

Chapel Hill Phase II

Organized Sewage Collection
System Application



Prepared for:
TCEQ
Austin Regional Office

Prepared by:
Paul Hames, P.E.



TBPE No. F-6324
TBPLS No. 10194230

2/01/2024

A handwritten signature in cursive script that reads "Paul M. Hames".

Project #222012278

February 1, 2024

Sign-off Sheet

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Prepared by Paul M. Hames
(signature)

Paul Hames, P.E.

Reviewed by Zhongyue Mao
(signature)

Zhongyue Mao, P.E.

CHAPEL HILL PHASE II

February 1, 2024

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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: Chapel Hill Phase II				2. Regulated Entity No.: 111787560			
3. Customer Name: AMFP V Chapel Hill II LLC				4. Customer No.:			
5. Project Type: (Please circle/check one)	<input checked="" type="radio"/> New	Modification		Extension		Exception	
6. Plan Type: (Please circle/check one)	WPAP	CZP	<input checked="" type="radio"/> SCS	UST	AST	EXP	EXT
7. Land Use: (Please circle/check one)	Residential		<input checked="" type="radio"/> Non-residential		8. Site (acres):		14.881
9. Application Fee:			10. Permanent BMP(s):		Batch Detention		
11. SCS (Linear Ft.):			12. AST/UST (No. Tanks):				
13. County:	Williamson		14. Watershed:		Brushy Creek		

Application Distribution

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

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

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

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

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

Paul M. Hames, PE

Print Name of Customer/Authorized Agent

Paul M. Hames

2/01/2024

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 I

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: Paul M. Hames, P.E.

Date: 2/01/2024

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Chapel Hill Phase II
2. County: Williamson
3. Stream Basin: Brushy Creek
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: Erik Boraks

Entity: AMFP V Chapel Hill II LLC

Mailing Address: 13740 Midway Road, #804

City, State: Dallas, Texas

Zip: 75244

Telephone: (972)385-1676

FAX: _____

Email Address: Erik.Boraks@dukecompanies.com

8. Agent/Representative (If any):

Contact Person: Paul M. Hames, P.E.

Entity: Stantec Consulting Services

Mailing Address: 6080 Tennyson Pkwy., Suite 200

City, State: Plano, Texas

Zip: 75024

Telephone: (214) 473-2483

FAX: _____

Email Address: Paul.hames@stantec.com

9. Project Location:

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

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

South side of Southeast Inner Loop, east side of Interstate 35, north side of Westinghouse Road and west side of Celebration Blvd.

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: TBD

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

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

- (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
- (2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

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

Administrative Information

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

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

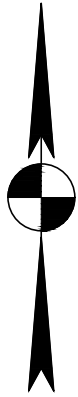
19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

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

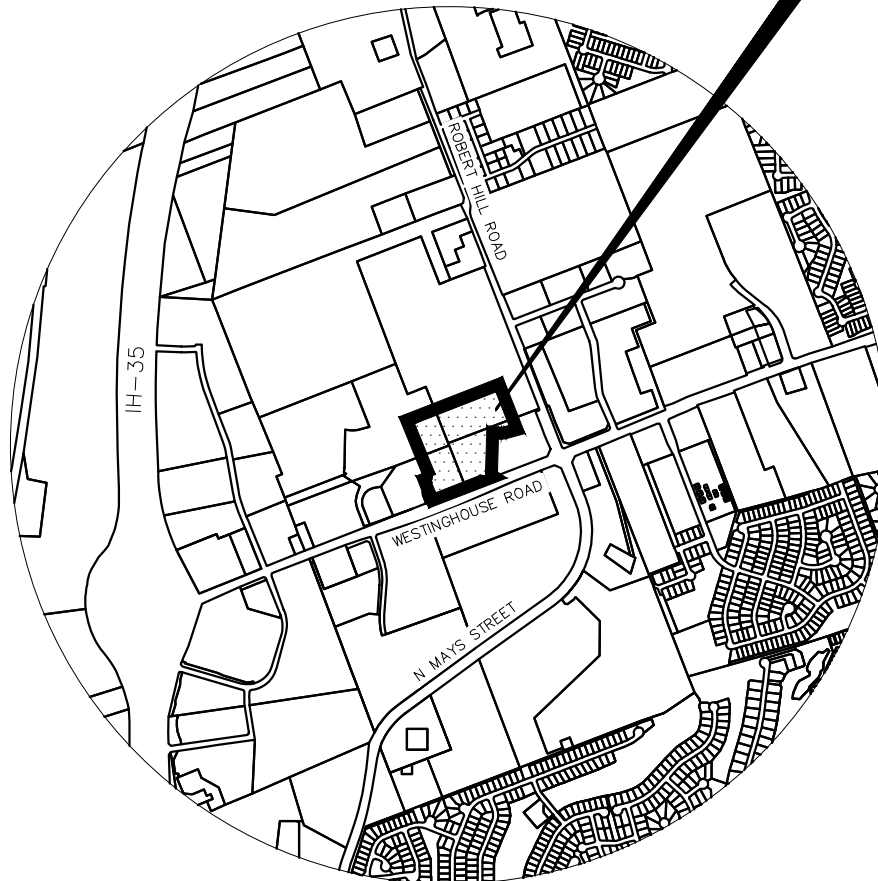
20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies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

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

Attachment A – Road Map



**PROJECT
SITE**



SITE LOCATION MAP

N.T.S.



Stantec

1905 Aldrich Street, Suite 300
Austin, Texas 78723-3544
Tel. (512) 328-0011 Fax (512) 328-0325
TBPE # F-6324 TBPLS # F-10194230
Copyright © 10/18/2021

401 WESTINGHOUSE ROAD
GEORGETOWN, TEXAS, 78626

DUKE, INC.

SITE LOCATION MAP

DATE: 10/18/2021

SCALE: N.T.S.

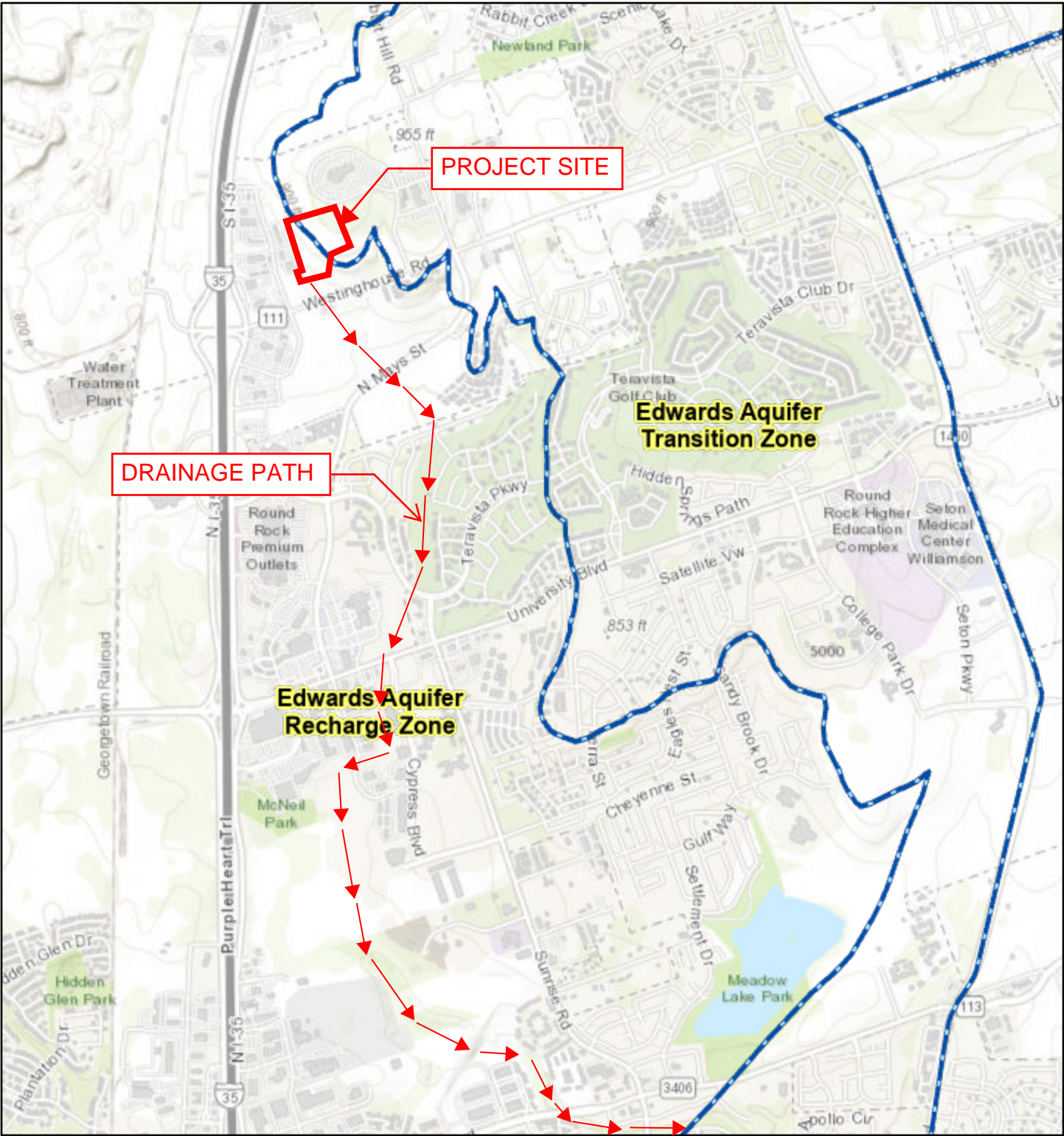
DRAWN BY: ZM

FILE:

PROJECT No. 222012278

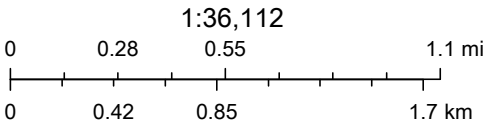
Attachment B – USGS/Edwards Recharge Zone Map

Chapel Hill Phase 2



2/15/2022, 9:27:17 AM

- Edwards Aquifer Label
- Edwards Aquifer Boundary
- Edwards Aquifer Boundary central line
- TX Counties
- 7.5 Minute Quad Grid
- TCEQ_EDWARDS_OFFICIAL_MAPS



Austin Community College, City of Austin, County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/ NASA, EPA, USDA, TCEQ

Attachment C – Project Description

The 17.425-acre site, platted as Lot 1 of Chapel Hill Subdivision Section Two, is located on the north side of Westinghouse Road, about a half mile east of the intersection of Interstate 35 and Westinghouse Road in Georgetown, Texas. Chapel Hill Apartments Phase II will consist of 10 apartment buildings and a club house with associated drives, sidewalks, parking, drainage, water quality and detention pond, and utilities. The offsite area to the south of the development will consist of an access driveway with deceleration lane and an additional water quality and detention pond. The existing condition of the site consists of natural grass land with a stock pond in the southwest corner of the property. Additionally, there is an abandoned residential home and barns enclosed with a fence that are all to be removed and surrounded by brush, weeds, and grass mixture with a tree population. The stock pond will be removed and stormwater detention will be provided by the proposed onsite detention pond. The site runoff drains to a box culvert under Westinghouse Road and eventually releases into Brushy Creek. The site generally slopes from northeast to southwest with slopes ranging from 5%-25%. The project is within the City Limits of Georgetown and is located over both the Edwards Aquifer Recharge and Transition Zones. Development of this project is designed in accordance with the City of Georgetown Unified Development Code (UDC) and the TCEQ RG-348 Technical Guidance Manual.

Temporary water quality controls will be provided during construction of the site improvements and will consist of silt fence, rock berms, inlet protection, a temporary sediment pond, concrete truck washout pits, stabilized construction entrances, and dust control.

Permanent water quality control will be provided for this site by an onsite water quality pond. This water quality/detention pond will be located on Lot 1, replacing the existing stock pond. The pond is designed to remove 85% of the increased TSS from the contributing drainage basins, as stipulated by the City of Georgetown UDC, which exceeds the required removal rate of 80% mandated by TCEQ. The water quality pond has been designed for the future impervious cover associated with Lot 1.

Wastewater from the Phase II site will drain to the Westinghouse South Regional Lift Station via an existing gravity sewage collection system where it will then be conveyed to the San Gabriel Wastewater Treatment Plant. The wastewater from the apartment site will be 100% domestic and includes approximately 1,923 LF of 8-inch pipe and 523 LF of 6-inch pipe to be installed from the Phase I manhole connection in the southeast corner of the property.

Water will be provided to the site by a connection to an existing water line contained within an easement on the northern boundary of the site.

The total limits of construction for this project including offsite development is approximately 17.7 acres.

Section II

Geologic Assessment Form (TCEQ-0585)



**Narrative Description of Site Specific Geology for the
Approximately 54-acre Chapel Hill Tract and Offsite
Water and Wastewater Utility Lines, Williamson
County, Texas**

Prepared for:

Halff Associates, Inc

Prepared by:

Cambrian Environmental

April 22nd, 2020

**NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY FOR THE
APPROXIMATELY 54-ACRE CHAPEL HILL TRACT AND OFFSITE WATER AND
WASTEWATER UTILITY LINES, WILLIAMSON COUNTY, TEXAS**

Prepared for

HALFF ASSOCIATES, INC.

9500 Amberglen Boulevard
Building F, Suite 125
Austin, Texas 78729

Prepared by

Craig Crawford, P.G.

CAMBRIAN ENVIRONMENTAL

4422 Pack Saddle Pass
Suite 204
Austin, Texas 78745

Texas Geoscience Firm Registration # 50484



As a licensed professional geoscientist I attest that the contents of this report are complete and accurate to the best of my knowledge.

April 22nd, 2020

Geologic Assessment

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Geologist: Craig Crawford, PG

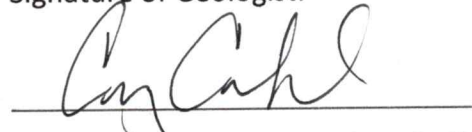
Telephone: 512.705.5541

Date: 22 April 2020

Fax: _____

Representing: Cambrian Environmental (Tx Geo Firm # 50484) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: Chapel Hill (54-acre Tract and Offsite Wastewater Line)

Project Information

1. Date(s) Geologic Assessment was performed: 16 May & 21 August 2019, 10 March 2020

2. Type of Project:

- ☒ WPAP
☒ SCS

- ☐ AST
☐ UST

3. Location of Project:

- ☒ Recharge Zone
☒ Transition Zone
☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table.** Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.
5. ☒ Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Austin-Whitewright	C	< 4
Ferris-Heiden	D	> 5
Heiden	D	> 5
Houston	D	> 5

** Soil Group Definitions (Abbreviated)*

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

6. ☒ **Attachment B – Stratigraphic Column.** A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.
7. ☒ **Attachment C – Site Geology.** A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.
8. ☒ **Attachment D – Site Geologic Map(s).** The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1" = 400'
 Applicant's Site Plan Scale: 1" = 40'
 Site Geologic Map Scale: 1" = 40'
 Site Soils Map Scale (if more than 1 soil type): 1" = 1000'
9. Method of collecting positional data:
☒ Global Positioning System (GPS) technology.
☐ Other method(s). Please describe method of data collection: _____
10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.

12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
- ☐ Geologic or manmade features were not discovered on the project site during the field investigation.
13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.
- ☒ There are 3 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
- ☐ The wells are not in use and have been properly abandoned.
- ☒ The wells are not in use and will be properly abandoned.
- ☐ The wells are in use and comply with 16 TAC Chapter 76.
- ☐ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

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



NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY FOR THE APPROXIMATELY 54-ACRE CHAPEL HILL TRACT AND OFFSITE WATER AND WASTEWATER UTILITY LINES, WILLIAMSON COUNTY, TEXAS

PROJECT DESCRIPTION

This narrative Geologic Assessment accompanies the Texas Commission on Environmental Quality (TCEQ) Geologic Assessment form TCEQ-0585 completed for the approximately 54-acre Chapel Hill tract. The project site is located on the north side of Westinghouse Road, approximately 0.35 miles east of Interstate Highway (IH) 35. Additionally, this report covers an offsite wastewater line associated with this project. This utility line runs south-southeast from Westinghouse Road, and extends past North Mays Street towards an existing development along Centerbrook Place (see Project Location Map).

