WATER POLLUTION ABATEMENT PLAN REPORT (WPAP)

FOR

12 OAKS VILLAGE REGIONAL DETENTION POND

Williamson County, Texas

May 2023

HR Green Project No: 224302.002

Prepared for:

12 Oaks Village, L.P.
7801 N. Capital of Texas Hwy,
Suite 390
Austin, Texas 78731

5/9/2023

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SECTION 1: EDWARD AQUIFER APPLICATION COVER PAGE (TCEQ-20705)

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

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

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

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.

4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: 12 Oaks Village Regional Detention Pond						**2. Regulated Entity No.:**			
3. Customer Name: 12 Oaks Village, L.P.						**4. Customer No.:**			
5. Project Type: **(Please circle/check one)**	New ✓		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP ✓	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential ✓			**8. Site (acres):**		53.19	
9. Application Fee:	$8,000.00		**10. Permanent BMP(s):**			Detention Pond			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			North Fork San Gabriel River			

Application Distribution

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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	__	__	✓
Region (1 req.)	__	__	✓
County(ies)	__	__	✓
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer __Hays Trinity __Plum Creek	__Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos __Wimberley __Woodcreek	__Austin __Bee Cave __Pflugerville __Rollingwood __Round Rock __Sunset Valley __West Lake Hills	__Austin __Cedar Park __Florence __Georgetown __Jerrell __Leander ✓Liberty Hill __Pflugerville __Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	__	__	__	__	__
Region (1 req.)	__	__	__	__	__
County(ies)	__	__	__	__	__
Groundwater Conservation District(s)	__ Edwards Aquifer Authority __Trinity-Glen Rose	__Edwards Aquifer Authority	__Kinney	__EAA __Medina	__EAA __Uvalde
City(ies) Jurisdiction	__Castle Hills __Fair Oaks Ranch __Helotes __Hill Country Village __Hollywood Park __San Antonio (SAWS) __Shavano Park	__Bulverde __Fair Oaks Ranch __Garden Ridge __New Braunfels __Schertz	NA	__San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Xavier Garza, P.E.
Print Name of Customer/Authorized Agent Xavier Garza 5/9/2023
Signature of Customer/Authorized Agent Date

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

SECTION 2: GENERAL INFORMATION FORM (TCEQ-0587)

General Information Form

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Xavier Garza, P.E.

Date: 05/09/2023

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: 12 Oaks Village Regional Detention Pond
2. County: Williamson
3. Stream Basin: North Fork San Gabriel
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

   ☑ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

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

7. Customer (Applicant):

Contact Person: Thomas Mote
Entity: 12 Oaks Village, LP
Mailing Address: 7801 N. Capital of Texas Highway, Suite 390
City, State: Austin, Texas Zip: 78731
Telephone: 512-901-9800 FAX: _____
Email Address: tom@jwdevelopmentinc.com

8. Agent/Representative (If any):

Contact Person: Xavier Garza, P.E.
Entity: HR Green
Mailing Address: 5508 Highway 290 West, Suite 150
City, State: Austin, TX Zip: 78735
Telephone: 512.872.6696 FAX: 713.965.0044
Email Address: xavier.garza@hrgreen.com

9. Project Location:

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

10. ☑ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.
Northeast of the intersection of State Highway 29 West & Ronald Reagan Blvd in Liberty Hill, Texas 78642

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

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

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

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

☐ Survey staking will be completed by this date: _____

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

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

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

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

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

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

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

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

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

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

Administrative Information

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

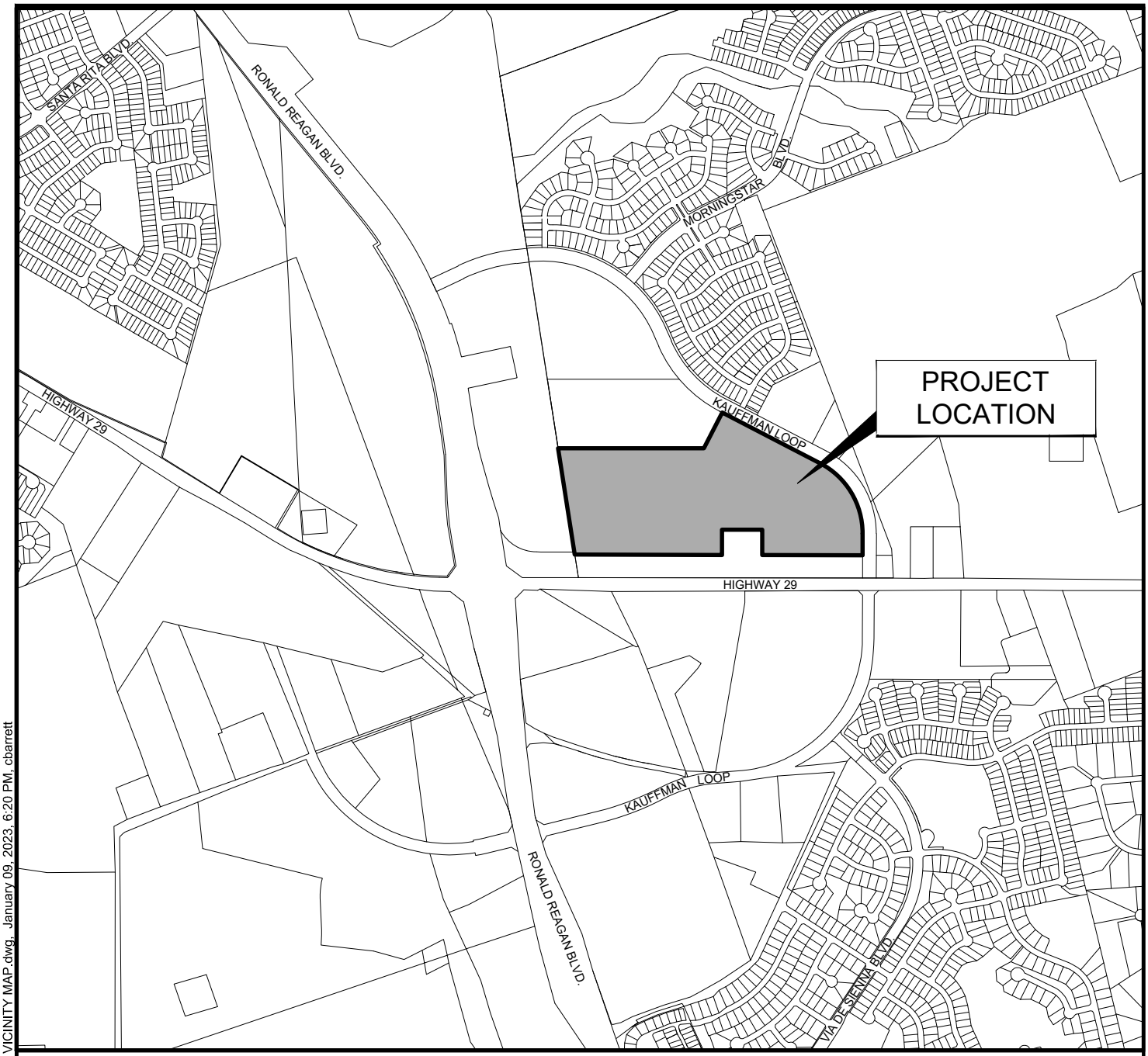
- [x] For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- [ ] For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- [ ] For a UST Facility Plan or Modification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

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

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

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

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



VICINITY MAP

N.T.S.

HRGreen.

DEVELOPMENT TX

5508 HIGHWAY 290 WEST
SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM

TBPE NO: 16384
TBPLS NO: 10194101

NEW GROWTH REGIONAL POND

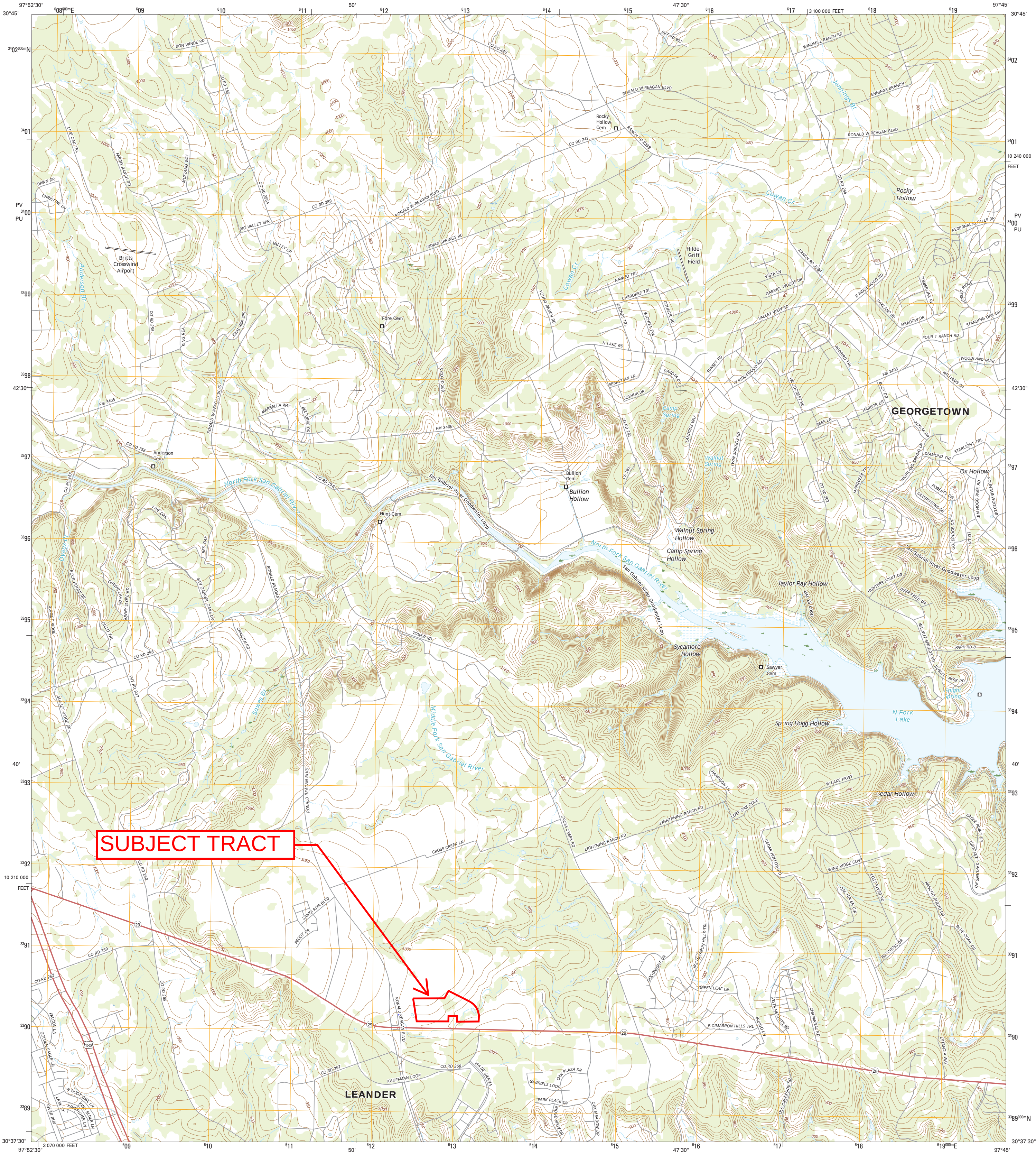
P:\New Growth\224302.002 - 12 Oaks Village Detention Pond\02_ACAD\4_Exhibits\8X11 VICINITY MAP.dwg, January 09, 2023, 6:20 PM, cbarrett

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

LEANDER NE QUADRANGLE
TEXAS-WILLIAMSON CO.
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 14R
10 000-foot ticks: Texas Coordinate System of 1983 (central zone)

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, July 2014
Roads..... U.S. Census Bureau, 2014 - 2015
Names.....GNIS, 2015
Hydrography.....National Hydrography Dataset, 2014
Contours.....National Elevation Dataset, 2004
Boundaries.....Multiple sources; see metadata file 1972 - 2015

Wetlands.....FWS National Wetlands Inventory 1977 - 2014

MN GN 4° 6´ 73 MILS 0° 36´ 11 MILS
UTM GRID AND 2016 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
PV / PU 3400
Grid Zone Designation
14R

SCALE 1:24 000

KILOMETERS / METERS / MILES / FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.19

TEXAS
QUADRANGLE LOCATION

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

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

LEANDER NE, TX
2016

NSN. 7643016396982
NGA REF NO. USGSX24K25239

ATTACHMENT C – PROJECT DESCRIPTION

The 12 Oaks Village Regional Detention Pond development is a proposed regional detention pond for the future 12 Oaks Village development. The proposed regional detention pond is located in Liberty Hill Extraterritorial Jurisdiction (ETJ) and Williamson County. The site is located within the Middle Fork San Gabriel River sub watershed of the North Fork San Gabriel River watershed. The overall project site encompasses a 53.19 acre tract of land located northeast of the intersection of SH 29 and Ronald Regan Boulevard. The limits of the construction are roughly 21.65 acres which encompasses the extent of land disturbance associated with this project.

The project site is undeveloped land with grass and scattered trees. A tree removal plan is provided with the 12 Oaks Village Regional Detention Pond plan. Please refer to sheet 7 & 8 of the 12 Oaks Village Regional Detention Pond plans for further details. There is no portion of the project site located within the 100-year floodplain as defined by FEMA FIRM Panel No. 48491C0275E, September 26, 2008. All development will remain outside of the FEMA floodplain. The regional detention pond is proposed within the area of the calculated 100-year floodplain as it is an inline detention facility. There is no impervious cover proposed with this site plan.

The project site is located within the Edwards Aquifer Recharge Zone. There is an existing natural channel flowing southwest to northeast in the south-central portion of the site. Onsite drainage flows to the natural channel. Offsite areas to the north and west of the site drain to an upstream location along the channel before flowing through the property. A majority of the offsite areas contributing the onsite channel flow are undeveloped with a one area of single-family residential and one area commercial development.

Per Title 30, Texas Administrative Code § 213.3, the 12 Oaks Village Regional Detention Pond plan is proposing to preform construction-related regulated activity on the recharge zone of the Edwards Aquifer having the potential for polluting the Edwards Aquifer and hydrologically connected surface streams. Specifically, the project plan is to perform excavation activities that alter or disturb the topographic, geologic, or existing recharge characteristics of a site. There are no permanent water quality BMPs proposed with this site plan. Erosion and sedimentation controls will be provided during construction as temporary BMPs.

SECTION 3: GEOLOGIC ASSESSMENT FORM (TCEQ-0585)

Horizon™
Environmental Services, Inc.

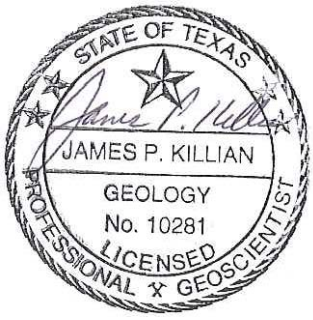
GEOLOGIC ASSESSMENT
MORNINGSTAR RANCH (DIPPREY TRACT)
LEANDER, WILLIAMSON COUNTY, TEXAS
HJN 140011 GA

PREPARED FOR:

MARLIN ATLANTIS GROUP
DALLAS, TEXAS

PREPARED BY:

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



SEPTEMBER 2014

CORPORATE HEADQUARTERS
1507 South IH 35 ★ Austin, Texas 78741 ★ 512.328.2430 ★ Fax 512.328.1804 ★ www.horizon-esi.com
Certified WBE/HUB/DBE/SBE

Horizon
Environmental Services, Inc.

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LIST OF APPENDICES

Horizon
Environmental Services, Inc.

TCEQ GEOLOGIC ASSESSMENT FORM

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

REGULATED ENTITY NAME: Morningstar Ranch; Leander, Williamson County, Texas

TYPE OF PROJECT: X WPAP _ AST X SCS _ UST

LOCATION OF PROJECT: X Recharge Zone __ Transition Zone __ Contributing Zone

PROJECT INFORMATION

Figure 1 shows the Site Location and Edwards Aquifer Recharge Zone.

1. X Geologic or manmade features are described and evaluated using the attached **GEOLOGIC ASSESSMENT TABLE** provided in Appendix C.

2. X Soil cover on the project site is summarized in the table below (Table 1) and uses the Soil Conservation Service (SCS) Hydrologic Soil Groups* (*Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A*, SCS, 1986) (NRCS, 1975, and Werchan et al., 1983).

TABLE 1 – SURFACE SOILS

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thickness (feet)
CfB - Crawford clay, 1-3% slopes	D	1 - 2
FaA - Fairlie clay, 0-1% slopes	D	1 - 2
FaB - Fairlie clay, 1-2% slopes	D	1 - 2
GeB - Georgetown clay loam, 0-2% slopes	D	2 - 3
GsB - Georgetown stony clay loam, 1-3% slopes	D	1 - 2

* Soil Group Definitions (Abbreviated)

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

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

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

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

3. X A **STRATIGRAPHIC COLUMN** is attached at the end of this form in the additional comments section and shows formations, members, and thicknesses. The

outcropping unit should be at the top of the stratigraphic column (Appendix A, Figure 5).

4. X A **NARRATIVE DESCRIPTION OF SITE-SPECIFIC GEOLOGY** is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst characteristics of the site.

5. X Appropriate **SITE GEOLOGIC MAP(S)** are attached in Appendix B:

The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

Applicant's Site Plan Scale	1" = 400'
Site Geologic Map Scale	1" = 400'
Site Soils Map Scale (if more than 1 soil type)	1" = 1100'

6. Method of collecting positional data:
X Global Positioning System (GPS) technology.
_ Other method(s).

7. X The project site is shown and labeled on the Site Geologic Map (Appendix B).

8. X Surface geologic units are shown and labeled on the Site Geologic Map (Appendix B).

9. X Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map (Appendix B) and are described in the attached Geologic Assessment Table (Appendix C).

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

10. X The Recharge Zone boundary is shown and labeled, if appropriate (Appendix A, Figure 2).

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

_ There are ___ (#) wells and ___ test wells present on the project site, and the locations are shown and labeled. (Check all of the following that apply.)
  _ The test well is not in use and has been properly abandoned.
  _ The wells are not in use and will be properly abandoned.
  _ The wells are in use and comply with 16 TAC §76.

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

Horizon
Environmental Services, Inc.

ADMINISTRATIVE INFORMATION

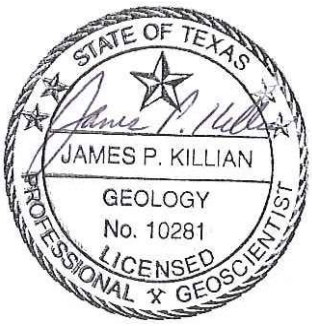
12. X Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies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

Date(s) Geologic Assessment was performed: 10, 13, and 23 June 2014; 6 and 7 August 2014; and 17 September 2014
Date(s)

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

For Horizon Environmental Services, Inc.

James Killian, PG[1]
Print Name of Geologist



(512) 328-2430, Ext. 112
Telephone

(512) 328-2633
Fax

Signature of Geologist

18 September 2014
Date

Representing: Horizon Environmental Services, Inc., Austin, Texas

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

[1] Registered Professional Geologist, State of Texas

TCEQ GEOLOGIC ASSESSMENT
ADDITIONAL COMMENTS

1.0 INTRODUCTION AND METHODOLOGY

This report and the planned abatement measures are intended to fulfill Texas Commission on Environmental Quality (TCEQ) reporting requirements (TCEQ, 1999). This geologic assessment includes a review of the site for potential aquifer recharge and documentation of general geologic characteristics for the subject site. Horizon conducted the necessary field and literature studies according to TCEQ Instructions to Geologists for completing Geologic Assessments within the Edwards Aquifer Recharge Zone (TCEQ, 2004).

Horizon walked transects spaced less than 50 feet apart and mapped the location of features using a subfoot accurate Trimble GeoHX handheld GPS and post-processed data utilizing aerial photographs, topographic maps, and GPS Pathfinder Office software. Horizon also searched the area around any potential recharge features that were encountered to look for any additional features.

The Geologic Assessment Table in Appendix C provides a description of any features that meet the TCEQ definition of potential recharge features (TCEQ, 2004). Features that do not meet the TCEQ definition, which include surface weathering, karren, or animal burrows, were evaluated in the field and omitted from this report. While walking transects, Horizon removed loose rocks and soil (by hand), when necessary, to preliminarily assess each feature's subsurface extent. However, labor-intensive excavation was not conducted.

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

2.0 ENVIRONMENTAL SETTING

2.1 LAND USE

The current use of the subject site is undeveloped rangeland, woodlands, and agricultural land with local electrical and water utilities. The subject site consists of approximately ±530 acres that are currently used to raise beef cattle in west-central Williamson County, Texas. Access to the site is along State Highway 29 (Appendix A, Figure 1). Surrounding land use is predominantly undeveloped rangeland and/or rural residential.

2.2 TOPOGRAPHY AND SURFACE WATER

The subject site is situated on gently to moderately sloping terrain within the Middle Fork of the San Gabriel River watershed (Appendix A, Figures 2 and 3). Surface elevations on the subject site vary from a minimum of approximately 940 feet above mean sea level (amsl) at the northeastern portion of the property corner to a maximum of approximately 1020 feet amsl at the western limits of the proposed right-of-way (ROW) connector (Kauffman Loop) to Ronald Reagan Boulevard. Drainage on most of the site occurs primarily by overland sheet flow in multiple directions based on location near several unnamed tributaries of the Middle Fork of the San Gabriel River.

2.3 EDWARDS AQUIFER ZONE

As shown in Appendix A, Figure 2, the subject site is found within the Edwards Aquifer Recharge Zone, as mapped by TCEQ Recharge Zone Boundary Maps (TCEQ, 2014).

2.4 SURFACE SOILS

Mapping by the Natural Resources Conservation Service (NRCS, 2014) shows approximately 5 soil mapping units within the subject site (Appendix A, Figure 4) associated with the soil series described below.

Crawford clay, 1 to 3% slopes (CfB): This gently sloping soil is on mesas, foot slopes, and at the head of drainage ways on uplands. Typically, the uppermost layer is neutral clay about 27 inches thick. It is brown in the upper 6 inches and dark reddish brown below that. The underlying material is whitish, fractured hard limestone. This soil is well drained, and the available water capacity is low. When the soil is dry and cracked, permeability is rapid; but when the soil is wet and the cracks are closed, permeability is very slow. Runoff is medium.

Fairlie clay, 0 to 1% slopes (FaA) and 1 to 2% slopes (FaB): This nearly level soil is on broad plateaus, slightly depressed areas near the head of drains, and in shallow valleys on uplands. Typically, this soil has a dark gray clay upper layer about 36 inches thick. The layer below that, which extends to about 46 inches, is gray clay. The underlying material to a depth of 55 inches is weakly cemented limestone interbedded with limy material. This soil is calcareous and moderately alkaline. This soil is moderately well drained. When dry, it has wide cracks, and water enters it rapidly. However, when this soil is wet and the cracks are sealed, water enters it very slowly. Surface runoff is slow when this soil is dry and cracked. The available water capacity is high and erosion is a slight hazard.

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

the cracks are closed, water enters the soil very slowly. Runoff is medium. The available water capacity is high. Erosion is a slight hazard.

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

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

2.5 GEOLOGY

A review of existing literature shows most of the subject site is underlain by the undifferentiated Edwards Limestone Formation (Ked) (Bureau of Economic Geology [UT-BEG, 1995]) with an estimated maximum thickness of about 40 feet at higher elevations located along the west-southwest side. In addition, Quaternary-age terrace deposits (terraces along streams [Qt]) occur at the highest elevations located near the west and central portions of the subject site with an estimated thickness of less than 20 feet. In general, the rock strata beneath the site dip to the southeast at about 10 to 30 feet per mile.

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

Table 2 depicts the stratigraphic relationship and approximate thicknesses of the uppermost geologic unit found at the subject site.

TABLE 2 – GEOLOGIC STRATIGRAPHIC COLUMN

Geologic Period	Hydrologic Unit	Geologic Unit	Geologic Member	Approximate Thickness (feet)	Description
Quaternary	--	Terraces along streams (Qt)	--	Up to 20	Gravel, sand, silt, and clay in various proportions with gravel more prominent in the older, higher terraces. Eroded fragments of dolomite, limestone, and chert from the Edwards Plateau; sand mostly quartz. No cave development.
Lower Cretaceous	Edwards Aquifer	Edwards Formation (Ked)	--	40	Gray to light brownish-gray, thin to medium-bedded, dense, dolomite, dolomitic limestone, and limestone containing rudists (long, conical bivalves). Gray to black chert is common. Low to moderate cave development.
Lower Cretaceous	Edwards Aquifer	Comanche Peak Formation (Kc)	--	50	Gray to very light brown, fine-grained, nodular limestone, marly limestone, and marl. No cave development.
Lower Cretaceous	Confining Unit	Walnut Formation (Kwa)	--	175	Composed of 4 thinly bedded limestone and marl members (Keys Valley Marl, Cedar Park Limestone, Bee Cave Marl, and Bull Creek Limestone). Uppermost member is Keys Valley Marl, fine- to very fine-grained, cream colored, fossiliferous marl with some thin interbeds of soft limestone. Low cave development.

2.6 WATER WELLS

A search was made for water wells on and within 0.5 miles of the subject site. A review of the records of the TCEQ and the Texas Water Development Board (TWDB) revealed no water wells at the subject site or within 0.5 miles from the subject site (TWDB, 2014). No evidence of water wells was present on the subject site during the field investigation. The results of this survey do not preclude the existence of an abandoned well.

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

2.7 GEOLOGIC AND MANMADE FEATURES

Field surveys of the subject site were conducted by a licensed Horizon geologist on 10, 13, and 23 June 2014; 6 and 7 August 2014; and 17 September 2014. Four natural geologic features (F-1 to F-4) were identified within the subject site. Five manmade features (M-1 to M-5) (all are stock

ponds) were observed at the subject site. These stock ponds appear to have been constructed over several years ago and are located within various unnamed tributaries of the Middle Fork of the San Gabriel River. Based on the presence of thick deposits of predominately very fine-grained (clay) fluvial sediments, all of the manmade features have very low relative infiltration rates.

Geologic Feature F-1: Sinkhole measuring approximately 7 feet in diameter x 1.5 feet deep with 2 drainage portal openings (1 foot in diameter x 1 to 1.5 feet deep) located along its clay and rock-laden floor. No air flow conductivity was noted at the openings. Probing with a steel rod encountered clay soil and cobbles about 2 feet below the feature's floor. On 6 August 2014, Horizon staff excavated an area about 6 feet long x 4 feet wide x 5 feet deep near the center of the sinkhole. No voids and/or drainage portals were observed along its floor or walls, and probing with a steel rod encountered very dense, weathered soil and rock about 2 feet below the lowest point of the excavation. Excavation was partially refilled due to the presence of livestock on the site. This feature has a low infiltration rate and a surface runoff catchment of less than 0.1 acres.

Geologic Feature F-2: Solution cavity measuring approximately 2 feet long x 1.5 feet wide x 0.5 feet deep with a semi-open drainage portal amongst loose rocks and soil. No air flow conductivity was noted at the opening. Probing with a steel rod encountered loose clay soil and cobbles about 1 foot below the feature's floor. On 6 August 2014, Horizon staff excavated an area about 5 feet long x 2 feet wide x 5.5 feet deep near the center of the feature. No voids and/or drainage portals were observed along its floor or walls, and probing with a steel rod encountered very dense, weathered soil and rock about 2 feet below the lowest point of the excavation. Excavation was refilled to existing grade due to the presence of livestock on the site. This feature has a low infiltration rate and a surface runoff catchment of less than 0.1 acres.

Geologic Feature F-3: Upland sinkhole measuring approximately 11 feet long x 9 feet wide x 2 feet deep with 2 drainage portal openings located along the edge of a rock headwall. Slight air flow conductivity was noted at the openings. Probing with a steel rod encountered loose cobbles and soil about 3 feet below the feature's floor. On 6 and 7 August 2014, Horizon staff excavated an area (6 feet long x 3 feet wide x 4.5 feet deep) along the north side of the rock headwall and discovered a low, horizontal bedding plane void (4 feet long x 3 feet wide x 1 to 0.3 feet high) about 2 feet below the surface that slopes down toward the south. No other voids and/or drainage portals were observed along the excavated floor or walls. This feature has an intermediate infiltration rate and a surface runoff catchment of less than 0.4 acres.

Geologic Feature F-4: Upland sinkhole measuring approximately 9 feet long x 6 feet wide x 2 feet deep with 2 semi-open drainage portal openings (0.8 feet in diameter and 0.9 feet in diameter x 1 foot deep) amongst loose clay and cobbles. No air flow conductivity was noted. Probing with a steel rod encountered firm clay soil and cobbles about 2 feet below the feature's floor. On 6 August 2014, Horizon staff excavated an area about 5 feet long x 3 feet wide x 3 feet deep near the center of the sinkhole. No voids and/or drainage portals were observed along its floor or walls, and probing with a steel rod encountered very dense, weathered soil and rock about 2 feet below the lowest point of the excavation. Excavation was partially refilled due to the presence of livestock on the site. This feature has a low infiltration rate and a surface runoff catchment of less than 0.1 acres.

A map detailing site geology and the location of the geologic features is provided in Appendix B. Further information pertaining to the geologic features is provided in the Geologic Assessment Table (Appendix C). Photographs of the geologic features are also provided in Appendix D.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Four natural geologic features and 5 manmade features were identified at the subject site. All of the features were evaluated for their potential to be significant pathways for fluid movement into the Edwards Aquifer. The Geologic Assessment Table (Appendix C) summarizes this evaluation and assigns each feature's sensitivity a total point value. Those with a point value of 40 or higher are deemed to be sensitive groundwater recharge features and should be protected during site development pursuant to TCEQ rules for protection of the Edwards Aquifer (30 TAC 213).

