

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

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

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

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

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Sanctuary Dripping Springs				2. Regulated Entity No.: N/A				
3. Customer Name: Sanctuary Dripping Springs, LLC				4. Customer No.: N/A				
5. Project Type: (Please circle/check one)	<input checked="" type="radio"/> New	Modification			Extension		Exception	
6. Plan Type: (Please circle/check one)	WPAP <input checked="" type="radio"/> CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	<input checked="" type="radio"/> Residential	Non-residential			8. Site (acres):		104.355	
9. Application Fee:	10,000	10. Permanent BMP(s):			Retention Irrigation			
11. SCS (Linear Ft.):	N/A	12. AST/UST (No. Tanks):			N/A			
13. County:	Hays	14. Watershed:			Gatlin Creek – 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.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Region (1 req.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
County(ies)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input checked="" type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input checked="" type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.	
Lexie England	
Print Name of Customer/Authorized Agent	
	10/04/2023
Signature of Customer/Authorized Agent	Date

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

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

I _____ Sara Morell _____
Print Name

_____ Founding Partner _____
Title - Owner/President/Other

of _____ Sanctuary Dripping Springs, LLC _____
Corporation/Partnership/Entity Name

have authorized _____ Lexie, England, P.E. _____
Print Name of Agent/Engineer

of _____ Kimley-Horn _____
Print Name of Firm

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

I also understand that:

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

SIGNATURE PAGE:

[Handwritten Signature]
Applicant's Signature

10.13.23
Date

THE STATE OF Texas §
County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Sara Morell 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 13th day of October, 2023.

[Handwritten Signature]
NOTARY PUBLIC
Kacie Solis
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 03-09-2024



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: Lexie England, P.E.

Date: 10/04/2023

Signature of Customer/Agent:



Regulated Entity Name: Sanctuary Dripping Springs, LLC

Project Information

1. County: Hays
2. Stream Basin: Pier Branch of Onion Creek
3. Groundwater Conservation District (if applicable): Hays Trinity GCD
4. Customer (Applicant):

Contact Person: Justin Kathan

Entity: Sanctuary Dripping Springs, LLC

Mailing Address: 1416 Green Terrace

City, State: Round Rock, TX

Telephone: N/A

Email Address: justin@sanctuary.com

Zip: 78620

Fax: N/A

5. Agent/Representative (If any):

Contact Person: Lexie England

Entity: Kimley Horn

Mailing Address: 5301 Southwest Parkway

City, State: Austin, TX

Zip: 78735

Telephone: 512-518-6529

Fax: N/A

Email Address: lexie.english@kimley-horn.com

6. Project Location:

- The project site is located inside the city limits of _____.
- The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of Dripping Springs, TX.
- 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.

The 104.335 AC site is located at the northeast corner of Chaparral In and Deerfield Rd. East of Dripping Springs, TX.

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:

- Residential: # of Lots: 49
- Residential: # of Living Unit Equivalents: 90
- Commercial
- Industrial
- Other: _____

13. Total project area (size of site): 104.335 Acres

Total disturbed area: 65.5 Acres

14. Estimated projected population: N/A

15. The amount and type of impervious cover expected after construction is complete is shown below:

Table 1 - Impervious Cover

<i>Impervious Cover of Proposed Project</i>	<i>Sq. Ft.</i>	<i>Sq. Ft./Acre</i>	<i>Acres</i>
Structures/Rooftops	490,000	÷ 43,560 =	11.25
Parking	100,000	÷ 43,560 =	2.30
Other paved surfaces	535,600	÷ 43,560 =	12.30
Total Impervious Cover	1,125,600	÷ 43,560 =	25.85

Total Impervious Cover $\frac{25.85}{104.335} \times 100 = 25\%$ **Total Acreage** 104.335 X 100 = 25 % 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

18. Type of project:

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

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.

$L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$

21. Pavement Area:

Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

$L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$

Pavement area _____ acres \div R.O.W. area _____ acres $\times 100 = \text{_____ \%}$ 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. **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 _____ (name) Treatment Plant. The treatment facility is:

Existing.

Proposed.

N/A

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

<i>AST Number</i>	<i>Size (Gallons)</i>	<i>Substance to be Stored</i>	<i>Tank Material</i>
1			
2			
3			
4			
5			

Total 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

<i>Length (L)(Ft.)</i>	<i>Width(W)(Ft.)</i>	<i>Height (H)(Ft.)</i>	<i>L x W x H = (Ft3)</i>	<i>Gallons</i>

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. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = _____'.
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.
 - 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 Flood Plain Map - Prelim Panel 48209C0120G ISSUED 12/14/2022.
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. 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. 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. 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.
 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.

51. 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. **Attachment 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. **Attachment 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. **Attachment L - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams is attached.

N/A

55. **Attachment M - Construction Plans.** Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are

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

N/A

56. **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.

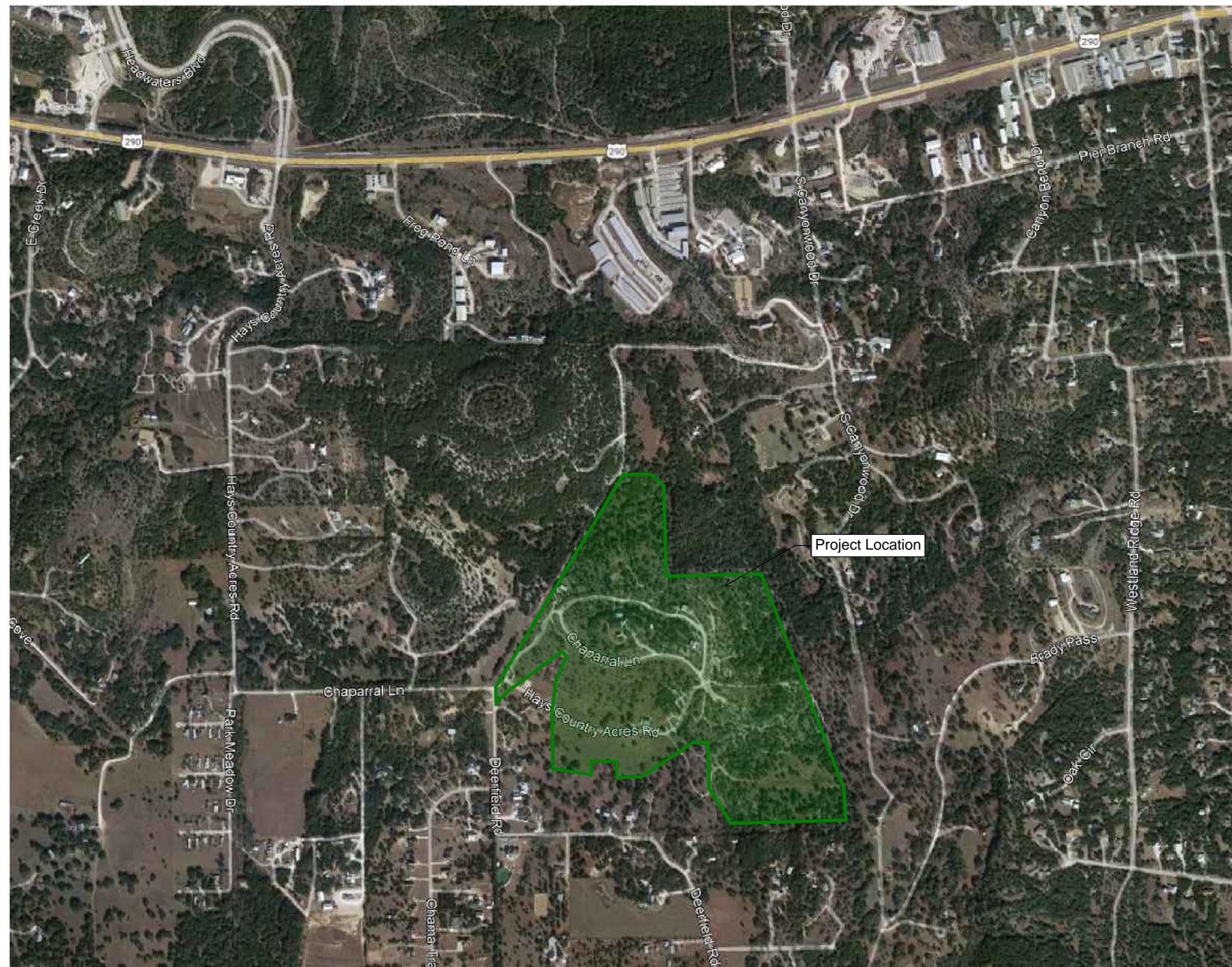
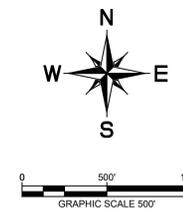
59. The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or 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



Road Map

Sanctuary Dripping Springs

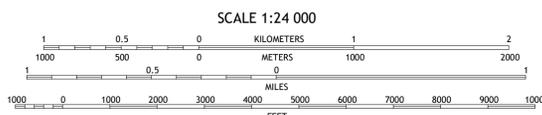
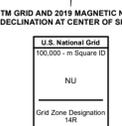
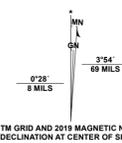
Dripping Springs, Texas
October 23



Produced by the United States Geological Survey

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

Imagery.....NAIP, September 2016 - November 2016
Roads.....U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018
Contours.....National Elevation Dataset, 2019
Boundaries.....Multiple sources; see metadata file 2019 - 2021
Wetlands.....FWS National Wetlands Inventory Not Available



CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
This map was produced to conform with the
National Geospatial Program US Topo Product Standard.



ADJOINING QUADRANGLES

1	2	3
4	5	6
7	8	

1 Hammetts Crossing
2 Shingle Hills
3 Bee Cave
4 Hensley
5 Signal Hill
6 Rough Hollow
7 Driftwood
8 Mountain City

ROAD CLASSIFICATION

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



ATTACHMENT C: Project Narrative

This project narrative has been prepared for the Texas Commission on Environmental Quality and is directly for the use of the proposed Sanctuary Dripping Springs development (the "Project"). The subject property containing the Project is located at 1111 Hays Country Aces rd, within the city of Dripping Springs ETJ. The development is proposed on a +/- 104.335-acre site that consist of one tax parcel.

The proposed improvements include roadway improvements, drainage improvements, and associated utilities. These proposed improvements will add impervious cover to the site. The proposed impervious cover is 25-acres of the total 104.335 acre site. Future development will be capped to bring a maximum of 25% impervious cover on site.

Areas within the project that are proposed to be demolished include 4 single family residential homes, ±69,500 SF of paved roadway, and ±60,500 SF of gravel roadway.

Water Quality Best Management Practices (BMP) for the Project will address the water quality requirements for the ultimate area disturbed. All drainage areas will utilize a retention-irrigation system which will utilize their own full-sedimentation retention basins to meet all water quality requirements per TCEQ requirements including a 10.89 off-site area draining onto the site.

ATTACHMENT D: Factors Affecting Surface Water Quality

No industrial associated activity discharges are expected for this proposed commercial development site. Surface water quality can be affected by disturbance during construction and by development after construction. Soil disturbance from clearing and grubbing and cut / fill operations can lead to discharge of sediment unless adequate temporary erosion control measures are in place. For this project, the use of silt fence, construction entrances, and rock berms will prevent sediment from leaving the site. Siltation collected by the control measures will be cleaned from fences, berms, etc. on a routine schedule as outlined in the SWPPP and contract specifications.

During construction, surface water quality may also be affected by a spill of hydrocarbons or other hazardous substances used in construction. The most likely instances of a spill of hydrocarbons or hazardous substances are:

- a) Refueling construction equipment.
- b) Oil and grease from the asphalt pavement and vehicle traffic.
- c) Performing operator-level maintenance, including adding petroleum, oils, or lubricants.
- d) Normal silt build-up.
- e) Unscheduled or emergency repairs, such as hydraulic fluid leaks.
- f) Trash which becomes loose from subdivision residents.
- g) Fertilizers used in the landscaping around the apartment buildings.

Every effort will be taken to be cautious and prevent spills. In the event of a fuel or hazardous substance spill as defined by the Reportable Quantities Table 1 (page 3) of the TCEQ's Small-Business Handbook for Spill Response (RG-285, June 1997), the contractor is required to clean up the spill and notify the TCEQ as required in RG-285. During business hours report spills to the TCEQ's Austin Regional Office at (512) 339-2929, after business hours call 1-800-832-8224, the Environmental Response Hotline or (512) 463-7727, the TCEQ Spill Reporting Hotline, which is also answered 24 hours a day.

After construction is complete, impervious cover for the tract of land is the major reason for degradation of water quality. Impervious cover includes the building foundations, street pavement and concrete sidewalks. Oil and fuel discharge from vehicles is anticipated. The proposed permanent BMPs on this project will help mitigate these occurrences.

ATTACHMENT E: Volume and Character of Stormwater

EXISTING HYDROLOGIC CONDITIONS ANALYSIS

The site has six existing on-site drainage areas and one offsite drainage area which outfall at six separate points of analysis (POA-1, POA-2, POA-3, POA-4, POA-5, and POA-6). Runoff from the existing drainage area DA-EX-1 flows from the center of the property to the north (POA-1). Runoff from the existing drainage area DA-EX-2 flows from the center of the property to the north (POA-2). Runoff from the existing drainage area DA-EX-3 flows from the center of the property to the northeast (POA-3). Runoff from the existing drainage area DA-EX-4 flows from the center of the property to the southeast (POA-4). Runoff from the existing offsite drainage area DA-EX-OFF4 flows from the south to the southeast (POA-4). Runoff from the existing drainage area DA-EX-5 flows from the center of the property to the south (POA-5). Runoff from the existing drainage area DA-EX-6 flows from the center of the property to the southwest (POA-6). The approach taken for the existing conditions of this site is to maintain the design peak flows to assure the downstream storm infrastructure can adequately convey the runoff and that the major point of confluence is not adversely affected. Table 4.1 below summarizes the existing drainage areas and the runoff produced for each storm event.

Table 4.1 Existing Drainage Areas Summary

EXISTING CONDITIONS							PEAK FLOWS AT POA			
DRAINAGE AREA	AREA (AC.)	IMPERVIOUS COVER	BASE CN	IMPERVIOUS CN	WEIGHTED CN	TC (MIN)*	Q2 (CFS)	Q10 (CFS)	Q25 (CFS)	Q100 (CFS)
DA-EX-1	17.56	1.3%	80	98	80.2	17.9	38.70	73.10	96.70	136.00
DA-EX-2	6.40	1.9%	80	98	80.3	11.5	16.70	31.60	41.70	58.70
DA-EX-3	18.51	1.3%	80	98	80.2	8.9	49.90	93.70	123.00	172.40
*DA-EX-4	36.82	1.6%	80	98	80.3	10.7	85.00	163.30	216.70	306.40
*DA-EX-OFF4	10.89	5.6%	--	--	--	--	--	--	--	--
*DA-EX-ON4	25.93	0.0%	--	--	--	--	--	--	--	--
DA-EX-5	29.85	3.7%	80	98	80.7	13.4	74.20	140.80	185.90	261.80
DA-EX-6	4.99	5.2%	80	98	80.9	10.0	13.70	25.50	33.40	46.70

*DA-EX-OFF4 AND DA-EX-ON4 FLOWS ARE COMBINED IN DA-EX-4

PROPOSED HYDROLOGIC CONDITIONS ANALYSIS

The proposed drainage areas consider the additional impervious cover added in the proposed development. The proposed drainage areas generally follow the same drainage paths as existing conditions. The existing and proposed drainage areas were analyzed at their respective points of analysis. In all analyzed storm events, 2-year, 10-year, 25-year and 100-year, no point of analysis increased in peak run-off in the developed condition.

The time of concentrations were calculated using the equations used in the City of Austin (COA DCM) for sheet flow, shallow concentrated flow, and channel flow. Zone 2 of the City of Austin 24-hour rainfall hyetographs (COA DCM) were used to define the 2, 10, 25, and 100-year rainfall events.

Proposed drainage areas correspond to their respective existing drainage areas by number. For example, DA-PR-2 is outfalling to the same point-of-analysis (POA-2) as DA-EX-2.

Table 4.2 Proposed Drainage Areas Summary

PROPOSED CONDITIONS							PEAK FLOWS AT POA (UNDETAINED)				PEAK FLOWS AT POA (DETAINED)			
DRAINAGE AREA	AREA (AC.)	IMPERVIOUS COVER	BASE CN	IMPERVIOUS CN	WEIGHTED CN	TC (MIN)*	Q2 (CFS)	Q10 (CFS)	Q25 (CFS)	Q100 (CFS)	Q2 (CFS)	Q10 (CFS)	Q25 (CFS)	Q100 (CFS)
DA-PR-1	17.33	25.0%	80	98	84.5	8.6	53.20	93.00	119.70	164.70	37.30	71.60	96.30	135.80
DA-PR-2	6.41	25.0%	80	98	84.5	5.6	23.30	41.40	53.40	73.70	15.40	27.40	37.30	53.30
DA-PR-3	17.66	25.0%	80	98	84.5	8.8	54.30	95.00	122.30	168.30	49.20	92.40	119.90	165.90
DA-PR-4	37.62	19.4%	80	98	83.5	5.0	133.90	241.40	312.70	434.10	81.70	158.10	212.20	303.10
*DA-PR-OFF4	10.89	5.6%	--	--	--	--	--	--	--	--	--	--	--	--
DA-PR-ON4	26.73	25.0%	--	--	--	--	--	--	--	--	--	--	--	--
DA-PR-5	30.94	25.0%	80	98	84.5	11.3	93.00	163.90	211.50	291.90	70.50	137.20	181.00	252.40
DA-PR-6	4.66	25.0%	80	98	84.5	5.0	17.60	31.20	40.20	55.50	14.20	25.60	33.60	46.60

* OFFSITE FLOWS FROM DA-PR-OFF4 ARE ROUTED TO POND 4

ATTACHMENT F: Suitability Letter From Authorized Agent

This attachment is not applicable. All lots are greater than 1 acre (1.6 AC minimum). All OSSF permitting is being conducted through Hays County.

ATTACHMENT G: Alternative Secondary Containment Methods

This attachment is not applicable. No alternative secondary containment methods will be utilized.

ATTACHMENT H: AST Containment Structure Drawings

This attachment is not applicable. No ASTs will be utilized.

ATTACHMENT I: 20% or Less Impervious Cover Waiver

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

ATTACHMENT J: BMPs for Upgradient Stormwater

All stormwater from offsite drainage area DA-PR-OFF4 is being detained in Pond 4 and accounted for in the drainage calculations. All other offsite drainage that originates upgradient of this site is flowing through the site undisturbed.

No groundwater originates upgradient from the site and flows across the site.

ATTACHMENT K: BMPs for On-site Stormwater

Six on-site drainage areas and an offsite drainage area totaling 152.24-acres are accounted for. All drainage areas will utilize a retention-irrigation system which will utilize their own full-sedimentation retention basins to meet all water quality requirements per TCEQ requirements.

See calculations below from the TCEQ provided template spreadsheets. These calculations can also be found on the construction documents.

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_{N1} \times P)$

where: $L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed development = 80% of increased load
 A_{N1} = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
 County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches

$L_{M \text{ TOTAL PROJECT}}$ = **21156** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **1**
 Total drainage basin/outfall area = **17.33** acres
 Predevelopment impervious area within drainage basin/outfall area = **0.20** acres
 Post-development impervious area within drainage basin/outfall area = **4.33** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 $L_{M \text{ THIS BASIN}}$ = **3709** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
 Removal efficiency = **100** percent

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

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_1 \times 34.6 + A_P \times 0.54)$

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_1 = Impervious area proposed in the BMP catchment area
 A_P = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **17.33** acres
 A_1 = **4.33** acres
 A_P = **13.00** acres
 L_R = **5178** lbs

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

Desired $L_{M \text{ THIS BASIN}}$ = **3709** lbs.

F = **0.72**

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

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = **0.83** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **12103** cubic feet

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

Off-site area draining to BMP = **0.00** acres
 Off-site Impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **2421**
 Total Capture Volume (required water quality volume(s) x 1.20) = **14524** cubic feet

7. Retention/Irrigation System

Designed as Required in RG-348

Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **14524** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr **Enter determined permeability rate or assumed value of 0.1**
 Irrigation area = **58097** square feet
1.33 acres

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

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

where: $L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
 County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches

$L_{M \text{ TOTAL PROJECT}}$ = **21156** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **2**
 Total drainage basin/outfall area = **6.41** acres
 Predevelopment impervious area within drainage basin/outfall area = **0.12** acres
 Post-development impervious area within drainage basin/outfall area = **1.60** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 $L_{M \text{ THIS BASIN}}$ = **1331** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
 Removal efficiency = **100** percent

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

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_1 \times 34.6 + A_P \times 0.54)$

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_1 = Impervious area proposed in the BMP catchment area
 A_P = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **6.41** acres
 A_1 = **1.60** acres
 A_P = **4.81** acres
 L_R = **1915** lbs

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

Desired $L_{M \text{ THIS BASIN}}$ = **1331** lbs.

F = **0.69**

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

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = **0.75** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **4036** cubic feet

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

Off-site area draining to BMP = **0.00** acres
 Off-site Impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **807**
 Total Capture Volume (required water quality volume(s) x 1.20) = **4843** cubic feet

7. Retention/Irrigation System

Designed as Required in RG-348

Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **4843** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr **Enter determined permeability rate or assumed value of 0.1**
 Irrigation area = **19371** square feet
0.44 acres

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

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

where: $L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
 County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches

$L_{M \text{ TOTAL PROJECT}}$ = **21156** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **3**
 Total drainage basin/outfall area = **17.66** acres
 Predevelopment impervious area within drainage basin/outfall area = **0.24** acres
 Post-development impervious area within drainage basin/outfall area = **4.42** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 $L_{M \text{ THIS BASIN}}$ = **3747** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
 Removal efficiency = **100** percent

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

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_1 \times 34.6 + A_P \times 0.54)$

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_1 = Impervious area proposed in the BMP catchment area
 A_P = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **17.66** acres
 A_1 = **4.42** acres
 A_P = **13.25** acres
 L_R = **5277** lbs

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

Desired $L_{M \text{ THIS BASIN}}$ = **3747** lbs.

F = **0.71**

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

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = **0.80** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **11919** cubic feet

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

Off-site area draining to BMP = **0.00** acres
 Off-site Impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **2384**
 Total Capture Volume (required water quality volume(s) x 1.20) = **14303** cubic feet

7. Retention/Irrigation System

Designed as Required in RG-348

Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **14303** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr **Enter determined permeability rate or assumed value of 0.1**
 Irrigation area = **57211** square feet
1.31 acres

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

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

where: $L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
 County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches

$L_{M \text{ TOTAL PROJECT}}$ = **21156** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **4**
 Total drainage basin/outfall area = **26.73** acres
 Predevelopment impervious area within drainage basin/outfall area = **0.61** acres
 Post-development impervious area within drainage basin/outfall area = **6.68** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 $L_{M \text{ THIS BASIN}}$ = **5451** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
 Removal efficiency = **100** percent

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

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_1 \times 34.6 + A_P \times 0.54)$

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_1 = Impervious area proposed in the BMP catchment area
 A_P = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **26.73** acres
 A_1 = **6.68** acres
 A_P = **20.05** acres
 L_R = **7987** lbs

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

Desired $L_{M \text{ THIS BASIN}}$ = **5451** lbs.

F = **0.68**

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

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = **0.73** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **16402** cubic feet

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

Off-site area draining to BMP = **10.89** acres
 Off-site Impervious cover draining to BMP = **0.61** acres
 Impervious fraction of off-site area = **0.06**
 Off-site Runoff Coefficient = **0.08**
 Off-site Water Quality Volume = **2399** cubic feet

Storage for Sediment = **3760**
 Total Capture Volume (required water quality volume(s) x 1.20) = **22562** cubic feet

7. Retention/Irrigation System

Designed as Required in RG-348

Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **22562** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr **Enter determined permeability rate or assumed value of 0.1**
 Irrigation area = **90246** square feet
2.07 acres

TSS Removal Calculations 04-20-2009

Project Name: **The Sanctuary - Pond 5**
 Date Prepared: **10/9/2023**

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

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

where: $L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
 County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches

$L_{M \text{ TOTAL PROJECT}} = 21156$ lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **5**
 Total drainage basin/outfall area = **30.94** acres
 Predevelopment impervious area within drainage basin/outfall area = **1.15** acres
 Post-development impervious area within drainage basin/outfall area = **7.74** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 $L_{M \text{ THIS BASIN}} = 5911$ lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
 Removal efficiency = **100** percent

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

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

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

$A_C = 30.94$ acres
 $A_i = 7.74$ acres
 $A_p = 23.21$ acres
 $L_R = 9245$ lbs

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

Desired $L_{M \text{ THIS BASIN}} = 5911$ lbs.
 F = **0.64**

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

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = **0.66** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **17012** cubic feet

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

Off-site area draining to BMP = **0.00** acres
 Off-site Impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **3402**
Total Capture Volume (required water quality volume(s) x 1.20) = 20414 cubic feet

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

7. Retention/Irrigation System

Designed as Required in RG-348

Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **20414** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr **Enter determined permeability rate or assumed value of 0.1**
 Irrigation area = **81657** square feet
1.87 acres

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

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

where: $L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
County = **Hays**
Total project area included in plan = **104.34** acres
Predevelopment impervious area within the limits of the plan = **2.52** acres
Total post-development impervious area within the limits of the plan = **26.09** acres
Total post-development impervious cover fraction = **0.25**
 P = **33** inches

$L_{M \text{ TOTAL PROJECT}}$ = **21156** lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **6**
Total drainage basin/outfall area = **4.66** acres
Predevelopment impervious area within drainage basin/outfall area = **0.20** acres
Post-development impervious area within drainage basin/outfall area = **1.17** acres
Post-development impervious fraction within drainage basin/outfall area = **0.25**
 $L_{M \text{ THIS BASIN}}$ = **866** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
Removal efficiency = **100** percent

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

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

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **4.66** acres
 A_i = **1.17** acres
 A_p = **3.50** acres
 L_R = **1392** lbs

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

Desired $L_{M \text{ THIS BASIN}}$ = **866** lbs.
 F = **0.62**

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

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = **0.62** inches
Post Development Runoff Coefficient = **0.23**
On-site Water Quality Volume = **2414** cubic feet

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

Off-site area draining to BMP = **0.00** acres
Off-site Impervious cover draining to BMP = **0.00** acres
Impervious fraction of off-site area = **0**
Off-site Runoff Coefficient = **0.00**
Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **483**
Total Capture Volume (required water quality volume(s) x 1.20) = **2896** cubic feet

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

7. Retention/Irrigation System

Designed as Required in RG-348

Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **2896** cubic feet

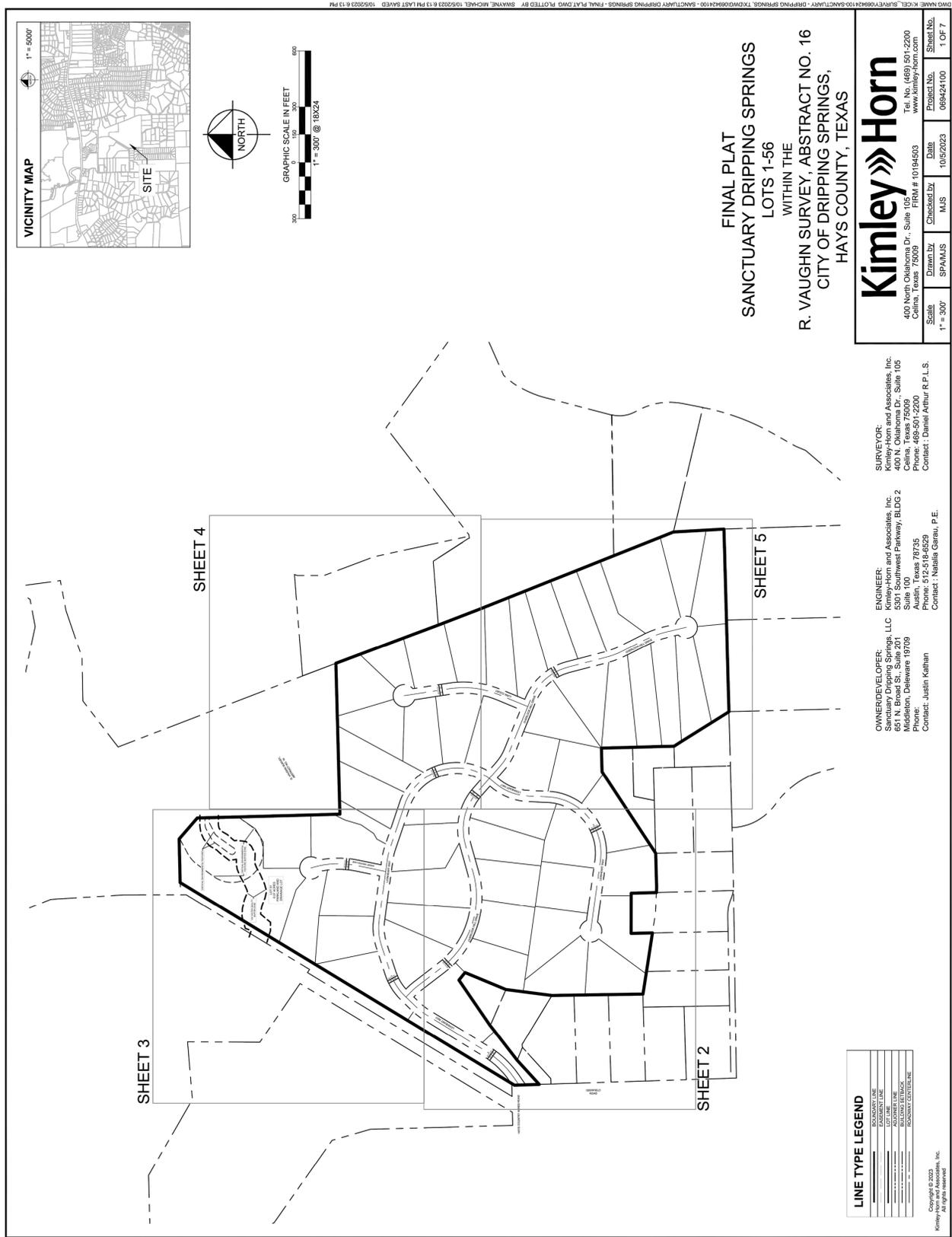
Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr Enter determined permeability rate or assumed value of 0.1
Irrigation area = **11585** square feet
0.27 acres

ATTACHMENT L: BMPs for Surface Streams

There are no perennial surface streams on the site. The intermittent stream and buffer on the north end of the site are not impacted by the proposed development. Drainage contributing to the intermittent stream is treated for water quality and detained to match existing flow rates by the proposed ponds.

ATTACHMENT M: Construction Plans



LINE TYPE LEGEND

- BOUNDARY LINE
- EASEMENT LINE
- ADJACENT LINE
- ADJACENT CENTERLINE
- BOUNDARY CENTERLINE

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OWNER/DEVELOPER:
 Sanctuaries LLC
 851 N. Broad St., Suite 201
 Middleton, Delaware 19709
 Phone: 489-501-2200
 Contact: Justin Kathan

ENGINEER:
 Kimley-Horn and Associates, Inc.
 5301 Southwest Parkway, BLDG 2
 Suite 100
 Austin, Texas 78735
 Contact: Natalia Garau, P.E.

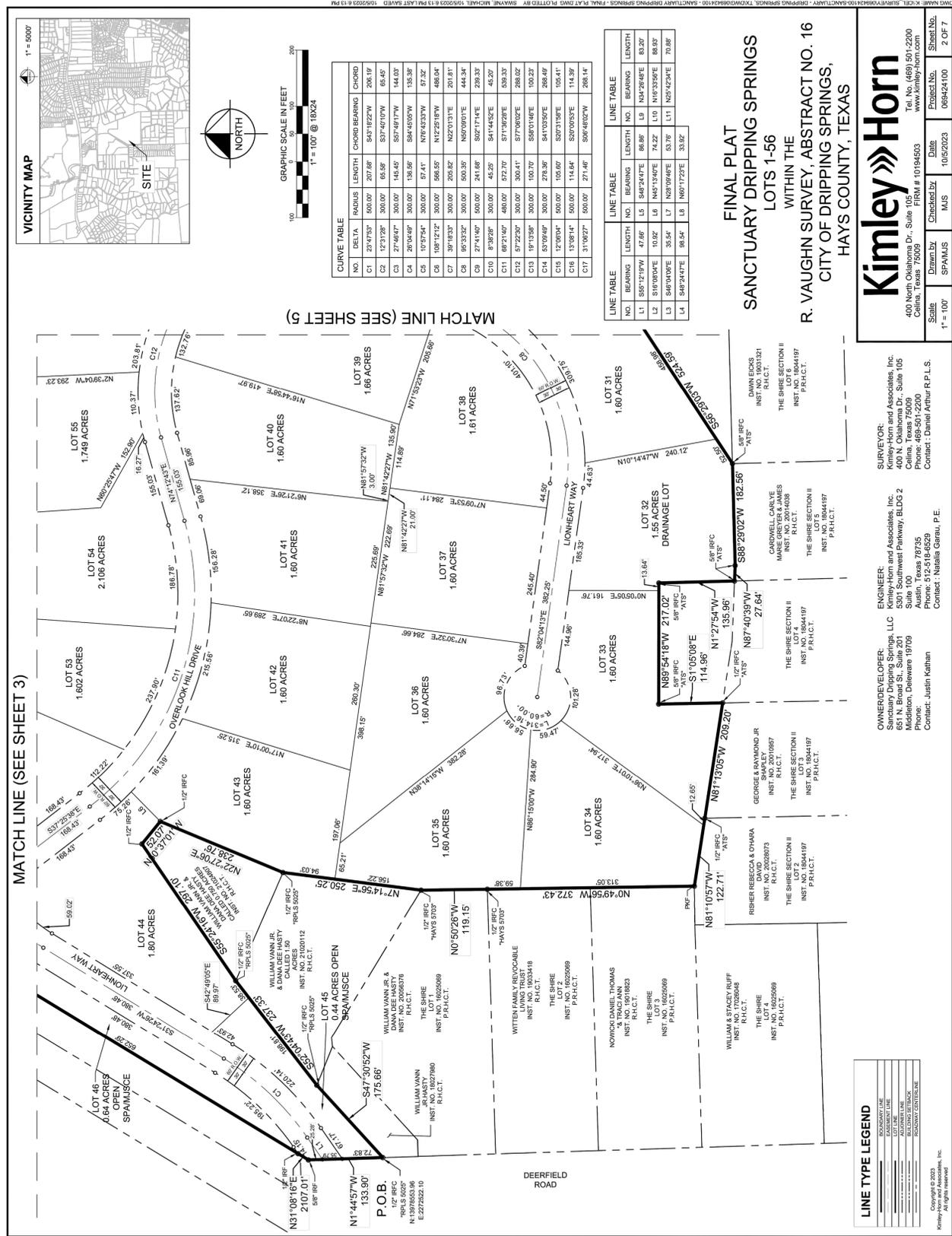
SURVEYOR:
 Kimley-Horn and Associates, Inc.
 400 N. Oklahoma Dr., Suite 105
 Celina, Texas 75009
 Phone: 469-501-2200
 Contact: Daniel Arthur R.P.L.S.

FINAL PLAT
SANCTUARY DRIPPING SPRINGS
LOTS 1-56
 WITHIN THE
R. VAUGHN SURVEY, ABSTRACT NO. 16
CITY OF DRIPPING SPRINGS,
HAYS COUNTY, TEXAS

Kimley-Horn

400 North Oklahoma Dr., Suite 105
 Celina, Texas 75009
 Firm # 01945603
 www.kimley-horn.com

Scale: 1" = 300'
 Drawn by: SPAMJMS
 Checked by: NJS
 Date: 10/05/2023
 Project No.: 069424100
 Sheet No.: 1 OF 7



LINE TYPE LEGEND

- BOUNDARY LINE
- EASEMENT LINE
- ADJACENT LINE
- ADJACENT CENTERLINE
- BOUNDARY CENTERLINE

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 Contact: Natalia Garau, P.E.

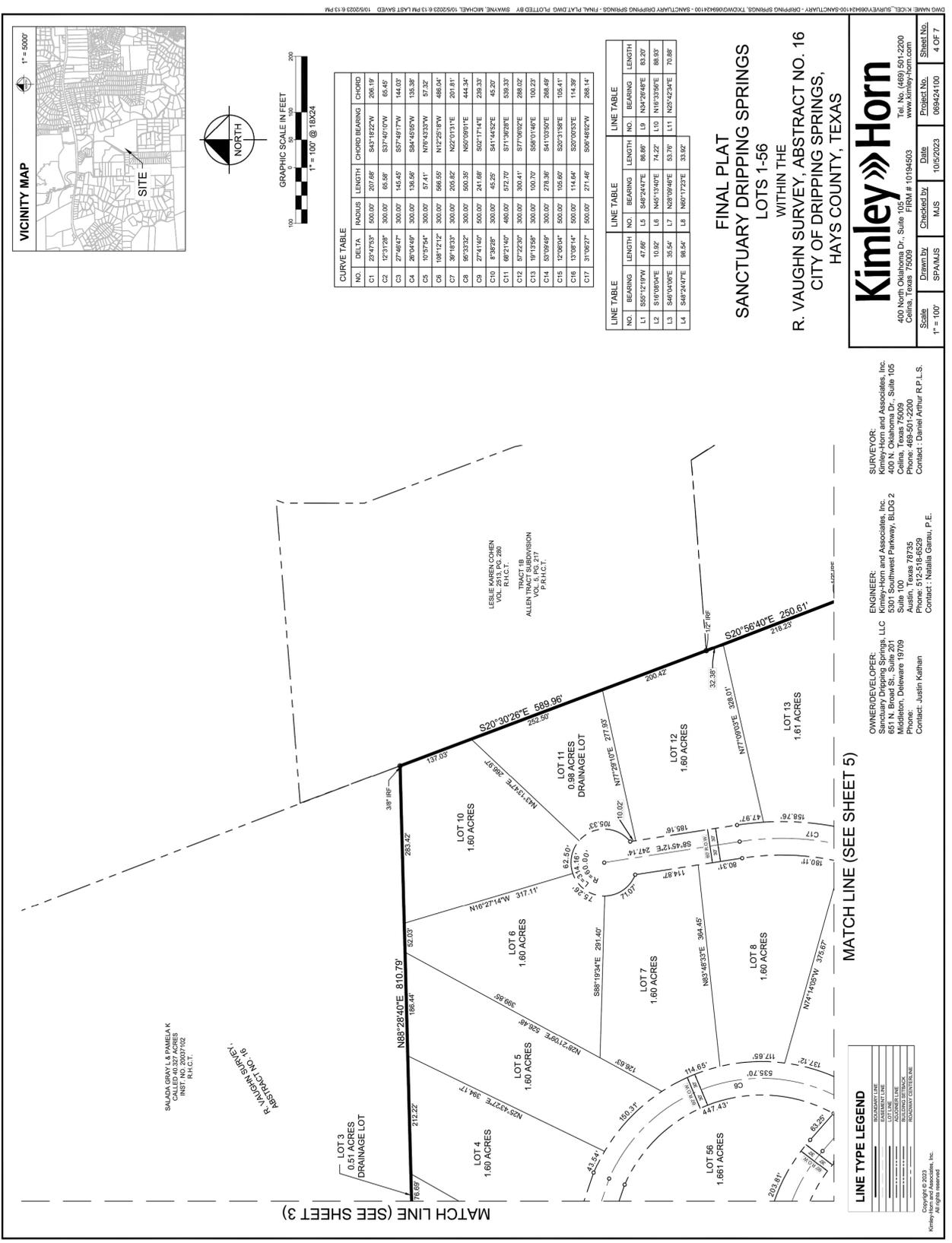
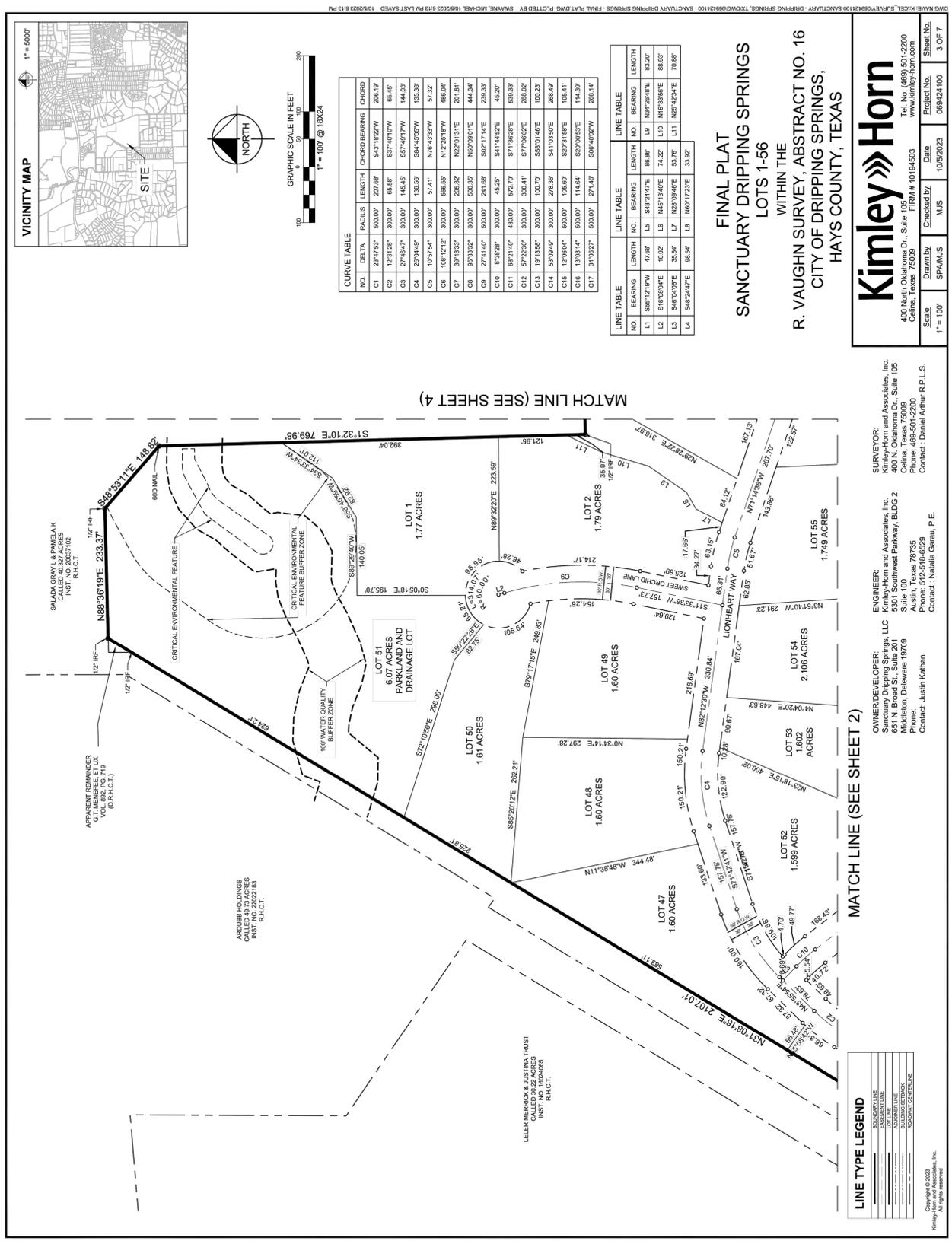
SURVEYOR:
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FINAL PLAT
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R. VAUGHN SURVEY, ABSTRACT NO. 16
CITY OF DRIPPING SPRINGS,
HAYS COUNTY, TEXAS

Kimley-Horn

400 North Oklahoma Dr., Suite 105
 Celina, Texas 75009
 Firm # 01945603
 www.kimley-horn.com

Scale: 1" = 100'
 Drawn by: SPAMJMS
 Checked by: NJS
 Date: 10/05/2023
 Project No.: 069424100
 Sheet No.: 2 OF 7



KNOW ALL MEN BY THESE PRESENTS
THAT WE, OWNER, AS OWNER OF 104.27 ACRES BEING ALL OF THAT TRACT OF LAND IN HAYS COUNTY, TEXAS, DESCRIBED AS BEING THE TRACT OF LAND IN HAYS COUNTY, TEXAS, CONVEYED TO SERENITY HILLS PARTNERS LLC, IN A GENERAL WARRANTY DEED DATED JUNE 29, 2022 AND RECORDED IN DOCUMENT NO. 22032944 OF THE PUBLIC RECORDS OF HAYS COUNTY, TEXAS, HAVE HEREBY APPROVED THIS FINAL PLAT DESIGNATING THE _____ ACRE TRACT AS SERENITY DRIPPING SPRINGS, AN ADDITION TO HAYS COUNTY, AND DO HEREBY DEDICATE TO THE USE OF THE PUBLIC RECORDS OF HAYS COUNTY, TEXAS, THE PARCELS SHOWN ON THESE EASEMENTS AND FINAL PLAT, PLACES KNOWN AS SERENITY DRIPPING SPRINGS, AS INDICATED EITHER BY PLAT OR SEPARATE INSTRUMENT, AND THAT THIS PLAT IS SUBJECT TO ALL OF THE REQUIREMENTS OF THE SUBDIVISION REGULATIONS OF THE CITY OF DRIPPING SPRINGS AND THE COUNTY OF HAYS, TEXAS.

