CONTRIBUTING ZONE PLAN

For

CALITERRA PHASE 5 SECTION 13

ENHANCED MEASURES

Prepared For:

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Prepared By:

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June 2023

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I. EDWARDS AQUIFER APPLICATION COVER PAGE (TCEQ-20705)

Texas Commission on Environmental Quality Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

1. <u>Edwards Aquifer applications</u> 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: <u>http://www.tceq.texas.gov/field/eapp</u>.

- 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: Caliterra Ph. 5, Sec. 13				2. Regulated Entity No.:				
3. Customer Name: CF CSLK CALITERRA, LLC			4. Ci	4. Customer No.: 606010296				
5. Project Type: (Please circle/check one)	New	Modification Extension		Exception				
6. Plan Type: (Please circle/check one)	WPAP CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential	Non-r	Non-residential 8. Si 50.947		ite (acres): acres			
9. Application Fee:	\$1,500	10. Permanent BMP(s):		Vegetated Filte	r Strips			
11. SCS (Linear Ft.):		12. AST/UST (No. Tanks):			nks):			
13. County:	Hays	14. W	14. Watershed:			Onion 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.)	_1_		_			
Region (1 req.)	_1_		—			
County(ies)	_1_					
Groundwater Conservation District(s)	Edwards Aquifer Authority Barton Springs/ Edwards Aquifer Hays Trinity Plum Creek	Barton Springs/ Edwards Aquifer	NA			
City(ies) Jurisdiction	Austin Buda Dripping Springs Kyle Mountain City San Marcos Wimberley Woodcreek	Austin Bee Cave Pflugerville Rollingwood Round Rock Sunset Valley West Lake Hills	Austin Cedar Park Florence Georgetown Jerrell Leander Liberty Hill Pflugerville Round Rock			

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

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

Quynn Dusek

Print Name of Customer/Authorized Agent

Signature of Customer/Authorized Agent

2/9/2023 Date

FOR TCEQ INTERNAL USE ONLY					
Date(s)Reviewed:	Date Administratively Complete:				
Received From:		Correct Number of Copies:			
Received By:		Distribut	ion 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):		Payable to TCEQ (Y/N):			
Core Data Form Complete (Y/N):		Check:	Signed (Y/N):		
Core Data Form Incomplete Nos.:		Less than 90 days old (Y/N):			

II. CONTRIBUTING ZONE PLAN APPLICATION (TCEQ-10257)

Contributing Zone Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), 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 **Contributing Zone Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: Quynn Dusek

Date: 2/9/2023

Signature of Customer/Agent:

hugu Dask

Regulated Entity Name: Caliterra Ph. 5, Sec. 13

Project Information

- 1. County: <u>Hays</u>
- 2. Stream Basin: Onion Creek
- 3. Groundwater Conservation District (if applicable): Hays Trinity
- 4. Customer (Applicant):

Contact Person: Gregory L. RichEntity: CF CSLK CALITERRA, LLCMailing Address: 1222 Merit Drive, Suite 1020City, State: Dallas, TXZip: 75251Telephone: 972-960-2777Fax: _____Email Address: grich@siepiela.com

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5. Agent/Representative (If any):

Contact Person: Quynn DusekEntity: Carlson, Brigance, & Doering, IncMailing Address: 5501 West William Cannon DriveCity, State: Austin, TXZip: 78749Telephone: 512-280-5160Fax: 512-583-0903Email Address: quynn@cbdeng.com

6. Project Location:

- The project site is located inside the city limits of <u>Dripping Springs</u>.
- 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.
- 7. The location of the project site is described below. Sufficient detail and clarity has been provided so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

Left off of Premier Park Loop , appro	ximately 350 along	Kelsey Lane. S	lite is on the left.
30° 10' 13.4436'' N98° 6' 0.4608'' W			

- 8. Attachment A Road Map. A road map showing directions to and the location of the project site is attached. The map clearly shows the boundary of the project site.
- 9. Attachment B USGS Quadrangle Map. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') is attached. The map(s) clearly show:

Project site boundaries. USGS Quadrangle Name(s).

- 10. Attachment C Project Narrative. A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:
 - Area of the site
 Offsite areas
 Impervious cover
 Permanent BMP(s)
 Proposed site use
 Site history
 Previous development
 - Area(s) to be demolished
- 11. 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/Not cleared)
- Other:
- 12. The type of project is:

\times	Residential: # of Lots: <u>11</u>
	Residential: # of Living Unit Equivalents:
	Commercial
	Industrial
	Other:

13. Total project area (size of site): <u>4.899</u> Acres

Total disturbed area: <u>4.899</u> Acres

- 14. Estimated projected population: 39
- 15. The amount and type of impervious cover expected after construction is complete is shown below:

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	50,000	÷ 43,560 =	1.15
Parking		÷ 43,560 =	
Other paved surfaces	12,971	÷ 43,560 =	0.30
Total Impervious Cover	183,617	÷ 43,560 =	1.45

Table 1 - Impervious Cover

Total Impervious Cover <u>1.45</u> ÷ Total Acreage <u>4.90</u> X 100 = <u>26.60</u>% Impervious Cover

- 16. Attachment D Factors Affecting Surface Water Quality. A detailed description of all factors that could affect surface water quality is attached. If applicable, this includes the location and description of any discharge associated with industrial activity other than construction.
- 17. 🛛 Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

For Road Projects Only

Complete questions 18 - 23 if this application is exclusively for a road project.

N/A

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18.	Туре	of	project:
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TXDOT road project. County road or roads built to county specifications. City thoroughfare or roads to be dedicated to a municipality. Street or road providing access to private driveways. 19. Type of pavement or road surface to be used: Concrete Asphaltic concrete pavement Other: 20. Right of Way (R.O.W.): Length of R.O.W.: _____ feet. Width of R.O.W.: _____ feet. $L \times W = Ft^2 \div 43,560 Ft^2/Acre = acres.$ 21. Pavement Area: Length of pavement area: _____ feet. Width of pavement area: feet. $L \times W = Ft^2 \div 43,560 Ft^2/Acre = acres.$ Pavement area acres ÷ R.O.W. area acres x 100 = % impervious cover.

22. A rest stop will be included in this project.

A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

25. 🛛 Wastewater is to be discharged in the contributing zone. Requirements under 30 TAC §213.6(c) relating to Wastewater Treatment and Disposal Systems have been satisfied.

N/A

26. Wastewater will be disposed of by:

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

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

\bowtie	Existing.
	Proposed
□ N/A	4

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

Complete questions 27 - 33 if this project includes the installation of AST(s) with volume(s) greater than or equal to 500 gallons.

N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

AST Number	Size (Gallons)	Substance to be Stored	Tank M	aterial
1				
2				
3				
4				
5				
		T	otal x 1.5 =	Gallons

28. The AST will be placed within a containment structure that is sized to capture one and one-half (1 1/2) times the storage capacity of the system. For facilities with more than

one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.

Attachment G - Alternative Secondary Containment Methods. Alternative methods for providing secondary containment are proposed. Specifications showing equivalent protection for the Edwards Aquifer are attached.

29. Inside dimensions and capacity of containment structure(s):

 Table 3 - Secondary Containment

Length (L)(Ft.)	Width(W)(Ft.)	Height (H)(Ft.)	L x W x H = (Ft3)	Gallons

Total: _____ Gallons

30. Piping:

] All piping, hoses, and dispensers will be located inside the containment structure.

Some of the piping to dispensers or equipment will extend outside the containment structure.

The piping will be aboveground

] The piping will be underground

- 31. The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of:
- 32. Attachment H AST Containment Structure Drawings. A scaled drawing of the containment structure is attached that shows the following:
 - Interior dimensions (length, width, depth and wall and floor thickness).
 - Internal drainage to a point convenient for the collection of any spillage.

Tanks clearly labeled

Piping clearly labeled

Dispenser clearly labeled

33. Any spills must be directed to a point convenient for collection and recovery. Spills from storage tank facilities must be removed from the controlled drainage area for disposal within 24 hours of the spill.

In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.

In the event of a spill, any spillage will be drained from the containment structure through a drain and valve within 24 hours of the spill and disposed of properly. The drain and valve system are shown in detail on the scaled drawing.

Site Plan Requirements

Items 34 - 46 must be included on the Site Plan.

34. \square The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = <u>50</u>'.

35. 100-year floodplain boundaries:

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

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM# 48209C0115F Hays County, TX, dated Sept 2, 2005.

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

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

- 37. \square A drainage plan showing all paths of drainage from the site to surface streams.
- 38. 🖂 The drainage patterns and approximate slopes anticipated after major grading activities.
- 39. \square Areas of soil disturbance and areas which will not be disturbed.
- 40. 🔀 Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
- 41. 🛛 Locations where soil stabilization practices are expected to occur.
- 42. Surface waters (including wetlands).

N/A

43. Locations where stormwater discharges to surface water.

There will be no discharges to surface water.

44. Temporary aboveground storage tank facilities.

Temporary aboveground storage tank facilities will not be located on this site.

45. Permanent aboveground storage tank facilities.

Permanent aboveground storage tank facilities will not be located on this site.

46. \square Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

Practices and measures that will be used during and after construction is completed.

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

🗌 N/A

- 48. These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.
 - The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

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

🗌 N/A

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

🗌 N/A

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

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

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

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

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

	 Attachment I - 20% or Less Impervious Cover Waiver. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached. The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover. The site will not be used for multi-family residential developments, schools, or small business sites.
52. 🗌 Att	tachment J - BMPs for Upgradient Stormwater.
	 A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached. No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached. Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.
53. 🔀 Ati	tachment K - BMPs for On-site Stormwater.
	A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached. Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.
54. 🔀 Att tha	tachment L - BMPs for Surface Streams. A description of the BMPs and measures at prevent pollutants from entering surface streams is attached.
□ N/.	Ά
55. 🔀 Att pro suj	tachment M - Construction Plans. Construction plans and design calculations for the oposed permanent BMPs and measures have been prepared by or under the direct pervision of a Texas Licensed Professional Engineer, and are signed, sealed, and

dated. Construction plans for the proposed permanent BMPs and measures are

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attached and include: Design calculations, TCEQ Construction Notes, all proposed
structural plans and specifications, and appropriate details.

N/A

56. X Attachment N - Inspection, Maintenance, Repair and Retrofit Plan. A site and BMP specific plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan fulfills all of the following:
Prepared and certified by the engineer designing the permanent BMPs and measures
 Signed by the owner or responsible party Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit. Contains a discussion of record keeping procedures
N/A
57. Attachment O - Pilot-Scale Field Testing Plan. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.
⊠ N/A
58. Attachment P - Measures for Minimizing Surface Stream Contamination. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that result in water quality degradation.
□ N/A

Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.

- 59. The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
- 60. A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development,

or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

Administrative Information

- 61. 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.
- 62. Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.
- 63. The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.
 - The Temporary Stormwater Section (TCEQ-0602) is included with the application.

ATTACHMENT A – Road Map

ATTACHMENT A CALITERRA PHASE 5 SECTION 13



LOCATION MAP SCALE: 1" = 2,000' ATTACHMENT B – USGS Quadrangle Map



ST The National Map ATTACHMENT "B"







ATTACHMENT C – Project Description

The **Caliterra Phase 5 Section 13** project is a proposed development of a 11 single family lot, 4.899-acre tract in Caliterra Subdivision, located immediately East of existing Phase 2 Section 8.

This site is located in City of Dripping Springs' ETJ and is in Hays County. The project is in the HCDD No.1 Municipal Utility District. The site is currently undeveloped. No offsite areas developed areas flow through the boundary.

The project lies over the Edwards Aquifer Contributing Zone in Hays County and is subject to the TCEQ Contributing Zone regulations. The project is within Caliterra Subdivision and is subject to the Development Agreement between City of Dripping Springs and Development Solutions CAT, LLC, Owner of Caliterra Subdivision, recorded in Vol. 4978, Page 215, OPR of Hays County, Texas. The project is also subject to the Water Agreement between the developer and the Dripping Springs Water Supply Corporation.

Water quality for this project will be from vegetated filter strips located on either side of the roadway and two existing batch detention ponds built with Phase 5 Section 14. This will cover the existing 29.6% impervious cover onsite.

ATTACHMENT D

Factors Affecting Surface Water Quality

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

ATTACHMENT E

Volume and Character of Stormwater Runoff

This site was analyzed in conjunction with Caliterra Phase 5 Section 14. The total flow from proposed condition will generate approximately 212 CFS during the 100-year storm event, comparable to existing conditions generating 222 CFS. The runoff leaving the site will be in compliance with the Texas Commission on Environmental Quality (TCEQ) Regulations. Runoff from the development will be routed to water quality and detention ponds via channels, bar ditches, and culverts. The batch detention ponds have 91% removal rate by TCEQ standards and are constructed with the previous section of Caliterra 5-14. These existing batch detention ponds were designed to meet TCEQ standard specifications. The quality of runoff will be at an acceptable level. The average curve number for the proposed development is 89 and the impervious cover in the future developed state is 29.6% and approximately 0.0% for the undeveloped state. The runoff coefficient is 0.46 for existing conditions and 0.62 for proposed conditions.

ATTACHMENT J BMPs for Upgradient Stormwater

Only a small portion of offsite drainage flows onto Caliterra Phase 5 Section 13 and it is from the back of lots in Caliterra Phase 2 Section 8. This impervious cover will be conveyed through a channel and treated by the batch detention ponds proposed with Caliterra Phase 5 Section 14.

ATTACHMENT K BMPs for On-site Stormwater

On-site stormwater will be conveyed through channels, bar ditches, and culverts to filter strips and batch detention ponds built with Caliterra Phase 5 Section 14. The filter strips and batch detention ponds were designed using TCEQ technical guidance manual RG-348. The detention controls will release the 2-year storm event at half of the existing flow rate and the 10-year storm event at equal to or less than the existing flow rate.

ATTACHMENT L BMPs for Surface Streams

The runoff from this site is treated by utilizing filter strips and two batch detention ponds. These will prevent the pollutants from entering the adjacent stream until they are reduced to an acceptable level. There are no critical features located within the project site or affected by the project construction.

ATTACHMENT M Construction Plans

CALITERRA PHASE 5 SECTION 13 SUB' STREET, DRAINAGE, WATER, AND WASTEWATER IMPROVEMENTS

SITE

SHEET LIST TABLE

SHEET NUMBER

SHEET TITLE

- COVER SHEET
- 2 GENERAL NOTES
- 3 FINAL PLAT (1 OF 2)
- 4 FINAL PLAT (2 OF 2)
- 5 EROSION CONTROL PLAN
- 6 EROSION CONTROL DETAILS
- 7 AS-BUILT DRAINAGE PLAN 2-8 (SHEET 1 OF 2)
- 8 AS-BUILT DRAINAGE PLAN 2-8 (SHEET 2 OF 2)
- 9 AS-BUILT DRAINAGE PLAN 5-14 (SHEET 1 OF 2)
- 10 AS-BUILT DRAINAGE PLAN 5-14 (SHEET 2 OF 2)
- 11 BRIDGE WATER LOOP PLAN & PROFILE (0+00-END)
- 12 OVERALL WATER DISTRIBUTION PLAN
- 13 WASTEWATER LINE A PLAN & PROFILE (0+00-END)
- 14 CONSTRUCTION AND WATER DETAILS
- 15 WATER DETAILS
- 16 WASTEWATER DETAILS

		REVISE (R)	TOTAL #	NET CHANGE	TOTAL SITE	CITY OF DRIPPING	APPROVED	DATE
NO.	DESCRIPTION	ADD (A) VOID (V) SHEET NO's	SHEETS IN PLAN SET	IMP. COVER (SQ. FT.)	IMP. COVER (SQ. FT.)/ (%)	SPRINGS APPROVAL/DATE	BY	IMAGED

						IMPERVIOUS CO	OVER AND	OPEN SPACE	TABLE						
				LOT	STREETS AND	WATER QUALITY		LIFT STATION			TOTAL	TOTAL			
		NO. OF		IMPERVIOUS	SIDEWALK	WET PONDS AND	PARKS AND	AND ACCESS	AMENTITY		IMPERVIOUS	IMPERVIOUS	TOTAL	AVERAGE	OPEN SPACE
PHASE	SECTION	SFR'S	L.U.E. USE	COVER (SF)	IMPERVIOUS COVER	ACCESS DRIVES	TRAILS	DRIVES	CENTERS	OTHER	COVER	COVER	AREA	LOT SIZE	PARKLAND
					SF	SF	SF	SF	SF	SF	FT	AC	AC	SF	AC
1	1	61	SF	204,000	206,656	24,051	0	4,808	100,441	0	515,905	11.8	64.1	13,800	45.67
1	2	23	SF	98,500	44,961	0	0	0	0	0	143,461	3.3	14.2	15,500	3.36
1	3	23	SF	101,500	42,511	0	0	0	0	0	144,011	3.3	14.1	16,700	1.44
1	4	18	SF	90,000	107,532	0	0	0	0	0	197,532	4.5	62.5	18,500	45.82
1	5	NA	ROW	0	75,934	0	0	0	0	0	75,934	1.7	5.1	0	38.70
1	WC	1	COMM	42,553	0	0	4,373	0	0	0	46,926	1.1	6.6	0	0.00
1	AMENITY	1	COMM	61,798	0	0	0	0	0	0	61,798	1.4	7.2	0	0.00
2	7	116	SF	379,000	274,577	0	0	0	0	0	653,577	15.0	56.7	11,500	15.73
2	8	89	SF	359,000	217,855	0	0	0	0	0	576,855	13.2	61.7	14,000	19.04
3	9	82	SF	228,960	165,964	0	0	0	0	0	394,924	9.1	31.8	9,175	7.21
4	11	103	SF	286,500	205,255	103,588	0	0	0	0	491,755	11.3	37.9	9,394	8.17
4	12	42	SF	178,596	63,350	0	0	0	0	0	241,946	5.6	65.0	11,000	45.04
5	13	11	SF	27,500	12,972	0	0	0	0	0	40,472	0.9	4.9	15,719	0.00
5	14	25	SF	141,000	44,616	0	0	0	0	0	185,616	4.3	50.9	29,530	31.40
FUTURE RES	SIDENTIAL	22	SF	77,000	65,000	359,759	513,883	11,871	36,480	0	704,234	16.2	155.8	15,000	90.00
FUTURE CO	MMERCIAL	UNKNOWN	СОММ	713,513	0	0	0	0	0	0	713,513	16.4	23.5	0	0.0
TOTAL				2,988,660	1,803,552	487,398	518,256	16,678	136,921	0	5,464,067	125.4	662.0	13,500	351
									TOTAL PF			ER PERCENTAGE	18.9%		

LOCATION MAP SCALE: NOT TO SCALE

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF DRIPPING SPRINGS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

- NOTES:
 NO PORTION OF THIS TRACT IS WITHIN THE BOUNDARIES OF THE 100 YEAR FLOOD PLAIN OF THE FEDERAL FLOOD INSURANCE ADMINISTRATION FIRM PANEL NO. 48209C-0115F FOR HAYS COUNTY, TEXAS, DATED SEPTEMBER 2, 2005.
 MINIMUM REQUIRED FIRE FLOW SHALL MEET OR EXCEED THE REQUIREMENTS OF APPENDIX B OF THE 2015 INTERNATIONAL FIRE CODE. MINIMUM FIRE FLOW SHALL NOT BE LESS THAN 1000 GALLONS PER MINUTE FOR THIS
- PROJECT.
 THIS PROJECT IS LOCATED IN THE EDWARDS AQUIFER CONTRIBUTING ZONE.
 WASTEWATER IS PROVIDED BY DRIPPING SPRINGS. WATER IS PROVIDED BY DRIPPING SPRINGS WATER SUPPLY CORP.
 THIS DEVELOPMENT IS SUBJECT TO THE DEVELOPMENT AND CONVEYANCE AGREEMENT DATED JULY 22nd, 2014
- BETWEEN THE CITY OF DRIPPING SPRINGS AND DEVELOPMENT SOLUTIONS CAT, LLC RECORDED IN VOLUME 4978, PAGE 214, PUBLIC RECORDS OF HAYS COUNTY, TEXAS.