One geologic feature (F-3) has been evaluated as sensitive for groundwater recharge capability and would therefore require a TCEQ protective setback buffer. In general, a protective buffer encompassing a sensitive feature is recommended to meet the TCEQ guidance for a setback of at least 50 feet in all directions from the feature's areal extent (perimeter), plus its watershed catchment up to 200 feet from the perimeter of the feature. Three geologic features (F-1, F-2, and F-4) have been evaluated as non-sensitive for groundwater recharge capability and would therefore not require TCEQ protective setback buffers. No further action is recommended for these non-sensitive geologic features.

Five manmade features (M-1 to M-5) have been evaluated as non-sensitive for groundwater recharge capability and would therefore not require TCEQ protective setback buffers. No further action is recommended for these non-sensitive manmade features.

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

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

4.0 REFERENCES

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(USGS) US Geological Survey. 7.5-minute series topographic maps, Leander, Texas, quadrangle, 1987.

(UT-BEG) The University of Texas at Austin Bureau of Economic Geology; C.V. Proctor, Jr., T.E. Brown, J.H. McGowen, N.B. Waechter, and V.E. Barnes. *Geologic Atlas of Texas*, Austin Sheet. Francis Luther Whitney Memorial Edition. 1974; revised 1995.

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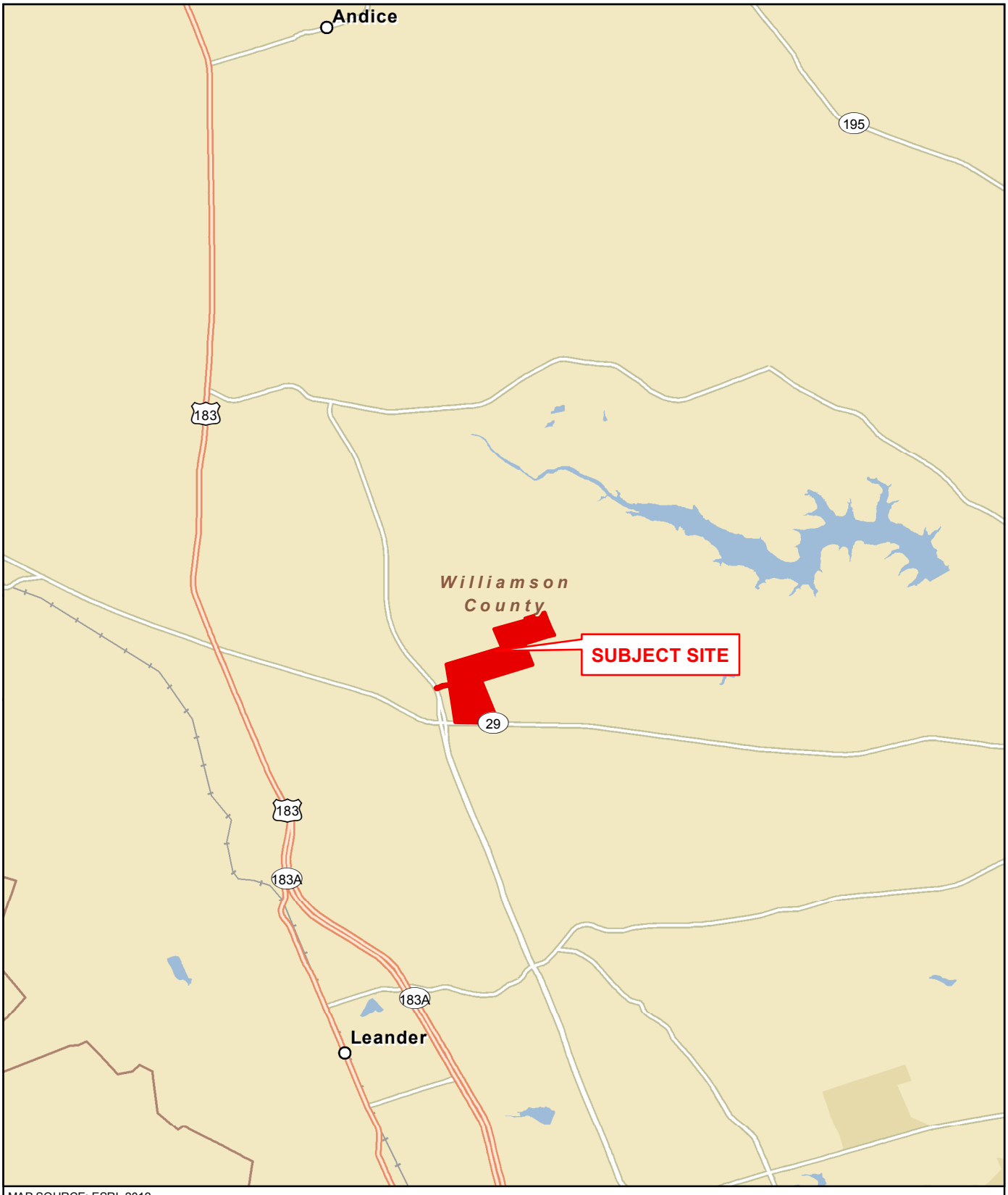
APPENDIX A

PROJECT FIGURES

140011 - 530-Acre Dipprey Tract Pl\Graphics\GA\140011A01GA_Vicinity Map.mxd | REM | 07-15-2014 | CEC | 9-17-2014



MAP SOURCE: ESRI, 2012.

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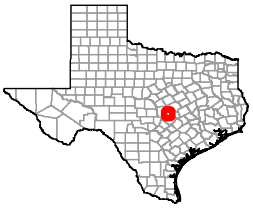
Miles



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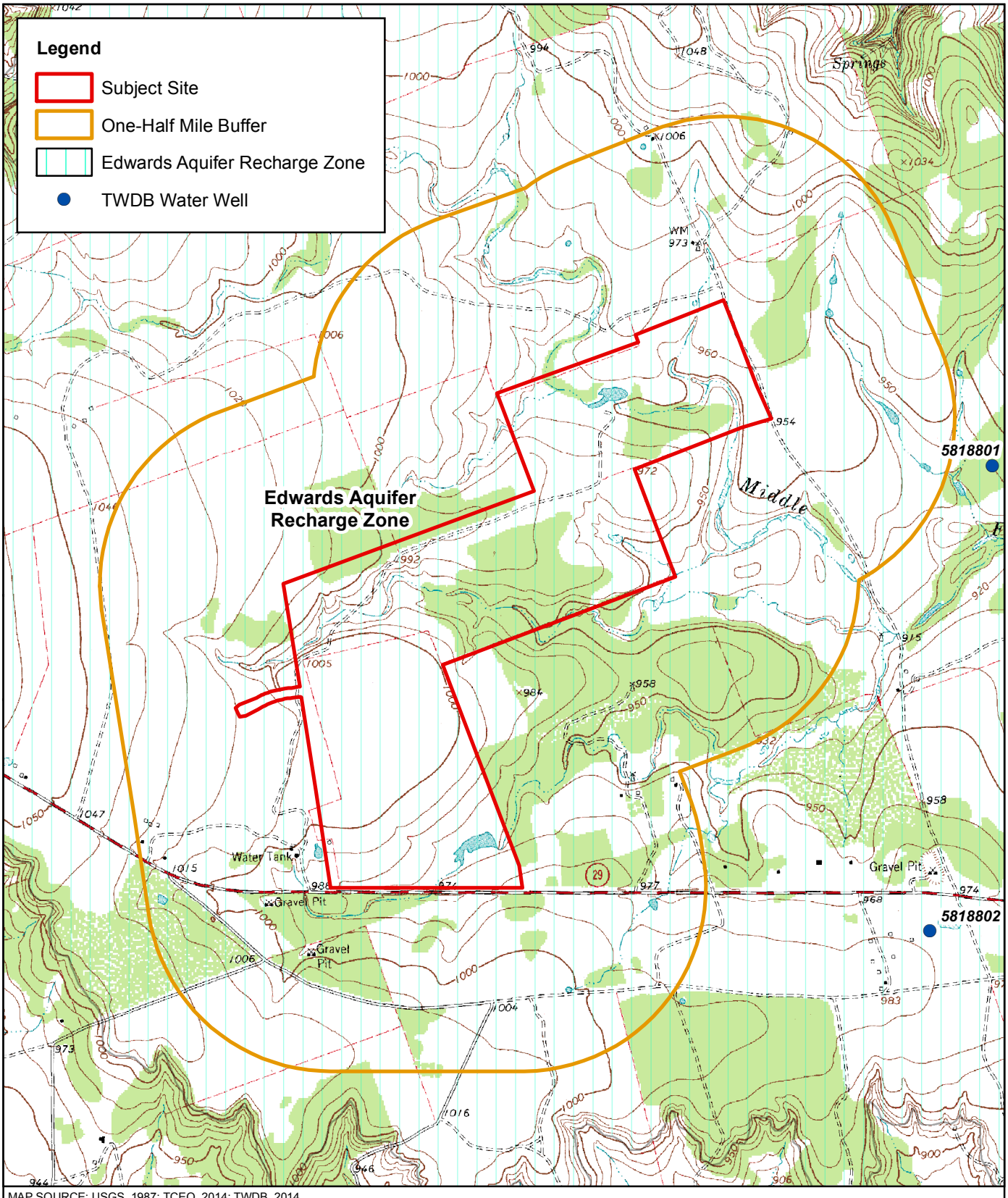
APPENDIX A, FIGURE 1

VICINITY MAP
MORNINGSTAR RANCH
GEORGETOWN,
WILLIAMSON COUNTY, TEXAS



140011 - 530-Acre Dipprey Tract PI\Graphics\GA\140011A02GA_Topo_Hydro.mxd | REM | 07-15-2014 | CEC | 9-15-2014

MAP SOURCE: USGS, 1987; TCEQ, 2014; TWDB, 2014.

0 1,000 2,000
Feet

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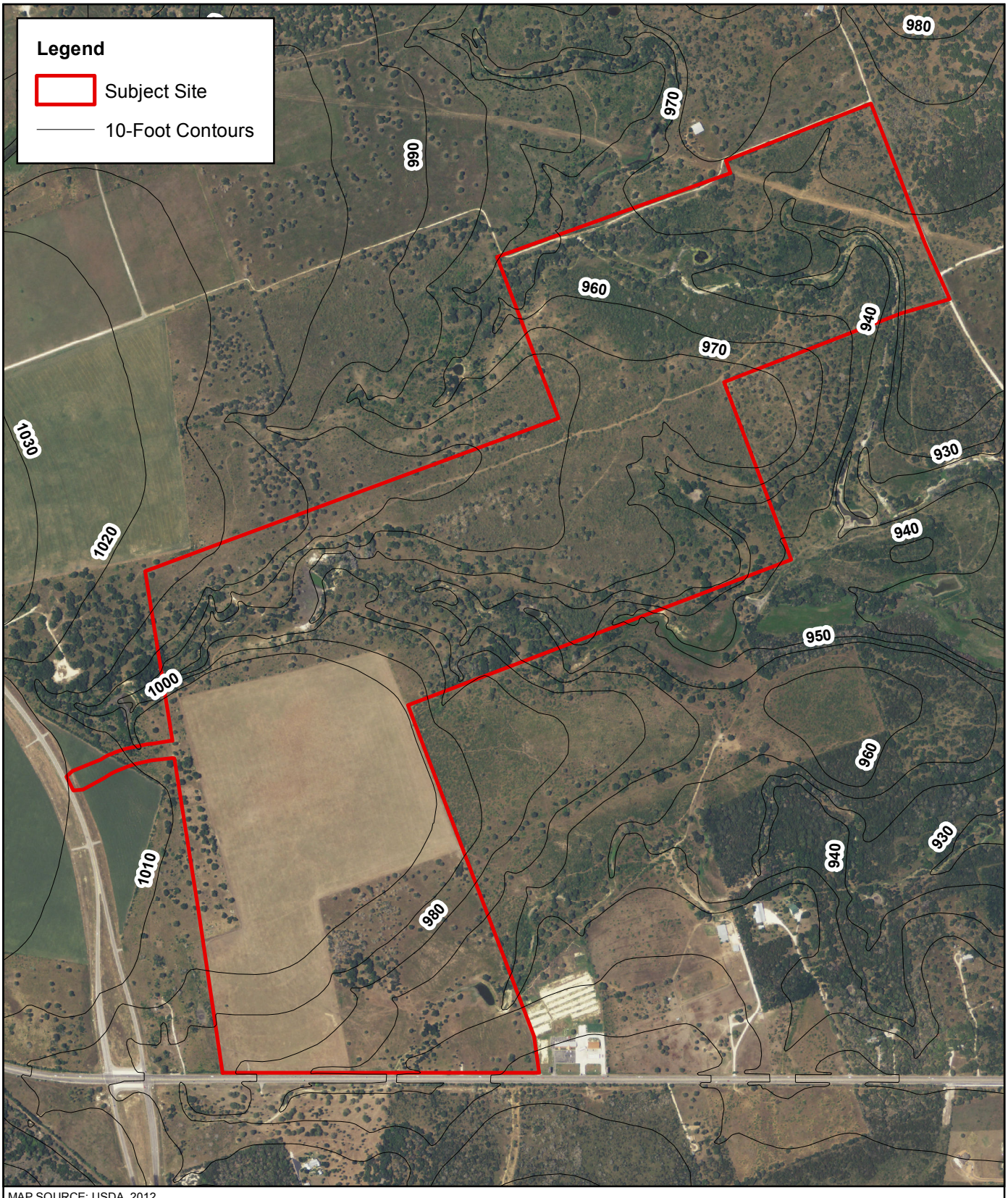
APPENDIX A, FIGURE 2

TOPOGRAPHY AND HYDROGEOLOGY MAP
MORNINGSTAR RANCH
GEORGETOWN,
WILLIAMSON COUNTY, TEXAS



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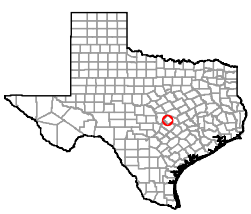
MAP SOURCE: USDA, 2012.

0 550 1,100
Feet



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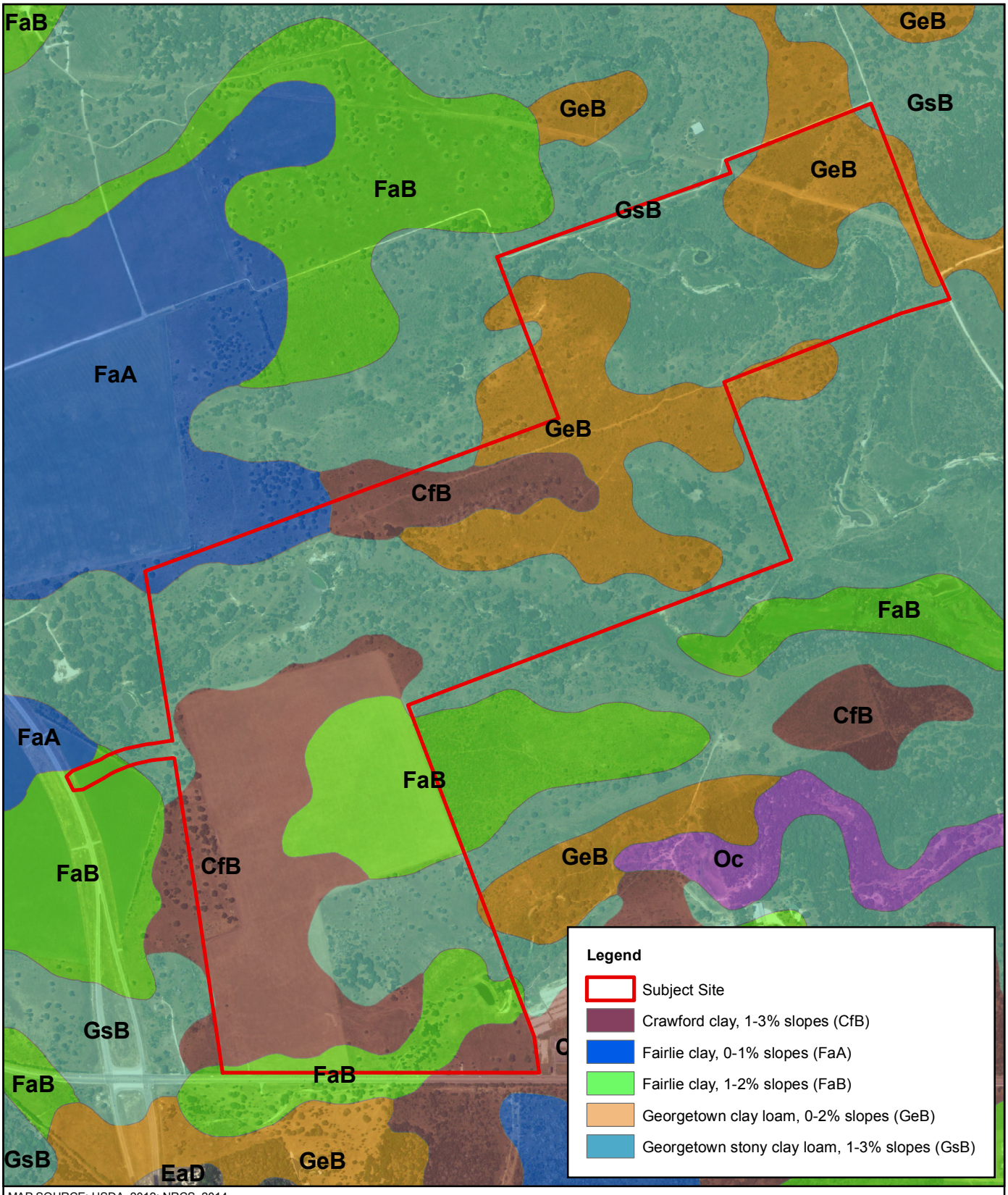
APPENDIX A, FIGURE 3

SITE TOPOGRAPHY MAP
MORNINGSTAR RANCH
GEORGETOWN,
WILLIAMSON COUNTY, TEXAS



140011 - 530-Acre Dipprey Tract PI\Graphics\GA\140011A04GA_Soils.mxd | REM | 07-15-2014 I CEC I 9-15-2014

MAP SOURCE: USDA, 2012; NRCS, 2014.

STATE OF TEXAS
JAMES P. KILLIAN
GEOLOGY
No. 10281
LICENSED
PROFESSIONAL GEOSCIENTIST

0 550 1,100
Feet

Horizon
Environmental Services, Inc.

APPENDIX A, FIGURE 4

SURFACE SOILS MAP
MORNINGSTAR RANCH
GEORGETOWN,
WILLIAMSON COUNTY, TEXAS

Geologic Unit	Hydrologic Unit	Approx. Thickness at Project Site (ft)	Elevation (ft msl)	Depth (ft)
			1020	0
Terraces along streams (Qt)	-	20		
			1000	20
Edwards Formation (Ked)	Edwards Aquifer	40		
			960	60
Comanche Peak Formation (Kc)		50		
			910	110
Walnut Formation (Kwa)	Confining Unit	175		
			735	285

Note: Unit elevation and thickness given with respect to a ground surface elevation of 1020 ft on the western limit of proposed ROW connector (Kauffman Loop) at the project site.

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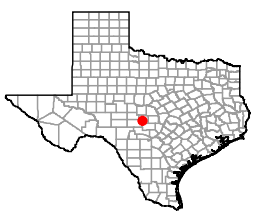
STATE OF TEXAS
JAMES P. KILLIAN
GEOLOGY
No. 10281
LICENSED
PROFESSIONAL GEOSCIENTIST



APPENDIX A, FIGURE 5

STRATIGRAPHIC COLUMN
APPROXIMATELY 530-ACRE
MORNINGSTAR RANCH
GEORGETOWN,
WILLIAMSON COUNTY, TEXAS

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APPENDIX B

SITE GEOLOGIC MAP

Qt
Qt
Qt
Ked
Ked
F-1
M-3
M-4
M-2
M-5
F-4
F-3
F-2
M-1

Legend

- Geologic Features
- Subject Site
- ROW Connector
- Manmade Features
- Terraces along streams (Qt)
- Edwards Formation (Ked)

MAP SOURCE: UT-BEG, 1974; USDA, 2012.

STATE OF TEXAS
JAMES P. KILLIAN
GEOLOGY
No. 10281
LICENSED
PROFESSIONAL GEOSCIENTIST

0 200 400
Feet

Scale: 1" = 400'

APPENDIX B, FIGURE 1

SITE GEOLOGIC MAP
MORNINGSTAR RANCH
GEORGETOWN,
WILLIAMSON COUNTY, TEXAS

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APPENDIX C

SITE GEOLOGIC ASSESSMENT TABLE

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Morningstar Ranch; SH 29; Georgetown, Texas

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
F-1	30.65743	-97.80857	SH	20	Ked	7	7	1.5	--		--	--	C,F,O	12	32	X		X		Drainage
F-2	30.642261	97.818755	SC	20	Ked	2	1.5	0.5	--		--	--	C,F,O	10	30	X		X		Hillside
F-3	30.64369	-97.82655	SH	20	Ked	11	9	2	--		--	--	C,F,O	28	48		X	X		Hilltop
F-4	30.64388	-97.82603	SH	20	Ked	9	6	2	--		--	--	C,F,O	10	30	X		X		Hilltop
M-1	30.475226	-97.687841	MB	30	Ked	300	60	7	--		--	--	C,F,O	5	35	X		X		Drainage
M-2	30.64997	-97.82309	MB	30	Ked	300	50	6					C,F,O	5	35	X		X		Drainage
M-3	30.65704	-97.81167	MB	30	Ked	100	60	5					C,F,O	5	35	X		X		Drainage
M-4	30.65154	-97.81226	MB	30	Ked	50	50	4					C,F,O	5	35	X		X		Drainage
M-5	30.64884	-97.8171	MB	30	Ked	75	50	4					C,F,O	5	35	X		X		Drainage

* DATUM:_____

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

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

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

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

Date : August 15, 2014

Sheet 1 of 1

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

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Environmental Services, Inc.

APPENDIX D

SITE PHOTOGRAPHS

PHOTO 1
View of geologic feature F-1 (sinkhole), facing southwest

PHOTO 2
Close up view of F-1, after excavation

PHOTO 3
View of geologic feature F-2 (solution cavity), facing east

PHOTO 4
Close up view of F-2, after excavation

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PHOTO 5
View of geologic feature F-3 (sinkhole), facing north

PHOTO 6
View of F-3 after excavation, facing southeast

PHOTO 7
View of geologic feature F-4 (sinkhole), with two partially open drainage portals, facing down

PHOTO 8
Close up view of F-4, after excavation

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SECTION 4: WATER POLLUTION ABATEMENT PLAN APPLICATION FORM (TCEQ-0584)

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

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

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

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Xavier Garza, P.E.

Date: 05/09/2023

Signature of Customer/Agent:

Regulated Entity Name: 12 Oaks Village Regional Detention Pond

Regulated Entity Information

1. The type of project is:

   ☐ Residential: Number of Lots:_____
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☐ Commercial
   ☐ Industrial
   ☑ Other: Detention Pond

2. Total site acreage (size of property): 53.19

3. Estimated projected population: N/A

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

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	N/A	÷ 43,560 =	0
Parking	N/A	÷ 43,560 =	0
Other paved surfaces	N/A	÷ 43,560 =	0
Total Impervious Cover	N/A	÷ 43,560 =	0

Total Impervious Cover 0 **÷ Total Acreage** 0 **X 100 =** 0 **% Impervious Cover**

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

For Road Projects Only N/A

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

7. Type of project:

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

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

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

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

   Width of R.O.W.: _____ feet.
   L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

    Width of pavement area: _____ feet.
    L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
    Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

11. ☐ A rest stop will be included in this project.

    ☐ A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

N/A % Domestic	_____Gallons/day
N/A % Industrial	_____Gallons/day
N/A % Commingled	_____Gallons/day
TOTAL gallons/day N/A	

15. Wastewater will be disposed of by:

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

- ☐ **Attachment C - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.
- ☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☐ Sewage Collection System (Sewer Lines):

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

- ☐ The SCS was previously submitted on_____.
- ☐ The SCS was submitted with this application.
- ☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☐ The sewage collection system will convey the wastewater to the _____ (name) Treatment Plant. The treatment facility is:

☐ Existing.
☐ Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 50 '.

18. 100-year floodplain boundaries:

☑ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
☐ No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): Floodplain Analysis conducted by HR Green March 2023

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

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

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

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

☐ The wells are not in use and have been properly abandoned.
☐ The wells are not in use and will be properly abandoned.
☐ The wells are in use and comply with 16 TAC §76.

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

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

☐ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☑ No sensitive geologic or manmade features were identified in the Geologic Assessment.
☐ **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. ☑ The drainage patterns and approximate slopes anticipated after major grading activities.
23. ☑ Areas of soil disturbance and areas which will not be disturbed.
24. ☑ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
25. ☑ Locations where soil stabilization practices are expected to occur.
26. ☐ Surface waters (including wetlands).

    ☑ N/A
27. ☑ Locations where stormwater discharges to surface water or sensitive features are to occur.

    ☐ There will be no discharges to surface water or sensitive features.
28. ☑ Legal boundaries of the site are shown.

Administrative Information

29. ☑ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
30. ☑ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

ATTACHMENT A – FACTORS AFFECTING WATER QUALITY

Potential sources of pollution that may be expected to affect the quality of the storm water discharges from the construction site include the following:

- Soil erosion due to the clearing of the site for drainage structures.
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings.
- Miscellaneous trash and litter from construction.

There are no expected potential sources of pollution that may affect the quality of the storm water discharges from the site after construction is complete.

ATTACHMENT B – VOLUME AND CHARACTER OF STORMWATER

The project site is located within the Edwards Aquifer Recharge Zone. There is an existing natural channel running through the south-central portion of the site. There is no proposed impervious cover associated with this development. There is no expected increase in TSS associated with this development. There are no sensitive geologic or man-made features found at the site.

Detailed existing and fully developed flow data for the points of interest are provided on the drainage plan as part of the construction documents submitted with this application. Refer to Sheets 9-10 on 12 Oaks Village Regional Detention Pond Construction Plans, for the Existing and Proposed Drainage Plans. Summary tables are also provided below. In this analysis the proposed conditions represent the full development of the entire 12 Oaks Village property. Although there is no impervious cover associated with this site plan, all areas within the future 12 Oaks Village area are modeled at maximum future impervious cover. For this reason, all impervious cover listed in drainage area DEV-C1, containing the proposed regional detention pond, in proposed conditions is associated with the assumed future development for 12 Oaks Village. This method of analysis was used to determine the proper sizing of the regional detention pond proposed with the 12 Oaks Village Regional Detention Pond construction plans which is to serve the future 12 Oaks Village development. The future 12 Oaks Village development will provide water quality treatment for any increase in TSS.

Routing Analysis Inputs - Existing Conditions							
Drainage Areas		Land Use		TOC Calculation Table	HEC-HMS Inputs		
Contributing Area	Area (ac)	Base Curve Number	Existing Impervious Cover (ac)	TOC (min)	Area (sq. mi.)	Impervious Cover (%)	Lag Time (min)
EX-A	570.09	80	77.20	101.46	0.89076	13.54%	60.88
EX-B	49.24	80	4.64	49.53	0.07694	9.43%	29.72
EX-C	71.64	80	0.00	40.49	0.11194	0.00%	24.29
EX-D1	11.97	80	0.00	21.60	0.01870	0.00%	12.96
EX-D2	1.80	80	0.89	5.00	0.00281	49.66%	3.00
EX-E	9.89	80	4.47	15.11	0.01545	45.20%	9.06

Routing Analysis Inputs - Proposed Conditions							
Drainage Areas		Land Use		TOC Calculation Table	HEC-HMS Inputs		
Contributing Area	Area (ac)	Curve Number	Total Impervious Cover (ac)	TOC (min)	Area (sq. mi.)	Impervious Cover (%)	Lag Time
DEV-A	570.09	80	77.20	101.46	0.89076	13.54%	60.88
DEV-B	46.19	80	4.64	49.53	0.07218	10.05%	29.72
DEV-C1	52.95	80	42.36	5.00	0.08273	80.00%	3.00
DEV-C2	18.92	80	15.13	5.00	0.02956	80.00%	3.00
DEV-D1	13.33	80	8.67	5.00	0.02083	65.00%	3.00
DEV-D2	2.91	80	0.89	5.00	0.00455	30.65%	3.00
DEV-E	9.89	80	4.47	15.11	0.01545	45.20%	9.06

12 Oaks Village - Regional Detion Pond - Hydrology Summary Table												
Analysis Point	Existing Peak Flow (cfs)				Proposed Peak Flow (cfs)				Δ Peak Flow (cfs)			
	A14 Q_2	A14 Q_{10}	A14 Q_{25}	A14 Q_{100}	A14 Q_2	A14 Q_{10}	A14 Q_{25}	A14 Q_{100}	A14 Q_2	A14 Q_{10}	A14 Q_{25}	A14 Q_{100}
POI-A4	511	948	1,258	1,787	511	948	1,258	1,787	0	0	0	0
POI-A3	544	1,011	1,343	1,910	542	1,007	1,338	1,902	-2	-4	-5	-8
POI-A2	585	1,093	1,455	2,075	564	1,051	1,399	2,000	-21	-42	-56	-75
POI-A1	590	1,104	1,470	2,098	554	1,056	1,395	1,971	-36	-48	-75	-127
POI-A0	594	1,111	1,480	2,114	557	1,061	1,403	1,983	-37	-50	-77	-131

5/9/2023

SECTION 5: TEMPORARY STORMWATER SECTION (TCEQ-0602)

Temporary Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Xavier Garza, P.E.

Date: 05/09/2023

Signature of Customer/Agent:

Regulated Entity Name: 12 Oaks Village Regional Detention Pond

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

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

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

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

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

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

Sequence of Construction

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

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

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

6. ☑ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: North Fork San Gabriel River

Temporary Best Management Practices (TBMPs)

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

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

- [x] A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
- [x] A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
- [x] A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
- [x] A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

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

   - [ ] **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
   - [x] There will be no temporary sealing of naturally-occurring sensitive features on the site.