WITNESS MY HAND THIS _____ DAY OF _____, 20____.

NAME _____
ADDRESS _____

STATE OF TEXAS §
COUNTY OF _____ §

Before me, the undersigned authority, a Notary Public in and for said County and State, on this day personally appeared _____ known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and considerations therein expressed.

Given under my hand and seal of office, this _____ day of _____, 20____.

Notary Public in and for the State of Texas

My Commission expires on: _____

No structure in this subdivision shall be occupied, until connected to an individual water supply or wastewater collection system. Due to existing water supply, prospective property owners are cautioned by Hays County to question the seller concerning ground water availability. Rain water collection is encouraged and, in some areas, may offer the best renewable water resource.

No structure in this subdivision shall be occupied until connected to a permitted sewer system or to an on-site wastewater system that has been approved and permitted by Hays County.

No construction or development within the subdivision may begin until all Hays County Development Authorization requirements have been satisfied.

MARCUS RACHECO, DIRECTOR
HAYS COUNTY DEVELOPMENT SERVICES
ERIC VAN GAASBEEK, R.S., CFM
HAYS COUNTY FLOODPLAIN
ADMINISTRATOR

STATE OF TEXAS §
COUNTY OF COLLIN §

KNOW ALL MEN BY THESE PRESENTS

That I, Daniel Arthur, a Registered Professional Land Surveyor in the State of Texas, do hereby certify that I prepared this plat and the field notes made a part thereof from an actual survey of the premises shown hereon and that the corner monuments shown thereon were properly placed under my supervision.

Daniel Arthur
Registered Professional Land Surveyor
Texas Registration No. 5933
Kimley-Horn and Associates, Inc.
400 North Oklahoma Drive, Suite 105
Celina, Texas 75009
(469) 501-2200
daniel.arthur@kimley-horn.com

PRELIMINARY

THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL BE REVIEWED OR BELIEVED UPON AS A FINAL SURVEY DOCUMENT

STATE OF TEXAS §
COUNTY OF COLLIN §

Before me, the undersigned authority, a Notary Public in and for said County and State, on this day personally appeared _____ known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose and considerations therein expressed.

Given under my hand and seal of office, this _____ day of _____, 2023.

Notary Public in and for the State of Texas

My Commission expires on: _____

STATE OF TEXAS §
COUNTY OF COLLIN §

I, ELAINE CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, CERTIFY THAT ON THE _____ DAY OF _____ A.D., 20____ THE COMMISSIONERS COURT OF HAYS COUNTY, TEXAS PASSED AN ORDER AUTHORIZING THE FILING FOR RECORD OF THIS PLAT AND SAID ORDER HAS BEEN DULY ENTERED IN THE MINUTES OF SAID COURT IN HAYS COUNTY INSTRUMENT NUMBER _____

REBECCA BECERRA
COUNTY JUDGE
HAYS COUNTY, TEXAS

ELAINE H. CARDENAS
COUNTY CLERK
HAYS COUNTY, TEXAS

STATE OF TEXAS §
COUNTY OF HAYS §

I, ELAINE CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, DO HEREBY CERTIFY THAT THIS PLAT WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 20____ AT _____ O'CLOCK _____ M. AND DULY

RECORDED ON THE _____ DAY OF _____, 20____ AT _____ O'CLOCK _____ M. IN THE PLAT RECORDS OF HAYS COUNTY, TEXAS IN HAYS COUNTY INSTRUMENT NUMBER _____

ELAINE CARDENAS
COUNTY CLERK
HAYS COUNTY, TEXAS

FINAL PLAT
SANCTUARY DRIPPING SPRINGS
WITHIN THE
LOTS 1-56
R. VAUGHN SURVEY, ABSTRACT NO. 16
CITY OF DRIPPING SPRINGS,
HAYS COUNTY, TEXAS

Kimley»Horn

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Scale	N/A	Drawn By	SP/AMJS	Checked By	NJS	Date	10/5/2023	Project No.	069424100	Sheet No.	7 OF 7
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SURVEYOR:
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400 N. Oklahoma Dr., Suite 105
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Phone: 469-501-2200
Contact: Daniel Arthur R.P.L.S.

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5301 Southwest Parkway, BLDG 2
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Phone: 512-316-6529
Contact: Natalia Garza, P.E.

OWNER/DEVELOPER:
Serenity Hills, LLC
851 N. Broad St., Suite 201
Middletown, Delaware 19709
Phone: _____
Contact: Justin Kathun

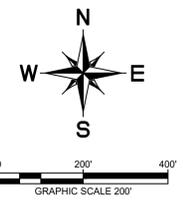
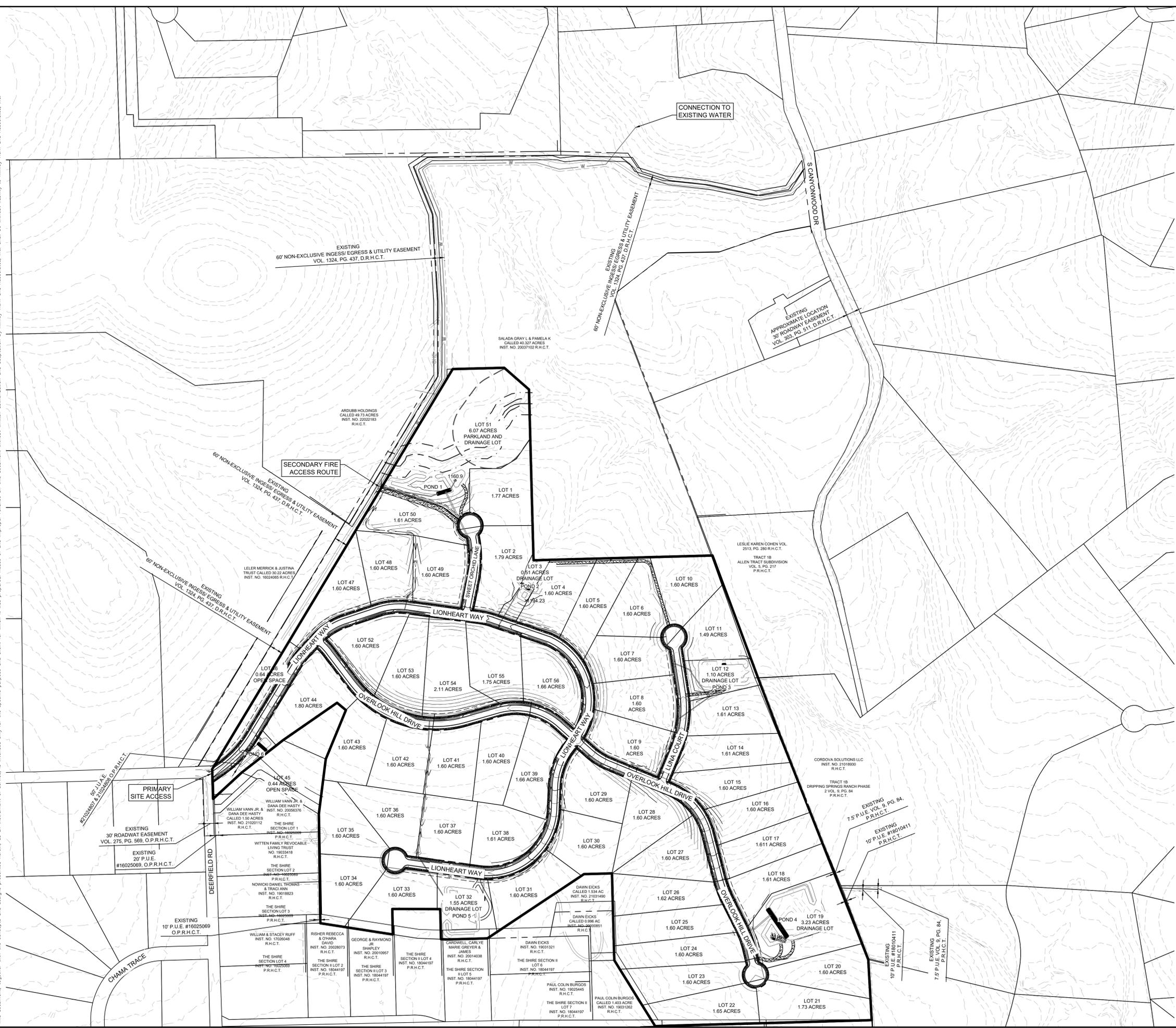
KHA PROJECT	069424100
DATE	10/19/2023
SCALE	AS SHOWN
DESIGNED BY	LE
DRAWN BY	LE
CHECKED BY	NG



10/19/2023

KIMLEY-HORN AND ASSOCIATES, INC. (KHA) PROJECT 069424100 DATE 10/19/2023 SCALE: AS SHOWN DESIGNED BY: LE DRAWN BY: LE CHECKED BY: NG	<p>GENERAL NOTES</p> <p>OVERALL:</p> <ol style="list-style-type: none"> 1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY (OR TOWN) STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE MORE RESTRICTIVE SPECIFICATION SHALL APPLY. 2. THE CONTRACTOR SHALL COMPLY WITH CITY (OR TOWN) "GENERAL NOTES" FOR CONSTRUCTION, IF EXISTING AND REQUIRED BY THE CITY. AREAS FOR CONFLICTING SPECIFICATIONS SHALL BE IDENTIFIED AND THE MORE RESTRICTIVE SHALL APPLY. 3. THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE AUTHORITIES' SPECIFICATIONS AND REQUIREMENTS. 4. SOIL CONDITIONS AND UTILITIES SHALL BE VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS SHOWN ON THESE PLANS WERE PROVIDED BY THE TOPOGRAPHIC SURVEY PREPARED BY THE PROJECT SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS. 5. THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS REPRESENTS EXISTING CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER IMMEDIATELY. 6. IF THE CONTRACTOR DOES NOT ACCEPT THE EXISTING TOPOGRAPHIC SURVEY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL PROVIDE A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL LAND SURVEYOR TO THE OWNER AND ENGINEER FOR REVIEW. 7. THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING AND STAKING. 8. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL, INCLUDING BENCHMARKS PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS. PROPERTY LINES AND CORNERS SHALL BE HELD AS THE HORIZONTAL CONTROL. 9. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ARCHITECT, ENGINEER, AND IF APPLICABLE THE CITY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE CITY, ENGINEER, AND OWNER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM. 10. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WORK. 11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES IN THE WORK AREA PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. 12. CONTRACTOR SHALL CALL TEXAS 811 AN ADEQUATE AMOUNT OF TIME PRIOR TO COMMENCING CONSTRUCTION OR ANY EXCAVATION. THE CONTRACTOR SHALL USE EXTREME CAUTION AS THEY WILL ASSUME RESPONSIBILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR CONTRACTOR TO USE FOR THE PROJECT. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY. 13. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY ADJUSTMENTS AND RELOCATIONS OF EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO ADJUSTING EXISTING MANHOLES TO MATCH PROPOSED GRADE. RELOCATING EXISTING POLES AND GUY WIRES THAT ARE LOCATED IN PROPOSED DRIVEWAYS, ADJUSTING THE HORIZONTAL OR VERTICAL ALIGNMENT OF EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE PROPOSED GRADE OR CROSSING WITH PROPOSED UTILITY, AND ANY OTHERS THAT MAY BE ENCOUNTERED THAT ARE UNKNOWN AT THIS TIME AND NOT SHOWN ON THESE PLANS. 14. CONTRACTOR SHALL ARRANGE FOR OR PROVIDE, AT ITS EXPENSE, ALL GAS, TELECOMMUNICATIONS, CABLE, OVERHEAD AND UNDERGROUND POWER LINES, AND UTILITY POLE ADJUSTMENTS NEEDED TO ACCOMMODATE THE PROPOSED IMPROVEMENTS. 15. CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF FRANCHISE UTILITIES THAT ARE NECESSARY FOR ON-SITE AND OFF-SITE CONSTRUCTION, AND SERVICE TO THE PROPOSED DEVELOPMENT. 16. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES DUE TO THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR CONTRACTOR TO USE FOR THE PROJECT. 17. BRACING OF UTILITY POLES MAY BE REQUIRED BY THE UTILITY COMPANIES WHEN TRENCHING OR EXCAVATING IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR, WITH NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE PAY ITEM. 18. CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL AND UTILITY OWNER REGULATIONS PERTAINING TO WORK SETBACKS FROM POWER LINES. 19. CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS, APPROVALS, AND BONDS PRIOR TO CONSTRUCTION. 20. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS. 21. ALL SHOP DRAWINGS AND OTHER DOCUMENTS THAT REQUIRE ENGINEER REVIEW SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF CONSTRUCTION OF THAT ITEM, SO THAT NO LESS THAN 10 BUSINESS DAYS FOR REVIEW AND RESPONSE IS AVAILABLE. 22. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES, AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO USE OF THE FACILITY AND THE FINAL CONNECTION OF SERVICES. 23. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS. 24. CONTRACTORS BID PRICE SHALL INCLUDE ALL INSPECTION FEES. 25. ALL SYMBOLS SHOWN ON THESE PLANS (E.G. FIRE HYDRANT, METERS, VALVES, INLETS, ETC...) ARE FOR PRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE. CONTRACTOR SHALL COORDINATE FINAL SIZES AND LOCATIONS WITH APPROPRIATE CITY INSPECTOR. 26. THE SCOPE OF WORK TERMINATES AT THE PROPERTY BOUNDARY CONTROL PLAN, SURVEY BOUNDARY AND/OR PLAT. ANY DIFFERENCES FOUND SHALL BE REPORTED TO KH IMMEDIATELY. 27. ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA. 28. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIALS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL MATERIALS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND COMPLY WITH CITY STANDARD SPECIFICATIONS AND GEOTECHNICAL REPORT. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING MATERIALS. OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR TESTING MATERIALS. 29. ALL COPIES OF MATERIALS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY. 30. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS. 31. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORTS RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO PLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO PLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING. 32. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA, NO ENCROACHMENTS OUTSIDE OF THE WORK AREA WILL BE ALLOWED. ANY DAMAGE RESULT THEREFROM SHALL BE CONTRACTORS SOLE RESPONSIBILITY TO REPAIR AND RESTORE TO ORIGINAL CONDITION OR BETTER. 33. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, UTILITIES, MANHOLES, POLES, GUY WIRES, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, COMMUNICATION BOXES/PEDESTALS, AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR ANY DAMAGES AT NO COST TO THE OWNER. 34. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY OR PUBLIC IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCES, WALLS, SIGNS, PAVEMENT, CURBS, UTILITIES, SIDEWALKS, GRASS, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS, ETC... TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER. 35. ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY SITE CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER, INCLUDING AS NECESSARY GRADING, LANDSCAPING, CULVERTS, AND PAVEMENT. 36. THE CONTRACTOR SHALL SALVAGE ALL EXISTING POWER POLES, SIGNS, WATER VALVES, FIRE HYDRANTS, METERS, ETC... THAT ARE TO BE RELOCATED DURING CONSTRUCTION. 37. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES. 38. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY. 39. ALL TRENCHES SHALL BE KEPT TRENCHES FREE FROM WATER AND DEBRIS. 40. SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. 41. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE ENGINEERS SEAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL REQUIRED SAFETY PROCEDURES AND PROGRAMS. 42. SIGNS RELATED TO SITE OPERATION OR SAFETY ARE NOT INCLUDED IN THESE PLANS. 43. CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNINGS OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS. 44. LIGHT POLES, SIGNS, AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN ACCESSIBLE ROUTES. 45. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". 46. TOP RIM ELEVATIONS OF ALL EXISTING AND PROPOSED MANHOLES SHALL BE COORDINATED WITH TOP OF PAVEMENT OR FINISHED GRADE AND SHALL BE ADJUSTED TO BE FLUSH WITH THE ACTUAL FINISHED GRADE AT THE TIME OF PAVING. 47. CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED VALVES, FIRE HYDRANTS, AND OTHER UTILITY APPURTENANCES TO MATCH ACTUAL FINISHED GRADES AT THE TIME OF PAVING. 48. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND PHASING, AND SHALL CONTACT THE APPROPRIATE CITY OFFICIALS, INCLUDING BUILDING OFFICIAL, ENGINEERING INSPECTOR, AND FIRE MARSHAL TO LEARN OF ANY REQUIREMENTS. 49. CONTRACTOR IS RESPONSIBLE FOR PREPARATION, SUBMITTAL, AND APPROVAL BY THE CITY OF A TRAFFIC CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION, AND THEN THE IMPLEMENTATION OF THE PLAN. 50. CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS. 51. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION. <p>EROSION CONTROL:</p> <ol style="list-style-type: none"> 1. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS, LAWS, AND ORDINANCES THAT APPLY TO THE CONSTRUCTION SITE AND DISTURBANCE. 2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE "TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TRX 15000". 3. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE. 4. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT. 5. CONTRACTOR IS SOLELY RESPONSIBLE FOR INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL EROSION CONTROL DEVICES, BEST MANAGEMENT PRACTICES (BMPs), AND FOR UPDATING THE EROSION CONTROL PLAN DURING CONSTRUCTION AS FIELD CONDITIONS CHANGE. 6. CONTRACTOR SHALL DOCUMENT THE DATES OF INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL FOR EACH BMP EMPLOYED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE. 7. AS STORM SEWER INLETS ARE INSTALLED ON-SITE, TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED AT EACH INLET PER APPROVED DETAILS. 8. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE AREA IT PROTECTS HAS BEEN PERMANENTLY STABILIZED. 9. CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL DEVICES NEEDED DUE TO PROJECT PHASING. 10. CONTRACTOR SHALL OBSERVE THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES AND MAKE FIELD ADJUSTMENTS AND MODIFICATIONS AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE SITE. IF THE EROSION CONTROL DEVICES DO NOT <p>EFFECTIVELY CONTROL EROSION AND PREVENT SEDIMENTATION FROM WASHING OFF THE SITE, THEN THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AND THE PRESERVATION PLANS FOR ALL INFORMATION AND DETAILS REGARDING EXISTING TREES TO BE REMOVED AND PRESERVED.</p> <ol style="list-style-type: none"> 11. OFF-SITE SOIL BORROW, SPOIL, AND STORAGE AREAS (IF APPLICABLE) ARE CONSIDERED AS PART OF THE PROJECT SITE AND MUST ALSO COMPLY WITH THE EROSION CONTROL REQUIREMENTS FOR THIS PROJECT. THIS INCLUDES THE INSTALLATION OF BMPs TO CONTROL EROSION AND SEDIMENTATION, THE ESTABLISHMENT OF PERMANENT GRASS COVER ON DISTURBED AREAS PRIOR TO ANY CONSTRUCTION, AND THE PROVISION OF EROSION CONTROL DEVICES TO PREVENT EROSION AND SEDIMENTATION. 12. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY. 13. CONTRACTORS SHALL INSPECT ALL EROSION CONTROL DEVICES, BMPs, DISTURBED AREAS, AND VEHICLE ENTRY AND EXIT AREAS FOR EROSION AND SEDIMENTATION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY. 14. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS IN ACCORDANCE WITH CITY SPECIFICATIONS. CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION TRAFFIC USES THE STABILIZED ENTRANCE AT THE TOP AND BOTTOM OF THE HILL. 15. SITE ENTRY AND EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING AND FLOWING OF SEDIMENT AND DIRT ONTO OFF-SITE ROADWAYS. ALL SEDIMENT AND DIRT FROM THE SITE THAT IS DEPOSITED ONTO AN OFF-SITE ROADWAY SHALL BE REMOVED FROM THE SITE. 16. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SILT AND DEBRIS FROM THE DEPOSITED OFF-SITE ROADWAYS THAT ARE A RESULT OF THE CONSTRUCTION, AS REQUESTED BY OWNER AND CITY. AT A MINIMUM, THIS SHOULD OCCUR ONCE PER DAY FOR THE OFF-SITE ROADWAYS. 17. WASHING OF VEHICLES IS REQUIRED TO REMOVE SEDIMENT PRIOR TO EXITING THE SITE. IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP BMP. 18. CONTRACTOR SHALL INSTALL A TEMPORARY SEDIMENT BASIN FOR ANY ON-SITE DRAINAGE AREAS THAT ARE GREATER THAN 10 ACRES, PER CITY AND CITY STANDARDS. IF NO ENGINEERING DESIGN HAS BEEN PROVIDED FOR A SEDIMENTATION BASIN ON THESE PLANS, THEN THE CONTRACTOR SHALL ARRANGE FOR AN APPROPRIATE DESIGN TO BE PROVIDED. 19. ALL FINES IMPOSED FOR SEDIMENT OR DIRT DISCHARGED FROM THE SITE SHALL BE PAID BY THE RESPONSIBLE CONTRACTOR. 20. WHEN SEDIMENT OR DIRT HAS CLOGGED THE CONSTRUCTION ENTRANCE VOID SPACES BETWEEN STONES OR DIRT IS BEING TRACKED OFF-SITE, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY AND REMOVE THE CLOGGING MATERIAL. SEDIMENTATION SHALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BMP TO CONTROL SEDIMENTATION. PERIODIC RE-GRADING OR NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE. 21. NEAR THE CONSTRUCTION AREA, THE CONTRACTOR SHALL LOCATE THEIR OPERATIONS AND STORAGE AREAS TO AVOID DISTURBANCE OF ANY AREA, UNLESS A DEDICATED CONSTRUCTION IN THE AREA IS EXPECTED WITHIN 21 DAYS OF THE LAST DISTURBANCE. 22. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING CONSTRUCTION, ALWAYS CLEANING UP DIRT, LOOSE MATERIAL, AND TRASH AS CONSTRUCTION PROGRESSES. 23. UPON COMPLETION OF FINE GRADING, ALL PORTIONS OF DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED. STABILIZATION IS ACHIEVED WHEN THE AREA IS EITHER COVERED BY PERMANENT IMPERVIOUS STRUCTURES, SUCH AS BUILDINGS, SIDEWALK, PAVEMENT, OR A UNIFORM PERENNIAL VEGETATIVE COVER. 24. THE CONTRACTOR SHALL VERIFY THE PRESENCE, LOCATION, DEPTH, AND DIMENSIONS OF DRAIN PIPES, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE CONSTRUCTION SHALL BE DREDGED, AND THE SEDIMENT GENERATED BY THE PROJECT SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS. <p>STORM WATER DISCHARGE AUTHORIZATION:</p> <ol style="list-style-type: none"> 1. CONTRACTOR SHALL COMPLY WITH ALL TCEQ AND EPA STORM WATER POLLUTION PREVENTION REQUIREMENTS. 2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TRX 15000. 3. THE CONTRACTOR SHALL ENSURE THAT ALL PRIMARY OPERATORS SUBMIT A NOI TO TCEQ AT LEAST SEVEN DAYS PRIOR TO COMMENCING CONSTRUCTION (IF APPLICABLE), OR IF UTILIZING ELECTRONIC SUBMITTAL, PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL PROVIDE A COPY OF THE SIGNED NOI TO THE OPERATOR OF ANY MSA (TYPICALLY THE CITY) RECEIVING DISCHARGE FROM THE SITE. 4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE, INCLUDING POSTING SITE NOTICE, INSPECTIONS, DOCUMENTATION, AND SUBMISSION OF ANY INFORMATION REQUIRED BY TCEQ. 5. ALL CONTRACTORS AND SUBCONTRACTORS PROVIDING SERVICES RELATED TO THE SWPPP SHALL SIGN THE REQUIRED CONTRACTOR CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSIBILITIES AS SPECIFIED IN THE SWPPP. 6. A NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO TCEQ BY ANY PRIMARY OPERATOR WITHIN 30 DAYS AFTER ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL AREAS OF THE PROJECT. THE CONTRACTOR SHALL MAINTAIN OPERATIONAL CONTROL, HAS OCCURRED, OR THE OPERATOR HAS OBTAINED ALTERNATIVE AUTHORIZATION UNDER A DIFFERENT PERMIT. A COPY OF THE NOT SHALL BE PROVIDED TO THE OPERATOR OF ANY MSA RECEIVING DISCHARGE FROM THE SITE. <p>DEMOLITION:</p> <ol style="list-style-type: none"> 1. KH IS NOT RESPONSIBLE FOR THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR TO IMPLEMENT THIS DEMOLITION PLAN. THIS PRELIMINARY DEMOLITION PLAN SIMPLY INDICATES THE KNOWN OBJECTS ON THE SUBJECT TRACT THAT ARE TO BE DEMOLISHED. 2. KH DOES NOT WARRANT OR REPRESENT THAT THE PLAN, WHICH WAS PREPARED BASED ON SURVEY AND UTILITY INFORMATION PROVIDED BY OTHERS, SHOWS ALL IMPROVEMENTS AND UTILITIES, THAT THE IMPROVEMENTS AND UTILITIES ARE SHOWN EXACTLY AS THEY EXIST ON THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING HIS OWN SITE RECONNAISSANCE TO SCOPE ITS WORK AND TO CONFIRM WITH THE OWNERS OF IMPROVEMENTS AND UTILITIES THE ABILITY AND PROCESS FOR THE REMOVAL OF THEIR FACILITIES. 3. THIS PLAN IS INTENDED TO GIVE A GENERAL GUIDE TO THE CONTRACTOR, NOTHING MORE. THE GOAL OF THE DEMOLITION IS TO LEAVE THE CONTRACTOR WITH A CLEAR, UNOBSTRUCTED, AND UNDISTURBED SITE FOR THE REMOVAL OF IMPROVEMENTS AND UTILITIES, ETC. TO ACCOMPLISH THIS GOAL ARE THE RESPONSIBILITY OF THE CONTRACTOR. 4. CONTRACTOR IS STRONGLY CAUTIONED TO REVIEW THE FOLLOWING REPORTS DESCRIBING SITE CONDITIONS PRIOR TO BIDDING AND CONSTRUCTION OF THE DEMOLITION PROJECT: <ol style="list-style-type: none"> a. ENVIRONMENTAL SITE ASSESSMENT PROVIDED BY THE OWNER, b. ASBESTOS BUILDING INSPECTION REPORT(S) PROVIDED BY THE OWNER, c. GEOTECHNICAL REPORT PROVIDED BY THE OWNER, d. OTHER REPORTS THAT ARE APPLICABLE TO THE PROJECT. 5. CONTRACTOR SHALL CONTACT THE OWNER TO REVIEW WHETHER ADDITIONAL REPORTS OR AMENDMENTS TO THE ABOVE CITED REPORTS HAVE BEEN PREPARED AND TO OBTAIN/REVIEW/VERIFY COMPLY WITH THE RECOMMENDATION OF SUCH STUDIES PRIOR TO CONSTRUCTION. 6. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING THE DEMOLITION OF OBJECTS ON THE SITE AND THE DISPOSAL OF THE DEMOLISHED MATERIALS OFF-SITE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REVIEW THE SITE, DETERMINE THE APPLICABLE REGULATIONS, RECEIVE THE REQUIRED PERMITS AND AUTHORIZATIONS, AND COMPLY WITH ALL APPLICABLE REGULATIONS. THE CONTRACTOR SHALL NOT REPRESENT THAT THE ABOVE ARE ACCURATE, COMPLETE, OR COMPREHENSIVE SHOWING ALL ITEMS THAT WILL NEED TO BE DEMOLISHED AND REMOVED. 7. SURFACE PAVEMENT INDICATED MAY OVERLAY OTHER HIDDEN STRUCTURES, SUCH AS ADDITIONAL LAYERS OF PAVEMENT, FOUNDATIONS OR WALLS, THAT ARE ALSO TO BE REMOVED. <p>GRADING:</p> <ol style="list-style-type: none"> 1. THE CONTRACTOR AND GRADING SUBCONTRACTOR SHALL VERIFY THE SUITABILITY OF EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE CIVIL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES. 2. CONTRACTOR SHALL OBTAIN ANY REQUIRED GRADING PERMITS FROM THE CITY. 3. POLLUTANT DISCHARGE ELIMINATION SYSTEM TRX 15000 SPOT ELEVATIONS SHOWN IN PAVED AREA REFLECT TOP OF PAVEMENT SURFACE. IN LOCATIONS ALONG A CURB LINE, ADD 6-INCHES (OR THE HEIGHT OF THE CURB) TO THE PAVING GRADE FOR TOP OF CURB ELEVATION. 4. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES. 5. NO EARTHWORK FILL SHALL BE PLACED IN ANY EXISTING DRAINAGE WAY, SWALE, CHANNEL, DITCH, CREEK, OR FLOODPLAIN FOR ANY REASON OR ANY LENGTH OF TIME, UNLESS THESE PLANS SPECIFICALLY INDICATE THIS IS REQUIRED. 6. TEMPORARY CULVERTS MAY BE REQUIRED TO MAINTAIN FLOW OF EXISTING WATER. 7. REFER TO DIMENSION CONTROL PLAN, AND PLAN FOR HORIZONTAL DIMENSIONS. 8. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND CONDITION FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. 9. CONTRACTOR IS RESPONSIBLE FOR ALL SOILS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL SOILS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND COMPLY WITH CITY STANDARD SPECIFICATIONS AND GEOTECHNICAL REPORT. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING SOILS. THE OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR SOILS TESTING. 21. ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY. 22. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE SOILS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS. 23. THE SCOPE OF WORK TERMINATES AT THE PROPERTY BOUNDARY CONTROL PLAN, SURVEY BOUNDARY AND/OR PLAT. ANY DIFFERENCES FOUND SHALL BE REPORTED TO KH IMMEDIATELY. 24. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORTS RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO PLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO PLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING. 25. EROSION CONTROL DEVICES SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT AND STRUCTURAL PLANS AND SPECIFICATIONS FILL, CONDITIONING, AND PREPARATION IN THE BUILDING PAD. 26. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORTS RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO PLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO PLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING. 27. EROSION CONTROL DEVICES SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT AND STRUCTURAL PLANS AND SPECIFICATIONS FILL, CONDITIONING, AND PREPARATION IN THE BUILDING PAD. 28. EXISTING TREE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES FOUND IN THE FIELD THAT AFFECT THE GRADING PLAN TO THE CIVIL ENGINEER. 29. CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY. 30. TREE PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY STANDARD TREE PROTECTION DETAILS AND THE <p>APPROVED TREE PRESERVATION PLANS BY THE LANDSCAPE ARCHITECT</p> <ol style="list-style-type: none"> 1. CONTRACTOR SHALL REFERENCE THE TREE PRESERVATION PLANS FOR ALL INFORMATION AND DETAILS REGARDING EXISTING TREES TO BE REMOVED AND PRESERVED. 2. NO TREE SHALL BE REMOVED UNLESS A TREE REMOVAL PERMIT HAS BEEN ISSUED BY THE CITY, OR CITY HAS OTHERWISE CONFIRMED IN WRITING THAT ONE IS NEEDED FOR THE TREES. 3. NO TREE SHALL BE REMOVED WITHOUT PRIOR AUTHORIZATION OF THE OWNER OR OWNER'S REPRESENTATIVE. EXISTING TREES SHALL BE PRESERVED WHENEVER POSSIBLE AND GRADING IMPACT TO THEM HELD TO A MINIMUM. 34. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AT JOINTS TO VERIFY THE PRESENCE, LOCATION, DEPTH, AND DIMENSIONS OF DRAIN PIPES, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE INTENDED STRUCTURE TO CONVEY STORMWATER RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY AREAS OF POOR DRAINAGE ARE DISCOVERED. 35. CONTRACTOR FIELD ADJUSTMENT OF PROPOSED SPOT GRADES IS ALLOWED, IF THE APPROVAL OF THE CIVIL ENGINEER IS OBTAINED. <p>RETAINING WALLS:</p> <ol style="list-style-type: none"> 1. RETAINING WALLS SHOWN ARE FOR SITE GRADING PURPOSES ONLY, AND INCLUDE ONLY LOCATION AND SURFACE SPOT ELEVATIONS AT THE TOP AND BOTTOM OF THE WALL. 2. RETAINING WALL TYPE OR SYSTEM SHALL BE SELECTED BY THE OWNER. 3. RETAINING WALL DESIGN SHALL BE PROVIDED BY OTHERS AND SHALL FIT IN THE WALL ZONE OR LOCATION SHOWN ON THESE PLANS. STRUCTURAL DESIGN SHALL BE PROVIDED BY OTHERS, INCLUDING WALLS, RAILINGS, AND OTHER WALL SAFETY DEVICES SHALL BE PERFORMED BY A LICENSED ENGINEER AND ARE NOT PART OF THIS PLAN SET. 4. RETAINING WALL DESIGN SHALL MEET THE INTENT OF THE GRADING PLAN AND SHALL ACCOUNT FOR ANY INFLUENCE ON ADJACENT BUILDING FOUNDATIONS, UTILITIES, PROPERTY LINES AND OTHER CONSTRUCTABILITY NOTES. 5. RETAINING WALL ENGINEER SHALL CONSULT THESE PLANS AND THE GEOTECHNICAL REPORT FOR POTENTIAL CONFLICTS. <p>PAVING:</p> <ol style="list-style-type: none"> 1. ALL PAVING MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, THE CITY STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION/DETAIL SHALL BE FOLLOWED. 2. ALL PRIVATE DRIVEWAYS AND PAVING SUBGRADE SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING ALL ADDENDA. 3. ALL FIRELANE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARDS AND DETAILS. IF THESE ARE DIFFERENT THAN THOSE IN THE GEOTECHNICAL REPORT, THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY. 4. ALL PUBLIC PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS. 5. CONTRACTOR IS RESPONSIBLE FOR ALL PAVING AND PAVING SUBGRADE TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL PAVING AND PAVING SUBGRADE TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR. 6. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE PAVING AND PAVING SUBGRADE, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS. 7. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORTS RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO PLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO PLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING. 8. CURB RAMP ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BASED ON THE CITY STANDARD CONSTRUCTION DETAIL AND SPECIFICATIONS. 9. PRIVATE CURB RAMP SHALL PROVIDE PUBLIC STREET RIGHT-OF-WAY SHALL CONFORM TO ADA AND T&S STANDARDS AND SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP, NOT INCLUDING FLARES. 10. ALL ACCESSIBLE RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA AND T&S STANDARDS, LATEST EDITION. 11. ANY COMPONENTS OF THE PROJECT SUBJECT TO RESIDENTIAL USE SHALL ALSO CONFORM TO THE FAIR HOUSING ACT, AND COMPLY WITH THE FAIR HOUSING ACT DESIGN MANUAL BY THE US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT. 12. CONTRACTOR SHALL CONSTRUCT PROPOSED PAVEMENT TO MATCH EXISTING PAVEMENT WITH A SMOOTH, FLUSH, CONNECTION. 13. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND NECESSARY CONDUIT FOR LIGHTING, IRRIGATION, ETC. PRIOR TO PLACEMENT OF PAVEMENT. ALL CONSTRUCTION DOCUMENTS (CIVIL, MEP, LANDSCAPE, IRRIGATION, AND ARCHITECT) SHALL BE CONSULTED. 24. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA, T&S, AND FFA) EXIST TO ADAPTAS SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA AND T&S SLOPE COMPLIANCE ISSUES. <p>STORM DRAINAGE:</p> <ol style="list-style-type: none"> 1. ALL STORM SEWER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS. 2. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER. 3. CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING STORM SEWER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY STORM SEWER, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED. 4. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF ALL PUBLIC STORM SEWER STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. 5. FLOW LINE, TOP-OF-CURB, RIM, THROAT, AND GRATE ELEVATIONS OF PROPOSED INLETS SHALL BE VERIFIED WITH THE GRADING PLAN AND FIELD CONDITIONS PRIOR TO THEIR INSTALLATION. 6. ALL PUBLIC STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS. 7. ALL PRIVATE STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS. 8. ALL PVC TO RCP CONNECTIONS ENTERING STRUCTURES OR OTHER STORM PIPES SHALL HAVE A CONCRETE COLLAR AND BE GROUDED TO ASSURE THE CONNECTION IS WATERTIGHT. 9. ALL PUBLIC STORM SEWER LINES SHALL BE MINIMUM CLASS III RCP. PRIVATE STORM SEWER LINES 18-INCHES AND GREATER SHALL BE CLASS I RCP OR OTHER TOP OF CURB ELEVATIONS SHOWN IN PAVED AREA REFLECT TOP OF PAVEMENT SURFACE. IN LOCATIONS ALONG A CURB LINE, ADD 6-INCHES (OR THE HEIGHT OF THE CURB) TO THE PAVING GRADE FOR TOP OF CURB ELEVATION. 10. IF CONTRACTOR PROPOSES TO USE HOPE OR PVC IN LIEU OF RCP FOR PRIVATE STORM SEWER, CONTRACTOR SHALL SUBMIT TECHNICAL DATA TO THE OWNER, ENGINEER AND CITY ENGINEER/INSPECTOR FOR APPROVAL PRIOR TO ORDERING THE MATERIAL. ANY PROPOSED HOPE AND PVC SHALL BE WATERTIGHT. 11. CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL STORM SEWER LINES. 12. EMBEDMENT FOR ALL STORM SEWER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS. 13. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF ALL PUBLIC STORM SEWER STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. 14. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING STORM SEWER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY WATER OR WASTEWATER ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. 15. USE A FOOT JOINTS WITH BEVELED ENDS IF RADIUS OF STORM SEWER IS LESS THAN 100 FEET. 16. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY. 17. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER. <p>POND NOTES:</p> <ol style="list-style-type: none"> 1. ANY PONDS THAT ARE INTENDED TO HOLD WATER INDEFINITELY SHALL BE CONSTRUCTED WATERTIGHT. 2. FOR ANY POND INTENDED TO HOLD WATER INDEFINITELY, THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR POND LNER SPECIFICATIONS. 3. A GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE ALL POND LNER MATERIAL, PLACEMENT PROCEDURES, AND PROVIDE TESTING TO ENSURE THE POND LNER MATERIAL PLACED IS WATERTIGHT. 4. STORM SEWER PIPES AND OTHER STRUCTURES INTENDED TO HOLD WATER INDEFINITELY SHALL BE INSTALLED WITH WATERTIGHT JOINTS TO AT LEAST 1-FOOT ABOVE THE NORMAL POOL WATER SURFACE ELEVATION. 5. ANY GRAVEL OR OTHER PERVIOUS EMBEDMENT AROUND PIPES OR OUTFALL STRUCTURES NEAR THE POND SHALL BE ELIMINATED FOR AT LEAST 20 FEET FROM THE POND SOIL AND ROUTE TO WATER TO LEAK THROUGH THE EMBEDMENT MATERIAL IS PROVIDED. BACKFILL IN THESE AREAS SHALL BE OF IMPERVIOUS MATERIAL. 6. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY, THE WATER LEVEL FOLLOWING COMPLETION AND FILLING OF THE POND SHALL BE MONITORED BY THE CONTRACTOR FOR AT LEAST 60 DAYS TO OBSERVE WATER INFLOW, OUTFLOW, AND CALCULATE EVAPORATION TO VERIFY THAT THE POND IS WATERTIGHT. 7. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY, THE POND WATER LEVEL SHALL ALSO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION SO THAT IT REMAINS FULL TO ITS DESIGN WATER LEVEL, AND IS NOT LOWERED, AS THIS MAY DRY-OUT THE POND LINER AND RISK ITS WATERTIGHT PROPERTIES. <p>WATER AND WASTEWATER:</p> <ol style="list-style-type: none"> 1. ALL WATER AND WASTEWATER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS. 2. CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING WATER AND WASTEWATER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY WATER OR WASTEWATER ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. 3. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITY SERVICES ENTERING THE BUILDING. 4. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF ALL UTILITY CROSSINGS PRIOR TO THE INSTALLATION OF ANY PIPE. 5. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE WATER AND WASTEWATER IMPROVEMENTS. 6. ALL PUBLIC WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS. 7. ALL PRIVATE WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS. 8. FIRE SPRINKLER INSTALLATION SHALL BE PROVIDED BY A LICENSED FIRE SPRINKLER CONTRACTOR, AND COMPLY TO THE APPLICABLE CODES AND INSPECTIONS REQUIRED. THESE PLANS WERE PREPARED WITHOUT THE BENEFIT OF THE FIRE SPRINKLER DESIGN. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES. 9. EMBEDMENT FOR ALL WATER AND WASTEWATER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS. 10. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF WATER PIPE AND FITTINGS CLEAN AND CAPPED AT TIMES WHEN INSTALLATION IS NOT IN PROGRESS. 11. CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL WATER AND WASTEWATER LINES. 12. ALL WATER AND WASTEWATER CONSTRUCTION SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR. 13. CONTRACTOR SHALL COMPLY WITH CITY REQUIREMENTS FOR WATER AND WASTEWATER SERVICE DISRUPTIONS AND THE AMOUNT OF PRIOR NOTICE THAT IS REQUIRED, AND SHALL COORDINATE DIRECTLY WITH THE APPROPRIATE CITY DEPARTMENT. 14. CONTRACTOR SHALL SEQUENCE WATER AND WASTEWATER CONSTRUCTION TO AVOID INTERRUPTION OF SERVICE TO SURROUNDING PROPERTIES. 15. CONTRACTOR SHALL MAINTAIN WATER SERVICE AND WASTEWATER SERVICE TO ALL CUSTOMERS THROUGHOUT CONSTRUCTION (IF NECESSARY, BY USE OF TEMPORARY METHODS APPROVED BY THE CITY AND OWNER). THIS WORK SHALL BE CONSIDERED A SUBSIDIARY TO THE PROJECT AND SHALL BE PAID FOR BY THE OWNER. 16. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL WATER AND WASTEWATER LINES CROSSING THE PROJECT. THE CONTRACTOR SHALL REPAIR ALL DAMAGED LINES IMMEDIATELY. ALL REPAIRS OF EXISTING WATER MAINS, WATER SERVICES, SEWER MAINS, AND SANITARY SEWER SERVICES ARE SUBSIDIARY TO THE WORK, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. 17. VALVE ADJUSTMENTS SHALL BE CONSTRUCTED SUCH THAT THE COVERS ARE AT FINISHED SURFACE GRADE OF THE PROPOSED PAVEMENT. 18. THE ENDS OF ALL EXISTING WATER MAINS THAT ARE CUT, BUT NOT REMOVED, SHALL BE PLUGGED AND ABANDONED IN PLACE. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. <th data-bbox="2838 40 2990 1982"> <p>REVISIONS</p> <p>No. DATE</p> </th>	<p>REVISIONS</p> <p>No. DATE</p>
<p>Plotted By: Connelly, Wladimir; Notes: October 30, 2023, 10:24:26pm; File Path: K:\SALV\Civil\069424100_Sanctuary Drilling Springs\Civil\Drawings\C_C_General_Notes.dwg</p> <p>This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reruse of this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.</p>	<p>19. ALL FIRE HYDRANTS, VALVES, TEES, BENDS, WYES, REDUCERS, FITTINGS, AND ENDS SHALL BE MECHANICALLY RESTRAINED AND/OR THRUST BLOCKED TO CITY STANDARDS.</p> <p>20. CONTRACTOR SHALL INSTALL A FULL SEGMENT OF WATER OR WASTEWATER PIPE CENTERED AT ALL UTILITY CROSSINGS SO THAT JOINTS ARE GREATER THAN 9 FEET FROM THE CROSSING.</p> <p>21. ALL CROSSINGS AND LOCATIONS WHERE WASTEWATER IS LESS THAN 9 FEET FROM WATER, WASTEWATER CONSTRUCTION AND MATERIALS SHALL COMPLY WITH TCEQ CHAPTER 217.</p> <p>22. ALL CROSSING AND LOCATIONS WHERE WATER IS LESS THAN 9 FEET FROM WASTEWATER, WATER CONSTRUCTION AND MATERIALS SHALL COMPLY WITH TCEQ CHAPTER 204.4.</p> <p>23. ALL WEO AND SHALL BE TESTED IN ACCORDANCE WITH THE CITY, AWWA, AND TCEQ STANDARDS AND SPECIFICATIONS. AT A MINIMUM, THIS SHALL CONSIST OF THE FOLLOWING:</p> <ol style="list-style-type: none"> a. ALL WATER LINES SHALL BE HYDROSTATICALLY TESTED AND CHLORINATED BEFORE BEING PLACED INTO SERVICE. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THEIR TESTING PROCEDURES AND RECORDS. b. WASTEWATER LINES AND MANHOLES SHALL BE PRESSURE TESTED. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THEIR REQUIRED PROCEDURES AND SHALL ALSO COMPLY WITH TCEQ REGULATIONS. AFTER COMPLETION OF THESE TESTS, A	

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LEGEND

---	PROPERTY LINE
-ww-	PROPOSED WASTEWATER LINE
-W-	PROPOSED WATER LINE
⊙	PROPOSED WASTEWATER MANHOLE
⊙	PROPOSED WASTEWATER CLEANOUT
⊙	PROPOSED FIRE HYDRANT
⊙	PROPOSED TAPPING SLEEVE & VALVE
⊙	EXISTING OVERHEAD POWER LINE
-W-	EXISTING WATER LINE
-ww-	EXISTING WASTEWATER LINE
-SS-	EXISTING STORM SEWER LINE
⊙	EXISTING POWER POLE
⊙	EXISTING FIRE HYDRANT
⊙	EXISTING WATER METER
⊙	EXISTING WASTEWATER MANHOLE
---	ADA ROUTE

NOTES:

- TREES AND TOPOGRAPHY BASED UPON SURVEY BY CHAPPARAL PROFESSIONAL LAND SURVEYING, INC. ON JUNE 18, 2015. NO WARRANTY IS EXPRESSED OR IMPLIED AS TO THEIR ACCURACY.
- ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 14' VERTICAL CLEARANCE.
- ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED, STENCIL THE WORDS "FIRE ZONE/FIRE AWAY ZONE" IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. SEC. 9014.2
- ALL PARKING SPACES SHALL HAVE MINIMUM 7'-0" VERTICAL CLEARANCE.
- WARNING SIGNS ARE REQUIRED TO BE PLACED UNDER THE OVERHEAD ELECTRIC LINES TO MAKE ALL PERSONNEL AWARE OF THE ELECTRIC HAZARD. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OCCUPIED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 31080 AND ANSI A1171-1996-4.6.2.
- CONTRACTOR TO COORDINATE WITH PROJECT ARBORIST TO TRIM TREES TO ENSURE VISIBILITY NEAR PARKING AREAS.
- CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- CAUTION: DO NOT PLACE THE STAGING AREA IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP.
- THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 IN.
- ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50.
- GROUND SURFACES ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM, AND SLIP RESISTANT.
- ALL LANDSCAPED AREAS ARE TO BE PROTECTED BY SIX-INCH WHEEL CURBS, WHEELTOPS, OR OTHER APPROVED BARRIERS AS PER ECM 2.4.7.
- COMPLIANCE WITH THE COMMERCIAL AND MULTIFAMILY RECYCLING ORDINANCE IS MANDATORY FOR MULTIFAMILY COMPLEXES WITH 100 OR MORE UNITS AND BUSINESSES WITH 100 OR MORE EMPLOYEES (AUSTIN CITY CODE, SEC. 15-0-91).
- REFER TO CITY OF AUSTIN ELECTRICAL DEPARTMENT FOR CONSTRUCTION PLANS AND DETAILS. CONTACT REY MARTINEZ (512-505-7643).
- ADEQUATE BARRIERS BETWEEN ALL VEHICULAR USE AREAS AND ADJACENT LANDSCAPE AREAS, SUCH AS A 6" CONCRETE CURB ARE REQUIRED. IF A STANDARD 6" CURB AND GUTTER ARE NOT PROVIDED FOR A VEHICULAR USE AREAS AND ADJACENT LANDSCAPE AREAS, COMPLY WITH ECM, SECTION 2.4.7, "PROTECTION OF LANDSCAPE AREAS".
- RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF THE FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT. [IBC CODE 105.2]
- SEE ARCHITECTURAL PLANS FOR CARPORT DESIGN.
- THE NUMBER OF DRIVEWAYS ON OLD SAN ANTONIO ROAD IS LIMITED TO ONE.
- EACH COMPACT PARKING SPACE/ABLE WILL BE SIGNED "SMALL CAR ONLY."
- ALL FDC's TO BE TWO 2'-2" SIAMSE CONNECTIONS.