OWNER

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				DESIGNEI BY: QJHD	D DI	RAFTED BY: QJHD
SUBMITTED BY:				DATE		
Juynn D	voek		3/8/2023			
CARLSON, BRIG	ANCE AND DOERING, INC.		DATE	- A I SI ON		
PPROVED BY:				R		
CHAD GILPIN, F CITY OF DRIPP	P.E. — CITY ENGINEER ING SPRINGS		DATE	& Doering, Inc.	Surveying #F3791 North Office	12129 RR 620 N., Ste. 600 Austin, Texas 78750 www.cbdeng.com
AICHELLE FISCI CITY OF DRIPP	HER – CITY ADMINISTRATOR ING SPRINGS		DATE	rlson, Brigance	Civil Engineering ◆ FIRM ID 3 Main Office	1 West William Cannon Dr. Austin, Texas 78749 Phone No. (512) 280-5160
AYS COUNTY	TRANSPORTATION DEPARTMENT		DATE	Ca		- 250
AYS COUNTY	DEVELOPMENT DISTRICT NO. 1		DATE			
AYS COUNTY	ESD #6		DATE		ON 13	TER, & AENTS
	11			Ē	SECTI	E, WAT ROVEN
OR DRIPPING	SPRINGS WATER SUPPLY CORP	ORATION	DATE	COVER SHEI	A PHASE 5	, DRAINAGI VATER IMPF
CITY OF DRIPP	ING SPRINGS WASTEWATER ENG	INEER	DATE		CALITERF	STREET WASTEV
CITY OF DRIPP	ING SPRINGS DEVELOPMENT PE	RMIT #		NAME:	ME:	:Т:
R/DEVELOPER: CF CS 12222 DALLAS PHONE GREGC	SLK CALITERRA, LLC ENGINE MERIT DRIVE, SUITE 1020 S, TX 75251 E: (512) 651–8100 DRY L. RICH, MANAGER	EER: CARLSON, BRIGANCE & C/O MRS. QUYNN DUS 5501 WEST WILLIAM C/ AUSTIN, TEXAS 78749 PHONE: (512) 280-5	& DOERING, INC. SEK, P.E. ANNON DRIVE 5160	SHEET	mole molecular	C PROJEC
	BENCHMARK NOTES: BM#1 IS A CAPPED 1/2" IRON ROD, ON THE SOUTH APPROXIMATELY 136' NORTH FROM THE EASTERNMOS OF CALITERRA PHASE TWO, SECTION EIGHT, INSTRUME ELEVATION = 1,154.00'	FAX: (512) 280–516 SIDE OF CALITERRA PARKWAY T CORNER OF LOT 16, BLOCK INT # 18010022.	5 (, "K"	QU PB CARLSON, BR	E. OF. 7E YNN DUSER 130416 CENSES ONAL GANCE & DO ID# F3791	3/08/23
	BM#2 IS A "X" ON TOP OF RIBBON CURB, ON THE I PARKWAY, APPROXIMATELY 139' SOUTHEAST FROM THI 35, BLOCK "E", AMENDED PLAT OF CALITERRA PHASE PG. 138. ELEVATION = 1,066.07'	NORTH SIDE OF CALITERRA E SOUTHERNMOST CORNER OF : ONE, SECTION FOUR, VOL. 1	- LOT 9,	DATE API JOB NUM SHEET	RIL 20 BER 5530)23
				517EE1	OF	16

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CONTRIBUTING ZONE PLAN GENERAL CONSTRUCTION NOTES

EDWARDS AQUIFER PROTECTION PROGRAM CONSTRUCTION NOTES - LEGAL DISCLAIMER

THE FOLLOWING/LISTED "CONSTRUCTION NOTES" ARE INTENDED TO BE ADVISORY IN NATURE ONLY AND DO NOT CONSTITUTE AN APPROVAL OR CONDITIONAL APPROVAL BY THE EXECUTIVE DIRECTOR (ED), NOR DO THEY CONSTITUTE A COMPREHENSIVE LISTING OF RULES OR CONDITIONS TO BE FOLLOWED DURING CONSTRUCTION. FURTHER ACTIONS MAY BE REQUIRED TO ACHIEVE COMPLIANCE WITH TCEQ REGULATIONS FOUND IN TITLE 30, TEXAS ADMINISTRATIVE CODE (TAC), CHAPTERS 213 AND 217, AS WELL AS LOCAL ORDINANCES AND REGULATIONS PROVIDING FOR THE PROTECTION OF WATER QUALITY. ADDITIONALLY, NOTHING CONTAINED IN THE FOLLOWING/LISTED "CONSTRUCTION NOTES" RESTRICTS THE POWERS OF THE ED, THE COMMISSION OR ANY OTHER GOVERNMENTAL ENTITY TO PREVENT, CORRECT, OR CURTAIL ACTIVITIES THAT RESULT OR MAY RESULT IN POLLUTION OF THE EDWARDS AQUIFER OR HYDROLOGICALLY CONNECTED SURFACE WATERS. THE HOLDER OF ANY EDWARDS AQUIFER PROTECTION PLAN CONTAINING "CONSTRUCTION NOTES" IS STILL RESPONSIBLE FOR COMPLIANCE WITH TITLE 30, TAC, CHAPTERS 213 OR ANY OTHER APPLICABLE TCEQ REGULATION, AS WELL AS ALL CONDITIONS OF AN EDWARDS AQUIFER PROTECTION PLAN THROUGH ALL PHASES OF PLAN IMPLEMENTATION. FAILURE TO COMPLY WITH ANY CONDITION OF THE ED'S APPROVAL, WHETHER OR NOT IN CONTRADICTION OF ANY "CONSTRUCTION NOTES," IS A VIOLATION OF TCEQ REGULATIONS AND ANY VIOLATION IS SUBJECT TO ADMINISTRATIVE RULES, ORDERS, AND PENALTIES AS PROVIDED UNDER TITLE 30, TAC § 213.10 (RELATING TO ENFORCEMENT). SUCH VIOLATIONS MAY ALSO BE SUBJECT TO CIVIL PENALTIES AND INJUNCTION. THE FOLLOWING/LISTED "CONSTRUCTION NOTES" IN NO WAY REPRESENT AN APPROVED EXCEPTION BY THE ED TO ANY PART OF TITLE 30 TAC, CHAPTERS 213 AND 217, OR ANY OTHER TCEQ APPLICABLE REGULATION

- 1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE: -THE NAME OF THE APPROVED PROJECT; -THE ACTIVITY START DATE: AND
 - -THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
- 2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN (CZP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ONSITE.
- 3. NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
- 4. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES,
- SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY
- LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
- 7. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON-SITE MUST HAVE PROPER E&S CONTROLS.
- 8. IF PORTIONS OF THE SITE WILL HAVE A CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL TCEQ-0592A (REV. JULY 15, 2015) PAGE 2 OF 2 STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
- 9. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: -THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; -THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE;
 - -THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
- 11. THE HOLDER OF ANY APPROVED CZP MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
- ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT
- NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
- B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
- C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER: OR
- D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE PLAN.

AUSTIN REGIONAL OFFICE SAN ANTONIO REGIONAL OFFICE 12100 PARK 35 CIRCLE, BUILDING A 14250 JUDSON ROAD AUSTIN, TEXAS 78753-1808 SAN ANTONIO, TEXAS 78233-4480 PHONE (210) 490-3096 PHONE (512) 339-2929 FAX (210) 545-4329 FAX (512) 339-3795

HAYS COUNTY ROAD DEPARTMENT GENERAL CONSTRUCTION NOTES:

- 1. SEVENTY-TWO (72) HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION, THE DEVELOPER SHALL ARRANGE A PRE-CONSTRUCTION CONFERENCE WITH ALL PERTINENT PARTIES.
- 2. ALL ROADWAY AND DRAINAGE IMPROVEMENTS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH HAYS COUNTY SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS FROM HAYS COUNTY ROAD AND BRIDGE DEPARTMENT PRIOR TO BEGINNING ANY ON-SITE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE NECESSARY INSPECTIONS FROM THE HAYS COUNTY ROAD AND BRIDGE DEPARTMENT. ALL REPAIRS TO IMPROVEMENTS CAUSED BY CONTRACTOR'S FAILURE TO INSTALL IMPROVEMENTS IN ACCORDANCE WITH HAYS COUNTY SPECIFICATIONS AND THESE CONSTRUCTION PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. HAYS COUNTY TRANSPORTATION DEPARTMENT'S ACCEPTANCE OF THE IMPROVEMENTS ARE CONTINGENT ON REPAIRS BEING MADE TO HAYS COUNTY'S SATISFACTION. DELAYS CAUSED BY REPAIRS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- 3. A MINIMUM OF TWO (2) BENCHMARKS SHALL BE SHOWN ON THE CONSTRUCTION PLANS.
- 4. ALL BEDDING MATERIALS USED WITHIN THE ROW SHALL COMPLY WITH COA ITEM 510.
- 5. ALL CONCRETE PLACED WITHIN THE ROW SHALL BE A MINIMUM OF CLASS A. THE USE OF REBAR CHAIRS AND TESTS CYLINDERS WILL BE REQUIRED ON PCC VALLEY GUTTER PLACEMENTS.
- 6. THE PROPOSED FULLY DEVELOPED STORMWATER RUNOFF RATE CANNOT EXCEED EXISTING CONDITIONS RUNOFF RATE.
- 7. DEWATERING OPERATIONS MST USE SWPPP-SPECIFIED METHODS ONLY. IF SUCH METHODS ARE ONLY GENERAL OR NOT APPLICABLE, PUMP FROM THE TOP OF THE POOL (RATHER THAN THE BOTTOM) AND DISCHARGE TO A VEGETATED, UPLAND AREA (AWAY FROM WATERBODIES OR DRAINAGES) OR USE ANOTHER TYPE OF FILTRATION PRIOR TO DISCHARGE. REFER TO THE EPA 2017 GENERAL CONSTRUCTION PERMIT, SECTION 2.4, AS APPLICABLE.
- 8. THE CONTRACTOR SHALL SUPPLY QUALIFIED PERSONNEL TO PERFORM SWPPP INSPECTIONS ON PROJECT ≥ 1 ACRE. QUALIFIED PERSONNEL SHALL HAVE CISEC, CESSWI, OR EQUIVALENT CERTIFICATION APPROVED BE THE MS4.
- 9. CONTRACTOR SHALL ENSURE THAT MUD AND DEBRIS TRACKED ONTO PUBLICLY MAINTAINED ROADWAYS FROM VEHICLES LEAVING THE CONSTRUCTION SITE WILL BE CLEANED UP DAILY.
- 10. NO EXPLOSIVES SHALL BE USED FOR THIS PROJECT WITHOUT TCEQ APPROVAL.
- 11. ALL HOLES, TRENCHES AND OTHER HAZARDOUS AREAS SHALL BE ADEQUATELY PROTECTED BY BARRICADES, FENCING, LIGHTS AND/OR OTHER PROTECTIVE DEVICES IN COMPLIANCE WITH COA 509S AND OSHA REGULATIONS AT ALL TIMES.
- 12. THE CONTRACTOR SHALL SUBMIT A TRENCH SAFETY PLAN PREPARED AND SEALED BY AN ENGINEER LICENSED BY THE STATE OF TEXAS PRIOR TO THE START OF THE PROJECT. THE CONTRACTOR SHALL ASSIGN A COMPETENT PERSON THAT HAS BEEN PROPERLY TRAINED AND IS QUALIFIED TO MAKE INSPECTIONS AND SUPERVISE THE INSTALLATION, MAINTENANCE, AND REMOVAL OF THE TRENCH SAFETY OR EXCAVATION SAFETY SYSTEM.
- 13. HAYS COUNTY IS NOT RESPONSIBLE FOR SIDEWALK MAINTENANCE. A FULLY EXECUTED LICENSE AGREEMENT MUST BE IN-PLACE PRIOR TO CONSTRUCTION OF SIDEWALKS WITHIN HAYS COUNTY ROW.
- 14. CONTRACTOR SHALL COMPLY WITH CONSTRUCTION SEQUENCING WHICH MAY BE SPECIFIED SOMEWHERE IN THE CONSTRUCTION PLANS.
- 15. PERMIT IS REQUIRED FOR CONSTRUCTION IN "RIGHT OF WAY": ORDINANCE 7.10. NO DRIVEWAY, UTILITY CONSTRUCTION, MAILBOXES, LANDSCAPING OR ANY OTHER ENCROACHMENT INTO RIGHT-OF-WAY OR EASEMENT SHALL BE ALLOWED WITHOUT FIRST OBTAINING A PERMIT FROM THE HAYS COUNTY ROAD AND BRIDGE DEPARTMENT.
- 16. PRIOR TO THE INSTALLATION OF ANY ROAD BUILDING MATERIAL THE SUBGRADE SHALL BE INSPECTED BY HAYS COUNTY. PRIOR TO PAVING, BASE MATERIAL SHALL BE INSPECTED BY HAYS COUNTY. THE OWNER OR HIS AGENT SHALL NOTIFIY HAYS COUNTY FORTY-EIGHT (48) HOURS PRIOR TO THE TIME WHEN THE INSPECTION IS NEEDED: ORDINANCE 1.05; 2.06.
- 17. ALL OUTFALLS CONSTRUCTED WITHIN HAYS COUNTY MUST BE SUBMITTED TO HAYS COUNTY WITH GPS COORDINATED AT THE END OF EACH PROJECT. COORDINATED WILL BE SUBMITTED ON THE NAD 1983 STATED PLANE SOUTH CENTRAL FIPS 4204 FEET COORDINATE SYSTEM. ALL COORDINATED WILL BE SUBMITTED IN GRID UNITS. THE REQUIRED FILE TYPE FOR COORDINATE DATA SUBMISSIONS IS *TXT FORMAT.
- 18. AT THE TIME A FINAL INSPECTION AND RELEASE OF PERFORMANCE SECURITY IS REQUESTED; THE DESIGN ENGINEER SHALL PROVIDE A COMPLETE SET OF "AS-BUILT" RECORD DRAWINGS IN PDF FORMAT (300DPI) ON A VIRUS FREE DISK AND SHALL CERTIFY THAT ALL ROAD AND DRAINAGE CONSTRUCTION HAS BEEN COMPLETED IN SUBSTANTIAL ACCORDANCE WITH PREVIOUSLY APPROVED PLANS AND SPECIFICATIONS, EXCEPT AS NOTED. NO PERFORMANCE SECURITY WILL BE RELEASED WITHOUT THESE EXHIBITS.

HAYS COUNTY GENERAL NOTES:

- ACCORDANCE WITH OHSA STANDARDS. 2. ALL BEDDING MATERIAL USED WITHIN THE ROW MUST COMPLY WITH COA 510
- 3. HMAC CORE PATCHES SHALL CONSIST OF AN APPROVED POLYMER COLD MIX REPORT, OR WHICHEVER IS MORE STRINGENT.

<u>SPECIAL NOTES</u>

1. THE SUBGRADE WAS TESTED BY <u>MLA LABS</u> IN _____. THE STREET SECTIONS WERE DESIGNED ACCORDINGLY. THE SUBGRADE MATERIAL AND THE STREET SECTIONS ARE DESIGNED ACCORDING TO HAYS COUNTY DESIGN CRITERIA. CARLSON BRIGANCE AND DOERING ENGINEERING & ASSOCIATES, INC. IS NOT RESPONSIBLE FOR THE BASE AND PAVEMENT DESIGN AS RECOMMENDED BY THE SOILS ENGINEER IN HIS/HER GEOTECHNICAL REPORT.

2. FOR ANY QUESTIONS CONCERNING THE GEOTECHNICAL REPORT OR PAVEMENT THICKNESS DESIGN CONTACT TIMOTHY WESTON OF MLA LABS, INC. AT 512-873-8899.

STREET NAMES	HMAC TYPE C THICKNESS (INCHES)	CRUSHED LIMESTONE BASE (INCHES)	LOW PLASTICITY SUB-BASE (INCHES)	GEOGRID	STREET CLASSIFICATION
BRIDGE WATER LOOP	1.5"	8"	*18	YES	LOCAL

*SEE GEOTECHNICAL REPORT FOR ALTERNATIVE SECTIONS WHERE SUBGRADE MATERIAL IS MORE THAN 2 FEET OF EXPANSIVE SUBGRADE PI > 35

DISINFECTION OF POTABLE WATER LINES A. PREVENTING CONTAMINATION

- SHALL BE CLOSED WITH WATERTIGHT PLUGS WHEN PIPE LAYING IS STOPPED AT THE CLOSE OF THE DAY'S WORK.
- B. CLEANING
- IN ACCORDANCE WITH SECTION 01500 OF THE STANDARD CONTRACT DOCUMENTS.
- C. PROCEDURE AND DOSAGE THE ENGINEER.

ONE CONNECTION TO THE EXISTING SYSTEM WILL BE ALLOWED WITH A VALVE ARRANGED TO PREVENT THE STRONG DISINFECTING DOSAGE FROM FLOWING BACK INTO THE EXISTING WATER SUPPLY PIPING. THE VALVE SHALL BE KEPT CLOSED AND LOCKED IN A VALVE BOX WITH THE LID PAINTED RED. NO OTHER CONNECTION SHALL BE MADE UNTIL THE DISINFECTION OF THE NEW LINE IS COMPLETE AND THE WATER SAMPLES HAVE MET THE ESTABLISHED CRITERIA. THE VALVE SHALL REMAIN CLOSED AT ALL TIMES EXCEPT WHEN FILLING OR FLUSHING THE LINE AND MUST BE STAFFED DURING THESE OPERATIONS. BACKFLOW PREVENTION IN THE FORM OF A REDUCED PRESSURE BACKFLOW ASSEMBLY MUST BE PROVIDED IF THE VALVE IS LEFT UNATTENDED. THE NEW PIPELINE SHALL BE FILLED COMPLETELY WITH DISINFECTING SOLUTION BY FEEDING THE CONCENTRATED CHLORINE AND APPROVED WATER FROM THE EXISTING SYSTEM UNIFORMLY INTO THE NEW PIPING IN SUCH PROPORTIONS THAT EVERY PART OF THE LINE HAS A MINIMUM CONCENTRATION OF 50 MG/LITER AVAILABLE CHLORINE.

THE DISINFECTING SOLUTION SHALL BE RETAINED IN THE PIPING FOR AT LEAST 24 HOURS AND ALL VALVES. HYDRANTS. SERVICES, STUBS, ETC. SHALL BE OPERATED SO AS TO DISINFECT ALL THEIR PARTS. AFTER THIS RETENTION PERIOD, THE WATER SHALL CONTAIN NO LESS THAN 25 MG/LITER CHLORINE THROUGHOUT THE TREATED SECTION OF THE PIPELINE.

FOR PIPELINES LARGER THAN 16" IN DIAMETER. THE CONTRACTOR MAY USE THE AWWA C-651 "SLUG METHOD" FOR DISINFECTING THE PIPELINE. CHLORINE SHALL BE FED AT A CONSTANT RATE AND AT A SUFFICIENT CONCENTRATION AT ONE FND OF THE PIPELINE TO DEVELOP A SLUG OF CHLORINATED WATER HAVING NOT LESS THAN 100 MG/LITER OF FREE CHLORINE. THE CONTRACTOR SHALL MOVE THE SLUG THROUGH THE MAIN SO THAT ALL INTERIOR SURFACES ARE EXPOSED TO THE SLUG FOR AT LEAST THREE (3) HOURS. THE CHLORINE CONCENTRATION IN THE SLUG SHALL BE MEASURED AS IT MOVES THROUGH THE PIPELINE. IF THE CHLORINE CONCENTRATION DROPS BELOW 50 MG/LITER, THE CONTRACTOR SHALL STOP THE SLUG AND FEED ADDITIONAL CHLORINE TO THE HEAD OF THE SLUG TO RESTORE THE CHLORINE CONCENTRATION TO AT LEAST 100 MG/LITER BEFORE PROCEEDING. AS THE SLUG FLOWS PAST FITTINGS AND VALVES, RELATED VALVES AND HYDRANTS SHALL BE OPERATED SO AS TO DISINFECT APPURTENANCES AND PIPE BRANCHES.

UNLESS OTHERWISE INDICATED, ALL QUANTITIES SPECIFIED HEREIN REFER TO MEASUREMENTS REQUIRED BY THE TESTING PROCEDURES INCLUDED IN THE CURRENT EDITION OF "STANDARD METHODS". THE CHLORINE CONCENTRATION AT EACH STEP IN THE DISINFECTION PROCEDURE SHALL BE VERIFIED BY CHLORINE RESIDUAL DETERMINATIONS.