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

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

    - [ ] For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
    - [ ] For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
    - [x] For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
    - [ ] There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

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

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

☑ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

18. ☑ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
19. ☑ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☑ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
21. ☑ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
22. ☑ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

ATTACHMENT A – SPILL RESPONSE ACTIONS

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

The following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated, and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the Owner and to the appropriate State or local government agency, regardless of the size.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The site superintendent responsible for the day-to-day site operations will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer onsite.
- Any reportable quantity hydrocarbon or hazardous material spill should be reported to the TCEQ at the following 24-hour toll free number 1-800-832-8224.

For a spill of Reportable Quantity:

- Initial notification. Upon the determination that a reportable discharge or spill has occurred, the responsible person shall notify the agency as soon as possible but not later than 24 hours after the discovery of the spill or discharge.
- Method of notification. The responsible person shall notify the agency in any reasonable manner including by telephone, in person, or by any other method approved by the agency. In all cases, the initial notification shall provide, to the extent known, the information listed in subsection (d) of Title 30, Part I, Chapter 327, Rule §327.3. Notice provided under this section satisfies the federal requirement to notify the State Emergency Response Commission in the State of Texas.
- Notification of local government authorities. If the discharge or spill creates an imminent health threat, the responsible person shall immediately notify and cooperate with local emergency authorities. The responsible party will cooperate with the local emergency authority in providing support to implement appropriate notification and response actions. The local emergency authority, as necessary, will implement its emergency management plan, which may include notifying and evacuating affected persons. In the absence of a local emergency authority, the responsible person shall take reasonable measures to notify potentially affected persons of the imminent health threat.
- As soon as possible, but no later than two (2) weeks after discovery of the spill or discharge, the Contractor shall reasonably attempt to notify the Owner (if identifiable) or Occupant of the property upon which the discharge or spill occurred as well as the occupants of any property that the Contractor believes is adversely affected.

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

Vehicle and Equipment Maintenance:

- If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
- Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Place drip pans or absorbent materials under paving equipment when not in use.
- Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Do not leave full drip pans or other containers lying around.
- Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over the waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all of the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

ATTACHMENT B – POTENTIAL SOURCES OF CONTAMINATION

Once grading activities begin, erosion of bare soil during rainfall events is the most common source of contamination. Silt fences will be installed at the beginning of the grading operation to minimize the potential for transport of the soil offsite.

Asphalt products will be not used on this project. There is no potential of contamination due to asphalt during construction.

During construction activities, potential sources of contamination would include petroleum products leaking from construction equipment. The contractor will be advised to keep the equipment in working order and report any spills per the spill response plan.

Other potential sources of contamination include hydraulic fluid and diesel fuel from mechanical equipment and vehicles, as well as paints and chemicals used on site. Any spills shall be handled according to the Spill Response Actions in **Attachment A**.

ATTACHMENT C – SEQUENCE OF MAJOR ACTIVITIES

The first activity of construction will be to install the erosion control measures, consisting of silt fences, tree protection, rock berm, and stabilized construction entrances. Temporary erosion control measures will remain in place throughout the duration of construction and will be required to be maintained by the contractor to ensure proper functionality, especially after storm events. All disturbed areas to remain pervious will be vegetated using the procedures detailed in the construction plans and all temporary erosion control measures will be removed upon revegetation. Construction activities associated with this application is expected to disturb 21.65 acres of the site.

Major Construction Activities and Sequencing:

The major construction activities for this project will include and be sequenced as follows:

1. Established Best Management Practices shall consist of the following: silt fencing, a rock berm, a temporary spoils area, a concrete truck washout pit, and a temporary construction entrance (Estimated area to be disturbed = 1.3 Acres). These items are to remain and be maintained throughout all construction activities.
2. Site mass grading operation and construction. (Estimated area to be disturbed = 21.65 Acres)

The contractor is responsible for implementing and maintaining the storm water pollution prevention plan which includes maintaining all the necessary erosion controls throughout construction.

ATTACHMENT D – TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

As shown on the Construction Erosion Control Plans, temporary BMP practices and measures will include installing silt fences, a rock berm, stabilized construction entrances, a concrete truck washout, and a temporary spoils area prior to beginning grading operations on the site. Temporary measures are intended to provide a method of slowing the upgradient flow, onsite flow or runoff from the construction site in order to allow sediment and suspended solids to settle out of the water. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features. As a temporary BMP, a silt fence will be installed to reduce pollutants. BMP measures utilized in this plan are intended to allow storm water to continue downstream after passing through for treatment.

Site Preparation:

The methodology for pollution prevention of all on-site stormwater will include a) the erection of silt fences along the downgradient boundary of the construction staging area and concrete washout, b) installation of a stabilized construction entrance to reduce the dispersion of sediment from the site, c) installation of rock berm at the culvert on the downgradient boundary of the site, and d) installation of a construction staging area.

Construction:

All installed erosion control measure will be inspected, and if necessary, repaired before any additional construction begins, as well as periodically throughout the construction process. The contractor will be responsible for all maintenance of erosion control measures, as well as the installation of all remaining on-site control measures, including the concrete truck washout, as necessary.

ATTACHMENT E – REQUEST TO TEMPORARILY SEAL A FEATURE

There are no sensitive features on site.

ATTACHMENT F – STRUCTURAL PRACTICES

The proposed structural practices to control erosion and sedimentation include a stabilized construction entrance, silt fence, rock berm, concrete truck washout, and temporary spoils area.

ATTACHMENT G – DRAINAGE AREA MAPS

Refer to sheets 9 and 10 of the 12 Oaks Village Regional Detention Pond construction plans.

ATTACHMENT I – INSPECTION AND MAINTENANCE FOR BMPS

See construction plans included with this application submittal.

Temporary Best Management Practices (BMPs) and measures will be used during construction to prevent pollution of groundwater, surface water and naturally occurring environmental features. Silt fence, stabilized construction entrance, tree protection, rock berm, concrete washout area, and a temporary spoils area will be installed prior to beginning construction and prior to commencement of any of the activities defined in the sequence of construction as Attachment C. Inspection and maintenance of the on-site controls shall be performed during the site clearing and rough grading process. Refer to Sheet 7 and 8 on 12 Oaks Village Regional Detention Pond construction plans attached for specific controls and details.

BMPs and measures will prevent pollution of surface water or groundwater that originates on site or flows off-site, including pollution caused by contaminated stormwater run-off from the site, through the use of a rock berm placed at the culvert on the downgradient boundary of the site. The Contractor is expected to inspect the controls weekly and after significant rainfalls to ensure proper function. When silt accumulates six (6) inches in depth the Contractor shall promptly remove the silt from the controls.

BMPs and measures will prevent pollutants from entering surface streams, or the aquifer by interception stormwater potentially carrying sediment and other pollutants. BMPs and measures will implement one (1) stabilized construction entrance and a construction stockpiling/staging area to help minimize pollutant run-off and erosion generated during construction. Paved streets and driveways adjacent to these sites will be cleaned regularly to remove excess mud, dirt or rock tracked from the site. Sedimentation will be concentrated only in these areas for efficient maintenance. Water trucks will be on-site as necessary to aid be cleaned regularly to remove excess mud, dirt or rock tracked from the site. Sedimentation will be concentrated only in these areas for efficient maintenance. Water trucks will be on-site as necessary to aid in controlling dust. BMPs will be implemented to limit/prevent contaminated inflow from entering surface streams or the aquifer. These practices are to include the following measure: the use of silt fence. The fabricated silt fence barricade will provide help to reduce the likelihood of contaminated runoff from entering the aquifer. If any sensitive features are identified by TCEQ inspections, or during excavation or construction, measures appropriate to the sensitivity of the discovered feature will be enacted. No blasting is proposed.

Temporary Erosion and Sedimentation Notes:

1. The Contractor shall maintain, install erosion/sedimentation controls and tree/natural protective fencing prior to any site preparation work (clearing, grubbing or excavation).
2. 2he placement of erosion/sedimentation controls and tree/natural area protective fencing shall be in accordance with the TCEQ Technical Guidance Manual and the approved Erosion and Sedimentation Control Plan. No erosion controls shall be placed beyond the property lines of the site unless written permission has been obtained from adjacent property owners.
3. A pre-construction conference shall be held on-site with the Contractor, design engineer/permit applicant and Environmental Inspector after installation of the erosion/sedimentation and tree/natural area protection measures and prior to beginning any site preparation work. The Contractor shall notify the Environmental Inspector at least three (3) days prior to the meeting date.
4. Any major variation in materials or locations of controls or fences from those shown on the approved plans will require a revision and must be approved by the reviewing engineer, environmental specialist or city arborist as appropriate. Minor changes to be made as field revisions to the Erosion and Sedimentation Control Plan may be required by the Environmental Inspector during the course of construction to correct control inadequacies.
5. The Contractor is required to inspect the controls at weekly intervals and after significant rainfall events to ensure that they are functioning properly. The person(s) responsible for maintenance of controls shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six (6) inches.
6. Prior to final acceptance by the City, haul roads and waterway crossing constructed for temporary Contractor access must be removed, accumulated sediment removed from the waterway and the area restored to the original grade and revegetated. All land clearing debris shall be disposed of in approved soil disposal sites.
7. All work must stop if a void in the rock substrate is discovered, which is one (1) square foot in total area, blows air from within the substrate, and/or consistently received water during any rain event. At this time it is the responsibility of the project manager to immediately contact an Environmental Inspector for further investigation.
8. All slopes shall be sodded or seeded with approved grass, grass mixtures or ground cover suitable to the area and season in which they are applied.
9. Silt fences and similarly recognized techniques and materials shall be employed during construction to prevent point source sedimentation loading of downstream facilities. Such installation shall be regularly

inspected for effectiveness. Additional measures may be required if, in the opinion of the City Engineer, they are warranted.

10. All temporary erosion control measures shall not be removed until final inspection and approval of the project by the engineer. It shall be the responsibility of the Contractor to maintain all temporary erosion control structures and to remove each structure as approved by the engineer.
11. Any dirt, mud, rocks, debris, etc., that is spilled, tracked, or otherwise deposited on any existing paved street shall be cleaned up immediately.

Dewatering Operations

1. Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP area under way, inspect weekly to verify continued BMP implementation.
2. Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
3. Unit-specific maintenance requirements are included with the description of each technology.
4. Sediment removed during the maintenance of a dewatering device may be either spread onsite and stabilized, or disposed of at a disposal site.
5. Sediment that is commingled with other pollutants must be disposed of in accordance with all applicable laws and regulations.

ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Contractors will ensure that existing vegetation is preserved where attainable and that disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to temporary seeding, permanent seeding, mulching, geotextiles, sodding, tree protection, preservation of natural vegetation and other appropriate measures. All slopes shall be sodded or seeded with approved grass, grass mixtures or ground cover suitable to the area and season in which they are applied. Except as noted below, stabilization shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the activity has temporarily or permanently ceased. Refer to the 12 Oaks Village Regional Detention Pond construction plans for the Existing Conditions & Tree Survey, and the Erosion & Sedimentation Control Plan, respectively.

SECTION 6: PERMANENT STORMWATER SECTION (TCEQ-0600)

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(Ii), (E), and (5), Effective June 1, 1999

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

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

Signature

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

Print Name of Customer/Agent: Xavier Garza, P.E.

Date: 05/09/2023

Signature of Customer/Agent

Regulated Entity Name: 12 Oaks Village Regional Detention Pond

Permanent Best Management Practices (BMPs)

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

1. ☐ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

   ☑ N/A

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

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

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

☑ N/A

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

   ☑ N/A

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

   ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
   ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
   ☑ The site will not be used for low density single-family residential development.

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

   ☐ **Attachment A - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
   ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
   ☑ The site will not be used for multi-family residential developments, schools, or small business sites.

6. ☑ **Attachment B - BMPs for Upgradient Stormwater**.

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

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

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

7. ☐ **Attachment C - BMPs for On-site Stormwater**.

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

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

8. ☐ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☑ N/A

9. ☑ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☑ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☐ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☑ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☐ Design calculations (TSS removal calculations)

☑ TCEQ construction notes

☑ All geologic features

☐ All proposed structural BMP(s) plans and specifications

☐ N/A

11. ☐ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

    ☐ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☐ Signed by the owner or responsible party
    ☐ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    ☐ A discussion of record keeping procedures

    ☑ N/A

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

    ☑ N/A

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

    ☑ N/A

Responsibility for Maintenance of Permanent BMP(s)

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

14. ☐ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

    ☑ N/A

15. ☐ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

    ☑ N/A

ATTACHMENT B – BMPS FOR UPGRADIANT STORMWATER

The existing upgradient drainage patterns are west to east towards the existing tributary of the San Gabriel River. This tributary carries upgradient drainage through the site. The drainage is concentrated in the tributary while it flows through the site. The tributary enters the site on the south boundary and flows to the eastern boundary. The proposed development will not cause adverse impact on water quality of upgradient storm water flowing through the site.

ATTACHMENT C – BMPS FOR ON-SITE STORMWATER

No additional stormwater or pollution will be produced by the site. For this reason, no permanent water quality BMPs for on-site stormwater are required.

ATTACHMENT F – CONSTRUCTION PLANS

The 12 Oaks Village Regional Detention Pond plans are attached. Per Title 30, Texas Administrative Code § 213.3, the 12 Oaks Village Regional Detention Pond plan is proposing to preform construction-related regulated activity on the recharge zone of the Edwards Aquifer having the potential for polluting the Edwards Aquifer and hydrologically connected surface streams. Specifically, the project plan is to perform excavation activities that alter or disturb the topographic, geologic, or existing recharge characteristics of a site. There are no permanent water quality BMPs proposed with this site plan. Erosion and sedimentation controls will be provided during construction as temporary BMPs as specified in the construction plans.

SECTION 7: AGENT AUTHORIZATION FORM (TCEQ-0599)

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

I Thomas Mote,
Print Name

Sr. Vice President,
Title - Owner/President/Other

of 12 Oaks Village, LP,
Corporation/Partnership/Entity Name

have authorized Xavier Garza, P.E.
Print Name of Agent/Engineer

of HR Green
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

4/24/23
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Tom Mote known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 24 day of April, 2023.

CANDACE KUXHOUSE
My Notary ID # 133648392
Expires March 16, 2026

NOTARY PUBLIC

Candace Kuxhouse
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 3/16/2026

SECTION 8: APPLICATION FEE FORM (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: 12 Oaks Regional Detention Pond
Regulated Entity Location: Highway 29 W, LIBERTY HILL, TX 78642
Name of Customer: 12 Oaks Village, L.P.
Contact Person: Xavier Garza, P.E. Phone: 512.872.6696
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☑ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

☑ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☑ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***		***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	N/A	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	N/A	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	53.19	Acres	$ 8,000.00
Sewage Collection System	N/A	L.F.	$
Lift Stations without sewer lines	N/A	Acres	$
Underground or Aboveground Storage Tank Facility	N/A	Tanks	$
Piping System(s)(only)	N/A	Each	$
Exception	N/A	Each	$
Extension of Time	N/A	Each	$

Signature: Xavier Garza Date: 5/9/2023

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

SECTION 9: CORE DATA FORM (TCEQ-10400)

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN		**RN**

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy) 3/18/2021

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* *If new Customer, enter previous Customer below:*

12 Oaks Village, LP

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0803980717	32078317453		

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☒ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☐ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	8310 N CAPITAL OF TX HWY							
	STE 150							
	City	AUSTIN	**State**	TX	**ZIP**	78731	**ZIP + 4**	

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	tom@jwdevelopmentinc.com

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

(512) 901-9800		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

12 Oaks Village Regional Detetnion Pond

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	Ronald Regan Blvd and State Highway 29							
	City	Liberty Hill	**State**	TX	**ZIP**	78642	**ZIP + 4**	
24. County	Williamson							

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

25. Description to Physical Location:	Northeast at the intersectin of Ronald Regan Blvd and State Highway 29				
26. Nearest City			**State**	**Nearest ZIP Code**	
Liberty Hill			TX	78642	

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.638889		**28. Longitude (W) In Decimal:**	-97.819444	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	38	20	97	49	10

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
6552	6512	237210	236220

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

Land Developement

34. Mailing Address:	**8310 N CAPITAL OF TX HWY**							
	STE 150							
	City	**AUSTIN**	**State**	**TX**	**ZIP**	**78731**	**ZIP + 4**	
35. E-Mail Address:	**tom@jwdevelopmentinc.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 901-9800		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Xavier Garza, P.E.	**41. Title:**	Engineer

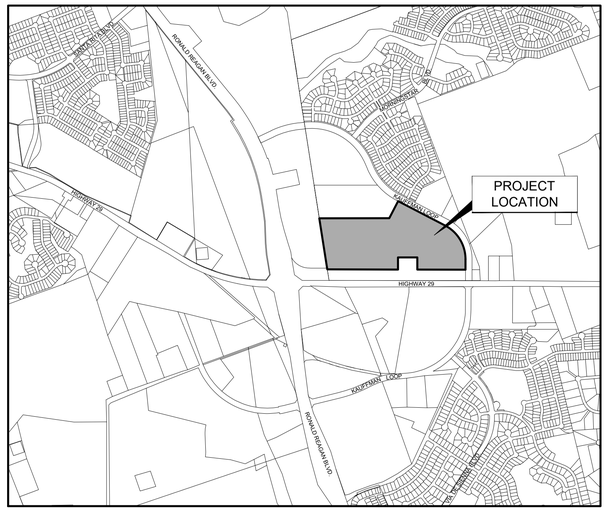
42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512 **)** 872-6696		**(** 713 **)** 965-0044	xavier.garza@hrgreen.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	HR Green	**Job Title:**	Engineer	
Name *(In Print):*	Xavier Garza		**Phone:**	**(** 512 **)** 872- **6696**
Signature:			**Date:**	5/9/2023

CONSTRUCTION PLANS FOR
12 OAKS VILLAGE
REGIONAL DETENTION POND
LIBERTY HILL, TEXAS 78642



VICINITY MAP
N.T.S.

FLOODPLAIN INFORMATION:

NO PORTION OF THIS TRACT IS WITHIN A FLOOD HAZARD AREA AS SHOWN ON THE FLOOD INSURANCE RATE MAP PANEL #48491C0275E, EFFECTIVE SEPTEMBER 26, 2008 , COMMUNITY: WILLIAMSON COUNTY.

BENCHMARK:

BENCHMARK LIST: NAVD 88 - OPUS

BM 1: SQUARE CUT ON TOP OF CURB ON THE NOSE OF THE MEDIAN AT KAUFFMAN LOOP AND S.H. HWY. 29, NORTH SIDE OF S.H. HWY. 29.
ELEVATION = 982.16'.

BM 23: SQUARE WITH CUT X ON NORTH CORNER OF A CONCRETE TRANSFORMER PAD LOCATED APPROXIMATELY 940 FEET NORTH OF S.H. 29 NORTH EDGE OF PAVEMENT AND APPROXIMATELY 90 FEET SOUTHWEST OF THE CENTER OF MEDIAN OF KAUFFMAN LOOP.
ELEVATION = 968.52'

GENERAL NOTES

1. UPON APPROVAL OF THESE CONSTRUCTION PLANS BY THE COMMISSIONERS COURT OF FILING AND SUBSEQUENT ACCEPTANCE OF MAINTENANCE OF STREETS BY THE CITY OF LIBERTY HILL, IT IS UNDERSTOOD THAT PLACEMENT OF ANY AND ALL TRAFFIC CONTROL DEVICES REQUIRING SIGNAGE SUCH AS STREET NAMES, SPEED LIMITS, STOP SIGNS, YIELD SIGNS, ETC, SHALL BE THE SOLE RESPONSIBILITY OF THE DEVELOPER UNDER THE DIRECTION OF THE COMMISSIONERS COURT AND/OR THE COUNTY ENGINEER.
2. THE CITY OF LIBERTY HILL ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE REPRESENTATIONS BY OTHER PARTIES IN THIS CONSTRUCTION PLAN. FLOODPLAIN DATA, IN PARTICULAR, MAY CHANGE DEPENDING ON SUBSEQUENT DEVELOPMENT.
3. ALL DRAINAGE EASEMENTS SHALL BE FREE OF CONSTRUCTION OR ANY TYPE OF OBSTRUCTION INCLUDING BUT NOT LIMITED TO BUILDINGS, FENCES, LANDSCAPING OR OTHER STRUCTURES, EXCEPT AS APPROVED BY THE CITY OF LIBERTY HILL.
4. PROPERTY OWNERS AND/OR HIS/HER ASSIGNS SHALL PROVIDE ACCESS TO DRAINAGE EASEMENTS AS MAY BE NECESSARY AND SHALL NOT PROHIBIT ACCESS BY THE CITY OF LIBERTY HILL.
5. ALL CORNER LOTS WITHIN THIS DEVELOPMENT MAY ACCESS ONLY ONE STREET AND MUST TAKE THEIR ACCESS FROM THE MINOR OF TWO STREETS.
6. ALL DRIVEWAYS IN THIS SUBDIVISION MUST BE CONSTRUCTED TO FACILITATE DRAINAGE ALONG THE ROW. THE DEVELOPER AND/OR PROPERTY OWNER SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF DRIVEWAYS IN ACCORDANCE WITH THE CITY OF LIBERTY HILL SPECIFICATIONS, WHICH MAY INCLUDE CULVERTS PIPE INSTALLATION. A PERMIT MUST BE OBTAINED FROM THE CITY OF LIBERTY HILL PRIOR TO THE CREATION OF A DRIVEWAY. ACCESS TO STATE HIGHWAYS IS REGULATED BY TXDOT AND THEREFORE MUST BE APPROVED AND CONSTRUCTED TO ITS STANDARDS.
7. PROPERTY IN THIS SUBDIVISION SHALL BE DEVELOPED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS INCLUDING, BUT NOT LIMITED TO: WILLIAMSON COUNTY 9-1-1 ADDRESSING ASSIGNMENT, DRIVEWAYS/CULVERT, DEVELOPMENT, FLOODPLAIN, ON-SITE SEWAGE FACILITY, AND LOST PINES HABITAT CONSERVATION PLAN. COUNTY PERMITS ARE OBTAINED AND ISSUED THROUGH THE THE CITY OF LIBERTY HILL DEVELOPMENT SERVICES DEPARTMENT.
8. THE OWNER OF THIS SUBDIVISION, AND HIS/HER SUCCESSORS AND ASSIGNS, ASSUMES RESPONSIBILITY FOR THE CONSTRUCTION OF SUBDIVISION IMPROVEMENTS WHICH COMPLY WITH APPLICABLE REGULATIONS AND REQUIMENTS OF THE CITY OF LIBERTY HILL. THE OWNER UNDERSTANDS AND ACKNOWLEDGES THAT PLAT VACATIONS OR RE-PLATTING MAY BE REQUIRED, AT THE OWNERS SOLE EXPENSE, IF PLANS TO CONSTRUCT THIS SUBDIVISION DO NOT COMPLY WITH SUCH REGULATIONS AND REQUIREMENTS.
9. IT IS UNDERSTOOD THAT ON APPROVAL OF THESE CONSTRUCTION PLANS BY THE COMMISSIONERS COURT OF THE CITY OF LIBERTY HILL TEXAS, THAT THE CONSTRUCTION OF ALL BRIDGES, CULVERTS STREETS, ROADS, AND OTHER PUBLIC THOROUGHFARES DELINEATED AND SHOWN ON THESE CONSTRUCTION PLANS, SHALL REMAIN THE RESPONSIBILITY OF THE OWNER AND/OR DEVELOPER OF THE TRACT OF LAND COVERED BY THESE CONSTRUCTION PLANS, IN ACCORDANCE WITH PLANS AND SPECIFICATIONS PRESCRIBED BY THE COMMISSIONERS COURT OF THE CITY OF LIBERTY HILL, TEXAS. THE COURT ASSUMES NO OBLIGATION TO CONSTRUCT ANY BRIDGES, CULVERTS, STREETS, ROADS, OR PUBLIC THOROUGHFARES SHOWN ON THESE CONSTRUCTION PLANS, OR OF CONSTRUCTING AND BRIDGES OR CULVERTS IN CONNECTION THEREWITH.
10. THE OWNER/DEVELOPER OF THE SUBDIVISION SHALL CONSTRUCT THE SUBDIVISION'S STREET AND DRAINAGE IMPROVEMENTS TO COUNTY STANDARDS IN ORDER FOR THE COUNTY TO ACCEPT THE PUBLIC IMPROVEMENTS FOR MAINTENANCE OR TO RELEASE FISCAL SECURITY POSTED TO SECURE PRIVATE IMPROVEMENTS. TO SECURE THIS OBLIGATION, THE OWNER(S) MUST POST FISCAL SECURITY WITH THE COUNTY IN THE AMOUNT OF THE ESTIMATED COST OF THE IMPROVEMENTS. THE OWNER(S) OBLIGATION TO CONSTRUCT THE IMPROVEMENTS TO COUNTY STANDARDS AND TO POST THE FISCAL SECURITY TO SECURE SUCH CONSTRUCTION IS A CONTINUING OBLIGATION BINDING ON THE OWNERS AND THEIR SUCCESSORS AND ASSIGNS UNTIL THE PUBLIC IMPROVEMENTS HAVE BEEN ACCEPTED FOR MAINTENANCE BY THE COUNTY, OF THE PRIVATE IMPROVEMENTS HAVE BEEN CONSTRUCTED AND ARE PERFORMING TO COUNTY STANDARDS.
11. APPROVAL OF THESE CONSTRUCTION PLANS BY THE COMMISSIONERS COURT OF THE CITY OF LIBERTY HILL, TEXAS, DOES NO CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE CONSTRUCTION PLANS HAS BEEN REVIEWED FOR COMPLIANCE OF REGULATIONS BY THE COUNTY ENGINEER AND/OR CONSTRUCTION PLANS REVIEW STAFF.
12. NEITHER APPROVAL OF SUBDIVISION CONSTRUCTION PLANS BY THE THE CITY OF LIBERTY HILL COMMISSIONERS COURT, NOR THE FILING/RECORDING OF AN APPROVED CONSTRUCTION PLANS CONSTITUTES ACCEPTANCES BY THE CITY OF LIBERTY HILL OF ANY DEDICATION OF THE ROADS/STREETS DEPICTED ON THE CONSTRUCTION PLANS. ONLY THE CITY OF LIBERTY HILL COMMISSIONERS COURT , ACTING AS A BODY, HAS THE AUTHORITY TO ACCEPT ROADS/STREETS INTO THE THE CITY OF LIBERTY HILL ROAD SYSTEM FOR COUNTY MAINTENANCE. INDIVIDUAL MEMBERS OF THE THE CITY OF LIBERTY HILL COMMISSIONERS COURT HAVE NO AUTHORITY TO BIND THE CITY OF LIBERTY HILL BY SEPARATE ACTION. UNTIL THE CITY OF LIBERTY HILL, THROUGH ITS COMMISSIONERS COURT, ACCEPTS A ROAD/STREET THAT HAS BEEN DEDICATED IN THE CONSTRUCTION PLANS, SAID ROAD/STREET IS NOT A COUNTY ROAD, AND IS NOT SUBJECT TO COUNTY MAINTENANCE.
13. NO ON-SITE WATER WELL MAY BE PLACED WITHIN 100' (50' IF ENCASED) OF AN ON-SITE SEWAGE DISPOSAL AREA, NOR CAN ANY ONSITE SEWAGE DISPOSAL AREA BE PLACED WITHIN 100' (50' IF ENCASED) OF AN ON-SITE WELL.
14. EACH LOT SHALL HAVE A 50' WATER WELL SETBACK ADJACENT TO PROPERTY LINES. PROPERTY OWNERS AND/ OR REGISTERED WATER WELL INSTALLERS ARE RESPONSIBLE TO DETERMINE APPROPRIATE LOCATIONS FOR SAME, IF NOT SPECIFIED HEREIN. FURTHER INFORMATION AND REGISTRATION OF ON-SITE WATER WELLS IS OBTAINED AND ISSUED THROUGH THE LOST PINES GROUNDWATER CONSERVATION DISTRICT.
15. NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO THE APPROVED WATER AND ELECTRIC DISTRIBUTION SYSTEMS AND WASTEWATER COLLECTION FACILITIES.
16. DRAINAGE EASEMENTS AND STORM WATER DETENTION FACILITIES SHALL BE MAINTAINED BY THE PROPERTY OWNER'S ASSOCIATION. MAINTENANCE SHALL CONSIST OF ESTABLISHING AND MAINTAINING REVEGETATION WITHIN THESE EASEMENTS AND MOWING EASEMENTS TWICE A YEAR. PROPERTY OWNER AND THEIR ASSIGNS SHALL PROVIDE ACCESS TO DRAINAGE EASEMENTS AS MAY BE NECESSARY AND SHALL NOT PROHIBIT ACCESS BY THE CITY OF LIBERTY HILL REPRESENTATIVES.
17. NO LOTS IN THIS SUBDIVISION SHALL BE RESUBDIVIDED.

REVISIONS / CORRECTIONS

NUMBER	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	SHEETS IN PLAN SET	CITY OF LIBERTY HILL APPROVAL	APPROVAL DATE

LEGAL DESCRIPTION

53.19 ACRES OF LAND IN THE GREENLEAF FISK SURVEY, ABSTRACT NO. 5, WILLIAMSON COUNTY, TEXAS; BEING A PORTION OF THAT CALLED 92.314 ACRE TRACT OF LAND DESCRIBED IN THE SPECIAL WARRANTY DEED WITH VENDOR'S LIEN TO 12 OAKS VILLAGE, LP OF RECORD IN DOCUMENT NO. 2021100741, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND CORRECTED IN THE CORRECTION AFFIDAVIT OF RECORD IN DOCUMENT NO. 2021195904, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

APPLICATION SUBMITTAL DATE:

JANUARY 2023

OWNER:

12 OAKS VILLAGE, L.P.
7801 N. CAPITAL OF TEXAS HWY,
SUITE 390
AUSTIN, TEXAS 78731

ENGINEER/SURVEYOR:

HRGreen.
DEVELOPMENT TX
TBPE NO: 16384 - TBPLS NO: 10194101
5508 HIGHWAY 290 WEST SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM

SHEET LIST TABLE

CERTIFICATE OF THE LICENSED ENGINEER

THE STATE OF TEXAS
COUNTY OF LIBERTY HILL

KNOW ALL MEN BY THESE PRESENTS

THAT, I XAVIER GARZA-ROBLEDO, P.E., DO HEREBY CERTIFY THAT THE INFORMATION CONTAINED ON THESE CONSTRUCTION PLANS COMPLIES WITH THE SUBDIVISION REGULATIONS FOR THE CITY OF LIBERTY HILL, TEXAS AND THAT THE 100 YEAR FLOODPLAIN IS AS SHOWN AND WILL BE CONTAINED WITHIN THE DRAINAGE EASEMENT AND OR DRAINAGE RIGHT-OF-WAY, AS SHOWN HEREON.

