# Transmittal

Date: April 10, 2026

To: TCEQ Reviewer

From: Stacy Mulholland

Reference: Double L Ranch Pods A1, A2, A3, A4, B1, & B4 CZP Application

| Item No. | Number of Copies | Description |
|---|---|---|
| 1 | 1 | Cover Sheet |
| 2 | 1 | Edwards Aquifer Application Cover Page |
| 3 | 1 | Contributing Zone Plan Application |
| 4 | 1 | Temporary Stormwater Section |
| 5 | 1 | Agent Authorization Form |
| 6 | 1 | Application Fee Form |
| 7 | 1 | TCEQ Core Data Form |
| 8 | 1 | Development Agreement |
| 9 | 1 | Geological Assessment |
| 10 | 1 | Phase 1 TCEQ Approval Letter |
| 11 | 1 | RWPF TCEQ Approval Letter |

Comments:

# Contributing Zone Plan

## Double L Ranch – Pods A1, A2, A3, A4, B1, & B4

Prepared for: Double L Ranch – Pods A1, A2, A3, A4, B1, & B4

Prepared by: BGE, Inc.

TBPE Registered Firm #: 1046




**Please note that this site is subject to comply with RG-348A, Optional Enhanced Measures, for West Travis County PUA water quality review.**

## 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:** Double L Ranch – Pods A1, A2, A3, A4, B1, & B4 | | | | | **2. Regulated Entity No.:** | | | | |
| **3. Customer Name:** Double L Development, LLC | | | | | **4. Customer No.:** CN606051399 | | | | |
| **5. Project Type:** **(Please circle/check one)** | New | | Modification | | | Extension | | Exception | |
| **6. Plan Type:** **(Please circle/check one)** | WPAP | CZP | SCS | UST | AST | EXP | EXT | Technical Clarification | Optional Enhanced Measures |
| **7. Land Use:** **(Please circle/check one)** | Residential | | Non-residential | | | **8. Site (acres):** | | | 144.11 |
| **9. Application Fee:** | $ 8,000 | | **10. Permanent BMP(s):** | | | | | 3 Batch Detention Ponds, 3 Jellyfish, 1 grassy swale, 9 Vegetative filter strips | |
| **11. SCS (Linear Ft.):** | | | **12. AST/UST (No. Tanks):** | | | | | | |
| **13. County:** | Hays | | **14. Watershed:** | | | | | Little Barton 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.) | X | ___ | ___ |
| Region (1 req.) | X | ___ | ___ |
| County(ies) | ___ | ___ | ___ |
| Groundwater Conservation District(s) | ___Edwards Aquifer Authority<br>___Barton Springs/ Edwards Aquifer<br>_x_Hays Trinity<br>___Plum Creek | ___Barton Springs/ Edwards Aquifer | NA |
| City(ies) Jurisdiction | ___Austin<br>___Buda<br>_x_Dripping Springs<br>___Kyle<br>___Mountain City<br>___San Marcos<br>___Wimberley<br>___Woodcreek | ___Austin<br>___Bee Cave<br>___Pflugerville<br>___Rollingwood<br>___Round Rock<br>___Sunset Valley<br>___West Lake Hills | ___Austin<br>___Cedar Park<br>___Florence<br>___Georgetown<br>___Jerrell<br>___Leander<br>___Liberty Hill<br>___Pflugerville<br>___Round Rock |

| **San Antonio Region** | | | | | |
|---|---|---|---|---|---|
| **County:** | **Bexar** | **Comal** | **Kinney** | **Medina** | **Uvalde** |
| Original (1 req.) | ___ | ___ | ___ | ___ | ___ |
| Region (1 req.) | ___ | ___ | ___ | ___ | ___ |
| County(ies) | ___ | ___ | ___ | ___ | ___ |
| Groundwater Conservation District(s) | ___ Edwards Aquifer Authority<br>___Trinity-Glen Rose | ___Edwards Aquifer Authority | ___Kinney | ___EAA<br>___Medina | ___EAA<br>___Uvalde |
| City(ies) Jurisdiction | ___Castle Hills<br>___Fair Oaks Ranch<br>___Helotes<br>___Hill Country Village<br>___Hollywood Park<br>___San Antonio (SAWS)<br>___Shavano Park | ___Bulverde<br>___Fair Oaks Ranch<br>___Garden Ridge<br>___New Braunfels<br>___Schertz | NA | ___San Antonio ETJ (SAWS) | NA |

| |
|---|
| I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.<br><br>Stacy Mulholland, P.E. |
| Print Name of Customer/Authorized Agent<br>  04/09/2026<br>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): | |

# 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: Stacy Mulholland, P.E.

Date: 04/09/2026

Signature of Customer/Agent:



**Regulated Entity Name**: Double L Ranch - Pods A1, A2, A3, A4, B1, & B4

## *Project Information*

1. County: Hays
2. Stream Basin: Little Barton Creek
3. Groundwater Conservation District (if applicable): Hays Trinity
4. Customer (Applicant):

   Contact Person: Robert E. Fondren
   Entity: Double L Development, LLC
   Mailing Address: 1600 West Loop South, Suite 2600
   City, State: Houston, TX Zip: 77027
   Telephone: (713) 623-2466 Fax: N/A
   Email Address: N/A

5. Agent/Representative (If any):

Contact Person: Stacy Mulholland, P.E.
Entity: BGE, Inc.
Mailing Address: 7330 San Pedro Ave Suite 301
City, State: San Antonio, TX Zip: 78216
Telephone: (210) 581-3637 Fax: N/A
Email Address: smulholland@bgeinc.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 City of Dripping Springs.
☐ 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.

2.0 miles due North from the intersection of US 290 and Ranch Rd 12

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: 307
☐ Residential: # of Living Unit Equivalents: _____
☐ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): 144.121 Acres

Total disturbed area: 146.600 Acres

14. Estimated projected population: 768

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

**Table 1 - Impervious Cover**

| ***Impervious Cover of Proposed Project*** | ***Sq. Ft.*** | ***Sq. Ft./Acre*** | ***Acres*** |
|---|---|---|---|
| Structures/Rooftops | 1,308,717 | ÷ 43,560 = | 30.044 |
| Parking | 1,112,648 | ÷ 43,560 = | 25.543 |
| Other paved surfaces | 123,628 | ÷ 43,560 = | 2.838 |
| Total Impervious Cover | 2,635,076 | ÷ 43,560 = | 58.425 |

**Total Impervious Cover** 58.425 **÷ Total Acreage** 144.121 **X 100 =** 40.54**% 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 x W = _____$Ft^2$ ÷ 43,560 $Ft^2$/Acre = _____ acres.

21. Pavement Area:

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

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 City of Dripping Springs (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**

| *AST Number* | *Size (Gallons)* | *Substance to be Stored* | *Tank Material* |
|---|---|---|---|
| 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**

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

**Total: _____ Gallons**

30. Piping:

☐ All piping, hoses, and dispensers will be located inside the containment structure.
☐ Some of the piping to dispensers or equipment will extend outside the containment structure.
☐ The piping will be aboveground
☐ The piping will be underground

31. ☐ The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of: _____.

32. ☐ **Attachment H - AST Containment Structure Drawings**. A scaled drawing of the containment structure is attached that shows the following:

☐ Interior dimensions (length, width, depth and wall and floor thickness).
☐ Internal drainage to a point convenient for the collection of any spillage.
☐ Tanks clearly labeled
☐ Piping clearly labeled
☐ Dispenser clearly labeled

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

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

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

## *Site Plan Requirements*

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

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

    Site Plan Scale: 1" = 100'.

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): 48209C0105G, Dated January 17, 2025.

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

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.




N

0 1,000' 2,000' 4,000'

## PLAN LEGEND

- OVERALL PROPERTY BOUNDARY
- POD BOUNDARY
- COUNTY LINE
- PARCEL LINES

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:


**BGE, Inc.**
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

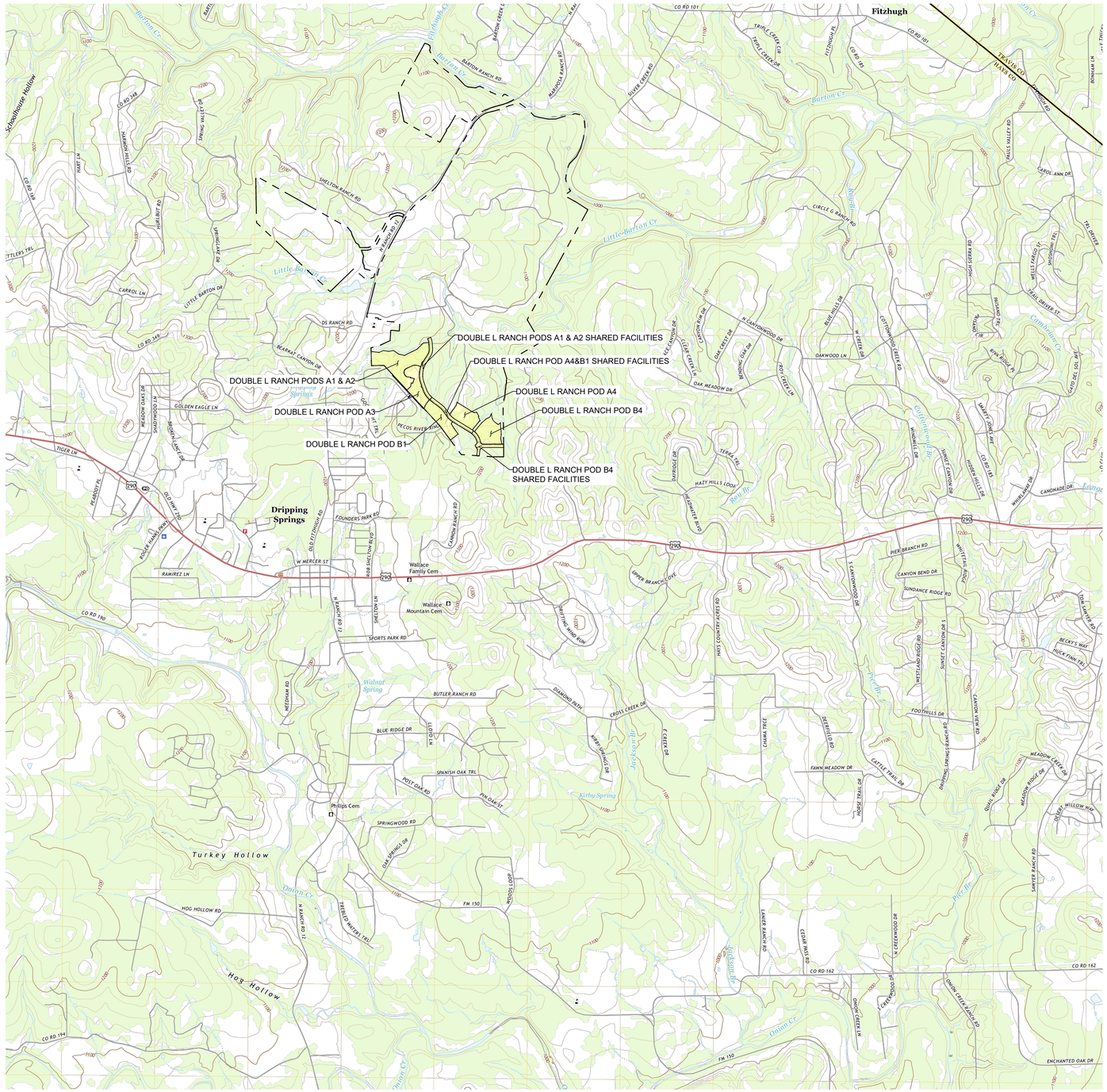

# DOUBLE L RANCH - PODS A1, A2, A3, A4, B1, & B4

# ATTACHMENT A - ROAD MAP

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET


O:\00014789-00\LS\00 - Pod A1&A2 - Shared Facilities\05_ENGR\07_CZP\00_Double L Ranch CZP Template\02_Working\ROAD MAP.dwg Layout: Layout1 Plotted: 4/8/2026 1:04:17 PM By: Jramones


DOUBLE L RANCH PODS A1 & A2 SHARED FACILITIES
DOUBLE L RANCH POD A4&B1 SHARED FACILITIES
DOUBLE L RANCH PODS A1 & A2
DOUBLE L RANCH POD A4
DOUBLE L RANCH POD A3
DOUBLE L RANCH POD B4
DOUBLE L RANCH POD B1
DOUBLE L RANCH POD B4 SHARED FACILITIES
Fitzhugh
Dripping Springs
Wallace Family Cem
Wallace Mountain Cem
Philips Cem
Turkey Hollow
Hog Hollow
Barton Cr
Little Barton Cr
Onion Cr
Walnut Spring
Kirby Spring
Jacobson Br
Cypress Br
Pier Br
Cottonwood Br
Cypress Creek Br
Long Br
Schoolhouse Hollow
CO RD 101
CO RD 165
CO RD 165A
CO RD 180
CO RD 194
CO RD 162
FM 150
290
TRAVIS CO
HAYS CO
BLANCO CO
BARTON CREEK RD
BARTON RANCH RD
RABBOSA RANCH RD
SILVER CREEK RD
TRIPLE CREEK CIR
TRIPLE CREEK DR
FITZHUGH RD
FITZHUGH CUTOFF
BONHAM LN
SHELTON RANCH RD
CIRCLE G RANCH RD
HIGH SIERRA RD
VALLEY VIEW DR
VALLES VALLEY RD
CAROL ANN DR
TRAIL DRIVER
WELLS FARGO ST
TRAIL DRIVER ST
SHOSHONI TRL
PAWNEE TRL
CHEYENNE TRL
CATO DEL SOL DR
CAMBRIAN CV
RIM RIDGE PL
OAKWOOD LN
N CANDLEWOOD DR
BLUE HILLS DR
W CREEK DR
COTTONWOOD CREEK RD
OAK CREEK DR
BIRDING OAK DR
PEST CREEK LN
OAK MEADOW DR
CLEAR CREEK LN
CLEAR CREEK DR
YES CANYON DR
CLOUD DR
OAK RIDGE DR
HARRY POPE DR
WINDMILL DR
SUNSET CANYON DR
HIDDEN HILLS DR
WHITE OAK DR
CANONADE DR
PIER BRANCH RD
CANYON BEND DR
SUNDANCE RIDGE RD
S CANDLEWOOD DR
WESTLAND RIDGE RD
SUNSET CANYON DR S
LITTLE CANYON RD
BECKY'S WAY
HUCK FINN TRL
CANYON VIEW RD
FOOTHILLS DR
SHOSHONI TRAIL PASS
MEADOW CREEK DR
MEADOW RIDGE DR
DESERT WILLOW WAY
SAWYER RANCH RD
ENCHANTED OAK DR
CYPRESS CREEK RANCH RD
N CREEKWOOD DR
CREEKWOOD DR
CYPRESS RANCH DR
LANIER RANCH RD
CEDAR GLEN DR
FAWN MEADOW DR
CATTLE TRAIL DR
HORSE TRAIL DR
CHAMA TRACE
DEERFIELD DR
JAMES COUNTRY ACRES RD
DIAMOND PATH
CROSS CREEK DR
HERB SPRINGS DR
E CREEK DR
UPPER BRANCH COVE
DEERTHORN RUNN RUN
FOUNDERS PARK RD
OLD FITZHUGH RD
CANNON RANCH RD
W MERCER ST
HOB SHELTON RD
SHELTON LN
W RANCH RD 12
SPORTS PARK RD
RAMIREZ LN
OLD HWY 290
ROGER HANSEN WAY
TIGER LN
TEARDO PL
GOLDEN EAGLE LN
MEADOW OAKS DR
SHADYWOOD LN
BRUSHY LAKE CIR
RECOS RIVER RIV
AT T TRL
DAYRIDGE DR
TERRA TRL
HAZY HILLS LOOP
MEADOWRIDGE RD
WESTMEDIA DR
WESTMEDIA LN
BUTLER RANCH RD
WESTMAN RD
BLUE RIDGE DR
LEDGE LN
SPANISH OAK TRL
POST OAK RD
PIN OAK ST
SPRINGWOOD RD
OAK SPRINGS DR
GOAT GOOSE
FM 150
TREBED WATERS TRL
W RANCH RD 12
HOG HOLLOW RD
CO RD 194
ENCHANTED OAK DR
CYPRESS CREEK RANCH RD
CO RD 162
LANIER RANCH RD
CEDAR GLEN DR
N CREEKWOOD DR
CREEKWOOD DR
CYPRESS RANCH

# Attachment C – Project Narrative

The Double L Ranch Pods A1, A2, A3, A4, B1, and B4 are proposed on a 144.121-acre undeveloped site located within the City of Dripping Springs (CoDS) Extra Territorial Jurisdiction (ETJ) approximately 2.0 miles north of the intersection of US Highway 290 and Ranch Road 12. The site consists of 307 single-family residential lots with associated roadway access and utilities. The project site lies within the Little Barton Creek Watershed and does not contain any FEMA 100-yr floodplains (48209C0105G, Dated January 17, 2025). Optional enhanced measures are provided in accordance with the CoDS Development Agreement.

This project's scope includes clearing, grubbing, and grading of the overall site, as well as the installation of water, wastewater, and storm sewer lines. Sewage will be conveyed to the Double L Ranch Reclaimed Water Production Facility (RWPF), where it will be treated and reused. The RWPF is permitted under TPDES Permit No. WQ0014488001 and 210 Reuse Authorization No. EP0000009. The impervious cover will increase from natural conditions to 40.54%, or 58.425 acres of the 144.121 acre site.

The permanent BMPs utilized and proposed will this application consist of three (3) batch detention ponds, three (3) jellyfish, one (1) grassy swale, and nine (9) vegetative filter strips (VFS). Locations, treated impervious cover acreage, and provided total suspended solids (TSS) removal are summarized below and are called out in the Permanent BMP Map in Attachment K - BMPs for On-site Stormwater.

- Jellyfish A is in the Pod A1A2 construction plan set, located in the northwestern portion of the A1A2 site. It will treat 2.611 acres of impervious cover and remove 2,348 lbs of TSS.
- Jellyfish B is in the Pod A1A2 construction plan set, located in the northeastern portion of the A1A2 site. It will treat 2.922 acres of impervious cover and remove 2,638 lbs of TSS.
- Jellyfish E is in the Pod A1A2 construction plan set, located in the southern portion of the A1A2 site. It will treat 2.402 acres of impervious cover and remove 2,175 lbs of TSS.
- A3.1 VFS is in the Pod A1A2A3 construction plan set, located in the northwestern portion of the A3 site. It will treat 0.107 acres of impervious cover in series with Pond D and remove 119 lbs of TSS.
- A3.2 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A1A2A3 construction plan set, located in the northeastern portion of the A3 site. It will treat 0.144 acres of impervious cover in series with Pond D and remove 158 lbs of TSS.
- A3.3 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A1A2A3 construction plan set, located in the northeastern portion of the A3 site. It will treat 0.109 acres of impervious cover in series with Pond F and remove 122 lbs of TSS.
- A3.4 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A1A2A3 construction plan set, located in the eastern portion of the A3 site. It will treat 0.232 acres of impervious cover in series with Pond F and remove 254 lbs of TSS.
- Pond D is in the Pod A1A2A3 construction plan set, located along the southeastern boundary of the A3 site. It will treat 10.551 acres of impervious cover and remove 10,861 lbs of TSS. The required water quality volume is 131,243 CF and 133,276 CF is provided.
- Pond F is in the Pod A1A2A3 construction plan set, located along the northeastern boundary of the phase 2 site. It will treat 6.878 acres of impervious cover and remove 7,153 lbs of TSS. The required water quality volume is 88,580 CF and 91,600 CF is provided.

- B1.1 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A4B1 construction plan set, located in the eastern portion of the A4B1 site. It will treat 0.654 acres of impervious cover and remove 647 lbs of TSS.
- A4.1 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A4B1 construction plan set, located in the eastern portion of the A4B1 site. It will treat 0.314 acres of impervious cover in series with Pond J and remove 345 lbs of TSS.
- B4.1 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod B4 construction plan set, located in the eastern portion of the B4 site. It will treat 0.179 acres of impervious cover in series with Pond J and remove 314 lbs of TSS.
- B4.2 VFS is a 50-foot-wide natural vegetative filter strip in the Pod B4 construction plan set, located along the southeastern boundary of the B4 site. It will treat 0.325 acres of impervious cover and remove 325 lbs of TSS.
- B4.3 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod B4 construction plan set, located along the southeastern boundary of the B4 site. It will treat 0.324 acres of impervious cover and remove 321 lbs of TSS.
- B4 Grassy Swale is in the Pod B4 construction plan set, located centrally within the B4 site. It will treat 0.156 acres of impervious cover and remove 164 lbs of TSS.
- Pond J is in the Pod B4 construction plan set, located in the eastern portion of the B4 site. It will treat 25.520 acres of impervious cover and remove 25,522 lbs of TSS. The required water quality volume is 326,855 CF and 337,658 CF is provided.
- The Ranch Road 12 TxDOT improvements will add additional turn lanes and widen the roadway resulting in 1.240 acres of uncaptured impervious cover.
- The remaining uncaptured area from the Double L Pod site is 4.998 acres of impervious cover.

The total TSS removal required for the Double L Ranch Pods site is 53,406 lbs.

The construction plans submitted with this application include no plans for demolition. The runoff will sheet flow to the permanent VFS. Any uncaptured flow will be accounted for by the overtreatment by the proposed BMPs. All PBMPs have been designed in accordance with the Texas Commission on Environmental Quality's (TCEQ) Technical Guidance Manual (TGM) RG-348 (2005) and Optional Enhanced Measures Appendix A.

The tables below summarize the TSS removal calculations to show the overall project satisfies TSS removal.

| DOUBLE L A1-A4, B1, & B4 PROJECT SUMMARY | | | | | |
|---|---|---|---|---|---|
| **POD** | **BMP** | **BMP BASIN (AC)** | **EXISTING IC (AC)** | **PROPOSED IC (AC)** | **REQUIRED TSS REMOVAL (LBS)** |
| A1A2 | JELLYFISH A | 4.624 | 0.000 | 2.611 | 2,387 |
| | JELLYFISH B | 5.945 | 0.000 | 2.922 | 2,671 |
| | JELLYFISH E | 5.332 | 0.000 | 2.402 | 2,196 |
| | UNCAP A | 4.872 | 0.000 | 0.241 | 220 |
| | UNCAP B | 6.523 | 0.000 | 0.746 | 682 |
| | UNCAP E | 4.053 | 0.000 | 0.000 | 0 |
| A1A2A3 | POND D | 21.494 | 0.000 | 10.551 | 9,645 |
| | POND F | 18.642 | 0.000 | 6.878 | 6,287 |
| | UNCAP BYP G1 | 1.617 | 0.000 | 0.882 | 806 |
| | UNCAP H | 2.149 | 0.000 | 0.701 | 641 |
| A4B1 | B1.1 VFS | 1.482 | 0.000 | 0.654 | 598 |
| | A4B1 UNCAP D | 3.787 | 0.000 | 0.606 | 554 |
| | A4B1 UNCAP J.1 | 1.754 | 0.000 | 0.933 | 853 |
| B4 | B4.2 VFS | 0.968 | 0.000 | 0.325 | 297 |
| | B4.3 VFS | 0.752 | 0.000 | 0.324 | 296 |
| | POND J | 55.830 | 0.000 | 25.520 | 23,328 |
| | B4 UNCAP J.2 | 2.526 | 0.000 | 0.889 | 812 |
| PH1 | PH1 UNCAP - TXDOT RR 12 IMPROVEMENTS | 1.771 | 0.000 | 1.240 | 1,133 |
| **TOTAL** | | **144.121** | **0.000** | **58.425** | **53,406** |

**Table 1 – Double L A1-A4, B1, & B4 Project Summary:** This table summarizes the required TSS removal calculations by BMP.

| DOUBLE L A1-A4, B1, & B4 IN SERIES BMPS | | | | |
|---|---|---|---|---|
| **POD** | **BMP** | **BMP BASIN (AC)** | **EXISTING IC (AC)** | **PROPOSED IC (AC)** |
| A3 | A3.1 VFS* | 0.385 | 0.000 | 0.107 |
| | A3.2 VFS* | 0.371 | 0.000 | 0.144 |
| | A3.3 VFS** | 0.440 | 0.000 | 0.109 |
| | A3.4 VFS** | 0.574 | 0.000 | 0.232 |
| A4B1 | A4.1 VFS^ | 0.821 | 0.000 | 0.314 |
| B4 | B4.1 VFS^ | 0.449 | 0.000 | 0.179 |
| | B4 GRASSY SWALE^ | 0.622 | 0.000 | 0.156 |
| **TOTAL** | | **3.662** | **0.000** | **1.241** |

*IN SERIES WITH POND D
**IN SERIES WITH POND F
^IN SERIES WITH POND J

**Table 2 – Double L A1-A4, B1, & B4 In Series BMPs:** The table above summarizes the BMPs that are in series with other proposed BMPs.

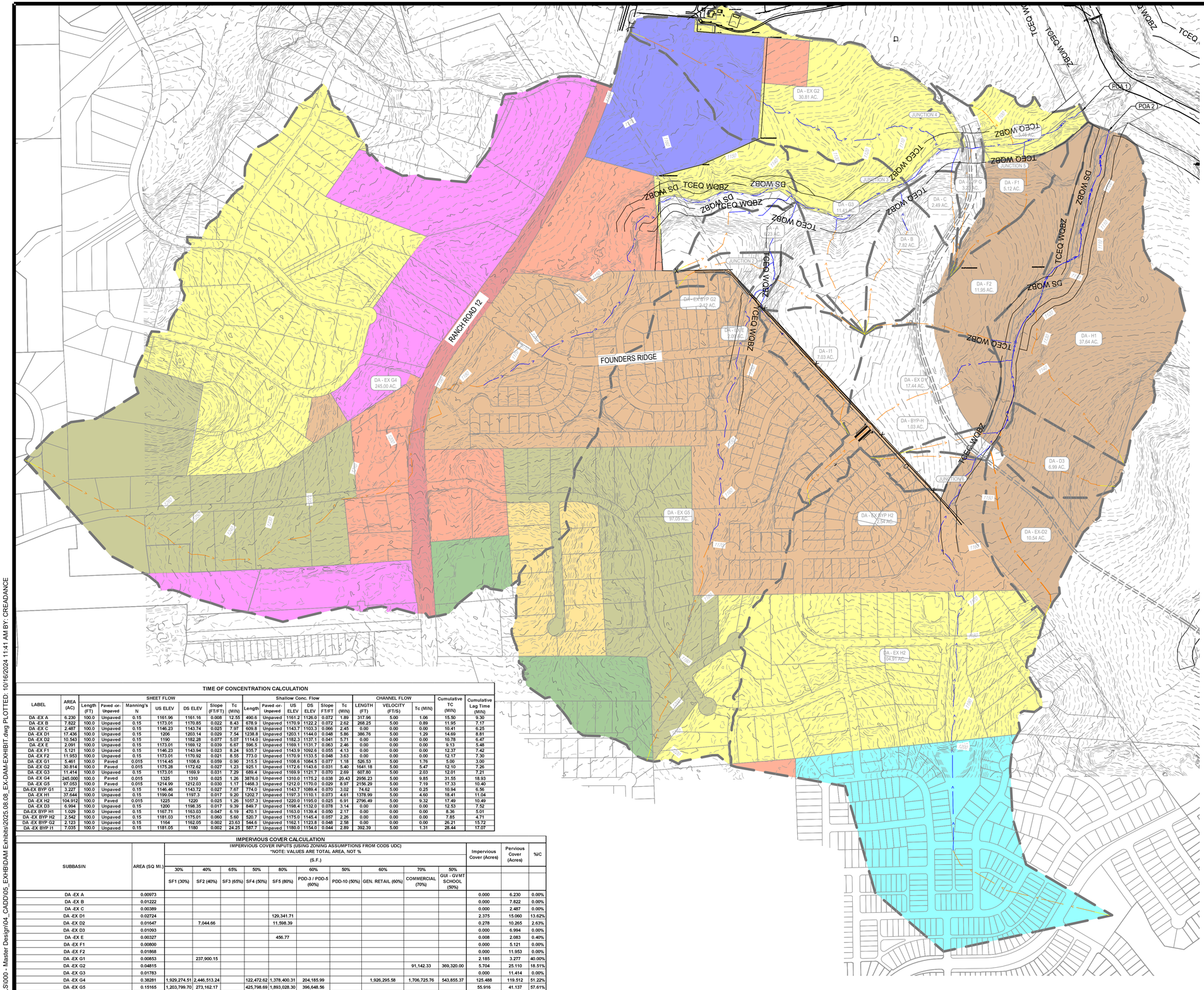
| DOUBLE L A1-A4, B1, & B4 BMP SUMMARY TABLE | | | |
|---|---|---|---|
| **POD** | **BMP** | **REQUIRED TSS REMOVAL (LBS)** | **PROVIDED TSS REMOVAL (LBS)** |
| A1A2 | JELLYFISH A | 2,387 | 2,348 |
| | JELLYFISH B | 2,671 | 2,638 |
| | JELLYFISH E | 2,196 | 2,175 |
| | UNCAP A | 220 | --- |
| | UNCAP B | 682 | --- |
| | UNCAP E | 0 | --- |
| A3 | A3.1 VFS* | --- | 119 |
| | A3.2 VFS* | --- | 158 |
| | A3.3 VFS** | --- | 122 |
| | A3.4 VFS** | --- | 254 |
| A1A2A3 | POND D | 9,645 | 10,861 |
| | POND F | 6,287 | 7,153 |
| | UNCAP BYP G1 | 806 | --- |
| | UNCAP H | 641 | --- |
| A4B1 | B1.1 VFS | 598 | 647 |
| | A4.1 VFS^ | --- | 345 |
| | A4B1 UNCAP D | 554 | --- |
| | A4B1 UNCAP J.1 | 853 | --- |
| B4 | B4.1 VFS^ | --- | 314 |
| | B4.2 VFS | 297 | 325 |
| | B4.3 VFS | 296 | 321 |
| | B4 GRASSY SWALE^ | --- | 164 |
| | POND J | 23,328 | 25,522 |
| | B4 UNCAP J.2 | 812 | --- |
| PH1 | PH1 UNCAP - TXDOT RR 12 IMPROVEMENTS | 1,133 | --- |
| **TOTAL** | | **53,406** | **53,466** |

*IN SERIES WITH POND D
**IN SERIES WITH POND F
^IN SERIES WITH POND J

**Table 3 – Double L A1-A4, B1, & B4 BMP Summary:** This table summarizes the required and provided TSS removal calculations by BMP.

# Attachment D – Factors Affecting Surface Water Quality

Multiple factors have the potential of affecting surface water quality during construction. These include: oil, grease, gas, transmission fluids, and/or other vehicular fluids, as well as shifts in sediment that will occur during excavation and fill operations. Upon completion of construction, normal traffic on the site could be responsible for many of these same pollutants, as well as everyday activities such as car washing and lawn watering.




## TIME OF CONCENTRATION CALCULATION

| LABEL | AREA (AC) | SHEET FLOW | | | | | | Shallow Conc. Flow | | | | | | CHANNEL FLOW | | | Cumulative TC (MIN) | Cumulative Lag Time (MIN) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Length (FT) | Paved -or- Unpaved | Manning's N | US ELEV | DS ELEV | Slope (FT/FT) | Tc (MIN) | Length | Paved -or- Unpaved | US ELEV | DS ELEV | Slope FT/FT | Tc (MIN) | LENGTH (FT) | VELOCITY (FT/S) | Tc (MIN) | | |
| DA -EX A | 6.230 | 100.0 | Unpaved | 0.15 | 1161.96 | 1161.16 | 0.008 | 12.55 | 490.6 | Unpaved | 1161.2 | 1126.0 | 0.072 | 1.89 | 317.96 | 5.00 | 1.06 | 15.50 | 9.30 |
| DA -EX B | 7.822 | 100.0 | Unpaved | 0.15 | 1173.01 | 1170.85 | 0.022 | 8.43 | 678.9 | Unpaved | 1170.9 | 1122.2 | 0.072 | 2.62 | 268.25 | 5.00 | 0.89 | 11.95 | 7.17 |
| DA -EX C | 2.487 | 100.0 | Unpaved | 0.15 | 1146.23 | 1143.74 | 0.025 | 7.97 | 609.8 | Unpaved | 1143.7 | 1103.3 | 0.066 | 2.45 | 0.00 | 0.00 | 0.00 | 10.41 | 6.25 |
| DA -EX D1 | 17.436 | 100.0 | Unpaved | 0.15 | 1206 | 1203.14 | 0.029 | 7.54 | 1238.8 | Unpaved | 1203.1 | 1144.0 | 0.048 | 5.86 | 386.76 | 5.00 | 1.29 | 14.69 | 8.81 |
| DA -EX D2 | 10.543 | 100.0 | Unpaved | 0.15 | 1190 | 1182.28 | 0.077 | 5.07 | 1114.0 | Unpaved | 1182.3 | 1137.1 | 0.041 | 5.71 | 0.00 | 0.00 | 0.00 | 10.78 | 6.47 |
| DA -EX E | 2.091 | 100.0 | Unpaved | 0.15 | 1173.01 | 1169.12 | 0.039 | 6.87 | 596.5 | Unpaved | 1169.1 | 1131.7 | 0.063 | 2.46 | 0.00 | 0.00 | 0.00 | 9.13 | 5.48 |
| DA -EX F1 | 5.121 | 100.0 | Unpaved | 0.15 | 1146.23 | 1143.94 | 0.023 | 8.24 | 935.7 | Unpaved | 1143.9 | 1092.6 | 0.055 | 4.13 | 0.00 | 0.00 | 0.00 | 12.37 | 7.42 |
| DA -EX F2 | 11.953 | 100.0 | Unpaved | 0.15 | 1173.01 | 1170.92 | 0.021 | 8.55 | 773.0 | Unpaved | 1170.9 | 1133.5 | 0.048 | 3.63 | 0.00 | 0.00 | 0.00 | 12.17 | 7.30 |
| DA -EX G1 | 5.461 | 100.0 | Paved | 0.015 | 1114.45 | 1108.9 | 0.059 | 0.90 | 315.5 | Unpaved | 1108.6 | 1094.5 | 0.077 | 1.18 | 526.53 | 5.00 | 1.76 | 5.00 | 3.00 |
| DA -EX G2 | 30.814 | 100.0 | Paved | 0.015 | 1175.28 | 1172.62 | 0.027 | 1.23 | 925.1 | Unpaved | 1172.6 | 1143.6 | 0.031 | 5.40 | 1641.18 | 5.00 | 5.47 | 12.10 | 7.26 |
| DA -EX G3 | 11.414 | 100.0 | Unpaved | 0.15 | 1173.01 | 1169.9 | 0.031 | 7.29 | 689.4 | Unpaved | 1169.9 | 1121.7 | 0.070 | 2.69 | 607.80 | 5.00 | 2.03 | 12.01 | 7.21 |
| DA -EX G4 | 245.000 | 100.0 | Paved | 0.015 | 1325 | 1310 | 0.025 | 1.26 | 3876.0 | Unpaved | 1310.0 | 1175.2 | 0.038 | 20.43 | 2956.23 | 5.00 | 9.85 | 31.55 | 18.93 |
| DA -EX G5 | 97.053 | 100.0 | Paved | 0.015 | 1214.99 | 1212.03 | 0.030 | 1.17 | 1468.3 | Unpaved | 1212.0 | 1170.0 | 0.029 | 8.97 | 2156.29 | 5.00 | 7.19 | 17.33 | 10.40 |
| DA-EX BYP G1 | 3.227 | 100.0 | Unpaved | 0.15 | 1146.46 | 1143.72 | 0.027 | 7.67 | 774.0 | Unpaved | 1143.7 | 1089.4 | 0.070 | 3.02 | 74.62 | 5.00 | 0.25 | 10.94 | 6.56 |
| DA -EX H1 | 37.644 | 100.0 | Unpaved | 0.15 | 1199.04 | 1197.3 | 0.017 | 9.20 | 1202.7 | Unpaved | 1197.3 | 1110.1 | 0.073 | 4.61 | 1378.99 | 5.00 | 4.60 | 18.41 | 11.04 |
| DA -EX H2 | 104.912 | 100.0 | Paved | 0.015 | 1225 | 1220 | 0.025 | 1.26 | 1057.3 | Unpaved | 1220.0 | 1195.0 | 0.025 | 6.91 | 2796.49 | 5.00 | 9.32 | 17.49 | 10.49 |
| DA -EX D3 | 6.994 | 100.0 | Unpaved | 0.15 | 1200 | 1198.35 | 0.017 | 9.39 | 849.7 | Unpaved | 1198.4 | 1132.0 | 0.078 | 3.14 | 0.00 | 0.00 | 0.00 | 12.53 | 7.52 |
| DA-EX BYP H1 | 1.029 | 100.0 | Unpaved | 0.15 | 1167.71 | 1163.03 | 0.047 | 6.19 | 470.1 | Unpaved | 1163.0 | 1139.4 | 0.050 | 2.17 | 0.00 | 0.00 | 0.00 | 8.36 | 5.01 |
| DA -EX BYP H2 | 2.542 | 100.0 | Unpaved | 0.15 | 1181.03 | 1175.01 | 0.060 | 5.60 | 520.7 | Unpaved | 1175.0 | 1145.4 | 0.057 | 2.26 | 0.00 | 0.00 | 0.00 | 7.85 | 4.71 |
| DA -EX BYP G2 | 2.123 | 100.0 | Unpaved | 0.15 | 1164 | 1162.05 | 0.002 | 23.63 | 544.6 | Unpaved | 1162.1 | 1123.8 | 0.048 | 2.58 | 0.00 | 0.00 | 0.00 | 26.21 | 15.72 |
| DA -EX BYP I1 | 7.035 | 100.0 | Unpaved | 0.15 | 1181.05 | 1180 | 0.002 | 24.25 | 587.7 | Unpaved | 1180.0 | 1154.0 | 0.044 | 2.89 | 392.39 | 5.00 | 1.31 | 28.44 | 17.07 |

## IMPERVIOUS COVER CALCULATION

| SUBBASIN | AREA (SQ MI.) | IMPERVIOUS COVER INPUTS (USING ZONING ASSUMPTIONS FROM CODS UDC) *NOTE: VALUES ARE TOTAL AREA, NOT % (S.F.) | | | | | | | | | | Impervious Cover (Acres) | Pervious Cover (Acres) | %IC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 30% | 40% | 65% | 50% | 80% | 60% | 50% | 60% | 70% | 50% | | | |
| | | SF1 (30%) | SF2 (40%) | SF3 (65%) | SF4 (50%) | SF5 (80%) | PDD-3 / PDD-5 (60%) | PDD-10 (50%) | GEN. RETAIL (60%) | COMMERCIAL (70%) | GUI - GVMT SCHOOL (50%) | | | |
| DA -EX A | 0.00973 | | | | | | | | | | | 0.000 | 6.230 | 0.00% |
| DA -EX B | 0.01222 | | | | | | | | | | | 0.000 | 7.822 | 0.00% |
| DA -EX C | 0.00389 | | | | | | | | | | | 0.000 | 2.487 | 0.00% |
| DA -EX D1 | 0.02724 | | | | | 129,341.71 | | | | | | 2.375 | 15.060 | 13.62% |
| DA -EX D2 | 0.01647 | | 7,044.66 | | | 11,998.39 | | | | | | 0.278 | 10.265 | 2.63% |
| DA -EX D3 | 0.01093 | | | | | | | | | | | 0.000 | 6.994 | 0.00% |
| DA -EX E | 0.00327 | | | | | 456.77 | | | | | | 0.008 | 2.083 | 0.40% |
| DA -EX F1 | 0.00800 | | | | | | | | | | | 0.000 | 5.121 | 0.00% |
| DA -EX F2 | 0.01868 | | | | | | | | | | | 0.000 | 11.953 | 0.00% |
| DA -EX G1 | 0.00853 | | 237,900.15 | | | | | | | | | 2.185 | 3.277 | 40.00% |
| DA -EX G2 | 0.04815 | | | | | | | | | | 91,142.33 | 5.704 | 25.110 | 18.51% |
| DA -EX G3 | 0.01783 | | | | | | | | | | | 0.000 | 11.414 | 0.00% |
| DA -EX G4 | 0.38281 | 1,929,274.51 | 2,446,513.24 | | 122,472.62 | 1,378,400.31 | 204,185.99 | | 1,926,295.58 | 1,706,725.76 | 543,855.37 | 125.488 | 119.512 | 51.22% |
| DA -EX G5 | 0.15165 | 1,203,799.70 | 273,162.17 | | 425,798.69 | 1,893,028.30 | 396,648.56 | | | | | 55.916 | 41.137 | 57.61% |
| DA-EX BYP G1 | 0.00504 | | | | | | | | | | | 0.000 | 3.227 | 0.00% |
| DA -EX H1 | 0.05882 | | | | | | | | | | | 0.000 | 37.644 | 0.00% |
| DA -EX H2 | 0.16393 | 2,811.97 | 2,001,819.96 | | | 905,874.52 | | 1,518,220.39 | | 30,220.46 | | 52.951 | 51.961 | 50.47% |
| DA-EX BYP H1 | 0.00161 | | | | | | | | | | | 0.000 | 1.029 | 0.00% |
| DA -EX BYP H2 | 0.00397 | | | | | 46,309.52 | | | | | | 0.850 | 1.691 | 33.46% |
| DA -EX BYP G2 | 0.00332 | | | | | 29,568.29 | | | | | | 0.543 | 1.580 | 25.58% |
| DA -EX BYP I1 | 0.01099 | | | | | 123,165.29 | | | | | | 2.262 | 4.773 | 32.15% |

| LABEL | HEC-HMS RESULTS (CFS) | | | |
|---|---|---|---|---|
| | Q2 | Q10 | Q25 | Q100 |
| EX-A | 16.60 | 30.30 | 39.30 | 53.80 |
| EX-B | 23.60 | 42.40 | 54.80 | 74.80 |
| EX-C | 7.80 | 13.90 | 17.90 | 24.40 |
| EX-D1 | 53.60 | 92.10 | 117.40 | 158.10 |
| EX-D2 | 33.40 | 59.10 | 76.10 | 103.40 |
| EX-D3 | 20.70 | 37.30 | 48.30 | 66.00 |
| EX-E | 6.60 | 11.70 | 15.10 | 20.50 |
| EX-F1 | 15.20 | 27.40 | 35.50 | 48.50 |
| EX-F2 | 35.60 | 64.20 | 83.20 | 113.70 |
| EX-G1 | 27.20 | 43.40 | 54.10 | 71.60 |
| EX-G2 | 102.90 | 175.30 | 223.10 | 299.90 |
| EX-G3 | 26.10 | 47.30 | 61.50 | 84.20 |
| EX-G4 | 646.40 | 1023.60 | 1271.10 | 1675.00 |
| EX-G5 | 335.70 | 520.70 | 642.30 | 839.50 |
| EX-H1 | 92.70 | 169.50 | 220.70 | 303.10 |
| EX-H2 | 354.60 | 556.30 | 688.90 | 903.40 |
| EX-BYP G | 10.00 | 17.90 | 23.10 | 31.50 |
| EX-BYP H | 3.50 | 6.00 | 7.60 | 10.20 |
| EX-BYP H5 | 10.00 | 16.20 | 20.30 | 26.90 |
| EX-BYP H6 | 5.60 | 9.20 | 11.60 | 15.50 |
| EX-BYP I1 | 21.30 | 34.60 | 43.40 | 57.40 |
| EX BYP H1-POA 2 | 20.20 | 36.30 | 46.90 | 64.00 |
| Junction-1 | 659.30 | 1046.40 | 1300.30 | 1714.60 |
| Junction-2 | 367.10 | 572.50 | 707.60 | 926.50 |
| Junction-3 | 997.20 | 1581.00 | 1963.70 | 2587.60 |
| Junction-4 | 1073.30 | 1720.90 | 2146.30 | 2839.60 |
| Junction-5 | 1081.20 | 1734.70 | 2164.00 | 2863.60 |
| Junction-6 | 387.60 | 618.30 | 769.70 | 1015.00 |
| POA 1 | 1088.70 | 1737.80 | 2170.40 | 2876.10 |
| POA 2 | 589.70 | 979.30 | 1236.00 | 1650.70 |
| REACH EX BYP G-POA 1 | 1071.00 | 1707.90 | 2125.30 | 2805.50 |
| REACH EX BYP H-H1 | 3.30 | 5.70 | 7.30 | 9.80 |
| REACH EX BYP H5-H3 | 10.00 | 16.20 | 20.30 | 26.90 |
| REACH EX BYP H6-A | 5.60 | 9.20 | 11.60 | 15.50 |
| REACH EX BYP H-A | 21.30 | 34.60 | 43.40 | 57.40 |
| REACH EX C-BYP G | 7.80 | 13.90 | 17.90 | 24.40 |
| REACH EX D1-POA 2 | 52.40 | 89.50 | 114.00 | 153.20 |
| REACH EX E-A | 6.60 | 11.70 | 15.10 | 20.50 |
| REACH EX F-POA 1 | 14.40 | 26.20 | 33.90 | 46.50 |
| REACH EX F2-POA 2 | 33.50 | 60.00 | 77.60 | 105.80 |
| REACH EX G2-G1 | 1073.30 | 1720.90 | 2146.30 | 2839.60 |
| REACH EX G3-BYP G | 997.20 | 1581.00 | 1963.70 | 2587.60 |
| REACH EX G4-G2 | 647.90 | 1028.20 | 1278.40 | 1686.90 |
| REACH EX G5-G3 | 365.40 | 570.50 | 705.20 | 923.80 |
| REACH EX H2-H1 | 387.60 | 618.30 | 769.70 | 1015.00 |
| Reach-EX A-G3 | 16.60 | 30.30 | 39.30 | 53.80 |

NOTE:
1. OFFSITE FLOWS ASSUME NO DETENTION.
2. ZONING ASSUMPTIONS FOR IMPERVIOUS COVER COME FROM CITY OF DRIPPING SPRINGS ZONING ORDINANCE

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY:
REVIEWED BY:
DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

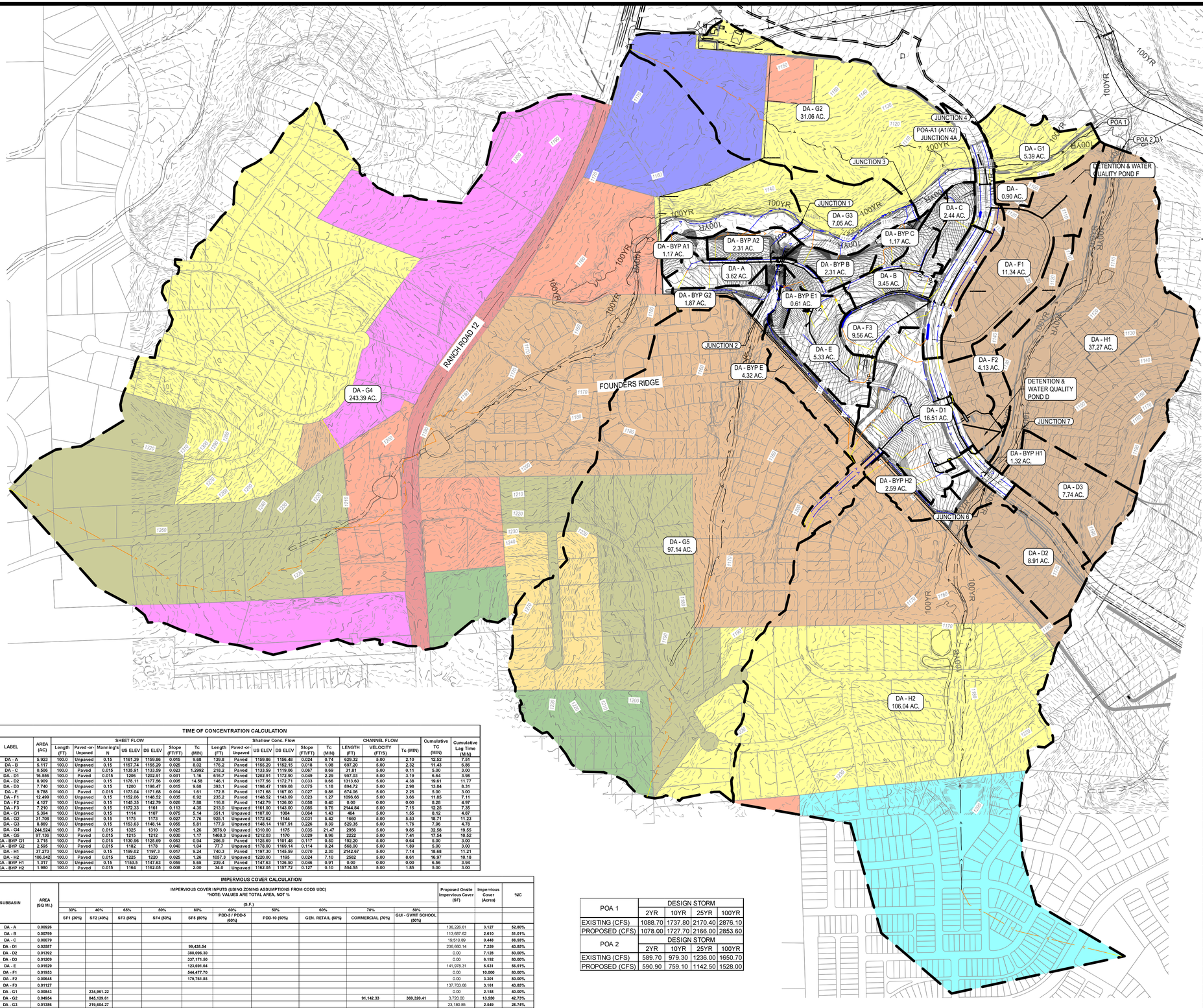

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

# DOUBLE L RANCH POD A3

## EXISTING DRAINAGE AREA MAP

SHEET
15 OF 53

O:\00014789-00\LS\000 - Master Design\04_CADD\05_EXHIBIDAM Exhibits\2025.08.08_EX-DAM-EXHIBIT.dwg PLOTTED: 10/16/2024 11:41 AM BY: CREADANCE




N

0 150' 300' 600'

SCALE: 1" = 300'

## LEGEND

- XX / XX AC. — DRAINAGE AREA ID / DRAINAGE AREA
- POD A1/A2 PHASE BOUNDARY
- DRAINAGE AREA BOUNDARY
- XXX — EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- TIME OF CONCENTRATION SHEET FLOW
- TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW
- TIME OF CONCENTRATION CHANNEL FLOW
- SINGLE FAMILY 1 - 40% MAX IC
- SINGLE FAMILY 2 - 45% MAX IC
- SINGLE FAMILY 4 - 60% MAX IC
- SINGLE FAMILY 5 - 55% MAX IC
- PDD (ASSUMED TO BE SF 5) - 55% MAX IC
- GENERAL RETAIL - 90% MAX IC
- GOVERNMENT/SCHOOL (ASSUMED TO BE COMMERCIAL) - 95% MAX IC
- COMMERCIAL - 95% MAX IC
- COMMERCIAL HIGHWAY - 85% MAX IC
- FLOW ARROW

### TIME OF CONCENTRATION CALCULATION

| LABEL | AREA (AC) | SHEET FLOW | | | | | | | SHALLOW CONC. FLOW | | | | | CHANNEL FLOW | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Length (FT) | Paved -or- Unpaved | Manning's N | US ELEV | DS ELEV | Slope (FT/FT) | Tc (MIN) | Length (FT) | Paved -or- Unpaved | US ELEV | DS ELEV | Slope (FT/FT) | Tc (MIN) | LENGTH (FT) | VELOCITY (FT/S) | Tc (MIN) | Cumulative TC (MIN) | Cumulative Lag Time (MIN) |
| DA - A | 5.923 | 100.0 | Unpaved | 0.15 | 1161.39 | 1159.86 | 0.015 | 9.68 | 139.8 | Paved | 1159.86 | 1156.48 | 0.024 | 0.74 | 629.32 | 5.00 | 2.10 | 12.52 | 7.51 |
| DA - B | 5.117 | 100.0 | Unpaved | 0.15 | 1157.74 | 1155.29 | 0.025 | 8.02 | 176.2 | Paved | 1155.29 | 1152.15 | 0.018 | 1.08 | 697.20 | 5.00 | 2.32 | 11.43 | 6.86 |
| DA - C | 0.506 | 100.0 | Paved | 0.015 | 1135.91 | 1133.59 | 0.023 | 1.2992 | 218.2 | Paved | 1133.59 | 1119.06 | 0.067 | 0.69 | 31.81 | 5.00 | 0.11 | 5.00 | 3.00 |
| DA - D1 | 16.556 | 100.0 | Paved | 0.015 | 1206 | 1202.91 | 0.031 | 1.16 | 616.7 | Paved | 1202.91 | 1172.90 | 0.049 | 2.29 | 957.03 | 5.00 | 3.19 | 6.64 | 3.98 |
| DA - D2 | 8.909 | 100.0 | Unpaved | 0.15 | 1178.11 | 1177.56 | 0.005 | 14.58 | 146.1 | Paved | 1177.56 | 1172.71 | 0.033 | 0.66 | 1313.60 | 5.00 | 4.38 | 19.61 | 11.77 |
| DA - D3 | 7.740 | 100.0 | Unpaved | 0.15 | 1200 | 1198.47 | 0.015 | 9.68 | 393.1 | Paved | 1198.47 | 1169.08 | 0.075 | 1.18 | 894.72 | 5.00 | 2.98 | 13.84 | 8.31 |
| DA - E | 9.788 | 100.0 | Paved | 0.015 | 1173.04 | 1171.68 | 0.014 | 1.61 | 172.8 | Paved | 1171.68 | 1167.00 | 0.027 | 0.86 | 674.06 | 5.00 | 2.25 | 5.00 | 3.00 |
| DA - F1 | 12.499 | 100.0 | Unpaved | 0.15 | 1152.06 | 1148.52 | 0.035 | 6.92 | 235.2 | Paved | 1148.52 | 1145.59 | 0.023 | 1.27 | 1098.66 | 5.00 | 3.66 | 11.85 | 7.11 |
| DA - F2 | 4.127 | 100.0 | Unpaved | 0.15 | 1145.35 | 1142.79 | 0.026 | 7.88 | 116.8 | Paved | 1142.79 | 1136.00 | 0.058 | 0.40 | 0.00 | 0.00 | 0.00 | 8.28 | 4.97 |
| DA - F3 | 7.210 | 100.0 | Unpaved | 0.15 | 1172.33 | 1161 | 0.113 | 4.35 | 213.0 | Unpaved | 1161.00 | 1143.00 | 0.085 | 0.76 | 2144.84 | 5.00 | 7.15 | 12.25 | 7.35 |
| DA - G1 | 5.394 | 100.0 | Unpaved | 0.15 | 1114 | 1107 | 0.075 | 5.14 | 351.1 | Unpaved | 1107.00 | 1104 | 0.064 | 1.43 | 464 | 5.00 | 1.55 | 6.12 | 4.87 |
| DA - G2 | 31.708 | 100.0 | Unpaved | 0.15 | 1175 | 1173 | 0.027 | 7.76 | 925.1 | Unpaved | 1172.62 | 1144 | 0.031 | 5.42 | 1660 | 5.00 | 5.53 | 18.71 | 11.23 |
| DA - G3 | 8.869 | 100.0 | Unpaved | 0.15 | 1153.63 | 1148.14 | 0.055 | 5.81 | 177.9 | Unpaved | 1148.14 | 1107.91 | 0.226 | 0.39 | 529.35 | 5.00 | 1.76 | 7.96 | 4.78 |
| DA - G4 | 244.524 | 100.0 | Paved | 0.015 | 1325 | 1310 | 0.025 | 1.26 | 3876.0 | Unpaved | 1310.00 | 1175 | 0.035 | 21.47 | 2956 | 5.00 | 9.85 | 32.58 | 19.55 |
| DA - G5 | 97.136 | 100.0 | Paved | 0.015 | 1215 | 1212 | 0.030 | 1.17 | 1468.3 | Unpaved | 1212.03 | 1170 | 0.029 | 8.96 | 2222 | 5.00 | 7.41 | 17.54 | 10.52 |
| DA - BYP G1 | 3.715 | 100.0 | Paved | 0.015 | 1130.96 | 1125.69 | 0.053 | 0.94 | 206.9 | Paved | 1125.69 | 1101.48 | 0.117 | 0.50 | 192.20 | 5.00 | 0.64 | 5.00 | 3.00 |
| DA - BYP G2 | 2.595 | 100.0 | Paved | 0.015 | 1182 | 1178 | 0.040 | 1.04 | 77.7 | Unpaved | 1178.00 | 1169.14 | 0.114 | 0.24 | 568.00 | 5.00 | 1.89 | 5.00 | 3.00 |
| DA - H1 | 37.270 | 100.0 | Unpaved | 0.15 | 1199.02 | 1197.3 | 0.017 | 9.24 | 740.3 | Paved | 1197.30 | 1145.59 | 0.070 | 2.30 | 2142.67 | 5.00 | 7.14 | 16.68 | 11.21 |
| DA - H2 | 106.042 | 100.0 | Paved | 0.015 | 1225 | 1220 | 0.025 | 1.26 | 1057.3 | Unpaved | 1220.00 | 1195 | 0.024 | 7.10 | 2562 | 5.00 | 8.61 | 16.97 | 10.18 |
| DA - BYP H1 | 1.317 | 100.0 | Unpaved | 0.15 | 1153.5 | 1147.63 | 0.059 | 5.65 | 239.4 | Paved | 1147.63 | 1136.50 | 0.046 | 0.91 | 0.00 | 0.00 | 0.00 | 6.56 | 3.94 |
| DA - BYP H2 | 1.980 | 100.0 | Paved | 0.015 | 1164 | 1162.05 | 0.008 | 2.00 | 34.0 | Unpaved | 1162.05 | 1157.72 | 0.127 | 0.10 | 554.55 | 5.00 | 1.85 | 5.00 | 3.00 |

### IMPERVIOUS COVER CALCULATION

| SUBBASIN | AREA (SQ MI.) | IMPERVIOUS COVER INPUTS (USING ZONING ASSUMPTIONS FROM CODS UDC) *NOTE: VALUES ARE TOTAL AREA, NOT % (S.F.) | | | | | | | | | | Proposed Onsite Impervious Cover (SF) | Impervious Cover (Acres) | %IC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 30% | 40% | 65% | 50% | 80% | 60% | 50% | 60% | 70% | 50% | | | |
| | | SF1 (30%) | SF2 (40%) | SF3 (65%) | SF4 (50%) | SF5 (80%) | PDD-3 / PDD-5 (60%) | PDD-10 (50%) | GEN. RETAIL (60%) | COMMERCIAL (70%) | GUI - GVMT SCHOOL (50%) | | | |
| DA - A | 0.00926 | | | | | | | | | | | 136,226.61 | 3.127 | 52.80% |
| DA - B | 0.00799 | | | | | | | | | | | 113,687.62 | 2.610 | 51.01% |
| DA - C | 0.00079 | | | | | | | | | | | 19,510.89 | 0.448 | 88.55% |
| DA - D1 | 0.02587 | | | | | 99,438.54 | | | | | | 236,660.14 | 7.259 | 43.85% |
| DA - D2 | 0.01392 | | | | | 388,096.30 | | | | | | 0.00 | 7.128 | 80.00% |
| DA - D3 | 0.01209 | | | | | 337,171.56 | | | | | | 0.00 | 6.192 | 80.00% |
| DA - E | 0.01529 | | | | | 123,691.04 | | | | | | 141,978.31 | 5.531 | 56.51% |
| DA - F1 | 0.01953 | | | | | 544,477.70 | | | | | | 0.00 | 10.000 | 80.00% |
| DA - F2 | 0.00645 | | | | | 179,761.85 | | | | | | 0.00 | 3.301 | 80.00% |
| DA - F3 | 0.01127 | | | | | | | | | | | 137,703.68 | 3.161 | 43.85% |
| DA - G1 | 0.00843 | | 234,961.22 | | | | | | | | | 0.00 | 2.158 | 40.00% |
| DA - G2 | 0.04954 | | 845,139.61 | | | | | | | 91,142.33 | 369,320.41 | 3,720.00 | 13.550 | 42.73% |
| DA - G3 | 0.01386 | | 219,604.27 | | | | | | | | | 23,180.85 | 2.549 | 28.74% |
| DA - G4 | 0.38207 | 1,928,517.65 | 2,687,022.09 | | 122,445.27 | 1,378,400.31 | 204,185.99 | | 1,926,295.58 | 1,706,725.76 | 543,855.36 | 10,785.13 | 127.939 | 52.32% |
| DA - G5 | 0.15178 | 1,203,795.78 | 273,162.17 | | 425,795.67 | 1,892,742.87 | 396,648.56 | | | | | 0.00 | 55.911 | 57.56% |
| DA - BYP G1 | 0.00580 | | | | | 29,170.71 | | | | | | 38,405.40 | 1.601 | 43.10% |
| DA - BYP G2 | 0.00310 | | | | | 29,561.49 | | | | | | 6,800.00 | 0.706 | 35.57% |
| DA - H1 | 0.05823 | | | | | 1,623,467.88 | | | | | | 0.00 | 29.816 | 80.00% |
| DA - H2 | 0.15569 | 2,811.97 | 2,008,903.83 | | | 1,058,924.13 | | 1,518,220.39 | | 30,220.46 | | 7,272.12 | 55.994 | 52.80% |
| DA - BYP H1 | 0.00206 | | | | | | | | | | | 29,295.04 | 0.673 | 51.07% |
| DA - BYP H2 | 0.00405 | | | | | 76,202.82 | | | | | | 7,976.96 | 1.583 | 61.00% |

| POA 1 | DESIGN STORM | | | |
|---|---|---|---|---|
| | 2YR | 10YR | 25YR | 100YR |
| EXISTING (CFS) | 1088.70 | 1737.80 | 2170.40 | 2876.10 |
| PROPOSED (CFS) | 1078.00 | 1727.70 | 2166.00 | 2853.60 |
| **POA 2** | **DESIGN STORM** | | | |
| | 2YR | 10YR | 25YR | 100YR |
| EXISTING (CFS) | 589.70 | 979.30 | 1236.00 | 1650.70 |
| PROPOSED (CFS) | 590.90 | 759.10 | 1142.50 | 1528.00 |

### HEC-HMS RESULTS (CFS)

| LABEL | Q2 | Q10 | Q25 | Q100 |
|---|---|---|---|---|
| DA-A | 23.40 | 36.50 | 45.10 | 59.00 |
| DA-B | 20.90 | 32.50 | 40.30 | 52.70 |
| DA-BYP G1 | 19.80 | 30.10 | 36.90 | 48.20 |
| DA-BYP G2 | 9.70 | 15.50 | 19.40 | 25.70 |
| DA-BYP H1 | 6.10 | 9.50 | 11.70 | 15.40 |
| DA-BYP H2 | 13.50 | 20.80 | 25.60 | 33.60 |
| DA-C | 2.70 | 4.10 | 5.00 | 6.60 |
| DA-D1 | 74.20 | 117.30 | 145.60 | 191.50 |
| DA-D2 | 31.10 | 47.40 | 58.10 | 75.60 |
| DA-D3 | 30.90 | 47.00 | 57.60 | 75.00 |
| DA-E | 46.80 | 75.40 | 94.20 | 124.80 |
| DA-F1 | 52.50 | 79.70 | 97.80 | 127.20 |
| DA-F2 | 17.80 | 27.10 | 33.20 | 43.20 |
| DA-F3 | 26.30 | 42.80 | 53.70 | 71.20 |
| DA-G1 | 21.20 | 34.20 | 42.70 | 56.40 |
| DA-G2 | 123.00 | 194.70 | 241.80 | 318.10 |
| DA-G3 | 33.90 | 55.70 | 69.90 | 92.90 |
| DA-G4 | 634.50 | 1003.80 | 1246.20 | 1642.20 |
| DA-G5 | 336.00 | 521.20 | 642.90 | 840.30 |
| DA-H1 | 131.90 | 200.70 | 246.30 | 320.40 |
| DA-H2 | 362.00 | 565.70 | 699.60 | 916.30 |
| Junction 1 | 648.50 | 1025.50 | 1272.90 | 1677.20 |
| Junction 2 | 368.20 | 575.00 | 710.80 | 930.90 |
| Junction 3 | 979.70 | 1542.10 | 1910.80 | 2512.90 |
| Junction 4 | 1068.50 | 1687.80 | 2094.40 | 2758.70 |
| Junction 7 | 448.30 | 688.60 | 870.70 | 1176.70 |
| Junction-6 | 373.00 | 585.50 | 724.90 | 951.10 |
| POA 1 | 1078.00 | 1727.70 | 2166.00 | 2853.60 |
| POA 2 | 590.90 | 904.80 | 1142.50 | 1528.00 |
| Pond D | 78.90 | 109.00 | 154.00 | 225.70 |
| Pond F | 22.00 | 46.20 | 80.50 | 110.10 |
| Reach BYP G7-Junction 2 | 9.70 | 15.50 | 19.40 | 25.70 |
| Reach BYP H5-Junction 5 | 13.50 | 20.80 | 25.60 | 33.60 |
| Reach C- Junction 4 | 2.70 | 4.10 | 5.00 | 6.60 |
| Reach E - Junction 2 | 46.80 | 75.40 | 94.20 | 124.80 |
| Reach F2-POA 2 | 17.70 | 26.90 | 33.00 | 42.90 |
| Reach Junction 1-Junction 3 | 643.40 | 1014.70 | 1258.00 | 1655.40 |
| Reach Junction 2 -Junction 3 | 363.70 | 566.30 | 699.40 | 915.30 |
| Reach Junction 3-Junction 4 | 979.70 | 1542.10 | 1910.80 | 2512.90 |
| Reach Junction 4 - POA 1 | 1058.80 | 1668.10 | 2067.20 | 2719.30 |
| Reach Junction 6 -Junction 7 | 373.00 | 585.50 | 724.90 | 951.10 |
| Reach Junction 7-POA 2 | 443.80 | 680.90 | 867.90 | 1170.70 |

NOTE:
1. OFFSITE FLOWS ASSUME NO DETENTION.
2. ZONING ASSUMPTIONS FOR IMPERVIOUS COVER COME FROM CITY OF DRIPPING SPRINGS ZONING ORDINANCE

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

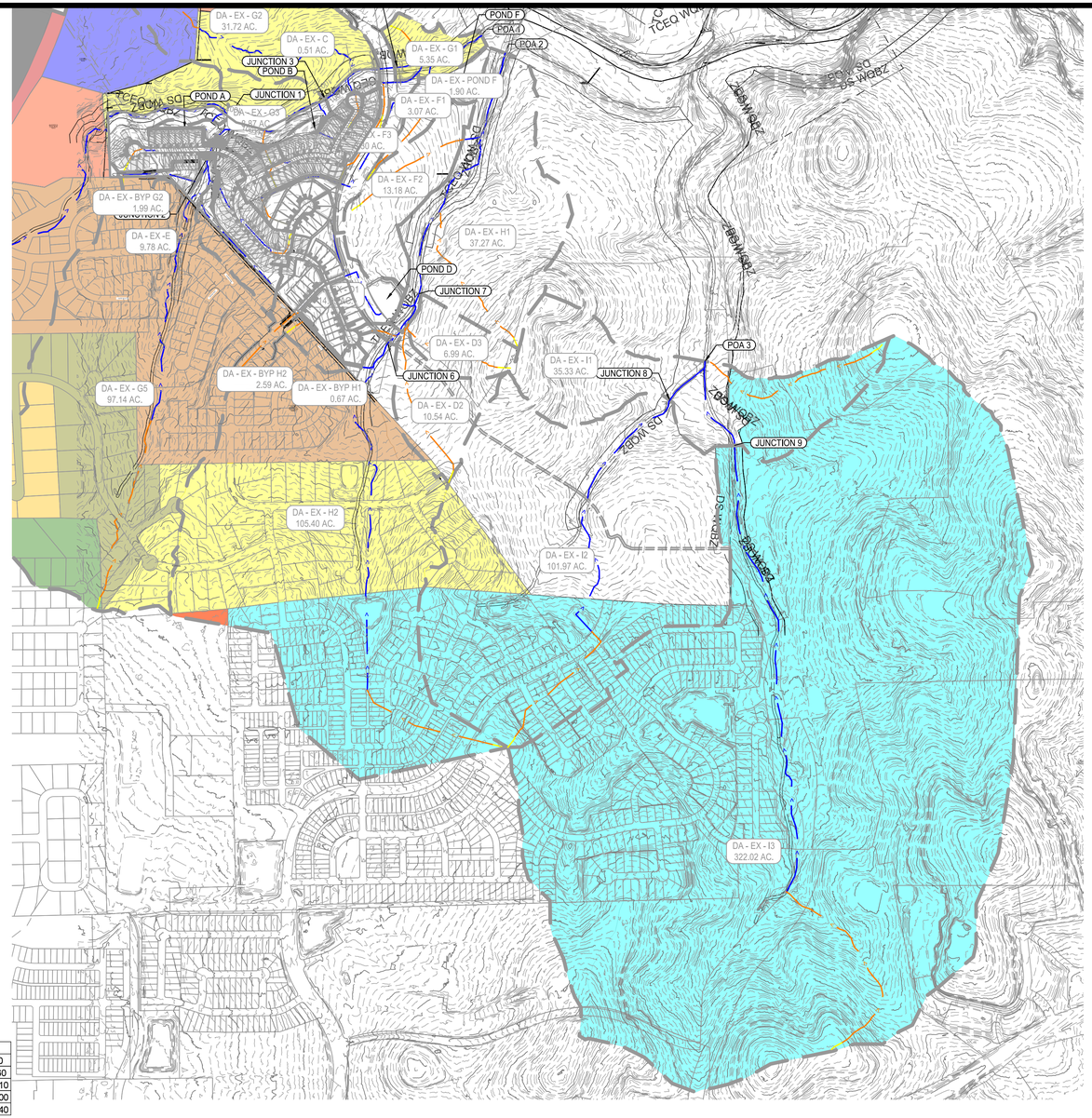

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


# DOUBLE L- A1, A2, & A3 ARTERIAL

## ULTIMATE DEVELOPMENT DRAINAGE AREA MAP

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
16OF 86




| DRAINAGE AREA | HEC-HMS RESULTS (CFS) EX | | | | |
|---|---|---|---|---|---|
| | Q2 | Q5 | Q10 | Q25 | Q100 |
| DA-EX-I1 | 115.80 | 161.70 | 204.90 | 265.20 | 361.60 |
| DA-EX-I2 | 357.80 | 486.20 | 606.20 | 773.00 | 1039.10 |
| DA-EX-I3 | 922.00 | 1230.90 | 1501.50 | 1881.40 | 2485.00 |
| POA-3 | 1241.30 | 1678.30 | 2061.60 | 2600.00 | 3454.40 |

N

0 250' 500' 1,000'

SCALE: 1" = 500'

## LEGEND

- DRAINAGE AREA ID (XX)
- DRAINAGE AREA (XX AC.)
- POD A1/A2 PHASE BOUNDARY
- DRAINAGE AREA BOUNDARY
- EXISTING MAJOR CONTOUR (XXX)
- EXISTING MINOR CONTOUR (XXX)
- TIME OF CONCENTRATION SHEET FLOW
- TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW
- TIME OF CONCENTRATION CHANNEL FLOW
- FLOW ARROW
- SINGLE FAMILY 1 - 30% MAX IC
- SINGLE FAMILY 2 - 40% MAX IC
- SINGLE FAMILY 3 - 65% MAX IC
- SINGLE FAMILY 4 - 50% MAX IC
- SINGLE FAMILY 5 - 80% MAX IC
- PDD 3 & PDD 5 (60% MAX IC)
- PDD 10 (50% MAX IC)
- GENERAL RETAIL (60% MAX IC)
- GOVERNMENT - GUI (50% MAX IC)
- COMMERCIAL (70% MAX IC)

TIME OF CONCENTRATION CALCULATION

| LABEL | AREA (AC) | SHEET FLOW | | | | | | | Shallow Conc. Flow | | | | | | CHANNEL FLOW | | | Cumulative TC (MIN) | INTENSITY | | | DISCHARGE | | | Cumulative Lag Time (MIN) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Length (FT) | Paved -or- Unpaved | Manning's N | US ELEV | DS ELEV | Slope (FT/FT) | Tc (MIN) | Length | Paved -or- Unpaved | US ELEV | DS ELEV | Slope FT/FT | Tc (MIN) | LENGTH (FT) | VELOCITY (FT/S) | Tc (MIN) | | I 10yr (in/hr) | I 25yr (in/hr) | I 100yr (in/hr) | Q10 (cfs) | Q 25 (cfs) | Q 100 (cfs) | |
| DA - EX A | 5.921 | 100.0 | Unpaved | 0.15 | 1161.39 | 1159.32 | 0.021 | 8.58 | 139.8 | Paved | 1159.3 | 1156.0 | 0.024 | 0.74 | 629.32 | 5.00 | 2.10 | 11.42 | 7.11 | 8.74 | 11.51 | 21.15 | 28.24 | 42.37 | 6.85 |
| DA - EX B | 5.116 | 100.0 | Unpaved | 0.15 | 1159.95 | 1155.29 | 0.047 | 6.20 | 176.2 | Paved | 1155.3 | 1153.0 | 0.013 | 1.26 | 697.20 | 5.00 | 2.32 | 9.78 | 7.57 | 9.30 | 12.24 | 24.57 | 32.39 | 47.78 | 5.87 |
| DA - EX C | 0.506 | 100.0 | Paved | 0.015 | 1136.01 | 1133.81 | 0.022 | 1.33 | 218.2 | Paved | 1133.8 | 1126.0 | 0.036 | 0.95 | 0.00 | 0.00 | 0.00 | 5.00 | 9.43 | 11.62 | 15.32 | 2.38 | 3.18 | 4.79 | 3.00 |
| DA - EX D1 | 14.990 | 100.0 | Unpaved | 0.15 | 1204.91 | 1202.81 | 0.021 | 8.53 | 627.1 | Paved | 1202.8 | 1173.1 | 0.047 | 2.36 | 957.03 | 5.00 | 3.19 | 14.08 | 6.50 | 7.99 | 10.52 | 61.78 | 81.49 | 120.27 | 8.45 |
| DA - EX D2 | 10.543 | 100.0 | Unpaved | 0.15 | 1189.93 | 1182.28 | 0.077 | 5.09 | 1178.3 | Unpaved | 1182.3 | 1135.1 | 0.040 | 6.08 | 0.00 | 0.00 | 0.00 | 11.17 | 7.18 | 8.83 | 11.61 | 45.50 | 60.14 | 89.04 | 6.70 |
| DA - EX D3 | 6.994 | 100.0 | Unpaved | 0.15 | 1200 | 1198.35 | 0.017 | 9.39 | 803.6 | Unpaved | 1198.4 | 1133.0 | 0.081 | 2.91 | 0.00 | 0.00 | 0.00 | 12.30 | 6.90 | 8.47 | 11.15 | 31.20 | 41.10 | 60.55 | 7.38 |
| DA - EX E | 9.780 | 100.0 | Unpaved | 0.15 | 1173 | 1171.24 | 0.018 | 9.15 | 172.8 | Unpaved | 1171.2 | 1167.4 | 0.023 | 1.19 | 725.65 | 5.00 | 2.42 | 12.76 | 6.79 | 8.34 | 10.98 | 41.99 | 55.38 | 81.72 | 7.66 |
| DA - EX F1 | 3.070 | 100.0 | Unpaved | 0.15 | 1144.68 | 1143.1 | 0.016 | 9.56 | 830.4 | Unpaved | 1143.1 | 1092.6 | 0.061 | 3.48 | 0.00 | 0.00 | 0.00 | 13.04 | 6.72 | 8.27 | 10.88 | 7.22 | 9.90 | 15.36 | 7.82 |
| DA - EX F2 | 13.179 | 100.0 | Unpaved | 0.15 | 1153.84 | 1148.79 | 0.050 | 6.01 | 901.8 | Unpaved | 1148.8 | 1108.1 | 0.045 | 4.38 | | 0.00 | 0.00 | 10.39 | 7.39 | 9.09 | 11.96 | 60.58 | 79.95 | 118.08 | 6.23 |
| DA - EX F3 | 8.303 | 100.0 | Paved | 0.015 | 1143.71 | 1139.48 | 0.042 | 1.02 | 470.4 | Unpaved | 1139.5 | 1119.8 | 0.042 | 2.38 | | 0.00 | 0.00 | 5.00 | 9.43 | 11.62 | 15.32 | 48.93 | 64.73 | 95.72 | 3.00 |
| DA - EX G1 | 5.351 | 100.0 | Unpaved | 0.15 | 1114.82 | 1107.06 | 0.078 | 5.06 | 351.1 | Unpaved | 1107.1 | 1084.3 | 0.065 | 1.43 | 464.03 | 5.00 | 1.55 | 8.03 | 8.14 | 10.01 | 13.18 | 24.32 | 32.33 | 48.26 | 4.82 |
| DA - EX BYP G1 | 3.113 | 100.0 | Paved | 0.015 | 1123.03 | 1117.45 | 0.056 | 0.91 | 236.2 | Paved | 1117.5 | 1111.7 | 0.024 | 1.24 | 283.41 | 5.00 | 0.94 | 5.00 | 9.43 | 11.62 | 15.32 | 16.38 | 21.84 | 32.64 | 3.00 |
| DA - EX G2 | 31.718 | 100.0 | Unpaved | 0.15 | 1174.01 | 1172.5 | 0.015 | 9.73 | 925.1 | Unpaved | 1172.5 | 1143.6 | 0.031 | 5.41 | 1660.32 | 5.00 | 5.53 | 20.68 | 5.40 | 6.66 | 8.78 | 95.57 | 127.41 | 190.66 | 12.41 |
| DA - EX BYP G2 | 1.986 | 100.0 | Unpaved | 0.15 | 1164 | 1162.04 | 0.020 | 8.77 | 34.0 | Unpaved | 1162.0 | 1157.7 | 0.127 | 0.10 | 554.55 | 5.00 | 1.85 | 10.72 | 7.30 | 8.97 | 11.81 | 7.94 | 10.56 | 15.79 | 6.43 |
| DA - EX G3 | 8.872 | 100.0 | Unpaved | 0.15 | 1154.73 | 1148.13 | 0.066 | 5.40 | 177.2 | Unpaved | 1148.1 | 1107.9 | 0.227 | 0.38 | 529.35 | 5.00 | 1.76 | 7.54 | 8.32 | 10.23 | 13.47 | 43.73 | 57.89 | 85.81 | 4.53 |
| DA - EX G4 | 244.524 | 100.0 | Paved | 0.015 | 1225 | 1220 | 0.050 | 0.96 | 3876.0 | Unpaved | 1220.0 | 1195.0 | 0.006 | 49.85 | 2956.23 | 5.00 | 9.85 | 60.66 | 2.90 | 3.64 | 4.87 | 433.86 | 585.45 | 880.09 | 36.40 |
| DA - EX G5 | 97.136 | 100.0 | Unpaved | 0.15 | 1215 | 1211.98 | 0.030 | 7.38 | 1468.3 | Unpaved | 1212.0 | 1170.0 | 0.029 | 8.97 | 2221.55 | 5.00 | 7.41 | 23.75 | 5.02 | 6.20 | 8.19 | 280.03 | 372.71 | 555.73 | 14.25 |
| DA - EX H1 | 37.269 | 100.0 | Unpaved | 0.15 | 1199.04 | 1197.3 | 0.017 | 9.20 | 1202.7 | Unpaved | 1197.3 | 1110.1 | 0.073 | 4.61 | 1378.95 | 5.00 | 4.60 | 18.41 | 5.73 | 7.05 | 9.29 | 113.40 | 151.47 | 227.40 | 11.04 |
| DA - EX BYP H1 | 0.672 | 100.0 | Unpaved | 0.15 | 1156.7 | 1154.37 | 0.023 | 8.18 | 187.3 | Unpaved | 1154.4 | 1135.8 | 0.099 | 0.61 | 50.89 | 5.00 | 0.17 | 8.97 | 7.83 | 9.62 | 12.66 | 3.25 | 4.29 | 6.33 | 5.38 |
| DA - EX H2 | 105.397 | 100.0 | Unpaved | 0.15 | 1258 | 1255.99 | 0.020 | 8.68 | 1057.3 | Unpaved | 1256.0 | 1212.0 | 0.042 | 5.35 | 2802.32 | 5.00 | 9.34 | 23.38 | 5.07 | 6.25 | 8.26 | 335.13 | 443.97 | 657.75 | 14.03 |
| DA - EX BYP H2 | 2.595 | 100.0 | Unpaved | 0.15 | 1182 | 1177.75 | 0.043 | 6.43 | 77.7 | Unpaved | 1177.8 | 1170.1 | 0.099 | 0.26 | 568.00 | 5.00 | 1.89 | 8.58 | 7.95 | 9.78 | 12.86 | 13.51 | 17.79 | 26.18 | 5.15 |
| DA - EX I1 | 35.335 | 100.0 | Unpaved | 0.15 | 1202 | 1198.82 | 0.032 | 7.23 | 1396.2 | Unpaved | 1198.8 | 1098.0 | 0.072 | 5.37 | 0.00 | 0.00 | 0.00 | 12.59 | 6.83 | 8.39 | 11.04 | 90.57 | 123.35 | 190.09 | 7.56 |
| DA - EX I2 | 101.968 | 100.0 | Unpaved | 0.15 | 1285 | 1253.65 | 0.313 | 2.89 | 1108.9 | Paved | 1253.7 | 1178.0 | 0.068 | 3.48 | 2142.68 | 5.00 | 7.14 | 13.52 | 6.62 | 8.14 | 10.71 | 376.58 | 500.71 | 747.56 | 8.11 |
| DA - EX I3 | 322.023 | 100.0 | Unpaved | 0.15 | 1284.05 | 1281.84 | 0.022 | 8.36 | 1592.8 | Unpaved | 1281.8 | 1178.2 | 0.065 | 6.45 | 3484.69 | 5.00 | 11.62 | 26.42 | 4.74 | 5.86 | 7.75 | 573.52 | 785.49 | 1216.07 | 15.85 |

IMPERVIOUS COVER CALCULATION

| SUBBASIN | AREA (SF) | AREA (AC) | AREA (SQ MI.) | %IC |
|---|---|---|---|---|
| DA - EX A | 257,940 | 5.921 | 0.00925 | 52.74% |
| DA - EX B | 222,862 | 5.116 | 0.00799 | 51.34% |
| DA - EX C | 22,047 | 0.506 | 0.00079 | 88.50% |
| DA - EX D1 | 652,972 | 14.990 | 0.02342 | 41.01% |
| DA - EX D2 | 459,257 | 10.543 | 0.01647 | 2.08% |
| DA - EX D3 | 304,656 | 6.994 | 0.01093 | 0.00% |
| DA - EX E | 426,023 | 9.780 | 0.01528 | 33.30% |
| DA - EX F1 | 133,716 | 3.070 | 0.00480 | 0.00% |
| DA - EX F2 | 574,071 | 13.179 | 0.02059 | 0.00% |
| DA - EX F3 | 361,670 | 8.303 | 0.01297 | 29.67% |
| DA - EX G1 | 233,078 | 5.351 | 0.00836 | 47.51% |
| DA - EX BYP G1 | 135,591 | 3.113 | 0.00486 | 23.11% |
| DA - EX G2 | 1,381,617 | 31.718 | 0.04956 | 26.16% |
| DA - EX BYP G2 | 86,490 | 1.986 | 0.00310 | 26.67% |
| DA - EX G3 | 386,460 | 8.872 | 0.01386 | 6.08% |
| DA - EX G4 | 10,651,450 | 244.524 | 0.38207 | 62.49% |
| DA - EX G5 | 4,231,249 | 97.136 | 0.15178 | 50.08% |
| DA - EX H1 | 1,623,456 | 37.269 | 0.05823 | 0.00% |
| DA - EX BYP H1 | 29,254 | 0.672 | 0.00105 | 9.10% |
| DA - EX H2 | 4,591,084 | 105.397 | 0.16468 | 52.71% |
| DA - EX BYP H2 | 113,016 | 2.595 | 0.00405 | 42.19% |
| DA - EX I1 | 1,539,175 | 35.335 | 0.05521 | 0.00% |
| DA - EX I2 | 4,441,722 | 101.968 | 0.15932 | 26.32% |
| DA - EX I3 | 14,027,329 | 322.023 | 0.50316 | 65.00% |

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

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

| | APR | DATE | DESCRIPTION | REV |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

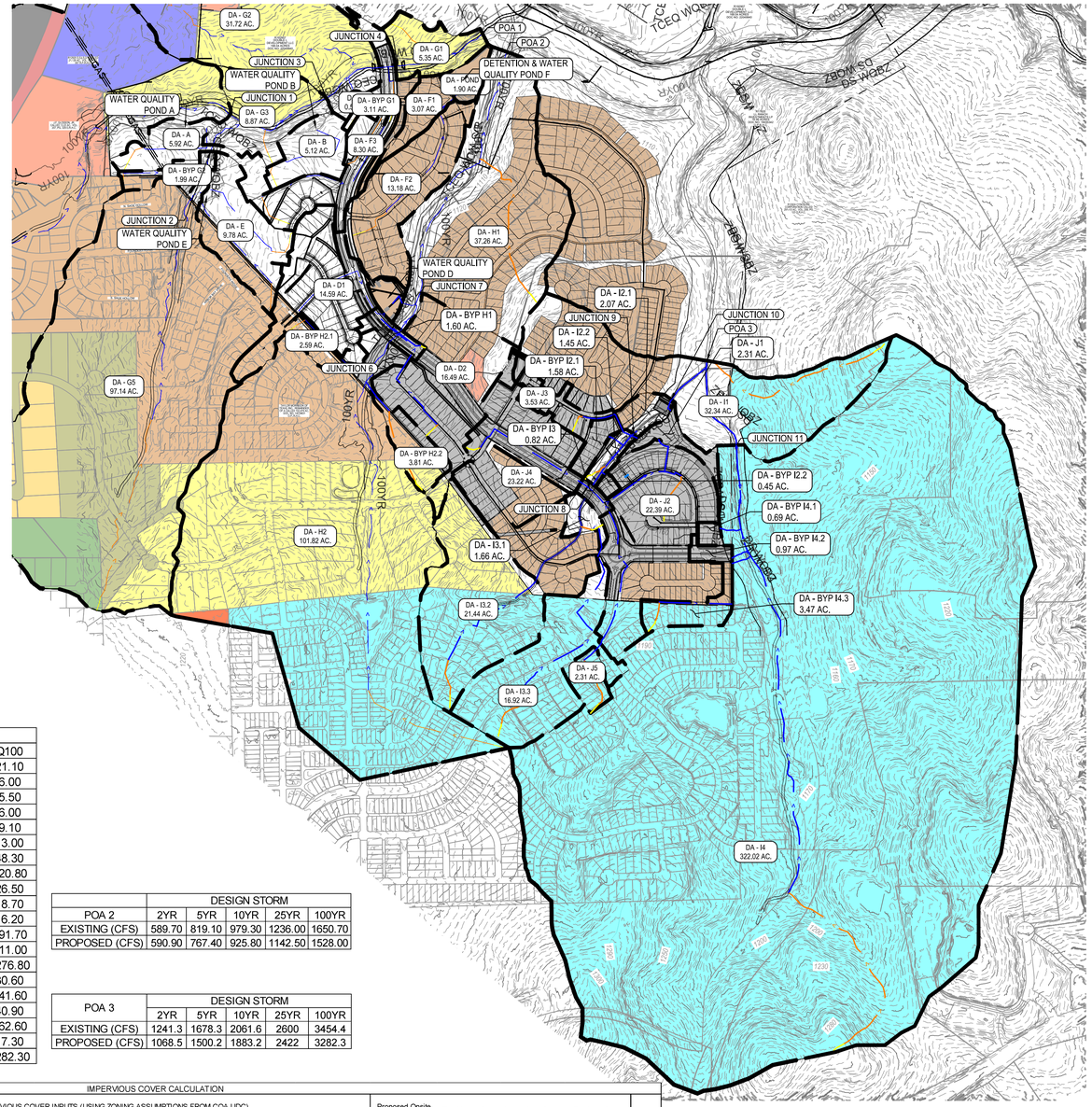

BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

DOUBLE L - POD A4 & B1

# EXISTING DRAINAGE AREA MAP

SHEET
26 OF 123




| DRAINAGE AREA | HEC-HMS RESULTS (CFS) UD | | | | |
|---|---|---|---|---|---|
| | Q2 | Q5 | Q10 | Q25 | Q100 |
| DA-BYP I2.1 | 7.90 | 10.40 | 12.70 | 15.90 | 21.10 |
| DA-BYP I2.2 | 2.20 | 2.90 | 3.60 | 4.50 | 6.00 |
| DA-BYP I3.1 | 2.10 | 2.70 | 3.30 | 4.10 | 5.50 |
| DA-BYP I3.2 | 2.30 | 3.00 | 3.70 | 4.50 | 6.00 |
| DA-BYP I4.1 | 3.30 | 4.40 | 5.40 | 6.80 | 9.10 |
| DA-BYP I4.2 | 5.10 | 6.50 | 7.90 | 9.90 | 13.00 |
| DA-BYP I4.3 | 18.50 | 24.10 | 29.30 | 36.50 | 48.30 |
| DA-I1 | 102.20 | 143.00 | 181.30 | 235.00 | 320.80 |
| DA-I2.1 | 8.50 | 11.80 | 15.00 | 19.40 | 26.50 |
| DA-I2.2 | 6.00 | 8.40 | 10.60 | 13.70 | 18.70 |
| DA-I3.1 | 5.20 | 7.30 | 9.20 | 11.90 | 16.20 |
| DA-I3.2 | 111.00 | 144.60 | 176.50 | 220.40 | 291.70 |
| DA-I3.3 | 82.10 | 105.90 | 128.70 | 160.10 | 211.00 |
| DA-I4 | 712.10 | 1015.80 | 1286.10 | 1668.60 | 2276.80 |
| DA-J1 | 9.80 | 13.60 | 17.30 | 22.40 | 30.60 |
| DA-J2 | 87.70 | 116.60 | 143.80 | 181.50 | 241.60 |
| DA-J3 | 15.80 | 20.40 | 24.90 | 31.00 | 40.90 |
| DA-J4 | 102.00 | 131.90 | 160.20 | 199.50 | 262.60 |
| DA-J5 | 6.40 | 8.60 | 10.40 | 13.10 | 17.30 |
| POA-3 | 1068.50 | 1500.20 | 1883.20 | 2422.00 | 3282.30 |

| | DESIGN STORM | | | | |
|---|---|---|---|---|---|
| POA 2 | 2YR | 5YR | 10YR | 25YR | 100YR |
| EXISTING (CFS) | 589.70 | 819.10 | 979.30 | 1236.00 | 1650.70 |
| PROPOSED (CFS) | 590.90 | 767.40 | 925.80 | 1142.50 | 1528.00 |

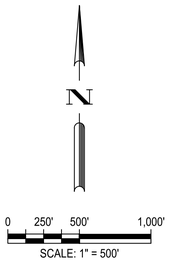
| | DESIGN STORM | | | | |
|---|---|---|---|---|---|
| POA 3 | 2YR | 5YR | 10YR | 25YR | 100YR |
| EXISTING (CFS) | 1241.3 | 1678.3 | 2061.6 | 2600 | 3454.4 |
| PROPOSED (CFS) | 1068.5 | 1500.2 | 1883.2 | 2422 | 3282.3 |