SUBCHAPTER E NOTES:

- ALL EXTERIOR LIGHTING WILL BE FULL CUT-OFF AND FULLY SHIELDED IN COMPLIANCE WITH SUBCHAPTER E 2.5. ALL SITE LIGHTING TO BE LOCATED ON THE BUILDING WILL BE IN COMPLIANCE WITH SUBCHAPTER E 2.5, AND WILL BE REVIEWED DURING BUILDING PLAN REVIEW. ANY CHANGE OR SUBSTITUTION OF LAMPLIGHT FIXTURES SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL IN ACCORDANCE WITH SECTION 2.5.2.E.
- ALL INTERNAL UTILITIES WILL BE LOCATED IN THE DRIVE AISLES AND NOT IN THE PARKING AREAS.
- SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE RESPONSIBILITY OF THE OWNER TO PROVIDE QUALITY TO PRINCIPAL BUILDING MATERIALS.

- THE SPACES MUST BE RESERVED AND ASSIGNED TO DWELLING UNITS WHICH ARE REQUIRED TO HAVE TWO OR MORE PARKING SPACES PER UNIT (I.E. UNITS WITH TWO OR MORE BEDROOMS).
- AT LEAST ONE OF THE SPACES MUST BE LOCATED WITHIN AN ENCLOSED GARAGE, IN ORDER TO AVOID VISUAL CLUTTER.
- BOTH OF THE SPACES MUST BE STANDARD SIZE; NO COMPACT OR HANDICAPPED ACCESSIBLE TENDERM PARKING SPACES ARE PERMITTED.
- AT LEAST TEN PERCENT OF THE TOTAL PARKING SPACES ON THE SITE MUST BE UNASSIGNED SPACES WHICH ARE AVAILABLE FOR THE USE OF VISITORS.



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 5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100
 AUSTIN, TX 78735
 PHONE: 512-616-2237 FAX: 512-616-2238
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 TBE Firm No. 928



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DATE	10/19/2023
SCALE	AS SHOWN
DESIGNED BY	LE
DRAWN BY	LE
CHECKED BY	NG

OVERALL SITE PLAN

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

MATCH LINE SHEET 11



LEGEND

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	EASEMENT LINE
	OVERHEAD ELECTRIC
	BENCHMARK
	UTILITY POLE
	GUY ANCHOR
	IRON ROD FOUND
	DEMOLITION AREA: ITEMS TO BE REMOVED AS NOTED
	LIMITS OF CONSTRUCTION AREA
	EXISTING TREES TO REMAIN
	EXISTING TREES TO BE REMOVED
	EXISTING DIRT ROAD TO BE REMOVED
	EXISTING PAVEMENT ROAD TO BE REMOVED

CORVOVA SOLUTIONS LLC
INST. NO. 21018930
R.H.C.T.

TRACT 18
DRIPPING SPRINGS RANCH PHASE
2 VOL. 9, PG. 84
P.R.H.C.T.

Kimley»Horn
5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100
AUSTIN, TX 78735
PHONE: 512-646-7237 FAX: 512-646-7238
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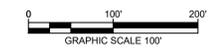
EXISTING
CONDITIONS &
DEMOLITION PLAN
(1 OF 2)

SANCTUARY DRIPPING
SPRINGS
1111 HAYS COUNTRY ACRES RD.
HAYS COUNTY, TEXAS



Plotted By: Conolly, Wlyder, Date: October 30, 2023, 05:25:10pm, File Path: K:\SAU\Civil\069424100 Sanctuary Dripping Springs\Coa\PlanSheets\11 - Existing Conditions and Demolition.dwg
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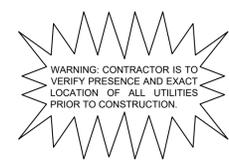


LEGEND

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	EASEMENT LINE
	OVERHEAD ELECTRIC
	BENCHMARK
	UTILITY POLE
	GUY ANCHOR
	IRON ROD FOUND
	DEMOLITION AREA- ITEMS TO BE REMOVED AS NOTED
	LIMITS OF CONSTRUCTION AREA
	EXISTING TREES TO REMAIN
	EXISTING TREES TO BE REMOVED
	EXISTING DIRT ROAD TO BE REMOVED
	EXISTING PAVEMENT ROAD TO BE REMOVED



LESLIE KAREN COHEN VOL. 220, PG. 20 P.H.C.T.
 TRACT 1B
 ALLEN TRACT SUBDIVISION
 VOL. 5, PG. 217
 P.H.C.T.



MATCH LINE SHEET 10

No.	REVISIONS	DATE	BY

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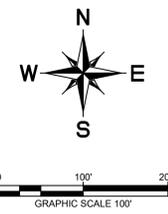


KHA PROJECT	069424100
DATE	10/19/2023
SCALE	AS SHOWN
DESIGNED BY	LE
DRAWN BY	LE
CHECKED BY	NG

**EXISTING
 CONDITIONS &
 DEMOLITION PLAN
 (2 OF 2)**

**SANCTUARY DRIPPING
 SPRINGS**
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

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LEGEND

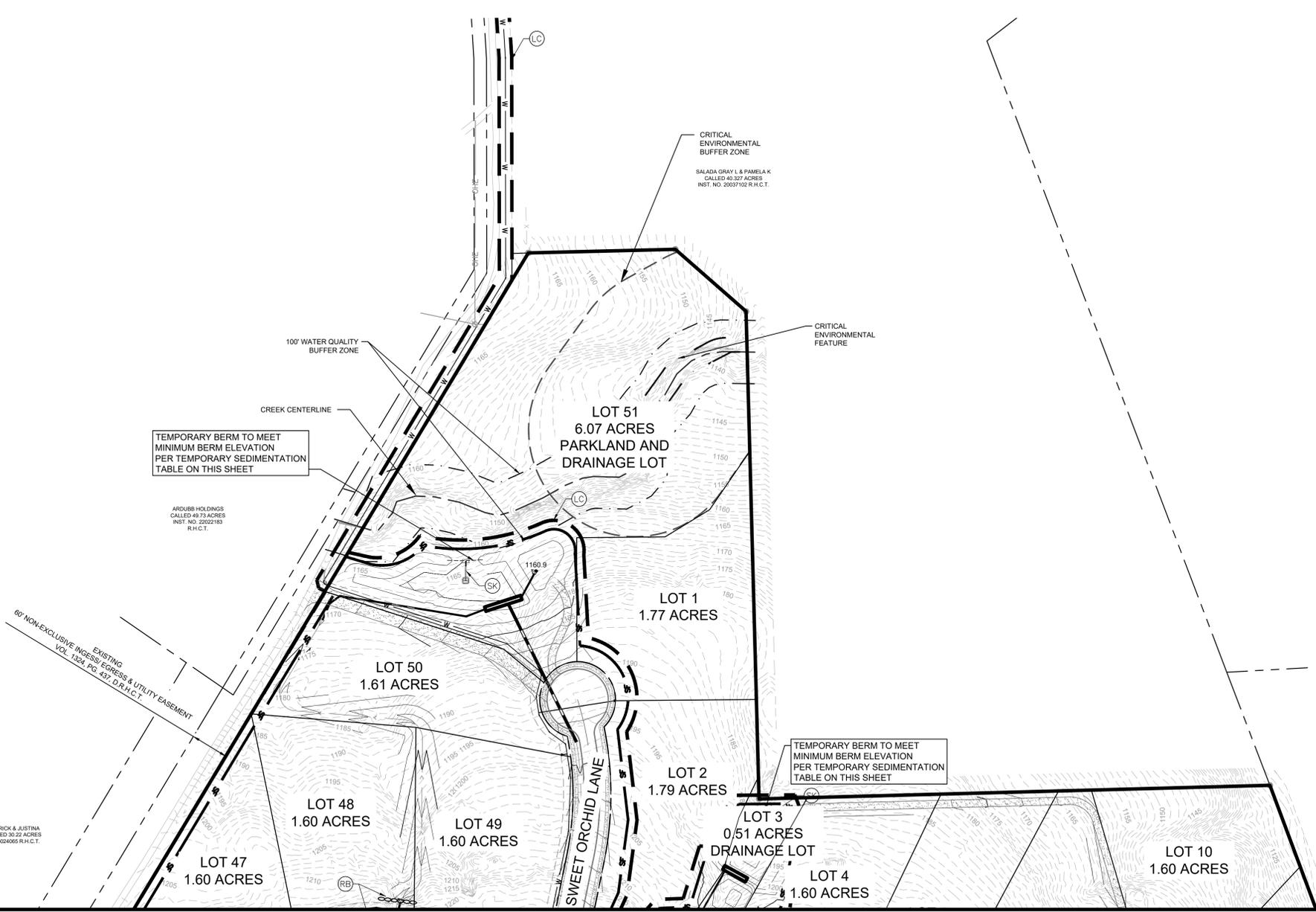
	SILT FENCE
	TREE PROTECTION
	PROPOSED INLET PROTECTION
	CONSTRUCTION ENTRANCE
	ROCK BERM
	EXISTING CONTOURS
	PROPOSED CONTOURS
	LIMITS OF CONSTRUCTION AREA
	TREE TO REMAIN
	CONCRETE WASHOUT
	STAGING AND SPOILS AREA
	POND SKIMMER

- NOTES:**
- CONTRACTOR IS SOLELY RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS. CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.
 - CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP.
 - THE ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF CEDAR PARK RULES AND REGULATIONS.
 - CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURE DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING.
 - TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
 - BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
 - ADDITIONAL EROSION AND SEDIMENTATION CONTROLS MAY BE REQUIRED BY THE COUNTY DURING CONSTRUCTION.
 - REFERENCE EROSION CONTROL NOTES AND DETAILS ON SHEET 7.
 - IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR VEGETATION MATTING. THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY.
 - ALL DISTURBED AREAS TO BE RE-VEGETATED.
 - SEE LANDSCAPE ARCHITECT PLANS FOR TREE PRESERVATION PLAN AND TREE LIST.
 - THE SEQUENCE OF CONSTRUCTION SHOWN ABOVE IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS INCLUDED IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS.
 - PROPOSED PONDS ARE TO BE ROUGH GRADED AND USED FOR TEMPORARY SEDIMENTATION CONTROL. REFER TO TEMPORARY SEDIMENTATION CONTROL POND REQUIREMENTS TABLE ON THIS SHEET.

TEMPORARY SEDIMENTATION CONTROL POND REQUIREMENTS

POND	MINIMUM STORAGE (Cu. Ft.)	MINIMUM BERM ELEVATION (Ft.)
1	25,603	1,163
2	7,955	1,181
3	9,381	1,130
4	56,368	1,116
5	38,954	1,163
6	1,711	1,172

*MINIMUM STORAGE IS THE TEMPORARY POND STORAGE REQUIRED TO CONTAIN THE 24-HR, 2-YR STORM EVENT.



CRITICAL ENVIRONMENTAL BUFFER ZONE
 SALADA GRAY L & PAMELA K
 CALLED 46.327.462615
 INST. NO. 20037102 R.H.C.T.

TEMPORARY BERM TO MEET MINIMUM BERM ELEVATION PER TEMPORARY SEDIMENTATION TABLE ON THIS SHEET

TEMPORARY BERM TO MEET MINIMUM BERM ELEVATION PER TEMPORARY SEDIMENTATION TABLE ON THIS SHEET

ARDBB HOLDINGS CALLED 49.73 ACRES INST. NO. 2202193 R.H.C.T.

LELER MERRICK & JUSTINA TRUST CALLED 39.32 ACRES INST. NO. 16024065 R.H.C.T.

LESLIE KAREN COHEN VOL. 2203 PG. 20 R.H.C.T.
 TRACT 1B ALLEN TRACT SUBDIVISION VOL. 5 PG. 217 P.H.C.T.

EXISTING 60' NON-EXCLUSIVE INGRESS/EGRESS AND UTILITY EASEMENT VOL. 1304 PG. 431 D.R.H.C.T.

MATCH LINE SHEET 12



DATE: _____ BY: _____

REVISIONS: _____

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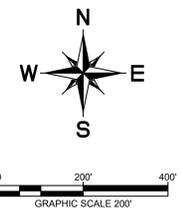
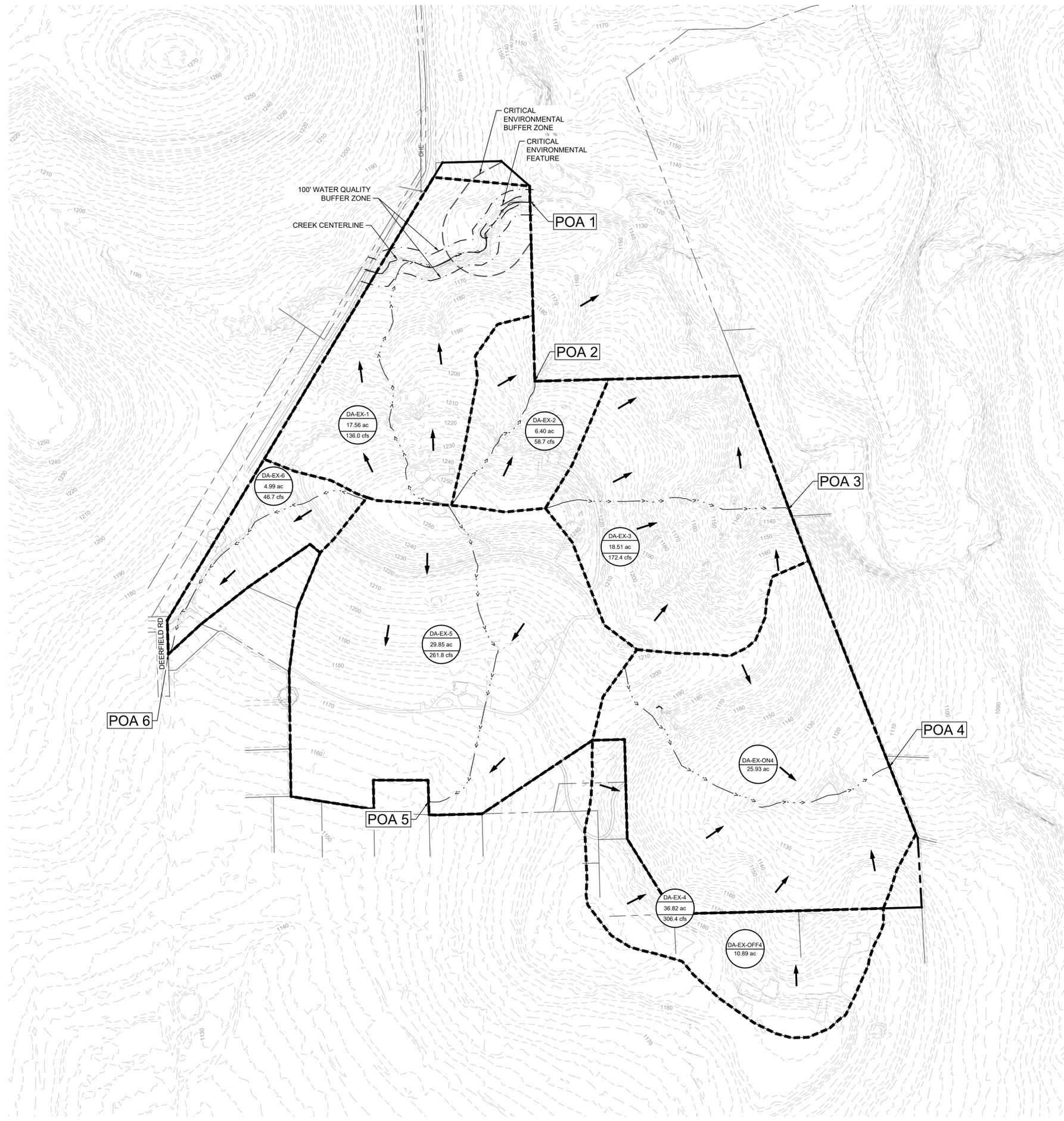
KHA PROJECT	069424100
DATE	10/19/2023
SCALE	AS SHOWN
DESIGNED BY	LE
DRAWN BY	LE
CHECKED BY	NG

EROSION CONTROL PLAN (2 OF 2)

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

SHEET NUMBER
13 OF 68

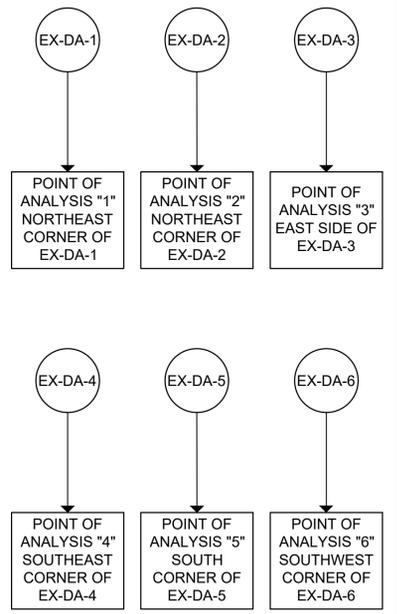
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LEGEND

	AREA DESIGNATOR AREA IN ACRES Q2 FLOW IN CFS
	PROPERTY LINE
	EXISTING DRAINAGE DIVIDE EXISTING FLOW DIRECTION
	EXISTING CONTOUR
	LONGEST FLOW PATH (Tc FLOW PATH)

- NOTES:**
- EXISTING OFF-SITE CONTOURS ARE FROM THE TEXAS NATURAL RESOURCES INFORMATION SYSTEM (TNRS) GIS DATA
 - ALL CONTOURS SHOWN ARE AT ONE-FOOT INTERVALS.

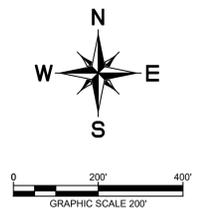
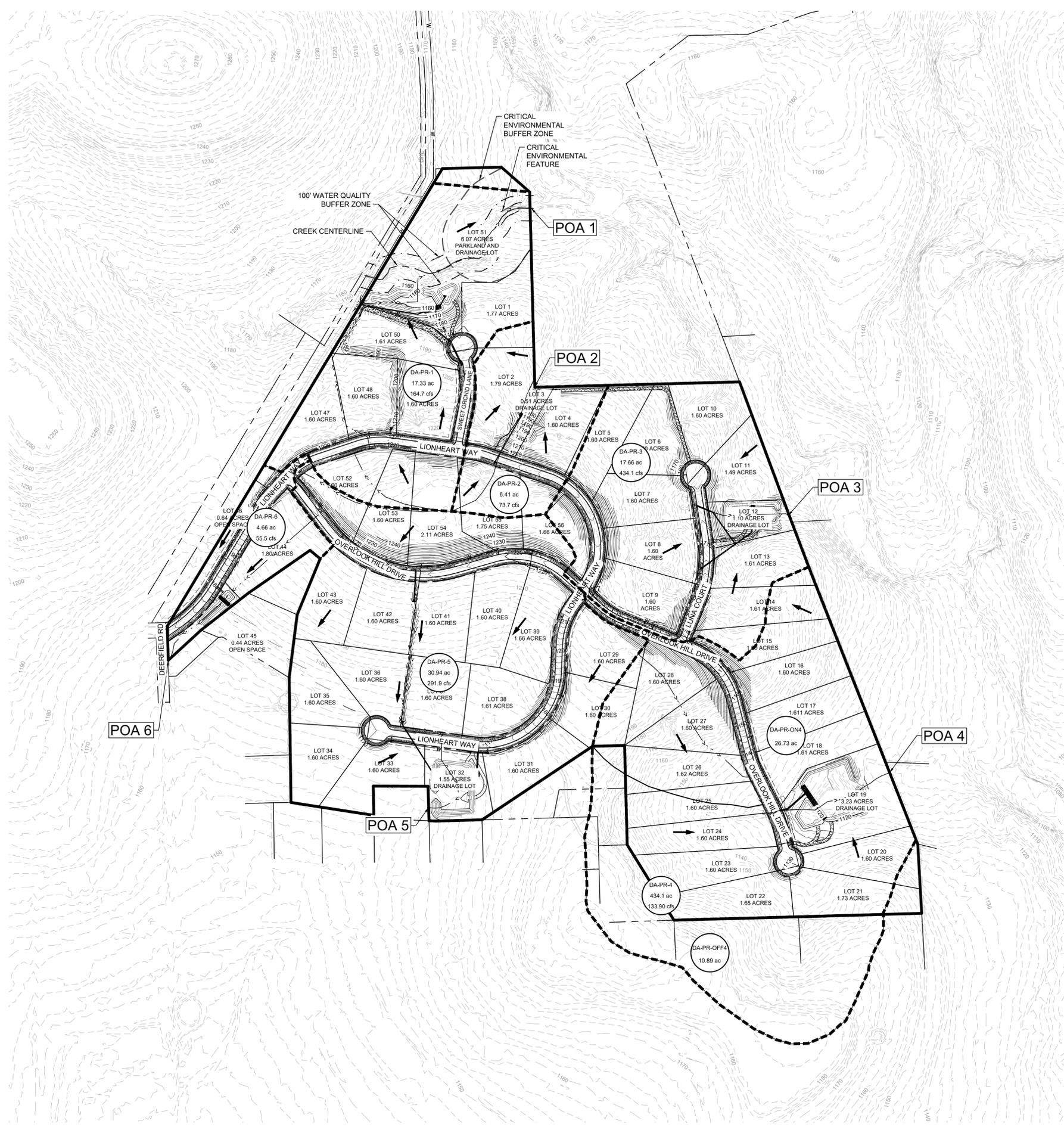


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<p>13689 NATALIA CASALI LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS</p>	
<p>KHA PROJECT 069424100</p>	<p>DATE 10/19/2023</p>
<p>SCALE: AS SHOWN</p>	<p>DESIGNED BY: LE</p>
<p>DRAWN BY: LE</p>	<p>CHECKED BY: NG</p>
<p>EXISTING DRAINAGE AREA MAP</p>	
<p>SANCTUARY DRIPPING SPRINGS 1111 HAYS COUNTRY ACRES RD. HAYS COUNTY, TEXAS</p>	
<p>SHEET NUMBER 14 OF 68</p>	
<p>REVISIONS</p>	<p>BY DATE</p>

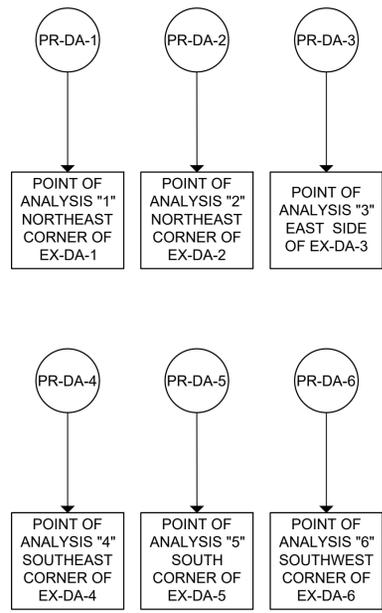
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LEGEND

	AREA DESIGNATOR AREA IN ACRES Q2 FLOW IN CFS
	INLET NUMBER
	PROPERTY LINE
	PROPOSED STORM DRAIN LINE
	EXISTING STORM DRAIN LINE
	PROPOSED DRAINAGE DIVIDE
	PROPOSED STORM DRAIN HEADWALL
	PROPOSED FLOW DIRECTION
	PROPOSED CONTOUR
	EXISTING CONTOUR
	LONGEST FLOW PATH (Tc FLOW PATH)

- NOTES:**
- EXISTING OFF-SITE CONTOURS ARE FROM THE TEXAS NATURAL RESOURCES INFORMATION SYSTEM (TNRIS) GIS DATA.
 - ALL CONTOURS SHOWN ARE AT ONE-FOOT INTERVALS.



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PROPOSED DRAINAGE AREA MAP

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS



WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

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TIME OF CONCENTRATION CALCULATIONS

Existing Time of Concentration Calculations

Drainage Area	Area (AC)	Impervious Cover (SF)	Impervious Cover (AC)	Impervious Cover (%)	Sheet Flow			Unpaved Shallow Flow			Paved Shallow Flow			Channel Flow			Total Tc min		
					Length ft	Slope ft/ft	Tt min	Length ft	Slope ft/ft	Tt min	Length ft	Slope ft/ft	Tt min	Length ft	V ft/s	Slope ft/ft		Tt min	
DA-EX-1	17.56	9789	0.22	1.3%	100	0.02	0.2	12.85 min	1002	0.10	3.20	0	0.01	0.00	671	6.00	0.10	1.86	17.9 min
DA-EX-2	6.4	5247	0.12	1.9%	100	0.03	0.2	10.11 min	200	0.16	0.51	0	0.01	0.00	314	6.00	0.13	0.87	11.5 min
DA-EX-3	18.51	10093	0.23	1.3%	100	0.09	0.2	6.61 min	514	0.15	1.38	0	0.01	0.00	341	6.00	0.13	0.95	8.9 min
*DA-EX-4	36.82	26584	0.61	1.6%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18.5 min
DA-EX-OFF4	10.89	26584	0.61	5.6%	100	0.01	0.2	14.27 min	1208	0.09	4.26	0	0.01	0.00	0	6.00	0.00	0.00	18.5 min
DA-EX-ON4	25.93	0	0.00	0.0%	100	0.09	0.2	6.60 min	1269	0.10	4.09	0	0.01	0.00	0	6.00	0.00	0.00	10.7 min
DA-EX-5	29.85	48053	1.10	3.7%	100	0.04	0.2	8.91 min	1245	0.08	4.48	0	0.01	0.00	0	6.00	0.00	0.00	13.4 min
DA-EX-6	4.99	11310	0.26	5.2%	100	0.11	0.2	6.03 min	1014	0.07	3.96	0	0.01	0.00	0	6.00	0.00	0.00	10.0 min

*TIME OF CONCENTRATION FOR DA-EX-4 IS THE LONGER OF THE THE TWO SUBBASINS DA-EX-OFF4 AND DA-EX-ON4

Proposed Time of Concentration Calculations

Drainage Area	Area (AC)	Impervious Cover (SF)	Impervious Cover (AC)	Impervious Cover (%)	Sheet Flow			Unpaved Shallow Flow			Paved Shallow Flow			Channel Flow			Total Tc min		
					Length ft	Slope ft/ft	n	Tt min	Length ft	Slope ft/ft	Tt min	Length ft	Slope ft/ft	Tt min	Length ft	V ft/s		Slope ft/ft	Tt min
DA-PR-1	17.33	188724	4.33	25.0%	100	0.02	0.06	4.54 min	396	0.09	1.35	0	0.01	0.00	961	6.00	0.05	2.67	8.6 min
DA-PR-2	6.41	69805	1.60	25.0%	100	0.02	0.06	4.68 min	172	0.15	0.46	0	0.01	0.00	162	6.00	0.05	0.45	5.6 min
DA-PR-3	17.66	192317	4.42	25.0%	100	0.15	0.06	2.03 min	384	0.01	3.45	0	0.01	0.00	1203	6.00	0.05	3.34	8.8 min
*DA-PR-4	37.62	317654	7.29	19.4%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.4 min
DA-PR-OFF4	10.89	26565	0.61	5.6%	100	0.07	0.06	2.80 min	638	0.09	2.15	0	0.01	0.00	178	6.00	0.05	0.49	5.4 min
DA-PR-ON4	26.73	291090	6.68	25.0%	100	0.12	0.06	2.22 min	569	0.12	1.67	0	0.01	0.00	298	6.00	0.05	0.83	5.0 min
DR-PR-5	30.94	336937	7.74	25.0%	100	0.02	0.06	4.92 min	508	0.06	2.15	0	0.01	0.00	1515	6.00	0.05	4.21	11.3 min
DR-PR-6	4.66	50747	1.17	25.0%	100	0.09	0.016	0.86 min	361	0.08	1.34	0	0.01	0.00	0	6.00	0.01	0.00	5.0 min

*TIME OF CONCENTRATION FOR DA-PR-4 IS THE LONGER OF THE THE TWO SUBBASINS DA-PR-OFF4 AND DA-PR-ON4

POINT OF ANALYSIS SUMMARY

DRAINAGE AREA	POA	AREA (AC.)	IMPERVIOUS COVER	BASE CN	IMPERVIOUS CN	WEIGHTED CN	TC (MIN)*	PEAK FLOWS AT POA			
								Q ₂ (CFS)	Q ₁₀ (CFS)	Q ₂₅ (CFS)	Q ₁₀₀ (CFS)
DA-EX-1	POA-1	17.56	1.3%	80	98	80.2	17.9	38.70	73.10	96.70	136.00
DA-EX-2	POA-2	6.40	1.9%	80	98	80.3	11.5	16.70	31.60	41.70	58.70
DA-EX-3	POA-3	18.51	1.3%	80	98	80.2	8.9	49.90	93.70	123.00	172.40
*DA-EX-4	POA-4	47.71	1.6%	80	98	80.3	10.7	85.00	163.30	216.70	306.40
*DA-EX-OFF4	POA-4	10.89	5.6%	--	--	--	--	--	--	--	--
*DA-EX-ON4	POA-4	36.82	0.0%	--	--	--	--	--	--	--	--
DA-EX-5	POA-5	29.85	3.7%	80	98	80.7	13.4	74.20	140.80	185.90	261.80
DA-EX-6	POA-6	4.99	5.2%	80	98	80.9	10.0	13.70	25.50	33.40	46.70

*DA-EX-OFF4 AND DA-EX-ON4 FLOWS ARE COMBINED IN DA-EX-4

PROPOSED CONDITIONS

DRAINAGE AREA	POA	AREA (AC.)	IMPERVIOUS COVER	BASE CN	IMPERVIOUS CN	WEIGHTED CN	TC (MIN)*	PEAK FLOWS AT POA (UNDETAINED)				PEAK FLOWS AT POA (DETAINED)			
								Q ₂ (CFS)	Q ₁₀ (CFS)	Q ₂₅ (CFS)	Q ₁₀₀ (CFS)	Q ₂ (CFS)	Q ₁₀ (CFS)	Q ₂₅ (CFS)	Q ₁₀₀ (CFS)
DA-PR-1	POA-1	17.33	25.0%	80	98	84.5	8.6	53.20	93.00	119.70	164.70	37.30	71.60	96.30	135.80
DA-PR-2	POA-2	6.41	25.0%	80	98	84.5	5.6	23.30	41.40	53.40	73.70	15.40	27.40	37.30	53.30
DA-PR-3	POA-3	17.66	25.0%	80	98	84.5	8.8	54.30	95.00	122.30	168.30	49.20	92.40	119.90	165.90
DA-PR-4	POA-4	64.35	19.4%	80	98	83.5	5.0	133.90	241.40	312.70	434.10	81.70	158.10	212.20	303.10
*DA-PR-OFF4	POA-4	26.73	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
DA-PR-ON4	POA-4	37.62	25.0%	--	--	--	--	--	--	--	--	--	--	--	--
DA-PR-5	POA-5	30.94	25.0%	80	98	84.5	11.3	93.00	163.90	211.50	291.90	70.50	137.20	181.00	252.40
DA-PR-6	POA-6	4.66	25.0%	80	98	84.5	5.0	17.60	31.20	40.20	55.50	14.20	25.60	33.60	46.60

* OFFSITE FLOWS FROM DA-PR-OFF4 ARE ROUTED TO POND 4

TSS REMOVAL SUMMARY

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **The Sanctuary - Pond 1**
Date Prepared: **10/9/2023**

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

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

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

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

County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches

L_M TOTAL PROJECT = **21156** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **6**

REFER TO POND SHEETS FOR TSS REMOVAL FOR INDIVIDUAL BASINS

RETENTION-IRRIGATION SUMMARY

Drainage Area	RETENTION-IRRIGATION SUMMARY			
	Required WQ Volume (Cu. Ft.)	Provided WQ Volume (Cu. Ft.)	Required Irrigation Area (SF)	Required Irrigation Area (AC)
DA-PR-1	14524	12448	58097	1.33
DA-PR-2	4843	5479	19371	0.44
DA-PR-3	14303	18293	57211	1.31
DA-PR-4	22562	22589	90246	2.07
DA-PR-5	20414	20642	81657	1.87
DA-PR-6	2896	2971	11585	0.27



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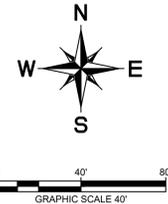
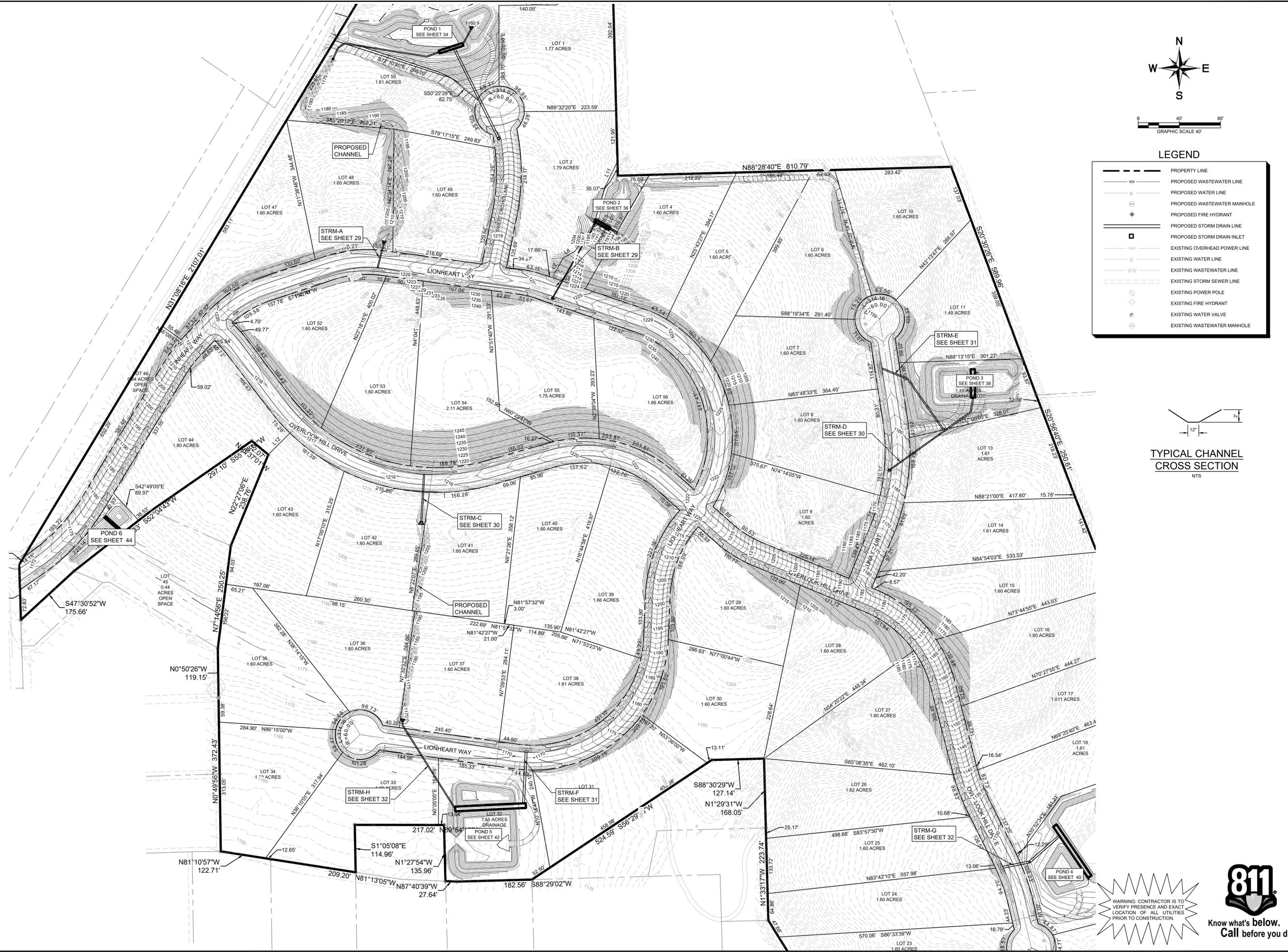


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DRAINAGE AREA CALCULATIONS

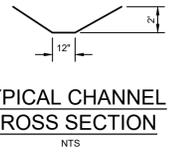
SANCTUARY DRIPPING SPRINGS
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 HAYS COUNTY, TEXAS

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LEGEND

	PROPERTY LINE
	PROPOSED WASTEWATER LINE
	PROPOSED WATER LINE
	PROPOSED WASTEWATER MANHOLE
	PROPOSED FIRE HYDRANT
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM DRAIN INLET
	EXISTING OVERHEAD POWER LINE
	EXISTING WATER LINE
	EXISTING WASTEWATER LINE
	EXISTING STORM SEWER LINE
	EXISTING POWER POLE
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING WASTEWATER MANHOLE



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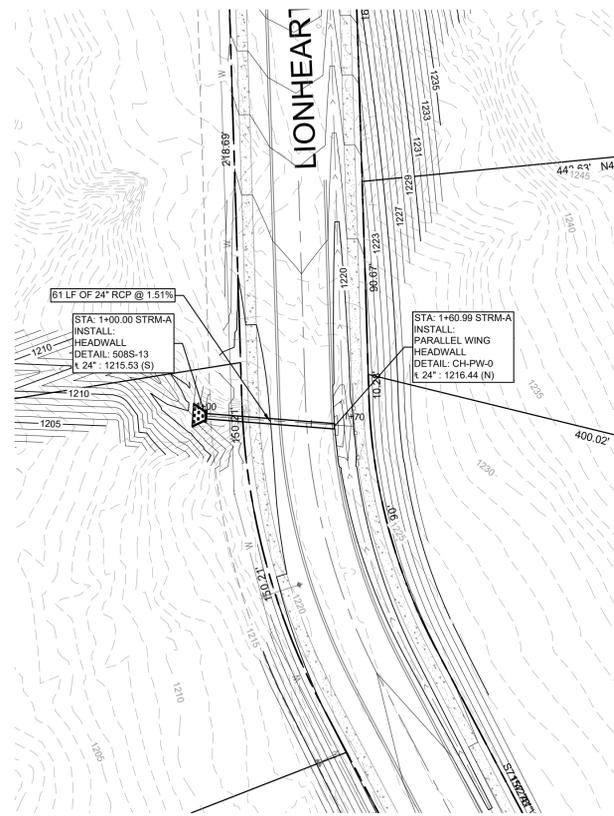
OVERALL STORM PLAN

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

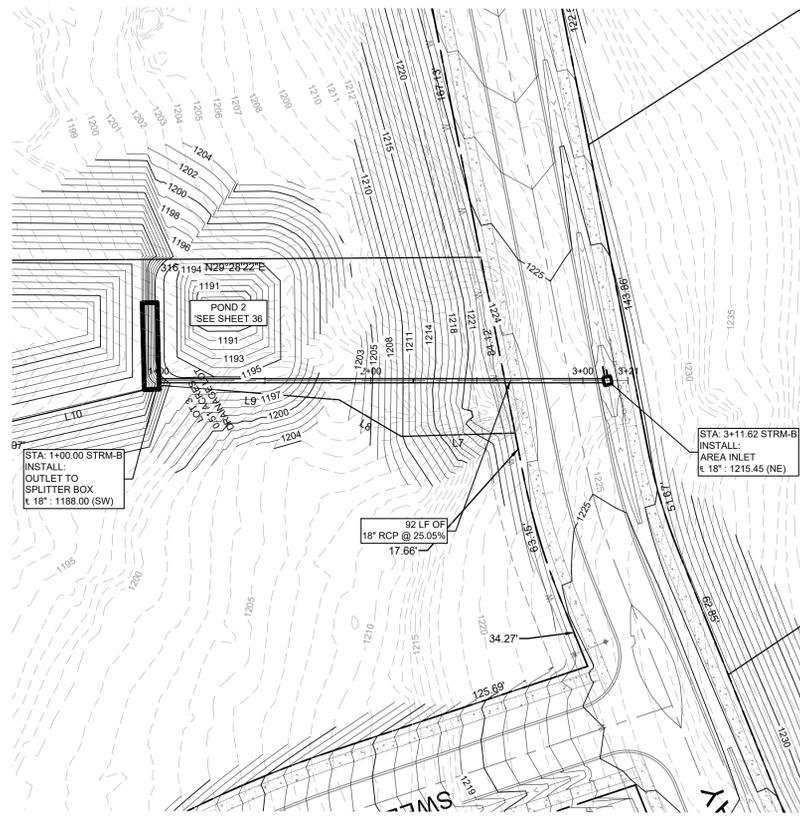
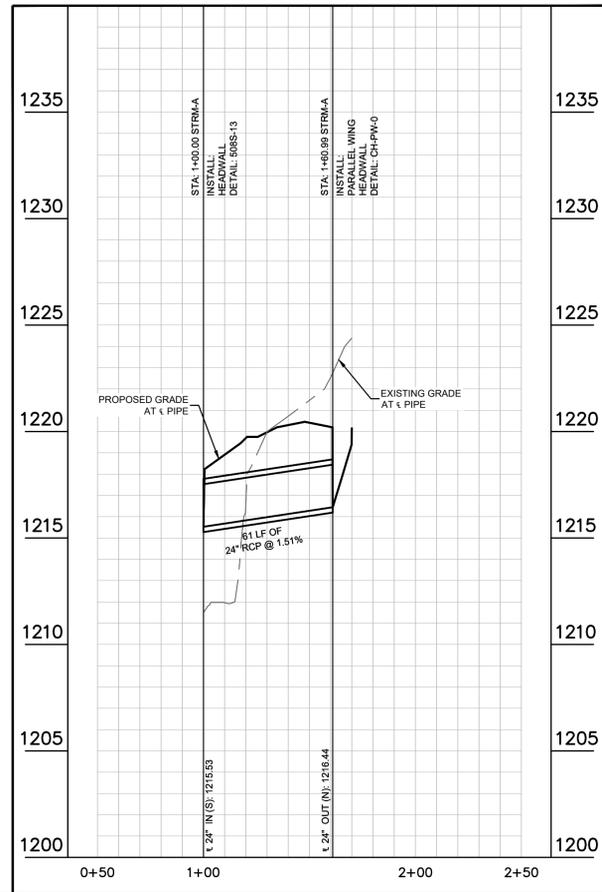
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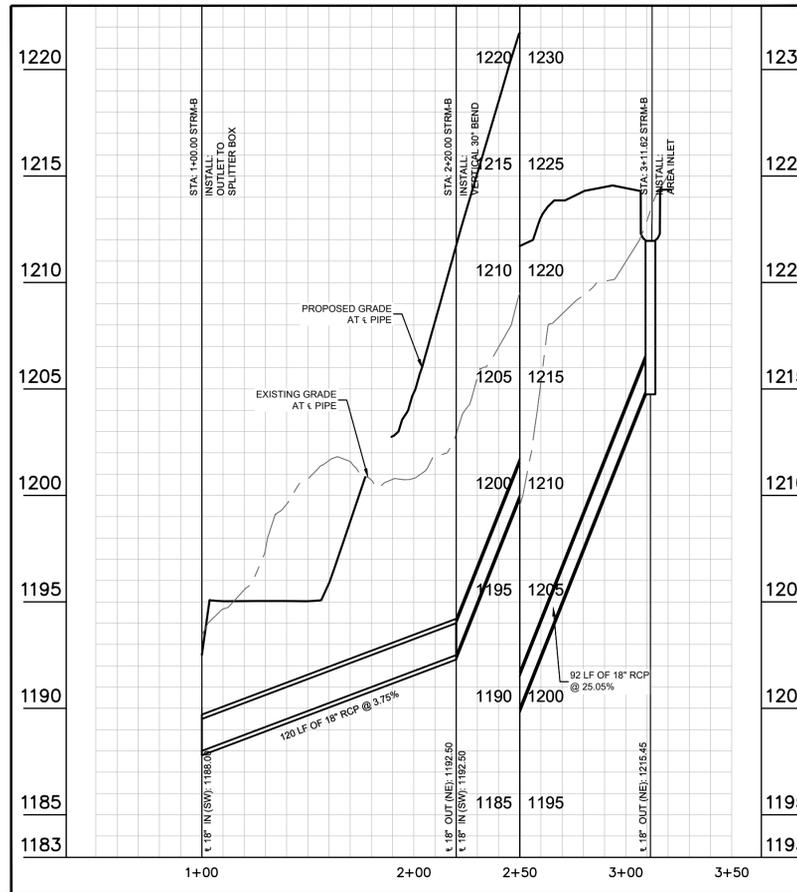
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STRM-A