METHODOLOGY

Two Cambrian Environmental Registered Professional Geoscientists (License #s 10791 & 1350) and two karst technicians conducted a field survey for a Geologic Assessment on May 16th 2019, and a second site visit to complete the field survey for the wastewater line portion of the project occurred on August 21st 2019. A third site visit and survey were conducted on March 20th 2020 to survey the alignment of the offsite waterline. The pedestrian survey was completed by walking parallel transects spaced approximately 50 feet apart as directed by the TCEQ in the Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones (Rev. 10-01-04). Closer spacing was used where vegetation inhibited clear observation. All potential karst features, including depressions, holes, and animal burrows, were carefully examined for evidence of subsurface extent. A number of techniques were used for this effort, including probing with a digging implement to determine the thickness and consistency of fill material and feeling for the presence of air flow, which may indicate the presence of a sub-surface void space. Other techniques included making observations of any notable characteristics of the feature site such as the presence of various types of vegetation or a semi-circular burrow mound produced by the activities of small mammals. The locations of any discovered features were recorded with a handheld GPS unit and were also marked on-site with pink flagging tape. Cambrian also conducted due diligence activities as called for under the City of Georgetown Edwards Aquifer Recharge Zone Water Quality Ordinance (“the Ordinance”).

RESULTS

Soils

Soils mapped within the project area include the Austin-Whitewright complex (AwC2), Ferris-Heiden complex (FhE), Heiden (HeD2, HsE), and Houston (HuB, HuC2) series soils (see Site Soils Map).¹ The Austin-Whitewright series soils are within the “C” classification of the hydrologic soil groups. Type “C” soils have a slow infiltration rate (high runoff potential) when thoroughly wet. The Ferris-Heiden, Heiden, and Houston series soils are within the “D” classification of the hydrologic soil groups. Type “D” soils have a very slow infiltration rate (very high runoff potential) when thoroughly wet.

¹ United States Department of Agriculture, Soil Conservation Service, Soil Survey of Williamson County, Texas, 1983.

Geology

The project site is located partially within the Edwards Aquifer Recharge Zone, and partially within the Edwards Aquifer Transition Zone. Generally, the Recharge Zone is the area where the stratigraphic units constituting the Edwards Aquifer are outcropping at the surface, and where permeable features create the potential for recharge of surface waters into the aquifer. The Transition Zone is where geologic formations outcrop in proximity to the Recharge Zone, and where geologic features may present possible avenues of recharge of surface waters to the aquifer. The Transition Zone includes portions of the Del Rio Clay, Buda Limestone, Eagle Ford Group, and Austin Chalk.

The bedrock lithologies underlying and outcropping in the 54-acre portion of the project area are Cretaceous in age and consist of the Eagle Ford Group, the Buda Limestone, and the Del Rio Clay, which are stratigraphically above the units that comprise the Edwards Aquifer (see Project Geologic Map, Sheet 1 of 3). The bedrock lithologies underlying the wastewater line portion of the project area consist of the Del Rio Clay and the Georgetown Limestone (see Project Geologic Map, Sheets 2 & 3). The geology of this area has been mapped most recently at a useful scale by Collins (2005), and we find his interpretation of the geology to be generally accurate.²

Recharge into the aquifer primarily occurs in areas where the Edwards Group and Georgetown Formation are exposed at the surface, and both of these units are absent in outcrop on the property. Most recharge is from direct infiltration via precipitation and streamflow loss. Recharge occurs predominantly along secondary porosity features such as faults, fractures, and karst features (caves, solution cavities, sinkholes, etc.). Karst features are commonly formed along joints, fractures, and bedding plane surfaces in the Edwards Group. No karst features on any type were discovered during the pedestrian survey, and very little outcropping bedrock was observed due to the generally thick soil cover. The alignment of one mapped fault crosses through the wastewater line portion of the project (see Project Geologic Map, Sheet 3 of 3), however no trace of this fault was observable in the field. This portion of the project area has a thick layer of clayey soil (Houston Black clay) over the bedrock, and the location of this fault was not able to be verified.

Three wells were discovered during the pedestrian survey. However, a review of the Texas Water Development Board's online Groundwater Data Viewer³ did not produce any results or data regarding any documented ground water wells located on this the property.

Site Hydrogeologic Assessment

In the absence of discrete recharge features, the likelihood of surface water infiltrating on this property and contributing to the main body of the aquifer is thought to be very low. This is further supported by the lack of the Edwards Limestone and Georgetown Limestone outcrop on the property. While the likelihood is low, should any karst features be discovered during the construction phase of the project, they should be reported to TCEQ and have appropriate mitigation measures emplaced.

² Collins, E.W., 2005, Geologic Map of the West Half of the Taylor 30x60 Quadrangle: Central Texas Urban Corridor, Encompassing Round Rock, Georgetown, Salado, Briggs, Liberty Hill, and Leander. Bureau of Economic Geology, The University of Texas at Austin. Austin, Texas 78713-8924.

³ <https://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer>

City of Georgetown Ordinance

No springs were identified on the property during the pedestrian survey, and therefore no occupied site protection, or spring buffer protection measures will be required for this property. One mapped stream occurs in the wastewater line portion of the project area (see Project Geologic Map, sheets 2 & 3), however this channel appears to have been highly modified in the past by the installation two impoundment ponds are present near the headwaters of this draw. This mapped stream consists of a very shallow drainage that was dry and overgrown with vegetation during both site visits, and no flowing water was observed during either site visit in spite of recent rain events. It appears that this drainage may only flow if the two upstream impoundment ponds overflow. Any water that may potentially flow in this short section of this drainage draw, flows to the south into an existing series stormwater control structures and ponds associated with the existing subdivision to the south of this project. In accordance with the Ordinance, the construction of certain improvements may be subject to stated restrictions. This includes wastewater facilities, provided that the wastewater utility shall not be located below the normal highwater elevation within the channel of a stream, except at crossings of the stream.

All regulated activities within the recharge zone must follow water quality best management practices, and development of the property will need to comply with the water quality protection measures as outlined in Section 8 of the Ordinance.

Feature Descriptions

- F-1** The feature consists of a water well. It is unknown if the well is still actively in use, or if it will be utilized during the proposed development of the tract. The depth of this well is unknown. If the well is not intended to be utilized, it should be properly abandoned by a licensed well driller prior to the construction phase of the project. (GPS: 30.58142, -97.68533)
- F-2** The feature consists of a closed depression that measures approximately 10 feet in diameter by less than 1 foot deep. The feature is lined with limestone cobbles, bricks, and concrete; appears to be a relic of past land clearing, or other activities, associated with the existing homestead on the property. The feature does not appear to be karst in origin. (GPS: 30.58129, -97.68481)
- F-3** The feature consists of limestone block cistern, and appears to have been used in the past for livestock or in association with the homestead. (GPS: 30.58184, -97.68411)
- F-4** The feature consists of a water well. It is unknown if the well is still actively in use, or if it will be utilized during the proposed development of the tract. The depth of this well is unknown. If the well is not intended to be utilized, it should be properly abandoned by a licensed well driller prior to the construction phase of the project. (GPS: 30.58169, -97.68427)
- F-5** The feature consists of a water well. It is unknown if the well is still actively in use, or if it will be utilized during the proposed development of the tract. The depth of this well is unknown. If the well is not intended to be utilized, it should be properly abandoned by a licensed well driller prior to the construction phase of the project. (GPS: 30.58105, -97.68548)

Fault One fault is mapped as crossing through the wastewater line portion of the project area. No traces of this fault were directly observable in the field, and therefore the location was not verifiable during the survey. This portion of the project area is underlain with thick clayey soils of the Houston Black series. Beneath the thick soil cover, the bedrock geology is mapped as the Del Rio Clay on east (downthrown) side of the fault, and the Georgetown Limestone on the west side of the fault, however no bedrock outcrop was observed in this portion of the project area. (inferred GPS: 30.57435, -97.68161)

Stratigraphic Column for the Approximately 54-acre Chapel Hill Tract

*Shaded areas represent lithologies underlying the project area

Upper Cretaceous	Kef	Eagle Ford (~50 feet)	Edwards Aquifer
	Kbu	Buda Limestone (~20 feet)	
	Kdr	Del Rio Clay (60 feet)	
	Kgt	Georgetown Limestone (100 feet)	
Lower Cretaceous	Ked	Edwards Limestone (90-100 feet)	
	Kcp	Comanche Peak Limestone (~40 feet)	
	Kwa	Walnut Formation (~130 feet)	



Feature F-1, water well



Feature F-2, non-karst closed depression lined with limestone cobbles.



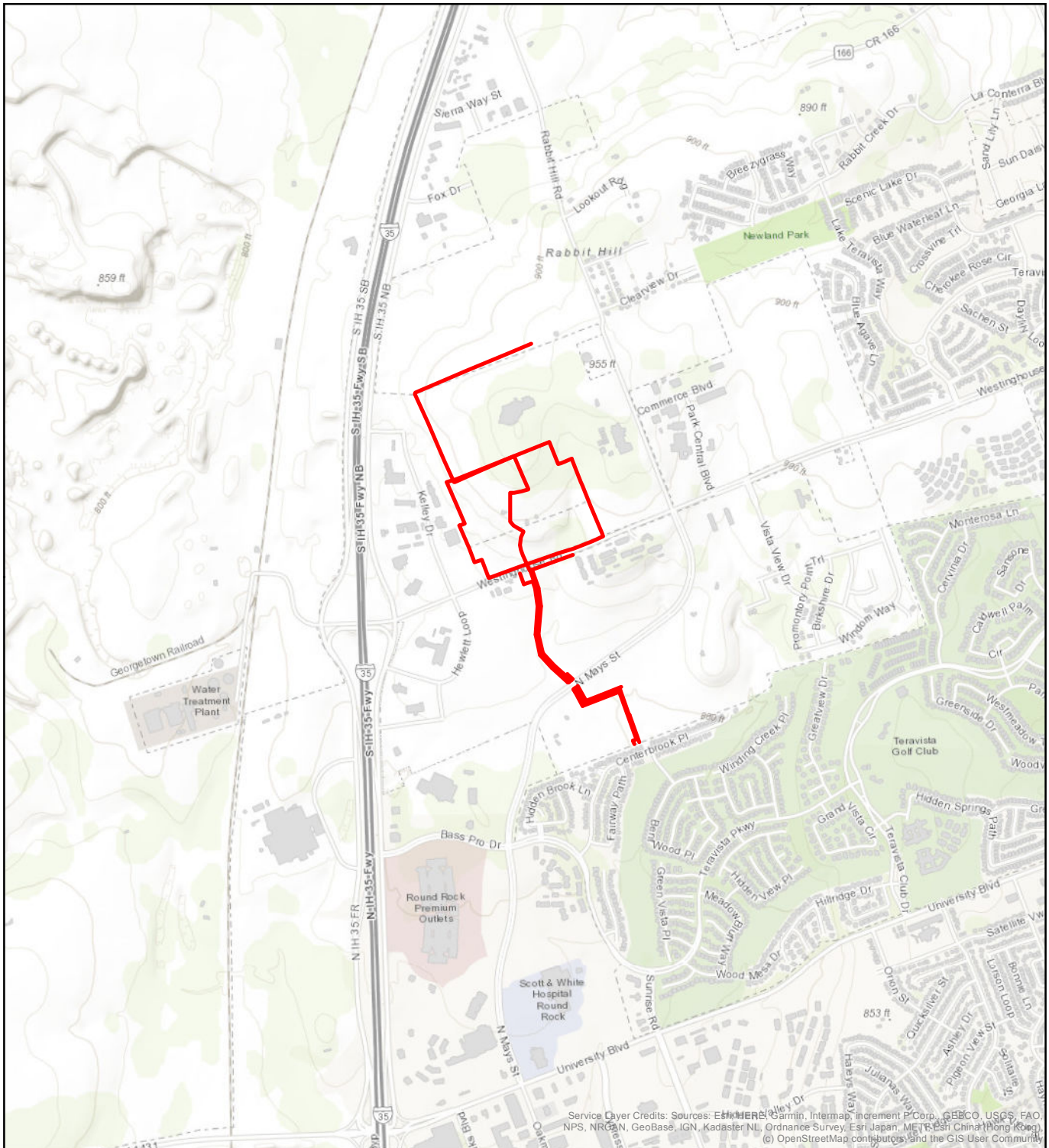
Feature F-3, cistern



Feature F-4, well and pressure tank

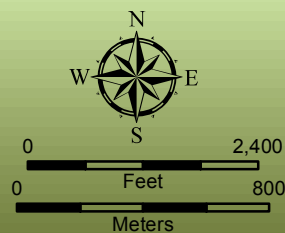


Feature F-5, well (located inside structure)



Project Location Map

Chapel Hill Project
4/09/2020

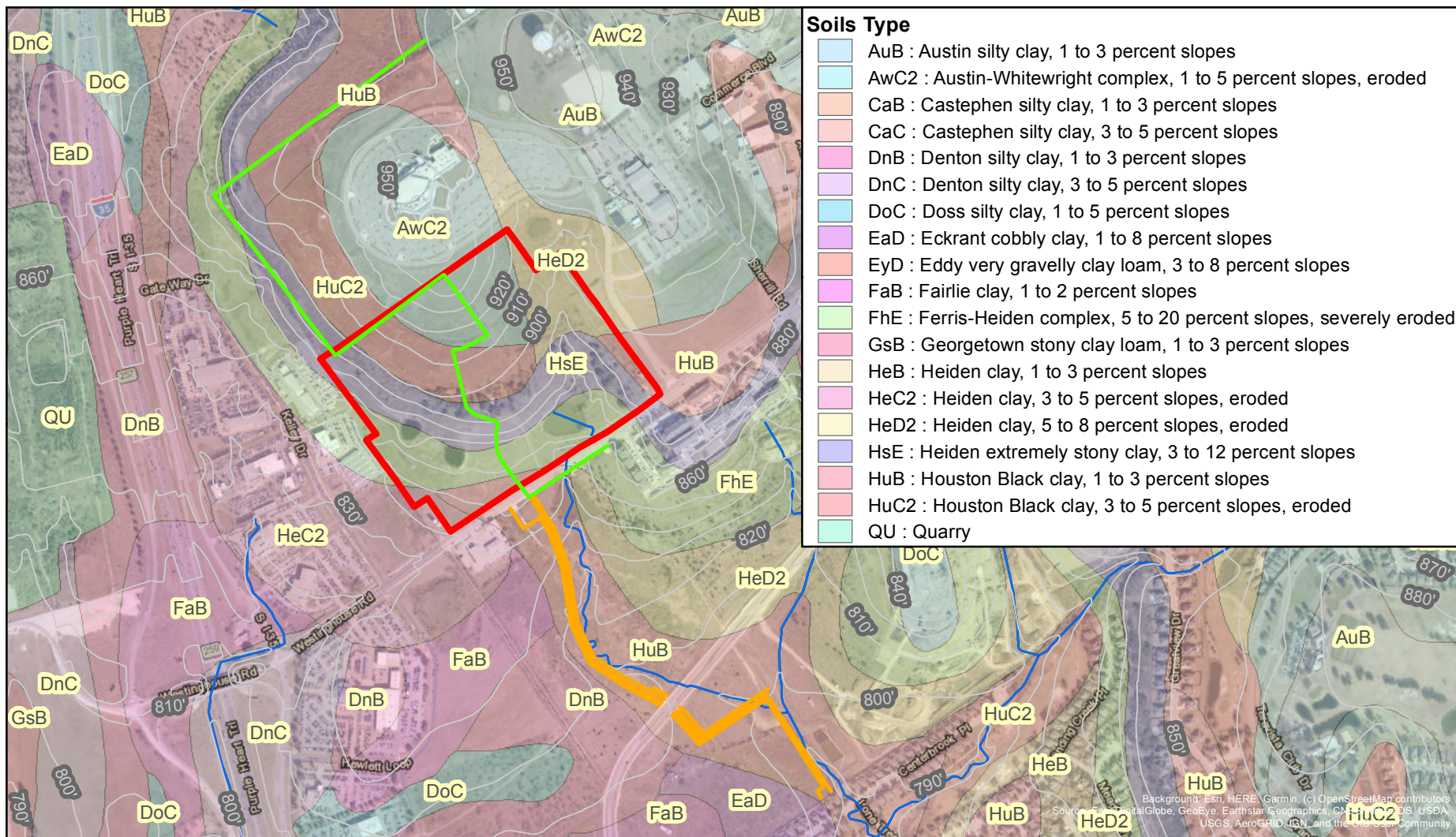


Map Key

Project Area



Williamson County, Texas

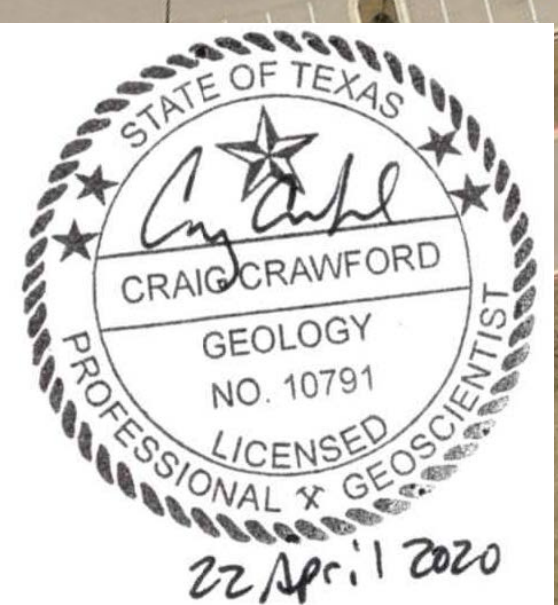


Soils of the Project Area



Map Key

- Project Area
- Wastewater Alignment
- Waterline
- Stream
- Contour Line



Project Geologic Map

Cambrian

Map Key

- Project Area
- Waterline
- Geologic or Man-made Feature
- Geologic Unit
- Kef - Eagle Ford Group
- Kdr - Del Rio Clay
- Kbu - Buda Limestone
- 10-Foot Elevation Contour
- Stream