D. FINAL FLUSHING THE HEAVILY CHLORINATED WATER SHALL THEN BE CAREFULLY FLUSHED FROM THE POTABLE WATER LINE UNTIL THE CHLORINE CONCENTRATION IS NO HIGHER THAN THE RESIDUAL GENERALLY PREVAILING IN THE EXISTING DISTRIBUTION SYSTEM. PROPER PLANNING AND APPROPRIATE PREPARATIONS IN HANDLING, DILUTING, IF NECESSARY, AND DISPOSING OF THIS STRONG CHLORINE SOLUTION IS NECESSARY TO INSURE THAT THERE IS NO INJURY OR DAMAGE TO THE PUBLIC. THE WATER SYSTEM OR THE ENVIRONMENT. THE PLANS AND PREPARATIONS OF THE CONTRACTOR MUST BE APPROVED BY THE CITY BEFORE FLUSHING OF THE LINE MAY BEGIN. ADDITIONALLY THE FLUSHING MUST BE WITNESSED BY AN AUTHORIZED REPRESENTATIVE OF THE MUD OR THE ENGINEER.

APPROVAL FOR DISCHARGE OF THE DILUTED CHLORINE WATER OR HEAVILY CHLORINATED WATER INTO THE WASTEWATER SYSTEM MUST BE OBTAINED FROM THE AUSTIN WATER UTILITY. THE LINE FLUSHING OPERATIONS SHALL BE REGULATED BY THE CONTRACTOR SO AS NOT TO OVERLOAD THE WASTEWATER SYSTEM OR CAUSE DAMAGE TO THE ODOR FEED SYSTEMS AT THE LIFT STATIONS. THE MUD OR THE ENGINEER SHALL DESIGNATE ITS OWN REPRESENTATIVE TO OVERSEE THE WORK. DAILY NOTICE OF LINE DISCHARGING MUST BE REPORTED TO THE AUSTIN WATER UTILITY DISPATCH OFFICE.

E. BACTERIOLOGICAL TESTING EXISTING SYSTEMS.

THE CONTRACTOR, AT ITS EXPENSE, SHALL INSTALL SUFFICIENT SAMPLING TAPS AT PROPER LOCATIONS ALONG THE PIPELINE. EACH SAMPLING TAP SHALL CONSIST OF A STANDARD CORPORATION COCK INSTALLED IN THE LINE AND EXTENDED WITH A COPPER TUBING GOOSENECK ASSEMBLY. AFTER SAMPLES HAVE BEEN COLLECTED, THE GOOSENECK ASSEMBLY MAY BE REMOVED AND RETAINED FOR FUTURE USE.

SAMPLES FOR BACTERIOLOGICAL ANALYSIS WILL ONLY BE COLLECTED FROM SUITABLE SAMPLING TAPS IN STERILE BOTTLES TREATED WITH SODIUM THIOSULFATE. SAMPLES SHALL NOT BE DRAWN FROM HOSES OR UNREGULATED SOURCES. THE CITY, AT ITS EXPENSE, WILL FURNISH THE STERILE SAMPLE BOTTLES AND MAY, AT ITS DISCRETION, COLLECT THE TEST SAMPLES WITH CITY PERSONNEL

IF THE INITIAL DISINFECTION FAILS TO PRODUCE ACCEPTABLE SAMPLE TEST RESULTS, THE DISINFECTION PROCEDURE SHALL BE REPEATED AT THE CONTRACTOR'S EXPENSE. BEFORE THE PIPING MAY BE PLACED IN SERVICE, TWO (2) CONSECUTIVE SETS OF ACCEPTABLE TEST RESULTS MUST BE OBTAINED.

AN ACCEPTABLE TEST SAMPLE IS ONE IN WHICH: (1) THE CHLORINE LEVEL IS SIMILAR TO THE LEVEL OF THE EXISTING DISTRIBUTION SYSTEM; (2) THERE IS NO FREE CHLORINE AND (3) TOTAL COLIFORM ORGANISMS ARE ABSENT. AN INVALID SAMPLE IS ONE, WHICH HAS EXCESSIVE FREE CHLORINE, SILT OR NON-COLIFORM GROWTH AS DEFINED IN THE CURRENT ISSUE OF THE "STANDARDS METHODS." IF UNACCEPTABLE SAMPLE RESULTS ARE OBTAINED FOR ANY PIPE, THE CONTRACTOR MAY, WITH THE CONCURRENCE OF THE INSPECTOR, FOR ONE TIME ONLY FLUSH THE LINES AND THEN COLLECT A SECOND SERIES OF TEST SAMPLES FOR TESTING BY THE CITY. AFTER THIS FLUSHING SEQUENCE IS COMPLETED, ANY PIPE WITH ONE OR MORE FAILED SAMPLES MUST BE DISINFECTED AGAIN IN ACCORDANCE WITH THE APPROVED DISINFECTION PROCEDURE FOLLOWED BY APPROPRIATE SAMPLING AND TESTING OF THE WATER.

1. FOR SLOPES OR TRENCHES GREATER THAN 5 FEET IN DEPTH, ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN

4. SUBGRADE AND BASE MOISTURE DENSITY REQUIREMENTS SHALL COMPLY WITH HAYS COUNTY SPECIFICATIONS, GEOTECH

THE CONTRACTOR SHALL PROTECT ALL PIPING MATERIALS FROM CONTAMINATION DURING STORAGE, HANDLING AND INSTALLATION. PRIOR TO DISINFECTION, THE PIPELINE INTERIOR SHALL BE CLEAN, DRY AND UNOBSTRUCTED. ALL OPENINGS IN THE PIPELINE

PRIOR TO DISINFECTION THE CONTRACTOR SHALL CLEAN THE PIPELINE TO REMOVE FOREIGN MATTER. FOR PIPELINES 16" IN DIAMETER OR SMALLER, CLEANING SHALL CONSIST OF FLUSHING THE PIPELINE. FOR PIPELINES GREATER THAN 16" IN DIAMETER, CLEANING SHALL BE PERFORMED BY OPERATING HYDRANTS AND BLOW-OFFS LOCATED AT LOW POINTS IN THE PIPELINE, OR BY MECHANICAL MEANS (SWEEPING OR PIGGING). WATER FOR THE WORK SHALL BE METERED AND FURNISHED BY THE CONTRACTOR

THE CONTRACTOR, AT ITS EXPENSE, WILL SUPPLY THE TEST GAUGES AND THE SODIUM HYPOCHLORITE CONFORMING TO ANSI/AWWA B300, WHICH CONTAINS APPROXIMATELY 5 PERCENT TO FIFTEEN PERCENT AVAILABLE CHLORINE, AND WILL SUBMIT FOR APPROVAL A WRITTEN PLAN FOR THE DISINFECTION PROCESS. CALCIUM HYPOCHLORITE CONFORMING TO ANSI/AWWA B300, WHICH CONTAINS APPROXIMATELY 65 PERCENT AVAILABLE CHLORINE BY WEIGHT, MAY BE USED IN GRANULAR FORM OR IN 5 G TABLETS FOR 16" DIAMETER OR SMALLER LINES, IF IT IS INCLUDED AS PART OF THE WRITTEN PLAN OF DISINFECTION THAT IS APPROVED BY THE MUD AND THE ENGINEER. THE CONTRACTOR, AT ITS EXPENSE, SHALL PROVIDE ALL OTHER EQUIPMENT, SUPPLIES AND THE NECESSARY LABOR TO PERFORM THE DISINFECTION UNDER THE GENERAL SUPERVISION OF THE MUD AND

AFTER FINAL FLUSHING OF THE STRONG DISINFECTING SOLUTION, TWO (2) SETS OF WATER SAMPLES FROM THE LINE, THAT ARE TAKEN AT LEAST TWENTY-FOUR (24) HOURS APART, WILL BE TESTED FOR BACTERIOLOGICAL QUALITY BY THE CITY AND MUST BE FOUND FREE OF COLIFORM ORGANISMS BEFORE THE PIPELINE MAY BE PLACED IN SERVICE. EACH SET SHALL CONSIST OF ONE (1) SAMPLE THAT IS DRAWN FROM THE END OF THE MAIN AND ADDITIONAL SAMPLES THAT ARE COLLECTED AT INTERVALS OF NOT MORE THAN 1000 FEET ALONG THE PIPELINE. ALL STUBS SHALL BE TESTED BEFORE CONNECTIONS ARE MADE TO

- 1. ALL WASTEWATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF AUSTIN AND TCEQ 30 TAC, CHAPTER 217 REQUIREMENTS.
- 2. CONTRACTOR SHALL GUARANTEE THE WORK AGAINST DEFECTIVE WORKMANSHIP AND MATERIALS FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE CITY OF DRIPPING SPRINGS.
- 3. BEDDING FOR GRAVITY WASTEWATER LINES, FORCE MAINS, AND TREATED EFFLUENT LINES SHALL BE 3/4" TO 1" ROCK WITH A 6 OUNCE NONWOVEN GEOTEXTILE FABRIC, MEETING EITHER TXDOT DMS 6200 OR TYPE 1 COA 620S, PLACED OVER THE BEDDING. CONTRACTOR SHALL PROVIDE A MINIMUM 5 GALLON BUCKET SAMPLE OF THE PROPOSED BEDDING MATERIAL FOR CITY OF DRIPPING SPRINGS APPROVAL
- 4. WHEN GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION, RECOMMENDATIONS ON BEDDING AND BACKFILL SHALL BE PROVIDED BY A GEOTECHNICAL ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ALL RECOMMENDATIONS SHALL BE APPROVED BY THE CITY OF DRIPPING SPRINGS.
- 5. CONTRACTOR SHALL ADHERE TO CITY OF AUSTIN STANDARD 1100S-1 FOR WASTEWATER MANHOLE RING ADJUSTMENTS IN PAVED ARFAS.
- 6. GRAVITY WASTEWATER LINES SHALL BE PVC SDR 26 ASTM D3034 IF LOCATED GREATER THAN 9 FEET FROM A WATERLINE. IF LESS THAN 9 FEET (OUTSIDE OF PIPE TO OUTSIDE OF PIPE) FROM ANY WATER LINE, PIPE SHALL BE PVC SDR 26 ASTM D2241 PRESSURE RATED PIPE.
- 7. FORCE MAINS SHALL BE MINIMUM PVC SDR 26 ASTM D2241 PRESSURE RATED PIPE IN BROWN POLY BAG.
- 8. TREATED EFFLUENT LINES SHALL BE MINIMUM PVC SDR 21 ASTM D2241 PURPLE PRESSURE RATED PIPE. 9. ALL WASTEWATER MANHOLES ARE TO BE COATED WITH CEMENTITIOUS LINING (SEWPERCOAT® OR APPROVED EQUAL) PER CITY OF AUSTIN REQUIREMENTS. EXISTING MANHOLES WHERE CONNECTIONS ARE MADE TO THE CITY SEWER SYSTEM SHALL BE COATED
- OR RECOATED AFTER CONNECTIONS ARE MADE OR AFTER MANHOLE ADJUSTMENTS ARE MADE. 10. ENGINEER AND CONTRACTOR SHALL COORDINATE WITH THE DRIPPING SPRINGS WSC REGARDING WATER LINE AND WATER SERVICE LINE CROSSINGS.
- 11. CONTRACTOR SHALL INSTALL BOLTED MANHOLE LIDS ON ALL MANHOLES OUTSIDE PAVEMENT.
- 12. WASTEWATER MANHOLE LIDS SHALL HAVE "SANITARY SEWER" CAST IN THE LID.
- 13. CITY OF DRIPPING SPRINGS' INSPECTOR SHALL OBSERVE INSTALLATION OF ALL TAPS ONTO WASTEWATER LINES.
- 14. CITY OF DRIPPING SPRINGS' INSPECTOR SHALL BE NOTIFIED 48 HOURS PRIOR TO ALL UTILITY LINE TESTING BY CALLING THE CITY 512-858-4725 OR THE DESIGNATED INSPECTOR IDENTIFIED AT THE PRECONSTRUCTION MEETING. 15. CONTRACTOR SHALL PERFORM THE FOLLOWING TESTING ON ALL TYPES OF WASTEWATER IMPROVEMENTS AT HIS EXPENSE:
- A. GRAVITY WASTEWATER LINES AND SERVICES LOW PRESSURE AIR TEST.
- B. GRAVITY WASTEWATER LINES MANDREL DEFLECTION TESTING AFTER 30 DAYS OF FINAL BACKFILL
- C. GRAVITY WASTEWATER LINES TELEVISED UPON COMPLETION OF CONSTRUCTION AND PRIOR TO PAVING. CONTRACTOR SHALL PROVIDE THE VIDEOS OF THE PIPES TO THE CITY OF DRIPPING SPRINGS PRIOR TO ACCEPTANCE.
- D. WASTEWATER MANHOLES VACUUM TEST @ 10 INCHES OF MERCURY FOR 3 MINUTES. THE MANHOLE SHALL HAVE PASSED THE TEST IF THE VACUUM DOES NOT DROP BELOW 9 INCHES OF MERCURY (-4.5 PSIG) WITHIN 3 MINUTES OF THE TIME THE VALVE WAS CLOSED. NO VACUUM TESTING WILL BE ACCEPTED BY THE CITY OF DRIPPING SPRINGS UNTIL COMPLETION OF MINIMUM FIRST COURSE OF BASE IS INSTALLED.
- E. FORCE MAINS AND TREATED EFFLUENT LINES HYDROSTATICALLY TEST TO A MINIMUM OF 1.5 TIMES WORKING PRESSURE FOR 24 HOURS.
- F. EXISTING WASTEWATER FACILITIES PRETEST AND POSTTEST EXISTING LINES AND MANHOLES WHEN CONNECTING TO EXISTING FACILITIES.
- 16. NEWLY PLANTED TREES SHALL BE LOCATED AT LEAST 10 FEET FROM PUBLIC WASTEWATER SERVICE LINES TO BE MAINTAINED BY THE CITY.

DRIPPING SPRINGS WSC WATERLINE CONSTRUCTION GUIDELINES

<u>10/18/18</u>

- WATERLINES SHALL BE DESIGNED TO BE INSTALLED BETWEEN 36 INCHES MINIMUM BURY DEPTH AND 60 INCHES MAXIMUM, ANY WATERLINE DESIGNED TO BE BURIED DEEPER THAN 5 FEET MUST HAVE APPROVAL FROM DRIPPING SPRINGS WSC STAFF AND ITS
- 2. ALL WATERLINES SHOULD CROSS ABOVE STORM SEWER, ANY WATERLINE DESIGNED TO CROSS UNDER STORM SEWER MUST HAVE
- APPROVAL FROM DRIPPING SPRINGS WSC STAFF AND ITS ENGINEERS. 3. ALL GAS, ELECTRIC, TELECOMMUNICATION AND WASTEWATER LINES MUST CROSS BELOW WATER LINES, ANY LINE THAT CANNOT CROSS
- UNDER WILL REQUIRE APPROVAL FROM DRIPPING SPRINGS WSC STAFF AND ENGINEERS 4. WATERLINES SHALL BE CONSTRUCTED SO THE DRIPPING SPRINGS WSC CAN PERFORM MAINTENANCE ON THEM WHEN NECESSARY THIS
- INCLUDES A. NO WALLS CONSTRUCTED OVER OR WITHIN SIX FEET OF A WATERLINE WITHOUT PRIOR APPROVAL FROM THE DRIPPING SPRINGS
- WSC STAFF OR ITS ENGINEERS. B. NO SIGNS CONSTRUCTED OVER OR WITHIN SIX FEET OF A WATERLINE WITHOUT PRIOR APPROVAL FROM DRIPPING SPRINGS WSC
- STAFF OR ITS ENGINEERS. C. NOTHING CAN BE BUILT OR PLACED WITHIN THE DRIPPING SPRINGS WSC EASEMENTS THAT CANNOT BE EASILY MOVED BY WSC
- STAFF TO PERFORM MAINTENANCE D. ALL WATERLINES MUST BE CONSTRUCTED OUT OF THE FLOW LINE OF OTHER UTILITY TRENCHES, UNLESS CROSSING AT LEAST A 45
- DEGREES ANGLE
- E. NO WATERLINE WILL BE CONSTRUCTED IN THE FLOWLINE OF A DRAINAGE DITCH.
- 5. ALL WATER DISTRIBUTION LINES SHALL BE C-900 DR-18 OR DR 14 PVC PIPE MANUFACTURED IN THE UNITED STATES 6. ALL WATER SYSTEM MATERIALS SHALL FULLY COMPLY WITH TCEQ AND AWWA STANDARDS. ALL CONSTRUCTION SHALL FULLY COMPLY
- WITH THE DRIPPING SPRINGS WSC CURRENT CONSTRUCTION STANDARDS.
- 7. ALL SERVICE LINES SHALL BE SDR-9 P.E. PIPE 250 PSI.
- 8. ALL FITTINGS SHALL BE DUCTILE IRON MANUFACTURED IN THE UNITED STATES OF AMERICA WITH MECHANICAL JOINTS (MJ) AND HAVE EBBA IRON, INC. RESTRAINT AT EACH MJ. EACH C900 PVC PIPE SHALL HAVE EBBA IRON, INC. SERIES 1500 BELL RESTRAINT HARNESS WHEN LOCATED WITHIN THE DIMENSIONS SPECIFIED ON PLANS FROM D.I. FITTINGS, GATE VALVES, FIRE HYDRANTS, AND DEAD END LINES, AND WRAPPED IN 8 MIL POLYETHYLENE FILM.
- 9. ALL FIRE HYDRANT LEADS TO BE CONSTRUCTED WITH DUCTILE IRON PIPE MANUFACTURED IN THE UNITED STATES OF AMERICA AND WRAPPED IN 8 MIL POLYETHYLENE FILM.
- 10. GATE VALVES SHALL CONFORM TO AWWA STANDARD C515 AND SHALL BE AMERICAN FLOW CONTROL, KENNEDY VALVE, EAST JORDAN IRON WORKS OR MUELLER COMPANY.
- 11. VALVE BOXES SHALL BE CAST IRON WITH ADJUSTABLE BARREL HEIGHT SET PLUMB WITH 24" X 24" X 5" CONCRETE PAD, VALVE BOXES IN ROAD OR SIDEWALK SHALL BE CONSTRUCTED WITH A TRAFFIC BEARING BOOT SIX INCH DUCTILE IRON PIPE AND PAVING RING.
- 12. BRASS FITTING SHALL BE FORD BRASS UNLESS OTHERWISE APPROVED BY THE DRIPPING SPRINGS WSC STAFF AND ENGINEER. 13. IF CONFLICT BETWEEN PROJECT SPECIFICATIONS AND WATER DISTRIBUTION SYSTEM CONSTRUCTION STANDARDS OF THE DRIPPING
- SPRINGS WSC, THE WSC CONSTRUCTION STANDARDS SHALL GOVERN, INCLUDING OMITTED ITEMS FROM THE PROJECT SPECIFICATIONS
- 14. CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING PRIOR TO BEGINNING WORK, THE DRIPPING SPRINGS WSC SHALL BE NOTIFIED A MINIMUM OF 2 BUSINESS DAYS IN ADVANCE OF MEETING. 15. CONTRACTOR SHALL PROVIDE SUBMITTAL INFORMATION TO THE DRIPPING SPRINGS WSC ON ALL MATERIALS PROPOSED TO BE INSTALLED
- FOR REVIEW AND TO DETERMINE CONFORMANCE WITH THE DRIPPING SPRINGS WSC CONSTRUCTION STANDARDS. 16. PIPE EMBEDMENT SHALL BE # 5 TOPPING ROCK FROM EITHER CHANAS AGGREGATE BLANCO LLC (WASHED CRUSHED ROCK) OR WEST
- HENLEY QUARRY AGGREGATE WITH SAMPLE PROVIDED TO AND APPROVED BY THE DRIPPING SPRINGS WSC STAFF. THERE SHALL BE A MINIMUM OF 12 INCHES EMBEDMENT MATERIAL OVER THE PIPE AND 6 INCHES EMBEDMENT MATERIAL UNDER THE PIPE.
- 17. FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD C502 AND SHALL BE AMERICAN DARLING 5 ¼ " B-84-B, KENNEDY VALVE GUARDIAN K81-D, EAST JORDAN IRON WORKS MASTER 5CD250 OR MUELLER SUPER CENTURION 250 WITH HOSE OPENINGS AND 5" STORZ QUICK CONNECT PUMPER NOZZLE WITH A CAST PENTAGON OPERATING NUT. THE 2 ½" DISCHARGE OUTLETS MUST BE NATIONAL HOSE THREAD. A BLUE, DOUBLE SIDED; REFLECTIVE MARKER MUST BE AFFIXED TO THE ROADWAY DIRECTLY IN LINE WITH THE FIRE HYDRANT. HYDRANTS SHALL HAVE A RED OR SILVER PAINT COATING. HYDRANTS SHALL BE PLACED SO THEY ARE READILY ACCESSIBLE WITH NO OBSTRUCTIONS WITHIN 4 FEET OF HYDRANT. DO NOT PLACE HYDRANT WITHIN OR ADJACENT TO A DRAINAGE STRUCTURE.
- 18. EACH SERVICE SADDLE SHALL BE SMITH BLAIR EPOXY COATED WITH DUAL STAINLESS STEEL BANDS COMPLETELY WRAPPED WITH 8 MIL POLYETHYLENE FILM.
- 19. TOP OF THE METER BOX SHALL BE 2 INCHES ABOVE FINISHED GRADE
- 20. PIPES CROSSING UNDER STREET OR DRIVEWAY PAVEMENT SHALL BE BACKFILLED USING CRUSHED LIMESTONE BASE 6 INCH MAXIMUM LIFTS TO 95% STANDARD PROCTOR ABOVE THE PIPE EMBEDMENT MATERIAL, FLOWABLE FILL OR SUCH OTHER BACKFILL AS MAY BE REQUIRED BY THE CITY OF DRIPPING SPRINGS AND OR HAYS COUNTY.
- 21. METER BOXES MUST BE PLASTIC. ALL TRAFFIC BEARING BOXES MUST BE MADE OF POLY
- 22. STATE HIGHWAY BORE SHALL BE IN COMPLIANCE WITH TXDOT PERMIT REQUIREMENTS
- 23. ALL NEW WATERLINE CONSTRUCTION MUST BE DISINFECTED, PASS A PRESSURE TEST AND PASS BACTERIOLOGICAL SAMPLES.
- 24. ANY UNDERGROUND ELECTRIC CONDUIT/CONDUCTORS OR GAS LINE CROSSING THE DRIPPING SPRINGS WSC LINE SHALL BE LOCATED A MINIMUM OF 12 INCHES UNDER THE WATERLINE AT NEAR 90 DEGREES AND BE ENCASED WITH A MINIMUM 4 INCH THICK CONCRETE FOR A LENGTH NOT LESS THAN 24 INCHES ON EACH SIDE OF THE O.D. OF THE WATERLINE.
- 25. ALL FIRE LINES WILL HAVE THE APPROPRIATE BACKFLOW PREVENTER INSTALLED AND BE PLACED INSIDE OF A PRECAST VAULT AT OR NEAR THE PROPERTY LINE UNLESS THERE IS A DEDICATED EASEMENT PROVIDED DRIPPING SPRINGS WSC, THE DRIPPING SPRINGS WSCS MAINTENANCE ENDS AT THE FIRST FLANGE ON THE FIRST GATE VALVE GOING INTO THE BACKFLOW PREVENTER
- 26. METERS 3 INCH AND LARGER WILL BE PLACED IN A PRECAST VAULT AT OR NEAR THE PROPERTY LINE UNLESS A DEDICATED EASEMENT IS PROVIDED TO THE DRIPPING SPRINGS WSC.
- 27. THE DRIPPING SPRINGS WSC MAINTENANCE OR REPAIR RESPONSIBILITY SHALL END AT EACH SERVICE METER WITHIN THE METER BOX.