STRM-B



PROFILE SCALE
 1" = 40' HORIZONTAL
 1" = 4' VERTICAL

LEGEND

- — — — — PROPERTY LINE
- — — — — PROPOSED WASTEWATER LINE
- — — — — PROPOSED WATER LINE
- — — — — PROPOSED WASTEWATER MANHOLE
- — — — — PROPOSED FIRE HYDRANT
- — — — — PROPOSED STORM DRAIN LINE
- — — — — PROPOSED STORM DRAIN INLET
- — — — — EXISTING OVERHEAD POWER LINE
- — — — — EXISTING WATER LINE
- — — — — EXISTING WASTEWATER LINE
- — — — — EXISTING STORM SEWER LINE
- — — — — EXISTING POWER POLE
- — — — — EXISTING FIRE HYDRANT
- — — — — EXISTING WATER VALVE
- — — — — EXISTING WASTEWATER MANHOLE

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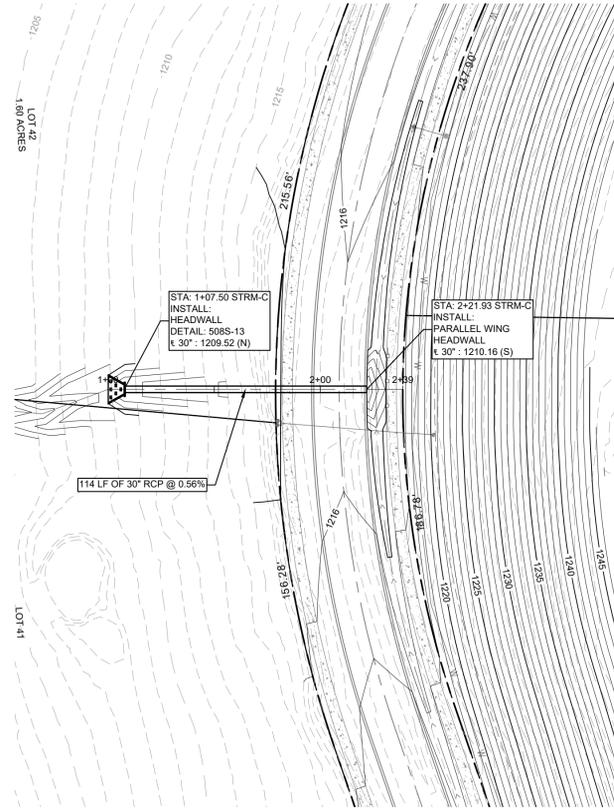
STORM PLAN & PROFILE (1 OF 4)

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

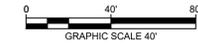
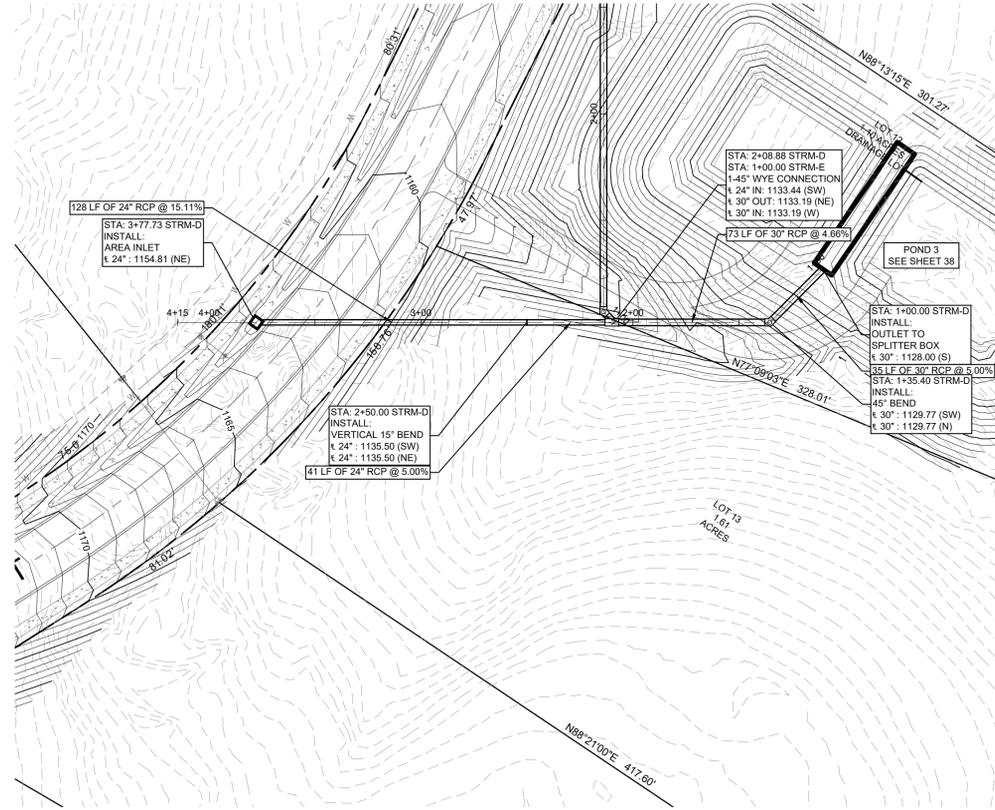
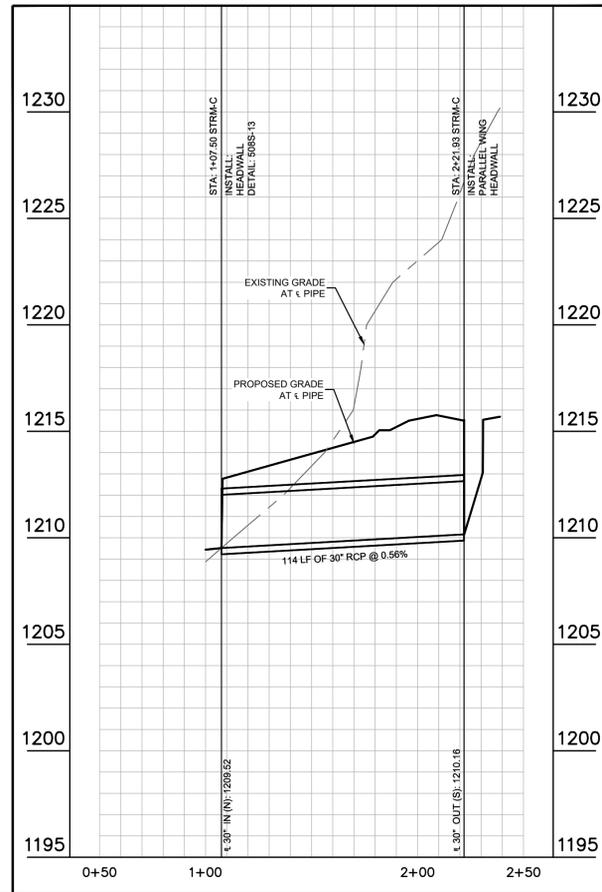
811
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WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

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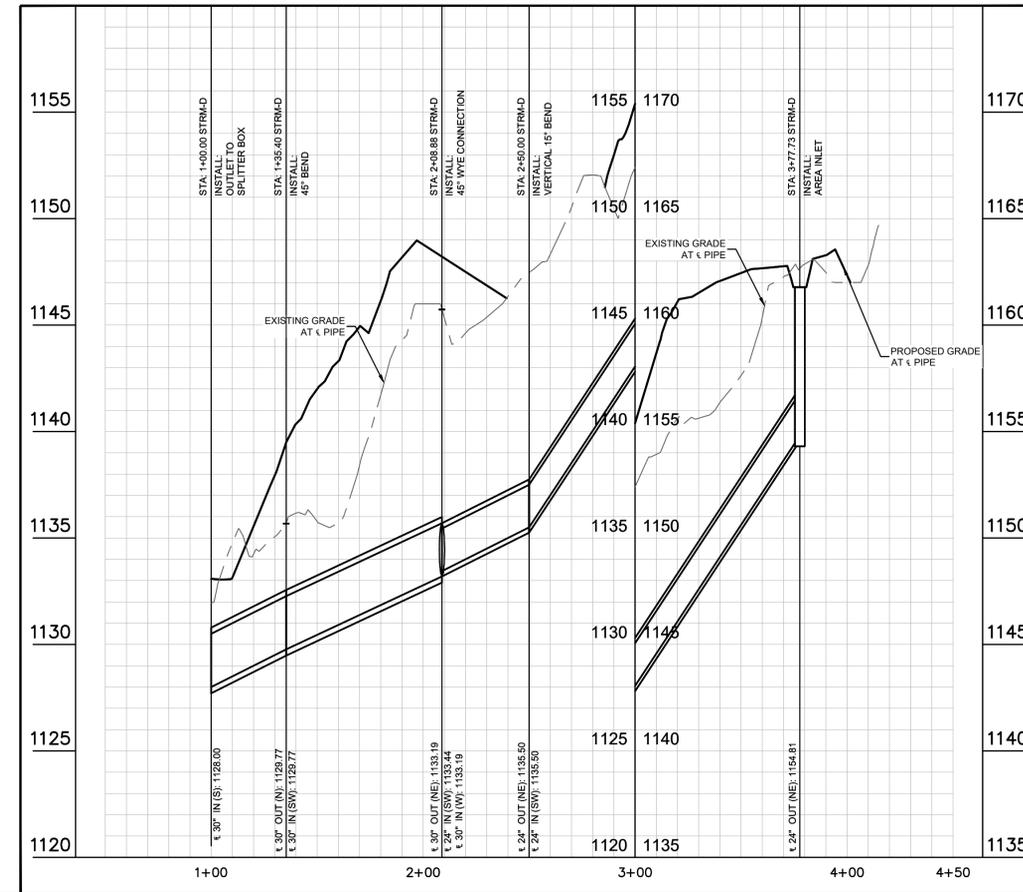
STRM-C



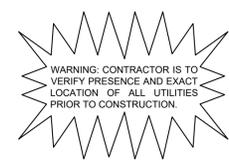
LEGEND

---	PROPERTY LINE
---	PROPOSED WASTEWATER LINE
---	PROPOSED WATER LINE
○	PROPOSED WASTEWATER MANHOLE
+	PROPOSED FIRE HYDRANT
---	PROPOSED STORM DRAIN LINE
□	PROPOSED STORM DRAIN INLET
---	EXISTING OVERHEAD POWER LINE
---	EXISTING WATER LINE
---	EXISTING WASTEWATER LINE
---	EXISTING STORM SEWER LINE
○	EXISTING POWER POLE
+	EXISTING FIRE HYDRANT
○	EXISTING WATER VALVE
○	EXISTING WASTEWATER MANHOLE

STRM-D



PROFILE SCALE
 1" = 40' HORIZONTAL
 1" = 4' VERTICAL



No.	REVISIONS	DATE	BY

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 AUSTIN, TX 78735
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 TBPE Firm No. 928

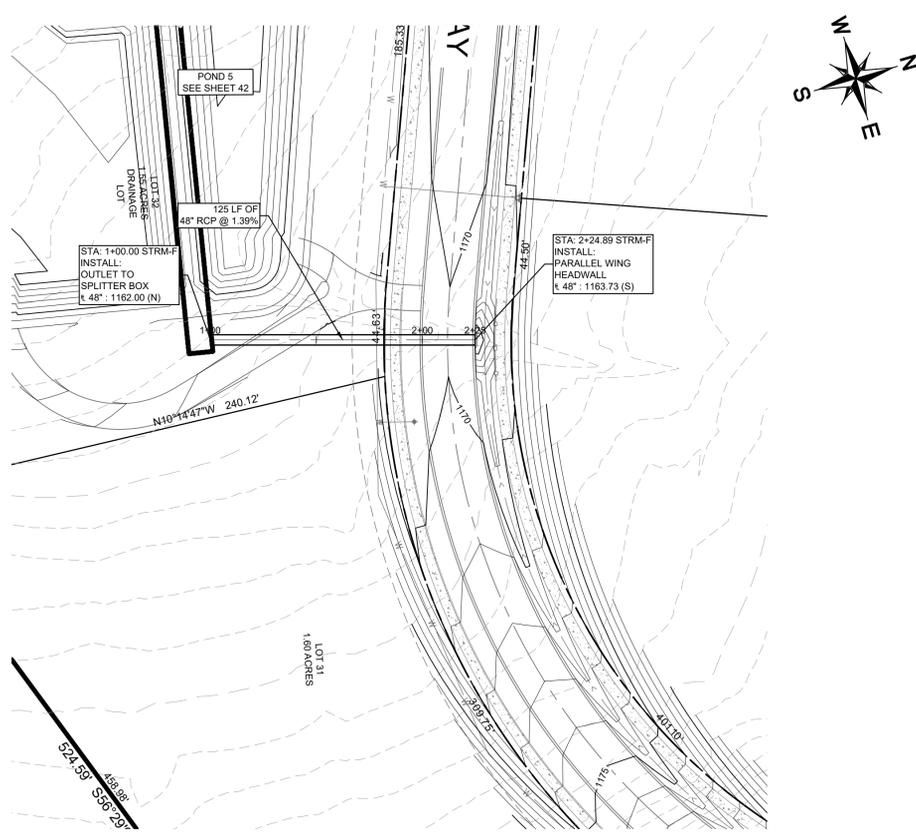
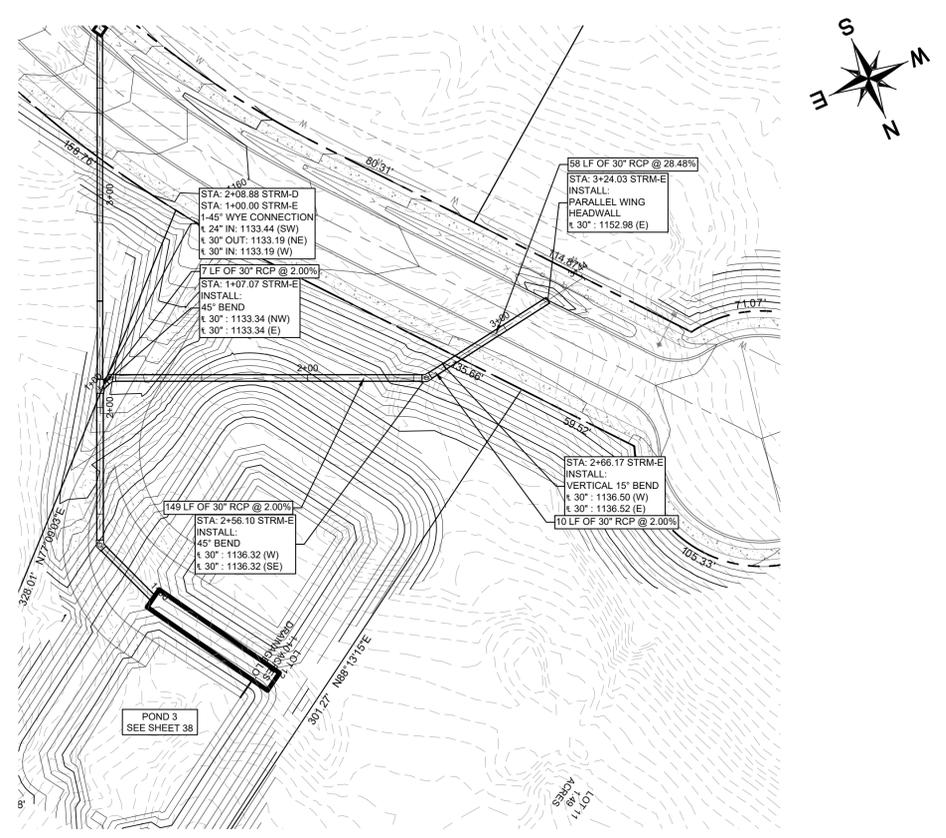


KHA PROJECT	069424100
DATE	10/19/2023
SCALE:	AS SHOWN
DESIGNED BY:	LE
DRAWN BY:	LE
CHECKED BY:	NG

STORM PLAN & PROFILE (2 OF 4)

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

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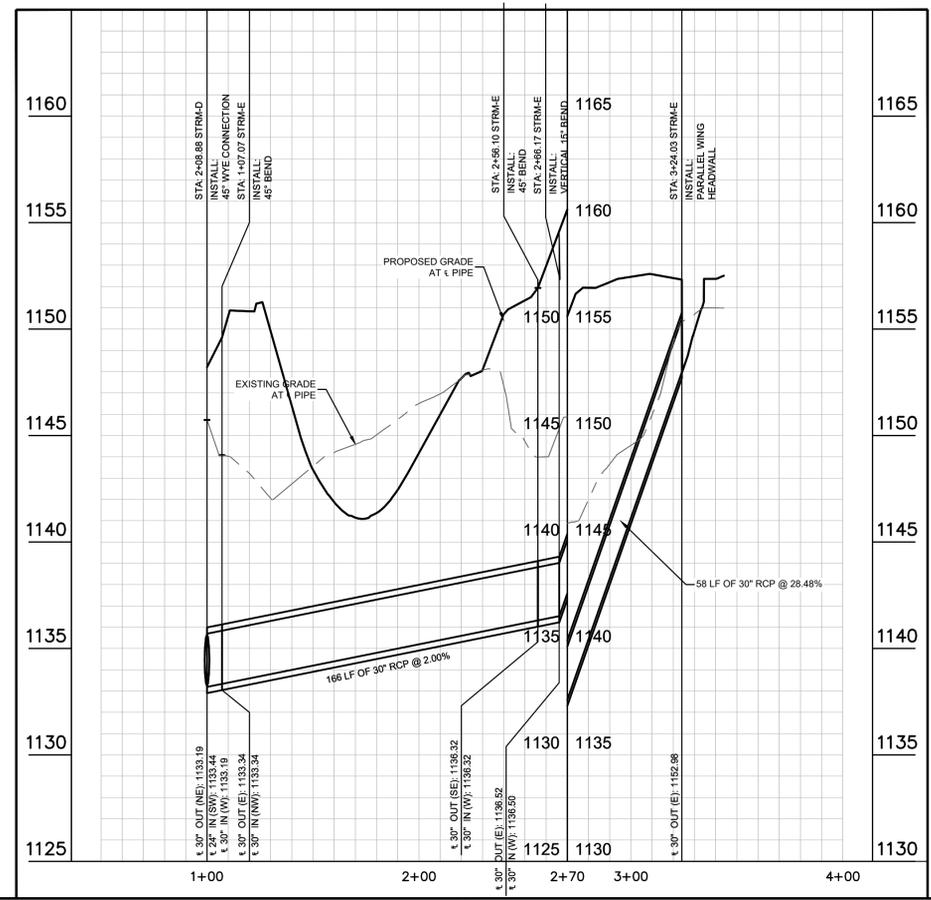


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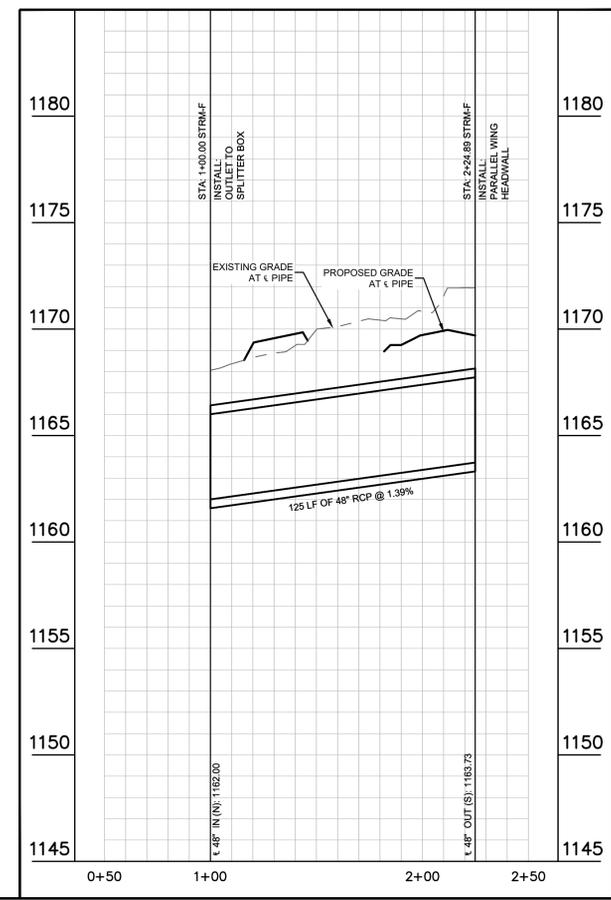
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	PROPOSED WATER LINE
	PROPOSED WASTEWATER MANHOLE
	PROPOSED FIRE HYDRANT
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM DRAIN INLET
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	EXISTING WATER LINE
	EXISTING WASTEWATER LINE
	EXISTING STORM SEWER LINE
	EXISTING POWER POLE
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING WASTEWATER MANHOLE

GRAPHIC SCALE 40'

STRM-E



STRM-F

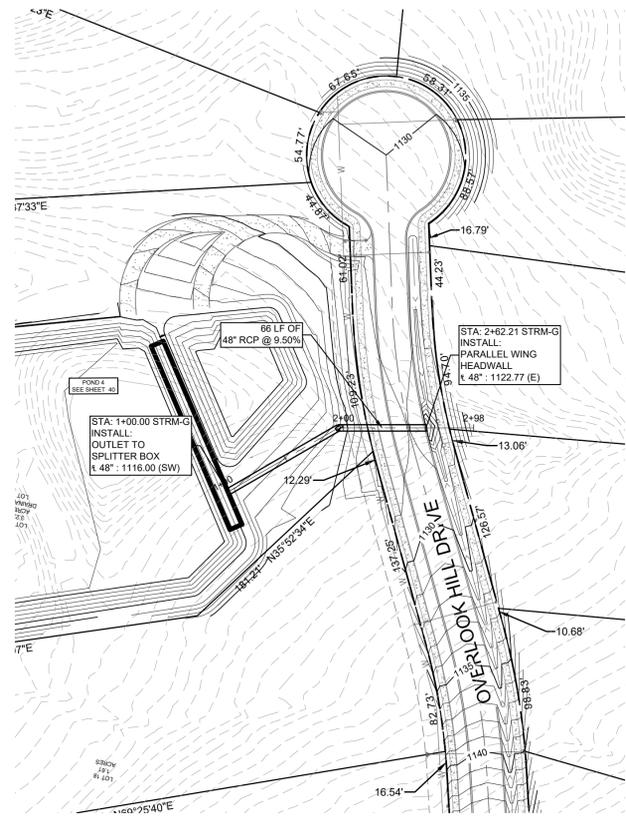


PROFILE SCALE
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 1" = 4' VERTICAL

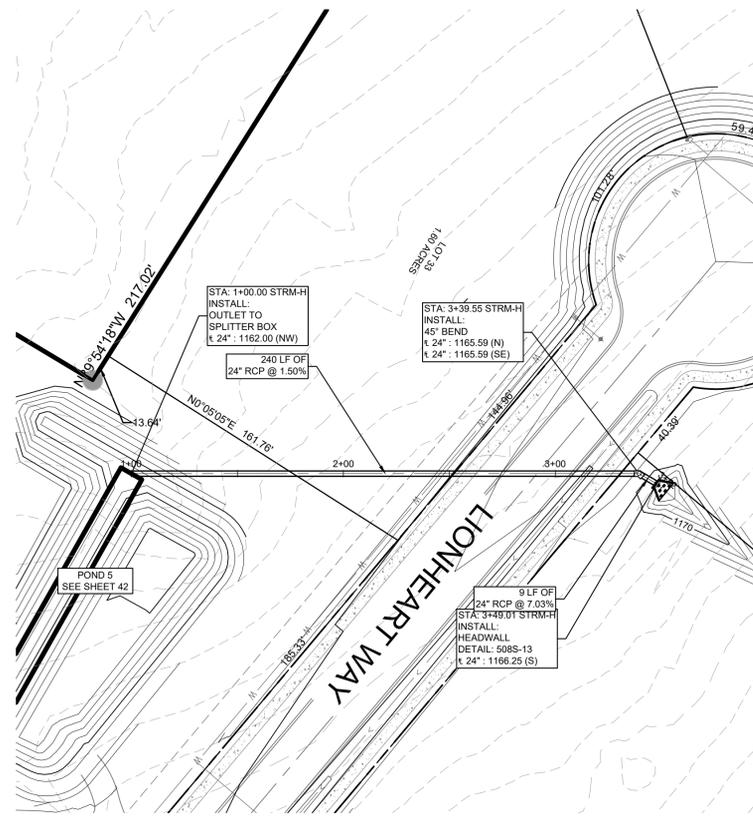
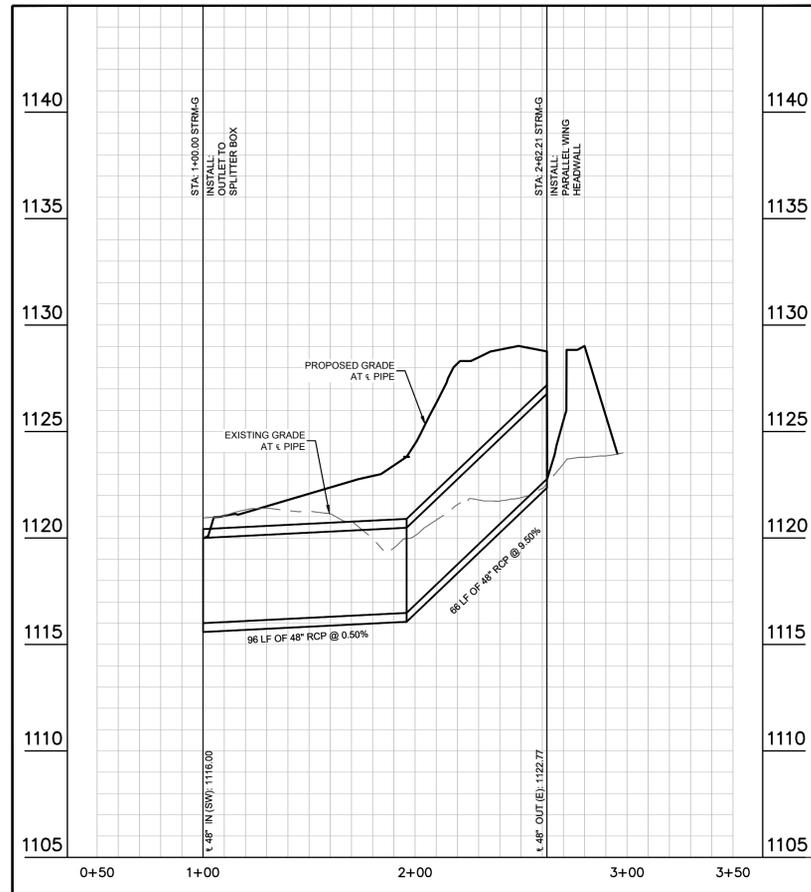
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<p>SANCTUARY DRIPPING SPRINGS 1111 HAYS COUNTRY ACRES RD. HAYS COUNTY, TEXAS</p>	<p>STORM PLAN & PROFILE (3 OF 4)</p>												
<p>SHEET NUMBER 31 OF 68</p>	<p>DATE 10/19/2023</p> <p>SCALE: AS SHOWN</p> <p>DESIGNED BY: LE</p> <p>DRAWN BY: LE</p> <p>CHECKED BY: NG</p>												
<p>Kimley-Horn 5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100 AUSTIN, TX 78735 PHONE: 512-646-2237 FAX: 512-646-418-1791 © 2023 KIMLEY-HORN AND ASSOCIATES, INC. TBPE Firm No. 928</p>													
<p>STATE OF TEXAS KIMLEY-HORN AND ASSOCIATES, INC. LICENSED PROFESSIONAL ENGINEERING 13689 10/19/2023</p>													
<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	DATE	BY										
No.	DATE	BY											

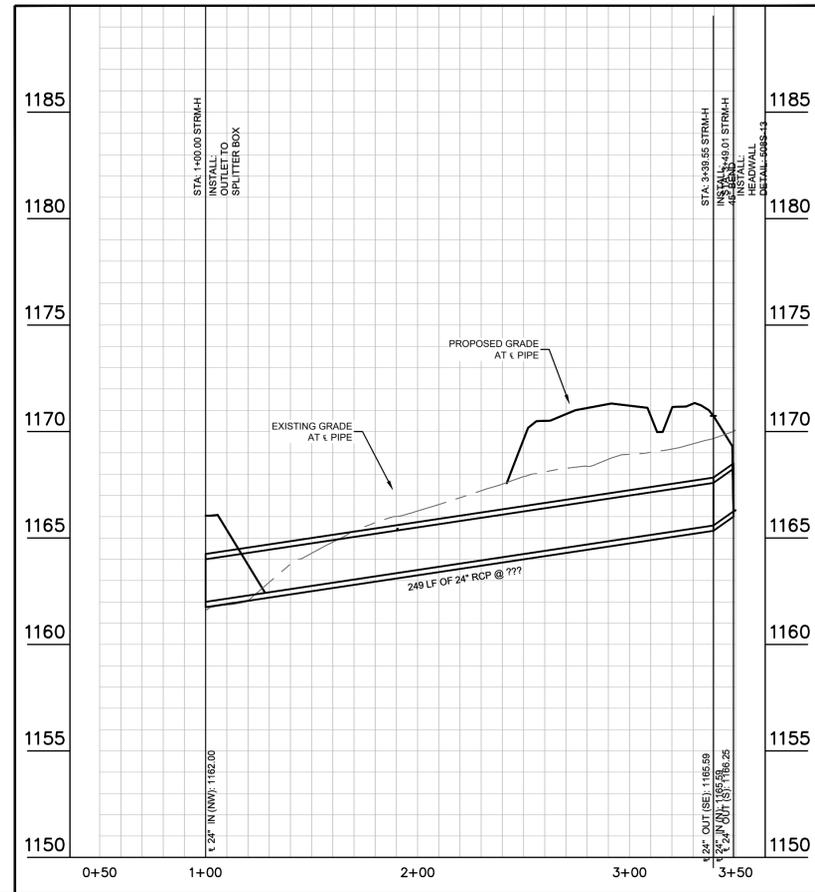
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STRM-G



STRM-H



PROFILE SCALE
 1" = 40' HORIZONTAL
 1" = 4' VERTICAL

LEGEND

- PROPERTY LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED FIRE HYDRANT
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN INLET
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- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WASTEWATER MANHOLE

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REVISIONS

No.	DATE	BY

STATE OF TEXAS

NATALIA CASARIS BOLLINGER

13689

PROFESSIONAL ENGINEER

10/19/2023

KHA PROJECT	069424100
DATE	10/19/2023
SCALE:	AS SHOWN
DESIGNED BY:	LE
DRAWN BY:	LE
CHECKED BY:	NG

STORM PLAN & PROFILE (4 OF 4)

SANCTUARY DRIPPING SPRINGS

1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

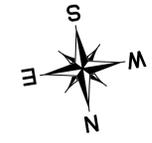
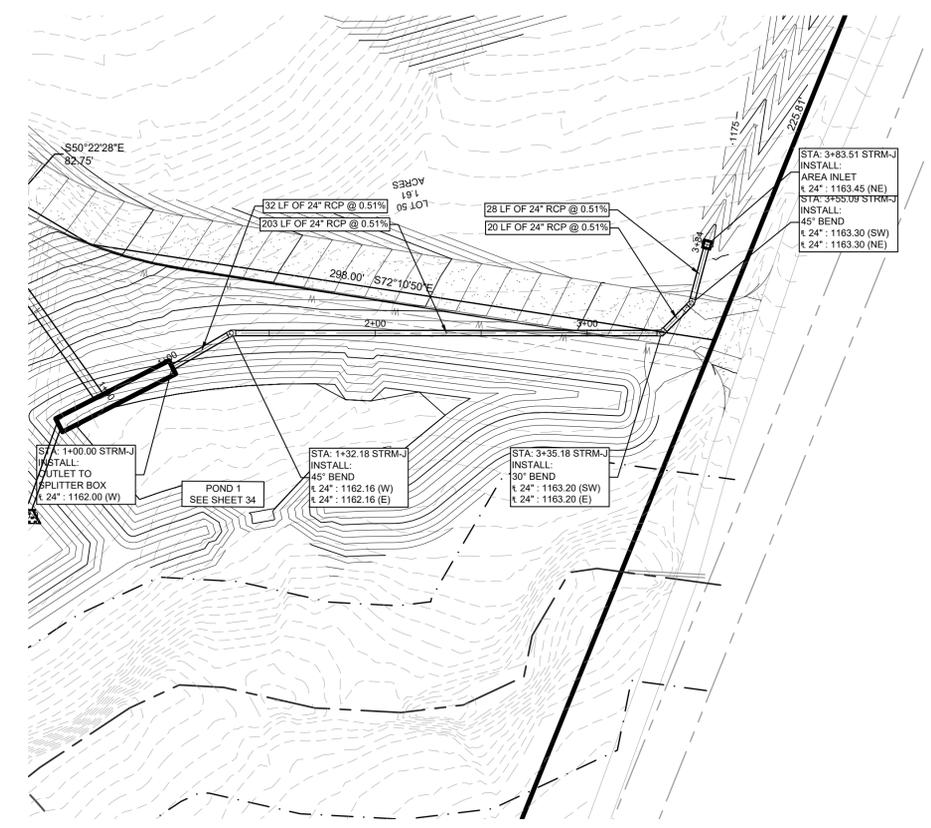
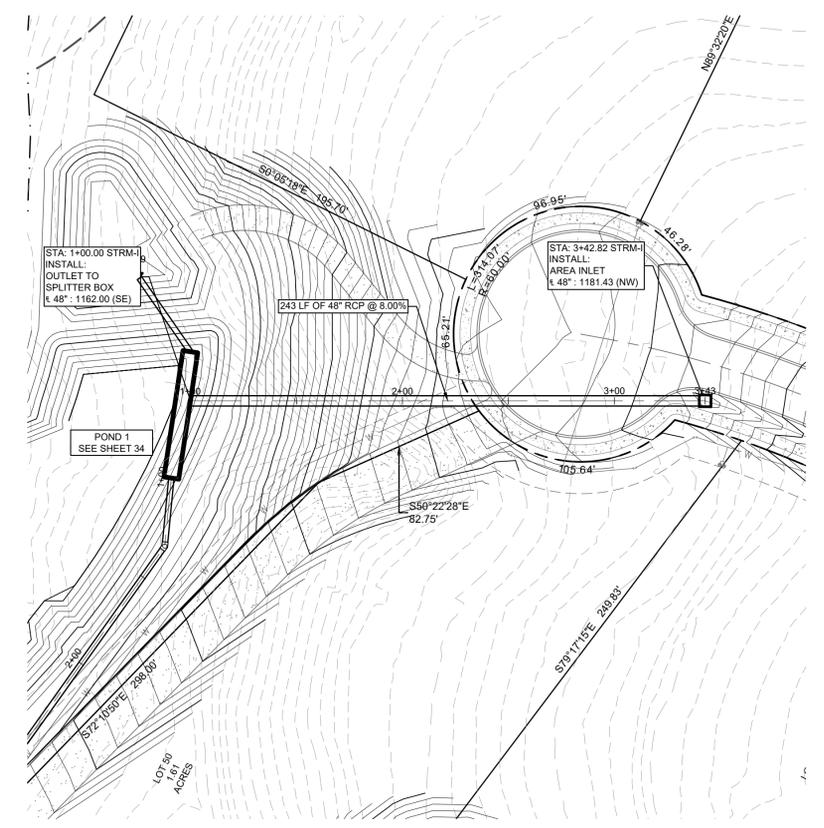
SHEET NUMBER

32 OF 68

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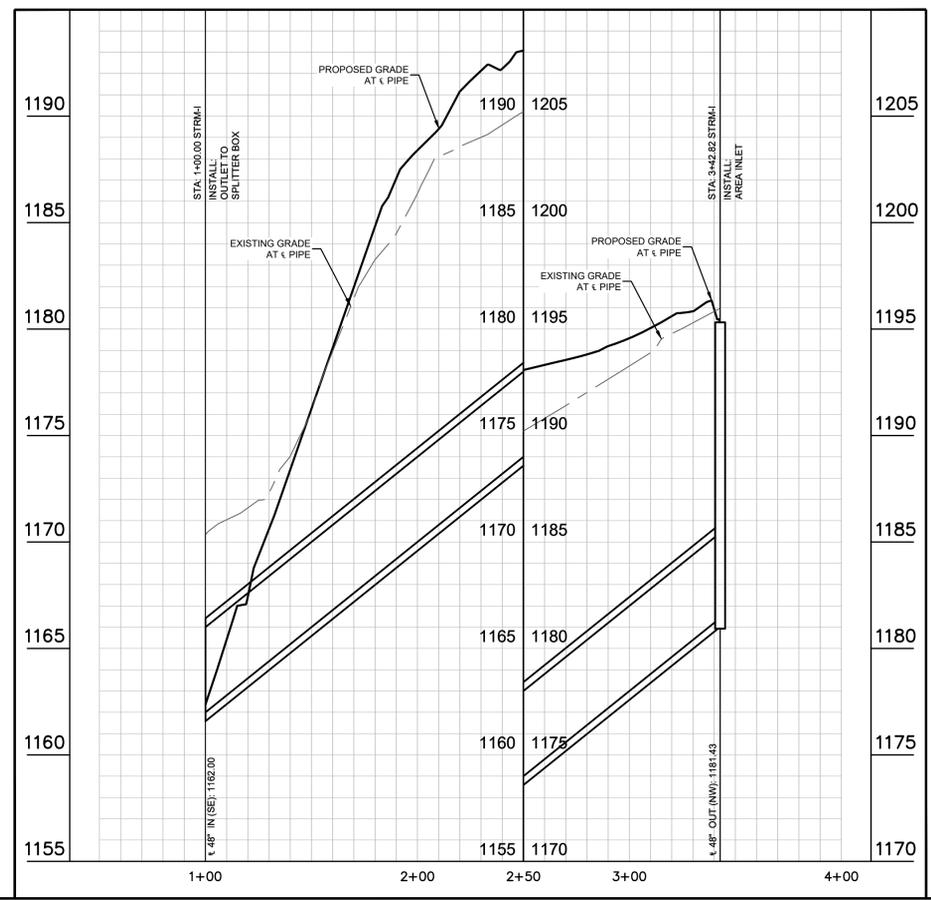
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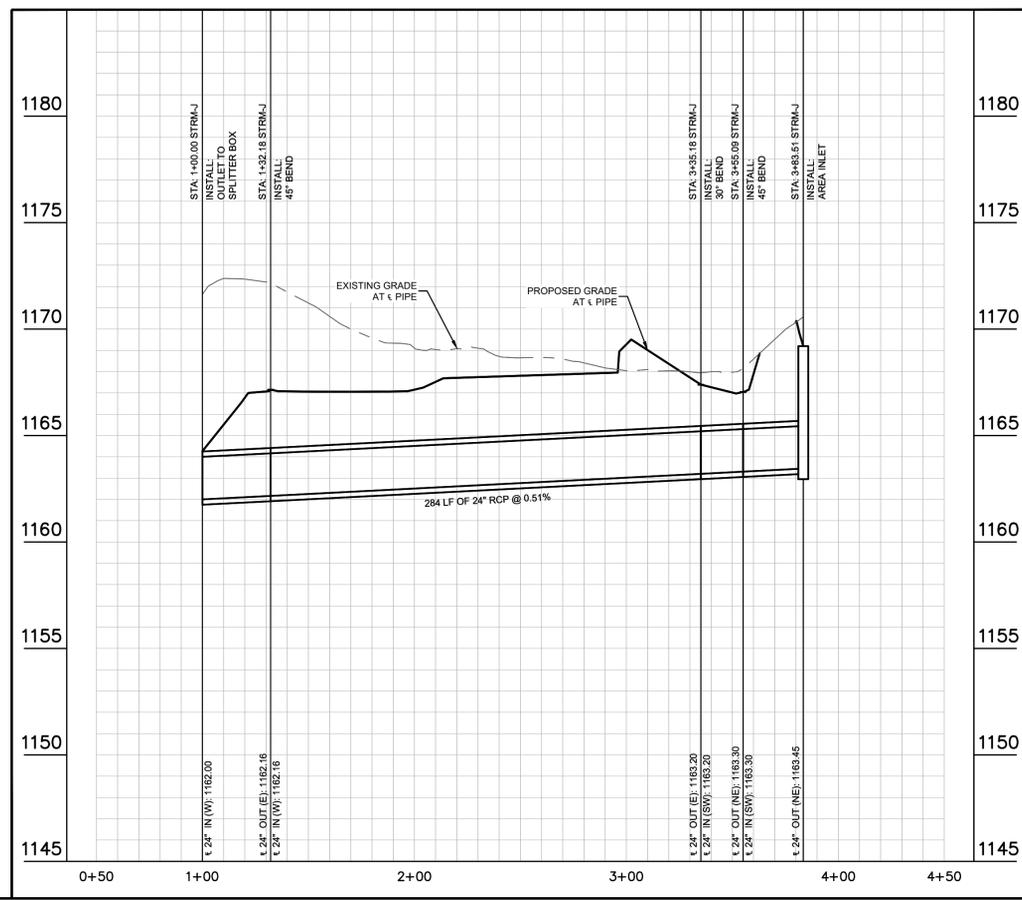


LEGEND	
	PROPERTY LINE
	PROPOSED WASTEWATER LINE
	PROPOSED WATER LINE
	PROPOSED WASTEWATER MANHOLE
	PROPOSED FIRE HYDRANT
	PROPOSED STORM DRAIN LINE
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	EXISTING STORM SEWER LINE
	EXISTING POWER POLE
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING WASTEWATER MANHOLE