SHEET 1 OF 4

0 20 40
Feet
0 10 20
Meters

1 inch = 40 feet

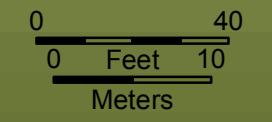


Project Geologic Map

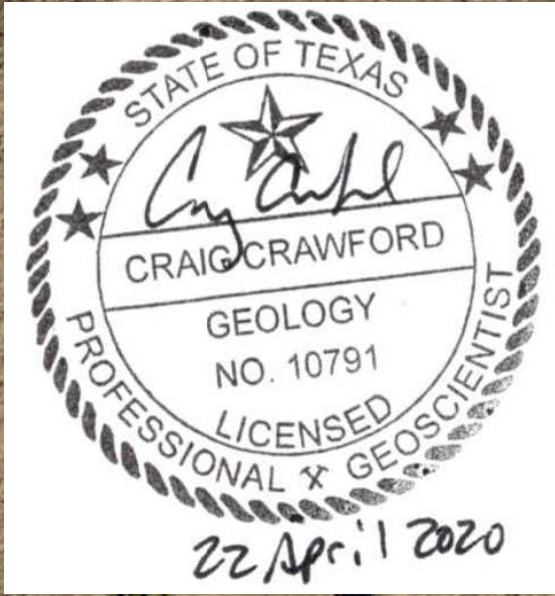


- Map Key**
- Project Area
 - Wastewater Alignment
 - Waterline
 - Geologic Unit
 - Kgt - Georgetown Limestone
 - Kdr - Del Rio Clay
 - 10-Foot Elevation Contour
 - Stream

SHEET 2 OF 4



1 inch = 40 feet





Project Geologic Map



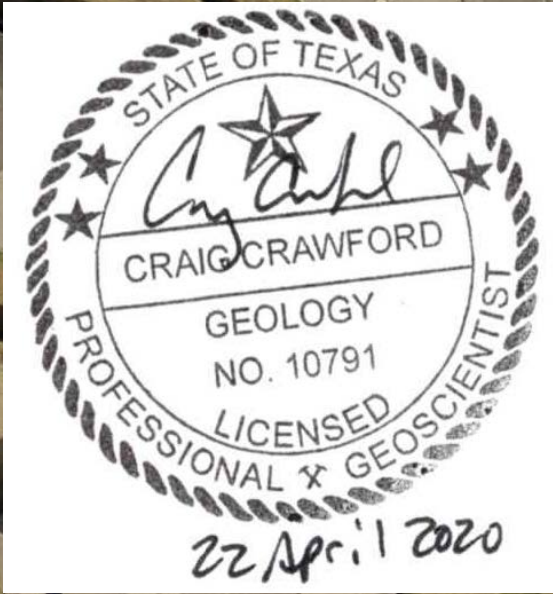
- Map Key**
- Wastewater Alignment
 - Geologic Unit
 - Kgt - Georgetown Limestone
 - Kdr - Del Rio Clay
 - Fault
 - 10-Foot Elevation Contour
 - Stream

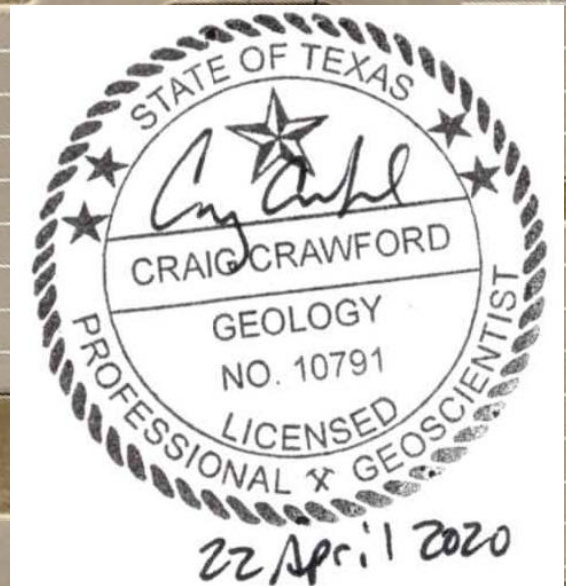
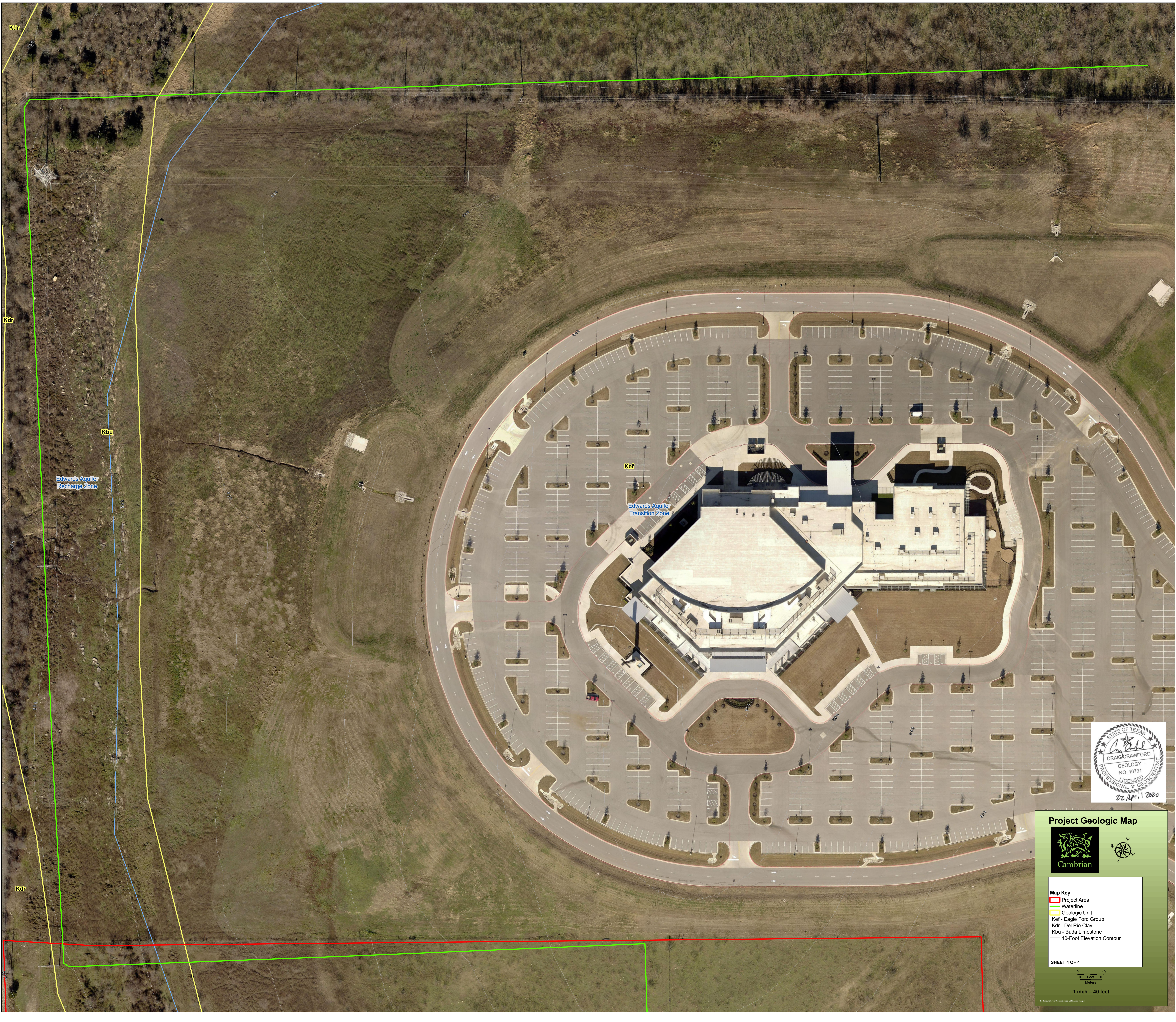
SHEET 3 OF 4

0 40
0 Feet 10
Meters

1 inch = 40 feet

Background Layer Credits: Source: ESRI Aerial Imagery



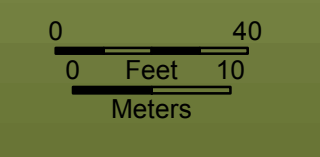


Project Geologic Map



- Map Key**
- Project Area
 - Waterline
 - Geologic Unit
 - Kef - Eagle Ford Group
 - Kdr - Del Rio Clay
 - Kbu - Buda Limestone
 - 10-Foot Elevation Contour

SHEET 4 OF 4



1 inch = 40 feet

Background: Open Streets. Source: CDR, Aerial Imagery

Section III

Organized Sewage Collection System Plan (TCEQ-0582)

Organized Sewage Collection System Application

Texas Commission on Environmental Quality

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

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

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

Regulated Entity Name: Chapel Hill Phase II

1. ☒ **Attachment A – SCS Engineering Design Report.** This Engineering Design Report is provided to fulfill the requirements of 30 TAC Chapter 217, including 217.10 of Subchapter A, §§217.51 – 217.70 of Subchapter C, and Subchapter D as applicable, and is required to be submitted with this SCS Application Form.

Customer Information

2. The entity and contact person responsible for providing the required engineering certification of testing for this sewage collection system upon completion (including private service connections) and every five years thereafter to the appropriate TCEQ region office pursuant to 30 TAC §213.5(c) is:

Contact Person: Erik Boraks

Entity: AMFP V Chapel Hill II LLC

Mailing Address: 13740 Midway Road #804

City, State: Dallas, TX

Zip: 75244

Telephone: (972) 385-1676

Fax: _____

Email Address: Erik.Boraks@dukecompanies.com

The appropriate regional office must be informed of any changes in this information within 30 days of the change.

3. The engineer responsible for the design of this sewage collection system is:

Contact Person: Paul M. Hames, P.E.

Texas Licensed Professional Engineer's Number: 66791

Entity: Stantec Consulting Services Inc.

Mailing Address: 6080 Tennyson Parkway, Suite 200

City, State: Plano, TX

Zip: 75024

Telephone: (214) 538-2483

Fax: _____

Email Address: Paul.Hames@stantec.com

Project Information

4. Anticipated type of development to be served (estimated future population to be served, plus adequate allowance for institutional and commercial flows):

- ☐ Residential: Number of single-family lots: _____
☒ Multi-family: Number of residential units: 276
☒ Commercial
☐ Industrial
☐ Off-site system (not associated with any development)
☐ Other: _____

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

100% Domestic 197,280 gallons/day
_____% Industrial _____ gallons/day
_____% Commingled _____ gallons/day
Total gallons/day: 197,280

6. Existing and anticipated infiltration/inflow is 17,425 gallons/day. This will be addressed by: The flow listed in Item 5 above includes Inflow & Infiltration. The wastewater pipes have been sized to accommodate this anticipated Inflow & Infiltration.

7. A Water Pollution Abatement Plan (WPAP) is required for construction of any associated commercial, industrial or residential project located on the Recharge Zone.

- ☐ The WPAP application for this development was approved by letter dated _____. A copy of the approval letter is attached.
☒ The WPAP application for this development was submitted to the TCEQ on 1/12/2024, but has not been approved.
☐ A WPAP application is required for an associated project, but it has not been submitted.
☐ There is no associated project requiring a WPAP application.

8. Pipe description:

Table 1 - Pipe Description

<i>Pipe Diameter(Inches)</i>	<i>Linear Feet (1)</i>	<i>Pipe Material (2)</i>	<i>Specifications (3)</i>
6"	523	SDR 26 PVC	ASTM 3034; ASTM 2241
8"	1923	SDR 26 PVC	ASTM 3034; ASTM 2241

Total Linear Feet: 2446

- (1) Linear feet - Include stub-outs and double service connections. Do not include private service laterals.
- (2) Pipe Material - If PVC, state SDR value.
- (3) Specifications - ASTM / ANSI / AWWA specification and class numbers should be included.
9. The sewage collection system will convey the wastewater to the San Gabriel (name) Treatment Plant. The treatment facility is:
- ☒ Existing
- ☐ Proposed
10. All components of this sewage collection system will comply with:
- ☒ The City of Georgetown standard specifications.
- ☐ Other. Specifications are attached.
11. ☒ No force main(s) and/or lift station(s) are associated with this sewage collection system.
- ☐ A force main(s) and/or lift station(s) is associated with this sewage collection system and the **Lift Station/Force Main System Application** form (TCEQ-0624) is included with this application.

Alignment

12. ☒ There are no deviations from uniform grade in this sewage collection system without manholes and with open cut construction.
13. ☒ There are no deviations from straight alignment in this sewage collection system without manholes.
- ☐ **Attachment B - Justification and Calculations for Deviation in Straight Alignment without Manholes.** A justification for deviations from straight alignment in this sewage collection system without manholes with documentation from pipe manufacturer allowing pipe curvature is attached.
- ☐ For curved sewer lines, all curved sewer line notes (TCEQ-0596) are included on the construction plans for the wastewater collection system.

Manholes and Cleanouts

14. ☒ Manholes or clean-outs exist at the end of each sewer line(s). These locations are listed below: (Please attach additional sheet if necessary)

Table 2 - Manholes and Cleanouts

<i>Line</i>	<i>Shown on Sheet</i>	<i>Station</i>	<i>Manhole or Clean-out?</i>
WW-A	31 Of 45	10+00.00	Manhole
WW-A	31 Of 45	10+74.73	Drop Manhole
WW-A	31 Of 45	12+78.72	Manhole
WW-A	31 Of 45	14+19.61	Manhole

Line	Shown on Sheet	Station	Manhole or Clean-out?
WW-A	31 Of 45	16+20.95	Manhole
WW-A-1	31 Of 45	10+02.14	Cleanout
WW-A-2	31 Of 45	10+00.00	Cleanout
WW-A-3	31 Of 45	10+00.00	Cleanout
WW-A-4	31 Of 45	10+00.00	Cleanout
WW-B	31 Of 45	10+72.37	Manhole

15. ☒ Manholes are installed at all Points of Curvature and Points of Termination of a sewer line.
16. ☒ The maximum spacing between manholes on this project for each pipe diameter is no greater than:

Pipe Diameter (inches)	Max. Manhole Spacing (feet)
6 - 15	500
16 - 30	800
36 - 48	1000
≥54	2000

- ☐ **Attachment C – Justification for Variance from Maximum Manhole Spacing.** The maximum spacing between manholes on this project (for each pipe diameter used) is greater than listed in the table above. A justification for any variance from the maximum spacing is attached, and must include a letter from the entity which will operate and maintain the system stating that it has the capability to maintain lines with manhole spacing greater than the allowed spacing.
17. ☐ All manholes will be monolithic, cast-in-place concrete.
- ☒ The use of pre-cast manholes is requested for this project. The manufacturer's specifications and construction drawings, showing the method of sealing the joints, are attached.

Site Plan Requirements

Items 18 - 25 must be included on the Site Plan.

18. ☒ The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = 40'.
19. ☒ The Site Plan must include the sewage collection system general layout, including manholes with station numbers, and sewer pipe stub outs (if any). Site plan must be overlain by topographic contour lines, using a contour interval of not greater than ten feet and showing the area within both the five-year floodplain and the 100-year floodplain of any drainage way.

20. Lateral stub-outs:

- ☒ The location of all lateral stub-outs are shown and labeled.
- ☐ No lateral stub-outs will be installed during the construction of this sewer collection system.

21. Location of existing and proposed water lines:

- ☒ The entire water distribution system for this project is shown and labeled.
- ☐ If not shown on the Site Plan, a Utility Plan is provided showing the entire water and sewer systems.
- ☐ There will be no water lines associated with this project.