CITY OF DRIPPING SPRINGS STANDARD WASTEWATER UTILITY CONSTRUCTION NOTES <u>MARCH 2020</u>





e: 2234/66.26 Elevation: 1066.14' (navd '88) BM#2: Mag Nail on Ribbon Curb on the South Side of Caliterra Parkway Approximately 578 Feet east of Premier Park Loop	N: 139/2060.35 E: 2253463.87 ELEVATION: 1128.76' (NAVD '88)	BASIS OF BEARINGS - TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD83	ELEVATION DATOM - NUKTH AMERICAN VERTICAL DATOM OF 1300 (NAVD 00) GEVID 12D	A SUBDIVISION OF 4.898 ACRES BEING CALITERRA PHASE 5, SECTION 13, OUT OF THE PHILIP A. SMITH LEAGUE,	SURVET NUMBER 26, ABSIRACI NUMBER 413, IN HATS COUNTY, TEXAS	SHEET NO. 1 OF 3		Carlson, Brigance & Doering, Inc.	CCBO Civil Engineering 5501 West William Cannon Austin, Texas 78749	Phone No. (512) 280-5160 + Fax No. (512) 280-5165	J: \AC3D\5530\Survey\PLAT - CALITERRA 5-13						. ft.) LOT SIZE NO.	- 1 ACRE 11 <- 1 ACRE 11	1-2 ACRE 0	2-5 ACRE 0	5-10 ACRE 0	2. F1. > 10 ACRE 0	0. FT. MINIMUM LOT SIZE: 0.294 AC (12.816 so ft.)	N. FT. AVERAGE LOT SIZE: D. FT. 0.388 AC (16.004 co. 44)	$\overline{\mathbf{H}}$
CROSSMATTER LAIVE				Line Table	Line # Length Direction L1 113.96 N5342'16"E	L2 140.20 N30'23'23"E	L3 22.85 N58°35'31"E L4 22.42 S58°35'31"W						PHASE 5, SECTION 13 FINAL PLAT			AREA TABLE	AREA 4.898 ACRES (213,379 sq WITHIN SUBDIVISION 4.898 ACRES (213,379 sq	AREA OF SINGLE FAMILY 4.269 ACRES (185,944 sc	AREA WITHIN PUBLIC 0.630 ACRE (27,435 sq.	BLOCK 'K'	LOT NO. ACREAGE SQ. FI 32 0.354 ACRE 15,405 SC	33 0.304 ACKE 13,230 SG 34 0.294 ACKE 12,816 SC	35 0.351 ACRE 15,293 SC 36 0.649 ACRE 28,283 SC	EN 37 0.547 ACRE 23,817 SC 38 0.465 ACRE 20,264 SC	IS 39 0.313 ACRE 13,628 SC
	Curve Table	Curve # Length Radius Chord Direction Chord Length Tangent DELTA C14 84.92 60.00 N44*08*40*E 78.01 51.33 81*05*36*	C15 54.34 60.00 S69'21'52"E 52.50 29.19 51'53'20" C16 54.34 60.00 S17'28'31"E 52.50 29.19 51'53'20"	C17 56.90 60.00 S35'38'05"W 54.79 30.79 54'19'53" C18 14.34 60.00 S69'38'50"W 14.31 7.20 15'41'36"	C19 9.51 270.00 S75'29'05"W 9.51 4.75 2'01'02"	C20 74.85 270.00 S66 ⁻ 32 [°] W 74.61 37.67 15 ⁻ 55 ³ 03 [°] C21 179.25 220.71 N27 [°] 04 [°] E 174.36 94.90 46 [°] 31 [*] 52 [°]	C22 209.79 220.71 N23 ² 25 ⁴ 1 [*] W 201.98 113.58 54 ² 7 ³ 8 [*]	C25 6.51 2/3.50 N4737'50'W 6.51 3.26 1'21'53" C24 199.40 273.50 N69'11'58"W 195.02 104.37 41'46'23"	C25 89.79 273.50 S80°30'31"W 89.39 45.30 18'48'39"				CALITERRA		DRIPPING SPRINGS. CHARGE ZONE. Aquifer Zone.	O VEAD FLOOD DI ANI AC DEI MEATED ON FLIDM. DANFLI NO 400000116F DATE	O TEAR FLOOD FLAIN AS DELINEATED ON F.I.N.M. FANEL NO 40203001131, DATE	IPPING SPRINGS.	ATE SITE DEVELOPMENT PLAN, APPLICATION, AND FEES REQUIRED.			SPRINGS AND HAYS COUNTY DEVELOPMENT REGULATIONS. THF CITY OF DRIPPING SPRINGS	e approved community water system. E approved organized waste water system.	TIL ALL OF HAYS COUNTY DEVELOPMENT AUTHORIZATION REQUIREMENTS HAVE BEE	NS OF PUBLIC ROADWAYS, NO DRIVEWAY CONSTRUCTED ON ANY LOT WITHIN THT. ERMIT FOR USE OF THE CITY RIGHT—OF—WAY HAS BEEN ISSUED, IF ANY CITY RIGH
	Curve Table	Curve # Length Radius Chord Direction Chord Length Tangent DELTA C1 17.92 530.00 N30*42*22*W 17.92 8.96 1*56*15*	C2 386.81 273.50 S8727'55"E 355.37 233.73 81'02'01" C3 389.04 220.71 S00'09'45"E 340.59 267.71 100'59'29"	C4 23.49 15.00 S76"32"40"E 21.16 14.93 89"43"57" C5 23.63 15.00 \$13"27"25"W 21.26 15.07 90"16"12"	C6 84.36 270.00 S6732'33"W 84.02 42.53 1754'05"	C7 103.10 330.00 N6732'33"E 102.69 51.98 17'54'05" C8 264.83 60.00 S49'57'15"E 96.53 81.24 252'53'45"	C9 31.81 25.00 N40°02′44″E 29.70 18.46 72°53′43″	C10 87.31 330.00 N661018°E 87.06 43.91 15'09'34" C11 15.79 330.00 N75'07'20°E 15.79 7.90 2'44'31"	C12 19.07 273.50 S54°00'56"W 19.07 9.54 3'59'43" C13 72.03 273.50 S63'33'30"W 71.82 36.22 15'05'23"					<u>General notes:</u>	1. This final plat is within the extra territorial Jurisdiction (eTJ) of the City of 2. No portion of this plat lies within the Boundaries of the Edwards aquifer rec 3. This plat lies within the Boundaries of the contributing zone of the Edwards <i>i</i>	4. THIS PLAT IS LOCATED WITHIN THE DRIPPING SPRINGS INDEPENDENT SCHOOL DISTRICT. 5. ACCESS TO AND FROM CORNER LOTS SHALL ONLY BE PERMITTED FROM ONE STREET. 6. NO DODATION OF THE CUBIECT PLAT DODATED VIETNIN A DECEMBER 100	 NO FUNCTION OF THE SUBJECT FLAT FROFENT IS LOCATED WITHIN A DESIGNATED TO SEPTEMBER 2, 2005, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. WATER SERVICE WILL BE PROVIDED TO FACH OT FROM THE DRIPPING SPRINGS WATER SC 	8. ORGANIZED WASTEWATER SERVICE WILL BE PROVIDED TO EACH LOT BY THE CITY OF DRIF 9. ELECTRIC SERVICE WILL BE PROVIDED BY THE PEDERNALES ELECTRIC COOPERATIVE.	10. TELEPHONE SERVICE WILL BE PROVIDED BY VERIZON. 11. IF GAS LINES ARE NOT INCLUDED IN THE CONSTRUCTION PLANS, THERE WILL BE SEPARA	12. MINIMUM FRONI SEIBACK SHALL BE 20. 13. MINIMUM REAR SETBACK SHALL BE 20'.	14. MINIMUM SIDE AND INTERTOR SIDE YARD SETBACKS SHALL BE 5'. 15. MINIMUM SIDE YARD SETBACKS ADJACENT TO A PUBLIC STREET SHALL BE 10'. 16. ITTULTY EASEMENTS OF 15. FEET SHALL DE LOCATED ALONG EACU SIDE OF DEDICATED D'	17. ALL STREETS SHALL BE DESIGNED IN ACCORDANCE WITH APPLICABLE CITY OF DRIPPING 5 IN NO STRUCTURE SHALL BE DESIGNED INTIL A CERTIFICATE OF OCCUPANCY IS ISSUED BY	19. NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A STATE 20. NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A STATE	21. NO CONSTRUCTION OR OTHER DEVELOPMENT WITHIN THIS SUBDIVISION MAY BEGIN UNTI- Satisfied.	22. IN ORDER TO PROMOTE SAFE USE OF ROADWAYS AND TO PRESERVE THE CUNUTITION SUBDIVISION SHALL BE PERMITTED ACCESS ONTO A PUBLIC ROADWAY UNLESS (A) A PER

> 10 ACRE 0 MINIMUM LOT SIZE: 0.288 AC (16,904 sq. ft.) 0.388 AC (16,904 sq. ft.)	A SUBDINSION OF 4,898 ACRES BEING CALITERRA PHASE 5, SECTION 13, OUT OF THE PHILIP A SMITH LEAGUE SURVEY NUMBER 26, ABSTRACT NUMBER 415, IN HAYS DOUNT, TEXA DOUNT, TEXA DOUNT
33 0.204 ARE 112.30 S0. F1. 35 0.351 ACR 12,810 S0. F1. 35 0.465 ACR 23,817 S0. F1. 37 0.547 ACR 23,817 S0. F1. 38 0.465 ACR 23,817 S0. F1. 39 0.531 ACR 13,628 F1. 40 0.532 ACR 13,628 F1. 41 0.236 ACR 13,629 S0. F1. 42 0.343 ACR 13,629 S0. F1.	CAL LOT, BULDNG STERKX LINE LESSINFIN LOCATION LESSINFIN LOCATION (1" = 100') (1" = 100') (1" = 100') (1" = 100') SIDE INTERIOR SIDE
AFRE MARKEN DATA DEVELOPMENT NUMBER. AND THE REGULATIONS. CONTRUBBING SPONGS. CERTIFICATE OF COLOPANCY IS ISSUED BY THE CITY OF DARPING SPONGS. CECUPPED UNIT. CONNECTED TO A STATE APPROVED COMMUNITY WATER SYSTEM. CCCUPPED UNIT. CONNECTED TO A STATE APPROVED ORGANIZED WASTE WATER SYSTEM. CCCUPPED UNIT. CONNECTED TO A STATE APPROVED ORGANIZED WASTE WATER SYSTEM. WITHIN THS SUBDWISION MAY BEGN UNTIL ALL OF HAYS COUNTY DEVELOPMENT AUTHORIZATION REQUREMENTS HAVE BEEN WASS AND TO PRESERVE THE CONDITIONS OF PUBLIC ROADWAYS, NO DRIVEMAY CONSTRUCTED ON ANY LOT WITHIN THIS SUBDWISION MAY BEGN UNTIL ALL OF HAYS COUNTY ONE STATED ON ANY UNLESS (A) A PERMIT FOR USE OF THE CITY RIGHT-OF-WAY HAS BEEN ISSUED. TO A PUBLIC ROADWAY UNLESS (A) A PERMIT FOR USE OF THE CITY RIGHT-OF-WAY HAS BEEN ISSUED. TO A PUBLIC ROADWAY UNLESS (A) A PERMIT FOR USE OF THE CITY RIGHT-OF-WAY HAS BEEN ISSUED. TO A PUBLIC ROADWAY UNLESS (A) A PERMIT FOR USE OF THE CITY RIGHT-OF-WAY HAS BEEN ISSUED. TO A PUBLIC ROADWAY UNLESS (A) A PERMIT FOR USE OF THE CITY RIGHT-OF-WAY HAS BEEN ISSUED. THE AND MAN SPACING REQUIREMENTS FOR DAVERWAYS AS SET FORTH IN THE EDWARDS AQUIFER (RENYED) OR AS ECTITY OF DRIPPING SPRINGS AND TEER OULTR. TOTO DRIPPING SPRINGS AND THE OTO FOR MALTER OULTS. TERM ADDIVIDUAL ENHANCED MASCINGTON. CITY OF DRIPPING SPRINGS AND DEFLIDAMENT SOLUTION. CITY OF DRIPPING SPRINGS AND DEFLIDAMENT SOLUTON. CITY OF DRIPPING SPRINGS AND DEFLIDAMENT FOR THE CUT OF DRIPPING SPRINGS AND DEVELOPMENT TRANS ENDICATED ALONG ERCOPS AND DEFLIDAMENT FOR THE CITY OF DRIPPING SPRINGS AND DEVELOPMENT TRANS TERM DEPLICIPARENT ADDICTION OF HAS COUNTY. TERM DEPLICIPARENT FOR THE CITY OF DRIPPI	E
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E OF TEXAS } W ALL MEN BY THESE PRESENTS: W ALL MEN BY THESE PRESENTS: M ALL MEN BY THESE PRESENTS: W ALL MEN BY THESE PRESENTS: M ALL MEND, THIS THE DAY OF2 MERT DRIVE, SUITE 1020 AS, TX 72251 M ANDAGENERATIONS HERERON M ANDAGENERATION M ANDAGENERATIONS HERERON M ANDAGENERATION M ANDAGENERATIONS HERERON M ANDAGENERATION M ANDAGENERATIONS HERERON M ANDAGENERATION M ANDAGENERATION

BEFORE ME, THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND HE ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED.	A.J. GRAY OPERATIONS GENERAL MANAGER DRIPPING SPRINGS WATER SUPPLY CORP. WATER UTILITY PROVDER	AARON REED PUBLIC WORKS DIRECTOR CITY OF DRIPPING SPRINGS WASTEWATER UTILITY PROVIDER
NOTARY PUBLIC, STATE OF TEXAS	THIS PLAT, CALITERRA, PHASE 5, SECTION 13, HAS BEEN SUBMITTED AND THIS THE DAY OF) CONSIDERED BY THE CITY OF DRIPPING SPRINGS AND IS HEREBY APPROVED
PRINTED NOTARY NAME MY COMMISSION EXPIRES:	IND INE DAT OF 20 20	
STATE OF TEXAS: COUNTY OF TRAVIS:	MIM JAMES, PLANNING & ZONING COMMISSION CHAIR DATE	ANDREA CUNNINGHAM, CITY SECRETARY DATE
I, BRETT R. PASQUARELLA, A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN THIS PLAT. I CERTIFY TO THE COMPLETENESS, ACCURACY AND COMPLIANCE TO THE CITY OF DRIPPINGS SPRINGS	STATE OF TEXAS } COUNTY OF HAYS }	
subdivision ukuinances. Flood Plain Note: No Portion of This Tract IS within the designated flood hazard area as shown on the federal insurance rate Map Panel No. 48209c0115F, dated september 02, 2005.	I, THE UNDERSIGNED, DIRECTOR OF HAYS COUNTY DEVELOPMENT SERVIC COUNTY REQUIREMENTS AS STATED IN THE INTERLOCAL COOPERATION AG SUBDIVISION REGULATION WITHIN THE EXTRATERRITORIAL JURISDICTION OF TH	ES, HEREBY CERTIFY THAT THIS SUBDIVISION PLAT CONFORMS TO ALL HAYS REEMENT BETWEEN HAYS COUNTY AND THE CITY OF DRIPPING SPRINGS FOR E CITY OF DRIPPING SPRINGS.
ENGINEERING BY:	NO STRUCTURE OR OTHER DEVELOPMENT IN THIS SUBDIVISION MAY BEGIN I	INTIL ALL HAYS COUNTY AUTHORIZATION REQUIREMENTS HAVE BEEN SATISFIED.
BRETT R. PASQUARELLA, P.E., No. 84769 DATE BRETT R. PASQUARELLA CARLSON, BRIGANCE & DOERING, INC. 5501 WEST WILLIAM CANNON DRIVE, AUSTIN, TEXAS 78749	MARCUS PACHECO, DIRECTOR HAYS COUNTY DEVELOPMENT SERVICES	DATE:
THIS FLOOD STATEMENT, AS DETERMINED BY A H.U.DF.I.A. FLOOD INSURANCE RATE MAP, DOES NOT IMPLY THAT THE PROPERTY OR THE IMPROVEMENTS THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASSIONS, GREATER FOODS CAN AND WILL OCCUR, AND FLOOD HEIGHTS MAY INCREASE BY MAN-MADE OR NATURAL CAUSES.	I, ELAINE HANSON CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE O A.D., ATO'CLOCKM. IN THE PLAT RECORDS OF HAYS (DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING WITH ITS N THE DAY OF, 20, 20, 20, 0UNTY, TEXAS, AS INSTRUMENT NO
STATE OF TEXAS: THIS STATEMENT SHALL NOT CREATE LIABLITY ON THE PART OF ENGINEER OR SURVEYOR. COUNTY OF TRAVIS:	witness my hand and seal of office, this the day of	A.D.
I, JOHN DAVID KIPP, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING, AND HEREBY CERTIFY THAT THIS PLAT COMPLIES WITH THE REQUIREMENTS OF THE CITY OF DRIPPING SPRINGS, TEXAS, AND WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND.	ELAINE HANSON CARDENAS BY:COUNTY CLERK COUNTY CLERK HAYS COUNTY, TEXAS	SHEET NO. 3 OF 3
SURVEYED BY: JOHN DAVID KIPP, R.P.L.S. NO. 5844 DATE JOHN DAVID KIPP, R.P.L.S. NO. 5844 DATE CARLSON, BRICANCE & DOERING, INC. 5501 WEST WILLIAM CANNON DRIVE AUSTIN, TEXAS 78749	A SUBDIVISION OF 4.898 ACRES BEING CALITERRA PHASE 5, SECTION 13, OUT OF THE PHILIP A. SMITH LEAGUE, SURVEY NUMBER 26, ABSTRACT NUMBER 415, IN HAYS COUNTY, TEXAS	Carlson, Brigance & Doering, Inc. FIRM ID #F3791 REG. # 10024900 Civil Engineering Strucying 5501 West William Cannon Austin, Texas 78749 Phone No. (512) 280-5160 Fax No. (512) 280-5165 J: \AC3D\5530\Survey\PLAT CALITERRA 5-13