STATE OF TEXAS
XAVIER GARZA-ROBLEDO
135174
LICENSED
PROFESSIONAL ENGINEER

04/29/2023
DATE

XAVIER GARZA-ROBLEDO P.E.
HR GREEN
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TEXAS 78735
512 872-6696

APPROVED AND ACCEPTANCE:

CITY OF LIBERTY HILL DIRECTOR OF PLANNING

CITY OF LIBERTY HILL CITY ENGINEER
CURTIS R. STEGER, P.E.

BASED ON THE DESIGN ENGINEER'S CERTIFICATION OF COMPLIANCE WITH ALL APPLICABLE CITY, STATE, AND FEDERAL REGULATIONS, THE WASTEWATER PORTION OF THE PLANS AND SPECIFICATIONS CONTAINED HEREIN HAVE BEEN REVIEWED AND ARE FOUND TO BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE CITY OF LIBERTY HILL.

GEORGETOWN UTILITY SYSTEM

REVIEWED FOR COMPLIANCE WITH COUNTY REQUIREMENTS:

WILLIAMSON COUNTY

BASED ON THE DESIGN ENGINEER'S CERTIFICATION OF COMPLIANCE WITH ALL APPLICABLE CITY, STATE, AND FEDERAL REGULATIONS, THE WASTEWATER PORTION OF THE PLANS AND SPECIFICATIONS CONTAINED HEREIN HAVE BEEN REVIEWED AND ARE FOUND TO BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE CITY OF LIBERTY HILL.

NO.	BY	DATE
	REVISION	

811 Know what's below. Call before you dig.

HRGreen. DEVELOPMENT TX
5508 HIGHWAY 290 WEST
SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM
TBPE NO: 16384
TBPLS NO: 10194101

COVER SHEET

12 OAKS VILLAGE
REGIONAL DETENTION POND
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT. 1 OF 16

P:\New Growth\224302.002 - 12 Oaks Village Detention Pond\02_ACAD\10_Const Plans\COVER SHEET.dwg, CVR, April 28, 2023, 5:49 PM, cbarrett

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
ORGANIZED SEWAGE COLLECTION SYSTEM (SCS)
GENERAL CONSTRUCTION NOTES

1. THIS ORGANIZED SEWAGE COLLECTION SYSTEM MUST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES 30 TEXAS ADMINISTRATIVE CODE (TAC) §§213.5(C) AND 217.51 - 217.70 AND 30 TAC CHAPTER 217, SUBCHAPTER D, AND THE CITY OF LIBERTY HILL STANDARD SPECIFICATIONS.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SEWAGE COLLECTION SYSTEM PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS MUST BE REQUIRED TO KEEP ON-SITE COPIES OF THE PLAN AND THE APPROVAL LETTER.

3. NO LATER THAN 48 HOURS PRIOR TO COMMENCING ANY REGULATED ACTIVITY, THE APPLICANT OR HIS AGENT MUST NOTIFY THE REGIONAL OFFICE, IN WRITING, OF THE DATE ON WHICH THE REGULATED ACTIVITY WILL BEGIN.

4. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL.

5. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION, MUST BE MAINTAINED DURING CONSTRUCTION, AND MUST BE REMOVED WHEN SUFFICIENT VEGETATION IS ESTABLISHED TO CONTROL THE EROSION AND SEDIMENTATION AND THE CONSTRUCTION AREA IS STABILIZED.

6. THE SEWER LINE TRENCH DETAILS SHOWING THE CROSS SECTION WITH THE DIMENSIONS, PIPE PLACEMENT, AND BACKFILL INSTRUCTIONS ARE INCLUDED ON PLAN SHEET 30 OF 30 OF THESE PLANS. ALL SEWER PIPES JOINTS MUST MEET THE REQUIREMENTS IN 30 TAC §§217.53(C) AND 217.65. GRAVITY LINES MUST HAVE A SDR 26 OR LESS. PRESSURIZED SEWER SYSTEMS MUST HAVE PIPE WITH A MINIMUM WORKING PRESSURE RATING OF 150 PSI. THE ASTM, ANSI, OR AWWA SPECIFICATION NUMBERS FOR THE PIPE(S) AND JOINTS ARE ASTM D 3034 AND ASTM 2214. THE PIPE MATERIAL, THE PRESSURE CLASSES, AND THE SDR AND/OR DR DESIGNATIONS ARE SDR 26 PVC-160 PSI.

7. IF ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPLICANT MUST IMMEDIATELY NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY OF THE FEATURE DISCOVERED. A GEOLOGIST'S ASSESSMENT OF THE LOCATION AND EXTENT OF THE FEATURE DISCOVERED MUST BE REPORTED TO THAT REGIONAL OFFICE IN WRITING WITHIN TWO WORKING DAYS. THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.

8. SEWER LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF SIX (6) INCHES.

9. BLASTING PROCEDURES FOR PROTECTION OF EXISTING SEWER LINES AND OTHER UTILITIES WILL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION CRITERIA. SAND IS NOT ALLOWED AS BEDDING OR BACKFILL IN TRENCHES THAT HAVE BEEN BLASTED. IF ANY EXISTING SEWER LINES ARE DAMAGED, THE LINES MUST BE REPAIRED AND RETESTED.

10. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.

    THE DIAMETER OF THE MANHOLES MUST BE A MINIMUM OF FOUR FEET AND THE MANHOLE FOR ENTRY MUST HAVE A MINIMUM CLEAR OPENING DIAMETER OF 30 INCHES. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND SEWER LINE/MANHOLE INVERTS DESCRIBED IN 30 TAC §217.55 ARE INCLUDED ON PLAN SHEET 30 OF 30.

    IT IS SUGGESTED THAT ENTRANCE INTO MANHOLES IN EXCESS OF FOUR FEET DEEP BE ACCOMPLISHED BY MEANS OF A PORTABLE LADDER. THE INCLUSION OF STEPS IN A MANHOLE IS PROHIBITED.

11. WHERE WATER LINES AND NEW SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).

12. WHERE SEWERS LINES DEVIATE FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE ALL CURVATURE OF SEWER PIPE MUST BE ACHIEVED BY THE FOLLOWING PROCEDURE WHICH IS RECOMMENDED BY THE PIPE MANUFACTURER: ________________________
    IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE USED: ____________________________________

    SPECIFIC CARE MUST BE TAKEN TO ENSURE THAT THE JOINT IS PLACED IN THE CENTER OF THE TRENCH AND PROPERLY BEDDED IN ACCORDANCE WITH 30 TAC §217.54.

13. NEW SEWAGE COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH STUB OUTS FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH STUB OUTS MUST BE MARKED ON THE GROUND SUCH THAT THEIR LOCATION CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH STUB OUTS MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW STUB-OUTS MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE END OF THE STREET PAVEMENT. ALL STUB-OUTS MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING SEWER LINE NOT FURNISHED WITH STUB OUTS MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.

    IF NO STUB-OUT IS PRESENT AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE DETAIL ON PLAN SHEET __ OF __. (FOR POTENTIAL FUTURE LATERALS).

    THE PRIVATE SERVICE LATERAL STUB-OUTS MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS ON PLAN SHEET __ OF __ AND MARKED AFTER BACKFILLING AS SHOWN IN THE DETAIL ON PLAN SHEET __ OF __.

14. TRENCHING, BEDDING AND BACKFILL MUST CONFORM WITH 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B OR C.

15. SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN-OUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN-OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)(3)(E).

16. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS WHICH MUST BE MADE AVAILABLE TO THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER LINES HAVE PASSED ALL REQUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO USE OF THE NEW COLLECTION SYSTEM. TESTING METHOD WILL BE:

    (A) FOR A COLLECTION SYSTEM PIPE THAT WILL TRANSPORT WASTEWATER BY GRAVITY FLOW, THE DESIGN MUST SPECIFY AN INFILTRATION AND EXFILTRATION TEST OR A LOW-PRESSURE AIR TEST. A TEST MUST CONFORM TO THE FOLLOWING REQUIREMENTS:

(1) LOW PRESSURE AIR TEST.

(A) LOW PRESSURE AIR TEST MUST FOLLOW THE PROCEDURES DESCRIBED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) C-828, ASTM C-924, OR ASTM F-1417 OR OTHER PROCEDURE APPROVED BY THE EXECUTIVE DIRECTOR, EXCEPT AS TO TESTING TIMES AS REQUIRED IN TABLE C.3 IN SUBPARAGRAPH (C) OF THIS PARAGRAPH OR EQUATION C.3 IN SUBPARAGRAPH (B)(II) OF THIS PARAGRAPH.

(B) FOR SECTIONS OF COLLECTION SYSTEM PIPE LESS THAN 36 INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY, UNLESS A PIPE IS TO BE TESTED AS REQUIRED BY PARAGRAPH (2) OF THIS SUBSECTION.

(I) A PIPE MUST BE PRESSURIZED TO 3.5 POUNDS PER SQUARE INCH (PSI) GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE.

(II) ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 PSI GAUGE TO 2.5 PSI GAUGE IS COMPUTED FROM THE FOLLOWING EQUATION:

EQUATION C.3

$$T = \frac{0.085 \times D \times K}{Q}$$

WHERE:

T = TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE IN SECONDS
K = 0.000419 X D X L, BUT NOT LESS THAN 1.0
D = AVERAGE INSIDE PIPE DIAMETER IN INCHES
L = LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET
Q = RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE

(C) SINCE A K VALUE OF LESS THAN 1.0 MAY NOT BE USED, THE MINIMUM TESTING TIME FOR EACH PIPE DIAMETER IS SHOWN IN THE FOLLOWING TABLE C.3:

(A) AN OWNER MAY STOP A TEST IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME.

(E) IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF A TESTING PERIOD, THEN THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE.

(F) WASTEWATER COLLECTION SYSTEM PIPES WITH A 27 INCH OR LARGER AVERAGE INSIDE DIAMETER MAY BE AIR TESTED AT EACH JOINT INSTEAD OF FOLLOWING THE PROCEDURE OUTLINED IN THIS SECTION.

(G) A TESTING PROCEDURE FOR PIPE WITH AN INSIDE DIAMETER GREATER THAN 33 INCHES MUST BE APPROVED BY THE EXECUTIVE DIRECTOR.

(2) INFILTRATION/EXFILTRATION TEST.

(A) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF 2.0 FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE.

(B) AN OWNER SHALL USE AN INFILTRATION TEST IN LIEU OF AN EXFILTRATION TEST WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL.

(C) THE TOTAL EXFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO FEET ABOVE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER.

(D) FOR CONSTRUCTION WITHIN A 25-YEAR FLOOD PLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD AS IN SUBPARGRAPH (C) OF THIS PARAGRAPH.

(E) IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, AN OWNER SHALL UNDERTAKE REMEDIAL ACTION IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED. AN OWNER SHALL RETEST A PIPE FOLLOWING A REMEDIATION ACTION.

(B) IF A GRAVITY COLLECTION PIPE IS COMPOSED OF FLEXIBLE PIPE, DEFLECTION TESTING IS ALSO REQUIRED. THE FOLLOWING PROCEDURES MUST BE FOLLOWED:

(1) FOR A COLLECTION PIPE WITH INSIDE DIAMETER LESS THAN 27 INCHES, DEFLECTION MEASUREMENT REQUIRES A RIGID MANDREL.

(A) MANDREL SIZING.

(I) A RIGID MANDREL MUST HAVE AN OUTSIDE DIAMETER (OD) NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER (ID) OR AVERAGE ID OF A PIPE, AS SPECIFIED IN THE APPROPRIATE STANDARD BY THE ASTMS, AMERICAN WATER WORKS ASSOCIATION, UNI-BELL, OR AMERICAN NATIONAL STANDARDS INSTITUTE, OR ANY RELATED APPENDIX.

(II) IF A MANDREL SIZING DIAMETER IS NOT SPECIFIED IN THE APPROPRIATE STANDARD, THE MANDREL MUST HAVE AN OD EQUAL TO 95% OF THE ID OF A PIPE. IN THIS CASE, THE ID OF THE PIPE, FOR THE PURPOSE OF DETERMINING THE OD OF THE MANDREL, MUST EQUAL BE THE AVERAGE OUTSIDE DIAMETER MINUS TWO MINIMUM WALL THICKNESSES FOR OD CONTROLLED PIPE AND THE AVERAGE INSIDE DIAMETER FOR ID CONTROLLED PIPE.

(III) ALL DIMENSIONS MUST MEET THE APPROPRIATE STANDARD.

(B) MANDREL DESIGN.

(I) A RIGID MANDREL MUST BE CONSTRUCTED OF A METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200 PSI WITHOUT BEING DEFORMED.

(II) A MANDREL MUST HAVE NINE OR MORE ODD NUMBER OF RUNNERS OR LEGS.

(III) A BARREL SECTION LENGTH MUST EQUAL AT LEAST 75% OF THE INSIDE DIAMETER OF A PIPE.

(IV) EACH SIZE MANDREL MUST USE A SEPARATE PROVING RING.

(C) METHOD OPTIONS.

(I) AN ADJUSTABLE OR FLEXIBLE MANDREL IS PROHIBITED.

(II) A TEST MAY NOT USE TELEVISION INSPECTION AS A SUBSTITUTE FOR A DEFLECTION TEST.

(III) IF REQUESTED, THE EXECUTIVE DIRECTOR MAY APPROVE THE USE OF A DEFLECTOMETER OR A MANDREL WITH REMOVABLE LEGS OR RUNNERS ON A CASE-BY-CASE BASIS.

(2) FOR A GRAVITY COLLECTION SYSTEM PIPE WITH AN INSIDE DIAMETER 27 INCHES AND GREATER, OTHER TEST METHODS MAY BE USED TO DETERMINE VERTICAL DEFLECTION.

(3) A DEFLECTION TEST METHOD MUST BE ACCURATE TO WITHIN PLUS OR MINUS 0.2% DEFLECTION.

(4) AN OWNER SHALL NOT CONDUCT A DEFLECTION TEST UNTIL AT LEAST 30 DAYS AFTER THE FINAL BACKFILL.

(5) GRAVITY COLLECTION SYSTEM PIPE DEFLECTION MUST NOT EXCEED FIVE PERCENT (5%).

(6) IF A PIPE SECTION FAILS A DEFLECTION TEST, AN OWNER SHALL CORRECT THE PROBLEM AND CONDUCT A SECOND TEST AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

Pipe Diameter *(inches)*	Minimum Time *(seconds)*	Maximum Length for Minimum Time *(feet)*	Time for Longer Length *(seconds/foot)*
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

17. ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC §217.58.

(A) ALL MANHOLES MUST PASS A LEAKAGE TEST.

(B) AN OWNER SHALL TEST EACH MANHOLE (AFTER ASSEMBLY AND BACKFILLING) FOR LEAKAGE, SEPARATE AND INDEPENDENT OF THE COLLECTION SYSTEM PIPES, BY HYDROSTATIC EXFILTRATION TESTING, VACUUM TESTING, OR OTHER METHOD APPROVED BY THE EXECUTIVE DIRECTOR.

(1) HYDROSTATIC TESTING.

(A) THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING OR ANY ALTERNATIVE TEST METHODS IS 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR.

(B) TO PERFORM A HYDROSTATIC EXFILTRATION TEST, AN OWNER SHALL SEAL ALL WASTEWATER PIPES COMING INTO A MANHOLE WITH AN INTERNAL PIPE PLUG, FILL THE MANHOLE WITH WATER, AND MAINTAIN THE TEST FOR AT LEAST ONE HOUR.

(C) A TEST FOR CONCRETE MANHOLES MAY USE A 24-HOUR WETTING PERIOD BEFORE TESTING TO ALLOW SATURATION OF THE CONCRETE.

(2) VACUUM TESTING.

(A) TO PERFORM A VACUUM TEST, AN OWNER SHALL PLUG ALL LIFT HOLES AND EXTERIOR JOINTS WITH A NON-SHRINK GROUT AND PLUG ALL PIPES ENTERING A MANHOLE.

(B) NO GROUT MUST BE PLACED IN HORIZONTAL JOINTS BEFORE TESTING.

C) STUB-OUTS, MANHOLE BOOTS, AND PIPE PLUGS MUST BE SECURED TO PREVENT MOVEMENT WHILE A VACUUM IS DRAWN.

(D) AN OWNER SHALL USE A MINIMUM 60 INCH/LB TORQUE WRENCH TO TIGHTEN THE EXTERNAL CLAMPS THAT SECURE A TEST COVER TO THE TOP OF A MANHOLE.

(E) A TEST HEAD MUST BE PLACED AT THE INSIDE OF THE TOP OF A CONE SECTION, AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

(F) THERE MUST BE A VACUUM OF 10 INCHES OF MERCURY INSIDE A MANHOLE TO PERFORM A VALID TEST.

(G) A TEST DOES NOT BEGIN UNTIL AFTER THE VACUUM PUMP IS OFF.

(H) A MANHOLE PASSES THE TEST IF AFTER 2.0 MINUTES AND WITH ALL VALVES CLOSED, THE VACUUM IS AT LEAST 9.0 INCHES OF MERCURY.

18. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

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

1. WRITTEN CONSTRUCTION NOTIFICATION MUST BE GIVEN TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION MUST INCLUDE THE DATE ON WHICH THE REGULATED ACTIVITY WILL COMMENCE, THE NAME OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR AND THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.

3. IF ANY SENSITIVE FEATURE IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.

4. NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM IS INSTALLED WITHIN 150 FEET OF A DOMESTIC, INDUSTRIAL, IRRIGATION, OR PUBLIC WATER SUPPLY WELL, OR OTHER SENSITIVE FEATURE.

5. PRIOR TO COMMENCEMENT OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE TEMPORARY STORM WATER SECTION OF THE APPROVED EDWARDS AQUIFER PROTECTION PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.

6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS TO WATER QUALITY (E.G., FUGITIVE SEDIMENT IN STREET BEING WASHED INTO SURFACE STREAMS OR SENSITIVE FEATURES BY THE NEXT RAIN).

7. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS NOT LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME.

8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES (E.G., SCREENING OUTFALLS, PICKED UP DAILY).

9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.

10. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARY OR PERMANENTLY CEASE IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE. IN AREAS EXPERIENCING DROUGHTS WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SEASONAL ARID CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.

11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:

    A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;

    B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;

    C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

IMPERVIOUS COVER ASSUMPTIONS
LOTS <10K SQ FT= 3500 SQ FT
LOTS >10K SQ FT= 4000 SQ FT

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY STANDARD SPECIFICATIONS MANUAL.

2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT HIS EXPENSE.

3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS ARE APPROPRIATE.

4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.

5. THE CONTRACTOR SHALL GIVE THE CITY 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE 218-5555 (ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT).

6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.

7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY , HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.

8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT PRIOR TO FINAL ACCEPTANCE.

9. THE ROUND ROCK CITY COUNCIL SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.

10. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.

11. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.

12. AVAILABLE BENCHMARKS (CITY DATUM) THAT MAY BE UTILIZED FOR THE CONSTRUCTION OF THIS PROJECT ARE DESCRIBED AS FOLLOWS:

13. MAXIMUM OF 80% IMPERVIOUS COVER PER LOT, OTHERWISE STORMWATER MANAGEMENT CONTROLS SHALL BE DESIGNED, CONSTRUCTED AND MAINTAINED BY OWNER. IF IMPERVIOUS COVER IS PROPOSED TO EXCEED MAXIMUM PERCENTAGE ALLOWED, CONTACT WILLIAMSON COUNTY FLOODPLAIN ADMINISTRATION TO REVIEW THE STORMWATER MANAGEMENT CONTROLS PROPOSED ON LOT.

14. A FLOODPLAIN DEVELOPMENT PERMIT MAY BE REQUIRED FOR BLOCK A LOT 2 PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT. THE NEED FOR A FLOODPLAIN DEVELOPMENT PERMIT WILL BE DETERMINED BY WLLIAMSON COUNTY UPON REVIEW OF THE PROPOSED STRUCTURE LOCATION.

15. THE MINIMUM FINISHED FLOOR ELEVATIONS (FFE) FOR LOTS SHOWN ON THIS PLAT ARE DETERMINED BY A STUDY PREPARED BY HR GREEN, LLC, DATED MARCH 9, 2023.

16. FLOODPLAIN INFORMATION, SUCH AS FLOODPLAIN BOUNDARIES, DEPTHS, ELEVATIONS, AND THE MINIMUM FINISHED FLOOR ELEVATIONS SHOWN ON THIS PLAT, WILL CHANGE OVER TIME WITH BETTER DATA AND FLOOD STUDIES. THE FLOODPLAIN INFORMATION SHOWN ON THIS PLAT WAS ACCURATE AT THE TIME OF PLATTING, BUT MAY BE SUPERSEDED AT THE TIME OF CONSTRUCTION. THE BEST AVAILABLE FLOODPLAIN DATA SHALL BE UTILIZED AT THE TIME OF CONSTRUCTION, AS DETERMINED BY THE WILLIAMSON COUNTY FLOODPLAIN ADMINISTRATOR. A FLOODPLAIN DEVELOPMENT PERMIT APPLICATION MUST BE SUBMITTED AND APPROVED PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT WITHIN OR ADJACENT TO A REGULATED FLOODPLAIN.

17. DETENTION IS PROVIDED BY DETENTION POND LOCATED ON LOT 2 BLOCK A, AND IN ACCORDANCE WITH THE TERMS OF THE DEVELOPMENT AGREEMENT BETWEEN 12 OAKS VILLAGE, LP, KAUFFMAN MULTIFAMILY PARTNERS, LLC, AND WILLIAMSON COUNTY DATED, OCTOBER 5TH, 2022.

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT (WILL BE PROVIDED BY THE CONTRACTOR; ARE ON SHEET _______, ETC.).

2. IN ACCORDANCE WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4-FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.

3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY .

STREET AND DRAINAGE NOTES:

1. ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING. TELEPHONE (512) 778-5449 (INSPECTIONS).

2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.

3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.

4. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT.

5. BARRICADES BUILT TO CITY STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.

6. ALL R.C.P. SHALL BE MINIMUM CLASS III.

7. THE SUBGRADE MATERIAL FOR THE STREETS SHOWN HEREIN WAS TESTED BY MLA LABS AND THE PAVING SECTIONS DESIGNED IN ACCORDANCE WITH THE CURRENT CITY DESIGN CRITERIA. THE PAVING SECTIONS ARE TO BE CONSTRUCTED AS FOLLOWS:

Street Classification	Subgrade Material	Hot Mix Asphaltic Concrete, in	Crushed Limestone Base, in	Low Plasticity Sub-Base, In	Lime Stabilized Subgrade, in
Local Streets	Subgrade PI greater than 20	2.0	12	-	-
	Subgrade PI greater than 20	2.0	8	-	8
	Subgrade PI greater than 20	2.0	8	18	-
	Subgrade PI less than 20	2.0	8	-	-
Residential Collectors	Subgrade PI greater than 20	2.0	15	-	-
	Subgrade PI greater than 20	2.0	10	-	8
	Subgrade PI greater than 20	2.0	10	18	-
	Subgrade PI less than 20	2.0	10	-	-
Neighbor-hood Collectors	Subgrade PI greater than 20	2.0	21	-	-
	Subgrade PI greater than 20	2.0	14	-	8
	Subgrade PI greater than 20	2.0	14	18	-
	Subgrade PI less than 20	2.0	14	-	-
Primary Collector 4-Lane	Subgrade PI greater than 20	4.5	20	-	-
	Subgrade PI greater than 20	4.5	12	-	10
	Subgrade PI greater than 20	4.5	12	18	-
	Subgrade PI less than 20	4.5	12	-	-

THE GEOTECHNICAL ENGINEER SHALL INSPECT THE SUBGRADE FOR COMPLIANCE WITH THE DESIGN ASSUMPTIONS MADE DURING PREPARATION OF THE SOILS REPORT. ANY ADJUSTMENTS THAT ARE REQUIRED SHALL BE MADE THROUGH REVISION OF THE CONSTRUCTION PLANS.

8. WHERE PI'S ARE OVER 20, SUBGRADES MUST BE STABILIZED UTILIZING A METHOD ACCEPTABLE TO THE CITY ENGINEER. THE GEOTECHNICAL ENGINEER SHALL RECOMMEND AN APPROPRIATE SUBGRADE STABILIZATION IF SULFATES ARE DETERMINED TO BE PRESENT.

WATER AND WASTEWATER NOTES:

1. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 200), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9).

2. PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 150), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241 OR D3034, MAX. DR-26), DUCTILE IRON (AWWA C-100, MIN. CLASS 200).

3. UNLESS OTHERWISE ACCEPTED BY THE CITY ENGINEER, DEPTH OF COVER FOR ALL LINES OUT OF THE PAVEMENT SHALL BE 42" MIN., AND DEPTH OF COVER FOR ALL LINES UNDER PAVEMENT SHALL BE A MIN. OF 30" BELOW SUBGRADE.

4. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200).

5. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE AND SEALED WITH DUCT TAPE OR EQUAL ACCEPTED BY THE CITY ENGINEER.

6. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR AT (512) 778-5449 TO COORDINATE UTILITY TIE-INS AND NOTIFY HIM AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING LINES.

7. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF THE PAVEMENT SHALL HAVE BOLTED COVERS. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE ALLOWED.

8. THE CONTRACTOR MUST OBTAIN A BULK WATER PERMIT OR PURCHASE AND INSTALL A WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO USE WATER.

9. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE SCHEDULED WITH THE WATER & WASTEWATER SUPERINTENDENT, TELEPHONE (512) 778-5449

10. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM STERILIZATION OF ALL POTABLE WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING TEST GAUGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTING MATERIAL), AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY CITY PERSONNEL. WATER SAMPLES WILL BE COLLECTED BY THE CITY TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM. WHERE MEANS OF FLUSHING IS NECESSARY, THE CONTRACTOR, AT HIS EXPENSE, SHALL PROVIDE FLUSHING DEVICES AND REMOVE SAID DEVICES PRIOR TO FINAL ACCEPTANCE BY THE CITY .

11. SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTOR'S REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE CITY. THE CONTRACTOR SHALL SUPPLY A CHECK OR MONEY ORDER, PAYABLE TO THE CITY , TO COVER THE FEE CHARGED FOR TESTING EACH WATER SAMPLE. CITY FEE AMOUNTS MAY BE OBTAINED BY CALLING THE ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT AT (512) 778-5449.

12. 12 THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY CITY PERSONNEL.

13. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY OF INSPECTOR AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.

14. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY .

15. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.

16. ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:
    WATER SERVICE "W" ON TOP OF CURB
    WASTEWATER SERVICE "S" ON TOP OF CURB
    VALVE "V" ON FACE OF CURB

    TOOLS FOR MARKING THE CURB SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF MARKING SHALL BE AS SPECIFIED BY THE ENGINEER AND ACCEPTED BY THE CITY .

17. CONTACT CITY ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT AT 218-5555 FOR ASSISTANCE IN OBTAINING EXISTING WATER AND WASTEWATER LOCATIONS.

18. THE CITY FIRE DEPARTMENT SHALL BE NOTIFIED 48 HOURS PRIOR TO TESTING OF ANY BUILDING SPRINKLER PIPING IN ORDER THAT THE FIRE DEPARTMENT MAY MONITOR SUCH TESTING.

19. SAND, AS DESCRIBED IN SPECIFICATION ITEM 510 PIPE, SHALL NOT BE USED AS BEDDING FOR WATER AND WASTEWATER LINES. ACCEPTABLE BEDDING MATERIALS ARE PIPE BEDDING STONE, PEA GRAVEL AND IN LIEU OF SAND, A NATURALLY OCCURRING OR MANUFACTURED STONE MATERIAL CONFORMING TO ASTM C33 FOR STONE QUALITY AND MEETING THE FOLLOWING GRADATION SPECIFICATION:

20. SIEVE SIZE PERCENT RETAINED BY WEIGHT

1/2"	0
3/8"	0-2
#4	40-85
#10	95-100

21. THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING UTILITY LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 A.M. AND 6 P.M.

22. ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 317, AS APPLICABLE. WHENEVER TCEQ AND CITY SPECIFICATIONS CONFLICT, THE MORE STRINGENT SHALL APPLY.

TRAFFIC MARKING NOTES:

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.

2. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY EROSION AND SEDIMENTATION CONTROL ORDINANCE.

2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.

3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.

4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.

5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

CITY OF GEORGETOWN UTILITY SYSTEM

WATER NOTES:

1. THESE WATER SYSTEM PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE, AND FEDERAL REQUIREMENTS AND CODES.

2. THIS WATER PROJECT IS SUBJECT TO ALL CITY STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.

3. THAT THE PUBLIC WATER SYSTEM MAINS SHALL BE 150 PSI C900 PVC AND TESTED BY THE CONTRACTOR AT 150 PSI FOR 4 HOURS.

4. ALL BENDS AND CHANGES IN DIRECTION ON WATER MAINS SHALL BE RESTRAINED AND THRUST BLOCKED ACCORDING TO CITY DETAILS.

5. LONG FIRE HYDRANT LEADS SHALL BE RESTRAINED.

6. ALL WATER LINES SHALL BE BACTERIA TESTED BY THE CONTRACTOR ACCORDING TO THE CITY STANDARDS AND SPECIFICATIONS.

7. WATER AND WASTEWATER MAIN CROSSINGS SHALL MEET ALL REQUIREMENTS OF THE TCEQ AND THE CITY.

WILLIAMSON COUNTY EMERGENCY SERVICE DISTRICT No. 4
LIBERTY HILL FIRE DEPARTMENT

(2) SECTION C105.2 INSTALLATION.