22. 100-year floodplain:

- ☒ After construction is complete, no part of this project will be in or cross a 100-year floodplain, either naturally occurring or manmade. (Do not include streets or concrete-lined channels constructed above of sewer lines.)
- ☐ After construction is complete, all sections located within the 100-year floodplain will have water-tight manholes. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 3 - 100-Year Floodplain

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to
	of	to
	of	to
	of	to

23. 5-year floodplain:

- ☒ After construction is complete, no part of this project will be in or cross a 5-year floodplain, either naturally occurring or man-made. (Do not include streets or concrete-lined channels constructed above sewer lines.)
- ☐ After construction is complete, all sections located within the 5-year floodplain will be encased in concrete or capped with concrete. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 4 - 5-Year Floodplain

<i>Line</i>	<i>Sheet</i>	<i>Station</i>
	of	to
	of	to
	of	to
	of	to

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

Items 26 - 33 must be included on the Plan and Profile sheets.

26. ☒ All existing or proposed water line crossings and any parallel water lines within 9 feet of sewer lines are listed in the table below. These lines must have the type of pressure rated pipe to be installed shown on the plan and profile sheets. Any request for a variance from the required pressure rated piping at crossings must include a variance approval from 30 TAC Chapter 290.

☐ There will be no water line crossings.

☐ There will be no water lines within 9 feet of proposed sewer lines.

Table 5 - Water Line Crossings

<i>Line</i>	<i>Station or Closest Point</i>	<i>Crossing or Parallel</i>	<i>Horizontal Separation Distance</i>	<i>Vertical Separation Distance</i>
WW-A	12+31	Crossing	0	4.26'
WW-A	12+46	Crossing	0	3.21'
WW-A	13+26	Crossing	0	1.33'
WW-A	14+80	Crossing	0	2.35'
WW-B	14+33	Crossing	0	3.35'
WW-B	14+74	Crossing	0	1.48'
WW-C	10+16	Crossing	0	1.03'

27. Vented Manholes:

- ☒ **No part** of this sewer line is within the 100-year floodplain and vented manholes are not required by 30 TAC Chapter 217.
- ☐ **A portion** of this sewer line is within the 100-year floodplain and vented manholes will be provided at less than 1500 foot intervals. These water-tight manholes are listed in the table below and labeled on the appropriate profile sheets.
- ☐ **A portion** of this sewer line is within the 100-year floodplain and an alternative means of venting shall be provided at less than 1500 feet intervals. A description of the alternative means is described on the following page.
- ☐ **A portion** of this sewer line is within the 100-year floodplain; however, there is no interval longer than 1500 feet located within. No vented manholes will be used.

Table 6 - Vented Manholes

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>

28. Drop manholes:

- ☐ There are no drop manholes associated with this project.
- ☒ Sewer lines which enter new or existing manholes or "manhole structures" higher than 24 inches above the manhole invert are listed in the table below and labeled on the appropriate profile sheets. These lines meet the requirements of 30 TAC §217.55(l)(2)(H).

Table 7 - Drop Manholes

<i>Line</i>	<i>Manhole</i>	<i>Station</i>	<i>Sheet</i>
WW-A	4' MH; 3.6' Drop	10+74.73	31 of 45
WW-D-1	4' MH; 4.2' Drop	10+06.57	31 of 45

29. Sewer line stub-outs (For proposed extensions):

- ☒ The placement and markings of all sewer line stub-outs are shown and labeled.
- ☐ No sewer line stub-outs are to be installed during the construction of this sewage collection system.

30. Lateral stub-outs (For proposed private service connections):

- ☒ The placement and markings of all lateral stub-outs are shown and labeled.
- ☐ No lateral stub-outs are to be installed during the construction of this sewage collection system.

31. Minimum flow velocity (From Appendix A)

- ☒ Assuming pipes are flowing full; all slopes are designed to produce flows equal to or greater than 2.0 feet per second for this system/line.

32. Maximum flow velocity/slopes (From Appendix A)

- ☒ Assuming pipes are flowing full, all slopes are designed to produce maximum flows of less than or equal to 10 feet per second for this system/line.

- ☐ **Attachment D – Calculations for Slopes for Flows Greater Than 10.0 Feet per Second.**
Assuming pipes are flowing full, some slopes produce flows which are greater than 10 feet per second. These locations are listed in the table below. Calculations are attached.

Table 8 - Flows Greater Than 10 Feet per Second

<i>Line</i>	<i>Profile Sheet</i>	<i>Station to Station</i>	<i>FPS</i>	<i>% Slope</i>	<i>Erosion/Shock Protection</i>

33. Assuming pipes are flowing full, where flows are ≥ 10 feet per second, the provisions noted below have been made to protect against pipe displacement by erosion and/or shock under 30 TAC §217.53(l)(2)(B).

- ☐ Concrete encasement shown on appropriate Plan and Profile sheets for the locations listed in the table above.
- ☐ Steel-reinforced, anchored concrete baffles/retards placed every 50 feet shown on appropriate Plan and Profile sheets for the locations listed in the table above.
- ☒ N/A

Administrative Information

34. ☒ The final plans and technical specifications are submitted for TCEQ review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.
35. ☒ Standard details are shown on the detail sheets, which are dated, signed, and sealed by the Texas Licensed Professional Engineer, as listed in the table below:

Table 9 - Standard Details

<i>Standard Details</i>	<i>Shown on Sheet</i>
Lateral stub-out marking [Required]	35 of 45
Manhole, showing inverts comply with 30 TAC §217.55(l)(2) [Required]	35 of 45
Alternate method of joining lateral to existing SCS line for potential future connections [Required]	35 of 45
Typical trench cross-sections [Required]	34 of 45
Bolted manholes [Required]	35 of 45
Sewer Service lateral standard details [Required]	35 of 45
Clean-out at end of line [Required, if used]	35 of 45
Baffles or concrete encasement for shock/erosion protection [Required, if flow velocity of any section of pipe >10 fps]	n.a. of n.a.

Standard Details	Shown on Sheet
Detail showing Wastewater Line/Water Line Crossing [Required, if crossings are proposed]	of
Mandrel detail or specifications showing compliance with 30 TAC §217.57(b) and (c) [Required, if Flexible Pipe is used]	n.a. of n.a.
Drop manholes [Required, if a pipe entering a manhole is more than 24 inches above manhole invert]	35 of 45

36. ☒ All organized sewage collection system general construction notes (TCEQ-0596) are included on the construction plans for this sewage collection system.
37. ☒ All proposed sewer lines will be sufficiently surveyed/staked to allow an assessment prior to TCEQ executive director approval. If the alignments of the proposed sewer lines are not walkable on that date, the application will be deemed incomplete and returned.
- ☒ Survey staking was completed on this date: TBD
38. ☒ 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.
39. ☒ Any modification of this SCS application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Signature

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

Print Name of Licensed Professional Engineer: Paul M. Hames, P.E.

Date: 2/01/2024

Place engineer's seal here:

Paul M. Hames

2/01/2024



Signature of Licensed Professional Engineer:

Paul M. Haines

Appendix A-Flow Velocity Table

Flow Velocity (Flowing Full) All gravity sewer lines on the Edwards Aquifer Recharge Zone shall be designed and constructed with hydraulic slopes sufficient to give a velocity when flowing full of not less than 2.0 feet per second, and not greater than 10 feet per second. The grades shown in the following table are based on Manning's formula and an n factor of 0.013 and shall be the minimum and maximum acceptable slopes unless provisions are made otherwise.

Table 10 - Slope Velocity

<i>Pipe Diameter(Inches)</i>	<i>% Slope required for minimum flow velocity of 2.0 fps</i>	<i>% Slope which produces flow velocity of 10.0 fps</i>
6	0.50	12.35
8	0.33	8.40
10	0.25	6.23
12	0.20	4.88
15	0.15	3.62
18	0.11	2.83
21	0.09	2.30
24	0.08	1.93
27	0.06	1.65
30	0.055	1.43
33	0.05	1.26
36	0.045	1.12
39	0.04	1.01
>39	*	*

**For lines larger than 39 inches in diameter, the slope may be determined by Manning's formula (as shown below) to maintain a minimum velocity greater than 2.0 feet per second when flowing full and a maximum velocity less than 10 feet per second when flowing full.*

$$v = \frac{1.49}{n} \times R_h^{0.67} \times \sqrt{S}$$

Figure 1 - Manning's Formula

Where:

v = velocity (ft/sec)

*n = Manning's roughness coefficient
(0.013)*

Rh = hydraulic radius (ft)

S = slope (ft/ft)

Line	Sheet	Station	Manhole/Cleanout
WW-A	31 Of 45	10+00.00	Manhole
WW-A	31 Of 45	10+74.73	Drop Manhole
WW-A	31 Of 45	12+78.72	Manhole
WW-A	31 Of 45	14+19.61	Manhole
WW-A	31 Of 45	16+20.95	Manhole
WW-A-1	31 Of 45	10+02.14	Cleanout
WW-A-2	31 Of 45	10+00.00	Cleanout
WW-A-3	31 Of 45	10+00.00	Cleanout
WW-A-4	31 Of 45	10+00.00	Cleanout
WW-B	31 Of 45	10+72.37	Manhole
WW-B	31 Of 45	12+33.91	Manhole
WW-B	31 Of 45	14+67.93	Manhole
WW-B	31 Of 45	15+85.82	Manhole
WW-B	31 Of 45	16+57.06	Manhole
WW-B-1	31 Of 45	10+00.00	Manhole
WW-B-2	31 Of 45	10+00.00	Cleanout
WW-C	31 Of 45	11+72.13	Manhole
WW-C	31 Of 45	13+61.10	Manhole
WW-C	31 Of 45	15+23.29	Manhole
WW-C-1	31 Of 45	10+00.00	Cleanout
WW-C-2	31 Of 45	10+00.00	Cleanout
WW-C-3	31 Of 45	10+00.00	Cleanout
WW-D	31 Of 45	11+04.86	Manhole
WW-D-1	31 Of 45	10+06.57	Drop Manhole
WW-D-1	31 Of 45	10+16.91	Cleanout
WW-D-2	31 Of 45	10+00.00	Cleanout

Line	Sheet	Station	Crossing Utility	Vert Separation
WW-A	31 Of 45	12+31	6" Water	4.26
WW-A	31 Of 45	12+46	6" Water	3.21
WW-A	31 Of 45	13+26	6" Water	1.33
WW-A	31 Of 45	14+80	6" Water	2.35
WW Lat A-3	31 Of 45	10+64	8" Water	2.32
WW-B	31 Of 45	14+33	6" Water	3.35
WW-B	31 Of 45	14+74	8" Water	1.48
WW-C	31 Of 45	10+16	8" Water	1.03
WW Lat C-3	31 Of 45	10+32	8" Water	1.51
WW Lat D-2	31 Of 45	10+30	8" Water	1.08

ATTACHMENT 3A

SCS Final Engineering Design Report

TAC.30.1.217. A §217.10. §217.10 (f)-1

Location:

The following report was prepared to summarize the onsite wastewater design for the proposed Chapel Hill Phase II Development. Chapel Hill Phase II is a multi-family/commercial development in Georgetown, TX on a 17.425-acre site platted as Lot 1 of Chapel Hill Subdivision Section Two. The project will consist of 10 apartment buildings, totaling 276 units, and an amenity center.

The proposed site is located on the north side of Westinghouse Road at 403 Westinghouse Road, Georgetown, Texas 78626, immediately west of Chapel Hill Phase I. The Celebration Church is located just north of the site. The site has vehicular access to Westinghouse via an offsite drive through the Phase I development.

As required by the City of Georgetown, the developer previously constructed an offsite wastewater interceptor that connects Phase I and Phase II to an existing City of Georgetown lift station (the Westinghouse South Reginal Lift Station) located approximately 3,500 LF to the south of the Chapel Hill Phase I site. The downstream wastewater collection system has been sized and designed to accommodate the development's wastewater flow, as well as the wastewater flows from several of the downstream properties within the City of Georgetown's sewershed to this lift station. The design of the offsite and Phase I wastewater systems are included in an Organized Sewer Collection System application submitted to TCEQ by Halff in June 2020.

TAC.30.1.217.A §217.10 (f)-2

Existing Conditions:

The Chapel Hill Phase II site is located inside the City of Georgetown's city limits and has driveway access to Westinghouse Road to the south via an offsite drive through Phase I. The site is vacant and has been cleared of internal fences. A large stock pond is in the southwest corner of the site.

The site generally slopes from northeast to southwest with slopes ranging from 5%-15%. An onsite drainage channel slopes from the northeast corner of the site to the stock pond, with slopes ranging from 3%-8%.

There is an existing 8-inch wastewater main stubbed up from Phase I at the southeast corner of the site to which the proposed Phase II wastewater system will connect and be carried through Phase I to the Westinghouse South Regional Lift Station located approximately 0.75 miles to the south. This lift station ultimately connects to the San Gabriel Wastewater Treatment Plant (WWTP).

Proposed Conditions:

The 17.425-acre site is known as Lot 1 of Chapel Hill Subdivision Section Two. This project consists of the construction of 10 apartment buildings and amenity center on Lot 1, with associated drives, parking, sidewalks, drainage, and utilities. Onsite detention and water quality ponds will be constructed, plus an offsite detention and water quality pond will be constructed to the southwest of the site for commercial development in the future.

The proposed Phase II wastewater system is a combination of 8-inch diameter trunk lines with 6-inch diameter laterals that will collect gravity flow and connect to an existing 8-inch private wastewater gravity line stubbed up from the Phase I site to the south. This flow passes through the existing Phase I system which connects to the existing wastewater interceptor, owned, and maintained by the City of Georgetown, which conveys sewage approximately 4,700 LF to the south to the existing Westinghouse South Regional Lift Station. The interceptor was designed to collect developed flows from Lots 1, 2, 3, and 4, as well as the neighboring properties to the west of the site and several other properties within the sewershed (see OSCS application prepared by Halff, June 2020). The interceptor ranges in diameter from 8-inches to 12-inches until it connects to an existing 12-inch wastewater line which connects to the lift station.

Several water and wastewater crossings are proposed that do not meet the requirement of 9 feet horizontal and vertical separation. The 9-foot separation distance would require excessive depths of the wastewater line and, in some cases, would not be feasible to drain via gravity. As such, appropriate crossings have been designed meeting the requirements set forth within Chapter 217.53 and Chapter 290.44.

TAC.30.1.217.A §217.10 (f)-3_

Design Flow Determination:

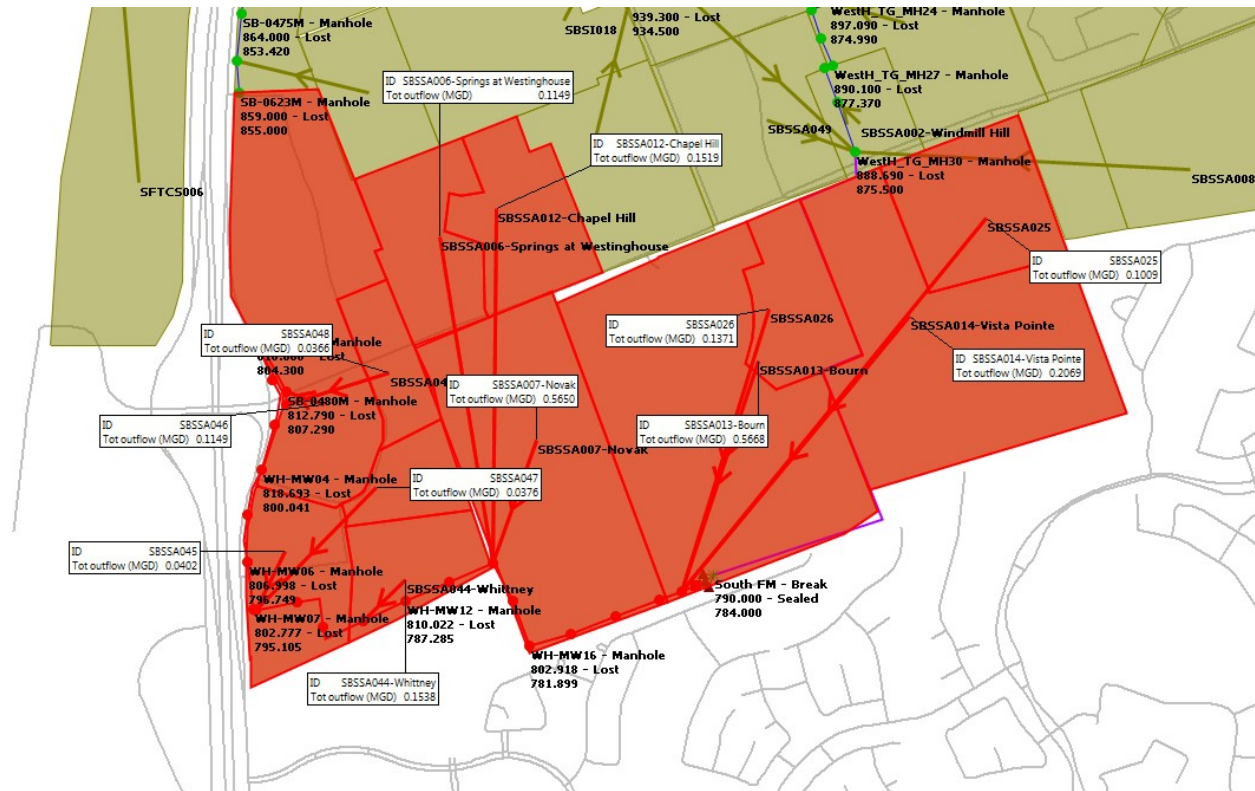
The proposed Phase II development on Lot 1 includes a total of 276 units. For conservative design purposes, each apartment unit was assigned a Living Unit Equivalent (LUE) of 0.75 per unit. Each LUE was set to equal 2.5 persons, with each person using 100 gallons/day or 250 gallons/day/LUE (see equation 1). The Average Dry Weather Flow (ADWF) from the Phase II site was calculated to be 51,750 gpd. Using a Peaking Factor of 3.48 (see equation 2), the Peak Dry Weather Flow (PDWF) was calculated to be 179,974 gpd (see equation 3).

$$1 \text{ LUE} = 250 \frac{\text{gallons}}{\text{day}} = 100 \frac{\text{gal}}{\text{persons} * \text{day}} * 2.5 \text{ persons (Equation 1)}$$

$$\text{Peaking Factor (PF)} = 2.8 * \text{ADWF(MGD)}^{-0.0732} \text{ (Equation 2)}$$

$$\text{PDWF} = \text{ADWF} * \text{PF} \text{ (Equation 3)}$$

The design flow for properties to the south of Chapel Hill was provided by the City of Georgetown via a sewershed model performed by their consulting engineer utilizing the same



basis principals as presented above but with a slightly less peaking factor. The city does not typically model smaller diameter collection lines which are expected to have a higher peaking factor near the source of the flow. Their model attenuates the flow resulting in lower modeled numbers than the strict equations presented above. The city also utilizes an Inflow and Infiltration factor of 750 gallons per acre per day in lieu of 1,000 gallons. The city feels comfortable with 750 gallons because they are routinely looking at larger basins, which can balance out versus smaller pockets of acreage. As development matures, the city has much stricter requirements to maintain a tight system and keep inflow and infiltration low due to the TCEQ Edwards Aquifer Recharge Zone rules. The model results provided by the city is displayed below and calculates to a total of 2.0728 million gallons per day (MGD).