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APPENDIX P-1 - EROSION CONTROL NOTES

- 1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
- 2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE COA ESC PLAN SHALL BE CONSULTED AND USED AS THE BASIS FOR A TPDES REQUIRED SWPPP. IF A SWPPP IS REQUIRED, IT SHALL BE AVAILABLE FOR REVIEW BY THE CITY OF AUSTIN ENVIRONMENTAL INSPECTOR AT ALL TIMES DURING CONSTRUCTION, INCLUDING AT THE PRE-CONSTRUCTION MEETING. THE CHECKLIST BELOW CONTAINS THE BASIC ELEMENTS THAT SHALL BE REVIEWED FOR PERMIT APPROVAL BY HAYS COUNTY AND DRIPPING SPRINGS EV PLAN REVIEWERS AS WELL AS HAYS COUNTY AND DRIPPING SPRINGS EV INSPECTORS.
- 3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
- 4. 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 CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE OWNER OR OWNER'S REPRESENTATIVE SHALL NOTIFY THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT, AT LEAST THREE DAYS PRIOR TO THE MEETING DATE. COA APPROVED ESC PLAN AND TPDES SWPPP (IF REQUIRED) SHOULD BE REVIEWED BY HAYS COUNTY AND DRIPPING SPRINGS EV INSPECTOR AT THIS TIME.
- 5. 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 ABORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT. 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.
- 6. THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED INSPECTOR WITH EITHER A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), CERTIFIED EROSION, SEDIMENT AND STORMWATER-INSPECTOR (CESSWI) OR CERTIFIED INSPECTOR OF SEDIMENTATION AND EROSION CONTROLS (CISEC) CERTIFICATION TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
- 7. PRIOR TO FINAL ACCEPTANCE BY HAYS COUNTY AND DRIPPING SPRINGS, HAUL ROADS AND WATERWAY CROSSINGS 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.
- 8. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A HAYS COUNTY AND DRIPPING SPRINGS ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION.
- TEMPORARY AND PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW. A. ALL DISTURBED AREAS TO BE REVEGETATED ARE REQUIRED TO PLACE A MINIMUM OF SIX (6) INCHES OF TOPSOIL [SEE STANDARD SPECIFICATION ITEM NO. 601S.3(A)]. DO NOT ADD TOPSOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES. THE TOPSOIL SHALL BE COMPOSED OF 4 PARTS OF SOIL MIXED WITH 1 PART COMPOST, BY VOLUME. THE COMPOST SHALL MEET THE DEFINITION OF COMPOST AS DEFINED BY TXDOT SPECIFICATION ITEM 161. THE SOIL SHALL BE LOCALLY AVAILABLE NATIVE SOIL
 - THAT MEETS THE FOLLOWING SPECIFICATIONS: SHALL BE FREE OF TRASH, WEEDS, DELETERIOUS MATERIALS, ROCKS, AND DEBRIS.
 - \$ 100% SHALL PASS THROUGH A 1.5-INCH (38-MM) SCREEN.
 - SOIL TO BE A LOAMY MATERIAL THAT MEETS THE REQUIREMENTS OF THE TABLE BELOW IN ACCORDANCE WITH THE USDA TEXTURAL TRIANGLE. SOIL KNOWN LOCALLY AS "RED DEATH" IS NOT AN ALLOWABLE SOIL. TEXTURAL COMPOSITION SHALL MEET THE FOLLOWING CRITERIA:

TEXTURE CLASS	MINIMUM	MAXIMUM
CLAY	5 %	50 🛪
SILT	10 🕱	50 🛪
SAND	15 🛪	67 🛪

- AN OWNER/ENGINEER MAY PROPOSE USE OF ONSITE SALVAGED TOPSOIL WHICH DOES NOT MEET THE SOIL TEXTURE CLASS REQUIRED ABOVE BY PROVIDING A SOIL ANALYSIS AND A WRITTEN STATEMENT FROM A QUALIFIED PROFESSIONAL IN SOILS, LANDSCAPE ARCHITECTURE, OR AGRONOMY INDICATING THE ONSITE TOPSOIL WILL PROVIDE AN EQUIVALENT GROWTH MEDIA AND SPECIFYING WHAT, IF ANY, SOIL AMENDMENTS ARE REQUIRED.
- SOIL AMENDMENTS SHALL BE WORKED INTO THE EXISTING ONSITE TOPSOIL WITH A DISC OR TILLER TO CREATE A WELL-BLENDED MATERIAL. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY OFTEN BE USED, BUT IT SHOULD MEET THE SAME STANDARDS AS

THE VEGETATIVE STABILIZATION OF AREAS DISTURBED BY CONSTRUCTION SHALL BE AS FOLLOWS:

TEMPORARY VEGETATIVE STABILIZATION:

SET FORTH IN THESE STANDARDS.

 FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH COOL SEASON COVER CROPS (WHEAT AT 0.5 POUNDS PER 1000 SF, OATS AT 0.5 POUNDS PER 1000 SF, CEREAL RYE GRAIN AT 0.5 POUNDS PER 1000 SF) WITH A TOTAL RATE OF 1.5 POUNDS PER 1000 SF. COOL SEASON COVER CROPS ARE NOT PERMANENT EROSION CONTROL.
 FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 1 POUNDS PER 1000 SF.

- A. FERTILIZER SHALL BE WATER SOLUBLE WITH AN ANALYSIS OF 15-15-15 TO BE APPLIED ONCE AT PLANTING AND ONCE DURING THE PERIOD OF ESTABLISHMENT AT A RATE OF 1/2 POUND PER 1000
- B. HYDROMULCH SHALL COMPLY WITH TABLE1, BELOW.
- C. TEMPORARY EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1 1/2 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.
 D. WHEN REQUIRED, NATIVE GRASS SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL.

TABLE 1: HYDROMULCHING FOR TEMPORARY VEGETATIVE STABILIZATION

MATERIAL	LONGEVITY	DESCRIPTION	TYPICAL APPLICATIONS	APPLICATION RATES
100% OR ANY BLEND OF WOOD, CELLULOSE, STRAW, AND/OR COTTON MATERIAL (EXCEPT NO MULCH SHALL EXCEED 30% PAPER)	0-3 months	70% OR GREATER WOOD/STRAW 30% OR LESS PAPER OR NATURAL FIBERS	MODERATE SLOPES; FROM FLAT TO 3:1	1500 TO 2000 LBS PER ACER

PERMANENT VEGETATIVE STABILIZATION:

- . FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOWED TO A HEIGHT OF LESS THAN ONE-HALF (1/2) INCH AND THE AREA SHALL BE RE-SEEDED IN ACCORDANCE WITH 2. BELOW.
- FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 1 POUND PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL.
 - A. FERTILIZER SHALL BE A WATER SOLUBLE WITH AN ANALYSIS OF 15-15-15 TO BE APPLIED ONCE AT PLANTING AND ONCE DURING THE PERIOD OF ESTABLISHMENT AT A RATE OF 1/2 POUND PER 1000 SF.
 - B. HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.
 C. THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES. THE IRRIGATION SHALL OCCUR AT DAILY INTERVALS (MINIMUM) DURING THE FIRST TWO MONTHS. RAINFALL OCCURRENCES OF 1/2
 - INCH OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK.
 D. PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½
 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.
 E. WHEN REQUIRED, NATIVE GRASS SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN
- ENVIRONMENTAL CRITERIA MANUAL.

 TABLE 2:
 HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
Bonded Fiber Matrix (BFM)	80% ORGANIC Defibrated fibers 10% tackifier	6 Months	ON SLOPES UP TO 2:1 AND EROSIVE SOIL CONDITIONS	2500 TO 4000 LBS PER ACRE (SEE MANUFACTURES RECOMMENDATIONS)
FIBER REINFORCED MATRIX (FRM)	65% ORGANIC DEFIBRATED FIBERS 25% REINFORCING FIRBERS OR LESS 10% TACKIFIER	UP TO 12 MONTHS	on slopes up to 1:1 and erosive soil conditions	3000 TO 4000 LBS PER ACRE (SEE MANUFACTURES RECOMMENDATIONS)





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				Ŷ		C	Do	ak Flor	w Rate	Calcu	lations	0110															والمراجب والمحمد والمراجب والمراجب			Swale Ca	alcu
		<u> </u>	T	-, <u>, ;</u>		T		aktio		Curcu		· · · · ·						Т					·. · ·				Slo	оре	Q ₁₀₀	· '	Velo
											Shallov	v		Shallow	v						5				1	Name	9	%			fp
							Sheet	t Flow		Conc	entrate	d Flow	Conc	entrated	d Flow	Channel I	low To	otal		25-Yea	r	1	.00-Year				min	max	cfs	min	
Basin From	E	Basin To		Area	а						(unpave	d)		(paved))											S8-1a	3.8	30%	5.4		3.5
												-														S8-1b	1.83%	4.63%	5.2	2.67	,
					*	L		S	Tt	L	S	Tt	L	S	Tt	LV	Tt T	Гс		1	Q	c	<u> </u>	2		S8-2	1.96%	6.02%	13.6	3.48	3
				sf	acre	ft	11	%	min	ft	%	min	ft	%	min	ft fps	min n	nin		in/hr	cfs		in/hr cf	s		S8-3a	3.6	50%	5.6		3.5
X8-1a/X8-1b	Cu	ulvert X8-1		72,359	1.661	100	0.24	2.5%	11.7	172	3.2%	1.0	0	0.0%	0.0	63 6	0.2 1	2.8	0.57	7.43	7.1	0.65	9.51 10	.3		S8-3b	1.89%	4.17%	11.8	3.32	2
X8-1a	Sv	wale S8-1a		35,476	0.814	100	0.24	3.0%	10.9	69	2.9%	0.4	0	0.0%	0.0	0 0	0.0 1	1.3	0.58	7.83	3.7	0.66	9.98 5.	4		S8-4	3.6	50%	9.0		3.9
X8-1b	Sv	wale S8-1b		36,883	0.847	100	0.24	2.5%	11.7	172	3.2%	1.0	0	0.0%	0.0	0 0	0.0 1	2.7	0.56	7.47	3.6	0.64	9.56 5.	2		S8-5a	2.48%	5.00%	24.5	4.41	I
X8-2	Swale S8	8-2/Culvert X	8-2	103,658	2.380	100	0.24	2.0%	12.8	145	2.8%	0.9	0	0.0%	0.0	296 6	0.8 1	4.5	0.55	7.06	9.3	0.63	9.07 13	.6		S8-5b	1.6	59%	6.2		2.7
X8-3a/X8-3b	Cu	ulvert X8-3		120,645	2.770	100	0.24	3.0%	10.9	246	3.9%	1.3	0	0.0%	0.0	171 6	0.5 1	2.6	0.56	7.48	11.5	0.63	9.57 16	.8		S8-5c	7.4	40%	29.4	1	5.3
X8-3a	Sv	wale S8-3a		33,299	0.764	100	0.24	5.0%	8.8	169	3.0%	1.0	0	0.0%	0.0	0 0	0.0 9	9.9	0.62	8.23	3.9	0.70	10.44 5.	6		S8-6a	1.44%	3.13%	28.9	3.75	5
X8-3b	Sv	wale S8-3b		87,346	2.005	100	0.24	3.0%	10.9	246	3.9%	1.3	0	0.0%	0.0	0 0	0.0 1	2.1	0.53	7.60	8.1	0.61	9.71 11	.8		S8-6b	2.5	54%	1.7	1	2.2
X8-2/B1-a/B1-b	C	Culvert B-1		265,741	6.101	100	0.24	5.0%	8.8	138	4.7%	0.7	0	0.0%	0.0	327 6	0.9 1	0.4	0.56	8.07	27.8	0.64	10.25 40	.2		SB1-a	0.5	58%	21.90		2.9
B1-a	Sv	wale SB1-a		139,635	3.206	100	0.24	5.0%	8.8	138	4.7%	0.7	0	0.0%	0.0	0 0	0.0 9	9.5	0.57	8.34	15.2	0.65	10.57 21	.9		SB1-b	2.23%	2.97%	16.70	4.59	϶
X8-2/B1-b	Sv	wale SB1-b		126,106	2.895	100	0.24	2.0%	12.8	145	2.8%	0.9	0	0.0%	0.0	296 6	0.8 1	4.5	0.56	7.06	11.5	0.64	9.07 16	.7		SB2-c	1.82%	4.93%	11.10	3.27	2
B-2a	В	Berm B2-a		71,859	1.650	100	0.24	5.0%	8.8	122	2.0%	0.9	0	0.0%	0.0	0 0	0.0 9	9.7	0.51	8.27	7.0	0.59	10.49 10	.1		SB2-d	2.42%	3.98%	20.40	4.17	7
B-2b	В	Berm B2-b		173,892	3.992	100	0.24	4.0%	9.7	104	5.8%	0.4	0	0.0%	0.0	0 0	0.0 1	0.1	0.51	8.16	16.5	0.58	10.35 24	.1	5	SB2-e*	1.0	00%	31.60		3.7
X8-2/B1-a/B1-b/B2-a	Sv	wale WQ-1		337,600	7.750	100	0.24	2.0%	12.8	145	2.8%	0.9	0	0.0%	0.0	296 6	0.8 1	4.5	0.55	7.06	30.3	0.63	9.07 44	.3		SC-1	2.73%	4.02%	17.00	4.17	7
B-2c	Sv	wale SB2-c		86,135	1.977	100	0.24	2.0%	12.8	41	1.8%	0.3	0	0.0%	0.0	0 0	0.0 1	3.1	0.52	7.37	7.6	0.59	9.44 11	1		SC-2	1.97%	4.27%	17.00	4.49	9
X8-3a/X8-3b/B-2d	Sv	wale SB2-d		147,601	3.388	100	0.24	3.0%	10.9	246	3.9%	1.3	0	0.0%	0.0	171 6	0.5 1	2.6	0.55	7.48	14.0	0.63	9.57 20	.4		NO-1*	2.50%	3.89%	63.30	4.28	8
X8-3a/X8-3b/B-2d/B-2e	Sv	wale SB2-e		245,083	5.626	100	0.24	3.0%	10.9	246	3.9%	1.3	0	0.0%	0.0	621 6	1.7 1	3.9	0.53	7.19	21.6	0.61	9.23 31	6		NO-2*	1 (00%	30.40		2.4
X8-2/B1-a/B1-b/B2-a/B2-b	Sv	wale WQ-1		511,492	11.742	100	0.24	2.0%	12.8	145	2.8%	0.9	0	0.0%	0.0	728 6	2.0 1	5.7	0.54	6.81	43.0	0.61	8.77 63	.3	*Wate	or Quality G	rassy Swal	<u>е</u>	1		
X8-2/B1-a/B1-b/X8-3a/X8-3b/B2a-e	С	Culvert B-2		842,710	19.346	5 100	0.24	2.0%	12.8	145	2.8%	0.9	0	0.0%	0.0	899 6	2.5 1	.6.2	0.53	6.72	69.5	0.61	8.66 10	2.3	Inde	in quality of	. <u></u>				
X8-4	Swale S	8-4/Culvert X	(8-4	60,890	1.398	100	0.24	3.5%	10.2	111	1.8%	0.9	0	0.0%	0.0	20 6	0.1 1	.1.1	0.56	7.87	6.2	0.64	10.03 9	0							
X8-4/X8-5a/X8-5b	Culvert >	X8-5/Swale S	8-5c	221,559	5.086	100	0.24	2.5%	11.7	150	3.7%	0.8	0	0.0%	0.0	117 6	0.3 1	.2.8	0.53	7.44	20.1	0.61	9.52 29	.4	·····						
X8-4/X8-5a	Sv	wale S8-5a		172,704	3.965	100	0.24	3.5%	10.2	111	1.8%	0.9	0	0.0%	0.0	20 6	0.1 1	.1.1	0.54	7.87	16.9	0.62	10.03 24	.5	Runoff	Coefficients	nagaagaaan na aagaagaa maada ahaa ahaa ahaa ahaa ahaa ahaa a				10000
X8-5b	Sv	wale S8-5b		48,855	1.122	100	0.24	2.5%	11.7	150	3.7%	0.8	. 0	0.0%	0.0	0 0	0.0 1	.2.5	0.50	7.52	4.2	0.58	9.61 6	.2	COA DO	CM - Table 2-	1				-
X8-6a	SV	wale S8-6a		234,090	5.374	100	0.24	3.0%	10.9	653	2.6%	4.2	0	0.0%	0.0	0 0	0.0 1	.5.0	0.53	6.94	19.7	0.60	8.93 28	3.9						25 Yr	1
X8-6b	E	Berm 8-6b		146,461	3.362	100	0.24	2.0%	12.8	671	2.6%	4.3	0	0.0%	0.0	0 0	0.0 1	7.1	0.43	6.55	9.4	0.50	8.46 14	.2	Asphal	t	· · · · · · · · · · · · · · · · · · ·			0.86	
X8-6c	SI	wale S8-6b		10,851	0.249	64.8	0.24	1.5%	10.0	0	0.0%	0.0	0	0.0%	0.0	99 6	0.3 1	.0.3	0.58	8.11	1.2	0.66	10.30 1	.7	Conc /	Roof				0.88	
X8-6a/X8-6c	Culvert X	X8-6/Swale W	/Q-2	244,941	5.623	100	0.24	3.0%	10.9	653	2.6%	4.2	0	0.0%	0.0	0 0	0.0 1	.5.0	0.53	6.94	20.7	0.61	8.93 30).4	Grass			Goo	d Cond	0.39	
C-1	Swale SC-1	L & SC-2/Culv	ert C-1	149,752	3.438	100	0.24	3.0%	10.9	401	3.2%	2.3	0	0.0%	0.0	306 6	0.9 1	.4.0	0.47	7.16	11.5	0.54	9.19 17	7.0	(2-7%)	/Pango				;	+
FR	Fr	ee Release		38,971	0.895	100	0.24	4.5%	9.2	132	4.9%	0.6	0	0.0%	0.0	0 0	0.0	9.8	0.53	8.24	3.9	0.60	10.45 5	.6	(2-7%)	e/ Kalige		Avg		0.42	
P-1		Pond 1		353,123	8.107	100	0.24	9.0%	7.0	67	7.5%	0.3	0	0.0%	0.0	163 6	0.5	7.7	0.50	8.96	36.0	0.57	11.27 5:	L.9	Pasture	e/Range	*	Cha	_	0.46	†
P-2		Pond 2		58,380	1.340	100	0.24	3.5%	10.2	111	3.2%	0.6	0	0.0%	0.0	0 0	0.0 1	0.8	0.47	7.95	5.1	0.55	10.11 7	.4	(over 7	%)		Stee	<u>ه</u>	0.46	
				Caliterr	a Subdiv	vision P	hase 2	Section	8								9								Curve	Numbers					
		1		1		c value	:5						T = -	omune (*					٢			To	otal	T	CrD			BtG		T	
					100		G	RASS-GO	DOD	P/	ASTURE/I	RANGE	PA	STURE/R/	ANGE			1	ŀ			16	Area	Area		Weighted	Area		Weighte	d Total (CN
· · · · · · · · · · · · · · · · · · ·		ASPH		ROOF/		KETE		(2-7%	1		(2-7%	9	<u> </u>	(over 79	0/ /0]	-	Comara	ite		Basir	n Are	ea (SF)	(SaMi)	(SF)	%	CN	(SF)	%	CN		
Basin	Total Area sf	Area sf	%	Area sf		%	Are sf	9	%		sf	%	Ar s	ea f	70	25 Yr "C"	100 Yr "	'C"		SW-1	1,1	33,868	0.0407	831,004	73.3%	65.0	302,864	26.7%	23.6	88.6	5
X8-1a/X8-1b	72,359	10,688	14.8%	17,000	23	3.5%	44,6	71	61.7%		0	0.0%	()	0.0%	0.57	0.65		L	5W-2	2 35	1,579	0.0126	351,579	100.0%	88.7	U	0.0%	0	08./	
X8-1a	35,476	7,401	20.9%	7,000	19	9.7%	21,0	75	59.4%		0	0.0%	()	0.0%	0.58	0.66														
X8-1b	36,883	3,287	8.9%	10,000	2	7.1%	23,5	96	64.0%		0	0.0%	(0.0%	0.56	0.64														
X8-2	103.658	8.698	8.4%	26.000	2	5.1%	68.9	60	66.5%		0	0.0%	()	0.0%	0.55	0.63														