FIRE HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FIVE (5) INCH STEAMER OPENING AT LEAST 18 INCHES ABOVE FINISHED GRADE. THE FIVE (5) INCH OPENING MUST FACE THE DRIVEWAY OR STREET AND MUST BE TOTALLY UNOBSTRUCTED TO THE STREET. FIRE HYDRANT DESIGN SHALL BE 2- 2.5" NST OUTLETS, 1 - 5.0" STORZ CONNECTION WITH A CAP TO INCLUDE A HEX NUT TO FIT A HYDRANT WRENCH ALONG WITH A REFLECTIVE BAND. THE FIRE HYDRANT SHALL BE PAINTED SILVER IN COLOR AND DESIGNATED BY A BLUE REFLECTOR IN THE CENTER OF THE STREET.

NO.	REVISION	BY	DATE

811
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HRGreen®
DEVELOPMENT TX

Xavier Garza
STATE OF TEXAS
XAVIER GARZA-ROBLEDO
135174
LICENSED PROFESSIONAL ENGINEER
04/29/2023

GENERAL NOTES

12 OAKS VILLAGE REGIONAL DETENTION POND CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT. 2 OF 16

FINAL PLAT
12 OAKS VILLAGE

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

OWNER: 12 OAKS VILLAGE, L.P.
7801 N. CAPITAL OF TEXAS HWY,
SUITE 390
AUSTIN, TEXAS 78731

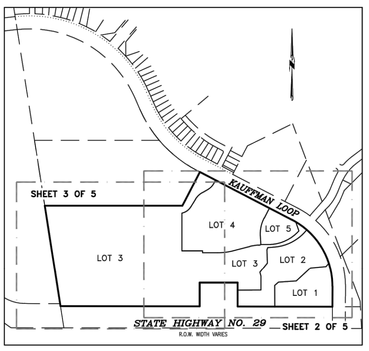
SURVEYOR: ERNESTO NAVARRETE, R.P.L.S.
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 6642 – STATE OF TEXAS
HR GREEN DEVELOPMENT TX, LLC
5508 HWY 290 WEST, SUITE 150
AUSTIN, TEXAS 78735
512.872.6696
ERNESTO.NAVARRETE@HRGREEN.COM
TBPLS FIRM NO. 10194101

ENGINEER: JUDD T. WILLMANN, P.E.
REGISTERED PROFESSIONAL ENGINEER
NO. 90356– STATE OF TEXAS
HR GREEN DEVELOPMENT TX, LLC
5508 HWY 290 WEST, SUITE 150
AUSTIN, TEXAS 78735
512.872.6696
JUDD.WILLMANN@HRGREEN.COM
TBPE FIRM NO. F–16384

SURVEY: GREENLEAF FISK SURVEY, ABSTRACT NO. 5

ACREAGE: 53.19 ACRES
NUMBER OF BLOCKS: 1
LINEAR FEET OF NEW STREET: 0'
NUMBER OF LOTS: 5
PATENT SURVEY: GREENLEAF FISK SURVEY, ABST. A–5

VICINITY MAP
1" = 3000'



SHEET INDEX
N.T.S.

SHEET INDEX
1. COVER SHEET & SHEET INDEX
2. PLAT
3. PLAT
4. METES AND BOUNDS & LINE AND CURVE TABLES
5. GENERAL NOTES / SIGNATURE BLOCKS

STREET INDEX
NO NEW STREETS

NOTES:

1. BEARING BASIS IS TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NAD83(2011), GRID.
2. DISTANCES SHOWN HEREON ARE BASED ON SURFACE MEASUREMENTS, TO CONVERT SURFACE DISTANCES TO GRID, MULTIPLY BY THE COMBINED SCALE FACTOR.
3. THE COMBINED SCALE FACTOR FOR THIS PROJECT IS 0.9998532817.
4. COORDINATES SHOWN HEREON ARE TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NAD83(2011), GRID.

BENCHMARK: NAVD88 – OPUS

BM 1: SQUARE CUT ON TOP OF CURB ON THE NOSE OF THE MEDIAN AT KAUFFMAN LOOP AND S.H. HWY. 29, NORTH SIDE OF S.H. HWY. 29. ELEVATION = 982.16'.

BM 23: SQUARE WITH CUT X ON NORTH CORNER OF A CONCRETE TRANSFORMER PAD LOCATED APPROXIMATELY 940 FEET NORTH OF S.H. 29 NORTH EDGE OF PAVEMENT AND APPROXIMATELY 90 FEET SOUTHWEST OF THE CENTER OF MEDIAN OF KAUFFMAN LOOP. ELEVATION = 968.52'

NOTES:

THE FOLLOWING DOCUMENTS OF RECORD AFFECT THE SUBJECT TRACT AS SHOWN HEREON:

TERMS, CONDITIONS, AND STIPULATIONS IN THE DEVELOPMENT AGREEMENT AS RECORDED IN DOCUMENT NUMBER 2006035818, OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

TERMS, CONDITIONS, AND STIPULATIONS IN THE PETITION FOR CREATION OF A MUNICIPAL UTILITY DISTRICT, AS RECORDED IN DOCUMENT NUMBER 2006096636, OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

ACCESS EASEMENT AGREEMENT, BY INSTRUMENT DATED 7/2/2021, RECORDED IN/UNDER DOCUMENT NO. 2021100747, OF THE OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.

ALL TERMS, CONDITIONS AND PROVISIONS OF THAT CERTAIN MEMORANDUM OF DEVELOPMENT AGREEMENT, DATED 7/2/2021, FILED 7/6/2021, RECORDED IN/UNDER DOCUMENT NO. 2021100749, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.

SUBMITTED: _____ OCTOBER 04, 2022

CITY PROJECT NUMBER 2022–_–_

FILE No: 1386

No:	REVISION:	BY:	DATE:
	PLAT PREPARATION DATE		SEPTEMBER, 2022
	APPLICATION SUBMITTAL DATE		
1	CITY COMMENTS	M.B.	12–20–22
2	ACCESS EASEMENT ADDED	M.B.	01–05–23
3	STAFF REVIEW COMMENTS	M.B.	02–16–23

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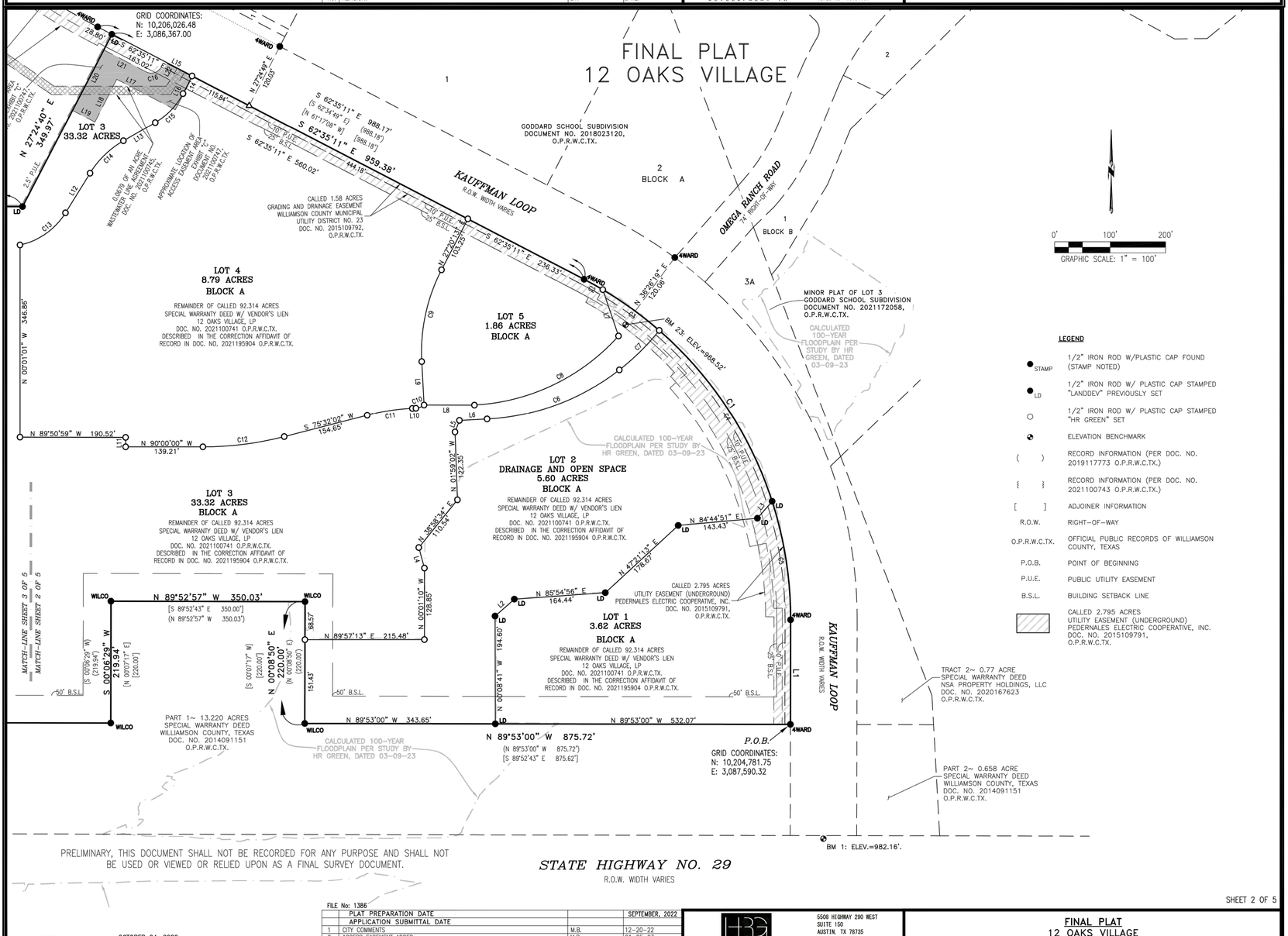
FINAL PLAT
12 OAKS VILLAGE
GREENLEAF FISK SURVEY, A–5
WILLIAMSON COUNTY, TEXAS



PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

STATE HIGHWAY NO. 29
R.O.W. WIDTH VARIES

SUBMITTED: _____ OCTOBER 04, 2022

CITY PROJECT NUMBER 2022–_–_

FILE No: 1386

No:	REVISION:	BY:	DATE:
	PLAT PREPARATION DATE		SEPTEMBER, 2022
	APPLICATION SUBMITTAL DATE		
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3	STAFF REVIEW COMMENTS	M.B.	02–16–23

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FINAL PLAT
12 OAKS VILLAGE
GREENLEAF FISK SURVEY, A–5
WILLIAMSON COUNTY, TEXAS

FINAL PLAT
12 OAKS VILLAGE

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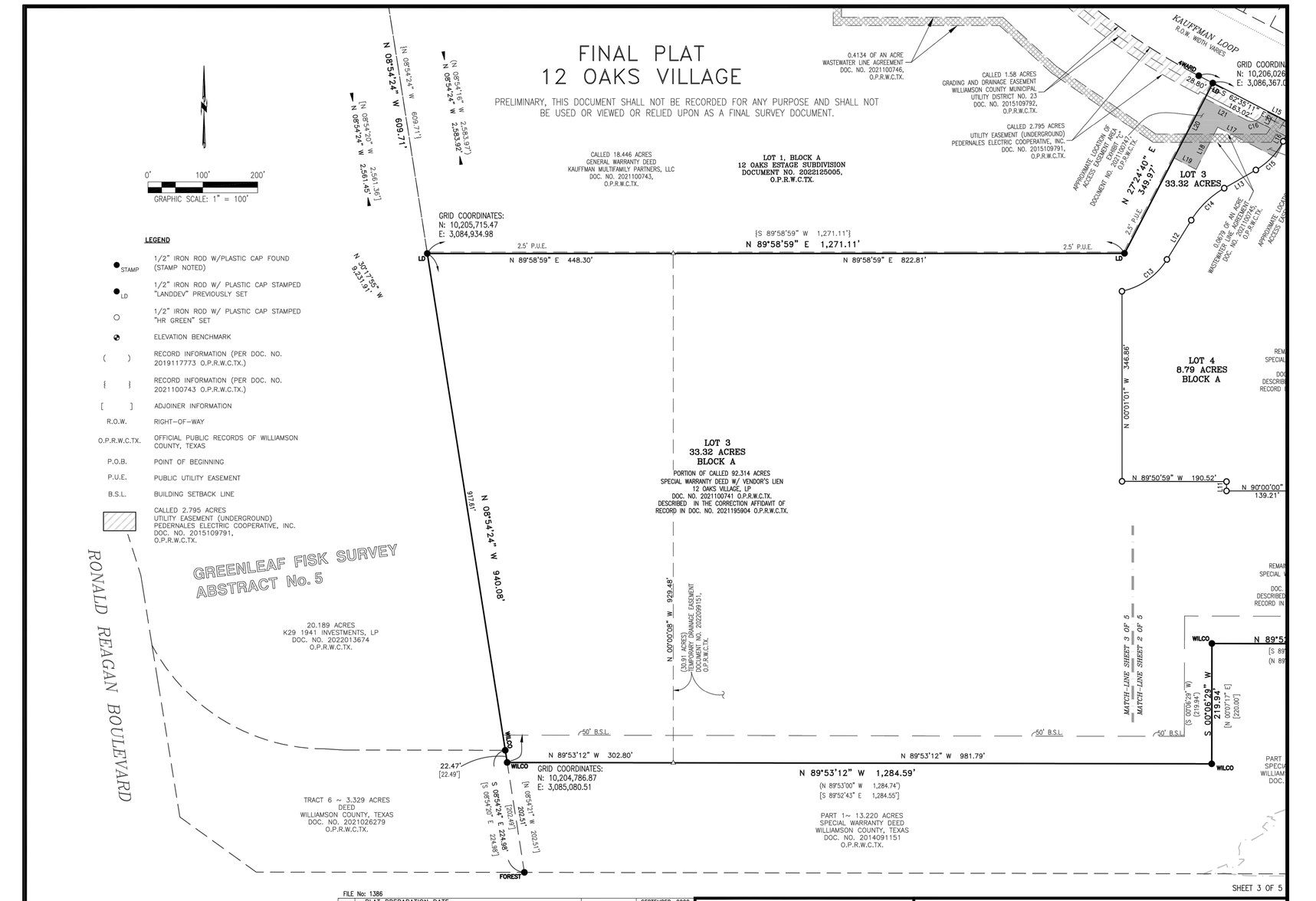

LEGEND

- ● STAMP — 1/2" IRON ROD W/PLASTIC CAP FOUND (STAMP NOTED)
- ● LD — 1/2" IRON ROD W/ PLASTIC CAP STAMPED "LANDDEV" PREVIOUSLY SET
- ○ — 1/2" IRON ROD W/ PLASTIC CAP STAMPED "HR GREEN" SET
- ◆ — ELEVATION BENCHMARK
- ( ) — RECORD INFORMATION (PER DOC. NO. 2019117773 O.P.R.W.C.TX.)
- { } — RECORD INFORMATION (PER DOC. NO. 2021100743 O.P.R.W.C.TX.)
- [ ] — ADJOINER INFORMATION
- R.O.W. — RIGHT-OF-WAY
- O.P.R.W.C.TX. — OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
- P.O.B. — POINT OF BEGINNING
- P.U.E. — PUBLIC UTILITY EASEMENT
- B.S.L. — BUILDING SETBACK LINE
- CALLED 2.795 ACRES UTILITY EASEMENT (UNDERGROUND) PEDERNALES ELECTRIC COOPERATIVE, INC. DOC. NO. 2015109791, O.P.R.W.C.TX.

SUBMITTED: OCTOBER 04, 2022

CITY PROJECT NUMBER 2022-_-_

FILE No: 1386			
	PLAT PREPARATION DATE		SEPTEMBER, 2022
	APPLICATION SUBMITTAL DATE		
1	CITY COMMENTS	M.B.	12-20-22
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3	STAFF REVIEW COMMENTS	M.B.	02-16-23
No:	REVISION:	BY:	DATE:

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FINAL PLAT
12 OAKS VILLAGE
GREENLEAF FISK SURVEY, A-5
WILLIAMSON COUNTY, TEXAS

FINAL PLAT
12 OAKS VILLAGE

FIELD NOTES DESCRIPTION

DESCRIPTION OF 53.19 ACRES OF LAND IN THE GREENLEAF FISK SURVEY, ABSTRACT NO. 5, WILLIAMSON COUNTY, TEXAS; BEING A PORTION OF A CERTAIN CALLED 92.314 ACRE TRACT OF LAND CONVEYED IN THE SPECIAL WARRANTY DEED W/VENDOR'S LIEN TO 12 OAKS VILLAGE, LP OF RECORD IN DOCUMENT NO. 2021100741, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND DESCRIBED IN THE CORRECTION AFFIDAVIT OF RECORD IN DOCUMENT NO. 2021195904, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 53.19 ACRES OF LAND, AS SURVEYED BY HR GREEN DEVELOPMENT TX, LLC, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a 1/2-inch iron rod with a plastic cap stamped "4WARD BOUNDARY" found in the intersecting north right-of-way line of State Highway No. 29, a variable width right-of-way and the west right-of-way line of Kauffman Loop, a variable width right-of-way, and also in the west line of a certain called 12.35 acre tract described in the Deed to Williamson County, Texas, of record in Document No. 2016016908, Official Public Records of Williamson County, Texas, same being the most easterly northeast corner of that certain called 13.220 acre tract of land designated as Part 1 and described in the Special Warranty Deed to Williamson County, Texas, of record in Document No. 2014091151, Official Public Records of Williamson County, Texas, at the southerly southeast corner of the said 92.314 acre tract, for the southeast corner and POINT OF BEGINNING of the tract described herein, from which the approximate southwest corner of the said Greenleaf Fisk Survey, Abstract No. 5, bears approximately S 00°27'20" E, a distance of 10,733 feet;

THENCE leaving the west right-of-way line of said Kauffman Loop and the west line of the said 12.35 acre tract, with the north right-of-way line of said State Highway No. 29 and the north line of the said 13.220 acre tract, with the south line of the said 92.314 acre tract, with the south line of the tract described herein, the following five (5) courses and distances:

1. N 89°53'00" W, a distance of 875.72 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at an angle point,
2. N 00°08'50" E, a distance of 220.00 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at an angle point,
3. N 89°52'57" W, a distance of 350.03 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at an angle point,
4. S 00°06'29" W, a distance of 219.94 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at an angle point, and
5. N 89°53'12" W, a distance of 1,284.59 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found in the east line of a certain called 3.329 acre tract of land designated as Tract 6 and described in the Deed to Williamson County, Texas, of record in Document No. 2021026279, Official Public Records of Williamson County, Texas, at the southwest corner of the said 92.314 acre tract, same being the westerly northwest corner of the said 13.220 acre tract, for the southwest corner of the tract described herein;

THENCE N 08°54'24" W, leaving the westerly northwest corner of the said 13.220 acre tract, with the east line of the said 3.329 acre tract and the west line of the said 92.314 acre tract, with the west line of the tract described herein, a distance of 22.47 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at the northeast corner of the said 3.329 acre tract, same being the southeast corner of a certain called 20.189 acre tract conveyed in the deed to K29 1941 Investments, LP of record in Document No. 2021168915, Official Public Records of Williamson County, Texas, and described in the Correction Affidavit as to Deed of record in Document No. 2022013674, Official Public Records of Williamson County, Texas, for a point-on-line in the west line of the said 92.314 acre tract and in the west line of the tract described herein;

THENCE N 08°54'24" W, leaving the northeast corner of the said 3.329 acre tract, continuing with the west line of the said 92.314 acre tract, with the east line of the said 20.189 acre tract, with the west line of the tract described herein, a distance of 917.61 feet to a ½-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the southwest corner of a certain called 18.446 acre tract described in the General Warranty Deed to Kauffman Multifamily Partners, LLC of record in Document No. 2021100743, Official Public Records of Williamson County, Texas, for the northwest corner of the tract described herein;

THENCE leaving the east line of the said 20.189 acre tract, crossing the said 92.314 acre tract, with the south line of the said 18.446 acre tract, with the north line of the tract described herein, the following two (2) courses and distances:

1. N 89°58'59" E, a distance of 1,271.11 feet to a ½-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the southeast corner of the said 18.446 acre tract, for an angle point in the north line of the tract described herein, and
2. N 27°24'40" E, a distance of 349.97 feet to a ½-inch iron rod with a plastic cap stamped "LANDDEV" previously set in the southwest right-of-way line of said Kauffman Loop and the southwest line of the said 12.35 acre tract, same being the east line of the said 92.314 acre tract, for an east corner of the said 18.446 acre tract, for a north corner of the tract described herein, from which a ½-inch iron rod with a plastic cap stamped "4WARD BOUNDARY" found at a point-of-curvature in the southwest right-of-way line of said Kauffman Loop and the southwest line of the said 12.35 acre tract, same being the east line of the said 92.314 acre tract and the east line of the said 18.446 acre tract bears N 62°35'11" W, a distance of 28.80 feet;

THENCE with the southwest and west right-of-way line of said Kauffman Loop and the southwest and west line of the said 12.35 acre tract, with the east line of the said 92.314 acre tract, with the east line of the tract described herein, the following three (3) courses and distances:

1. S 62°35'11" E, a distance of 959.38 feet to a ½-inch iron rod with a plastic cap stamped "4WARD BOUNDARY" found at a point-of-curvature,
2. With the arc of a curve to the right, having a radius of 690.00 feet, an arc distance of 755.30 feet, and a chord which bears S 31°13'11" E, a distance of 718.15 feet to a ½-inch iron rod with a plastic cap stamped "4WARD BOUNDARY" found at a point-of-tangency, and
3. S 00°07'00" W, a distance of 189.05 feet to the POINT OF BEGINNING and containing 53.19 acres of land, more or less.

Bearing Basis: Texas Coordinate System, Central Zone, NAD83, Grid.

LINE TABLE		
LINE #	BEARING	DISTANCE
L1	S 00°07'00" W	189.05'
L2	S 48°42'08" W	46.32'
L3	S 41°11'01" W	40.34'
L4	N 15°13'28" W	38.39'
L5	N 20°57'55" E	22.38'
L6	N 86°57'45" E	49.90'
L7	S 18°47'25" E	88.08'
L8	N 89°52'31" W	90.74'
L9	N 03°02'02" W	78.42'
L10	S 86°57'58" W	6.46'
L11	N 00°00'00" W	17.00'
L12	N 31°44'59" E	84.08'
L13	N 60°03'39" E	66.39'
L14	N 27°25'11" E	35.69'
L15	S 62°35'11" E	58.43'
L16	S 27°43'01" W	67.74'
L17	N 62°35'10" W	118.99'
L18	S 27°03'43" W	86.48'
L19	N 62°29'16" W	45.49'
L20	N 27°24'40" E	122.64'
L21	S 62°34'13" E	85.69'
L22	N 27°22'47" E	11.35'

CURVE TABLE				
CURVE #	RADIUS	ARC DISTANCE	CHORD BEARING	CHORD DISTANCE
C1	690.00'	755.30'	S 31°13'11" E	718.15'
C2	690.00'	38.48'	N 60°56'53" W	38.47'
C3	690.00'	125.77'	N 54°09'43" W	125.59'
C4	690.00'	374.12'	N 33°24'27" W	369.55'
C5	690.00'	216.94'	N 08°52'04" W	216.04'
C6	425.50'	258.40'	N 69°34'07" E	254.45'
C7	426.03'	101.47'	N 45°20'42" E	101.23'
C8	375.00'	295.98'	N 64°21'17" E	288.36'
C9	323.00'	171.21'	S 12°09'06" W	169.22'
C10	25.00'	16.09'	N 68°31'52" E	15.81'
C11	413.00'	82.40'	S 81°15'00" W	82.27'
C12	587.00'	148.21'	N 82°46'01" E	147.81'
C13	128.50'	103.22'	N 54°45'42" E	100.47'
C14	171.50'	84.74'	S 45°54'19" W	83.88'
C15	128.50'	73.21'	N 43°44'25" E	72.22'
C16	20.00'	31.78'	N 72°26'55" E	28.54'

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

SUBMITTED: OCTOBER 04, 2022

CITY PROJECT NUMBER 2022-_-_

FILE No: 1386			
	PLAT PREPARATION DATE		SEPTEMBER, 2022
	APPLICATION SUBMITTAL DATE		
1	CITY COMMENTS	M.B.	12-20-22
2	ACCESS EASEMENT ADDED	M.B.	01-05-23
3	STAFF REVIEW COMMENTS	M.B.	02-16-23
No:	REVISION:	BY:	DATE:

HRGreen. DEVELOPMENT TX
5508 HIGHWAY 290 WEST
SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM
TBPE NO: 16384
TBPLS NO: 10194101

FINAL PLAT
12 OAKS VILLAGE
GREENLEAF FISK SURVEY, A-5
WILLIAMSON COUNTY, TEXAS

FINAL PLAT
12 OAKS VILLAGE

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF WILLIAMSON §

WE, 12 OAKS VILLAGE, LP, OWNER OF 53.19 ACRES OF LAND IN THE GREENLEAF FISK SURVEY, ABSTRACT NO. 5, WILLIAMSON COUNTY, TEXAS; BEING A PORTION OF THAT CALLED 92.314 ACRE TRACT OF LAND DESCRIBED IN THE SPECIAL WARRANTY DEED WITH VENDOR'S LIEN TO 12 OAKS VILLAGE, LP OF RECORD IN DOCUMENT NO. 2021100741, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND CORRECTED IN THE CORRECTION AFFIDAVIT OF RECORD IN DOCUMENT NO. 2021195904, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 53.19 ACRES OF LAND AS SHOWN HEREON, AND DO CONSENT TO ALL PLAT REQUIREMENTS SHOWN HEREON, AND HEREBY DEDICATE TO THE PUBLIC THE STREETS, RIGHTS-OF-WAY, EASEMENTS, AND PUBLIC PLACES SHOWN HEREON. IT IS THE RESPONSIBILITY OF THE OWNERS, NOT THE COUNTY, TO ASSURE COMPLIANCE WITH THE PROVISIONS OF ALL APPLICABLE STATE, FEDERAL AND LOCAL LAWS AND REGULATIONS RELATED TO THE ENVIRONMENT, INCLUDING (BUT NOT LIMITED TO) THE ENDANGERED SPECIES ACT, STATE AQUIFER REGULATIONS AND MUNICIPAL WATERSHED ORDINANCES. THIS SUBDIVISION IS TO BE KNOWN AS:

12 OAKS VILLAGE

TO CERTIFY WHICH, WITNESS BY MY HAND THIS_____ DAY OF_____, 20_____.

_____
TOM MOORE
12 OAKS VILLAGE, L.P.
7801 N. CAPITAL OF TEXAS HWY,
SUITE 390
AUSTIN, TEXAS 78731

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF WILLIAMSON §

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS_____ DAY OF_____, 20__.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS
MY COMMISSION EXPIRES ON: _____

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF WILLIAMSON §

THAT, FRONTIER BANK OF TEXAS, LIEN HOLDER OF A PORTION OF 53.19 ACRES OF LAND SHOWN HEREON AND DESCRIBED IN DOCUMENT NO. 2021100741, AND CORRECTED IN DOCUMENT NO. 2021195904, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; DOES HEREBY CONSENT TO THE SUBDIVISION OF SAID 53.19 ACRES AS SHOWN HEREON, AND DOES FURTHER HEREBY, JOIN, APPROVE AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DOES HEREBY DEDICATE TO THE CITY OF LIBERTY HILL THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF LIBERTY HILL MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS:

12 OAKS VILLAGE

TO CERTIFY WHICH, WITNESS BY MY HAND THIS _____ DAY OF _____, 20____.

_____

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF WILLIAMSON §

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____ KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 20____.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS
MY COMMISSION EXPIRES ON: _____

BASED UPON THE REPRESENTATIONS OF THE ENGINEER OR SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER REVIEW OF THE PLAT AS REPRESENTED BY THE SAID ENGINEER OR SURVEYOR, I FIND THAT THIS PLAT COMPLIES WITH THE WILLIAMSON COUNTY FLOODPLAIN REGULATIONS. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REPRESENTATIONS AND SHOULD NOT BE RELIED UPON FOR VERIFICATION OF THE FACTS ALLEGED. WILLIAMSON COUNTY DISCLAIMS ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC FOR INDEPENDENT VERIFICATION OF THE REPRESENTATIONS, FACTUAL OR OTHERWISE, CONTAINED IN THIS PLAT AND THE DOCUMENTS ASSOCIATION WITHIN IT.