TAC.30.1.217.A §217.10 (f)-4

Minimum and Maximum Grades:

Using the City of Georgetown's Unified Development Code, the minimum pipe diameter of 8 inches was used for all mains within Lot 1. The 8-inch diameter pipe size is the minimum size specified throughout the entire project, excluding service laterals. TCEQ requires

a minimum slope of no less than 0.33% and a maximum allowable slope of 8.40% for 8-inch diameter pipes. All pipe segments designed within the construction documents fall within these acceptable ranges. The pipe material for all wastewater mains is designated as PVC (ASTM D2241 or D3034, SDR 26).

TAC.30.1.217.A §217.10 (f)-5

Analysis of the offsite pipe network is not applicable.

TAC.30.1.217.A §217.10 (f)-6

Existing System Impact:

Based on information and direction provided by the City of Georgetown, the existing 12-inch stub out to the lift station is sufficient in handling the incoming flows from this and other developments. The City of Georgetown instructed that the flows produced by the subject site and the surrounding properties within the sewershed will have no adverse impacts to the downstream system.

TAC.30.1.217.A §217.10 (f)-7

Inflow & Infiltration:

Using the inflow and infiltration expectation of 1,000 gallons/acre/day from the City of Georgetown's wastewater design criteria, the anticipated Inflow & Infiltration over the 17.425-acre Phase II development is calculated to be 17,425 gallons/day considering the applicable drainage area to the site's wastewater lines. The remaining properties within the sewershed utilized a rate of 750 gallons/ac/day per the City of Georgetown's sewershed model. The added flows from inflow and infiltration for each line segment were taken into consideration with the calculation of the peak wet weather design flows. The hydraulic effect of the inflow and infiltration on the proposed onsite system is minor in relation to the wastewater line sizes required by the City of Georgetown. There will be no proposed inflow and infiltration flow rate monitoring systems installed, nor will there be any inflow and infiltration abatement measures taken.

TAC.30.1.217. A. §217.10 (f)-8

Trunk/Interceptor:

The proposed offsite and onsite wastewater pipes range from 8-inch to 12-inch PVC SDR 26 lines. Based on calculations for the proposed wastewater lines and information and direction from the City of Georgetown, the proposed wastewater collection system and the Westinghouse South Regional Lift Station will be able to handle the peak flow.

TAC.30.1.217. A. §217.10 (f)-9

Treatment Facility:

Based on the expected design flows and the direction provided by the City of Georgetown, the existing San Gabriel WWTP will have the capacity and capabilities of treating the proposed

wastewater flows produced by the proposed development.

TAC.30.1.217. A.§217.10 (f)-10

Structural Analysis:

Due to the Organized Sewage Collection System (SCS) meeting all the necessary requirements in TAC.30.1.217. C. §217.53. k.4, a structural analysis was deemed unnecessary.

TAC.30.1.217. A.§217.10 (f)-11

Future Expansion:

The sewage collection system within this project is designed for the proposed improvements associated with ultimate development of the property, as well as the ultimate development of the surrounding properties within the sewershed of the Westinghouse South Regional Lift Station. Future service lines will mainly be constructed within private developments accounted for within the City's model.

TAC.30.1.217. A.§217.10 (f)-12

Lift Station Calculations:

Not Applicable. The SCS does not include a lift station.

TAC.30.1.217. A.§217.10 (f)-13

Safety Considerations:

The project design incorporated numerous safety considerations. Security fences will be used throughout the project's boundary to prevent any passerby from accidentally entering an active construction zone. All trenches that require a depth of larger than 5 feet will follow the trenching and excavation safety guidelines set forth by OSHA. There will be no blasting on the entire construction site. The wastewater manholes are spaced less than the maximum allowed TCEQ spacing and allow appropriate ventilation throughout to prevent odor buildup. All buried pipe is set at a reasonable depth to prevent excessive excavation while serving the adjacent properties with appropriate depths. There are no tight workspaces throughout the entire jobsite. Traffic control will be implemented by the Contractor while work is conducted near Westinghouse Road and Mays Street

Section V

Temporary Stormwater Section (TECQ-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.

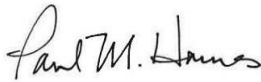
Signature

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: Paul M. Hames, P.E.

Date: 2/01/2024

Signature of Customer/Agent:



Regulated Entity Name: Chapel Hill Phase II

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: Potential for diesel fuel, gasoline, lubricants, and paint.

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: Brushy Creek

Temporary Best Management Practices (TBMPs)

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

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

- ☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
 - ☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
 - ☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
 - ☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
8. ☒ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
- ☐ **Attachment E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
- ☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.
9. ☒ **Attachment F - Structural Practices.** A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.
10. ☒ **Attachment G - Drainage Area Map.** A drainage area map supporting the following requirements is attached:
- ☒ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
 - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
 - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
 - ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

- ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
11. ☒ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
- ☐ N/A
12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

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

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

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

Administrative Information

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

ATTACHMENT A – SPILL RESPONSE ACTIONS

Good Housekeeping and Material Management Practices shall include, but are not limited to the following:

- Neat and orderly storage of any chemicals, pesticides, fertilizers, fuels, etc., that are being stored on site. All storage tanks will be above ground, have a maximum storage capacity of 250 gallons and be stored on site for less than one (1) year. Aboveground storage tanks (ASTs) shall comply with Title 30 TAC, Chapter 334, Subchapter F and will be located within the respective phase's Stockpiling Area as illustrated on the Erosion and Sedimentation Control Plans included with this submittal.
- Regular garbage, rubbish, construction waste and sanitary waste disposal.
- Prompt cleanup of any spills that have occurred of liquid or dry materials.
- Cleanup of sediments that have been tracked by vehicles or have been transported by wind or storm water about the site or onto nearby roadways.

In addition to the Good Housekeeping and Material Management Practices, discussed in the previous sections of this plan, the following practices will be followed for spill prevention and clean up.

- Manufacturer's recommended methods of spill cleanup will be clearly posted, and site personnel will be made aware of the procedures and the location of the information and the cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the materials storage area onsite. Equipment and materials will include but are not limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, 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 clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported 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 recurring 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 (3) 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 hydrocarbon or hazardous material spill should be reported to the TCEQ at the following 24-hour toll free number 1-800-832-8224.

The Contractor shall notify the agency as soon as possible whenever necessary to provide information that would trigger a change in the response to the spill or discharge. If the discharge or spill creates an imminent health threat, the Contractor shall immediately notify and cooperate with local emergency authorities.

The Contractor 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 personnel. In the absence of a local emergency authority, the Contractor shall take reasonable measure 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.

ATTACHMENT B -- POTENTIAL SOURCES OF CONTAMINATION

Asphalt products will be used on this project. After placement of asphalt, emulsion, or coatings, the applicant will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt curing time, the applicant should maintain standby personnel and equipment to contain any asphalt wash-off should an unexpected rain occur.

Sediment and soil from disturbed areas are another potential source of contamination. During activities causing soil disturbance, temporary best management practices outlined in ***Attachment D***, shall be followed to prevent discharge of sediment to North Fork San Gabriel River.

Other potential sources of contamination include hydraulic fluid and diesel fuel from mechanical equipment, 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 project includes 17.425 acres of areas to be disturbed for the development. The location of the temporary erosion control measures are shown on the Erosion & Sedimentation Control sheets.

- 1) Install erosion controls as indicated on approved plan. (17.425 acres)
- 2) Prior to beginning construction, the owner or his authorized representative shall convene a Pre-Construction Conference between the TCEQ, City of Georgetown, consulting engineer, contractor, and any other affected parties. Notify the TCEQ at least 48 hours prior to the time of the conference and 48 hours prior to the beginning of construction. On-site Pre-Construction meeting should be held with Contractor, TCEQ, Engineer, and Owner.
- 3) Install tree protection and initiate tree mitigation measures. (1072 LF)
- 4) Contact the City of Georgetown Planning Department to schedule the on-site preconstruction coordination meeting.
- 5) Evaluate temporary erosion control installation. Review construction schedule with the water quality plan requirements and the erosion control plan.
- 6) Begin Site Cleaning. (17.425 acres)
- 7) Rough grade batch detention ponds and construct structural detention pond walls & outlet structures. (0.81 acres)
- 8) Rough grade site. Inspect and maintain all controls as per general notes. (17 acres)
- 9) Construct site utilities. (10075 LF)
- 10) Schedule and attend mid-construction on-site meeting to coordinate changes in construction schedule and evaluate effectiveness of erosion control plan (city inspector, project engineer, general contractor, environmental project manager). Identify anticipated completion date and coordinate final construction sequence and inspection schedule with environmental inspector.
- 11) Construct paving, parking, and buildings. (10.08 acres)
- 12) Final construction of batch detention ponds. (0.81 acre)
- 13) Complete construction and install landscaping.
- 14) Revegetate disturbed areas and clean out permanent controls and install filter media or complete a developer's contract for the revegetation along with the engineer's concurrence letter.
- 15) Project engineer inspects job and writes concurrence letter to the city. Final Inspection is scheduled upon receipt of letter.
- 16) Upon revegetation per City of Georgetown requirements, remove temporary erosion/sedimentation controls.

ATTACHMENT D -- TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

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, inlet protection, stabilized construction entrance and construction stockpiling areas 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. The perimeter fence shall be regularly monitored to ensure that the buffers remain no-construction zones until the site work has been completed and authorization has been granted by the engineer. Please reference attached copy of the Erosion and Sedimentation Control Plans 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 silt fences placed immediately downstream of disturbed areas. To minimize destruction to any portion of the Recharge Zone, on-site perimeter silt fence will also be implemented for pertinent areas throughout the entirety of construction. 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. As noted earlier, the proposed water quality pond will be used to treat storm water from the construction of the site. The water quality facility shall be properly inspected throughout construction and restored upon completion of the respective phase.

BMPs and measures will prevent pollutants from entering surface streams or the aquifer by intercepting 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 in controlling dust. No setbacks were proposed for the site; however, BMPs will be implemented to limit/prevent contaminated inflow from entering surface streams or the aquifer. These practices are to include the following measures: the use of silt fence, triangular filter dikes and vegetative buffer zones. The fabricated silt fence barricade, triangular filter dikes and natural living filter vegetative buffer 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. The placement of erosion/sedimentation controls and tree/natural area protective fencing shall be in accordance with the City of Georgetown's current Code of Ordinances 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 of Georgetown, 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 spoil 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. Erosion control measures, site work and restoration work shall be in accordance with the City of Georgetown Erosion and Sedimentation Control Ordinance.
9. 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.
10. 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 of Georgetown for effectiveness. Additional measures may be required if, in the opinion of the City Engineer, they are warranted.
11. 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.
12. Any dirt, mud, rocks, debris, etc., that is spilled, tracked, or otherwise deposited on any existing paved street shall be cleaned up immediately.

ATTACHMENT E – REQUEST TO SEAL FEATURES

No environmental features are being temporarily sealed. Therefore, this section is not applicable.

ATTACHMENT F – STRUCTURAL PRACTICES

Silt fencing will be placed on the down gradient side of any exposed soils to limit the discharge of silt and pollutant from exposed areas of the site. Additionally, triangular filter dikes will be placed down gradient of areas that may require dewatering. Dewatering shall be directed toward the water quality pond and/or filter dikes to limit the discharge of silt and pollutants from exposed areas of the site. Also included are stabilized construction entrances to reduce the amount of mud tracked onto surrounding streets by construction vehicles. Inspection and maintenance of the onsite controls shall be performed during the site clearing and rough grading process.

Additionally, the use of the pond will also protect against contaminated runoff leaving the site. The Contractor will be responsible for proper inlet protection in addition to cleaning out all structures adversely affected by sediment after heavy rainfalls.

ATTACHMENT G – DRAINAGE AREA MAPS

The drainage area maps are provided in the Chapel Hill Phase 2 plan set.

ATTACHMENT H – TEMPORARY SEDIMENT POND PLANS AND CALCULATIONS

Temporary sediment pond plans and calculations were prepared in acceptance with TCEQ and TPDES requirements. Please see the TCEQ Water Quality Calculations Sheet in the plan set for reference.

ATTACHMENT I – INSPECTION AND MAINTENANCE FOR BEST MANAGEMENT PRACTICES

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

Silt Fence:

1. Inspection shall be made weekly and after each rainfall event, in accordance with Section 1.4.3 of RG-348.
2. Torn fabric shall be replaced or a second line of fencing parallel to the torn section shall be implemented as needed.
3. Accumulated silt shall be removed when it reaches a depth of six (6) inches. The silt shall be disposed of on an approved site and in such a manner that will not contribute to additional siltation.
4. Silt fence shall be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.

Inlet Protection:

1. Daily inspection shall be made by the Contractor and silt accumulation must be removed when depth reaches 50 mm (two (2) inches).
2. Contractor shall monitor the performance of inlet protection during each rainfall event and immediately remove the inlet protections if the stormwater begins to overtop the curb.
3. Inlet protections shall be removed as soon as the source of sediment is stabilized.

Stabilized Construction Entrance:

1. The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto public roadway. This may require periodic top dressing with additional stone as conditions demand. As well as repair and clean out of any measure device used to trap sediment. All sediments that are spilled, dropped, washed, or tracked onto public roadway must be removed immediately.
2. Entrance shall be properly graded to prevent run-off from leaving the construction site.

Concrete Washout Area:

1. Routine inspection in accordance with Section 1.4.18 of RG-348 of the area to ensure that sufficient quantity and volume remain to contain all liquid and concrete waste generated by washout operations.
2. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.

3. When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of. Holes, depressions, or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Prior to commencing construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. Controls specified in the SWPPP section of the approved Edwards Aquifer Contributing Zone 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. *

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

Please see the Erosion & Sedimentation Control Plan Notes and Details Sheet of the attached construction plans for more details.