STRM-I



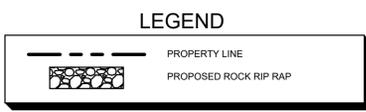
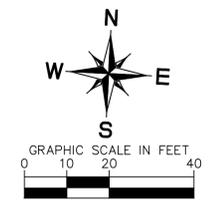
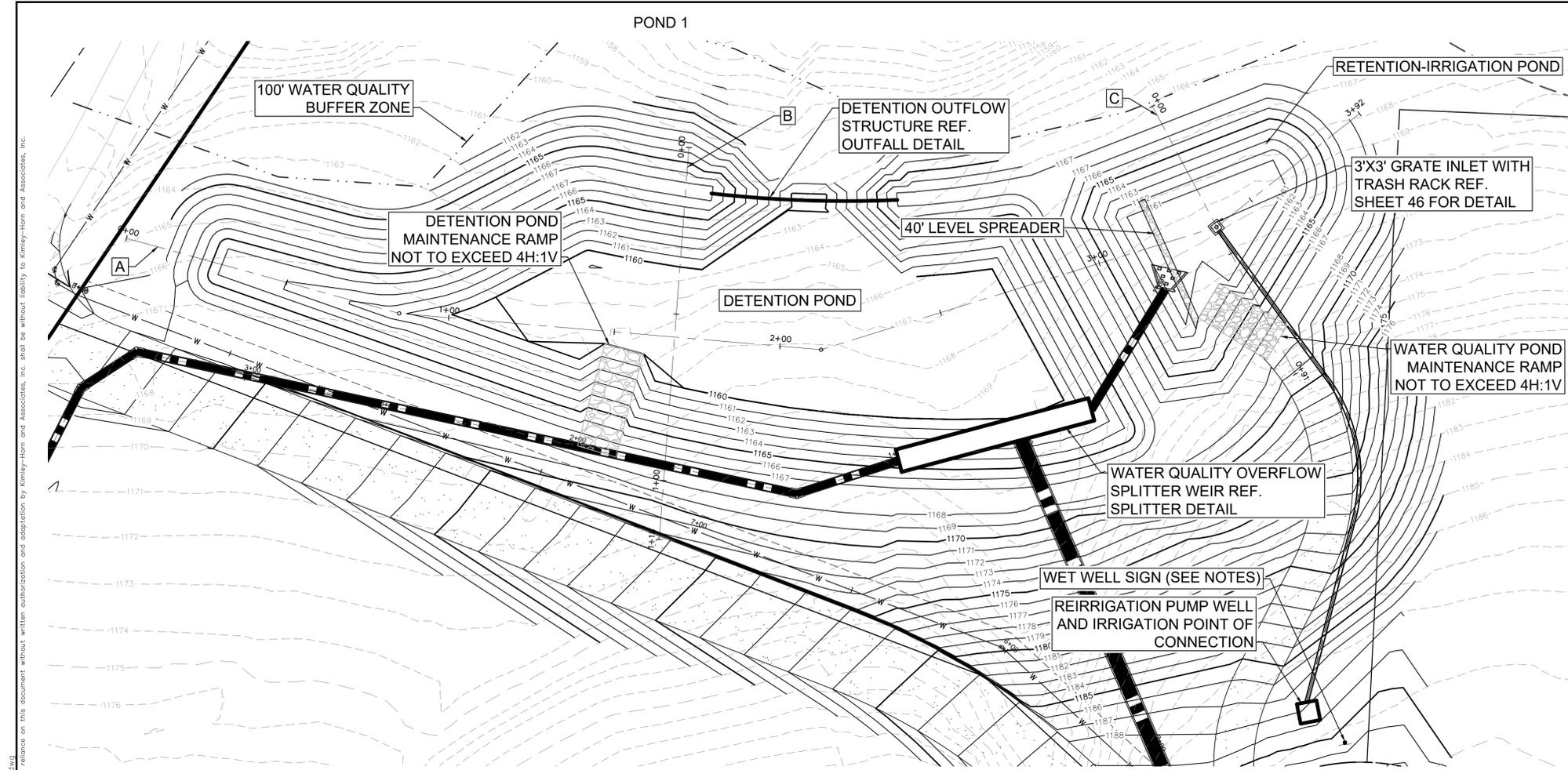
STRM-J



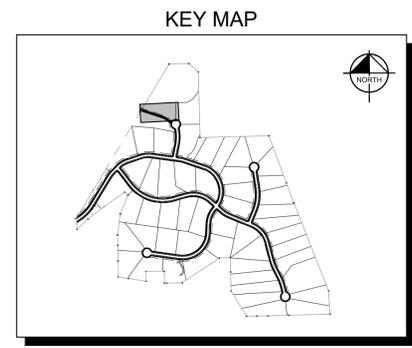
PROFILE SCALE
 1" = 40' HORIZONTAL
 1" = 4' VERTICAL



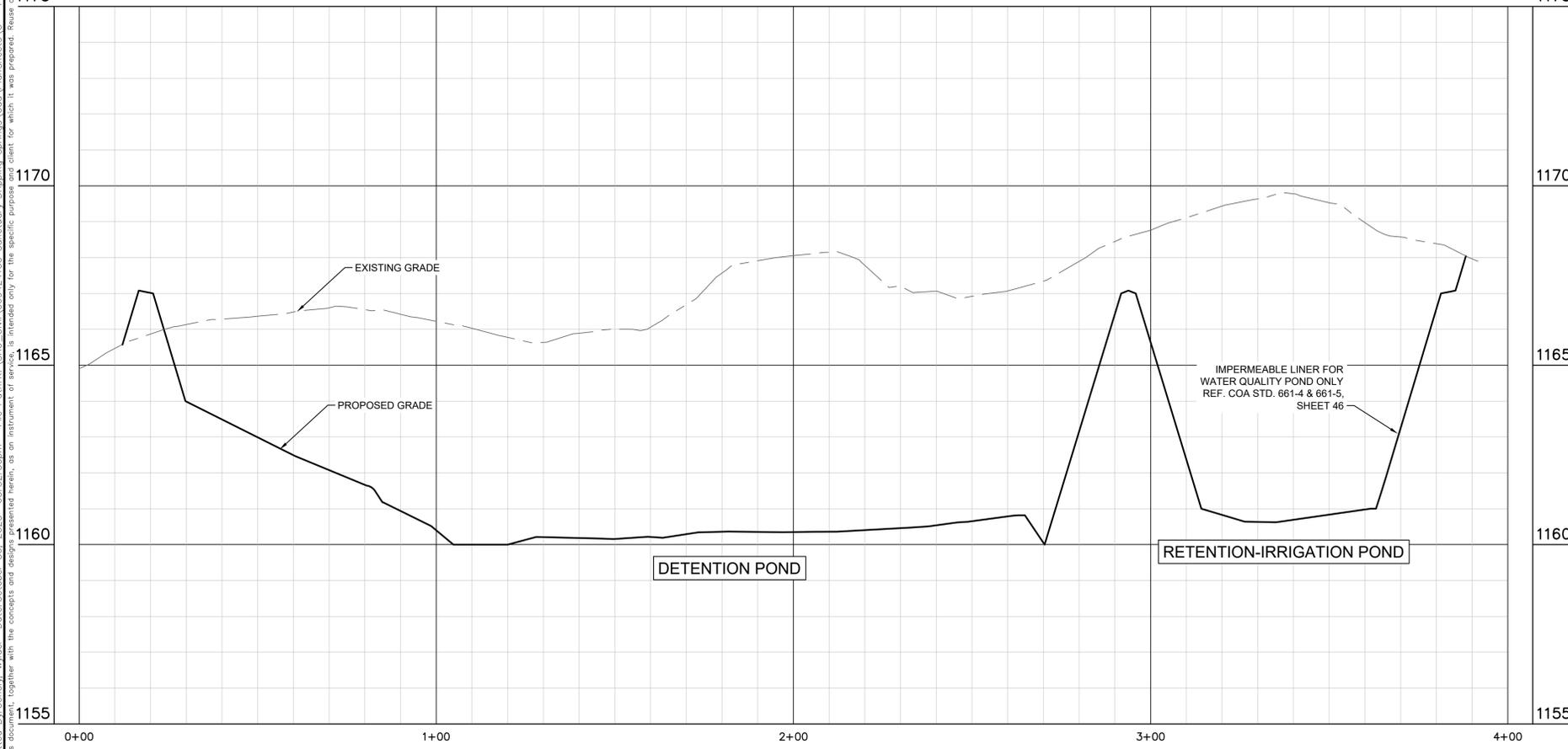
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10/19/2023				
KHA PROJECT 069424100	DATE 10/19/2023	SCALE: AS SHOWN	DESIGNED BY: LE	DRAWN BY: LE
			CHECKED BY: NG	
STORM PLAN & PROFILE (5 OF 5)				
SANCTUARY DRIPPING SPRINGS 1111 HAYS COUNTRY ACRES RD. HAYS COUNTY, TEXAS				
SHEET NUMBER				
33 OF 68				
		REVISIONS	BY	DATE



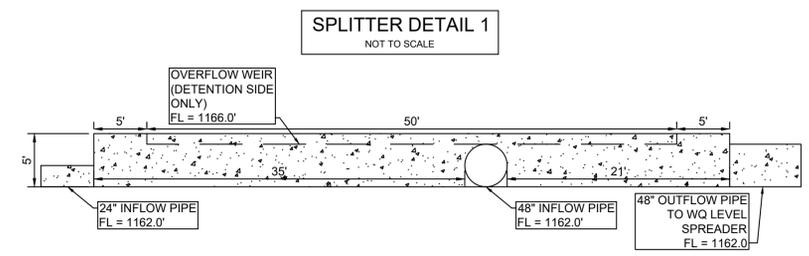
- NOTES**
1. WET WELL PRIVATE MAINTENANCE SIGN WITH NAME AND PHONE NUMBER OR RESPONSIBLE PARTY WHO MAY BE CONTACT IF ALARM GOES OFF.



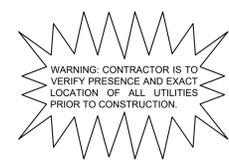
POND 1 – PROFILE A



PROFILE SCALE
1" = 20' HORIZONTAL
1" = 2' VERTICAL



Pond 1 Splitter Calculations				
	Undertained Flow (CFS)	Weir Width	Depth	Velocity
LEVEL SPREADER (25-yr)	119.7	40	1.00	3.00
SPLITTER WEIR (100-yr)	164.7	50	0.99	3.32



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10/19/2023

KHA PROJECT
069424100

DATE
10/19/2023

SCALE: AS SHOWN

DESIGNED BY: LE

DRAWN BY: LE

CHECKED BY: NG

POND PLAN & PROFILE

(1 OF 12)

SANCTUARY DRIPPING
SPRINGS
1111 HAYS COUNTRY ACRES RD.
HAYS COUNTY, TEXAS

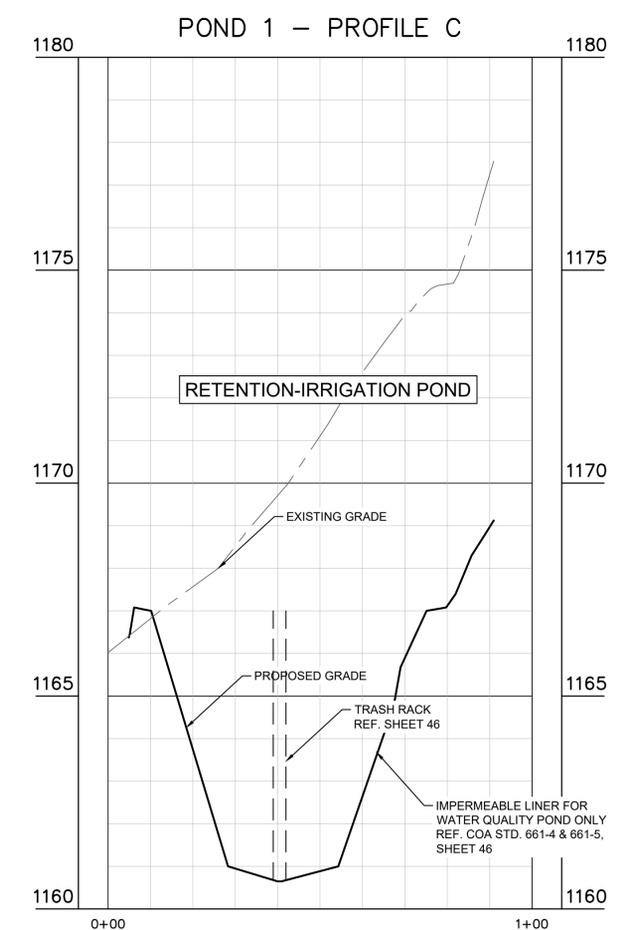
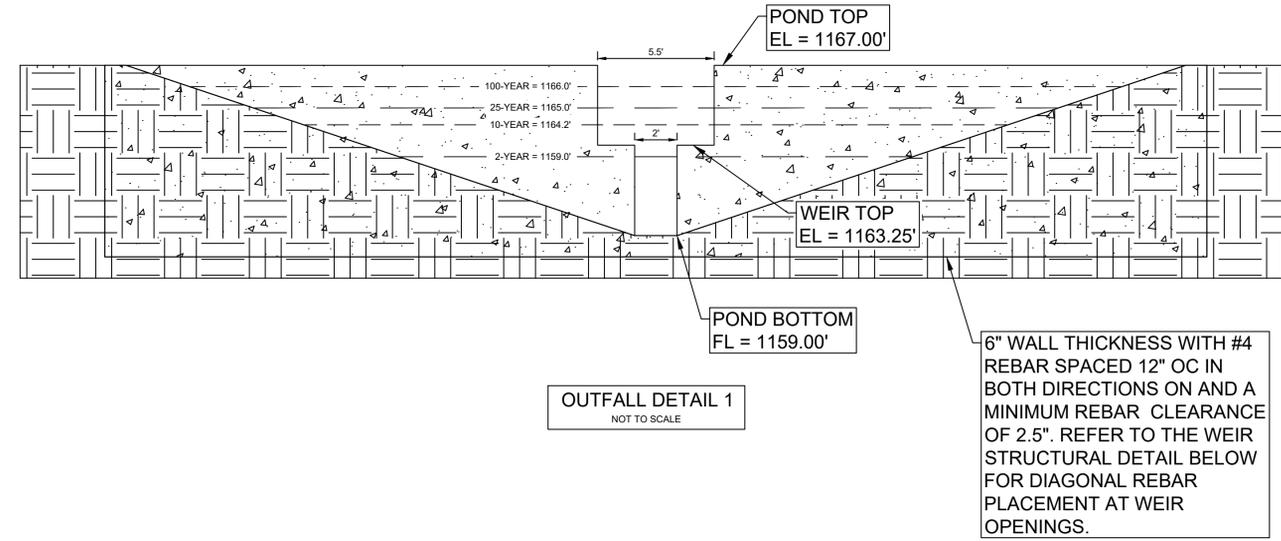
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34 OF 68

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POND 1 DETENTION ELEVATION STORAGE TABLE				
Elevation (ft)	Depth (ft)	Area (sq. ft.)	Incr. Vol. (cu. ft.)	Storage (cu. ft.)
1159	0.00	1	0.00	0.00
1160	1.00	6,512	3,256.39	3,256.39
1161	2.00	7,832	7,171.94	10,428.33
1162	3.00	9,224	8,527.96	18,956.29
1162.7	3.70	9,768	6,647.07	25,603.36
1163	4.00	10,778	3,081.88	28,685.24
1164	5.00	12,570	11,674.08	40,359.32
1164.2	5.20	12,747	2,531.74	42,891.06
1165	6.00	14,342	10,835.78	53,726.84
1166	7.00	16,148	15,245.13	68,971.97
1167	8.00	17,992	32,334.15	86,060.99

POND 1 WATER QUALITY RETENTION ELEVATION STORAGE TABLE				
Elevation (ft)	Depth (ft)	Area (sq. ft.)	Incr. Vol. (cu. ft.)	Storage (cu. ft.)
1161	0.00	1,034	0.00	0.00
1162	1.00	1,568	1,301.00	1,301.00
1163	2.00	2,118	1,843.00	3,144.00
1164	3.00	2,736	2,427.00	5,571.00
1165	4.00	3,421	3,078.50	8,649.50
1166	5.00	4,175	3,798.00	12,447.50
1167	6.00	4,995	4,585.00	17,032.50

POND 1 FLOW SUMMARY			
Storm Event	Existing Flow (cfs)	Undetained Flow (cfs)	Detained Flow (cfs)
2-yr	38.7	53.2	37.30
10-yr	73.1	93	71.60
25-yr	96.7	119.7	96.30
100-yr	136	164.7	135.80



Texas Commission on Environmental Quality
TSS Removal Calculations 04-20-2009
 Project Name: **The Sanctuary - Pond 1**
 Date Prepared: **10/9/2023**

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30
 Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
 where: L_M TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches
 Site Data: Determine Required Load Removal Based on the Entire Project
 County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches
 L_M TOTAL PROJECT = **21156** lbs.
 Number of drainage basins / outfalls areas leaving the plan area = **6**

2. Drainage Basin Parameters (This information should be provided for each basin):
 Drainage Basin/Outfall Area No. = **1**
 Total drainage basin/outfall area = **17.33** acres
 Predevelopment impervious area within drainage basin/outfall area = **0.20** acres
 Post-development impervious area within drainage basin/outfall area = **4.33** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 L_M THIS BASIN = **3709** lbs.

3. Indicate the proposed BMP Code for this basin.
 Proposed BMP = **Retention / Infiltration**
 Removal efficiency = **100** percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.
 RG-348 Page 3-33 Equation 3.7: $L_R = (BMP \text{ efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$
 where: A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP
 A_C = **17.33** acres
 A_i = **4.33** acres
 A_p = **13.00** acres
 L_R = **5178** lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area
 Desired L_M THIS BASIN = **3709** lbs.
 F = **0.72**

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36
 Rainfall Depth = **0.83** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **12103** cubic feet
 Calculations from RG-348 Pages 3-36 to 3-37
 Off-site area draining to BMP = **0.00** acres
 Off-site Impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet
 Storage for Sediment = **2421**
 Total Capture Volume (required water quality volume(s) x 1.20) = **14524** cubic feet

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46
 Required Water Quality Volume for retention basin = **14524** cubic feet
 Irrigation Area Calculations:
 Soil infiltration/permeability rate = **0.1** in/hr Enter determined permeability rate or assumed value of 0.1
 Irrigation area = **58097** square feet
 L_R = **1.33** acres

PROFILE SCALE
 1" = 20' HORIZONTAL
 1" = 2' VERTICAL



DATE
REVISIONS

No.
BY

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 PHONE: 512-646-2237 FAX: 512-646-418-1791
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 TBPE Firm No. 928

10/19/2023

KHA PROJECT
069424100

DATE
10/19/2023

SCALE: AS SHOWN

DESIGNED BY: LE

DRAWN BY: LE

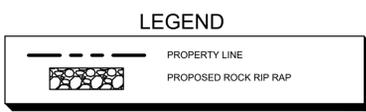
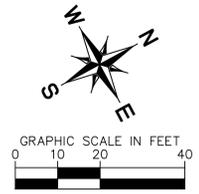
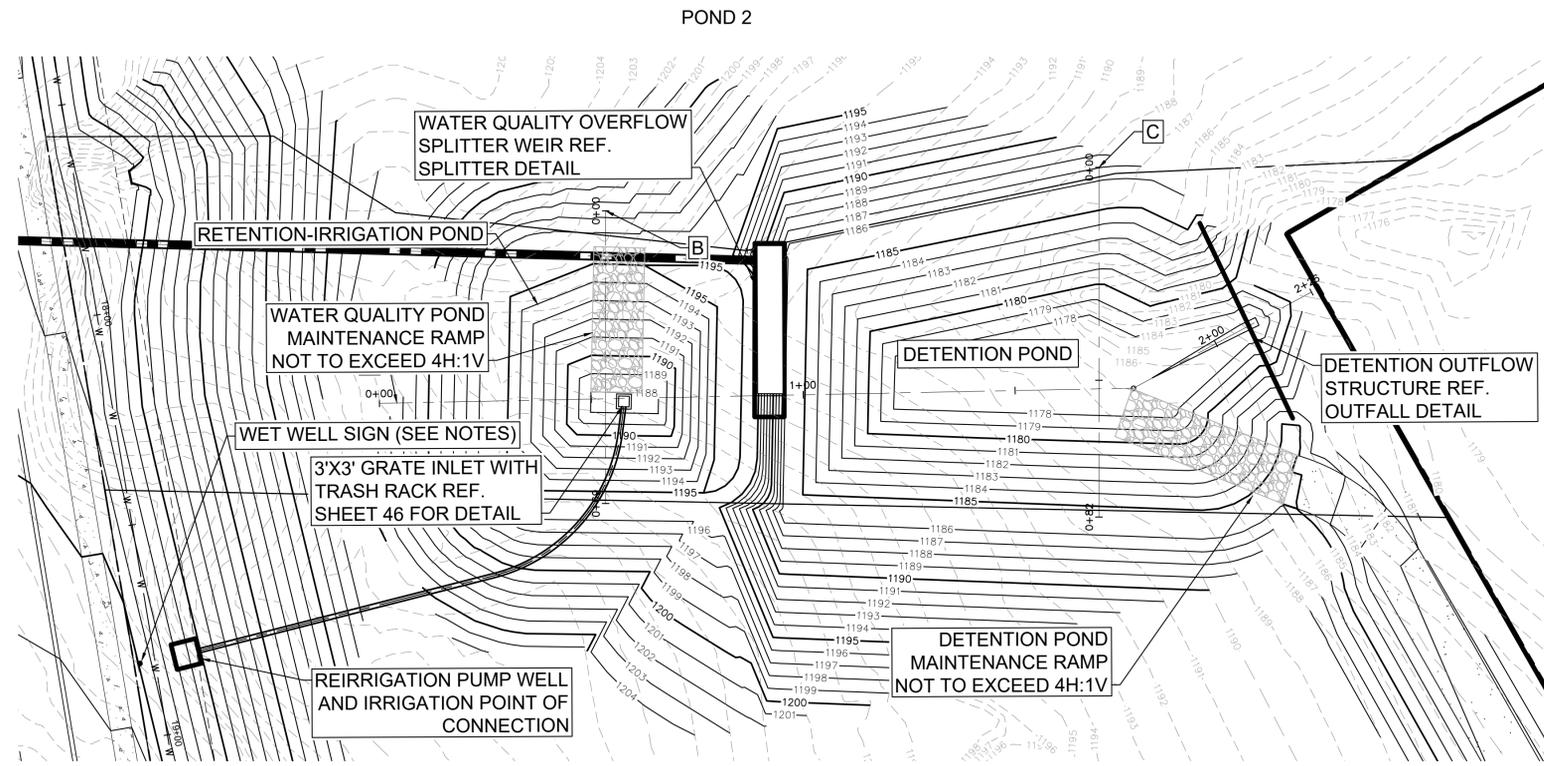
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POND PLAN & PROFILE
(2 OF 12)

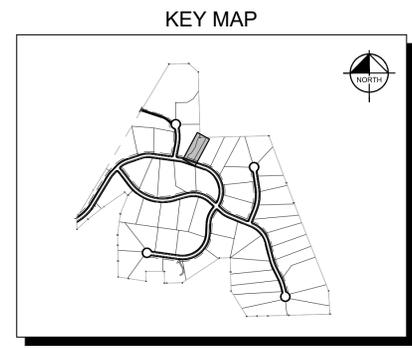
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HAYS COUNTY, TEXAS

SHEET NUMBER
35 OF 68

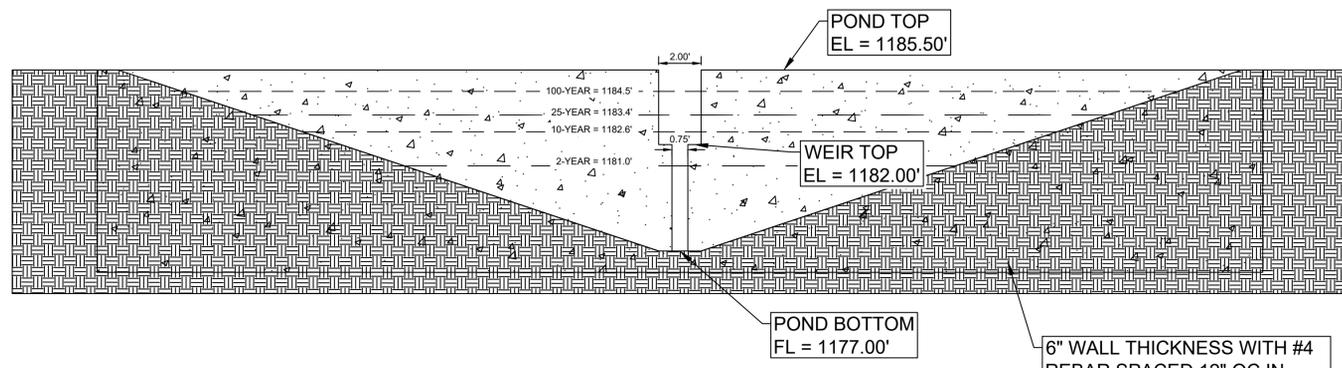
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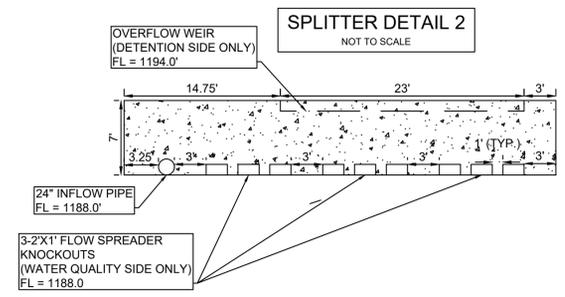
- NOTES**
1. WET WELL PRIVATE MAINTENANCE SIGN WITH NAME AND PHONE NUMBER OR RESPONSIBLE PARTY WHO MAY BE CONTACT IF ALARM GOES OFF.



OUTFALL DETAIL 2
NOT TO SCALE



6" WALL THICKNESS WITH #4 REBAR SPACED 12" OC IN BOTH DIRECTIONS ON AND A MINIMUM REBAR CLEARANCE OF 2.5". REFER TO THE WEIR STRUCTURAL DETAIL BELOW FOR DIAGONAL REBAR PLACEMENT AT WEIR OPENINGS.

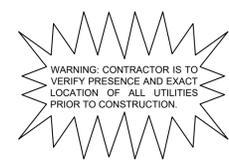


POND 2 SPLITTER KNOCKOUT ARRAY CALCULATION

# of Knockouts	9
Knockout Area	2
Head to pass water	1
Max Flow (CFS)	86.7
Velocity (FPS)	2.97
Can Pass 25-YR Flow?	TRUE

Pond 2 Splitter Calculations

	Undertained Flow (CFS)	Weir Width	Depth	Velocity
25-yr	53.4			
SPLITTER WEIR (100-yr)	73.7	23	0.97	3.29



No.	REVISIONS	DATE	BY

Kimley»Horn

5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100
AUSTIN, TX 78735
PHONE: 512-646-2237 FAX: 512-646-2238
© 2023 KIMLEY-HORN AND ASSOCIATES, INC.
TBPE Firm No. 928

STATE OF TEXAS
NATALIA CASARIS SOLIZ
13689
LICENSED PROFESSIONAL ENGINEER

10/19/2023

KHA PROJECT	069424100
DATE	10/19/2023
SCALE	AS SHOWN
DESIGNED BY	LE
DRAWN BY	LE
CHECKED BY	NG

POND PLAN & PROFILE
(3 OF 12)

SANCTUARY DRIPPING SPRINGS
1111 HAYS COUNTRY ACRES RD.
HAYS COUNTY, TEXAS

Plotted By: Conolly, Wyster, Date: October 30, 2023, 05:32:56pm, File Path: K:\SAU\Civil\069424100_Sanctuary_Dripping_Springs\Cad\PlanSheets\C - Pond Plan 1.dwg
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Elevation (ft)	Depth (ft)	Area (sq.ft.)	Incr. Vol. (cu.ft.)	Storage (cu.ft.)	
1177	0.00	21	0.00	0.00	
1178	1.00	1462	741.50	741.50	
1179	2.00	2067	1,764.50	2,506.00	
1180	3.00	2714	2,390.50	4,896.50	
2-YR WSE	1181	4.00	3,058.00	7,954.50	
1182	5.00	4132	3,767.00	11,721.50	
10-YR WSE	1182.6	5.60	4363	2,548.48	14,269.99
1183	6.00	4902	1,852.95	16,122.94	
25-YR WSE	1183.4	6.40	5064	1,993.22	18,116.16
1184	7.00	5714	3,233.55	21,349.70	
100-YR WSE	1184.5	7.50	5928	2,910.52	24,260.22
1185	8.00	6569	3,124.18	27,384.39	

PROFILE SCALE
 1" = 20' HORIZONTAL
 1" = 2' VERTICAL

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **The Sanctuary - Pond 2**
 Date Prepared: **10/9/2023**

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

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

where: $L_{M \text{ TOTAL PROJECT}} =$ Required TSS removal resulting from the proposed development = 80% of increased load
 $A_N =$ Net increase in impervious area for the project
 $P =$ Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
 County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 $P =$ **33** inches

$L_{M \text{ TOTAL PROJECT}} =$ **21156** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **2**
 Total drainage basin/outfall area = **6.41** acres
 Predevelopment impervious area within drainage basin/outfall area = **0.12** acres
 Post-development impervious area within drainage basin/outfall area = **1.60** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 $L_{M \text{ THIS BASIN}} =$ **1331** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
 Removal efficiency = **100** percent

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

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

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

$A_C =$ **6.41** acres
 $A_i =$ **1.60** acres
 $A_p =$ **4.81** acres
 $L_R =$ **1915** lbs

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

Desired $L_{M \text{ THIS BASIN}} =$ **1331** lbs.
 $F =$ **0.69**

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

Rainfall Depth = **0.75** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **4036** cubic feet

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

Off-site area draining to BMP = **0.00** acres
 Off-site impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet

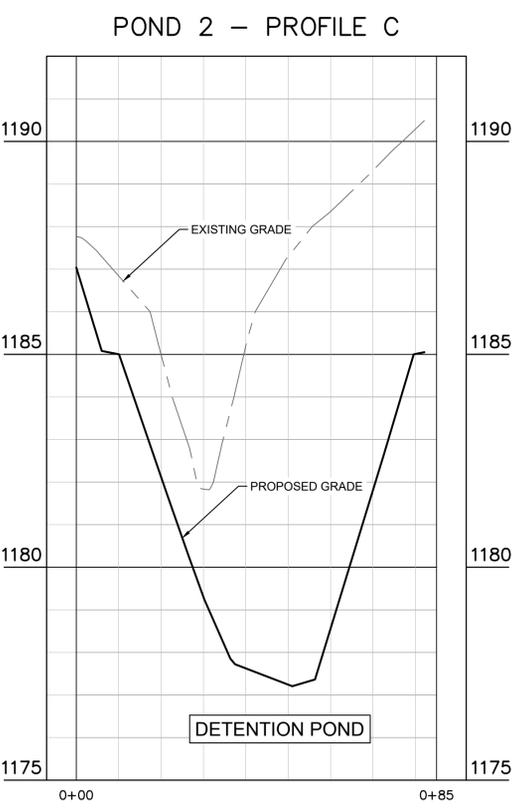
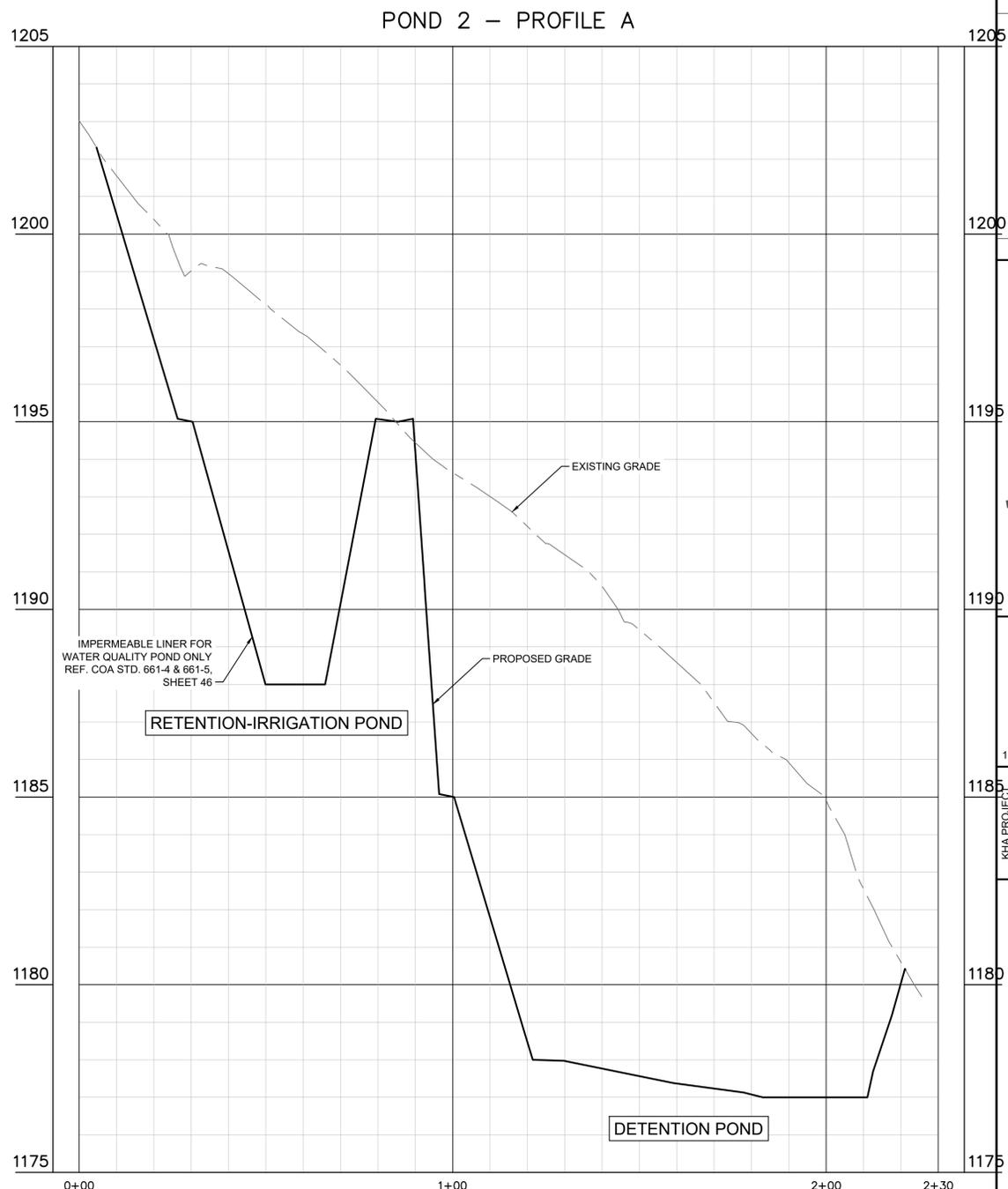
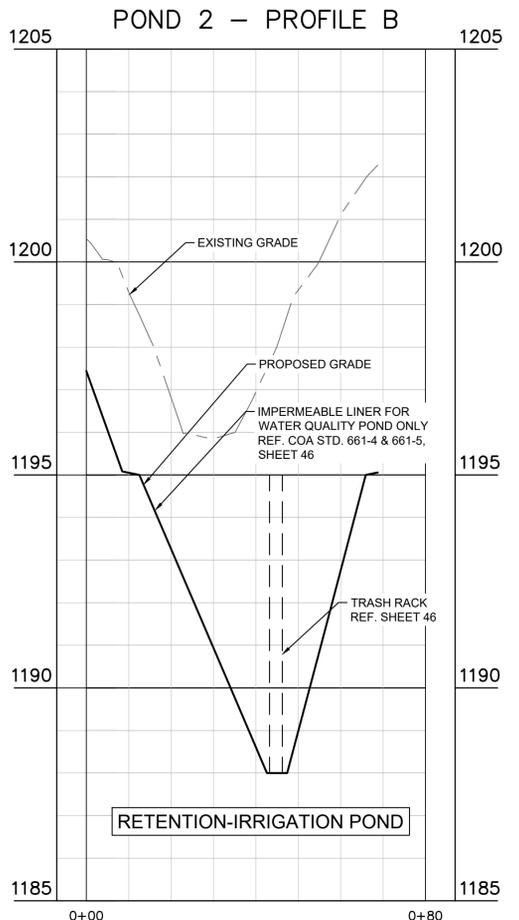
Storage for Sediment = **807**
 Total Capture Volume (required water quality volume(s) x 1.20) = **4843** cubic feet

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **4843** cubic feet

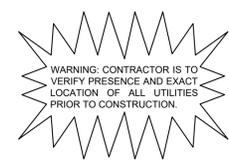
Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr Enter determined permeability rate or assumed value of 0.1
 Irrigation area = **19371** square feet
0.44 acres



Elevation (ft)	Depth (ft)	Area (sq.ft.)	Incr. Vol. (cu.ft.)	Storage (cu.ft.)
1188	0.00	76	0.00	0.00
1189	1.00	249	162.50	162.50
1190	2.00	491	370.00	532.50
1191	3.00	803	647.00	1,179.50
1192	4.00	1,184	993.50	2,173.00
1193	5.00	1,636	1,410.00	3,583.00
1194	6.00	2,156	1,896.00	5,479.00
1195	7.00	2,747	2,451.50	7,930.50

Storm Event	Flow (cfs)		
	Existing Flow	Undetained Flow	Detained Flow
2-yr	16.7	23.3	15.40
10-yr	31.6	41.4	27.40
25-yr	53.4	53.4	37.30
100-yr	58.7	73.7	53.30



Know what's below. Call before you dig.

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 5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100
 AUSTIN, TX 78735
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 TBPE Firm No. 928



KHA PROJECT	069424100
DATE	10/19/2023
SCALE	AS SHOWN
DESIGNED BY	LE
DRAWN BY	LE
CHECKED BY	NG

POND PLAN & PROFILE
(4 OF 12)

SANCTUARY DRIPPING SPRINGS
1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

SHEET NUMBER
37 OF 68

NO.	REVISIONS	DATE	BY

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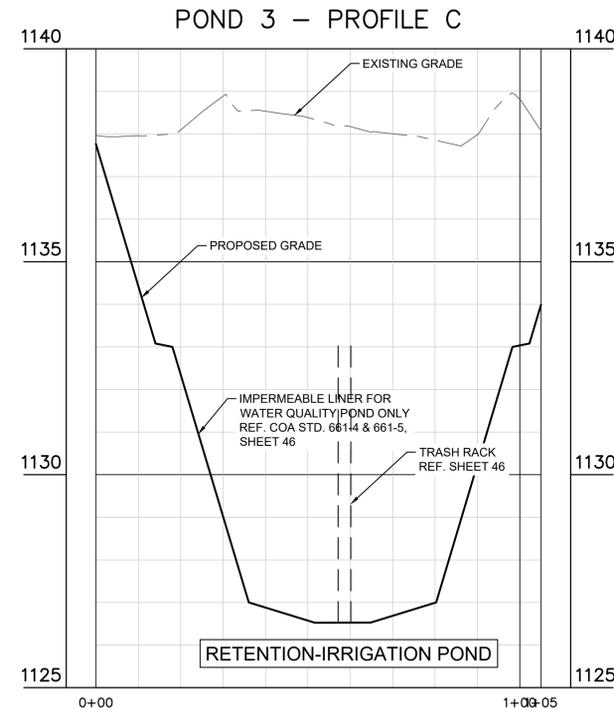
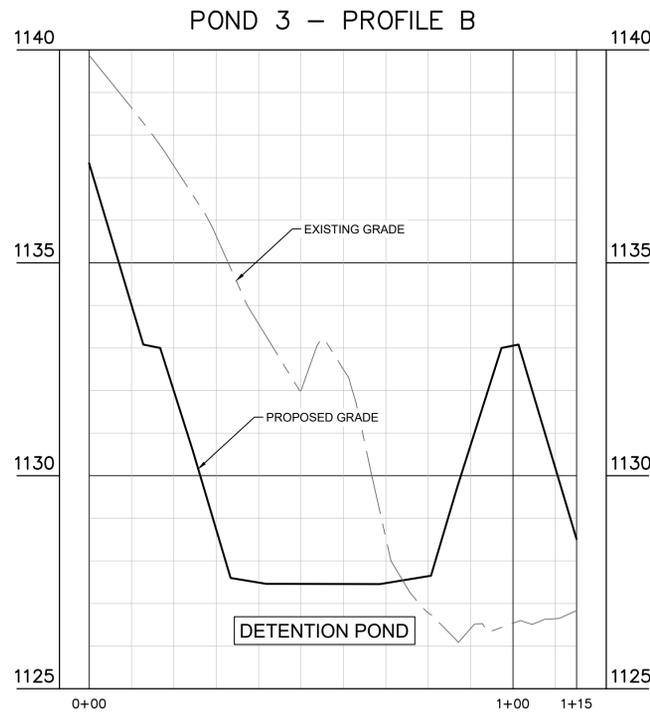
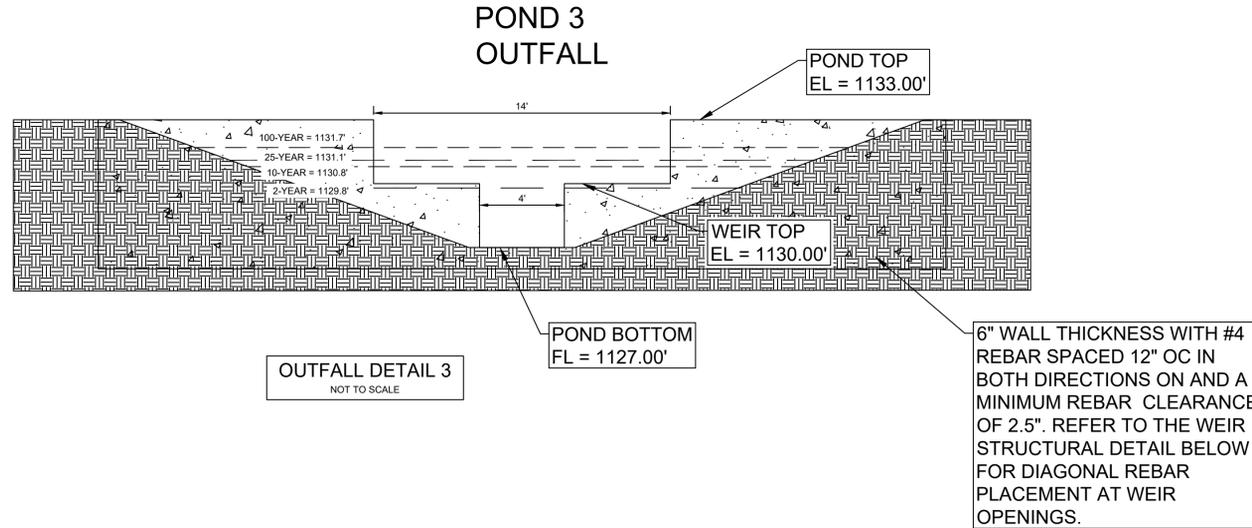
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POND 3 DETENTION ELEVATION STORAGE TABLE				
Elevation (ft)	Depth (ft)	Area (sq.ft.)	Incr. Vol. (cu.ft.)	Storage (cu.ft.)
1127	0.00	1	0.00	0.00
1128	1.00	3,639	1,820.00	1,820.00
1129	2.00	4,323	3,981.00	5,801.00
2-YR WSE	1129.8	4,627	3,579.86	9,380.86
1130	3.00	5,082	970.88	10,351.74
10-YR WSE	1130.8	5,395	4,190.68	14,542.42
1131	4.00	5,863	1,125.77	15,668.19
25-YR WSE	1131.1	5,906	588.46	16,256.65
100-YR WSE	1131.7	6,163	3,620.72	19,877.38
1132	5.00	6,720	1,932.46	21,809.84
1133	6.00	7,633	7,176.51	28,986.35

POND 3 WATER QUALITY RETENTION ELEVATION STORAGE TABLE				
Elevation (ft)	Depth (ft)	Area (sq.ft.)	Incr. Vol. (cu.ft.)	Storage (cu.ft.)
1127	0.00	1	0.00	0.00
1128	1.00	2,773	1,387.00	1,387.00
1129	2.00	3,442	3,107.50	4,494.50
1130	3.00	4,177	3,809.50	8,304.00
1131	4.00	4,978	4,577.50	12,881.50
1132	5.00	5,845	5,411.50	18,293.00
1133	6.00	5,956	5,900.31	24,193.31

POND 3 FLOW SUMMARY			
Storm Event	Existing Flow (cfs)	Undetained Flow (cfs)	Detained Flow (cfs)
2-yr	49.9	54.3	49.20
10-yr	93.7	95	92.40
25-yr	123	122.3	119.90
100-yr	172.4	168.3	165.90

WQ ELEVATION



Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **The Sanctuary - Pond 3**
Date Prepared: **10/9/2023**

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

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

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

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

County = **Hays** acres
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches

L_M TOTAL PROJECT = **21156** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **3**
 Total drainage basin/outfall area = **17.66** acres
 Predevelopment impervious area within drainage basin/outfall area = **0.24** acres
 Post-development impervious area within drainage basin/outfall area = **4.42** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 L_M THIS BASIN = **3747** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
 Removal efficiency = **100** percent

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

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

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **17.66** acres
 A_i = **4.42** acres
 A_p = **13.25** acres
 L_R = **5277** lbs

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

Desired L_M THIS BASIN = **3747** lbs.