_____ _____.
J. TERRON EVERTSON, P.E. COUNTY ENGINEER DATE
WILLIAMSON COUNTY FLOODPLAIN ADMINISTRATOR

I, JERRY L. MILLARD, JR., DIRECTOR OF PLANNING, DESIGNEE, OF THE CITY OF LIBERTY HILL, TEXAS, UNDER THE AUTHORITY GRANTED ME IN SECTION 3.09.02 OF THE UNIFIED DEVELOPMENT CODE, IN ACCORDANCE WITH THE TEXAS LOCAL GOVERNMENT CODE, DO HEREBY CERTIFY THIS PLAT AS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

_____ _____
JERRY L. MILLARD, JR., DIRECTOR OF PLANNING DATE

ROAD NAMES AND ADDRESS ASSIGNMENTS VERIFIED THIS THE _____ DAY OF _____, 20_____ A.D.,

_____
CINDY BRIDGES, ENP
WILLIAMSON COUNTY ADDRESSING COORDINATOR
512-943-3708
CBRIDGES@WILCO.ORG

GENERAL NOTES:

1. IT IS UNDERSTOOD THAT THE BUILDING OF ALL ROADS, AND OTHER PUBLIC THOROUGHFARES AND ANY BRIDGES OR CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IS THE RESPONSIBILITY OF THE OWNER(S) OF THE TRACT OF LAND COVERED BY THIS PLAT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY WILLIAMSON COUNTY, TEXAS. THE CITY NOR THE COUNTY ASSUME ANY OBLIGATION TO BUILD ANY OF THE ROADS, OR OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT, OR OF CONSTRUCTING ANY OF THE BRIDGES OR DRAINAGE IMPROVEMENTS IN THE CONNECTION THEREWITH. NEITHER THE CITY NOR THE COUNTY ASSUME ANY RESPONSIBILITY FOR DRAINAGE WAYS OR EASEMENTS IN THE SUBDIVISION, OTHER THAN THOSE DRAINING OR PROTECTING THE ROAD SYSTEM.
2. IT IS THE RESPONSIBILITY OF THE OWNER(S), NOT THE COUNTY OR THE CITY, TO ASSURE COMPLIANCE WITH THE PROVISIONS OF ALL APPLICABLE STATE, FEDERAL AND LOCAL LAWS AND REGULATIONS RELATING TO THE PLATTING AND DEVELOPMENT OF THIS PROPERTY. THE CITY OF LIBERTY HILL NOR WILLIAMSON COUNTY ASSUME RESPONSIBILITY FOR THE ACCURACY OF REPRESENTATIONS BY OTHER PARTIES IN THIS PLAT. FLOODPLAIN DATA, IN PARTICULAR, MAY CHANGE. IT IS FURTHER UNDERSTOOD THAT THE OWNER(S) OF THE TRACT OF LAND COVERED BY THIS PLAT MUST INSTALL AT THEIR OWN EXPENSE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE THAT MAY BE REQUIRED BEFORE THE ROADS IN THE SUBDIVISION HAVE FINALLY BEEN ACCEPTED FOR MAINTENANCE BY THE WCMUD #23.
3. ALL UTILITY LINES MUST BE LOCATED UNDERGROUND.
4. THIS SUBDIVISION IS WHOLLY CONTAINED WITHIN THE EXTRA TERRITORIAL JURISDICTION OF THE CITY OF LIBERTY HILL, WILLIAMSON COUNTY, TEXAS.
5. NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO PERMITTED WATER DISTRIBUTION AND WASTEWATER COLLECTION FACILITIES.
6. PROPERTY OWNERS SHALL PROVIDE FOR ACCESS TO DRAINAGE EASEMENTS AS MAY BE NECESSARY AND SHALL NOT PROHIBIT ACCESS BY THE CITY OF LIBERTY HILL.
7. ALL EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE PROPERTY OWNER OR HIS OR HER ASSIGNS.
8. ALL PUBLIC ROADWAYS AND EASEMENTS AS SHOWN ON THIS PLAT ARE FREE OF LIENS.
9. NO CONSTRUCTION, PLANTING OR GRADING SHALL BE PERMITTED TO INTERFERE WITH SIGHT EASEMENTS BETWEEN THE HEIGHTS OF THREE AND EIGHT FEET AS MEASURED FROM THE CROWNS OF THE ADJACENT STREETS.
10. UTILITY PROVIDERS:
    WATER SERVICE – GEORGETOWN UTILITY SYSTEMS
    WASTEWATER SERVICE – CITY OF LIBERTY HILL
11. MAINTENANCE RESPONSIBILITY FOR DRAINAGE WILL NOT BE ACCEPTED BY THE COUNTY OTHER THAN THAT ACCEPTED IN CONNECTION WITH DRAINING OR PROTECTING THE ROAD SYSTEM. MAINTENANCE RESPONSIBILITY FOR STORM WATER MANAGEMENT CONTROLS WILL REMAIN WITH THE OWNER.
12. THE MINIMUM FINISHED FLOOR ELEVATION SHALL BE AT LEAST ONE FOOT ABOVE THE ADJACENT FINISHED GRADE AND BASE FLOOD ELEVATION. EXCEPTIONS CAN BE MADE AT ENTRANCE AND EGRESS POINTS, WHERE NECESSARY, TO MEET THE AMERICANS WITH DISABILITIES ACT (ADA). RECREATIONAL VEHICLE PARKING PADS MUST ALSO BE PLACED AT LEAST ONE FOOT ABOVE BASE FLOOD ELEVATION.
13. NO LOT IN THIS SUBDIVISION IS ENCROACHED BY A SPECIAL FLOOD HAZARD AREA(S) INUNDATED BY THE 100-YEAR (1% CHANCE) FLOOD AS IDENTIFIED BY THE U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 48491C0275E, EFFECTIVE DATE SEPTEMBER 26, 2008 FOR WILLIAMSON COUNTY, TEXAS.
14. NO STRUCTURE OR LAND IN THIS PLAT SHALL HEREAFTER BE LOCATED OR ALTERED WITHOUT FIRST OBTAINING A CERTIFICATE OF COMPLIANCE OR FLOODPLAIN DEVELOPMENT PERMIT FROM THE WILLIAMSON COUNTY FLOODPLAIN ADMINISTRATOR.
15. THIS SUBDIVISION IS SUBJECT TO STORMWATER MANAGEMENT CONTROLS AS REQUIRED BY WILLIAMSON COUNTY SUBDIVISION REGULATIONS SECTION B11.1, ON NEW DEVELOPMENT THAT WOULD EVOKE SUCH CONTROLS BEYOND EXISTING CONDITIONS.
16. IMPROVEMENTS WITHIN THE COUNTY ROAD RIGHT-OF-WAY INCLUDING, BUT NOT LIMITED TO, LANDSCAPING, IRRIGATION LIGHTING, CUSTOM SIGNS, IS PROHIBITED WITHOUT FIRST OBTAINING AND EXECUTED LICENSE AGREEMENT WITH WILLIAMSON COUNTY.
17. ALL SIDEWALKS SHALL BE MAINTAINED BY THE PROPERTY OWNERS.
18. THE PURPOSE OF THIS PLAT IS TO SHOW THE PROPOSED IMPROVEMENTS TO THE OWNER'S PROPERTY, INCLUDING THE EXISTING TOPOGRAPHY, TO EVALUATE THE EXISTING AND PROPOSED DRAINAGE PATTERNS. THERE ARE NO IMPROVEMENTS OR SUBDIVISION OF LOTS 1–5, BLOCK A PROPOSED WITH THIS PLAT. A REVISED PRELIMINARY PLAT SHALL BE SUBMITTED AND APPROVED PRIOR TO ANY DIVISION OF LOTS 1–5, BLOCK A INTO TWO OR MORE PARTS TO LAY OUT (1) A SUBDIVISION OF THE TRACT, INCLUDING AN ADDITION; (2) LOTS; OR (3) STREETS, ALLEYS, SQUARES, PARKS, OR OTHER PARTS OF THE TRACT INTENDED TO BE DEDICATED TO PUBLIC USE OR FOR THE USE OF PURCHASERS OR OWNERS OF LOTS FRONTING ON OR ADJACENT TO THE STREETS, ALLEYS, SQUARES, PARKS, OR OTHER PARTS. A LOT IS ANY PARCEL OR TRACT OF LAND EXCLUSIVE OF ANY ADJOINING ROAD OR ROAD RIGHT-OF-WAY THAT IS SEPARATED FROM OTHER PARCELS BY A LEGAL DESCRIPTION, A SUBDIVISION OF RECORD, OR SURVEY MAP. THE TERMS "STREET" OR "ROAD" ARE INTERCHANGEABLE AND ARE USED TO DESCRIBE ALL VEHICULAR WAYS, REGARDLESS OF ANY OTHER DESIGNATION THEY MAY CARRY OR WHETHER THE STREET OR ROAD WILL BE PUBLIC OR PRIVATELY OWNED.
19. NO OBSTRUCTION, INCLUDING BUT NOT LIMITED TO FENCING OR STORAGE, SHALL BE PERMITTED IN ANY DRAINAGE EASEMENTS SHOWN HEREON.
20. A TEN (10') P.U.E. ABUTTING AND ALONG THE STREET SIDE PROPERTY LINE IS HEREBY DEDICATED FOR ALL STREET SIDE PROPERTY LOTS SHOWN HEREON.
21. RECIPROCAL JOINT ACCESS AND PARKING BETWEEN ALL LOTS DEPICTED ON THIS FINAL PLAT IS HEREBY GRANTED. THE JOINT ACCESS MUST ALLOW PEDESTRIAN AND/OR VEHICULAR TRAFFIC/PARKING TO MOVE FREELY TO THE ADJACENT PUBLIC RIGHT-OF-WAY, OR BETWEEN THE TRACTS, OR BOTH, EACH OWNER MUST MAINTAIN ITS TRACT, AND THAT PORTION OF THE ACCESS AND PARKING AREA LOCATED ON ITS TRACT IF ANY, AND ALL IMPROVEMENTS, TO ALLOW CONTINUOUS FREE VEHICULAR AND PEDESTRIAN INGRESS AND EGRESS.
22. MAXIMUM OF 80% IMPERVIOUS COVER PER LOT, OTHERWISE STORMWATER MANAGEMENT CONTROLS SHALL BE DESIGNED, CONSTRUCTED AND MAINTAINED BY OWNER. IF IMPERVIOUS COVER IS PROPOSED TO EXCEED MAXIMUM PERCENTAGE ALLOWED, CONTACT WILLIAMSON COUNTY FLOODPLAIN ADMINISTRATION TO REVIEW THE STORMWATER MANAGEMENT CONTROLS PROPOSED ON LOT.
23. DRIVEWAY MAINTENANCE WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. IF OBSTRUCTIONS OCCUR WITHIN THE DRIVEWAY CULVERT, THE COUNTY RESERVES THE RIGHT TO CLEAR OBSTRUCTIONS THAT ARE CAUSING ADVERSE IMPACTS TO THE ROADWAY.
24. A FLOODPLAIN DEVELOPMENT PERMIT MAY BE REQUIRED FOR BLOCK A LOT 2 PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT. THE NEED FOR A FLOODPLAIN DEVELOPMENT PERMIT WILL BE DETERMINED BY WILLIAMSON COUNTY UPON REVIEW OF THE PROPOSED STRUCTURE LOCATION.
25. BASED ON THE CONDUCTED FLOODPLAIN STUDY PERFORMED BY HR GREEN, DATED MARCH 9, 2023, THE MINIMUM FINISHED FLOOR ELEVATION (FFE) WILL BE SET AT 972 FEET FOR LOTS ADJACENT TO THE FLOODPLAIN.
26. FLOODPLAIN INFORMATION, SUCH AS FLOODPLAIN BOUNDARIES, DEPTHS, ELEVATIONS, AND THE MINIMUM FINISHED FLOOR ELEVATIONS SHOWN ON THIS PLAT, WILL CHANGE OVER TIME WITH BETTER DATA AND FLOOD STUDIES. THE FLOODPLAIN INFORMATION SHOWN ON THIS PLAT WAS ACCURATE AT THE TIME OF PLATTING, BUT MAY BE SUPERSEDED AT THE TIME OF CONSTRUCTION. THE BEST AVAILABLE FLOODPLAIN DATA SHALL BE UTILIZED AT THE TIME OF CONSTRUCTION, AS DETERMINED BY THE WILLIAMSON COUNTY FLOODPLAIN ADMINISTRATOR. A FLOODPLAIN DEVELOPMENT PERMIT APPLICATION MUST BE SUBMITTED AND APPROVED PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT WITHIN OR ADJACENT TO A REGULATED FLOODPLAIN.
27. DETENTION IS PROVIDED BY DETENTION POND LOCATED ON LOT 2 BLOCK A, AND IN ACCORDANCE WITH THE TERMS OF THE DEVELOPMENT AGREEMENT BETWEEN 12 OAKS VILLAGE, LP, KAUFFMAN MULTIFAMILY PARTNERS, LLC, AND WILLIAMSON COUNTY DATED, OCTOBER 5TH, 2022.

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF TRAVIS §

I, ERNESTO NAVARRETE, REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ACCURATE ON-THE-GROUND SURVEY OF THE LAND AND THAT THE MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH CHAPTER 5, SUBDIVISIONS, CITY OF LIBERTY HILL UNIFIED DEVELOPMENT. LOT CORNERS WILL BE SET AFTER THE PLAT IS RECORDED AND SITE GRADING IS COMPLETE. ALL EASEMENTS OF RECORDS ARE SHOWN OR NOTED ON THE PLAT, AND ARE BASED ON THE TITLE COMMITMENT PREPARED BY STEWART TITLE GUARANTY COMPANY, GF NO. 1594366, EFFECTIVE DATE FEBRUARY 15, 2022.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT AUSTIN, TRAVIS, COUNTY TEXAS, THIS _____ DAY OF _____, 20_____.

_____
ERNESTO NAVARRETE, R.P.L.S.
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 6642 – STATE OF TEXAS
HR GREEN DEVELOPMENT TX, LLC
5508 HWY 290 WEST, SUITE 150
AUSTIN, TEXAS 78735
512.872.6696
ERNESTO.NAVARRETE@HRGREEN.COM
TBPLS FIRM NO. 10194101

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF TRAVIS §

I, JUDD T. WILLMANN, A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS IN COMPLIANCE WITH THE CODES AND ORDINANCES OF THE CITY OF LIBERTY HILL, TEXAS.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT AUSTIN, TRAVIS, COUNTY TEXAS, THIS _____ DAY OF _____, 20_____.

_____
JUDD T. WILLMANN, P.E.
REGISTERED PROFESSIONAL ENGINEER
NO. 90356 – STATE OF TEXAS
HR GREEN DEVELOPMENT TX, LLC
5508 HWY 290 WEST, SUITE 150
AUSTIN, TEXAS 78735
512.872.6696
JUDD.WILLMANN@HRGREEN.COM
TBPE FIRM NO. F-16384

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF WILLIAMSON §

I, NANCY E. RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE_____ DAY OF_____, 20__, A.D., AT _____ O'CLOCK, _____M., AND DULY RECORDED THIS THE____ DAY OF_____, 20____, A.D., AT_ O'CLOCK,____M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN INSTRUMENT NO. _____.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

BY: _____
NANCY E. RISTER
CLERK, COUNTY COURT
WILLIAMSON COUNTY, TEXAS

SHEET 5 OF 5

SUBMITTED: _____ OCTOBER 04, 2022

CITY PROJECT NUMBER 2022-_-_

FILE No: 1386

	PLAT PREPARATION DATE		SEPTEMBER, 2022
	APPLICATION SUBMITTAL DATE		
1	CITY COMMENTS	M.B.	12-20-22
2	ACCESS EASEMENT ADDED	M.B.	01-05-23
3	STAFF REVIEW COMMENTS	M.B.	02-16-23
No:	REVISION:	BY:	DATE:

HRGreen. DEVELOPMENT TX

5508 HIGHWAY 290 WEST
SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM
TBPE NO: 16384
TBPLS NO: 10194101

FINAL PLAT
12 OAKS VILLAGE
GREENLEAF FISK SURVEY, A-5
WILLIAMSON COUNTY, TEXAS

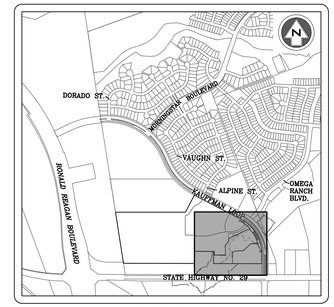
SHT. 5 OF 16

0 50' 100'

SCALE: 1" = 50'

LEGEND

- EXISTING MINOR CONTOUR
- 505 EXISTING MAJOR CONTOUR
- OVERALL PROPERTY BOUNDARY
- EASEMENT
- JURISDICTIONAL WATER
- X — X — X — EXISTING FENCE TO BE REMOVED
- LOC LIMITS OF CONSTRUCTION
- TREE TO BE REMOVED
- TREE TO REMAIN



KEY MAP
N.T.S.

NO.	REVISION	BY	DATE

811 Know what's below. Call before you dig.

HRGreen
5909 HIGHWAY 290 WEST
SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM
TBPE NO: 16384
TBPLS NO: 10194101

DEVELOPMENT TX

XAVIER GARZA-ROBLEDO
135174
LICENSED
PROFESSIONAL ENGINEER
04/20/2023

EXISTING CONDITIONS AND DEMOLITION PLAN 1 OF 2
12 OAKS VILLAGE
REGIONAL DETENTION POND CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT. 6 OF 16

P:\New Growth\229400.002 - 12 Oaks Village Detention Pond\02_ACAD\10_Comm Plans\EXISTING CONDITIONS.dwg, ex, April 28, 2023, 5:45 PM, cbarrett

S 89°58'59" W 1,271.11'

REMAINDER OF CALLED 91.314 ACRES
SPECIAL WARRANTY DEED W/ VENDOR'S LIEN
12 OAKS VILLAGE, LP
DOC. NO. 2021100741
O.P.R.W.C.TX.
DESCRIBED IN THE CORRECTION AFFIDAVIT OF RECORD IN DOC. NO. 2021195904
O.P.R.W.C.TX.

(N 89°53'00" W 1,284.74')
[S 89°52'43" E 1,284.55']

PART 1~ 13.220 ACRES
SPECIAL WARRANTY DEED
WILLIAMSON COUNTY, TEXAS
DOC. NO. 2014091151
O.P.R.W.C.TX.

(S 00°06'06" W) (219.96')
[N 00°07'17" E] [220.00']

MATCHLINE SEE SHEET 6

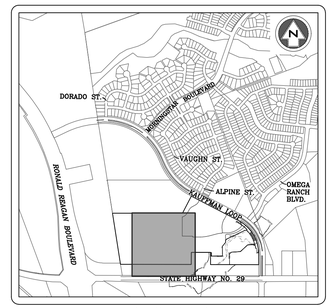
GATE
ASPHALT DRIVEWAY

STATE HIGHWAY NO. 29 PUBLIC R.O.W. WIDTH VARIES

0 50' 100'
SCALE: 1" = 50'

LEGEND

- EXISTING MINOR CONTOUR
- 505 EXISTING MAJOR CONTOUR
- OVERALL PROPERTY BOUNDARY
- EASEMENT
- JURISDICTIONAL WATER
- X X X EXISTING FENCE TO BE REMOVED
- LOC LIMITS OF CONSTRUCTION
- TREE TO BE REMOVED
- TREE TO REMAIN



KEY MAP
N.T.S.

NO.	REVISION	BY	DATE

Know what's below. Call before you dig.

HRGreen
5909 WEST LOOP 290 NORTH
SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM
TBPE NO: 16384
TBPLS NO: 10194101
DEVELOPMENT TX

Xavier Garza
STATE OF TEXAS
XAVIER GARZA-ROBLEDO
135174
LICENSED PROFESSIONAL ENGINEER
04/29/2023

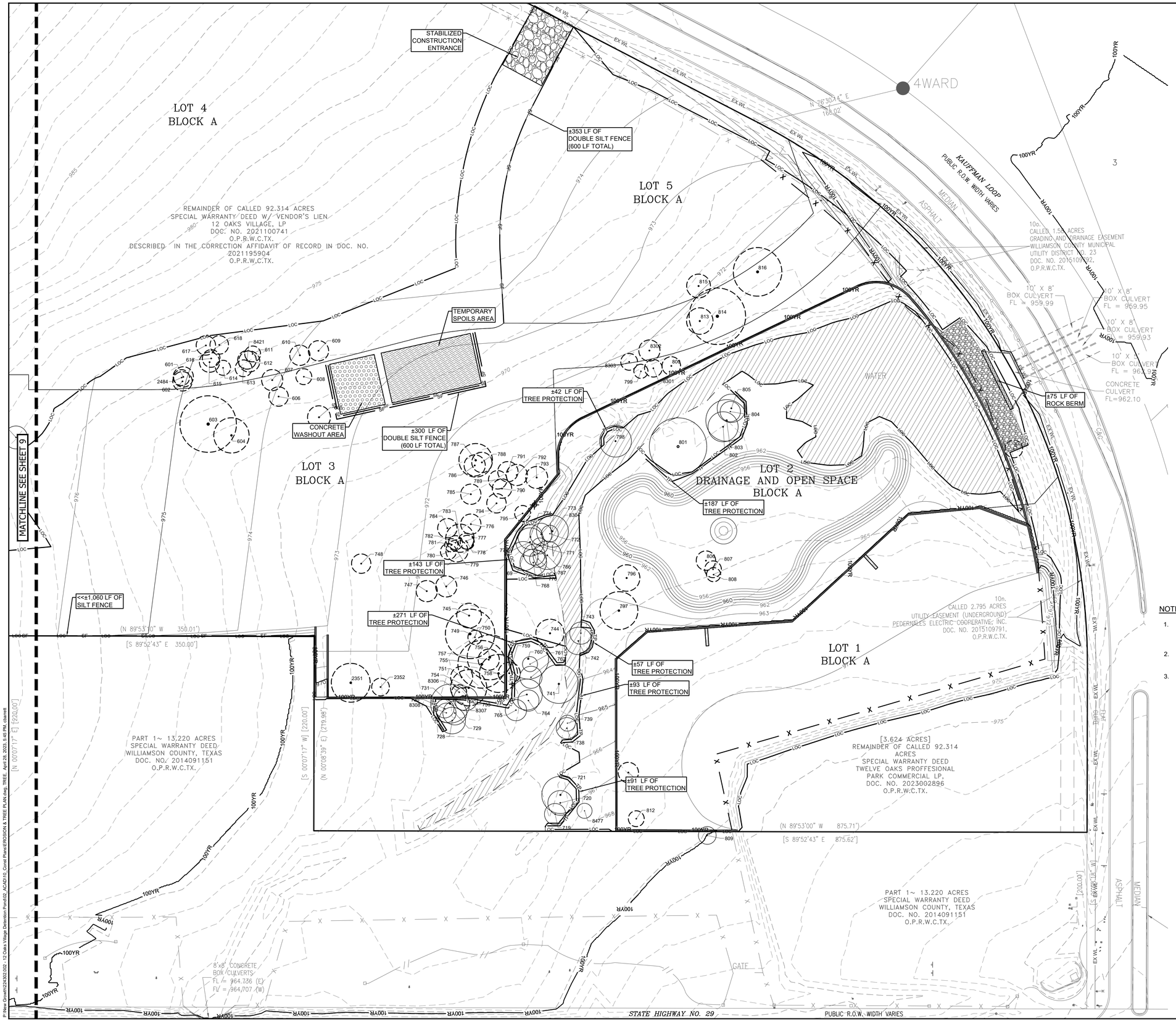
EXISTING CONDITIONS AND DEMOLITION PLAN 2 OF 2

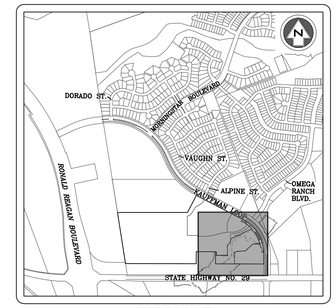
12 OAKS VILLAGE
REGIONAL DETENTION POND
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT: 7 OF 16

P:\New Growth\224302.002 - 12 Oaks Village Detention Pond\02_ACAD\10_Civil Plans\EXISTING CONDITIONS.dwg, ex (2), April 29, 2023, 5:45 PM, cbarrett





KEY MAP
N.T.S.

0 50' 100'
SCALE: 1" = 50'

LEGEND

- EXISTING MINOR CONTOUR
- 505 EXISTING MAJOR CONTOUR
- 504 PROPOSED MINOR CONTOUR
- 505 PROPOSED MAJOR CONTOUR
- PROPERTY BOUNDARY
- 100YR CALCULATED 100-YEAR PROPOSED FLOOD PLAIN
- EASEMENT
- STORM DRAIN LINE
- FLOW ARROW
- PROPOSED WALL
- JURISDICTIONAL WATER
- TREE TO BE REMOVED
- TREE TO REMAIN
- LOC LIMITS OF CONSTRUCTION
- SF SILT FENCE
- TP TREE PROTECTION FENCING
- ROCK BERM
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY SPOILS AREA
- CONCRETE WASHOUT AREA

NOTES:

1. THE COUNTY OF BASTROP ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD OR MODIFY EROSION/SEDIMENT CONTROLS ON SITE THROUGHOUT THE DURATION OF THE PROJECT.
2. ALL ROCK BERMS AND SILT FENCES ARE TEMPORARY AND WILL BE REMOVED AFTER CONFIRMING WITH THE ENGINEER.
3. IN THE EVENT OF INCELEMENT WEATHER THAT MAY RESULT IN A FLOODING SITUATION, THE CONTRACTOR SHALL REMOVE INLET PROTECTION MEASURES UNTIL SUCH TIME AS THE WEATHER EVENT HAS PASSED.

SUMMARY OF EROSION & SEDIMENTATION CONTROLS	
ITEM	QUANTITY
SILT FENCE	1,998 LF
ROCK BERM	75 LF
TREE PROTECTION	884 LF
STABILIZED CONSTRUCTION ENTRANCE	1 EA
LIMITS OF CONSTRUCTION	21.65 AC

NO.	REVISION	BY	DATE

811 Know what's below. Call before you dig.

HRGreen
5909 HIGHWAY 290 WEST
SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM
TBPE NO: 16384
TBPLS NO: 10194101
DEVELOPMENT TX

XAVIER GARZA-ROBLEDO
135174
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
04/20/2023

EROSION, SEDIMENTATION CONTROL & TREE PROTECTION PLAN 1 OF 2

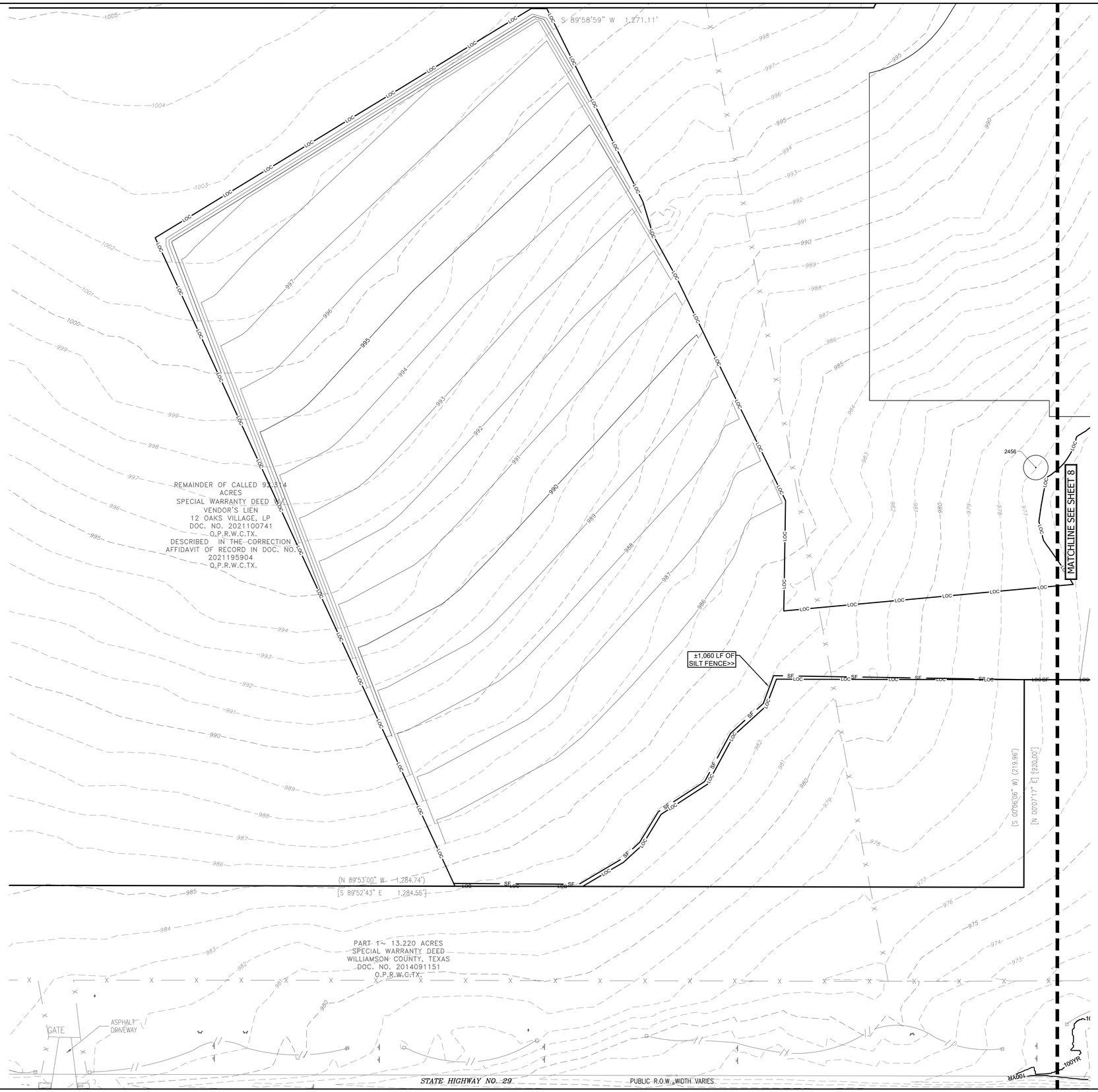
12 OAKS VILLAGE REGIONAL DETENTION POND CONSTRUCTION PLANS

LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT. 8 OF 16

P:\Hrg Grow\029400.002 - 12 Oaks Village Detention Pond\02_ACAD\10_Comm Planet\EROSION & TREE PLAN.dwg, TREE, Apr 28, 2023, 5:45 PM, dsarrett



0 50' 100'

SCALE: 1" = 50'

LEGEND

- EXISTING MINOR CONTOUR
- 505 EXISTING MAJOR CONTOUR
- 504 PROPOSED MINOR CONTOUR
- 505 PROPOSED MAJOR CONTOUR
- PROPERTY BOUNDARY
- 100YR CALCULATED 100-YEAR PROPOSED FLOOD PLAIN
- EASEMENT
- STORM DRAIN LINE
- FLOW ARROW
- PROPOSED WALL
- JURISDICTIONAL WATER
- TREE TO BE REMOVED
- TREE TO REMAIN
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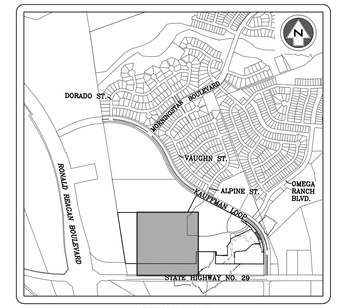

KEY MAP
N.T.S.