(*see General Notes for Edwards Aquifer Recharge Zone Plan)

Section VI

Agent Authorization Form (TCEQ-0599)

I, Robert J. Stone III,
Print Name
Other (Authorized Agent)
Title - Owner/President/Other
of AMFP V Chapel Hill II LLC
Corporation/Partnership/Entity Name
have authorized Paul M. Hames, P.E.
Print Name of Agent/Engineer
of Stantec Consulting Services
Print Name of Firm

I also understand that:

- Page 1 of 2

SIGNATURE PAGE:

Robert J. Stone III
Applicant's Signature

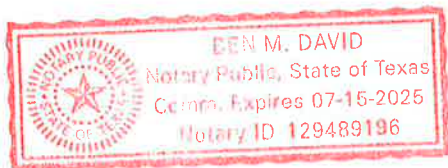
1/12/24
Date

THE STATE OF Texas §

County of Dallas §

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

GIVEN under my hand and seal of office on this 12th day of January, 2024



[Signature]
NOTARY PUBLIC

Ben M. David
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 7-15-25

Section VII

Application Fee Form (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Chapel Hill Phase II

Regulated Entity Location: 403 Westinghouse Road, Georgetown, Texas 78626

Name of Customer: AMFP V Chapel Hill II LLC

Contact Person: Erik Boraks

Phone: (972) 385-1676

Customer Reference Number (if issued):CN _____

Regulated Entity Reference Number (if issued):RN 111787560

Austin Regional Office (3373)

☐ Hays

☐ Travis

☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar

☐ Medina

☐ Uvalde

☐ Comal

☐ Kinney

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

☒ Austin Regional Office

☐ San Antonio Regional Office

☐ Mailed to: TCEQ - Cashier

☐ Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

Site Location (Check All That Apply):

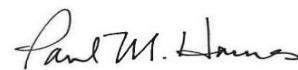
☒ Recharge Zone

☐ Contributing Zone

☒ Transition Zone

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	\$
Sewage Collection System	2446 L.F.	\$ 1223
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: _____



Date: 2/01/2024

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

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

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

Extension of Time Requests

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

Section VIII

Core Data Form (TCEQ-10400)



TCEQ Use Only

TCEQ Core Data Form

For detailed instructions regarding completion of 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.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
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 111787560

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)					
<input checked="" type="checkbox"/> New Customer		<input type="checkbox"/> Update to Customer Information					
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)		<input type="checkbox"/> Change in Regulated Entity Ownership					
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:					
AMFP V Chapel Hill II LLC							
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)				
0804094898	32079527084	88-2779187					
11. Type of Customer:	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited				
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input checked="" type="checkbox"/> Other: LLC					
12. Number of Employees		13. Independently Owned and Operated?					
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following							
<input checked="" type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator							
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:							
15. Mailing Address:	3610-2 N. Josey						
	Suite 223						
	City	Carrollton	State	TX	ZIP	75007	ZIP + 4
16. Country Mailing Information (if outside USA)				17. E-Mail Address (if applicable)			
				Erik.Boraks@dukecompanies.com			
18. Telephone Number		19. Extension or Code		20. Fax Number (if applicable)			
(972) 385-1676				() -			

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)	
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information	
The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency 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.)	
Chapel Hill Phase 2	

23. Street Address of the Regulated Entity: (No PO Boxes)	403 Westinghouse Road							
	City	Georgetown	State	TX	ZIP	78626	ZIP + 4	
24. County	Williamson							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:								
26. Nearest City					State	Nearest ZIP Code		
27. Latitude (N) In Decimal:				28. Longitude (W) In Decimal:				
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			
30	34	55.54	97	41	10.62			
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)			
6513	6531		531311		531110			
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)								
Multifamily apartment development								
34. Mailing Address:	13740 Midway Road							
	Suite 804							
	City	Dallas	State	TX	ZIP	75244	ZIP + 4	
35. E-Mail Address:	Erik.Boraks@dukecompanies.com							
36. Telephone Number	37. Extension or Code		38. Fax Number (if applicable)					
(972) 385-1687			() -					

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

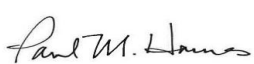
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review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

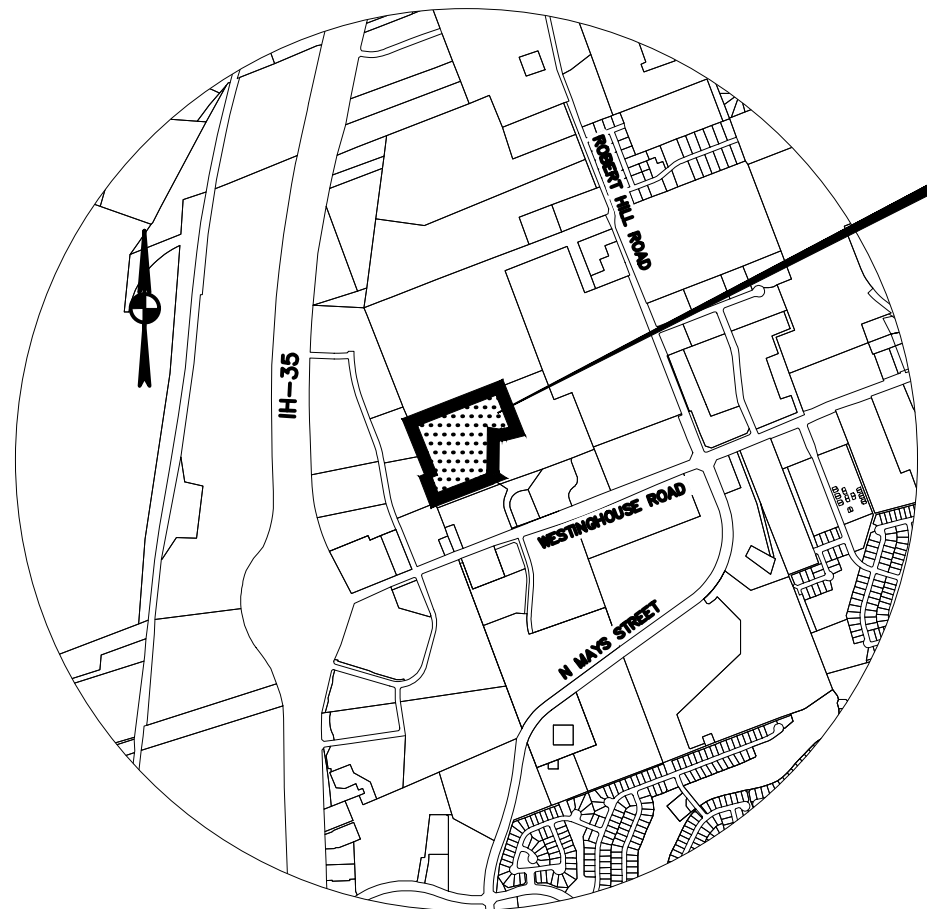
SECTION IV: Preparer Information

40. Name:	Paul M. Hames, P.E.		41. Title:	Principal
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(214) 473-2483		() -	Paul.Hames@stantec.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:	Stantec Consulting Services		Job Title:	Principal	
Name (In Print):	Paul M. Hames, P.E.			Phone:	(214) 473- 2483
Signature:				Date:	2/01/2024



VICINITY MAP
SCALE: 1:5000

PROJECT
SITE

CONSTRUCTION DOCUMENTS

FOR

CHAPEL HILL PHASE 2

403 WESTINGHOUSE ROAD

GEORGETOWN, TEXAS 78626

DEVELOPER: DUKE, INC.
13740 MIDWAY RD #804
DALLAS, TX 75244
ERIK BORAKS
(972) 385-1676

ENGINEER/SURVEYOR: STANTEC
6080 TENNYSON PARKWAY, SUITE 200
PLANO, TEXAS 75024
BRAIN CARRINGTON, P.E.
(469) 329-3613

LANDSCAPE ARCHITECT: LEE & ASSOCIATES, INC.
8601 RANCH ROAD 2222,
BLDG. 1, SUITE 290
AUSTIN, TX 78730
ANDREW TRIMBLE, RLA
(512) 645-8477

ARCHITECT: MEEKS PARTNERS
16000 MEMORIAL DRIVE, SUITE 100
HOUSTON, TX 77079
DANIEL SENNING, RA
(281) 558-8787

UTILITIES: WATER, WASTEWATER, ELECTRIC:
GEORGETOWN UTILITY SYSTEMS
300 INDUSTRIAL AVENUE
GEORGETOWN, TX 78626
(512) 930-3640

ZONING:
1. P.U.D. ORD NO 2020-46 (MF-2 AND C-1 BASE ZONING)

RECORDED PLAT:
CHAPEL HILL SUBDIVISION SECTION 2, DOC# 2023022114

PROPOSED USE:
MULTI-FAMILY, ATTACHED 276 DWELLING UNITS (1,524 AVERAGE DAILY TRIPS)

ACREAGE:
17.425 ACRES



GENERAL SITE DEVELOPMENT PLAN NOTES:

- IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER, AND SUCCESSORS TO THE CURRENT PROPERTY OWNER, TO ENSURE THE SUBJECT PROPERTY AND ANY IMPROVEMENTS ARE MAINTAINED IN CONFORMANCE WITH THIS SITE DEVELOPMENT PLAN.
- THIS DEVELOPMENT SHALL COMPLY WITH ALL STANDARDS OF THE UNIFIED DEVELOPMENT CODE (UDC), THE CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL, THE DEVELOPMENT MANUAL AND ALL OTHER APPLICABLE CITY STANDARDS.
- THIS SITE DEVELOPMENT PLAN SHALL MEET THE UDC STORMWATER REQUIREMENTS.
- ALL SIGNAGE REQUIRES A SEPARATE APPLICATION AND APPROVAL FROM THE INSPECTION SERVICES DEPARTMENT. NO SIGNAGE IS APPROVED WITH THE SITE DEVELOPMENT PLAN.
- SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH THE UDC.
- DRIVEWAYS WILL REQUIRE APPROVAL BY THE DEVELOPMENT ENGINEER OF THE CITY OF GEORGETOWN.
- OUTDOOR LIGHTING SHALL COMPLY WITH SECTION 7.04 OF THE UDC.
- SCREENING OF MECHANICAL EQUIPMENT, DUMPSTERS AND PARKING SHALL COMPLY WITH CHAPTER 8 OF THE UDC. THE SCREENING IS SHOWN ON THE LANDSCAPE AND ARCHITECTURAL PLANS, AS APPLICABLE.
- THE COMPANION LANDSCAPE PLAN HAS BEEN DESIGNED AND PLANT MATERIALS SHALL BE INSTALLED TO MEET ALL REQUIREMENTS OF THE UDC.
- ALL MAINTENANCE OF REQUIRED LANDSCAPE SHALL COMPLY WITH THE MAINTENANCE STANDARDS OF CHAPTER 8 OF THE UDC.
- A SEPARATE IRRIGATION PLAN SHALL BE REQUIRED AT THE TIME OF BUILDING PERMIT APPLICATION.
- FIRE FLOW REQUIREMENTS OF 1,500 GPM ARE BEING MET BY THIS PLAN.
- ANY HERITAGE TREE NOTED ON THIS SITE DEVELOPMENT PLAN IS SUBJECT, IN PERPETUITY, TO THE MAINTENANCE, CARE, PRUNING AND REMOVAL REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE.
- THE CONSTRUCTION PORTION OF THESE 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 CONSTRUCTION OF 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.
- THIS PROJECT IS SUBJECT TO ALL CITY STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
- WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE LOCATED ALONG THE STREET AND WITHIN THE SITE. WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BE RELOCATED, IT SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER.
- ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 13.06.
- THE PROPERTY SUBJECT TO THIS APPLICATION IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN. (FOR PROPERTIES LOCATED OVER THE EDWARDS AQUIFER RECHARGE ZONE)
- A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETED ON 04/22/2020. ANY SPRINGS AND STREAMS AS IDENTIFIED IN THE GEOLOGIC ASSESSMENT ARE SHOWN HEREIN.

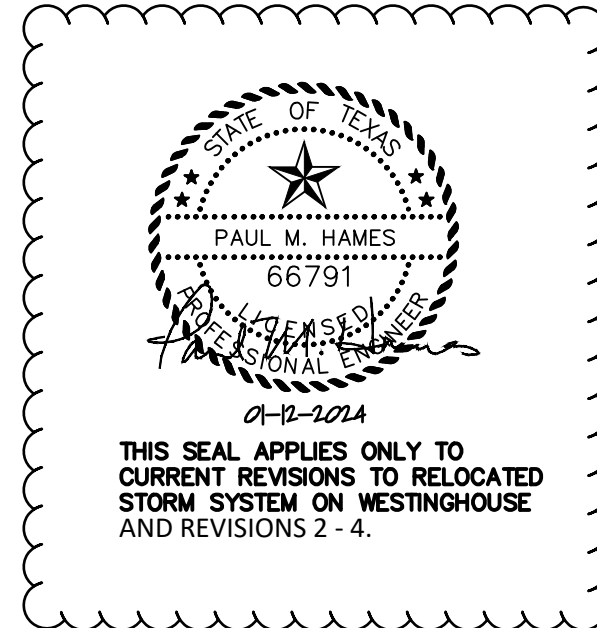


Approved for construction by the City of
Georgetown Planning & Zoning Commission on:
June 6, 2023

This SDP will expire 24 months from the date of

approval if the applicable conditions of UDC

Section 3.09.090 are not met.



ADDRESS : 403 WESTINGHOUSE ROAD
GEORGETOWN, TEXAS 78626

1ST SUBMITTAL DATE : 10/18/2021 **5TH SUBMITTAL DATE :** 05/01/2023
2ND SUBMITTAL DATE : 12/06/2021
3RD SUBMITTAL DATE : 06/22/2022
4TH SUBMITTAL DATE : 10/03/2022

SUBMITTED BY :

BRAIN CARRINGTON, P.E. **DATE**
STANTEC
6080 TENNYSON PARKWAY, SUITE 200
PLANO, TEXAS 75024
(469)329-3613

I, ALYSSA N. CAMPBELL, P.E., CERTIFY THAT THESE ENGINEERING DOCUMENTS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THE INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY APPROVAL.

REVISION LOG:

NO.	DATE	COMMENTS

FILE : V:\2220\active\222012278\civil\phase_01\drawing\sheets\222012278crv01.dwg

SHEET NO.	DESCRIPTION	SHEET INDEX
	CIVIL ENGINEERING	

CIVIL SITE PLAN SET

Sheet List Table	Sheet Title
Sheet Number	COVER SHEET
01	GENERAL NOTES
02	SUBDIVISION PLAT
03	EXISTING CONDITIONS & DEMOLITION PLAN
04	ON-SITE EROSION & SEDIMENTATION CONTROL PLAN
05	OFF-SITE EROSION & SEDIMENTATION CONTROL PLAN
06	EROSION & SEDIMENTATION CONTROL DETAILS
07	ON-SITE EXISTING DRAINAGE AREA MAP
08	OFF-SITE EXISTING DRAINAGE AREA MAP
09	ON-SITE PROPOSED DRAINAGE AREA MAP A
10	ON-SITE PROPOSED DRAINAGE AREA MAP B
11	OFF-SITE PROPOSED DRAINAGE AREA MAP
12	ON-SITE GRADING PLAN
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14	MASTER SITE PLAN
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22	OFF-SITE PAVING & DRAINAGE PLAN
23	SITE & PAVING DETAILS
24	TYPICAL ROAD SECTIONS
25	NORTH WATER QUALITY & DETENTION POND
26	SOUTH WATER QUALITY & DETENTION POND
27	TCEQ WATER QUALITY CALCULATIONS
28	STORM SEWER DETAILS 01
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31	WASTEWATER PROFILES 1 OF 2
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33	WATER & WASTEWATER DETAILS 01
34	WATER & WASTEWATER DETAILS 02
35	WATER & WASTEWATER DETAILS 03
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DECELERATION CONSTRUCTION SET

Sheet List Table	Sheet Title
Sheet Number	EXISTING CONDITIONS AND DEMOLITION PLAN
C1.01	GRADING PLAN
C2.01	PAVING PLAN
C3.01	DIMENSIONAL CONTROL PLAN
C4.01	STRIPING AND SIGNAGE PLAN
C5.01	UTILITY PLAN
C6.01	STORM SEWER PROFILES
C6.02	

APPROVED FOR ACCEPTANCE

CITY OF GEORGETOWN DATE

WILLIAMSON COUNTY EMERGENCY SERVICE DISTRICT #3 DATE

DATE

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MIGHT BE OCCURRED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