				Caliterra Si	C Value	nase z Sectio	on 8												Curve	Numbers									
	· · · · · · · · · · · · · · · · · · ·					GPASS	6000	DASTUR	/RANGE	PASTURF	RANGE					То	tal		CrD		T	Bt	G						
		ASPH	IALT	ROOF/CO	NCRETE	(2-7	(000D 7%)	(2-7	/%)	(over	7%)		Р. 	B	asin	Area (SE)	Area	Area	%	Weighted	l Area	%	Weig	nted Tota	al CN				
	Total Area	Area	%	Area	%	Area	%	Area	%	Area	%	Composite	Composite				(SqMi)	(SF)		CN	(SF)		CI	1					
Basin	sf	sf	, eg, aux-lub-linit. Helder e de Balandar de Balandar de Balandar	sf		sf	go gray na mana na aka kata kata kata kata kata kata	sf		sf		25 Yr "C"	100 Yr "C"	S	W-1	1,133,868	0.0407	831,004	73.3%	65.0	302,864	26.7	<u>% 23</u>	6 8	8.6				
X8-1a/X8-1b	72,359	10,688	14.8%	17,000	23.5%	44,671	61.7%	0	0.0%	0	0.0%	0.57	0.65	S	W-2	351,579	0.0126	351,579	100.0%	88.7	0	0.09	% 0	8	8.7				
X8-1a	35,476	7,401	20.9%	7,000	19.7%	21,075	59.4%	0	0.0%	0	0.0%	0.58	0.66																
X8-1b	36,883	3,287	8.9%	10,000	27.1%	23,596	64.0%	0	0.0%	0	0.0%	0.56	0.64																
X8-2	103,658	8,698	8.4%	26,000	25.1%	68,960	66.5%	0	0.0%	0	0.0%	0.55	0.63																
X8-3a/X8-3b	120,645	15,287	12.7%	26,500	22.0%	78,858	65.4%	0	0.0%	0	0.0%	0.56	0.63																
X8-3a	33,299	8,058	24.2%	8,000	24.0%	17,241	51.8%	0	0.0%	0	0.0%	0.62	0.70																
X8-3b	87,346	7,229	8.3%	18,500	21.2%	61,617	70.5%	0	0.0%	0	0.0%	0.53	0.61						2										
X8-2/B1-a/B1-b	265,741	25,851	9.7%	70,000	26.3%	169,890	63.9%	0	0.0%	0	0.0%	0.56	0.64										فنقل بالبر المالية والمحمور مرق بالإيمان ويست		Pr	e-Develop	ed Flow Rat	e Calculat	ions
B1-a	139,635	11,353	8.1%	40,000	28.6%	88,282	63.2%	0	0.0%	0	0.0%	0.57	0.65					She	et Flow		Shallo	v Conce	entrated F	ow			······		L
X8-2/B1-b	126,106	14,498	11.5%	30,000	23.8%	81,608	64.7%	0	0.0%	0	0.0%	0.56	0.64			٨٣		agth			agth		Avg			Lag Time	Area		
B-2a	71,859	3,683	5.1%	12,000	16.7%	19,038	26.5%	37,138	51.7%	0	0.0%	0.51	0.59	Basin	Area	(SF) (A		ft) Slop	e (%) 1	t(hr)	ft)	be.(%)	Velocity	T _t (hr)	T _c (min)	(min)	(samile)	CN	0
B-2b	173,892	10,282	5.9%	28,000	16.1%	69,339	39.9%	66,271	38.1%	0	0.0%	0.51	0.58				()			`			(ft/s)				(sqiine)		
X8-2/B1-a/B1-b/B2-a	337,600	29,534	8.7%	82,000	24.3%	188,928	56.0%	37,138	11.0%	0	0.0%	0.55	0.63	SW-1	1,133	,868 26	5.0 3	00 2.3	17%	0.30 1,	791 4.	69%	3	0.14	26.77	16.06	0.0407	88.6	5
B-2c	86,135	6,118	7.1%	16,000	18.6%	52,825	61.3%	11,192	13.0%	0	0.0%	0.52	0.59	SW-2	351,	579 8	.1 3	600 4.3	33%	0.23 1,	044 3.	93%	3	0.09	19.26	11.55	0.0126	88.7	1
X8-3a/X8-3b/B-2d	147,601	21,297	14.4%	28,500	19.3%	92,030	62.4%	5,774	3.9%	0	0.0%	0.55	0.63																
X8-3a/X8-3b/B-2d/B-2e	245,083	28,811	11.8%	42,500	17.3%	149,141	60.9%	24,631	10.1%	0	0.0%	0.53	0.61																
X8-2/B1-a/B1-b/B2-a/B2-b	511,492	39,816	7.8%	110,000	21.5%	258,267	50.5%	103,409	20.2%	0	0.0%	0.54	0.61																
X8-2/B1-a/B1-b/X8-3a/X8-3b/B2a-e	842,710	74,745	8.9%	168,500	20.0%	460,233	54.6%	139,232	16.5%	0	0.0%	0.53	0.61			÷		Soil G	iroups										
X8-4	60,890	8,237	13.5%	13,500	22.2%	39,153	64.3%	0	0.0%	0	0.0%	0.56	0.64		Soi	I T	Area		Soil	· ·	Area	Com	n						
X8-4/X8-5a/X8-5b	221,559	26,007	11.7%	37,500	16.9%	127,929	57.7%	30,124	13.6%	0	0.0%	0.53	0.61			Name	(Acre)	%	Group	CN	(Acre)	Value	e						
X8-4/X8-5a	172,704	23,337	13.5%	29,500	17.1%	102,971	59.6%	16,897	9.8%	0	0.0%	0.54	0.62			Comfort	(Actor)	07	D	87	0.70	60.9	<u> </u>						
X8-5b	48,855	2,670	5.5%	8,000	16.4%	24,958	51.1%	13,227	27.1%	0	0.0%	0.50	0.58		n H	Bunios	1.00	0.7		87	0.70	13.0	5						
X8-6a	234,090	15,000	6.4%	48,000	20.5%	119,029	50.8%	52,061	22.2%	0	0.0%	0.53	0.60			Pock	1.00	0.15		08	0.15	1/ 7	,						
X8-6b	146,461	548	0.4%	2,000	1.4%	2,306	1.6%	141,607	96.7%	0	0.0%	0.43	0.50			NUCK		0.15	Total	90 CE	1.00	14.7							
X8-6c	10,851	2,291	21.1%	2,000	18.4%	6,560	60.5%	0	0.0%	0	0.0%	0.58	0.66			<u> </u>	·	0.05	Total	C0.66	1.00	20.0							
X8-6a/X8-6c	244,941	17,291	7.1%	50,000	20.4%	125,589	51.3%	52,061	21.3%	0	0.0%	0.53	0.61			Brackett		0.35	L R	83	0.35	29.0	5						
C-1	149,752	15,985	10.7%	0	0.0%	0	0.0%	133,767	89.3%	0	0.0%	0.47	0.54	В	tG -	Real	1.00	0.2		8/	0.20	17.4	+						
FR	38,971	2,798	7.2%	7,500	19.2%	17,153	44.0%	11,520	29.6%	0	0.0%	0.53	0.60			Eckrant		0.2		8/	0.20	1/.4	+						
P-1	353,123	14,752	4.2%	32,000	9.1%	95,970	27.2%	0	0.0%	210,401	59.6%	0.50	0.57			ROCK		0.25	N/A	98	0.25	24.5	<u>}</u>						
P-2	58,380	1,520	2.6%	7,500	12.8%	30,564	52.4%	18,796	32.2%	0	0.0%	0.47	0.55						Total	88.35	1.00								

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		(Caliterra Su	bdivision	Phase 2 Se	ction 8		
			S	wale Calcu	lations			
	Slo	ре	Q ₁₀₀	Velo	ocity	Norma	l Depth	Side Slopes
Name	9	6		fŗ	DS	f	t	
	min	max	cfs	min	max	min	max	ft/ft
S8-1a	3.8	0%	5.4	3.	54	0.	45	12:1&3:1
S8-1b	1.83%	4.63%	5.2	2.67	3.78	0.43	0.51	12:1&3:1
S8-2	1.96%	6.02%	13.6	3.48	5.31	0.58	0.72	12:1&3:1
S8-3a	3.6	0%	5.6	3.	50	0.4	46	12:1&3:1
S8-3b	1.89%	4.17%	11.8	3.32	4.46	0.59	0.69	12:1&3:1
S8-4	3.6	0%	9.0	3.	95	0.	55	12:1&3:1
S8-5a	2.48%	5.00%	24.5	4.41	5.74	0.75	0.86	12:1&3:1
S8-5b	1.6	9%	6.2	2.	71	0.	55	12:1 & 3:1
S8-5c	7.4	0%	29.4	5.	32	0.	69	3:1
S8-6a	1.44%	3.13%	28.9	3.75	5.01	0.88	1.01	12:1&3:1
S8-6b	2.5	4%	1.7	2.	28	0.	32	12:1&3:1
SB1-a	0.5	8%	21.90	2.	97	1.	45	4:1&3:1
SB1-b	2.23%	2.97%	16.70	4.59	5.12	0.97	1.02	4:1&3:1
SB2-c	1.82%	4.93%	11.10	3.22	4.68	0.56	0.68	12:1&3:1
SB2-d	2.42%	3.98%	20.40	4.17	5.03	0.74	0.81	12:1&3:1
SB2-e*	1.0	0%	31.60	3.	.77	0.	91	4:1&3:1
SC-1	2.73%	4.02%	17.00	4.17	4.82	0.69	0.74	12:1&3:1
SC-2	1.97%	4.27%	17.00	4.49	5.97	0.70	0.84	3:1
WQ-1*	2.50%	3.89%	63.30	4.28	4.98	0.98	1.11	3:1
WQ-2*	1.0	00%	30.40	2	.48	0.	95	3:1
Water Quality G	Grassy Swal	9						

Runoff Coefficients	11111111111111111111111111111111111111	1000 Million (1000 Million (10	
COA DCM - Table 2-1		and and a second s	
:		25 Yr	100 Yr
Asphalt		0.86	0.95
Conc / Roof		0.88	0.97
Grass (2-7%)	Good Cond	0.39	0.46
Pasture/Range (2-7%)	Avg	0.42	0.49
Pasture/Range	Steep	0.46	0.53

tom Width		INITIALS DATE LB 7-25-16 JB 7-46-16
ft n/a 10		DESCRIPTION added pre developed drainage area calcs, added c-value table. Modified drainage calcs for P-2 & FR
10		100. LAUREN BARZILLA 108483
		CMA ENGINEERING, INC. 235 LEDGE STONE DRIVE AUSTIN, TEXAS 78737 (512) 432-1000 Registration # F-3053
Pre - Develo Q _{5YR} Q 76.1 9 26.7 3	Deed Flow (cfs) 2.7 114.1 148.5 32.5 40.0 52.0	CALITERRA - PHASE 2 SECTION 8 DRAINAGE CALCULATIONS
	AS BUILT	DESIGNED: DRAWN BY: MK APPROVED: FILE: 5-1683-S08 DRAINAGE PLAN JOB NO.: 1683-001 DATE: MARCH 2016 10 OF 50





	DESIGN BY: BRP	IED	DRAFTED BY: KJG
LEGEND	DATE		
EXISTING MINOR CONTOURS SOS EXISTING MAJOR CONTOURS PROPOSED MINOR CONTOURS PROPOSED MAJOR CONTOURS DRAINAGE AREA BOUNDARY TIME OF CONCENTRATION PATH DRAINAGE AREA NUMBER LP\HP HIGH POINT / LOW POINT FLOW ARROW	REVISION		
$\int_{100'} \frac{200'}{200'}$ SCALE: 1" = 100'	- Codena Reimana & Doemina Inc	CBD Civil Engineering & Surveying	FIRM ID #F3791 Main Office Main Office North Office 5501 West William Cannon Dr. 12129 RR 620 N., Ste. 600 Austin, Texas 78749 Austin, Texas 78750 Phone No. (512) 280-5160 www.cbdeng.com
	EXISTING HYDROLOGY MAP	CALITERRA PHASE 5 SECTION 14	STREET, DRAINAGE, WATER, & WASTEWATER IMPROVEMENTS
	SHEET NAME:	JOB NAME:	PROJECT:
	But	R A	TEXAS
	CARLSON, 20 DATE MA	T R. PAS 8476 8476 8476 BRIGANCE ID# F37 022-03	QUARELLA 9 5ED. & DOERING, INC. 791 3-24 1 2022









PATH:J:\AC3D\5530\dwg\5530-STREETS SHEETS.dwg -





WATER SERVICE TA	BLE
STATION	SERVICE
1+05.80	D
1+12.04	D
2+48.87	D
2+69.37	D
2+99.18	S
3+02.18	D
	WATER SERVICE TAI STATION 1+05.80 1+05.80 1+12.04 2+48.87 2+69.37 2+99.18 3+02.18

Curve Table: Alignments												
Curve #	Radius	Delta	Tangent	Chord	Arc Length							
C1	318.00'	017°54'05"	50.09'	98.95'	99.36'							
C2	37.00'	039°38'25"	13.34'	25.09'	25.60'							
С3	37.00'	039°38'25"	13.34'	25.09'	25.60'							

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24- HOURS PRIOR TO COMMENCING CONSTRUCTION.

	WATER LEGEND
	\frown S proposed single service
	\frown D proposed double service
	C EXISTING SINGLE SERVICE
	Ca EXISTING DOUBLE SERVICE
	PROPOSED FIRE HYDRANT
	PROPOSED GATE VALVE & BOX
	EXISTING FIRE HYDRANT
	EXISTING GATE VALVE & BOX
120'	BLUE REFLECTOR
,	CURVE NUMBER

WATERLINE NOTES:

 ONLY ONE TIE-IN TO THE EXISTING WATER SYSTEM SHALL BE ALLOWED UNTIL ALL INSTALLED WATERLINES HAVE PASSED TESTING REQUIREMENTS. TEST RESULTS SHALL BE PROVIDED TO THE DESIGN ENGINEER.
 COST OF ALL FITTINGS, INCLUDING THOSE NOT SHOWN, SHALL BE SUBSIDIARY TO THE COST OF

 COST OF ALL FITTINGS, INCLUDING THOSE NOT SHOWN, SHALL BE SUBSIDIART TO THE COST OF THE PIPE.
 CONTRACTOR SHALL COORDINATE OPERATION OF ALL VALVES WITH DRIPPING SPRINGS WATER SERVICE CORPORATION.

4. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED WASTEWATER OR TREATED EFFLUENT MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER OR TREATED EFFLUENT MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER OR TREATED EFFLUENT MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER OR TREATED EFFLUENT MAIN OR LATERAL. THE WASTEWATER OR TREATED EFFLUENT PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE WASTEWATER OR TREATED EFFLUENT MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND WITH A MINIMUM OF 2.5 BAGS OF CEMENT PER CUBIC YARD OF SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END. THE MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM TO ONE OF THE FOLLOWING OPTIONS:

(A) WITHIN NINE FEET HORIZONTALLY OF EITHER SIDE OF THE WATERLINE, THE WASTEWATER OR TREATED EFFLUENT PIPE AND JOINTS SHALL BE CONSTRUCTED WITH PIPE MATERIAL HAVING A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF TWO FEET SHALL BE PROVIDED. THE WASTEWATER OR TREATED EFFLUENT MAIN OR LATERAL SHALL BE LOCATED BELOW THE WATERLINE.

(B) ALL SECTIONS OF WASTEWATER OR TREATED EFFLUENT MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18-FOOT (OR LONGER) SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE ENCASING PIPE SHALL BE CENTERED ON THE WATERLINE AND SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WASTEWATER OR TREATED EFFLUENT MAIN OR LATERAL. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON-SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF SIX INCHES BETWEEN THE ENCASEMENT PIPE AND THE WATERLINE SHALL BE PROVIDED. THE WASTEWATER LINE SHALL BE LOCATED BELOW THE WATERLINE.

5. 8" WATERLINES SHALL HAVE A MINIMUM DEPTH OF 36 INCHES

6. ALL WATER SERVICES SHALL EXTEND PAST THE ROADSIDE SWALE. THE SERVICE LINE SHALL END AT THE TOP OF THE BACKSIDE SLOPE. THE WATER SERVICE AND FIRE HYDRANT LEADS SHALL HAVE A MINIMUM 2' OF COVER UNDER THE FLOW LINE OF THE DITCH. ADJUST THE DEPTH OF THE WATER LINE ACCORDINGLY TO ACHIEVE THIS WHILE MAINTAINING A FLAT TO RISING SLOPE ON THE SERVICE.

TYPICAL UTILITY DIMENSION DETAI	L
N.I.S.	
60'	
38.5' 38.5' 38.5' 5.0' 38.5' 5.0' 38.5' 5.0' Salter S	ROW











ADOPTED

THAT ARE NOT AVAILABLE FROM THE L WW-3C. ALL BURIED DI AND CI PIPE LENE PER SPL WW-27D. ALL COVERS
CAL GATE VALVE 4" - 16"

NGINEER ASSUMES FOR APPROPRIATE S STANDARD.	511-AW-01
i , , reconstruction	







DESIGNED

SHEET

14 OF 16

DRAFTED







sheet 15 of 16



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ATTACHMENT N

Operating and Maintenance Plan

Maintenance Plan for Stormwater Management Facilities within the HAYS COUNTY DEVELOPMENT DISTRICT No. 1 Municipal Utility District

Construction and Acceptance of Improvements:

Upon construction completion of storm water facilities by the Developer and subsequent acceptance by Hays County Development District No. 1 Municipal Utility District, the District will be responsible for the operations and maintenance of such facilities.

Contact Information for Party Responsible for storm water facilities

Inframark 14050 Summit Drive #103 Austin, TX 78728-7122 (512) 246-0498

Basin Maintenance and Documentation

A common sign of failure of some storm water facilities standing water long after the rain event ends. This is especially true in detention basins. In addition, wet ponds may also need to be drained for maintenance purposes. The water in each of these systems can be pumped into the storm drain conveyance system downstream of the facility as long as it has been at least 48 hours since the last rain event. This delay usually provides sufficient time for most of the pollutants to settle out of the standing water; however, the discharge of sediment laden water is not allowed at any time. The owner or operator of a BMP constructed to comply with the TSS removal requirement is obligated to provide all the maintenance activities required to maintain the function of the facility and other activities as described in the WPAP and CZP. The owner/operator must maintain records of all maintenance activities for the most recent 3 years. These records must be made available to the TCEQ upon request.