NOTES:

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SUMMARY OF EROSION & SEDIMENTATION CONTROLS	
ITEM	QUANTITY
SILT FENCE	1,998 LF
ROCK BERM	75 LF
TREE PROTECTION	884 LF
STABILIZED CONSTRUCTION ENTRANCE	1 EA
LIMITS OF CONSTRUCTION	21.65 AC

NO.	REVISION	BY	DATE

811 Know what's below. Call before you dig.

5509 HIGHWAY 290 WEST
SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM
TBPE NO: 16384
TBPLS NO: 10194101

HRGreen

DEVELOPMENT TX

STATE OF TEXAS
XAVIER GARZA-ROBLEDO
135174
LICENSED
PROFESSIONAL ENGINEER
04/29/2023

EROSION, SEDIMENTATION CONTROL & TREE PROTECTION PLAN 2 OF 2

12 OAKS VILLAGE
REGIONAL DETENTION POND CONSTRUCTION PLANS

LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT. 9 OF 16

P:\New Growth\24092\002 - 12 Oaks Village Detention Pond\02_ACAD\10_Corel Plans\EROSION & TREE PLAN.dwg, TREE (2), April 28, 2023, 5:45 PM, dsarrett

POINT TABLE				
POINT	DESCRIPTION	MULTI TRUNK	HERITAGE	REMOVE
601	11.5" CEDAR ELM 8.5 6 MS	X		X
602	11.5" CEDAR ELM 8.5 6 MS	X		X
603	11.5" CEDAR ELM 8.5 6 MS	X		X
604	11.5" CEDAR ELM 8.5 6 MS	X		X
605	11.5" CEDAR ELM 8.5 6 MS	X		X
606	11.5" CEDAR ELM 8.5 6 MS	X		X
607	11.5" CEDAR ELM 8.5 6 MS	X		X
608	11.5" CEDAR ELM 8.5 6 MS	X		X
609	11.5" CEDAR ELM 8.5 6 MS	X		X
610	11.5" CEDAR ELM 8.5 6 MS	X		X
611	11.5" CEDAR ELM 8.5 6 MS	X		X
612	11.5" CEDAR ELM 8.5 6 MS	X		X
613	11.5" CEDAR ELM 8.5 6 MS	X		X
614	11.5" CEDAR ELM 8.5 6 MS	X		X
615	11.5" CEDAR ELM 8.5 6 MS	X		X
616	11.5" CEDAR ELM 8.5 6 MS	X		X
617	11.5" CEDAR ELM 8.5 6 MS	X		X
618	11.5" CEDAR ELM 8.5 6 MS	X		X
719	12" CEDAR ELM			
720	14" CEDAR ELM			
721	21" CEDAR ELM 17 9 MS	X		
723	11.5" CEDAR ELM			X
728	15" CEDAR ELM 12 6 MT	X		
729	13.5" CEDAR ELM			
730	10.5" CEDAR ELM 8 5 MS	X		
731	22" LIVE OAK 11.5 11 9.5 MS	X		
738	12" CEDAR ELM			
739	9" CEDAR ELM			
741	22" CEDAR ELM 8 8 7 6.5 6 MT	X		
742	15.5" CEDAR ELM			
743	12.5" CEDAR ELM			
744	16" BOIS D'ARC			
745	11.5" CEDAR ELM 8.5 6 MS	X		X
746	11.5" CEDAR ELM 8.5 6 MS	X		X
747	11.5" CEDAR ELM 8.5 6 MS	X		X
748	11.5" CEDAR ELM 8.5 6 MS	X		X
749	11.5" CEDAR ELM 8.5 6 MS	X		X
750	11.5" CEDAR ELM 8.5 6 MS	X		X
751	11.5" CEDAR ELM 8.5 6 MS	X		X
753	13.5" CEDAR ELM			
754	20.5" CEDAR ELM 11.5 10 8 MS	X		X
755	11.5" CEDAR ELM 8.5 6 MS	X		X
756	11.5" CEDAR ELM 8.5 6 MS	X		X
757	11.5" CEDAR ELM 8.5 6 MS	X		X
758	11.5" CEDAR ELM 8.5 6 MS	X		X
759	12.5" MESQUITE 8.5 8 MS	X		X
760	23" CEDAR ELM 16 14 MS	X		
761	8.5" LIVE OAK 6 5 MS	X		
762	12.5" CEDAR ELM			
763	17.5" CEDAR ELM			
764	12" CEDAR ELM			
765	12" CEDAR ELM			
766	11.5" CEDAR ELM 8.5 6 MS	X		
767	11.5" CEDAR ELM 8.5 6 MS	X		
768	11.5" CEDAR ELM 8.5 6 MS	X		
769	11.5" CEDAR ELM 8.5 6 MS	X		
770	11.5" CEDAR ELM 8.5 6 MS	X		
771	11.5" CEDAR ELM 8.5 6 MS	X		

POINT TABLE				
POINT	DESCRIPTION	MULTI TRUNK	HERITAGE	REMOVE
772	11.5" CEDAR ELM 8.5 6 MS	X		
773	11.5" CEDAR ELM 8.5 6 MS	X		
774	11.5" CEDAR ELM 8.5 6 MS	X		
775	11.5" CEDAR ELM 8.5 6 MS	X		
776	11.5" CEDAR ELM 8.5 6 MS	X		X
777	11.5" CEDAR ELM 8.5 6 MS	X		X
778	11.5" CEDAR ELM 8.5 6 MS	X		X
779	11.5" CEDAR ELM 8.5 6 MS	X		X
780	11.5" CEDAR ELM 8.5 6 MS	X		X
781	11.5" CEDAR ELM 8.5 6 MS	X		X
782	11.5" CEDAR ELM 8.5 6 MS	X		X
783	11.5" CEDAR ELM 8.5 6 MS	X		X
784	11.5" CEDAR ELM 8.5 6 MS	X		X
785	11.5" CEDAR ELM 8.5 6 MS	X		X
786	11.5" CEDAR ELM 8.5 6 MS	X		X
787	11.5" CEDAR ELM 8.5 6 MS	X		X
788	11.5" CEDAR ELM 8.5 6 MS	X		X
789	11.5" CEDAR ELM 8.5 6 MS	X		X
790	11.5" CEDAR ELM 8.5 6 MS	X		X
791	11.5" CEDAR ELM 8.5 6 MS	X		X
792	11.5" CEDAR ELM 8.5 6 MS	X		X
793	11.5" CEDAR ELM 8.5 6 MS	X		X
794	11.5" CEDAR ELM 8.5 6 MS	X		X
795	11.5" CEDAR ELM 8.5 6 MS	X		X
796	11.5" CEDAR ELM 8.5 6 MS	X		X
797	11.5" CEDAR ELM 8.5 6 MS	X		X
798	11.5" CEDAR ELM 8.5 6 MS	X		
799	11.5" CEDAR ELM 8.5 6 MS	X		X
800	11.5" CEDAR ELM 8.5 6 MS	X		X
801	11.5" CEDAR ELM 8.5 6 MS	X		
802	11.5" CEDAR ELM 8.5 6 MS	X		
803	11.5" CEDAR ELM 8.5 6 MS	X		
804	11.5" CEDAR ELM 8.5 6 MS	X		
805	11.5" CEDAR ELM 8.5 6 MS	X		
806	11.5" CEDAR ELM 8.5 6 MS	X		X
807	11.5" CEDAR ELM 8.5 6 MS	X		X
808	11.5" CEDAR ELM 8.5 6 MS	X		X
809	10" CEDAR ELM			
812	9" BOIS D'ARC			X
813	11.5" CEDAR ELM 8.5 6 MS	X		X
814	11.5" CEDAR ELM 8.5 6 MS	X		X
815	11.5" CEDAR ELM 8.5 6 MS	X		X
816	11.5" CEDAR ELM 8.5 6 MS	X		X
817	10" CEDAR ELM			X
2351	11.5" CEDAR ELM 8.5 6 MS	X		X
2352	11.5" CEDAR ELM 8.5 6 MS	X		X
2456	11.5" CEDAR ELM 8.5 6 MS	X		
2484	11.5" CEDAR ELM 8.5 6 MS	X		X
8301	11.5" CEDAR ELM 8.5 6 MS	X		X
8302	11.5" CEDAR ELM 8.5 6 MS	X		X
8303	11.5" CEDAR ELM 8.5 6 MS	X		X
8304	11.5" CEDAR ELM 8.5 6 MS	X		
8306	8.5" CEDAR ELM			X
8307	8" CEDAR ELM			
8308	11" CEDAR ELM 8.5 5.5 MT	X		
8421	11.5" CEDAR ELM 8.5 6 MS	X		X
8477	8.5" CEDAR ELM			

NO.	REVISION	BY	DATE

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DEVELOPMENT TX

XAVIER GARZA-ROBLEDO
135174
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
04/29/2023

TREE LIST

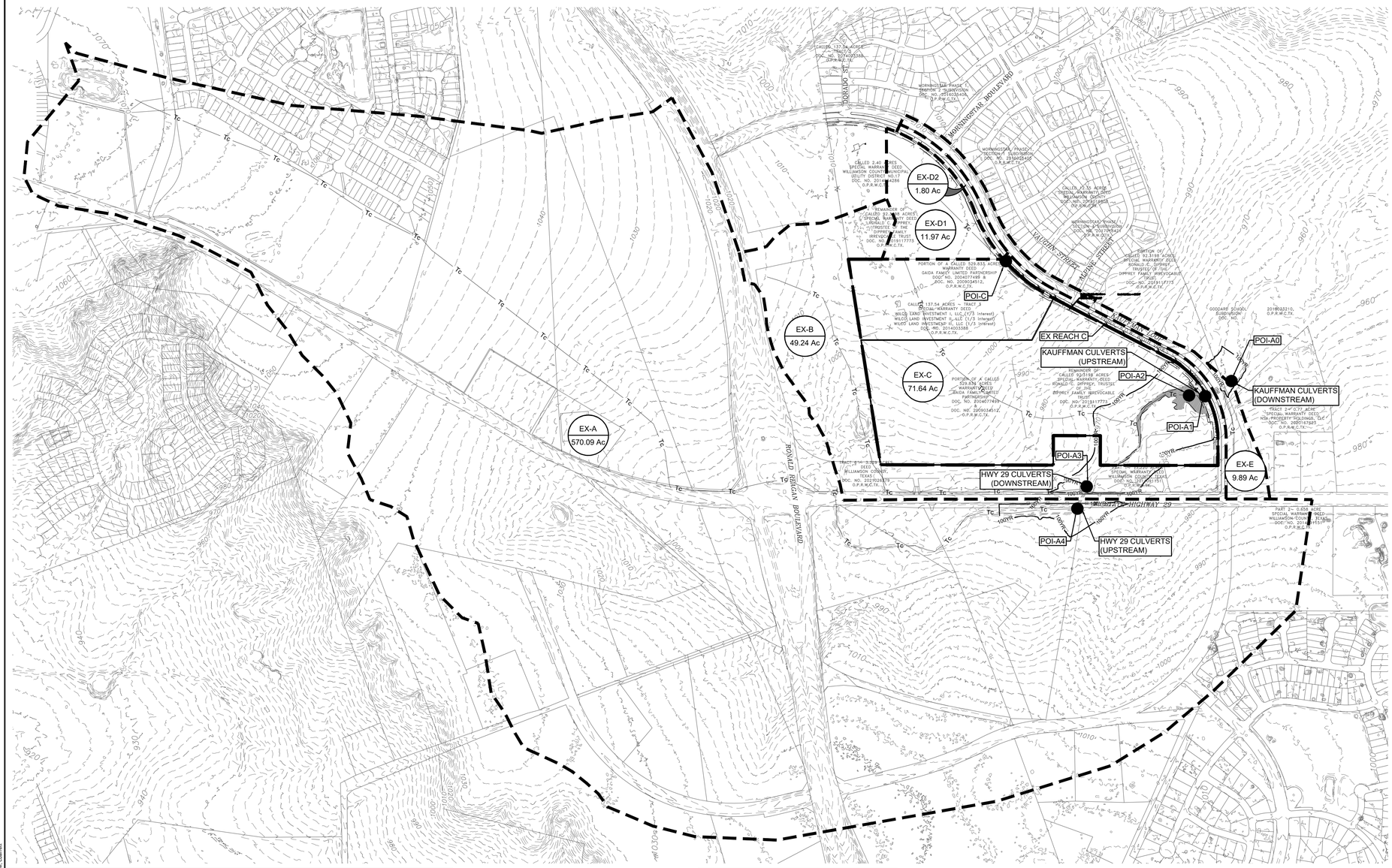
12 OAKS VILLAGE REGIONAL DETENTION POND CONSTRUCTION PLANS

LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT. 10 OF 16

P:\New Growth\24302\002 - 12 Oaks Village Detention Pond\02_ACAD\10_Const Plans\EROSION & TREE PLAN.dwg, TREELIST, April 29, 2023, 5:46 PM, cbarrett



0 400' 800'

SCALE: 1" = 400'

LEGEND

- 835 — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- Tc — TIME OF CONCENTRATION
- 100YR — CALCULATED 100-YEAR EXISTING FLOOD PLAIN
- FLOW ARROW
- EXISTING DRAINAGE LINE
- DA-1 / xx.xx ac — EXISTING DRAINAGE LABEL
- POI A — POINT OF INTEREST

Kauffman Loop Existing Culverts Outfall Rating	
Elevation	Q (cfs)
962.10	0
962.65	10
962.76	30
962.84	50
963.07	80
963.42	120
963.97	200
964.82	350
965.03	390
965.07	400
965.52	500
966.28	700
966.95	900
967.27	1000
967.86	1200
968.43	1400
968.96	1600
969.47	1800
969.96	2000
970.44	2200
970.90	2400
971.34	2600
971.82	2800
971.90	3000
973.23	5000
974.57	10000

Kauffman Loop Culverts Existing Water Surface Elevation	
Storm	WSE
2-YR	965.87
10-YR	967.59
25-YR	968.62
100-YR	970.20

Routing Analysis Inputs - Existing Conditions

Drainage Areas		Land Use		TOC Calculation Table	HEC-HMS Inputs		
Contributing Area	Area (ac)	Base Curve Number	Existing Impervious Cover (ac)	TOC (min)	Area (sq. mi.)	Impervious Cover (%)	Lag Time (min)
EX-A	570.09	80	77.20	101.46	0.89076	13.54%	60.88
EX-B	49.24	80	4.64	49.53	0.07694	9.43%	29.72
EX-C	71.64	80	0.00	40.49	0.11194	0.00%	24.29
EX-D1	11.97	80	0.00	21.60	0.01870	0.00%	12.96
EX-D2	1.80	80	0.89	5.00	0.00281	49.66%	3.00
EX-E	9.89	80	4.47	15.11	0.01545	45.20%	9.06

Reach Lag Calculations

Reach Name	Length (ft)	Velocity (ft/s)	T_c (min)	Lag Time (min)
EX R-D	1754	4.50	6.50	3.90

Time of Concentration Calculations - Existing Conditions

Contributing Area	Sheet Flow					Shallow Concentrated Flow (Unpaved)				Total Tc
	Length (ft)	Delta (ft)	Slope (ft/ft)	Roughness Coefficient	T_{sheet}	Length (ft)	Delta (ft)	Slope (ft/ft)	$T_{unpaved}$ (min)	T_c (min)
EX-A	100	0.5	0.0050	0.24	22.39	8478.0	104	0.0123	79.07	**101.46**
EX-B	100	0.65	0.0065	0.24	20.16	3362.0	47	0.0140	29.37	**49.53**
EX-C	100	1	0.0100	0.24	16.97	2899.0	47.0	0.0162	23.52	**40.49**
EX-D1	Tc = 21.6 min (Morningstar New Growth Plans)									**21.60**
EX-D2	Tc = 5 min									**5.00**
EX-E	100	3.1	0.0310	0.24	10.79	692.0	19	0.0275	4.31	**15.11**

Existing Hydrology Summary

Key Analysis Point	Peak Flow (cfs)			
	A14 Q_2	A14 Q_{10}	A14 Q_{25}	A14 Q_{100}
POI-A4	511	948	1,258	1,787
POI-A3	544	1,011	1,343	1,910
POI-A2	585	1,093	1,455	2,075
POI-A1	590	1,104	1,470	2,098
POI-A0	594	1,111	1,480	2,114

NO.	REVISION	BY	DATE

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DEVELOPMENT TX

XAVIER GARZA-ROBLEDO
135174
LICENSED PROFESSIONAL ENGINEER
04/29/2023

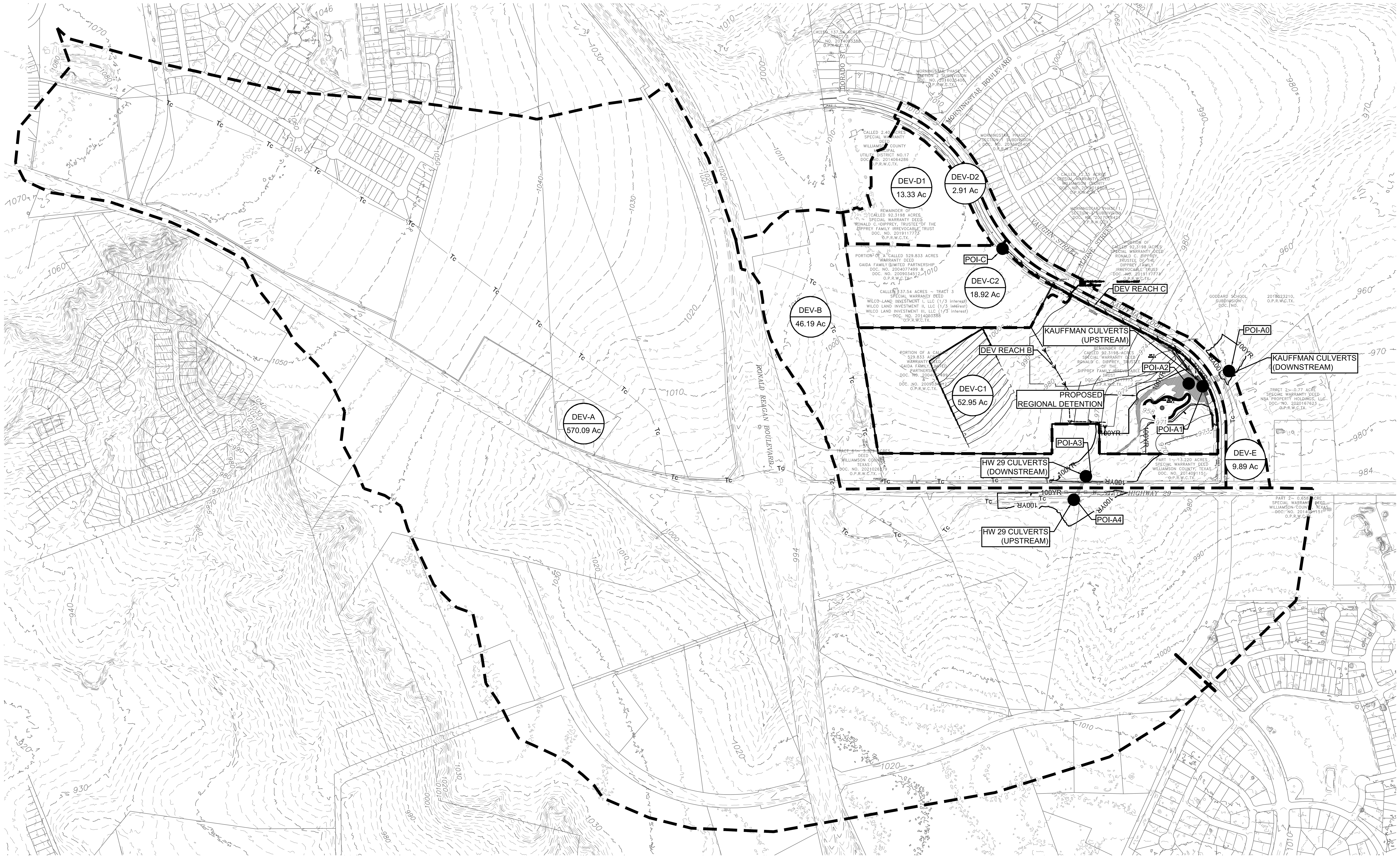
EXISTING DRAINAGE MAP

12 OAKS VILLAGE
REGIONAL DETENTION POND
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT: 11 OF 16

P:\New Growth\224202.002 - 12 Oaks Village Detention Pond\02_ACAD\10_Civil Plans\EXISTING DRAINAGE MAP.dwg, xsala, April 28, 2023, 5:45 PM, cbarrett



0 400' 800'
SCALE: 1" = 400'

LEGEND

- 504 — EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- 505 — PROPOSED MINOR CONTOUR
- 505 — PROPOSED MAJOR CONTOUR
- FLOW ARROW
- SWALE
- 100YR — CALCULATED 100-YEAR PROPOSED FLOOD PLAIN
- Tc — TIME OF CONCENTRATION
- REACH
- PROPOSED DRAINAGE BOUNDARY
- STORM DRAIN LINE
- DA-1 xx.xx ac — PROPOSED DRAINAGE LABEL
- POI A — POINT OF INTEREST

12 Oaks Regional Pond : Elevation-Area-Storage				
Elevation	Area (sf)	Area (ac)	Total Storage (cf)	Total Storage (Ac-Ft)
962.10	0	0.0000	0	0
963.00	101,852	2.3382	30,556	0.70
964.00	148,475	3.4085	154,989	3.56
965.00	176,573	4.0536	317,310	7.28
966.00	202,983	4.6599	506,934	11.64
967.00	240,965	5.5318	728,637	16.73
968.00	272,966	6.2664	985,436	22.62
969.00	299,047	6.8652	1,271,344	29.19
970.00	327,308	7.5140	1,584,415	36.37
971.00	359,650	8.2564	1,927,767	44.26

Kauffman Loop Culverts Proposed Water Surface Elevation	
Storm	WSE
2-YR	965.22
10-YR	966.17
25-YR	968.26
100-YR	969.83

Routing Analysis Inputs - Proposed Conditions							
Drainage Areas		Land Use		TOC Calculation Table	HEC-HMS Inputs		
Contributing Area	Area (ac)	Curve Number	Total Impervious Cover (ac)	TOC (min)	Area (sq. mi.)	Impervious Cover (%)	Lag Time
DEV-A	570.09	80	77.20	101.46	0.89076	13.54%	60.88
DEV-B	46.19	80	4.64	49.53	0.07218	10.05%	29.72
DEV-C1	52.95	80	42.36	5.00	0.08273	80.00%	3.00
DEV-C2	18.92	80	15.13	5.00	0.02956	80.00%	3.00
DEV-D1	13.33	80	8.67	5.00	0.02083	65.00%	3.00
DEV-D2	2.91	80	0.89	5.00	0.00455	30.65%	3.00
DEV-E	9.89	80	4.47	15.11	0.01545	45.20%	9.06

Time of Concentration Calculations - Proposed Conditions										
Contributing Area	Sheet Flow					Shallow Concentrated Flow (Unpaved)				Total Tc (min)
	Length	Delta (ft)	Slope (ft/ft)	Roughness Coefficient	T_{sheet}	Length (ft)	Delta (ft)	Slope (ft/ft)	$T_{unpaved}$	T_c (min)
DEV-A	100	0.5	0.0050	0.24	22.39	8478.0	104	0.0123	79.07	**101.46**
DEV-B	100	0.65	0.0065	0.24	20.16	3362.0	47.0	0.0140	29.37	**49.53**
DEV-C1										**5.00**
DEV-C2										**5.00**
DEV-D1										**5.00**
DEV-D2										**5.00**
DEV-E	100	3.1	0.0310	0.24	10.79	692.0	19	0.0275	4.31	**15.11**

Reach Lag Calculations				
Reach Name	Length (ft)	Velocity (ft/s)	T_c (min)	Lag Time (min)
DEV R-C	1130	4.50	4.19	2.51
DEV R-D	1754	4.50	6.50	3.90

Proposed Hydrology Summary				
Key Analysis Point	Peak Flow (cfs)			
	A14 Q_2	A14 Q_{10}	A14 Q_{25}	A14 Q_{100}
POI-A4	511	948	1,258	1,787
POI-A3	542	1,007	1,338	1,902
POI-A2	564	1,051	1,399	2,000
POI-A1	554	1,056	1,395	1,971
POI-A0	557	1,061	1,403	1,983

Summary Table: Existing vs. Proposed												
Analysis Point	Pre-Developed Peak Flow (cfs)				Developed Peak Flow (cfs)				Δ Peak Flow (cfs)			
	A14 Q_2	A14 Q_{10}	A14 Q_{25}	A14 Q_{100}	A14 Q_2	A14 Q_{10}	A14 Q_{25}	A14 Q_{100}	A14 Q_2	A14 Q_{10}	A14 Q_{25}	A14 Q_{100}
POI-A4	511	948	1,258	1,787	511	948	1,258	1,787	0	0	0	0
POI-A3	544	1,011	1,343	1,910	542	1,007	1,338	1,902	-2	-4	-5	-8
POI-A2	585	1,093	1,455	2,075	564	1,051	1,399	2,000	-21	-42	-56	-75
POI-A1	590	1,104	1,470	2,098	554	1,056	1,395	1,971	-36	-48	-75	-127
POI-A0	594	1,111	1,480	2,114	557	1,061	1,403	1,983	-37	-50	-77	-131

P:\New Growth\224302.002 - 12 Oaks Village Detention Pond\02_ACAD\10_Const Plans\PROPOSED DRAINAGE.dwg, PRDA, April 28, 2023, 5:46 PM, cbarrett

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STATE OF TEXAS
XAVIER GARZA-ROBLEDO
135174
LICENSED PROFESSIONAL ENGINEER
04/29/2023

PROPOSED DRAINAGE MAP

12 OAKS VILLAGE REGIONAL DETENTION POND CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

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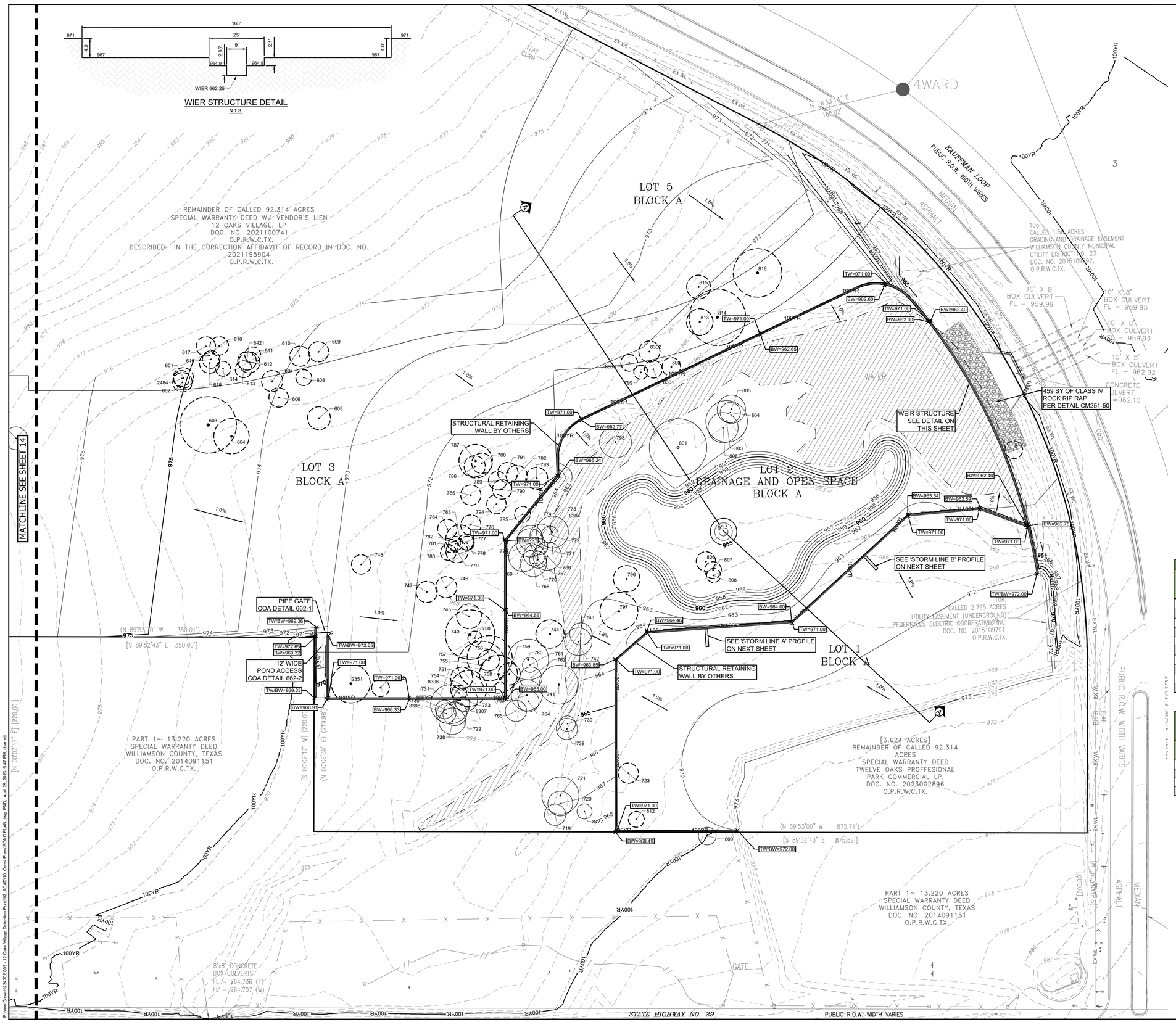
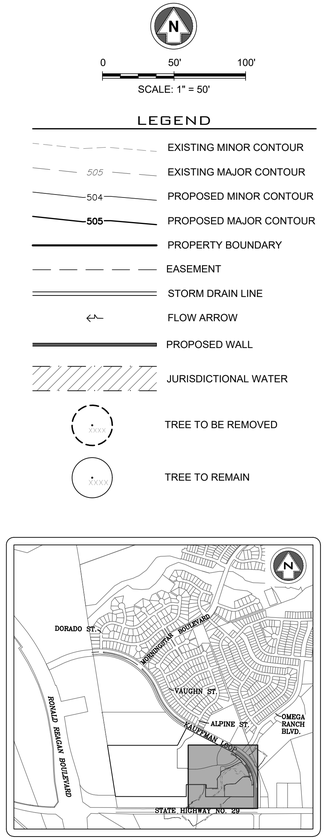
WIER STRUCTURE DETAIL
N.T.S.