IMPERVIOUS COVER CALCULATION

| SUBBASIN | AREA (SF) | AREA (AC) | AREA (SQ MI.) | IMPERVIOUS COVER INPUTS (USING ZONING ASSUMPTIONS FROM COA UDC) *NOTE: VALUES ARE TOTAL AREA, NOT % (S.F.) | | | | | | | | | | Proposed Onsite Impervious Cover (SF) | Total Impervious Cover (SF) | Impervious Cover (Acres) | Pervious Cover (Acres) | %IC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 30% | 40% | 50% | 80% | 60% PDD-3 / PDD-5 (60%) | 50% | 60% | 70% | 50% | | | | | | |
| | | | | SF1 (30%) | SF2 (40%) | SF4 (50%) | SF 5 (80%) | | PDD-10 (50%) | General Retail (60%) | Commercial (70%) | Gvnt/School (50%) | | | | | | |
| DA - D2 | 718193.27 | 16.49 | 0.02576 | | 27,935.98 | | 310,651.86 | | | | | | | 163,937.13 | 423,633.00 | 9.73 | 6.76 | 58.99% |
| DA - H1 | 1622929.91 | 37.26 | 0.05821 | | | | 1,622,929.91 | | | | | | | 0.00 | 1,298,343.93 | 29.81 | 7.45 | 80.00% |
| DA - BYP H1 | 69554.65 | 1.60 | 0.00249 | | | | | | | | | | | 34,655.46 | 34,655.46 | 0.80 | 0.80 | 49.82% |
| DA - BYP H1.1 | 40085.53 | 0.92 | 0.00144 | | | | | | | | | | | 18,268.58 | 18,268.58 | 0.42 | 0.50 | 45.57% |
| DA - BYP H1.2 | 29469.12 | 0.68 | 0.00106 | | | | | | | | | | | 16,386.88 | 16,386.88 | 0.38 | 0.30 | 55.61% |
| DA - H2 | 4435100.65 | 101.82 | 0.15909 | | 1,931,377.16 | | 857,558.00 | | 1,518,220.39 | | | 30,220.46 | | 0.00 | 2,232,817.69 | 51.26 | 50.56 | 50.34% |
| DA - BYP H2.1 | 113016.46 | 2.59 | 0.00405 | | | | 82,003.26 | | | | | | | 0.00 | 65,602.60 | 1.51 | 1.09 | 58.05% |
| DA - BYP H2.2 | 165997.96 | 3.81 | 0.00595 | | 48,668.60 | | 58,512.93 | | | | | | | 0.00 | 66,277.78 | 1.52 | 2.29 | 39.93% |
| DA - I1 | 1408622.39 | 32.34 | 0.05053 | | | | 522,821.22 | | | | | | | 32,863.44 | 451,120.42 | 10.36 | 21.98 | 32.03% |
| DA - I2.1 | 90318.73 | 2.07 | 0.00324 | | | | 90,318.73 | | | | | | | 0.00 | 72,254.98 | 1.66 | 0.41 | 80.00% |
| DA - I2.2 | 63125.99 | 1.45 | 0.00226 | | | | | | | | | | | 0.00 | 0.00 | 0.00 | 1.45 | 0.00% |
| DA - BYP I2.1 | 68793.48 | 1.58 | 0.00247 | | | | | | | | | | | 32,275.89 | 32,275.89 | 0.74 | 0.84 | 46.92% |
| DA - BYP I2.2 | 19558.92 | 0.45 | 0.00070 | | | | | | | | | | | 8,474.34 | 8,474.34 | 0.19 | 0.25 | 43.33% |
| DA - I3.1 | 72131.42 | 1.66 | 0.00259 | | | | | | | | | | | 0.00 | 0.00 | 0.00 | 1.66 | 0.00% |
| DA - I3.2 | 934015.91 | 21.44 | 0.03350 | | 309,134.78 | | | | 568,362.77 | | | | | 0.00 | 407,835.30 | 9.36 | 12.08 | 43.66% |
| DA - I3.3 | 736962.41 | 16.92 | 0.02643 | | | | | | 694,952.68 | | | | | 0.00 | 347,476.34 | 7.98 | 8.94 | 47.15% |
| DA - BYP I3.1 | 17025.52 | 0.39 | 0.00061 | | | | | | | | | | | 10,707.01 | 10,707.01 | 0.25 | 0.15 | 62.89% |
| DA - BYP I3.2 | 18770.44 | 0.43 | 0.00067 | | | | | | | | | | | 11,026.90 | 11,026.90 | 0.25 | 0.18 | 58.75% |
| DA - I4 | 14027329.31 | 322.02 | 0.50316 | | | | | | 14,027,326.69 | | | | | 0.00 | 7,013,663.35 | 161.01 | 161.01 | 50.00% |
| DA - BYP I4.1 | 30088.95 | 0.69 | 0.00108 | | | | | | | | | | | 11,300.10 | 11,300.10 | 0.26 | 0.43 | 37.56% |
| DA - BYP I4.2 | 42440.69 | 0.97 | 0.00152 | | | | | | | | | | | 27,482.11 | 27,482.11 | 0.63 | 0.34 | 64.75% |
| DA - BYP I4.3 | 150956.87 | 3.47 | 0.00541 | | | | 42,096.47 | | 108860.404 | | | | | 0.00 | 88,107.37 | 2.02 | 1.44 | 58.37% |
| DA - J1 | 100678.88 | 2.31 | 0.00361 | | | | | | | | | | | 0.00 | 0.00 | 0.00 | 2.31 | 0.00% |
| DA - J2 | 975353.27 | 22.39 | 0.03499 | | | | 244171.659 | | | | | | | 306,881.50 | 502,218.83 | 11.53 | 10.86 | 51.49% |
| DA - J3 | 153613.51 | 3.53 | 0.00551 | | | | | | | | | | | 89,283.17 | 89,283.17 | 2.05 | 1.48 | 58.12% |
| DA - J4 | 1011363.16 | 23.22 | 0.03628 | | | | 463,350.20 | | | | | | | 234,439.78 | 605,119.93 | 13.89 | 9.33 | 59.83% |
| DA - J5 | 100616.22 | 2.31 | 0.00361 | | | | | | 100,616.22 | | | | | 0.00 | 50,308.11 | 1.15 | 1.15 | 50.00% |

TIME OF CONCENTRATION CALCULATION

| LABEL | DOWNSTREAM POA | CLASSIFICATION (PRIMARY EXTENTS OF DA) | AREA (AC) | TOTAL NON CHANNEL FLOW (FT) | SHEET FLOW | | | | | | | Shallow Conc. Flow | | | | | | CHANNEL FLOW | | | Cumulative Tc (MIN) | Cumulative Lag Time (MIN) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Length (FT) | Paved -or- Unpaved | Manning's N | US ELEV | DS ELEV | Slope (FT/FT) | Tc (MIN) | Length (FT) | Paved -or- Unpaved | US ELEV | DS ELEV | Slope (FT/FT) | Tc (MIN) | LENGTH (FT) | VELOCITY (FT/S) | Tc (MIN) | | |
| DA - D2 | POA 2 | ONSITE | 16.49 | 117.74 | 100.0 | Unpaved | 0.15 | 1171.31 | 1169.50 | 0.02 | 9.05 | 17.74 | Unpaved | 1169.50 | 1169.19 | 0.017 | 0.14 | 150.00 | 5.00 | 0.50 | 9.69 | 5.81 |
| DA - H1 | POA 2 | OFFSITE | 37.26 | 1297.27 | 100.0 | Unpaved | 0.15 | 1196.01 | 1189.34 | 0.07 | 5.37 | 1197.27 | Unpaved | 1196.01 | 1098.51 | 0.081 | 4.33 | 852.98 | 5.00 | 2.84 | 12.55 | 7.53 |
| DA - BYP H1 | POA 2 | ONSITE | 1.60 | 40.90 | 40.9 | Unpaved | 0.15 | 1147.39 | 1146.92 | 0.01 | 5.31 | 0.00 | Paved | | | 0.000 | 0.00 | 246.48 | 5.00 | 0.82 | 6.13 | 3.68 |
| DA - H2 | POA 2 | OFFSITE | 101.82 | 1157.32 | 100.0 | Unpaved | 0.15 | 1258.00 | 1255.99 | 0.02 | 8.68 | 1057.32 | Paved | 1255.99 | 1211.99 | 0.042 | 4.25 | 2802.32 | 5.00 | 9.34 | 22.27 | 13.36 |
| DA - BYP H2.1 | POA 2 | ONSITE | 2.59 | 177.73 | 100.0 | Unpaved | 0.15 | 1182.00 | 1177.75 | 0.04 | 6.43 | 77.73 | Unpaved | 1177.75 | 1170.08 | 0.099 | 0.26 | 568.00 | 5.00 | 1.89 | 8.58 | 5.15 |
| DA - BYP H2.2 | POA 2 | ONSITE | 3.81 | 659.60 | 100.0 | Unpaved | 0.15 | 1189.79 | 1179.05 | 0.11 | 4.44 | 559.60 | Unpaved | 1179.05 | 1158.36 | 0.037 | 3.01 | 197.07 | 5.00 | 0.66 | 8.10 | 4.86 |
| DA - I1 | POA 3 | OFFSITE | 32.34 | 1496.19 | 100.0 | Unpaved | 0.15 | 1202.00 | 1198.82 | 0.03 | 7.23 | 1396.19 | Unpaved | 1198.82 | 1098.00 | 0.072 | 5.37 | 331.29 | 5.00 | 1.10 | 13.70 | 8.22 |
| DA - I2.1 | POA 3 | ONSITE | 2.07 | 210.92 | 100.0 | Unpaved | 0.15 | 1134.98 | 1124.37 | 0.11 | 4.46 | 110.92 | Unpaved | 1124.37 | 1115.96 | 0.076 | 0.42 | 365.89 | 5.00 | 1.22 | 6.10 | 3.66 |
| DA - I2.2 | POA 3 | ONSITE | 1.45 | 190.51 | 100.0 | Unpaved | 0.15 | 1141.22 | 1127.23 | 0.14 | 4.00 | 90.51 | Unpaved | 1127.23 | 1125.00 | 0.02464 | 0.596 | 318.529 | 5.00 | 1.06 | 5.65 | 3.39 |
| DA - BYP I2.1 | POA 3 | ONSITE | 1.58 | 151.57 | 100.0 | Unpaved | 0.15 | 1148.53 | 1142.53 | 0.06 | 5.61 | 51.57 | Unpaved | 1142.53 | 1137.65 | 0.095 | 0.17 | | 5.00 | 0.00 | 5.78 | 3.47 |
| DA - BYP I2.2 | POA 3 | OFFSITE | 0.45 | 160.22 | 100.0 | Unpaved | 0.15 | 1140.82 | 1134.82 | 0.06 | 5.61 | 60.22 | Unpaved | 1134.82 | 1127.27 | 0.125 | 0.18 | | 5.00 | 0.00 | 5.78 | 3.47 |
| DA - I3.1 | POA 3 | ONSITE | 1.66 | 371.79 | 100.0 | Unpaved | 0.15 | 1240.01 | 1236.85 | 0.03 | 7.24 | 271.79 | Unpaved | 1236.85 | 1218.36 | 0.068 | 1.08 | 1721.14 | 5.00 | 5.74 | 14.06 | 8.43 |
| DA - I3.2 | POA 3 | ONSITE | 21.44 | 343.44 | 100.0 | Unpaved | 0.15 | 1215.09 | 1205.77 | 0.09 | 4.70 | 243.44 | Unpaved | 1205.77 | 1181.23 | 0.101 | 0.79 | | 0.00 | 0.00 | 5.49 | 3.30 |
| DA - I3.3 | POA 3 | ONSITE | 16.92 | 350.11 | 100.0 | Unpaved | 0.15 | 1154.66 | 1151.23 | 0.03 | 7.01 | 250.11 | Paved | 1151.23 | 1141.45 | 0.0 | 1.0 | 32.4 | 5.00 | 0.11 | 8.16 | 4.89 |
| DA - BYP I3.1 | POA 3 | ONSITE | 0.39 | 49.45 | 49.5 | Unpaved | 0.15 | 1143.73 | 1142.02 | 0.03 | 3.98 | | Unpaved | | | 0.000 | 0.00 | 147.69 | 5.00 | 0.49 | 5.00 | 3.00 |
| DA - BYP I3.2 | POA 3 | ONSITE | 0.43 | 53.81 | 53.8 | Unpaved | 0.15 | 1143.63 | 1141.54 | 0.04 | 4.06 | | Unpaved | | | 0.000 | 0.00 | 167.18 | 5.00 | 0.56 | 5.00 | 3.00 |
| DA - I4 | POA 3 | ONSITE | 322.02 | 1692.75 | 100.0 | Unpaved | 0.15 | 1284.05 | 1281.84 | 0.02 | 8.36 | 1592.75 | Unpaved | 1281.84 | 1178.17 | 0.065 | 6.45 | 3484.69 | 5.00 | 11.62 | 26.42 | 15.85 |
| DA - BYP I4.1 | POA 3 | ONSITE | 0.69 | 168.72 | 100.0 | Unpaved | 0.15 | 1149.03 | 1143.53 | 0.06 | 5.80 | 68.72 | Unpaved | 1143.53 | 1137.32 | 0.090 | 0.24 | | 5.00 | 0.00 | 6.04 | 3.62 |
| DA - BYP I4.2 | POA 3 | ONSITE | 0.97 | 251.38 | 100.0 | Unpaved | 0.15 | 1168.43 | 1162.44 | 0.06 | 5.61 | 151.38 | Unpaved | 1162.43 | 1149.37 | 0.086 | 0.53 | 66.79 | 5.00 | 0.22 | 6.36 | 3.82 |
| DA - BYP I4.3 | POA 3 | ONSITE | 3.47 | 9.53 | 9.5 | Unpaved | 0.15 | 1169.42 | 1169.34 | 0.01 | 1.88 | | Unpaved | | | 0.000 | 0.00 | 191.86 | 0.00 | 0.00 | 5.00 | 3.00 |
| DA - J1 | POA 3 | ONSITE | 2.31 | 252.80 | 100.0 | Unpaved | 0.15 | 1131.80 | 1121.45 | 0.10 | 4.51 | 152.80 | Unpaved | 1121.45 | 1111.00 | 0.068 | 0.60 | | 0.00 | 0.00 | 5.11 | 3.07 |
| DA - J2 | POA 3 | ONSITE | 22.39 | 381.88 | 100.0 | Unpaved | 0.15 | 1152.23 | 1151.03 | 0.01 | 10.67 | 281.88 | Paved | 1151.03 | 1142.62 | 0.030 | 1.34 | 50.36 | 0.00 | 0.00 | 12.01 | 7.21 |
| DA - J3 | POA 3 | ONSITE | 3.53 | 153.35 | 100.0 | Unpaved | 0.15 | 1154.41 | 1152.98 | 0.01 | 9.95 | 53.35 | Unpaved | 1152.98 | 1150.38 | 0.049 | 0.25 | 239.09 | 0.00 | 0.00 | 10.20 | 6.12 |
| DA - J4 | POA 3 | ONSITE | 23.22 | 104.56 | 100.0 | Unpaved | 0.15 | 1180.11 | 1178.87 | 0.01 | 10.53 | 4.56 | Unpaved | 1178.87 | 1178.74 | 0.029 | 0.03 | 98.89 | 5.00 | 0.33 | 10.89 | 6.53 |
| DA - J5 | POA 3 | ONSITE | 2.31 | 470.26 | 100.0 | Unpaved | 0.15 | 1206.01 | 1205.88 | 0.00 | 25.96 | 370.26 | Unpaved | 1205.88 | 1186.97 | 0.051 | 1.69 | 122.94 | 5.00 | 0.41 | 28.06 | 16.84 |




LEGEND

- DRAINAGE AREA ID (XX)
- DRAINAGE AREA (XX AC.)
- POD A1/A2 PHASE BOUNDARY
- DRAINAGE AREA BOUNDARY
- EXISTING MAJOR CONTOUR (XXX)
- EXISTING MINOR CONTOUR (XXX)
- TIME OF CONCENTRATION SHEET FLOW
- TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW
- TIME OF CONCENTRATION CHANNEL FLOW
- FLOW ARROW
- SINGLE FAMILY 1 - 30% MAX IC
- SINGLE FAMILY 2 - 40% MAX IC
- SINGLE FAMILY 3 - 65% MAX IC
- SINGLE FAMILY 4 - 50% MAX IC
- SINGLE FAMILY 5 - 80% MAX IC
- PDD 3 & PDD 5 (60% MAX IC)
- PDD 10 (50% MAX IC)
- GENERAL RETAIL (60% MAX IC)
- GOVERNMENT - GUI (50% MAX IC)
- COMMERCIAL (70% MAX IC)

NOTE:
1. OFFSITE FLOWS ASSUME NO DETENTION.
2. ZONING ASSUMPTIONS FOR IMPERVIOUS COVER COME FROM CITY OF DRIPPING SPRINGS ZONING ORDINANCE

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

# DOUBLE L - POD A4 & B1

## ULTIMATE DEVELOPMENT DRAINAGE AREA MAP

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
27 OF 123

O:\00014789-00\LSI\04 - Pod A4&B1\04_CADD\01_SHTS\C-SP-ULT-DAM.dwg Layout: A4B1 Plotted: 4/10/2026 11:05:09 AM By: Creadance

# Attachment E – Volume and Character of Stormwater

The total drainage area accounted for is 141.121 acres, all of which originate on-site. Impervious cover accounts for 58.424 acres of the total drainage area, resulting in an increase in impervious cover from natural conditions to 40.54%. As shown on the BMP Map Exhibit (Attachment K). The ponds and erosion controls will be constructed first. Stormwater runoff will be managed through a combination of vegetative filter strips (VFS), Jellyfish filter, grassy swale and batch detention ponds. Runoff will sheet flow to the VFS and grassy swale, and then enter either the Jellyfish Filter or batch detention ponds by sheet flow or via inlets and storm drain system. The following BMPs provide water quality treatment for the Double L Pods. Locations, treated impervious cover acreage, and provided total suspended solids (TSS) removal are summarized below.

- Jellyfish A is in the Pod A1A2 construction plan set, located in the northwestern portion of the A1A2 site. It will treat 2.611 acres of impervious cover and remove 2,348 lbs of TSS.
- Jellyfish B is in the Pod A1A2 construction plan set, located in the northeastern portion of the A1A2 site. It will treat 2.922 acres of impervious cover and remove 2,638 lbs of TSS.
- Jellyfish E is in the Pod A1A2 construction plan set, located in the southern portion of the A1A2 site. It will treat 2.402 acres of impervious cover and remove 2,175 lbs of TSS.
- A3.1 VFS is in the Pod A1A2A3 construction plan set, located in the northwestern portion of the A3 site. It will treat 0.107 acres of impervious cover in series with Pond D and remove 119 lbs of TSS.
- A3.2 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A1A2A3 construction plan set, located in the northeastern portion of the A3 site. It will treat 0.144 acres of impervious cover in series with Pond D and remove 158 lbs of TSS.
- A3.3 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A1A2A3 construction plan set, located in the northeastern portion of the A3 site. It will treat 0.109 acres of impervious cover in series with Pond F and remove 122 lbs of TSS.
- A3.4 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A1A2A3 construction plan set, located in the eastern portion of the A3 site. It will treat 0.232 acres of impervious cover in series with Pond F and remove 254 lbs of TSS.
- Pond D is in the Pod A1A2A3 construction plan set, located along the southeastern boundary of the A3 site. It will treat 10.551 acres of impervious cover and remove 10,861 lbs of TSS. The required water quality volume is 131,243 CF and 133,276 CF is provided.
- Pond F is in the Pod A1A2A3 construction plan set, located along the northeastern boundary of the phase 2 site. It will treat 6.878 acres of impervious cover and remove 7,153 lbs of TSS. The required water quality volume is 88,580 CF and 91,600 CF is provided.
- B1.1 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A4B1 construction plan set, located in the eastern portion of the A4B1 site. It will treat 0.654 acres of impervious cover and remove 647 lbs of TSS.
- A4.1 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod A4B1 construction plan set, located in the eastern portion of the A4B1 site. It will treat 0.314 acres of impervious cover in series with Pond J and remove 345 lbs of TSS.
- B4.1 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod B4 construction plan set, located in the eastern portion of the B4 site. It will treat 0.179 acres of impervious cover in series with Pond J and remove 314 lbs of TSS.

- B4.2 VFS is a 50-foot-wide natural vegetative filter strip in the Pod B4 construction plan set, located along the southeastern boundary of the B4 site. It will treat 0.325 acres of impervious cover and remove 325 lbs of TSS.
- B4.3 VFS is a 15-foot-wide engineered vegetative filter strip in the Pod B4 construction plan set, located along the southeastern boundary of the B4 site. It will treat 0.324 acres of impervious cover and remove 321 lbs of TSS.
- B4 Grassy Swale is in the Pod B4 construction plan set, located centrally within the B4 site. It will treat 0.156 acres of impervious cover and remove 164 lbs of TSS.
- Pond J is in the Pod B4 construction plan set, located in the eastern portion of the B4 site. It will treat 25.520 acres of impervious cover and remove 25,522 lbs of TSS. The required water quality volume is 326,855 CF and 337,658 CF is provided.
- The Ranch Road 12 TxDOT improvements will add additional turn lanes and widen the roadway resulting in 1.240 acres of uncaptured impervious cover and resulting in a required TSS removal of 1,133 lbs. The overtreatment will be provided in this application will be permanently allocated to TxDOT turn lanes and shall not be reassigned to future site development.
- The remaining uncaptured area from the Double L Pod site is 4.998 acres of impervious cover.

Drainage area maps and calculations have been included in Attachment E. A BMP flow map with the TSS calculation has been included in Attachment K. Please reference the construction plan sheets for the storm drain system conveying the runoff to the respective BMPs.

# Attachment F – Suitability Letter from Authorized Agent

Not applicable to this project.

## Attachment G – Alternative Secondary Containment Methods

Not applicable to this project.

## Attachment H – AST Containment Structure Drawings

Not applicable to this project.

## Attachment I – 20% or Less Impervious Cover Waiver

Not applicable to this project.

## Attachment J – BMPs for Upgradient Stormwater

There are no permanent BMPs proposed specifically for upgradient stormwater. The area upgradient of the site is undeveloped and flows through this project via Little Barton Creek, which is a natural stream. Any runoff originating in this area, after running flowing through natural vegetation, will not require further treatment by engineering measures.

# Attachment K – BMPs for On-Site Stormwater

Silt control fences are to be installed to prevent stormwater from carrying sediment offsite during construction. Construction entrances are to be placed to facilitate the arrival and departure of construction vehicles without the addition of undue erosion. Batch detention ponds, Jellyfish filters, grassy swale and vegetative filter strips are to be installed in accordance with construction plans to treat pollutant areas of the Double L Ranch Pods. All PBMPs have been designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to provide the required TSS removal. Optional enhanced measures are provided in accordance with the City of Dripping Springs Development Agreement.

| DOUBLE L A1-A4, B1, & B4 BMP SUMMARY TABLE | | | |
|---|---|---|---|
| **POD** | **BMP** | **REQUIRED TSS REMOVAL (LBS)** | **PROVIDED TSS REMOVAL (LBS)** |
| A1A2 | JELLYFISH A | 2,387 | 2,348 |
| | JELLYFISH B | 2,671 | 2,638 |
| | JELLYFISH E | 2,196 | 2,175 |
| | UNCAP A | 220 | --- |
| | UNCAP B | 682 | --- |
| | UNCAP E | 0 | --- |
| A3 | A3.1 VFS* | --- | 119 |
| | A3.2 VFS* | --- | 158 |
| | A3.3 VFS** | --- | 122 |
| | A3.4 VFS** | --- | 254 |
| A1A2A3 | POND D | 9,645 | 10,861 |
| | POND F | 6,287 | 7,153 |
| | UNCAP BYP G1 | 806 | --- |
| | UNCAP H | 641 | --- |
| A4B1 | B1.1 VFS | 598 | 647 |
| | A4.1 VFS^ | --- | 345 |
| | A4B1 UNCAP D | 554 | --- |
| | A4B1 UNCAP J.1 | 853 | --- |
| B4 | B4.1 VFS^ | --- | 314 |
| | B4.2 VFS | 297 | 325 |
| | B4.3 VFS | 296 | 321 |
| | B4 GRASSY SWALE^ | --- | 164 |
| | POND J | 23,328 | 25,522 |
| | B4 UNCAP J.2 | 812 | --- |
| PH1 | PH1 UNCAP - TXDOT RR 12 IMPROVEMENTS | 1,133 | --- |
| | **TOTAL** | **53,406** | **53,466** |
| *IN SERIES WITH POND D | | | |
| **IN SERIES WITH POND F | | | |
| ^IN SERIES WITH POND J | | | |




0 75 150 300

SCALE: 1" = 150'

LEGEND

- 1202 — 2' PROPOSED CONTOURS
- 1210 — 10' PROPOSED CONTOURS
- 1202 — 2' EXISTING CONTOURS
- 1210 — 10' EXISTING CONTOURS
- PROPERTY BOUNDARY
- FLOW TO JELLYFISH A
- FLOW TO JELLYFISH B
- FLOW TO JELLYFISH E
- FLOW TO POND D
- FLOW TO POND F
- FLOW TO POND J
- FLOW TO VEGETATIVE FILTER STRIPS
- FLOW TO IN SERIES VEGETATIVE FILTER STRIPS
- FLOW TO IN SERIES GRASSY SWALES
- UNCAPTURED FLOW

| DOUBLE L A1-A4, B1, & B4 PROJECT SUMMARY | | | | | |
|---|---|---|---|---|---|
| **POD** | **BMP** | **BMP BASIN (AC)** | **EXISTING IC (AC)** | **PROPOSED IC (AC)** | **REQUIRED TSS REMOVAL (LBS)** |
| A1A2 | JELLYFISH A | 4.624 | 0.000 | 2.611 | 2,387 |
| | JELLYFISH B | 5.945 | 0.000 | 2.922 | 2,671 |
| | JELLYFISH E | 5.332 | 0.000 | 2.402 | 2,196 |
| | UNCAP A | 4.872 | 0.000 | 0.241 | 220 |
| | UNCAP B | 6.523 | 0.000 | 0.746 | 682 |
| | UNCAP E | 4.053 | 0.000 | 0.000 | 0 |
| A1A2A3 | POND D | 21.494 | 0.000 | 10.551 | 9,645 |
| | POND F | 18.642 | 0.000 | 6.878 | 6,287 |
| | UNCAP BYP G1 | 1.617 | 0.000 | 0.882 | 806 |
| | UNCAP H | 2.149 | 0.000 | 0.701 | 641 |
| A4B1 | B1.1 VFS | 1.482 | 0.000 | 0.654 | 598 |
| | A4B1 UNCAP D | 3.787 | 0.000 | 0.606 | 554 |
| | A4B1 UNCAP J.1 | 1.754 | 0.000 | 0.933 | 853 |
| B4 | B4.2 VFS | 0.968 | 0.000 | 0.325 | 297 |
| | B4.3 VFS | 0.752 | 0.000 | 0.324 | 296 |
| | POND J | 55.830 | 0.000 | 25.520 | 23,328 |
| | B4 UNCAP J.2 | 2.526 | 0.000 | 0.889 | 812 |
| PH1 | PH1 UNCAP - TXDOT RR 12 IMPROVEMENTS | 1.771 | 0.000 | 1.240 | 1,133 |
| | **TOTAL** | **144.121** | **0.000** | **58.424** | **53,406** |

| DOUBLE L A1-A4, B1, & B4 IN SERIES BMPS | | | | |
|---|---|---|---|---|
| **POD** | **BMP** | **BMP BASIN (AC)** | **EXISTING IC (AC)** | **PROPOSED IC (AC)** |
| A3 | A3.1 VFS* | 0.385 | 0.000 | 0.107 |
| | A3.2 VFS* | 0.371 | 0.000 | 0.144 |
| | A3.3 VFS** | 0.440 | 0.000 | 0.109 |
| | A3.4 VFS** | 0.574 | 0.000 | 0.232 |
| A4B1 | A4.1 VFS^ | 0.821 | 0.000 | 0.314 |
| B4 | B4.1 VFS^ | 0.449 | 0.000 | 0.179 |
| | B4 GRASSY SWALE^ | 0.622 | 0.000 | 0.156 |
| | **TOTAL** | **3.662** | **0.000** | **1.241** |
| *IN SERIES WITH POND D | | | | |
| **IN SERIES WITH POND F | | | | |
| ^IN SERIES WITH POND J | | | | |

Know what's below. Call before you dig.

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

| APR | DATE | DESCRIPTION | REV |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: SSM

DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL. 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L PODS A1-A4, B1, & B4

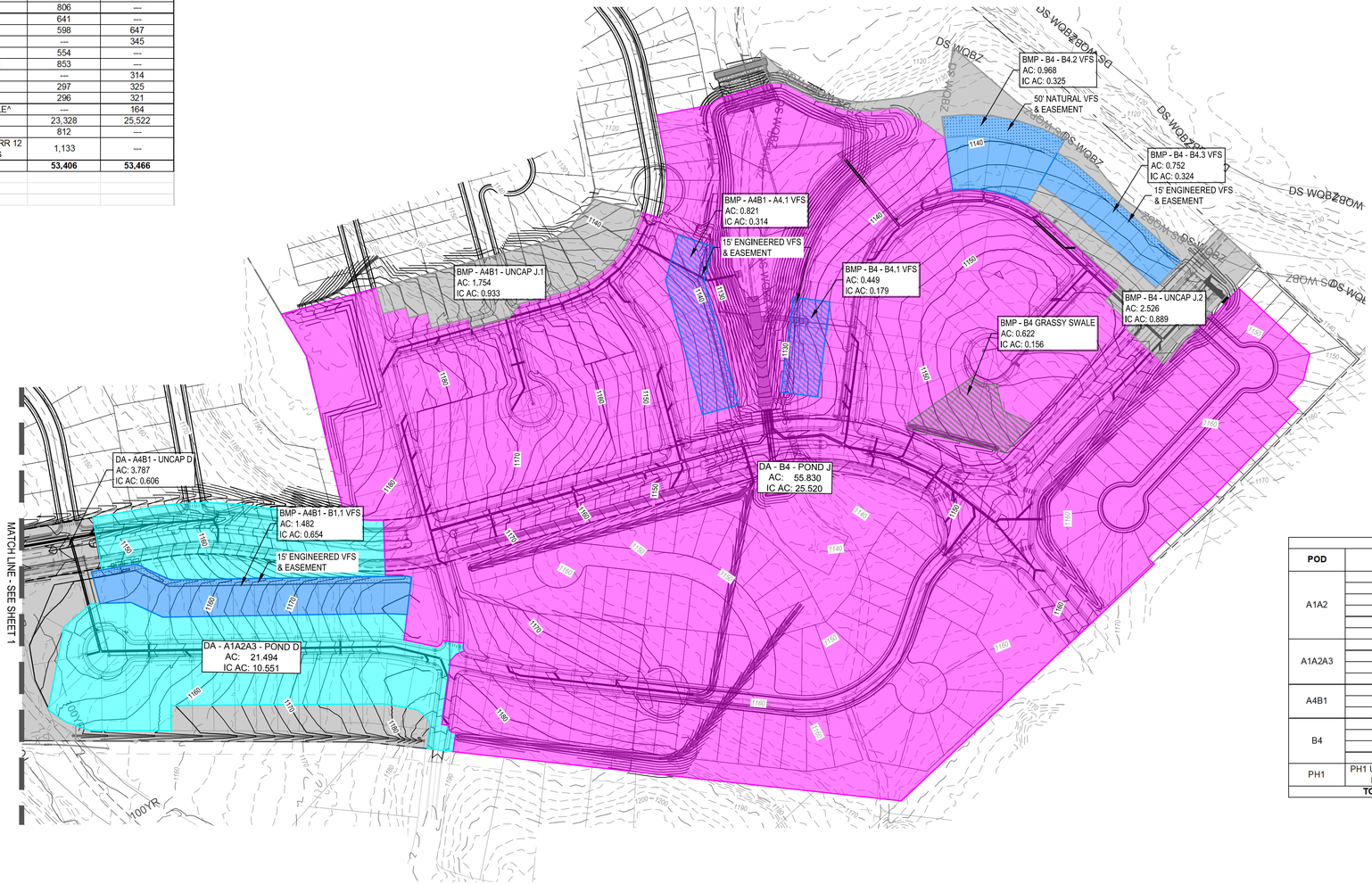
# PERMANENT BMP FLOW MAP

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET 1

| DOUBLE L A1-A4, B1, & B4 BMP SUMMARY TABLE | | | |
|---|---|---|---|
| **POD** | **BMP** | **REQUIRED TSS REMOVAL (LBS)** | **PROVIDED TSS REMOVAL (LBS)** |
| A1A2 | JELLYFISH A | 2,387 | 2,348 |
| | JELLYFISH B | 2,671 | 2,638 |
| | JELLYFISH E | 2,196 | 2,175 |
| | UNCAP A | 220 | --- |
| | UNCAP B | 682 | --- |
| | UNCAP E | 0 | --- |
| A3 | A3.1 VFS* | --- | 119 |
| | A3.2 VFS* | --- | 158 |
| | A3.3 VFS** | --- | 122 |
| | A3.4 VFS** | --- | 254 |
| A1A2A3 | POND D | 9,645 | 10,861 |
| | POND F | 6,287 | 7,153 |
| | UNCAP BYP G1 | 806 | --- |
| | UNCAP H | 641 | --- |
| A4B1 | B1.1 VFS | 598 | 647 |
| | A4.1 VFS^ | --- | 345 |
| | A4B1 UNCAP D | 554 | --- |
| | A4B1 UNCAP J.1 | 853 | --- |
| B4 | B4.1 VFS^ | --- | 314 |
| | B4.2 VFS | 297 | 325 |
| | B4.3 VFS | 296 | 321 |
| | B4 GRASSY SWALE^ | --- | 164 |
| | POND J | 23,328 | 25,522 |
| | B4 UNCAP J.2 | 812 | --- |
| PH1 | PH1 UNCAP - TXDOT RR 12 IMPROVEMENTS | 1,133 | --- |
| **TOTAL** | | **53,406** | **53,466** |

*IN SERIES WITH POND D
**IN SERIES WITH POND F
^IN SERIES WITH POND J




0 75 150 300
SCALE: 1" = 150'

LEGEND

- 1202 — 2' PROPOSED CONTOURS
- 1210 — 10' PROPOSED CONTOURS
- 1202 — 2' EXISTING CONTOURS
- 1210 — 10' EXISTING CONTOURS
- PROPERTY BOUNDARY
- FLOW TO JELLYFISH A
- FLOW TO JELLYFISH B
- FLOW TO JELLYFISH E
- FLOW TO POND D
- FLOW TO POND F
- FLOW TO POND J
- FLOW TO VEGETATIVE FILTER STRIPS
- FLOW TO IN SERIES VEGETATIVE FILTER STRIPS
- FLOW TO IN SERIES GRASSY SWALES
- UNCAPTURED FLOW

| DOUBLE L A1-A4, B1, & B4 PROJECT SUMMARY | | | | | |
|---|---|---|---|---|---|
| **POD** | **BMP** | **BMP BASIN (AC)** | **EXISTING IC (AC)** | **PROPOSED IC (AC)** | **REQUIRED TSS REMOVAL (LBS)** |
| A1A2 | JELLYFISH A | 4.624 | 0.000 | 2.611 | 2,387 |
| | JELLYFISH B | 5.945 | 0.000 | 2.922 | 2,671 |
| | JELLYFISH E | 5.332 | 0.000 | 2.402 | 2,196 |
| | UNCAP A | 4.872 | 0.000 | 0.241 | 220 |
| | UNCAP B | 6.523 | 0.000 | 0.746 | 682 |
| | UNCAP E | 4.053 | 0.000 | 0.000 | 0 |
| A1A2A3 | POND D | 21.494 | 0.000 | 10.551 | 9,645 |
| | POND F | 18.642 | 0.000 | 6.878 | 6,287 |
| | UNCAP BYP G1 | 1.617 | 0.000 | 0.882 | 806 |
| | UNCAP H | 2.149 | 0.000 | 0.701 | 641 |
| A4B1 | B1.1 VFS | 1.482 | 0.000 | 0.654 | 598 |
| | A4B1 UNCAP D | 3.787 | 0.000 | 0.606 | 554 |
| | A4B1 UNCAP J.1 | 1.754 | 0.000 | 0.933 | 853 |
| B4 | B4.2 VFS | 0.968 | 0.000 | 0.325 | 297 |
| | B4.3 VFS | 0.752 | 0.000 | 0.324 | 296 |
| | POND J | 55.830 | 0.000 | 25.520 | 23,328 |
| | B4 UNCAP J.2 | 2.526 | 0.000 | 0.889 | 812 |
| PH1 | PH1 UNCAP - TXDOT RR 12 IMPROVEMENTS | 1.771 | 0.000 | 1.240 | 1,133 |
| **TOTAL** | | **144.121** | **0.000** | **58.424** | **53,406** |

| DOUBLE L A1-A4, B1, & B4 IN SERIES BMPS | | | | |
|---|---|---|---|---|
| **POD** | **BMP** | **BMP BASIN (AC)** | **EXISTING IC (AC)** | **PROPOSED IC (AC)** |
| A3 | A3.1 VFS* | 0.385 | 0.000 | 0.107 |
| | A3.2 VFS* | 0.371 | 0.000 | 0.144 |
| | A3.3 VFS** | 0.440 | 0.000 | 0.109 |
| | A3.4 VFS** | 0.574 | 0.000 | 0.232 |
| A4B1 | A4.1 VFS^ | 0.821 | 0.000 | 0.314 |
| B4 | B4.1 VFS^ | 0.449 | 0.000 | 0.179 |
| | B4 GRASSY SWALE^ | 0.622 | 0.000 | 0.156 |
| **TOTAL** | | **3.662** | **0.000** | **1.241** |

*IN SERIES WITH POND D
**IN SERIES WITH POND F
^IN SERIES WITH POND J

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

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

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: SSM
DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


DOUBLE L PODS A1-A4, B1, & B4

PERMANENT BMP FLOW MAP

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET 2

Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** A1A2 JELLYFISH A

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 4.624 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 2.611 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.56 | |
| $L_{M\ THIS\ BASIN}$ = | 2387 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

| | | |
|---|---|---|
| Proposed BMP = | JELLYFISH | |
| Removal efficiency = | 86 | 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

| | | |
|---|---|---|
| $A_C$ = | 4.624 | acres |
| $A_I$ = | 2.611 | acres |
| $A_P$ = | 2.01 | acres |
| $L_R$ = | 2595 | lbs |

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

| | | |
|---|---|---|
| Desired $L_{M\ THIS\ BASIN}$ = | 2348 | lbs. |
| F = | 0.90 | |

**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

| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.00 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | acres |
| Rainfall Intensity = | 1.10 | inches per hour |
| Effective Area = | 2.41 | acres |
| Cartridge Length = | 54 | inches |
| **Peak Treatment Flow Required =** | 2.673 | cubic feet per second |

**7. Jellyfish**
Designed as Required in RG-348
Section 3.2.22

| Flow Through Jellyfish Size | Vault |
|---|---|
| Jellyfish Size for Flow-Based Configuration = | JFPDo811-17-4 |
| Jellyfish Treatment Flow Rate = | 3.39 cfs |



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** A1A2 JELLYFISH B

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 5.945 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 2.922 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.49 | |
| $L_{M\ THIS\ BASIN}$ = | 2671 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

| | | |
|---|---|---|
| Proposed BMP = | JELLYFISH | |
| Removal efficiency = | 86 | 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

| | | |
|---|---|---|
| $A_C$ = | 5.945 | acres |
| $A_I$ = | 2.922 | acres |
| $A_P$ = | 3.02 | acres |
| $L_R$ = | 2916 | lbs |

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

| | | |
|---|---|---|
| Desired $L_{M\ THIS\ BASIN}$ = | 2638 | lbs. |
| F = | 0.90 | |

**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

| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.00 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | acres |
| Rainfall Intensity = | 1.10 | inches per hour |
| Effective Area = | 2.72 | acres |
| Cartridge Length = | 54 | inches |
| **Peak Treatment Flow Required =** | 3.016 | cubic feet per second |

**7. Jellyfish**
Designed as Required in RG-348
Section 3.2.22

| Flow Through Jellyfish Size | Vault | |
|---|---|---|
| Jellyfish Size for Flow-Based Configuration = | JFPDo811-16-4 | |
| Jellyfish Treatment Flow Rate = | 3.21 | cfs |



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.

**Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A**

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan * = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** A1A2 JELLYFISH E

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 5.332 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 2.402 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.45 | |
| $L_{M\ THIS\ BASIN}$ = | 2196 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

| | | |
|---|---|---|
| Proposed BMP = | JELLYFISH | |
| Removal efficiency = | 86 | 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

| | | |
|---|---|---|
| $A_C$ = | 5.332 | acres |
| $A_I$ = | 2.402 | acres |
| $A_P$ = | 2.93 | acres |
| $L_R$ = | 2404 | lbs |

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

| | | |
|---|---|---|
| Desired $L_{M\ THIS\ BASIN}$ = | 2175 | lbs. |
| F = | 0.90 | |

**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

| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.000 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | acres |
| Rainfall Intensity = | 1.10 | inches per hour |
| Effective Area = | 2.25 | acres |
| Cartridge Length = | 54 | inches |
| **Peak Treatment Flow Required =** | 2.494 | cubic feet per second |

**7. Jellyfish**
Designed as Required in RG-348
Section 3.2.22

| Flow Through Jellyfish Size | Vault | |
|---|---|---|
| Jellyfish Size for Flow-Based Configuration = | JFPDo811-15-4 | |
| Jellyfish Treatment Flow Rate = | 3.03 | cfs |



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** Pond D

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 21.494 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 10.551 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.49 | |
| $L_{M\ THIS\ BASIN}$ = | 9645 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Batch Detention
Removal efficiency = 91 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

| | | |
|---|---|---|
| $A_C$ = | 21.494 | acres |
| $A_I$ = | 10.551 | acres |
| $A_P$ = | 10.94 | acres |
| $L_R$ = | 11140 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 10861 lbs.

F = 0.97

**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 = | 3.00 | inches |
| Post Development Runoff Coefficient = | 0.47 | |
| On-site Water Quality Volume = | 109369 | cubic feet |

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

| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.000 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | 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 = | 21874 | |
| **Total Capture Volume (required water quality volume(s) x 1.20) =** | 131243 | 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.



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod A3
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** Pond F

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 18.642 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 6.878 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.37 | |
| $L_{M\ THIS\ BASIN}$ = | 6287 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Batch Detention
Removal efficiency = 91 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

| | | |
|---|---|---|
| $A_C$ = | 18.642 | acres |
| $A_I$ = | 6.878 | acres |
| $A_P$ = | 11.76 | acres |
| $L_R$ = | 7337 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 7153 lbs.

F = 0.97

**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 = | 3.00 | inches |
| Post Development Runoff Coefficient = | 0.36 | |
| On-site Water Quality Volume = | 73817 | 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 = | 14763 | |
| **Total Capture Volume (required water quality volume(s) x 1.20) =** | 88580 | 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.**

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** A1A2A3 - A3.1 ENG VFS

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 0.385 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.107 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.28 | |
| $L_{M\ THIS\ BASIN}$ = | 98 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 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

| | | |
|---|---|---|
| $A_C$ = | 0.385 | acres |
| $A_I$ = | 0.107 | acres |
| $A_P$ = | 0.28 | acres |
| $L_R$ = | 108 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 108 lbs.

F = 1.00

**19. BMPs Installed in a Series** Designed as Required in RG-348 Pages 3-32

**Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for $E_2$ be changed from 0.5 to 0.65 on May 3, 2006**

$E_{TOT} = [1 - ((1 - E_1) \times (1 - 0.65E_2) \times (1 - 0.25E_3))] \times 100$ = **93.87** percent NET EFFICIENCY OF THE BMPs IN THE SERIES

EFFICIENCY OF FIRST BMP IN THE SERIES = $E_1$ = 85 percent A3.1 VFS

EFFICIENCY OF THE SECOND BMP IN THE SERIES = $E_2$ = 91 percent POND D

EFFICIENCY OF THE THIRD BMP IN THE SERIES = $E_3$ = 0 percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
($A_I$ AND $A_P$ VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT} \times P \times (A_I \times 34.6 \times A_P \times 0.54)$ = **119** lbs



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** A1A2A3 - A3.2 ENG VFS

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 0.371 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.144 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.39 | |
| $L_{M\ THIS\ BASIN}$ = | 132 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 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

| | | |
|---|---|---|
| $A_C$ = | 0.371 | acres |
| $A_I$ = | 0.144 | acres |
| $A_P$ = | 0.23 | acres |
| $L_R$ = | 143 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 143 lbs.

F = 1.00

**19. BMPs Installed in a Series** Designed as Required in RG-348 Pages 3-32

Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for $E_2$ be changed from 0.5 to 0.65 on May 3, 2006

$E_{TOT} = [1 - ((1 - E_1) \times (1 - 0.65E_2) \times (1 - 0.25E_3))] \times 100$ = **93.87** percent NET EFFICIENCY OF THE BMPs IN THE SERIES

EFFICIENCY OF FIRST BMP IN THE SERIES = $E_1$ = 85 percent A3.2 VFS

EFFICIENCY OF THE SECOND BMP IN THE SERIES = $E_2$ = 91 percent POND D

EFFICIENCY OF THE THIRD BMP IN THE SERIES = $E_3$ = 0 percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
($A_I$ AND $A_P$ VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT} \times P \times (A_I \times 34.6 \times A_P \times 0.54)$ = **158** lbs



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** A1A2A3 - A3.3 ENG VFS

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 0.440 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.109 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.25 | |
| $L_{M\ THIS\ BASIN}$ = | 100 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 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

| | | |
|---|---|---|
| $A_C$ = | 0.440 | acres |
| $A_I$ = | 0.109 | acres |
| $A_P$ = | 0.33 | acres |
| $L_R$ = | 111 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 111 lbs.

F = 1.00

**19. BMPs Installed in a Series** Designed as Required in RG-348 Pages 3-32

Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for $E_2$ be changed from 0.5 to 0.65 on May 3, 2006

$E_{TOT} = [1 - ((1 - E_1) \times (1 - 0.65E_2) \times (1 - 0.25E_3))] \times 100$ = **93.87** percent NET EFFICIENCY OF THE BMPs IN THE SERIES

EFFICIENCY OF FIRST BMP IN THE SERIES = $E_1$ = 85 percent A3.3 VFS

EFFICIENCY OF THE SECOND BMP IN THE SERIES = $E_2$ = 91 percent POND F

EFFICIENCY OF THE THIRD BMP IN THE SERIES = $E_3$ = 0 percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
($A_I$ AND $A_P$ VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT} \times P \times (A_I \times 34.6 \times A_P \times 0.54)$ = **122** lbs



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** A1A2A3 - A3.4 ENG VFS

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 0.574 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.232 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.40 | |
| $L_{M\ THIS\ BASIN}$ = | 212 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 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

| | | |
|---|---|---|
| $A_C$ = | 0.574 | acres |
| $A_I$ = | 0.232 | acres |
| $A_P$ = | 0.34 | acres |
| $L_R$ = | 230 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 230 lbs.

F = 1.00

**19. BMPs Installed in a Series** Designed as Required in RG-348 Pages 3-32

Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for $E_2$ be changed from 0.5 to 0.65 on May 3, 2006

| | | | |
|---|---|---|---|
| $E_{TOT} = [1 - ((1 - E_1) X (1 - 0.65E_2) x (1 - 0.25E_3))] X 100$ = | 93.87 | percent | NET EFFICIENCY OF THE BMPs IN THE SERIES |
| EFFICIENCY OF FIRST BMP IN THE SERIES = $E_1$ = | 85 | percent | A3.4 VFS |
| EFFICIENCY OF THE SECOND BMP IN THE SERIES = $E_2$ = | 91 | percent | POND F |
| EFFICIENCY OF THE THIRD BMP IN THE SERIES = $E_3$ = | 0 | percent | |

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
($A_I$ AND $A_P$ VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT}$ X P X ($A_I$ X 34.6 X $A_P$ X0.54) = 254 lbs



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** B1.1 ENG PERM VFS

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 1.482 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.654 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.44 | |
| $L_{M\ THIS\ BASIN}$ = | 598 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 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

| | | |
|---|---|---|
| $A_C$ = | 1.482 | acres |
| $A_I$ = | 0.654 | acres |
| $A_P$ = | 0.83 | acres |
| $L_R$ = | 647 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 647 lbs.

F = 1.00

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** A4.1 ENG PERM VFS

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 0.821 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.314 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.38 | |
| $L_{M\ THIS\ BASIN}$ = | 287 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 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

| | | |
|---|---|---|
| $A_C$ = | 0.821 | acres |
| $A_I$ = | 0.314 | acres |
| $A_P$ = | 0.51 | acres |
| $L_R$ = | 312 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 312 lbs.

F = 1.00

**19. BMPs Installed in a Series** Designed as Required in RG-348 Pages 3-32

**Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for $E_2$ be changed from 0.5 to 0.65 on May 3, 2006**

$E_{TOT} = [1 - ((1 - E_1) \times (1 - 0.65E_2) \times (1 - 0.25E_3))] \times 100$ = **93.87** percent NET EFFICIENCY OF THE BMPs IN THE SERIES

EFFICIENCY OF FIRST BMP IN THE SERIES = $E_1$ = 85 percent A4.1 VFS

EFFICIENCY OF THE SECOND BMP IN THE SERIES = $E_2$ = 91 percent POND J

EFFICIENCY OF THE THIRD BMP IN THE SERIES = $E_3$ = 0 percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
($A_I$ AND $A_P$ VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT} \times P \times (A_I \times 34.6 \times A_P \times 0.54)$ = **345** lbs

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/10/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

**Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A**

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** POND J

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 55.830 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 25.520 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.46 | |
| $L_{M\ THIS\ BASIN}$ = | 23328 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = BATCH DETENTION
Removal efficiency = 91 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

| | | |
|---|---|---|
| $A_C$ = | 55.830 | acres |
| $A_I$ = | 25.520 | acres |
| $A_P$ = | 30.31 | acres |
| $L_R$ = | 27008 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 25522 lbs.

F = 0.94

**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 = 2.40 inches
Post Development Runoff Coefficient = 0.56
On-site Water Quality Volume = 272379 cubic feet

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

| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.000 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | 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 = | 54476 | |
| **Total Capture Volume (required water quality volume(s) x 1.20) =** | 326855 | 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.**



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** B4.1 ENG PERM VFS

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 0.680 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.287 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.42 | |
| $L_{M\ THIS\ BASIN}$ = | 262 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 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

| | | |
|---|---|---|
| $A_C$ = | 0.680 | acres |
| $A_I$ = | 0.287 | acres |
| $A_P$ = | 0.39 | acres |
| $L_R$ = | 284 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 284 lbs.

F = 1.00

**19. BMPs Installed in a Series** Designed as Required in RG-348 Pages 3-32

Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for $E_2$ be changed from 0.5 to 0.65 on May 3, 2006

| | | | |
|---|---|---|---|
| $E_{TOT} = [1 - ((1 - E_1) X (1 - 0.65E_2) x (1 - 0.25E_3))] X 100$ = | 93.87 | percent | NET EFFICIENCY OF THE BMPs IN THE SERIES |
| EFFICIENCY OF FIRST BMP IN THE SERIES = $E_1$ = | 85 | percent | B4.1 VFS |
| EFFICIENCY OF THE SECOND BMP IN THE SERIES = $E_2$ = | 91 | percent | POND J |
| EFFICIENCY OF THE THIRD BMP IN THE SERIES = $E_3$ = | 0 | percent | |

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
($A_I$ AND $A_P$ VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT}$ X P X ($A_I$ X 34.6 X $A_P$ X0.54) = 314 lbs



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. = B4.2 NATURAL VFS**

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 0.968 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.325 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.34 | |
| $L_{M\ THIS\ BASIN}$ = | 297 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 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

| | | |
|---|---|---|
| $A_C$ = | 0.968 | acres |
| $A_I$ = | 0.325 | acres |
| $A_P$ = | 0.64 | acres |
| $L_R$ = | 325 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 325 lbs.

F = 1.00




04/10/2026

Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** B4.3 ENG PERM VFS

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 0.752 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.324 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.43 | |
| $L_{M\ THIS\ BASIN}$ = | 296 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 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

| | | |
|---|---|---|
| $A_C$ = | 0.752 | acres |
| $A_I$ = | 0.324 | acres |
| $A_P$ = | 0.43 | acres |
| $L_R$ = | 321 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 321 lbs.

F = 1.00



Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

## Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** B4 GRASSY SWALE

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 0.622 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 0.156 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.25 | |
| $L_{M\ THIS\ BASIN}$ = | 143 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Grassy Swale
Removal efficiency = 70 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

| | | |
|---|---|---|
| $A_C$ = | 0.622 | acres |
| $A_I$ = | 0.156 | acres |
| $A_P$ = | 0.47 | acres |
| $L_R$ = | 130 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 130 lbs.

F = 1.00



**15. Grassy Swales** Designed as Required in RG-348 Pages 3-51 to 3-54

Design parameters for the swale:

| | | |
|---|---|---|
| Drainage Area to be Treated by the Swale = A = | **0.622** | acres |
| Impervious Cover in Drainage Area = | **0.156** | acres |
| Rainfall intensity = i = | 1.1 | in/hr |
| Swale Slope = | **0.025** | ft/ft |
| Side Slope (z) = | **3** | |
| Design Water Depth = y = | **0.33** | ft |
| Weighted Runoff Coefficient = C = | 0.43 | |
| $A_{CS}$ = cross-sectional area of flow in Swale = | 2.00 | sf |
| $P_W$ = Wetted Perimeter = | 7.11 | feet |
| $R_H$ = hydraulic radius of flow cross-section = $A_{CS}/P_W$ = | 0.28 | feet |
| n = Manning's roughness coefficient = | **0.03** | |

**15A. Using the Method Described in the RG-348**

Manning's Equation: $Q = \frac{1.49}{n} A_{CS} R_H^{2/3} S^{0.5}$

$b = \frac{0.134 \times Q}{y^{1.67} S^{0.5}} - zy$ = **5.00** feet

**Q = CiA =** 0.30 cfs

**To calculate the flow velocity in the swale:**

V (Velocity of Flow in the swale) = $Q/A_{CS}$ = 0.15 ft/sec

**To calculate the resulting swale length:**

L = Minimum Swale Length = V (ft/sec) * 300 (sec) = 44.42 feet

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters must be modified and the solver rerun.

**19. BMPs Installed in a Series** Designed as Required in RG-348 Pages 3-32

**Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for $E_2$ be changed from 0.5 to 0.65 on May 3, 2006**

| | | | |
|---|---|---|---|
| $E_{TOT} = [1 - ((1 - E_1) X (1 - 0.65E_2) x (1 - 0.25E_3))] X 100$ = | **87.75** | percent | NET EFFICIENCY OF THE BMPs IN THE SERIES |
| EFFICIENCY OF FIRST BMP IN THE SERIES = $E_1$ = | **70** | percent | B4 GRASSY SWALE |
| EFFICIENCY OF THE SECOND BMP IN THE SERIES = $E_2$ = | **91** | percent | POND J |
| EFFICIENCY OF THE THIRD BMP IN THE SERIES = $E_3$ = | **0** | percent | |

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
($A_I$ AND $A_P$ VALUES ARE FROM SECTION 3 ABOVE)

$L_R = E_{TOT} X P X (A_I X 34.6 X A_P X0.54)$ = **164** lbs

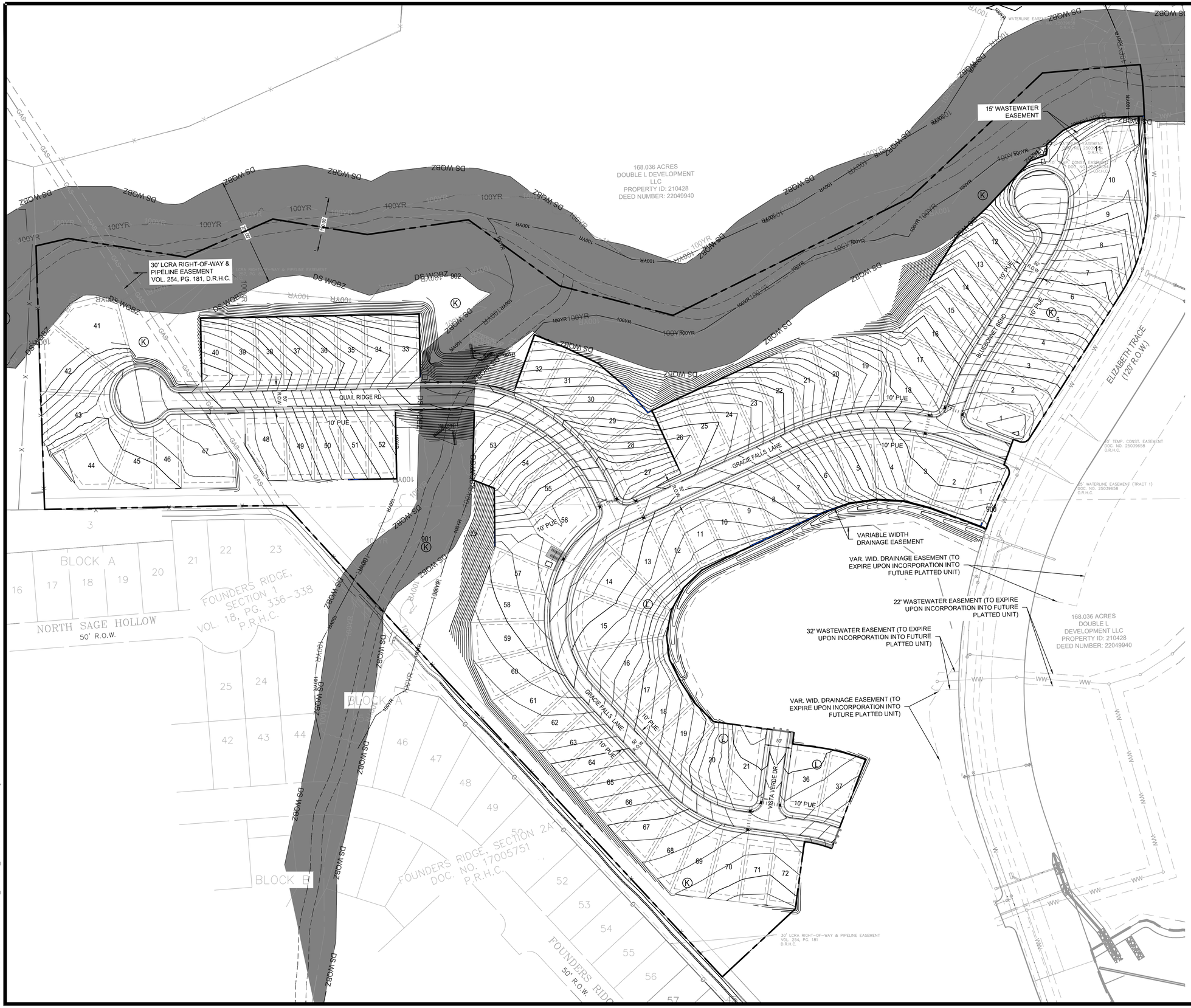
STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

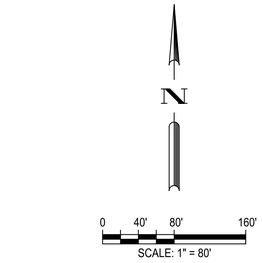
## Attachment L – BMPs for Surface Streams

No BMPs are proposed specifically for surface streams. Proposed on-site BMPs and drainage systems are designed to maintain existing flow patterns.

## Attachment M – Construction Plans

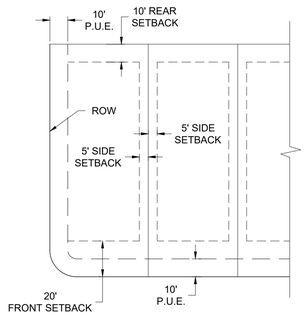
Construction plans for both temporary and permanent BMPs are attached.




## LEGEND

- PROPOSED BOUNDARY
- XXX EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 100YR 100 YR INUNDATION FLOOD PLAIN
- DS WQBZ DRIPPING SPRINGS WQBZ
- TCEQ WQBZ
- RETAINING WALL
- 10' PUE LINE
- BUILDING SETBACK LINE




TYPICAL BUILDING SETBACKS

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

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DAZ

REVIEWED BY: CL

DRAWN BY: DAZ

BGE


BGE, INC.
1701 Directors Blvd., Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


# DOUBLE L - POD A1 & A2 DRIPPING SPRINGS, TEXAS

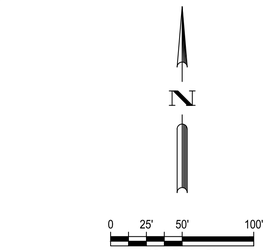
## OVERALL SITE PLAN

STATE OF TEXAS
DAVID A. MILLER
90235
LICENSED
PROFESSIONAL ENGINEER
4/9/2026

SHEET 9 OF 77

O:\00014789-00\LS\01 - Pod A1&A2\04_CADD\01_SHTS\C-SITE-PLAN-OV.dwg PLOTTED: 10/16/2024 11:41 AM BY: DZINSMEYER



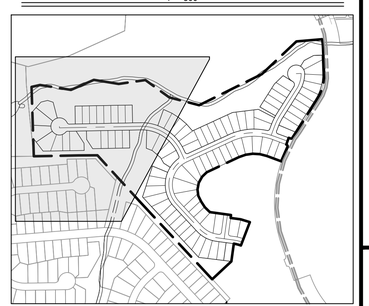

## LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- 745 EXISTING MAJOR CONTOUR
- 743 EXISTING MINOR CONTOUR
- 745 PROPOSED MAJOR CONTOUR
- 743 PROPOSED MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- RETAINING WALL
- LOC LIMITS OF CONSTRUCTION
- SF/LOC LIMITS OF CONSTRUCTION / SILT FENCE
- SF SILT FENCE
- 100YR 100YR INUNDATION FLOODPLAIN
- TCEQ WQBZ TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- ROCK BERM
- J-HOOK
- INLET PROTECTION
- FLOW DIRECTION
- CONCRETE WASHOUT
- STAGING AND SPOILS AREA
- STABILIZED CONSTRUCTION ENTRANCE
- LANDLOK EROSION CONTROL MATTING

### EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

KEY MAP
1" = 500'



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

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

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DAZ

REVIEWED BY: CL

DRAWN BY: DAZ

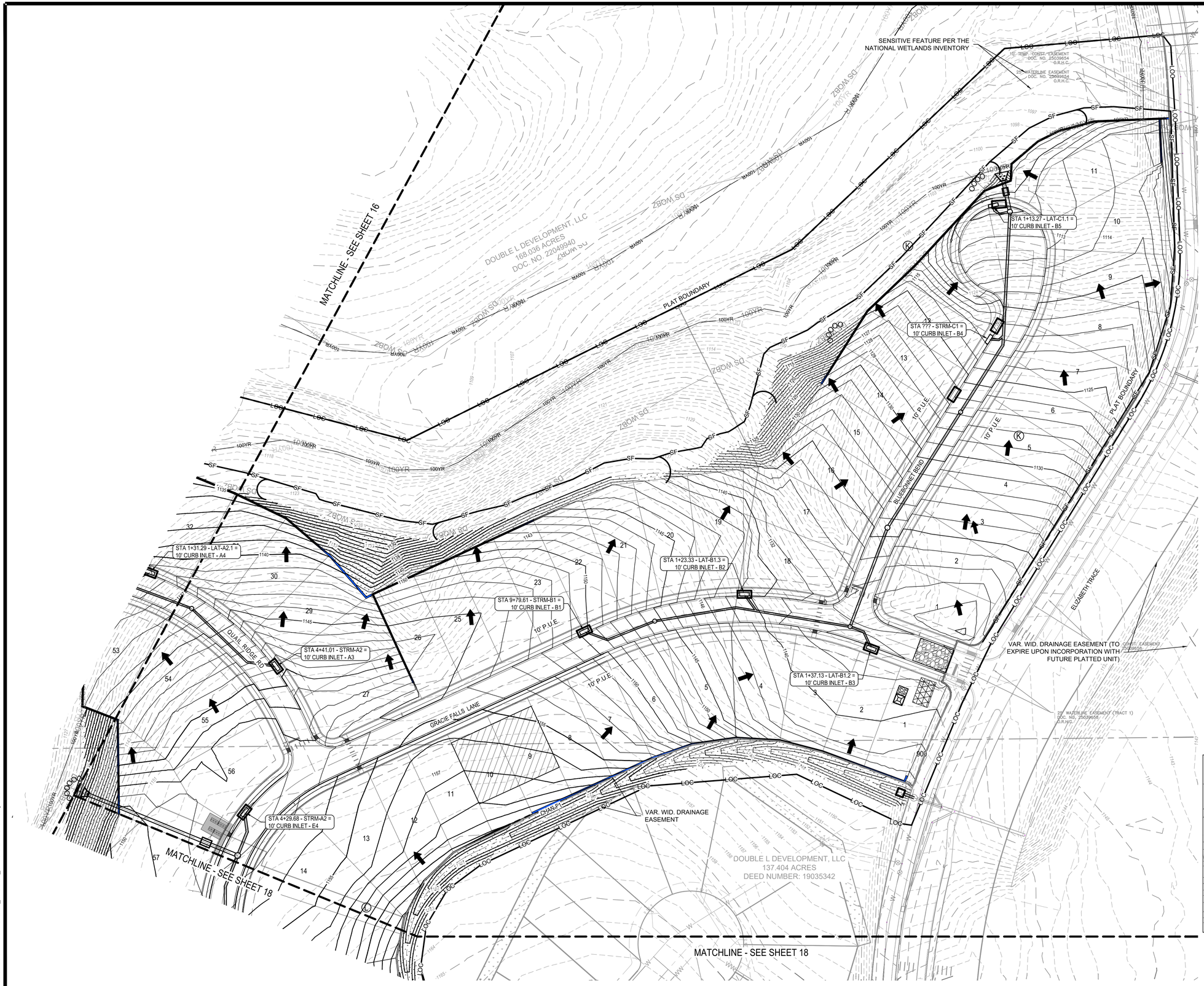
BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

# DOUBLE L - POD A1 & A2
# DRIPPING SPRINGS, TEXAS
## EROSION AND SEDIMENTATION CONTROL PLAN (1 OF 3)

STATE OF TEXAS
DAVID A. MILLER
90235
PROFESSIONAL ENGINEER
4/9/2026

SHEET
16 OF 77

O:\00014789-00\LS\01 - Pod A1&A2\04_CADD\01_SHTS\C-EROS-OV.dwg PLOTTED: 10/16/2024 11:41 AM BY: DZINSMEYER




N

0 25' 50' 100'

SCALE: 1" = 50'

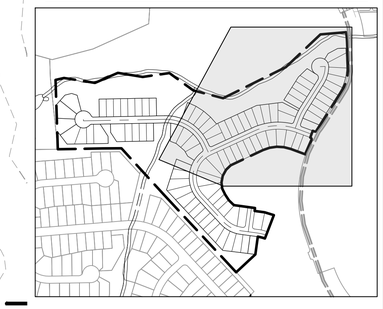
## LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- RETAINING WALL
- LIMITS OF CONSTRUCTION
- LIMITS OF CONSTRUCTION / SILT FENCE
- SILT FENCE
- 100YR INUNDATION FLOODPLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- ROCK BERM
- J-HOOK
- INLET PROTECTION
- FLOW DIRECTION
- CONCRETE WASHOUT
- STAGING AND SPOILS AREA
- STABILIZED CONSTRUCTION ENTRANCE
- LANDLOK EROSION CONTROL MATTING

### EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

KEY MAP
1" = 500'



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

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

| | APR | DATE | DESCRIPTION | REV |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: DAZ

REVIEWED BY: CL

DRAWN BY: DAZ


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


# DOUBLE L - POD A1 & A2
# DRIPPING SPRINGS, TEXAS

## EROSION AND SEDIMENTATION CONTROL PLAN (2 OF 3)

STATE OF TEXAS
DAVID A. MILLER
90235
LICENSED PROFESSIONAL ENGINEER
4/9/2026

SHEET
17 OF 77

O:\00014789-00\LS01 - Pod A1&A2\04_CADD\01_SHTS\C-EROS-OV.dwg PLOTTED: 10/16/2024 11:41 AM BY: DZINSMEYER




0 25' 50' 100'

SCALE: 1" = 50'

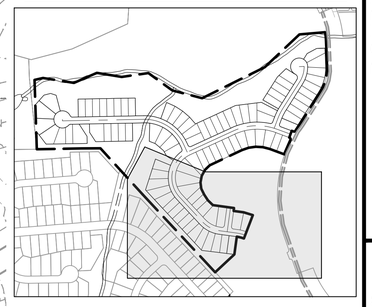
## LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- RETAINING WALL
- LIMITS OF CONSTRUCTION
- LIMITS OF CONSTRUCTION / SILT FENCE
- SILT FENCE
- 100YR INUNDATION FLOODPLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- ROCK BERM
- J-HOOK
- INLET PROTECTION
- FLOW DIRECTION
- CONCRETE WASHOUT
- STAGING AND SPOILS AREA
- STABILIZED CONSTRUCTION ENTRANCE
- LANDLOK EROSION CONTROL MATTING

### EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

KEY MAP
1" = 500'



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

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DAZ

REVIEWED BY: CL

DRAWN BY: DAZ

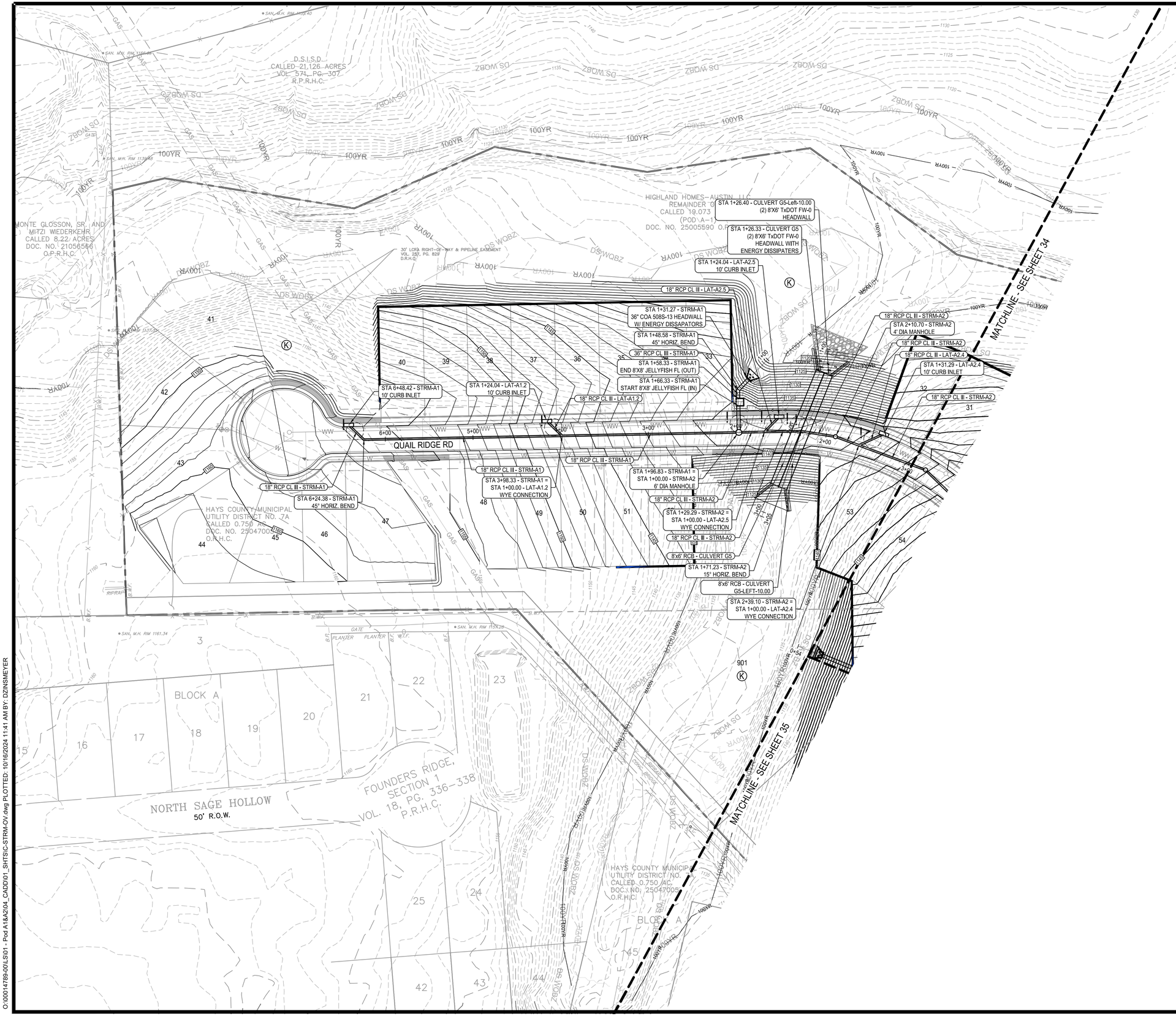

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

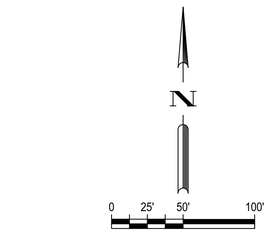

# DOUBLE L - POD A1 & A2
# DRIPPING SPRINGS, TEXAS
## EROSION AND SEDIMENTATION CONTROL PLAN
## (3 OF 3)

STATE OF TEXAS
DAVID A. MILLER
90235
PROFESSIONAL ENGINEER
4/9/2026

SHEET
18 OF 77

O:\00014789-00\LS\01 - Pod A1&A2\04_CADD\01_SHTS\C-EROS-OV.dwg PLOTTED: 10/16/2024 11:41 AM BY: DZINSMEYER

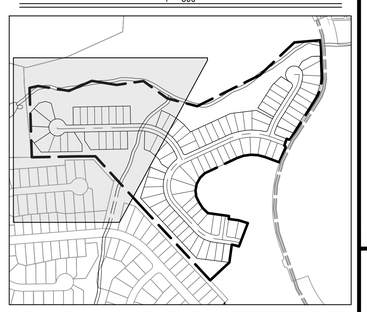



LEGEND

- PROPERTY BOUNDARY
- XXX — PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- DIRECTION OF STREET FLOW
- PROPOSED 10' CURB INLET
- PROPOSED 15' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED STORM SEWER
- WW — WASTEWATER LINE
- W — WATER LINE
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS

KEY MAP
1" = 500'



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

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

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DAZ

REVIEWED BY: CL

DRAWN BY: DAZ

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

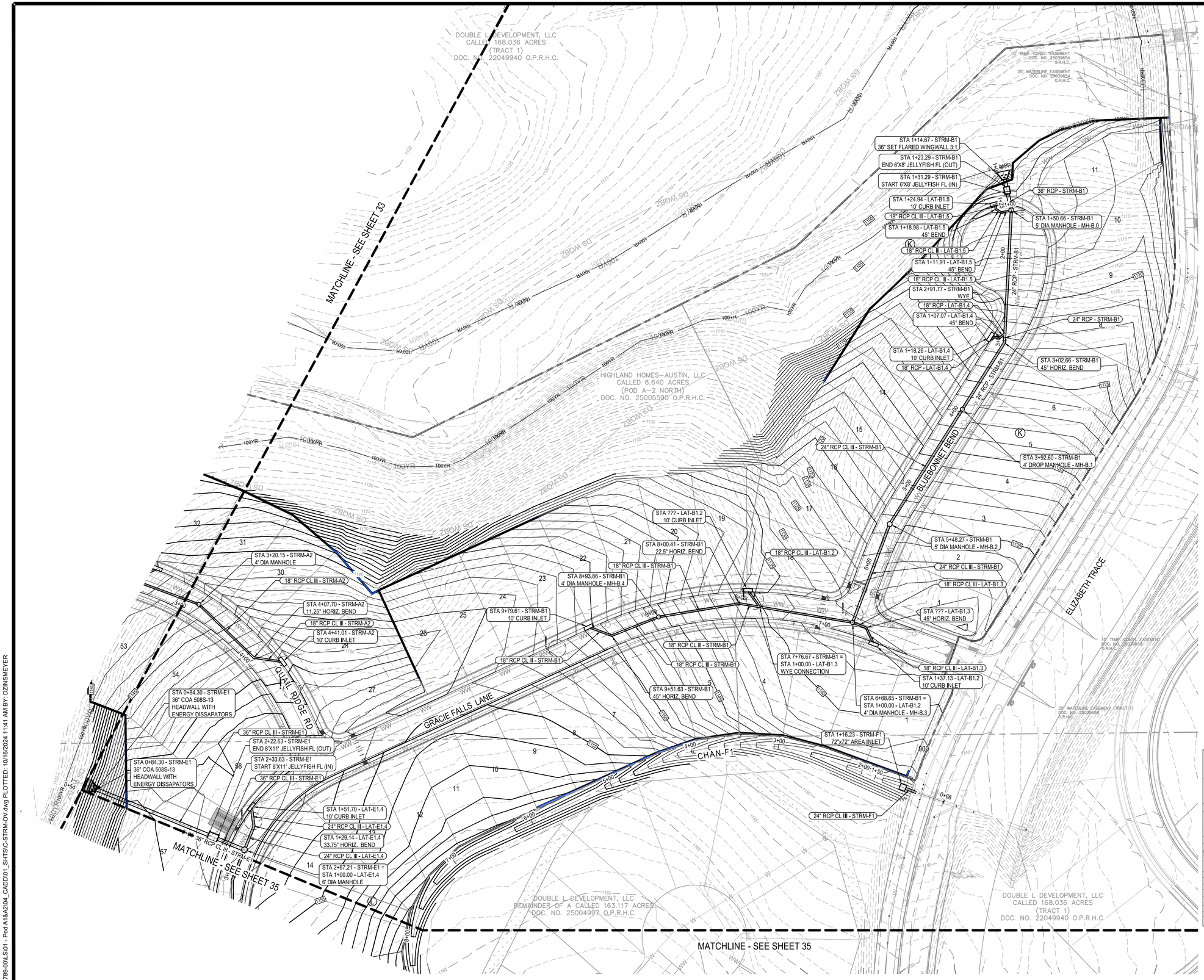
# DOUBLE L - POD A1 & A2
# DRIPPING SPRINGS, TEXAS

## OVERALL STORM DRAINAGE PLAN
## (1 OF 3)

STATE OF TEXAS
DAVID A. MILLER
90235
LICENSED PROFESSIONAL ENGINEER
4/9/2026

SHEET
33 OF 77

O:\100014789-00\LS\01 - Pod A1&A2\04_CADD\01_SHTS\C-STRM-OV.dwg PLOTTED: 10/16/2024 11:41 AM BY: DZINSMEYER




N

0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- XXX — PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- DIRECTION OF STREET FLOW
- PROPOSED 10' CURB INLET
- PROPOSED 15' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED STORM SEWER
- WW — WASTEWATER LINE
- W — WATER LINE
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS

KEY MAP
1" = 500'



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

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

| REV | DATE | APR | DESCRIPTION |
|---|---|---|---|
| | | | |

DESIGNED BY: DAZ

REVIEWED BY: CL

DRAWN BY: DAZ

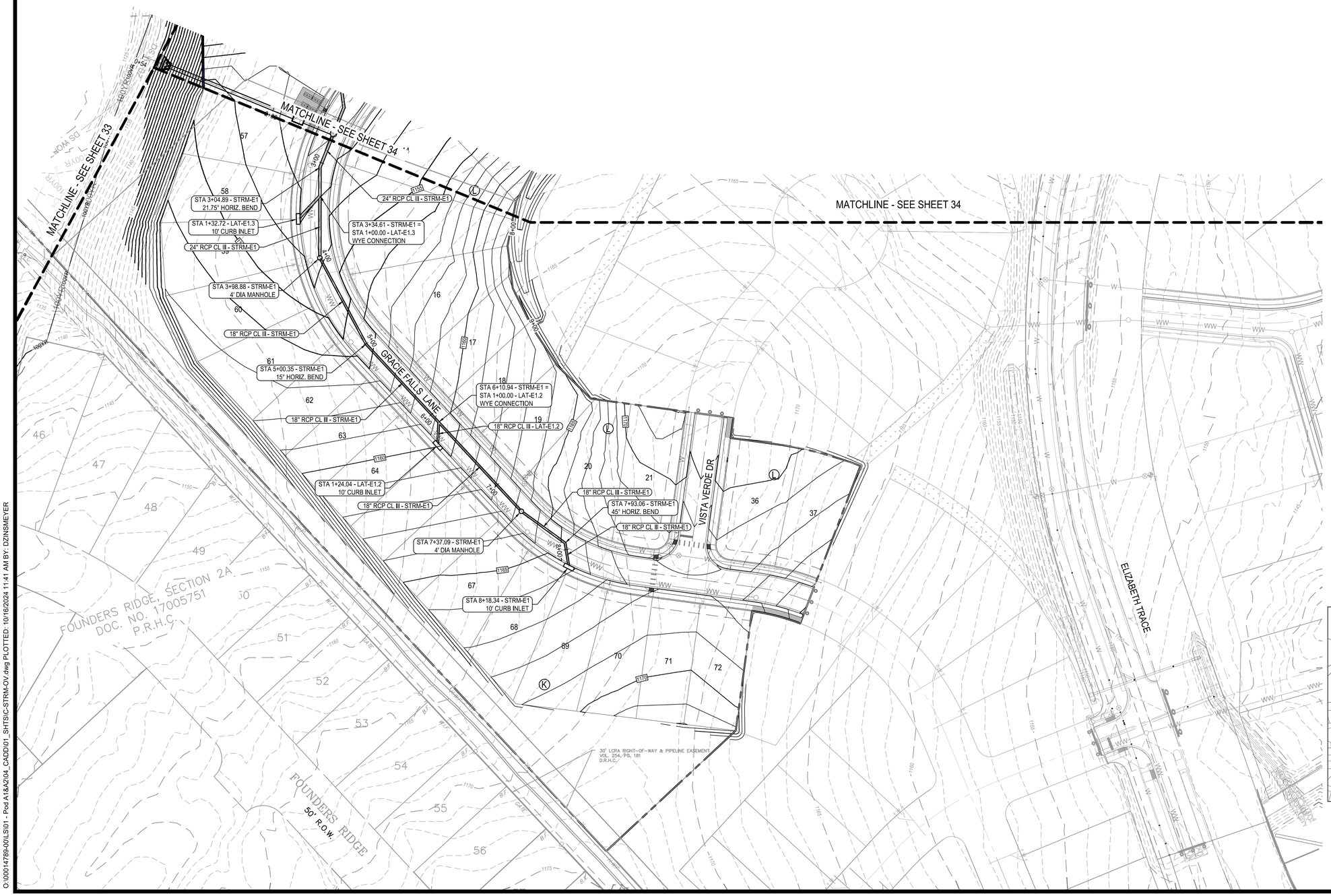
BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

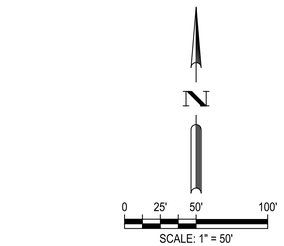
# DOUBLE L - POD A1 & A2
# DRIPPING SPRINGS, TEXAS
## OVERALL STORM DRAINAGE PLAN
## (2 OF 3)

STATE OF TEXAS
DAVID A. MILLER
90235
LICENSED PROFESSIONAL ENGINEER
4/9/2026

SHEET
34 OF 77

O:\00014789-00\LS01 - Pod A1&A2\04_CADD\01_SHTS\C-STRM-OV.dwg PLOTTED: 10/16/2024 11:41 AM BY: DZINSMEYER

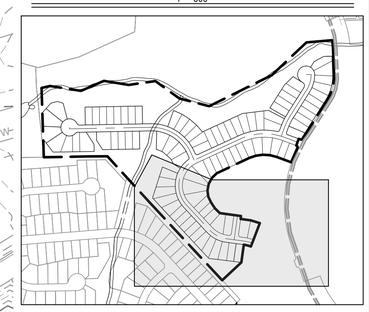



LEGEND

- PROPERTY BOUNDARY
- XXX — PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- DIRECTION OF STREET FLOW
- PROPOSED 10' CURB INLET
- PROPOSED 15' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED STORM SEWER
- WW — WASTEWATER LINE
- W — WATER LINE
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS

KEY MAP
1" = 500'



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

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DAZ

REVIEWED BY: CL

DRAWN BY: DAZ


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

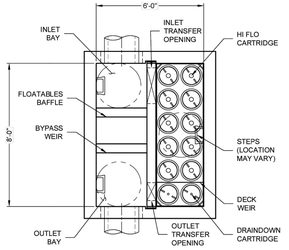

# DOUBLE L - POD A1 & A2
# DRIPPING SPRINGS, TEXAS

## OVERALL STORM DRAINAGE PLAN (3 OF 3)

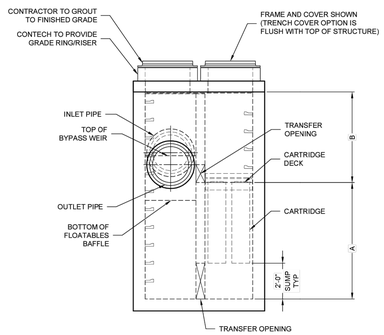
STATE OF TEXAS
DAVID A. MILLER
90035
LICENSED
PROFESSIONAL ENGINEER
4/9/2026

SHEET
35 OF 77

O:\00014789-00\LS01 - Pod A1&A2\04_CADD\01_SHTS\C-STRM-OV.dwg PLOTTED: 10/16/2024 11:41 AM BY: DZINSMEYER




**PLAN VIEW**
(TOP SLAB NOT SHOWN FOR CLARITY)




**ELEVATION VIEW**

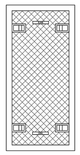
## JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

| CARTRIDGE SELECTION | | | | |
|---|---|---|---|---|
| CARTRIDGE LENGTH | 54" | 40" | 27" | 15" |
| OUTLET INVERT TO STRUCTURE INVERT (A) | 6'-6" | 5'-4" | 4'-3" | 3'-3" |
| FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART) | 0.178 / 0.089 | 0.133 / 0.067 | 0.089 / 0.045 | 0.049 / 0.025 |
| MAX. TREATMENT (CFS) | 1.96 | 1.47 | 0.98 | 0.54 |
| DECK TO INSIDE TOP (MIN) (B) | 5.00 | 4.00 | 4.00 | 4.00 |




**FRAME AND COVER**
(DIAMETER VARIES)
N.T.S.



**24" TRENCH COVER**
(LENGTH VARIES)
N.T.S.

**SITE SPECIFIC DATA REQUIREMENTS**

| | |
|---|---|
| STRUCTURE ID | * |
| WATER QUALITY FLOW RATE (cfs) | * |
| PEAK FLOW RATE (cfs) | * |
| RETURN PERIOD OF PEAK FLOW (yrs) | * |
| # OF CARTRIDGES REQUIRED (HF / DD) | * |
| CARTRIDGE LENGTH | * |

| PIPE DATA: | I.E. | MAT'L | DIA | SLOPE % | HGL |
|---|---|---|---|---|---|
| INLET #1 | * | * | * | * | * |
| INLET #2 | * | * | * | * | * |
| OUTLET | * | * | * | * | * |

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

| | |
|---|---|
| RIM ELEVATION | * |

| ANTI-FLOTATION BALLAST | WIDTH | HEIGHT |
|---|---|---|
| | * | * |

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES:
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS. LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

Jellyfish® Filter

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NO. 8,287,720; 8,221,616; US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JFPD0806
STANDARD DETAIL
PEAK DIVERSION CONFIGURATION

I:\COMMON\CAD\TREATMENT\13 JELLYFISH FILTERS\0 STANDARD DRAWINGS\JFPD\DWGs\JFPDD0806 DTL NEW.DWG 1/29/2018 10:39 AM

Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

**Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A**
**Characters shown in red are data entry fields.**
**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan * = | 58.429 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. = A1A2 JELLYFISH A**

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 4.624 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 2.611 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.56 | |
| $L_{M\ THIS\ BASIN}$ = | 2387 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

| | | |
|---|---|---|
| Proposed BMP = | JELLYFISH | |
| Removal efficiency = | 86 | 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: $L_R = (\text{BMP efficiency}) \times P \times (A_N \times 34.6 + A_P \times 0.54)$

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

| | | |
|---|---|---|
| $A_C$ = | 4.624 | acres |
| $A_I$ = | 2.611 | acres |
| $A_P$ = | 2.01 | acres |
| $L_R$ = | 2595 | lbs |

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

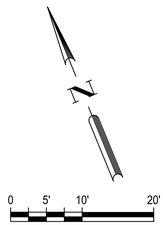
| | | |
|---|---|---|
| Desired $L_{M\ THIS\ BASIN}$ = | 2348 | lbs. |
| F = | 0.90 | |

**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

| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.00 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | acres |
| Rainfall Intensity = | 1.10 | inches per hour |
| Effective Area = | 2.41 | acres |
| Cartridge Length = | 54 | inches |
| **Peak Treatment Flow Required =** | **2.673** | cubic feet per second |

**7. Jellyfish**
Designed as Required in RG-348
Section 3.2.2.2

| Flow Through Jellyfish Size | Vault | |
|---|---|---|
| Jellyfish Size for Flow-Based Configuration = | JFPDo811-17-4 | *Selected by Contech prior to DA/C changing, will need to be updated |
| Jellyfish Treatment Flow Rate = | 3.39 | cfs |




SCALE: 1" = 10'

## LEGEND

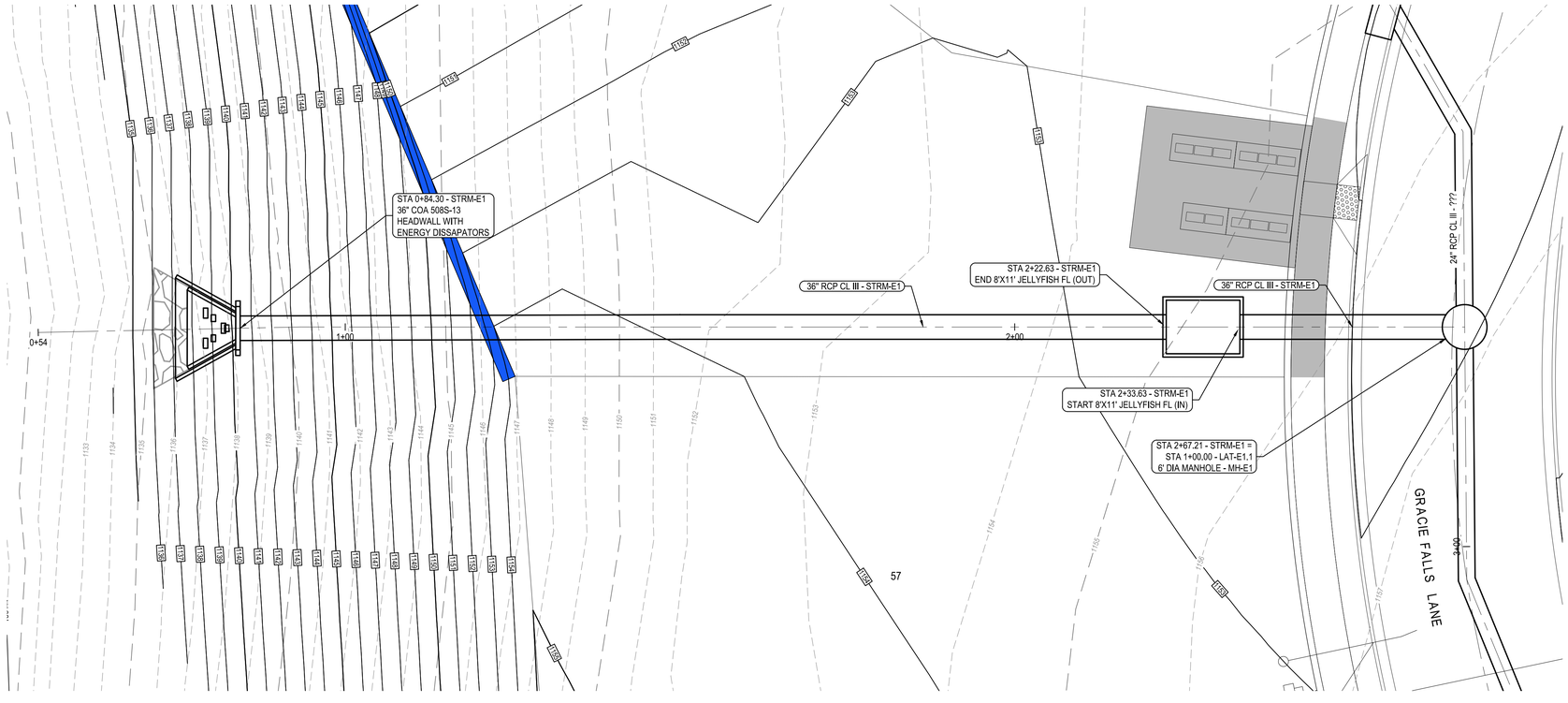
- PROPERTY BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- 100 — ENGINEERED 100YR FLOODPLAIN
- 100* — ENGINEERED INTERIM 100YR FLOODPLAIN (PRIOR TO DEVELOPMENT OF PHASE X)
- STORM SEWER FLOW DIRECTION
- PROPOSED JUNCTION BOX
- PROPOSED CURB INLET
- PROPOSED 4'X4' AREA INLET
- JURISDICTIONAL WATERS

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
2. ALL INLET AND STORM MANHOLE LIDS TO NOT STATE ANY CITY REFERENCES.
3. CONTRACTOR TO BE AWARE OF OVERHEAD ELECTRIC LINES AND UNDERGROUND GAS LINE AT ALL TIMES.
4. ALL FITTINGS AND WYES SHALL BE PRECAST ELEMENTS AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL FROM THE COUNTY.