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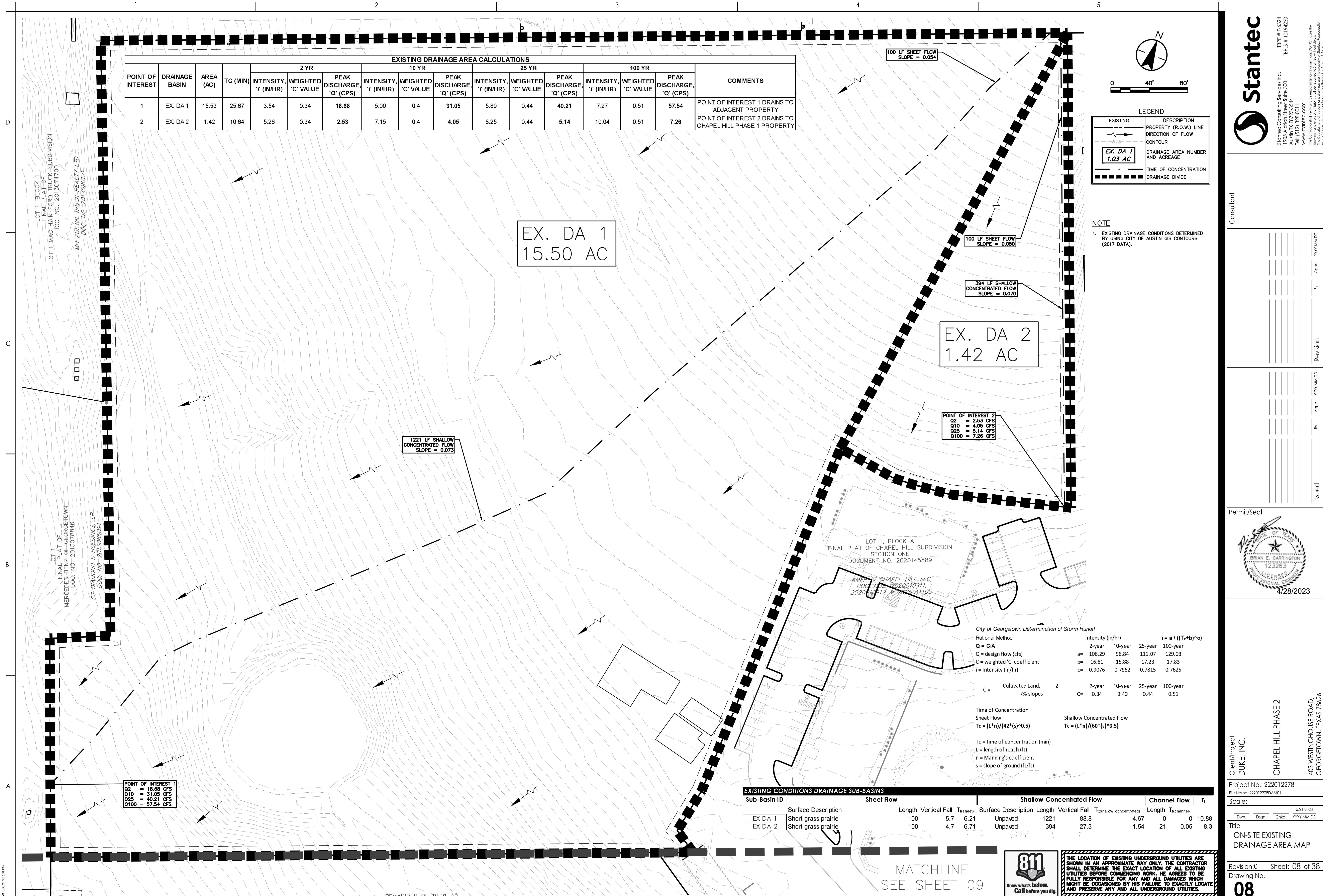
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SHEET
1
OF 38

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ORIGINAL SHEET - ARCH'D

REMAINDER OF 15.01 AC



EXISTING DRAINAGE AREA CALCULATIONS																
POINT OF INTEREST	DRAINAGE BASIN	AREA (AC)	TC (MIN)	2 YR			10 YR			25 YR			100 YR			COMMENTS
				INTENSITY, 'I' (IN/HR)	WEIGHTED 'C' VALUE	PEAK DISCHARGE, 'Q' (CPS)	INTENSITY, 'I' (IN/HR)	WEIGHTED 'C' VALUE	PEAK DISCHARGE, 'Q' (CPS)	INTENSITY, 'I' (IN/HR)	WEIGHTED 'C' VALUE	PEAK DISCHARGE, 'Q' (CPS)	INTENSITY, 'I' (IN/HR)	WEIGHTED 'C' VALUE	PEAK DISCHARGE, 'Q' (CPS)	
1	EX. DA 1	15.53	25.67	3.54	0.34	18.68	5.00	0.4	31.05	5.89	0.44	40.21	7.27	0.51	57.54	POINT OF INTEREST 1 DRAINS TO ADJACENT PROPERTY
2	EX. DA 2	1.42	10.64	5.26	0.34	2.53	7.15	0.4	4.05	8.25	0.44	5.14	10.04	0.51	7.26	POINT OF INTEREST 2 DRAINS TO CHAPEL HILL PHASE 1 PROPERTY

0

40'

80'

LEGEND

EXISTING	DESCRIPTION
	PROPERTY (R.O.W.) LINE
	DIRECTION OF FLOW
	CONTOUR
	DRAINAGE AREA NUMBER AND ACREAGE
	TIME OF CONCENTRATION
	DRAINAGE DIVIDE

NOTE

1. EXISTING DRAINAGE CONDITIONS DETERMINED BY USING CITY OF AUSTIN GIS CONTOURS (2017 DATA).

Consultant

Permit/Seal



Client/Project
DUKE, INC.

CHAPEL HILL PHASE 2

403 WESTINGHOUSE ROAD,
GEORGETOWN, TEXAS 78626

Project No.: 222012278

File Name: 222012278DAM01

Scale:

Dwn.	Desgn.	Chkd.	YYYYMMDD
			5.21.2023

Title
ON-SITE EXISTING
DRAINAGE AREA MAP

Revision:0 Sheet: 08 of 38
Drawing No.

08

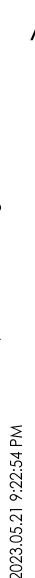
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THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

$$T = \frac{y}{S_x}$$

T= Ponded width (ft)
y= depth of water in the curb and gutter cross section (ft)
Sx= roadway cross slope (ft/ft)

Inlet No.	Drainage Area	Inlet Size	Q 25 Yr (CFS)	Q 100 Yr (CFS)	h (FT)	Open Area (SF)	Q Capacity (CFS)	Capacity with 50% Clogging (CFS)	Q25 Pass?
OS G2	OS DA-2	2x2'	0.77	0.96	2.00	1.60	10.91	5.45	YES
OS G3	OS DA-3	2x2'	1.81	2.25	2.00	1.60	10.91	5.45	YES
G1	DA-19	2.5x2.5'	8.40	10.29	2.00	2.50	17.04	8.52	YES
G2	DA-20	2x2'	1.44	1.80	2.00	1.60	10.91	5.45	YES
G3	DA-21	2x2'	3.05	3.70	2.00	1.60	10.91	5.45	YES
G4	DA-22	2x2'	2.82	3.44	2.00	1.60	10.91	5.45	YES
G5	DA-23	2x2'	2.79	3.78	2.00	1.60	10.91	5.45	YES
G6	DA-25	3x3'	10.60	12.36	2.00	3.60	24.54	12.27	YES
G7	DA-26	2x2'	2.36	3.01	2.00	1.60	10.91	5.45	YES
G8	DA-27	2x2'	1.23	1.57	2.00	1.60	10.91	5.45	YES
G9	DA-28	2x2'	4.88	5.95	2.00	1.60	10.91	5.45	YES
G10	DA-29	2x2'	1.78	2.20	2.00	1.60	10.91	5.45	YES
G11	DA-31	2x2'	4.92	6.00	2.00	1.60	10.91	5.45	YES
G12	DA-32	2x2'	2.26	2.75	2.00	1.60	10.91	5.45	YES
G13	DA-33	3x3'	9.80	11.17	2.00	3.60	24.54	12.27	YES
G14	DA-34	2x2'	2.92	3.55	2.00	1.60	10.91	5.45	YES
G15	DA-35	2x2'	3.30	4.24	2.00	1.60	10.91	5.45	YES
G16	DA-36	2x2'	1.30	1.58	2.00	1.60	10.91	5.45	YES
G17	DA-37	2x2'	1.78	2.26	2.00	1.60	10.91	5.45	YES
G18	DA-38	2.5x2.5'	5.46	6.97	2.00	2.50	17.04	8.52	YES

INLET #	DRAINAGE AREA	INLET SIZE (ft)	Q-25	Q-BY	Q-TOT	LONG SLOPE (ft/ft)	CROSS SLOPE (ft/ft)	n	DEPTH OF GUTTER FLOW (ft)	PONDED WIDTH (ft)	EFFECTIVE SLOPE(S _{eo})	REQUIRED SIZE (ft)	PASS?	Q-by-pass	BY-PASS TO DA-	CURB DEPRESSION (ft.)	DEPRESSION WIDTH (ft.)	A _w	P _w	K _w	A _o	P _o	K _o	E _o
C1	DA-13	10	7.67		7.67	0.007	0.02	0.016	0.3310	16.549	0.268	8.388	OK	0.00		0.47917	1.5	0.833334	1.584061	48.85918	2.264619	15.04865	13.97643	0.777571

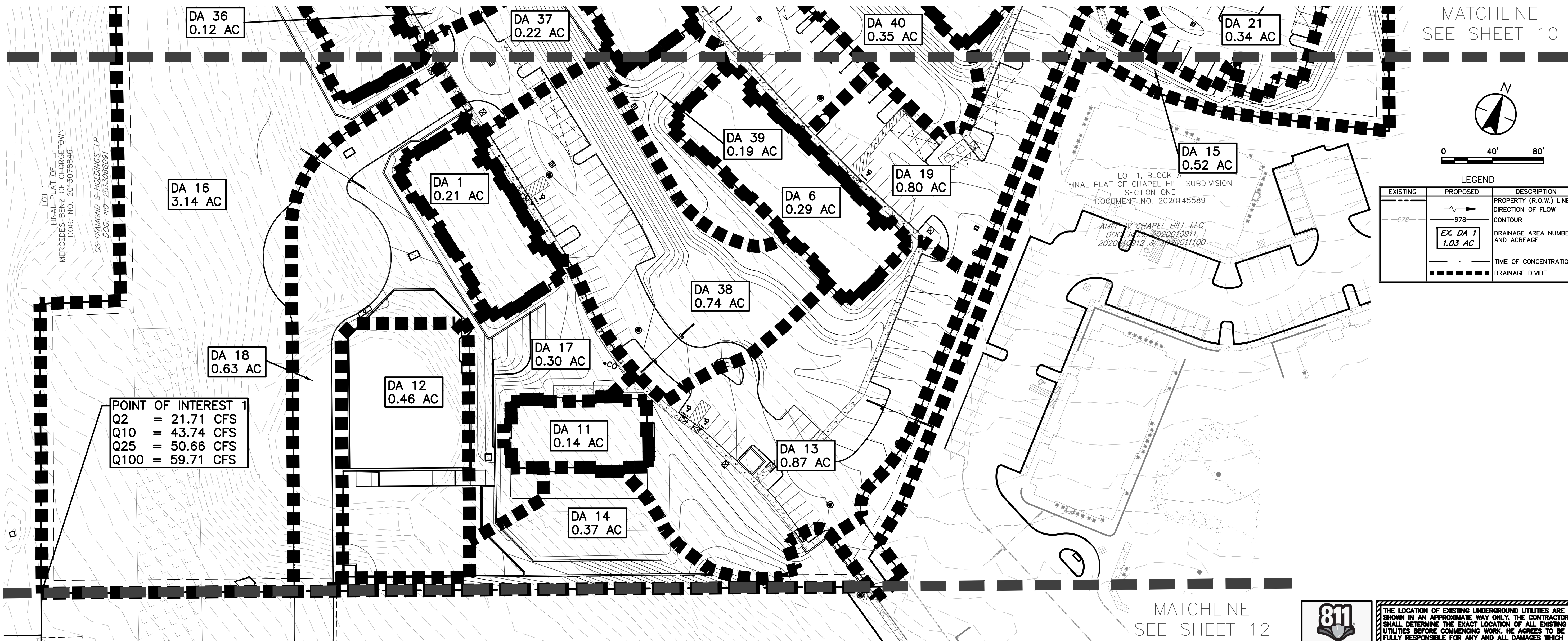
INLET #	DRAINAGE AREA	INLET SIZE (ft)	Q-100	Q-BY	Q-TOT	LONG SLOPE (ft/ft)	CROSS SLOPE (ft/ft)	n	DEPTH OF GUTTER FLOW (ft.)	PONDED WIDTH (ft.)	EFFECTIVE SLOPE(S _{se})	REQUIRED SIZE (ft)	PASS?	Q-by-pass	BY-PASS TO DA-	CURB DEPRESSION (ft.)	DEPRESSION WIDTH (ft.)	Aw	Pw	Kw	Ao	Po	Ko	EO
C1	DA-13	10	9.56		9.56	0.007	0.02	0.016	0.359	17.968	0.266	9.245	OK	0.00		0.47917	1.5	0.875917	1.584061	51.35584	2.711974	16.46807	15.29472	0.770524

Chapel Hill Phase 2 Onsite Existing Conditions				
	2-YR (CFS)	10 YR (CFS)	25-YR (CFS)	100-YR (CFS)
Point of Interest 1	24.19	43.79	55.71	74.19

Chapel Hill Phase 2 Onsite Proposed Conditions				
	2-YR (CFS)	10 Yr (CFS)	25-YR (CFS)	100-YR (CFS)
Point of Interest 1	21.71	43.74	50.66	59.71

Formulas:	Rational Method	Intensity (in/hr)			i = a / ((T_r+b)^c)
	Q = C i A		10-year	25-year	100-year
	Q = design flow (cfs)	a = 106.29	96.84	111.07	129.03
	C = weighted 'C' coefficient	b = 16.81	15.88	17.23	17.83
	i = Intensity (in/hr)	c = 0.9076	0.7952	0.7815	0.7825