KEY MAP
N.T.S.

12 Oaks Regional Pond : Elevation-Area-Storage				
Elevation	Area (sf)	Area (ac)	Total Storage (cf)	Total Storage (Ac-Ft)
962.10	0	0.0000	0	0
963.00	101,852	2.3382	30,556	0.70
964.00	148,475	3.4085	154,989	3.56
965.00	176,573	4.0536	317,310	7.28
966.00	202,983	4.6599	506,934	11.64
967.00	240,965	5.5318	728,637	16.73
968.00	272,966	6.2664	985,436	22.62
969.00	299,047	6.8652	1,271,344	29.19
970.00	327,308	7.5140	1,584,415	36.37
971.00	359,650	8.2564	1,927,767	44.26

Proposed Water Surface Elevation Regional Detetion	
Storm Event	WSE
2-YR	967.40
10-YR	968.20
25-YR	968.70
100-YR	970.00

NO.	REVISION	BY	DATE

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LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
04/29/2025

POND PLAN & OVERALL GRADING PLAN 1 OF 2
12 OAKS VILLAGE
REGIONAL DETENTION POND CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

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P:\New Growth\24302\300 - 12 Oaks Village Detention Pond\02_ACAD\10_Grand Plans\POND PLAN.dwg, PND, April 29, 2025, 5:47 PM, dtarrant

N 89°58'59" W 1,271.11'

REMAINDER OF CALLED 92.534 ACRES
SPECIAL WARRANTY DEED W/ VENDOR'S LIEN
12 OAKS VILLAGE, LP
DOC. NO. 2021100741
O.P.R.W.C.TX.
DESCRIBED IN THE CORRECTION AFFIDAVIT OF RECORD IN DOC. NO. 2021195904
O.P.R.W.C.TX.

MATCHLINE SEE SHEET 13

(N 89°53'00" W 1,284.74')
[S 89°52'43" E 1,284.55']

PART 1~ 13.220 ACRES
SPECIAL WARRANTY DEED
WILLIAMSON COUNTY, TEXAS
DOC. NO. 2014091151
O.P.R.W.C.TX.

(S 00°06'06" W) (219.96')
[N 00°07'17" E] [220.00']

GATE
ASPHALT DRIVEWAY

STATE HIGHWAY NO. 29 — PUBLIC R.O.W., WIDTH VARIES

MH001 — 100YR

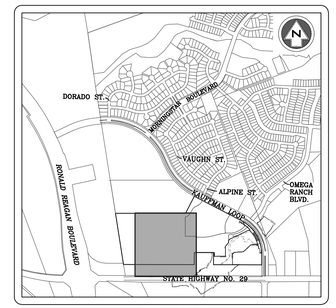
N

0 50' 100'

SCALE: 1" = 50'

LEGEND

- EXISTING MINOR CONTOUR
- 505 EXISTING MAJOR CONTOUR
- 504 PROPOSED MINOR CONTOUR
- 505 PROPOSED MAJOR CONTOUR
- PROPERTY BOUNDARY
- EASEMENT
- STORM DRAIN LINE
- FLOW ARROW
- PROPOSED WALL
- JURISDICTIONAL WATER
- TREE TO BE REMOVED
- TREE TO REMAIN



KEY MAP
N.T.S.

NO.	REVISION	BY	DATE

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POND PLAN & OVERALL GRADING 2 OF 2

12 OAKS VILLAGE REGIONAL DETENTION POND CONSTRUCTION PLANS

LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

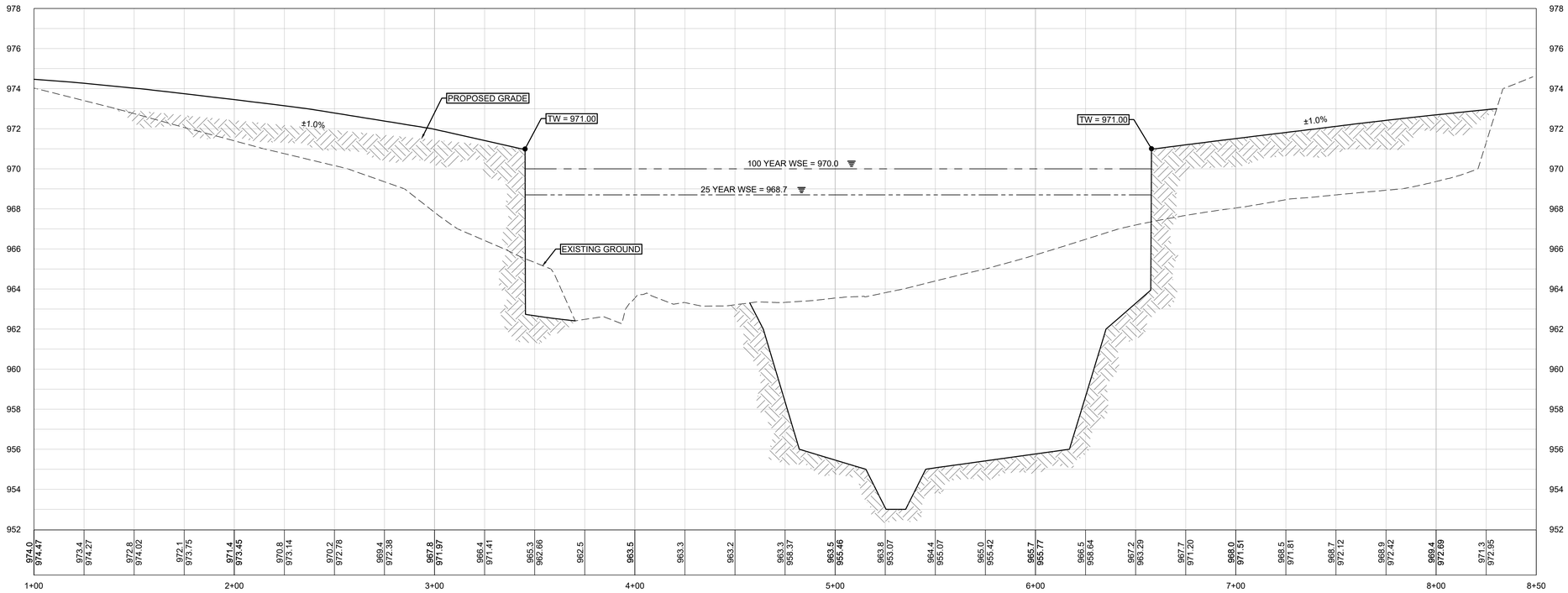
SHT. 14 OF 16

P:\New Growth\234302.002 - 12 Oaks Village Detention Pond\02_ACAD\10_Comet Planet\POND PLAN.dwg, PND (2), April 29, 2023, 5:48 PM, cbarrett

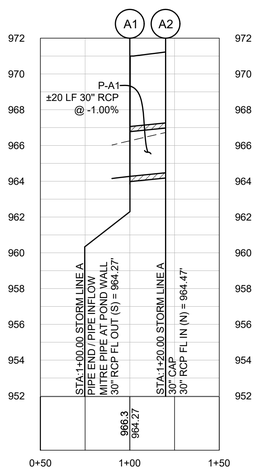
PROFILE SCALE
1" = 30' HORIZ.
1" = 3' VERT.

PROFILE LEGEND
PROPOSED FINISHED GRADE
EXISTING GRADE

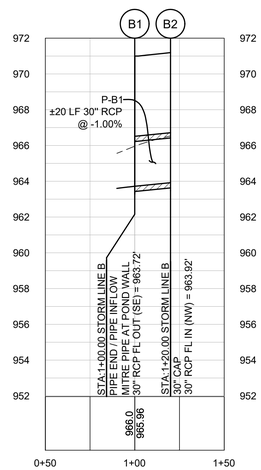
SECTION A



STORM LINE A



STORM LINE B



NO.	REVISION	BY	DATE

Know what's below. Call before you dig.

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SUITE 150
AUSTIN, TX 78735
512.872.6696
HRGREEN.COM
TBPE NO: 16384
TBPLS NO: 10194101

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DEVELOPMENT TX

STATE OF TEXAS
XAVIER GARZA-ROBLEDO
135174
LICENSED PROFESSIONAL ENGINEER
04/29/2023

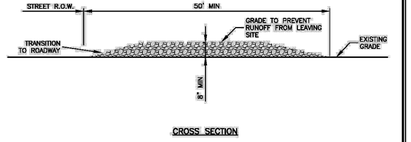
POND SECTIONS

12 OAKS VILLAGE
REGIONAL DETENTION POND
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT. 15 OF 16

P:\New Growth\2438302.002 - 12 Oaks Village Detention Pond\02_ACAD\10_Const Plans\POND PLAN.dwg, POND SECT, April 28, 2023, 5:48 PM, cbarrett

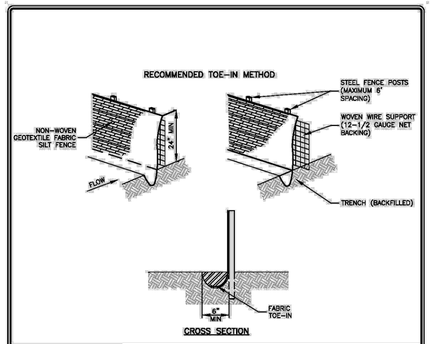


CROSS SECTION

NOTES:

1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	STABILIZED CONSTRUCTION ENTRANCE DETAIL	EC-09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

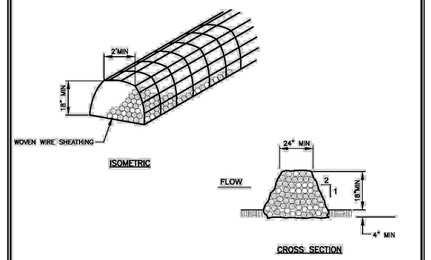


CROSS SECTION

NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1') FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH SHALL BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	SILT FENCE DETAIL	EC-10
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



CROSS SECTION

NOTES:

1. USE ONLY OPEN GRADED ROCK (3- to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/ OR FABRIC CORE–WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH OF 6", THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

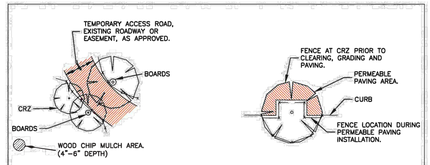
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	ROCK BERM DETAIL	EC-12
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL TREES TO BE PRESERVED FROM HIS ACTIVITIES.
2. ALL TREES SHOWN TO BE RETAINED ON THE PLANS, SHALL BE PROTECTED DURING CONSTRUCTION WITH FENCING. SEE: TREE PROTECTION TREE WELLS (EC–02), TREE PROTECTION TREE LOCATION (EC–03) AND TREE PROTECTION FENCE–CHAIN LINK (EC–04).
3. TREE PROTECTION FENCES SHALL BE ERECTED ACCORDING TO CITY STANDARDS FOR TREE PROTECTION, INCLUDING TYPES OF FENCING AND SIGNAGE.
4. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR GRADING) AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
5. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD–UP WITHIN TREE DRIPLINES.
6. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES, LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE) OR CRITICAL ROOT ZONE (CRZ), WHICHEVER IS GREATER; AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   6A. SOIL COMPACTION IN CRZ AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIAL.
   6B. CRZ DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL) OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE FORESTRY MANAGER.
   6C. WOUNDS TO EXPOSED ROOTS, TRUNK, OR LIMBS BY MECHANICAL EQUIPMENT
   6D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES.
7. EXCEPTIONS TO PLACING TREE FENCES AT THE TREE DRIPLINES OR CRZ, WHICHEVER IS GREATER, MAY BE PERMITTED IN THE FOLLOWING CASES:
   7A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, OR TREE WELL;
   7B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA;
   7C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.
   7D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE FORESTRY MANAGER TO DISCUSS ALTERNATIVES.
8. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE THAT IS CLOSER THAN 5 FEET TO A TREE TRUNK, THE TRUNK SHALL BE PROTECTED BY STRAPPED–ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
9. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES UNDER THE DRIPLINE OR CRZ, WHICHEVER IS GREATER, THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION.
10. ALL GRADING WITHIN CRZ AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA.
11. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL AND BACKFILLED WITH GOOD QUALITY TOP SOIL WITHIN TWO DAYS. IF EXPOSED ROOT AREAS CANNOT BE BACKFILLED WITHIN 2 DAYS, AN ORGANIC MATERIAL WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION SHALL BE PLACED TO COVER THE ROOTS UNTIL BACKFILL CAN OCCUR.
12. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, IN A LOCATION AND TO A DEPTH APPROVED BY THE FORESTRY MANAGER, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
13. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES WILL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS ARE TO BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON LEAVES.
14. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, A PLASTIC VAPOR BARRIER SHALL BE PLACED BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE CRZ.
15. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
16. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR (4) INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OR CRZ OF TREES, WHICHEVER IS GREATER. NO TOPSOIL IS PERMITTED ON ROOT FLARES OF ANY TREE.
17. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. ALL PRUNING MUST BE DONE ACCORDING TO CITY STANDARDS AND AS OUTLINED IN LITERATURE PROVIDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA PRUNING TECHNIQUES).
18. ALL OAK TREE CUTS, INTENTIONAL OR UNINTENTIONAL, SHALL BE SEALED WITH AN APPROVED PRUNING SEALER IMMEDIATELY (WITHIN 10 MINUTES). PRUNING SEAL OR TREE PAINT MUST BE KEPT ON SITE AT ALL TIMES.
19. THE FORESTRY MANAGER HAS THE AUTHORITY TO REQUIRE ADDITIONAL TREE PROTECTION BEFORE OR DURING CONSTRUCTION.
20. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED. REFER TO THE CITY OF ROUND ROUND ROCK TREE TECHNICAL MANUAL FOR APPROPRIATE REMOVAL METHODS.
21. PRIOR TO CONSTRUCTION, ALL LOWER TREE LIMBS OVER ROADWAYS MUST BE PRUNED TO A HEIGHT OF 14 FEET USING THE TECHNIQUES DESCRIBED IN THE CITY OF ROUND ROCK TREE TECHNICAL MANUAL.
22. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS NON COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

SCALE: NTS

RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 01-28-21 DATE	TREE PROTECTION NOTES	EC-01 SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



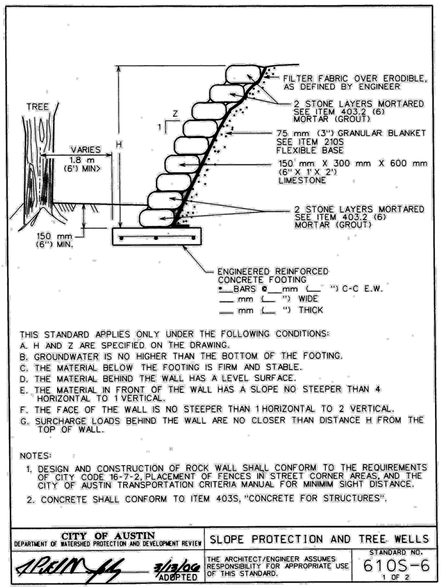
NOTE:

LIMITS OF MULCH AREAS AND DISTANCE FROM TRUNKS TO WORK/ PERMEABLE PAVING AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

SCALE: NTS

RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 01-28-21 DATE	TREE PROTECTION FENCE LOCATIONS	EC-03 SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



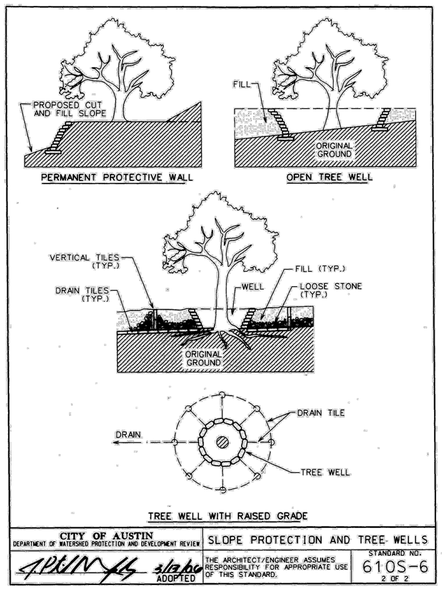
THIS STANDARD APPLIES ONLY UNDER THE FOLLOWING CONDITIONS:

A. H AND Z ARE SPECIFIED ON THE DRAWING.
B. GROUNDWATER IS NO HIGHER THAN THE BOTTOM OF THE FOOTING.
C. THE MATERIAL BELOW THE FOOTING IS FIRM AND STABLE.
D. THE MATERIAL BEHIND THE WALL HAS A LEVEL SURFACE.
E. THE MATERIAL IN FRONT OF THE WALL HAS A SLOPE NO STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
F. THE FACE OF THE WALL IS NO STEEPER THAN 1 HORIZONTAL TO 2 VERTICAL.
G. SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN DISTANCE H FROM THE TOP OF WALL.

NOTES:

1. DESIGN AND CONSTRUCTION OF ROCK WALL SHALL CONFORM TO THE REQUIREMENTS OF CITY CODE 16-7-2, PLACEMENT OF FENCES IN STREET CORNER AREAS, AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL FOR MINIMUM SIGHT DISTANCE.
2. CONCRETE SHALL CONFORM TO ITEM 403S, "CONCRETE FOR STRUCTURES".

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	SLOPE PROTECTION AND TREE WELLS	
1/28/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-6 1 OF 2



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	SLOPE PROTECTION AND TREE WELLS	
1/28/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-6 2 OF 2

NO.	REVISION	BY	DATE

811 Know what's below. Call before you dig.

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AUSTIN, TX 78735
512.872.6696
HRGREEN.COM
TBPE NO: 16384
TBPLS NO: 10194101

XAVIER GARZA-ROBLEDO 135174 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS 04/29/2023

CONSTRUCTION DETAILS

12 OAKS VILLAGE
REGIONAL DETENTION POND
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: XG
DRAWN BY: CB
CHECKED BY: XG
APPROVED BY: XG

SHT. 16 OF 16

P:\New Growth\28280\002 - 12 Oaks Village Detention Pond\02_ACAD\10_Const Plans\CONST DETAILS.dwg, DTL1, April 29, 2023, 5:48 PM, cbarrett

ELECTRONICALLY RECORDED 2021100741
Williamson County, Texas Total Pages: 8

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

GF#20060416

SPECIAL WARRANTY DEED WITH VENDOR'S LIEN

Date: July 1, 2021

Grantors: GAIDA FAMILY LIMITED PARTNERSHIP,
a Texas Limited Partnership

and

RONALD C. DIPPREY, TRUSTEE OF THE DIPPREY FAMILY IRREVOCABLE TRUST

Grantors' Mailing Address: P.O. Box 2595
Georgetown, Williamson County,
Texas 78627

Grantee: 12 OAKS VILLAGE, LP,
a Texas Limited Partnership

Grantee's Mailing Address: 7801 N. Capital of Texas Hwy, Suite 390
Austin, Travis County,
Texas 78731

Consideration:

TEN DOLLARS ($10.00), and other good and valuable consideration cash to Grantors paid by the Grantee hereinafter named, the receipt of which is hereby acknowledged and confessed, and for the payment of which no right or lien, expressed or implied, is retained; and for further consideration of the sum of FIVE MILLION THREE HUNDRED TWENTY-ONE THOUSAND AND NO/100 DOLLARS ($5,321,000.00), as evidenced by one certain promissory purchase money note, executed by Grantees and payable to the order of FRONTIER BANK OF TEXAS, bearing interest as therein provided, being secured by the vendor's lien hereinafter retained and additionally secured by a Deed of Trust lien, with power of sale, to Elaine Martin, Trustee.

Property (including any improvements):

All that certain 92.314 acre tract of land out of the GREENLIEF FISK Survey, Abstract No. 5 in Williamson County, Texas and being more particularly described by metes and bounds in Exhibit "A" attached hereto and made a part hereof for all purposes.

Reservations from Conveyance: None

Exceptions to Conveyance and Warranty:

This conveyance is expressly made and accepted subject to all matters on the ground that a true and correct survey would reveal and all valid and subsisting easements, restrictions, reservations, covenants, conditions and other matters relating to the Property to the extent that the same are valid and enforceable against the Property, as same are shown by instruments filed for record in the office of the County Clerk of WILLIAMSON County, Texas.

Grantors, for the Consideration and subject to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty, grant, sell, and convey to Grantee the Property, together with all and singular the rights and appurtenances thereto in any way belonging, to have and to hold it to Grantee and Grantee's successors and assigns forever. Grantors bind Grantors and Grantors' heirs, executors, administrators, and successors to warrant and forever defend all and singular the Property to Grantee and Grantee's successors and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof when the claim is by, through, or under Grantors but not otherwise, except as to the Reservations from Conveyance and the Exceptions to Conveyance and Warranty.

FRONTIER BANK OF TEXAS, at the request of Grantee, has paid in cash to Grantors that portion of the purchase price of the Property that is evidenced by the note. The first and superior vendor's lien against and superior title to the Property are retained by Grantor for the benefit of FRONTIER BANK OF TEXAS and are transferred, assigned, sold, and conveyed to FRONTIER BANK OF TEXAS without recourse against Grantor.

The vendor's lien against and superior title are retained as to the 47.184 acre tract which is a part of the Property and more fully described in the Deed of Trust of even date herewith between Grantee and FRONTIER BANK until each note described is fully paid according to its terms, at which time this Deed will become absolute.

When the context requires, singular nouns and pronouns include the plural.

Grantee is purchasing the Property in an "as is" condition with no representations made or implied as to the quality, fitness, or condition of the Property by the Grantors. Grantee is purchasing the Property based solely upon its inspection and is not relying on any representations made by Grantors. No representations of the use, fitness, size, quality or any other matters concerning the Property have been made by Grantors to Grantee. Grantors warrant only title to the Property as set forth in this Deed.

Ad valorem taxes for 2021 on said Property having been prorated between Grantors and Grantee on the date of closing hereof, the payment of such taxes are assumed by Grantee; together with subsequent assessments for that and prior years due to change in land usage, ownership, or both, the payment of which Grantee assumes.

GAIDA FAMILY LIMITED PARTNERHSIP,
a Texas Limited Partnership

By: Gaida Land, LLC,
a Texas Limited Liability Company
Its: General Partner

By: Karen L. Gaida
Its: President

Ronald C. Dipprey, as Trustee of
The Dipprey Family Irrevocable Trust

STATE OF TEXAS,
COUNTY OF WILLIAMSON.

BEFORE ME, the undersigned authority, on this day personally appeared Karen L. Gaida, President of Gaida Land, LLC, a Texas Limited Liability Company, the General Partner of Gaida Family Limited Partnership, a Texas Limited Partnership, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that she executed the same for the purposes and consideration therein expressed, and in the capacity therein stated and as the act and deed of the Company and Partnership.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 1st day of July, 2021.

JAMIE KAATZ
My Notary ID # 6145469
Expires July 31, 2022

JAMIE KAATZ
My Notary ID # 6145469
Expires July 31, 2022

Notary Public in and for
The State of Texas

STATE OF TEXAS,
COUNTY OF WILLIAMSON.

BEFORE ME, the undersigned authority, on this day personally appeared, Ronald C. Dipprey, Trustee of the Dipprey Family Irrevocable Trust, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, and in the capacity therein stated and as the act and deed of the Trust.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 1st day of July, 2021.

JAMIE KAATZ
My Notary ID # 6145469
Expires July 31, 2022

JAMIE KAATZ
My Notary ID # 6145469
Expires July 31, 2022

Notary Public in and for
The State of Texas

EXHIBIT "A"

FIELD NOTES DESCRIPTION

DESCRIPTION OF 47.184 ACRES OF LAND IN THE GREENLEAF FISK SURVEY, ABSTRACT NO. 5, WILLIAMSON COUNTY, TEXAS; BEING A PORTION OF THAT CERTAIN CALLED 92.3198 ACRE TRACT OF LAND DESCRIBED IN THE SPECIAL WARRANTY DEED TO RONALD C. DIPPREY, TRUSTEE OF THE DIPPREY FAMILY IRREVOCABLE TRUST OF RECORD IN DOCUMENT NO. 2019117773, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 47.184 ACRES OF LAND, AS SURVEYED BY LANDDEV CONSULTING, LLC, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a 1/2-inch iron rod with a plastic cap stamped "4WARD BOUNDARY" found in the intersecting north right-of-way line of State Highway No. 29, a variable-width right-of-way and the west right-of-way line of Kauffman Loop, a variable-width right-of-way, being in a west line of a certain called 12.35 acre tract described in the Deed to Williamson County, Texas, of record in Document No. 2016016908, Official Public Records of Williamson County, Texas, at the most easterly southeast corner of the said 92.3198 acre tract, same being the most easterly northeast corner of that certain called 13.220 acre tract of land designated as Part 1 and described in the Special Warranty Deed to Williamson County, Texas, of record in Document No. 2014091151, Official Public Records of Williamson County, Texas, for the most easterly southeast corner and **POINT OF BEGINNING** of the tract described herein;

THENCE, leaving the west right-of-way line of said Kauffman Loop, leaving a west line of the said 12.35 acre tract, with the north right-of-way line of said State Highway No. 29, with the south lines of the said 92.3198 acre tract, with the north lines of the said 13.200 acre tract, with the south lines of the tract described herein, the following five (5) courses and distances:

1. N 89°53'00" W, a distance of 875.72 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at an angle point,

2. N 00°08'50" E, a distance of 220.00 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at an angle point,

3. N 89°52'57" W, a distance of 350.03 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at an angle point,

4. S 00°06'29" W, a distance of 219.94 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at an angle point, and

5. N 89°53'12" W, a distance of 1,284.59 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found in the east line of that certain called 137.54 acre tract of land designated as Tract 3 and described in the Special Warranty Deed to Wilco Land Investment I, LLC (1/3 interest), Wilco Land Investment II, LLC (1/3 interest) and Wilco Land Investment III, LLC (1/3 interest) of record in Document No. 2014003388, Official Public Records of Williamson County, Texas, being also the east line of that certain called 3.329 acre tract of land designated as Tract 6 and described in the Deed to Williamson County, Texas, of record in Document No. 2021026279, Official Public Records of Williamson County, Texas, at the southwest corner of the said 92.3198 acre tract, same being the northwest corner of the said 13.220 acre tract, for the southwest corner of the tract described herein, and from which a 1/2-inch iron rod with a plastic cap stamped "FOREST 1847" found at the southwest corner of the said 13.200 acre tract, same being the southeast corner of the

said 137.54 acre tract and the southeast corner of the said 3.329 acre tract bears S 08°54'24" E, a distance of 202.51 feet;

THENCE N 08°54'24" W, with the west line of the said 92.3198 acre tract, with the east line of the said 137.54 acre tract, with the east line of the said 3.329 acre tract, with the west line of the tract described herein, at a distance of 22.47 feet pass a 5/8-inch iron rod with an aluminum cap stamped "WILCO ROW" found at the northeast corner of the said 3.329 acre tract, and continuing for a total distance of 940.08 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" set for the northwest corner of the tract described herein, from which a 1/2-inch iron rod with a plastic cap stamped "4WARD BOUNDARY" found in the curving south right-of-way line of said Kauffman Loop, at the most westerly southwest corner of the said 12.35 acre tract, at the northwest corner of the said 92.3198 acre tract, same being the southeast corner of that certain called 2.40 acre tract of land described in the Special Warranty Deed to Williamson County Municipal Utility District No. 17 of record in Document No. 2014064286, Official Public Records of Williamson County, Texas, bears N 08°54'24" W, a distance of 1,643.84 feet;

THENCE leaving the east line of the said 137.54 acre tract, crossing the said 92.3198 acre tract, with the north lines of the tract described herein, the following four (4) courses and distances:

1. N 89°58'59" E, a distance of 972.56 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" set for a northeast corner of the tract described herein,

2. S 00°00'00" E, a distance of 306.48 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" set for a re-entrant corner of the tract described herein,

3. N 90°00''00" E, a distance of 496.65 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" set for an angle point, and

4. N 27°24'40" E, a distance of 530.90 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" set in the southwest right-of-way line of said Kauffman Loop, in the southwest line of the said 12.35 acre tract, same being the northeast line of the said 92.3198 acre tract, for the easterly northeast corner of the tract described herein, from which a 1/2-inch iron rod with a plastic cap stamped "4WARD BOUNDARY" found at a point-of-curvature in the southwest right-of-way line of said Kauffman Loop, in the southwest line of the said 12.35 acre tract, same being the northeast line of the said 92.3198 acre tract bears N 62°35'11" W, a distance of 345.79 feet;

THENCE, with the southwest and west right-of-way line of said Kauffman Loop, with the southwest and west lines of the said 12.35 acre tract, with the northeast and east lines of the said 92.3198 acre tract, with the northeast and east lines of the tract described herein, the following three (3) courses and distances:

1. S 62°35''11" E, a distance of 642.38 feet to a 1/2-inch iron rod with a plastic cap stamped "4WARD BOUNDARY" found at a point-of-curvature,

2. with the arc of a curve to the right, having a radius of 690.00 feet, an arc distance of 755.30 feet, and a chord which bears S 31°13'11" E, a distance of 718.15 feet to a 1/2-inch iron rod with a plastic cap stamped "4WARD BOUNDARY" found at a point-of-tangency, and

3. S 00°07'00" W, a distance of 189.05 feet to the **POINT OF BEGINNING** and containing 47.184 acres of land, more or less.

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Nancy E. Rister, County Clerk
Williamson County, Texas