F = **0.71**

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

Rainfall Depth = **0.80** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **11919** cubic feet

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

Off-site area draining to BMP = **0.00** acres
 Off-site Impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **2384**
 Total Capture Volume (required water quality volume(s) x 1.20) = **14303** cubic feet

7. Retention/Irrigation System

Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **14303** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr **Enter determined permeability rate or assumed value of 0.1**
 Irrigation area = **57211** square feet
1.31 acres

PROFILE SCALE
 1" = 20' HORIZONTAL
 1" = 2' VERTICAL



Know what's below.
Call before you dig.

Kimley-Horn
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 AUSTIN, TX 78735
 PHONE: 512-646-2237 FAX: 512-646-418-1791
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 TBPE Firm No. 928



10/19/2023

KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
069424100	10/19/2023	AS SHOWN	LE	LE	NG

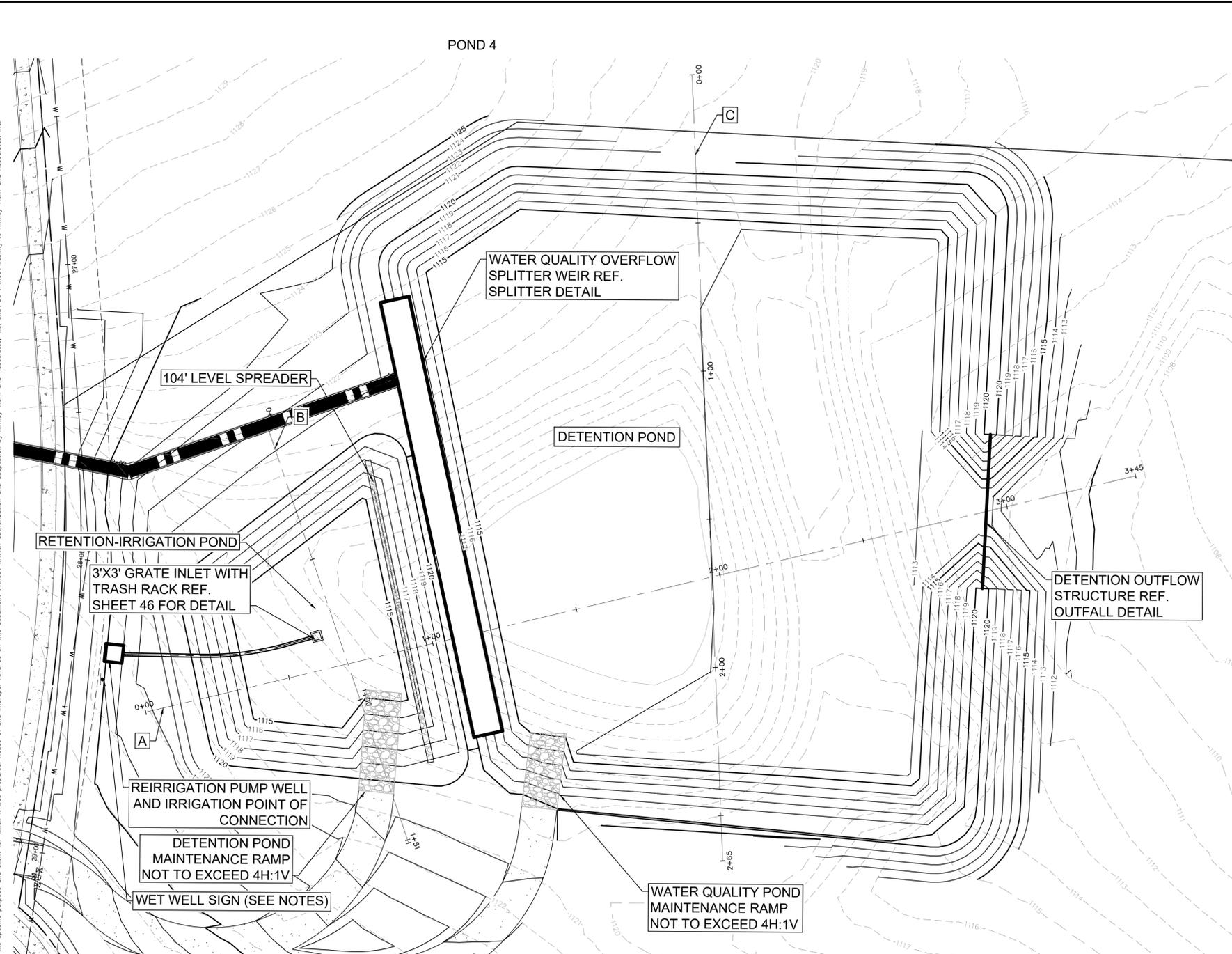
POND PLAN & PROFILE
(6 OF 12)

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

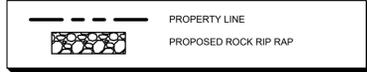
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39 OF 68

NO. REVISIONS DATE BY

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LEGEND



Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **The Sanctuary - Pond 4**
Date Prepared: **10/9/2023**

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30
Page 3-29 Equation 3.3: $L_M = 27.2(A_{IN} \times P)$

where: L_M TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load
 A_{IN} = Net increase in impervious area for the project
 P = Average annual precipitation, inches

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

County =	Hays
Total project area included in plan =	104.34 acres
Predevelopment impervious area within the limits of the plan =	2.52 acres
Total post-development impervious area within the limits of the plan =	26.09 acres
Total post-development impervious cover fraction =	0.25
P =	33 inches

L_M TOTAL PROJECT = 21156 lbs.
Number of drainage basins / outfalls areas leaving the plan area = 6

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

Drainage Basin/Outfall Area No. =	4
Total drainage basin/outfall area =	26.73 acres
Predevelopment impervious area within drainage basin/outfall area =	0.61 acres
Post-development impervious area within drainage basin/outfall area =	6.68 acres
Post-development impervious fraction within drainage basin/outfall area =	0.25
L_M THIS BASIN =	5451 lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
Removal efficiency = **100** percent

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

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

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	26.73	acres
A_i =	6.68	acres
A_p =	20.05	acres
L_R =	7987	lbs.

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

Desired L_M THIS BASIN = 5451 lbs.
F = 0.68

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

Rainfall Depth = 0.73 inches
Post Development Runoff Coefficient = 0.23
On-site Water Quality Volume = 16402 cubic feet

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

Off-site area draining to BMP = 10.89 acres
Off-site impervious cover draining to BMP = 0.61 acres
Impervious fraction of off-site area = 0.06
Off-site Runoff Coefficient = 0.08
Off-site Water Quality Volume = 2399 cubic feet

Storage for Sediment = 3760
Total Capture Volume (required water quality volume(s) x 1.20) = 22562 cubic feet

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

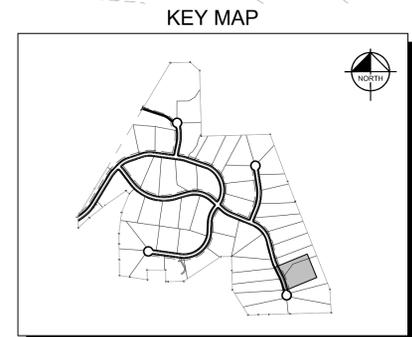
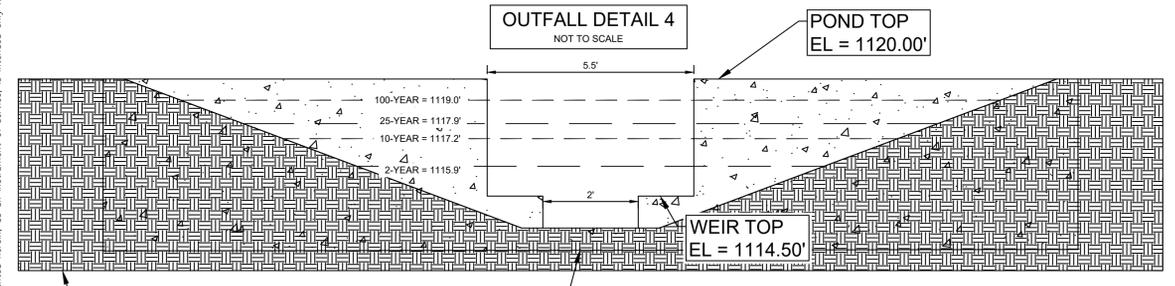
Required Water Quality Volume for retention basin = 22562 cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = 0.1 in/hr
Irrigation area = 90246 square feet
2.07 acres

NOTES

1. WET WELL PRIVATE MAINTENANCE SIGN WITH NAME AND PHONE NUMBER OR RESPONSIBLE PARTY WHO MAY BE CONTACT IF ALARM GOES OFF.



POND 4 DETENTION ELEVATION STORAGE TABLE

Elevation (ft)	Depth (ft)	Area (sq. ft.)	Incr. Vol. (cu. ft.)	Storage (cu. ft.)
1113	0.00	1	0.00	0.00
1114	1.00	14,545	7,273.06	7,273.06
1115	2.00	29,621	22,082.96	29,356.02
2-YR WSE	1115.9	30,405	27,011.56	56,367.58
1116	3.00	31,363	3,088.40	59,455.98
1117	4.00	33,411	32,386.86	91,842.84
10-YR WSE	1117.2	33,624	6,703.45	98,546.29
25-YR WSE	1117.9	34,371	23,798.24	122,344.53
1118	5.00	35,545	3,495.80	125,840.33
100-YR WSE	1119	37,706	36,625.25	162,465.58
1120	7.00	40,251	38,978.36	201,443.94

POND 4 WATER QUALITY RETENTION ELEVATION STORAGE TABLE

Elevation (ft)	Depth (ft)	Area (sq. ft.)	Incr. Vol. (cu. ft.)	Storage (cu. ft.)
1113	0.00	298	0.00	0.00
1114	1.00	1,483	890.50	890.50
1115	2.00	3,027	2,255.00	3,145.50
1116	3.00	3,857	3,442.00	6,587.50
1117	4.00	4,786	4,321.50	10,909.00
1118	5.00	5,815	5,300.50	16,209.50
1119	6.00	6,944	6,379.50	22,589.00
1120	7.00	8,146	7,545.00	30,134.00

POND 4 FLOW SUMMARY

Storm Event	Existing Flow (cfs)		Undetained Flow (cfs)		Detained Flow (cfs)	
	Existing Flow	Undetained Flow	Existing Flow	Detained Flow	Existing Flow	Detained Flow
2-yr	85	133.9	81.70			
10-yr	163.3	241.4	158.10			
25-yr	216.7	312.7	212.20			
100-yr	306.4	434.1	303.10			

6" WALL THICKNESS WITH #4 REBAR SPACED 12" OC IN BOTH DIRECTIONS ON AND A MINIMUM REBAR CLEARANCE OF 2.5". REFER TO THE WEIR STRUCTURAL DETAIL BELOW FOR DIAGONAL REBAR PLACEMENT AT WEIR OPENINGS.

POND BOTTOM FL = 1113.00'

OUTFALL DETAIL 4 NOT TO SCALE

POND TOP EL = 1120.00'

WEIR TOP EL = 1114.50'

WATER QUALITY POND MAINTENANCE RAMP NOT TO EXCEED 4H:1V

REIRRIGATION PUMP WELL AND IRRIGATION POINT OF CONNECTION

DETENTION POND MAINTENANCE RAMP NOT TO EXCEED 4H:1V

WET WELL SIGN (SEE NOTES)

3'X3' GRATE INLET WITH TRASH RACK REF. SHEET 46 FOR DETAIL

RETENTION-IRRIGATION POND

104' LEVEL SPREADER

WATER QUALITY OVERFLOW SPLITTER WEIR REF. SPLITTER DETAIL

DETENTION POND

DETENTION OUTFLOW STRUCTURE REF. OUTFALL DETAIL

NO.
REVISIONS
DATE

5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100
AUSTIN, TX 78735
PHONE: 512-646-2237 FAX: 512-646-418-1791
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TBPE Firm No. 928

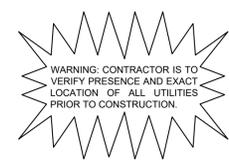
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KHA PROJECT	069424100
DATE	10/19/2023
SCALE	AS SHOWN
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POND PLAN & PROFILE
(7 OF 12)

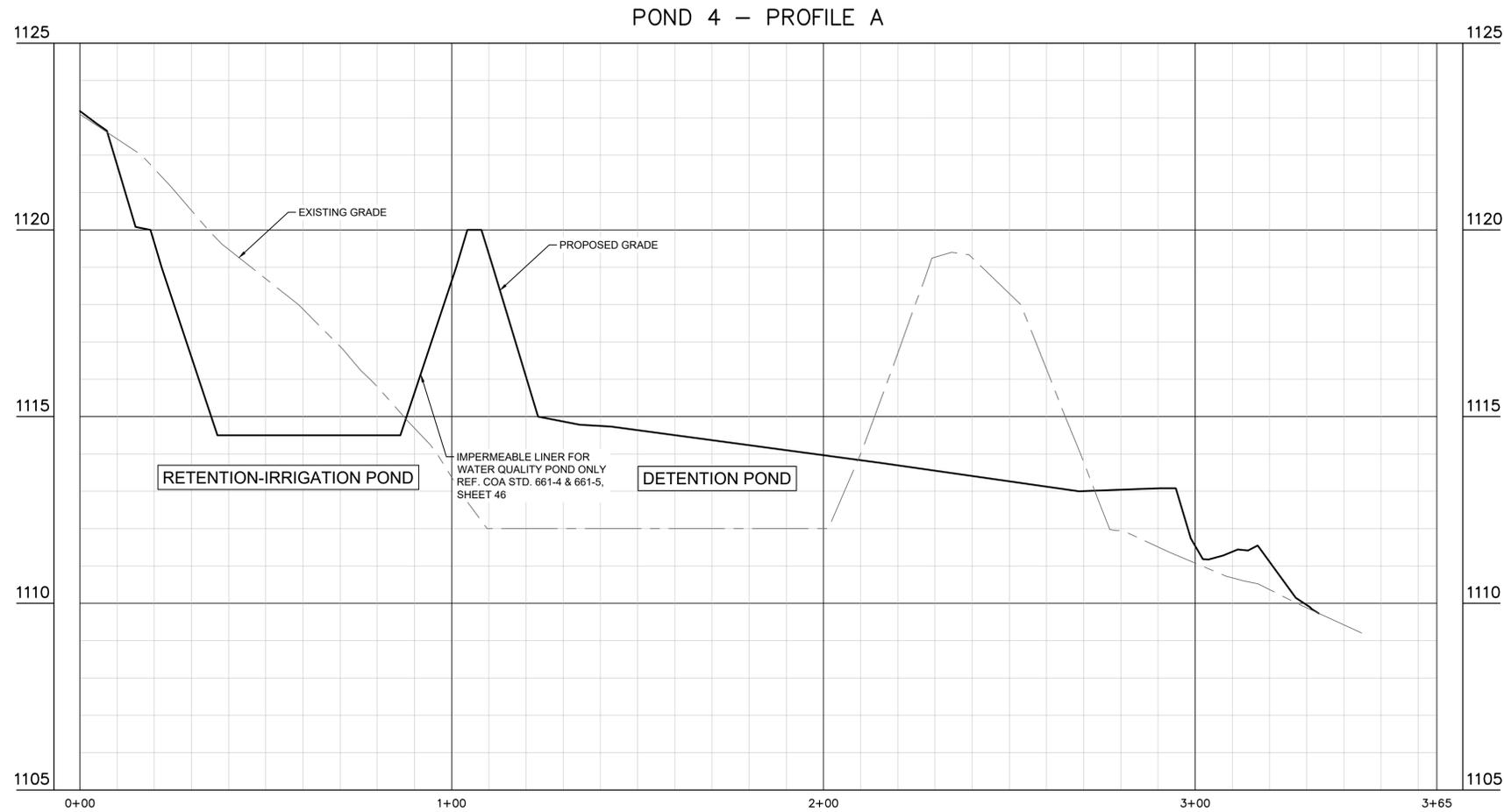
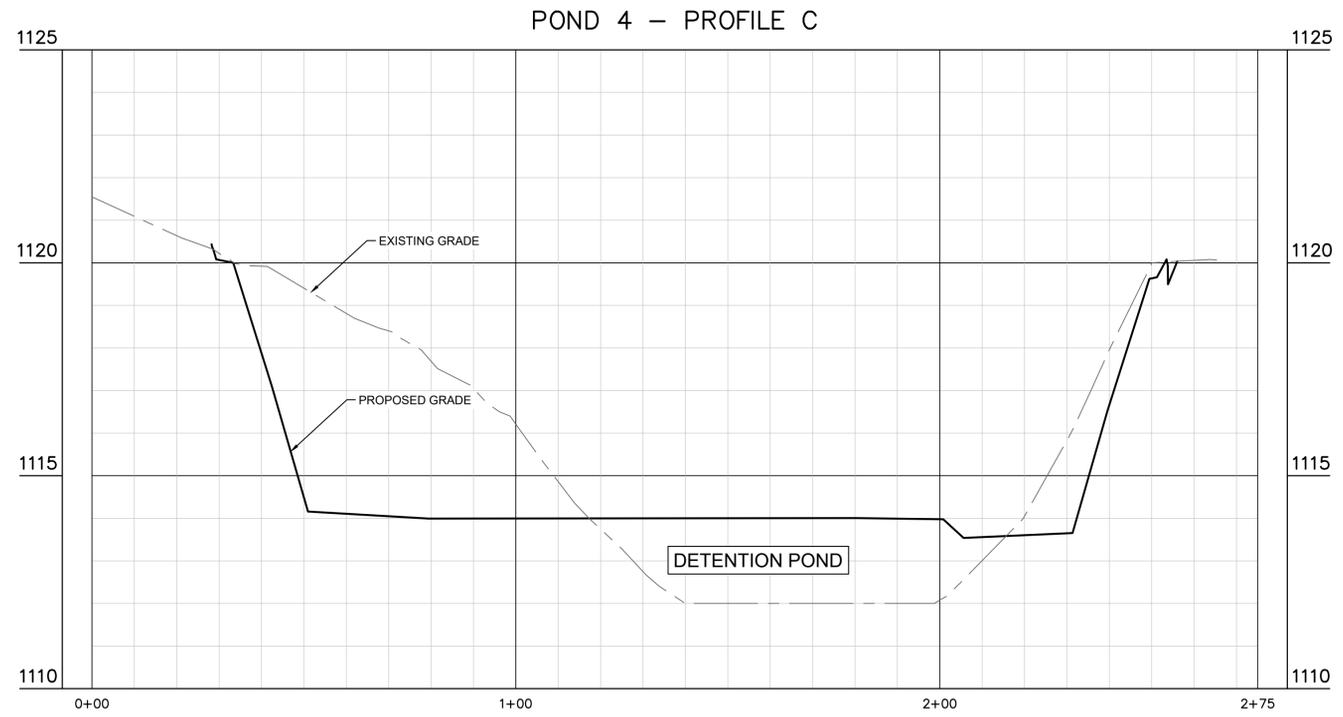
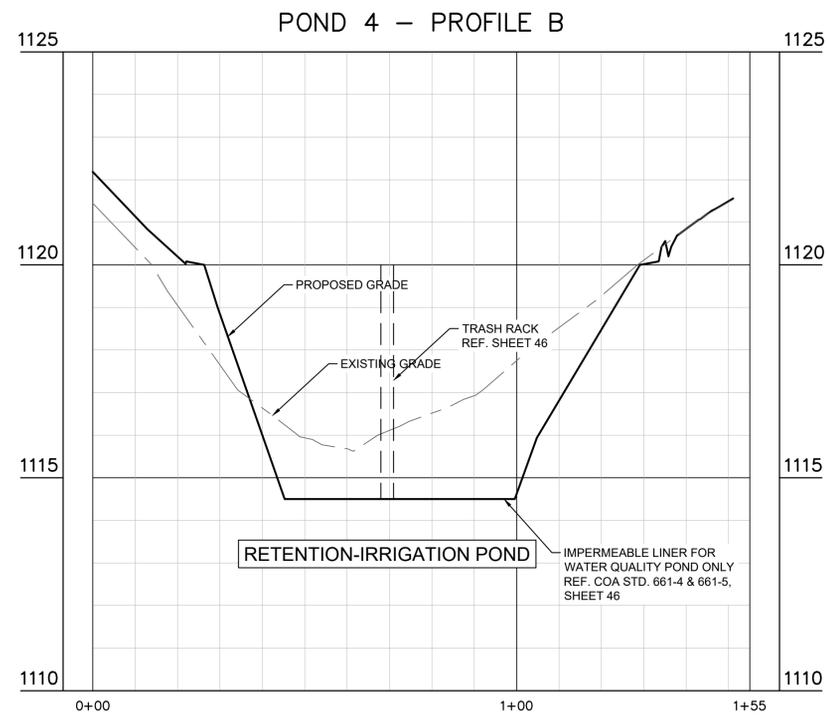
SANCTUARY DRIPPING SPRINGS
1111 HAYS COUNTRY ACRES RD.
HAYS COUNTY, TEXAS

SHEET NUMBER
40 OF 68

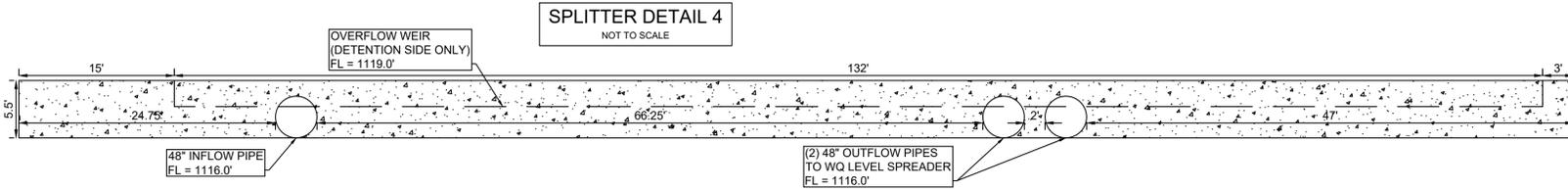


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Call before you dig.

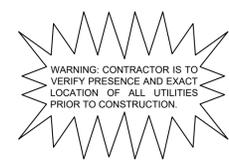
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PROFILE SCALE
 1" = 20' HORIZONTAL
 1" = 2' VERTICAL



Pond 4 Splitter Calculations				
	Undetained Flow (CFS)	Weir Width	Depth	Velocity
LEVEL SPREADER (25-yr)	312.7	104	1.00	3.00
SPLITTER WEIR (100-yr)	434.1	132	0.99	3.32



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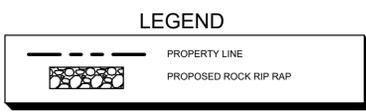
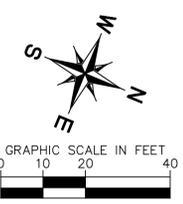
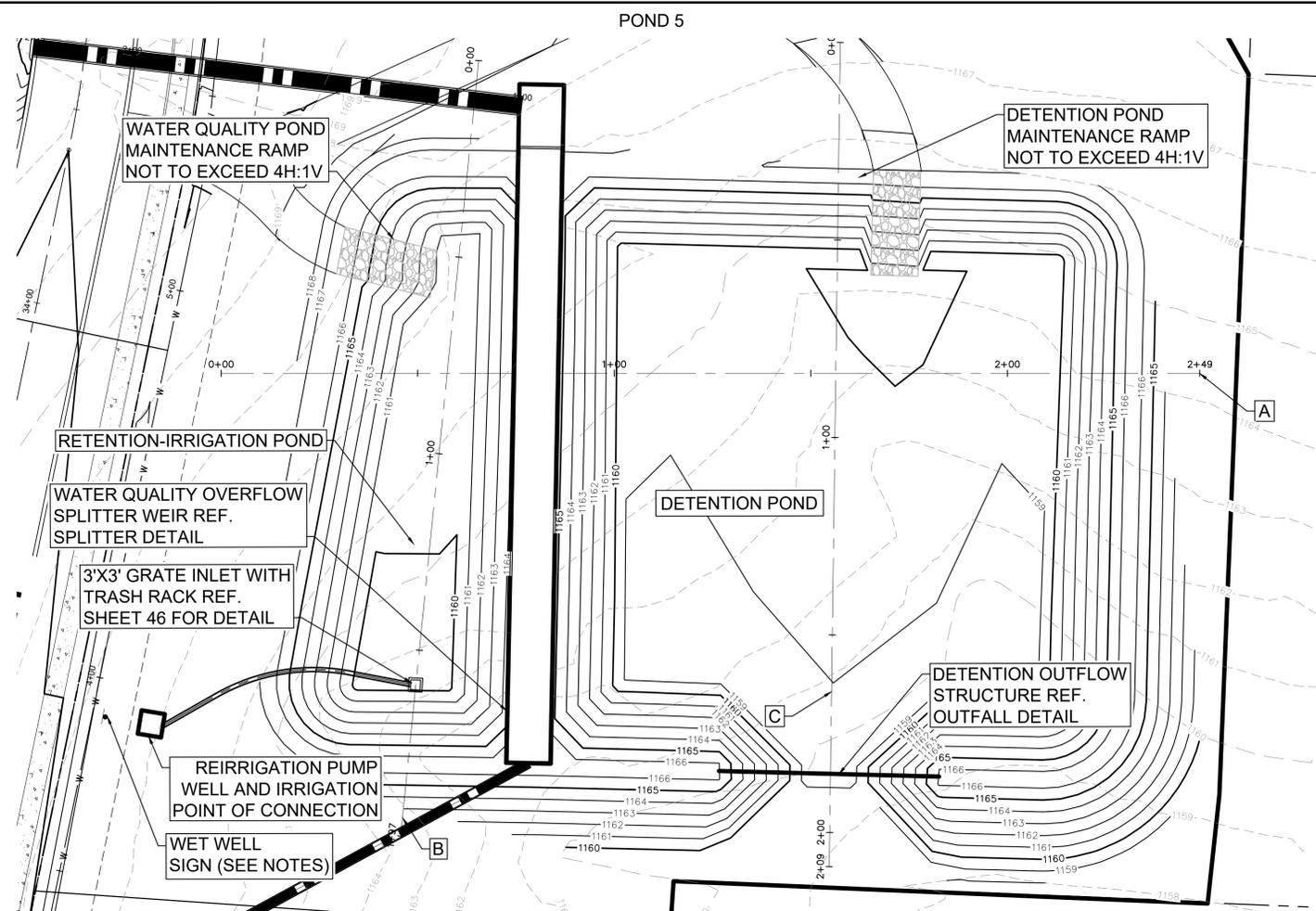
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- NOTES**
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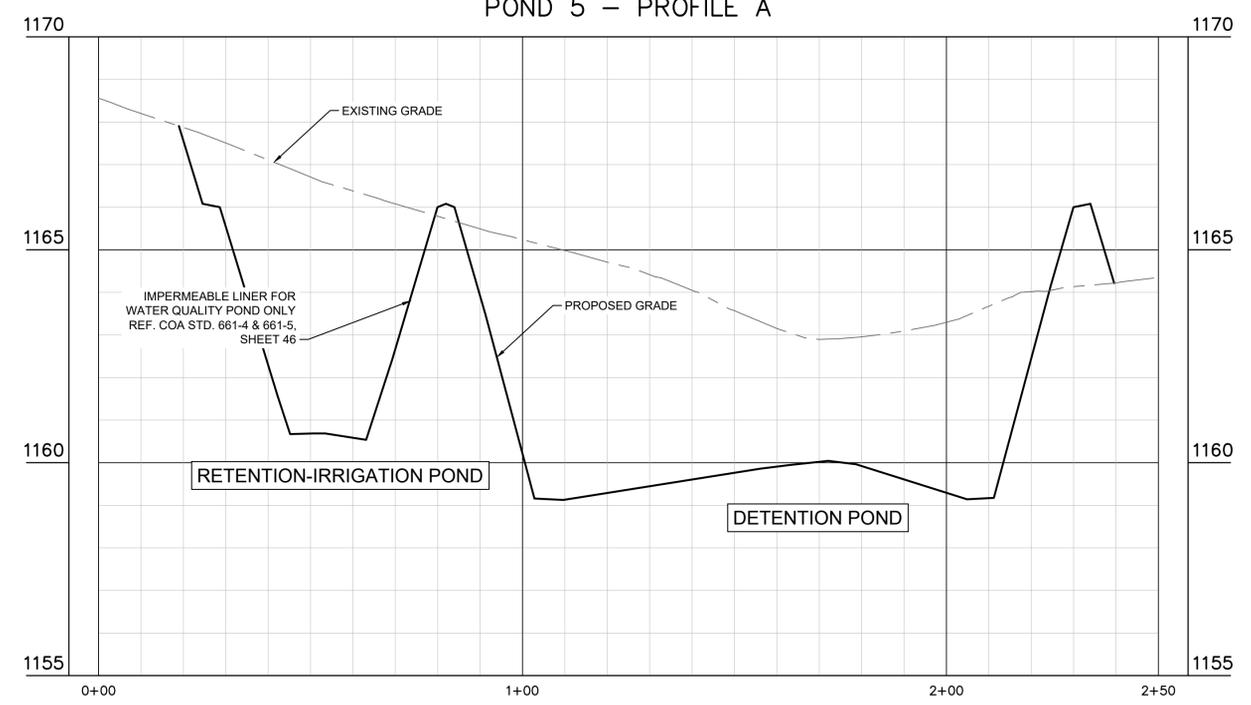
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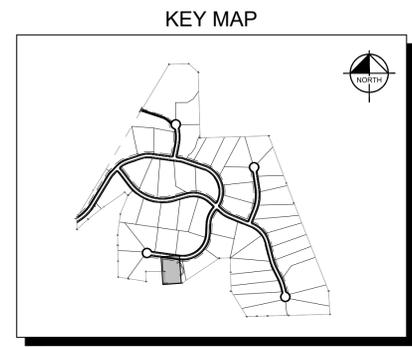


KHA PROJECT	069424100
DATE	10/19/2023
SCALE	AS SHOWN
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POND 5 - PROFILE A



PROFILE SCALE
 1" = 20' HORIZONTAL
 1" = 2' VERTICAL



POND 5 SPLITTER

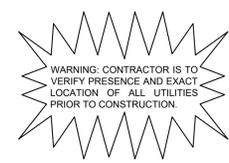
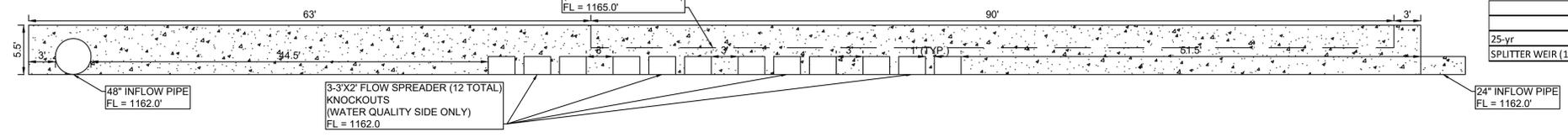
KNOCKOUT ARRAY CALCULATION

# of Knockouts	12
Knockout Area	6
Head to pass water	2
Max Flow (CFS)	490.3
Velocity (FPS)	2.94
Can Pass 25-YR Flow?	TRUE

Pond 5 Splitter Calculations

	Undetained Flow (CFS)	Weir Width	Depth	Velocity
25-yr	211.5			
SPLITTER WEIR (100-yr)	291.9	90	0.98	3.30

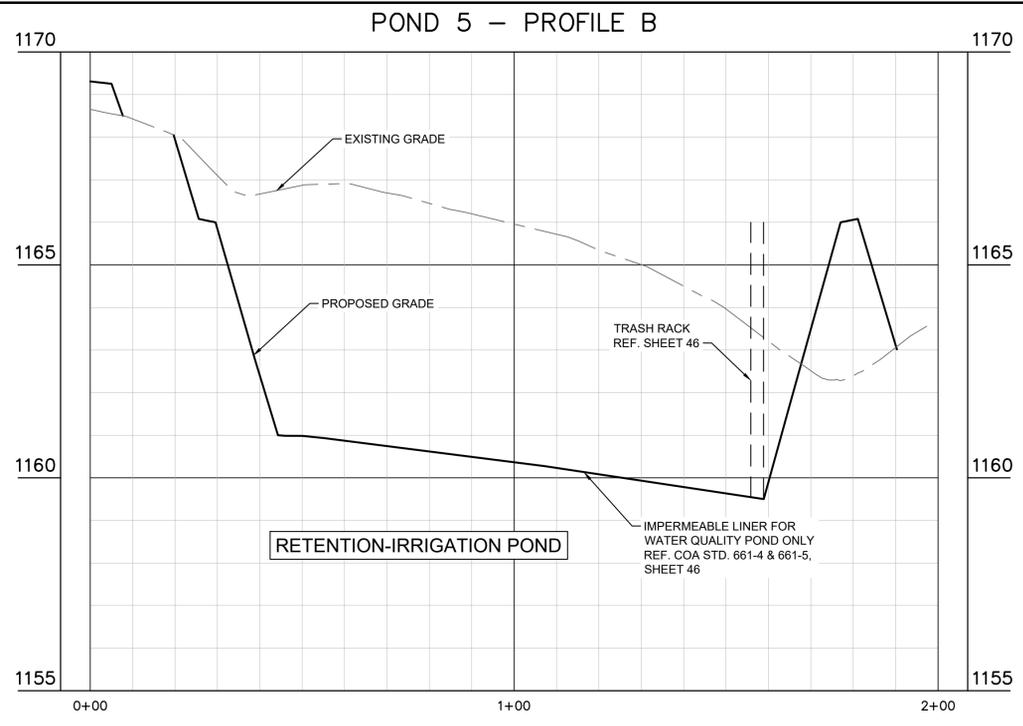
SPLITTER DETAIL 5
NOT TO SCALE



POND PLAN & PROFILE
 (9 OF 12)

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

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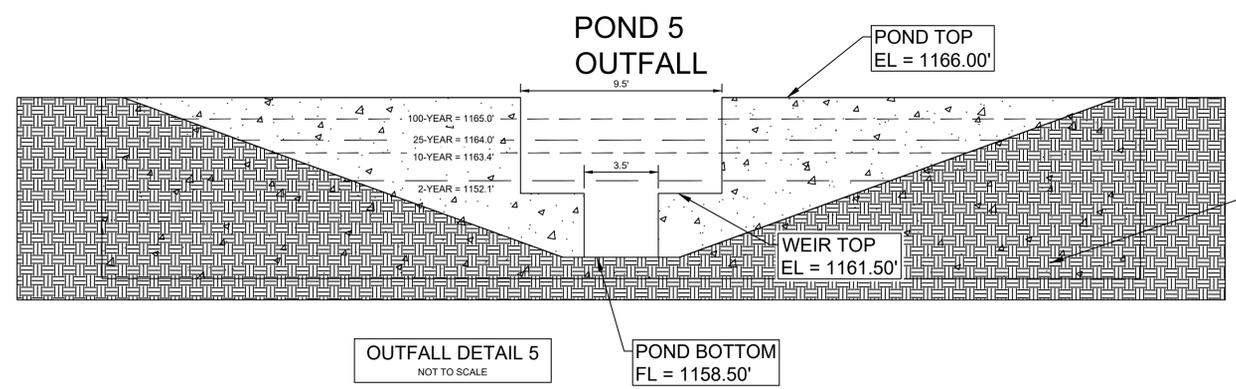
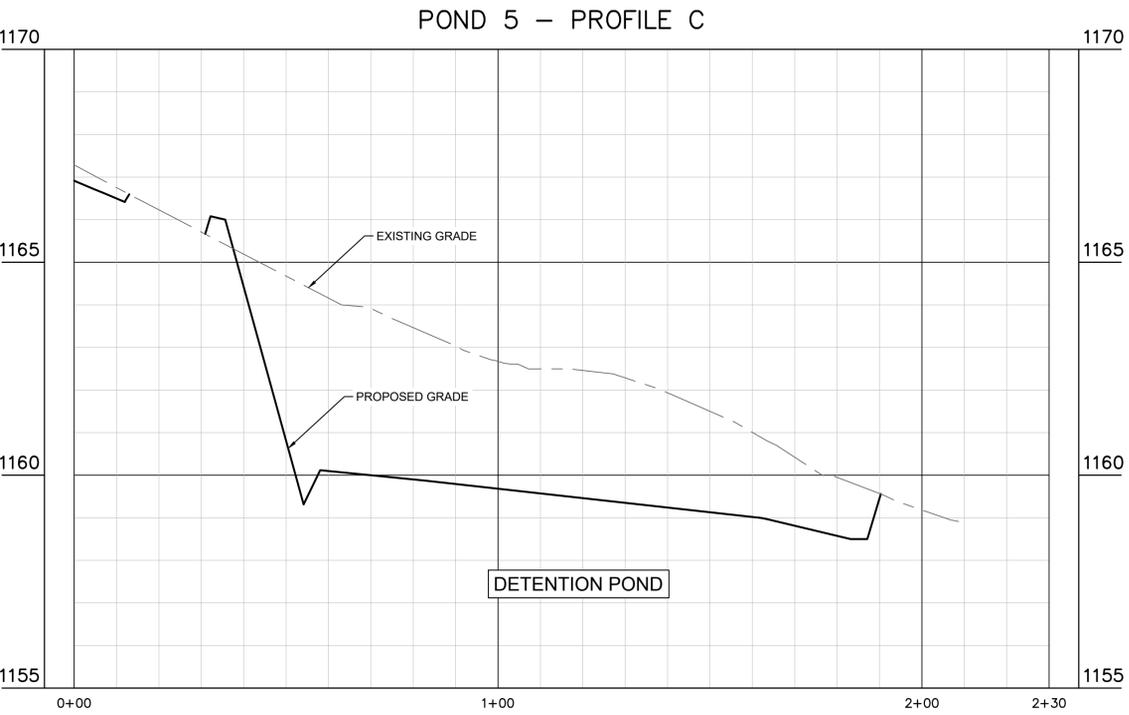


Elevation (ft)	Depth (ft)	Area (sq.ft.)	Incr. Vol. (cu.ft.)	Storage (cu.ft.)	
1158.5	0.00	1	0.00	0.00	
1159	0.50	3249	812.61	812.61	
1160	1.50	12542	7,895.62	8,708.23	
1161	2.50	14506	13,523.86	22,232.08	
1162	3.50	15776	15,141.02	37,373.10	
2-YR WSE	1162.1	3.60	15842	1,580.89	38,953.99
1163	4.50	17088	14,818.45	53,772.44	
10-YR WSE	1163.4	4.90	17359	6,889.45	60,661.89
25-YR WSE	1164	5.50	18443	10,740.59	71,402.48
100-YR WSE	1165	6.50	19841	19,142.01	90,544.48
1166	7.50	21287	20,564.02	111,108.51	

Elevation (ft)	Depth (ft)	Area (sq.ft.)	Incr. Vol. (cu.ft.)	Storage (cu.ft.)	
1159.5	0.00	1	0.00	0.00	
1160	0.50	807	202.00	202.00	
1161	1.50	2,717	1,762.00	1,964.00	
1162	2.50	3,650	3,183.50	5,147.50	
1163	3.50	4,632	4,141.00	9,288.50	
1164	4.50	5,664	5,148.00	14,436.50	
WQ ELEVATION	1165	5.50	6,746	6,205.00	20,641.50
1166	6.50	7,877	7,311.50	27,953.00	

Storm Event	Flow (cfs)		
	Existing Flow	Undetained Flow	Detained Flow
2-yr	74.2	93	70.50
10-yr	140.8	163.9	137.20
25-yr	185.9	211.5	181.00
100-yr	261.8	291.9	252.40

PROFILE SCALE
 1" = 20' HORIZONTAL
 1" = 2' VERTICAL



6" WALL THICKNESS WITH #4 REBAR SPACED 12" OC IN BOTH DIRECTIONS ON AND A MINIMUM REBAR CLEARANCE OF 2.5". REFER TO THE WEIR STRUCTURAL DETAIL BELOW FOR DIAGONAL REBAR PLACEMENT AT WEIR OPENINGS.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **The Sanctuary - Pond 5**
 Date Prepared: **10/9/2023**

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

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
 where: L_M TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
 County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches

L_M TOTAL PROJECT = **21156** lbs.
 Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **5**
 Total drainage basin/outfall area = **30.94** acres
 Predevelopment impervious area within drainage basin/outfall area = **1.15** acres
 Post-development impervious area within drainage basin/outfall area = **7.74** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 L_M THIS BASIN = **5911** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
 Removal efficiency = **100** percent

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

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

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = **30.94** acres
 A_i = **7.74** acres
 A_p = **23.21** acres
 L_R = **9245** lbs

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

Desired L_M THIS BASIN = **5911** lbs.
 F = **0.64**

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

Rainfall Depth = **0.66** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **17012** cubic feet

Calculations from RG-348 Pages 3-36 to 3-37
 Off-site area draining to BMP = **0.00** acres
 Off-site impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet

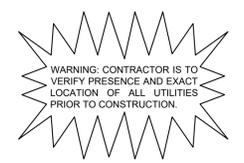
Storage for Sediment = **3402**
 Total Capture Volume (required water quality volume(s) x 1.20) = **20414** cubic feet

7. Retention/Irrigation System

Designed as Required in RG-348 Pages 3-42 to 3-46
 Required Water Quality Volume for retention basin = **20414** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr Enter determined permeability rate or assumed value of 0.1
 Irrigation area = **81657** square feet
 = **1.87** acres



811
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KHA PROJECT
 069424100

DATE
 10/19/2023

SCALE: AS SHOWN

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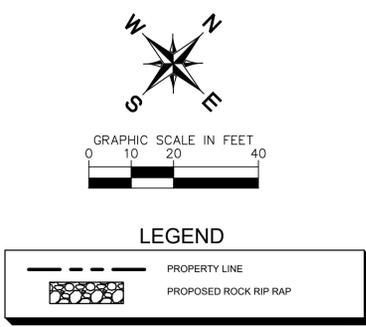
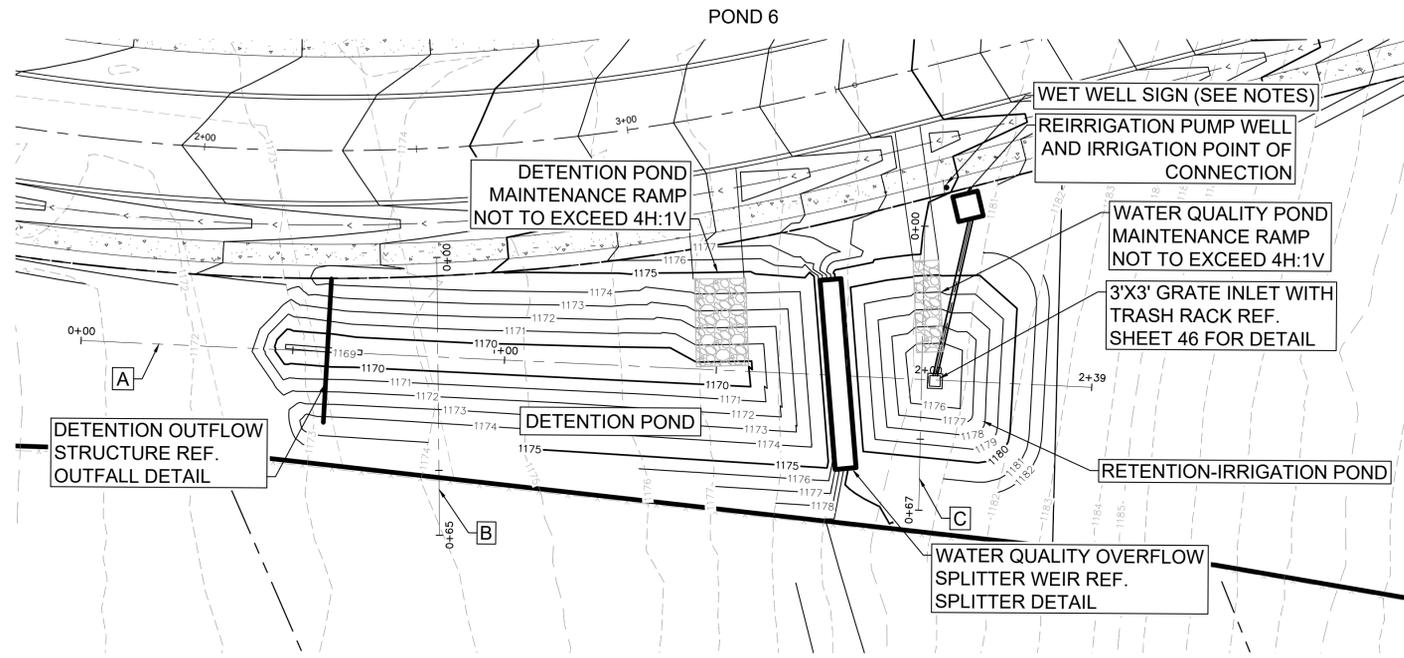
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POND PLAN & PROFILE
(10 OF 12)