## PROFILE LEGEND

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

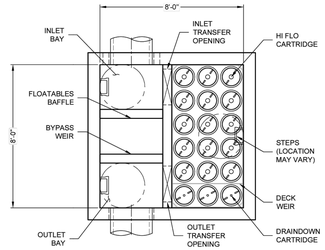
- PROPOSED GRADE
- PROPOSED SUBGRADE
- EXISTING GRADE
- 100 — 100YR HGL
- 25 — 25YR HGL
- PROPOSED STORM LINE
- PROPOSED STORM CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED JUNCTION BOX



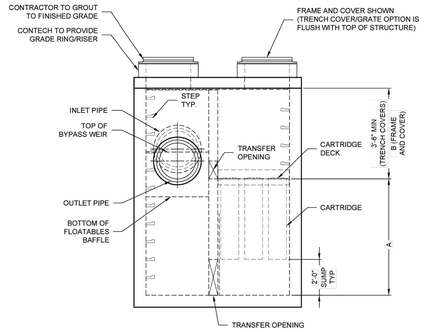

811 Know what's below. Call before you dig.

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

| | | DESCRIPTION | DATE | APR |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |




**PLAN VIEW**
(TOP SLAB NOT SHOWN FOR CLARITY)




**ELEVATION VIEW**

*Jellyfish® Filter*

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NO. 8,287,720; 8,221,618; US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

## JELLYFISH DESIGN NOTES

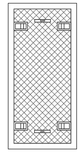
JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

CARTRIDGE SELECTION

| CARTRIDGE LENGTH | 54" | 40" | 27" | 15" |
|---|---|---|---|---|
| OUTLET INVERT TO STRUCTURE INVERT (A) | 6'-6" | 5'-4" | 4'-3" | 3'-3" |
| FLOW RATE HI-FLO / DRAINDOWN (CFS) (PER CART) | 0.178 / 0.089 | 0.133 / 0.067 | 0.089 / 0.045 | 0.049 / 0.025 |
| MAX. TREATMENT (CFS) | 2.94 | 2.21 | 1.47 | 0.81 |
| DECK TO INSIDE TOP (MIN) (B) | 5.00 | 4.00 | 4.00 | 4.00 |




**FRAME AND COVER**
(DIAMETER VARIES)
N.T.S.



**24" TRENCH COVER**
(LENGTH VARIES)
N.T.S.

**SITE SPECIFIC DATA REQUIREMENTS**

| | |
|---|---|
| STRUCTURE ID | * |
| WATER QUALITY FLOW RATE (cfs) | * |
| PEAK FLOW RATE (cfs) | * |
| RETURN PERIOD OF PEAK FLOW (yrs) | * |
| # OF CARTRIDGES REQUIRED (HF / DD) | * |
| CARTRIDGE LENGTH | * |

| PIPE DATA: | I.E. | MAT'L | DIA | SLOPE % | HGL |
|---|---|---|---|---|---|
| INLET #1 | * | * | * | * | * |
| INLET #2 | * | * | * | * | * |
| OUTLET | * | * | * | * | * |

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

| | |
|---|---|
| RIM ELEVATION | * |

| ANTI-FLOTATION BALLAST | WIDTH | HEIGHT |
|---|---|---|
| | * | * |

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

**CONTECH ENGINEERED SOLUTIONS LLC**
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

**JELLYFISH JFPD0808**
**STANDARD DETAIL**
**PEAK DIVERSION CONFIGURATION**

Texas Commission on Environmental Quality

***TSS Removal Calculations***

Project Name: **Double L Ranch Pod**
Date Prepared: **4/9/2026**

**Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.**

**Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A**
**Characters shown in red are data entry fields.**
**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan* = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 68.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. = A1&2 JELLYFISH B**

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 5.945 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 2.922 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.49 | |
| $L_{M\ THIS\ BASIN}$ = | 2671 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = JELLYFISH
Removal efficiency = 86 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: $L_R = (\text{BMP efficiency}) \times P \times (A_N \times 34.6 + A_P \times 0.54)$

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

| | | |
|---|---|---|
| $A_C$ = | 5.945 | acres |
| $A_I$ = | 2.922 | acres |
| $A_P$ = | 3.02 | acres |
| $L_R$ = | 2916 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 2638 lbs.

F = 0.90

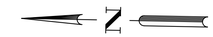
**6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.** Calculations from RG-348 Pages 3-34 to 3-36

| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.00 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | acres |
| Rainfall Intensity = | 1.10 | inches per hour |
| Effective Area = | 2.72 | acres |
| Cartridge Length = | 54 | inches |
| **Peak Treatment Flow Required =** | 3.016 | cubic feet per second |

**7. Jellyfish**
Designed as Required in RG-348
Section 3.2.22

| Flow Through Jellyfish Size | Vault |
|---|---|
| Jellyfish Size for Flow-Based Configuration = | JFPDo811-16-4 |
| Jellyfish Treatment Flow Rate = | 3.31 cfs |

*Selected by Contech prior to DA/C changing, will need to be updated




## LEGEND

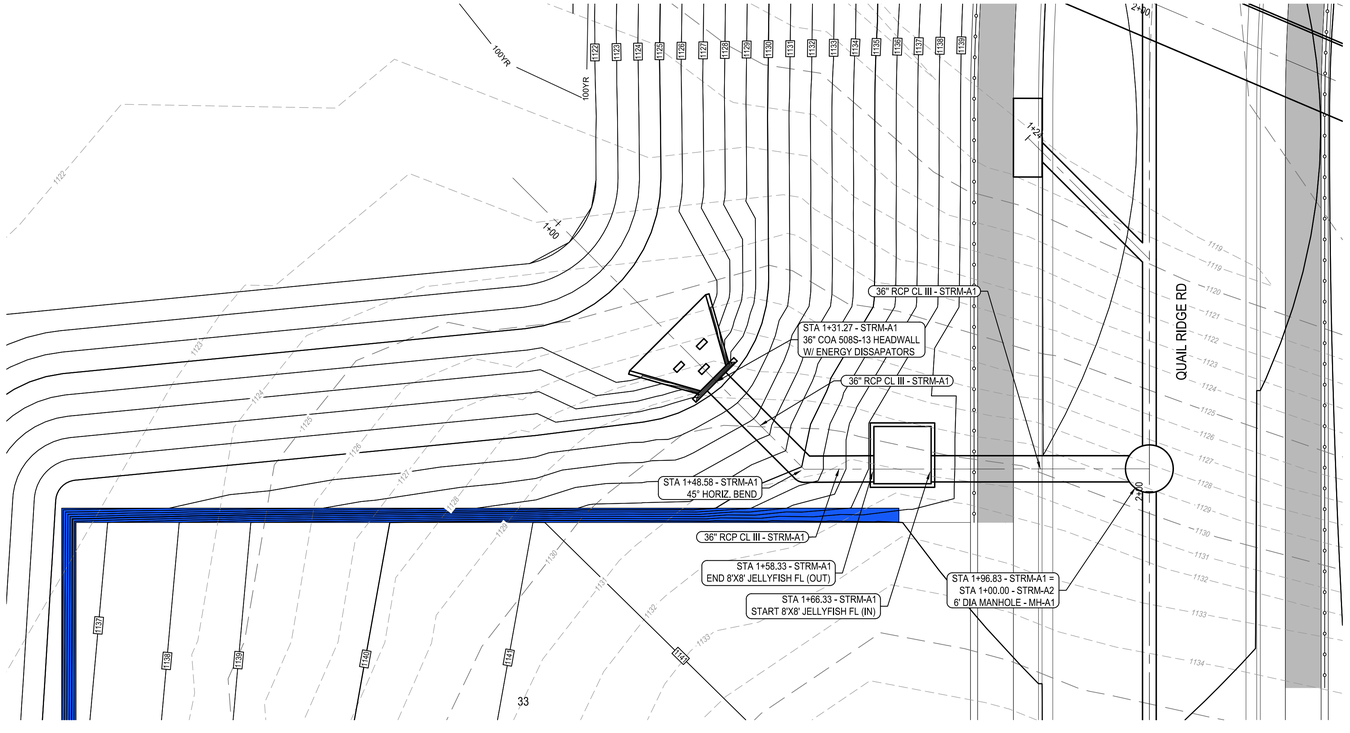
- PROPERTY BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- 100 — ENGINEERED 100YR FLOODPLAIN
- 100* — ENGINEERED INTERIM 100YR FLOODPLAIN (PRIOR TO DEVELOPMENT OF PHASE X)
- STORM SEWER FLOW DIRECTION
- PROPOSED JUNCTION BOX
- PROPOSED CURB INLET
- PROPOSED 4'X4' AREA INLET
- JURISDICTIONAL WATERS

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
2. ALL INLET AND STORM MANHOLE LIDS TO NOT STATE ANY CITY REFERENCES.
3. CONTRACTOR TO BE AWARE OF OVERHEAD ELECTRIC LINES AND UNDERGROUND GAS LINE AT ALL TIMES.
4. ALL FITTINGS AND WYES SHALL BE PRECAST ELEMENTS AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL FROM THE COUNTY.

## PROFILE LEGEND

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

- PROPOSED GRADE
- PROPOSED SUBGRADE
- EXISTING GRADE
- 100 — 100YR HGL
- 25 — 25YR HGL
- PROPOSED STORM LINE
- PROPOSED STORM CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED JUNCTION BOX




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

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

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| | | | | | | | REV |

DESIGNED BY: DAZ
REVIEWED BY: CL
DRAWN BY: DAZ

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

DOUBLE L - POD A1 & A2
DRIPPING SPRINGS, TEXAS

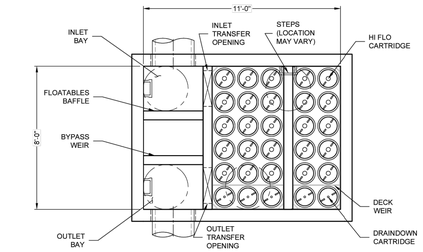
WATER TREATMENT VAULT B PLAN AND DETAILS

STATE OF TEXAS
DAVID A. MILLER
90235
LICENSED
PROFESSIONAL ENGINEER
4/9/2026

SHEET
45 OF 77

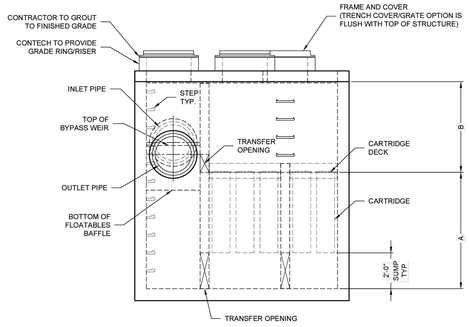
O:\000147\89-00\LS\01 - Pod A1&A2\04_CADD\01_SHTS\C-POND-PP-A.dwg PLOTTED: 10/16/2024 11:41 AM BY: DZINSMEYER

I:\COMMON\CAD\TEMPLATES\ACTIVE\2013 JELLYFISH FILTERS\8 STANDARD DRAWINGS\JFPD0808\JFPD0808_STL_NEW.DWG - 10/25/2018 10:32 AM




**PLAN VIEW**

(TOP SLAB NOT SHOWN FOR CLARITY)




**ELEVATION VIEW**

Jellyfish® Filter

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: U.S. PATENT NO. 8,287,726; 8,221,616; US 8,123,935; OTHER INTERNATIONAL PATENTS PENDING

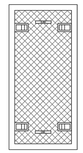
## JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT AND/OR SHALLOW ORIENTATIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD

| CARTRIDGE SELECTION | | | | |
|---|---|---|---|---|
| CARTRIDGE LENGTH | 54" | 40" | 27" | 15" |
| OUTLET INVERT TO STRUCTURE INVERT (A) | 6'-6" | 5'-4" | 4'-3" | 3'-3" |
| FLOW RATE HIGH-FLO / DRAINDOWN (CFS) (PER CART) | 0.178 / 0.089 | 0.133 / 0.067 | 0.089 / 0.045 | 0.049 / 0.025 |
| MAX. TREATMENT (CFS) | 4.90 | 3.67 | 2.45 | 1.36 |
| DECK TO INSIDE TOP (MIN) (B) | 5.00 | 4.00 | 4.00 | 4.00 |




**FRAME AND COVER**
(DIAMETER VARIES)
N.T.S.



**24" TRENCH COVER**
(LENGTH VARIES)
N.T.S.

**SITE SPECIFIC DATA REQUIREMENTS**

| | |
|---|---|
| STRUCTURE ID | * |
| WATER QUALITY FLOW RATE (cfs) | * |
| PEAK FLOW RATE (cfs) | * |
| RETURN PERIOD OF PEAK FLOW (yrs) | * |
| # OF CARTRIDGES REQUIRED (HF / DD) | * |
| CARTRIDGE LENGTH | * |

| PIPE DATA: | I.E. | MAT'L | DIA | SLOPE % | HGL |
|---|---|---|---|---|---|
| INLET #1 | * | * | * | * | * |
| INLET #2 | * | * | * | * | * |
| OUTLET | * | * | * | * | * |

SEE GENERAL NOTES 6-7 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

| | |
|---|---|
| RIM ELEVATION | * |

| ANTI-FLOTATION BALLAST | WIDTH | HEIGHT |
|---|---|---|
| | * | * |

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JFPD0811
STANDARD DETAIL
PEAK DIVERSION CONFIGURATION

Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/9/2026

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.

**Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A**
Characters shown in red are data entry fields.
**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. = A1A2 JELLYFISH E**

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 5.332 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 2.402 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.45 | |
| $L_{M\ THIS\ BASIN}$ = | 2196 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = JELLYFISH
Removal efficiency = 86 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 efficiency) x P x ($A_N$ x 34.6 + $A_P$ x 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

| | | |
|---|---|---|
| $A_C$ = | 5.332 | acres |
| $A_I$ = | 2.402 | acres |
| $A_P$ = | 2.93 | acres |
| $L_R$ = | 2404 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 2175 lbs.

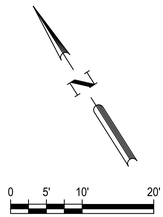
F = 0.90

**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

| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.000 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | acres |
| Rainfall Intensity = | 1.10 | inches per hour |
| Effective Area = | 2.25 | acres |
| Cartridge Length = | 54 | inches |
| **Peak Treatment Flow Required =** | **2.494** | cubic feet per second |

**7. Jellyfish**
Designed as Required in RG-348
Section 3.2.22

| Flow Through Jellyfish Size | Vault | |
|---|---|---|
| Jellyfish Size for Flow-Based Configuration = | JFPD0811-15-4 | *Selected by Contech prior to DA/IC changing, will need to be updated |
| Jellyfish Treatment Flow Rate = | 3.03 | cfs |




SCALE: 1" = 10'

## LEGEND

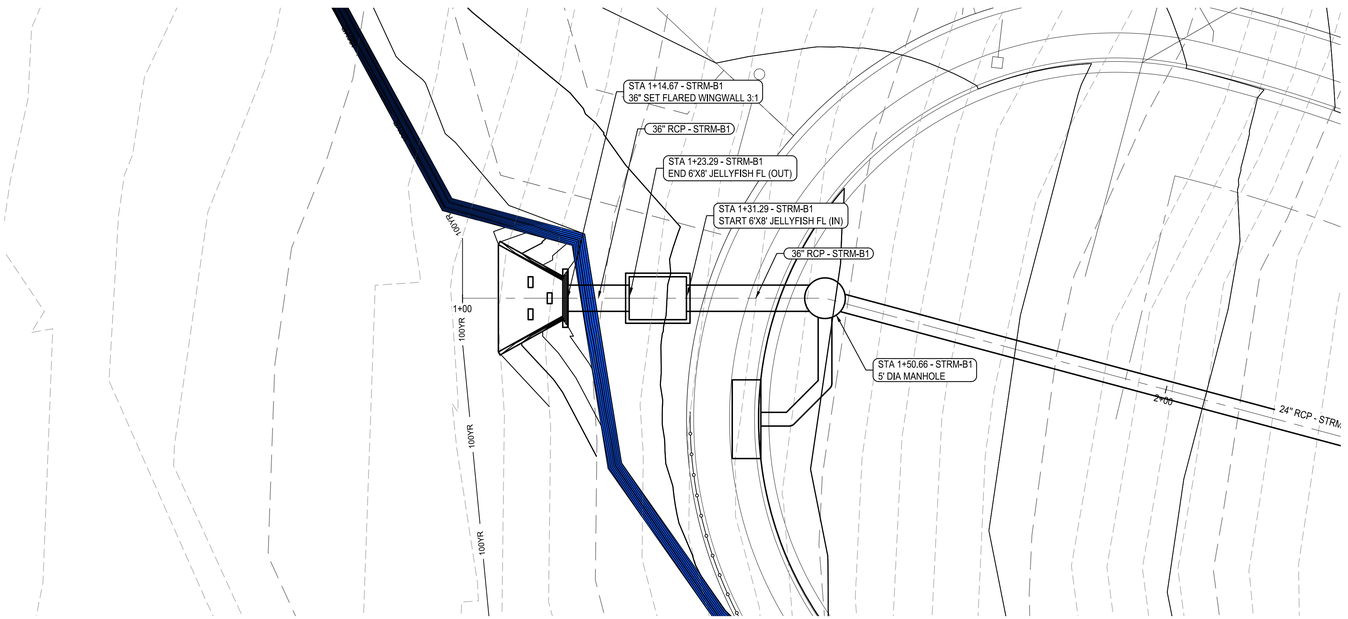
- PROPERTY BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- 100 — ENGINEERED 100YR FLOODPLAIN
- 100* — ENGINEERED INTERIM 100YR FLOODPLAIN (PRIOR TO DEVELOPMENT OF PHASE X)
- STORM SEWER FLOW DIRECTION
- PROPOSED JUNCTION BOX
- PROPOSED CURB INLET
- PROPOSED 4'X4' AREA INLET
- JURISDICTIONAL WATERS

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
2. ALL INLET AND STORM MANHOLE LIDS TO NOT STATE ANY CITY REFERENCES.
3. CONTRACTOR TO BE AWARE OF OVERHEAD ELECTRIC LINES AND UNDERGROUND GAS LINE AT ALL TIMES.
4. ALL FITTINGS AND WYES SHALL BE PRECAST ELEMENTS AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL FROM THE COUNTY.

## PROFILE LEGEND

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

- PROPOSED GRADE
- PROPOSED SUBGRADE
- EXISTING GRADE
- 100 — 100YR HGL
- 25 — 25YR HGL
- PROPOSED STORM LINE
- PROPOSED STORM CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED JUNCTION BOX




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

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DAZ
REVIEWED BY: CL
DRAWN BY: DAZ


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


DOUBLE L - POD A1 & A2
DRIPPING SPRINGS, TEXAS

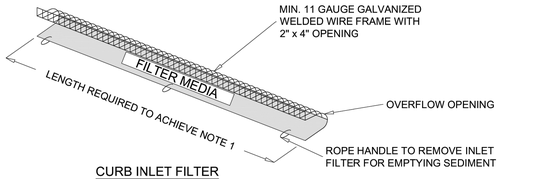
WATER TREATMENT VAULT E PLAN AND DETAILS

STATE OF TEXAS
DAVID A. MILLER
90235
LICENSED PROFESSIONAL ENGINEER
4/9/2026

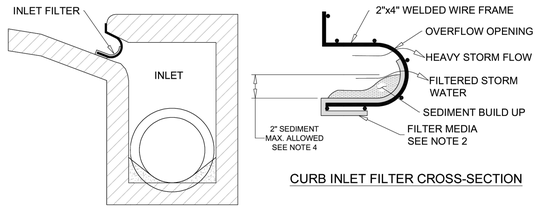
SHEET
46 OF 77

O:\00014789-00\ILS\01 - Pod A1&A2\04_CADD\01_SHTS\C-POND-PP-A.dwg PLOTTED: 10/16/2024 11:41 AM BY: DZINSMEYER

C:\USERS\SSKOCLONE\DRIVE - CONTECH ENGINEERED SOLUTIONS\PROFESSIONAL INITITIVES AND PROJECTS\JFPD0811-DTL.DWG 6/26/2018 8:18 AM




CURB INLET FILTER

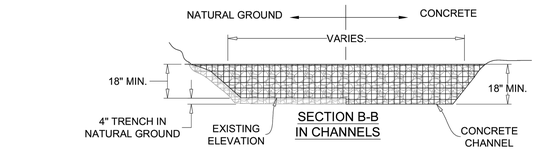



CURB INLET FILTER CROSS-SECTION

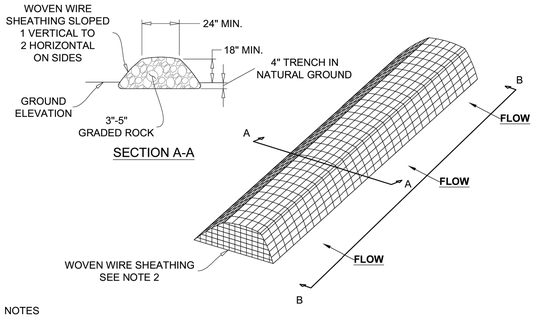
CURB INLET FILTER CROSS-SECTION SHOWING INLET PLACEMENT

NOTE:
1. THE INLET FILTER SHALL BE INSERTED INTO THE CURB INLET TO CREATE A COMPRESSION FIT IN THE INLET
2. THE FILTER MEDIA FOR PROJECTS WITHIN CITY OF SAN MARCOS JURISDICTION IS TO BE WOVEN FILTER FABRIC WITH A MINIMUM WATER FLOW RATE OF 300 GALLONS A MINUTE PER SQUARE FOOT ( 300 GAL/MIN/SF) .
3. THE FILTER MEDIA IS TO BE ATTACHED TO THE WIRE FRAME WITH HOG RINGS LEAVING AN OVERFLOW OPENING ABOVE THE FILTER MEDIA.
4. INSPECTION SHALL BE MADE BY THE CONTRACTOR WEEKLY AND WITHIN 24 HOURS OF A RAIN EVENT AND SILT ACCUMULATION MUST BE REMOVED WHEN THE DEPTH REACHES 2 INCHES.
5. INLET FILTER WILL BE REMOVED UPON STABILIZATION OF SEDIMENT SOURCES

| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | CURB INLET PROTECTION | |
|---|---|---|---|
| RECORDED COPY SIGNED BY | 2-15-2015 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD | 628S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | N.T.S. | STANDARD DETAIL |



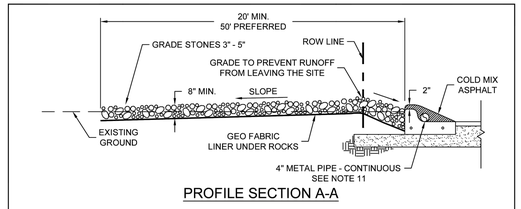

SECTION B-B IN CHANNELS



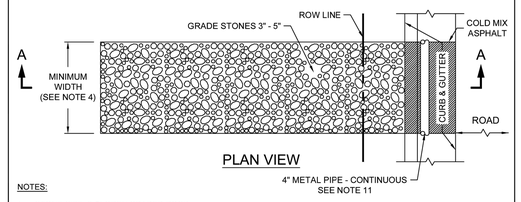

SECTION A-A

NOTES
1. USE ONLY OPEN GRADED ROCK 3"-5" IN DIAMETER.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT CONSTRUCTION, TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO 6", THE SILT WILL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS.
6. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | ROCK BERM DETAIL | |
|---|---|---|---|
| RECORDED COPY SIGNED BY | 8/4/2014 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD | 639S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | N.T.S. | STANDARD DETAIL |



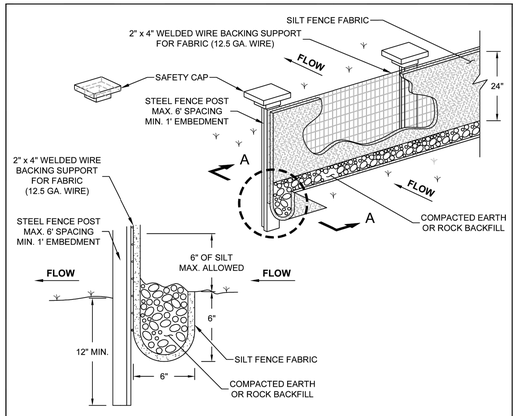

PROFILE SECTION A-A




PLAN VIEW

NOTES:
1. STONE SIZE: 3-5" OPEN GRADED ROCK.
2. LENGTH: 50' PREFERRED OR AS EFFECTIVE BUT NOT LESS THAN 20'.
3. THICKNESS: NOT LESS THAN 8".
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. DIMENSIONS OF SITE WILL DICTATE THE DIMENSIONS OF THE STABILIZED CONSTRUCTION ENTRANCES IF THE PREFERRED DIMENSIONS ARE NOT POSSIBLE ON SITE.
6. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
7. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASUREMENT DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENT THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
8. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
9. WHEN ALL SITE WORK IS COMPLETED, REMOVE STABILIZED CONSTRUCTION ENTRANCE COMPLETELY. REGRADE TO ORIGINAL CONDITION, ELEVATION AND RESTORE TO MATCH EXISTING OR PROPOSED CONDITIONS.
10. TOP OF GRADE STONES SHALL MATCH TOP OF EXISTING PAVEMENT OR CURB. COLD MIX ASPHALT & 4" METAL PIPE OR ALTERNATIVE WILL NOT BE REQUIRED WHERE THERE IS NO CATCH OR SPILL CURB.
11. PRE-FABRICATED CURB RAMPS ARE AN ACCEPTABLE ALTERNATIVE TO COLD MIX ASPHALT AND 4" METAL PIPE.

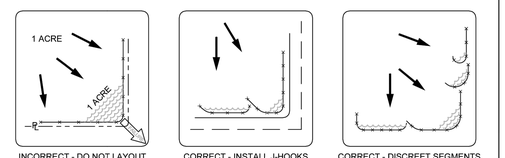
| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | STABILIZED CONSTRUCTION ENTRANCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY | 1/1/2021 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 641S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | 1 OF 1 |




SECTION A-A

NOTES:
1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS SHALL MATCH THE TOP OF THE FENCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1'.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 6" DEEP AND 6" WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY AND REPAIR OR REPLACEMENT SHALL BE MADE WITHIN 24 HOURS OF INSPECTION.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS PERMANENTLY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WITHIN 24 HOURS WHEN IT REACHES A DEPTH OF 6" OR AS DIRECTED BY OWNER. THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. INSTALL J-HOOK SPACING PER ENGINEER'S DESIGN , BUT NOT TO EXCEED 200'.

| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | SILT FENCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY | 1/1/2020 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 642S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | 1 OF 2 |

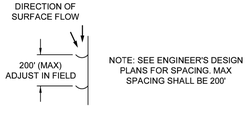



SILT FENCE TURNBACK DETAIL

SILT FENCE PLACEMENT FOR PERIMETER CONTROL

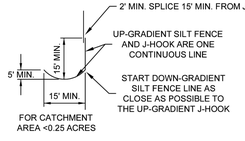
PLAN VIEW

I. SPACING REQUIREMENTS:

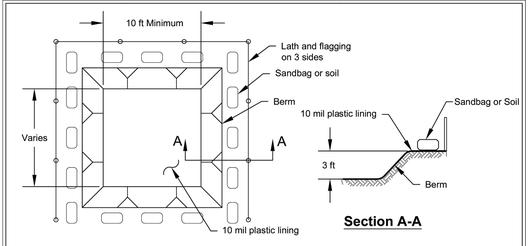



NOTE: SEE ENGINEER'S DESIGN PLANS FOR SPACING. MAX SPACING SHALL BE 200'

II. SIZING REQUIREMENTS:

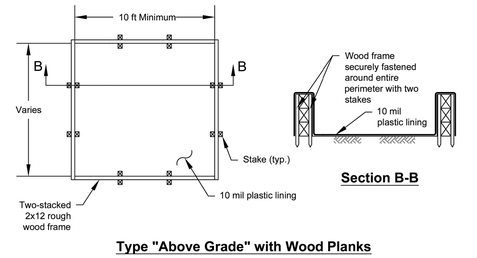



| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | SILT FENCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY | 1/1/2020 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 642S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | 2 OF 2 |




Section A-A

Type "Above Grade" with Earthen Berms




Section B-B

Type "Above Grade" with Wood Planks

NOT TO SCALE

Hays County Concrete Washout Area

Revised June 2025

| APR | DATE | DESCRIPTION | REV |
|---|---|---|---|
| | | | |

DESIGNED BY: DAZ

REVIEWED BY: CL

DRAWN BY: DAZ

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

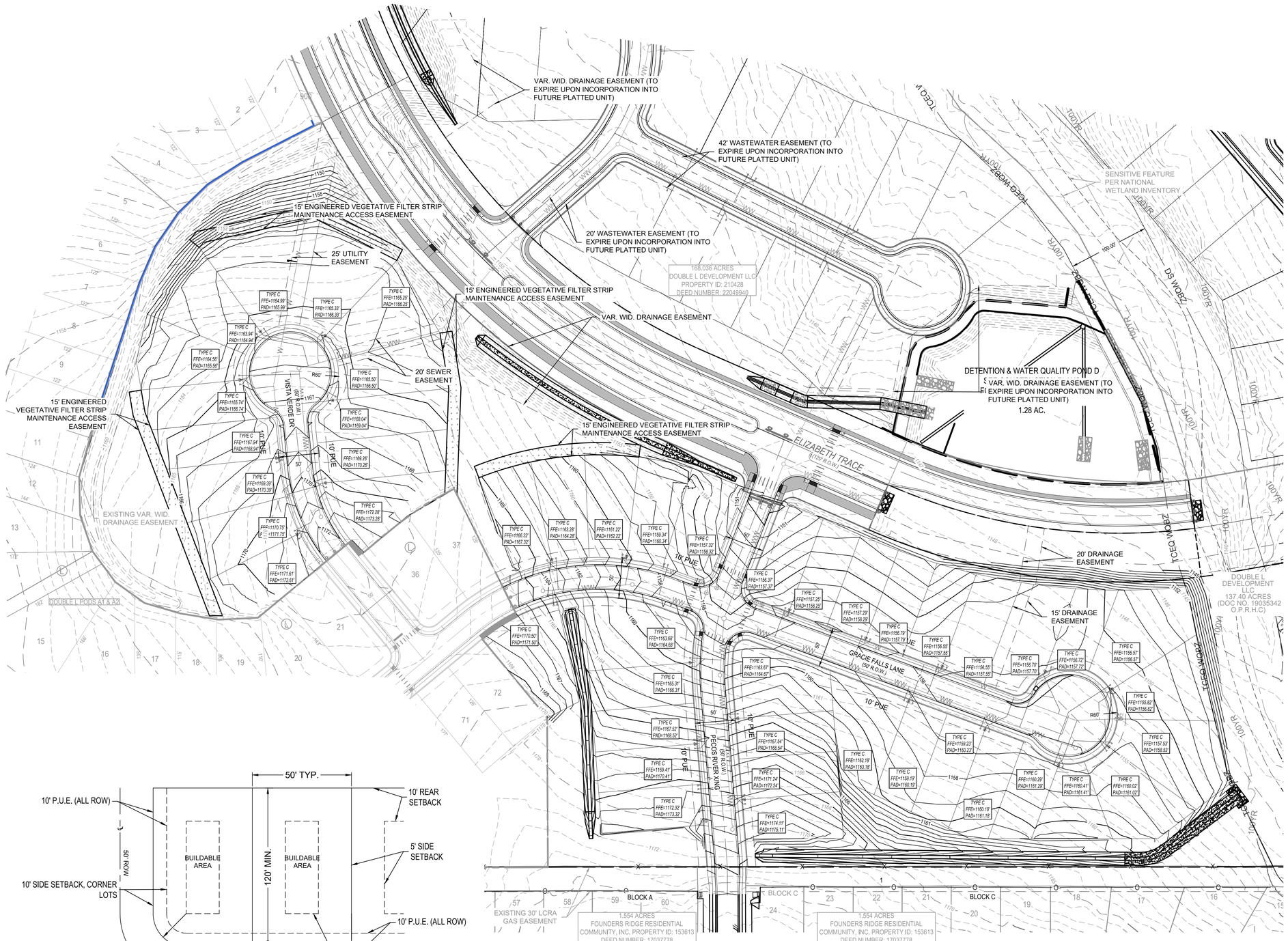
DOUBLE L - POD A1 & A2
DRIPPING SPRINGS, TEXAS

EROSION DETAILS

STATE OF TEXAS
DAVID A. MILLER
90235
LICENSED PROFESSIONAL ENGINEER
4/9/2026

SHEET
62 OF 77

O:\00014789-00\LS\01 - Pod A1&A2\04_CADD\01_SHTS\C-DET-L-OV.dwg PLOTTED: 10/16/2024 11:41 AM BY: CWIRTANEN







TYPICAL LOT LAYOUT
N.T.S.

N

0 30' 60' 120'

SCALE: 1" = 60'

LEGEND

XXX

100YR

TCEQ WQBZ

DS WQBZ

NOTE:

SEE TREE PLAN THIS SET FOR TREE PROTECTION AND TREES TO BE REMOVED

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


# DOUBLE L RANCH POD A3

## OVERALL SITE PLAN

STATE OF TEXAS
PATRICK M. SULLIVAN
142359
LICENSED PROFESSIONAL ENGINEER

04-10-2026

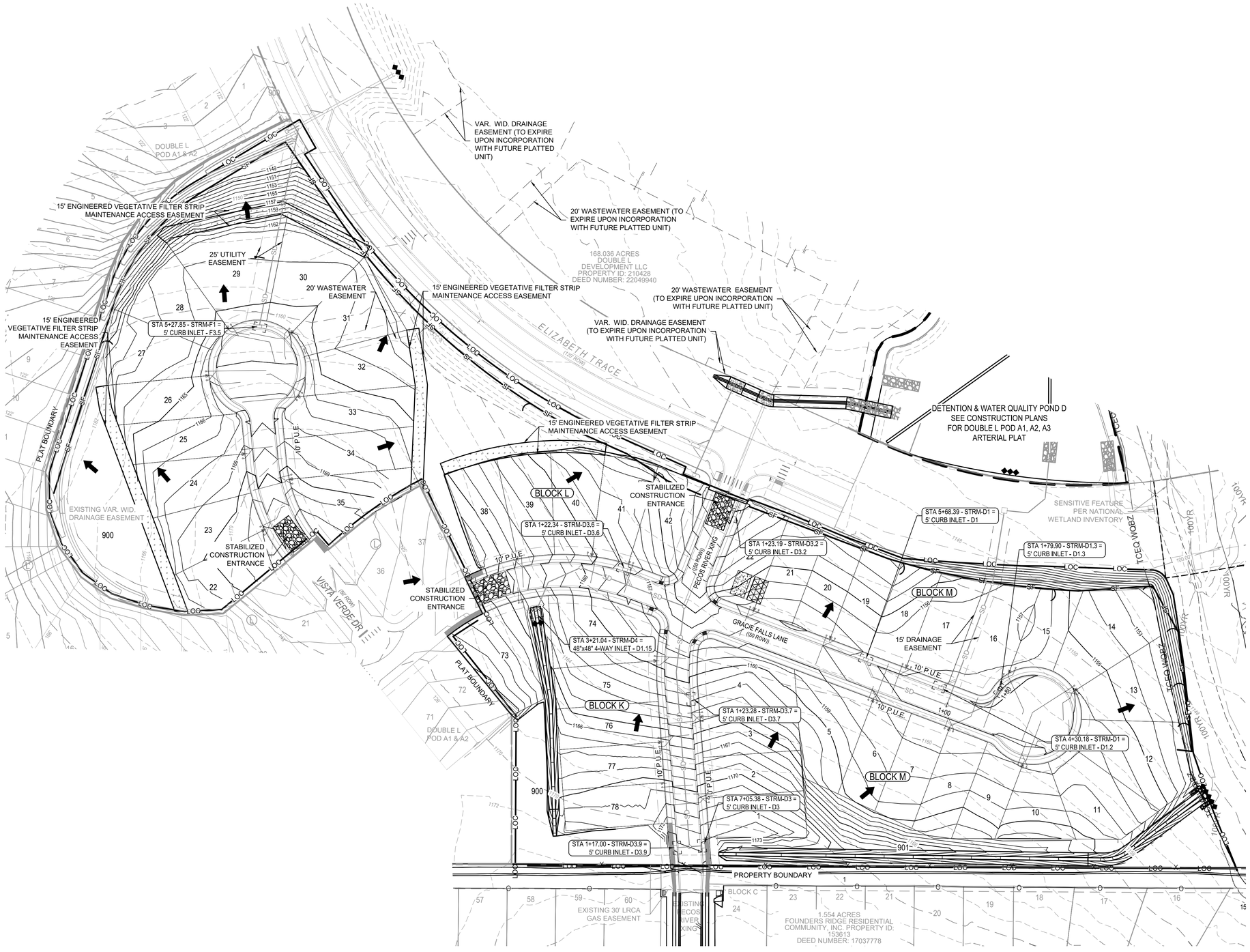
SHEET
8 OF 53

Know what's below. Call before you dig.

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

Know what's below. Call before you dig.

O:\000147789-001\LS\03 - Pod A3\04_CADD\01_SHTS\C-SP-OVERALL-SITE-PLAN.dwg PLOTTED: 10/16/2024 11:41 AM BY: JRAMONES




0 30' 60' 120'

SCALE: 1" = 60'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- PROPOSED MAJOR CONTOUR
- EXISTING PROPOSED CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LIMITS OF CONSTRUCTION
- TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- TEMPORARY SILT FENCE W/ J HOOKS
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100 YEAR FEMA FLOOD PLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- EXISTING HOG/BARB WIRE FENCE
- EXISTING IRON FENCE
- EXISTING WOOD FENCE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


# DOUBLE L RANCH POD A3

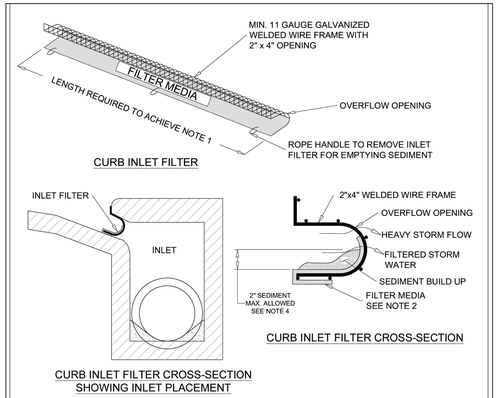
## EROSION AND SEDIMENTATION CONTROL PLAN

STATE OF TEXAS
PATRICK M. SULLIVAN
142359
LICENSED PROFESSIONAL ENGINEER

04-10-2026

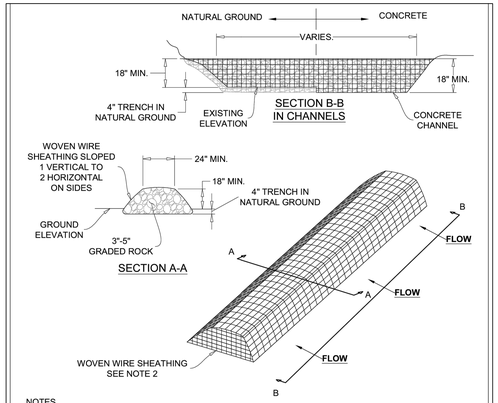
SHEET
13 OF 53

O:\000147\89-00\LS\03 - Pod A3\04_CADD\01_SHTS\C-SP-EROS-PL-03.dwg PLOTTED: 10/16/2024 11:41 AM BY: JRAMONES



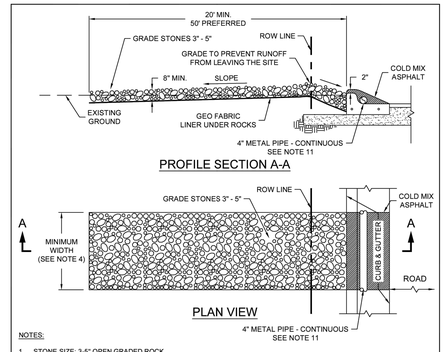

NOTE:
1. THE INLET FILTER SHALL BE INSERTED INTO THE CURB INLET TO CREATE A COMPRESSION FIT IN THE INLET
2. THE FILTER MEDIA FOR PROJECTS WITHIN CITY OF SAN MARCOS JURISDICTION IS TO BE WOVEN FILTER FABRIC WITH A MINIMUM WATER FLOW RATE OF 300 GALLONS A MINUTE PER SQUARE FOOT ( 300 GAL/MIN/SF)
3. THE FILTER MEDIA IS TO BE ATTACHED TO THE WIRE FRAME WITH HOG RINGS LEAVING AN OVERFLOW OPENING ABOVE THE FILTER MEDIA.
4. INSPECTION SHALL BE MADE BY THE CONTRACTOR WEEKLY AND WITHIN 24 HOURS OF A RAIN EVENT AND SILT ACCUMULATION MUST BE REMOVED WHEN THE DEPTH REACHES 2 INCHES.
5. INLET FILTER WILL BE REMOVED UPON STABILIZATION OF SEDIMENT SOURCES

| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | CURB INLET PROTECTION | |
|---|---|---|---|
| RECORDED COPY SIGNED BY | 2-15-2015 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD | 628S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | N.T.S. STANDARD DETAIL |



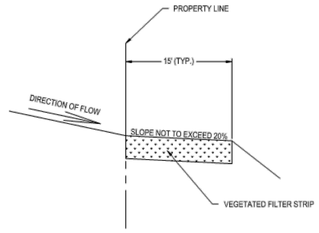

NOTES
1. USE ONLY OPEN GRADED ROCK 3"-5" IN DIAMETER.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT CONSTRUCTION, TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO 6", THE SILT WILL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS.
6. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | ROCK BERM DETAIL | |
|---|---|---|---|
| RECORDED COPY SIGNED BY | 8/4/2014 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD | 639S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | N.T.S. STANDARD DETAIL |




NOTES:
1. STONE SIZE: 3-5" OPEN GRADED ROCK.
2. LENGTH: 50' PREFERRED OR AS EFFECTIVE BUT NOT LESS THAN 20'.
3. THICKNESS: NOT LESS THAN 8".
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. DIMENSIONS OF SITE WILL DICTATE THE DIMENSIONS OF THE STABILIZED CONSTRUCTION ENTRANCES IF THE PREFERRED DIMENSIONS ARE NOT POSSIBLE ON SITE.
6. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
7. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASUREMENT DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENT THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
8. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
9. WHEN ALL SITE WORK IS COMPLETED, REMOVE STABILIZED CONSTRUCTION ENTRANCE COMPLETELY. REGRADE TO ORIGINAL CONDITION, ELEVATION AND RESTORE TO MATCH EXISTING OR PROPOSED CONDITIONS.
10. TOP OF GRADE STONES SHALL MATCH TOP OF EXISTING PAVEMENT OR CURB. COLD MIX ASPHALT & 4" METAL PIPE OR ALTERNATIVE WILL NOT BE REQUIRED WHERE THERE IS NO CATCH OR SPILL CURB.
11. PRE-FABRICATED CURB RAMPS ARE AN ACCEPTABLE ALTERNATIVE TO COLD MIX ASPHALT AND 4" METAL PIPE.

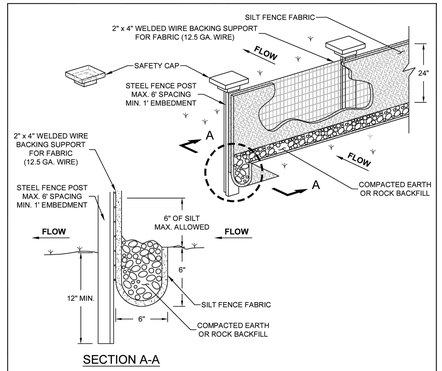
| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | STABILIZED CONSTRUCTION ENTRANCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY | 1/1/2021 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 641S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | 1 OF 1 |




ENGINEERED VEGETATED FILTER STRIP DETAIL (TYP.)
N.T.S.

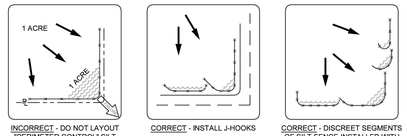
V.F.S. NOTES (TCEQ RG348)

1. THE FILTER STRIP SHOULD EXTEND ALONG THE ENTIRE LENGTH OF THE CONTRIBUTING AREA AND THE SLOPE SHOULD NOT EXCEED 20%. THE MINIMUM DIMENSION OF THE FILTER STRIP (IN THE DIRECTION OF FLOW) SHOULD BE NO LESS THAN 15 FEET. THE MAXIMUM WIDTH (IN THE DIRECTION OF FLOW) OF THE CONTRIBUTING IMPERVIOUS AREA SHOULD NOT EXCEED 72 FEET. FOR ROADWAYS WITH A VEGETATED STRIP ALONG BOTH SIDES THE TOTAL WIDTH OF THE ROADWAY SHOULD NOT EXCEED 144 FEET (I.E., 72 FEET DRAINING TO EACH SIDE).
2. THE MINIMUM VEGETATED COVER FOR ENGINEERED STRIPS IS 80%.
3. THE AREA CONTRIBUTING RUNOFF TO A FILTER STRIP SHOULD BE RELATIVELY FLAT SO THAT THE RUNOFF IS DISTRIBUTED EVENLY TO THE VEGETATED AREA WITHOUT THE USE OF A LEVEL SPREADER.
4. THE AREA TO BE USED FOR THE STRIP SHOULD BE FREE OF GULLIES OR RILLS THAT CAN CONCENTRATE OVERLAND FLOW (SCHUELER, 1987).
5. THE TOP EDGE OF THE FILTER STRIP ALONG THE PAVEMENT WILL BE DESIGNED TO AVOID THE SITUATION WHERE RUNOFF WOULD TRAVEL ALONG THE TOP OF THE FILTER STRIP, RATHER THAN THROUGH IT.
6. TOP EDGE OF THE FILTER STRIP SHOULD BE LEVEL, OTHERWISE RUNOFF WILL TEND TO FORM A CHANNEL IN THE LOW SPOT. A LEVEL SPREADER SHOULD NOT BE USED TO DISTRIBUTE RUNOFF TO AN ENGINEERED FILTER STRIP.
7. FILTER STRIPS SHOULD BE LANDSCAPED AFTER OTHER PORTIONS OF THE PROJECT ARE COMPLETED.




NOTES:
1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS SHALL MATCH THE TOP OF THE FENCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1'.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 6" DEEP AND 6" WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY AND REPAIR OR REPLACEMENT SHALL BE MADE WITHIN 24 HOURS OF INSPECTION.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS PERMANENTLY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WITHIN 24 HOURS WHEN IT REACHES A DEPTH OF 6" OR AS DIRECTED BY OWNER. THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. INSTALL J-HOOK SPACING PER ENGINEER'S DESIGN , BUT NOT TO EXCEED 200'.

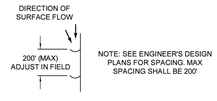
| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | SILT FENCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY | 1/1/2020 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 642S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | 1 OF 2 |



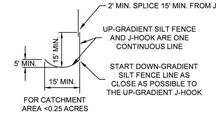

SILT FENCE PLACEMENT FOR PERIMETER CONTROL

PLAN VIEW

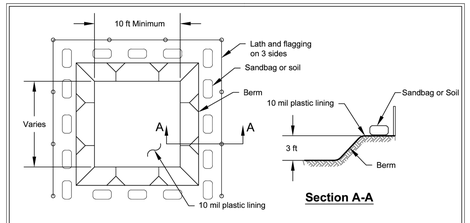
I. SPACING REQUIREMENTS:




II. SIZING REQUIREMENTS:




| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2020 | SILT FENCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY | 1/1/2020 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 642S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | 2 OF 2 |




NOT TO SCALE

Hays County Concrete Washout Area

Revised June 2025

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

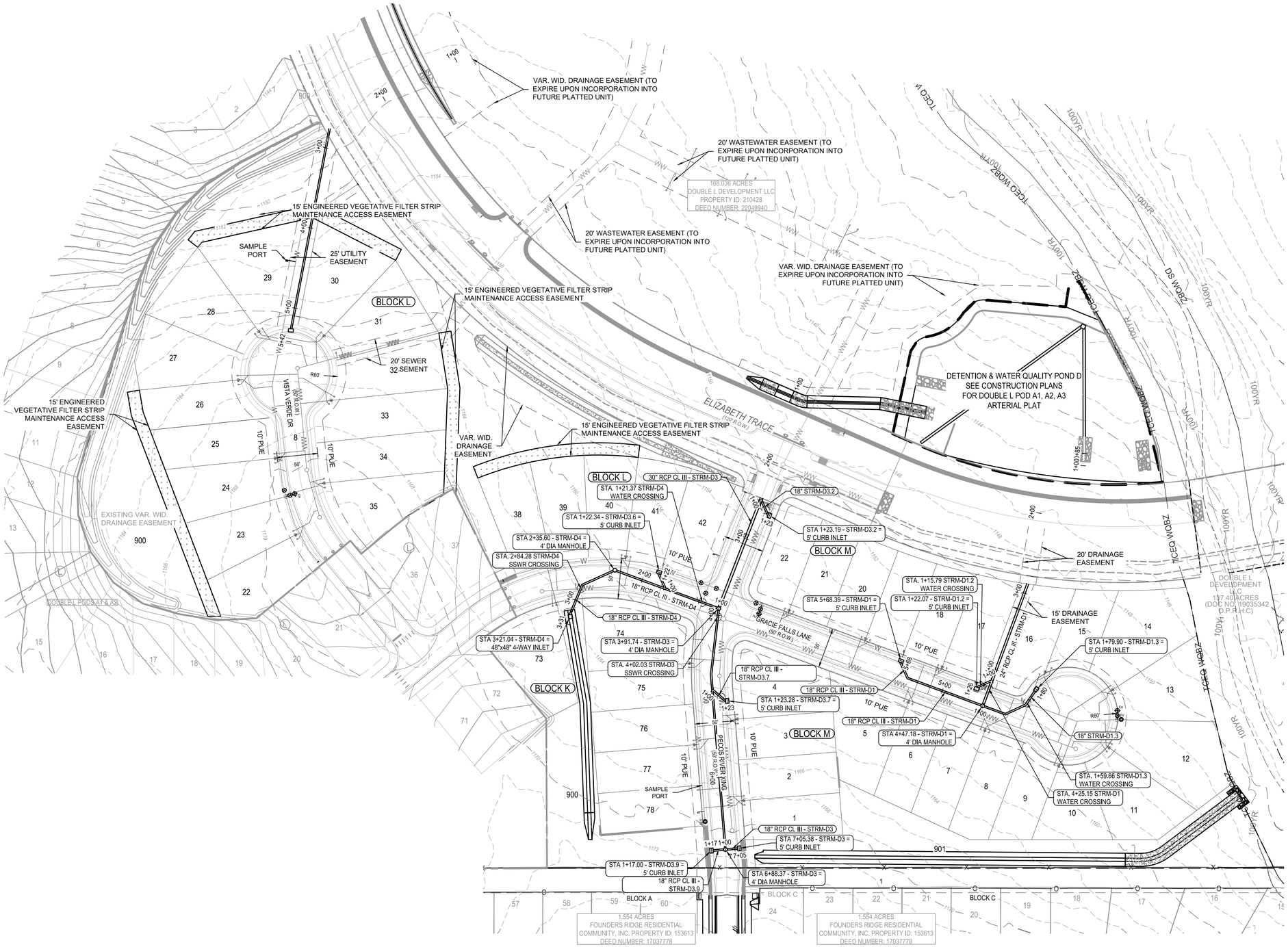
DOUBLE L RANCH POD A3

EROSION AND SEDIMENTATION CONTROL DETAILS

STATE OF TEXAS
PATRICK M. SULLIVAN
142359
LICENSED PROFESSIONAL ENGINEER
04-10-2026

SHEET
14 OF 53

O:\00014789-00\LS\03 - Pod A3\04_CADD\01_SHTS\C-SP-EROS-PL-03.dwg PLOTTED: 10/16/2024 11:41 AM BY: JRAMONES




N

0 30' 60' 120'

SCALE: 1" = 60'

## LEGEND

- PLAT BOUNDARY
- XXX — PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- DIRECTION OF STREET FLOW
- PROPOSED 10' CURB INLET
- PROPOSED 15' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED STORM SEWER
- WW — WASTEWATER LINE
- W — WATER LINE
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS

### PROFILE LEGEND

- PROPOSED STORM PIPE
- PROPOSED GROUND
- PROPOSED TOP OF CHANNEL
- PROPOSED SUBGRADE
- EXISTING GROUND
- 100 — 100 — 100-YR HGL LINE
- 25 — 25 — 25-YR HGL LINE

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


# DOUBLE L RANCH POD A3

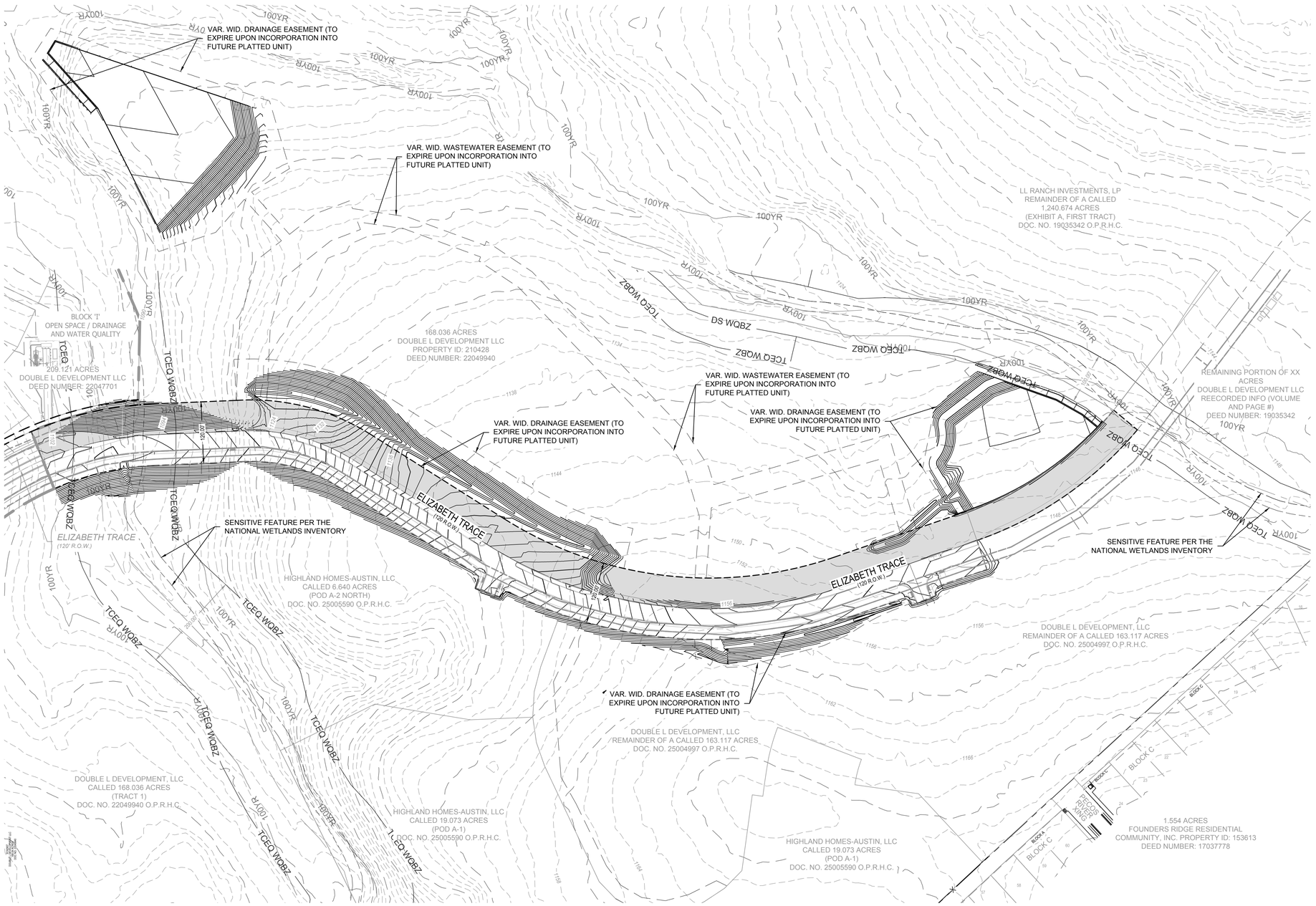
## OVERALL STORM PLAN

STATE OF TEXAS
PATRICK M. SULLIVAN
142359
LICENSED PROFESSIONAL ENGINEER

04-10-2026

SHEET
30 OF 53

O:\00014789-00\LS03 - Pod A3\04_CADD\01_SHTS\C-SP-OVERALL-STRM.dwg PLOTTED: 10/16/2024 11:41 AM BY: JRAMONES




0 50' 100' 200'

SCALE: 1" = 100'

## LEGEND

- PROPOSED BOUNDARY
- PROPOSED CENTERLINE
- XXX — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 100YR — 100 YR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WQBZ
- DS WQBZ — DRIPPING SPRINGS WQBZ
- DOUBLE L POD A1, A2, & A3 ARTERIAL - ULTIMATE

NOTE:

SEE TREE PLAN THIS SET FOR TREE PROTECTION AND TREES TO BE REMOVED

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DAZ

REVIEWED BY: CL

DRAWN BY: DAZ

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

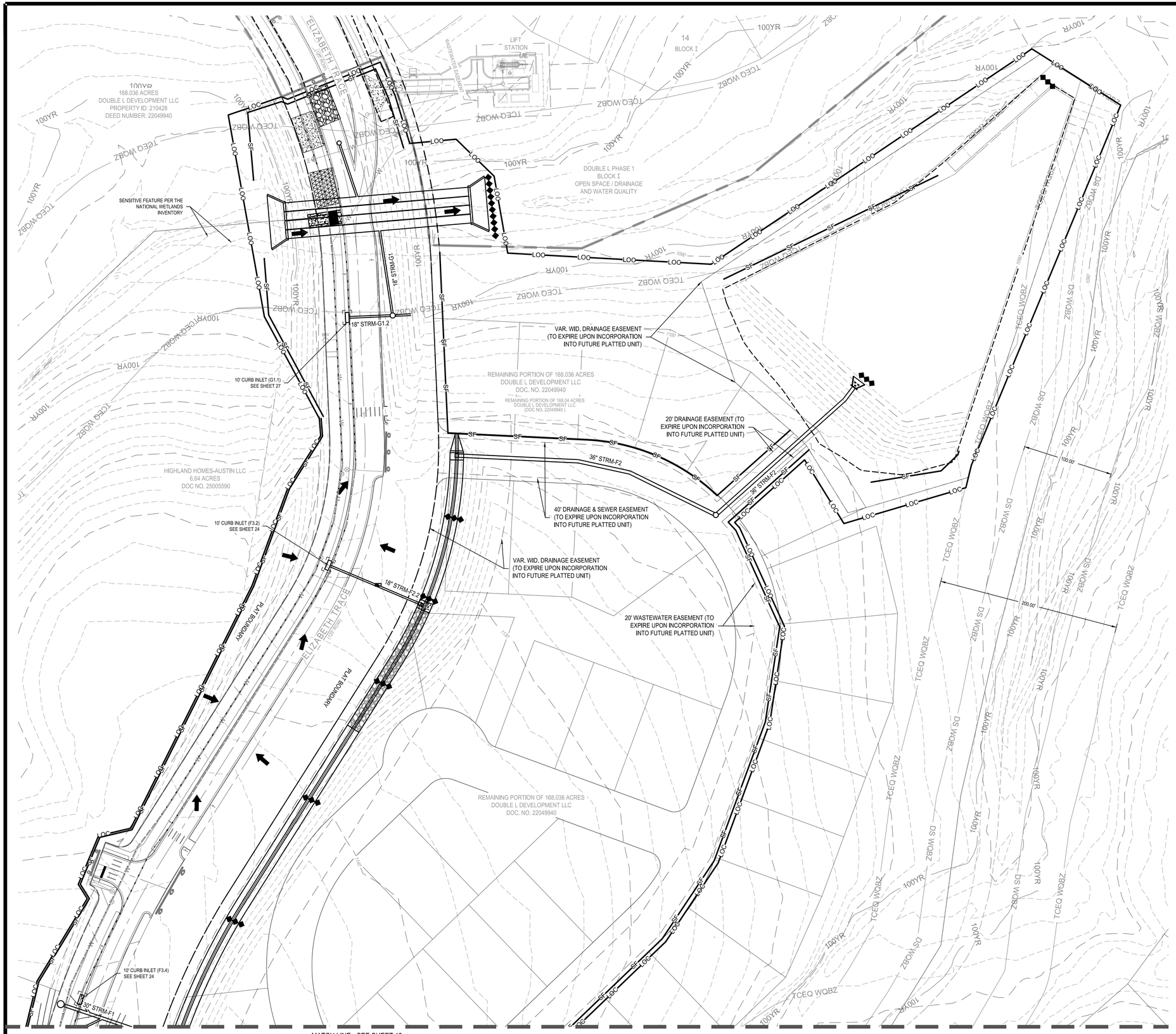
# DOUBLE L - POD A1 & A2
# DRIPPING SPRINGS, TEXAS

## OVERALL SITE PLAN

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
7 OF 75

O:\00014789-001\LS00 - Pod A1&A2 - Shared Facilities\04_CADD\01_SHTS\C-SP-OVERALL-SITE.dwg PLOTTED: 10/16/2024 11:41 AM BY: JTONDRE




N

0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LOC — LIMITS OF CONSTRUCTION
- SF — SF — TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

# DOUBLE L- A1, A2, & A3 ARTERIAL

## EROSION & SEDIMENTATION CONTROL PLAN (SHEET 1 OF 2)

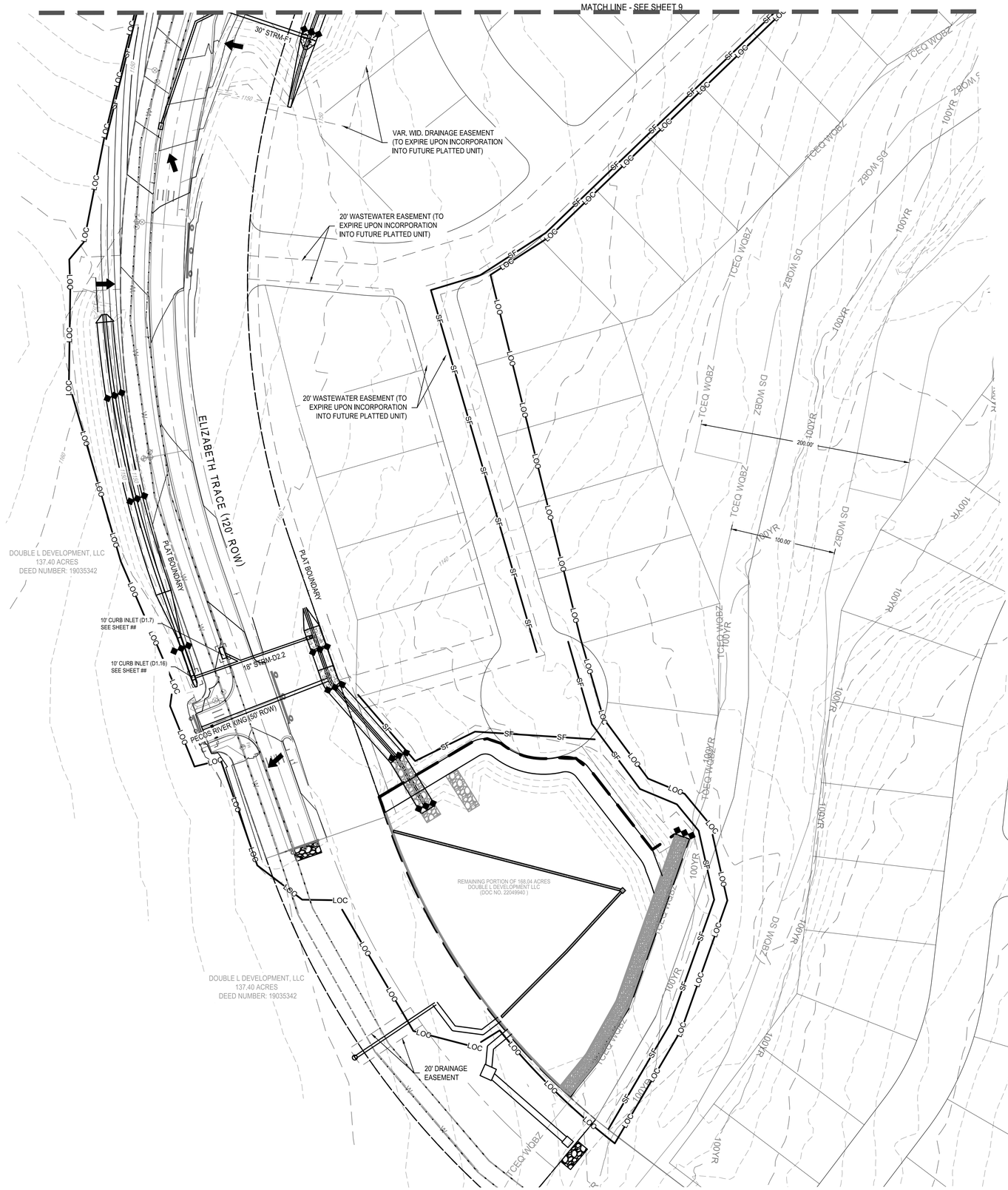
2/13/2026

STATE OF TEXAS
VANCE L. WEYMAND
99269
LICENSED
PROFESSIONAL ENGINEER

Vance Weymand

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

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




N

0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LOC — LIMITS OF CONSTRUCTION
- SF — SF — TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL
   1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


DOUBLE L- A1, A2, & A3 ARTERIAL

EROSION & SEDIMANTATION CONTROL PLAN (SHEET 2 OF 2)

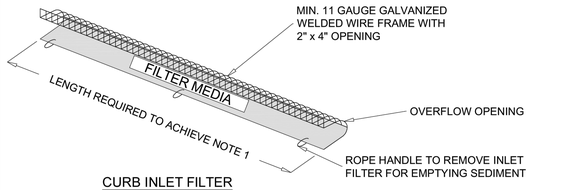
2/13/2026

STATE OF TEXAS
VANCE L. WEYMAND
99269
LICENSED
PROFESSIONAL ENGINEER

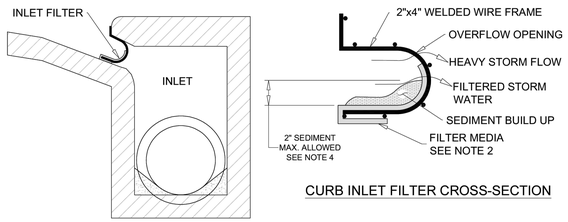
Vance Weymand

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

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




CURB INLET FILTER

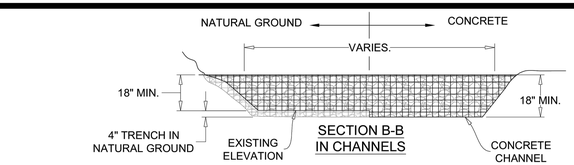



CURB INLET FILTER CROSS-SECTION

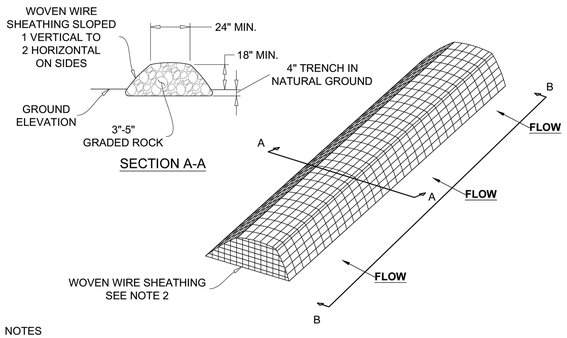
CURB INLET FILTER CROSS-SECTION
SHOWING INLET PLACEMENT

NOTE:
1. THE INLET FILTER SHALL BE INSERTED INTO THE CURB INLET TO CREATE A COMPRESSION FIT IN THE INLET
2. THE FILTER MEDIA FOR PROJECTS WITHIN CITY OF SAN MARCOS JURISDICTION IS TO BE WOVEN FILTER FABRIC WITH A MINIMUM WATER FLOW RATE OF 300 GALLONS A MINUTE PER SQUARE FOOT ( 300 GAL/MIN/SF) .
3. THE FILTER MEDIA IS TO BE ATTACHED TO THE WIRE FRAME WITH HOG RINGS LEAVING AN OVERFLOW OPENING ABOVE THE FILTER MEDIA.
4. INSPECTION SHALL BE MADE BY THE CONTRACTOR WEEKLY AND WITHIN 24 HOURS OF A RAIN EVENT AND SILT ACCUMULATION MUST BE REMOVED WHEN THE DEPTH REACHES 2 INCHES.
5. INLET FILTER WILL BE REMOVED UPON STABILIZATION OF SEDIMENT SOURCES

| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | CURB INLET PROTECTION | |
|---|---|---|---|
| RECORDED COPY SIGNED BY | 2-15-2015 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD | 628S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | N.T.S. | STANDARD DETAIL |




SECTION B-B
IN CHANNELS

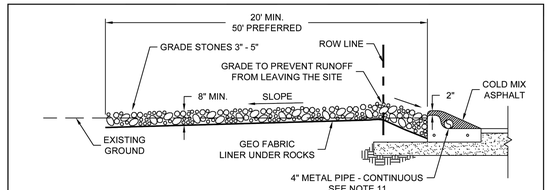



SECTION A-A

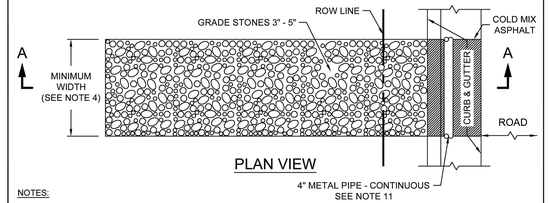
NOTES

1. USE ONLY OPEN GRADED ROCK 3"-5" IN DIAMETER.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT CONSTRUCTION, TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO 6", THE SILT WILL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS.
6. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | ROCK BERM DETAIL | |
|---|---|---|---|
| RECORDED COPY SIGNED BY | 8/4/2014 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD | 639S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | N.T.S. | STANDARD DETAIL |




PROFILE SECTION A-A

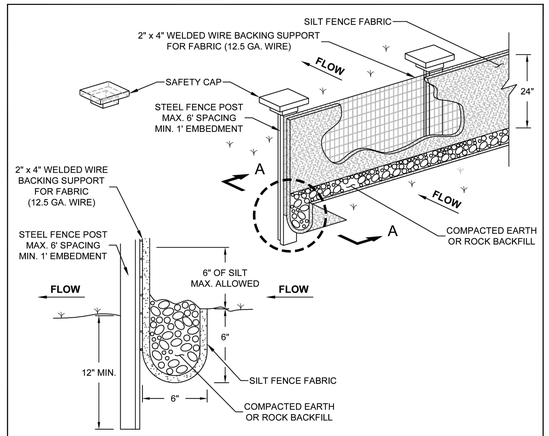



PLAN VIEW

NOTES:

1. STONE SIZE: 3-5" OPEN GRADED ROCK.
2. LENGTH: 50' PREFERRED OR AS EFFECTIVE BUT NOT LESS THAN 20'.
3. THICKNESS: NOT LESS THAN 8".
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. DIMENSIONS OF SITE WILL DICTATE THE DIMENSIONS OF THE STABILIZED CONSTRUCTION ENTRANCES IF THE PREFERRED DIMENSIONS ARE NOT POSSIBLE ON SITE.
6. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
7. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASUREMENT DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENT THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
8. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
9. WHEN ALL SITE WORK IS COMPLETED, REMOVE STABILIZED CONSTRUCTION ENTRANCE COMPLETELY. REGRADE TO ORIGINAL CONDITION, ELEVATION AND RESTORE TO MATCH EXISTING OR PROPOSED CONDITIONS.
10. TOP OF GRADE STONES SHALL MATCH TOP OF EXISTING PAVEMENT OR CURB. COLD MIX ASPHALT & 4" METAL PIPE OR ALTERNATIVE WILL NOT BE REQUIRED WHERE THERE IS NO CATCH OR SPILL CURB.
11. PRE-FABRICATED CURB RAMPS ARE AN ACCEPTABLE ALTERNATIVE TO COLD MIX ASPHALT AND 4" METAL PIPE.

| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | STABILIZED CONSTRUCTION ENTRANCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY | 1/1/2021 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 641S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | 1 OF 1 |

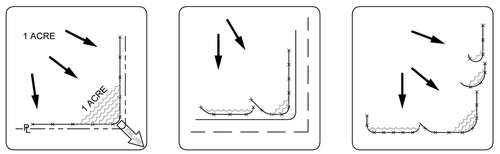



SECTION A-A

NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS SHALL MATCH THE TOP OF THE FENCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1'.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 6" DEEP AND 6" WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY AND REPAIR OR REPLACEMENT SHALL BE MADE WITHIN 24 HOURS OF INSPECTION.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS PERMANENTLY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WITHIN 24 HOURS WHEN IT REACHES A DEPTH OF 6" OR AS DIRECTED BY OWNER. THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. INSTALL J-HOOK SPACING PER ENGINEER'S DESIGN , BUT NOT TO EXCEED 200'.

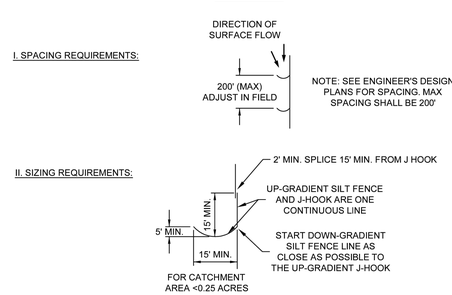
| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | SILT FENCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY | 1/1/2020 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 642S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | 1 OF 2 |



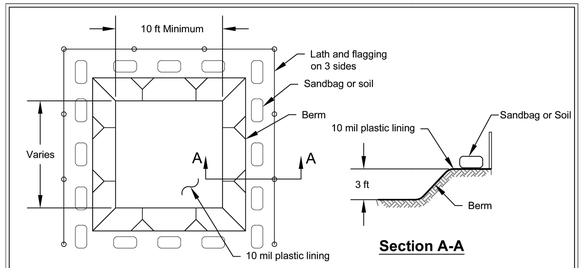

SILT FENCE
TURNBACK DETAIL

SILT FENCE PLACEMENT FOR PERIMETER CONTROL

PLAN VIEW

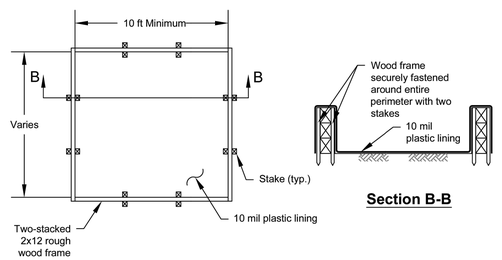



| The City of San Marcos Engineering and Capital Improvements | CURRENT AS OF 1/1/2024 | SILT FENCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY | 1/1/2020 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 642S-1-SM |
| LAURIE MOYER, P.E. | ADOPTED | | 2 OF 2 |




Section A-A

Type "Above Grade" with Earthen Berms




Section B-B

Type "Above Grade" with Wood Planks

NOT TO SCALE

Hays County Concrete
Washout Area

Revised June 2025

| DESCRIPTION | DATE | REV |
|---|---|---|
| | | APR |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


DOUBLE L- A1, A2, & A3 ARTERIAL

EROSION AND SEDIMENTATION CONTROL DETAILS

2/13/2026

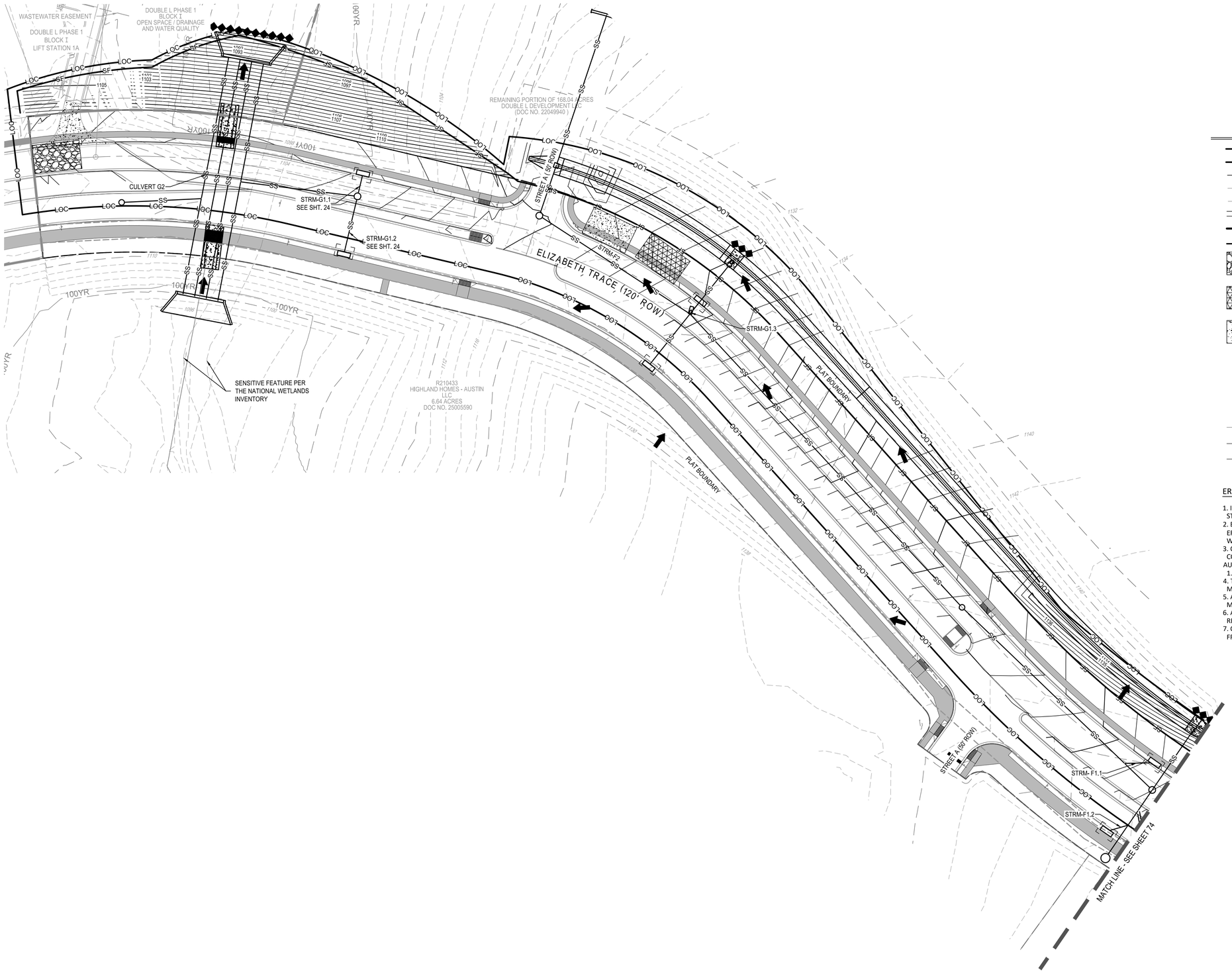
STATE OF TEXAS
VANCE L. WEYNAND
99265
LICENSED
PROFESSIONAL ENGINEER

Vance Weynand

SHEET
14OF 86

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

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




0 20' 40' 80'

SCALE: 1" = 40'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LOC — LIMITS OF CONSTRUCTION
- SF — SF — TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

| | APR | DATE | DESCRIPTION | REV |
|---|---|---|---|---|
| | | | | |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


# DOUBLE L- A1, A2, & A3 ARTERIAL

## ULTIMATE EROSION & SEDIMENTATION CONTROL PLAN (SHEET 1 OF 2)

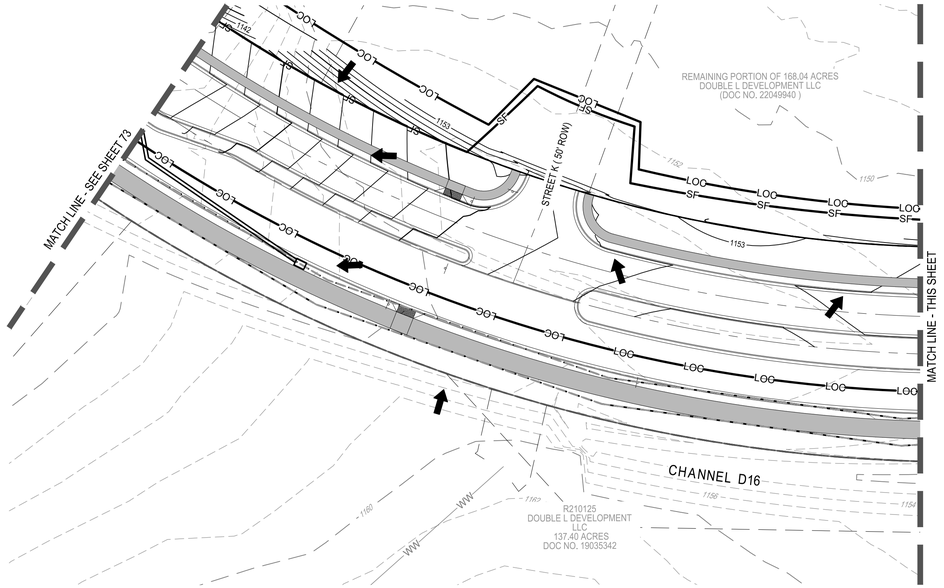
2/13/2026

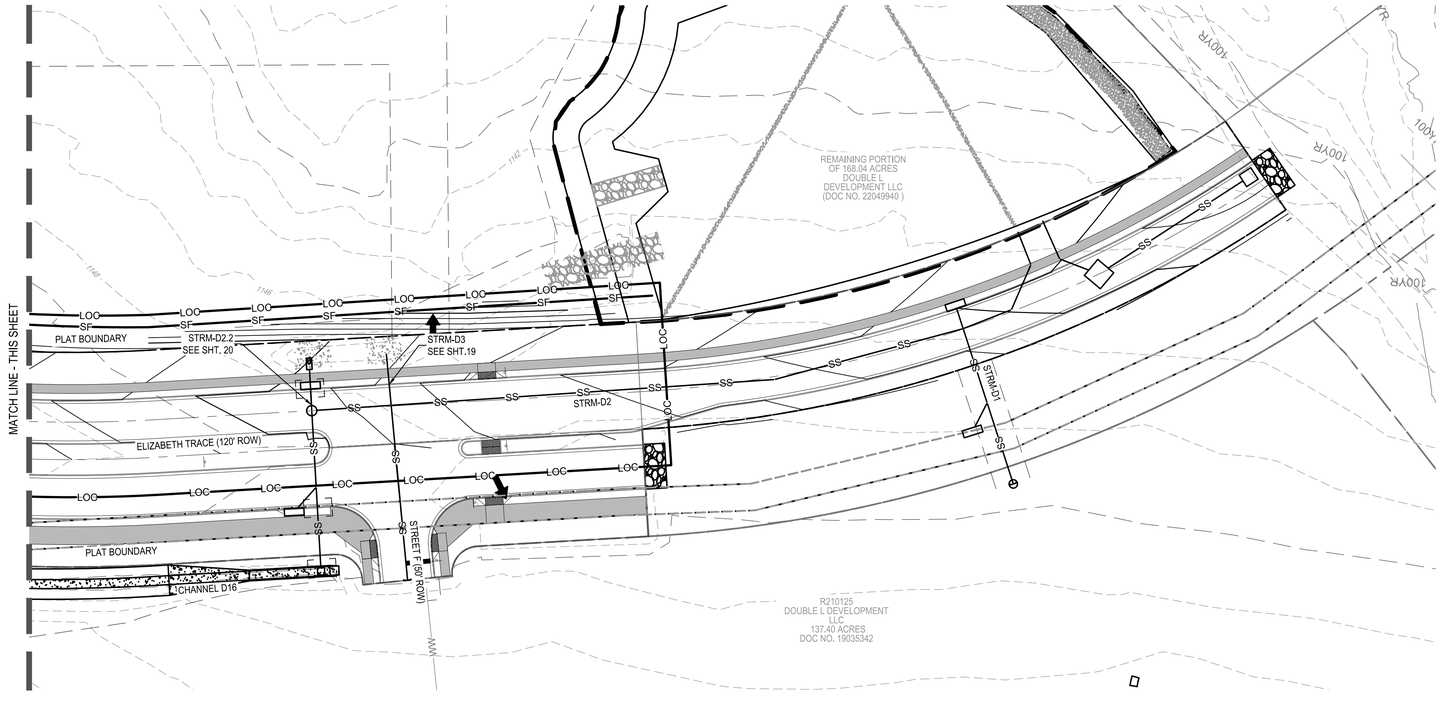
STATE OF TEXAS
VANCE L. WEYNAND
99269
LICENSED
PROFESSIONAL ENGINEER

Vance Weynand

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

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






0 20' 40' 80'

SCALE: 1" = 40'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LOC — LIMITS OF CONSTRUCTION
- SF — SF — TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com


# DOUBLE L- A1, A2, & A3 ARTERIAL

## ULTIMATE EROSION & SEDIMENTATION CONTROL PLAN (SHEET 2 OF 2)

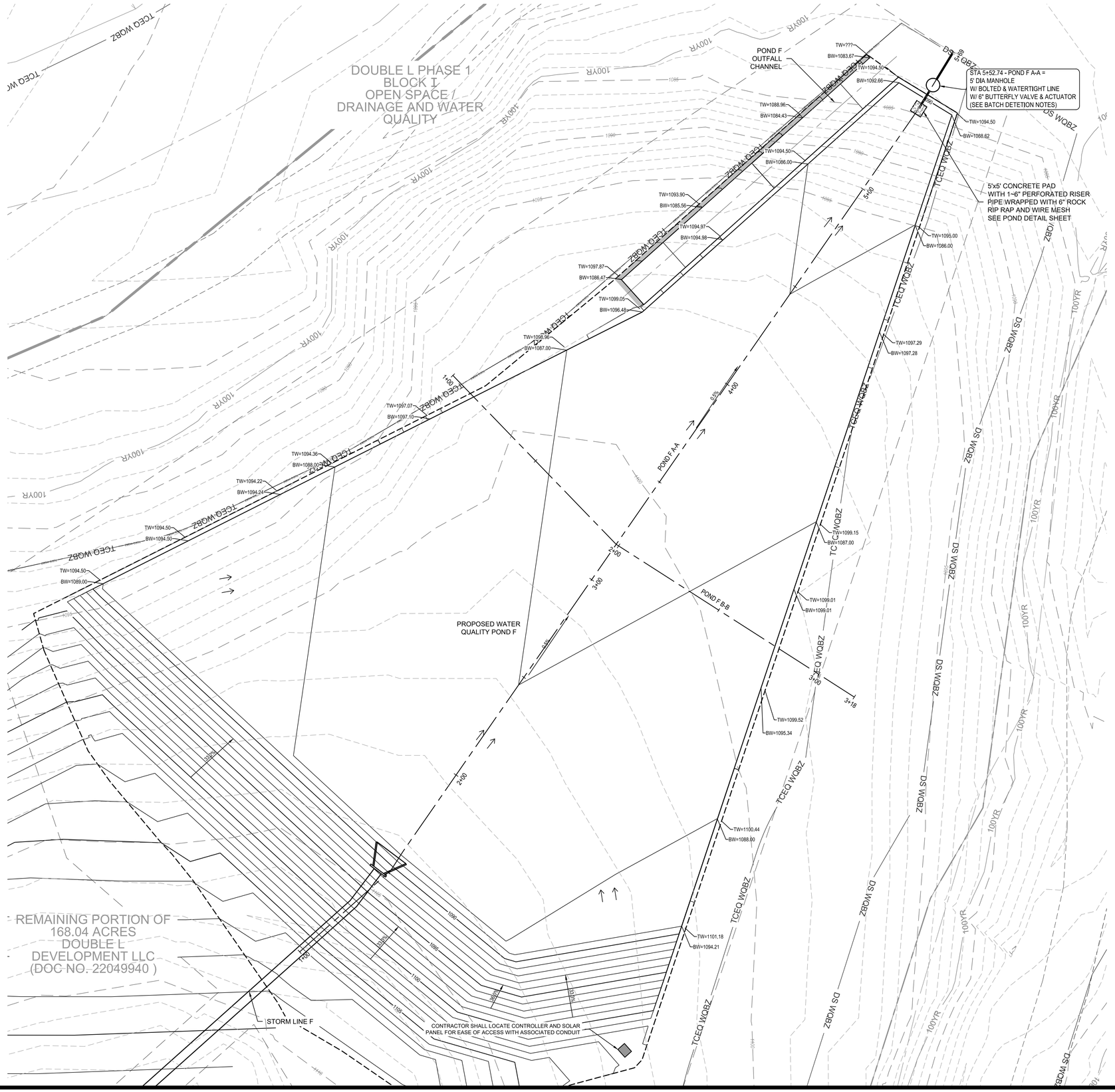
2/13/2026

STATE OF TEXAS
VANCE L. WEYNAND
99269
LICENSED
PROFESSIONAL ENGINEER

Vance Weynand


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

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






LEGEND

| | |
|---|---|
| | PROPERTY BOUNDARY |
| | PROPOSED CENTERLINE |
| 831 | EXISTING MINOR CONTOUR |
| 831 | EXISTING MAJOR CONTOUR |
| 681 | PROPOSED MINOR CONTOUR |
| 686 | PROPOSED MAJOR CONTOUR |
| TCEQ WQBZ | TEXAS COMMISSION ON ENVIRONMENTAL WATER QUALITY BUFFER ZONE |
| DS WQBZ | DRIPPING SPRING WATER QUALITY BUFFER ZONE |
| | PROPOSED CONCRETE RIP-RAP |
| | PROPOSED ROCK GABION |
| | PROPOSED 6" PVC WATER QUALITY OUTFALL |
| | PROPOSED MANHOLE |
| | DIRECTION OF FLOW |
| TW | TOP OF WALL |
| BW | BOTTOM OF WALL |
| FL | FLOW LINE |

PROFILE LEGEND

| | |
|---|---|
| | PROPOSED 6" PVC OUTFALL |
| | WATER SURFACE ELEVATION |
| | PROPOSED GRADE |
| | EXISTING GRADE |

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

NOTES:

1. POND SHALL MAINTAINED BY HAYS COUNTY MUD 7A.
2. POND IS TO HAVE 12" TOPSOIL BOTTOM.
3. THE REQUIRED WATER QUALITY VOLUME IS 91,600 CF AND THE PROVIDED WATER QUALITY VOLUME IS 91,600 CF.