Sediment Disposal

Stormwater pollutants include a variety of substances that are deposited on pervious and impervious surfaces and then transported by the next rainfall. In addition, there may be connections to the stormwater system that should go to the sanitary sewer system in older urbanized areas. Consequently, a variety of contaminants that may be classified as hazardous or toxic may enter stormwater management systems. These contaminants include heavy metals, petroleum hydrocarbons, pesticides, and a variety of organic chemicals. Consequently, several federal and state laws and regulations may apply to the disposal of sediments which accumulate in stormwater systems or which are captured by street sweepers.

Vegetative Filter Strips

Once a vegetated area is well established, little additional maintenance is generally necessary. The key to establishing a viable vegetated feature is the care and maintenance it receives in the first few months after it is planted. Once established, all vegetated BMPs require some basic maintenance to ensure the health of the plants including:

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

• Seasonal Mowing and Lawn Care. If the filter strip is made up of turf grass, it should be mowed as needed to limit vegetation height to 18 inches, using a mulching mower

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

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

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

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

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

Hazardous Material Spills

• *Hazardous Material Spills*. Non-storm water discharges are not expected from this site. After construction, in case of a hazardous material spill, the District's Operator, Inframark LLC., will be required to close valves from the discharge lines. A valve key shall be carried in all maintenance vehicles operating in the District at all times. The valve shall be fully shut-off. Shut-off is in the counter-clockwise direction. Owner Signature:

Gregory L. Rich, Manager/ Gregory L. Rich, Manager/ Gregory - No - CF CSLK Caliterra, LLC

CF CSLK Caliterra, LLC 1222 Merit Drive, Suite 1020 Dallas, TX 75251

ATTACHMENT P

Measures for Minimizing Surface Stream Contamination

The project utilizes filter strips and adjacent batch detention ponds to minimize surface stream contamination. The ponds and filter strips will reduce the sediment pollutant load to be less than or equal to that of existing loads. The two batch detention ponds' outlet structures were reinforced with outfall protection. This evenly distributes the discharge flow and slows discharge velocities, thus stopping the undermining of soil and sediment transport to the creek.

III. WATER QUALITY DESIGN

WATER QUALITY METHODOLOGY

Water quality for this section is provided by vegetated filter strips along the roadway and batch detention ponds sized and built with Caliterra Section 5 Phase 14. The Engineering Report is included in the appendix.

TCEQ TSS REMOVAL CALCULATIONS OPTIONAL ENHANCED MEASURES

Texas Commission on Environmental Quality		
TSS Removal Calculations 04-20-2009 OPTIONAL ENHANCED MEASURES		Project Name: Califerra 5-13 Date Prepared: 2/9/2023
Additional information is provided for cells with a red triang Text shown in blue indicate location of instructions in the Techni Characters shown in red are data entry fields. Characters shown in black (Bold) are calculated fields. Characters shown in black (Bold) are calculated fields.	e in the upper right corne al Guidance Manual - RG- nges to these fields will r	er. Place the cursor over the cell. -348. remove the equations used in the spreadsheet.
1. The Required Load Reduction for the total project:	Calculations from RG-348	Pages 3-27 to 3-30
Page 3-29 Equation 3.3: L	= 27.7(A _N x P)	
where: L _{M TOTAL PROJEC}	 Required TSS removal resulti Net increase in impervious are Average annual precipitation, 	ting from the proposed development = 80% of increased load rea for the project , inches
Site Data: Determine Required Load Removal Based on the Entire Proj Coum Total project area included in plan Predevelopment impervious area within the limits of the plan Total post-development impervious area within the limits of the plan Total post-development impervious cover fraction	ct = Hays = 4.90 acres = 0.00 acres = 1.45 acres = 0.30 = = 33 inches = 1325 lbs.	
 The values entered in these fields should be for the total project area. 		
Number of drainage basins / outfalls areas leaving the plan are	= 1	
2. Drainage Basin Parameters (This information should be provided for	ach basin):	
Drainage Basin/Outfall Area No	= 1 Filter strips al	Iona roadway
Total drainage basin/outfall are Predevelopment impervious area within drainage basin/outfall are Post-development impervious area within drainage basin/outfall are Post-development impervious fraction within drainage basin/outfall are	= 0.63 acres = 0.00 acres = 0.30 acres = 0.48 = 274 lbs.	
3. Indicate the proposed BMP Code for this basin.		
Proposed BM	= Vegetated Filter Strips	
Kemoval ethcienc 4. Calculate Maximum TSS Load Removed (La) for this Drainage Basin t	= 85 percent the selected BMP Type.	Aqualogic Cartridge Filter Batch Detention Bioretention Contech StormFilter Constructed Wetland Extended Detention Grassy Swale Retention / Irrigation Sand Filter Stormceptor Vegetated Filter Strips Vortechs Wet Basin Wet Vault
RG-348 Page 3-33 Equation 3.7: L	= (BMP efficiency) x P x (A ₁ x 34	34.6 + A _P x 0.54)
where: A Where: A	 Total On-Site drainage area in Impervious area proposed in 11 Pervious area remaining in the TSS Load removed from this 0.63 acres 0.30 acres 0.33 acres 296 lbs 	n the BMP catchment area the BMP catchment area e BMP catchment area i catchment area by the proposed BMP
Desired L _{M THIS BAS}	= 274 lbs.	
	= 0.93	Suyn Da

CARLSON, BRIGANCE & DOERING, INC. ID# F3791

GEOLOGICAL ASSESSMENT FORM (TCEQ-0585)

Environmental Services, Inc.

GEOLOGIC ASSESSMENT FOR 320-ACRE CALITERRA DEVELOPMENT PHASE 2 DRIPPING SPRINGS, HAYS COUNTY, TEXAS HJN 130091 GA

PREPARED FOR:

CMA ENGINEERING, INC. AUSTIN, TEXAS

PREPARED BY:

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

APRIL 2015

Caliterra GA Ph 2

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

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- B SITE GEOLOGIC MAP
- C GEOLOGIC ASSESSMENT TABLE
- D SITE PHOTOGRAPHS

Geologic Assessment

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Geologist: James Killian

Telephone: 512 328-2430

Date: 22 April 2015

Fax: <u>512 328-1804</u>

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

Signature of Geologist:

Regulated Entity Name: <u>320-Acre Caliterra Development Phase 2; Dripping Springs, Hays</u> County, Texas

Project Information

- 1. Date(s) Geologic Assessment was performed: 26 and 30 March; 1 and 2 April, 2015
- 2. Type of Project:

\times	WPAP
\mathbf{X}	SCS

3. Location of Project:

Reck	narge	Zone
		_

Transition Zone

Contributing Zone within the Transition Zone

- 4. X 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.

Soil Name	Group*	Thickness(feet)
Bolar clay loam, 1-3% slopes (BrB)	С	1 to 2
Brackett-Rock outcrop- Comfort complex, 1-8% slopes (BtD)	C & D	0 to 0.5
Brackett-Rock outcrop-Real complex, 8- 30% slopes (BtG)	C & D	0.5 to 1

Table 1 - Soil Units, InfiltrationCharacteristics and Thickness

Soil Name	Group*	Thickness(feet)
Comfort-Rock outcrop complex, 1-8% slopes (CrD)	D	0 to 0.5
Lewisville silty clay, 1-3% slopes (LeB)	В	0 to 0.5

- * 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. X 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" = <u>300</u>'

Site Geologic Map Scale: 1" = <u>300</u>' Site Soils Map Scale (if more than 1 soil type): 1" = <u>800</u>'

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 $\underline{2}$ (#) 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.

TCEQ GEOLOGIC ASSESSMENT ADDITIONAL COMMENTS

1.0 INTRODUCTION AND METHODOLOGY

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

In addition, this report complies with TCEQ Optional Enhanced Measures (OEM) for the Protection of Water Quality in the Edwards Aquifer RG-348 for new development in areas subject to the TCEQ Edwards Aquifer Rules (30 TAC Chapter 213). These measures provide a higher level of water quality protection and may be adopted by those who wish to implement additional measures for environmental protection or to satisfy requirements for agencies other than the TCEQ; as such, the implementation of these measures for the proposed development have been agreed upon between the US Fish and Wildlife Service (USFWS) and the developer of this property.

Horizon walked transects spaced 50 feet apart and mapped the location of features using a sub-foot accurate Trimble Geo HX handheld GPS and posted processed data utilizing GPS Pathfinder Office software, topographic maps, and aerial photographs. Horizon also searched the area around any potential recharge features encountered to look for any additional features.

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

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

2.0 ENVIRONMENTAL SETTING

2.1 LAND USE

The current use of the subject site is for raising beef cattle on undeveloped rangeland. Surrounding land use is predominantly undeveloped and single-family residential (Appendix A, Figure 1).

2.2 TOPOGRAPHY AND SURFACE WATER

The subject site is situated on gently to steeply sloping terrain located within the Onion Creek watershed (Appendix A, Figures 2 and 3). Surface elevations on the subject site vary from a minimum of approximately 1064 feet above mean sea level (amsl) within an unnamed tributary of Onion Creek along the eastern property boundary to a maximum of approximately 1215 feet amsl near the northwestern corner. Drainage on the west half of the site occurs primarily by overland sheet flow toward the south into Turkey Hollow. Drainage on the east half of the site occurs primarily by overland sheet flow toward the east into several unnamed tributaries of Onion Creek.

2.3 EDWARDS AQUIFER ZONE

As shown on Appendix A, Figure 2, the subject site is found within the Edwards Aquifer Contributing Zone, as mapped by the TCEQ Recharge Zone Boundary Maps (TCEQ, 2015).

2.4 SURFACE SOILS

Mapping by the Natural Resources Conservation Service (NRCS, 2015) shows 6 soil mapping units within the subject site (Appendix A, Figure 4) associated with the soil series described below. Generally, the soil series are similar in their physical, chemical, and engineering properties, with the principal exception being rock fragment content and thickness.

Bolar clay loam (BrB) is a moderately deep, gently sloping soil on concave valley slopes and foot slopes of hills on uplands. Typically, the surface layer is dark grayish brown and dark brown clay loam about 14 inches thick. The subsoil extends to a depth of 28 inches and is brown clay loam. Indurated limestone interbedded with marl is at a depth of 28 inches. This soil is moderately alkaline and calcareous throughout. It is well drained and surface runoff is medium. The permeability is moderate and available water capacity is low.

Brackett-Rock outcrop-Comfort complex (BtD) consists of shallow, loamy, clayey soils and Rock outcrop on uplands in the Edwards Plateau. Many areas have a benched appearance along the hill slopes because of the horizontal bands of Rock outcrop. The Brackett and Comfort soils are between the bands of Rock outcrop. The Brackett soil makes up 30 to 60% of the

complex and Rock outcrop makes up 10 to 45%. The Comfort soil and similar soils make up 10 to 20%. Typically, the surface layer of the Brackett soil is grayish brown gravelly clay loam about 6 inches thick. The subsoil extends to a depth of 17 inches. It is very pale brown and pale yellow gravelly clay loam. The underlying material is weakly cemented limestone interbedded with thin layers of indurated limestone. The soil is moderately alkaline and calcareous throughout. Typically, the areas of Rock outcrop consist of exposures of limestone bedrock. In some areas, however, the rock is flat and is covered by soil material as much as 3 inches thick. Typically, the surface layer of the Comfort soil is dark brown extremely stony clay about 4 inches thick. The subsoil extends to a depth of 11 inches. It is dark reddish brown extremely stony clay. The underlying material is indurated, fractured limestone. The soil is moderately alkaline and noncalcareous throughout. The soils in this complex are well drained. Surface runoff is medium to rapid. Permeability is moderately slow in the Brackett soil and slow in the Comfort soil. The available water capacity is very low.

Brackett-Rock outcrop-Real complex (BtG) consists of shallow, loamy soils and Rock outcrop on uplands in the Edwards Plateau. Escarpments and high rounded hills and ridges and their side slopes are characteristic of the areas. Slopes have a benched appearance because of the horizontal layers of Rock outcrop. The Real and Brackett soils are between the areas of Rock outcrop. The Brackett soil makes up 20 to 55% of the complex. Rock outcrop makes up 10 to 46% and the Real soil makes up 10 to 30%. Typically, the surface layer of the Brackett soil is gravish brown gravelly clay loam about 6 inches thick. The subsoil extends to a depth of 14 inches. It is light gray gravelly clay loam. The underlying material is weakly cemented limestone interbedded with thin strata of pale yellow and very pale brown shaly clay. The soil is moderately alkaline and calcareous throughout. Typically, Rock outcrop is barren of soil except in narrow fractures in the rock. In some areas the rock is flat and has as much as 3 inches of soil material on the surface. Typically, the surface layer of the Real soil is very dark gravish brown gravelly clay loam about 12 inches thick. The upper part is about 20%, by volume, weakly cemented limestone gravel, and the lower part is about 60%. The underlying material is weakly cemented limestone. The soils in this complex are well drained. Surface runoff is rapid. Permeability is moderately slow in the Brackett soil and slow in the Real soil. The available water capacity is very low.

Comfort-Rock outcrop complex (CrD) consists of shallow, clayey soils and Rock outcrop on side slopes and on hilltops and ridgetops on uplands in the Edwards Plateau. Comfort extremely stony clay makes up 49 to more than 95% of the complex. Rock outcrop and areas of soil less than 4 inches deep make up 5 to 36%. The areas of Rock outcrop are long, narrow horizontal bands on hill slopes and along small drains. The Comfort soil is between the bands of Rock outcrop. Typically, the surface layer of the Comfort soil is dark brown extremely stony clay about 6 inches thick. Cobbles and stones as much as 4 feet across cover about 45% of the surface. The subsoil extends to a depth of 13 inches. It is dark reddish brown extremely stony clay. The underlying material is indurated, fractured limestone. The soil is mildly alkaline and noncalcareous throughout. The Comfort soil is well drained. Surface runoff is slow to medium.

Permeability is slow, and the available water capacity is very low. Typically, Rock outcrop is dolomitic limestone that is barren of soil except in narrow fractures in the rock. In some areas the rock is flat and has as much as 3 inches of soil material on the surface.

LewisvIIIe silty clay (LeB) is a deep, gently sloping soil on stream terraces. Typically, the surface layer is dark grayish brown silty clay about 15 inches thick. The subsoil to a depth of 33 inches is light brown silty clay, and, to a depth of 63 inches, it is reddish yellow silty clay. The soil is moderately alkaline and calcareous throughout. This soil is well drained and surface runoff is medium. Permeability is moderate. The available water capacity is high.

Sunev clay loam (SuB) is a deep, gently sloping soil on valley slopes and foot slopes of hills on uplands in the Edwards Plateau. Typically, the surface layer is dark grayish brown clay loam about 11 inches thick. The subsoil to a depth of 35 inches is brown clay loam. To a depth of 45 inches, it is reddish yellow clay loam that is about 15%, by volume, soft masses and concretions of calcium carbonate. The soil is moderately alkaline and calcareous throughout. It is about 45% calcium carbonate (lime). This soil is well drained. Surface runoff is medium to rapid. Permeability is moderate, and the available water capacity is medium (Batte, 1984).

2.5 GEOLOGY

A review of existing literature shows the subject site is predominately underlain by the Glen Rose Formation (Kgr), Bureau of Economic Geology (UT-BEG, 1981), with an estimated maximum thickness of about 400 feet. The Glen Rose Formation consists of alternating resistant and recessive beds of limestone, dolomite, and marl, which is subdivided into upper and lower members (Kgr[u] and Kgr[l]). Underlying the Glen Rose Limestone is the Hensell Sand, with an estimated thickness of about 85 feet.

Very small portions of the site located along the eastern boundary at lower elevations within the Onion Creek floodplain are underlain by recent deposits of alluvium (Qal). These deposits consist of clay, silt, sand, and gravel with an estimated thickness of less than 10 feet. The silt and clay are calcareous and dark gray to dark brown. The sand is mostly quartz and the gravel is siliceous, mostly chert, quartzite, limestone, and petrified wood.

The subject site is not located within the Balcones Fault Zone and available geologic reports indicate the nearest mapped faults are located over 15 miles to the east. In general, the rock strata beneath the site dip to the east-southeast at about 10 to 30 feet per mile (less than 1°).

Table 1 depicts the stratigraphic relationship and approximate thicknesses of the uppermost geologic units found at the subject site.

Geologic Period	Hydrologic Unit	Geologic Unit	Approximate Thickness (feet)	Description
Lower Cretaceous	Confining Unit	Upper Glen Rose Limestone (Kgr[u])	220	Alternating resistant and recessive beds of limestone, dolomite, and marl; limestone aphanitic to fine-grained, hard to soft and marly, light gray to yellowish gray: dolomite, fine- grained, porous, yellowish-brown; marine megafossils include molluscan steinherns, rudistids, oysters, and echinoids; upper part, relatively thinner bedded, more dolomitic, and less fossiliferous than the lower part. Some surface cave development.
Lower Cretaceous	Confining Unit	Lower Glen Rose Limestone (Kgr[l])	160	Alternating resistant and recessive beds of limestone, dolomite, and marl; limestone aphanitic to fine-grained, hard to soft and marly, light gray to yellowish gray: dolomite, fine- grained, porous, yellowish-brown; marine megafossils include molluscan steinherns, rudistids, oysters, and echinoids. Low to moderate cave development.
Lower Cretaceous	Trinity Aquifer	Hensell Sand (Kh)	85	Mostly fine grained, friable to well cemented, argillaceous, calcareous, light brownish gray. No cave development.

TABLE 1 – GEOLOGIC STRATIGRAPHIC COLUMN

2.6 WATER WELLS

A search was made for water wells on and within 0.5 miles of the subject site. A review of the records of the TCEQ and the Texas Water Development Board (TWDB) revealed no water wells at the subject site. However, 2 private water wells (M-1 and M-2) were found at the subject site. No records for these wells were found in TWDB or TCEQ's well database records. Well M-2 is currently used to water livestock (beef cattle) and M-1 will be used for proposed residential development. Both of these wells appeared to be in good condition with properly cased and sealed piping above the surface. No other evidence of water wells was present on the subject site during the field investigation. According to the TWDB, 8 water wells exist within 0.5 miles of the subject site, most of which are completed in the Trinity Aquifer (TWDB, 2015). Appendix A, Figure 2, shows the TWDB water well locations.

The results of this survey do not preclude the existence of an abandoned well. Abandoned wells must be capped or properly abandoned according to the Administrative Rules of the Texas Department of Licensing and Regulation, 16 Texas Administrative Code (TAC), Chapter 76, effective 3 January 1999. A plugging report must be submitted (by a licensed water well driller) to the Texas Department of Licensing and Regulation, Water Well Driller's Program, Austin, Texas. If a well is intended for use, it must comply with 16 TAC §76.

2.7 GEOLOGIC AND MANMADE FEATURES

A field survey of the subject site was conducted by a licensed Horizon geologist on 26 and 30 March and 1 and 2 April 2015. No natural geologic features were identified within the immediate project area. A total of 2 manmade features (M-1 and M-2) were found at the subject

site and were identified as private water wells (previously described). A map detailing site geology is provided in Appendix B.

3.0 CONCLUSIONS AND RECOMMENDATIONS

No natural geologic features were identified at the subject site that would require protection or mitigation pursuant to TCEQ rules for protection of the Edwards Aquifer (30 TAC 213).

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

Because the subject site is located over the Edwards Aquifer Contributing Zone, it is possible that subsurface voids underlie the site. If any subsurface voids are encountered during proposed development, construction should halt immediately so that a geologist may assess potential for the void(s) to provide meaningful contribution to the Edwards Aquifer.

4.0 **REFERENCES**

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- (USGS) US Geological Survey. 7.5-minute series topographic maps, Dripping Springs, Texas, quadrangle, 1986.

APPENDIX A

PROJECT FIGURES






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Environmental Services, Inc.



Environmental Services, Inc.



Horizon. Environmental Services, Inc. JAMES P KILLIAN GEOLOGY No. 10281 UCENSED DUAL X GEOS

STRATIGRAPHIC COLUMN CALITERRA DEVELOPMENT PHASE II DRIPPING SPRINGS, HAYS COUNTY, TEXAS



APPENDIX B

SITE GEOLOGIC MAP

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MAP SOURCE: UT-BEG,1981 ; USDA, 2014.