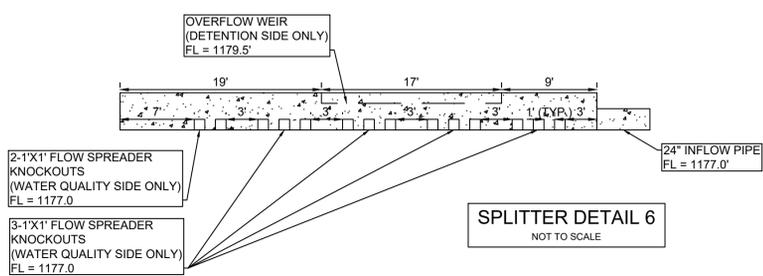
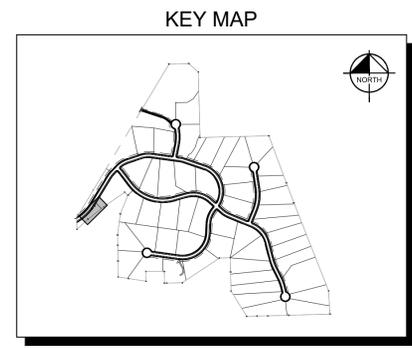
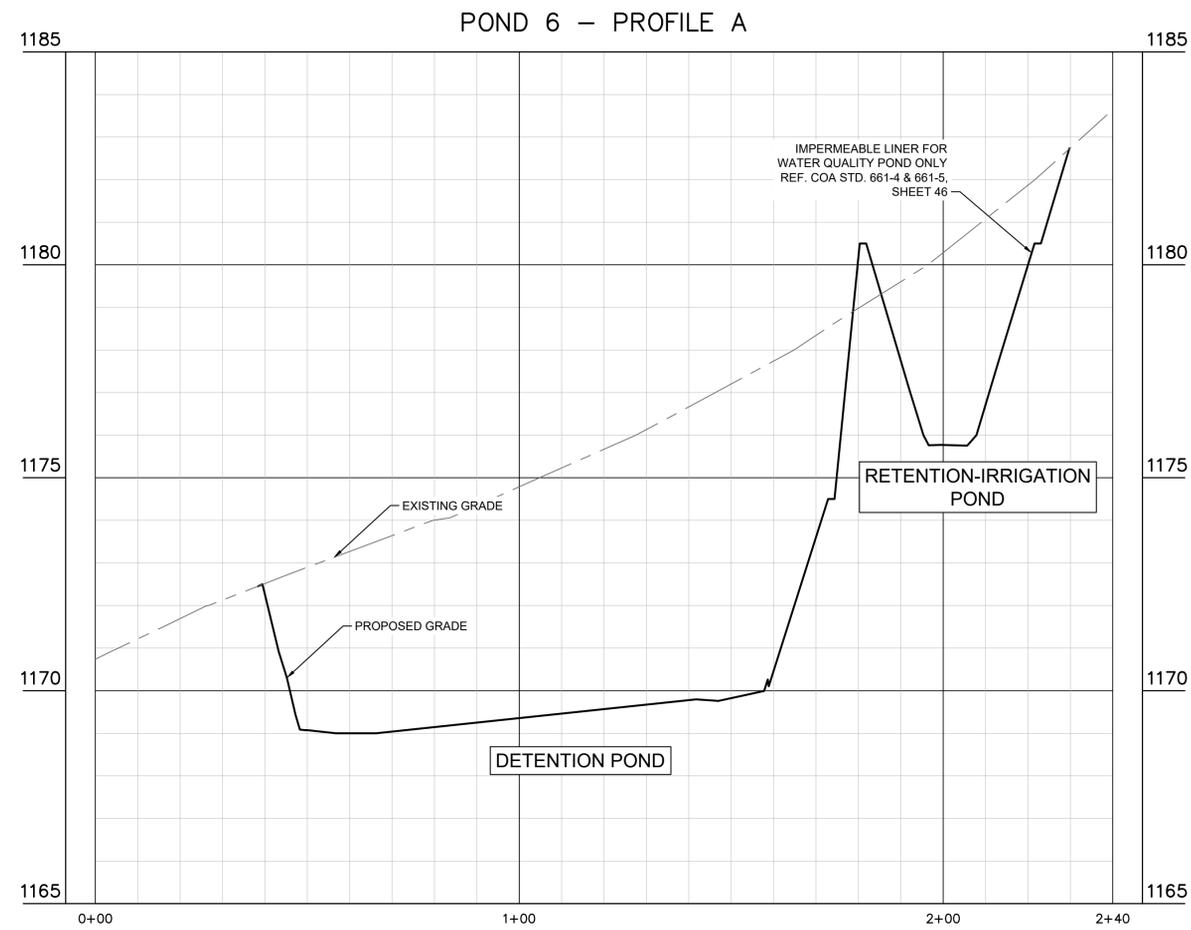
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SHEET NUMBER
43 OF 68

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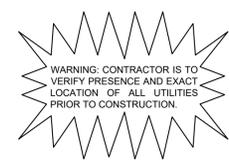


POND 6 SPLITTER KNOCKOUT ARRAY CALCULATION

# of Knockouts	14
Knockout Area	1
Head to pass water	1
Max Flow (CFS)	67.4
Velocity (FPS)	2.87
Can Pass 25-YR Flow?	TRUE

Pond 6 Splitter Calculations

	Undetained Flow (CFS)	Weir Width	Depth	Velocity
25-yr	40.2			
SPLITTER WEIR (100-yr)	55.5	17	0.99	3.31



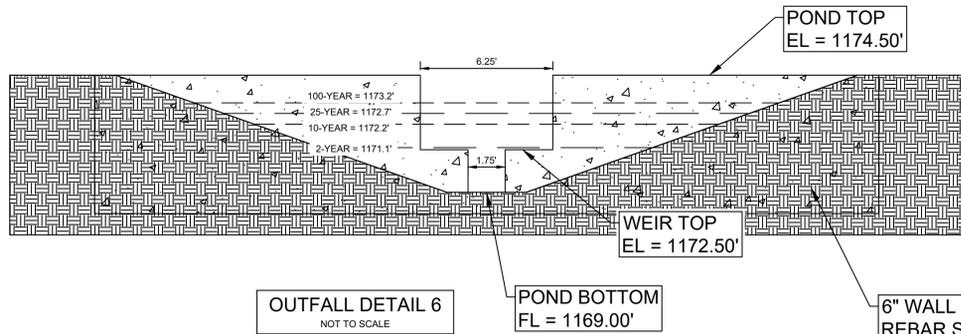
<p style="font-size: 24pt; font-weight: bold; margin: 0;">Kimley»Horn</p> <p style="font-size: 8pt; margin: 0;"> 5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100 AUSTIN, TX 78735 PHONE: 512-646-2237 FAX: 512-646-418-1791 © 2023 KIMLEY-HORN AND ASSOCIATES, INC. TBPE Firm No. 928 </p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;"> <p style="font-size: 6pt; margin: 0;"> STATE OF TEXAS NATALIA CASALI BOLLINGER 13689 LICENSED PROFESSIONAL ENGINEER </p> </td> <td style="width: 50%; text-align: center;"> <p style="font-size: 8pt; margin: 0;">10/19/2023</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 6pt;">KHA PROJECT</td> <td style="font-size: 6pt;">069424100</td> </tr> <tr> <td style="font-size: 6pt;">DATE</td> <td style="font-size: 6pt;">10/19/2023</td> </tr> <tr> <td style="font-size: 6pt;">SCALE:</td> <td style="font-size: 6pt;">AS SHOWN</td> </tr> <tr> <td style="font-size: 6pt;">DESIGNED BY:</td> <td style="font-size: 6pt;">LE</td> </tr> <tr> <td style="font-size: 6pt;">DRAWN BY:</td> <td style="font-size: 6pt;">LE</td> </tr> <tr> <td style="font-size: 6pt;">CHECKED BY:</td> <td style="font-size: 6pt;">NG</td> </tr> </table> </td> </tr> </table>	<p style="font-size: 6pt; margin: 0;"> STATE OF TEXAS NATALIA CASALI BOLLINGER 13689 LICENSED PROFESSIONAL ENGINEER </p>	<p style="font-size: 8pt; margin: 0;">10/19/2023</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 6pt;">KHA PROJECT</td> <td style="font-size: 6pt;">069424100</td> </tr> <tr> <td style="font-size: 6pt;">DATE</td> <td style="font-size: 6pt;">10/19/2023</td> </tr> <tr> <td style="font-size: 6pt;">SCALE:</td> <td style="font-size: 6pt;">AS SHOWN</td> </tr> <tr> <td style="font-size: 6pt;">DESIGNED BY:</td> <td style="font-size: 6pt;">LE</td> </tr> <tr> <td style="font-size: 6pt;">DRAWN BY:</td> <td style="font-size: 6pt;">LE</td> </tr> <tr> <td style="font-size: 6pt;">CHECKED BY:</td> <td style="font-size: 6pt;">NG</td> </tr> </table>	KHA PROJECT	069424100	DATE	10/19/2023	SCALE:	AS SHOWN	DESIGNED BY:	LE	DRAWN BY:	LE	CHECKED BY:	NG
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<p style="font-size: 12pt; font-weight: bold; margin: 0;">SANCTUARY DRIPPING SPRINGS</p> <p style="font-size: 10pt; margin: 0;">1111 HAYS COUNTRY ACRES RD. HAYS COUNTY, TEXAS</p>	<p style="font-size: 10pt; margin: 0;">POND PLAN & PROFILE (11 OF 12)</p>														
<p style="font-size: 10pt; margin: 0;">SHEET NUMBER 44 OF 68</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; font-size: 8pt;">NO.</td> <td style="width: 50%; font-size: 8pt;">REVISIONS</td> </tr> <tr> <td style="width: 50%; font-size: 8pt;">BY</td> <td style="width: 50%; font-size: 8pt;">DATE</td> </tr> </table>	NO.	REVISIONS	BY	DATE										
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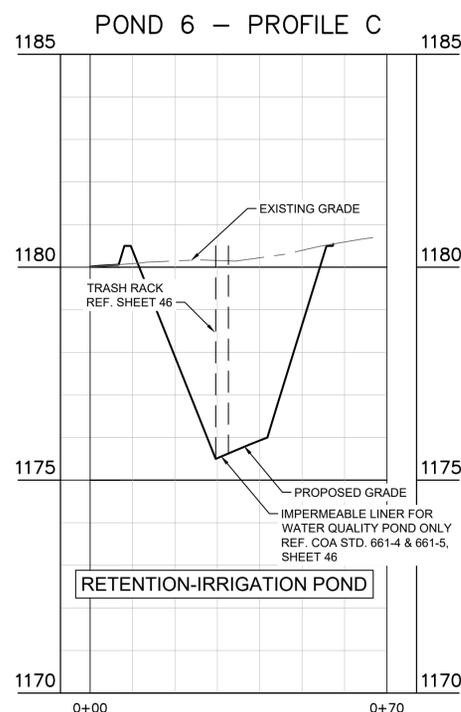
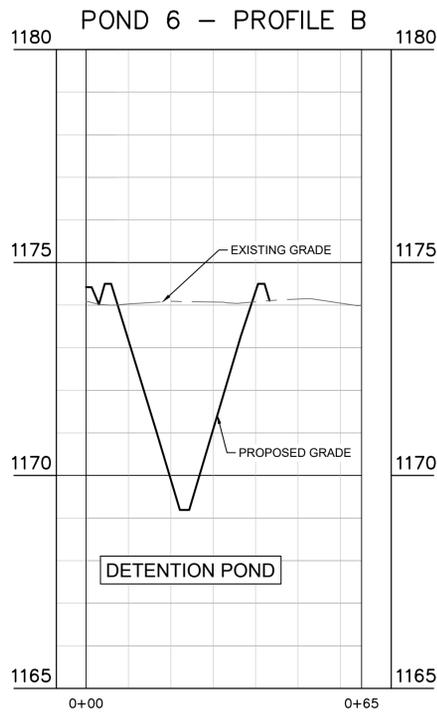
Elevation (ft)	Depth (ft)	Area (sq.ft.)	Incr. Vol. (cu.ft.)	Storage (cu.ft.)
1169	0.00	19	0.00	0.00
1170	1.00	787	402.82	402.82
1171	2.00	1,521	1,153.71	1,556.53
1171.1	2.10	1,560	154.01	1,710.54
1172	3.00	2,297	1,735.34	3,445.88
1172.2	3.20	2,376	467.30	3,913.19
1172.7	3.70	2,575	1,237.76	5,150.95
1173	4.00	3,091	849.89	6,000.84
1173.2	4.20	3,171	626.19	6,627.02
1174	5.00	3,888	2,823.41	9,450.43
1174.5	5.50	3,889	1,944.13	11,394.55

Elevation (ft)	Depth (ft)	Area (sq.ft.)	Incr. Vol. (cu.ft.)	Storage (cu.ft.)
1175.5	0.00	200	0.00	0.00
1176	0.50	354	138.50	138.50
1177	1.50	563	458.50	597.00
1178	2.50	857	710.00	1,307.00
1179	3.50	1,235	1,046.00	2,353.00
1179.5	4.00	1,235	617.50	2,970.50
1180	4.50	1,698	733.25	3,703.75
1180.5	5.00	1,961	914.75	4,618.50

Storm Event	Existing Flow (cfs)	Undetained Flow (cfs)	Detained Flow (cfs)
2-yr	13.7	17.6	14.20
10-yr	25.5	31.2	25.60
25-yr	33.4	40.2	33.60
100-yr	46.7	55.5	46.60



6" WALL THICKNESS WITH #4 REBAR SPACED 12" OC IN BOTH DIRECTIONS ON AND A MINIMUM REBAR CLEARANCE OF 2.5". REFER TO THE WEIR STRUCTURAL DETAIL BELOW FOR DIAGONAL REBAR PLACEMENT AT WEIR OPENINGS.



PROFILE SCALE
 1" = 20' HORIZONTAL
 1" = 2' VERTICAL

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **The Sanctuary - Pond 6**
 Date Prepared: **10/9/2023**

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

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

where: $L_{M \text{ TOTAL PROJECT}} =$ Required TSS removal resulting from the proposed development = 80% of increased load
 $A_N =$ Net increase in impervious area for the project
 $P =$ Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
 County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 $P =$ **33** inches

$L_{M \text{ TOTAL PROJECT}} =$ **21156** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **6**

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

Drainage Basin/Outfall Area No. = **6**
 Total drainage basin/outfall area = **4.66** acres
 Predevelopment impervious area within drainage basin/outfall area = **0.20** acres
 Post-development impervious area within drainage basin/outfall area = **1.17** acres
 Post-development impervious fraction within drainage basin/outfall area = **0.25**
 $L_{M \text{ THIS BASIN}} =$ **866** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Retention / Irrigation**
 Removal efficiency = **100** percent

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

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

where: $A_C =$ Total On-Site drainage area in the BMP catchment area
 $A_i =$ Impervious area proposed in the BMP catchment area
 $A_p =$ Penious area remaining in the BMP catchment area
 $L_R =$ TSS Load removed from this catchment area by the proposed BMP

$A_C =$ **4.66** acres
 $A_i =$ **1.17** acres
 $A_p =$ **3.50** acres
 $L_R =$ **1392** lbs

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

Desired $L_{M \text{ THIS BASIN}} =$ **866** lbs.

$F =$ **0.62**

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

Rainfall Depth = **0.62** inches
 Post Development Runoff Coefficient = **0.23**
 On-site Water Quality Volume = **2414** cubic feet

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

Off-site area draining to BMP = **0.00** acres
 Off-site impervious cover draining to BMP = **0.00** acres
 Impervious fraction of off-site area = **0**
 Off-site Runoff Coefficient = **0.00**
 Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **483** cubic feet
 Total Capture Volume (required water quality volume(s) x 1.20) = **2896** cubic feet

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **2896** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr Enter determined permeability rate or assumed value of 0.1
 Irrigation area = **11585** square feet
0.27 acres



Know what's below.
 Call before you dig.

Kimley-Horn
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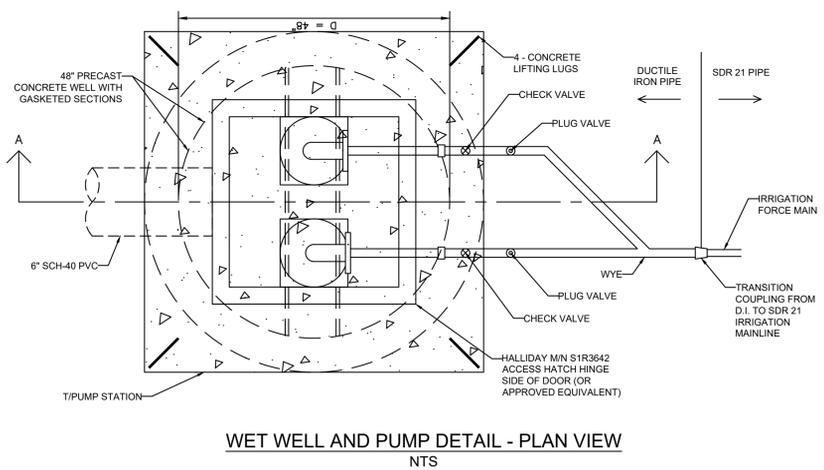
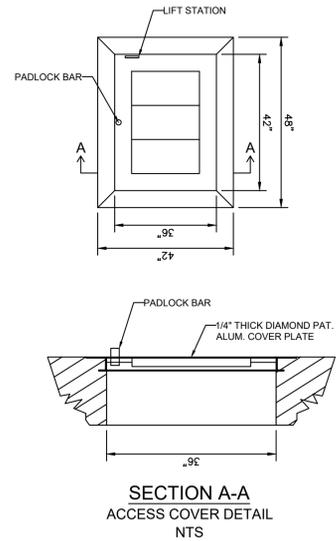
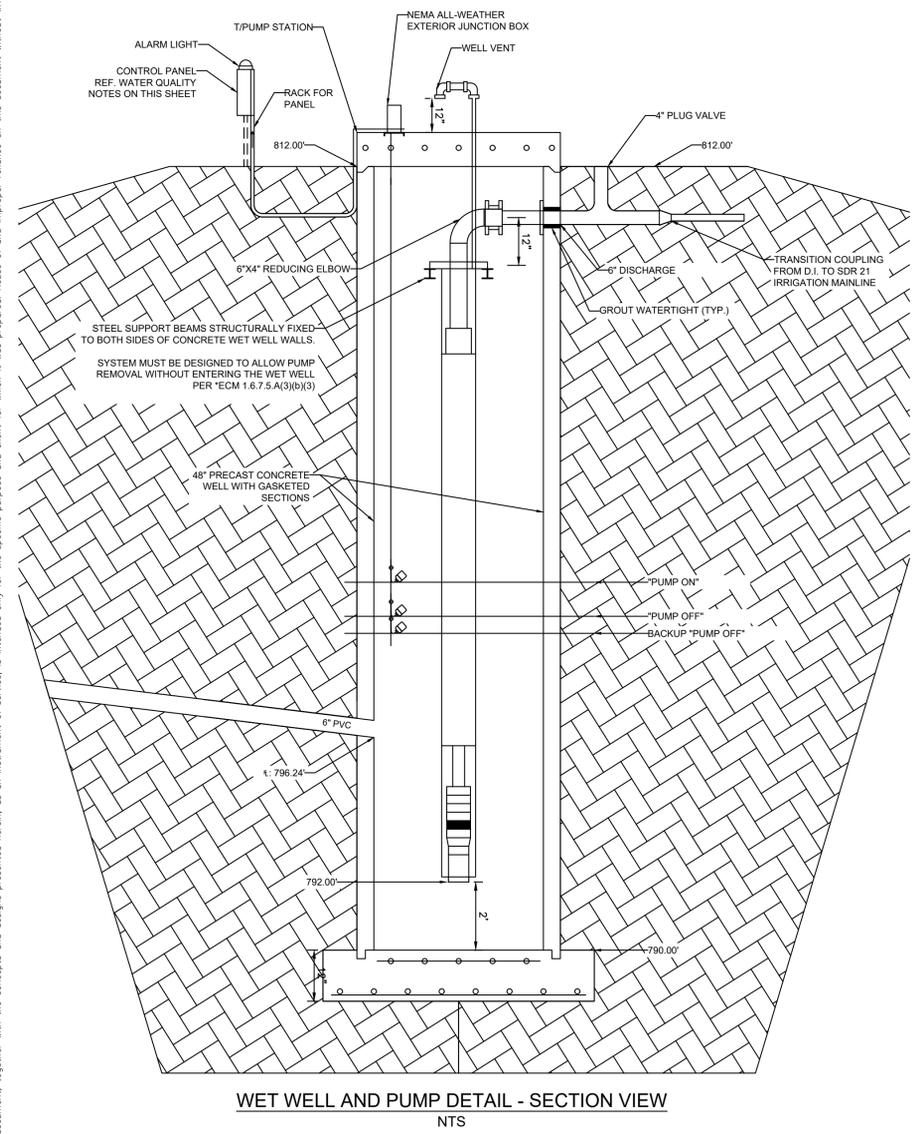
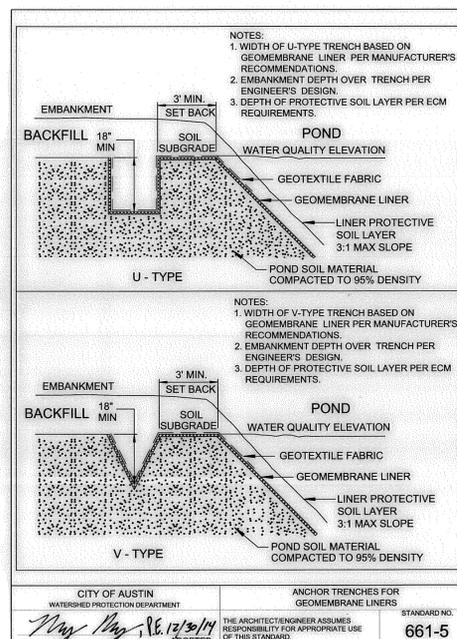
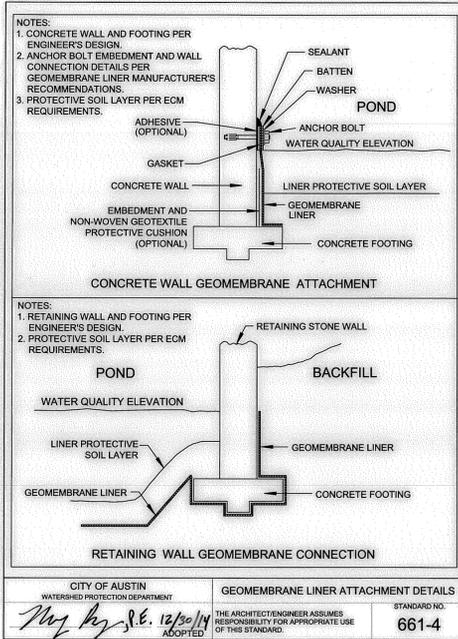
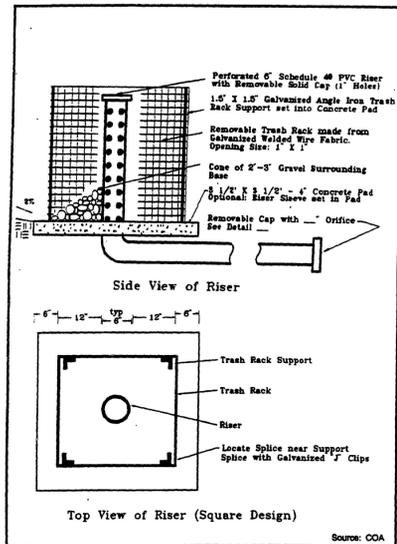
KHA PROJECT	069424100
DATE	10/19/2023
SCALE:	AS SHOWN
DESIGNED BY:	LE
DRAWN BY:	LE
CHECKED BY:	NG

POND PLAN & PROFILE
 (12 OF 12)

SANCTUARY DRIPPING
 SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

SHEET NUMBER
 45 OF 68

RISER DETAIL



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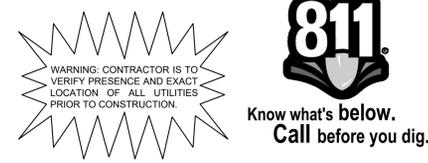


10/19/2023

KHA PROJECT	069424100
DATE	10/19/2023
SCALE	AS SHOWN
DESIGNED BY	LE
DRAWN BY	LE
CHECKED BY	NG

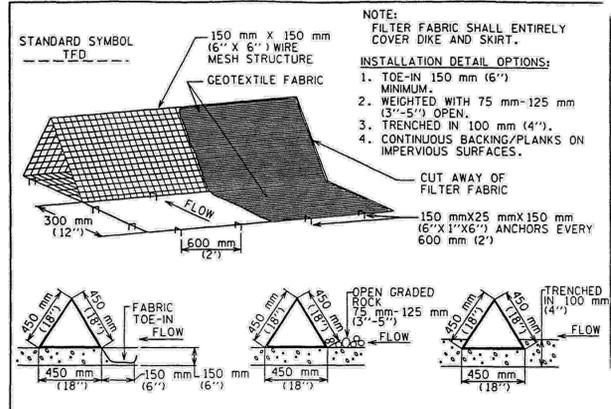
POND DETAILS

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS



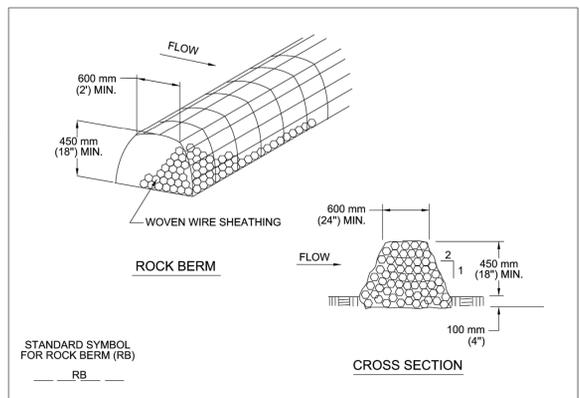
WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

Plotted By: Conolly, Wylzer, Date: October 30, 2023, 05:38:55pm, File Path: K:\SAU_Civil\069424100_Sanctuary Dripping Springs\Coat\PlanSheets\C - Erosion Control Details.dwg
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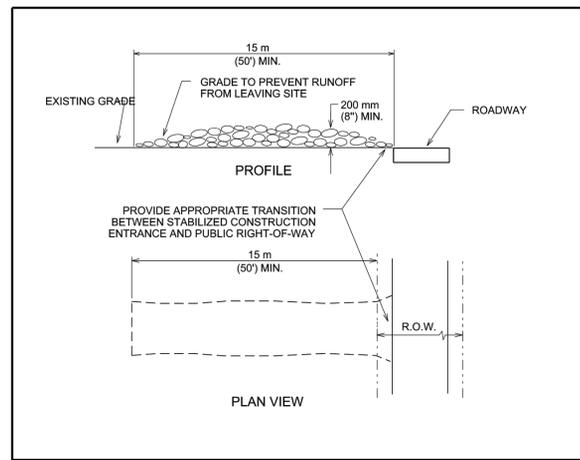


- GENERAL NOTES**
- DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
 - THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
 - THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF 75-125 mm (3-5") OPEN GRADED ROCK OR TOE-IN 150 mm (6") WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 100 mm (4").
 - DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 150 mm (6") WIRE STAPLES ON 600 mm (2') CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 10M (1/2") DIAMETER RE-BAR WITH TEE ENDS.
 - FILTER MATERIAL SHALL BE LAPPED OVER ENDS 150 mm (6") TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
 - THE DIKE STRUCTURE SHALL BE MW40-150 mm X 150 mm (6 GA. 6" X 6") WIRE MESH, 450 mm (18") ON A SIDE.
 - INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 - ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6") AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
 - AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8 ABOVE.

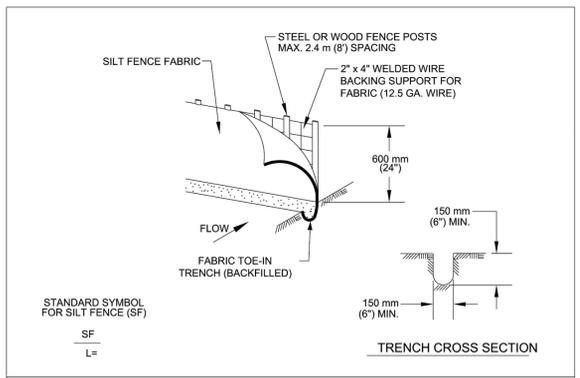
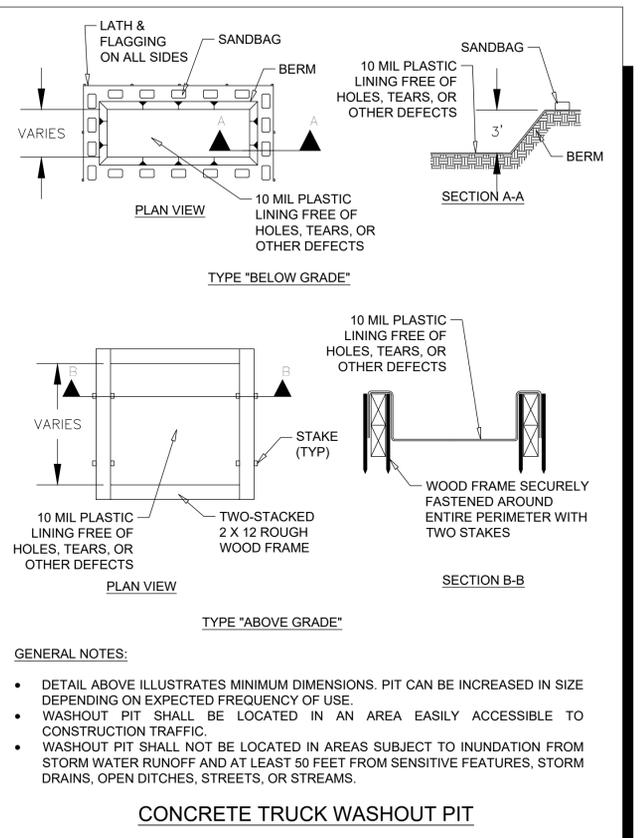
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TRIANGULAR SEDIMENT FILTER DIKE	STANDARD NO. 628S
RECORD COPY SIGNED BY MORGAN BYARS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED 09/01/2011



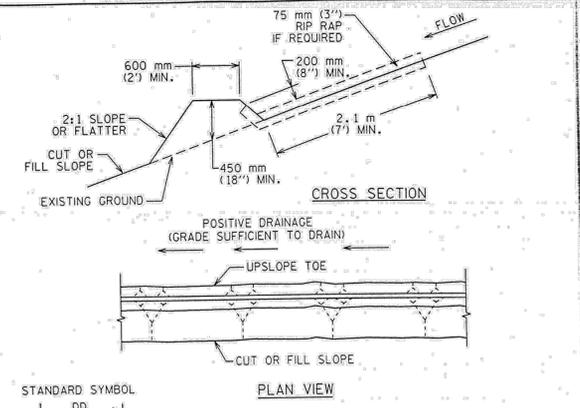
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	ROCK BERM	STANDARD NO. 639S-1
RECORD COPY SIGNED BY MORGAN BYARS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED 8/24/2010



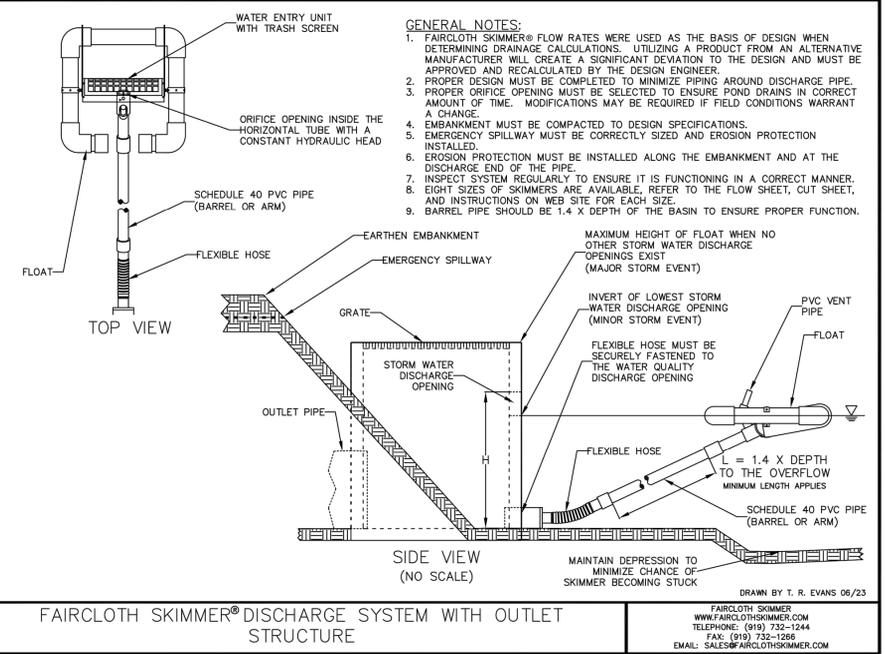
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	STANDARD NO. 641S-1
RECORD COPY SIGNED BY PATRICK MURPHY	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED 5/23/00



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SILT FENCE	STANDARD NO. 642S-1
RECORD COPY SIGNED BY MORGAN BYARS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED 09/01/2011



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	DIVERSION DIKE	STANDARD NO. 622S-1
RECORD COPY SIGNED BY MORGAN BYARS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED 09/01/2011



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH OUTLET STRUCTURE	STANDARD NO. 622S-1
RECORD COPY SIGNED BY MORGAN BYARS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED 09/01/2011



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	STATE OF TEXAS VICTORIA CAROL BOULHAR LICENSED PROFESSIONAL ENGINEER 13689
KHA PROJECT 069424100	DATE 10/19/2023
SCALE: AS SHOWN	DESIGNED BY: LE DRAWN BY: LE CHECKED BY: NG
EROSION CONTROL DETAILS	
SANCTUARY DRIPPING SPRINGS 1111 HAYS COUNTRY ACRES RD. HAYS COUNTY, TEXAS	
SHEET NUMBER 64 OF 68	

Attachment N

Inspection, Maintenance, Repair and Retrofit Plan

The inspection and maintenance plan outlines the procedures necessary to maintain the performance of the Permanent Best Management Practices for this project. It should be noted that the plan provides guidelines that may have to be adjusted dependent on site specific and weather related conditions.

It is the responsibility of the owner to provide the inspections and maintenance as outlined in the plan for the duration of the project. The owner will maintain this responsibility until it is assumed or transferred to another entity in writing. If the property is leased or sold, the responsibility for the maintenance will be required to be transferred through the lease agreement, binding covenants, closing documents, or other binding legal instrument.

Disposal of accumulated silt shall be accomplished following Texas Commission on Environmental Quality guidelines and specifications.

Maintenance records shall be kept on the installation, maintenance, or removal of items necessary for the proper operation of the facilities. All inspections shall be documented.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

Responsible Party: Sanctuary Dripping Springs, LLC
Mailing Address: 1416 Green Terrace
City, State: Round Rock, Texas Zip: 78664
Telephone: N/A Fax: N/A

I, the owner, have read and understand the requirements of the attached Inspection and Maintenance Plan for the proposed Permanent Best Management Practices for my project. I acknowledge that I will maintain responsibility for the implementation and execution of the plan until the responsibility is transferred to or assumed by another party in writing through a binding legal instrument.

Signature of Responsible Party [Handwritten Signature] Date 10.13.23

This Maintenance Plan is based on TCEQ Maintenance Guidelines.

By: [Handwritten Signature] Date 10/03/2023
Lexie England, P.E.

Kimley»Horn Water Quality Ponds

Routine Maintenance

Mowing: The side-slopes, embankment, and emergency spillway of the basin should be mowed at least twice a year to prevent woody growth and to control weeds.

Inspections: Water Quality Ponds should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the basin is functioning properly. There are many functions and characteristics of these BMPs that should be inspected. The embankment should be checked for subsidence, erosion, leakage, cracking, and tree growth. The condition of the emergency spillway should be checked. The inlet, barrel, and outlet should be inspected for clogging. Stability of the side slopes should be checked. Modifications to the basin structure and contributing watershed should be evaluated. During semi-annual inspections replace any dead or displaced vegetation. Replanting of various species of wetland vegetation may be required at first, until a viable mix of species is established. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage. The inspections should be carried out with As-built pond plans in hand.

Debris and Litter Removal: As part of periodic mowing operations and inspections, debris and litter should be removed from the surface of the basin. Attention should be paid to floatable debris, and the outlet should be checked for possible clogging.

Sediment Removal: Inspection of the forebay should be completed every three months for the first two years after construction completion, and during the three-month inspection cycle, if more than 15% of the forebay volume is lost, the sediment build-up should be removed. After the two-year period, the sediment forebay should be inspected every three years, and the sediment should be cleaned out if more than one-third of the forebay volume is lost. Every six years, the sediment build-up in the mail pool should be inspected and sediment should be removed if twenty percent of the main pool volume is lost.

Erosion Control: The basin side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion. Corrective measures such as re-grading and re-vegetation may be necessary.

Nuisance Control: Most public agencies surveyed indicate that control of insects, weeds, odors, and algae may be needed in some ponds. Nuisance control is probably the most frequent maintenance item demanded by local residents. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.). Biological control of algae and mosquitoes using fish such as fathead minnows is preferable to chemical applications.

Non-Routine Maintenance

Structural Repairs and Replacement: The structural integrity of the embankment, outlet structure and retaining walls should be inspected during the required routine inspections. Leakage or seepage of water through the embankment must be avoided and any structural damage should be repaired immediately.

Harvesting: If vegetation is present on the fringes or in the pond, it can be periodically harvested and the clippings removed to provide export of nutrients and to prevent the basin from filling with decaying organic matter.

Kimley»»Horn

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

Responsible Party: Sanctuary Dripping Springs, LLC
Mailing Address: 1416 Green Terrace
City, State: Round Rock, Texas Zip: 78664
Telephone: N/A Fax: N/A

I, the owner, have read and understand the requirements of the attached Inspection and Maintenance Plan for the proposed Permanent Best Management Practices for my project. I acknowledge that I will maintain responsibility for the implementation and execution of the plan until the responsibility is transferred to or assumed by another party in writing through a binding legal instrument.

Signature of Responsible Party  Date 10.13.23

ATTACHMENT P: Measures for Minimizing Surface Stream Contamination

There are no perennial surface streams on the site. The intermittent stream and buffer on the north end of the site are not impacted by the proposed development. Drainage contributing to the intermittent stream is treated for water quality and detained to match existing flow rates by the proposed ponds.

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: Lexie England

Date: 10/05/2023

Signature of Customer/Agent:



Regulated Entity Name: Sanctuary Dripping Springs

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: Onion Creek

Temporary Best Management Practices (TBMPs)

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

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

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

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

Soil Stabilization Practices

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

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

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

Administrative Information

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

ATTACHMENT A: Spill Response Actions

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

- Manufacturers' recommended methods for spill cleanup will be maintained on-site in the material data sheets (MSDS) and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Contact the MS4 Operator, TCEQ (800-832-8224), and the National Response Center (800-424-8802) to inform of any spill of toxic or hazardous material regardless of the size.

The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.

Reportable Quantities Link: https://www.tceq.texas.gov/response/spills/spill_rq.html

ATTACHMENT B: Potential Sources of Contamination

No industrial associated activity discharges are expected for this proposed commercial development site. Surface water quality can be affected by disturbance during construction and by development after construction. Soil disturbance from clearing and grubbing and cut / fill operations can lead to discharge of sediment unless adequate temporary erosion control measures are in place. For this project, the use of silt fence, construction entrances, and rock berms will prevent sediment from leaving the site. Siltation collected by the control measures will be cleaned from fences, berms, etc. on a routine schedule as outlined in the SWPPP and contract specifications.

During construction, surface water quality may also be affected by a spill of hydrocarbons or other hazardous substances used in construction. The most likely instances of a spill of hydrocarbons or hazardous substances are:

- a) Refueling construction equipment.
- b) Oil and grease from the asphalt pavement and vehicle traffic.
- c) Performing operator-level maintenance, including adding petroleum, oils, or lubricants.
- d) Normal silt build-up.
- e) Unscheduled or emergency repairs, such as hydraulic fluid leaks.
- f) Trash which becomes loose from subdivision residents.
- g) Fertilizers used in the landscaping around the apartment buildings.

Every effort will be taken to be cautious and prevent spills. In the event of a fuel or hazardous substance spill as defined by the Reportable Quantities Table 1 (page 3) of the TCEQ's Small-Business Handbook for Spill Response (RG-285, June 1997), the contractor is required to clean up the spill and notify the TCEQ as required in RG-285. During business hours report spills to the TCEQ's Austin Regional Office at (512) 339-2929, after business hours call 1-800-832-8224, the Environmental Response Hotline or (512) 463-7727, the TCEQ Spill Reporting Hotline, which is also answered 24 hours a day.

After construction is complete, impervious cover for the tract of land is the major reason for degradation of water quality. Impervious cover includes the building foundation, street pavement and concrete sidewalks. Oil and fuel discharge from vehicles is anticipated. The proposed permanent BMPs on this project will help mitigate these occurrences.

ATTACHMENT C: Sequence of Major Activities

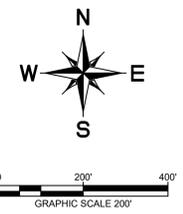
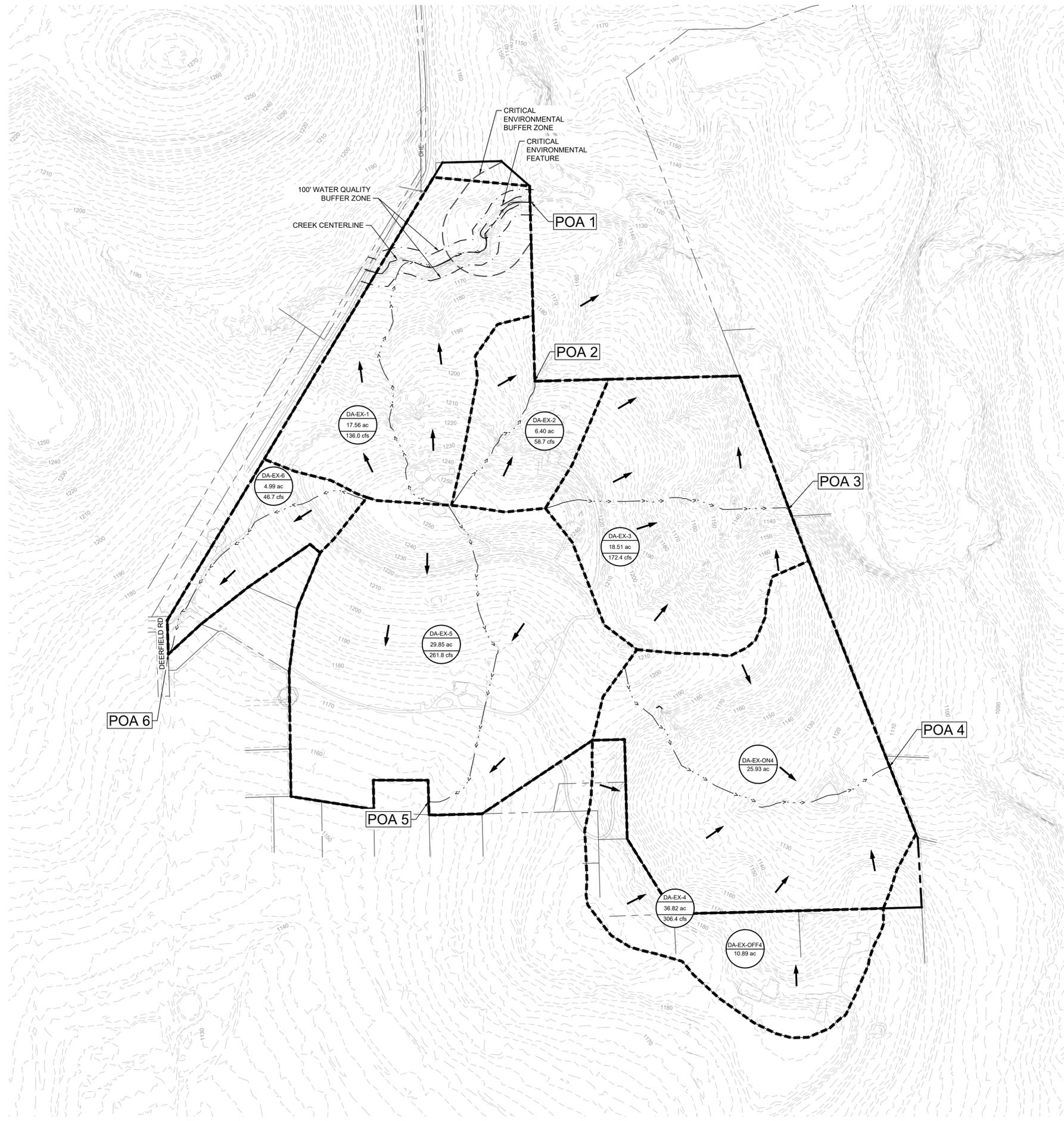
SEQUENCE OF CONSTRUCTION:

- 1) **INSTALL EROSION CONTROLS PER APPROVED PLANS.**
 - a) This activity effects less than 0.25-arces of the site, as its mostly consentrated at the borders of the site. The erosion controls will be in place for the duration of the construction and until the permanent BMPs have been established.
- 2) **HOLD PRE-CONSTRUCTION CONFERENCE.**
- 3) **DEMOLISH, REMOVE AND DISPOSE OF PROPERLY ALL EXISTING IMPROVEMENTS SHOWN TO BE REMOVED PER PLANS.**
 - a) This activity will effect approximately 0.6-acres of the site. The erosion controls initially placed will be maintained through this activity.
- 4) **ROUGH-CUT ALL REQUIRED OR NECESSARY PONDS. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF ANY EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL FINAL RESTORATION IS ACHIEVED.**
 - a) This activity will continue to effect the 2.25-acres of the site. This activity is preparing the site for the designed drainage condition (grading and ponds). The erosion controls initially placed will be maintained through this activity.
- 5) **BEGIN CONSTRUCTION OF UNDER GROUND UTILITY, PAVING AND BUILDING, INSTALL INLET EROSION/SEDIMENTATION PROTECTION.**
 - a) This activity will effect approximately 22.5-acres and the erosion controls measures initially placed will remain.
- 6) **COMPLETE PERMANENT EROSION CONTROL AND SITE RESTORATION. REMOVE TEMPORARY EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION. RESTORE ANY AREAS DISTURBED DURING REMOVAL OF EROSION/SEDIMENTATION CONTROLS.**
 - a) This activity will effect approximately 3 acres and includes placement of the permanent BMPs. The temporary BMPs will only be removed once the permanent BMPs have been established.
- 7) **PROJECT ENGINEER INSPECTS JOB AND WRITES LETTER OF CONCURRENCE TO THE PERMITTING AUTHORITY, FINAL INSPECTION WILL BE SCHEDULED UPON RECEIPT OF THE LETTER.**
- 8) **REMOVE ALL TRASH AND DEBRIS FROM THE SITE AND DISPOSE OF LEGALLY.**

ATTACHMENT D: Temporary Best Management Practices and Measures

As shown in the erosion and sediment control plan, to protect surface streams during construction activities silt fence will be placed on the downslope along the property line where construction activities end. In addition, a construction entrance will be utilized to filter stormwater through the rock material, inlet protection will be placed at installed inlets and rock berms will be placed in the drainage culvert to the east of the site to protect the surface streams further from any sediment that does make it through the other BMP controls.