BATCH DETENTION NOTES:

1. OVERVIEW: THE BASIN IS TYPICALLY FILLED QUICKLY BY STORMWATER CONVEYED THROUGH A STORM DRAIN, MAKING THE INFLOW TIME RELATIVELY SHORT. THE RESIDENCE TIME OF THE STORMWATER IS 12 HOURS AND IS CONTROLLED BY THE CONTROL VALVE (NORMALLY SHUT OFF) AND ACTUATOR INSTALLED ON THE OUTLET STRUCTURE. THE CONTROL VALVE OPENS ONCE THE DESIRED RESIDENCE TIME IS ACHIEVED AFTER A STORM EVENT. THE TREATED WATER IS RELEASED SLOWLY OVER A TIME OF 24 TO 48 HOURS.
2. VALVE/ACTUATOR: THE VALVE/ACTUATOR ASSEMBLY CONSISTS OF A BUTTERFLY VALVE WITH A SMALL 12VDC ACTUATOR. THE VALVE IS A QUARTER TURN VALVE. THE ACTUATOR OPERATES THE VALVE BETWEEN THE FULL OPEN AND FULL CLOSED POSITIONS. A MECHANICAL HAND CLANK ALLOWS A PHYSICAL OVERRIDE OF THE VALVE SYSTEM.
3. THE VALVE IS A KEYSTONE 6-INCH(100MM) BUTTERFLY VALVE MATED WITH A EPI-6 12VDC ACTUATOR. THE EPI-6 ACTUATOR REQUIRES AN OPEN OR CLOSE SIGNAL OF 10 SECONDS. THE ACTUATOR HAS LIMIT SWITCHES THAT DETECT END OF TRAVEL AND SHOT OFF THE INCOMING OPEN OR CLOSE SIGNAL TO THE ACTUATOR ONCE THE VALVES REACHES THE FULL OPEN OR CLOSED POSITION. OVER TORQUE SENSORS WILL SHUT DOWN THE ACTUATOR IN THE EVENT OF AN OVER TORQUE SITUATION.
4. CONTROLLER SYSTEM SPECIFICATIONS:
   - 4.1. POWER - THE CONTROLLER SHALL BE POWERED BY A SHIELD-CONTAINED RENEWABLE POWER SOURCE (SUCH AS SOLAR POWER) IF ELECTRICAL POWER IS NOT AVAILABLE. A SINGLE SUPPLY VOLTAGE FOR ALL COMPONENTS IS DESIRABLE.
   - 4.2. PROGRAMMABILITY - THE CONTROLLED SHALL BE PROGRAMMABLE. IT SHALL BE POSSIBLE TO UPDATE PROGRAMS IN THE FIELD. THE DETENTION TIME AND DRAW-DOWN TIME SHALL BE ADJUSTABLE IN HOURS FROM 0 HOURS TO 72 HOURS.
   - 4.3. EVENT SENSING - THE CONTROLLER SHALL BE ABLE TO SENSE THE BEGINNING OF A STORM (WATER FILLING THE BASIN), AND THE END OF A STORM (WATER HAS DRAINED FROM THE BASIN).
   - 4.4. ENVIRONMENT - THE CONTROLLER SHALL OPERATE IN TEMPERATURES FROM 0 DEGREES CELSIUS TO 55 DEGREES CELSIUS, IN HUMIDITY FROM 10% TO 90% (NON-CONDENSING). THE CONTROLLER SHALL OPERATE DURING PERIODS OF RAINFALL.
   - 4.5. SAFETY/SECURITY - THE SYSTEM COMPONENTS SHALL BE LOCKED IN ENCLOSURE TO PREVENT ACCIDENTAL CONTACT THAT COULD COMPROMISED THE FUNCTION OF THE APPARATUS OR CAUSE INJURY.
   - 4.6. MAINTENANCE - THE CONTROLLER SHALL REQUIRE MINIMAL PERIODIC MAINTENANCE TO CONTROLLER PROGRAM SHALL BE FIELD UPGRADEABLE. THE ABILITY TO MANUALLY OPERATE THE VALVE SHALL BE PROVIDED.
   - 4.7. RELIABILITY - 40,000 HOURS(4.6 YEARS) OR GREATER.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND DESIGN OF SENSOR, AUTOMATIC VALVE, CONTROLLER, ETC.TO ENGINEER FOR REVIEW AND APPROVAL.

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

# DOUBLE L- A1, A2, & A3 ARTERIAL

## DETENTION & WATER QUALITY POND F PLAN

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
38 OF 86

O:\00014789-00\LS\00 - Pod A1&A2 - Shared Facilities\04 CADD\01 - SHTS\C-SP-POND D & F.dwg Layout: DETENTION & WATER QUALITY POND F PLAN Plotted: 4/10/2026 2:50:39 PM By: Creadance

Texas Commission on Environmental Quality

***TSS Removal Calculations***

**Project Name:** Double L Ranch Pod A3
**Date Prepared:** 4/10/2026

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.

**Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A**

**Characters shown in red are data entry fields.**

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** Pond F

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 18.642 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 6.878 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.37 | |
| $L_{M\ THIS\ BASIN}$ = | 6287 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Batch Detention
Removal efficiency = 91 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 efficiency) x P x ($A_I$ x 34.6 + $A_P$ x 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

| | | |
|---|---|---|
| $A_C$ = | 18.642 | acres |
| $A_I$ = | 6.878 | acres |
| $A_P$ = | 11.76 | acres |
| $L_R$ = | 7337 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 7153 lbs.

F = 0.97

**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 = | 3.00 | inches |
| Post Development Runoff Coefficient = | 0.36 | |
| On-site Water Quality Volume = | 73817 | cubic feet |

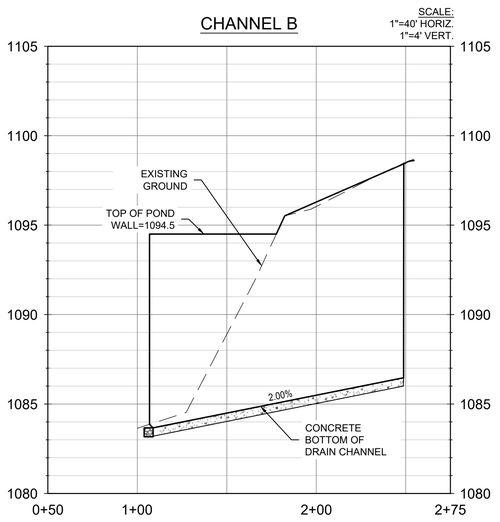
Calculations from RG-348 Pages 3-36 to 3-37

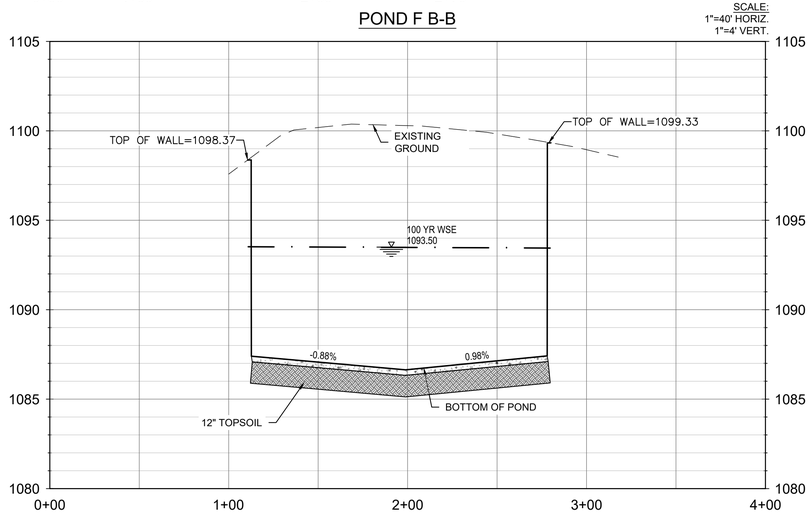
| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.00 | acres |
| Off-site Impervious cover draining to BMP = | 0.00 | acres |
| Impervious fraction of off-site area = | 0 | |
| Off-site Runoff Coefficient = | 0.00 | |
| Off-site Water Quality Volume = | 0 | cubic feet |
| Storage for Sediment = | 14763 | |
| **Total Capture Volume (required water quality volume(s) x 1.20) =** | 91600 | cubic feet |

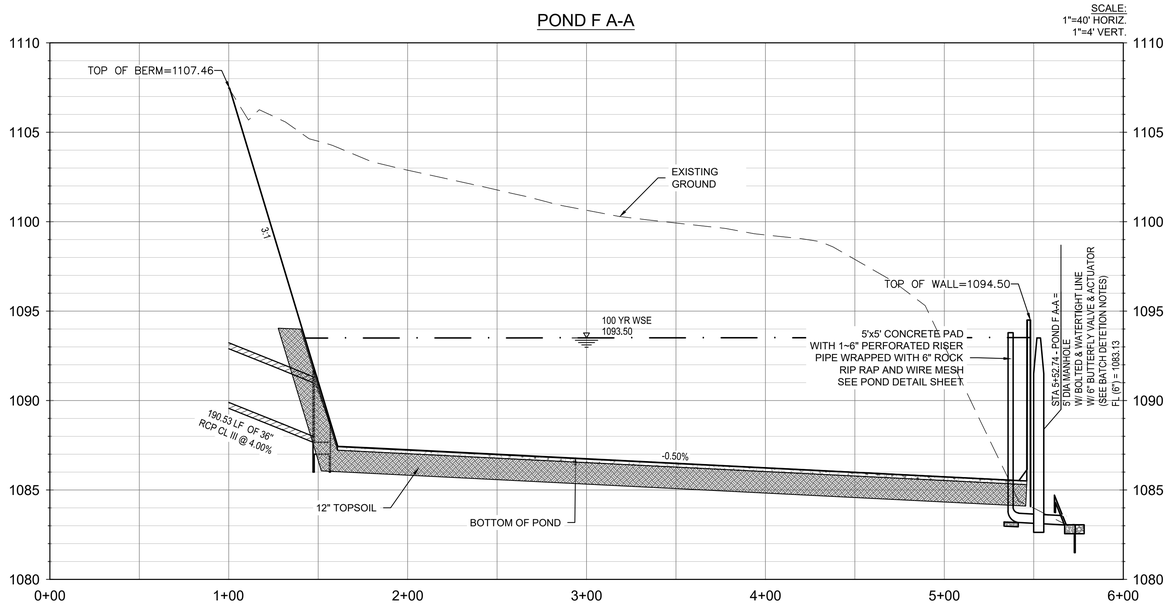
The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

**Sedimentation/Forbay Pond/Retention Pond/Cistern/Raingarden**

| Stage (ft msl) (Elevation) | Pond Depth (ft) | Cumulative Pond Depth (ft) | Surface Area (sf) | Volume (cf) | Cumulative Volume (cf) | |
|---|---|---|---|---|---|---|
| 1086.00 | 0.00 | 0.00 | 3,207 | 0 | 0 | |
| 1087.00 | 1.00 | 1.00 | 20,678 | 10,676 | 10,676 | |
| 1088.00 | 1.00 | 2.00 | 48,625 | 33,671 | 44,347 | |
| 1088.90 | 0.90 | 2.90 | 56,479 | 47,253 | 91,600 | WQE |
| 1089.00 | 0.10 | 3.00 | 56,642 | 5,330 | 96,929 | |
| 1090.00 | 1.00 | 4.00 | 57,569 | 57,105 | 154,034 | |
| 1091.00 | 1.00 | 5.00 | 58,500 | 58,034 | 212,068 | |
| 1092.00 | 1.00 | 6.00 | 59,435 | 58,967 | 271,035 | |
| 1093.00 | 1.00 | 7.00 | 60,376 | 59,905 | 330,940 | |
| 1094.00 | 1.00 | 8.00 | 61,321 | 60,848 | 391,788 | |




LEGEND

| | |
|---|---|
| | PROPERTY BOUNDARY |
| | PROPOSED CENTERLINE |
| 831 | EXISTING MINOR CONTOUR |
| 831 | EXISTING MAJOR CONTOUR |
| 681 | PROPOSED MINOR CONTOUR |
| 686 | PROPOSED MAJOR CONTOUR |
| TCEQ WQBZ | TEXAS COMMISSION ON ENVIRONMENTAL WATER QUALITY BUFFER ZONE |
| DS WQBZ | DRIPPING SPRING WATER QUALITY BUFFER ZONE |
| | PROPOSED STORM DRAIN LINE |
| | PROPOSED STORM DRAIN MANHOLE |
| | PROPOSED CURB INLET |
| | DIRECTION OF FLOW |
| TW | TOP OF WALL |
| BW | BOTTOM OF WALL |
| FL | FLOW LINE |

PROFILE LEGEND

| | |
|---|---|
| | PROPOSED STORM PIPE |
| | WATER SURFACE ELEVATION |
| | PROPOSED GRADE |
| | EXISTING GRADE |

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

APR | DATE | DESCRIPTION | REV

DESIGNED BY:
REVIEWED BY:
DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

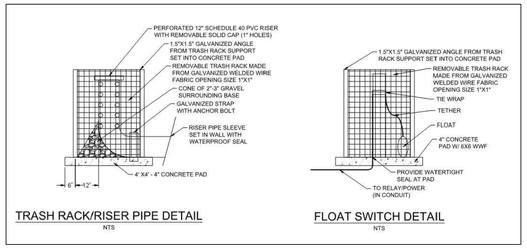

DOUBLE L- A1, A2, & A3 ARTERIAL

DETENTION & WATER QUALITY POND F PROFILE

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

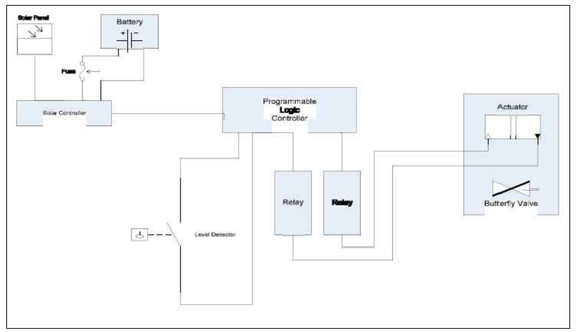
SHEET
39 OF 86

O:\00014789-00\LS\00 - Pod A1&A2 - Shared Facilities\04 CADD\01 SHTS\C-SP-POND D & F.dwg Layout: DETENTION & WATER QUALITY POND F PROFILE Plotted: 4/10/2026 2:50:47 PM By: Creadance

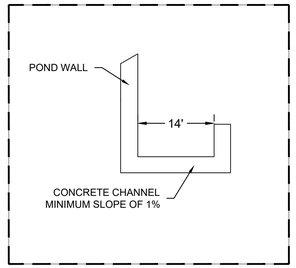



TRASH RACK/RISER PIPE DETAIL
NTS

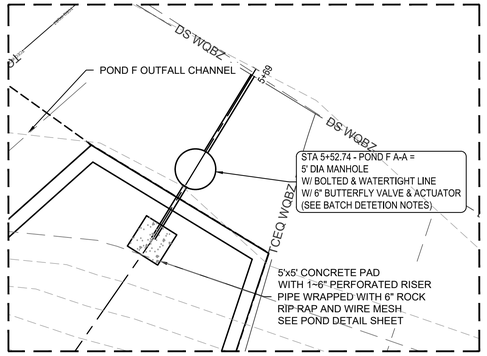
FLOAT SWITCH DETAIL
NTS



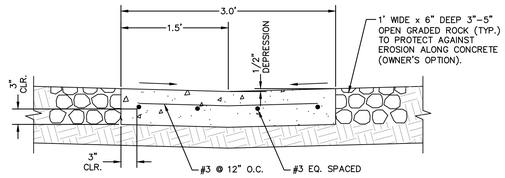

CONTROLLER DETAIL
N.T.S.



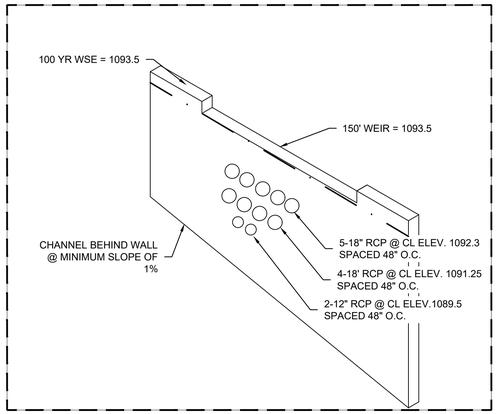

POND F OUTFALL CHANNEL DETAIL
SCALE: NTS




WATER QUALITY OUTFALL DETAIL
SCALE: 1"=10'




TRICKLE CHANNEL DETAIL
SCALE: NTS




POND F WEIR DETAIL
SCALE: NTS
NOTE: RCP TO BE EVENLY SPACE BELOW THE150' WEIR.

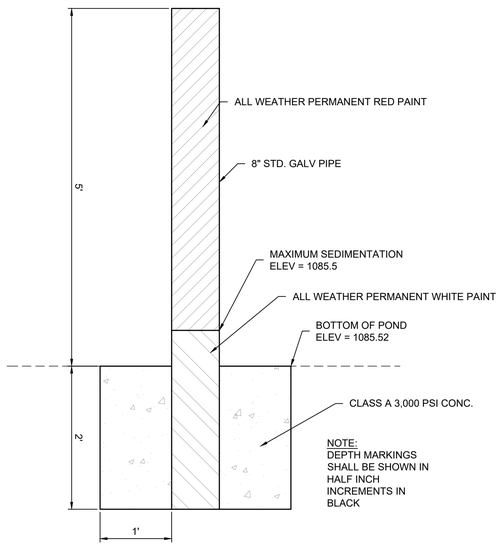
LEGEND

| | |
|---|---|
| | PROPERTY BOUNDARY |
| | PROPOSED CENTERLINE |
| 831 | EXISTING MINOR CONTOUR |
| 831 | EXISTING MAJOR CONTOUR |
| 681 | PROPOSED MINOR CONTOUR |
| 686 | PROPOSED MAJOR CONTOUR |
| TCEQ WQBZ | TEXAS COMMISSION ON ENVIRONMENTAL WATER QUALITY BUFFER ZONE |
| DS WQBZ | DRIPPING SPRING WATER QUALITY BUFFER ZONE |
| | PROPOSED STORM DRAIN LINE |
| | PROPOSED STORM DRAIN MANHOLE |
| | PROPOSED CURB INLET |
| | DIRECTION OF FLOW |
| TW | TOP OF WALL |
| BW | BOTTOM OF WALL |
| FL | FLOW LINE |

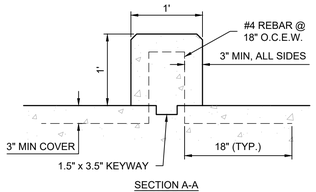
PROFILE LEGEND

| | |
|---|---|
| | PROPOSED STORM PIPE |
| | WATER SURFACE ELEVATION |
| | PROPOSED GRADE |
| | EXISTING GRADE |

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

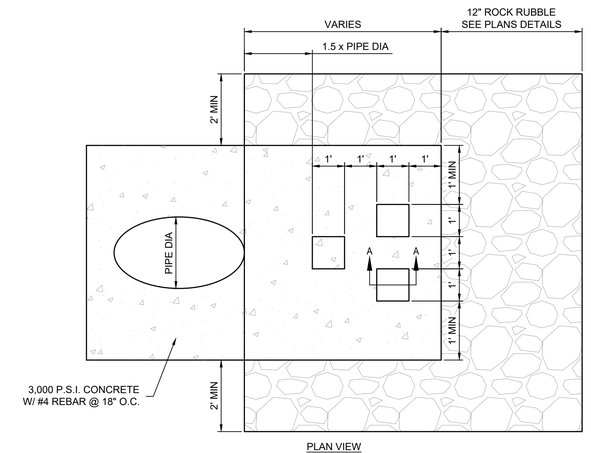



CONCRETE FILLED FIXED SEDIMENT MARKER
N.T.S.

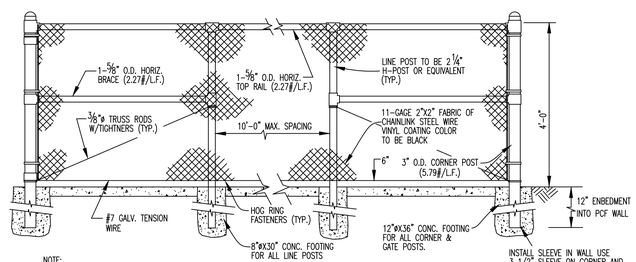



SECTION A-A
N.T.S.

ENERGY DISSIPATOR DETAILS
N.T.S.




PLAN VIEW
N.T.S.




NOTE:
1. ALL FENCE COMPONENTS TO BE VINYL COATED.
2. VINYL COATING COLOR TO BE BLACK.

BLACK VINYL CHAIN LINK FENCE DETAIL
N.T.S.

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

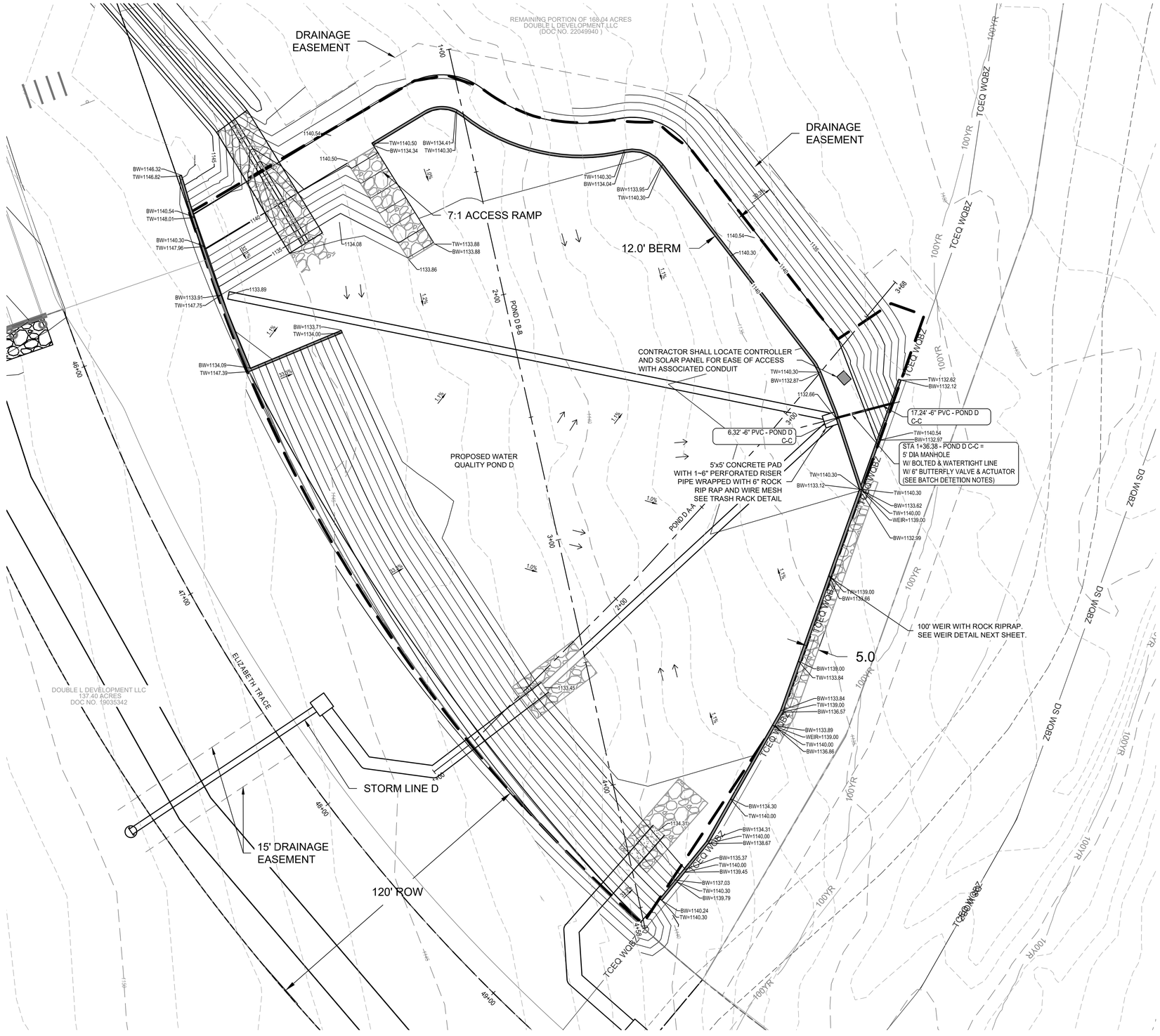
DOUBLE L- A1, A2, & A3 ARTERIAL

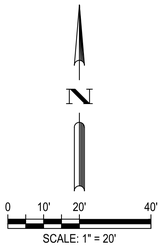
POND F DETAILS

STATE OF TEXAS
STACY MULHOLLAND
146417
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
40 OF 86

O:\00014789-001\LS00 - Pod A1&A2 - Shared Facilities\04 CADD\01 SHTS\C-SP-POND D & F.dwg Layout: POND F DETAILS Plotted: 4/10/2026 2:51:00 PM By: Creadance




LEGEND

| | |
|---|---|
| | PROPERTY BOUNDARY |
| | PROPOSED CENTERLINE |
| 831 | EXISTING MINOR CONTOUR |
| 831 | EXISTING MAJOR CONTOUR |
| 681 | PROPOSED MINOR CONTOUR |
| 686 | PROPOSED MAJOR CONTOUR |
| TCEQ WQBZ | TEXAS COMMISSION ON ENVIRONMENTAL WATER QUALITY BUFFER ZONE |
| DS WQBZ | DRIPPING SPRING WATER QUALITY BUFFER ZONE |
| | PROPOSED CONCRETE RIP-RAP |
| | PROPOSED ROCK GABION |
| | PROPOSED 6" PVC WATER QUALITY OUTFALL |
| | PROPOSED MANHOLE |
| | DIRECTION OF FLOW |
| TW | TOP OF WALL |
| BW | BOTTOM OF WALL |
| FL | FLOW LINE |

PROFILE LEGEND

| | |
|---|---|
| | PROPOSED 6" PVC OUTFALL |
| | WATER SURFACE ELEVATION |
| | PROPOSED GRADE |
| | EXISTING GRADE |

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

NOTES:

1. POND SHALL BE MAINTAINED BY HAYS COUNTY MUD 7A..
2. POND TO HAVE 12" TOPSOIL BOTTOM.
3. THE REQUIRED WATER QUALITY VOLUME IS 131,243 CF AND THE PROVIDED WATER QUALITY VOLUME IS 136,177 CF.

BATCH DETENTION NOTES:

1. OVERVIEW: THE BASIN IS TYPICALLY FILLED QUICKLY BY STORMWATER CONVEYED THROUGH A STORM DRAIN, MAKING THE INFLOW TIME RELATIVELY SHORT. THE RESIDENCE TIME OF THE STORMWATER IS 12 HOURS AND IS CONTROLLED BY THE CONTROL VALVE (NORMALLY SHUT OFF) AND ACTUATOR INSTALLED ON THE OUTLET STRUCTURE. THE CONTROL VALVE OPENS ONCE THE DESIRED RESIDENCE TIME IS ACHIEVED AFTER A STORM EVENT. THE TREATED WATER IS RELEASED SLOWLY OVER A TIME OF 24 TO 48 HOURS.
2. VALVE/ACTUATOR: THE VALVE/ACTUATOR ASSEMBLY CONSISTS OF A BUTTERFLY VALVE WITH A SMALL 12VDC ACTUATOR. THE VALVE IS A QUARTER TURN VALVE. THE ACTUATOR OPERATES THE VALVE BETWEEN THE FULL OPEN AND FULL CLOSED POSITIONS. A MECHANICAL HAND CLANK ALLOWS A PHYSICAL OVERRIDE OF THE VALVE SYSTEM.
3. THE VALVE IS A KEYSTONE 6-INCH(100MM) BUTTERFLY VALVE MATED WITH A EPI-6 12VDC ACTUATOR. THE EPI-6 ACTUATOR REQUIRES AN OPEN OR CLOSE SIGNAL OF 10 SECONDS. THE ACTUATOR HAS LIMIT SWITCHES THAT DETECT END OF TRAVEL AND SHOT OFF THE INCOMING OPEN OR CLOSE SIGNAL TO THE ACTUATOR ONCE THE VALVES REACHES THE FULL OPEN OR CLOSED POSITION. OVER TORQUE SENSORS WILL SHUT DOWN THE ACTUATOR IN THE EVENT OF AN OVER TORQUE SITUATION.
4. CONTROLLER SYSTEM SPECIFICATIONS:
   - 4.1. POWER - THE CONTROLLER SHALL BE POWERED BY A SHIELD-CONTAINED RENEWABLE POWER SOURCE (SUCH AS SOLAR POWER) IF ELECTRICAL POWER IS NOT AVAILABLE. A SINGLE SUPPLY VOLTAGE FOR ALL COMPONENTS IS DESIRABLE.
   - 4.2. PROGRAMMABILITY - THE CONTROLLED SHALL BE PROGRAMMABLE. IT SHALL BE POSSIBLE TO UPDATE PROGRAMS IN THE FIELD. THE DETENTION TIME AND DRAW-DOWN TIME SHALL BE ADJUSTABLE IN HOURS FROM 0 HOURS TO 72 HOURS.
   - 4.3. EVENT SENSING - THE CONTROLLER SHALL BE ABLE TO SENSE THE BEGINNING OF A STORM (WATER FILLING THE BASIN), AND THE END OF A STORM (WATER HAS DRAINED FROM THE BASIN).
   - 4.4. ENVIRONMENT - THE CONTROLLER SHALL OPERATE IN TEMPERATURES FROM 0 DEGREES CELSIUS TO 55 DEGREES CELSIUS, IN HUMIDITY FROM 10% TO 90% (NON-CONDENSING). THE CONTROLLER SHALL OPERATE DURING PERIODS OF RAINFALL.
   - 4.5. SAFETY/SECURITY - THE SYSTEM COMPONENTS SHALL BE LOCKED IN ENCLOSURE TO PREVENT ACCIDENTAL CONTACT THAT COULD COMPROMISED THE FUNCTION OF THE APPARATUS OR CAUSE INJURY.
   - 4.6. MAINTENANCE - THE CONTROLLER SHALL REQUIRE MINIMAL PERIODIC MAINTENANCE TO CONTROLLER PROGRAM SHALL BE FIELD UPGRADEABLE. THE ABILITY TO MANUALLY OPERATE THE VALVE SHALL BE PROVIDED.
   - 4.7. RELIABILITY - 40,000 HOURS(4.6 YEARS) OR GREATER.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND DESIGN OF SENSOR, AUTOMATIC VALVE, CONTROLLER, ETC.TO ENGINEER FOR REVIEW AND APPROVAL.

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

# DOUBLE L- A1, A2, & A3 ARTERIAL

## DETENTION & WATER QUALITY POND D PLAN

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
35 OF 86

O:\0001478\-00\LS\00 - Pod A1&A2 - Shared Facilities\04_CADD\01_SHTS\C-SP-POND D & F.dwg Layout: DETENTION & WATER QUALITY POND D PLAN Plotted: 4/10/2026 3:21:20 PM By: Creadance

*TSS Removal Calculations*

**Project Name:** Double L Ranch Pod
**Date Prepared:** 4/10/2026

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.

**Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348A**

Characters shown in red are data entry fields.

**Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.**

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

Page 3-29 Equation 3.3: $L_M = 27.7(A_N \times P)$

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 * = | 144.121 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan* = | 58.425 | acres |
| Total post-development impervious cover fraction * = | 0.41 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 53406 | lbs. |

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

Number of drainage basins / outfalls areas leaving the plan area = 14

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

**Drainage Basin/Outfall Area No. =** Pond D

| | | |
|---|---|---|
| Total drainage basin/outfall area = | 21.494 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 10.551 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.49 | |
| $L_{M\ THIS\ BASIN}$ = | 9645 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Batch Detention
Removal efficiency = 91 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 efficiency) x P x ($A_T$ x 34.6 + $A_P$ x 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

| | | |
|---|---|---|
| $A_C$ = | 21.494 | acres |
| $A_I$ = | 10.551 | acres |
| $A_P$ = | 10.94 | acres |
| $L_R$ = | 11140 | lbs |

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

Desired $L_{M\ THIS\ BASIN}$ = 10861 lbs.

F = 0.97

**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 = | 3.00 | inches |
| Post Development Runoff Coefficient = | 0.47 | |
| On-site Water Quality Volume = | 109369 | cubic feet |

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

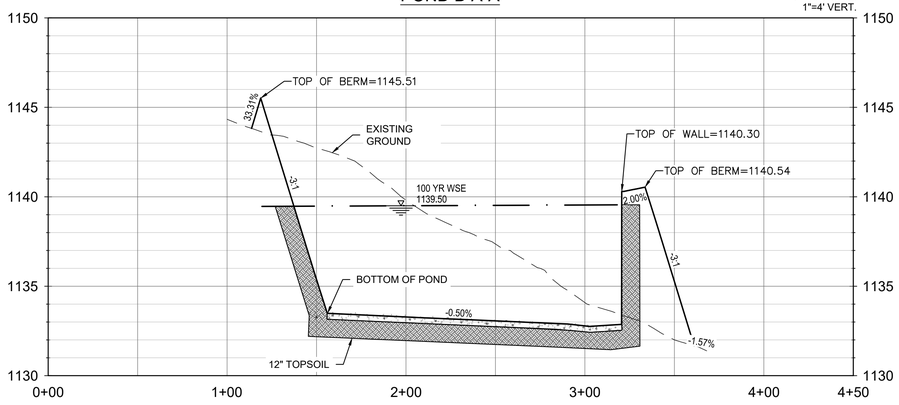
| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.000 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | acres |
| Impervious fraction of off-site area = | 0 | |
| Off-site Runoff Coefficient = | 0.00 | |
| Off-site Water Quality Volume = | 0 | cubic feet |
| Storage for Sediment = | 21874 | |
| **Total Capture Volume (required water quality volume(s) x 1.20) =** | 131243 | 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.

| Stage (ft msl) (Elevation) | Pond Depth (ft) | Cumulative Pond Depth (ft) | Surface Area (sf) | Volume (cf) | Cumulative Volume (cf) | |
|---|---|---|---|---|---|---|
| 1132.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1133.00 | 0.34 | 0.34 | 3,026 | 343 | 343 | |
| 1134.00 | 1.00 | 1.34 | 34,451 | 15,896 | 16,239 | |
| 1135.00 | 1.00 | 2.34 | 38,959 | 36,682 | 52,921 | |
| 1136.00 | 1.00 | 3.34 | 40,112 | 39,534 | 92,455 | |
| 1137.00 | 1.00 | 4.34 | 41,255 | 40,682 | 133,137 | WQE |
| 1138.00 | 1.00 | 5.34 | 42,388 | 41,820 | 174,957 | |
| 1139.00 | 1.00 | 6.34 | 43,511 | 42,948 | 217,905 | |
| 1140.00 | 1.00 | 7.34 | 44,625 | 44,067 | 261,972 | |
| 1140.30 | 0.30 | 7.64 | 45,418 | 13,506 | 275,478 | |

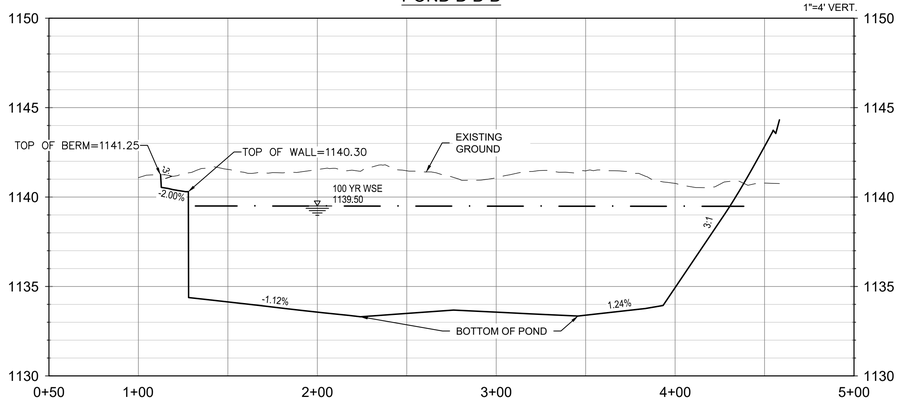
## POND D A-A

SCALE: 1"=40' HORIZ. 1"=4' VERT.



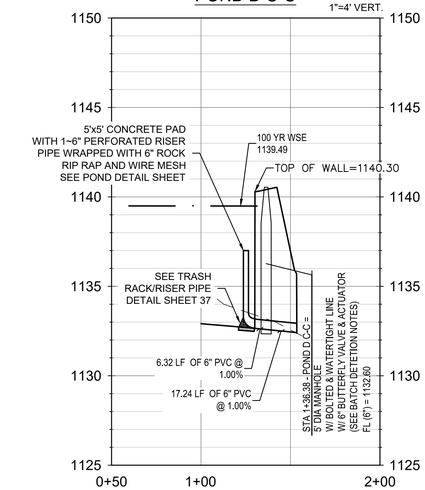

## POND D B-B

SCALE: 1"=40' HORIZ. 1"=4' VERT.




## POND D C-C

SCALE: 1"=40' HORIZ. 1"=4' VERT.




LEGEND

- PROPERTY BOUNDARY
- PROPOSED CENTERLINE
- 831 — EXISTING MINOR CONTOUR
- 831 — EXISTING MAJOR CONTOUR
- 681 — PROPOSED MINOR CONTOUR
- 686 — PROPOSED MAJOR CONTOUR
- TCEQ WQBZ — TEXAS COMMISSION ON ENVIRONMENTAL WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRING WATER QUALITY BUFFER ZONE
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED CURB INLET
- DIRECTION OF FLOW
- TW — TOP OF WALL
- BW — BOTTOM OF WALL
- FL — FLOW LINE

PROFILE LEGEND

- PROPOSED STORM PIPE
- WATER SURFACE ELEVATION
- PROPOSED GRADE
- EXISTING GRADE

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:
REVIEWED BY:
DRAWN BY:


BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

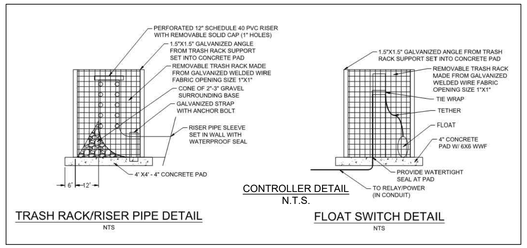

DOUBLE L- A1, A2, & A3 ARTERIAL

DETENTION & WATER QUALITY POND D PROFILE

STATE OF TEXAS — RICHARD PHAM 142275 — LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET 36 OF 86

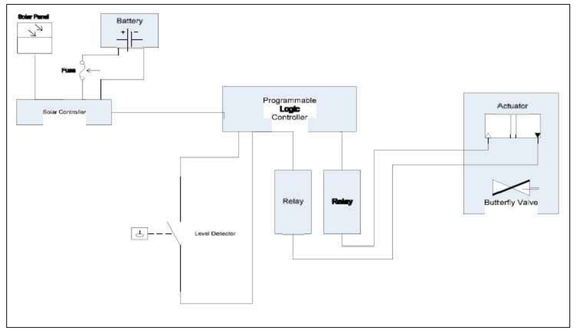
O:\00014789-00\LSI\00 - Pod A1&A2 - Shared Facilities\04_CADD\01_SHTS\C-SP-POND D & F.dwg Layout: DETENTION & WATER QUALITY POND D PROFILE Plotted: 4/10/2026 3:21:32 PM By: Creadance

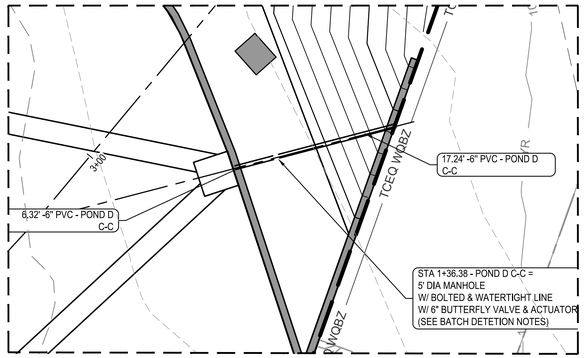



TRASH RACK/RISER PIPE DETAIL
NTS

CONTROLLER DETAIL
N.T.S.

FLOAT SWITCH DETAIL
NTS



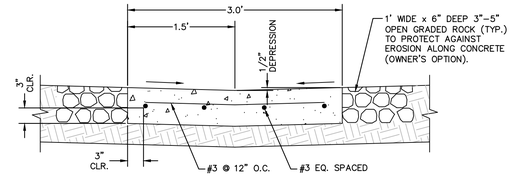

WATER QUALITY OUTFALL DETAIL
SCALE: 1"=10'

LEGEND

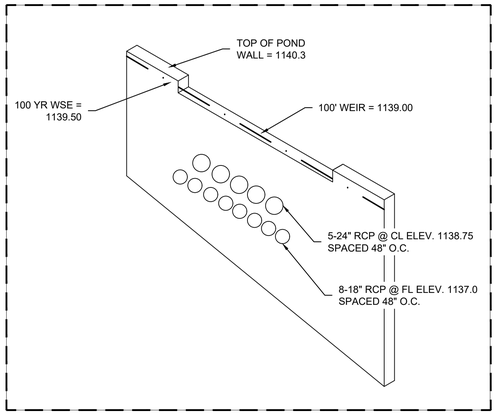
- PROPERTY BOUNDARY
- PROPOSED CENTERLINE
- 831 — EXISTING MINOR CONTOUR
- 831 — EXISTING MAJOR CONTOUR
- 681 — PROPOSED MINOR CONTOUR
- 686 — PROPOSED MAJOR CONTOUR
- TCEQ WQBZ — TEXAS COMMISSION ON ENVIRONMENTAL WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRING WATER QUALITY BUFFER ZONE
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED CURB INLET
- DIRECTION OF FLOW
- TW — TOP OF WALL
- BW — BOTTOM OF WALL
- FL — FLOW LINE

PROFILE LEGEND

- PROPOSED STORM PIPE
- WATER SURFACE ELEVATION
- PROPOSED GRADE
- EXISTING GRADE

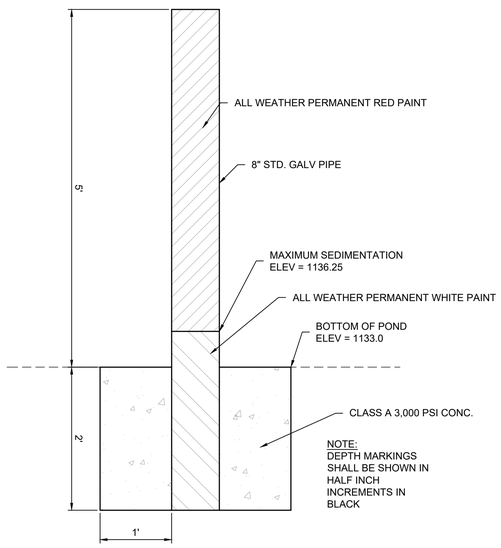



TRICKLE CHANNEL DETAIL
SCALE: NTS

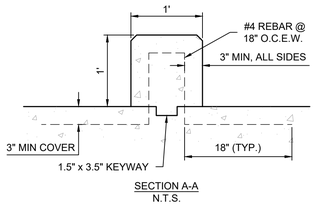



POND D WEIR DETAIL
SCALE: NTS

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

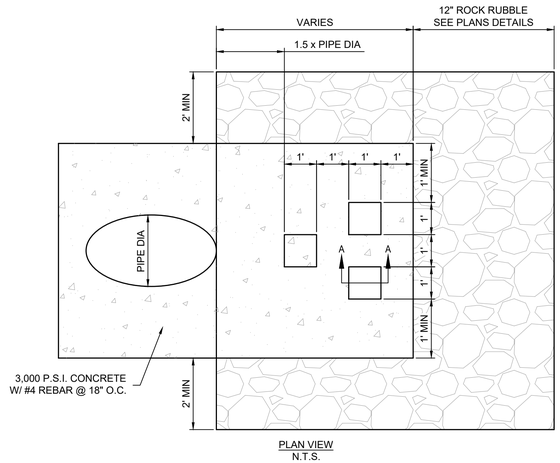



CONCRETE FILLED FIXED SEDIMENT MARKER
N.T.S.

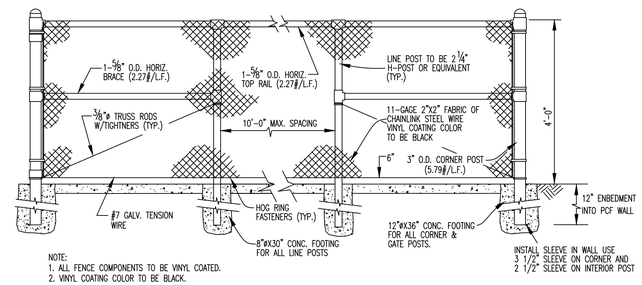



SECTION A-A
N.T.S.

ENERGY DISSIPATOR DETAILS
N.T.S.




PLAN VIEW
N.T.S.




NOTE:
1. ALL FENCE COMPONENTS TO BE VINYL COATED.
2. VINYL COATING COLOR TO BE BLACK.

BLACK VINYL CHAIN LINK FENCE DETAIL
N.T.S.

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

DOUBLE L- A1, A2, & A3 ARTERIAL

POND D DETAILS

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
37 OF 86

O:\00014789-00\LS\00 - Pod A1&A2 - Shared Facilities\04 CADD\01 SHTS\C-SP-POND D & F.dwg Layout:POND D DETAILS Plotted: 4/10/2026 3:21:42 PM By: Creadance




## PLAN LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- LOT LINE
- 28 — LOT NUMBER
- 10' P.U.E.
- 25' B.S.L.
- ROAD CENTERLINE
- SIDEWALK
- RETAINING WALL
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- TCEQ BUFFER AREA
- * HILL TOP PRESERVATION

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | APR |
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD A4 & B1

## OVERALL SITE PLAN

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

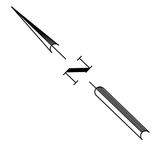
THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE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

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
6 OF 124

O:\00014789-000\LS\04 - Pod A4&B1\04_CADD\01_SHTS\C-SITE-OV-A4-B1.dwg Layout: OVERALL SITE PLAN Plotted: 4/10/2026 3:22:59 PM By: jramones



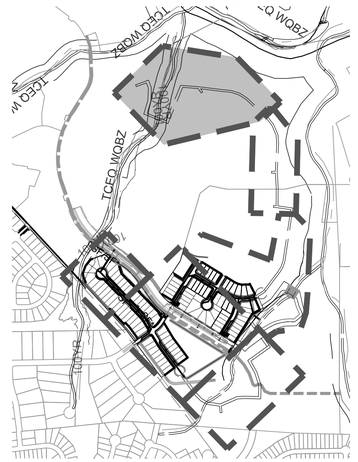




## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED MAJOR CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LIMITS OF CONSTRUCTION
- SF — TEMPORARY SILT FENCE
- SF* — POST CONSTRUCTION SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- X — EXISTING HOG/BARB WIRE FENCE
- O — EXISTING IRON FENCE
- EXISTING WOOD FENCE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).




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

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

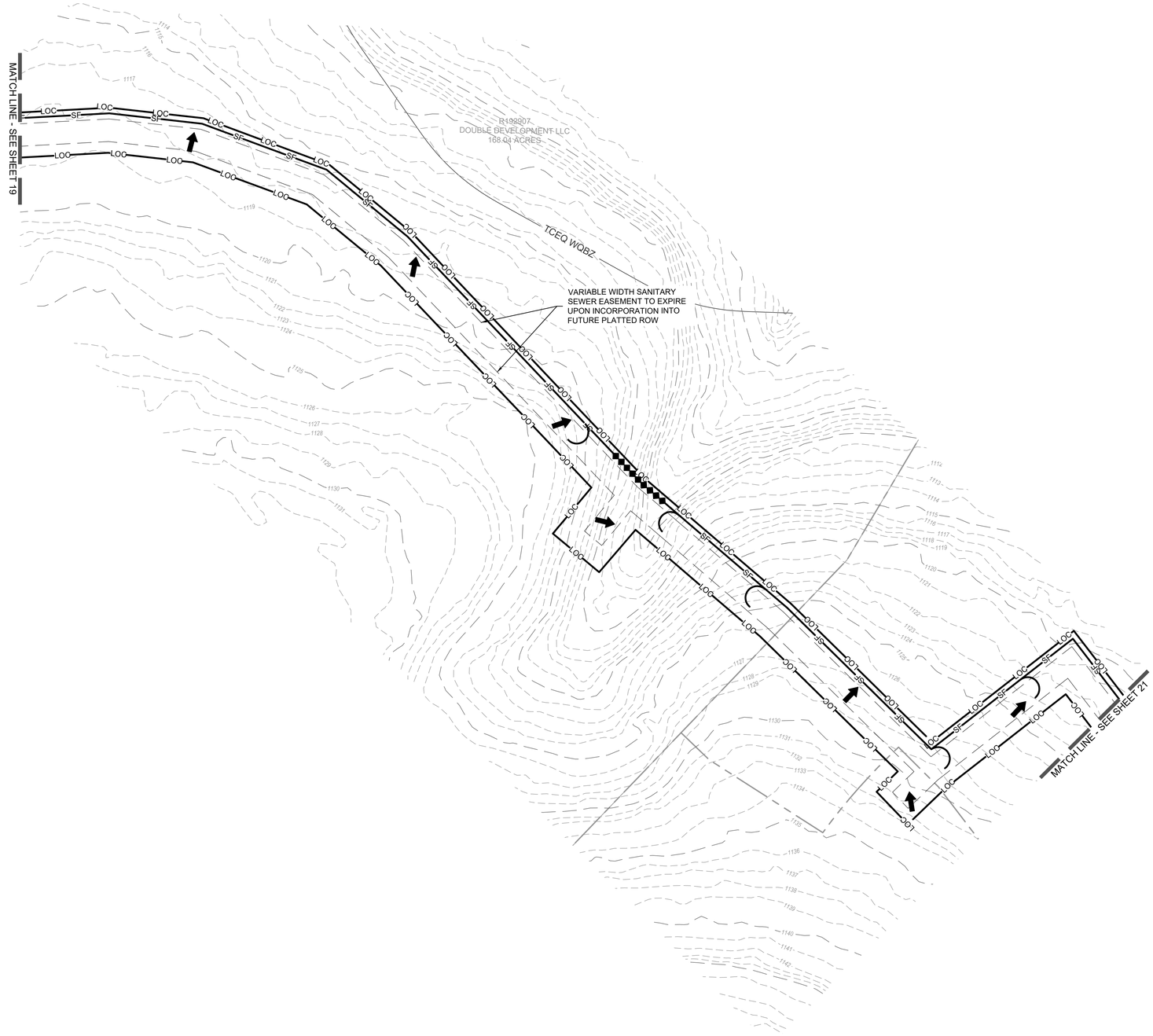
# DOUBLE L - POD A4 & B1

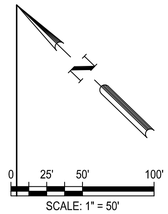
## EROSION AND SEDIMENTATION CONTROL PLAN (1 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
19 OF 124

\\bgeincldata\200014789-00\LSI04 - Pod A4&B1\04_CADD\01_SHTS\C-EROS-OV-A4-B1.dwg Layout: EROSION AND SEDIMENTATION CONTROL PLAN (1 OF 6) Plotted: 4/10/2026 4:35:23 PM By: Tpiasecki



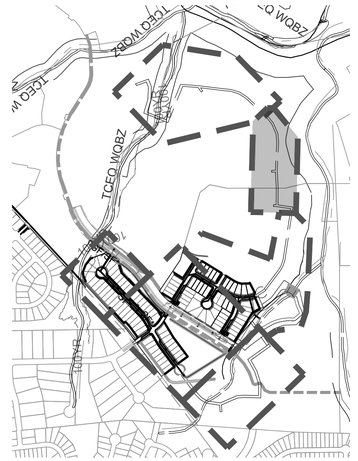




## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED MAJOR CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LIMITS OF CONSTRUCTION
- SF — TEMPORARY SILT FENCE
- SF* — POST CONSTRUCTION SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- X — EXISTING HOG/BARB WIRE FENCE
- O — EXISTING IRON FENCE
- EXISTING WOOD FENCE

EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL
   1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).




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

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

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | APR |
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| △ | △ | △ | △ | △ | △ | | REV |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

# DOUBLE L - POD A4 & B1

## EROSION AND SEDIMENTATION CONTROL PLAN (2 OF 6)

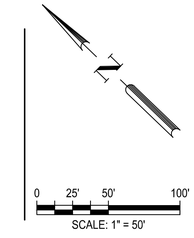
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
20 OF 124

\\bgeincdata\2000\14789-00\LS\04 - Pod A4&B1\04_CADD\01_SHTS\C-EROS-OV-A4-B1.dwg Layout: EROSION AND SEDIMENTATION CONTROL PLAN (2 OF 6) Plotted: 4/10/2026 4:37:20 PM By: Tpiasecki

\\bgeinc\data2\200014789-001\SI\04 - Pod A4&B1\04_CADD\01_SHTS\C-EROS-OV-A4-B1.dwg Layout: EROSION AND SEDIMENTATION CONTROL PLAN (3 OF 6) Plotted: 4/10/2026 4:42:06 PM By: Tplasecki



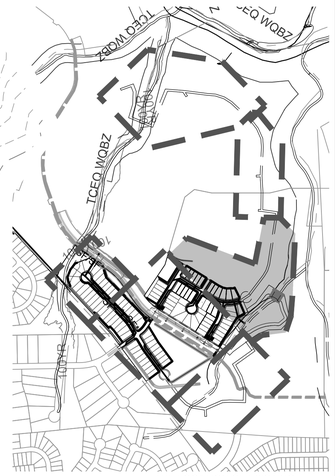




## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- PROPOSED MAJOR CONTOUR
- EXISTING PROPOSED CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LIMITS OF CONSTRUCTION
- TEMPORARY SILT FENCE
- POST CONSTRUCTION SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100 YEAR FEMA FLOOD PLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- EXISTING HOG/BARB WIRE FENCE
- EXISTING IRON FENCE
- EXISTING WOOD FENCE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).




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

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

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

**BGE, Inc.**
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

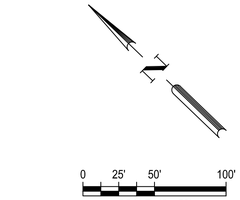
# DOUBLE L - POD A4 & B1

## EROSION AND SEDIMENTATION CONTROL PLAN (3 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
21 OF 124



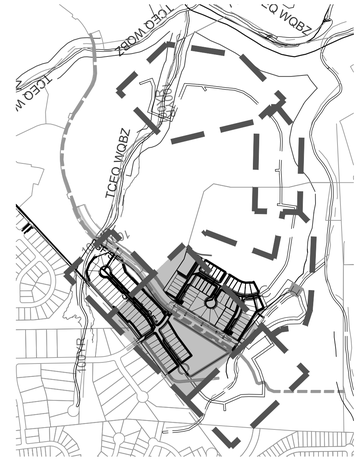




## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED MAJOR CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LIMITS OF CONSTRUCTION
- SF — TEMPORARY SILT FENCE
- SF* — POST CONSTRUCTION SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- X — EXISTING HOG/BARB WIRE FENCE
- O — EXISTING IRON FENCE
- EXISTING WOOD FENCE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).




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

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

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

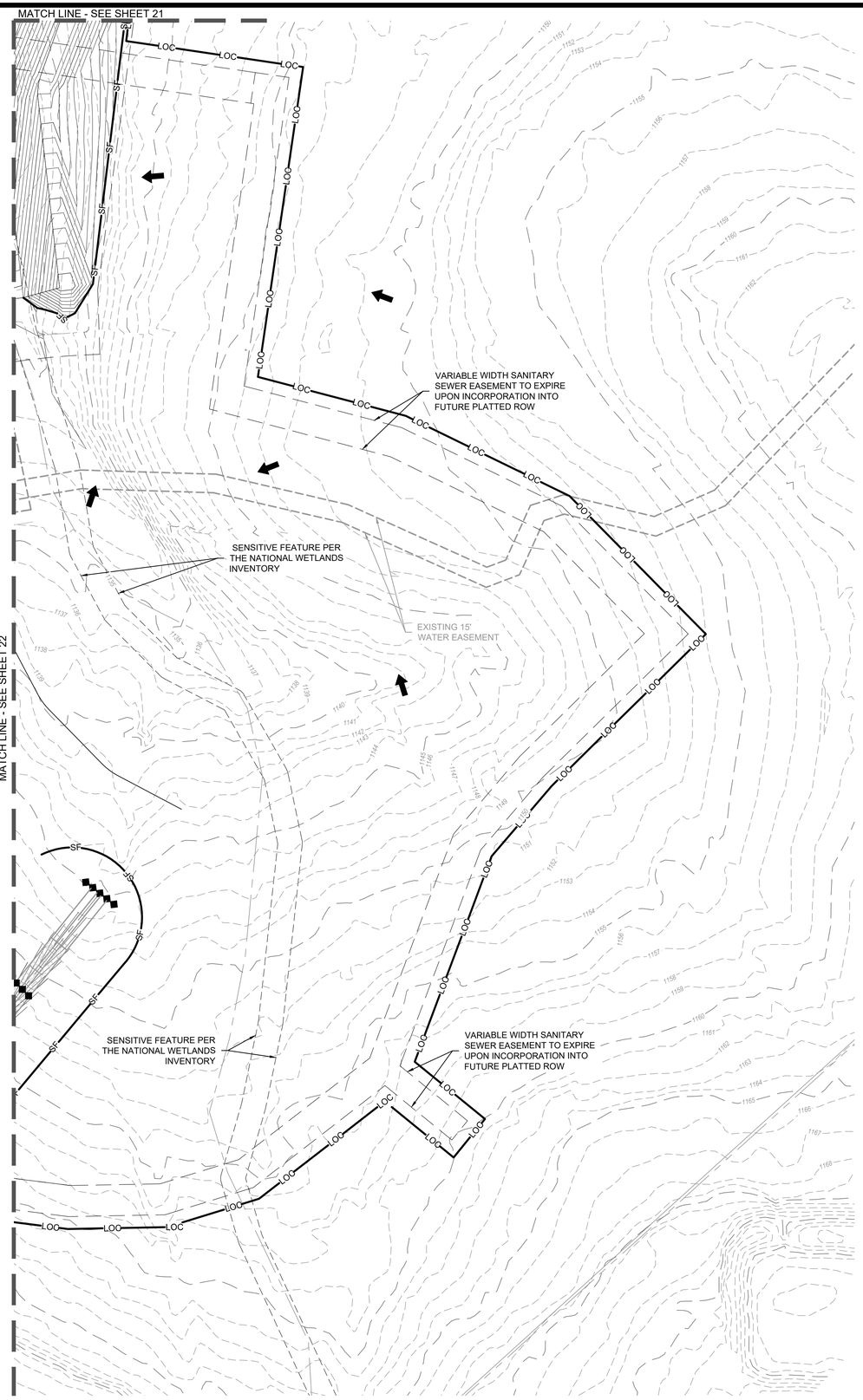
# DOUBLE L - POD A4 & B1

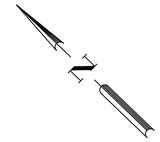
## EROSION AND SEDIMENTATION CONTROL PLAN (4 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
22 OF 124

\\bgeinc\data\2000\14789-000\LS\04 - Pod A4&B1\04_CADD\01_SHTS\C-EROS-OV-A4-B1.dwg Layout: EROSION AND SEDIMENTATION CONTROL PLAN (4 OF 6) Plotted: 4/10/2026 4:45:01 PM By: Rpham



0 25' 50' 100'

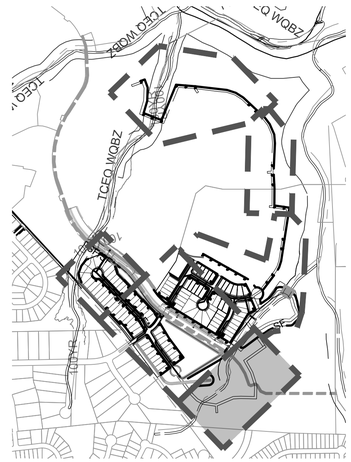
SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED MAJOR CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LIMITS OF CONSTRUCTION
- SF — TEMPORARY SILT FENCE
- SF* — POST CONSTRUCTION SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- X — EXISTING HOG/BARB WIRE FENCE
- O — EXISTING IRON FENCE
- EXISTING WOOD FENCE

### EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).




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

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

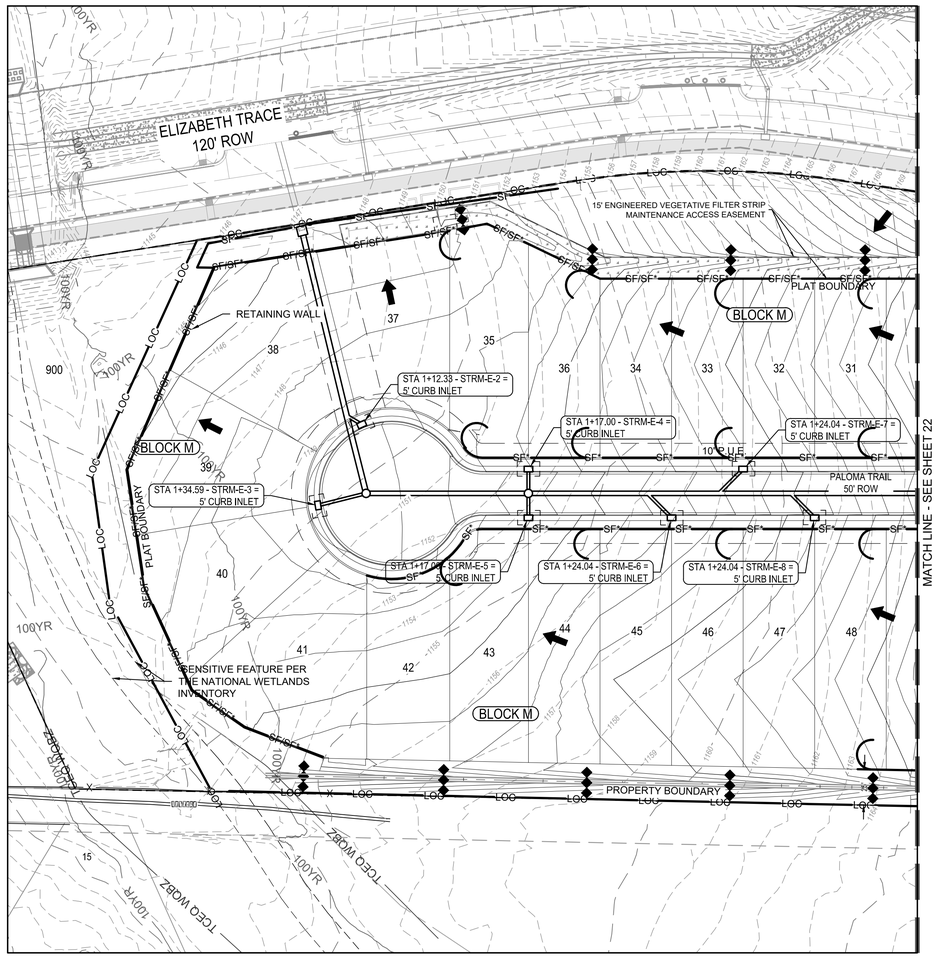
# DOUBLE L - POD A4 & B1

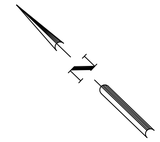
## EROSION AND SEDIMENTATION CONTROL PLAN (5 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
23 OF 124

O:\00014789-00\LS\04 - Pod A4&B1\04_CADD\01_SHTS\C-EROS-OV-A4-B1.dwg Layout: EROSION AND SEDIMENTATION CONTROL PLAN (5 OF 6) Plotted: 4/10/2026 3:25:17 PM By: Tpiasecki



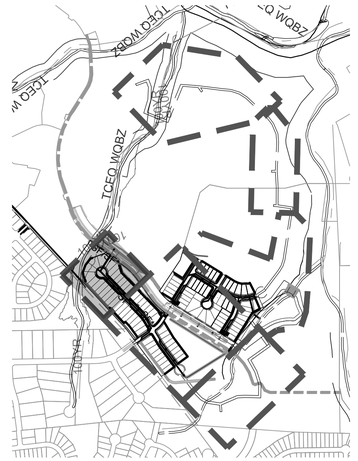




## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED MAJOR CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LIMITS OF CONSTRUCTION
- SF — TEMPORARY SILT FENCE
- SF* — POST CONSTRUCTION SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- 100YR — 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- X — EXISTING HOG/BARB WIRE FENCE
- O — EXISTING IRON FENCE
- EXISTING WOOD FENCE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).




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

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

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

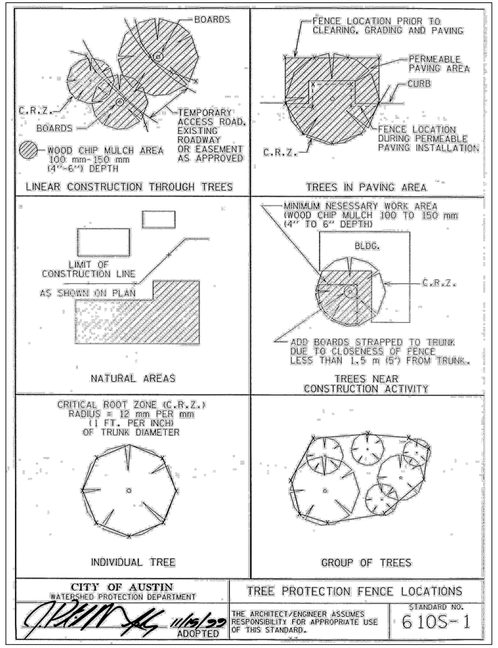
# DOUBLE L - POD A4 & B1

## EROSION AND SEDIMENTATION CONTROL PLAN (6 OF 6)

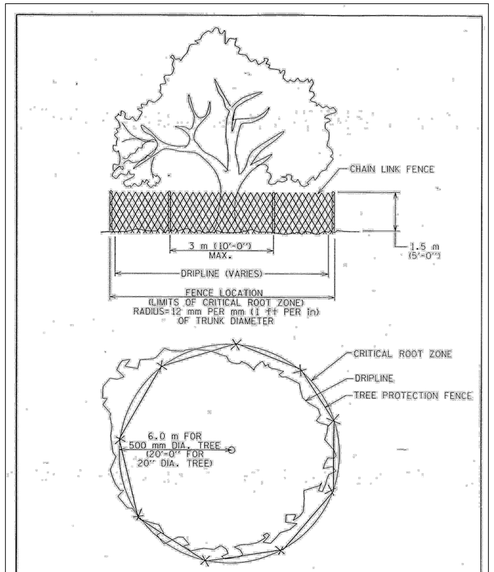
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
24 OF 124

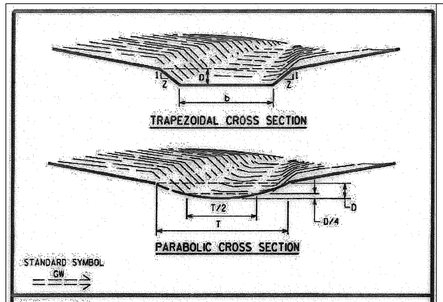
\\bgeincl\data\2\00014789-00\LS\04 - Pod A4&B1\04_CADD\01_SHTS\C-EROS-OV-A4-B1.dwg Layout: 24 EROSION AND SEDIMENTATION CONTROL PLAN (6 OF 6) Plotted: 4/10/2026 4:47:40 PM By: Rpham




| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | TREE PROTECTION FENCE LOCATIONS |
|---|---|
| 11/19/99 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-1 |




| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | TREE PROPTECTION FENCE TYPE A - CHAIN LINK |
|---|---|
| 11/19/99 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-2 |




**GENERAL NOTES:**

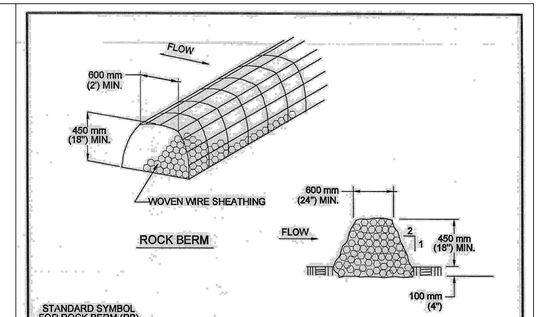
1. EXCEPT AS INDICATED ON THE DRAWINGS OR DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE, ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.

2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, TYPICAL SECTIONS AND CROSS-SECTION INDICATED ON THE DRAWINGS AND SHALL BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES, WHICH COULD IMPEDE NORMAL FLOW.

3. FILL SHALL CONFORM TO STANDARD SPECIFICATION ITEM NO. 132S, "EMBANKMENT".

4. EARTHEN CHANNELS SHALL ALWAYS BE STABILIZED WITH THE APPROPRIATE SOIL RETENTION BLANKET WHICH SHALL CONFORM TO STANDARD SPECIFICATION ITEM NO. 605S, "SOIL RETENTION BLANKET".

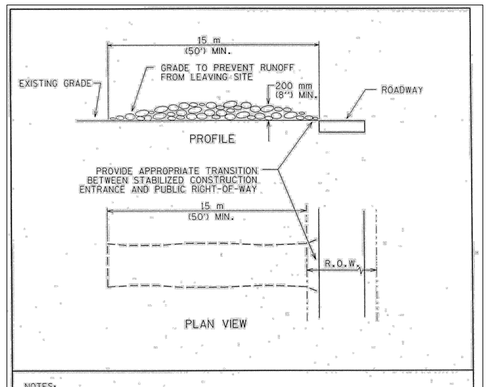
| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | GRASS LINED SWALE |
|---|---|
| ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 627S-1 |




**NOTES:**

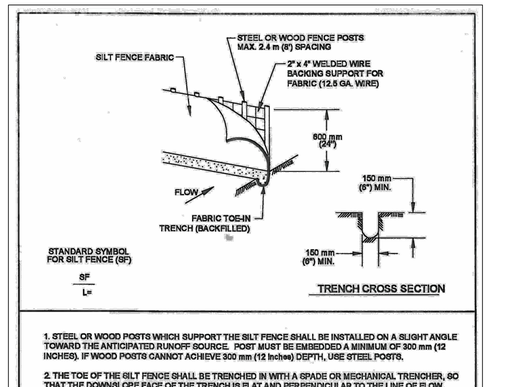
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | ROCK BERM |
|---|---|
| 8/24/2010 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 639S-1 |




NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | STABILIZED CONSTRUCTION ENTRANCE |
|---|---|
| 5/23/00 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 641S-1 |




1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 Inches) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 Inches) DEEP AND 150 mm (6 Inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

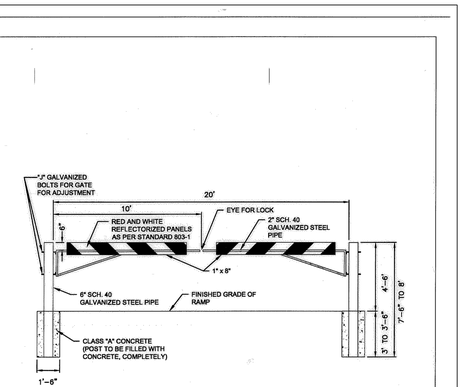
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

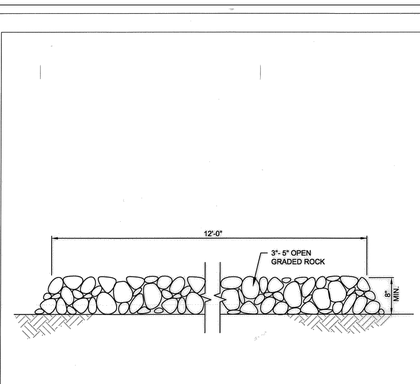
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | SILT FENCE |
|---|---|
| 9/1/2011 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 642S-1 |




NOTE:
RAMP BARRICADE SUBSIDIARY TO ITEM 403-G CONCRETE STRUCTURES

| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | POND PIPE GATE AT RAMP DETAIL |
|---|---|
| E. Rad, P.E. 1/9/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 662S-1 |




NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. THICKNESS: NOT LESS THAN 200 mm (8").
3. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.

| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | POND MAINTENANCE ROAD CROSS SECTION |
|---|---|
| E. Rad, P.E. 1/9/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 662S-2 |

APR
DATE
DESCRIPTION
REV

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

BGE

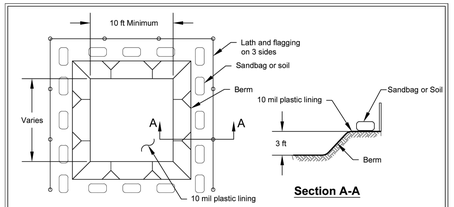
BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

DOUBLE L - POD A4 & B1

EROSION AND SEDIMENTATION CONTROL DETAILS (1 OF 2)

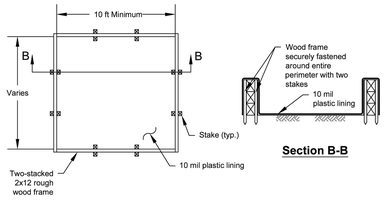
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
25 OF 124




**Section A-A**

**Type "Above Grade" with Earthen Berms**



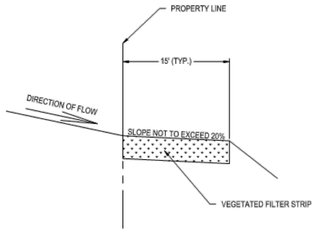

**Section B-B**

**Type "Above Grade" with Wood Planks**

NOT TO SCALE

Hays County Concrete Washout Area

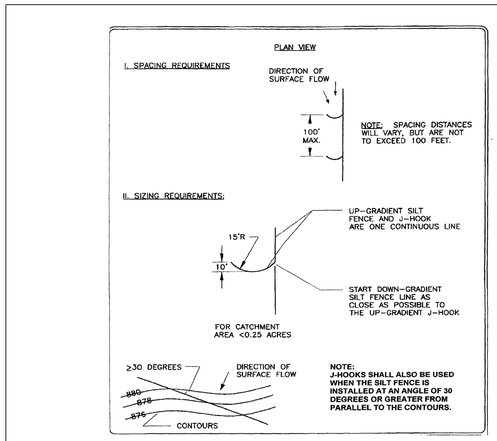
Revised June 2025




ENGINEERED VEGETATED FILTER STRIP DETAIL (TYP.)
N.T.S.

V.F.S. NOTES (TCEQ RG348)

1. THE FILTER STRIP SHOULD EXTEND ALONG THE ENTIRE LENGTH OF THE CONTRIBUTING AREA AND THE SLOPE SHOULD NOT EXCEED 20%. THE MINIMUM DIMENSION OF THE FILTER STRIP (IN THE DIRECTION OF FLOW) SHOULD BE NO LESS THAN 15 FEET. THE MAXIMUM WIDTH (IN THE DIRECTION OF FLOW) OF THE CONTRIBUTING IMPERVIOUS AREA SHOULD NOT EXCEED 72 FEET. FOR ROADWAYS WITH A VEGETATED STRIP ALONG BOTH SIDES THE TOTAL WIDTH OF THE ROADWAY SHOULD NOT EXCEED 144 FEET (I.E., 72 FEET DRAINING TO EACH SIDE).
2. THE MINIMUM VEGETATED COVER FOR ENGINEERED STRIPS IS 80%.
3. THE AREA CONTRIBUTING RUNOFF TO A FILTER STRIP SHOULD BE RELATIVELY FLAT SO THAT THE RUNOFF IS DISTRIBUTED EVENLY TO THE VEGETATED AREA WITHOUT THE USE OF A LEVEL SPREADER.
4. THE AREA TO BE USED FOR THE STRIP SHOULD BE FREE OF GULLIES OR RILLS THAT CAN CONCENTRATE OVERLAND FLOW (SCHUELER, 1987).
5. THE TOP EDGE OF THE FILTER STRIP ALONG THE PAVEMENT WILL BE DESIGNED TO AVOID THE SITUATION WHERE RUNOFF WOULD TRAVEL ALONG THE TOP OF THE FILTER STRIP, RATHER THAN THROUGH IT.
6. TOP EDGE OF THE FILTER STRIP SHOULD BE LEVEL. OTHERWISE RUNOFF WILL TEND TO FORM A CHANNEL IN THE LOW SPOT. A LEVEL SPREADER SHOULD NOT BE USED TO DISTRIBUTE RUNOFF TO AN ENGINEERED FILTER STRIP.
7. FILTER STRIPS SHOULD BE LANDSCAPED AFTER OTHER PORTIONS OF THE PROJECT ARE COMPLETED.




| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

DOUBLE L - POD A4 & B1

EROSION AND SEDIMENTATION CONTROL DETAILS (2 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
25 OF 124

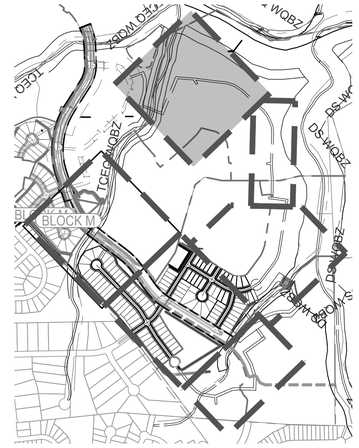



0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PROPOSED CONTOUR (XXX)
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR (XXX)
- PROPOSED 10' CURB INLET
- PROPOSED 5' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED FIRE HYDRANT (FH)
- PROPOSED STORM SEWER (SD)
- WASTEWATER LINE (WW)
- WATER LINE (W)
- DOUBLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- SINGLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- DOUBLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- SINGLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | APR |
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

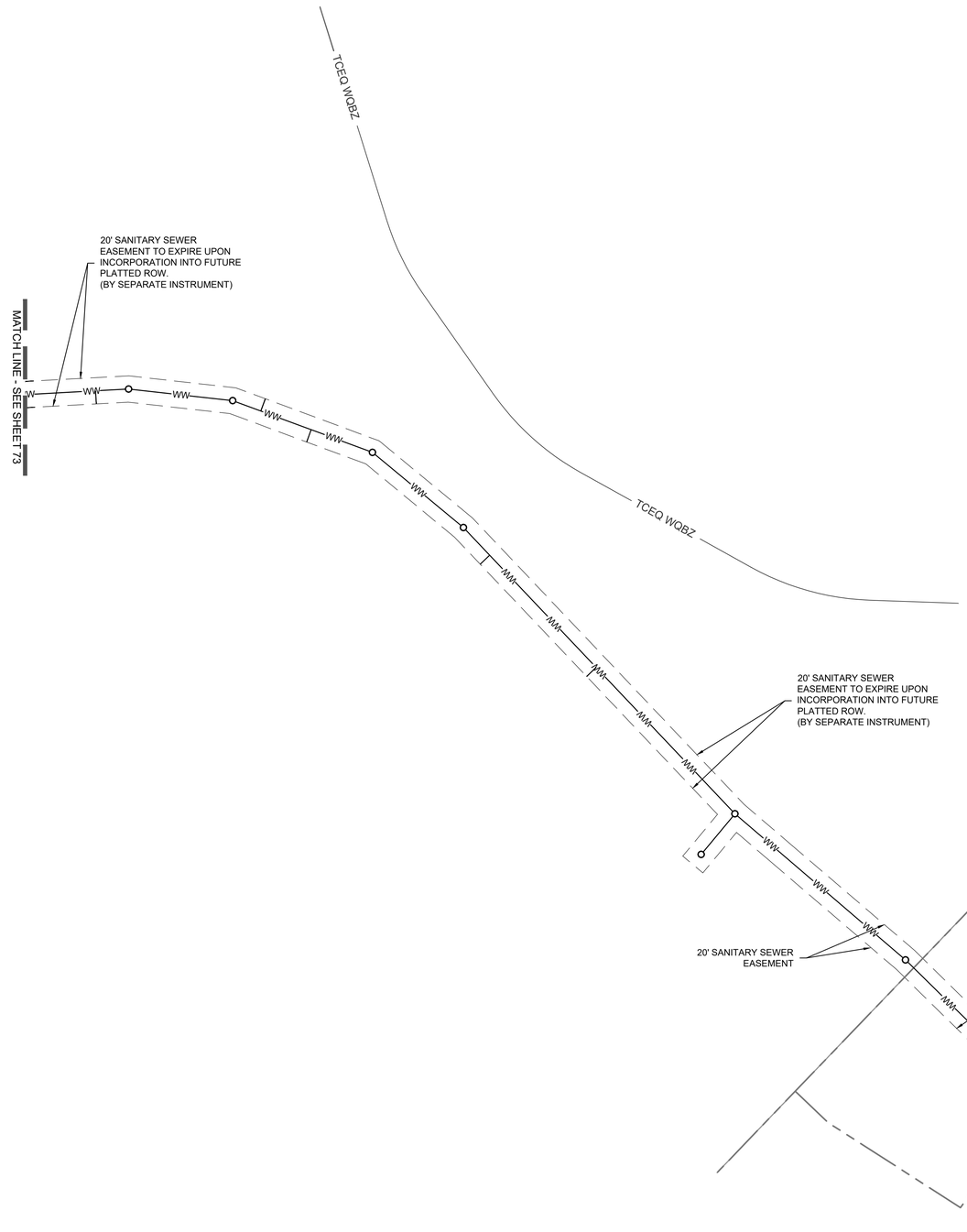

# DOUBLE L - POD A4 & B1

## OVERALL UTILITY (SHEET 1)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
73 OF 124

O:\00014789-009\LS\04 - Pod A4&B1\04_CADD\01_SHTS\C-UTIL-PL-A4&B1.dwg Layout: 13 OVERALL UTILITY (SHEET 1) Plotted: 4/10/2026 3:26:06 PM By: Creadance

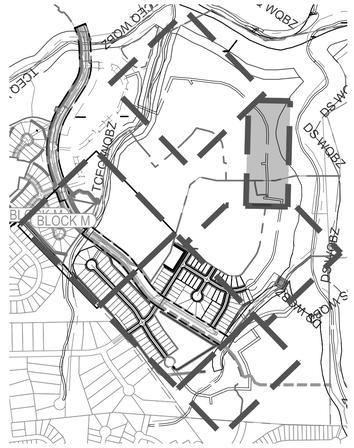



0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- XXX — PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED 10' CURB INLET
- PROPOSED 5' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- FH — PROPOSED FIRE HYDRANT
- SD — SD — PROPOSED STORM SEWER
- WW — WASTEWATER LINE
- W — WATER LINE
- DOUBLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- SINGLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- DOUBLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- SINGLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WQBZ — TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS




| | | | | | | APR |
|---|---|---|---|---|---|---|
| | | | | | | DATE |
| | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | REV |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD A4 & B1

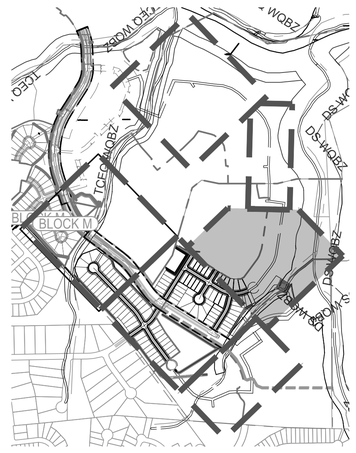
## OVERALL UTILITY (SHEET 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
74 OF 124

O:\000014789-00\LS\04 - Pod A4&B1\04_CADD\01_SHTS\C-UTIL-PL-A4&B1.dwg Layout: OVERALL UTILITY (SHEET 2) Plotted: 4/10/2026 3:26:05 PM By: Creadance




0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PROPOSED CONTOUR (XXX)
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR (XXX)
- PROPOSED 10' CURB INLET
- PROPOSED 5' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED FIRE HYDRANT (FH)
- PROPOSED STORM SEWER (SD)
- WASTEWATER LINE (WW)
- WATER LINE (W)
- DOUBLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- SINGLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- DOUBLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- SINGLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| △ | △ | △ | △ | △ | △ | | REV |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

# DOUBLE L - POD A4 & B1

## OVERALL UTILITY (SHEET 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET 75 OF 124

O:\00014789-00\LS\04 - Pod A4&B1\04_CAD\D\01_SHTS\C-UTIL-PL-A4&B1.dwg Layout: OVERALL UTILITY (SHEET 3) Plotted: 4/10/2026 3:25:12 PM By: Creadance

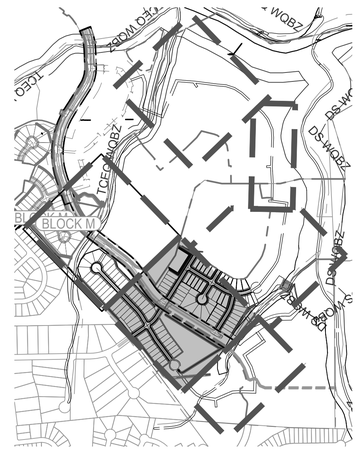



0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- XXX — PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED 10' CURB INLET
- PROPOSED 5' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- FH — PROPOSED FIRE HYDRANT
- SD — SD — PROPOSED STORM SEWER
- WW — WW — WW — WASTEWATER LINE
- W — W — W — WATER LINE
- DOUBLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- SINGLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- DOUBLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- SINGLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WQBZ — TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS



| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: ĐZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

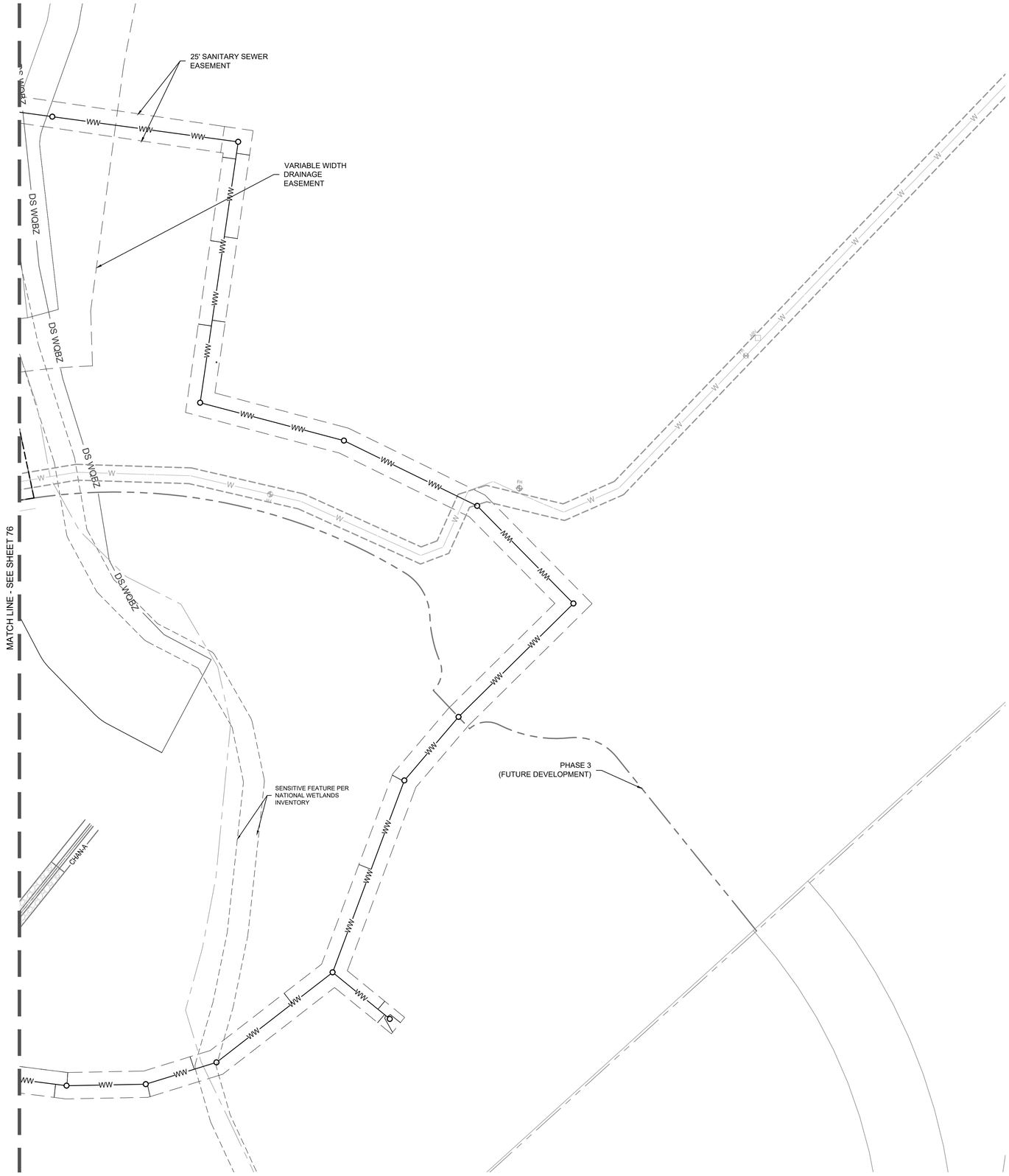

# DOUBLE L - POD A4 & B1

## OVERALL UTILITY (SHEET 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
76 OF 124

O:\00014789-000\LS\04 - Pod A4&B1\04_CADD\01_SHTS\C-UTIL-PL-A4&B1.dwg Layout: OVERALL UTILITY (SHEET 4) Plotted: 4/10/2026 3:23:57 PM By: Creadance

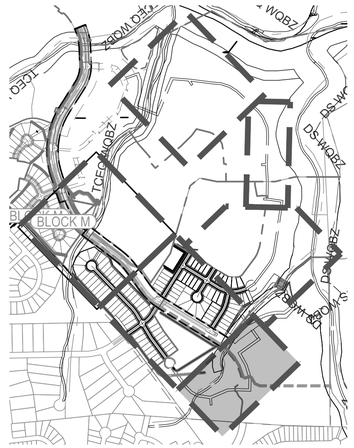



0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PROPOSED CONTOUR (XXX)
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR (XXX)
- PROPOSED 10' CURB INLET
- PROPOSED 5' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED FIRE HYDRANT (FH)
- PROPOSED STORM SEWER (SD)
- WASTEWATER LINE (WW)
- WATER LINE (W)
- DOUBLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- SINGLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- DOUBLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- SINGLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS




| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| △ | △ | △ | △ | △ | △ | | REV |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

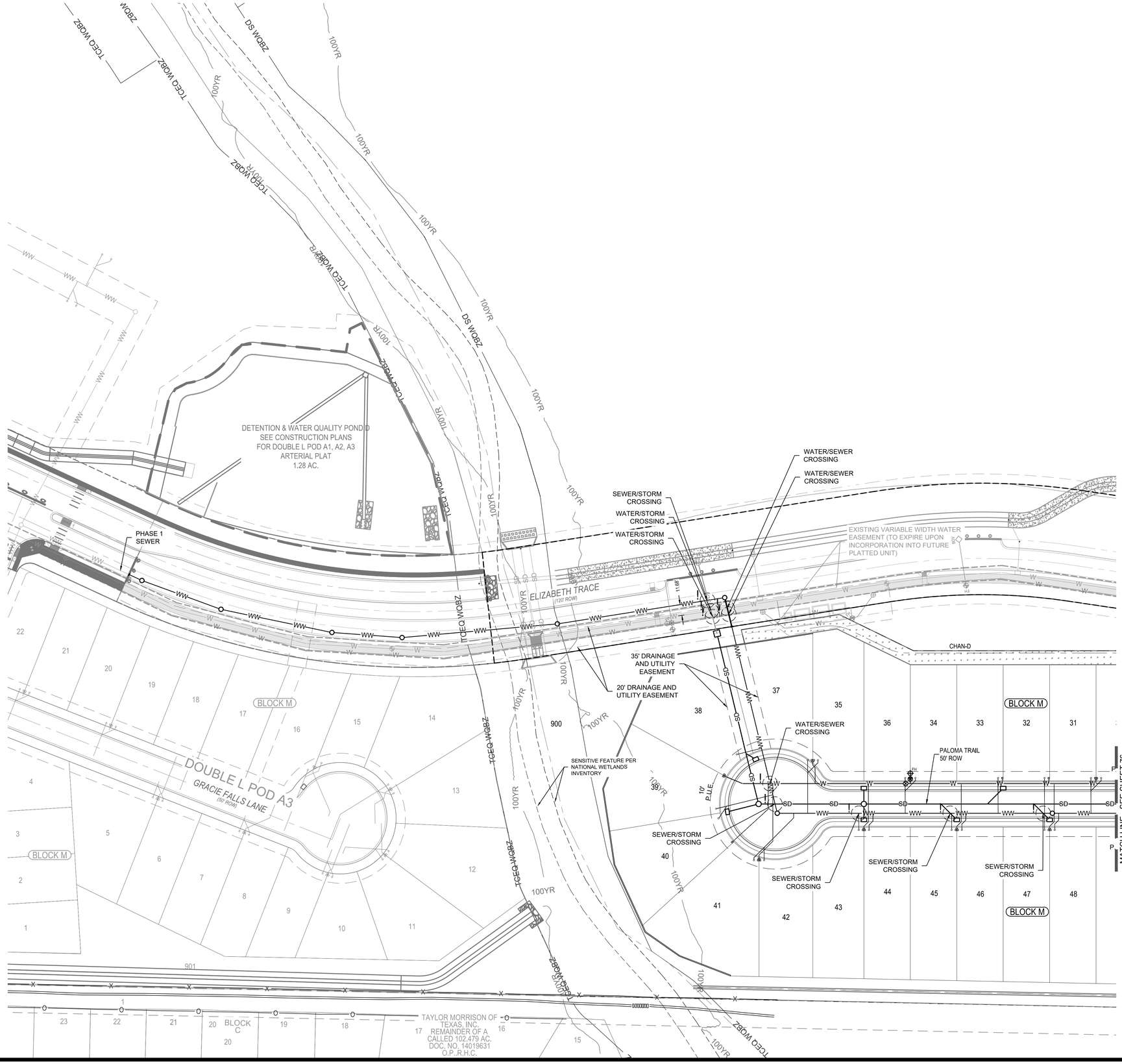
# DOUBLE L - POD A4 & B1

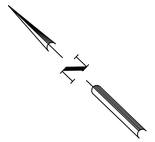
## OVERALL UTILITY (SHEET 5)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
77 OF 124

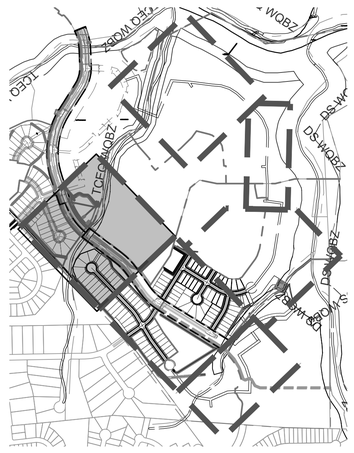
O:\00014789-000\LS\04 - Pod A4&B1\04_CADD\01_SHTS\C-UTIL-PL-A4&B1.dwg Layout: OVERALL UTILITY (SHEET 5) Plotted: 4/10/2026 3:25:39 PM By: Creadance




## LEGEND

- PROPERTY BOUNDARY
- PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED 10' CURB INLET
- PROPOSED 5' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED FIRE HYDRANT
- PROPOSED STORM SEWER
- WASTEWATER LINE
- WATER LINE
- DOUBLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- SINGLE W.W. SERVICE CONN. REFER TO DETAIL ON SHEET 74
- DOUBLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- SINGLE WATER SERVICE CONN. REFER TO DETAIL ON SHEET 75
- 100 YEAR FLOOD PLAIN ANALYZED BY BGE INC.
- 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | APR |
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT


**BGE, Inc.**
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

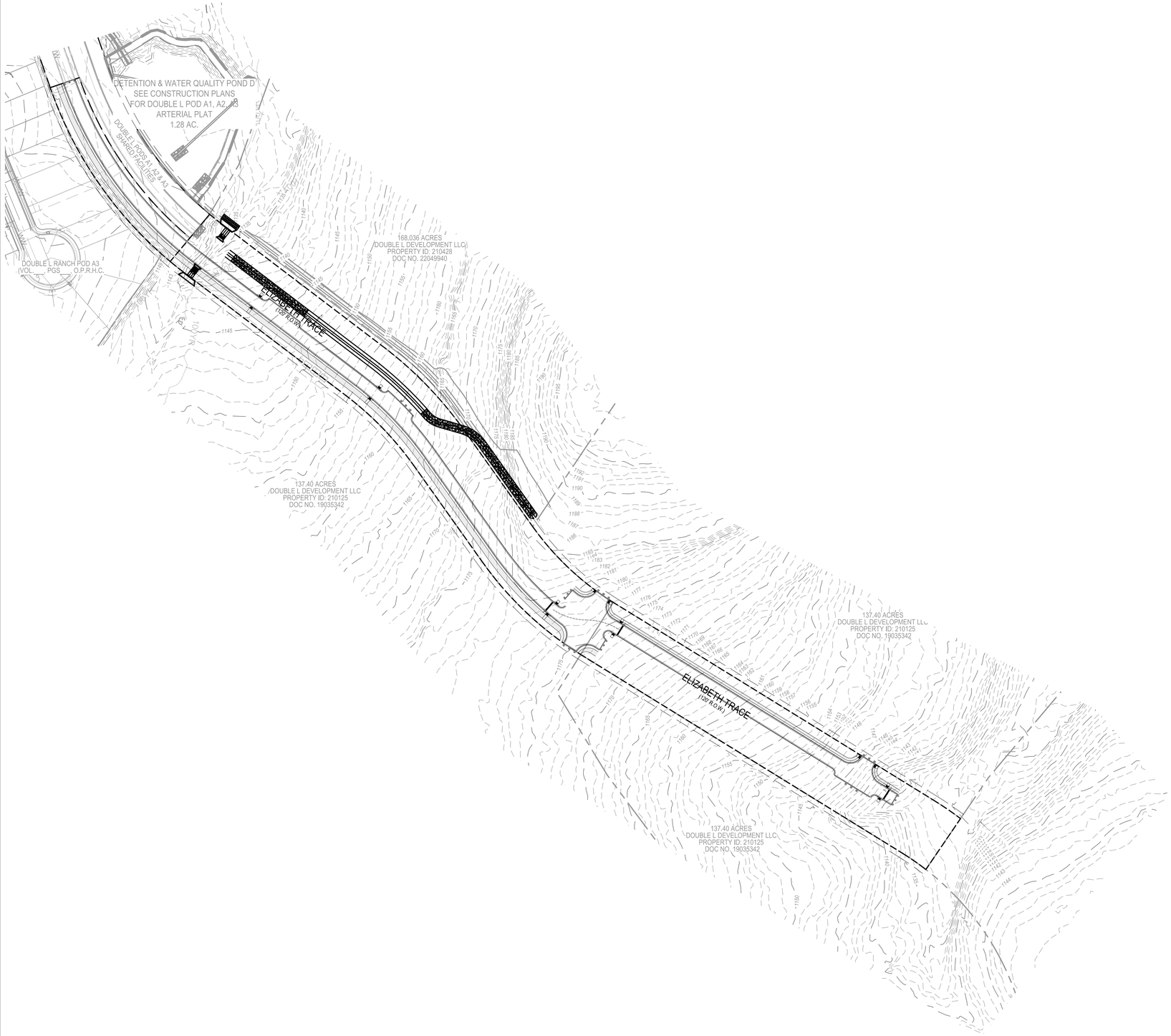

# DOUBLE L - POD A4 & B1

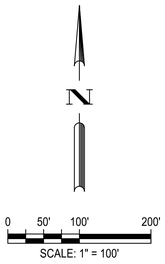
## OVERALL UTILITY (SHEET 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
78 OF 124


O:\00014789-00\LS\04 - Pod A4&B1\04_CAD\D\01_SHTS\C-UTIL-PL-A4&B1.dwg Layout: OVERALL UTILITY (SHEET 6) Plotted: 4/10/2026 3:24:01 PM By: Creadance




LEGEND

- PROPOSED BOUNDARY
- PROPOSED CENTERLINE
- XXX — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 100YR — 100 YR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WQBZ

NOTE:

SEE TREE PLAN THIS SET FOR TREE PROTECTION AND TREES TO BE REMOVED

Know what's below. Call before you dig.