Environmental Services, Inc.



APPENDIX B

SITE GEOLOGIC MAP CALITERRA DEVELOPMENT PHASE II DRIPPING SPRINGS, HAYS COUNTY, TEXAS



APPENDIX C

SITE GEOLOGIC ASSESSMENT TABLE

GEOLOGIC ASSESSMENT TABLE				PROJECT NAME: Caliterra Development				Phase 2, Dripping Springs, Hays Co Tx				Hays Co Tx								
	LOCATIO	DN				FE	ATU	RE C	HARAC	TEF	ristic	S			EVALUATION		PHYSICAL		L SETTING	
1A	1B *	1C*	2A	2B	3		4		5	5A	6	7	8A	8B	9	1	10	1	1	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIME	NSIONS (FEET)	TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENS	ITIVITY	CATCHME (ACF	ENT AREA RES)	TOPOGRAPHY
						х	Y	Z		10						<40	<u>>40</u>	<1.6	<u>>1.6</u>	
M-1	30.1762	-98.10621	MB	30	Kgr	0.3	0.3							Low - 5	35	Х		Х		Hilltop
M-2	30.1733	-98.10175	MB	30	Kgr	0.3	0.3							Low - 5	35	Х		Х		Hillside
* DATUM	:																			
2A TYPE	-	TYPE		2E	3 POINTS						. 8A	INFILLIN	١G							
С	Cave				30		N	None	, exposed	bed	rock									
SC	Solution cavity				20	C Coarse - cobbles, breakdown, sand, gravel														
SF	Solution-enlarg	ed fracture(s)			20	O Loose or soft mud or soil, organics, leaves, sticks, dark colors														
F	Fault				20) F Fines, compacted clay-rich sediment, soil profile, gray or red colors														
0	Other natural b	edrock features			5	V Vegetation. Give details in narrative description														
MB	Manmade feat	ure in bedrock			30		FS	Flows	stone, cen	nents	, cave d	eposits								
SW	Swallow hole				30		Х	Other	materials	5										
SH	SINKNOIE				20					40.7					1					
7	Town-Karst Close	eu uepressión			5			н⊔	illton L	ו∠ו ∼ווונ	ido r	Jraina	ao E	loodoloir	l Stri		hod			
Z	∠one, clustered	a or aligned feat	ures		30	l		и, г	mop, r	ms	nue, L	Jana	уе, г	looupiali	i, Sife	saiii	bed			

JAMES P. KILLIAN GEOLOGY No. 10281 CENSED

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213. Date 20 April 2015

Janua P. Iulta

Sheet <u>1</u> of <u>1</u>

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



APPENDIX D

SITE PHOTOGRAPHS



PHOTO 1 View of manmade feature M-1 (water well), facing north



PHOTO 2 View of manmade feature M-2 (livestock water well), facing north



TEMPORARY STORMWATER SECTION (TCEQ-0602)

Temporary Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Quynn Dusek

Date: 2/9/2023

Signature of Customer/Agent:

juset. Uppm.

Regulated Entity Name: Caliterra Ph. 5, Sec. 13

Project Information

Potential Sources of Contamination

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

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

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

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

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

Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
 Aboveground storage tanks with a cumulative storage capacity of 500 gallons or

more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

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

- 2. Attachment A Spill Response Actions. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. Attachment B Potential Sources of Contamination. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

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

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

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

6. Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: <u>Onion Creek</u>

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.	\square	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. \square 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

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

Notifications:

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

Cleanup:

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

<u>Follow-up:</u>

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

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Kind of spill	Where discharged	Reportable quantity	Rule, statute, or responsible agency
Hazardous substance	onto land	*Final RO" in Table 302.4 in 40 CFR 302.4 (see attached)	<u>30 TAC 327</u>
	into water	"Final RQ" or 100 lbs, whichever is less	30 TAC 327
Any Oil	coastal waters	as required by the Texas General Land Office	Texas General Land Office
Crude Oil, Oil that is neither a petroleum product nor used oil	onto land	210 gallons (five barrels)	<u>30 TAC 327</u>
	Directly into water	enough to create a sheen	301/00322
Petroleum Product, used oil	onto land from an exempt PST facility	210 gallons (five barrels)	<u>30 TAC 327</u>
	onto land, or onto land from a non-exempt PST facility	25 gallons	<u>30 TAC 327</u>
	directly into water	enough to create a sheen	<u>30 TAC 322</u>
Industrial solid waste or other substances	into water	100 lbs	30 TAC 322
From petroleum storage tanks, underground or aboveground	into water	enough to create a sheen on water	S ¹ <u>30 TAC 334.75-81</u>
From petroleum storage tanks, underground or aboveground	onto land	25 gallons or equal to the RO under 40 CFR 302	30 TAC 327
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	Into water	100 lbs	90 TAC 322

Temporary Stormwater Section - Attachment "A" Continued

ATTACHMENT "B"

Potential Sources of Contamination

Potential sources of contamination include the following:

- Gasoline, Diesel, and Hydraulic Fluid from construction equipment
- Asphalt products
- Construction Materials
- Trash and Debris
- Paint
- Concrete
- Gypsum from sheet rock
- Sediment

All materials shall be hauled in a manner consistent with the manufacturer's recommendations. Disposal of waste material shall be in conformance with all state and local laws

ATTACHMENT "C"

Sequence of Major Activities

Sequence of Construction Disturbance

- 1. Install and maintain Erosion Control and Tree Protection per the Approved Plans and specifications prior to any clearing and grubbing, grading, excavating, etc. Notify Construction Inspection Division when installed.
- 2. Prior to beginning construction, the owner or his representative shall hold a Pre-Construction Conference between TCEQ, Hays County, Contractor, and any other affected parties. Notify TCEQ at least 48 hours prior to the time of the conference and 48 hours prior to beginning construction. Prior to Pre-Construction Conference.
- 3. Hold Pre-Construction Conference with contractor, TCEQ, EV Inspector, Engineer, and owner or his representative.
- 4. Rough grade roadway and swales. Upon completion, restore as much disturbed areas as possible, particularly channels and large open areas. (Estimate of disturbed area = 0.63 ac)
- 5. Regrade streets to subgrade (Estimate of disturbed area = 0.27 ac)
- 6. Ensure that all underground utility crossings are completed. Lay first course base material on all streets. (0.63 ac)
- 7. Install ribbon curb. (Estimate of disturbed area = 0.03 ac)
- 8. Lay final base course on all streets. (0.27 ac)
- 9. Lay asphalt. (0.27 ac)
- 10. Clean site and revegetate all disturbed area according to the plans and specifications. Stabilization measures should include seeding and/or mulching.
- 11. Complete permanent erosion control and restoration of site vegetation.
- 12. Project Engineer to provide a written concurrence letter, and scheduling final inspection with EV Inspector, prior to the removal of erosion controls.
- 13. Remove and dispose of temporary erosion/sedimentation control measures.
- 14. Complete any necessary final dress up of areas disturbed.
- 15. Conduct a final inspection and complete all punch list items.
- Clearing and grubbing under a development permit, solely for the purpose of surveying and soil exploration, shall be a hand-cutting or blade-up operation.

ATTACHMENT "D"

Temporary Best Management Practices and Measures

All temporary BMP's will be installed prior to the beginning of construction and remain in place until revegetation has been completed or the future connecting section is built. These temporary measures will include tree protections, silt fences, concrete washouts and stabilized construction entrances. These erosion control devices will prevent the transport of sediment generated from this site. silt fences will be placed around the right of way to prevent any sediment from leaving the site. The erosion control devices proposed with this project allow for the passing of water while retaining any sediment or trash. This will allow for the flow to maintain its natural course. No sensitive features onsite.

ATTACHMENT "F"

Structural Practices

Since the site is quite small, structural practices of diverting runoff around exposed soils will consist only of silt fence. The silt fence will act as a barrier to catch any pollutants from leaving the site. The only runoff aimed at exposed soils will be from the ungraded land itself.

ATTACHMENT "G"

Drainage Area Map

An overall drainage area map is included within the plan set submitted with this application. This site generall flows to the south towards other adjacent Caliterra section. A permanent existing swale built with section 5-14 collect all the site runoff. No temporary sediment basin is recommended. An existing, offsite, permanent basin has been designed to collect the sediments from this site.

ATTACHMENT "I"

Inspection and maintenance for BMP's

The Best Management Practices installed during construction will be maintained in accordance with the requirements of the EPA's NPDES/TPDES storm water pollution prevention program (SWPPP). The following maintenance procedures shall be followed until permanent stabilization is complete.

Silt Fence

- a) Inspect weekly or after each rainfall event and repair or replacement shall be made promptly as needed.
- b) Silt Fence shall be removed when the site is completely stabilized so as to not block or impede storm flow or drainage.
- c) Accumulated silt shall be removed when it reaches a depth of 6 inches. The Silt shall be disposed of on an approved site and in such a manner that will not contribute to additional siltation.

Stabilized Construction Entrance

- a) The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto a public roadway. This may require periodic top dressing with additional stone as conditions demand, as well as repair and clean out of any devices used to trap sediment.
- b) Entrance must be properly graded to incorporate a drain swale or similar measure to prevent runoff from leaving the construction site.

Vegetated Filter Strips

- a) Inspect weekly or after each rainfall event and reseeding shall be made promptly as needed.
- b) If sediment accumulates in the VFS combined with swales, they should be plowed out, disked, and graded, if necessary, before reseeding. This is necessary to re-establish flow conditions favorable for optimum VFS performance.

Concrete Washout

- a) Inspection shall be made daily or after each rainfall event to check for leaks, identify any plastic linings and sidewalls which have been damaged by construction activities.
- b) When the washout container is filled over 75 % of its capacity, the washwater should be vacuumed off or allowed to evaporate to avoid overflows. When the remaining cementitious solids have hardened, they should be removed and recycled.
- c) Damages to the container should be repaired promptly and as needed.
- d) Before heavy rains, the washout containers liquid level should be lowered or the container should be covered to avoid an overflow during the rain event.

The owner shall hire an E&S compliance company to inspect E&S measures and keep reports of onsite inspections with deficiencies and solutions.

ATTACHMENT "J"

Schedule of Interim and Permanent Soil Stabilization Practices

The project's limits of construction are confined to the existing right-of-ways, easements, and project site itself. The project will begin with rough cutting of site. The utilities will be installed. The ribbon curbs and paving will be completed and within 120 days. The vegetated filter strips and embankments will be revegetated with hydromulch mix to be determined by the City of Dripping Springs to stabilize the soil. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practica

VI. AGENT AUTHORIZATION FORM

Agent Authorization Form For Required Signature Edwards Aquifer Protection Program Relating to 30 TAC Chapter 213 Effective June 1, 1999					
Gregory L. Rich					
Print Name					
Attorney - in - Fact					
Title - Owner/President/Other					
of CF CSLK CALITERRA, LLC					
Corporation/Partnership/Entity Name					
have authorizedQuynn Dusek and Brett Pasquarella					
of <u>Canton</u> , <u>Brignoe</u> <u>Foering</u> <u>Tuc</u>					

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

I also understand that:

- 1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
- 2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
- 3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
- 4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
- 5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

Page 1 of 2

SIGNATURE PAGE:

pplicant's Signature

13-2022

THE STATE OF TEXAS S

County of Dallas §

BEFORE ME, the undersigned authority, on this day personally appeared Greating Richards 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 13 day of Fubruary 3033



NOTARY PUBLIC Megan Terry Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 4 17 ne



VII. APPLICATION FEE FORM (TCEQ-0574)

Application Fee Form

Texas Commission on Environme						
Name of Proposed Regulated Ent	13					
Regulated Entity Location: Dripping Springs, TX (Hays County)						
Name of Customer: CF CSLK Caliterra, LLC						
Contact Person: Gregory L. Rich	Phon	e: <u>972-960-2777</u>				
Customer Reference Number (if i	ssued):CN <u>604534438</u> 66	06010296				
Regulated Entity Reference Number (if issued):RN						
Austin Regional Office (3373)						
🖂 Hays	Travis	Πw	illiamson			
San Antonio Regional Office (336	52)					
Bexar	Medina	U\	valde			
Comal	Kinney					
Application fees must be paid by	check, certified check, c	or money order, payab	le to the Texas			
Commission on Environmental C	uality . Your canceled c	heck will serve as you	r receipt. This			
form must be submitted with your fee payment. This payment is being submitted to:						
🔀 Austin Regional Office	an Antonio Regional Office					
Mailed to: TCEQ - Cashier	Vernight Delivery to: TCEQ - Cashier					
Revenues Section	2100 Park 35 Circle					
Mail Code 214	3uilding A, 3rd Floor					
P.O. Box 13088	Austin, TX 78753					
Austin, TX 78711-3088	512)239-0357					
Site Location (Check All That Apply):						
Recharge Zone	Contributing Zone	Transition Zone				
Type of Pla	ın	Size	Fee Due			
Water Pollution Abatement Plan,	Contributing Zone					
Plan: One Single Family Residenti	al Dwelling	Acres	\$			
Water Pollution Abatement Plan,	Contributing Zone					
Plan: Multiple Single Family Resid	lential and Parks	4.899 Acres	\$ 1,500			
Water Pollution Abatement Plan,						
Plan: Non-residential	Contributing Zone					
	Contributing Zone	Acres	\$			
Sewage Collection System	Contributing Zone	Acres L.F.	\$ \$			
Sewage Collection System Lift Stations without sewer lines	Contributing Zone	Acres L.F. Acres	\$ \$ \$			
Sewage Collection System Lift Stations without sewer lines Underground or Aboveground St	Contributing Zone orage Tank Facility	Acres L.F. Acres Tanks	\$ \$ \$ \$			
Sewage Collection System Lift Stations without sewer lines Underground or Aboveground St Piping System(s)(only)	Contributing Zone	Acres L.F. Acres Tanks Each	\$ \$ \$ \$			
Sewage Collection System Lift Stations without sewer lines Underground or Aboveground St Piping System(s)(only) Exception	Contributing Zone orage Tank Facility	Acres L.F. Acres Tanks Each Each	\$ \$ \$ \$ \$ \$			
Sewage Collection System Lift Stations without sewer lines Underground or Aboveground St Piping System(s)(only) Exception Extension of Time	Contributing Zone orage Tank Facility	Acres L.F. Acres Tanks Each Each Each	\$ \$ \$ \$ \$ \$ \$			

Signature:

Jugmen Dusek

Date: <u>2/9/2023</u>

Application Fee Schedule

Texas Commission on Environmental Quality

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

	Project Area in	_
Project	Acres	Fee
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,	< 1	\$3,000
multi-family residential, schools, and other sites	1 < 5	\$4,000
where regulated activities will occur)	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	Fee
Exception Request	\$500

Extension of Time Requests

Project	Fee
Extension of Time Request	\$150

VIII. CORE DATA FORM (TCEQ-10400)



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

	10 000		interom									
1. Reason fo	or Submis	sion (If other is a	hecked pleas	e descr	ibe in s	space µ	orovid	ed.)				
New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)												
Renewal (Core Data Form should be submitted with the renewal form)												
2. Customer	Reference	e Number <i>(if iss</i>	sued)	Follow	/ this lin	nk to sea	arch	3. Re	3. Regulated Entity Reference Number (if issued)			
CN 6060	10296			for CN Ce	l or RN Intral Re	number egistry*	<u>rs in</u> *	R	RN			
SECTION	II: Cu	stomer Info	ormation									
4. General C	ustomer I	nformation	5. Effective	e Date f	or Cus	stomer	· Infor	matio	n Up	dates (mm/dd/yyyy)	2/9/20	023
New Cust	omer Legal Na	me (Verifiable wit	h the Texas S	Update Secretar	to Cus v of Sta	stomer ate or	Inforn Texas	nation Comr	otrolle	Change in Change in er of Public Accounts)	Regulated E	Entity Ownership
The Custo	mer Nar	ne submitted	here mav	be up	dated	auto	mati	callv	bas	ed on what is cu	rrent and	active with the
Texas Sec	retary o	f State (SOS)	or Texas C	Compt	roller	of Pu	ıblic	Acco	ount	ts (CPA).		
6. Customer	Legal Na	me (If an individua	l, print last nam	ne first: e	g: Doe,	John)		<u> </u>	fnew	v Customer, enter previ	ous Custome	er below:
CF CSLK	Caliter	ra, LLC										
7. TX SOS/CI	PA Filing	Number	8. TX State	Tax ID	(11 digit	ts)		9. Federal Tax ID (9 digits) 10. DUNS Number			S Number (if applicable)	
08018774	5		3208255	471				8	87-4251048			
11. Type of C	Sustomer:	Corporat	ion			Individ	ual		Partnership: General Limited			
Government:	City	County 🗌 Federal [] State 🗌 Othe	r		Sole P	roprie	torship Other:				
12. Number of	of Employ	/ees		_				13. Independently Owned and Operated?			ted?	
⊠ 0-20 ∟	21-100	101-250	251-500	501 and higher Yes No								
14. Custome	r Role (Pr	oposed or Actual) -	- as it relates to	the Reg	gulated	Entity li	sted o	n this fo	orm. F	Please check one of the	following	
		Opera	tor			wner &	Oper	ator .				
	nal Licens	ee 🗌 Respo	onsible Party			oluntar	y Clea	anup A	pplica	ant Other:		
	12222 Merit Drive, Suite 1020											
15. Mailing Address:												
	City	Dallas		S	tate	TX		ZIP	7:	5251	ZIP + 4	
16. Country I	Mailing In	formation (if outs	ide USA)				17. E	E-Mail	Add	ress (if applicable)		·
							gric	ch@siepiela.com				
18. Telephone Number			19. Ex	xtensio	on or (Code	0	20. Fax Number (if applicable)				
(512) 549-7777							() -					

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)

 New Regulated Entity
 Update to Regulated Entity Name

 Update to Regulated Entity
 Update to Regulated Entity Name

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.)

Caliterra Phase 5 Section 14

23. Street Address of the Regulated Entity:	Bridge Water Loop and Kelsey Lane									
(No PO Boxes)	City	Dripping Springs	State	TX	ZIP	78620	ZIP + 4			
24. County										

Enter Physical Location Description if no street address is provided.										
25. Description to Physical Location:	Turn off Premier Park Loop down Kelsey Lane for 350'. New site is located on the left.								on the left.	
26. Nearest City					State				Nearest ZIP Code	
Dripping Springs					ТХ				78620	
27. Latitude (N) In Decin	nal:	30.170400)		28. Long	gitude (W) In I	Decimal:	nal: -98.100130		60
Degrees	Minutes		Seconds		Degrees		Minutes			Seconds
29. Primary SIC Code (4 digits) 30. Secondary SIC Code (4 digits) 31 (5)					. Primary NAICS Code 32. Sec or 6 digits) (5 or 6 dig			econdar digits)	ondary NAICS Code	
1521			236100							
33. What is the Primary	Business o	f this entity?	(Do not repeat the SIC	C or NAI	CS descripti	ion.)				
Single Family Resi	dences S	ubdivision								
				CF	CF CSLK Caliterra, LLC					
34. Mailing		12222 Merit Drive, Suite 1020								
Address.	City	Dallas	State	1	гх	ZIP	75251	ZIP	+ 4	
35. E-Mail Address:					grich@	siepiela.com				
36. Telephone Number			37. Extension or Code			38. Fax Number (if applicable)			cable)	
(512) 549-7777							() -		

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

Dam Safety	Districts	Edwards Aquifer	Emissions Inventory Air	Industrial Hazardous Waste
Municipal Solid Waste	New Source Review Air	OSSF 0	Petroleum Storage Tank	D PWS
Sludge	Storm Water	Title V Air	Tires	Used Oil
Voluntary Cleanup	Waste Water	Wastewater Agriculture	U Water Rights	Other:

SECTION IV: Preparer Information

40. Name:	Quynn Dusek		41. Title:	P.E.
42. Tele	phone Number 43. Ext./Code	44. Fax Number	45. E-Mail	Address
(512)	280-5160	() -	quynn@	cbdeng.com

SECTION V: Authorized Signature

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

Company:	Carlson, Brigance and Doering, Inc.	Job Title:	P.E., Pro	P.E., Project Manager			
Name (In Print):	Quynn Dusek, P.E.			Phone:	(512) 280- 5160		

Signature:	SuynDrack	Date:	6/16/2023