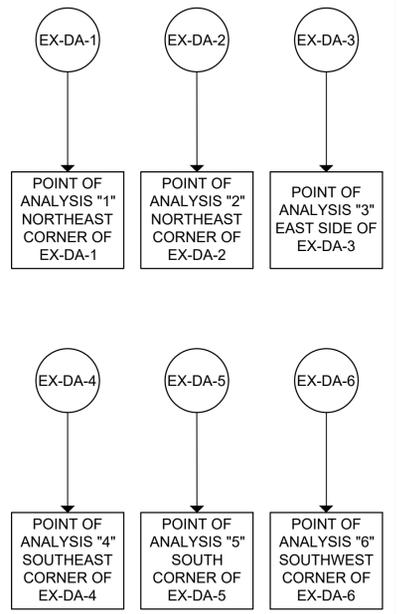
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LEGEND

	AREA DESIGNATOR AREA IN ACRES Q2 FLOW IN CFS
	PROPERTY LINE
	EXISTING DRAINAGE DIVIDE EXISTING FLOW DIRECTION
	EXISTING CONTOUR
	LONGEST FLOW PATH (Tc FLOW PATH)

- NOTES:**
- EXISTING OFF-SITE CONTOURS ARE FROM THE TEXAS NATURAL RESOURCES INFORMATION SYSTEM (TNRS) GIS DATA
 - ALL CONTOURS SHOWN ARE AT ONE-FOOT INTERVALS.



No.	REVISIONS	BY	DATE

Kimley-Horn
 5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100
 AUSTIN, TX 78735
 PHONE: 512-646-7237 FAX: 512-646-418-1791
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 TBPE Firm No. 928

STATE OF TEXAS
 NATAKA CASALI
 13689
 LICENSED PROFESSIONAL ENGINEER
 10/19/2023

KHA PROJECT	069424100
DATE	10/19/2023
SCALE	AS SHOWN
DESIGNED BY	LE
DRAWN BY	LE
CHECKED BY	NG

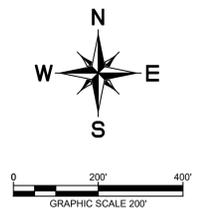
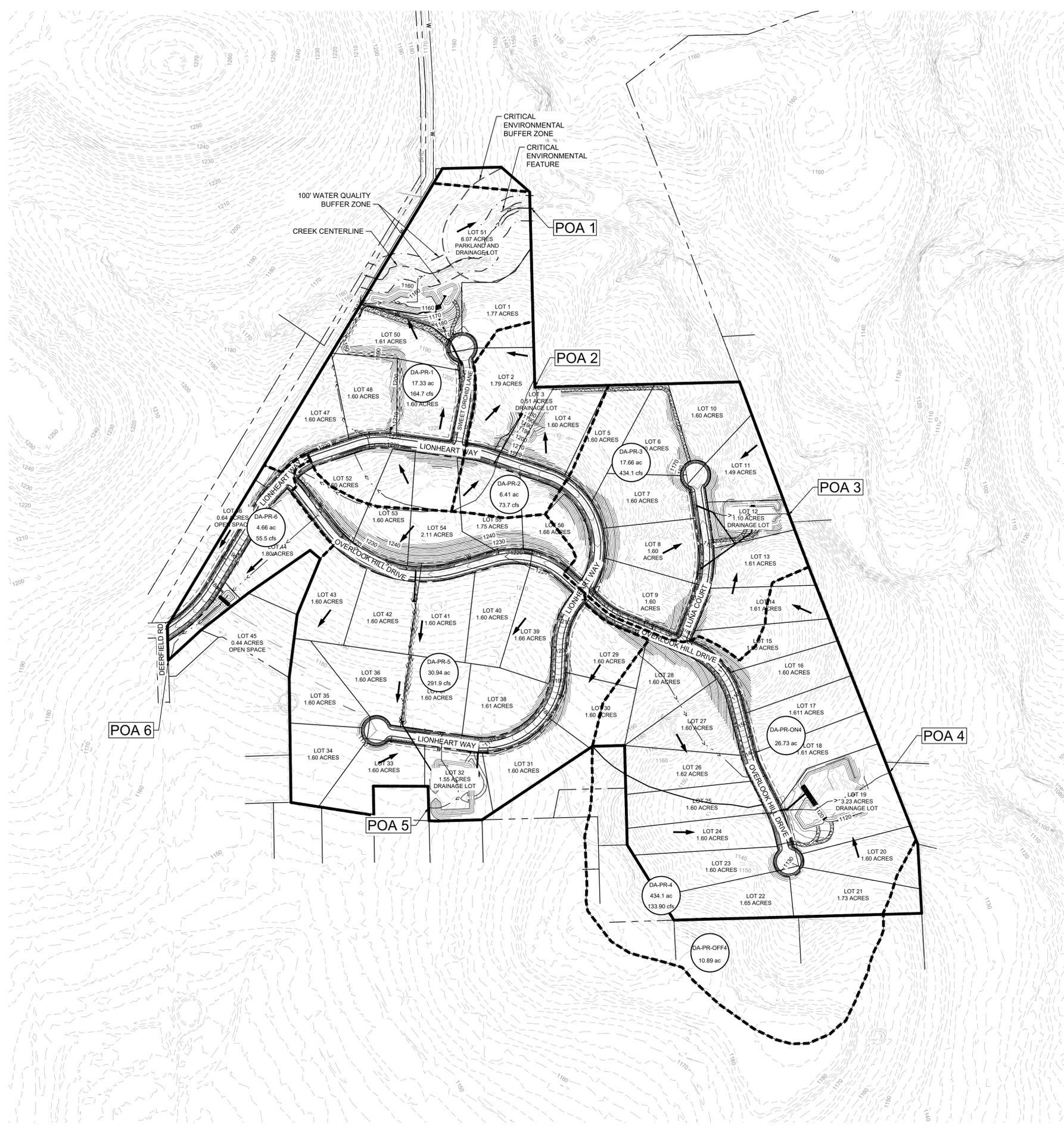
EXISTING DRAINAGE AREA MAP

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

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

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

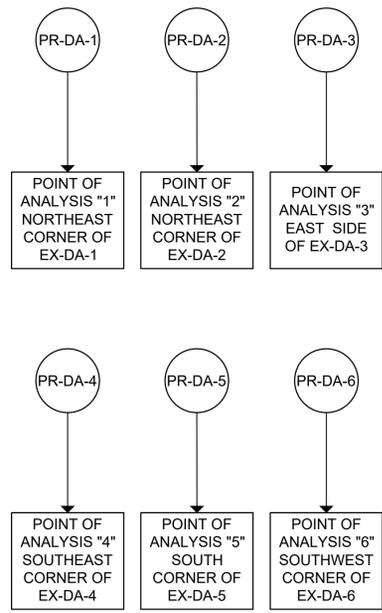
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LEGEND

	AREA DESIGNATOR AREA IN ACRES Q2 FLOW IN CFS
	INLET NUMBER
	PROPERTY LINE
	PROPOSED STORM DRAIN LINE
	EXISTING STORM DRAIN LINE
	PROPOSED DRAINAGE DIVIDE
	PROPOSED STORM DRAIN HEADWALL
	PROPOSED FLOW DIRECTION
	PROPOSED CONTOUR
	EXISTING CONTOUR
	LONGEST FLOW PATH (Tc FLOW PATH)

- NOTES:**
- EXISTING OFF-SITE CONTOURS ARE FROM THE TEXAS NATURAL RESOURCES INFORMATION SYSTEM (TNRIS) GIS DATA.
 - ALL CONTOURS SHOWN ARE AT ONE-FOOT INTERVALS.



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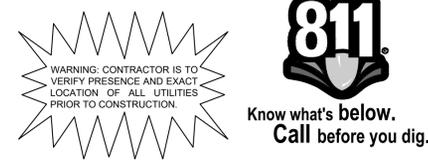
STATE OF TEXAS
 NATAKA CASALI
 13689
 LICENSED PROFESSIONAL ENGINEER
 10/19/2023

KHA PROJECT	069424100
DATE	10/19/2023
SCALE:	AS SHOWN
DESIGNED BY:	LE
DRAWN BY:	LE
CHECKED BY:	NG

PROPOSED DRAINAGE AREA MAP

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

SHEET NUMBER
15 OF 68



WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

Plotted By: Conolly, Wylde; Date: October 30, 2023 05:26:46pm; File Path: K:\SAU\Civil\069424100_Sanctuary_Dripping_Springs_Cool_Plan_Sheets\C - Proposed Drainage Area Map.dwg
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TIME OF CONCENTRATION CALCULATIONS

Existing Time of Concentration Calculations

Drainage Area	Area (AC)	Impervious Cover (SF)	Impervious Cover (AC)	Impervious Cover (%)	Sheet Flow			Unpaved Shallow Flow			Paved Shallow Flow			Channel Flow			Total Tc min		
					Length ft	Slope ft/ft	Tt min	Length ft	Slope ft/ft	Tt min	Length ft	Slope ft/ft	Tt min	Length ft	V ft/s	Slope ft/ft		Tt min	
DA-EX-1	17.56	9789	0.22	1.3%	100	0.02	0.2	12.85 min	1002	0.10	3.20	0	0.01	0.00	671	6.00	0.10	1.86	17.9 min
DA-EX-2	6.4	5247	0.12	1.9%	100	0.03	0.2	10.11 min	200	0.16	0.51	0	0.01	0.00	314	6.00	0.13	0.87	11.5 min
DA-EX-3	18.51	10093	0.23	1.3%	100	0.09	0.2	6.61 min	514	0.15	1.38	0	0.01	0.00	341	6.00	0.13	0.95	8.9 min
*DA-EX-4	36.82	26584	0.61	1.6%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18.5 min
DA-EX-OFF4	10.89	26584	0.61	5.6%	100	0.01	0.2	14.27 min	1208	0.09	4.26	0	0.01	0.00	0	6.00	0.00	0.00	18.5 min
DA-EX-ON4	25.93	0	0.00	0.0%	100	0.09	0.2	6.60 min	1269	0.10	4.09	0	0.01	0.00	0	6.00	0.00	0.00	10.7 min
DA-EX-5	29.85	48053	1.10	3.7%	100	0.04	0.2	8.91 min	1245	0.08	4.48	0	0.01	0.00	0	6.00	0.00	0.00	13.4 min
DA-EX-6	4.99	11310	0.26	5.2%	100	0.11	0.2	6.03 min	1014	0.07	3.96	0	0.01	0.00	0	6.00	0.00	0.00	10.0 min

*TIME OF CONCENTRATION FOR DA-EX-4 IS THE LONGER OF THE THE TWO SUBBASINS DA-EX-OFF4 AND DA-EX-ON4

Proposed Time of Concentration Calculations

Drainage Area	Area (AC)	Impervious Cover (SF)	Impervious Cover (AC)	Impervious Cover (%)	Sheet Flow			Unpaved Shallow Flow			Paved Shallow Flow			Channel Flow			Total Tc min		
					Length ft	Slope ft/ft	n	Tt min	Length ft	Slope ft/ft	Tt min	Length ft	Slope ft/ft	Tt min	Length ft	V ft/s		Slope ft/ft	Tt min
DA-PR-1	17.33	188724	4.33	25.0%	100	0.02	0.06	4.54 min	396	0.09	1.35	0	0.01	0.00	961	6.00	0.05	2.67	8.6 min
DA-PR-2	6.41	69805	1.60	25.0%	100	0.02	0.06	4.68 min	172	0.15	0.46	0	0.01	0.00	162	6.00	0.05	0.45	5.6 min
DA-PR-3	17.66	192317	4.42	25.0%	100	0.15	0.06	2.03 min	384	0.01	3.45	0	0.01	0.00	1203	6.00	0.05	3.34	8.8 min
*DA-PR-4	37.62	317654	7.29	19.4%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.4 min
DA-PR-OFF4	10.89	26565	0.61	5.6%	100	0.07	0.06	2.80 min	638	0.09	2.15	0	0.01	0.00	178	6.00	0.05	0.49	5.4 min
DA-PR-ON4	26.73	291090	6.68	25.0%	100	0.12	0.06	2.22 min	569	0.12	1.67	0	0.01	0.00	298	6.00	0.05	0.83	5.0 min
DR-PR-5	30.94	336937	7.74	25.0%	100	0.02	0.06	4.92 min	508	0.06	2.15	0	0.01	0.00	1515	6.00	0.05	4.21	11.3 min
DR-PR-6	4.66	50747	1.17	25.0%	100	0.09	0.016	0.86 min	361	0.08	1.34	0	0.01	0.00	0	6.00	0.01	0.00	5.0 min

*TIME OF CONCENTRATION FOR DA-PR-4 IS THE LONGER OF THE THE TWO SUBBASINS DA-PR-OFF4 AND DA-PR-ON4

POINT OF ANALYSIS SUMMARY

DRAINAGE AREA	POA	AREA (AC.)	IMPERVIOUS COVER	BASE CN	IMPERVIOUS CN	WEIGHTED CN	TC (MIN)*	PEAK FLOWS AT POA			
								Q ₂ (CFS)	Q ₁₀ (CFS)	Q ₂₅ (CFS)	Q ₁₀₀ (CFS)
DA-EX-1	POA-1	17.56	1.3%	80	98	80.2	17.9	38.70	73.10	96.70	136.00
DA-EX-2	POA-2	6.40	1.9%	80	98	80.3	11.5	16.70	31.60	41.70	58.70
DA-EX-3	POA-3	18.51	1.3%	80	98	80.2	8.9	49.90	93.70	123.00	172.40
*DA-EX-4	POA-4	47.71	1.6%	80	98	80.3	10.7	85.00	163.30	216.70	306.40
*DA-EX-OFF4	POA-4	10.89	5.6%	--	--	--	--	--	--	--	--
*DA-EX-ON4	POA-4	36.82	0.0%	--	--	--	--	--	--	--	--
DA-EX-5	POA-5	29.85	3.7%	80	98	80.7	13.4	74.20	140.80	185.90	261.80
DA-EX-6	POA-6	4.99	5.2%	80	98	80.9	10.0	13.70	25.50	33.40	46.70

*DA-EX-OFF4 AND DA-EX-ON4 FLOWS ARE COMBINED IN DA-EX-4

PROPOSED CONDITIONS

DRAINAGE AREA	POA	AREA (AC.)	IMPERVIOUS COVER	BASE CN	IMPERVIOUS CN	WEIGHTED CN	TC (MIN)*	PEAK FLOWS AT POA (UNDETAINED)				PEAK FLOWS AT POA (DETAINED)			
								Q ₂ (CFS)	Q ₁₀ (CFS)	Q ₂₅ (CFS)	Q ₁₀₀ (CFS)	Q ₂ (CFS)	Q ₁₀ (CFS)	Q ₂₅ (CFS)	Q ₁₀₀ (CFS)
DA-PR-1	POA-1	17.33	25.0%	80	98	84.5	8.6	53.20	93.00	119.70	164.70	37.30	71.60	96.30	135.80
DA-PR-2	POA-2	6.41	25.0%	80	98	84.5	5.6	23.30	41.40	53.40	73.70	15.40	27.40	37.30	53.30
DA-PR-3	POA-3	17.66	25.0%	80	98	84.5	8.8	54.30	95.00	122.30	168.30	49.20	92.40	119.90	165.90
DA-PR-4	POA-4	64.35	19.4%	80	98	83.5	5.0	133.90	241.40	312.70	434.10	81.70	158.10	212.20	303.10
*DA-PR-OFF4	POA-4	26.73	0.0%	--	--	--	--	--	--	--	--	--	--	--	--
DA-PR-ON4	POA-4	37.62	25.0%	--	--	--	--	--	--	--	--	--	--	--	--
DA-PR-5	POA-5	30.94	25.0%	80	98	84.5	11.3	93.00	163.90	211.50	291.90	70.50	137.20	181.00	252.40
DA-PR-6	POA-6	4.66	25.0%	80	98	84.5	5.0	17.60	31.20	40.20	55.50	14.20	25.60	33.60	46.60

* OFFSITE FLOWS FROM DA-PR-OFF4 ARE ROUTED TO POND 4

TSS REMOVAL SUMMARY

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **The Sanctuary - Pond 1**
Date Prepared: **10/9/2023**

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

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

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

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

County = **Hays**
 Total project area included in plan = **104.34** acres
 Predevelopment impervious area within the limits of the plan = **2.52** acres
 Total post-development impervious area within the limits of the plan = **26.09** acres
 Total post-development impervious cover fraction = **0.25**
 P = **33** inches

L_M TOTAL PROJECT = **21156** lbs.

Number of drainage basins / outfalls areas leaving the plan area = **6**

REFER TO POND SHEETS FOR TSS REMOVAL FOR INDIVIDUAL BASINS

RETENTION-IRRIGATION SUMMARY

Drainage Area	RETENTION-IRRIGATION SUMMARY			
	Required WQ Volume (Cu. Ft.)	Provided WQ Volume (Cu. Ft.)	Required Irrigation Area (SF)	Required Irrigation Area (AC)
DA-PR-1	14524	12448	58097	1.33
DA-PR-2	4843	5479	19371	0.44
DA-PR-3	14303	18293	57211	1.31
DA-PR-4	22562	22589	90246	2.07
DA-PR-5	20414	20642	81657	1.87
DA-PR-6	2896	2971	11585	0.27



Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley-Horn
 5301 SOUTHWEST PARKWAY, BUILDING 2, SUITE 100
 AUSTIN, TX 78735
 PHONE: 512-646-2237 FAX: 512-646-4180
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 TBPE Firm No. 928



KHA PROJECT	069424100
DATE	10/19/2023
SCALE:	AS SHOWN
DESIGNED BY:	LE
DRAWN BY:	LE
CHECKED BY:	NG

DRAINAGE AREA CALCULATIONS

SANCTUARY DRIPPING SPRINGS
 1111 HAYS COUNTRY ACRES RD.
 HAYS COUNTY, TEXAS

ATTACHMENT E: Request to Temporarily Seal a Feature

This attachment is not applicable. No features will be sealed on this site.

ATTACHMENT F: Structural Practices

The plan for temporary structural controls on this site include placing silt fence at the down slope of the site that will collect sediment prior to entering a stream. This will allow for the sediment to be clean out for continued effective usage of the silt fence.

ATTACHMENT H: Temporary Sediment Pond(s) Plans and Calculations

Proposed ponds are to be rough graded and used for temporary sedimentation control. Refer to the table below and the erosion and sedimentation control sheet in the construction documents for temporary sedimentation control pond requirements and information.

TEMPORARY SEDIMENTATION CONTROL POND REQUIREMENTS		
POND	MINIMUM STORAGE (Cu. Ft.)	MINIMUM BERM ELEVATION (Ft.)
1	25,603	1,163
2	7,955	1,181
3	9,381	1,130
4	56,368	1,116
5	38,954	1,163
6	1,711	1,172

*MINIMUM STORAGE IS THE TEMPORARY POND STORAGE REQUIRED TO CONTAIN THE 24-HR, 2-YR STORM EVENT.

ATTACHMENT I: Inspection and Maintenance for BMPs

A. Inspection Schedule

1. All disturbed areas, as well as all erosion and sediment control devices, will be inspected according to one of the following schedules:
 - a) at least every seven (7) calendar days and within 24 hours after a rainfall of 0.25" or greater, or
 - b) every seven (7) days on the same day of the week each week, regardless of whether or not there has been a rainfall event since the previous inspection.
2. Inspections will occur on the schedule provided in this plan and any changes made to the schedule must adhere to the following:
 - a) the schedule can change a maximum of one time each month,
 - b) the schedule change must be implemented at the beginning of a calendar month, and
 - c) the reason for the schedule change must be documented in this plan (an inspection schedule form is located below).

B. Inspection Reports

1. Completed inspection reports (see below) will include the following information:
 - a) scope of the inspection,
 - b) date of the inspection,
 - c) name(s) of personnel making the inspection,
 - d) reference to qualifications of inspection personnel,
 - e) observed major construction activities, and
 - f) actions taken as a result of the inspection.
2. All disturbed areas (on and off-site), areas for material storage locations where vehicles enter or exit the site, and all of the erosion and sediment controls that were identified as part this plan must be inspected. The inspection report must state whether the site was in compliance or identify any incidents of non-compliance. The report will be signed by the qualified inspector in accordance with the TPDES general permit and filed in this plan. A sample Inspection Report is included below along with an Inspector Qualification Form. All reports and inspections required by the general construction permit will be completed by a duly authorized representative.
3. The operator should correct any damage or deficiencies as soon as practicable after the inspection, but in no case later than seven (7) calendar days after the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in this plan, and wherever possible, those changes implemented before the next storm event or as soon as practicable. A list of maintenance guidelines are included below.

4. Inspection reports will be kept in the Operator's file, along with this plan, for at least three years from the date that the NOT is submitted to the TCEQ for the construction site.

C. Final Stabilization

Final stabilization of the construction site has been achieved when all soil disturbing activities at the site have been completed, and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures. If a vegetative cover cannot be established, equivalent permanent stabilization measures (such as riprap, gabions, or geotextiles) can be employed. When these conditions have been met, BMPs can be removed from the construction area.

Inspector Qualifications*

Inspector Name: _____
Qualifications (Check as appropriate and provide description):
 Training Course _____
 Supervised Experience _____
 Other _____

Inspector Name: _____
Qualifications (Check as appropriate and provide description):
 Training Course _____
 Supervised Experience _____
 Other _____

Inspector Name: _____
Qualifications (Check as appropriate and provide description):
 Training Course _____
 Supervised Experience _____
 Other _____

**Personnel conducting inspections must be knowledgeable of the general permit, familiar with the construction site, and knowledgeable of the SWP3 for the site.*

INSPECTION SCHEDULE

Inspections must be conducted:

- **Option 1** – at least once every 7 calendar days and within 24 hours of the end of a storm event of 0.25 inch or greater
- **Option 2** – at least once every 7 calendar days, regardless of whether or not there has been a rainfall event since the previous inspection.

Any changes to the schedule are conducted in accordance with the following:

- the schedule is changed a maximum of one time each month,
- the schedule change must be implemented at the beginning of a calendar month, and
- the reason for the schedule change must be documented below.

Date	Schedule Option	Reason for Schedule Change

MAINTENANCE GUIDELINES

1. Below are some maintenance practices to be used to maintain erosion and sediment controls:
 - All control measures will be inspected according to the schedule identified in Appendix E.
 - All measures will be maintained in good working order. The operator should correct any damage or deficiencies as soon as practicable after the inspection, but in no case later than seven (7) calendar days after the inspection.
 - BMP Maintenance (as applicable)
 - Sediment must be removed from sediment traps and sedimentation ponds no later than the time that design capacity has been reduced by 50%. For perimeter controls such as silt fences, berms, etc., the trapped sediment must be removed before it reaches 50% of the above-ground height.
 - Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
 - Drainage swale will be inspected and repaired as necessary.
 - Inlet control will be inspected and repaired as necessary.
 - Check dam will be inspected and repaired as necessary.
 - Straw bale dike will be inspected and repaired as necessary.
 - Diversion dike will be inspected and any breaches promptly repaired.
 - Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
 - If sediment escapes the site, accumulations must be removed at a frequency that minimizes off-site impacts, and prior to the next rain event, if feasible. If the permittee does not own or operate the off-site conveyance, then the permittee must work with the owner or operator of the property to remove the sediment.
 - Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

2. To maintain the above practices, the following will be performed:
 - Maintenance and repairs will be conducted before the next anticipated storm event or as necessary to maintain the continued effectiveness of storm water controls. Following an inspection, deficiencies should be corrected no later than seven (7) calendar days after the inspection.
 - Any necessary revisions to the SWP3 as a result of the inspection must be completed within seven (7) calendar days following the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in the SWP3 and wherever possible those changes implemented before the next storm event.
 - Personnel selected for inspection and maintenance responsibilities must be knowledgeable of the general permit, familiar with the construction site, and knowledgeable of the SWP3 for the site.

ATTACHMENT J: Schedule of Interim and Permanent Soil Stabilization Practices

Construction Activity Schedule

Activities	Start Date	Finish Date
1. Demolition (0.25-acres): Silt fence protection, tree protection, rock berm		
2. Rough Grading (32.5-acres): Construction entrance/exit shall be installed and all prior erosion control measures installed above to be maintained as necessary during rough grading.		
3. Utility Installation (1-acres): All prior erosion control measures installed above to be maintained as necessary during utility installation, inlet protection shall be installed as storm drainage system is constructed.		
4. Building Construction (4-acres): All prior erosion control measures installed above to maintained as necessary during construction.		
5. Paving (20-acres): All prior erosion control measures installed above to be maintained as necessary during paving and throughout the remainder of the project.		
6. Final Grading/Soil Stabilization/Landscaping (5-acres): All temporary erosion control measures to be removed at the conclusion of the project once final stabilization has been achieved. All affected storm sewer inlets and post development BMPs shall be cleaned prior to site completion.		

*Construction activity sequences for linear projects may be conducted on a rolling basis. As a result, construction activities may be at different stages at different locations in the project area. The Contractor is required to complete and update the schedule and adjust as necessary.

*Bare soils should be seeded or otherwise stabilized within 14 calendar days after final grading or where construction activity has temporarily ceased for more than 21 days.

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Sactuary Dripping Springs

Regulated Entity Location: 1111 Hays Country Acres Rd, Dripping Springs, TX 78620

Name of Customer: Sactuary Dripping Springs, LLC

Contact Person: Justin Kathan

Phone: N/A

Customer Reference Number (if issued):CN _____

Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

Hays

Travis

Williamson

San Antonio Regional Office (3362)

Bexar

Medina

Uvalde

Comal

Kinney

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

Austin Regional Office

San Antonio Regional Office

Mailed to: TCEQ - Cashier

Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

Site Location (Check All That Apply):

Recharge Zone

Contributing Zone

Transition Zone

Type of Plan	Size	Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	104.335 Acres	\$ 8,000
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	\$
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: 

Date: 10/04/2023

Application Fee Schedule

Texas Commission on Environmental Quality

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

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

Extension of Time Requests

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



TCEQ Core Data Form

TCEQ Use Only

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

SECTION I: General Information

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

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	10/03/2023	
<input type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)			
The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).			
6. Customer Legal Name (If an individual, print last name first: e.g.: Doe, John)		If new Customer, enter previous Customer below:	
Sanctuary Dripping Springs, LLC		_____	
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
805210744	_____	_____	_____
11. Type of Customer:	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other: _____	
12. Number of Employees		13. Independently Owned and Operated?	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) - as it relates to the Regulated Entity listed on this form. Please check one of the following:			
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other: _____			
15. Mailing Address:	1416 Green Terrace		

City	Round Rock	State	TX
ZIP	78644	ZIP + 4	_____
16. Country Mailing Information (if outside USA)		17. E-Mail Address (if applicable)	
_____		Justin@Sanctuary.com	
18. Telephone Number	19. Extension or Code	20. Fax Number (if applicable)	
(512) 518 - 6529	_____	(_____) _____ - _____	

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If "New Regulated Entity" is selected below this form should be accompanied by a permit application)	
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information	
The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).	
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)	
Sanctuary Dripping Springs, LLC	

23. Street Address of the Regulated Entity: (No PO Boxes)	1111 Hays Country Acres Rd						
	City	Dripping Springs	State	TX	ZIP	78620	ZIP + 4
24. County	Hays						

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	N/A
---------------------------------------	-----

26. Nearest City	Dripping Springs	State	TX	Nearest ZIP Code	78620
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27. Latitude (N) In Decimal:	30.181726	28. Longitude (W) In Decimal:	-98.034028		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
---------------------------------	-----------------------------------	--	--

6552		237210	
------	--	--------	--

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

34. Mailing Address:	1416 Green Terrace						
	City	Round Rock	State	TX	ZIP	78644	ZIP + 4

35. E-Mail Address:		
36. Telephone Number	37. Extension or Code	38. Fax Number (if applicable)
() -		() -

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

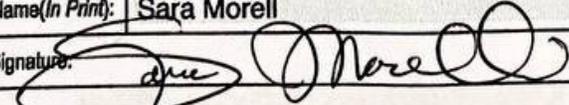
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source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

SECTION IV: Preparer Information

40. Name:	Lexie England, P.E.	41. Title:	Engineer
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 518 - 6529		() -	lexie.england@kimley-horn.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:	Sanctuary Dripping Springs, LLC	Job Title:	Founding Partner
Name (In Print):	Sara Morell	Phone:	(541) 407-2941
Signature:		Date:	10-13-23

Grantee's successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof by, through or under Grantor, but not otherwise and subject, however, to the provisions contained herein and the Permitted Exceptions.

Grantee, by its acceptance hereof, does further assume and agree to pay any and all ad valorem taxes and assessments for 2023 and subsequent years, as well as all ad valorem taxes relating to a change in the usage or ownership of the Property, whether by reason of this conveyance or hereafter.

[signature page follows]

EXHIBIT "A"

Legal Description of Property

A tract of land situated within the Richard Vaughan Survey Number 7, Abstract Number 16, Hays County, Texas and being the same called 135.046 acre tract of land conveyed to Park G. Jarrett, III by a deed filed for record in Volume 2481 at Page 829 of the Official Public Records of Hays County, Texas, Save and Except those portions conveyed by deeds filed under Document Number 18027980, 19031262, 20000851, 20036533, 20059388 (corrected in 21032488), 21024807, 21031490 and that portion platted into The Shire Minor Plat as filed under Document Number 16025069 and that portion platted into The Shire Section 2 as filed under Document Number 18044197 of the Official Public Records of Hays county, Texas. Said tract of land being more particularly described by metes and bounds as follows:

Beginning at a 1/2" rebar found on the West boundary line of Lot 1C-2 in the Final Plat of the Dripping Springs Ranch Phase 2 Subdivision, according to the map or plat thereof filed for record under Document Number 18010411 of the Official Public Records of Hays County, Texas, for the common East corner of the tract of land herein described and Lot 21 in Hays Country Acres according to the map or plat thereof filed for record in Volume 2 at Page 67 of the Plat Records of Hays County, Texas;

Thence S 88°24'09" W, along the common boundary line of the tract of land herein described and the aforementioned Lot 21, a distance of 487.70 feet to a 1/2" rebar found for a corner of the tract of land herein described and the common North corner of Lot 21 and 20 in the aforementioned Hays Country Acres, from which a 1/2" rebar with a cap marked B & G, found for a witness corner bears N 05°40'41" W a distance of 1.05 feet;

Thence along the common monumented boundary line of the tract of land herein described and the aforementioned Lot 20:

S 88°27'12" W a distance of 247.21 feet to a 1/2" rebar found for a common corner;

S 88°45'55" W a distance of 126.19 feet to a 1/2" rebar found for a common corner;

S 88°07'08" W a distance of 120.36 feet to a 1/2" rebar found for a common corner of the tract of land herein described, the common North corner of Lots 19 and 20 in the above-mentioned Hays Country Acres and the Southeast corner of a tract of land conveyed to P. C. Burgos by a deed filed for record under Document Number 19031262 of the Official Public Records of Hays County, Texas;

Thence N 31°57'56" W, along the common boundary line of the tract of land herein described and the aforementioned Burgos tract, a distance of 349.57 feet to a 1/2" rebar with a cap marked "ATS Engineers" found for the common corner of the tract of land herein described, said Burgos tract and a called 0.996 acre tract of land conveyed to Dawn Eicks by a deed filed for record under Document Number 20000851 of the Official Public Records of Hays County, Texas;

Thence N 01°33'05" W, along the common boundary line of the tract of land herein described and the aforementioned Eicks 0.996 acre tract, a distance of 223.83 feet to a cotton spindle found for a common corner of the tract of land herein described, said Eicks 0.996 acre tract and a called 1.534 acre tract of land conveyed to Dawn Eicks by a deed filed for record under Document Number 21031490 of the Official Public Records of Hays County, Texas;

Thence along the common boundary line of the tract of land herein described and the aforementioned Eicks 1.534 acre tract:

N 01°30'19" W a distance of 168.04 feet to a 1/2" rebar with a cap marked "ATS Engineers" found for a common corner;

S 88°28'57" W a distance of 127.13 feet to a 1/2" rebar with a cap marked "ATS Engineers" found for a common corner;

S 56°27'57" W a distance of 524.36 feet to a 1/2" rebar with a cap marked "ATS Engineers" found for a common corner and the common North corner of Lot 5 and Lot 7 in The Shire Section 2 according to the map of plat thereof filed for record under Document Number 18044197 of the Official Public Records of Hays County, Texas;

Thence S 88°29'27" W, along the common boundary line of the tract of land herein described and the aforementioned Lot 5 a distance of 182.94 feet to a 1/2" rebar with a cap marked "ATS Engineers" found for a common corner;

Thence N 87°40'47" W, continuing along the aforementioned common boundary line, a distance of 27.29 feet 1/2" rebar with a cap marked "ATS Engineers" found for the common corner of the tract of land herein described, Lot 4 and Lot 5 in the above-mentioned The Shire Section 2 and a tract of land conveyed to J. & A. Brownlow by a deed filed under Document Number 20059388 and corrected under Document Number 21032488 of the Official Public Records of Hays County, Texas;

Thence along the common boundary line of the tract of land herein described and the aforementioned Brownlow tract:

N 01°32'28" W a distance of 136.08 feet to a 1/2" rebar with a cap marked "ATS Engineers" found for a common corner;

N 89°54'22" W a distance of 217.00 feet to a 1/2" rebar with a cap marked "ATS Engineers" found for a common corner;

S 01°04'06" E a distance of 114.97 feet to a 1/2" rebar with a cap marked "ATS Engineers" found for a common corner and the common North corner of Lot 3 and Lot 4 in the above-mentioned The Shire Section 2;

Thence N 81°17'08" W, along the common boundary line of the tract of land herein described and the aforementioned Lot 3, a distance of 209.18 feet to a 1/2" rebar with a cap marked "ATS Engineers" found for the common North corner of Lot 2 and Lot 3 in the aforementioned The Shire Section 2;

Thence N 81°03'41" W, along the common boundary line of the tract of land herein described and the aforementioned Lot 2, a distance of 122.73 feet to a mag nail found for a common corner and the Southeast corner of Lot 3 in The Shire according to the map or plat thereof filed for record under Document Number 16025069 of the Official Public Records of Hays County, Texas;

Thence N 00°49'59" W, along the common boundary line of the tract of land herein described and the aforementioned The Shire, passing at 372.35 feet a 1/2" rebar with a cap marked "Hayes 5703" found for

the common East corner of Lot 2 and Lot 1 in The Shire and continuing for a total distance of 491.55 feet to a 1/2" rebar with a cap marked "Hayes 5703" found for the common East corner of Lot 1 and Lot 2 in The Shire and a common corner of a called 1.50 acre tract of land conveyed to W. V. Hasty, Jr. by a deed filed for record under Document Number 20036533 of the Official Public Records of Hays County, Texas;

Thence N 07°14'33" E, along the common boundary line of the tract of land herein described and the aforementioned Hasty 1.50 acre tract, a distance of 250.28 feet to a 1/2" rebar with a cap marked "RPLS 5205" found for a common corner with a called 0.750 acre tract of land conveyed to W. V. Hasty, Jr. et ux by a deed filed for record under Document Number 21024807 of the Official Public Records of Hays County, Texas;

Thence along the common boundary line of the tract of land herein described and the aforementioned Hasty 0.750 acre tract:

N 22°26'50" E a distance of 238.74 feet to a 1/2" rebar with a cap marked "RPLS 5205" found for a common corner;

N 50°35'42" W a distance of 52.06 feet to a 1/2" rebar with a cap marked "RPLS 5205" found for a common corner;

S 55°23'11" W a distance of 297.00 feet to the common West corner of the above-mentioned Hasty 0.750 and 1.50 acre tracts;

Thence S 52°05'09" W, along the common boundary line of the tract of land herein described and the aforementioned Hasty 1.50 acre tract, a distance of 237.38 feet to a 1/2" rebar with a cap marked "RPLS 5205" found for a common corner with a called 0.333 acre tract of land conveyed to W. V. Hasty, Jr. by a deed filed for record under Document Number 18027980 of the Official Public Records of Hays County, Texas;

Thence S 47°31'30" W, along the common boundary line of the tract of land herein described and the aforementioned Hasty 0.333 acre tract, a distance of 175.61 feet to a 1/2" rebar with a cap marked "RPLS 5205" found for a common corner on the East right-of-way line of Deerfield Road, a 60' public right-of-way;

Thence N 01°43'36" W, along the common boundary line of the tract of land herein described and the aforementioned East right-of-way line, a distance of 133.88 feet to a point for an angle point in said East right-of-way line;

Thence N 31°08'09" E, passing at 17.80 feet a 1/2" rebar found, on the North right-of-way line of Deerfield Road, for the most Southerly Southeast corner of a tract of land conveyed to Gray L. Salada, et ux by a deed filed under Document Number 20037102 of the Official Public Records of Hays County, Texas and continuing along the common boundary line of the tract of land herein described and said Salada tract passing at 2,056.86 feet a record corner of said Salada tract and continuing along the common boundary line of the tract of land herein described and an apparent remainder of a tract of land conveyed to G. T. Menefee, et ux by a deed filed for record in Volume 892 at Page 719 of the Official Public Records of Hays County, Texas for a total distance of 2,106.96 feet to a 1/2" rebar found for a corner on the a Southerly boundary line of said Salada tract;

Thence N 88°36'16" E, along the common boundary line of the aforementioned Salada tract and the tract of land herein described, a distance of 233.36 feet to a 1/2" rebar found for a common corner;

Thence S 48°51'18" E, continuing along the common boundary line of the aforementioned Salada tract and the tract of land herein described, a distance of 148.84 feet to a 60d nail found in a fence post for a common corner;

Thence S 01°31'07" E, continuing along the common boundary line of the aforementioned Salada tract and the tract of land herein described, a distance of 769.57 feet to a 1/2" rebar found for a common corner;

Thence N 88°30'19" E, continuing along the common boundary line of the tract of land herein described and the aforementioned Salada tract, a distance of 811.04 feet to a 3/8" rebar found for their common East corner on the West boundary line of Lot 1 in the Allen Tract Subdivision according to the map or plat thereof filed for record in Volume 5 at Page 217 of the Plat Records of Hays County, Texas;

Thence S 20°30'16" E, along the common boundary line of the tract of land herein described and the aforementioned Lot 1, a distance of 589.88 feet to a 1/2" rebar found for the common West corner of said Lot 1 and Lot 1B in the Resubdivision of Tract 1 & 2 Dripping Springs Ranch, Phase 2, according to the map or plat thereof filed for record in Volume 9 at Page 84 of the Plat Records of Hays County, Texas;

Thence S 20°58'18" E, along the common boundary line of the tract of land herein described and the aforementioned Lot 1B, a distance of 250.50 feet to a 1/2" rebar found for a common corner;

Thence S 21°35'36" E, continuing along the aforementioned common boundary line, passing at 765.48 feet the record common West corner of the aforementioned Lot 1B and Lot 1C-3 of the above-mentioned Final Plat of The Dripping Springs Ranch, Phase 2 Subdivision, and continuing for a total distance of 1,112.71 feet to a 1/2" rebar found for the common corner of the tract of land herein described, Lot 1C-3 and Lot 1C-2;

Thence S 03°17'03" E, along the common boundary line of the tract of land herein described and the aforementioned Lot 1C-2, a distance of 273.40 feet to the Point of Beginning.

Said tract of land containing 4,544,820 square feet or 104.335 acres, more or less.

EXHIBIT B

Permitted Exceptions

1. The restrictive covenants recorded in Volume 395, Page 315 of the Deed Records, amended in Volume 892, Page 687 of the Deed Records, both as recorded in Hays County, Texas.
2. The terms, conditions and stipulations set out in that certain Ingress and Egress Easement dated October 29, 1977, recorded in Volume 303, Page 511 of the Deed Records of Hays County, Texas and as affected by acknowledgments recorded in Volume 2437, Page 724 and Volume 2424, Page 241 of the Official Public Records of Hays County, Texas.
3. All oil, gas and other minerals, together with all rights relating thereto, express or implied, reserved in instrument recorded in Volume 395, Page 315 of the Deed Records of Hays County, Texas. Said mineral estate not traced further herein.
4. All oil, gas and other minerals, together with all rights relating thereto, express or implied, conveyed in instrument recorded in Volume 1314, Page 697 of the Official Public Records of Hays County, Texas. Said mineral estate not traced further herein.
5. All oil, gas and other minerals, together with all rights relating thereto, express or implied, conveyed in instrument recorded in Volume 1314, Page 701 of the Official Public Records of Hays County, Texas. Said mineral estate not traced further herein.
6. The terms, conditions and stipulations of that certain Easement Agreement dated June 30, 1997, recorded in Volume 1327, Page 128 of the Official Public Records of Hays County, Texas.
7. Electric distribution line easement granted to Pedernales Electric Cooperative, Inc., by instrument dated March 2, 2010, recorded in Volume 3846, Page 251 of the Official Public Records of Hays County, Texas.
8. Utility easement granted to Pedernales Electric Cooperative, Inc., by instrument dated January 5, 2016, recorded under Document No. 16003633 of the Official Public Records of Hays County, Texas.
9. Access easement granted to William Van Hasty, Jr., by instrument dated August 18, 2017, recorded under Document No. 17025919 of the Official Public Records of Hays County, Texas.
10. The terms, conditions and stipulations of that certain Access Easement Agreement dated May 10, 2021, recorded under Document No. 21024808 of the Official Public Records of Hays County, Texas, as further affected by that Amended and Restated Access Easement Agreement recorded under Document No. 21058224 of the Official Public Records of Hays County, Texas.
11. Apparent easement evidenced by the location of overhead utility lines outside of a dedicated easement as shown on the survey dated November 5, 2021, last revised April 10, 2023, prepared by Larry W. Busby, Registered Professional Land Surveyor No. 4967 (the "Survey").

12. The rights of third parties to use the dirt trails which traverse the property, and the dirt trails which cross south property line(s), as shown on the Survey.

**THE STATE OF TEXAS
COUNTY OF HAYS**

I hereby certify that this instrument was FILED on the date and the time stamped hereon by me and was duly RECORDED in the Records of Hays County, Texas.

23033566 DEED
09/12/2023 08:17:35 AM Total Fees: \$58.00

Elaine H. Cárdenas, MBA, PhD, County Clerk
Hays County, Texas