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

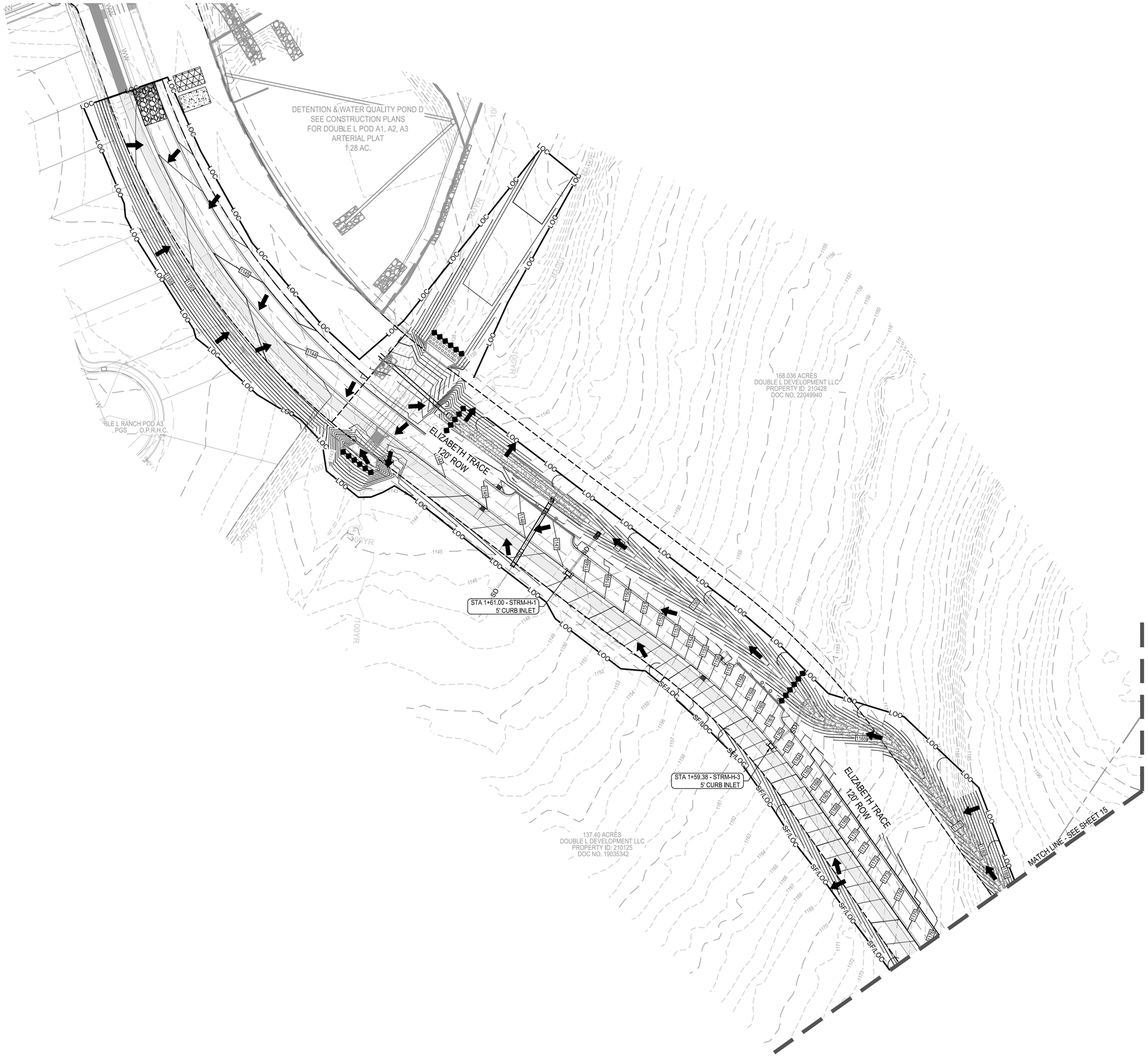
BGE
BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

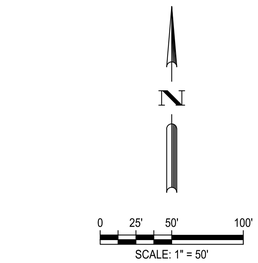
# DOUBLE L - POD A4 & B1 SHARED FACILITIES

## OVERALL SITE PLAN

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
8 OF 87




## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- PROPOSED MAJOR CONTOUR
- EXISTING PROPOSED CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LIMITS OF CONSTRUCTION
- TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- RETAINING WALL
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- J HOOK
- 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- EXISTING HOG/BARB WIRE FENCE
- EXISTING IRON FENCE
- EXISTING WOOD FENCE

EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

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

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

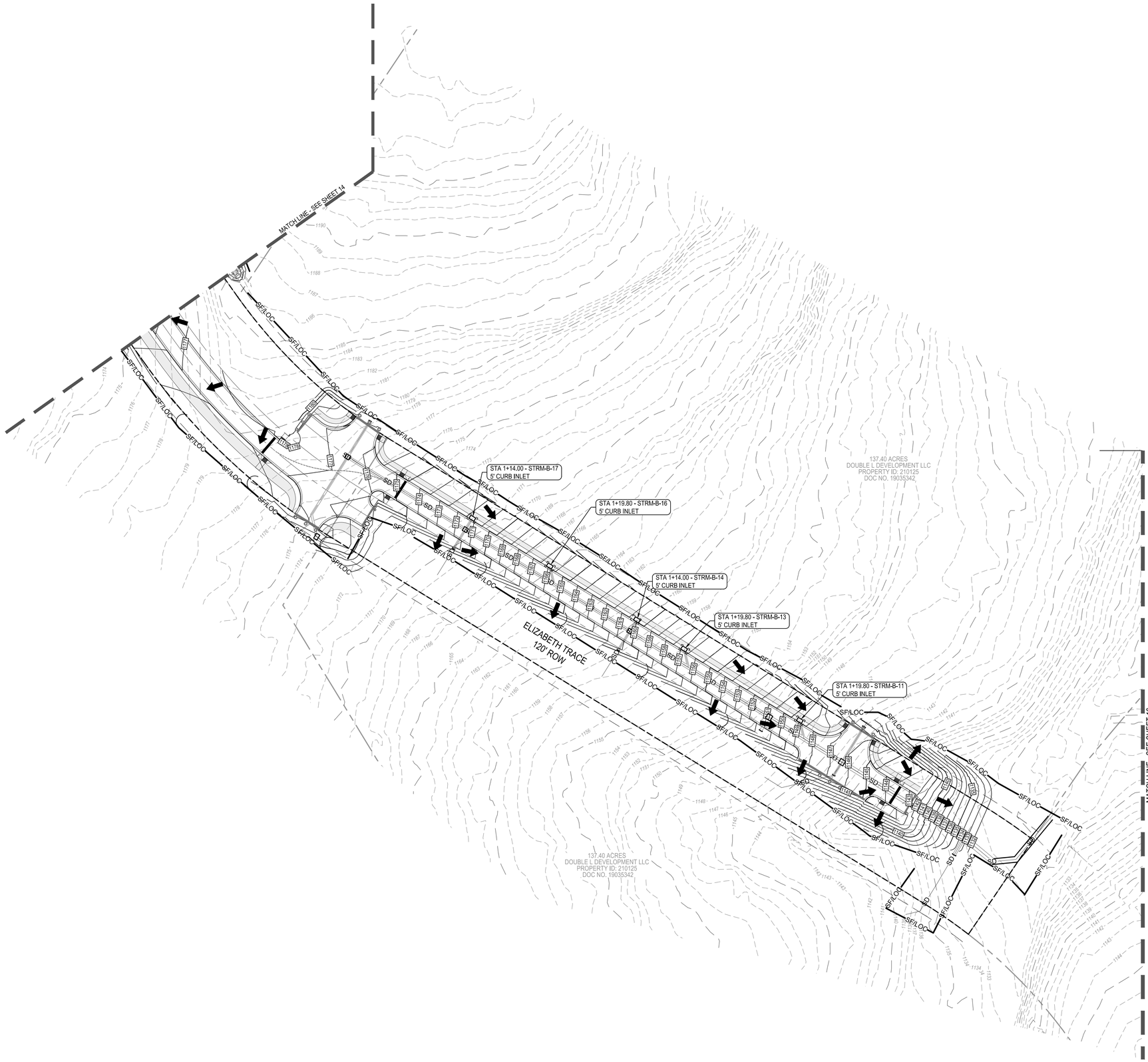
BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

# DOUBLE L - POD A4 & B1 SHARED FACILITIES

## EROSION AND SEDIMENTATION CONTROL PLAN (1 OF 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
14 OF 87




N

0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED MAJOR CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LIMITS OF CONSTRUCTION
- SF — TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- RETAINING WALL
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- J HOOK
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- X — EXISTING HOG/BARB WIRE FENCE
- O — EXISTING IRON FENCE
- EXISTING WOOD FENCE

EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

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

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

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT


BGE

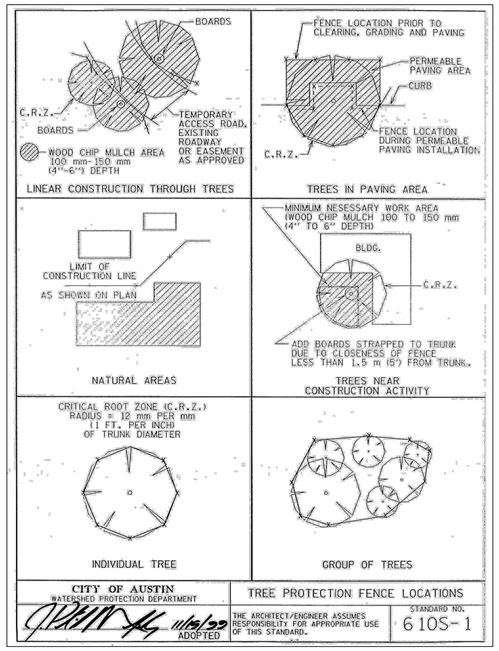
BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD A4 & B1 SHARED FACILITIES

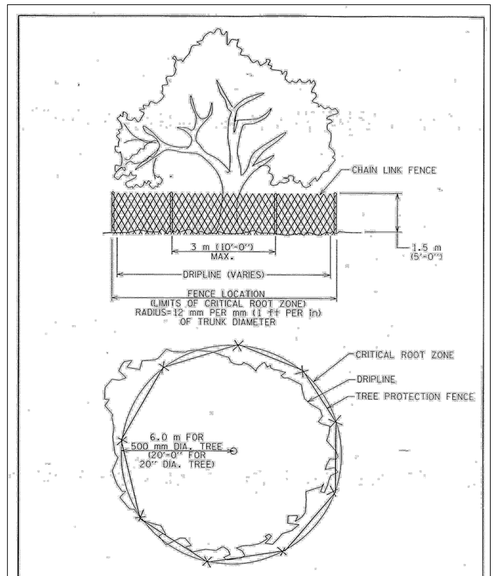
## EROSION AND SEDIMENTATION CONTROL PLAN (2 OF 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

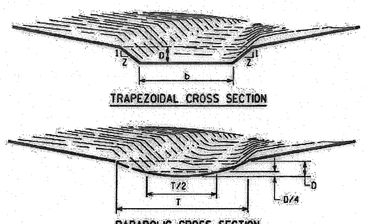
SHEET
15 OF 87




| CITY OF AUSTIN, WATERSHED PROTECTION DEPARTMENT | TREE PROTECTION FENCE LOCATIONS |
|---|---|
| 11/15/00 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-1 |



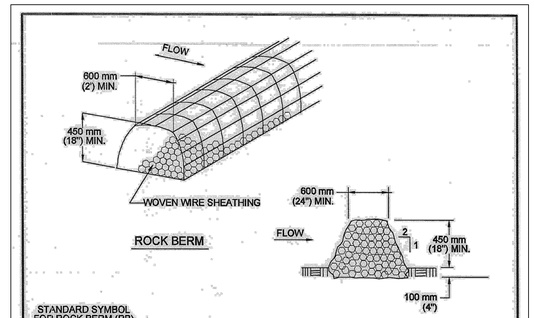

| CITY OF AUSTIN, WATERSHED PROTECTION DEPARTMENT | TREE PROPTECTION FENCE TYPE A - CHAIN LINK |
|---|---|
| 11/15/00 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-2 |




**GENERAL NOTES:**

1. EXCEPT AS INDICATED ON THE DRAWINGS OR DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE, ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, TYPICAL SECTIONS AND CROSS-SECTION INDICATED ON THE DRAWINGS AND SHALL BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES, WHICH COULD IMPEDE NORMAL FLOW.
3. FILL SHALL CONFORM TO STANDARD SPECIFICATION ITEM NO. 132S, "EMBANKMENT".
4. EARTHEN CHANNELS SHALL ALWAYS BE STABILIZED WITH THE APPROPRIATE SOIL RETENTION BLANKET WHICH SHALL CONFORM TO STANDARD SPECIFICATION ITEM NO. 605S, "SOIL RETENTION BLANKET".

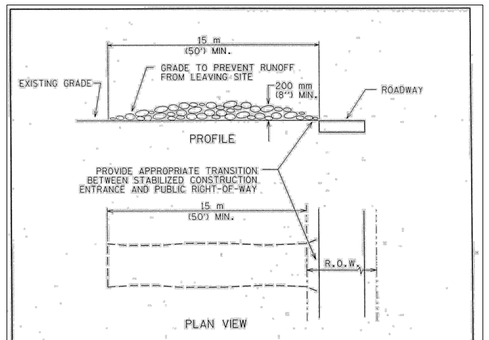
| CITY OF AUSTIN, WATERSHED PROTECTION DEPARTMENT | GRASS LINED SWALE |
|---|---|
| ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 627S-1 |




**NOTES:**

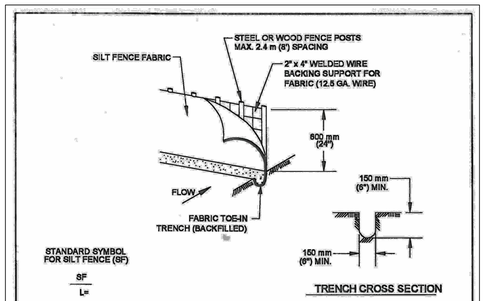
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

| CITY OF AUSTIN, WATERSHED PROTECTION DEPARTMENT | ROCK BERM |
|---|---|
| 8/24/2010 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 639S-1 |



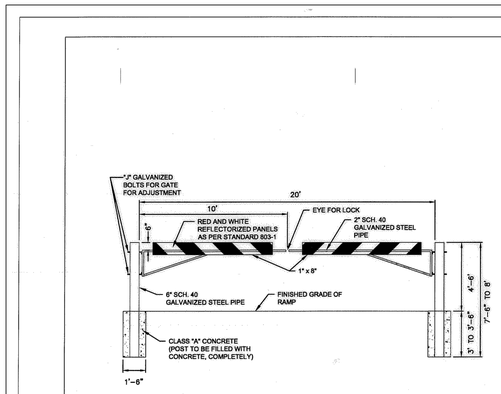

NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

| CITY OF AUSTIN, WATERSHED PROTECTION DEPARTMENT | STABILIZED CONSTRUCTION ENTRANCE |
|---|---|
| 5/23/00 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 641S-1 |



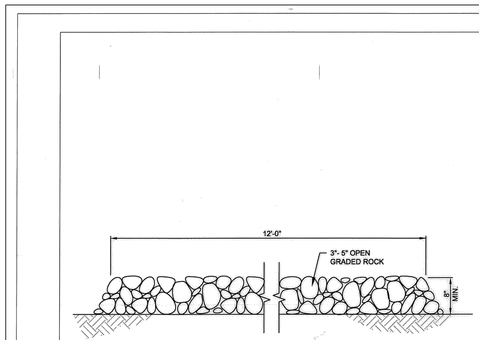

1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 inches) DEPTH, USE STEEL POSTS.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

| CITY OF AUSTIN, WATERSHED PROTECTION DEPARTMENT | SILT FENCE |
|---|---|
| 9/1/2011 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 642S-1 |




NOTE:
RAMP BARRICADE SUBSIDIARY TO ITEM 403-G CONCRETE STRUCTURES

| CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS | POND PIPE GATE AT RAMP DETAIL |
|---|---|
| E. Rad, P.E. 1/9/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 662S-1 |




NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. THICKNESS: NOT LESS THAN 200 mm (8").
3. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.

| CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS | POND MAINTENANCE ROAD CROSS SECTION |
|---|---|
| E. Rad, P.E. 1/9/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 662S-2 |

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE

BGE, INC.
1701 Directors Blvd, Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

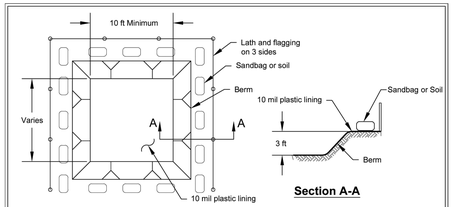
DOUBLE L RANCH POD A3

EROSION AND SEDIMENTATION CONTROL DETAILS 1

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

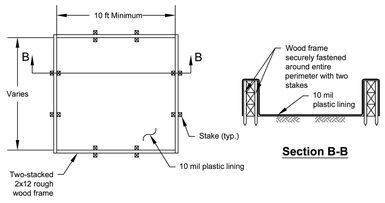
SHEET
17 OF 53

O:\00014789-00\ILS\05 - Pod A4&B1 - Shared Facilities\04_CADD\01_SHTS\C-SP-EROS-DETL.dwg PLOTTED: 10/16/2024 11:41 AM BY: MVELASQUEZ




**Section A-A**

**Type "Above Grade" with Earthen Berms**



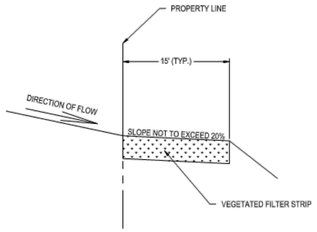

**Section B-B**

**Type "Above Grade" with Wood Planks**

NOT TO SCALE

# Hays County Concrete Washout Area

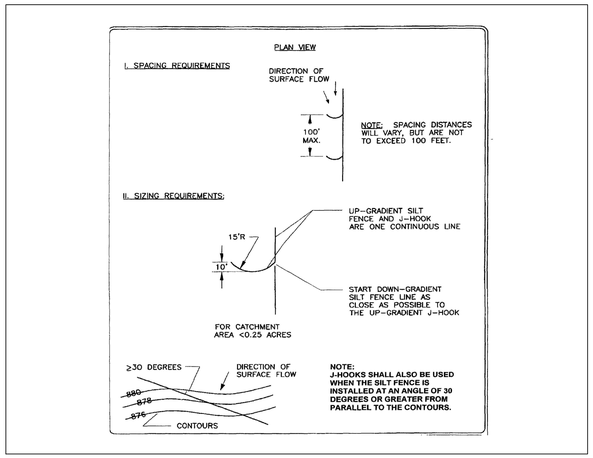
Revised June 2025




ENGINEERED VEGETATED FILTER STRIP DETAIL (TYP.)
N.T.S.

V.F.S. NOTES (TCEQ RG348)

1. THE FILTER STRIP SHOULD EXTEND ALONG THE ENTIRE LENGTH OF THE CONTRIBUTING AREA AND THE SLOPE SHOULD NOT EXCEED 20%. THE MINIMUM DIMENSION OF THE FILTER STRIP (IN THE DIRECTION OF FLOW) SHOULD BE NO LESS THAN 15 FEET. THE MAXIMUM WIDTH (IN THE DIRECTION OF FLOW) OF THE CONTRIBUTING IMPERVIOUS AREA SHOULD NOT EXCEED 72 FEET. FOR ROADWAYS WITH A VEGETATED STRIP ALONG BOTH SIDES THE TOTAL WIDTH OF THE ROADWAY SHOULD NOT EXCEED 144 FEET (I.E., 72 FEET DRAINING TO EACH SIDE).
2. THE MINIMUM VEGETATED COVER FOR ENGINEERED STRIPS IS 80%.
3. THE AREA CONTRIBUTING RUNOFF TO A FILTER STRIP SHOULD BE RELATIVELY FLAT SO THAT THE RUNOFF IS DISTRIBUTED EVENLY TO THE VEGETATED AREA WITHOUT THE USE OF A LEVEL SPREADER.
4. THE AREA TO BE USED FOR THE STRIP SHOULD BE FREE OF GULLIES OR RILLS THAT CAN CONCENTRATE OVERLAND FLOW (SCHUELER, 1987).
5. THE TOP EDGE OF THE FILTER STRIP ALONG THE PAVEMENT WILL BE DESIGNED TO AVOID THE SITUATION WHERE RUNOFF WOULD TRAVEL ALONG THE TOP OF THE FILTER STRIP, RATHER THAN THROUGH IT.
6. TOP EDGE OF THE FILTER STRIP SHOULD BE LEVEL. OTHERWISE RUNOFF WILL TEND TO FORM A CHANNEL IN THE LOW SPOT. A LEVEL SPREADER SHOULD NOT BE USED TO DISTRIBUTE RUNOFF TO AN ENGINEERED FILTER STRIP.
7. FILTER STRIPS SHOULD BE LANDSCAPED AFTER OTHER PORTIONS OF THE PROJECT ARE COMPLETED.




| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE, INC.
1701 Directors Blvd., Suite 1000
AUSTIN, TX 78744
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

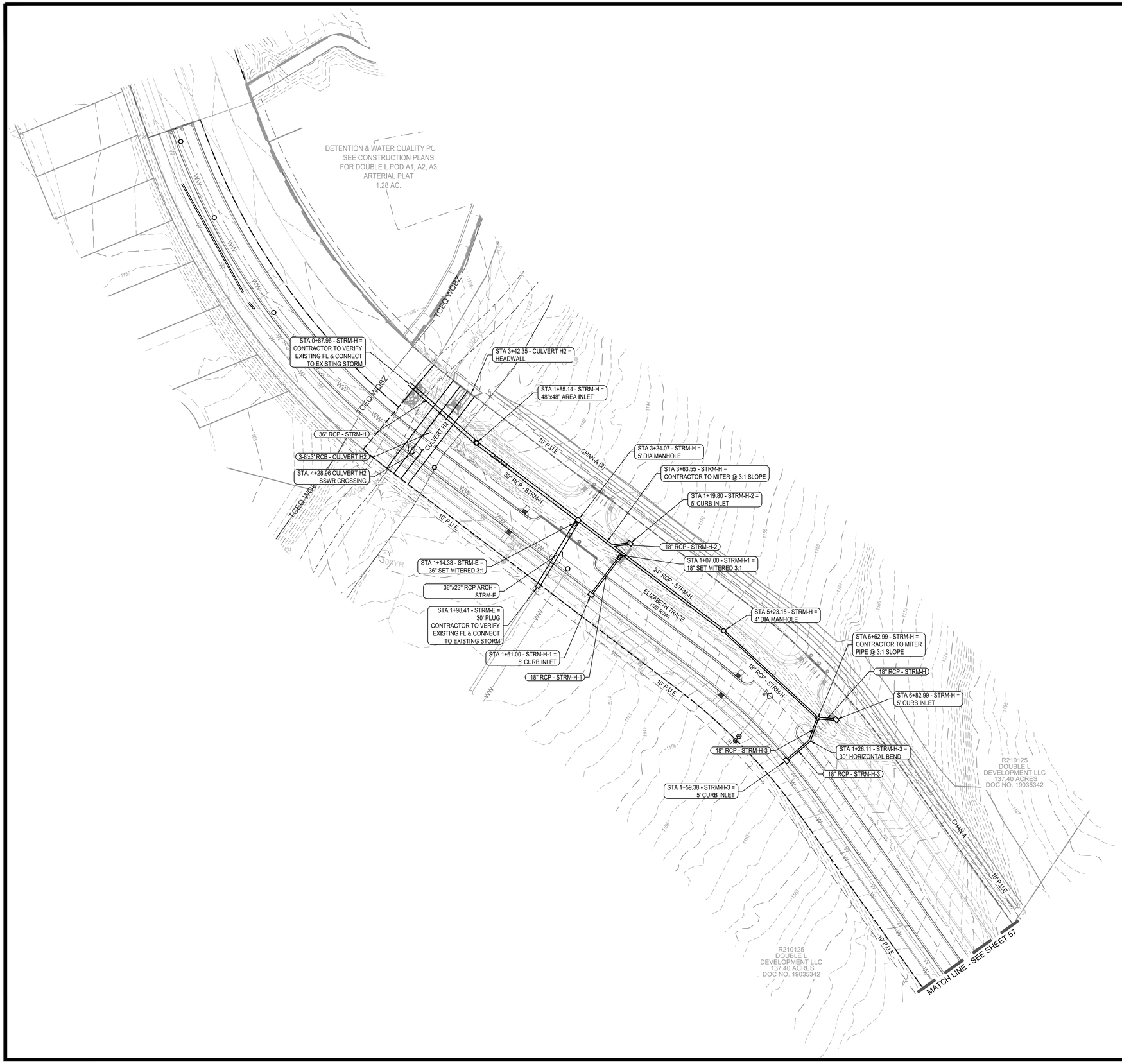
DOUBLE L RANCH POD A3

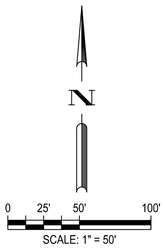
EROSION AND SEDIMENTATION CONTROL DETAILS 2

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
18 OF 53

O:\00014789-00\LS\05 - Pod A4&B1 - Shared Facilities\04_CADD\01_SHTS\C-SP-EROS-DETL.dwg PLOTTED: 10/16/2024 11:41 AM BY: MVELASQUEZ




## LEGEND

- PROPERTY BOUNDARY
- XXX — PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- DIRECTION OF STREET FLOW
- PROPOSED 10' CURB INLET
- PROPOSED 15' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED STORM SEWER
- WW — WASTEWATER LINE
- W — W — WATER LINE
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS

PROFILE LEGEND

- PROPOSED STORM PIPE
- PROPOSED GROUND
- PROPOSED TOP OF CHANNEL
- PROPOSED SUBGRADE
- EXISTING GROUND
- 100-YR HGL LINE
- 25-YR HGL LINE
- 100YR — 100-YR EGL LINE
- 25YR — 25-YR EGL LINE

Know what's below. Call before you dig.

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

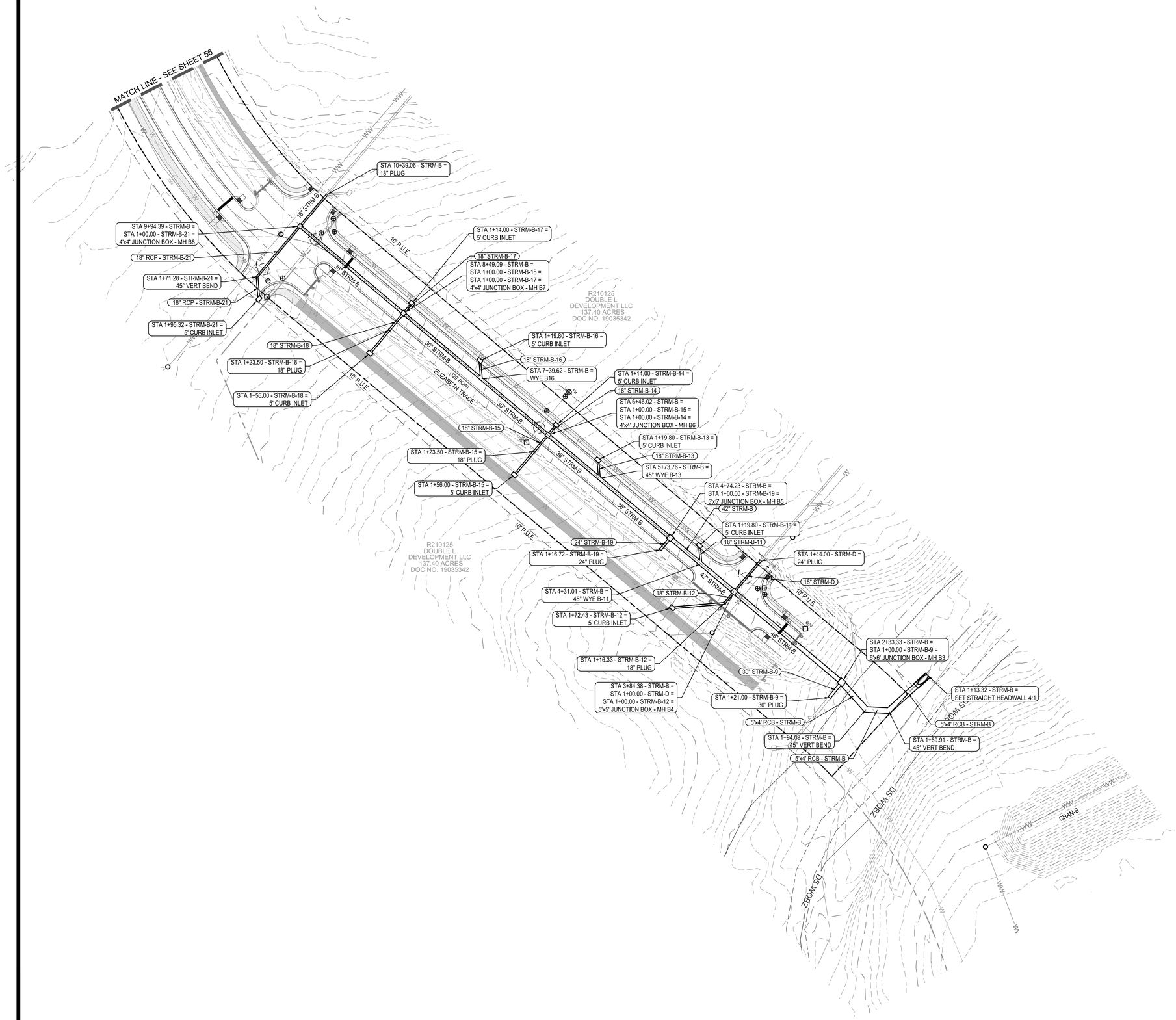
BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

# DOUBLE L - POD A4 & B1 SHARED FACILITIES

## OVERALL STORM PLAN (SHEET 1)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
36 OF 87




0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- XXX — PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- DIRECTION OF STREET FLOW
- PROPOSED 10' CURB INLET
- PROPOSED 15' CURB INLET
- PROPOSED MANHOLE
- PROPOSED AREA INLET
- PROPOSED HEADWALL
- PROPOSED STORM SEWER
- WW — WASTEWATER LINE
- W — W — WATER LINE
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- RETAINING WALL DESIGN/BUILD BY CONTRACTOR
- UTILITY CROSSINGS

### PROFILE LEGEND

- PROPOSED STORM PIPE
- PROPOSED GROUND
- PROPOSED TOP OF CHANNEL
- PROPOSED SUBGRADE
- EXISTING GROUND
- 100-YR HGL LINE
- 25-YR HGL LINE
- 100YR — 100-YR EGL LINE
- 25YR — 25-YR EGL LINE

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

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

| | APR | DATE | DESCRIPTION | REV |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT


BGE

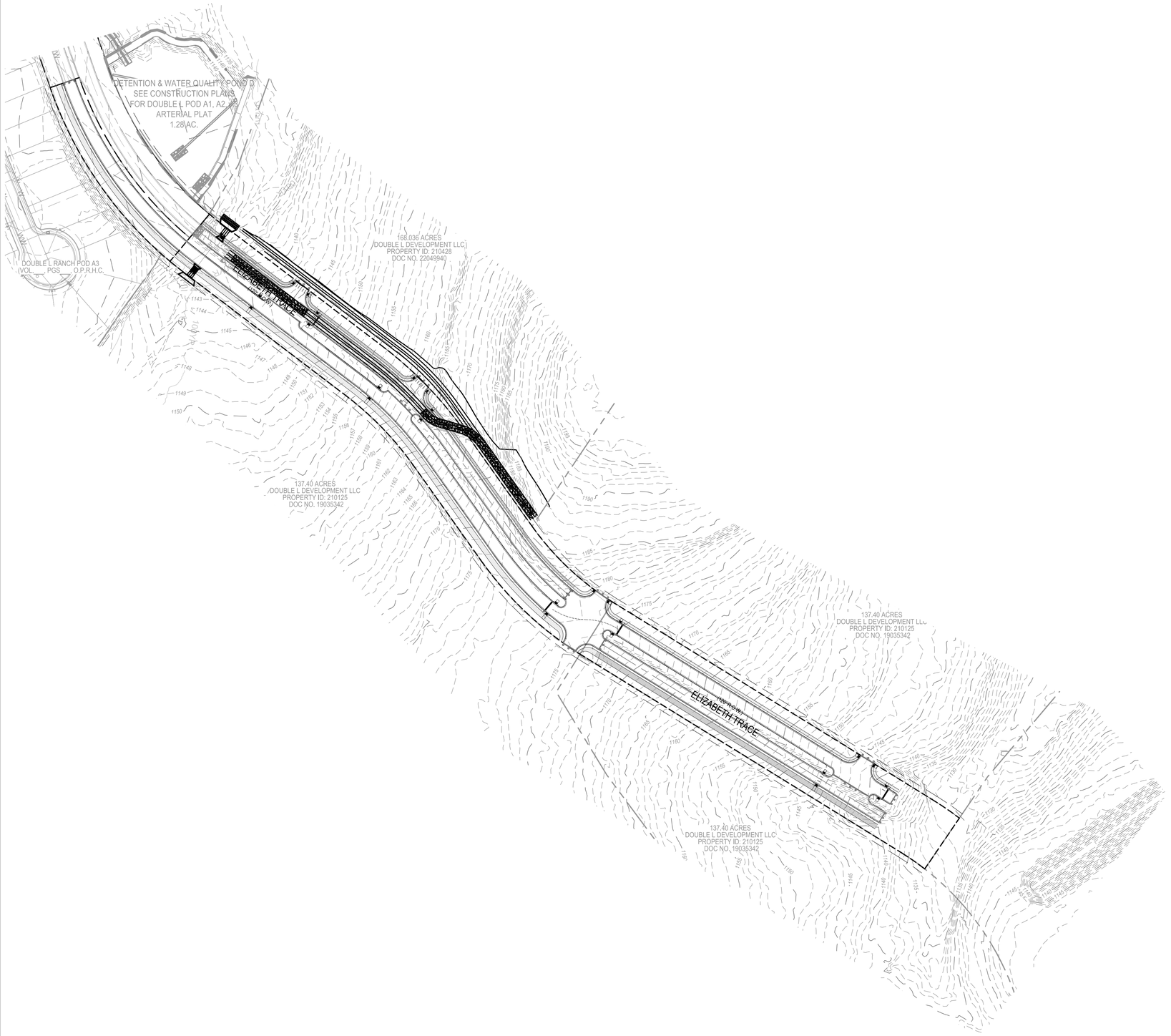
BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD A4 & B1 SHARED FACILITIES

## OVERALL STORM PLAN (SHEET 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
37 OF 87




N

0 40' 80' 160'

SCALE: 1" = 80'

## LEGEND

- PROPOSED BOUNDARY
- PROPOSED CENTERLINE
- XXX — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 100YR — 100 YR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WQBZ

NOTE:

SEE TREE PLAN THIS SET FOR TREE PROTECTION AND TREES TO BE REMOVED

Know what's below. Call before you dig.

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE
BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

# DOUBLE L - POD A4 & B1 SHARED FACILITIES

## ULTIMATE OVERALL SITE PLAN

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
69 OF 87




N

0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED MAJOR CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LIMITS OF CONSTRUCTION
- SF — TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- RETAINING WALL
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- J HOOK
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- X — EXISTING HOG/BARB WIRE FENCE
- O — EXISTING IRON FENCE
- EXISTING WOOD FENCE

EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

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

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE

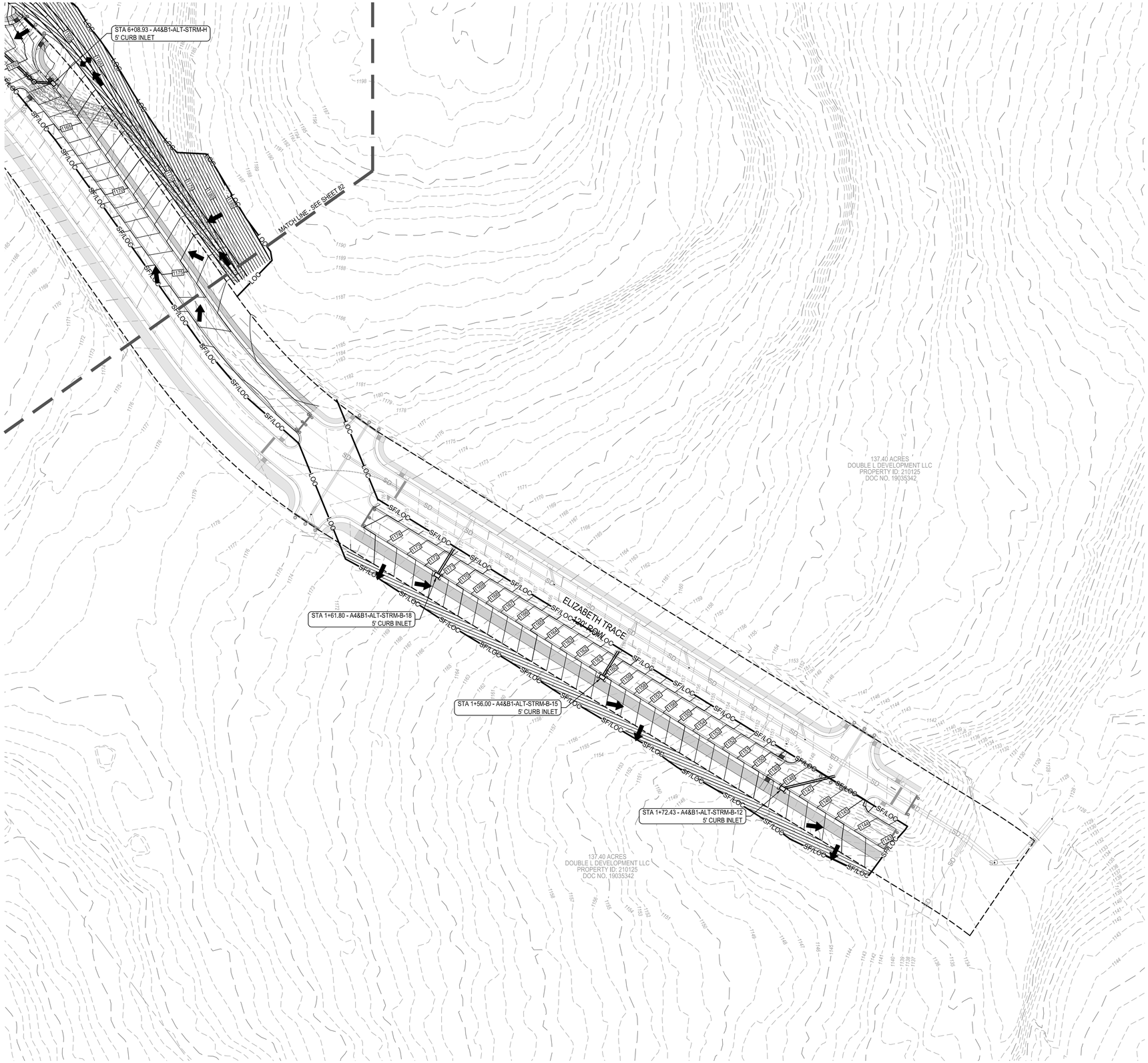

BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD A4 & B1 SHARED FACILITIES

## ULTIMATE EROSION AND SEDIMENTATION CONTROL PLAN (1 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
82 OF 87




N

0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX — PROPOSED MAJOR CONTOUR
- XXX — EXISTING PROPOSED CONTOUR
- XXX — EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC — LIMITS OF CONSTRUCTION
- SF — TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- RETAINING WALL
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- J HOOK
- 100YR — 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WQBZ — TCEQ WATER QUALITY BUFFER ZONE
- DS WQBZ — CITY OF DRIPPING SPRINGS WATER QUALITY BUFFER ZONE
- X — EXISTING HOG/BARB WIRE FENCE
- O — EXISTING IRON FENCE
- EXISTING WOOD FENCE

EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

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

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

| | | | | | | | APR |
|---|---|---|---|---|---|---|---|
| | | | | | | | DATE |
| | | | | | | | DESCRIPTION |
| ◁ | ◁ | ◁ | ◁ | ◁ | ◁ | | REV |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE

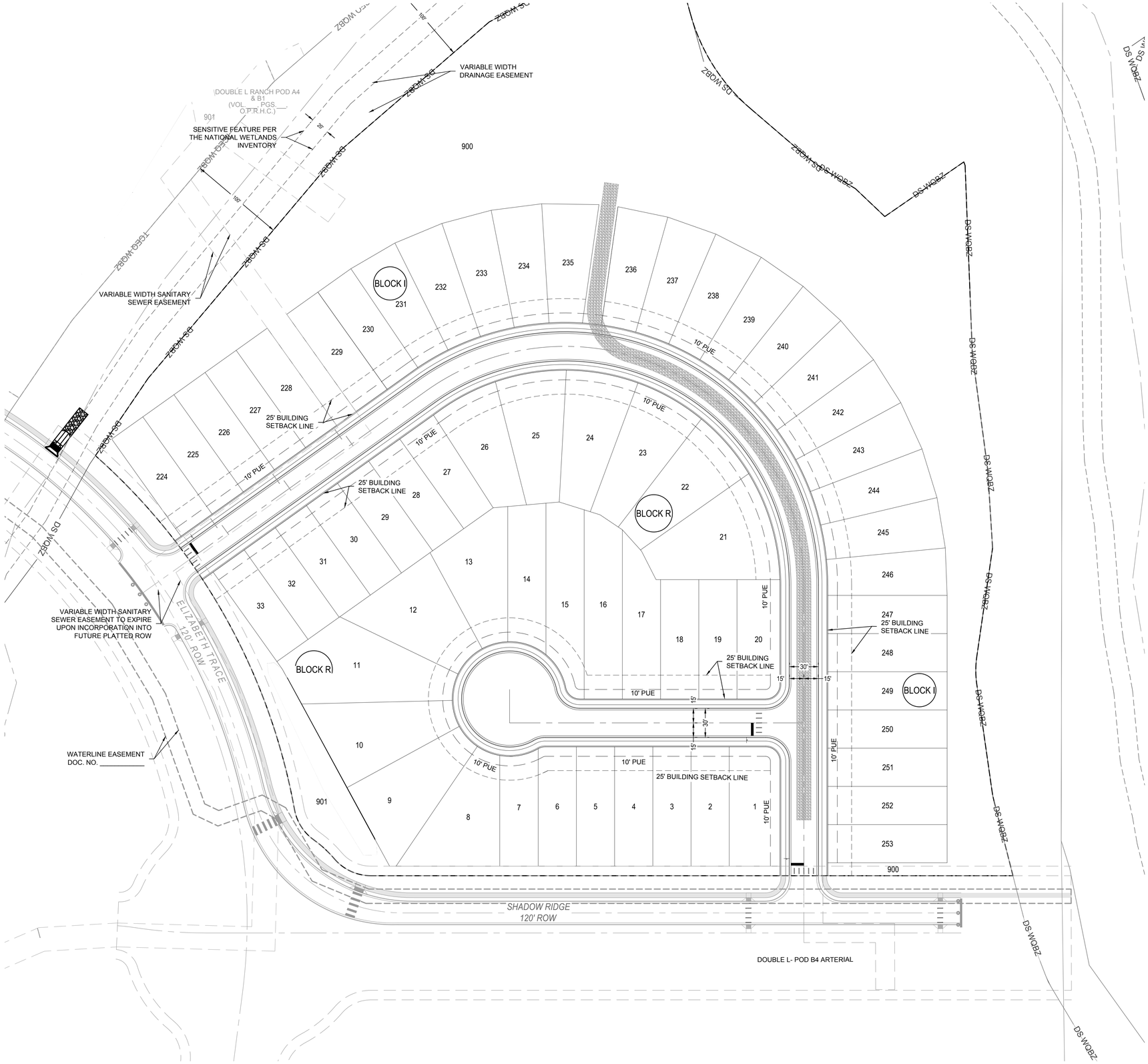
BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

# DOUBLE L - POD A4 & B1 SHARED FACILITIES

## ULTIMATE EROSION AND SEDIMENTATION CONTROL PLAN (2 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
83 OF 87




N

0 25' 50' 100'

SCALE: 1" = 50'

LEGEND

- PROPOSED BOUNDARY
- XXX — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 100YR — 100 YR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WQBZ
- SIDEWALK

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD B4

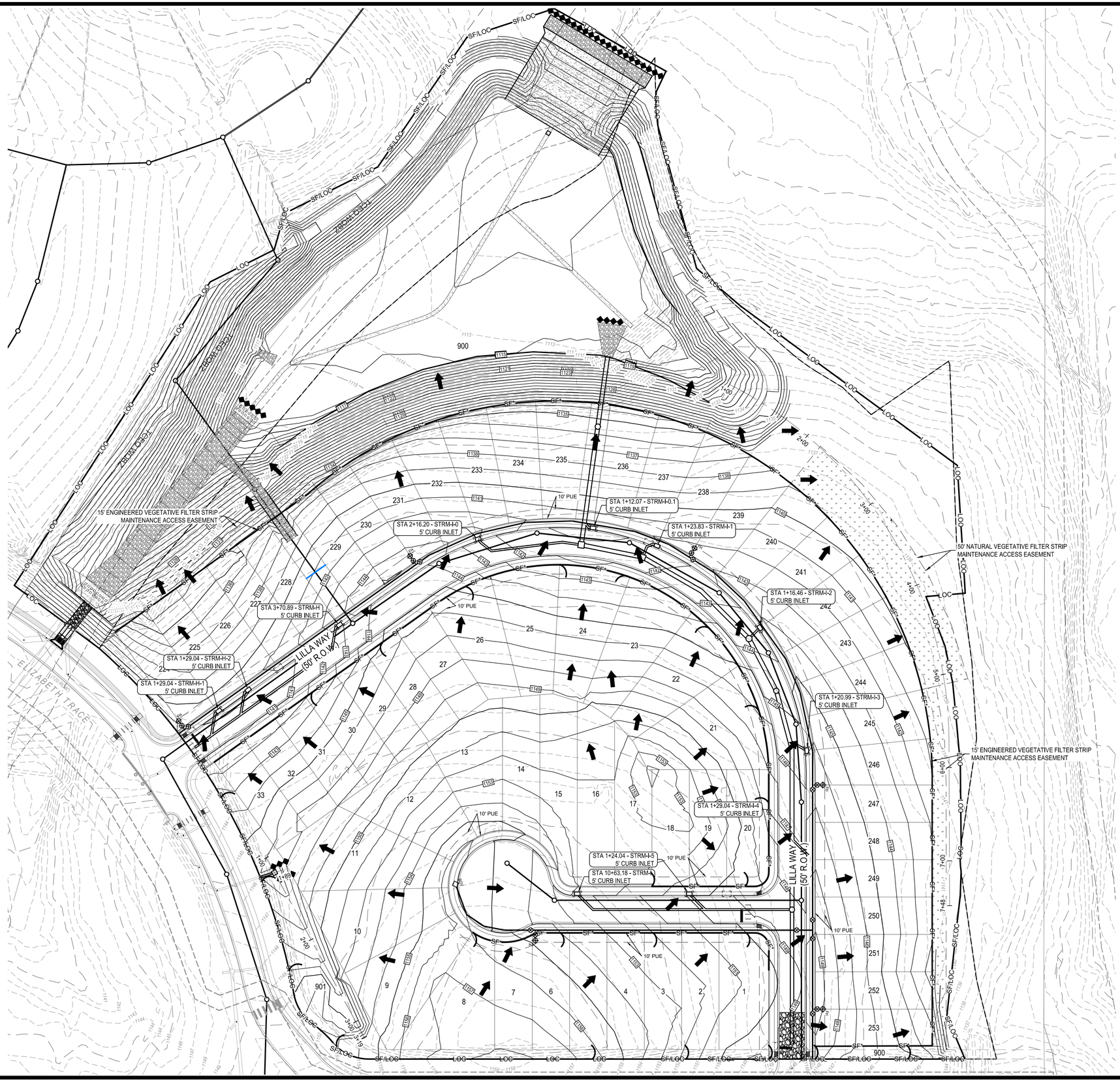
## OVERALL SITE PLAN

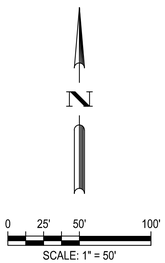
Know what's below. Call before you dig.

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

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
8 OF 51




LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- PROPOSED MAJOR CONTOUR
- EXISTING PROPOSED CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LIMITS OF CONSTRUCTION
- TEMPORARY SILT FENCE
- POST-CONSTRUCTION SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- RETAINING WALL
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- J HOOK
- 100 YEAR INUNDATION FLOOD PLAIN
- TCEQ WATER QUALITY BUFFER ZONE
- EXISTING HOG/BARB WIRE FENCE
- EXISTING IRON FENCE
- EXISTING WOOD FENCE

EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL
   1. A SOIL OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

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

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

| | APR | DATE | DESCRIPTION | REV |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

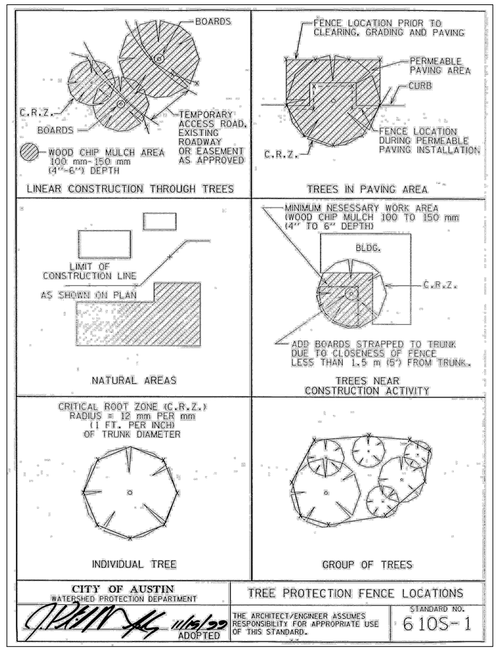
BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

# DOUBLE L - POD B4

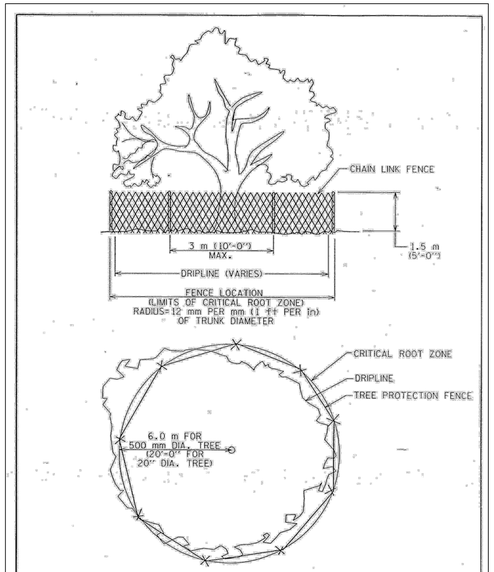
## EROSION AND SEDIMENTATION CONTROL PLAN

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

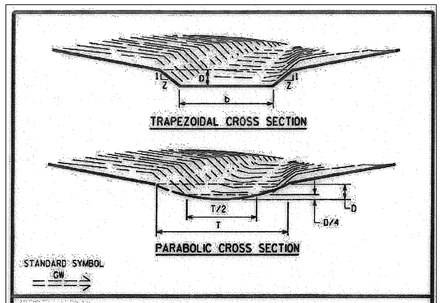
SHEET
12 OF 54




| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | TREE PROTECTION FENCE LOCATIONS |
|---|---|
| 11/19/99 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-1 |



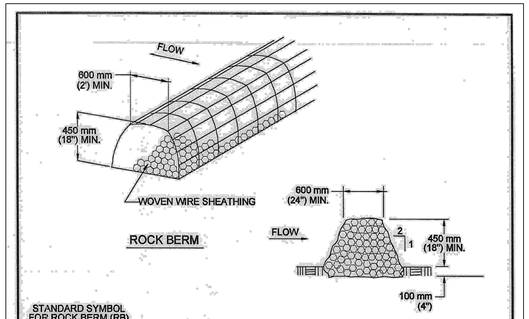

| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | TREE PROPTECTION FENCE TYPE A - CHAIN LINK |
|---|---|
| 11/19/99 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-2 |




**GENERAL NOTES:**

1. EXCEPT AS INDICATED ON THE DRAWINGS OR DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE, ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, TYPICAL SECTIONS AND CROSS-SECTION INDICATED ON THE DRAWINGS AND SHALL BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES, WHICH COULD IMPEDE NORMAL FLOW.
3. FILL SHALL CONFORM TO STANDARD SPECIFICATION ITEM NO. 132S, "EMBANKMENT".
4. EARTHEN CHANNELS SHALL ALWAYS BE STABILIZED WITH THE APPROPRIATE SOIL RETENTION BLANKET WHICH SHALL CONFORM TO STANDARD SPECIFICATION ITEM NO. 605S, "SOIL RETENTION BLANKET".

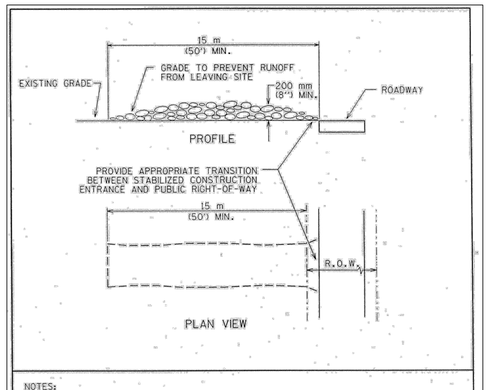
| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | GRASS LINED SWALE |
|---|---|
| ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 627S-1 |




**NOTES:**

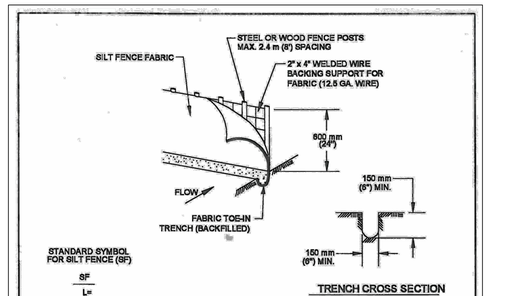
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | ROCK BERM |
|---|---|
| 8/24/2010 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 639S-1 |



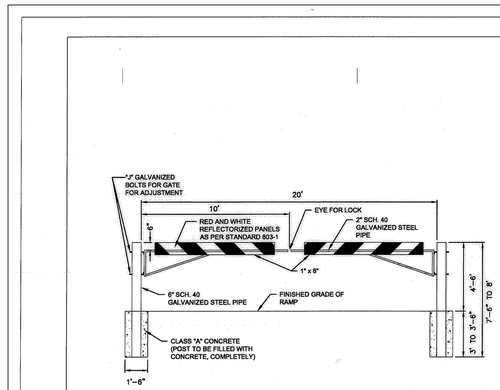

NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | STABILIZED CONSTRUCTION ENTRANCE |
|---|---|
| 5/23/00 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 641S-1 |



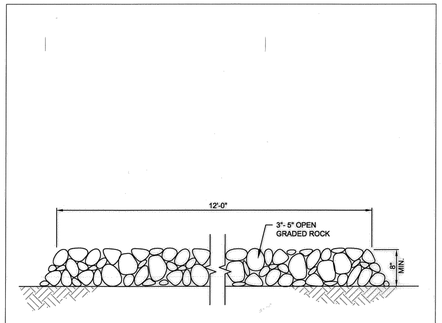

1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 Inches) DEPTH, USE STEEL POSTS.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 Inches) DEEP AND 150 mm (6 Inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | SILT FENCE |
|---|---|
| 9/1/2011 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 642S-1 |




NOTE:
RAMP BARRICADE SUBSIDIARY TO ITEM 403-G CONCRETE STRUCTURES

| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | POND PIPE GATE AT RAMP DETAIL |
|---|---|
| E. Rad, P.E. 1/9/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 662S-1 |




NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. THICKNESS: NOT LESS THAN 200 mm (8").
3. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.

| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | POND MAINTENANCE ROAD CROSS SECTION |
|---|---|
| E. Rad, P.E. 1/9/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 662S-2 |

| APR | DATE | DESCRIPTION | REV |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

BGE

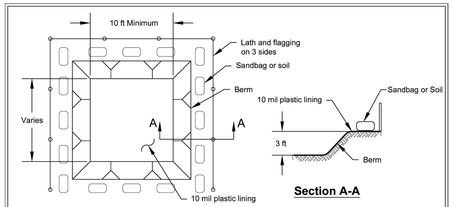
BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

DOUBLE L - POD B4

EROSION AND SEDIMENTATION CONTROL DETAILS (1 OF 2)

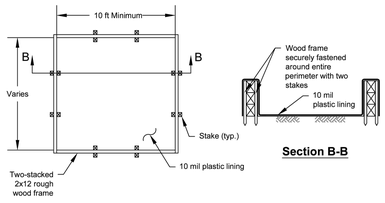
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
13 OF 54




**Section A-A**

**Type "Above Grade" with Earthen Berms**



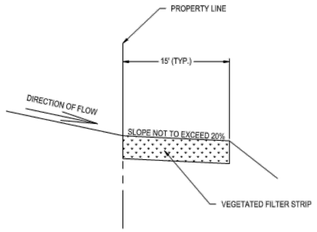

**Section B-B**

**Type "Above Grade" with Wood Planks**

NOT TO SCALE

Hays County Concrete Washout Area

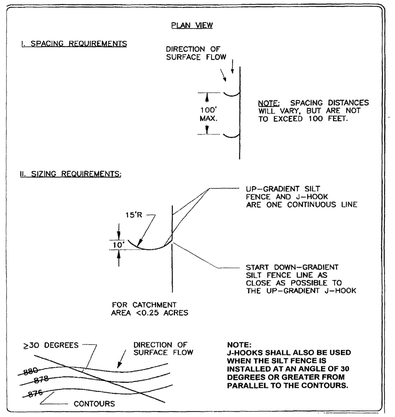
Revised June 2025




ENGINEERED VEGETATED FILTER STRIP DETAIL (TYP.)
N.T.S.

V.F.S. NOTES (TCEQ RG348)

1. THE FILTER STRIP SHOULD EXTEND ALONG THE ENTIRE LENGTH OF THE CONTRIBUTING AREA AND THE SLOPE SHOULD NOT EXCEED 20%. THE MINIMUM DIMENSION OF THE FILTER STRIP (IN THE DIRECTION OF FLOW) SHOULD BE NO LESS THAN 15 FEET. THE MAXIMUM WIDTH (IN THE DIRECTION OF FLOW) OF THE CONTRIBUTING IMPERVIOUS AREA SHOULD NOT EXCEED 72 FEET. FOR ROADWAYS WITH A VEGETATED STRIP ALONG BOTH SIDES THE TOTAL WIDTH OF THE ROADWAY SHOULD NOT EXCEED 144 FEET (I.E., 72 FEET DRAINING TO EACH SIDE).
2. THE MINIMUM VEGETATED COVER FOR ENGINEERED STRIPS IS 80%.
3. THE AREA CONTRIBUTING RUNOFF TO A FILTER STRIP SHOULD BE RELATIVELY FLAT SO THAT THE RUNOFF IS DISTRIBUTED EVENLY TO THE VEGETATED AREA WITHOUT THE USE OF A LEVEL SPREADER.
4. THE AREA TO BE USED FOR THE STRIP SHOULD BE FREE OF GULLIES OR RILLS THAT CAN CONCENTRATE OVERLAND FLOW (SCHUELER, 1987).
5. THE TOP EDGE OF THE FILTER STRIP ALONG THE PAVEMENT WILL BE DESIGNED TO AVOID THE SITUATION WHERE RUNOFF WOULD TRAVEL ALONG THE TOP OF THE FILTER STRIP, RATHER THAN THROUGH IT.
6. TOP EDGE OF THE FILTER STRIP SHOULD BE LEVEL. OTHERWISE RUNOFF WILL TEND TO FORM A CHANNEL IN THE LOW SPOT. A LEVEL SPREADER SHOULD NOT BE USED TO DISTRIBUTE RUNOFF TO AN ENGINEERED FILTER STRIP.
7. FILTER STRIPS SHOULD BE LANDSCAPED AFTER OTHER PORTIONS OF THE PROJECT ARE COMPLETED.




| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

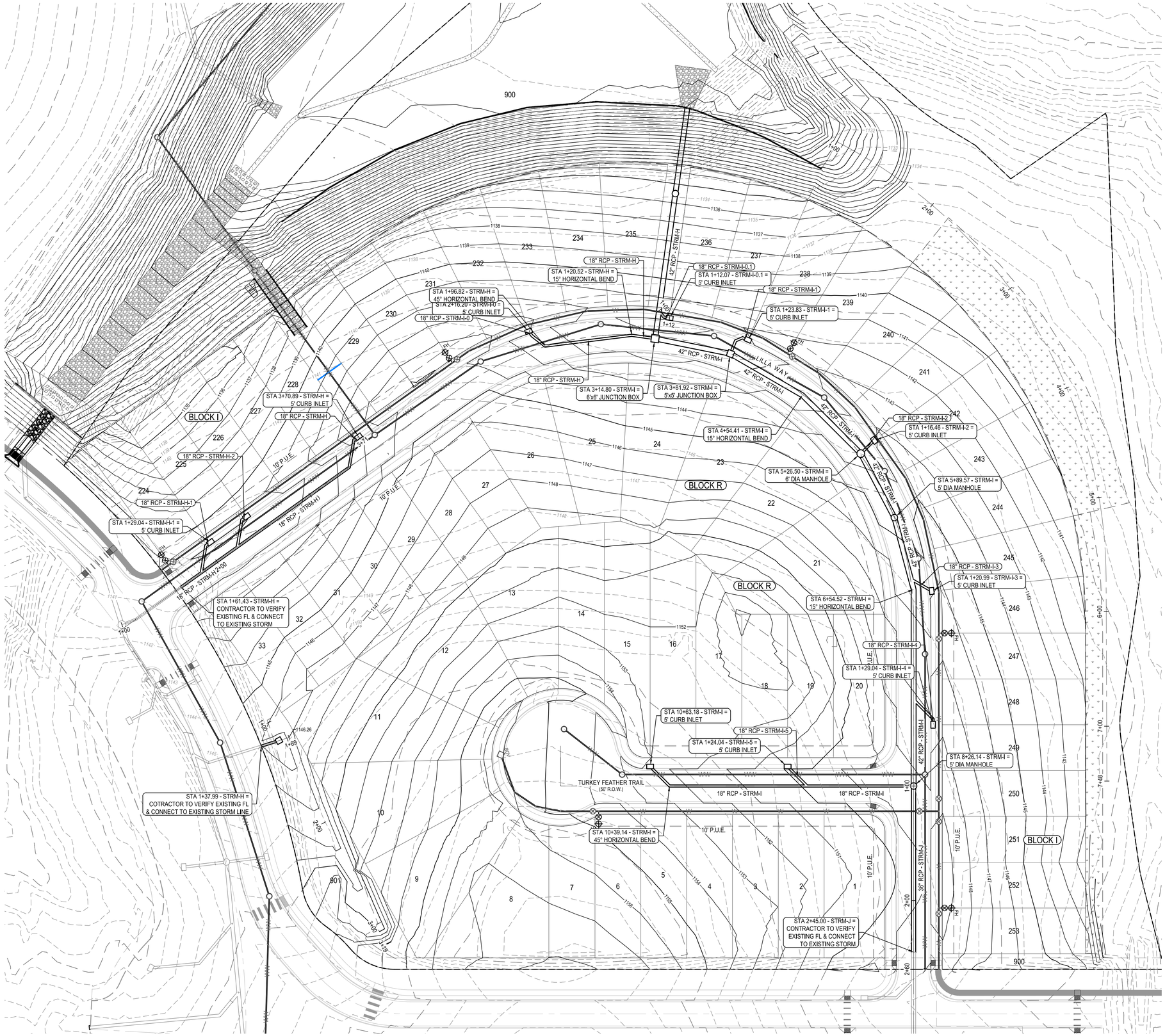
BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

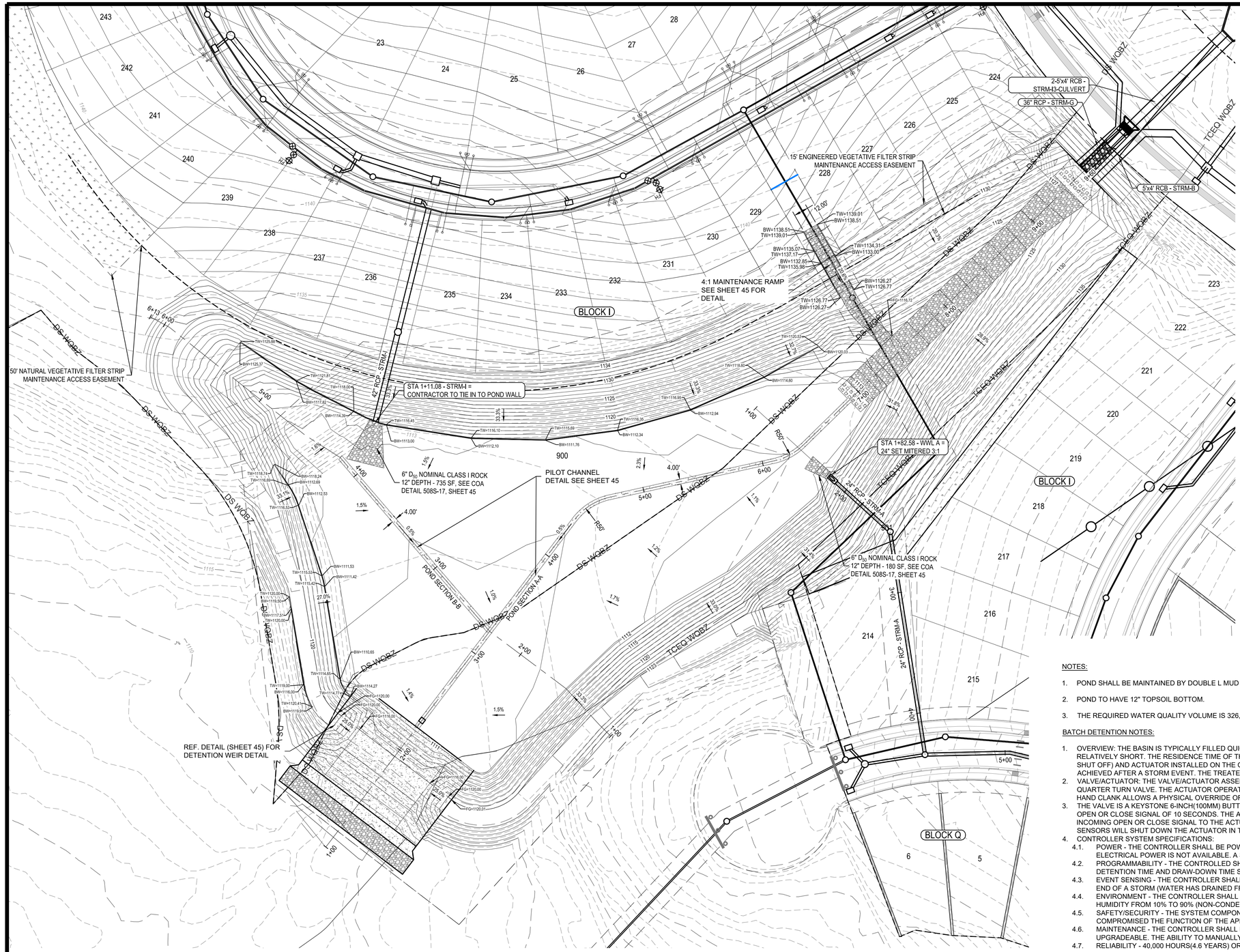
DOUBLE L - POD B4

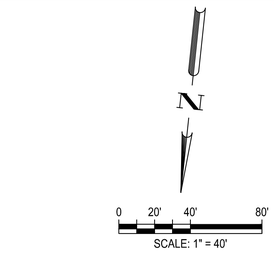
EROSION AND SEDIMENTATION CONTROL DETAILS (2 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
14 OF 54


STA 1+29.04 - STRM-H-1 = 5' CURB INLET
18" RCP - STRM-H-1
18" RCP - STRM-H-2
STA 1+61.43 - STRM-H = CONTRACTOR TO VERIFY EXISTING FL & CONNECT TO EXISTING STORM
STA 1+37.99 - STRM-H = COTRACTOR TO VERIFY EXISTING FL & CONNECT TO EXISTING STORM LINE
STA 3+70.89 - STRM-H = 5' CURB INLET
18" RCP - STRM-H
STA 1+96.82 - STRM-H = 45° HORIZONTAL BEND
STA 2+16.20 - STRM-H-0 = 5' CURB INLET
18" RCP - STRM-I-0
STA 1+20.52 - STRM-H = 15° HORIZONTAL BEND
18" RCP - STRM-H
42" RCP - STRM-H
18" RCP - STRM-I-0.1
STA 1+12.07 - STRM-I-0.1 = 5' CURB INLET
18" RCP - STRM-I-1
STA 1+23.83 - STRM-I-1 = 5' CURB INLET
42" RCP - STRM-I
LILLA WAY
18" RCP - STRM-H
STA 3+14.80 - STRM-J = 6'x6' JUNCTION BOX
STA 3+81.92 - STRM-I = 5'x5' JUNCTION BOX
STA 4+54.41 - STRM-I = 15° HORIZONTAL BEND
STA 5+26.50 - STRM-I = 6' DIA MANHOLE
BLOCK I
BLOCK R
10' P.U.E.
18" RCP - STRM-H
18" RCP - STRM-H)
STA 6+54.52 - STRM-I = 15° HORIZONTAL BEND
18" RCP - STRM-I-4
STA 1+29.04 - STRM-I-4 = 5' CURB INLET
STA 10+63.18 - STRM-I = 5' CURB INLET
18" RCP - STRM-I-5
STA 1+24.04 - STRM-I-5 = 5' CURB INLET
TURKEY FEATHER TRAIL (50' R.O.W.)
18" RCP - STRM-I
STA 10+39.14 - STRM-I = 45° HORIZONTAL BEND
STA 2+45.00 - STRM-J = CONTRACTOR TO VERIFY EXISTING FL & CONNECT TO EXISTING STORM
36" RCP - STRM-J
42" RCP - STRM-I
STA 1+16.46 - STRM-I-2 = 5' CURB INLET
18" RCP - STRM-I-2
STA 5+89.57 - STRM-I = 5' DIA MANHOLE
18" RCP - STRM-I-3
STA 1+20.99 - STRM-I-3 = 5' CURB INLET
STA 8+26.14 - STRM-I = 5' DIA MANHOLE
42" RCP - STRM-I
HWALS 20
42" RCP - STRM-I
42" RCP - STRM-I
42" RCP - STRM-I




LEGEND

- PROPERTY BOUNDARY
- PROPOSED CENTERLINE
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- TCEQ WQBZ — TEXAS COMMISSION ON ENVIRONMENTAL WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRING WATER QUALITY BUFFER ZONE
- PROPOSED CONCRETE RIP-RAP
- PROPOSED ROCK GABION
- PROPOSED 6" PVC WATER QUALITY OUTFALL
- PROPOSED MANHOLE
- DIRECTION OF FLOW
- TW — TOP OF WALL
- BW — BOTTOM OF WALL
- FL — FLOW LINE

PROFILE LEGEND

- PROPOSED 6" PVC OUTFALL
- WATER SURFACE ELEVATION
- PROPOSED GRADE
- EXISTING GRADE

## B4 POND VOLUME TABLE

**Sedimentation/Forbay Pond/Retention Pond/Cistern/Raingarden**

| Stage (ft msl) (Elevation) | Pond Depth (ft) | Cumulative Pond Depth (ft) | Surface Area (sf) | Volume (cf) | Cumulative Volume (cf) | |
|---|---|---|---|---|---|---|
| 1110.30 | 0.00 | 0.00 | 50 | 0 | 0 | |
| 1111.00 | 0.70 | 0.70 | 22,301 | 5,482 | 5,482 | |
| 1112.00 | 1.00 | 1.70 | 65,223 | 41,887 | 47,349 | |
| 1113.00 | 1.00 | 2.70 | 85,242 | 75,009 | 122,358 | |
| 1114.00 | 1.00 | 3.70 | 89,350 | 87,288 | 209,646 | |
| 1115.00 | 1.00 | 4.70 | 92,877 | 91,108 | 300,753 | |
| 1115.30 | 0.30 | 5.00 | 93,980.43 | 28,028 | 328,782 | WQE |
| 1116.00 | 0.70 | 5.70 | 96,926.19 | 66,815 | 395,596 | |
| 1117.00 | 1.70 | 6.70 | 101,357.65 | 165,998 | 494,780 | |
| 1118.00 | 1.00 | 7.70 | 105,924.20 | 103,633 | 598,412 | |
| 1119.00 | 1.00 | 8.70 | 110,750.23 | 108,328 | 706,740 | |
| 1120.00 | 1.00 | 9.70 | 115,827.76 | 113,280 | 820,020 | |

## B4 POND STORAGE TABLE

| POND J: STAGE-STORAGE TABLE | | | | | | |
|---|---|---|---|---|---|---|
| | | STORM EVENT | | | | |
| | | 2 YR | 5 YR | 10 YR | 25 YR | 100 YR |
| ULTIMATE (B4) | PEAK INFLOW | 406.0 | 529.8 | 648.2 | 811.9 | 1074.5 |
| | PEAK DISCHARGE | 342.5 | 462.6 | 571.1 | 727.0 | 974.6 |
| | POA-3 (DELTA: EX/ULT) | -63.50 | -67.20 | -77.10 | -84.90 | -99.90 |
| | WSEL | 1116.7 | 1117.0 | 1117.2 | 1117.5 | 1118.0 |
| | BOTTOM OF POND | 1110.30 | | | | |
| | WQE | 1115.30 | | | | |
| | TOP OF POND | 1120.00 | | | | |
| | TOTAL DEPTH | 6.40 | 6.70 | 6.90 | 7.20 | 7.70 |
| | DETENTION DEPTH | 1.40 | 1.70 | 1.90 | 2.20 | 2.70 |
| | FREEBOARD | 3.30 | 3.00 | 2.80 | 2.50 | 2.00 |

## B4 POND OUTLET QVD TABLE

| STORM EVENT | | | | | |
|---|---|---|---|---|---|
| | 2YR | 5YR | 10 YR | 25YR | 100 YR |
| WSEL | 1117.3 | 1117.6 | 1117.8 | 1118.1 | 1118.5 |
| WEIR AREA (SQFT) | 107.77 | 134.56 | 152.82 | 180.81 | 219.25 |
| DEPTH (FT) | 1.30 | 1.60 | 1.80 | 2.10 | 2.50 |
| FLOW (CFS) | 342.5 | 462.6 | 571.1 | 727.0 | 974.6 |
| VELOCITY (FPS) | 3.18 | 3.44 | 3.74 | 4.02 | 4.45 |

NOTES:

1. POND SHALL BE MAINTAINED BY DOUBLE L MUD 7A OF DRIPPING SPRINGS.
2. POND TO HAVE 12" TOPSOIL BOTTOM.
3. THE REQUIRED WATER QUALITY VOLUME IS 326,855 CF AND THE PROVIDED WATER QUALITY VOLUME IS 328,782 CF.

BATCH DETENTION NOTES:

1. OVERVIEW: THE BASIN IS TYPICALLY FILLED QUICKLY BY STORMWATER CONVEYED THROUGH A STORM DRAIN, MAKING THE INFLOW TIME RELATIVELY SHORT. THE RESIDENCE TIME OF THE STORMWATER IS 12 HOURS AND IS CONTROLLED BY THE CONTROL VALVE (NORMALLY SHUT OFF) AND ACTUATOR INSTALLED ON THE OUTLET STRUCTURE. THE CONTROL VALVE OPENS ONCE THE DESIRED RESIDENCE TIME IS ACHIEVED AFTER A STORM EVENT. THE TREATED WATER IS RELEASED SLOWLY OVER A TIME OF 24 TO 48 HOURS.
2. VALVE/ACTUATOR: THE VALVE/ACTUATOR ASSEMBLY CONSISTS OF A BUTTERFLY VALVE WITH A SMALL 12VDC ACTUATOR. THE VALVE IS A QUARTER TURN VALVE. THE ACTUATOR OPERATES THE VALVE BETWEEN THE FULL OPEN AND FULL CLOSED POSITIONS. A MECHANICAL HAND CLANK ALLOWS A PHYSICAL OVERRIDE OF THE VALVE SYSTEM.
3. THE VALVE IS A KEYSTONE 6-INCH(100MM) BUTTERFLY VALVE MATED WITH A EPI-6 12VDC ACTUATOR. THE EPI-6 ACTUATOR REQUIRES AN OPEN OR CLOSE SIGNAL OF 10 SECONDS. THE ACTUATOR HAS LIMIT SWITCHES THAT DETECT END OF TRAVEL AND SHOT OFF THE INCOMING OPEN OR CLOSE SIGNAL TO THE ACTUATOR ONCE THE VALVES REACHES THE FULL OPEN OR CLOSED POSITION. OVER TORQUE SENSORS WILL SHUT DOWN THE ACTUATOR IN THE EVENT OF AN OVER TORQUE SITUATION.
4. CONTROLLER SYSTEM SPECIFICATIONS:
   - 4.1. POWER - THE CONTROLLER SHALL BE POWERED BY A SHIELD-CONTAINED RENEWABLE POWER SOURCE (SUCH AS SOLAR POWER) IF ELECTRICAL POWER IS NOT AVAILABLE. A SINGLE SUPPLY VOLTAGE FOR ALL COMPONENTS IS DESIRABLE.
   - 4.2. PROGRAMMABILITY - THE CONTROLLER SHALL BE PROGRAMMABLE. IT SHALL BE POSSIBLE TO UPDATE PROGRAMS IN THE FIELD. THE DETENTION TIME AND DRAW-DOWN TIME SHALL BE ADJUSTABLE IN HOURS FROM 0 HOURS TO 72 HOURS.
   - 4.3. EVENT SENSING - THE CONTROLLER SHALL BE ABLE TO SENSE THE BEGINNING OF A STORM (WATER FILLING THE BASIN), AND THE END OF A STORM (WATER HAS DRAINED FROM THE BASIN).
   - 4.4. ENVIRONMENT - THE CONTROLLER SHALL OPERATE IN TEMPERATURES FROM 0 DEGREES CELSIUS TO 55 DEGREES CELSIUS, IN HUMIDITY FROM 10% TO 90% (NON-CONDENSING). THE CONTROLLER SHALL OPERATE DURING PERIODS OF RAINFALL.
   - 4.5. SAFETY/SECURITY - THE SYSTEM COMPONENTS SHALL BE LOCKED IN ENCLOSURE TO PREVENT ACCIDENTAL CONTACT THAT COULD COMPROMISED THE FUNCTION OF THE APPARATUS OR CAUSE INJURY.
   - 4.6. MAINTENANCE - THE CONTROLLER SHALL REQUIRE MINIMAL PERIODIC MAINTENANCE TO CONTROLLER PROGRAM SHALL BE FIELD UPGRADEABLE. THE ABILITY TO MANUALLY OPERATE THE VALVE SHALL BE PROVIDED.
   - 4.7. RELIABILITY - 40,000 HOURS(4.6 YEARS) OR GREATER.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND DESIGN OF SENSOR, AUTOMATIC VALVE, CONTROLLER, ETC.TO ENGINEER FOR REVIEW AND APPROVAL.

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

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

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

| | DATE | DESCRIPTION |
|---|---|---|
| REV | | |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

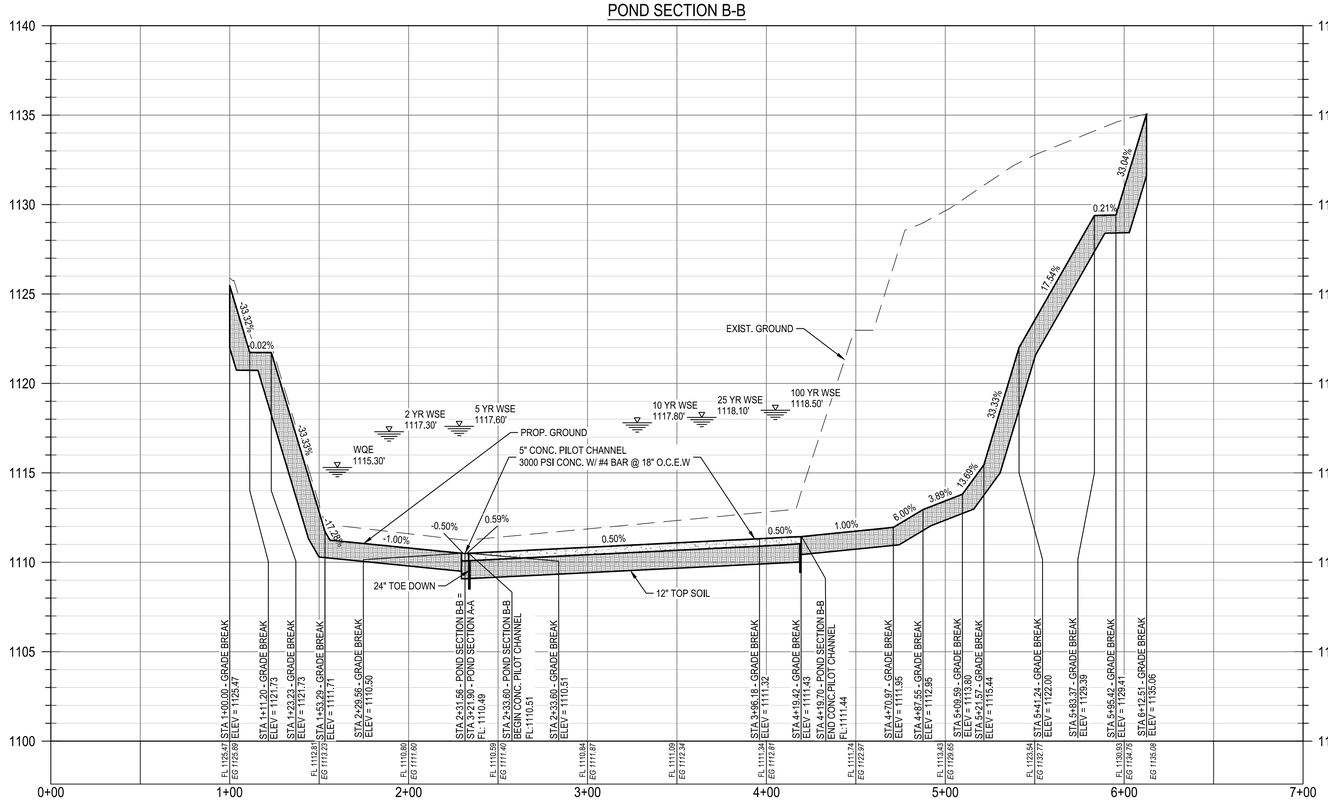
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

# DOUBLE L - POD B4

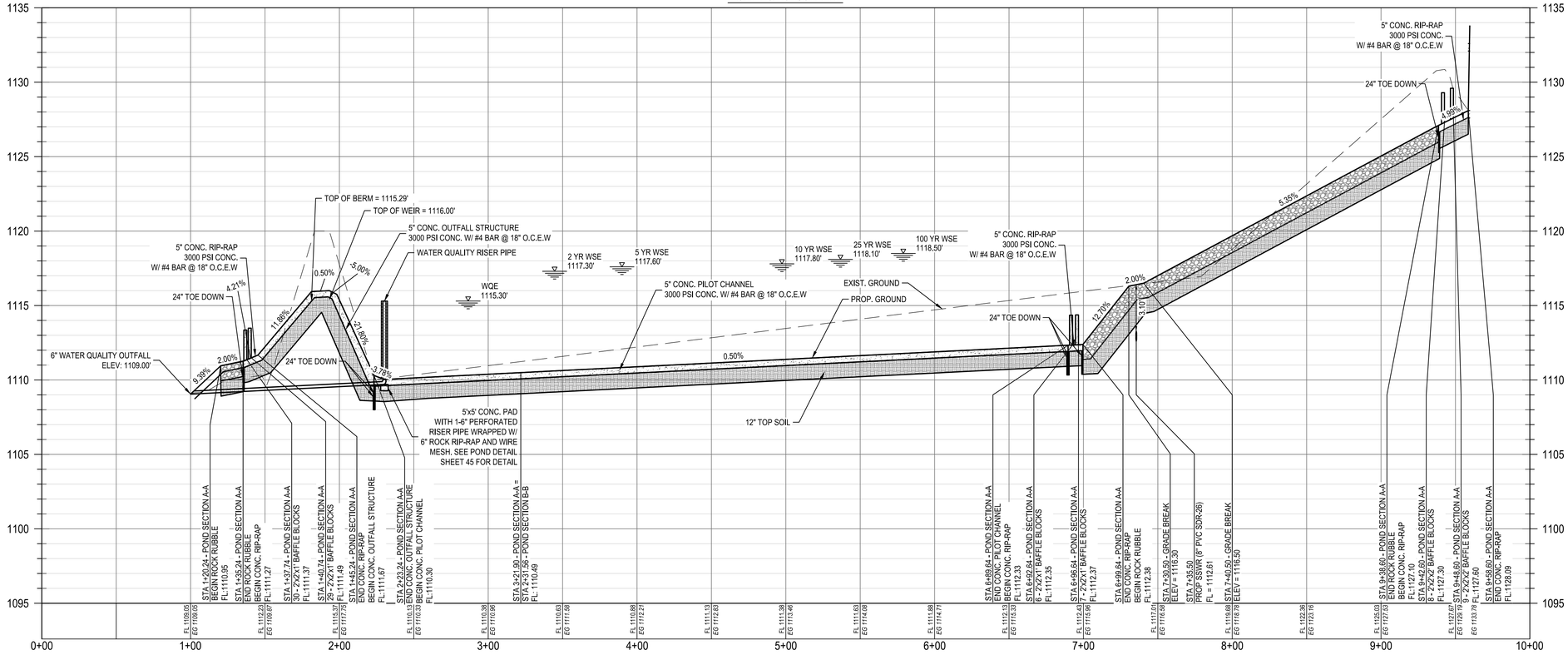
# DETENTION POND PLAN

SHEET
43 OF 54

## POND SECTION B-B




## POND SECTION A-A




## PROFILE LEGEND

FINISHED GRADE
EXISTING GROUND

0 20' 40' 80'

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

LEGEND

- PROPERTY BOUNDARY
- PROPOSED CENTERLINE
- 831 — EXISTING MINOR CONTOUR
- 831 — EXISTING MAJOR CONTOUR
- 681 — PROPOSED MINOR CONTOUR
- 686 — PROPOSED MAJOR CONTOUR
- TCEQ WQBZ — TEXAS COMMISSION ON ENVIRONMENTAL WATER QUALITY BUFFER ZONE
- DS WQBZ — DRIPPING SPRING WATER QUALITY BUFFER ZONE
- PROPOSED CONCRETE RIP-RAP
- PROPOSED ROCK GABION
- PROPOSED 6" PVC WATER QUALITY OUTFALL
- PROPOSED MANHOLE
- DIRECTION OF FLOW
- TW — TOP OF WALL
- BW — BOTTOM OF WALL
- FL — FLOW LINE

PROFILE LEGEND

- PROPOSED 6" PVC OUTFALL
- WATER SURFACE ELEVATION
- PROPOSED GRADE
- EXISTING GRADE

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

| | APR | DATE | DESCRIPTION | REV |
|---|---|---|---|---|
| | | | | |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD B4

# DETENTION POND PROFILE

Know what's below. Call before you dig.