Sub-Basin ID	Area (ac)	Tc (min)	2-YEAR				10-YEAR				25-YEAR				100-YEAR				COMMENTS
			Intensity (in/hr)	Weighted 'C' Value	Sub-Basin Q ₂ (cfs)	Intensity	Weighted 'C' Value	Sub-Basin Q ₁₀ (cfs)	Intensity	Weighted 'C' Value	Sub-Basin Q ₂₅ (cfs)	Intensity	Weighted 'C' Value	Sub-Basin Q ₁₀₀ (cfs)					
			PROPOSED CONDITIONS TRAINING SUB-BASINS																
DA-1	0.21	5.0	6.48	0.97	1.32	8.64	0.97	1.76	9.84	0.97	2.00	11.88	0.97	2.42		Roof drains into storm sewer			
DA-2	0.22	5.0	6.48	0.97	1.39	8.64	0.97	1.85	9.84	0.97	2.10	11.88	0.97	2.54		Roof drains into storm sewer			
DA-3	0.29	5.0	6.48	0.97	1.84	8.64	0.97	2.45	9.84	0.97	2.79	11.88	0.97	3.37		Roof drains into storm sewer			
DA-4	0.21	5.0	6.48	0.97	1.32	8.64	0.97	1.76	9.84	0.97	2.00	11.88	0.97	2.42		Roof drains into storm sewer			
DA-5	0.21	5.0	6.48	0.97	1.32	8.64	0.97	1.76	9.84	0.97	2.00	11.88	0.97	2.42		Roof drains into storm sewer			
DA-6	0.29	5.0	6.48	0.97	1.84	8.64	0.97	2.45	9.84	0.97	2.79	11.88	0.97	3.37		Roof drains into storm sewer			
DA-7	0.29	5.0	6.48	0.97	1.84	8.64	0.97	2.45	9.84	0.97	2.79	11.88	0.97	3.37		Roof drains into storm sewer			
DA-8	0.21	5.0	6.48	0.97	1.32	8.64	0.97	1.76	9.84	0.97	2.00	11.88	0.97	2.42		Roof drains into storm sewer			
DA-9	0.22	5.0	6.48	0.97	1.39	8.64	0.97	1.85	9.84	0.97	2.10	11.88	0.97	2.54		Roof drains into storm sewer			
DA-10	0.21	5.0	6.48	0.97	1.32	8.64	0.97	1.76	9.84	0.97	2.00	11.88	0.97	2.42		Roof drains into storm sewer			
DA-11	0.14	5.0	6.48	0.97	0.85	8.64	0.97	1.13	9.84	0.97	1.29	11.88	0.97	1.56		Roof drains into storm sewer			
DA-12	0.48	5.0	6.48	0.36	1.06	8.64	0.42	1.65	9.84	0.46	2.05	11.88	0.52	2.84		Roof drains into storm sewer			
DA-13	0.87	5.0	6.48	0.71	3.98	8.64	0.73	5.49	9.84	0.75	6.39	11.88	0.77	8.01		Drains into curb inlet			
DA-14	0.37	5.0	6.48	0.86	1.85	8.64	0.86	2.41	9.84	0.86	2.85	11.88	0.86	3.52		Drains into curb inlet			
DA-15	0.52	5.0	6.48	0.38	1.28	8.64	0.44	1.96	9.84	0.48	2.42	11.88	0.54	3.33		Drains offsite			
DA-16	3.15	5.0	6.48	0.34	6.98	8.64	0.40	10.94	9.84	0.44	13.69	11.88	0.51	19.14		Drains offsite			
DA-17	0.30	5.0	6.48	0.39	0.76	8.64	0.44	1.16	9.84	0.48	1.44	11.88	0.54	1.97		Drains into proposed pond			
DA-18	0.63	5.0	6.48	0.67	2.75	8.64	0.70	3.82	9.84	0.72	4.47	11.88	0.75	5.64		Drains onto access drive			
DA-19	0.80	5.0	6.48	0.82	4.26	8.64	0.84	5.77	9.84	0.84	6.64	11.88	0.86	8.16		Drains into grate inlet			
DA-20	0.09	9.5	5.47	0.39	0.20	7.41	0.45	0.31	8.53	0.48	0.39	10.37	0.55	0.53		Drains into grate inlet			
DA-21	0.34	5.0	6.48	0.91	2.00	8.64	0.92	2.67	9.84	0.92	3.05	11.88	0.92	3.70		Drains into grate inlet			
DA-22	0.31	5.0	6.48	0.87	1.72	8.64	0.88	2.32	9.84	0.88	2.65	11.88	0.89	3.24		Drains into grate inlet			
DA-23	0.53	7.6	5.84	0.34	1.05	7.86	0.40	1.66	9.01	0.44	2.09	10.93	0.51	2.94		Drains into grate inlet			
DA-24	0.42	5.5	6.35	0.34	0.92	8.48	0.40	1.44	9.67	0.44	1.81	11.69	0.51	2.52		Drains into DA-25			
DA-25	0.72	5.0	6.48	0.87	4.05	8.64	0.88	5.46	9.84	0.88	6.26	11.88	0.89	7.64		Drains into grate inlet			
DA-26	0.24	12.1	5.02	0.36	0.43	6.85	0.42	0.68	7.92	0.48	0.86	9.66	0.53	1.21		Drains into grate inlet			
DA-27	0.11	6.1	6.20	0.36	0.25	8.30	0.42	0.39	9.48	0.48	0.49	11.46	0.53	0.67		Drains into grate inlet			
DA-28	0.50	5.0	6.48	0.86	2.78	8.64	0.87	3.75	9.84	0.88	4.30	11.88	0.89	5.25		Drains into grate inlet			
DA-29	0.16	5.0	6.48	0.88	0.93	8.64	0.88	1.25	9.84	0.89	1.44	11.88	0.90	1.75		Drains into grate inlet			
DA-30	0.44	6.7	6.05	0.34	0.90	8.12	0.40	1.42	9.28	0.44	1.78	11.24	0.51	2.50		Drains into DA-33			
DA-31	0.41	5.0	6.48	0.86	2.23	8.64	0.87	3.24	9.84	0.87	3.54	11.88	0.88	4.33		Drains into grate inlet			
DA-32	0.22	5.0	6.48	0.96	1.20	8.64	0.87	1.62	9.84	0.87	1.86	11.88	0.88	2.27		Drains into grate inlet			
DA-33	0.61	5.0	6.48	0.83	3.29	8.64	0.84	4.45	9.84	0.85	5.11	11.88	0.87	6.27		Drains into grate inlet			
DA-34	0.27	5.0	6.48	0.88	1.52	8.64	0.88	2.05	9.84	0.89	2.35	11.88	0.90	2.86		Drains into grate inlet			
DA-35	0.37	14.6	4.66	0.35	0.61	6.40	0.41	0.98	7.44	0.45	1.24	9.09	0.52	1.75		Drains into grate inlet			
DA-36	0.12	5.0	6.48	0.92	0.70	8.64	0.92	0.94	9.84	0.92	1.07	11.88	0.93	1.30		Drains into grate inlet			
DA-37	0.22	5.0	6.48	0.60	0.87	8.64	0.64	1.23	9.84	0.66	1.45	11.88	0.70	1.86		Drains into grate inlet			
DA-38	0.74	5.0	6.48	0.60	2.89	8.64	0.64	4.07	9.84	0.66	4.80	11.88	0.70	6.14		Drains into grate inlet			
DA-39	0.19	7.1	5.95	0.34	0.39	8.00	0.40	0.61	9.16	0.44	0.77	11.09	0.51	1.08		Drains into grate inlet			
DA-40	0.35	6.8	6.03	0.34	0.71	8.09	0.40	1.12	9.26	0.44	1.41	11.21	0.51	1.97		Drains into grate inlet			



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Client/Project
DUKE, INC.

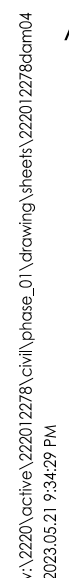
CHAPEL HILL PHASE 2

403 WESTINGHOUSE ROAD,
GEORGETOWN, TEXAS 78626

Project No.: 222012278			
File Name: 222012278DAM05			
Scale:			
			5.21.2023
Dwn.	Dsgn.	Chkd.	YYYY.MM.DD
Title ON-SITE PROPOSED DRAINAGE AREA MAP B			
Revision: 0		Sheet: 11 of 38	
Drawing No.			

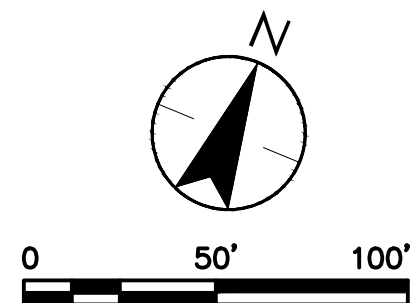
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2021-65-SDP



12

SITE DATA TABLE:
ZONING: P.U.D. ORD NO 2020-46 (MF-2 AND C-1 BASE ZONING)
PROPOSED USE: MULTI-FAMILY
LOT AREA = 14.88 AC
BUILDING FOOTPRINT = 99,483 SF
IMPERVIOUS AREA = 339,768 SF
IMPERVIOUS COVER = 46.17%
NUMBER OF UNITS = 276 DWELLING UNITS
MAXIMUM ALLOWABLE IMPERVIOUS COVER
DETENTION POND AND PRESERVATION OF
NATIVE TREE STANDS BOUNCES PER CHAPEL
HILL PUD 11.730 ACRES = 62%



EXISTING	PROPOSED	DESCRIPTION
XXX		PROPERTY LINE (R.O.W.) LINE
		RECORD INFORMATION
		LIGHT POLE
		POWER POLE
		GROUND LIGHT
		DOWN GUT
		JUNCTION BOX
		TRANSFORMER (SIZE VARIES)
		ELECTRICAL SWITCHBOX
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT
		BACKFLOW PREVENTER
		TELEPHONE RISER
		CABLE TV RISER
		ELECTRIC BOX
		ELECTRIC METER
		GAS METER
		GAS VALVE
		TRAFFIC CONTROL BOX
		TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
		CHAINLINK FENCE
		WOOD FENCE
		OVERHEAD ELECTRIC
		ELECTRIC MANHOLE (SIZE VARIES)
		WASTEWATER MANHOLE (SIZE VARIES)
		STORMSEWER MANHOLE (SIZE VARIES)
		TELEPHONE MANHOLE (SIZE VARIES)
		WATER MANHOLE
		WASTEWATER CLEANOUT
		DUMPSTER
		CURB & GUTTER
		FIRE LANE DESIGNATION
		ADA ACCESS ROUTE
		CONCRETE SIDEWALKS
		WALL SIGN
		WHEELSTOP
		BOLLARD
		PARKING COUNT (REGULAR SPACES)
		PARKING COUNT (HANDICAP SPACES)
		PARKING COUNT (COMPACT SPACES)
		PARKING COUNT (COMPACT SPACES)
		TREE TO REMAIN
		HANDICAP SPACE
		BIKE RACK
		BICYCLE ACCESS ROUTE
		LIMITS OF CONSTRUCTION
		ZONING LIMITS LINE
		PEDESTRIAN ACCESS ROUTE
		SETBACK LINE
		EASEMENT LINE
		CARPORT SPACES
		GARAGE SPACES

FIRE APPARATUS ACCESS ROAD GATES:

- GATES SECURING FIRE APPARATUS ACCESS ROADS SHALL COMPLY WITH ALL OF THE FOLLOWING CRITERIA:
1. THE MINIMUM UNOBSTRUCTED GATE WIDTH SHALL BE 20 FEET (6096MM), EXCEPTION: ONE- AND TWO-FAMILY DWELLINGS AS APPROVED BY THE FIRE CODE OFFICIAL.
 2. GATES SHALL BE OF THE SWINGING OR SLIDING TYPE.
 3. CONSTRUCTION OF GATES SHALL BE OF MATERIALS THAT ALLOW MANUAL OPERATION BY ONE PERSON.
 4. GATE COMPONENTS SHALL ALWAYS BE MAINTAINED IN AN OPERATIVE CONDITION AND REPLACED OR REPAIRED WHEN DEFECTIVE.
 5. ELECTRICALLY OPERATED GATES:
 - A. SHALL BE EQUIPPED WITH A MEANS OF OPENING THE GATE BY FIRE DEPARTMENT PERSONNEL FOR EMERGENCY ACCESS. EMERGENCY ACCESS DEVICES SHALL BE APPROVED BY THE FIRE CODE OFFICIAL.
 - B. SHALL BE IN THE FULLY OPENED POSITION FOR NO MORE THAN 30 SECONDS.
 - C. SHALL HAVE A MANUAL OVERRIDE SYSTEM. MANUAL OVERRIDE OPERATIONS SHALL BE LOCATED ON THE ENTRANCE SIDE OF THE GATE, OR WHEN POWER IS RESTORED FOR NORMAL OPERATIONS.
 - D. SHALL HAVE INSTALLED APPROVED PREEMPTIVE CONTROL OPENING EQUIPMENT.
 - E. EXCEPTIONS:
 - I. DRIVEWAYS SERVING ONE- AND TWO- FAMILY DWELLINGS AS APPROVED BY THE FIRE CODE OFFICIAL.
 - II. GATES SERVING AS AN EMERGENCY ACCESS WITH 24-HOUR STAFFED GATEHOUSES
 6. MANUAL OPERATING GATES:
 - A. MAY BE LOCKED WHEN APPROVED BY THE FIRE CODE OFFICIAL.
 - B. IF EQUIPPED WITH A LOCK, KEYS SHALL BE PROVIDED FOR INSTALLATION INTO AN APPROVED FIRE DEPARTMENT KEY BOX. KEYS SHALL BE MAINTAINED CURRENT.
 7. LOCKING DEVICE SPECIFICATIONS SHALL BE SUBMITTED FOR APPROVAL BY THE FIRE CODE OFFICIAL.
 8. ELECTRIC GATE OPERATORS, WHERE PROVIDED, SHALL BE DESIGNED IN ACCORDANCE WITH UL 325.9.
 9. GATES INTENDED FOR AUTOMATIC OPERATION SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED TO COMPLY WITH THE REQUIREMENTS OF ASTM F2020.
 10. A CONSTRUCTION PERMIT IN ACCORDANCE WITH SUBSECTION 503.6 IS REQUIRED TO INSTALL OR MODIFY A GATE ACROSS FIRE APPARATUS ROADWAYS.
 11. MAINTENANCE OF GATES SECURING FIRE APPARATUS ACCESS: GATES SHALL BE MAINTAINED IN AN OPERATIVE CONDITION AND REPAIRED OR REPLACED WHEN DEFECTIVE, WHEN REQUIRED BY THE FIRE CODE OFFICIAL. DEFECTIVE GATES SHALL BE SECURED IN THE OPEN POSITION UNTIL REPAIRED.

ACCESSIBILITY NOTES

1. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP. [TAS 4.3.7]
2. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 IN. THE MAXIMUM HORIZONTAL PROJECTION IS 30 FEET FOR A RAMP WITH A SLOPE BETWEEN 1:12 AND 1:15, AND 40 FEET FOR A RAMP WITH A SLOPE BETWEEN 1:16 AND 1:20.
3. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50. [TAS 4.3.7]
4. GROUND SURFACES ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM, AND SLIP RESISTANT. [TAS 4.5.1]
5. HANDRAILS SHALL BE INSTALLED ALONG PEDESTRIAN WALKWAYS WHERE THE WALL DROP OFF IS 30" OR GREATER.
6. ACCESSIBLE PARKING SPACES MUST BE LOCATED ON A SURFACE WITH A SLOPE NOT EXCEEDING 1:50.

NOTES

1. SEE SHEETS 16-19 FOR DETAILED SITE LAYOUT

GENERAL NOTES:

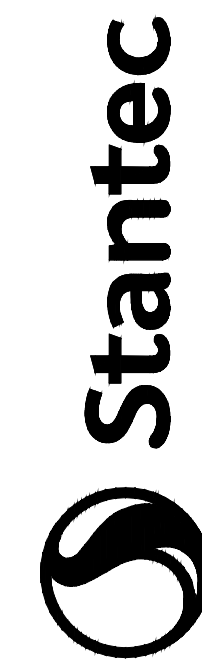
1. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER, AND SUCCESSOR TO THE CURRENT PROPERTY OWNER, TO ENSURE THE SUBJECT PROPERTY AND ANY IMPROVEMENTS ARE MAINTAINED IN CONFORMANCE WITH THIS SITE DEVELOPMENT PLAN.
2. THIS DEVELOPMENT SHALL COMPLY WITH ALL STANDARD OF THE UNIFIED DEVELOPMENT CODE (UDC), THE CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL, THE DEVELOPMENT MANUAL AND ALL OTHER APPLICABLE CITY STANDARDS.
3. THIS SITE DEVELOPMENT PLAN SHALL MEET THE UDC STORMWATER REQUIREMENTS.
4. ALL SIGNAGE REQUIRES A SEPARATE APPLICATION AND APPROVAL FROM THE INSPECTION SERVICES DEPARTMENT. NO SIGNAGE IS APPROVED WITH THE SITE DEVELOPMENT PLAN.
5. SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH THE UDC.
6. DRIVEWAYS WILL REQUIRE APPROVAL BY THE DEVELOPMENT ENGINEER OF THE CITY OF GEORGETOWN.
7. OUTDOOR LIGHTING SHALL COMPLY WITH SECTION 7.04 OF THE UDC.
8. SCREENING OF MECHANICAL EQUIPMENT, DUMPSTERS AND PARKING SHALL COMPLY WITH CHAPTER 8 OF THE UDC. THE SCREENING IS SHOWN ON THE LANDSCAPE AND ARCHITECTURAL PLANS, AS APPLICABLE.
9. THE COMPANION LANDSCAPE PLAN HAS BEEN DESIGNED AND PLANT MATERIALS SHALL BE INSTALLED TO MEET ALL REQUIREMENTS OF THE UDC.
10. ALL MAINTENANCE OF REQUIRED LANDSCAPE SHALL COMPLY WITH THE MAINTENANCE STANDARDS OF CHAPTER 8 OF THE UDC.
11. A SEPARATE IRRIGATION PLAN SHALL BE REQUIRED AT THE TIME OF BUILDING PERMIT APPLICATION.
12. FIRE FLOW REQUIREMENTS OF XX PER MINUTE ARE BEING MET BY THIS PLAN.
13. ANY HERITAGE TREE NOTED ON THIS SITE DEVELOPMENT PLAN IS SUBJECT, IN PERPETUITY, TO THE MAINTENANCE, CARE PRUNING AND REMOVAL REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE.
14. THE CONSTRUCTION PORTION OF THESE PLANS WERE PREPARED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF 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.
15. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
16. WHERE NO EXISTING OVERHEAD INFRASTRUCTURE IS SHOWN, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE LOCATED ALONG THE STREET AND WITHIN THE SITE, WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BE RELOCATED, IT SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER.
17. ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 13.09

PROPOSED USE	PARKING TABLE		
	TOTAL UNITS	MINIMUM PARKING RATIO	REQUIRED PARKING
MUTIFAMILY	1BR	156	1 SPACE/UNIT*
	2BR	108	2 SPACES/UNIT*
	3BR	12	2 SPACES/UNIT*
	VISITOR		5% OF TOTAL
TOTAL REQUIRED PARKING SPACES: 416			
TOTAL PROVIDED PARKING SPACES: 426			
REQUIRED ACCESSIBLE PARKING SPACES: 12			
PROVIDED ACCESSIBLE PARKING SPACES: 14**			
PROVIDED CARPORT PARKING SPACES: 312			
PROVIDED STANDARD PARKING SPACES: 56			

* MINIMUM PARKING RATIO REQUIRED PER PUD ORD 2020-49
** 12 STANDARD ACCESSIBLE SPACES PLUS 2 ACCESSIBLE GARAGE SPACES



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



Consultant

Permit/Seal



Client/Project
DUKE, INC.
CHAPEL HILL PHASE 2

Project No.: 222012278

File Name: 222012278SPN01

Scale:

Dwn. Dign. Chkd. YYYY.MM.DD
1:12.2024

Title
MASTER SITE PLAN

Revision:0 Sheet: 15 of 42

Drawing No.

15

2021-65-SDP