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

STATE OF TEXAS
RICHARD PHAM
142276
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
44 OF 54

| | | |
|---|---|---|
| Site Data: Determine Required Load Removal Based on the Entire Project | | |
| County = | Hays | |
| Total project area included in plan * = | 144.114 | acres |
| Predevelopment impervious area within the limits of the plan * = | 0.000 | acres |
| Total post-development impervious area within the limits of the plan * = | 60.000 | acres |
| Total post-development impervious cover fraction * = | 0.42 | |
| P = | 33 | inches |
| $L_{M\ TOTAL\ PROJECT}$ = | 54846 | lbs. |

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

| | | |
|---|---|---|
| Number of drainage basins / outfalls areas leaving the plan area = | 14 | |

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

| | | |
|---|---|---|
| **Drainage Basin/Outfall Area No. =** | POND J | |
| Total drainage basin/outfall area = | 55.830 | acres |
| Predevelopment impervious area within drainage basin/outfall area = | 0.000 | acres |
| Post-development impervious area within drainage basin/outfall area = | 25.027 | acres |
| Post-development impervious fraction within drainage basin/outfall area = | 0.45 | |
| $L_{M\ THIS\ BASIN}$ = | 22877 | lbs. |

**3. Indicate the proposed BMP Code for this basin.**

| | | |
|---|---|---|
| Proposed BMP = | BATCH DETENTION | |
| Removal efficiency = | 91 | 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 efficiency) x P x ($A_I$ x 34.6 + $A_P$ x 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

| | | |
|---|---|---|
| $A_C$ = | 55.830 | acres |
| $A_I$ = | 25.027 | acres |
| $A_P$ = | 30.80 | acres |
| $L_R$ = | 26504 | lbs |

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

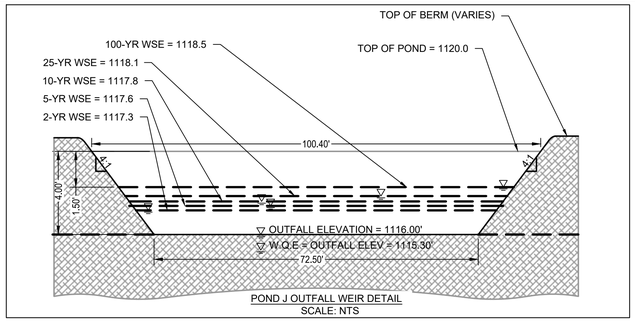
| | | |
|---|---|---|
| Desired $L_{M\ THIS\ BASIN}$ = | 25045 | lbs. |
| F = | 0.94 | |

**6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.** Calculations from RG-348

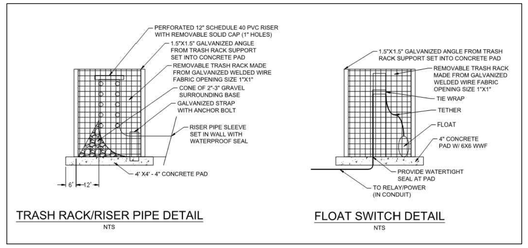
| | | |
|---|---|---|
| Rainfall Depth = | 2.40 | inches |
| Post Development Runoff Coefficient = | 0.56 | |
| On-site Water Quality Volume = | 272379 | cubic feet |

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

| | | |
|---|---|---|
| Off-site area draining to BMP = | 0.000 | acres |
| Off-site Impervious cover draining to BMP = | 0.000 | 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 = | 54476 | |
| **Total Capture Volume (required water quality volume(s) x 1.20) =** | 326855 | cubic feet |

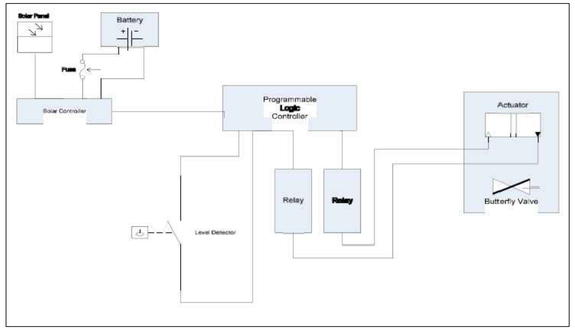



POND J OUTFALL WEIR DETAIL
SCALE: NTS

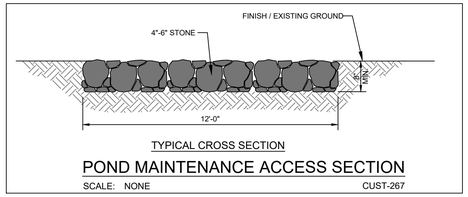



TRASH RACK/RISER PIPE DETAIL
NTS

FLOAT SWITCH DETAIL
NTS

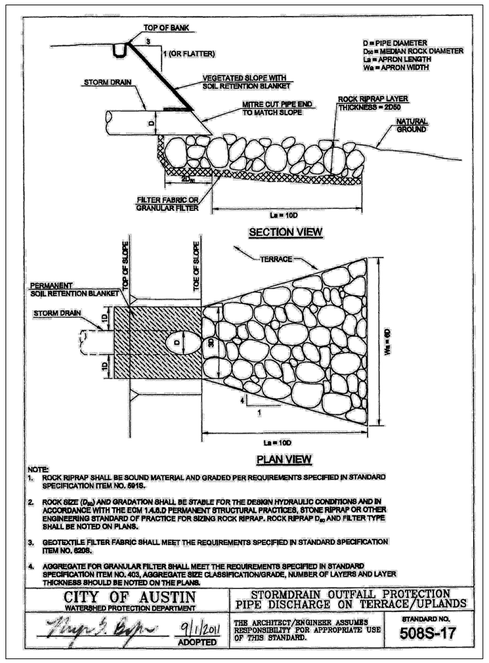



CONTROLLER DETAIL
N.T.S.



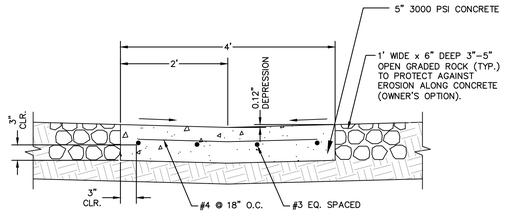

TYPICAL CROSS SECTION

POND MAINTENANCE ACCESS SECTION
SCALE: NONE CUST-267

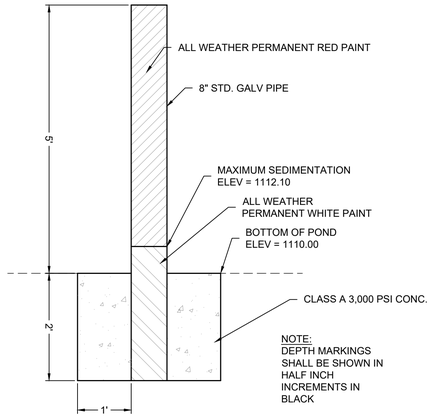



NOTE:
1. ROCK RIPRAP SHALL BE SOUND MATERIAL AND GRADED PER REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 5918.
2. ROCK SIZE ($D_{50}$) AND GRADATION SHALL BE STABLE FOR THE DESIGN HYDRAULIC CONDITIONS AND IN ACCORDANCE WITH THE ECM 1.4.8.D PERMANENT STRUCTURAL PRACTICES, STONE RIPRAP OR OTHER ENGINEERING STANDARD OF PRACTICE FOR SIZING ROCK RIPRAP. ROCK RIPRAP $D_{50}$ AND FILTER TYPE SHALL BE NOTED ON PLANS.
3. GEOTEXTILE FILTER FABRIC SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 6208.
4. AGGREGATE FOR GRANULAR FILTER SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 403, AGGREGATE SIZE CLASSIFICATION/GRADE, NUMBER OF LAYERS AND LAYER THICKNESS SHOULD BE NOTED ON THE PLANS.

| CITY OF AUSTIN<br>WATERSHED PROTECTION DEPARTMENT | STORMDRAIN OUTFALL PROTECTION<br>PIPE DISCHARGE ON TERRACE/UPLANDS | |
|---|---|---|
| 9/1/2011<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>508S-17 |



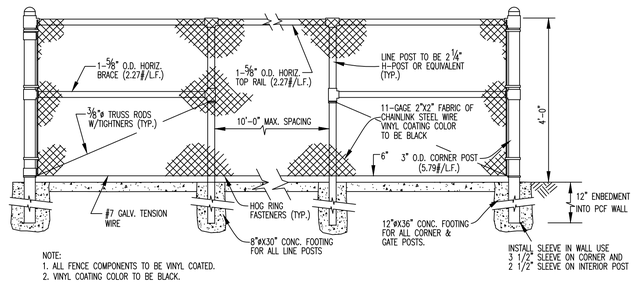

PILOT CHANNEL DETAIL
SCALE: NTS




NOTE:
DEPTH MARKINGS SHALL BE SHOWN IN HALF INCH INCREMENTS IN BLACK

CONCRETE FILLED FIXED SEDIMENT MARKER
N.T.S.

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.




NOTE:
1. ALL FENCE COMPONENTS TO BE VINYL COATED.
2. VINYL COATING COLOR TO BE BLACK.

BLACK VINYL CHAIN LINK FENCE DETAIL
N.T.S.

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

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

## PROFILE LEGEND

FINISHED GRADE
EXISTING GROUND

0 20' 40' 80'
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

LEGEND

| | |
|---|---|
| | PROPERTY BOUNDARY |
| | PROPOSED CENTERLINE |
| 831 | EXISTING MINOR CONTOUR |
| 831 | EXISTING MAJOR CONTOUR |
| 681 | PROPOSED MINOR CONTOUR |
| 686 | PROPOSED MAJOR CONTOUR |
| TCEQ WQBZ | TEXAS COMMISSION ON ENVIRONMENTAL WATER QUALITY BUFFER ZONE |
| DS WQBZ | DRIPPING SPRING WATER QUALITY BUFFER ZONE |
| | PROPOSED CONCRETE RIP-RAP |
| | PROPOSED ROCK GABION |
| | PROPOSED 6" PVC WATER QUALITY OUTFALL |
| | PROPOSED MANHOLE |
| | DIRECTION OF FLOW |
| TW | TOP OF WALL |
| BW | BOTTOM OF WALL |
| FL | FLOW LINE |

PROFILE LEGEND

| | |
|---|---|
| | PROPOSED 6" PVC OUTFALL |
| | WATER SURFACE ELEVATION |
| | PROPOSED GRADE |
| | EXISTING GRADE |

| | | | | | | | | | APR |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | DATE |
| | | | | | | | | | DESCRIPTION |
| | | | | | | | | | REV |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

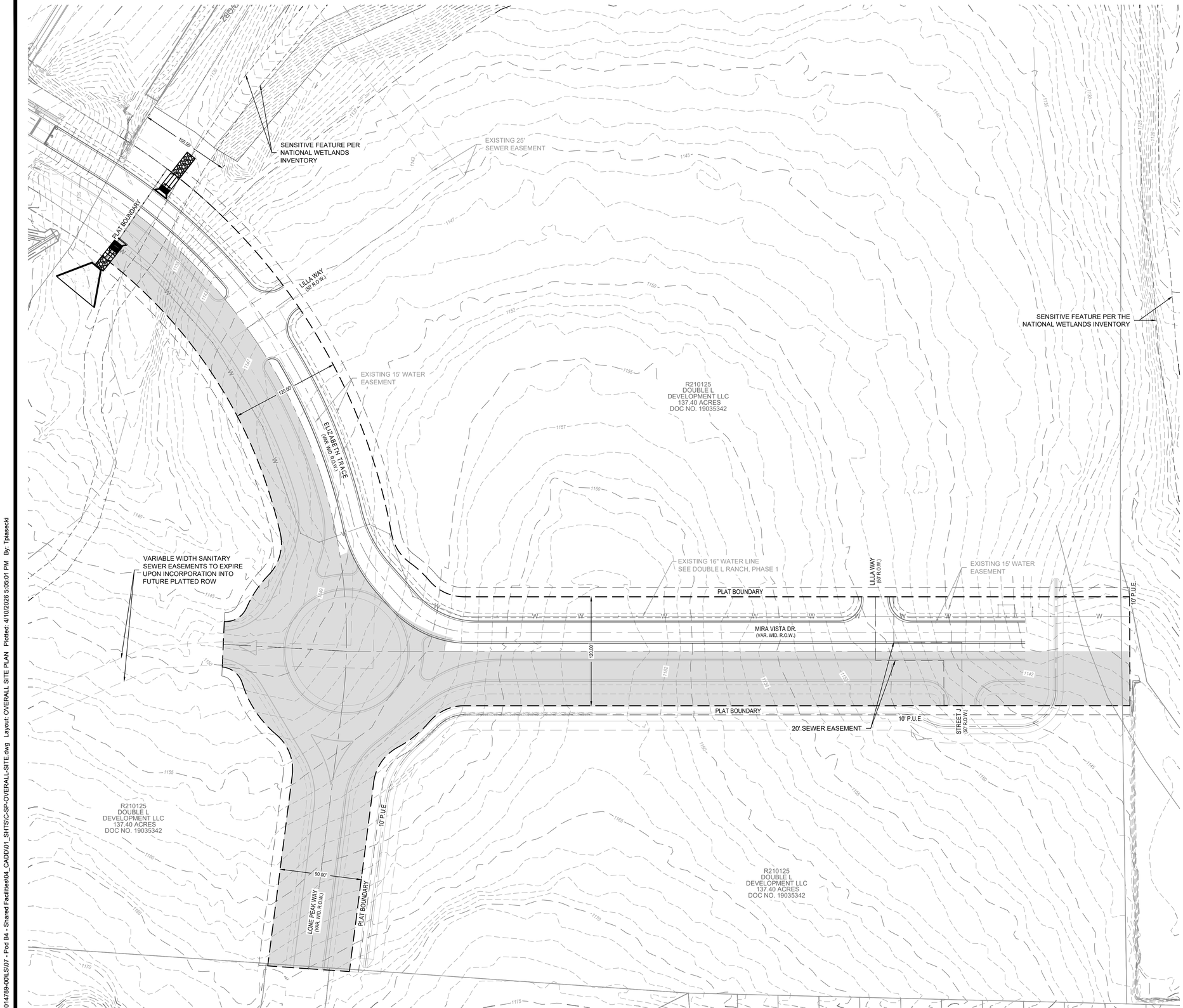

BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


DOUBLE L - POD B4

DETENTION POND DETAILS

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
45 OF 54




N

0 25' 50' 100'

SCALE: 1" = 50'

LEGEND

- PROPOSED BOUNDARY
- XXX — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- 100YR — 100 YR FEMA FLOOD PLAIN
- TCEQ WQBZ — TCEQ WQBZ — TCEQ WQBZ
- SIDEWALK
- DOUBLE L POD B4 ARTERIAL - ALTERNATE

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: ĐZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD B4 ARTERIAL

## OVERALL SITE PLAN

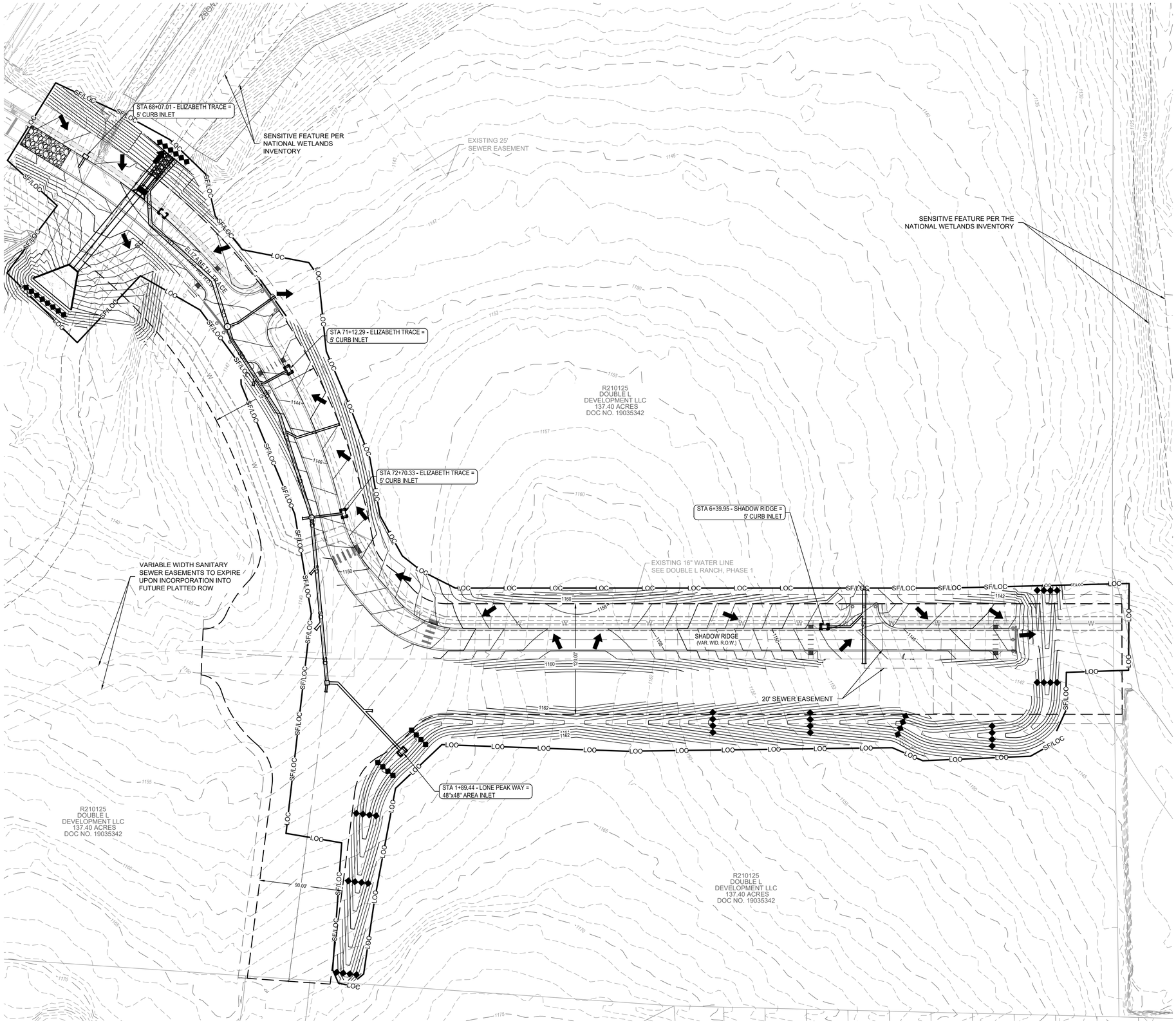
811 Know what's below. Call before you dig.

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

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

SHEET
7 OF 74

O:\00014789-00\LS\07 - Pod B4 - Shared Facilities\04_CADD\01_SHTS\C-SP-OVERALL-SITE.dwg Layout: OVERALL SITE PLAN Plotted: 4/10/2026 5:05:01 PM By: Tpiasecki




N

0 25' 50' 100'

SCALE: 1" = 50'

## LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- XXX PROPOSED MAJOR CONTOUR
- XXX EXISTING PROPOSED CONTOUR
- XXX EXISTING MINOR CONTOUR
- PROPOSED STORM DRAIN LINE
- LOC LIMITS OF CONSTRUCTION
- SF TEMPORARY SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE STAGING AREA
- CONCRETE WASHOUT AREA
- RETAINING WALL
- INLET PROTECTION
- FLOW ARROW
- ROCK BERM
- J HOOK
- 100YR 100 YEAR FEMA FLOOD PLAIN
- TCEQ WQRZ TCEQ WQRZ TCEQ WATER QUALITY BUFFER ZONE
- X EXISTING HOG/BARB WIRE FENCE
- O EXISTING IRON FENCE
- EXISTING WOOD FENCE

## EROSION AND SEDIMENTATION CONTROL NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS STABILIZE BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER CITY OF AUSTIN ENVIRONMENTAL CONTROL MANUAL 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR TO CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS AND MINIMUM OF ONCE DAILY.
5. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
6. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION / WATER QUALITY POND(S).

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

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

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE, SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD B4 ARTERIAL

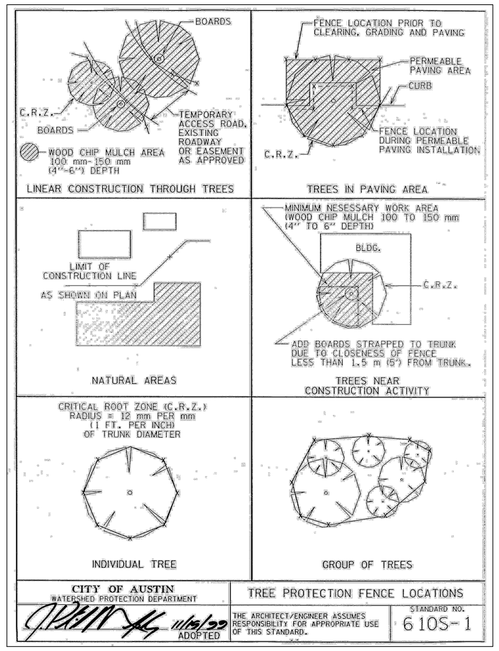
## EROSION AND SEDIMENTATION CONRTROL PLAN

STATE OF TEXAS RICHARD PHAM 142275 LICENSED PROFESSIONAL ENGINEER

04/10/2026

SHEET 8 OF 74

\\bgeinc\data2\00014789-00\LS\07 - Pod B4 - Shared Facilities\04_CADD\01_SHTS\C-SP-EROS.dwg Layout: 8 EROSION AND SEDIMENTATION CONRTROL PLAN Plotted: 4/10/2026 5:56:28 PM By: Tpiasecki



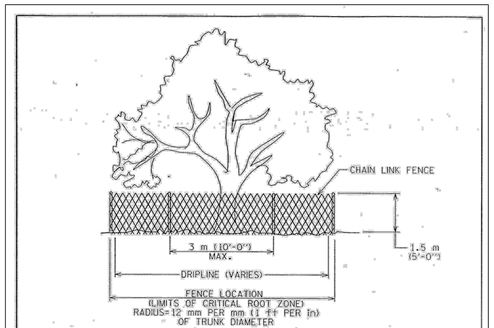

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

TREE PROTECTION FENCE LOCATIONS

11/3/99
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 610S-1



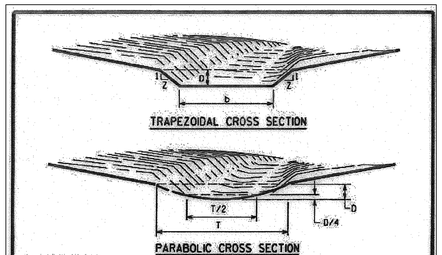

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

TREE PROPTECTION FENCE
TYPE A - CHAIN LINK

11/3/99
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 610S-2




**GENERAL NOTES:**

1. EXCEPT AS INDICATED ON THE DRAWINGS OR DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE, ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.

2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, TYPICAL SECTIONS AND CROSS-SECTION INDICATED ON THE DRAWINGS AND SHALL BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES, WHICH COULD IMPEDE NORMAL FLOW.

3. FILL SHALL CONFORM TO STANDARD SPECIFICATION ITEM NO. 132S, "EMBANKMENT".

4. EARTHEN CHANNELS SHALL ALWAYS BE STABILIZED WITH THE APPROPRIATE SOIL RETENTION BLANKET WHICH SHALL CONFORM TO STANDARD SPECIFICATION ITEM NO. 605S, "SOIL RETENTION BLANKET".

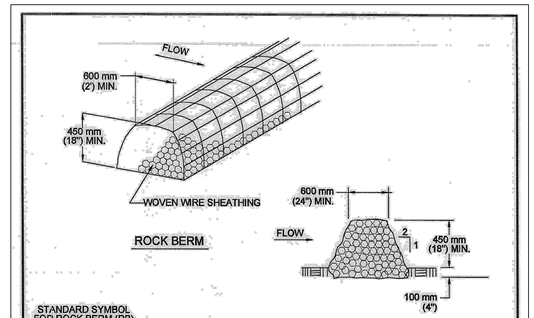
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

GRASS LINED SWALE

ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 627S-1




**NOTES:**

1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

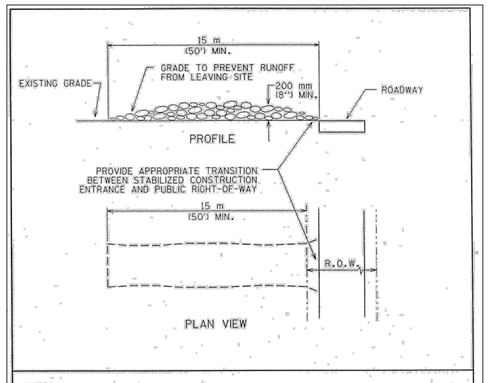
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

ROCK BERM

8/24/2010
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 639S-1




NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

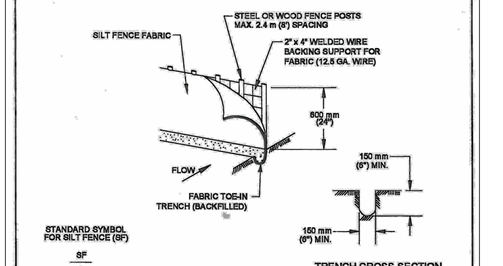
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

STABILIZED CONSTRUCTION ENTRANCE

5/23/02
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 641S-1




1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 Inches) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 Inches) DEEP AND 150 mm (6 Inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

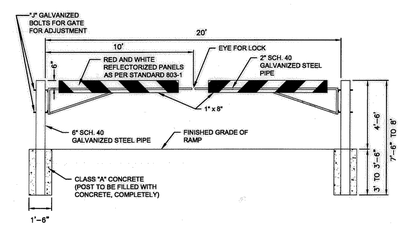
CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT

SILT FENCE

9/1/2011
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 642S-1




NOTE:
RAMP BARRICADE SUBSIDIARY TO ITEM 403-G CONCRETE STRUCTURES

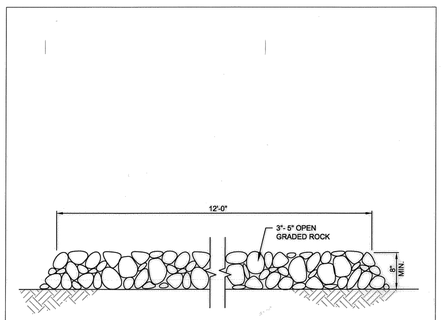
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

POND PIPE GATE AT RAMP DETAIL

E. Rad, P.E. 1/9/2016
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 662S-1




NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. THICKNESS: NOT LESS THAN 200 mm (8").
3. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS

POND MAINTENANCE ROAD
CROSS SECTION

E. Rad, P.E. 1/9/2016
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 662S-2

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR
REVIEWED BY: CL
DRAWN BY: JR/CR/JT

BGE

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

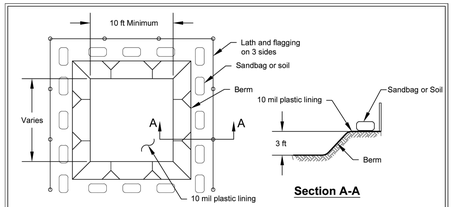
DOUBLE L - POD B4 ARTERIAL

EROSION AND SEDIMENTATION CONTROL DETAILS (1 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
04/10/2026

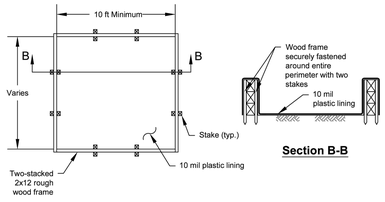
SHEET
9 OF 74

O:\00014789-00\LS\07 - Pod B4 - Shared Facilities\04_CADD\01_SHTS\C-SP-EROS-DETL.dwg Layout: EROSION AND SEDIMENTATION CONTROL DETAILS (1 OF 2) Plotted: 4/10/2026 5:05:14 PM By: Tpiasecki




**Section A-A**

**Type "Above Grade" with Earthen Berms**



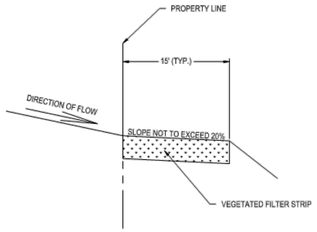

**Section B-B**

**Type "Above Grade" with Wood Planks**

NOT TO SCALE

Hays County Concrete Washout Area

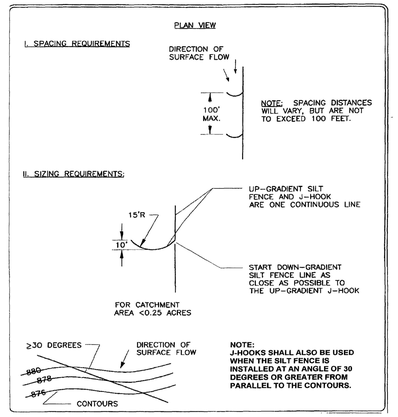
Revised June 2025




ENGINEERED VEGETATED FILTER STRIP DETAIL (TYP.)
N.T.S.

V.F.S. NOTES (TCEQ RG348)

1. THE FILTER STRIP SHOULD EXTEND ALONG THE ENTIRE LENGTH OF THE CONTRIBUTING AREA AND THE SLOPE SHOULD NOT EXCEED 20%. THE MINIMUM DIMENSION OF THE FILTER STRIP (IN THE DIRECTION OF FLOW) SHOULD BE NO LESS THAN 15 FEET. THE MAXIMUM WIDTH (IN THE DIRECTION OF FLOW) OF THE CONTRIBUTING IMPERVIOUS AREA SHOULD NOT EXCEED 72 FEET. FOR ROADWAYS WITH A VEGETATED STRIP ALONG BOTH SIDES THE TOTAL WIDTH OF THE ROADWAY SHOULD NOT EXCEED 144 FEET (I.E., 72 FEET DRAINING TO EACH SIDE).
2. THE MINIMUM VEGETATED COVER FOR ENGINEERED STRIPS IS 80%.
3. THE AREA CONTRIBUTING RUNOFF TO A FILTER STRIP SHOULD BE RELATIVELY FLAT SO THAT THE RUNOFF IS DISTRIBUTED EVENLY TO THE VEGETATED AREA WITHOUT THE USE OF A LEVEL SPREADER.
4. THE AREA TO BE USED FOR THE STRIP SHOULD BE FREE OF GULLIES OR RILLS THAT CAN CONCENTRATE OVERLAND FLOW (SCHUELER, 1987).
5. THE TOP EDGE OF THE FILTER STRIP ALONG THE PAVEMENT WILL BE DESIGNED TO AVOID THE SITUATION WHERE RUNOFF WOULD TRAVEL ALONG THE TOP OF THE FILTER STRIP, RATHER THAN THROUGH IT.
6. TOP EDGE OF THE FILTER STRIP SHOULD BE LEVEL. OTHERWISE RUNOFF WILL TEND TO FORM A CHANNEL IN THE LOW SPOT. A LEVEL SPREADER SHOULD NOT BE USED TO DISTRIBUTE RUNOFF TO AN ENGINEERED FILTER STRIP.
7. FILTER STRIPS SHOULD BE LANDSCAPED AFTER OTHER PORTIONS OF THE PROJECT ARE COMPLETED.




| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT

BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046

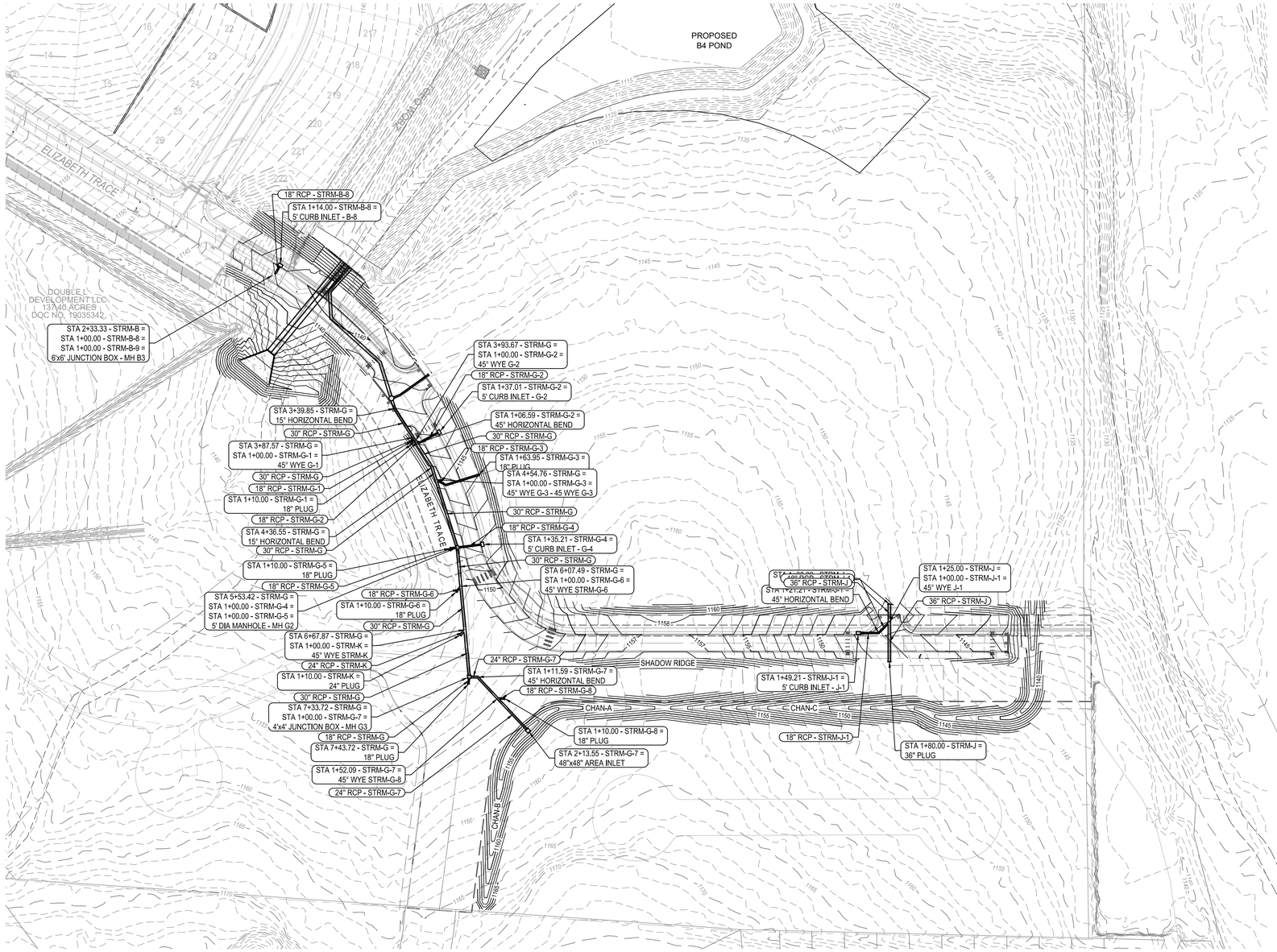
DOUBLE L - POD B4 ARTERIAL

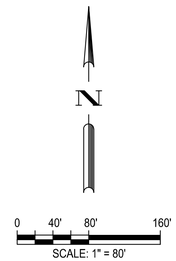
EROSION AND SEDIMENTATION CONTROL DETAILS (2 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
10 OF 74

O:\00014789-00\LSI\07 - Pod B4 - Shared Facilities\04_CADD\01_SHTS\C-SP-EROS-DETL.dwg Layout: EROSION AND SEDIMENTATION CONTROL DETAILS (2 OF 2) Plotted: 4/10/2026 5:05:21 PM By: Tpiasecki




## LEGEND

- PHASE BOUNDARY
- LOT LINES
- EXISTING LOT LINES
- PROPOSED CURB AND GUTTER
- 100YR — 100 YR FLOOD PLAIN
- TCEQ WQBZ — TCEQ WQBZ — TCEQ WQBZ
- XXX — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED 24" STORM SEWER
- PROPOSED INLET
- PROPOSED HEADWALL

| REV | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: DZ/JR/CR

REVIEWED BY: CL

DRAWN BY: JR/CR/JT


BGE, Inc.
7330 SAN PEDRO AVE. SUITE 202
SAN ANTONIO, TX 78216
TEL: 210-581-3600 • www.bgeinc.com
TBPE Registration No. F-1046


# DOUBLE L - POD B4 ARTERIAL

## OVERALL STORM PLAN

Know what's below. Call before you dig.

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

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/10/2026

SHEET
28 OF 74


O:\100014789-00\LS\07 - Pod B4 - Shared Facilities\04_CADD\01_SHTS\OVERALL STORM PLAN.dwg Layout: OVERALL STORM PLAN Plotted: 4/10/2026 5:05:22 PM By: Tplasecki

# Attachment N – Inspection, Maintenance, Repair, and Retrofit Plan

This document has been prepared to provide a description and schedule for the performance of maintenance on permanent pollution abatement measures. Maintenance measures to be performed will be dependent on what permanent pollution abatement measures are incorporated into the project. The project specific water pollution abatement plan should be reviewed to determine what permanent pollution abatement measures are incorporated into a project. It should also be noted that the timing and procedures presented herein are general guidelines. Adjustment to the timing and procedures may have to be made depending on project specific characteristics as well as weather related conditions but may not be altered without TCEQ approval.

**Batch Detention:**

Inspections should occur at least twice a year. If possible these inspections should be conducted during wet weather to determine if the pond is meeting target detention times. Inspections should check for clogging of the primary outfall mechanism, as well as erosion problems in the upper stage pilot channel, all flow paths, and any erodible areas inside and downstream of the basin. If any slumping or erosion is discovered, immediate regrading or revegetation should be performed to correct the problems. Structural faults discovered during inspection should be identified and repaired immediately. Faults to check for include cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. All inlet/outlet and riser pipes will eventually deteriorate and require replacement.

The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. At the time of mowing, litter and debris should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed. Additionally at this time, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.).

With each inspection, any damage to structural elements of the basin (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. An example of this type of repair can include patching of cracked concrete, sealing of voids, removal of vegetation from cracks and joints. The various inlet/outlet structures in a basin will eventually deteriorate and must be replaced.

Sediment shall be removed from the basin at least every 5 years, when sediment depth exceeds 6 inches, when the sediment interferes with the level sensor or when the basin does not drain within 48 hours. Care should be taken not to compromise the basin lining during maintenance.

The Logic Controller should be inspected as part of the twice yearly investigations. Verify that the external indicators (active, cycle in progress) are operating properly by turning the controller off and on, and by initiating a cycle by triggering the level sensor in the basin. The valve should be manually opened and closed using the open/close switch to verify valve operation and to assist in inspecting the valve for debris. The solar panel should be inspected and any dust or debris on the panel should be carefully removed. The controller and all other circuitry and wiring should be inspected for signs of corrosion, damage from insects, water leaks, or other damage. At the end of the inspection, the controller should be reset.

**Vegetative Filter Strips:**

Inspection of the VFS for erosion and damage to vegetation should occur at least twice per year; additional inspection periods, however, should occur after heavy rainfall. The BMPs should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. If areas are found that have bare spots or that need restoration, those areas should be replanted to meet the TCEQ requirements.

Inspections for debris and litter removal should be performed twice per year, at the minimum. Routine periodic checks are preferred. The filter strips should be kept free of obstructions and debris to allow for proper usage and minimal blockage. Additionally, monitoring to ensure channels and preferential flow paths have not developed should be conducted during routine inspection.

Vegetative Filter Strips must be mowed at least twice per year to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing is performed, a mulching mower should be used, or grass clippings should be caught and removed. Regular mowing should also include weed control practices; herbicide usage, however, should be kept to a minimum.

*All inspection and maintenance records must be kept at the office of the operator for the previous three years.

**Grassy Swales – Inspection and Maintenance Requirements**

Grassy swales shall be inspected after major storm events and at least annually. Maintenance includes mowing, vegetation management, removal of debris and sediment, erosion repair, and re-establishment of vegetation as necessary to maintain design performance.

**Jellyfish® Filter – Inspection and Maintenance Requirements**

The Jellyfish® Filter shall be inspected quarterly during the first year, after major storm events, and annually thereafter. Maintenance shall be conducted in accordance with the manufacturer's Inspection and Maintenance Guide and includes sediment removal, cartridge cleaning or replacement, and removal of oil and floatables.

Where a project is occupied by the owner, the owner may provide for maintenance with his own skilled forces or contract for recommended maintenance of Permanent Best Management Practices. Where a project is occupied or leased by a tenant, the owner shall require tenants to contract for such maintenance services either through a lease agreement, property owners association covenants, or other binding document.

I understand that I am responsible for maintenance of the Permanent Pollution Abatement Measures included in this project until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property or ownership is transferred.

An amended copy of this document will be provided to the TCEQ within thirty (30) days of any changes in the following information.

Responsible Party: Double L Development, LLC.

Mailing Address: 1600 West Loop South, Suite 2600

City, State, Zip: Houston, Texas 77027-3051

Telephone: (713) 623-2466

(Signature of Responsible Party)

Agent/Engineer: Stacy Mulholland, P.E. – Brown & Gay Engineers, Inc.

Mailing Address: 7330 San Pedro Ave, Suite 202

City, state, Zip: San Antonio, Texas 78216

Telephone: (210) 581-3637

(Signature of Agent/Engineer)

# Attachment O – Pilot-Scale Field Testing Plan

Not applicable to this project.

# Attachment P – Measures for Minimizing Surface Stream Contamination

The site will be stabilized using silt fence. All of the stabilization will be installed prior to construction and will be removed after construction has been completed. These methods will minimize any increases in erosion caused by construction. Additionally, the proposed permanent BMPs will treat any stormwater passing through the site prior to that stormwater's returning to existing drainage patterns and eventually flowing to surface streams. There will be no increase to flow off-site.

# 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: Stacy Mulholland, P.E.

Date: 04/09/2026

Signature of Customer/Agent:



**Regulated Entity Name:** Double L Ranch - Pods A1, A2, A3, A4, B1, & B4

## *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: Little Barton 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 Action

No spills of hydrocarbons or hazardous substances are expected. However, in the event that such an incident does occur, the contractor should carefully follow the following TCEQ guidelines:

**Cleanup:**

1. Clean up leaks and spill immediately.
2. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If he spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
3. Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly.

**Minor Spills:**

1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
2. Use absorbent materials on small spills rather than hosing down or burying the spill.
3. Absorbent materials should be promptly removed and disposed of properly.
4. Follow the practice below for a minor spill:
    - Contain the spread of the spill.
    - Recover spilled materials.
    - Clean the contaminated area and properly dispose of contaminated materials.

**Semi-Significant Spills:**

Semi-significant spills can still be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities. Spills should be cleaned up immediately, using the following practices:

1. Contain spread of the spill.
2. Notify the project foreman immediately.
3. If the spill occurs on paved or impermeable surfaces, clean up using “dry” methods (absorbent materials, cat litter, and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
4. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
5. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

**Significant/Hazardous Spills:**

Summarized in the table below are Reportable Quantity threshold numbers for certain kind of spills.

| REPORTABLE QUANTITY THRESHOLD | |
|---|---|
| Kind of Spill | RQ |
| Hazardous substance | Onto land – "Final RQ" in Table 302.4<br>Into water – "Final RQ" or 100 lbs, whichever is less |
| Any oil | Coastal waters – as required by the Texas General Land Office |
| Crude oil | 210 gallons |
| Petroleum product | Onto land from an exempt PST facility – 210 gallons<br>Onto land from a non-exempt PST facility – 25 gallons<br>Directly into water – enough to create a sheen |
| Production of oil, gas, or geothermal | As required by the Railroad Commission of Texas |
| Industrial solid wastes or other substances | Into water – 100 lbs |
| Petroleum storage tanks, aboveground or underground | Into water – enough to create a sheen on water<br>Onto land – 25 gallons |
| Substances causing pollution | Into water – 100 lbs |

Only certified Haz-Mat teams will be responsible for handling the material at the site.

For significant or hazardous spills that are in reportable quantities:

1. Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site. Additionally, in the event of a hazardous material spill, local Williamson County and/or city of Liberty Hill police, fire, and potentially EMS should be contacted in order to initiate the hazardous material response team.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 191, and 302, the contractor should notify the National Response Center at (800) 424-8802.
3. Notification should first be made by telephone and followed up with a written report of which one copy is to be kept on-site in the report binder and one copy is to be provided to the TCEQ.

4. The services of a spill contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
5. Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sherriff's Office, Fire Department, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tceq.state.tx.us/response/spills.html

# Attachment B – Potential Sources of Contamination

No particular activity or process during construction of the project is anticipated to present a significant risk of being a potential source of contamination. However, during regular construction operations, several common and minor risks of contamination are anticipated. Should any unforeseen mishaps occur during construction, the contractor shall follow the guidelines set forth in "Attachment A – Spill Response Plan".

**Potential sources of sediment to stormwater runoff:**

- Clearing and grubbing
- Grading and excavation
- Vehicle tracking
- Topsoil stripping and stockpiling
- Landscaping

**Potential pollutants and sources, other than sediment, to stormwater runoff:**

- Combined Staging Area – small fueling, minor equipment maintenance, sanitary facility.
- Materials Storage Area – solvents, adhesives, paving materials, aggregates, trash, etc.
- Construction Activities – paving, concrete pouring
- Concrete washout areas

**Potential on-site pollutants:**

- Fertilizer
- Concrete
- Glue, adhesives
- Gasoline, diesel fuel, hydraulic fluids, antifreeze
- Sanitary toilets

# Attachment C – Sequence of Major Activities

1. Temporary erosion and sedimentation controls are the to be installed as indicated on the approved subdivision construction plans and in accordance with the stormwater pollution prevention plan (SWPPP) that is required to be posted on the site. Install tree protection and initiate tree mitigation measures.

2. The environmental project manager, and/or site supervisor, and/or designated responsible party, and the general contractor will follow the storm water pollution prevention plan (SWPPP) posted on the site. Temporary erosion and sedimentation controls will be revised, if needed, to comply with city inspectors' directives, and revised construction schedule relative to the water quality plan requirements and the erosion and sedimentation plan.

3. Temporary erosion and sedimentation controls will be inspected and maintained in accordance with the storm water pollution prevention plan (SWPPP) posted on the site.

4. A sequence of major construction activities is listed below:

    I. Clearing and grubbing
    II. Grading and excavation for roadway
    III. Excavation for utilities
    IV. Construction of utilities
    V. Re-vegetation

5. Upon completion of construction and re-vegetation, the design engineer shall submit an engineer's letter of concurrence to the City of Dripping Springs indicating that construction, including re-vegetation, is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the appropriate city inspector.

6. After construction is complete and all disturbed areas have been re-vegetated per plan to at least 90 percent established, remove the temporary erosion and sedimentation controls and complete any necessary final re-vegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the permanent BMPs.

# Attachment D – Temporary Best Management Practices and Measures

a. 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.

*Upgradient water will be intercepted by curb inlets and routed around the project limits. All TBMPs are adequate for the drainage areas they serve.*

b. 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.

*Site preparation, which is the initiation of all activity on the project, will disturb the largest amount of soil. Therefore, before any of this work can begin, the clearing and grading contractor will be responsible for the installation of all on-site control measures. The methodology for pollution prevention of on-site stormwater will include: (l) erection of silt fences along the downgradient boundary of construction activities for temporary erosion and sedimentation controls, (2) installation of rock berms with silt fencing downgradient from areas of concentrated stormwater flow for temporary erosion control, (3) installation of gravel filter bags downgradient of construction activities for temporary erosion and sedimentation controls (4) installation of stabilized construction entrance/exit(s) to reduce the dispersion of sediment from the site, and (5) installation of construction staging area(s).*

*Prior to the initiation of construction, all previously installed control measures will be repaired or reestablished for their designed or intended purpose. This work, which is the remainder of all activity on the project, may also disturb additional soil. The construction contractor will be responsible for the installation of all remaining on-site control measures that includes installation of the concrete truck washout pit(s), as construction phasing warrants.*

*Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solidly to settle out of the runoff. By containing the sediment and solids within the Site, they will not enter surface streams and/or sensitive features.*

c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

*There were no naturally-occurring sensitive features observed on the site and no surface streams on, or adjacent, to the project limits. All Temporary BMPs utilized are adequate for the drainage areas served.*

***Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features.***

d. 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.

***There were no naturally-occurring sensitive features observed on the site and no surface streams on, or adjacent, to the project limits. All Temporary BMPs utilized are adequate for the drainage areas served.***

***Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features.***

# Attachment F – Structural Practices

The following structural measures will be installed prior to the initiation of site preparation activities:

- Erection of silt fences along the downgradient boundary of construction activities and rock berms with silt fence for secondary protection, as located on the Erosion & Sedimentation Control Plan sheets.
- Installation of inlet protection at downgradient inlets of construction activities, as located on the Erosion & Sedimentation Control Plan sheets.
- Installation of stabilized construction entrance/exit[s) and construction staging area(s), as located on the Erosion & Sedimentation Control Plan sheets.

The following structural measures will be installed at the initiation of construction activities or as appropriate based on the construction sequencing:

- Installation of concrete truck washout pit(s), as required and located on the Erosion & Sedimentation Control Plan sheets.

# Attachment I – Inspection and Maintenance for BMPs

The inspection and maintenance of temporary BMPs will be made according to TCEQ RG-348, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices.

**Inspection Personnel:**

Inspections shall be conducted by qualified representatives of the contractor acting on behalf of the owner or a designated party, if hired separately by the owner. Each operator must delegate authority to the specifically described position or person performing inspections, as provided by 30 TAC 305.128, as an authorized person for signing reports and performing certain activities requested by the director or required by the TPDES general permit. This delegation of authority must be provided to the director of TCEQ in writing and a copy shall be kept along with the signed effective copy of the SWPPP.

**Inspection Schedule and Procedures:**

An inspection shall occur weekly and after any rain event.

The authorized party shall inspect all disturbed areas of the site, areas used for storage of materials that exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site.

Disturbed areas and areas used for storage of materials that are exposed to precipitation or within limits of the 1% annual chance (100 year) floodplain must be inspected for evidence of, or the potential for, pollutants entering the runoff from the site. Erosion and sediment control measures identified in the plan must be observed to ensure that they are operating correctly. Observations can be made during wet or dry weather conditions. Where discharge locations or points are accessible, they must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. This can be done by inspecting receiving waters to see where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

Based on the results of the inspection, the site description and the pollution prevention measures identified in the plan must be revised as soon as possible after an inspection that reveals inadequacies. The inspection and plan review process must provide for timely implementation of any changes to the plan within 7 calendar days of the inspection.

An inspection report shall be completed, which summarizes the scope of the inspection, name(s) and qualifications of personnel conducting the inspection, the date(s) of the inspection, and major observations relating to the implementation of the SWPPP. Major observations shall include, as a minimum, location of discharges of sediment or other pollutants from the site, location of BMPs that need to be maintained, location of BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where BMPs are needed.

Actions taken as a result of the inspections must be described within, and retained as a part of, the SWPPP. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SWPPP and the TPDES general permit. The report must be signed by the authorized representative delegated by the operators in accordance with TAC 305.128.

**Maintenance and Corrective Actions** – Maintenance of erosion control facilities shall consist of the minimum requirements as follows:

A. In ongoing construction areas inspect erosion control improvements to confirm facilities are in place and operable. Where facilities have been temporarily set aside or damaged due to construction activity, place facilities in service before leaving job site.

B. If weather forecast predicts possibility of rain, check entire facilities throughout site to ensure that they are in place and operable. If job site weather conditions indicate high probability of rain, make special inspection of erosion control facilities.

C. After rainfall events, review erosion control facilities as soon as site is accessible. Clean rock berms, construction entrances, and other structural facilities. Determine where additional facilities or alternative techniques are needed to control sediment leaving site.

D. After portions of site have been seeded, review these areas on regular basis in accordance with project specifications to assure proper watering until grass is established. Re-seed areas where grass is not well-established.

E. Spills are to be handled as specified by the manufacturer of the product in a timely and safe manner by qualified personnel. The site superintendent will be responsible for coordinating spill prevention and cleanup operations.

F. Concrete trucks will discharge extra concrete or wash out drum only at an approved location on site. Residual product shall be properly disposed of.

G. Inspect vehicle entrance and exits for evidence of off-site tracking and correct as needed.

H. Remove sediment from traps/ponds no later than when the design capacity has been reduced by 50%. Remove sediment from silt fence/rock berms when sediment has accumulated more than 6” up the BMP.

I. If sediment escapes the site, the contractor, where feasible and where access is available, shall collect and remove sedimentation material by appropriate non-damaging methods. Additionally, the contractor shall correct the condition causing discharges.

J. If inspections or other information sources reveal a control has been used incorrectly, or that control is performing inadequately, the contractor must replace, correct, or modify the control as soon as practical after discovery of the deficiency.

| Pollution Prevention Measure | Inspected in Compliance | Corrective Action Required | |
|---|---|---|---|
| | | **Description** (use additional sheet if necessary) | **Date Completed** |
| **Best Management Practices** | | | |
| Natural vegetation buffer strips | | | |
| Temporary vegetation | | | |
| Permanent vegetation | | | |
| Sediment control basin | | | |
| Silt fences | | | |
| Rock berms | | | |
| Gravel filter bags | | | |
| Drain inlet protection | | | |
| Other structural controls | | | |
| Vehicle exits (off-site tracking) | | | |
| Material storage areas (leakage) | | | |
| Equipment areas (leaks, spills) | | | |
| Concrete washout pit (leaks, failure) | | | |
| General site cleanliness | | | |
| Trash receptacles | | | |
| **Evidence of Erosion** | | | |
| Site preparation | | | |
| Roadway or parking lot construction | | | |
| Utility construction | | | |
| Drainage construction | | | |
| Building construction | | | |
| **Major Observations** | | | |
| Sediment discharges from site | | | |
| BMPs requiring maintenance | | | |
| BMPs requiring modification | | | |
| Additional BMPs required | | | |

_____ **A brief statement describing the qualifications of the inspector is included in this SWP3.**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"I further certify I am an authorized signatory in accordance with the provisions of 30 TAC §305.128."

Inspector's Name _____ Inspector's Signature _____ Date _____

## PROJECT MILESTONE DATES

Date when major site grading activities begin:

| Construction Activity | Date |
|---|---|
| Installation of BMPs | |
| | |
| | |
| | |
| | |
| | |
| | |

Dates when construction activities temporarily or permanently cease on all or a portion of the project:

| Construction Activity | Date |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |

Dates when stabilization measures are initiated:

| Stabilization Activity | Date |
|---|---|
| | |
| | |
| | |
| | |
| | |
| Removal of BMPs | |

# Attachment J – Schedule of Interim and Permanent Soil Stabilization Practices

The schedule of interim and permanent soil stabilization practices will be according to: Federal Register / Vol. 63, No. 31 (February 17, 1998).

**Prior to Disturbance** – Install all temporary erosion and sedimentation control features.

**During Construction** – Maintain all temporary erosion and sedimentation control structures. Inspect all temporary erosion and sedimentation control structures on a weekly basis and after rain events.

**After Completion of Permanent Erosion and Sediment Controls** – Stabilize and restore all areas disturbed during construction. Permanent seeding will be applied immediately after the final design grades are achieved on portions of the site but no later than 14 days after construction activities have permanently ceased. After the entire site is stabilized, any sediment that has accumulated will be removed and hauled off-site for disposal. Construction debris, trash, and temporary BMPs will also be removed and any areas disturbed during removal will be seeded immediately.

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

I Robert E. Fondren ,
Print Name

Manager ,
Title - Owner/President/Other

of Double L Development, LLC ,
Corporation/Partnership/Entity Name

have authorized Stacy Mulholland, P.E.
Print Name of Agent/Engineer

of BGE, Inc.
Print Name of Firm

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

I also understand that:

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

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

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

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

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

SIGNATURE PAGE:

Applicant's Signature

4.9.26
Date

THE STATE OF TEXAS §

County of HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared Robert Fondren 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 9th day of April, 2026.

NOTARY PUBLIC

Frances K. Ard
Typed or Printed Name of Notary

FRANCES K. ARD
My Notary ID # 4169161
Expires April 14, 2026

MY COMMISSION EXPIRES: April 14, 2026

# Application Fee Form

**Texas Commission on Environmental Quality**
Name of Proposed Regulated Entity: Double L Ranch - Pods A1, A2, A3, A4, B1, & B4
Regulated Entity Location: 2.0 miles due North from the intersection of US 290 and Ranch Rd 12
Name of Customer: Double L Development, LLC
Contact Person: Robert E. Fondren Phone: (713) 623-2466
Customer Reference Number (if issued):CN 606051399
Regulated Entity Reference Number (if issued):RN ---

**Austin Regional Office (3373)**

☒ Hays ☐ Travis ☐ Williamson

**San Antonio Regional Office (3362)**

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

**Site Location (Check All That Apply):**

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

| *Type of Plan* | *Size* | *Fee Due* |
|---|---|---|
| Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling | Acres | $ |
| Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks | 144.11 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: 4.9.26



TCEQ-0574 (Rev. 02-24-15)

# Application Fee Schedule

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

***Water Pollution Abatement Plans and Modifications***

***Contributing Zone Plans and Modifications***

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

***Organized Sewage Collection Systems and Modifications***

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

***Underground and Aboveground Storage Tank System Facility Plans and Modifications***

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

***Exception Requests***

| *Project* | *Fee* |
|---|---|
| Exception Request | $500 |

***Extension of Time Requests***

| *Project* | *Fee* |
|---|---|
| Extension of Time Request | $150 |

TCEQ Use Only

# TCEQ Core Data Form

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

## SECTION I: General Information

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

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

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

| **2. Customer Reference Number** *(if issued)* | Follow this link to search for CN or RN numbers in Central Registry** | **3. Regulated Entity Reference Number** *(if issued)* |
|---|---|---|
| **CN 6060513** | | **RN** |

## SECTION II: Customer Information

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

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

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

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

Double L Development, 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)* |
|---|---|---|---|
| 0802983550 | 32066782940 | 82-5526408 | |

**11. Type of Customer:**

☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☒ Other: LLC

**12. Number of Employees**

☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

**13. Independently Owned and Operated?**

☒ **Yes** ☐ **No**

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

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

| **15. Mailing Address:** | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1600 West Loop South, Suite 2600 | | | | | | | |
| **City** | Houston | **State** | TX | **ZIP** | 77027 | **ZIP + 4** | 3051 |

| **16. Country Mailing Information** *(if outside USA)* | **17. E-Mail Address** *(if applicable)* |
|---|---|
| | |

| 18. Telephone Number | 19. Extension or Code | 20. Fax Number *(if applicable)* |
|---|---|---|
| ( 713 ) 623-2466 | | ( ) - |

## SECTION III: Regulated Entity Information

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

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

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

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

Double L Ranch - Pods A1, A2, A3, A4, B1, & B4

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **23. Street Address of the Regulated Entity:** ***(No PO Boxes)*** | | | | | | | |
| | **City** | | **State** | | **ZIP** | | **ZIP + 4** |
| **24. County** | Hays | | | | | | |

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

| | | | | | |
|---|---|---|---|---|---|
| **25. Description to Physical Location:** | 1.5 miles North of US 290 and Ranch Rd 12 | | | | |
| **26. Nearest City** | | | **State** | **Nearest ZIP Code** | |
| Dripping Springs | | | TX | 78620 | |

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

| **27. Latitude (N) In Decimal:** | 30.2125925 | | **28. Longitude (W) In Decimal:** | -98.0767056 | |
|---|---|---|---|---|---|
| Degrees | Minutes | Seconds | Degrees | Minutes | Seconds |
| 30 | 12 | 45.33N | 98 | 4 | 36.14W |

| **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) |
|---|---|---|---|
| 1521 | 1611 | 236115 | 237210 |

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

Single family residential housing

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **34. Mailing Address:** | **1600 West Loop South, Suite 2600** | | | | | | |
| | **City** | **Houston** | **State** | **TX** | **ZIP** | **77027** | **ZIP + 4** | **3051** |
| **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.

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

## SECTION IV: Preparer Information

| **40. Name:** | Stacy Mulholland | **41. Title:** | Senior Project Manager |
|---|---|---|---|

| **42. Telephone Number** | **43. Ext./Code** | **44. Fax Number** | **45. E-Mail Address** |
|---|---|---|---|
| **(** 210 **)** 581-3637 | | **(  )** - | smulholland@bgeinc.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:** | BGE, Inc. | **Job Title:** | Senior Project Manager |
|---|---|---|---|
| **Name** *(In Print):* | Stacy Mulholland | **Phone:** | **(** 210 **)** 581- **3637** |
| **Signature:** |  | **Date:** | 04/09/2026 |

# AMENDED AND RESTATED DEVELOPMENT AGREEMENT FOR ANARENE INVESTMENTS TRACT

**STATE OF TEXAS** §
§
**COUNTY OF HAYS** §

This Amended and Restated Development Agreement (the "Agreement") is between the City of Dripping Springs, (the "City"); ANARENE INVESTMENTS, LTD, a Texas limited partnership ("Anarene" or "Owner"); DOUBLE L DEVELOPMENT, LLC, a Texas limited liability company, as successor in interest to ANARENE INVESTMENTS, LTD, a Texas limited partnership ("Developer" or "Owner"); LL RANCH INVESTMENTS, LP, a Texas limited partnership ("LL Ranch" or "Owner"); Melinda Hill Perrin ("Perrin" or "Owner"); and John Graham Hill ("Hill" or "Owner") (LL Ranch, Anarene, Perrin and Hill are sometimes collectively referred to as the "Landowners"). In this Agreement, the City and Owner are sometimes individually referred to as a "Party," and collectively referred to as the "Parties".

## RECITALS:

**WHEREAS,** Anarene and the City entered into that certain Development Agreement effective as of October 17, 2012 (the "Original Agreement"), which was recorded in Volume 4466, Page 327 of the Official Public Records of Hays County, Texas; and

**WHEREAS,** the City and Anarene entered into an Amended and Restated Development Agreement for Anarene Investments Tract (the "Development Agreement") effective August 13, 2015; and

**WHEREAS,** Anarene assigned its rights, title and interest in the Development Agreement to the Developer pursuant to that Assignment and Assumption Agreement effective September 25, 2019; and

**WHEREAS,** the Landowners own a portion of the Land that is subject to the Development Agreement and agree to subject the Land to the terms and conditions of the Development Agreement; and

**WHEREAS,** the Parties now wish to amend and restate the Development Agreement; and

**WHEREAS,** the City is authorized to enter into this Agreement pursuant to Section 212.172 of the Texas Local Government Code, and the City and Owners are proceeding in reliance on the enforceability of this Agreement;

**NOW, THEREFORE, for a good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the Parties hereto, the City, Developer, and Landowners hereby agree as follows:**

## ARTICLE 1. DEFINITIONS

1.1 Act: House Bill 4183 of the 84th Legislature, Regular Session, codified as Chapter 7916 of the Texas Special District Local Laws Code.

1.2 Agreement: This contract between the City of Dripping Springs, Texas and Owners, including exhibits.

1.3 Applicable Rules: The City Rules, as defined herein will be applicable to the development of the Land for the term of this Agreement. This term does not include applicable Zoning, Building Codes, Landscaping, Lighting, Sign, or Exterior Design standards, as those ordinances may apply or hereafter be applied to residential and nonresidential properties. This term does not include regulations mandated by state law, or that are necessary to prevent imminent harm to human safety or property, which may be modified and made applicable to the Project even after the Effective Date.

1.4 City: The City of Dripping Springs, an incorporated Type A, general-law municipality located in Hays County, Texas.

1.5 City Council: The governing body of the City of Dripping Springs, Texas.

1.6 City Engineer: The person or firm designated by the City Council as the engineer for the City of Dripping Springs, Texas.

1.7 City Rules: Ordinance No. 2019-29 (Subdivision Ordinance), Lighting Ordinance as it may be amended from time to time and except as modified herein; Ordinance No. 3500.11(Water Quality Protection), Ordinance No. 2020-12 (Sign Ordinance), Ordinance No. 2019-39 (Dripping Springs Technical Criteria), the ordinances in effect as of the Effective Date identified on **Exhibit J,** all as modified by Project Approvals and variances granted concurrent with this Agreement including the variances listed in **Exhibit E**.

1.8 County: Hays County, Texas.

1.9 District or Districts: Any conservation and reclamation district(s) authorized pursuant to Texas Constitution Article III, Section 52 and Article XVI Section 59, including Hays County Municipal Utility District No. 7, that includes the Land or portions thereof and any subsequent district or districts that may be created by division of such district or districts.

1.10 Dripping Springs Technical Criteria: The criteria adopted in Article 28.07 of the City of Dripping Springs Code of Ordinances that includes technical criteria standard specifications and adopted in Ordinance 2019-39 and as modified by this Agreement including the variances in **Exhibit E**.

1.11 Effective Date: October 17, 2012.

1.12 Homeowners Association (HOA): is an organization created by a real estate developer for the purpose of controlling the appearance and managing any common-area assets during the marketing, managing, and selling of homes and sites in a residential subdivision. It grants the developer privileged voting rights in governing the association, while allowing the developer to exit financial and legal responsibility of the organization, typically by transferring ownership of the association to the homeowners after selling off a predetermined number of lots.

1.13 Impervious Cover Percentage: The percentage calculated by dividing the total acres of impervious cover on the Land by the total number of acres included in the Land.

1.14 Impervious Cover: As defined by the TCEQ, currently 30 Texas Administrative Code 213.3 (17) and as defined in the Dripping Springs Code of Ordinances Section 22.05.016(c) except swimming pools shall not be considered as impervious cover if they comply with freeboard requirements to capture the water quality volume for the surface area as required by the TCEQ. For residential tracts, Single Family Lot Impervious Cover Assumptions, as set forth in **Exhibit H**, shall be utilized to determine impervious cover on residential lots.

1.15 Land: Approximately 1675.094 acres of land, in Hays County, Texas, more fully described on **Exhibit A**, attached, and the approximately 2.066 acres described in **Exhibit A-1** in the event such land is acquired by one or more Owners.

1.16 Living Unit Equivalent (LUE): A single unit of service consists of the typical flow that would be produced by a single-family residence located in a typical subdivision served by the City.

1.17 Master Plan: The master plan of the City, originally presented in 1984, as may be amended, modified or supplemented by the City, in conjunction with the Comprehensive Plan.

1.18 Maximum Impervious Cover: The maximum impervious cover per residential lot shall be in accordance with **Exhibit I**.

1.19 Owner: One or more Owner listed above and any subsequent Owner, as assigned.

1.20 Phase 1 Road: The four-lane arterial, which will include a five-foot sidewalk, and shared-use path (8' or 10' depending on width of connecting path), as shown generally by red dashed line on **Exhibit G-1** within the area outlined in blue on **Exhibit G-1**.

1.21 Phase 2 Road: (i) The four-lane arterial, which will include a five-foot sidewalk, and shared-use path, 10' width , as shown generally by teal dashed line on **Exhibit G-1**, and (ii) the two-lane roadway extension to the boundaries of Cynosure (also known as "Wild Ridge"), as shown generally by green dashed line on **Exhibit G-1**, and to Big Sky Ranch, as shown generally by brown dashed line on the **Exhibit G-1**, all within the area outlined in yellow on **Exhibit G-1**.

1.22 Phase 3 Road: An additional two-lane expansion to the Phase 2 Road two-lane road to the boundary of Cynosure ("Wild Ridge"), as shown generally by purple dashed line on **Exhibit G-1** within the area outlined in orange on **Exhibit G-1**.

1.23 Project: The term as defined by Texas Local Government Code Chapter 245, as may be amended. The term refers to a specific property use and/or improvement undertaken on the Land, as documented in a manner that provides the City with fair notice.

1.24 Project Approvals: All aspects of the Project outside the current scope of work will require prior approval by the City Council.

1.25 Parkland: Parkland is a platted tract of land designated and used for recreation or open space.

1.26 Shared Use Path: a multi-use path (10') to be constructed within the Phase 1 Road and Phase 2 Road right of way.

1.27 Single Family Lot Impervious Cover Assumptions: As stated in **Exhibit H**.

1.28 TCEQ: Texas Commission on Environmental Quality, or its successor agencies.

1.29 TxDOT: Texas Department of Transportation, or its successor agencies.

1.30 WTCPUA: West Travis County Public Utility Authority, or its successor agencies.

## ARTICLE 2. PUBLIC BENEFITS, INFRASTRUCTURE & AMENITIES

2.1 Purpose: The development of the Land under this Agreement is intended to: (a) allow housing and commercial development within the City's ETJ to occur in an orderly manner in order to protect the health, safety and welfare of the City's present and future citizens; (b) promote the aesthetic enhancement of the City and its ETJ; and (c) promote a safe and attractive self-sustaining community.

2.2 Environmental Protection: Developer will implement compliance with the following natural resource laws and regulations, to the extent applicable:

2.2.1 Aquifer Protection: Developer will comply with all applicable TCEQ regulations. Developer shall also take reasonable measures to protect the Trinity Aquifer, including at a minimum adherence to the Edwards Aquifer Rules for the Contributing Zone. If the development is a low-density development (less than fifteen (15%) Impervious Cover), no structural water quality controls will be required.

2.2.2 Land Application Restrictions: If the Project utilizes individual onsite sewage disposal and if treated sewage effluent is disposed of through irrigation, property owners within the Project shall comply with the applicable City, County, and TCEQ permit for the lot or lots that are utilizing individual onsite sewage disposal. The City reserves the right to comment on any permit application submitted by an Owner.

2.2.3 Waterway Protection: Developer shall obtain authorization from and comply with applicable rules and regulations established by federal, state, and local governmental entities regarding waterway protection.

2.2.4 Stormwater Controls: Developer will prepare and implement a stormwater pollution prevention plan in compliance with the TCEQ's Texas Pollution Discharge Elimination System stormwater general permit for construction-related stormwater discharges. Owner will comply with the applicable Water Quality Controls as outlined in 2.2.8.

2.2.5 Endangered Species: Developer agrees to comply with the federal Endangered Species Act. City agrees that the TCEQ optional enhanced measures Appendix A and Appendix B to RG-348 are an approved regional plan acceptable to the United States Fish and Wildlife Service ("USFWS"). The City and Developer agree that by Developer complying with the TCEQ enhanced measures under RG-348, Developer is also in compliance with WTCPUA rules and policies related to the Endangered Species Act.

2.2.6 Water Conservation Plan: Developer shall comply with the current City plan, which has been approved by the WTCPUA.

2.2.7 Application Submittal: Developer shall submit all permit applications required under Section 2.2 to the City prior to applying to the relevant authority.

2.2.8 Water Quality Controls: Water quality best management practices ("BMPs") will be designed to meet those established by TCEQ publication RG 348, Appendix A.

2.3 Parkland: In addition to the 25.7 acres previously donated to the City of Dripping Springs (25.7 acres parkland), an additional 345.0 acres of Parkland will be provided out of the approximately 474 acres of open space, with 80.76 acres being within the floodplain, reflected on the Concept Plan, **Exhibit D**, and the Master Plan for Parkland for the Land, **Exhibit B**. This dedication shall fulfill all parkland dedication requirements on the Project, including but not limited to the requirements of Article 28.03 (Parkland Dedication) of the City's Code of Ordinances in effect as of the Effective Date of the Original Agreement, and no further dedication or payment will be required related to Parkland Dedication Fees other than that listed in this Agreement. Parkland will be dedicated in accordance with Section 28.03.006 of the Dripping Springs Code of Ordinances in effect as of the Effective Date of the Original Agreement and the attached **Exhibit B** Master Plan for Parkland for the Land.

At the discretion of Developer, portions may be dedicated to the City, with the City's acceptance and approval, the County, a homeowner's association, or the District. Developer shall not be required to submit park plans for each phase of development to the City's Parks and Recreation Commission if Developer develops Parkland in accordance with the attached **Exhibit B**.

2.4 Trails and Accessibility: Developer agrees to work with the City to establish and locate mutually acceptable trail systems within the Land. Developer intends to construct a pervious maintenance road adjacent to certain detention and drainage facilities, which may serve the dual purpose of (i) providing access to, and the ability to maintain, detention and drainage facilities, and (ii) providing a public trail through the Project, as shown on **Exhibit B** attached hereto as the "Public Trail Through Double L" (the "Trail"). The Trail will meet TCEQ standards for construction within a buffer zone and the District's standards for access and maintenance of its drainage and detention facilities. The City may further improve the Trail, subject to a separate written agreement with the District. The Developer agrees to work with the City to allow the City to construct public trail connections extending from the Trail to Dripping Springs Ranch Park and Rathgeber Natural Resource Park. The Developer agrees to pay Park Development Fees in the amount of $648 per residential unit for senior living multi-family and for residential lots of 40' wide or smaller (the "Garden Home Product"). The Developer further agrees to pay Park Development Fees in the amount of $648 per single-family residential unit (excluding Garden Home Product) that results in the number of platted single-family lots (excluding the Garden Home Product) within the Project exceeding 1,710 single-family residential units ("Additional Lots"). Provided, however, the City agrees to offset the amount of Park Development Fees otherwise owed under this Section 2.4 for Additional Lots by (i) the costs incurred by the Developer to construct the Trail or other trail facilities open to the general public except for the Shared Use Path, and (ii) the dollar amount of any private contribution by Owner for any grant application for parks. Park Development Fees for senior living multi-family, Garden Home Product and the Additional Lots shall be due and payable, in phases, to the City at the time such senior living multi-family, Garden Home Product and Additional Lots are platted or at the time of final platting of a phase of development that includes senior living multi-family, Garden Home Product and Additional Lots, whichever comes first, based on the number of senior living multi-family, Garden Home Product and Additional Lots included in the plat.

2.5 Hilltop Preservation: Developer shall preserve each of the six (6) hilltops as depicted in **Exhibit C** attached hereto and incorporated herein for all purposes. Building heights on such hills shall be limited to twenty (20) feet greater than the top of the corresponding hilltop; Developer will dedicate land for one water storage tank which may be located on one of the hilltops. Provided, however, nothing in this Section 2.5 will prevent Developer from conveyance of land for, or construction of water storage tanks on any of the four (4) hills, if required by the WTCPUA. Developer will endeavor to have the color of such tanks blend into the natural settings, however, the parties acknowledge that the color of such tanks may ultimately be determined by the WTCPUA.

2.6 Lighting: Developer, or an electric utility designated by Developer, will construct all illumination for street lighting, signage, security, exterior landscaping, and decorative facilities for the Project in accordance with the City Rules, including the Lighting Ordinance then in effect; provided however, the City agrees that the applicable lighting rules and regulations shall be no less favorable than those applicable to any other similarly situated development within the City's boundaries or its ETJ. Notwithstanding the foregoing, construction of street lighting shall be vested under the rules and regulations set forth in the Lighting Ordinance in effect at the time of execution of this Agreement unless otherwise agreed to, in whole or in part, by the Developer. District(s) will be required to operate and maintain the lighting within its boundaries according to City Rules. Owners agree that all restrictive covenants for the Project shall reinforce this provision and be applied to all construction and builders.

2.7 Landscaping: Developer shall comply with the City's Landscaping Ordinance (Ordinance No. 6300.10) in effect as of the Effective Date, as amended by this Agreement, in all commercial areas. Residential areas shall only be required to comply with the tree plan set forth in Exhibit L; provided, however, existing trees on an individual lot of at least three caliper inches may be used to satisfy the tree requirements set forth therein. Landscape design and vegetation along arterial roadways, will be a combination of native shade trees and ornamental trees along with clusters of native or adaptive shrubs and grasses at regular intervals along or within the right of way. Developer agrees that the use of native species of plant materials will be utilized throughout the Project attached as **Exhibit F**. Turf grasses on any lot within the Project shall be limited to Zoysia, Buffalo or Bermuda grasses. Other grasses may be approved by the City Administrator for lots utilizing drip irrigation systems. In no event may St. Augustine grass be used. The plant list attached as **Exhibit F** is approved.

2.8 Exterior Design & Architectural Standards: Within the commercial area, Developer shall comply with the City's Exterior Design & Architectural Standards Ordinance, as may be amended.

## ARTICLE 3. PROPERTY DEVELOPMENT

3.1 Governing Regulations: For purposes of any vesting analysis, the Parties agree that the Effective Date shall be construed as the date upon which the Original Agreement was approved by the City Council of Dripping Springs. The Applicable Rules shall govern the Project, unless otherwise expressly provided for in this Agreement. For the term of this Agreement, the development and use of the Land will be controlled by the terms of this Agreement, the Project Approvals, and the Applicable Rules. If there is any conflict with the terms of this Agreement and the Applicable Rules, the terms of this Agreement will control. If there is a conflict between the terms regarding construction of water and wastewater facilities under this Agreement and the Agreement for the Provisions of Nonstandard Wholesale and Retail Water Service, as amended, and the Wastewater Utility Service and Fee Agreement, as amended (collectively, the "Utility Agreements"), the terms regarding construction of water and wastewater facilities under the Utility Agreements shall

control if there is an unavoidable conflict in terms that cannot be resolved by harmonizing the intent of this Agreement and the Utility Agreements. Notwithstanding anything contained herein to the contrary, the variances described on **Exhibit E** to the Development Agreement are approved.

3.1.1 Residential Density: (a) The maximum number of single-family residential dwelling units that may be developed on the Land shall be 2,231 single-family units with lot allowances as set forth in Exhibit N, provided, however, there shall be a maximum of 73 thirty-five (35') lots, 96 forty (40') lots, and 110 forty-five (45') lots and (b) the maximum number of senior living multi-family units shall be 250 units.

3.1.1.1 Residential Lot Size: The minimum size for any lot shall be 3,500 square feet. See **Exhibit K** for all lot sizes.

3.1.2 Water Service: The Land shall be entitled to receive water service in accordance with the Agreement for the Provision of Nonstandard Wholesale and Retail Water Service between the City and Double L Development, LLC (the "Water Service Agreement"), in an amount not to exceed 3,393 Living Unit Equivalents ("LUEs"). The Parties agree water service may be provided by a third-party utility provider, including, but not limited to, a special purpose district. Any area that is not provided water service by the West Travis County Public Utility Agency ("PUA") shall not be subject to the memorandum of understanding between USFWS and LCRA, as predecessor to the PUA ("MOU"), or the PUA Service and Development Policies related to compliance with the MOU. The Water Service Agreement is hereby modified to increase the LUEs available to serve the Land to 3,393 LUEs.

3.1.2.1 Service Extension Request. The City agrees to submit a service extension request ("SER") to the PUA for reservation of an additional 1,683 LUEs for the Land within thirty (30) days of the Developer submitting the request to the City. Such 1,683 LUEs will be in addition to the 1,710 LUEs previously approved by the PUA that is reserved to serve the Land.

3.1.3 Wastewater Service: The Land shall be entitled to receive wastewater service in accordance with the Wastewater Utility Service and Fee Agreement between the City and Double L Development, LLC (the "Wastewater Agreement"), in an amount not to exceed 3,393 LUEs. The Parties agree wastewater service may be provided by a third-party utility provider, including, but not limited to, a special purpose district. The Wastewater Service Agreement is hereby modified to increase the LUEs available to serve the Land to 3,393 LUEs.

3.1.3.1 Reuse Water. The City agrees to approve and execute an Application for Reclaimed Water Production Authorization under 30 TAC Chapter 321 (the "321 Application"), within 10 days of receipt of a completed 321 Application from the Developer, or its representatives, for an amount up to half of the permitted rated

capacity of the City's wastewater treatment plant. The District will be entitled to all reuse water from the 321 plant to serve the Land.

3.1.4 Impervious Cover: Developer may develop the Project with an Impervious Cover Percentage that does not exceed thirty-five percent (35%) over the entire Project. Developer shall have the right to apportion impervious cover limits on a lot by lot or use by use basis not to exceed the applicable maximum impervious cover percentage shown in **Exhibit I** on each residential lot, and for the commercial portion of the Project as set forth in Section 3.1.4.1. Developer may apportion such limits as it deems desirable so long as the overall limitation herein specified is not exceeded. Developer may count in density and impervious cover calculations the gross area of the Land, including but not limited to, land designated as greenbelt, open space, mitigation or similar designation.

3.1.4.1 Nonresidential Impervious Cover: Commercial and multifamily impervious cover may reach a maximum of seventy percent (70%) of any given commercial or multifamily tract, provided that the maximum impervious cover for the Land does not exceed thirty-five percent (35%) of the gross area of the Land.

3.1.5 Water Quality Buffer Zones: Development on the Land shall comply with the stream buffers as required per the TCEQ Optional Enhanced Measures (OEM). These buffers will govern over the City of Dripping Springs Water Quality Buffers.

3.2 Project Approvals & Entitlements:

3.2.1 Concept Plan: The City confirms that the Concept Plan and Roadway Connectivity Plan attached as **Exhibit D** and **Exhibit G**, respectively, comply with the City's Comprehensive Plan, and that the Concept Plan has been approved by all requisite City departments, boards, and commissions and by the City Council. The City approves the land uses, densities, and reservations of land for public purposes on the Concept Plan. The City's execution of this Agreement shall be deemed to be the approval of the Concept Plan and Roadway Connectivity Plan, as shown on **Exhibit D** and **Exhibit G**, respectively, on which land uses, densities, and reservations of land for public purposes during development of the Land will be based. Notwithstanding the above, there must be a fifty (50) foot separation between commercial and residential development, measured from vertical building improvements.

3.2.1.1 Buffer Areas: For residential lots within the Project that are adjacent to the following subdivisions, there shall be minimum open space buffers, with allowance for above ground drainage facilities to protect adjacent property and control stormwater run-off, as follows:

Legacy Trails: 45 feet
Founders Ridge: 35 feet

Springlake Estates: 25 feet
Shelton Ranch Road: 25 feet

The above-referenced buffers shall be owned and maintained by the District and/or a homeowners association. The buffer areas, including for lots adjacent to Founders Ridge, Springlake Estates, Shelton Ranch Road, and Legacy Trails, are shown generally on **Exhibit M**.

3.2.2 Phasing of Development: The calculation of impervious cover, lot averaging, and similar requirements shall be determined and calculated on a whole project basis. An impervious cover exhibit shall be submitted concurrently with each plat filed indicating the amount of proposed impervious cover; the amount associated with prior platted areas and the amount associated with the area subject to such plat, all as set forth in **Exhibit H**. The chart shall also show the average lot size computation for the Land as a whole and resulting from the plat and prior platted areas. Any portion of the Land may be re-platted to change the use or designation of that previously platted portion so long as the entire platted portion of the Land meets the requirements of this Agreement, including impervious cover, lot averaging and similar requirements herein. So long as this Agreement remains in effect, such re-platting shall be deemed controlled by this Agreement as if the same were an original platting of such re-platted portions.

3.2.3 Project Approvals: The Project Approvals and variances set forth in **Exhibit E** and the Concept Plan attached to this Agreement as **Exhibit D** have been approved by all required City boards and commissions and the City Council and are granted by the City with respect to the development of the Land.

Since the project comprises a significant land area and its development may occur in phases over several years, modifications to the Concept Plan may become necessary due to changes in market conditions or other factors.

In order to provide flexibility with respect to certain details of the development of the Project, Owner may seek changes in the location and configuration of the residential, commercial, and parkland areas shown on the Concept Plan. Such changes will only require an administrative amendment to the Concept Plan so long as the Impervious Cover requirements herein are met, there are no reductions in lot sizes or increases in the overall density of the Project, and no net reduction in required Parkland for the Project. The City Administrator or designee shall be responsible for consideration and approval of such administrative amendments to the Concept Plan. The City Administrator may defer such approval to the City Council at their discretion, except that any decrease in residential lot sizes adjacent to a neighboring subdivision shall not be a minor amendment and must be brought before City Council for review and action. All the variations from the Concept Plan not deemed minor shall require a Concept Plan amendment approved by the City Council.

3.2.4 Signage: Developer will submit a Master Signage Plan for approval by City Council prior to construction of any signage structure or sign within the project. All signage will comply with the Sign Ordinance except as modified by this Agreement or the approved Master Signage Plan.

3.3 Further Approvals: Upon the Effective Date of this Agreement, Developer may develop the Land consistent with this Agreement. Any future approvals granted in writing by the City for such development will become a part of the Project Approvals.

3.4 Standard for Review: The City's review and approval of any submissions by Developer will not be unreasonably withheld or delayed. The City will review any plans, plat or other filing by Developer in accordance with the applicable City's ordinances, state law and this Agreement. If any submittal is not approved, the City will provide written comments to Developer specifying in detail all of the changes that will be required for the approval of the submittal.

3.5 Approvals & Appeals: The City acknowledges that timely City reviews are necessary for the effective implementation of Developer's development program. Therefore, the City agrees that it will comply with all statutory and internal City time frames for development reviews. The City further agrees that if, at any time, Developer believes that an impasse has been reached with the City staff on any development issue affecting the Project or if Developer wishes to appeal any decision of the City staff regarding the Project; then Developer may promptly appeal in writing to the City Council requesting a resolution of the impasse at the next scheduled City Council meeting, subject to compliance with all timetables required by the open meeting laws.

3.6 Concept Plan Amendments:

3.6.1 Due to the fact that the Project comprises a significant land area and its development will occur in phases over a number of years, modifications to the Concept Plan may become necessary due to changes in market conditions or other factors. In order to provide flexibility with respect to certain details of the development of the Project, Developer may seek changes in the location and configuration of the residential and/or commercial use lots shown on the Concept Plan, including changes within the proposed residential, commercial, or open space areas shown on the Concept Plan. Such changes will only require an administrative amendment to the Concept Plan so long as the Impervious Cover limitations are met and there are no increases to the residential or commercial density of the Land or adverse impacts to traffic, utilities, stormwater discharges, or water quality.

3.6.2 The City Administrator shall be responsible for consideration and approval of such administrative amendments to the Concept Plan. The City Administrator may defer such approval to the Planning and Zoning Commission and the City Council at the City Administrator's discretion. Further, minor changes that may impact traffic, utilities and stormwater discharges, and water quality, that are proposed for the

Concept Plan that do not result in an increase in the overall density of development of the Land and which otherwise comply with the Applicable Rules and this Agreement may be approved by the City Administrator. Similarly, minor variations of a preliminary plat or final plat from the Concept Plan that are approved by the City Administrator that do not increase the overall density of development of the Land or increase the overall Impervious Cover limit of thirty-five percent (35%), and which otherwise comply with the Applicable Rules, and this Agreement will not require an amendment to the Concept Plan.

3.7 Term of Approvals: The Concept Plan and any preliminary plat or final plat approved pursuant to this Agreement will be effective for the longer of (i) the term of this Agreement unless otherwise agreed by the Parties or (ii) the term contained in the applicable subdivision ordinance.

3.8 Extension of Permits & Approvals: Any permit or approval under this Agreement shall be extended for any period during which performance by any Owner is extended or delayed but in no instance shall any permits or approvals be extended beyond the term of this Agreement.

3.9 Initial Brush Removal: Developer may mechanically remove brush with practices to include uprooting or stump grinding without materially disrupting soil surface prior to receiving approval of a plat(s) for that portion of the Land in order to determine the location of roads, lots, utilities and drainage areas with regard to preservation of environmental features. This Section 3.9 will not prevent Developer from removing brush in accordance with any federal programs, including the United States Department of Agriculture Natural Resources Conservation Service's Environmental Quality Incentives Program. Owner shall not use burning as a method of removal of brush for clearing purposes for residential development; provided, however, burning may be used for removal of brush in connection with agricultural and wildlife practices.

3.10 Building Code: Developer agrees that all habitable buildings shall be constructed in accordance with all building or construction codes that have been adopted by the City. Fees for all building permits or building inspections by the City or the City's designee under this section shall be paid by builders. Building permit and building inspection fees are not included among the fees specifically listed in this Agreement. Regardless of this development's location in the extraterritorial jurisdiction, building permits are required for all structures.

3.11 Fiscal Security for Public Improvements: All public improvements shall be completed or supported by fiscal security in accordance with approved construction plans prior to submittal of final plat. A final plat shall not be filed for recordation until all public improvements and/or fiscal security has been accepted by the City. Developer will not be required to post fiscal security for the cost of public improvements that have been completed and, for partially completed public improvements, shall only be required to post fiscal security for the remaining estimated construction costs to complete such

improvements. The amount of the fiscal security shall equal one hundred percent (100%) of the remaining estimated construction costs to complete the public improvements not completed at the time of plat recordation. The District's engineer shall provide the cost estimate of the public infrastructure not completed at the time of the plat recordation to the City.

3.12 Deed Restrictions: Developer agrees that all restrictive covenants for the Project shall reinforce the provisions of this section and be applied to all builders and subsequent buyers and shall be appropriately drafted and filed to effectuate this intent and Agreement.

3.13 Fire Protection: Developer, and upon creation, each District, to the extent allowed by law, may pursue required approvals for, and implement and finance a fire protection plan to provide fire protection services within the Project's boundaries, in accordance with Hays County Emergency Services District No. 6 requirements.

3.14 Infrastructure Construction & Inspections: Developer, and upon creation, each District will be responsible for construction, operation and maintenance of all water, wastewater and drainage infrastructure within its boundaries except as provided in this Agreement, the Water Service Agreement or Wastewater Agreement or as otherwise agreed to by District, Owners and the City. The City will have the right to review and approve all plans and specifications for water and wastewater infrastructure, and to inspect all such water and wastewater infrastructure during construction and prior to acceptance for operation and maintenance. A copy of each set of approved plans and specifications and a copy of all inspection certificates will be filed with the City. All water and wastewater infrastructure within the Land shall be designed and built-in accordance with the rules, regulations, and specifications of the City and the TCEQ. All water and wastewater infrastructure within the Land shall be subject to City inspections and compliance with City Rules and TCEQ rules. In case of a conflict, the stricter provision shall prevail, unless TCEQ approval requires a different result. Reasonable and necessary fees incurred by the City for review of plans and specifications and inspections under this section shall be paid by the Developer or District(s).

3.15 Roadway Access: All streets and driveways within the Land shall be subject to the approval of the Texas Department of Transportation ("TxDOT") and/or Hays County, as applicable. City will review all streets and driveways when reviewing any plat, construction plan, and site plan.

3.16 Roads. The City agrees that the vehicular connections depicted in **Exhibit G** are hereby approved and shall be added to the City's Transportation Master Plan as necessary, including the loop road, shown on **Exhibit G**, as may be amended, to be added to the City's TMP. A Traffic Study has been completed for phase 1 of the Project. Phase 1 includes 244 single family homes. The Parties agree that, prior to final approval of a preliminary plat for phase 2 of the Project, a Traffic Impact Analysis ("TIA") for the entire Project will be approved by the City, Hays County, and TxDOT.

3.17 Connectivity. Developer shall use commercially reasonable efforts to start and diligently pursue the construction of the Phase 1 Road, Phase 2 Road, and Phase 3 Road generally depicted on **Exhibit G-1** by the following dates, subject to the terms and conditions contained herein, including the City's conditions precedent:

Phase 1 Road Start Date: December 2021

Phase 2 Road Start Date: February 2024

Phase 3 Road Start Date: February 2025

3.17.1 City shall require construction of two lanes of the four-lane offsite road, to be constructed by others, extending from Highway 290 to the southern boundary of the Project (hereinafter the "Southern Offsite Road"), to commence no later than June 1, 2023. In the event construction of two lanes of the Southern Offsite Road is not commenced by June 1, 2023, the committed Phase 2 Road Start Date of February 2024, shall be extended by the same number of days that commencement of the Southern Offsite Road is delayed beyond June 1, 2023. Further, the Developer shall not be obligated to commence construction of the Phase 3 Road two-lane expansion unless and until all four lanes of the Southern Offsite Road are complete. Developer will implement a traffic control plan for the Phase 3 Road to minimize disruption of traffic. The traffic control plan will be filed with application for the preliminary plat. Developer may build the Phase 2 Road two-lane roadway extension with open ditch, with the storm sewer to be added at the time of construction of the Phase 3 Road two-lane expansion.

3.17.2 City agrees to fulfill all the following obligations as conditions precedent to Developer's obligation to construct Phase 2 roads and Phase 3 two-lane expansion. The City agrees to complete the following items by November 1, 2021. For every day that one or more of the City's obligations remain incomplete beyond November 1, 2021, the Start Dates shall be extended by the same number of days: 1) execute and approve submission of the 321 Application for the Land; 2) approve nonstandard wholesale service agreement with the WTCPUA for 1,750 LUEs; 3) approve and submit service extension request (SER) for the remaining LUEs to serve the Land; 4) approve a raw water contract with Lower Colorado River Authority and reservation to the District for the total number of LUEs in the combined SERs; and 5) provide a copy of the Resolution consenting to creation of the District.

3.17.3 City further agrees to approve a nonstandard wholesale service agreement with the WTCPUA for the remaining LUEs included in the SER within 60 days of approval by the WTCPUA. The start dates set forth in Section 3.17 shall be extended by the same number of days that the nonstandard wholesale service agreement with the WTCPUA is not approved following such 60-day period.

3.17.4 Developer shall not be in default if the performance of its obligations is delayed, disrupted, or becomes impossible because of an act of God, war, earthquake, fire, pandemic, strike, work stoppages, shortage of materials, price increases in materials due to defined force majeure event, accident, civil commotion, epidemic, environmental litigation, act or inaction of government, its agencies, or offices, or any other similar cause. Upon occurrence of any such force majeure event, Developer shall notify the City, in writing, in accordance with Section 6.18.

3.17.5 Notwithstanding the other terms and conditions in this Agreement, the remedy for Developer's failure to comply with the road construction obligations is withholding approval of new plats, until such obligation has commenced, and specific performance. Building permits cannot be denied or delayed on platted and approved or accepted sections. Construction of improvements and acceptance thereof cannot be delayed or denied.

3.17.6 Section 5.4 regarding Right to Continue Development and Section 5.6 regarding Cooperation apply to the parties' agreement regarding roads contained in this Section 3.17.

3.18 Sidewalks. Developer shall construct or cause to be constructed five (5) foot sidewalks on each side of local residential streets. Arterial roads, as depicted on Exhibit G-1, will include, inside the right-of-way, a shared use path (8' or 10' depending on width of connecting path) on one side of the road and a five (5) foot sidewalk on the other side of the road.

## ARTICLE 4. FINANCING DISTRICT

4.1 Consent to Creation of District: In accordance with Texas Local Government Code, Section 42.042, the City has consented to the creation of the Districts, including Hays County Municipal Utility District No. 7, covering all or portions of the land described in Exhibits A and A-1. The Developer may not add additional land to the District or Districts which is not already included in the Land without approval by the City, which shall not be unreasonably withheld. The City consents to forming additional Districts and annexing or de-annexing land between the Districts from the land already included in a District and included in this Agreement and no further approval of the City or City Council is required when a District is annexing or de-annexing land between Districts from land already included in a District and in this Agreement. The City agrees that any District may exclude land and may annex land owned by any Owner that is located within the boundaries of the Project and the City's ETJ and may be divided in accordance with the Act, in furtherance of Developer's development goals pursuant to this Agreement, and no further approvals of the City or City Council is required provided, however, City agrees to provide any additional documentation evidencing such consent as may be requested or required by Owner or the District.

4.2 Consent to Wastewater Treatment Facilities: The City understands that the District(s), or Developer, will prepare an application to the TCEQ, or its successor agency, for a Chapter

321 authorization to treat and dispose wastewater generated by the development that is subject to this Agreement. The City will submit the application to the TCEQ.

## ARTICLE 5. AUTHORITY

5.1 Term:

5.1.1 Initial Term. This term of this Agreement will continue for twenty (20) years from the date of the last signature on this Agreement ("Initial Term"), unless sooner terminated per the terms of this Agreement. An extension not to exceed (10) years may be requested in writing to City Council and granting of the extension by City Council shall not be unreasonably withheld, conditioned, delayed, or require amendment to other terms of this Agreement.

5.1.2 Expiration. After the expiration of the Initial Term and any extension, this Agreement, will be of no further force and effect, except that termination will not affect any right or obligation previously granted.

5.1.3 Termination or Amendment. This Agreement may be terminated or amended as to all of the Land at any time by mutual written consent of the City and Owners or may be terminated or amended only as to a portion of the Land by the mutual written consent of the City and Owners of only the portion of the Land affected by the amendment or termination.

5.2 Authority: This Agreement is entered under the statutory authority of Chapter 212, Subchapter G, Texas Local Government Code. The Parties intend that this Agreement guarantee the continuation of the extraterritorial status of portions of the Land as provided in this Agreement; authorize certain land uses and development on the Land; provide for the uniform review and approval of plats and development plans for the Land; provide exceptions to certain ordinances; and provide other terms and consideration, including the continuation of land uses and zoning upon annexation of any portion of the Land to the City.

5.3 Applicable Rules: As of the Effective Date, Developer has initiated the subdivision and development permit process for the Project. The City agrees that, in accordance with Chapter 245, Texas Local Government Code, the City will consider the approval of any further approvals necessary for the Project based solely on the Applicable Rules, as modified by the Project Approvals, variances and this Agreement. Further, the City agrees that, upon the Effective Date, Developer has vested authority from the date of the Original Agreement to develop the Land in accordance with the Applicable Rules, as modified by any exceptions contained in the Project Approvals, variances, and this Agreement. In accordance with Chapter 245, Local Government Code, Owner may choose to apply changes in law, rules, regulations or ordinances of the City that enhance or protect the Project.

5.4 Right to Continue Development: In consideration of Owner's agreements hereunder, the City agrees that, during the term of this Agreement, it will not impose or attempt to impose: (a) any moratorium on building or development within the Project, or (b) any land use or development regulation that limits the rate or timing of land use approvals, whether affecting preliminary plans, final plats, site plans, building permits, certificates of occupancy or other necessary approvals, within the Project. No City-imposed moratorium, growth restriction, or other limitation affecting the rate, timing or sequencing of development or construction of all or any part of the Project will apply to the Land if such moratorium, restriction or other limitation conflicts with this Agreement or would have the effect of increasing Owner's obligations or decreasing Owner's rights and benefits under this Agreement. This Agreement on the part of the City will not apply to temporary moratoriums uniformly imposed throughout the City and ETJ due to an emergency constituting an imminent threat to the public health or safety, provided that the temporary moratorium continues only during the duration of the emergency.

5.5 Equivalent Substitute Obligation: If either Party is unable to meet an obligation under this Agreement due to a court order invalidating all or a portion of this Agreement, preemptive state or federal law, an imminent and bona fide threat to public safety that prevents performance or requires different performance, subsequent conditions that would legally excuse performance under this Agreement, or, the Parties agree to cooperate to revise this Agreement to provide for an equivalent substitute right or obligation as similar in terms to the illegal, invalid, or unenforceable provision as is possible and is legal, valid and enforceable, or other additional or modified rights or obligations that will most nearly preserve each Party's overall contractual benefit under this Agreement.

5.6 Cooperation:

5.6.1 The City and Owners each agree to execute such further documents or instruments as may be necessary to evidence their agreements hereunder.

5.6.2 The City agrees to cooperate with Developer in connection with any waivers or approvals Developer may desire or require to obtain from the County in connection with the development of the Land and a deferral of the County's plat and plan approval powers to the City for all plats and public infrastructure within the Project, other than roadway infrastructure that will be dedicated to the County for operation and maintenance after construction. Roads that will be dedicated to the County for operation and maintenance shall be subject to County review, inspection, and approval prior to dedication to the County.

5.6.3 The City acknowledges that the Developer, District, or HOA may in the future seek State or federal grant matching funds to finance certain park, recreational and environmental facilities within the Project. The City agrees to cooperate with and support these efforts to obtain grant funding that do not interfere with or conflict with the City's efforts to secure similar funding, including entering into joint use agreements with the Developer and HOA, in furtherance of the City's goal of making additional park, environmental and recreational facilities available to the

area. Provided, however, that the City will have no financial obligation associated with this activity.

5.7 Litigation: In the event of any third-party lawsuit or other claim relating to the validity of this Agreement or any actions taken by the Parties hereunder, Owners and the City agree to cooperate in the defense of such suit or claim, and to use their respective best efforts to resolve the suit or claim without diminution of their respective rights and obligations under this Agreement, The City's participation in the defense of such a lawsuit is expressly conditioned on budgetary appropriations for such action by the City Council. **Developer agrees, to the extent allowed by Texas law, to defend and indemnify the City for any reasonable and necessary litigation expenses, including court costs and outside attorney's fees, related to defense of this Agreement from third-party claims if the third-party claims arise from Developer's negligent acts or omissions or breach of this Agreement.** The filing of any third-party lawsuit relating to this Agreement, or the development of the Project will not delay, stop, or otherwise affect the development of the Project or the City's processing or issuance of any approvals for the Project, unless otherwise required by a court of competent jurisdiction.

## ARTICLE 6. GENERAL PROVISIONS

6.1 Assignment & Binding Effect:

6.1.1 This Agreement, and the rights and obligations of Owners hereunder, may be assigned by one or more Owners to a subsequent purchaser of all or a portion of the undeveloped property within the Project provided that the assignee assumes all of the obligations hereunder. Any assignment must be in writing, specifically describe the property in question, set forth the assigned rights and obligations and be executed by the proposed assignee, A copy of the assignment document must be delivered to the City and recorded in the real property records as may be required by applicable law. Upon any such assignment, the assignor will be released of any further obligations under this Agreement as to the property sold and obligations assigned.

6.1.2 If an Owner assigns its rights and obligations hereunder as to a portion of the Project, then the rights and obligations of any assignee and Owner will be non-severable, and Owner will be liable for the nonperformance of the assignee and vice-versa. In the case of nonperformance by one developer, the City may pursue all remedies against that nonperforming developer, even if such remedies will impede development activities of any performing developer as a result of that nonperformance.

6.1.3 The provisions of this Agreement will be binding upon, and inure to the benefit of the Parties, and their respective successors and assigns. This Agreement will not, however, be binding upon, or create any encumbrance to title as to, any ultimate consumer who purchases a fully developed and improved lot within the Project.

6.2 Severability: If any provision of this Agreement is illegal, invalid, or unenforceable, under present or future laws, it is the intention of the Parties that the remainder of this Agreement not be affected, and, in lieu of each illegal, invalid, or unenforceable provision, that a provision be added to this Agreement which is legal, valid, and enforceable and is as similar in terms to the illegal, invalid or enforceable provision as is possible.

6.3 Governing Law, Jurisdiction & Venue: This Agreement shall be governed by and construed in accordance with the laws of the State of Texas, as it applies to contracts performed within the State of Texas and without regard to any choice of law rules or principles to the contrary, The parties acknowledge that this Agreement is performable in Hays County, Texas and hereby submit to the jurisdiction of the courts of that County, and hereby agree that any such Court shall be a proper forum for the determination of any dispute arising hereunder.

6.4 No Third-Party Beneficiary: This Agreement is not intended, nor will it be construed, to create any third-party beneficiary rights in any person or entity who is not a Party, unless expressly otherwise provided.

6.5 Mortgagee Protection: This Agreement will not affect the right of Owners to encumber all or any portion of the Land by mortgage, deed of trust or other instrument to secure financing for the Project. The City understands that a lender providing financing for the Project ("Lender") may require interpretations of or modifications to this Agreement and agrees to cooperate with Owners and their Lenders' representatives in connection with any requests for interpretations or modifications. The City agrees not to unreasonably withhold or delay its approval of any requested interpretation or modification if the interpretation or modification is consistent with the intent and purposes of this Agreement. The City agrees as follows:

6.5.1 Neither entering into this Agreement, nor any breach of this Agreement, will affect any lien upon all or any portion of the Land.

6.5.2 The City will, upon written request of a Lender, provide the Lender with a copy of any written notice of default given to Owners under this Agreement within ten (10) days of the date such notice is given to Owners.

6.5.3 In the event of default by an Owner under this Agreement, a Lender may, but will not be obligated to, cure any default during any cure period extended to Owner, either under this Agreement or under the notice of default.

6.5.4 Any Lender who comes into possession of any portion of the Land by foreclosure or deed in lieu of foreclosure will take such property subject to the terms of this Agreement. No Lender will be liable for any defaults or monetary obligations of an Owner arising prior to the Lender's acquisition of title, but a Lender will not be entitled to obtain any permits or approvals with respect to that property until all

delinquent fees and other obligations of Owners under this Agreement that relate to the property in question have been paid or performed.

6.6 Certificate of Compliance: Within thirty (30) days of written request by a Party given accordance with Section 6.18, the other Party or Parties will execute and deliver to the requesting Party a statement certifying that: (a) this Agreement is unmodified and in full force and effect or, if there have been modifications, that this Agreement is in full force and effect as modified and stating the date and nature of each modification; (b) there are no current uncured defaults under this Agreement, or specifying the date and nature of each default; and (c) any other information that may be reasonably requested. A Party's failure to deliver a requested certification within this 30-day period will conclusively be deemed to constitute a confirmation that this Agreement is in full force without modification, and that there are no uncured defaults on the part of the requesting Party. The City Administrator or Planning Director is authorized to execute any requested certificate on behalf of the City.

6.7 Default: If a Party defaults in its obligations under this Agreement, the other Party must, prior to exercising a remedy available to that Party due to the default, give written notice to the defaulting Party, specifying the nature of the alleged default and the manner in which it can be satisfactorily cured, and extend to the defaulting Party at least thirty (30) days from receipt of the notice to cure the default. If the nature of the default is such that it cannot reasonably be cured within the thirty (30) day period, the commencement of the cure within the thirty (30) day period and the diligent prosecution of the cure to completion will be deemed a cure within the cure period. The City may issue Stop Work Orders for violations arising under this Agreement or the regulations applied herein.

6.8 Remedies for Default: If a Party defaults under this Agreement and fails to cure the default within the applicable cure period, the non-defaulting Party will have all rights and remedies available under this Agreement or applicable law, including the right to institute legal action to cure any default, to enjoin any threatened or attempted violation of this Agreement or to enforce the defaulting Party's obligations under this Agreement by specific performance or writ of mandamus, or to terminate this Agreement. In the event of a default by the City, Owners will be entitled to seek a writ of mandamus, in addition to seeking any other available remedies. All remedies available to a Party will be cumulative and the pursuit of one remedy will not constitute an election of remedies or a waiver of the right to pursue any other available remedy.

6.9 Reservation of Rights: To the extent not inconsistent with this Agreement, each Party reserves all rights, privileges, and immunities under applicable laws.

6.10 Attorneys Fees: The prevailing Party in any dispute under this Agreement will be entitled to recover from the non-prevailing Party its reasonable attorney's fees, expenses and court costs in connection with any original action, any appeals, and any post-judgment proceedings to collect or enforce a judgment.

6.11 Waiver: Any failure by a Party to insist upon strict performance by the other Party of any provision of this Agreement will not, regardless of the length of time during which that failure continues, be deemed a waiver of that Party's right to insist upon strict compliance with all terms of this Agreement. In order to be effective as to a Party, any waiver of default under this Agreement must be in writing, and a written waiver will only be effective as to the specific default and as to the specific period of time set forth in the written waiver. A written waiver will not constitute a waiver of any subsequent default, or of the right to require performance of the same or any other provision of this Agreement in the future.

6.12 Entire Agreement: This Agreement contains the entire agreement of the Parties. This Agreement may be amended only by written agreement signed by the Parties. An amendment to this Agreement may only be approved by an affirmative vote of at least three of the five (3 of 5) members of the City Council.

6.13 Exhibits, Headings, Construction & Counterparts: All exhibits attached to this Agreement are incorporated into and made a part of this Agreement for all purposes. If a conflict exists between the terms in this Agreement and an Exhibit or Exhibits to this Agreement, the Parties will endeavor to resolve the conflict in accordance with the intent of the Parties. If an unresolvable conflict exists, the terms of this Agreement shall control over the Exhibit. The paragraph headings contained in this Agreement are for convenience only and do not enlarge or limit the scope or meaning of the paragraphs. Wherever appropriate, words of the masculine gender may include the feminine or neuter, and the singular may include the plural, and vice-versa. Each of the Parties has been actively and equally involved in the negotiation of this Agreement. Accordingly, the rule of construction that any ambiguities are to be resolved against the drafting Party will not be employed in interpreting this Agreement or its exhibits. This Agreement may be executed in any number of counterparts, each of which will be deemed to be an original, and all of which will together constitute the same instrument. This Agreement will become effective only when one or more counterparts, individually or taken together, bear the signatures of all the Parties.

6.14 Time: Time is of the essence of this Agreement. In computing the number of days for purposes of this Agreement, all days will be counted, including Saturdays, Sundays and legal holidays; however, if the final day of any time period falls on a Saturday, Sunday or legal holiday, then the final day will be deemed to be the next day that is not a Saturday, Sunday or legal holiday.

6.15 Authority for Execution: The City certifies, represents, and warrants that the execution of this Agreement has been duly authorized, and that this Agreement has been approved in conformity with City ordinances and other applicable legal requirements. Each Owner certifies, represents, and warrants that the execution of this Agreement is duly authorized in conformity with its authority.

6.16 Property Rights: Owners expressly and unconditionally waive and release the City from any obligation to perform a takings impact assessment under the Texas Private Real Property Rights Act, Texas Government Code Chapter 2007, as it may apply to this Agreement, the Land, and the Project so long as this Agreement is in effect.

6.17 Mandatory Disclosures: Texas law requires that contractors make certain disclosures. Prior to the effective date of this Agreement, the Owner has submitted to the City a copy of the Conflict of Interest Questionnaire form (CIQ Form) approved by the Texas Ethics Commission (Texas Local Government Code Chapter 176). Execution of this Agreement is agreeing that the Owner is compliant with the Prohibit on Contracts with Companies Boycotting Israel (Texas Government Code Chapter 2270). The Contractor must also fill out Form 1295, as required by the Texas Ethics Commission, and submit it to the City. The form may be found here: https://www.ethics.state.tx.us/whatsnew/elf info form 1295.htm

6.18 Notices: Any notices or approvals under this Agreement must be in writing and may be sent by hand delivery, facsimile (with confirmation of delivery) or certified mail, return receipt requested, to the Parties at the following addresses or as such addresses may be changed from time to time by written notice to the other Parties:

CITY:

Original: **City Administrator City of Dripping Springs**
P. O. Box 384
Dripping Springs, TX 78620

**City Attorney**
**City of Dripping Springs**
P.O. Box 384
Dripping Springs, TX 78620

OWNER:

Original: **Anarene Investments Ltd.**
**c/o** 1600 West Loop South, Suite 2600
Houston, TX 77027

DEVELOPER/
OWNER:

Original: **Double L Development, LLC**
1600 West Loop South, Suite 2600
Houston, TX 77027

Copy: **Allen Boone Humphries Robinson LLP**
Attn: Ryan Harper
1108 Lavaca Street, Suite 510
Austin, Texas 78701

OWNER:

Original: **LL Ranch Investment, LP**
1600 West Loop South, Suite 2600
Houston TX 77027

OWNER:

Original **Graham Hill**
c/o 1600 West Loop South, Suite 2600
Houston, TX 77027

OWNER:

Original: **Melinda Hill Perrin**
c/o 1600 West Loop South, Suite 2600
Houston, TX 77027

Either City or Owners may change their mailing address at any time by giving written notice of such change to all other Parties in the manner provided herein at least ten days prior to the date such change is affected. All notices under this Agreement will be deemed given on the earlier of the date personal delivery is affected or on the delivery date or attempted delivery date shown on the return receipt or facsimile confirmation.

6.19 Exhibits: The following exhibits are attached to this Agreement, and made a part hereof for all purposes:

| | | |
|---|---|---|
| Exhibit A | - | Description of the Land |
| Exhibit A-1 | - | Description |
| Exhibit B | - | Master Plan for Parkland |
| Exhibit C | - | Hill Tops Preservation |
| Exhibit D | - | Concept Plan |
| Exhibit E | - | City of Dripping Springs Code Variances |
| Exhibit F | - | Approved Plant List |
| Exhibit G | | Roadway Connectivity Plan |
| Exhibit G-1 | | Roadway Phasing Plan |
| Exhibit H | | Single Family Lot Impervious Cover Assumptions |
| Exhibit I | | Maximum Impervious Cover Per Residential Lot |
| Exhibit J | | Vested Ordinances |
| Exhibit K | | Lot Sizes |

| | |
|---|---|
| Exhibit L | Tree Plan |
| Exhibit M | Buffers |
| Exhibit N | Lot Allowances |

**CITY OF DRIPPING SPRINGS**

By: _____
Bill Foulds, Jr., Mayor

This instrument was acknowledged on this 26 day of October, 2021 by Bill Foulds, Jr., Mayor of the City of Dripping Springs, Texas, a Texas general law municipality, on behalf of said municipality.

NOTARY PUBLIC STATE OF TEXAS
ANDREA CUNNINGHAM
My Notary ID # 131603237
Expires June 13, 2022

_____
Notary Public, State of Texas

RESPECTFULLY SUBMITTED this 28th day of October, 2021.

**DOUBLE L DEVELOPMENT, LLC, a Texas limited liability company**

By: _____

David A. Cannon, Manager

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

The foregoing instrument was ACKNOWLEDGED before me this 28th day of October, 2021, by David A. Cannon, in his capacity as Manager of Double L Development, LLC, a Texas limited liability company, on behalf of said limited liability company.

[SEAL]

FRANCES K. ARD
Notary ID #4169161
My Commission Expires
April 14, 2022

Notary Public, State of Texas _____

My Commission Expires: April 14, 2022

Frances K. Ard Printed Name of Notary Public

RESPECTFULLY SUBMITTED this 28th day of October, 2021.

**LL RANCH INVESTMENTS, LP,** a Texas limited partnership

By: Double L Ranch Management, LLC, a Texas limited liability company, its sole general partner

By: _____
David A. Cannon, Manager

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

The foregoing instrument was ACKNOWLEDGED before me this 28th day of October, 2021, by David A. Cannon, in his capacity as Manager of Double L Ranch Management, LLC, a Texas limited liability company, the sole general partner of LL Ranch Investments, LP, a Texas limited partnership, on behalf of said limited partnership.

[SEAL]
NOTARY PUBLIC STATE OF TEXAS
FRANCES K. ARD
Notary ID #4169161
My Commission Expires
April 14, 2022

Notary Public, State of Texas

My Commission Expires: April 14, 2022

Frances K. Ard Printed Name of Notary Public

RESPECTFULLY SUBMITTED this 29th day of October, 2021.

**ANARENE INVESTMENTS, LTD.**, a Texas limited partnership

By: Anarene Management, LLC, a Texas limited liability company, its general partner

By: _____
John Graham Hill, Manager

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

The foregoing instrument was ACKNOWLEDGED before me this 29th day of October, 2021, by John Graham Hill, in his capacity as Manager of Anarene Investment, LLC, a Texas limited liability company, general partner of Anarene Investment, Ltd., a Texas limited partnership, on behalf of said limited partnership.

[SEAL]

FRANCES K. ARD
Notary ID #4169161
My Commission Expires
April 14, 2022

Notary Public, State of Texas _____

My Commission Expires: **April 14, 2022**

**Frances K. Ard** Printed Name of Notary Public

**LANDOWNER**

JOHN GRAHAM HILL

By: _____

Date: October 29, 2021

This instrument was acknowledged on this 29th day of October, 2021, by JOHN GRAHAM HILL.

_____
Notary Public, State of Texas

FRANCES K. ARD
Notary ID #4169161
My Commission Expires
April 14, 2022

**LANDOWNER**

MELINDA HILL PERRIN

By: _____

Date: October 29, 2021

This instrument was acknowledged on this 29th day of October, 2021, by MELINDA HILL PERRIN.

_____
Notary Public, State of Texas

FRANCES K. ARD
Notary ID #4169161
My Commission Expires
April 14, 2022

EXHIBIT A

DOUBLE L DEVELOPMENT, LLC
33.099 ACRES
JOB NO. 5955-00

DESCRIPTION OF A 33.099 ACRE TRACT OF LAND
HAYS COUNTY, TEXAS

ALL THAT CERTAIN PARCEL OR TRACT OF LAND OUT OF THE ANTHONY G. DAVY SURVEY NO. 38, ABSTRACT NO. 148, SITUATED IN HAYS COUNTY, TEXAS; BEING ALL OF THAT CALLED 11.02 ACRE TRACT (TRACT 2), THAT CALLED 11.0 ACRE TRACT (TRACT 3) AND THAT CALLED 11.05 ACRE TRACT (TRACT 4) AS CONVEYED ANARENE INVESTMENTS, LTD., BY GENERAL WARRANY DEED RECORDED IN VOLUME 2639, PAGE 420 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS; AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS AND AS SHOWN ON THE ATTACHED SKETCH:

**COMMENCING for POINT OF REFERENCE** at a concrete monument found on the west right-of-way line of Ranch Road 12, (100' wide right-of-way), on the west line of a called 3.79-acre tract as conveyed to Douglas and Marnnie Boone, by general warranty deed recorded in Document No. 90031210 of the Official Public Records of Hays County, Texas, from which a 1/2-inch iron rod with cap stamp "BGE INC" set at the most easterly southeast corner of a called 139.16-acre tract (Tract 1) as conveyed Anarene Investments, Ltd., by the above described general warranty deed bears, N 30°25'01" E a distance of 5.84 feet; Thence with the west right-of-way line of said Ranch Road 12, S 30°12'30" W a distance of 1,614.33 feet to a 1/2-inch iron rod with cap stamped "BGE INC" set at the southeast corner of a called 11.00-acre tract as conveyed to Joyce Sorenson by deed recorded in Volume 1438, Page 604 of the Official Public Records of Hays County, Texas, being the northeast corner of the above described Anarene Investments 11.02-acre tract (Tract 2), for the northeast corner and **POINT OF BEGINNING** of the herein described tract;

THENCE, with west right-of-way line of said Ranch Road 12, S 30°12'30" W a distance of 652.24 feet to a concrete monument found on the east line of the above described Anarene Investments 11.0-acre tract (Tract 3), at a point of curvature of a curve to the right;

THENCE, continuing with west right-of-way line of said Ranch Road 12, along said curve to the right an arc distance of 537.81 feet, having a radius of 1,378.00 feet, a central angle of 22°21'42" and a chord which bears S 41°21'35" W a distance of 534.41 feet to a concrete monument found on the east line of the above described Anarene Investments 11.05-acre tract (Tract 4);

THENCE, continuing with west right-of-way line of said Ranch Road, S 52°28'45" W a distance of 415.74 feet to a 1/2-inch iron rod with cap stamped "BGE INC" set on the east line of said Anarene Investments 11.05-acre tract (Tract 4), at a point of curvature of a curve to the left, from which a concrete monument found bears, S 37°36'13" E a distance of 0.96 feet, also from which a concrete monument found on the east right-of-way line of said Ranch Road 12 bears, S 37°36'13" E a distance of 100.00 feet;

THENCE, continuing with west right-of-way line of said Ranch Road 12, along said curve to the left an arc distance of 259.34 feet, having a radius of 1,961.00 feet, a central angle of 07°34'38" and a chord which bears S 48°40'48" W a distance of 259.15 feet to a 1/2-inch iron rod with cap stamped "BGE INC" set at the south corner of said Anarene Investments 11.05-acre tract (Tract 4), for the south corner of the herein described tract, from which a concrete monument found on the west right-of-way line of said Ranch Road 12 bears, along a curve to the left an arc distance of 537.69 feet, having a radius of 1,961.00 feet, a central angle of 15°42'36" and a chord which bears S 37°02'11" W a distance of 536.01 feet;

THENCE, leaving the west right-of-way line of said Ranch Road 12, with the westerly line of said Anarene Investments 11.05-acre tract (Tract 4), N 05°51'23" W pass a 1/2-inch iron rod found at a distance of 17.05 feet and continuing on for a total distance of 344.31 feet to a 1/2-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found, at an outside corner of said Anarene Investments 11.05-acre tract (Tract 4), for an outside corner of the herein described tract;

THENCE, continuing with the westerly line of said Anarene Investments 11.05-acre tract (Tract 4), N 40°40'07" E a distance of 111.95 feet to a to a 1/2-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found, at an outside corner of said Anarene Investments 11.05-acre tract (Tract 4), for an outside corner of the herein described tract;

THENCE, continuing with the westerly line of said Anarene Investments 11.05-acre tract (Tract 4), S 76°19'22" E a distance of 116.44 feet to a 1/2-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found, on the east line of a called 88-acre tract as conveyed to Donald and Donnie Wayne Bonham by trustee's distribution deed recorded in Document No. 80025837 of the Official Public Records of Hays County, Texas, at an inside corner of said Anarene Investments 11.05-acre tract (Tract 4), for an inside corner of the herein described tract;

THENCE, continuing with the westerly line of said Anarene Investments 11.05-acre tract (Tract 4) and the east line of said Bonham 88-acre tract, N 10°45'34" W a distance of 852.52 feet to a 1/2-inch iron rod found at the common west corner of said Anarene Investments 11.05-acre tract (Tract 4) and 11.0-acre tract (Tract 3);

THENCE, continuing with the westerly line of said Anarene Investments 11.0-acre tract (Tract 3) and the east line of said Bonham 88-acre tract, generally along a fence, N 10°44'40" W a distance of 550.56 feet to a 1/2-inch iron rod found at the common west corner of said Anarene Investments 11.0-acre tract (Tract 3) and 11.02-acre tract (Tract 2);

THENCE, continuing with the westerly line of said Anarene Investments 11.02-acre tract (Tract 2) and the east line of said Bonham 88-acre tract, generally along a fence, N 10°40'50" W a distance of 431.04 feet to a 1/2-inch iron rod found at the most westerly southwest corner of a called 11.00-acre tract as conveyed to Bill Ben Biggs by deed recorded in Document No. 16023996 of the Official Public Records of Hays County, Texas, being the northwest corner of said Anarene Investments 11.02-acre tract (Tract 2), for the northwest corner of the herein described tract;

THENCE, with the north line of said Anarene Investments 11.02-acre tract (Tract 2), S 59°47'50" E a distance of 1,615.72 feet to the **POINT OF BEGINNING** and containing 33.099 acres of land, more or less.

I hereby certify that these notes were prepared by BGE from a survey made on the ground on September 10, 2018 under my supervision and are true and correct to the best of my knowledge. Bearing orientation is based on the Texas State Plane Coordinate System, South Central Zone, NAD 83.

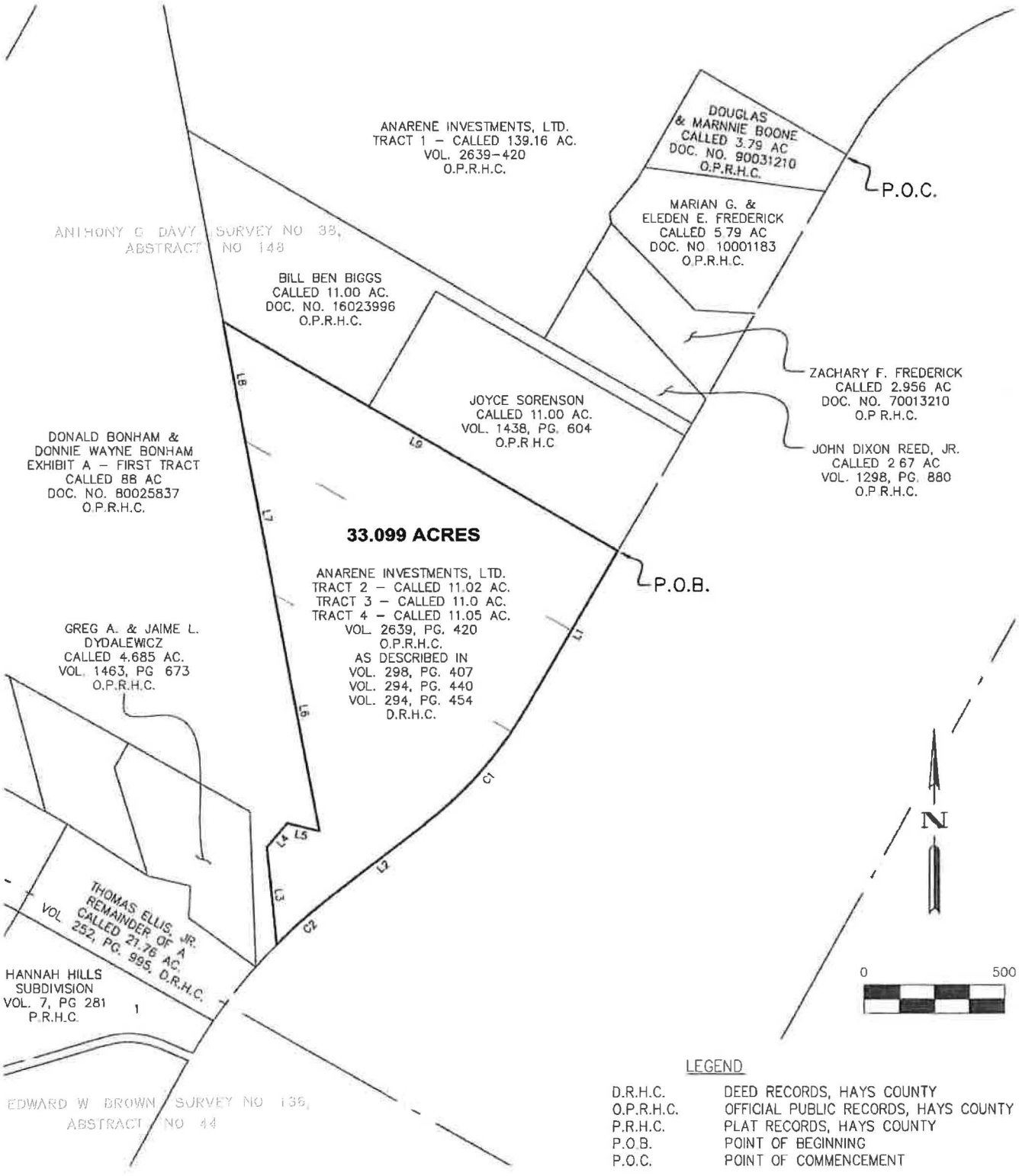



Jonathan O. Nobles RPLS No. 5777
BGE, Inc.
7000 North Mopac, Suite 330
Austin, Texas 78731
Telephone: (512) 879-0400
TBPLS Licensed Surveying Firm No. 10106502

12/12/2018
Date

Date: December 12, 2018
Project No.: 5955-00

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION




LEGEND

| | |
|---|---|
| D.R.H.C. | DEED RECORDS, HAYS COUNTY |
| O.P.R.H.C. | OFFICIAL PUBLIC RECORDS, HAYS COUNTY |
| P.R.H.C. | PLAT RECORDS, HAYS COUNTY |
| P.O.B. | POINT OF BEGINNING |
| P.O.C. | POINT OF COMMENCEMENT |

BEARING BASIS NOTE:

HORIZONTAL DATUM BASED UPON TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, TEXAS SOUTH CENTRAL ZONE. COORDINATES AND DISTANCES SHOWN ARE SURFACE VALUES. COMBINED SCALE FACTOR IS 0.9999320997.

**BGE, Inc.**
7000 North Mopac, Suite 330, Austin, TX 78731
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying Firm No. 10106502

Copyright 2018

SCALE: 1"=500'

SHEET 4 OF 5

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L1 | S 30°12'30" W | 652.24' |
| L2 | S 52°28'45" W | 415.74' |
| L3 | N 05°51'23" W | 344.31' |
| L4 | N 40°40'07" E | 111.95' |
| L5 | S 76°19'22" E | 116.44' |
| L6 | N 10°45'34" W | 852.52' |
| L7 | N 10°44'40" W | 550.56' |
| L8 | N 10°40'50" W | 431.04' |
| L9 | S 59°47'50" E | 1,615.72' |

| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| NUMBER | ARC LENGTH | RADIUS | DELTA | CHORD BEARING | CHORD DISTANCE |
| C1 | 537.81' | 1,378.00' | 22°21'42" | S 41°21'35" W | 534.41' |
| C2 | 259.34' | 1,961.00' | 7°34'38" | S 48°40'48" W | 259.15' |

**BGE, Inc.**
7000 North Mopac, Suite 330, Austin, TX 78731
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying Firm No. 10106502

Copyright 2018

SCALE: 1"=500'

SHEET 5 OF 5

DESCRIPTION OF A 139.641 ACRE TRACT OF LAND
HAYS COUNTY, TEXAS

ALL THAT CERTAIN PARCEL OR TRACT OF LAND OUT OF THE ANTHONY G. DAVY SURVEY NO. 38, ABSTRACT NO. 148, SITUATED IN HAYS COUNTY, TEXAS; BEING ALL OF THAT CALLED 139.16 ACRE TRACT (TRACT 1) AS CONVEYED ANARENE INVESTMENTS, LTD., BY GENERAL WARRANY DEED RECORDED IN VOLUME 2639, PAGE 420 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS; AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS AND AS SHOWN ON THE ATTACHED SKETCH:

**COMMENCING for POINT OF REFERENCE** at a concrete monument found on the west right-of-way line of Ranch Road 12, (right-of-way varies), on the west line of a called 3.79-acre tract as conveyed to Douglas and Marnnie Boone, by general warranty deed recorded in Document No. 90031210 of the Official Public Records of Hays County, Texas, from which a concrete monument found on the west right-of-way line of said Ranch Road 12 bears, S 30°12'30" W a distance of 2,266.57 feet; Thence with the west right-of-way line of said Ranch Road 12, N 30°25'01" E a distance of 5.84 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set at the most easterly southeast corner of the above described Anarene Investments 139.16-acre tract, for the most easterly southeast corner and **POINT OF BEGINNING** of the herein described tract, from which a 1/2-inch iron rod found bears, S 59°48'49" E a distance of 0.36 feet;

THENCE, leaving the west right-of-way line of Ranch Road 12, generally along a fence, with a south line of said Anarene Investments 139.16-acre tract, N 59°48'49" W a distance of 600.22 feet to a 1/2-inch iron rod found at the northwest corner of said Boone 3.79-acre tract, being an inside corner of said Anarene Investments 139.16-acre tract, for an inside corner of the herein described tract;

THENCE, with an easterly line of said Anarene Investments 139.16-acre tract, generally along a fence, the following four (4) courses:

1) S 30°11'19" W a distance of 445.90 feet to a 1/2-inch iron rod found on the west line of a called 5.79-acre tract as conveyed to Marian G. and Elden E. Frederick by warranty deed with vendor's lien recorded in Document No. 10001183 of the Official Public Records of Hays County, Texas;

2) S 38°52'56" W a distance of 156.72 feet to a 1/2-inch iron rod found on the west line of said Marian G. and Elden E. Frederick 5.79-acre tract;

3) S 09°02'34" E a distance of 37.18 feet to a 1/2-inch iron rod found at the common west corner of said Marian G. and Elden E. Frederick 5.79-acre tract and a called 2.956-acre tract as conveyed to Zachary F. Frederick by warranty deed with vendor's lien recorded in Document No. 70013210 of the Official Public Records of Hays County, Texas; and

4) S 30°13'06" W a distance of 469.75 feet to a 1/2-inch iron rod found on the north line of a 11.00-acre tract as conveyed to Bill Ben Biggs by deed recorded in Document No. 16023996 of the Official Public Records of Hays County, Texas, at the southwest corner of a called 2.67-acre tract as conveyed to John Dixon Reed, Jr. by general warranty deed recorded in Volume 1298, Page 880 of the Official Public records of Hays County, Texas, being the most southerly corner of said Anarene Investments 139.16-acre tract, for the most southerly corner of the herein described tract;

THENCE, with a southerly line of said Anarene Investments 139.16-acre tract, generally along a fence, N 59°46'29" W a distance of 1,465.41 feet to a 1/2-inch iron rod found on the east line of a called 88-acre tract as conveyed to Donald and Donnie Wayne Bonham by trustee's distribution deed recorded in Document No. 80025837 of the Official Public Records of Hays County, Texas, at the northwest corner of said Biggs 11.00-acre tract, being the most westerly southwest corner of said Anarene Investments 139.16-acre tract, for the most westerly southwest corner of the herein described tract;

THENCE with the west line of said Anarene Investments 139.16-acre tract, generally along a fence, the following five (5) courses:

1) N 10°38'24" W a distance of 909.58 feet to a cedar fence post found;

2) N 10°11'12" W a distance of 164.18 feet to a cedar fence post found on the east line of a called 204-acre tract as conveyed to said Donald and Donnie Wayne Bonham by said trustee's distribution deed, being the most westerly corner of said Anarene Investments 139.16-acre tract, for the most westerly corner of the herein described tract;

3) N 28°41'46" E a distance of 542.00 feet to a cedar fence post found;

4) N 28°47'55" E, pass a 5/8-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found 0.60 feet right of line at a distance of 482.92 feet and continuing on for a total distance of 866.82 feet to a cedar fence post; and

5) N 28°54'55" E a distance of 529.61 feet to a calculated point at the approximate centerline of Barton Creek, on the southerly line of a called 104.491-acre tract as conveyed to Relentless Ranch, L.L.C. by correction general warranty deed recorded in Document No. 90012886 of the Official Public Records of Hays County, Texas, at the west end of a Boundary Agreement by and between Wiley Allen Haydon, John Hill and Peery-Flume Properties, Inc. recorded in Volume 402, Page 683 of the Deed Records of Hays County, Texas, being the northwest corner of said Anarene Investments 139.16-acre tract, for the northwest corner of the herein described tract;

THENCE, with the approximate centerline of said Barton Creek, being the northerly line of said Anarene Investments 139.16-acre tract, and the southerly lines of said Relentless Ranch, L.L.C. 104.491-acre tract and Barton Creek Ranch a subdivision as recorded in Volume 4, Page 183 of the Plat Records of Hays County, Texas, the following twenty-one (21) courses:

1) S 70°59'20" E a distance of 120.37 feet to a calculated angle point;

2) S 51°55'32" E a distance of 77.06 feet to a calculated angle point;

3) S 16°38'10" E a distance of 62.50 feet to a calculated angle point;

4) S 10°00'16" W a distance of 118.67 feet to a calculated angle point;

5) S 23°24'00" E a distance of 312.21 feet to a calculated angle point;

6) S 43°16'44" E a distance of 345.40 feet to a calculated angle point;

7) S 53°17'30" E a distance of 549.07 feet to a calculated angle point;

8) S 86°09'12" E a distance of 89.15 feet to a calculated angle point;

9) S 57°50'27" E a distance of 53.27 feet to a calculated angle point;

10) S 43°29'01" E a distance of 430.90 feet to a calculated angle point;

11) S 60°01'11" E a distance of 131.02 feet to a calculated angle point;

12) S 83°13'21" E a distance of 277.83 feet to a calculated angle point;

13) N 63°18'21" E a distance of 102.47 feet to a calculated angle point;

14) N 83°26'31" E a distance of 61.03 feet to a calculated angle point;

15) S 66°44'36" E a distance of 328.20 feet to a calculated angle point;

16) S 47°24'46" E a distance of 96.56 feet to a calculated angle point;

17) S 65°43'06" E a distance of 358.78 feet to a calculated angle point;

18) S 83°49'47" E a distance of 86.81 feet to a calculated angle point;

19) N 40°32'43" E a distance of 96.08 feet to a calculated angle point;

20) S 81°17'05" E a distance of 60.72 feet to a calculated angle point; and

21) S 57°50'06" E a distance of 333.80 feet to a calculated point on the curving west right-of-way line of said Ranch Road 12, at the northeast corner of said Anarene Investments 139.16-acre tract, for the northeast corner of the herein described tract;

THENCE, leaving the approximate centerline of said Barton Creek, with the west right-of-way line of said Ranch Road 12 and the east line of said Anarene Investments 139.16-acre tract the following five (5) courses:

1) Along a curve to the right, an arc distance of 535.20 feet, having a radius of 1,829.86 feet, a central angle of 16°45'28" and a chord which bears S 68°02'14" W a distance of 533.29 feet to a concrete monument found;

2) S 74°30'50" W a distance of 305.45 feet to a concrete monument found;

3) S 68°30'56" W a distance of 233.16 feet to a concrete monument found at a point of curvature of a curve to the left;

4) Along said curve to the left an arc distance of 584.98 feet, having a radius of 1,205.47 feet, a central angle of 27°48'14" and a chord which bears S 51°28'02" W a distance of 579.26 feet to a concrete monument found;

5) S 30°25'01" W a distance of 149.26 feet to the **POINT OF BEGINNING** and containing 139.641 acres of land, more or less.

I hereby certify that these notes were prepared by BGE from a survey made on the ground on September 10, 2018 under my supervision and are true and correct to the best of my knowledge. Bearing orientation is based on the Texas State Plane Coordinate System, South Central Zone, NAD 83.

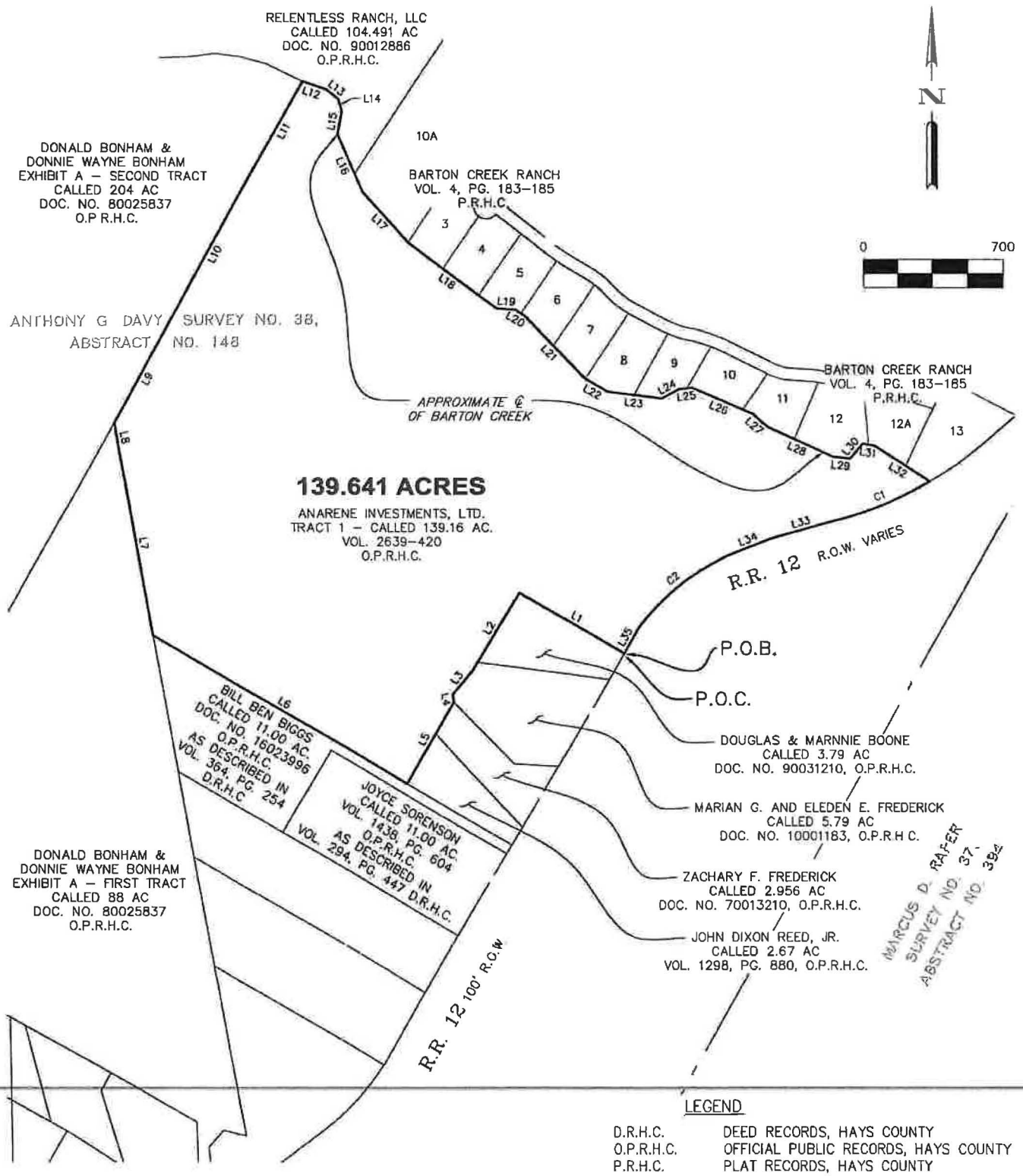



12/12/2018

Jonathan O. Nobles RPLS No. 5777 — Date
BGE, Inc.
7000 North Mopac, Suite 330
Austin, Texas 78731
Telephone: (512) 879-0400
TBPLS Licensed Surveying Firm No. 10106502

Date: December 12, 2018
Project No.: 5955-00

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION




LEGEND

| | |
|---|---|
| D.R.H.C. | DEED RECORDS, HAYS COUNTY |
| O.P.R.H.C. | OFFICIAL PUBLIC RECORDS, HAYS COUNTY |
| P.R.H.C. | PLAT RECORDS, HAYS COUNTY |
| P.O.B. | POINT OF BEGINNING |
| P.O.C. | POINT OF COMMENCEMENT |

BEARING BASIS NOTE:

HORIZONTAL DATUM BASED UPON TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, TEXAS SOUTH CENTRAL ZONE. COORDINATES AND DISTANCES SHOWN ARE SURFACE VALUES. COMBINED SCALE FACTOR IS 0.9999320997.

**BGE, Inc.**
7000 North Mopac, Suite 330, Austin, TX 78731
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying Firm No. 10106502

Copyright 2018

SCALE: 1"=700'

SHEET 5 OF 6

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L1 | N 59°48'49" W | 600.22' |
| L2 | S 30°11'19" W | 445.90' |
| L3 | S 38°52'56" W | 156.72' |
| L4 | S 09°02'34" E | 37.18' |
| L5 | S 30°13'06" W | 469.75' |
| L6 | N 59°46'29" W | 1,465.41' |
| L7 | N 10°38'24" W | 909.58' |
| L8 | N 10°11'12" W | 164.18' |
| L9 | N 28°41'46" E | 542.00' |
| L10 | N 28°47'55" E | 866.82' |
| L11 | N 28°54'55" E | 529.61' |
| L12 | S 70°59'20" E | 120.37' |
| L13 | S 51°55'32" E | 77.06' |
| L14 | S 16°38'10" E | 62.50' |
| L15 | S 10°00'16" W | 118.67' |
| L16 | S 23°24'00" E | 312.21' |
| L17 | S 43°16'44" E | 345.40' |
| L18 | S 53°17'30" E | 549.07' |

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L19 | S 86°09'12" E | 89.15' |
| L20 | S 57°50'27" E | 53.27' |
| L21 | S 43°29'01" E | 430.90' |
| L22 | S 60°01'11" E | 131.02' |
| L23 | S 83°13'21" E | 277.83' |
| L24 | N 63°18'21" E | 102.47' |
| L25 | N 83°26'31" E | 61.03' |
| L26 | S 66°44'36" E | 328.20' |
| L27 | S 47°24'46" E | 96.56' |
| L28 | S 65°43'06" E | 358.78' |
| L29 | S 83°49'47" E | 86.81' |
| L30 | N 40°32'43" E | 96.08' |
| L31 | S 81°17'05" E | 60.72' |
| L32 | S 57°50'06" E | 333.80' |
| L33 | S 74°30'50" W | 305.45' |
| L34 | S 68°30'56" W | 233.16' |
| L35 | S 30°25'01" W | 149.26' |

| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| NUMBER | ARC LENGTH | RADIUS | DELTA | CHORD BEARING | CHORD DISTANCE |
| C1 | 535.20' | 1,829.86' | 16°45'28" | S 68°02'14" W | 533.29' |
| C2 | 584.98' | 1,205.47' | 27°48'14" | S 51°28'02" W | 579.26' |

BGE, Inc.
7000 North Mopac, Suite 330, Austin, TX 78731
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying Firm No. 10106502

Copyright 2018

SCALE: 1"=700'

SHEET 6 OF 6

DESCRIPTION OF A 1,240.674 ACRE TRACT OF LAND
HAYS COUNTY, TEXAS

ALL THAT CERTAIN PARCEL OR TRACT OF LAND OUT OF THE PHILIP A. SMITH SURVEY NO. 26, ABSTRACT NO. 415, THE MARCUS D. RAPER SURVEY NO. 37, ABSTRACT NO. 394, THE ANTHONY G. DAVY SURVEY NO. 38, ABSTRACT NO. 148 AND THE EDWARD W. BROWN SURVEY NO. 136, ABSTRACT NO. 44, SITUATED IN HAYS COUNTY, TEXAS; BEING A PORTION OF A CALLED 1,051.23 ACRE TRACT AS DESCRIBED IN GENERAL WARRANTY DEED CONVEYED TO ANARENE INVESTMENTS, LTD. AND A PORTION OF THAT CALLED 73.69 ACRE SAVE & EXCEPT TRACT AS DESCRIBED IN EXHIBIT A-1 OF SAID GENERAL WARRANTY DEED TO ANARENE INVESTMENTS, LTD., RECORDED IN VOLUME 2639, PAGE 418 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, SAID 73.69 ACRE SAVE & EXCEPT TRACT BEING A PORTION OF THAT CALLED 507.1 ACRE TRACT AS CONVEYED TO JOHN L. HILL BY DEED RECORDED IN VOLUME 212, PAGE 629 OF THE DEED RECORDS OF HAYS COUNTY, ALSO SAVE AND EXCEPT FROM SAID 1051.23 ACRE TRACT A CALLED 90,000 SQUARE FEET OF LAND AS CONVEYED TO DRIPPING SPRINGS INDEPENDENT SCHOOL DISTRICT BY DEED OF GIFT RECORDED IN VOLUME 1489, PAGE 61 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, BEING ALL OF THAT CALLED 29.78 ACRE TRACT AS CONVEYED TO ANARENE INVESTMENTS, LTD. BY GENERAL WARRANTY DEED RECORDED IN VOLUME 2639, PAGE 400 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AND BEING ALL OF A CALLED 206.2 ACRE TRACT AS CONVEYED TO ANARENE INVESTMENTS, LTD. BY GENERAL WARRANTY DEED RECORDED IN VOLUME 2639, PAGE 403 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS; AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS AND AS SHOWN ON THE ATTACHED SKETCH:

**BEGINNING** at a 1/2-inch iron rod with cap stamp "BGE INC" set on the east right-of-way line of Ranch Road 12, (100' wide right-of-way), being the common most westerly corner of the above described Anarene Investments 1,051.23-acre tract and a called 21.126-acre tract as conveyed to Dripping Springs Independent School District (D.S.I.S.D.) by deed of gift recorded in Volume 571, Page 307 of Real Property Records of Hays County, Texas, for the most westerly corner and **POINT OF BEGINNING** of the herein described tract, from which a 80-D nail found bears S 80°14'54" E a distance of 0.54 feet, and from which a concrete monument found on east right-of-way line of said Ranch Road 12 bears, S 14°28'39" W a distance of 350.43 feet;

THENCE, with the east right-of-way line of said Ranch Road 12 the following fourteen (14) courses:

1) N 14°28'39" E a distance of 1,624.68 feet to a concrete monument found on the west line of said Anarene Investments 1,051.23-acre tract at a point of curvature of a curve to the right;

2) Along said curve to the right an arc distance of 722.05 feet, having a radius of 2,896.00 feet, a central angle of 14°17'07" and a chord which bears N 21°49'46" E a distance of 720.18 feet to concrete monument found at the common most westerly south corner of said Anarene Investments 1,051.23-acre tract and the above described Hill 73.69-acre tract;

3) N 29°11'41" E a distance of 1,489.16 feet to a concrete monument found on the west line of said Hill 73.69-acre tract, at a point of curvature of a curve to the right;

4) Along said curve to the right an arc distance of 756.40 feet, having a radius of 1,861.00 feet, a central angle of 23°17'16" and a chord which bears N 40°49'43" E a distance of 751.20 feet to a concrete monument found on the west line of said Hill 73.69-acre tract;

5) N 52°28'45" E, pass a 5/8-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found at the common most westerly north corner of said Hill 73.69-acre tract and said Anarene Investments 1,051.23-acre tract at a distance of 175.19 feet, and continuing on for a total distance of 415.50 feet to a concrete monument found on the west line of said Anarene Investments 1,051.23-acre tract, at a point of curvature of a curve to the left;

6) Along said curve to the left an arc distance of 576.84 feet, having a radius of 1,478.00 feet, a central angle of 22°21'42", and a chord which bears N 41°21'34" E a distance of 573.19 feet to a concrete monument found on the west line of said Anarene Investments 1,051.23-acre tract;

7) N 30°12'30" E a distance of 2,266.38 feet to a concrete monument found on the west line of said Anarene Investments 1,051.23-acre tract, at a point of curvature of a curve to the right;

8) Along said curve to the right an arc distance of 673.49 feet, having a radius of 1,096.00 feet, a central angle of 35°12'29", and a chord which bears N 47°48'39" E a distance of 662.94 feet to a concrete monument found (damaged) on the west line of said Anarene Investments 1,051.23-acre tract;

9) N 76°15'59" E a distance of 209.78 feet to a concrete monument found on the west line of said Anarene Investments 1,051.23-acre tract;

10) N 76°27'16" E a distance of 304.82 feet to a concrete monument found on the west line of said Anarene Investments 1,051.23-acre tract;

11) N 58°07'42" E a distance of 85.31 feet to a 5/8-inch iron rod found on the west line of said Anarene Investments 1,051.23-acre tract;

12) N 69°13'30" E a distance of 220.26 feet to a cotton spindle found in the northwest side of a 52" live oak, on the west line of said Anarene Investments 1,051.23-acre tract, from which a 1-1/2-inch iron pipe found bears N 09°17'07" W a distance of 0.64 feet;

13) N 74°01'48" E a distance of 195.37 feet to a 3/4-inch iron rod found on the west line of said Anarene Investments 1,051.23-acre tract, at a point of curvature of a curve to the left; and

14) Along said curve to the left an arc distance of 139.02 feet, having a radius of 1,979.86 feet, a central angle of 04°01'23", and a chord which bears N 59°58'27" E a distance of 138.99 feet to a 1-inch iron rod found on the west line of said Anarene Investments 1,051.23-acre tract, at the southwest corner of a called 0.112-acre tract as conveyed to Rella W. Brooks by deed recorded in Volume 224, Page 632 of the Deed Records of Hays County, Texas;

THENCE, leaving the east right-of-way line of said Ranch Road 12, with a north line of said Anarene Investments 1,051.23-acre tract, N 85°56'32" E a distance of 31.42 feet to a calculated point on the south line of said Rella Brooks 0.112-acre tract, at the approximate centerline of Barton Creek, for the most northerly corner of said Anarene Investments 1,051.23-acre tract, for the most northerly corner of the herein described tract;

THENCE, with the northerly and easterly lines said Anarene Investments 1,051.23-acre tract, along the approximate centerline of Barton Creek, the following twenty-one (21) courses:

1) S 54°06'53" E a distance of 416.52 feet to a calculated angle point;

2) S 43°31'40" E a distance of 320.98 feet to a calculated angle point;

3) S 71°33'35" E a distance of 162.29 feet to a calculated angle point;

4) S 80°15'23" E a distance of 359.62 feet to a calculated angle point;

5) N 89°12'39" E a distance of 268.06 feet to a calculated angle point;

6) N 71°48'37" E a distance of 226.20 feet to a calculated angle point;

7) N 75°52'56" E a distance of 471.86 feet to a calculated angle point;

8) S 76°44'48" E a distance of 149.76 feet to a calculated angle point;

9) S 51°55'11" E a distance of 99.32 feet to a calculated angle point;

10) S 31°00'27" E a distance of 192.83 feet to a calculated angle point;

11) S 04°33'09" E a distance of 253.81 feet to a calculated angle point;

12) S 08°46'56" W a distance of 358.50 feet to a calculated angle point;

13) S 15°06'53" W a distance of 362.97 feet to a calculated angle point;

14) S 27°05'38" W a distance of 330.40 feet to a calculated angle point;

15) S 44°01'50" W a distance of 364.58 feet to a calculated angle point;

16) S 23°23'55" W a distance of 114.84 feet to a calculated angle point;

17) S 12°27'30" W a distance of 299.12 feet to a calculated angle point;

18) S 07°06'56" W a distance of 132.91 feet to a calculated angle point;

19) S 10°50'48" E a distance of 166.36 feet to a calculated angle point;

20) S 24°03'53" E a distance of 134.10 feet to a calculated angle point; and

21) S 32°12'12" E a distance of 162.72 feet to a calculated point at inside corner of a called 46.53-acre tract as conveyed to Mary Taylor Henderson by general warranty deed with reservation of life estate recorded in Document No. 14038509 of the Official Public Records of Hays County, Texas, from which a 1-inch iron pipe found on the east bank of said Barton Creek bears, N 52°49'27" E a distance of 109.28 feet;

THENCE, leaving the approximate center line of said Barton Creek with a east line of said Anarene Investments 1,051.23-acre tract, S 55°46'32" W pass a 5/8-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found on the west bank of said Barton Creek a distance of 31.68 feet and continuing on for a total distance of 276.23 feet to a 5/8-inch iron rod found at the most westerly southwest corner of said Henderson 46.53-acre tract, at an inside corner of said Anarene Investments 1,051.23-acre tract, for an inside corner of the herein described tract;

THENCE, generally along a fence, with a north line of said Anarene Investments 1,051.23-acre tract, S 61°20'17" E pass a 1/2-inch iron rod found at the common south corner of said Henderson 46.53-acre tract and a called 26.10-acre tract as conveyed to Virginia Taylor Buckley by Document No. 9921334 of the Official Public Records of Hays County, Texas, at a distance of 279.93 feet and continuing on for a total distance of 466.74 feet to a 1/2-inch iron rod found at an angle point in the south line of said Buckley 26.10-acre tract, for an angle point of the herein described tract;

THENCE, generally along a fence, continuing with a north line of said Anarene Investments 1,051.23-acre tract, S 57°09'59" E a distance of 511.67 feet to a 1/2-inch iron rod found at the south corner of said Buckley 26.10-acre tract, on a west line of a remainder of a called 1,364.31-acre tract as conveyed to Rathgeber Investment Company, Ltd. By special warranty deed with vendor's lien recorded in Document No. 04015659 of the Official Public Records of Hays County, Texas, at the most easterly corner of said Anarene Investments 1,051.23-acre tract, for the most easterly corner of the herein described tract;

THENCE, generally along a fence, with an east line of said Anarene Investments 1,051.23-acre tract and a west line of said Rathgeber Investment 1,364.31-acre remainder tract, S 28°53'40" W a distance of 4,426.46 feet to a 5/8-inch iron rod found at the north corner of a called 29.78-acre tract as conveyed to Anarene Investments. Ltd. by general warranty deed recorded in Volume 2639, Page 400 of the Official Public Records of Hays County, Texas, for an inside corner of the herein described tract;

THENCE, leaving the fenced east line of said Anarene Investments 1,051.23-acre tract, with the east line of said Anarene Investments 29.78-acre tract, S 30°03'24" E a distance of 931.08 feet to a 3/8-inch iron rod found with cap stamped "RPLS 4542" near a fence corner, on a west line of said Rathgeber Investment 1,364.31-acre remainder tract, at the north east corner of a called 291-1/3-acre tract as conveyed to Cynosure Corporation by deed recorded in Volume 258, Page 123 of the Deed Records of Hays County, Texas, for an outside corner of the herein described tract;

THENCE, leaving the west line of said Rathgeber Investment 1,364.31-acre remainder tract, generally along a fence, with the south line of said Anarene Investments 29.78-acre tract, S 60°08'25" W a distance of 1,550.88 feet to a 1/2-inch iron pipe found at the south corner of said Anarene Investments 29.78-acre tract, at the northeast corner of a called 206.2-acre tract as conveyed to Anarene Investments. Ltd. by general warranty deed recorded in Volume 2639, Page 403 of the Official Public Records of Hays County, Texas, being the northwest corner of said Cynosure Corporation 291-1/3-acre tract, for an inside corner of the herein described tract;

THENCE, generally along a fence, with the east line of said Anarene Investments 206.2-acre tract, S 25°43'41" E a distance of 46.72 feet to a 60-D nail found in the root of a dead tree, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 16°46'01" E a distance of 280.41 feet to a 60-D nail found in tree, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 16°48'27" E a distance of 182.38 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 05°13'03" W a distance of 104.30 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 03°37'02" E a distance of 55.04 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 13°33'24" W a distance of 70.61 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 06°06'34" W a distance of 154.54 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 05°52'30" W a distance of 263.33 feet to a disturbed 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 16°02'05" W a distance of 196.54 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 00°43'42" W a distance of 330.59 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 00°08'28" W a distance of 273.70 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 05°46'10" E a distance of 42.66 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 01°49'02" E a distance of 238.81 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 00°49'25" E a distance of 353.56 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the east line of said Anarene Investments 206.2-acre tract, S 00°12'27" E a distance of 706.00 feet to a 1-1/2-inch iron pipe found, on the west line of said Cynosure Corporation 291-1/3-acre tract, at the south east corner of said Anarene Investments 206.2-acre tract, being the northwest corner of a called 200-acre tract as conveyed to William R. Scott and Bessie E. Scott by deed recorded in Volume 717, Page 229 of the Deed Records of Hays County, Texas, for the most southerly corner of the herein described tract;

THENCE, generally along a fence, with the south line of said Anarene Investments 206.2-acre tract, N 88°40'21" W a distance of 482.13 feet to a 60-D nail found in a dead tree, for an angle point;

THENCE, generally along a fence, with the south line of said Anarene Investments 206.2-acre tract, N 86°02'12" W a distance of 425.10 feet to a 60-D nail found in a tree, for an angle point;

THENCE, generally along a fence, with the south line of said Anarene Investments 206.2-acre tract, N 85°57'22" W a distance of 589.22 feet to a 1/2-inch iron rod found on the north line of said Scott 200-acre tract, at the southeast corner of Lot 28, of the Replat of Lot 2E, Block C, Pound house Hills Section 2 as recorded in Document No. 17007517 of the Official Public Records of Hays County, Texas, for the most southerly southwest corner of the herein described tract, from which a 1-inch iron pipe found on the north line of said Scott 200-acre tract, at a angle point in the south line of said Lot 28 bears, N 85°57'56" W a distance 104.76 feet;

THENCE, generally along a fence, with the west line of said Anarene Investments 206.2-acre tract and the east line of said Replat of Lot 2E, Block C, Poundhouse Hills Section 2, N 36°39'47" W a distance of 483.70 feet to a 1/2-inch iron rod found, for an angle point;

THENCE, generally along a fence, continuing with the west line of said Anarene Investments 206.2-acre tract and the east line of said Replat of Lot 2E, Block C, Poundhouse Hills Section 2, N 36°33'08" W pass a 1/2-inch iron rod with cap stamped "4WARD BOUNDARY" at the south easterly terminus of Pecos River Crossing (60' wide right-of-way) as dedicated by said Replat of Lot 2E, Block C, Poundhouse Hills Section 2 at a distance of 581.20 feet, pass a 1/2-inch iron rod with cap stamped "4WARD BOUNDARY" at the north easterly terminus of said Pecos River Crossing at a distance of 641.20 feet and continuing on for a total distance of 778.20 feet to a 1/2" iron rod found at the northeast corner of Lot 35 of said Replat of Lot 2E, Block C, Poundhouse Hills Section 2, being the southeast corner of the remainder of a called 102.479-acre tract as conveyed to Taylor Morrison of Texas, Inc. by special warranty deed recorded in Doc. No. 14019631 of the Official Public Records of Hays County, Texas;

THENCE, generally along a fence, continuing with the west line of said Anarene Investments 206.2-acre tract and the east line of said Taylor Morrison 102.479-acre remainder tract, N 42°39'59" W pass a 1/2-inch iron rod with cap stamp "BGE INC" set at the south east corner of Founders Ridge, Section 2A, a subdivision as recorded in Document No. 17005751 of the Official Public Records of Hays County, Texas, being the south easterly terminus of Copper Canyon (60' wide right-of-way) as dedicated by said Founders Ridge, Section 2A at a distance of 1,466.18 feet, pass a 1/2-inch iron rod with cap stamp "BGE INC" set at the north easterly terminus of said Copper Canyon a distance of 1,526.18 feet, and continuing on for a total distance of 1,696.21 feet to a 1/2-inch iron rod found on the west line of said Founders Ridge, Section 2A;

THENCE, generally along a fence, continuing with the west line of said Anarene Investments 206.2-acre tract, and the east line of said Founders Ridge, Section 2A, N 42°57'34" W a distance of 763.97 feet to a 1/2-inch iron rod found;

THENCE, generally along a fence, continuing with the west line of said Anarene Investments 206.2-acre tract, and the east line of said Founders Ridge, Section 2A, and the east line of Founders Ridge, Section 1, a subdivision as recorded in Volume 18, Page 336 of the Plat Records of Hays County, N 42°27'07" W a distance of 437.18 feet to a 1/2-inch iron rod found at the northwest corner of said Anarene Investments 206.2-acre tract, at the northeast corner of Lot 3, Block A, of said Founders Ridge, Section 1, being on the south line of said Anarene Investments 1,051.23-acre tract, for an inside corner of the herein described tract;

THENCE, generally along a fence, with the south line of said Anarene Investments 1,051.23-acre tract, and the north line of said of said Founders Ridge, Section 1, S 89°37'16" W a distance of 133.08 feet to a 1/2-inch iron pipe found, for an angle point;

THENCE, generally along a fence, continuing with the south line of said Anarene Investments 1,051.23-acre tract, S 88°53'52" W a distance of 311.37 feet to a 3/4-inch iron bar found at the southwest corner of a called 12.22-acre tract as conveyed to J.F. Glosson, Jr. by deed recorded in Volume 207, Page 329 of the Deed Records of Hays County, Texas, at the most southerly southwest corner of said Anarene Investments 1,051.23-acre tract, for an outside corner of the herein described tract;

THENCE, generally along a fence, with a west line of said Anarene Investments 1,051.23-acre tract, and the east line of said J.F. Glosson, Jr. 12.22-acre tract, N 01°52'37" W a distance of 630.02 feet to a 3/4-inch iron rod found under a fence at the common east corner of said J.F. Glosson, Jr. 12.22-acre tract and a called 21.126-acre tract as conveyed to Dripping Springs Independent School District (D.S.I.S.D.) by deed of gift recorded in Volume 571, Page 307 of Real Property Records of Hays County, Texas, for an outside corner of the herein described tract;

THENCE, generally along a fence, with a northerly line of said Anarene Investments 1,051.23-acre tract, and a southerly line of said D.S.I.S.D. 21.126-acre tract, N 75°23'13" E a distance of 295.08 feet to a 1/2-inch iron rod found, for an angle point;

THENCE, generally along a fence, continuing with a northerly line of said Anarene Investments 1,051.23-acre tract, and a southerly line of said D.S.I.S.D. 21.126-acre tract, N 65°41'55" E a distance of 427.16 feet to a disturbed 1/2-inch iron rod found at the most easterly south corner of said D.S.I.S.D. 21.126-acre tract, for an inside corner of the herein described tract;

THENCE, generally along a fence, with a west line of said Anarene Investments 1,051.23-acre tract, and an east line of said D.S.I.S.D. 21.126-acre tract, N 03°44'39" E a distance of 370.39 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set at the southwest corner of a 90,000-square foot tract as conveyed to Dripping Springs Independent School District (D.S.I.S.D.) by deed of gift recorded in Volume 1489, Page 61 of Official Public Records of Hays County, Texas, for an outside corner of the herein described tract;

THENCE, leaving the fenced west line of said Anarene Investments 1,051.23-acre tract, crossing over and across said Anarene Investments 1,051.23-acre tract, with the south line of said D.S.I.S.D. 90,000 square foot tract, S 85°02'09" E a distance of 300.00 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set at the southeast corner of said D.S.I.S.D. 90,000 square foot tract, for an inside corner of the herein described tract;

THENCE, continuing over and across said Anarene Investments 1,051.23-acre tract, with the east line of said D.S.I.S.D. 90,000 square foot tract, N 03°44'39" E a distance of 300.00 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set at the northeast corner of said D.S.I.S.D. 90,000 square foot tract, for an inside corner of the herein described tract;

THENCE, continuing over and across said Anarene Investments 1,051.23-acre tract, with the north line of said D.S.I.S.D. 90,000 square foot tract, N 85°02'09" W, pass a 1/2-inch iron rod found in concrete near a fence corner at the common north corner of said D.S.I.S.D. 90,000 square foot tract and said D.S.I.S.D. 21.126-acre tract at a distance of 300.00 feet, and continuing on with the north line of said D.S.I.S.D. 21.126-acre tract and a south line of said Anarene Investments 1,051.23-acre tract for a total distance of 649.54 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set at the southeast corner of a called 0.138-acre tract as conveyed to Dripping Springs Independent School District (D.S.I.S.D.) by warranty deed recorded in Volume 626, Page 293 of the Real Property Records of Hays County, Texas, for an inside corner of the herein described tract, from which a 1/2-inch iron rod found at or near a fence corner bears, N 84°19'25" W a distance of 3.39 feet;

THENCE, with a west line of said Anarene Investments 1,051.23-acre tract, and the east line of said D.S.I.S.D. 0.138-acre tract, N 04°57'51" E a distance of 50.00 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set at the northeast corner of said D.S.I.S.D. 0.138-acre tract, from which a 1/2-inch iron rod found at or near a fence corner bears, N 88°51'36" W a distance of 3.35 feet;

THENCE, with a south line of said Anarene Investments 1,051.23-acre tract, and a north line of said D.S.I.S.D. 0.138-acre tract, N 85°02'09" W a distance of 120.00 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set on the west line of said D.S.I.S.D. 21.126-acre tract, at the northwest corner of said D.S.I.S.D. 0.138-acre tract, from which a 1/2-inch iron rod found at or near a fence corner bears, N 89°05'52" W a distance of 3.40 feet;

THENCE, with a west line of said Anarene Investments 1,051.23-acre tract, and an east line of said D.S.I.S.D. 21.126-acre tract, N 04°57'51" E a distance of 39.82 feet to a 1/2-inch iron rod found near a fence corner, at an outside corner of said D.S.I.S.D. 21.126-acre tract;

THENCE, with a south line of said Anarene Investments 1,051.23-acre tract, and a north line of said D.S.I.S.D. 21.126-acre tract, N 85°02'09" W a distance of 418.62 feet to the **POINT OF BEGINNING.**

**SAVE & EXCEPT THE FOLLOWING TRACT OF LAND:**

ALL THAT CERTAIN PARCEL OR TRACT OF LAND OUT OF THE PHILIP A. SMITH SURVEY NO. 26, ABSTRACT NO. 415, THE MARCUS D. RAPER SURVEY NO. 37, ABSTRACT NO. 394, THE ANTHONY G. DAVY SURVEY NO. 38, ABSTRACT NO. 148 AND THE EDWARD W. BROWN SURVEY NO. 136, ABSTRACT NO. 44, SITUATED IN HAYS COUNTY, TEXAS; BEING A PORTION OF A CALLED 1,051.23 ACRE TRACT AS DESCRIBED IN GENERAL WARRANTY DEED CONVEYED TO ANARENE INVESTMENTS, LTD. AND A PORTION OF THAT CALLED 73.69 ACRE SAVE & EXCEPT TRACT AS DESCRIBED IN EXHIBIT A-1 OF SAID GENERAL WARRANTY DEED TO ANARENE INVESTMENTS, LTD., RECORDED IN VOLUME 2639, PAGE 418 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, SAID 73.69 ACRE SAVE & EXCEPT TRACT BEING A PORTION OF THAT CALLED 507.1 ACRE TRACT AS CONVEYED TO JOHN L. HILL BY DEED RECORDED IN VOLUME 212, PAGE 629 OF THE DEED RECORDS OF HAYS COUNTY, TEXAS; AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS AND AS SHOWN ON THE ATTACHED SKETCH:

**COMMENCING for POINT OF REFERENCE** at a 1/2-inch iron rod with cap stamp "BGE INC" set on the east right-of-way line of Ranch Road 12, (100' wide right-of-way), being the common most westerly corner of the above described Anarene Investments 1,051.23-acre tract and a called 21.126-acre tract as conveyed to Dripping Springs Independent School District (D.S.I.S.D.) by deed of gift recorded in Volume 571, Page 307 of Real Property Records of Hays County, Texas; Thence, leaving the east right-of-way line of Ranch Road 12 and crossing over and across said Anarene Investments 1,051.23-acre tract, N 48°15'26" E a distance of 3,883.45 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for the most southerly corner and **POINT OF BEGINNING** of the herein described tract;

THENCE, continuing over and across said Anarene Investments 1,051.23-acre tract, N 62°25'51" W a distance of 365.40 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of curvature of a curve to the right;

THENCE, continuing over and across said Anarene Investments 1,051.23-acre tract, along said curve to the right, an arc distance of 233.67 feet, having a radius of 485.00 feet, a central angle of 27°36'16" and a chord which bears N 48°37'43" W a distance of 231.41 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of tangency;

THENCE, continuing over and across said Anarene Investments 1,051.23-acre tract and crossing over and across the above described Hill 73.69-acre tract, N 34°49'35" W a distance of 267.91 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for a point of curvature of a curve to the left;

THENCE, continuing over and across said Hill 73.69-acre tract, along said curve to the left, an arc distance of 333.28 feet, having a radius of 1015.00 feet, a central angle of 18°48'48" and a chord which bears N 44°13'58" W a distance of 331.78 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set at a point of reverse curvature;

THENCE, continuing over and across said Hill 73.69-acre tract, along said curve to the right, an arc distance of 38.55 feet, having a radius of 25.00 feet, a central angle of 88°20'36" and a chord which bears N 09°28'04" W a distance of 34.84 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of tangency, for the most westerly corner of the herein described tract;

THENCE, continuing over and across said Hill 73.69-acre tract, N 34°42'14" E a distance of 612.89 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of curvature of a curve to the right;

THENCE, continuing over and across said Hill 73.69-acre tract and crossing over and across said Anarene Investments 1,051.23-acre tract, along said curve to the right, an arc distance of 168.56 feet, having a radius of 465.00 feet, a central angle of 20°46'10"and a chord which bears N 45°05'19" E a distance of 167.64 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of tangency;

THENCE, continuing over and across said Anarene Investments 1,051.23-acre tract, N 55°28'23" E a distance of 1,126.40 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for the most northerly corner of the herein described tract;

THENCE, continuing over and across said Anarene Investments 1,051.23-acre tract, S 13°35'57" E a distance of 353.90 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for an angle point;

THENCE, continuing over and across said Anarene Investments 1,051.23-acre tract, S 44°59'39" E a distance of 147.28 feet to a 5/8-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found at the most northerly northeast corner of said Hill 73.69-acre tract;

THENCE, with a east line of said Hill 73.69-acre tract and a west line of said Anarene Investments 1,051.23-acre tract, S 13°46'47" E a distance of 413.12 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for the most easterly corner of the herein described tract, from which a 5/8-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found at an angle point in the east line of said Hill 73.69-acre tract bears, S 13°46'47" E a distance of 192.95 feet;

THENCE, leaving the west line of said Anarene Investments 1,051.23-acre tract and crossing over and across said Hill 73.69-acre tract, S 88°54'34" W a distance of 262.83 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for an interior corner of the herein described tract;

THENCE, continuing over and across said Hill 73.69-acre tract and crossing over and across said Anarene Investments 1,051.23-acre tract, S 02°39'33" E a distance of 903.84 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for an exterior corner of the herein described tract;

THENCE, continuing over and across said Anarene Investments 1,051.23-acre tract and crossing over and across said Hill 73.69-acre tract, N 64°51'14" W a distance of 290.58 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for an interior corner of the herein described tract;

THENCE, continuing over and across said Hill 73.69-acre tract and crossing over and across said Anarene Investments 1,051.23-acre tract, S 35°05'06" W a distance of 538.90 feet to the **POINT OF BEGINNING.**

The net acreage of the herein described tract of land contains 1,240.674 acres of land, more or less.

I hereby certify that these notes were prepared by BGE from a survey made on the ground on September 10, 2018 under my supervision and are true and correct to the best of my knowledge. Bearing orientation is based on the Texas State Plane Coordinate System, South Central Zone, NAD 83.

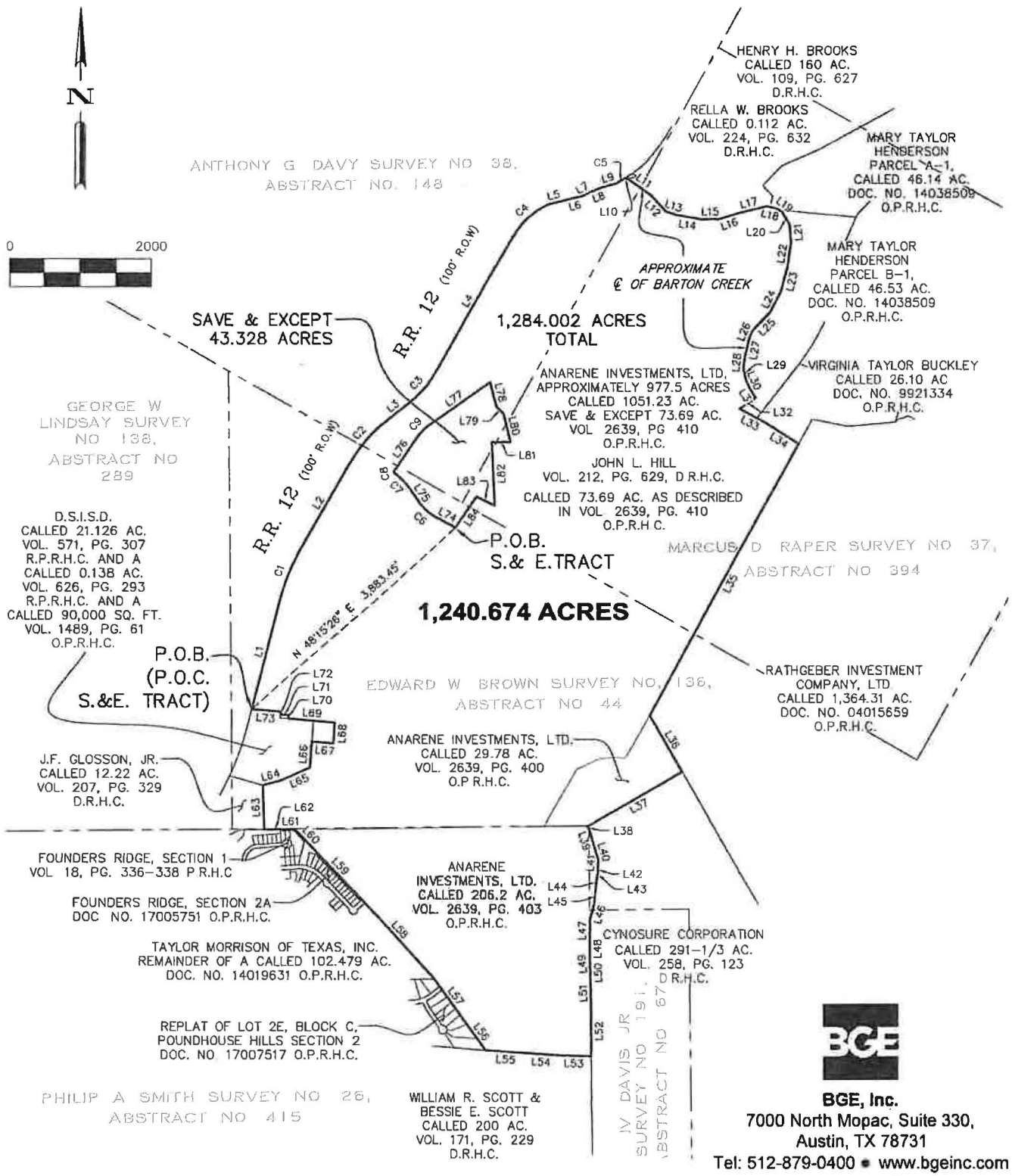



Jonathan O. Nobles RPLS No. 5777
BGE, Inc.
7000 North Mopac, Suite 330
Austin, Texas 78731
Telephone: (512) 879-0400
TBPLS Licensed Surveying Firm No. 10106502

11/19/2018
Date

Date: November 19, 2018
Project No.: 5955-00

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION




**BGE, Inc.**
7000 North Mopac, Suite 330,
Austin, TX 78731
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying
Firm No. 10106502

BEARING BASIS NOTE:

HORIZONTAL DATUM BASED UPON TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, TEXAS SOUTH CENTRAL ZONE. COORDINATES AND DISTANCES SHOWN ARE SURFACE VALUES. COMBINED SCALE FACTOR IS 0.9999320997.

LEGEND

| | |
|---|---|
| D.R.H.C. | DEED RECORDS, HAYS COUNTY |
| O.P.R.H.C. | OFFICIAL PUBLIC RECORDS, HAYS COUNTY |
| P.R.H.C. | PLAT RECORDS, HAYS COUNTY |
| P.O.B. | POINT OF BEGINNING |
| P.O.C. | POINT OF COMMENCEMENT |
| S.&E. TRACT | SAVE & EXCEPT TRACT |

Copyright 2018

SCALE: 1"=2000'

SHEET 11

OF 12

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L1 | N 14°28'39" E | 1,624.68' |
| L2 | N 29°11'41" E | 1,489.16' |
| L3 | N 52°28'45" E | 415.50' |
| L4 | N 30°12'30" E | 2,266.38' |
| L5 | N 76°15'59" E | 209.78' |
| L6 | N 76°27'16" E | 304.82' |
| L7 | N 58°07'42" E | 85.31' |
| L8 | N 69°13'30" E | 220.26' |
| L9 | N 74°01'48" E | 195.37' |
| L10 | N 85°56'32" E | 31.42' |
| L11 | S 54°06'53" E | 416.52' |
| L12 | S 43°31'40" E | 320.98' |
| L13 | S 71°33'35" E | 162.29' |
| L14 | S 80°15'23" E | 359.62' |
| L15 | N 89°12'39" E | 268.06' |
| L16 | N 71°48'37" E | 226.20' |
| L17 | N 75°52'56" E | 471.86' |
| L18 | S 76°44'48" E | 149.76' |
| L19 | S 51°55'11" E | 99.32' |
| L20 | S 31°00'27" E | 192.83' |
| L21 | S 04°33'09" E | 253.81' |
| L22 | S 08°46'56" W | 358.50' |
| L23 | S 15°06'53" W | 362.97' |
| L24 | S 27°05'38" W | 330.40' |
| L25 | S 44°01'50" W | 364.58' |
| L26 | S 23°23'55" W | 114.84' |
| L27 | S 12°27'30" W | 299.12' |
| L28 | S 07°06'56" W | 132.91' |

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L29 | S 10°50'48" E | 166.36' |
| L30 | S 24°03'53" E | 134.10' |
| L31 | S 32°12'12" E | 162.72' |
| L32 | S 55°46'32" W | 276.23' |
| L33 | S 61°20'17" E | 466.74' |
| L34 | S 57°09'59" E | 511.67' |
| L35 | S 28°53'40" W | 4,426.46' |
| L36 | S 30°03'24" E | 931.08' |
| L37 | S 60°08'25" W | 1,550.88' |
| L38 | S 25°43'41" E | 46.72' |
| L39 | S 16°46'01" E | 280.41' |
| L40 | S 16°48'27" E | 182.38' |
| L41 | S 05°13'03" W | 104.30' |
| L42 | S 03°37'02" E | 55.04' |
| L43 | S 13°33'24" W | 70.61' |
| L44 | S 06°06'34" W | 154.54' |
| L45 | S 05°52'30" W | 263.33' |
| L46 | S 16°02'05" W | 196.54' |
| L47 | S 00°43'42" W | 330.59' |
| L48 | S 00°08'28" W | 273.70' |
| L49 | S 05°46'10" E | 42.66' |
| L50 | S 01°49'02" E | 238.81' |
| L51 | S 00°49'25" E | 353.56' |
| L52 | S 00°12'27" E | 706.00' |
| L53 | N 88°40'21" W | 482.13' |
| L54 | N 86°02'12" W | 425.10' |
| L55 | N 85°57'22" W | 589.22' |
| L56 | N 36°39'47" W | 483.70' |

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L57 | N 36°33'08" W | 778.20' |
| L58 | N 42°39'59" W | 1,696.21' |
| L59 | N 42°57'34" W | 763.97' |
| L60 | N 42°27'07" W | 437.18' |
| L61 | S 89°37'16" W | 133.08' |
| L62 | S 88°53'52" W | 311.37' |
| L63 | N 01°52'37" W | 630.02' |
| L64 | N 75°23'13" E | 295.08' |
| L65 | N 65°41'55" E | 427.16' |
| L66 | N 03°44'39" E | 370.39' |
| L67 | S 85°02'09" E | 300.00' |
| L68 | N 03°44'39" E | 300.00' |
| L69 | N 85°02'09" W | 649.54' |
| L70 | N 04°57'51" E | 50.00' |
| L71 | N 85°02'09" W | 120.00' |
| L72 | N 04°57'51" E | 39.82' |
| L73 | N 85°02'09" W | 418.62' |
| L74 | N 62°25'51" W | 365.40' |
| L75 | N 34°49'35" W | 267.91' |
| L76 | N 34°42'14" E | 612.89' |
| L77 | N 55°28'23" E | 1,126.40' |
| L78 | S 13°35'57" E | 353.90' |
| L79 | S 44°59'39" E | 147.28' |
| L80 | S 13°46'47" E | 413.12' |
| L81 | S 88°54'34" W | 262.83' |
| L82 | S 02°39'33" E | 903.84' |
| L83 | N 64°51'14" W | 290.58' |
| L84 | S 35°05'06" W | 538.90' |

| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| NUMBER | ARC LENGTH | RADIUS | DELTA | CHORD BEARING | CHORD DISTANCE |
| C1 | 722.05' | 2,896.00' | 14°17'07" | N 21°49'46" E | 720.18' |
| C2 | 756.40' | 1,861.00' | 23°17'16" | N 40°49'43" E | 751.20' |
| C3 | 576.84' | 1,478.00' | 22°21'42" | N 41°21'34" E | 573.19' |
| C4 | 673.49' | 1,096.00' | 35°12'29" | N 47°48'39" E | 662.94' |
| C5 | 139.02' | 1,979.86' | 4°01'23" | N 59°58'27" E | 138.99' |
| C6 | 233.67' | 485.00' | 27°36'16" | N 48°37'43" W | 231.41' |
| C7 | 333.28' | 1,015.00' | 18°48'48" | N 44°13'58" W | 331.78' |
| C8 | 38.55' | 25.00' | 88°20'36" | N 09°28'04" W | 34.84' |
| C9 | 168.56' | 465.00' | 20°46'10" | N 45°05'19" E | 167.64' |

**BGE, Inc.**
7000 North Mopac, Suite 330,
Austin, TX 78731
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying
Firm No. 10106502

Copyright 2018

SCALE: 1"=2000'

SHEET 12

OF 12

EXHIBIT A

DOUBLE L DEVELOPMENT, LLC
218.352 ACRES
JOB NO. 5955-00

DESCRIPTION OF A 218.352 ACRE TRACT OF LAND
HAYS COUNTY, TEXAS

ALL THAT CERTAIN PARCEL OR TRACT OF LAND OUT OF THE GEORGE W. LINDSAY SURVEY NO. 138, ABSTRACT NO. 289 AND THE EDWARD W. BROWN SURVEY NO. 136, ABSTRACT NO. 44, SITUATED IN HAYS COUNTY, TEXAS; BEING A PORTION OF A CALLED 226.11 ACRE TRACT AND ALL OF A CALLED 17.80 ACRE TRACT DESCRIBED AS TRACTS 5 AND 6, RESPECTIVELY, AS CONVEYED TO ANARENE INVESTMENTS, LTD BY GENERAL WARRANTY DEED RECORDED IN VOLUME 2639, PAGE 420 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS; AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS AND AS SHOWN ON THE ATTACHED SKETCH:

**BEGINNING** at a TxDOT Type II Monument found on the westerly right-of-way line of Ranch Road 12 (right-of-way varies), at the most easterly corner of a called 64.2441 acre tract as conveyed to the City of Dripping Springs by instrument recorded in Volume 3326, Page 857 of the Official Public Records of Hays County, Texas, being on the south line of the above described Anarene Investments 226.11-acre tract, said monument being the northwest corner of a 0.126-acre right-of-way tract as conveyed to The State of Texas by instrument recorded in Volume 1089, Page 294 of the Official Public Records of Hays County, Texas, for the **POINT OF BEGINNING** of the herein described tract, from which a TxDOT Type II Monument found for reference bears S 19°17'01" W a distance of 315.35 feet;

THENCE, with the south line of said Anarene Investments 226.11-acre tract and the north line of said City of Dripping Springs 64.2441-acre tract, N 28°12'34" W a distance of 302.29 feet to a 1/2-inch iron rod with cap stamped "BGE INC" set at the south corner of a called 25.7398 acre tract as conveyed to the City of Dripping Springs by instrument recorded in Volume 4467, Page 509 of the Official Public Records of Hays County, Texas, for an exterior corner of the herein described tract, from which a 1/2-inch iron rod found at an angle point on the south line of said City of Dripping Springs 25.7398-acre tract bears N 28°12'34" W a distance of 363.28 feet;

THENCE, generally along a fence, with the east line of said City of Dripping Springs 25.7398-acre tract, N 14°36'11" E a distance of 1,470.07 feet to a 1/2-inch iron rod with cap stamped "BGE INC" set at the northeast corner of said City of Dripping Springs 25.7398-acre tract, for an interior corner of the herein described tract;

THENCE, generally along a fence, with the northeast line of said City of Dripping Springs 25.7398-acre tract, N 49°13'14" W a distance of 598.82 feet to a 1/2-inch iron rod with cap stamped "BGE INC" set at the most northerly corner of said City of Dripping Springs 25.7398-acre tract, for an interior corner of the herein described tract;

THENCE, generally along a fence, with the northwest line of said City of Dripping Springs 25.7398-acre tract, S 45°59'38" W a distance of 1,153.28 feet to a 1/2-inch iron rod with cap stamped "BGE INC" set on the north line of said City of Dripping Springs 64.2441-acre tract, at the west corner of said City of Dripping Springs 25.7398-acre tract, for an exterior corner of the herein described tract;

THENCE, generally along a fence, with the south line of said Anarene Investments 226.11-acre tract and the north line of said City of Dripping Springs 64.2441-acre tract, N 46°55'44" W a distance of 2,051.75 feet to a 1/2-inch iron rod found at the most northerly corner of said City of Dripping Springs 64.2441-acre tract, at the northeast corner of a called 62.03 acre tract as conveyed to Anne Elliece Davison and Glenn Travis Coode by instrument recorded in Document No. 17036564 of the Official Public Records of Hays County, Texas;

THENCE, generally along a fence, with the south line of said Anarene Investments 226.11-acre tract and the north line of said Davison-Coode 62.03-acre tract, N 46°51'16" W a distance of 1,500.80 feet to a 1/2-inch iron rod found on the east line of Lot 123-B, Resubdivision of Tract 123, Springlake, a subdivision as recorded in Book 9, Page 219 of the Plat Records of Hays County, Texas, at the northwest corner of said Davison-Coode 62.03-acre tract, being at the southwest corner of said Anarene Investments 226.11-acre tract, for the southwest corner of the herein described tract;

THENCE, generally along a fence, with the west line of said Anarene Investments 226.11-acre tract and the east line of said Lot 123-B, N 01°08'13" W a distance of 453.57 feet to a 1/2-inch iron rod found at the northeast corner of said Lot 123-B, being at the southeast corner of that certain 4.92-acre tract described as Tract 124, as conveyed to William and Penny Fairchild by instrument recorded in Volume 2598, Page 516 of the Official Public Records of Hays County, Texas;

THENCE, generally along a fence, continuing with the west line of said Anarene Investments 226.11-acre tract and the east line of said Fairchild 4.92-acre tract, N 01°07'53" W a distance of 460.08 feet to a 1/2-inch iron rod found at the northeast corner of said Fairchild 4.92-acre tract, at the southeast corner of Lot 125B-1, Replat of Tract 125A, B & C, Springlake, a subdivision as recorded in Volume 13, Page 388 of the Plat Records of Hays County, Texas;

THENCE, generally along a fence, continuing with the west line of said Anarene Investments 226.11-acre tract and the east line of said Lot 125B-1, N 00°54'14" W a distance of 336.16 feet to a 1/2-inch iron rod found at the northeast corner of said Lot 125B-1, at the southeast corner of that certain 5.00-acre tract described as Tract 126-A, as conveyed to Cary and Shara Meyers by instrument recorded in Volume 1056, Page 313 of the Official Public Records of Hays County, Texas;

THENCE, generally along a fence, continuing with the west line of said Anarene Investments 226.11-acre tract and with the east line of said Meyers 5.00-acre tract, N 00°45'39" W a distance of 332.73 feet to a 1/2-inch iron rod found at the northeast corner of said Meyers 5.00-acre tract, at the southeast corner of a called 3.898-acre tract as conveyed to Marc Lamoreaux by instrument recorded in Document No. 14029699 of the Official Public Records of Hays County, Texas;

THENCE, generally along a fence, continuing with the west line of said Anarene Investments 226.11-acre tract and with the east line of said Lamoreaux 3.898-acre tract, N 00°33'39" W a distance of 69.38 feet to a 1/2-inch iron rod with cap stamped "BGE INC" set at the southwest corner of a called 8.487-acre tract as conveyed to Joe and Karen Thompson by instrument recorded in Document No. 9702850 of the Official Public Records of Hays County, Texas, at the northwest corner of said Anarene Investments 226.11-acre tract, for the northwest corner of the herein described tract;

THENCE, generally along a fence, with the north line of said Anarene Investments 226.11-acre tract the following six (6) courses:

1) With the south line of said Thompson 8.487-acre tract, S 60°44'38" E a distance of 415.44 feet to a 1/2-inch iron rod found at the southwest corner of a called 13.108-acre tract as conveyed to David and Gena Baley by instrument recorded in Volume 1113, Page 715 of the Official Public Records of Hays County, Texas;

2) With the south line of said Baley 13.108-acre tract, S 60°41'05" E a distance of 789.57 feet to a 1/2-inch iron rod found at the southwest corner of a called 15.00-acre tract as conveyed to William and Margaret Crews by instrument recorded in Document No. 03030453 of the Official Public Records of Hays County, Texas;

3) With the south line of said Crews 15.00-acre tract, S 60°42'09" E a distance of 955.59 feet to a 1/2-inch iron rod found at the southwest corner of a called 11.992-acre tract as conveyed to John Fuquay by instrument recorded in Volume 397, Page 100 of the Deed Records of Hays County, Texas;

4) With the south line of said Fuquay 11.992-acre tract, S 60°27'57" E a distance of 707.23 feet to a 1/2-inch iron rod found at the southwest corner of a called 8.356-acre tract as conveyed to Leon & Elin Tosse by instrument recorded in Document No. 80015038 of the Official Public Records of Hays County, Texas;

5) With the south line of said Tosse 8.356-acre tract, S 60°46'51" E a distance of 601.45 feet to a 1/2-inch iron rod found at the southwest corner of a called 4.83-acre tract as conveyed to Everett and Karen Valdez by instrument recorded in Volume 1018, Page 833 of the Official Public Records of Hays County, Texas; and

6) Partly with the south line of said Valdez 4.83-acre tract, S 60°36'41" E a distance of 1,333.96 feet to a 1/2-inch iron rod found at the southeast corner of a called 10.30-acre tract as conveyed to Jeff and Cyndi Bode by instrument recorded in Volume 1498, Page 335 of the Official Public Records of Hays County, Texas, at the most southerly southwest corner of said Anarene Investments 17.80-acre tract, for an interior corner of the herein described tract;

THENCE, generally along a fence, with the easterly line of said Bode 10.30-acre tract and the westerly line of said Anarene investments 17.80-acre tract, the following three (3) courses:

1) N 29°07'24" E a distance of 406.60 feet to a 1/2-inch iron rod found for corner;

2) N 63°03'43" W a distance of 425.17 feet to a 1/2-inch iron rod found for corner; and

3) N 29°12'20" E, pass a 1/2-inch iron rod found for reference at a distance of 385.21 feet and continuing on for a total distance of 410.41 feet to a calculated point at the center of a 50-foot wide road easement (known as Shelton Ranch Road) as referenced on Hannah Hill Subdivision plat, as recorded in Volume 7, Page 281, Plat Records of Hays County, Texas, on the south line of said Shelton Ranch Road Right-of-Way (30' right-of-way) as dedicated by said Hannah Hill subdivision plat, at the northwest corner of said Anarene Investments 17.80-acre tract, for an exterior corner of the herein described tract;

THENCE, along the center of said 50' road easement, with the northerly line of said Anarene Investments 17.80-acre tract and the southerly line of said Hannah Hill Subdivision right-of-way dedication, the following five (5) courses:

1) S 68°08'51" E a distance of 21.24 feet to a 60D nail found at a point of curvature of a curve to the left;

2) Along said curve to the left an arc distance of 192.46 feet, having a radius of 288.51 feet, a central angle of 38°13'14" and a chord which bears S 87°17'39" E a distance of 188.91 feet to a 60D nail found for corner;

3) N 73°35'59" E a distance of 544.90 feet to a 60D nail found at a point of curvature of a curve to the right;

4) Along said curve to the right an arc distance of 192.48 feet, having a radius of 278.91 feet, a central angle of 39°32'26" and a chord which bears S 86°37'44" E a distance of 188.68 feet to a 60D nail found for corner; and

5) S 66°58'50" E a distance of 109.09 feet to a calculated point at the intersection with the west right-of-way line of said Ranch Road 12, at the northeast corner of said Anarene Investments 17.80-acre tract, for the northeast corner of the herein described tract;

THENCE, with the east line of said Anarene Investments 17.80-acre tract and the west right-of-way line of said Ranch Road 12, along a curve to the left an arc distance of 22.14 feet, having a radius of 1961.00 feet, a central angle of 00°38'49" and a chord which bears S 29°30'17" W a distance of 22.14 feet to a TxDOT Type I concrete monument found for corner;

THENCE, continuing with the east line of said Anarene Investments 17.80-acre tract and the west right-of-way line of said Ranch Road 12, S 29°11'41" W, pass a 1-inch iron pipe found at the northeast corner of said Anarene Investments 226.11-acre tract at a distance of 1,349.20 feet, and continuing on for a total distance of 1,489.20 feet to a TxDOT Type I concrete monument found at a point of curvature of a curve to the left;

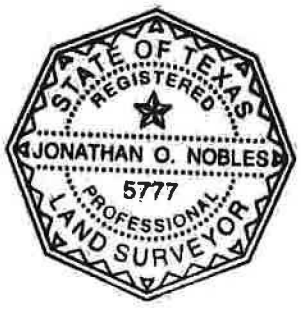
THENCE, continuing with the east line of said Anarene Investments 226.11-acre tract and the west right-of-way line of said Ranch Road 12, along said curve to the left an arc distance of 746.98 feet, having a radius of 2,996.00 feet, a central angle of 14°17'07", and a chord which bears S 21°50'01" W a distance of 745.05 feet to a TxDOT Type I concrete monument found for corner;

THENCE, continuing with the east line of said Anarene Investments 226.11-acre tract and the west right-of-way line of said Ranch Road 12, S 14°28'39" W a distance of 1,975.67 feet to a 1/2-inch iron rod set with cap stamped "BGE, Inc." at a point of curvature of a curve to the right, from which a TxDOT Type I concrete monument found for reference bears N 59°27'59" W a distance of 4.21 feet, also from which a TxDOT Type I concrete monument found on the east right-of-way line of said Ranch Road 12 bears S 75°30'33" E a distance of 100.00 feet;

THENCE, continuing with the east line of said Anarene Investments 226.11-acre tract and the west right-of-way line of said Ranch Road 12, along said curve to the right an arc distance of 98.26 feet, having a radius of 2,815.00 feet, a central angle of 02°00'00" and a chord which bears S 15°29'27" W a distance of 98.25 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for the southeast corner of the herein described tract;

THENCE, with the southerly line of said Anarene Investments 226.11-acre tract and a cut-back portion of the west right-of-way line of said Ranch Road 12, N 28°34'13" W a distance of 28.76 feet to the **POINT OF BEGINNING** and containing 218.352 acres of land, more or less.

I hereby certify that these notes were prepared by BGE from a survey made on the ground on September 10, 2018 under my supervision and are true and correct to the best of my knowledge. Bearing orientation is based on the Texas State Plane Coordinate System, South Central Zone, NAD 83.

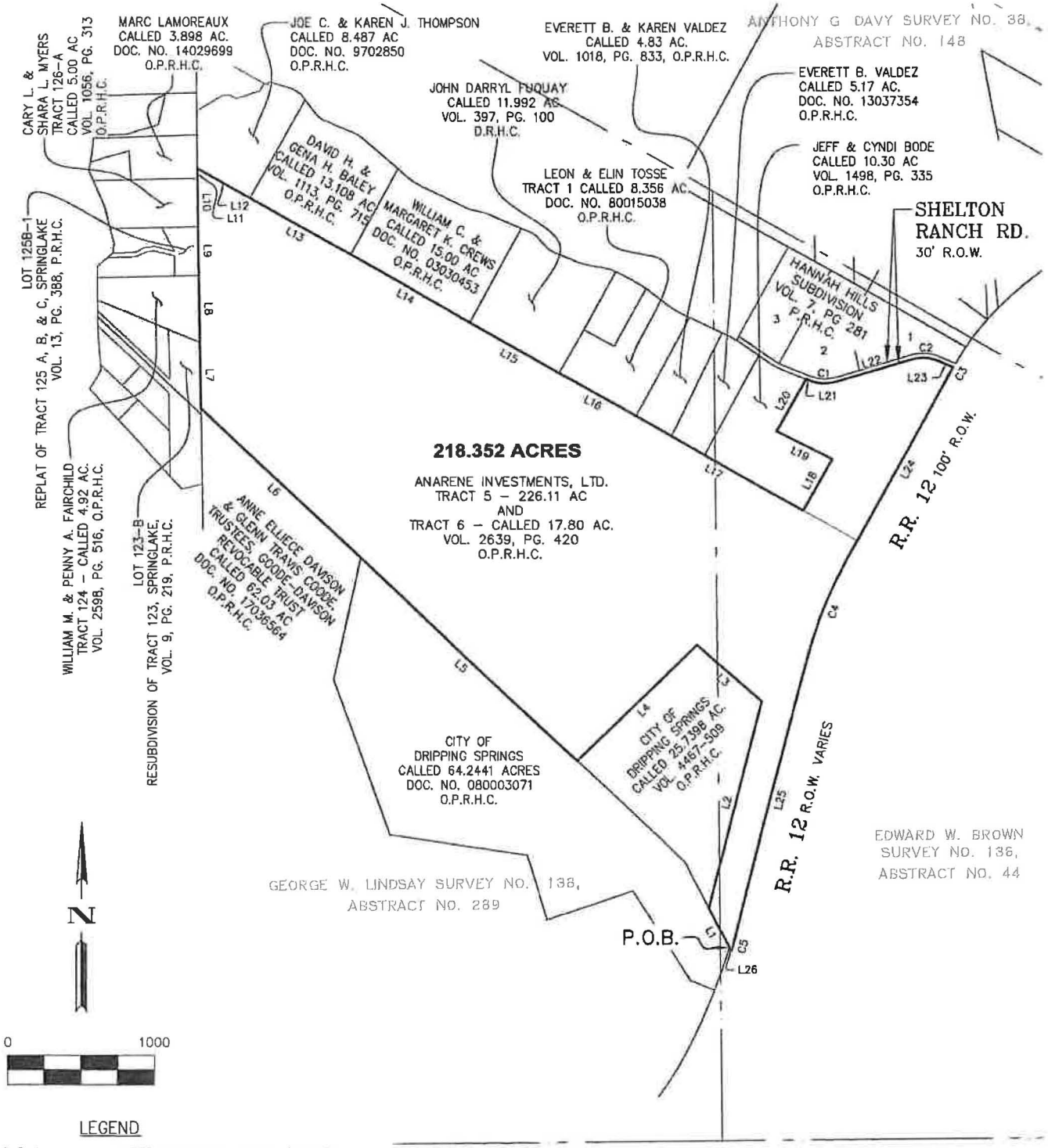



Jonathan O. Nobles RPLS No. 5777
BGE, Inc.
7000 North Mopac, Suite 330
Austin, Texas 78731
Telephone: (512) 879-0400
TBPLS Licensed Surveying Firm No. 10106502

12/12/2018
Date

Date: December 11, 2018
Project No.: 5955-00

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION




LEGEND

| | |
|---|---|
| D.R.H.C. | DEED RECORDS, HAYS COUNTY |
| O.P.R.H.C. | OFFICIAL PUBLIC RECORDS, HAYS COUNTY |
| P.R.H.C. | PLAT RECORDS, HAYS COUNTY |
| P.O.B. | POINT OF BEGINNING |

BEARING BASIS NOTE:

HORIZONTAL DATUM BASED UPON TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, TEXAS SOUTH CENTRAL ZONE. COORDINATES AND DISTANCES SHOWN ARE SURFACE VALUES. COMBINED SCALE FACTOR IS 0.9999320997.

**BGE, Inc.**
7000 North Mopac, Suite 330, Austin, TX 78731
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying Firm No. 10106502

Copyright 2018

SCALE: 1"=1000'

SHEET 6 OF 7

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L1 | N 28°12'34" W | 302.29' |
| L2 | N 14°36'11" E | 1,470.07' |
| L3 | N 49°13'14" W | 598.82' |
| L4 | S 45°59'38" W | 1,153.28' |
| L5 | N 46°55'44" W | 2,051.75' |
| L6 | N 46°51'16" W | 1,500.80' |
| L7 | N 01°08'13" W | 453.57' |
| L8 | N 01°07'53" W | 460.08' |
| L9 | N 00°54'14" W | 336.16' |
| L10 | N 00°45'39" W | 332.73' |
| L11 | N 00°33'39" W | 69.38' |
| L12 | S 60°44'38" E | 415.44' |
| L13 | S 60°41'05" E | 789.57' |

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L14 | S 60°42'09" E | 955.59' |
| L15 | S 60°27'57" E | 707.23' |
| L16 | S 60°46'51" E | 601.45' |
| L17 | S 60°36'41" E | 1,333.96' |
| L18 | N 29°07'24" E | 406.60' |
| L19 | N 63°03'43" W | 425.17' |
| L20 | N 29°12'20" E | 410.41' |
| L21 | S 68°08'51" E | 21.24' |
| L22 | N 73°35'59" E | 544.90' |
| L23 | S 66°58'50" E | 109.09' |
| L24 | S 29°11'41" W | 1,489.20' |
| L25 | S 14°28'39" W | 1,975.67' |
| L26 | N 28°34'13" W | 28.76' |

| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| NUMBER | ARC LENGTH | RADIUS | DELTA | CHORD BEARING | CHORD DISTANCE |
| C1 | 192.46' | 288.51' | 38°13'14" | S 87°17'39" E | 188.91' |
| C2 | 192.48' | 278.91' | 39°32'26" | S 86°37'44" E | 188.68' |
| C3 | 22.14' | 1,961.00' | 0°38'49" | S 29°30'17" W | 22.14' |
| C4 | 746.98' | 2,996.00' | 14°17'07" | S 21°50'01" W | 745.05' |
| C5 | 98.26' | 2,815.00' | 2°00'00" | S 15°29'27" W | 98.25' |

**BGE, Inc.**
7000 North Mopac, Suite 330, Austin, TX 78731
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying Firm No. 10106502

Copyright 2018

SCALE: 1"=1000'

SHEET 7

OF 7

EXHIBIT A

DOUBLE L DEVELOPMENT, LLC
43.328 ACRES
JOB NO. 5955-00

DESCRIPTION OF A 43.328 ACRE TRACT OF LAND
HAYS COUNTY, TEXAS

ALL THAT CERTAIN PARCEL OR TRACT OF LAND OUT OF THE PHILIP A. SMITH SURVEY NO. 26, ABSTRACT NO. 415, THE MARCUS D. RAPER SURVEY NO. 37, ABSTRACT NO. 394, THE ANTHONY G. DAVY SURVEY NO. 38, ABSTRACT NO. 148 AND THE EDWARD W. BROWN SURVEY NO. 136, ABSTRACT NO. 44, SITUATED IN HAYS COUNTY, TEXAS; BEING A PORTION OF A 977.54 ACRE TRACT AS DESCRIBED IN GENERAL WARRANTY DEED CONVEYED TO ANARENE INVESTMENTS, LTD. AS RECORDED IN VOLUME 2639, PAGE 410 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AND BEING A PORTION OF A CALLED 67.776 ACRE TRACT AS DESCRIBED IN SPECIAL WARRANTY DEEDS CONVEYED TO ANARENE INVESTMENTS, LTD. AS RECORDED IN VOLUME 3958, PAGE 629 AND VOLUME 3958, PAGE 699, BOTH OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AND BEING ALL OF THAT CALLED 2.304 ACRE TRACT AS DESCRIBED IN GENERAL WARRANTY DEED CONVEYED TO JOHN GRAHAM HILL AS RECORDED IN DOCUMENT NUMBER 05005107 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AND BEING ALL OF THAT CALLED 2.30 ACRE TRACT AS DESCRIBED IN GENERAL WARRANTY DEED CONVEYED TO MELINDA HILL PERRIN AS RECORDED IN DOCUMENT NUMBER 80027016 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AND BEING ALL OF THAT CALLED 1.31 ACRE TRACT AS DESCRIBED IN SPECIAL WARRANTY DEED CONVEYED TO JOHN GRAHAM HILL AND MELINDA HILL PERRIN AS RECORDED IN DOCUMENT NUMBER 16043631 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS; AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS AND AS SHOWN ON THE ATTACHED SKETCH:

**COMMENCING for POINT OF REFERENCE** at a 1/2-inch iron rod with cap stamp "BGE INC" set on the east right-of-way line of Ranch Road 12, (100' wide right-of-way), being the common most westerly corner of the above described Anarene Investments 977.54-acre tract and a called 21.126-acre tract as conveyed to Dripping Springs Independent School District (D.S.I.S.D.) by deed of gift recorded in Volume 571, Page 307 of Real Property Records of Hays County, Texas, from which a 80-D nail found bears, S 80°14'54" E a distance of 0.54 feet, and from which a concrete monument found on east right-of-way line of said Ranch Road 12 bears, S 14°28'39" W a distance of 350.43 feet; Thence, leaving the east right-of-way line of Ranch Road 12 and crossing over and across said Anarene Investments 977.54-acre tract, N 48°15'26" E a distance of 3,883.45 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for the most southerly corner and **POINT OF BEGINNING** of the herein described tract;

THENCE, continuing over and across said Anarene Investments 977.54-acre tract, N 62°25'51" W a distance of 365.40 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of curvature of a curve to the right;

THENCE, continuing over and across said Anarene Investments 977.54-acre tract, along said curve to the right, an arc distance of 233.67 feet, having a radius of 485.00 feet, a central angle of 27°36'16" and a chord which bears N 48°37'43" W a distance of 231.41 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of tangency;

THENCE, continuing over and across said Anarene Investments 977.54-acre tract and crossing over and across the above described Anarene Investments 67.776-acre tract, N 34°49'35" W a distance of 267.91 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for a point of curvature of a curve to the left;

THENCE, continuing over and across said Anarene Investments 67.776-acre tract, along said curve to the left, an arc distance of 333.28 feet, having a radius of 1015.00 feet, a central angle of 18°48'48" and a chord which bears N 44°13'58" W a distance of 331.78 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set at a point of reverse curvature;

THENCE, continuing over and across said Anarene Investments 67.776-acre tract, along said curve to the right, an arc distance of 38.55 feet, having a radius of 25.00 feet, a central angle of 88°20'36" and a chord which bears N 09°28'04" W a distance of 34.84 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of tangency, for the most westerly corner of the herein described tract;

THENCE, continuing over and across said Anarene Investments 67.776-acre tract, N 34°42'14" E a distance of 612.89 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of curvature of a curve to the right;

THENCE, continuing over and across said Anarene Investments 67.776-acre tract and crossing over and across said Anarene Investments 977.54-acre tract, along said curve to the right, an arc distance of 168.56 feet, having a radius of 465.00 feet, a central angle of 20°46'10"and a chord which bears N 45°05'19" E a distance of 167.64 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for a point of tangency;

THENCE, continuing over and across said Anarene Investments 977.54-acre tract, N 55°28'23" E a distance of 1,126.40 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for the most northerly corner of the herein described tract;

THENCE, continuing over and across said Anarene Investments 977.54-acre tract, S 13°35'57" E a distance of 353.90 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set for an angle point;

THENCE, continuing over and across said Anarene Investments 977.54-acre tract, S 44°59'39" E a distance of 147.28 feet to a 5/8-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found at the most northerly northeast corner of said Anarene Investments 67.776-acre tract;

THENCE, with a east line of said Anarene Investments 67.776-acre tract and a west line of said Anarene Investments 977.54-acre tract, S 13°46'47" E a distance of 413.12 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for the most easterly corner of the herein described tract, from which a 5/8-inch iron rod with cap stamped "RPLS 3984 STAUDT SURVEY" found at an angle point in the east line of said Anarene Investments 67.776-acre tract bears, S 13°46'47" E a distance of 192.95 feet;

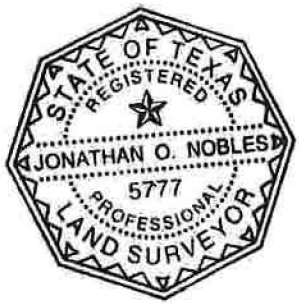
THENCE, leaving the west line of said Anarene Investments 977.54-acre tract and crossing over and across said Anarene Investments 67.776-acre tract, S 88°54'34" W a distance of 262.83 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for an interior corner of the herein described tract;

THENCE, continuing over and across said Anarene Investments 67.776-acre tract and crossing over and across said Anarene Investments 977.54-acre tract, S 02°39'33" E a distance of 903.84 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for an exterior corner of the herein described tract;

THENCE, continuing over and across said Anarene Investments 977.54-acre tract and crossing over and across said Anarene Investments 67.776-acre tract, N 64°51'14" W a distance of 290.58 feet to a 1/2-inch iron rod with cap stamp "BGE INC" set, for an interior corner of the herein described tract;

THENCE, continuing over and across said Anarene Investments 67.776-acre tract and crossing over and across said Anarene Investments 977.54-acre tract, S 35°05'06" W a distance of 538.90 feet to the **POINT OF BEGINNING** and containing 43.328 acres of land, more or less.

I hereby certify that these notes were prepared by BGE from a survey made on the ground on September 10, 2018 under my supervision and are true and correct to the best of my knowledge. Bearing orientation is based on the Texas State Plane Coordinate System, South Central Zone, NAD 83.

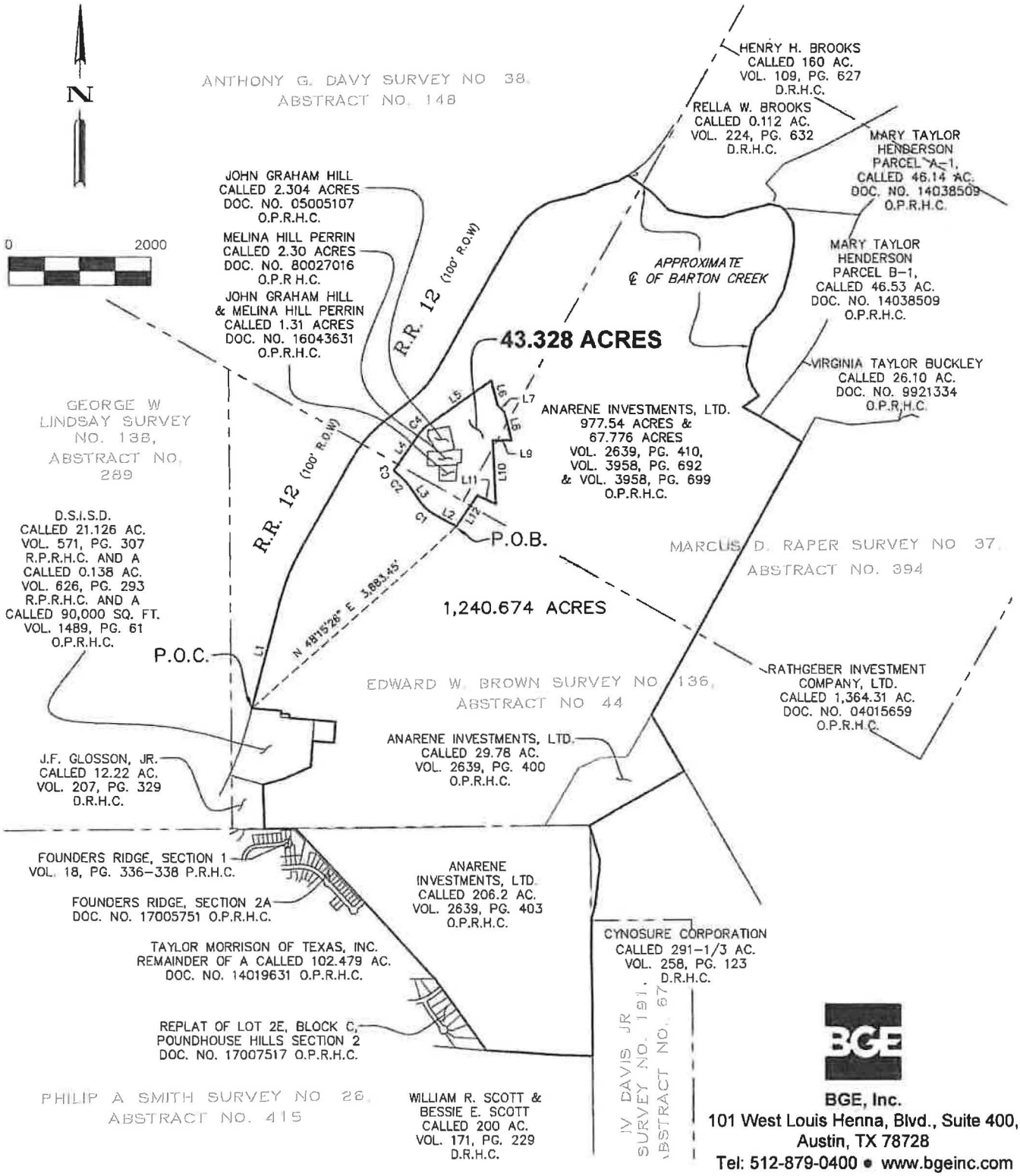



Jonathan O. Nobles RPLS No. 5777
BGE, Inc.
7000 North Mopac, Suite 330
Austin, Texas 78731
Telephone: (512) 879-0400
TBPLS Licensed Surveying Firm No. 10106502

8/30/2019
Date

Date: November 19, 2018
Revised: August 30, 2019
Project No.: 5955-00

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION




**BGE, Inc.**
101 West Louis Henna, Blvd., Suite 400,
Austin, TX 78728
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying
Firm No. 10106502

BEARING BASIS NOTE:

HORIZONTAL DATUM BASED UPON TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, TEXAS SOUTH CENTRAL ZONE. COORDINATES AND DISTANCES SHOWN ARE SURFACE VALUES. COMBINED SCALE FACTOR IS 0.9999320997.

LEGEND

| | |
|---|---|
| D.R.H.C. | DEED RECORDS, HAYS COUNTY |
| O.P.R.H.C. | OFFICIAL PUBLIC RECORDS, HAYS COUNTY |
| P.R.H.C. | PLAT RECORDS, HAYS COUNTY |
| P.O.B. | POINT OF BEGINNING |
| P.O.C. | POINT OF COMMENCEMENT |

Copyright 2019

SCALE: 1"=2000'

SHEET 4 OF 5

# EXHIBIT TO ACCOMPANY LEGAL DESCRIPTION

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L1 | N 14°28'39" E | 1,624.68' |
| L2 | N 62°25'51" W | 365.40' |
| L3 | N 34°49'35" W | 267.91' |
| L4 | N 34°42'14" E | 612.89' |
| L5 | N 55°28'23" E | 1,126.40' |
| L6 | S 13°35'57" E | 353.90' |
| L7 | S 44°59'39" E | 147.28' |
| L8 | S 13°46'47" E | 413.12' |
| L9 | S 88°54'34" W | 262.83' |
| L10 | S 02°39'33" E | 903.84' |
| L11 | N 64°51'14" W | 290.58' |
| L12 | S 35°05'06" W | 538.90' |

| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| NUMBER | ARC LENGTH | RADIUS | DELTA | CHORD BEARING | CHORD DISTANCE |
| C1 | 233.67' | 485.00' | 27°36'16" | N 48°37'43" W | 231.41' |
| C2 | 333.28' | 1,015.00' | 18°48'48" | N 44°13'58" W | 331.78' |
| C3 | 38.55' | 25.00' | 88°20'36" | N 09°28'04" W | 34.84' |
| C4 | 168.56' | 465.00' | 20°46'10" | N 45°05'19" E | 167.64' |

**BGE, Inc.**
101 West Louis Henns Blvd., Suite 400,
Austin, TX 78728
Tel: 512-879-0400 • www.bgeinc.com
TBPLS Licensed Surveying
Firm No. 10106502

Copyright 2019

SCALE: 1"=2000'

SHEET 5

OF 5

EXHIBIT **A-1**

DRIPPING SPINGS I.S.D.
89,980 SQ. FT.
JOB NO. 7540-00

METES & BOUNDS DESCRIPTION

FIELD NOTES FOR A 89,980 SQUARE FOOT (2.066 ACRES) TRACT OF LAND OUT OF THE EDWARD W. BROWN SURVEY NO. 136, ABSTRACT NO. 44, SITUATED IN HAYS COUNTY, TEXAS; BEING ALL OF THAT CALLED 90,000 SQUARE FOOT TRACT CONVEYED TO DRIPPING SPRINGS INDEPENDENT SCHOOL DISTRICT BY DEED OF GIFT RECORDED IN VOLUME 1489, PAGE 61 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS; AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS AND AS SHOWN ON THE ATTACHED SKETCH:

**BEGINNING** at a 1/2-inch iron rod in concrete found on a southerly line of a called 223.556 acre tract as conveyed to Double L Development, LLC by special warranty deed recorded in Document Number 19035343 of the Official Public Records of Hays County, Texas, at the most easterly northeast corner of a called 21.126 acre tract as conveyed to Dripping Springs Independent School District (D.S.I.S.D.) by deed of gift recorded in Volume 571, Page 307 of Real Property Records of Hays County, Texas, being the northwest corner of the above described D.S.I.S.D. 90,000-square foot tract, for the northwest corner and **POINT OF BEGINNING** of the herein described tract, from which a 1/2-inch iron rod found at the most easterly southeast corner of said D.S.I.S.D. 21.126-acre tract bears S 03°44'39" W a distance of 670.39 feet;

THENCE, with the southerly line of said Double L Development, LLC, 223.556-acre tract, and the north line of said D.S.I.S.D. 90,000-square foot tract, S 85° 02' 09" E for a distance of 300.00 feet to a 1/2-inch iron rod w/cap stamped "BGE INC" set at a southerly corner of said Double L Development, LLC, 223.556-acre tract, for the northeast corner of the herein described tract.

THENCE, leaving the southerly line of said Double L Development, LLC, 223.556-acre tract, with a westerly line of the remainder of a called 1,240.674 acre tract as conveyed to LL Ranch Investments, LP by special warranty deed recorded in Document Number 19035342 of the Official Public Records of Hays County, Texas, and the east line of said D.S.I.S.D. 90,000-square foot tract, S 03° 44' 39" W for a distance of 300.00 feet to a 1/2-inch iron rod w/cap stamped "BGE INC" set for the southeast corner of the herein described tract.

THENCE, with a northerly line of said LL Ranch Investments, LP 1,240.674-acre remainder tract, and the south line of said D.S.I.S.D. 90,000-square foot tract, N 85° 02' 09" W for a distance of 300.00 feet to a 1/2-inch iron rod w/cap stamped "BGE INC" set on the east line of said D.S.I.S.D. 21.126-acre tract for the southwest corner of the herein described tract.

THENCE, with east line of said D.S.I.S.D. 21.126-acre tract, and west line of said D.S.I.S.D. 90,000-square foot tract, N 03° 44' 39" E a distance of 300.00 feet to the **POINT OF BEGINNING** and containing 89,980 square feet (2.066 acres) of land, more or less.

I hereby certify that these notes were prepared by BGE from a survey made on the ground on September 10, 2018 under my supervision and are true and correct to the best of my knowledge. Bearing orientation is based on the Texas State Plane Coordinate System, South Central Zone, NAD 83.

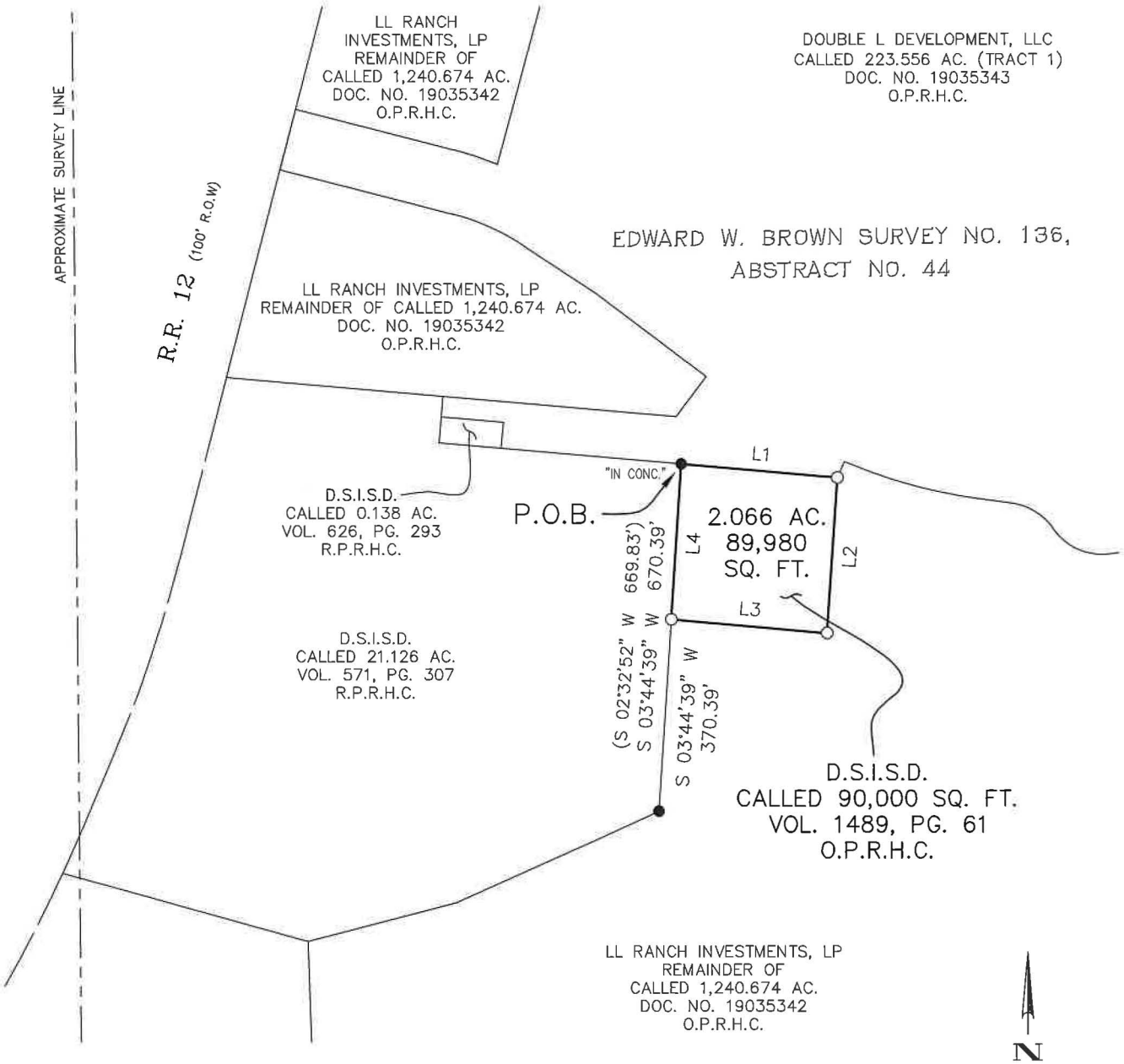
Jonathan O. Nobles RPLS No. 5777
BGE, Inc.
101 West Louis Henna Blvd., Suite 400
Austin, Texas 78728
Telephone: (512) 879-0400
TBPLS Licensed Surveying Firm No. 10106502

05/06/2021
Date




Date: May 6, 2021
Project No.: 7540-00

# SKETCH TO ACCOMPANY LEGAL DESCRIPTION




LEGEND

| | |
|---|---|
| O.P.R.H.C. | OFFICIAL PUBLIC RECORDS, HAYS COUNTY |
| R.P.R.H.C. | REAL PROPERTY RECORDS, HAYS COUNTY |
| P.O.B. | POINT OF BEGINNING |
| ( ) | RECORD INFORMATION VOL. 571, PG. 307 & VOL. 1489, PG. 61 |
| ● | FOUND 1/2-INCH IRON ROD |
| O | SET 1/2-INCH IRON ROD W/CAP STAMPED "BGE INC" |

| LINE TABLE | | |
|---|---|---|
| NUMBER | BEARING | DISTANCE |
| L1 | S 85°02'09" E | 300.00' |
| | (S 86°13'48" E) | (300.00') |
| L2 | S 03°44'39" W | 300.00' |
| | (S 02°32'52" W) | (300.00') |
| L3 | N 85°02'09" W | 300.00' |
| | (N 86°13'48" W) | (300.00') |
| L4 | N 03°44'39" E | 300.00' |

BEARING BASIS NOTE:

HORIZONTAL DATUM BASED UPON TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, TEXAS SOUTH CENTRAL ZONE. COORDINATES AND DISTANCES SHOWN ARE SURFACE VALUES. COMBINED SCALE FACTOR IS 0.9999320997.

**BGE, Inc.**
7101 West Louis Henna Blvd., Suite 400, Austin, TX 78728
Tel: 512-879-0400 • www.bgeinc.com
TBPELS Licensed Surveying Firm No. 10106502

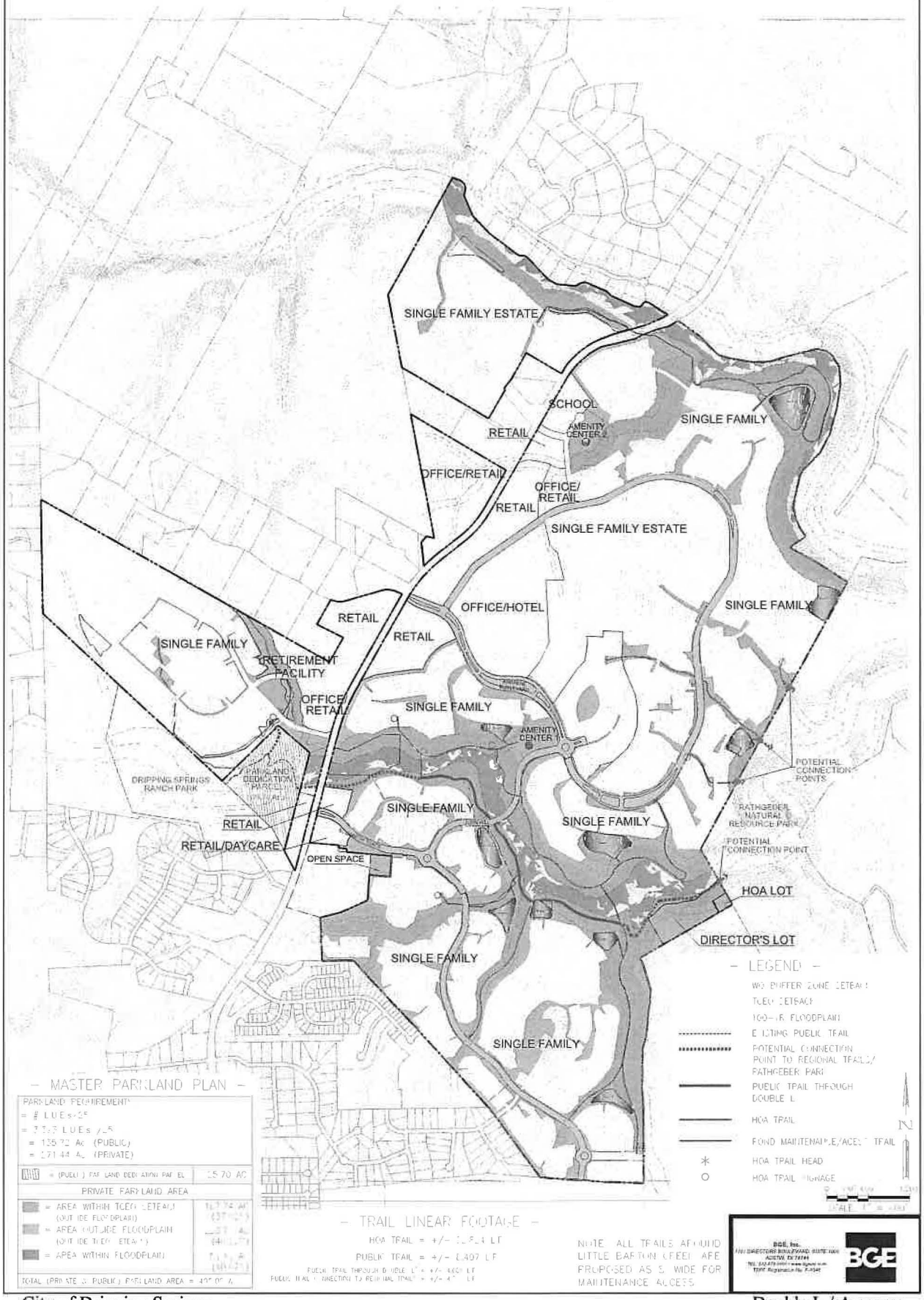
SCALE: 1"300'
SHEET 3
OF 3

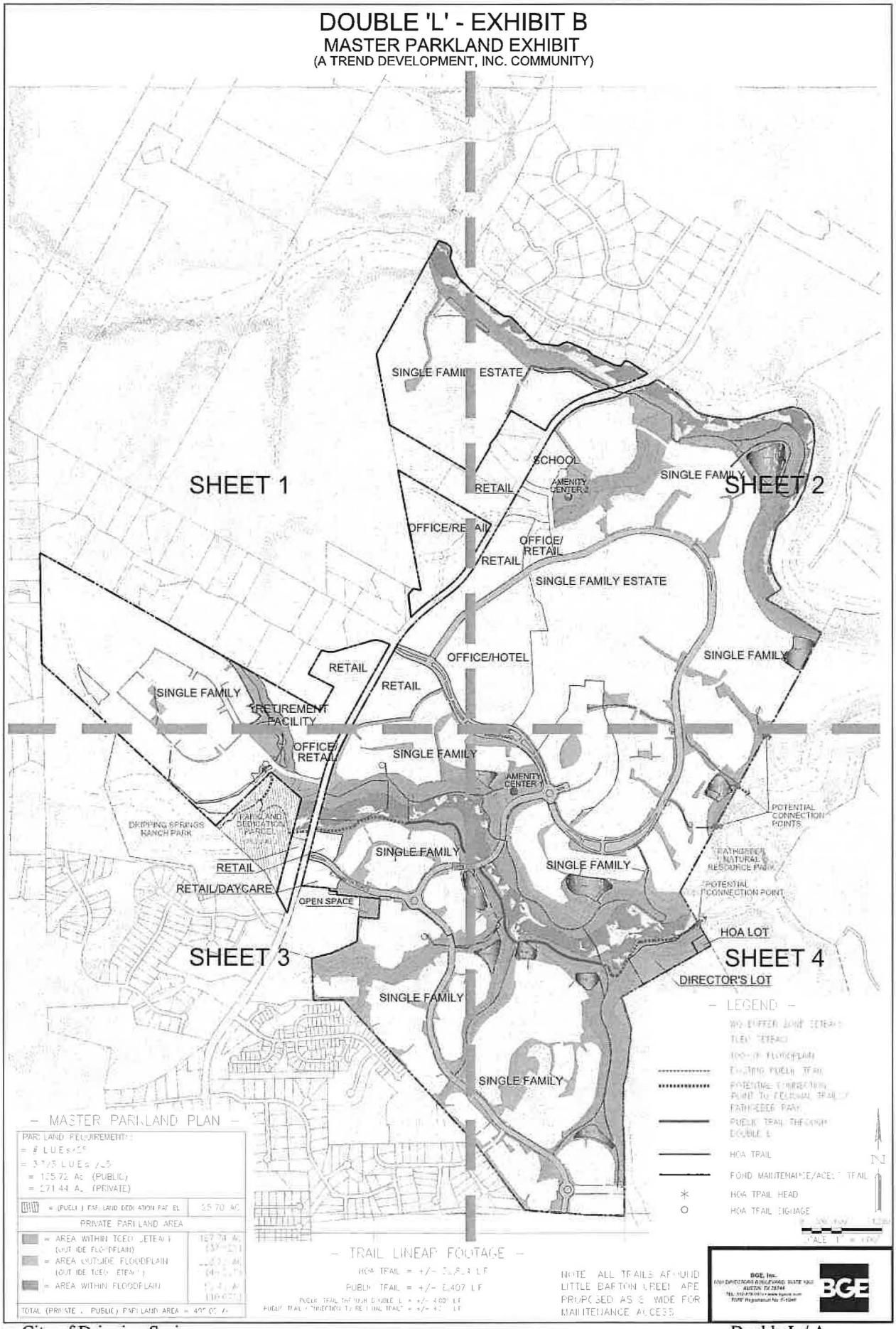
Copyright 2021

# DOUBLE 'L' - EXHIBIT B

## MASTER PARKLAND EXHIBIT

(A TREND DEVELOPMENT, INC. COMMUNITY)

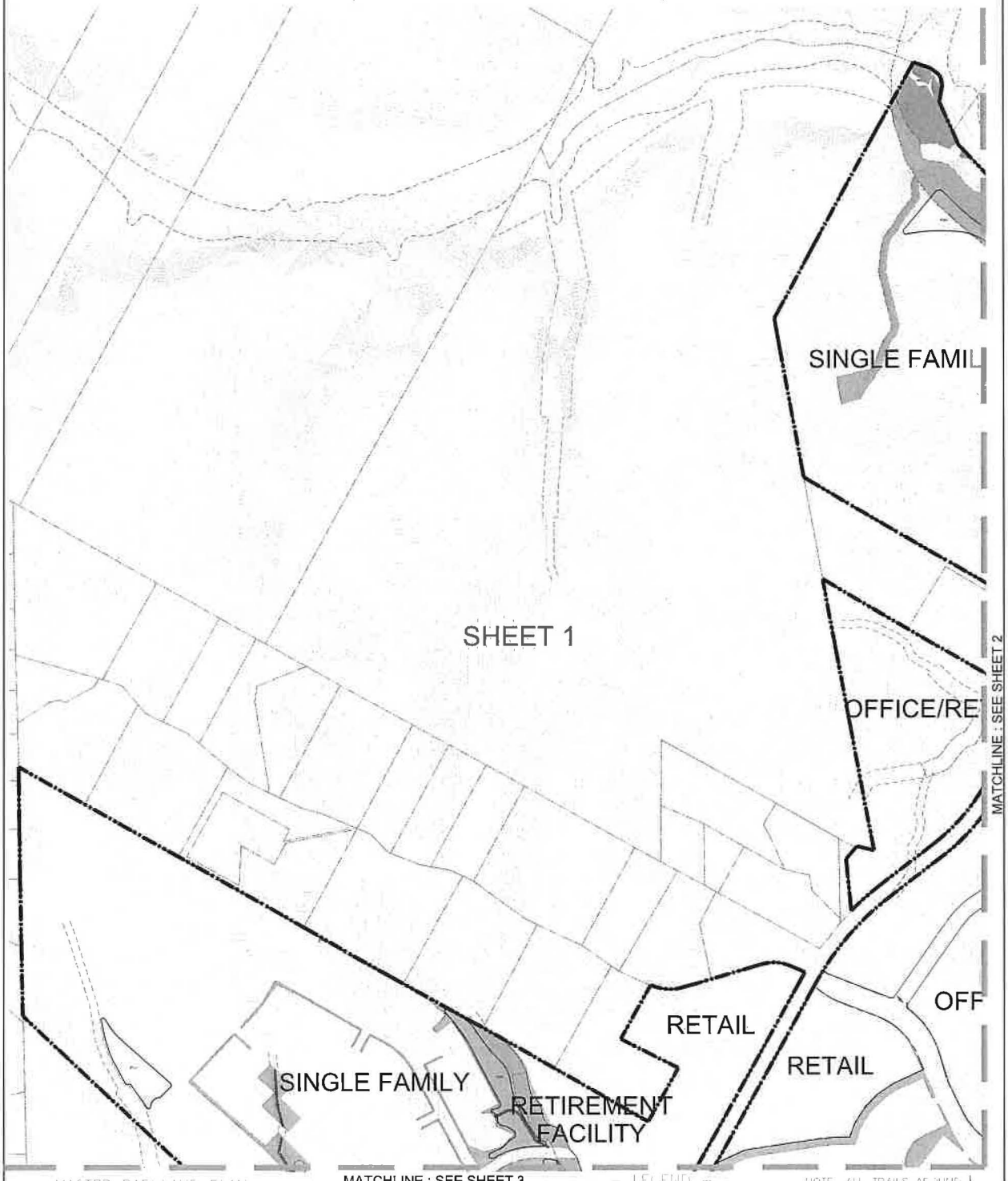



DOUBLE 'L' - EXHIBIT B
MASTER PARKLAND EXHIBIT
(A TREND DEVELOPMENT, INC. COMMUNITY)
SHEET 1
SHEET 2
SHEET 3
SHEET 4
SINGLE FAMILY ESTATE
SCHOOL
AMENITY CENTER 2
RETAIL
SINGLE FAMILY
OFFICE/RETAIL
OFFICE/ RETAIL
SINGLE FAMILY ESTATE
OFFICE/HOTEL
RETAIL
RETAIL
SINGLE FAMILY
RETIREMENT FACILITY
OFFICE/ RETAIL
SINGLE FAMILY
AMENITY CENTER 1
DRIPPING SPRINGS RANCH PARK
PARKLAND DEDICATION PARCEL
POTENTIAL CONNECTION POINTS
SINGLE FAMILY
SINGLE FAMILY
PATHFINDER NATURAL RESOURCE PARK
RETAIL
RETAIL/DAYCARE
OPEN SPACE
POTENTIAL CONNECTION POINT
HOA LOT
DIRECTOR'S LOT
SINGLE FAMILY
SINGLE FAMILY
- LEGEND -
EXISTING PUBLIC TRAIL
POTENTIAL CONNECTION POINT TO FEDERAL TRAILS / PATHFINDER PARK
PUBLIC TRAIL THROUGH DOUBLE L
HOA TRAIL
POND MAINTENANCE/ACCESS TRAIL
HOA TRAIL HEAD
HOA TRAIL SIGNAGE
N
- MASTER PARKLAND PLAN -
PARKLAND REQUIREMENTS
= # LUEs/25
= 3725 LUEs / 25
= 135.72 Ac. (PUBLIC)
= 27144 Ac. (PRIVATE)
= (PUBLIC) PARKLAND DEDICATION REQUIRED
25.70 AC
PRIVATE PARKLAND AREA
= AREA WITHIN TCEQ SETBACK (OUTSIDE FLOODPLAIN)
= AREA OUTSIDE FLOODPLAIN (OUTSIDE TCEQ SETBACK)
= AREA WITHIN FLOODPLAIN
TOTAL (PRIVATE + PUBLIC) PARKLAND AREA = 407.05 +/-
- TRAIL LINEAR FOOTAGE -
HOA TRAIL = +/- 10,853 LF
PUBLIC TRAIL = +/- 6,407 LF
PUBLIC TRAIL THROUGH DOUBLE L = +/- 4,007 LF
PUBLIC TRAIL CONNECTION TO RETIREMENT TRAILS = +/- 42 LF
NOTE: ALL TRAILS AROUND LITTLE BARTON CREEK ARE PROPOSED AS 8' WIDE FOR MAINTENANCE ACCESS
BGE, Inc.
BGE

# DOUBLE 'L' - EXHIBIT B

## MASTER PARKLAND EXHIBIT

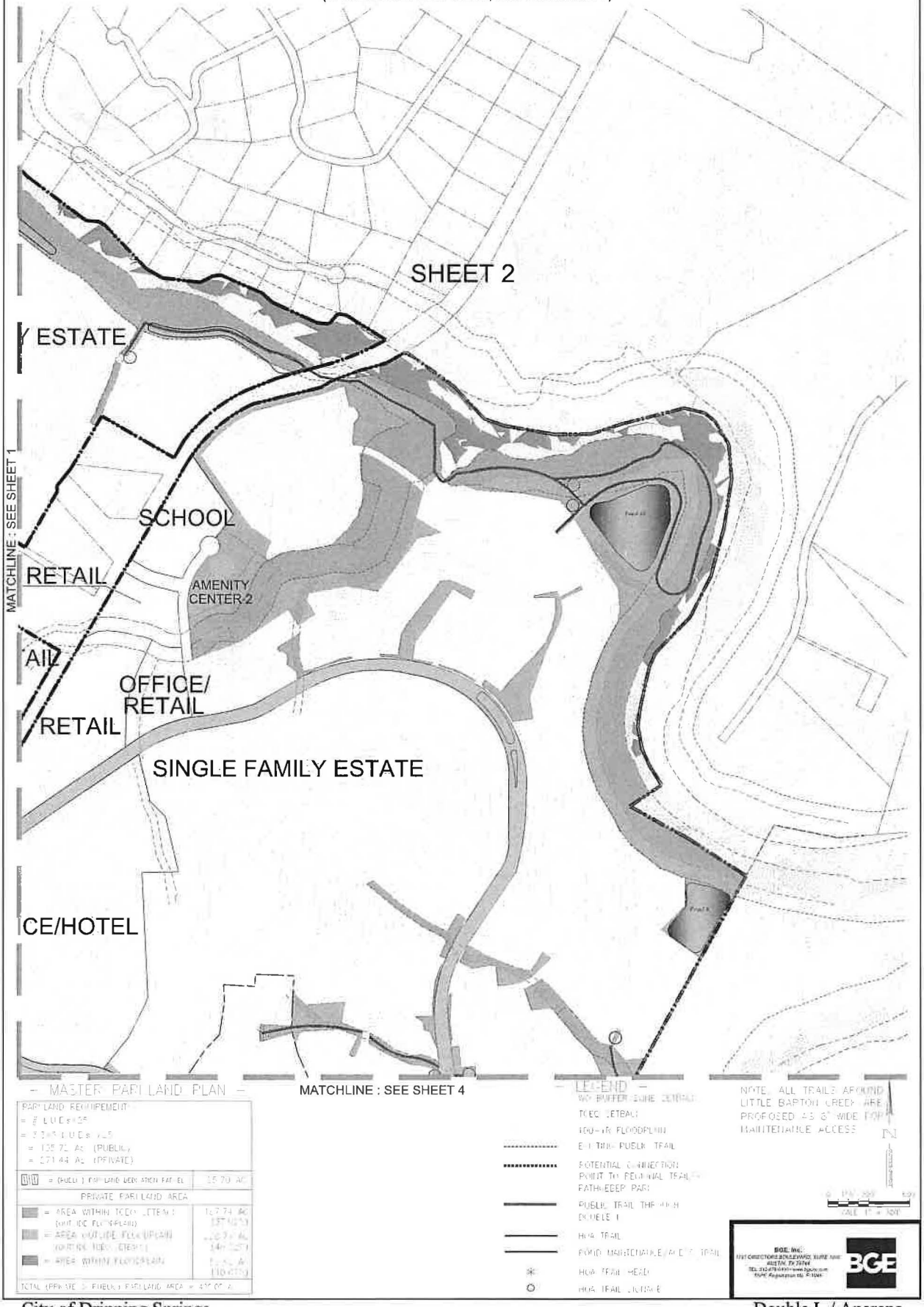
(A TREND DEVELOPMENT, INC. COMMUNITY)



# DOUBLE 'L' - EXHIBIT B

## MASTER PARKLAND EXHIBIT

(A TREND DEVELOPMENT, INC. COMMUNITY)



# DOUBLE 'L' - EXHIBIT B

## MASTER PARKLAND EXHIBIT

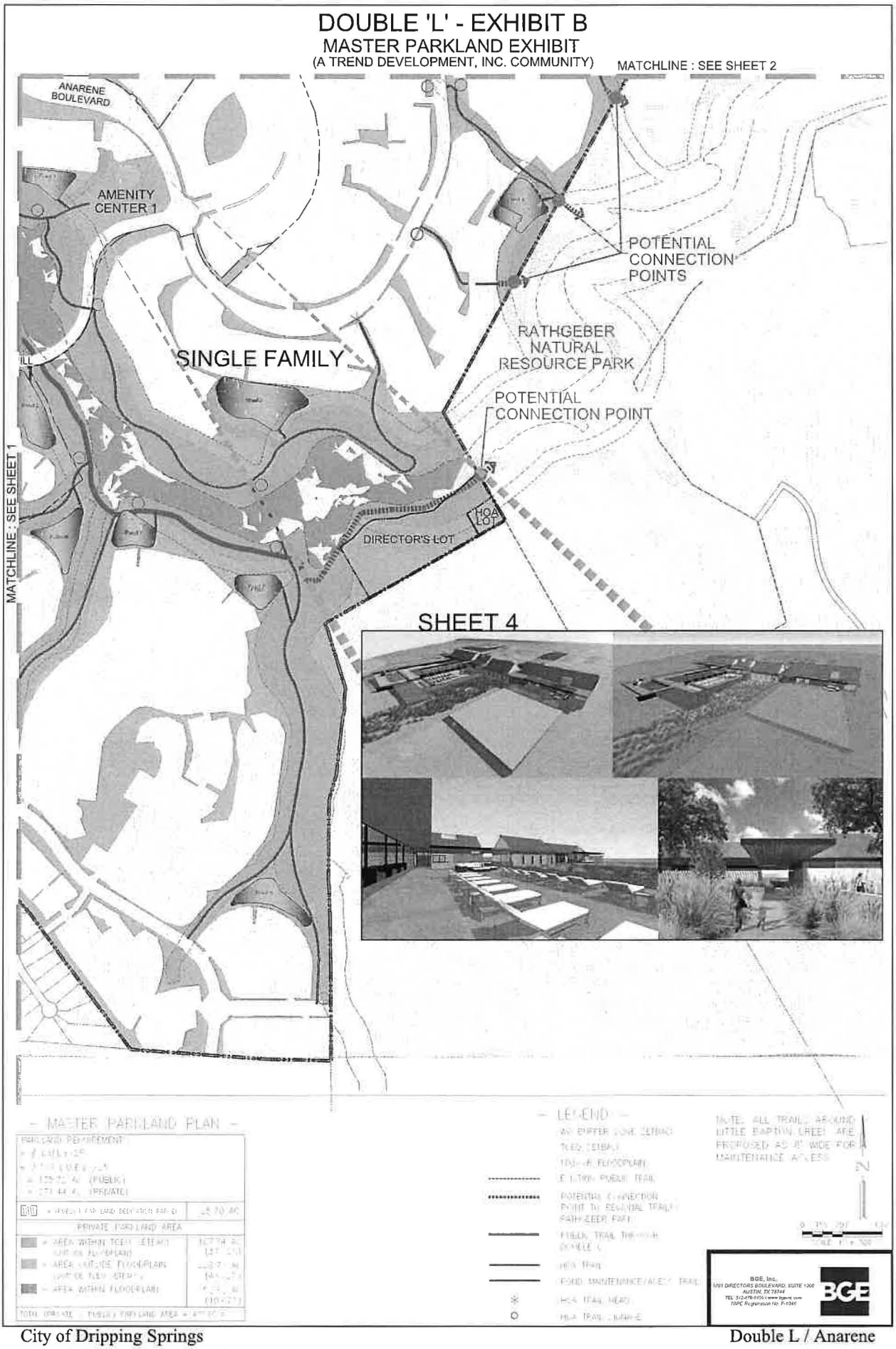
(A TREND DEVELOPMENT, INC. COMMUNITY)



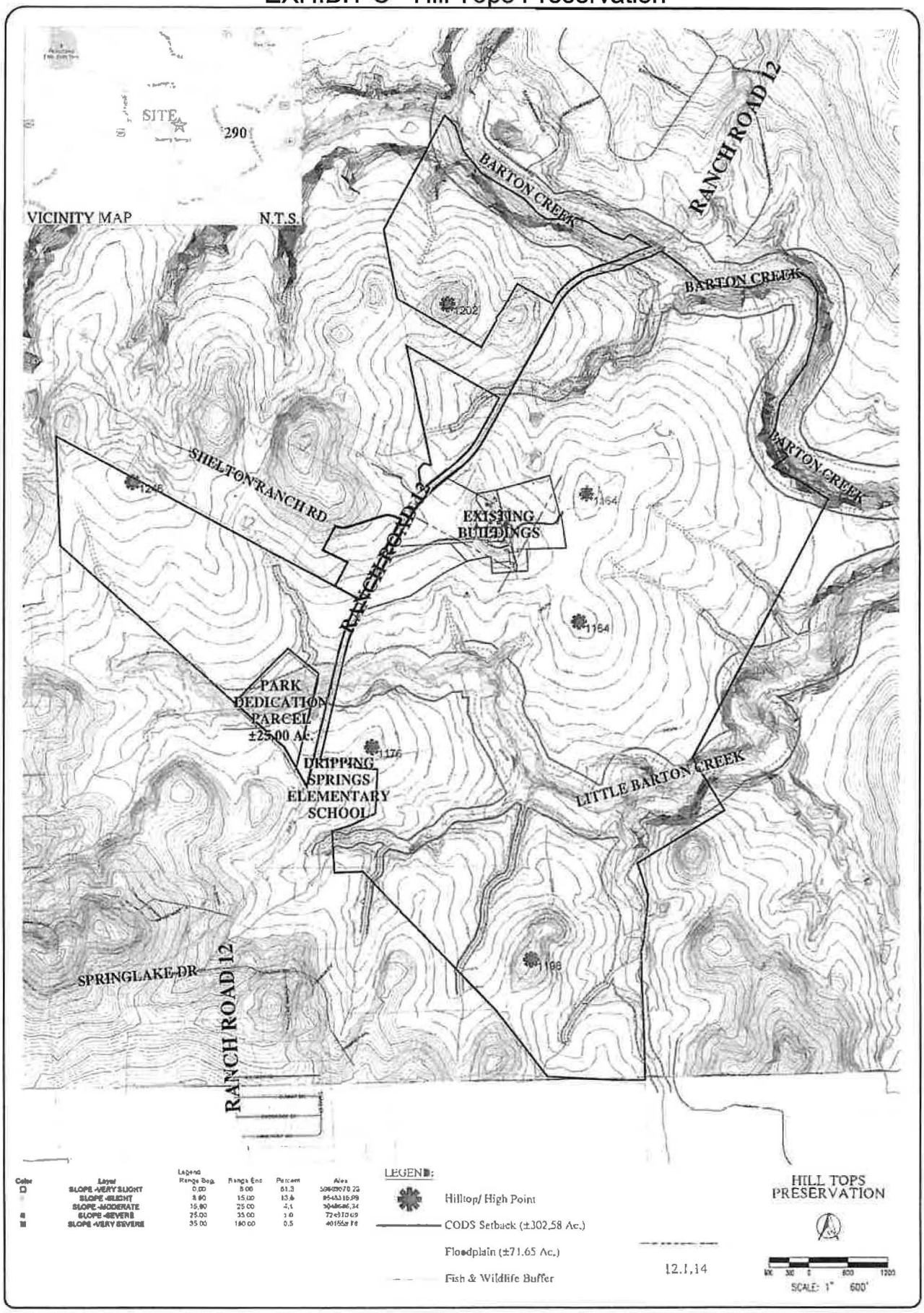
# DOUBLE 'L' - EXHIBIT B

## MASTER PARKLAND EXHIBIT

(A TREND DEVELOPMENT, INC. COMMUNITY)



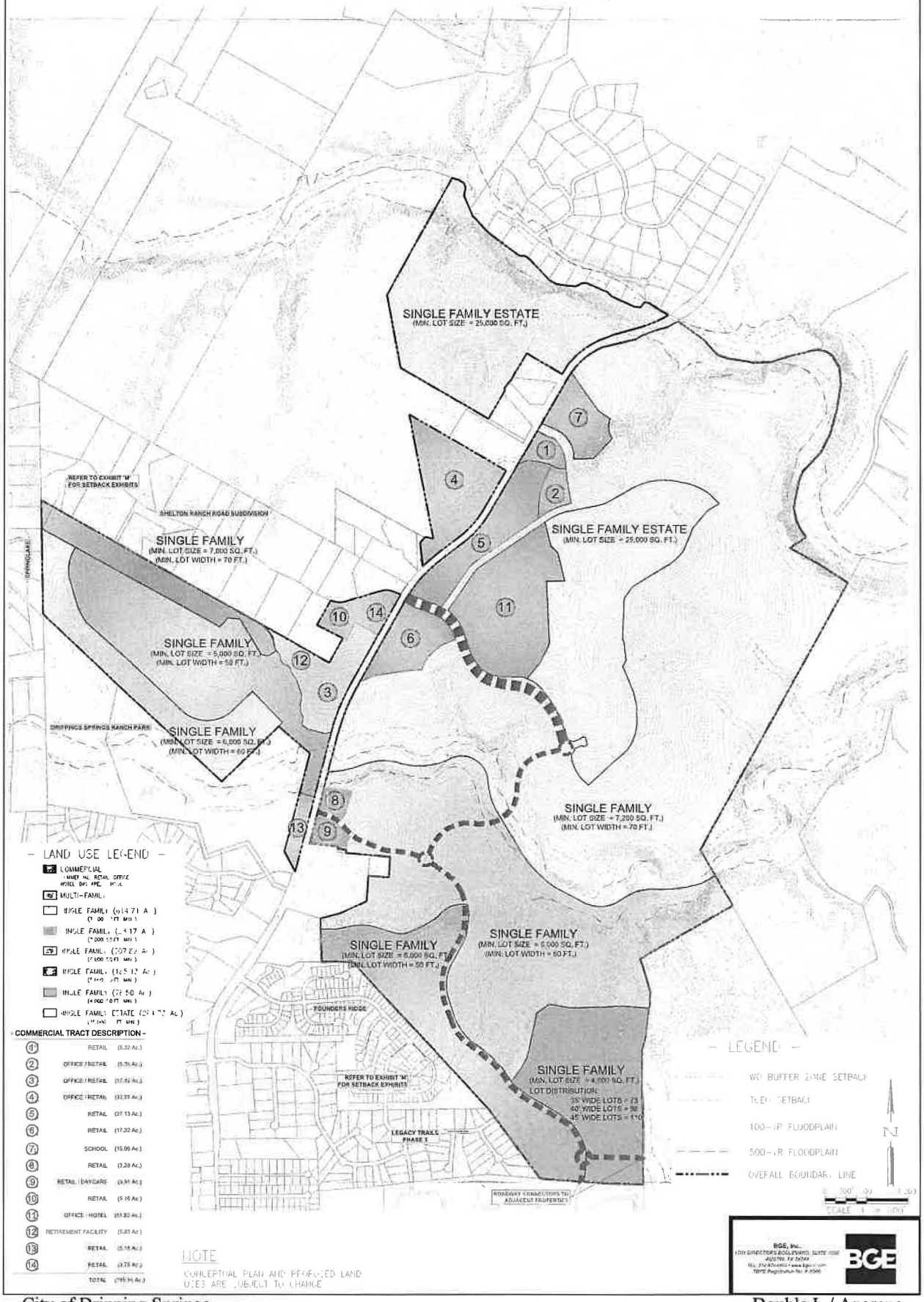
# EXHIBIT C - Hill Tops Preservation



# DOUBLE 'L' - EXHIBIT D

## CONCEPTUAL MASTER PLAN

(A TREND DEVELOPMENT, INC. COMMUNITY)




NOTE

CONCEPTUAL PLAN AND PROPOSED LAND USES ARE SUBJECT TO CHANGE

EXHIBIT E

| **Code Section** *(Ordinance)* | **Summary** | **Modification** |
|---|---|---|
| **City of Dripping Springs Code of Ordinances currently in effect, 2021** | | |
| **Chapter 22** | **General Regulations** | |
| 22.05.014(c) *(3500.11, §4, adopted 2/20/07)* | Hazardous Material Traps (HMT) required on roads with 5,000+ VPD | Eliminate this requirement. HMT requirements will be per TCEQ RG-348 Appendix A Optional Enhanced Measures. |
| 22.05.015 *(3500.11, §5, adopted 2/20/07)* | Performance Standards for Water Quality BMP's | Eliminate and substitute with comply with TCEQ RG-348 Appendix A Optional Enhanced Measures. |
| 22.05.016(a)(2) *(3500.11, §6, adopted 2/20/07)* | Maximum Impervious Cover | Maximum impervious cover for all site development plans within the Edwards Aquifer will be as tabulated in Section 3.1.4 of the Agreement. The overall project impervious cover to be 35% maximum. |
| 22.05.016(c) *(3500.11, §6, adopted 2/20/07)* | The following are IC: (6) Swimming pool surface area. | Modify (6) to Swimming pool surface area unless they provide freeboard volume to contain the Water Quality Volume as required by TCEQ rules. |
| 22.05.17(b) *(3500.11, §7, adopted 2/20/07)* | Water Quality Buffers | Eliminate 22.05.17 and Buffers per TCEQ RG-348 Appendix A Optional Enhanced Measures shall govern. |
| 22.05.017(d) *(3500.11, §7, adopted 2/20/07)* | Development in the buffer is limited to critical crossings only and as few as possible; (11) WQ ponds are allowed in the buffer if drainage area is < 128 ac | Allow stacking detention on top of the allowed WQ Ponds; Allow storm outfalls and daylights in the buffer (e.g. pond outfall). Parallel encroachment of utilities within the buffer may be allowed with City Engineer approval. |
| 22.05.022(a)(2) *(3500.11, §12, adopted 2/20/07)* | Nonresidential construction is to use xeriscape landscaping | Eliminate |
| 22.05.023 *(3500.11, §13, adopted 2/20/07)* | Structural Controls – Water Quality | Eliminate and substitute with comply with TCEQ RG-348 Appendix A Optional Enhanced Measures. |
| 22.05.025 *(3500.11, §15, adopted 2/20/07)* | Erosion Hazard Zone setbacks; sections allows for a slope maintenance plan | Eliminate |

EXHIBIT E

| **Code Section** *(Ordinance)* | **Summary** | **Modification** |
|---|---|---|
| **Chapter 26** | **Sign Ordinance** | |
| 26.01.004 *(2020-12)* | (4) off premises signs are prohibited | Allow an off-site directional sign with comparable design and size to the sign approved for the Wild Ridge Development at the US Hwy 290 and proposed Arterial intersections. |
| **Chapter 28** | **Subdivision & Site Development** | |
| 28.07.004(4) *(2019-39, adopted 10/15/19)* | The Dripping Springs Techinical Criteria (DSTC), Ordinance No. 2019-39, defers to the City of Austin Environmental Criteria Manual (ECM) for the design of Environmental Management Facilities. | No requirement to comply with the City of Austin ECM for Water Quality design purposes. BMP's for water quality control compliant with the Texas Commission on Environmental Quality (TCEQ) Optional Enhanced Measures for the Protection of Water Quality in the Edwards Aquifer (RG-348 Appendix A) are considered as compliant Environmental management facilities. |
| 28 Exh A 5.4.3 *(2019-29, adopted 9/10/19)* | Requires construction and installation of required public improvements & City Utilities | All public improvements shall be completed or supported by complete fiscal security in accordance with approved construction plans prior to submission of final plat. A final plat shall not be filed for recordation until all improvements and/or fiscal security has been accepted by the City. |
| 28 Exh A 11.21.2 *(2019-29, adopted 9/10/19)* | Maximum block length and cul-de-sac is 2,000' | Maximum block length and cul-de-sac is 3,000' |
| 28 Exh A 12.2.1 *(2019-29, adopted 9/10/19)* | Minimum utility easement is 20' | Minimum utility easement is 15' |
| 28 Exh A 12.2.4 *(2019-29, adopted 9/10/19)* | Front lot PUE is to be 20' | Front lot PUE is to be 10' |

EXHIBIT E

| **Code Section** *(Ordinance)* | **Summary** | **Modification** |
|---|---|---|
| 28 Exh A 13.2 *(2019-29, adopted 9/10/19)* | Repeat language on block lengths; min/max called as 400'/1,200' | Update to match 28 Exh A 11.21.2 |
| 28 Exh A 14.6 *(2019-29, adopted 9/10/19)* | Minimum lot size is 0.75 ac | Minimum lot size is 3,500 SF |
| 28 Exh A 15.2 *(2019-29, adopted 9/10/19)* | The sidewalk must be a minimum of 5' from the back of curb and 1' from the ROW; 5' can only be reduced with City Council approval | Sidewalks shall be a minimum of 5 feet wide, 2 feet from the ROW and a minimum of 3.5 feet from the back of curb. |
| 28 Exh A 16.1 *(2019-29, adopted 9/10/19)* | Minimum Building Setback Lines | Residential lots 45 ft wide or less are allowed for zero lot line development while maintaining a ten-foot side building line setback on the other side. |
| 28 Exh A 18.3.8 *(2019-29, adopted 9/10/19)* | Drainage from one lot may go across another w/o City Engineer approval & an easement | Drainage from a residential lot backing an adjacent residential lot within the subdivision will be allowed to drain to the adjacent lot and on to a street, sewer or ditch for collection in a centralized drainage facility. Drainage leaving the subdivision shall be allowed to leave the site matching the existing character of the flow (sheet flow or concentrated flow) and at the existing rate of flow or less. |

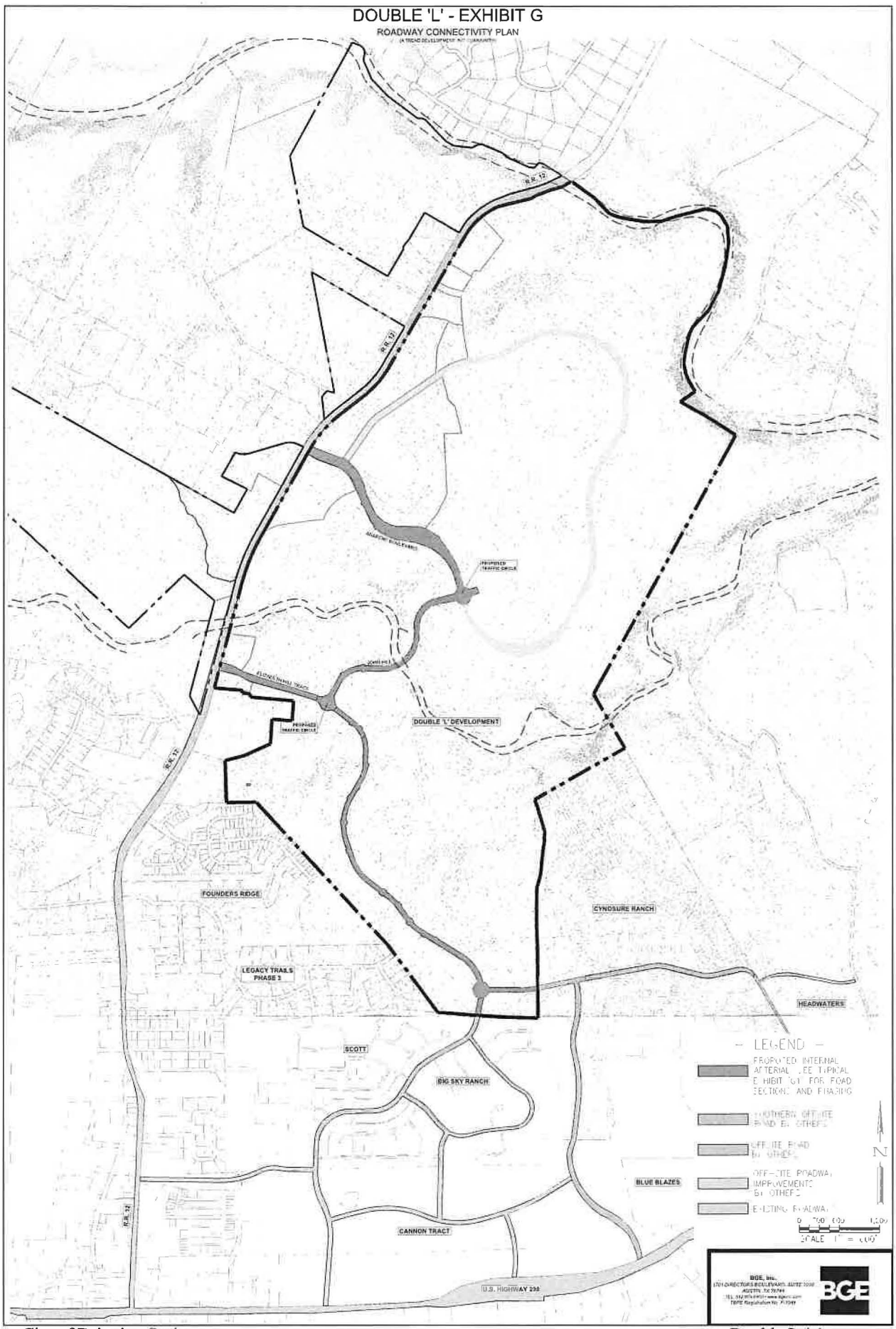
## EXHIBIT F

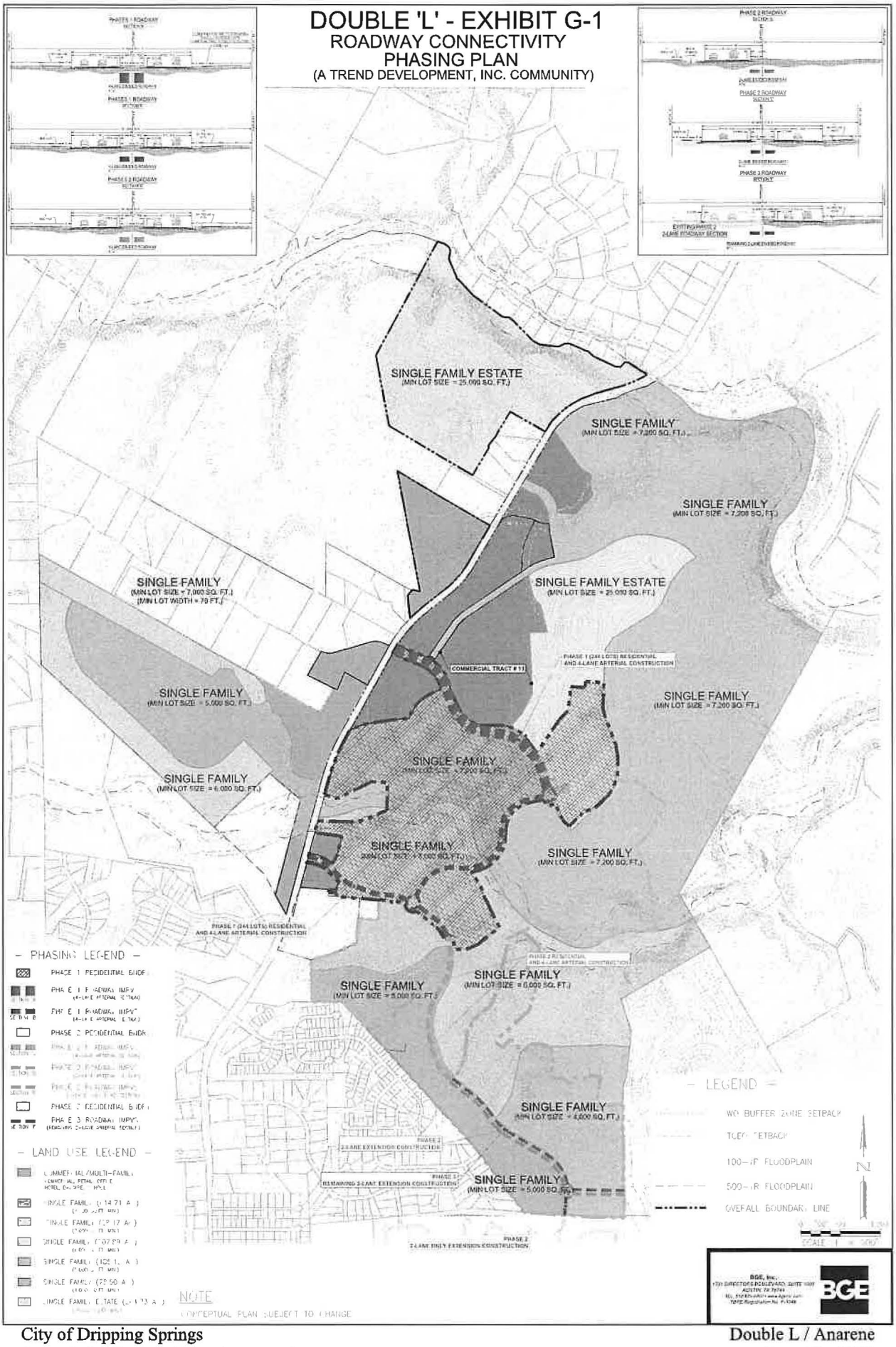
### Approved Plant List

For landscaping, developer, builders, and home owners will follow guidelines as specified for Western Zone, Edwards Plateau in ***Native and Adapted Landscape Plants an earthwise guide for Central Texas Fifth Edition, 2013*** published by Texas A&M Agrilife Extension, City of Austin, and growgreen.org (commonly referred to as Austin Grow Green booklet). Any plant listed as invasive on page 53 of Austin Grow Green Fifth Edition is prohibited from use.

# DOUBLE 'L' - EXHIBIT G

ROADWAY CONNECTIVITY PLAN




DOUBLE 'L' - EXHIBIT G-1
ROADWAY CONNECTIVITY
PHASING PLAN
(A TREND DEVELOPMENT, INC. COMMUNITY)
SINGLE FAMILY ESTATE
(MIN LOT SIZE = 25,000 SQ. FT.)
SINGLE FAMILY
(MIN LOT SIZE = 7,200 SQ. FT.)
SINGLE FAMILY
(MIN LOT SIZE = 7,000 SQ. FT.)
(MIN LOT WIDTH = 70 FT.)
SINGLE FAMILY ESTATE
(MIN LOT SIZE = 25,000 SQ. FT.)
COMMERCIAL TRACT # 11
PHASE 1 (244 LOTS) RESIDENTIAL AND 4-LANE ARTERIAL CONSTRUCTION
SINGLE FAMILY
(MIN LOT SIZE = 5,000 SQ. FT.)
SINGLE FAMILY
(MIN LOT SIZE = 6,000 SQ. FT.)
SINGLE FAMILY
(MIN LOT SIZE = 4,600 SQ. FT.)
- PHASING LEGEND -
PHASE 1 RESIDENTIAL BUILDOUT
PHASE 1 ROADWAY IMPV.
PHASE 2 RESIDENTIAL BUILDOUT
PHASE 2 ROADWAY IMPV.
PHASE 3 ROADWAY IMPV.
- LAND USE LEGEND -
- LEGEND -
WQ BUFFER ZONE SETBACK
TCEQ SETBACK
100-YR FLOODPLAIN
500-YR FLOODPLAIN
OVERALL BOUNDARY LINE
N
NOTE
CONCEPTUAL PLAN SUBJECT TO CHANGE
BGE, Inc.

## Exhibit H

| Impervious Cover Assumption for Single Family Lots | |
|---|---|
| **Lot size** | **Assumed Impervious Cover (sq.ft)** |
| <10000 sq.ft | 4,375 |
| 10000 sq.ft - 15000 sq.ft | 5,000 |
| 15000 sq.ft - 1 ac | 6,250 |
| 1-3 ac | 8,500 |
| >3 ac | 8,750 |

## Exhibit I

| Maximum Allowed Impervious Cover for Single Family Lots | |
|---|---|
| **Typical Lot Size (Lot Width Measured at Front Setback)** | **Maximum Impervious Cover** |
| 35' (35'-39') | 65% |
| 40' (40'-44') | 65% |
| 45' (45'-49') | 65% |
| 50' (50'-59') | 65% |
| 60' (60'-69') | 65% |
| 70' (70'-79') | 65% |
| 80' (80'-89') | 60% |
| 90' (90'-104') | 55% |
| 105' to less than 1 Acre | 55% |
| 1 Acre | 35% |
| 1-3 Acres | 35% |

## EXHIBIT J

| **APPROVED VARIANCES**<br>**Vested Ordinances in effect in 2012 to be adopted under this Agreement** | |
|---|---|
| **Volume 2, Article 15, Chapter 20, Subchapter A**<br>**Ordinance No. 1230.6** | **Comments** |
| Section 1. General Procedures | |
| Section 1.3.2 – The provisions of this Chapter shall apply to the following forms of land subdivision and development activity within the City and its ETJ:<br>(f) The Development of an Apartment Project or Condominium Project. | Keep for managed care facility |
| **Chapter 13 – Landscape Ordinance** | |
| **Ordinance No. 6300.10 - Attached** | Adopt entire ordinance |

CITY OF DRIPPING SPRINGS

ORDINANCE No. 6300.10

# LANDSCAPING

AN ORDINANCE ENACTING VOLUME 2, ARTICLE 15, CHAPTER 13 OF THE DRIPPING SPRINGS CODE OF ORDINANCES; ESTABLISHING REGULATIONS FOR LANDSCAPING; PROVIDING FOR THE FOLLOWING: RULES; STANDARDS; PROCEDURES; CRIMINAL PENALTIES NOT TO EXCEED $2,000 OR CIVIL PENALTIES OF UP TO $500 PER VIOLATION; AND SEVERABILITY

**WHEREAS,** the City Council of the City of Dripping Springs ("City Council") seeks to improve the community through long-term environmental care and stewardship; and

**WHEREAS,** the City Council seeks to protect the Trinity and Edwards Aquifer recharge zone, the Balcones Escarpment, and the Onion Creek, Bear Creek, and Barton Creek Watersheds; and

**WHEREAS,** the City Council seeks to attract and improve the City's business climate and attract residents and retain business by ensuring the City's atmosphere includes attractive landscaping and the comfort of native shade trees; and

**WHEREAS,** the City Council finds that to protect, preserve, and promote nature in the city in turn protects the public health, safety, and welfare of the community's residents; and

**WHEREAS,** the City is undergoing substantial growth and construction, and the City Council seeks to ensure revegetation following common construction activities; and

**WHEREAS,** the City Council has determined that trees are vital to community health, human health, water conservation, and the economy; and

**WHEREAS,** the City Council has determined that landscaping preserves erosive slopes, reduces surface water runoff, provides for native habitats, and provides privacy, noise reduction, and a reduction in headlight glare, thus ensuring and sustaining a healthy environment; and

**WHEREAS,** nationally municipalities are embracing landscaping ordinances that protect the health, safety, and welfare of the community in an environmentally, historically, geographically, and aesthetically sensitive manner; and

**WHEREAS,** responsible regulation of landscaping is integral to the City's Water Quality Protection Program; and

**WHEREAS,** pursuant to Texas Local Government Code Section 51.001, the City has general authority to adopt an ordinance or police regulation that is for the good government, peace, or order of the City and is necessary or proper for carrying out a power granted by law to the City; and

**WHEREAS,** pursuant to Section 217.002 of the Texas Local Government Code, as a Type-A General Law municipality, the City has the authority to adopt ordinances that define, declare, abate, and remove nuisances; and

**WHEREAS,** pursuant to Texas Local Government Code Chapter 211, the City has general authority to regulate zoning; pursuant to Texas Local Government Code Chapter 214 the City has the authority to adopt ordinances that regulate housing; and pursuant to Texas Water Code Section 26.177, a city may establish a water pollution control and abatement program; and

**WHEREAS,** the landscaping and tree preservation standards established by this Ordinance are consistent with the City Council's comprehensive effort to preserve the cultural, historical, ecological, and geological treasures of the City and enhance economic development; and

**WHEREAS,** the City Council finds that it is necessary and proper for the good government, peace, or order of the City of Dripping Springs to adopt this Ordinance regulating landscaping.

**NOW, THEREFORE, BE IT ORDAINED by the Dripping Springs City Council:**

## 1. FINDINGS OF FACT

The foregoing recitals are incorporated into this Ordinance by reference as findings of fact as if expressly set forth herein.

## 2. ENACTMENT

Volume 2, Article 15, Chapter 13 of the City of Dripping Springs Code of Ordinances is hereby approved and enacted, and shall read in accordance with *Attachment "A"*, which is attached hereto and incorporated into this Ordinance for all intents and purposes.

## 3. REPEALER

All ordinances, or parts thereof, that are in conflict or inconsistent with any provision of this Ordinance are hereby repealed to the extent of such conflict, and the provisions of this Ordinance

shall be and remain controlling as to the matters regulated herein.

## 4. SEVERABILITY

Should any of the clauses, sentences, paragraphs, sections, or parts of this Ordinance be deemed invalid, unconstitutional, or unenforceable by a court of law or administrative agency with jurisdiction over the matter, such action shall not be construed to affect any other valid portion of this Ordinance.

## 5. CODIFICATION

The City Secretary is hereby directed to record and publish the attached rules, regulations, and policies in the City's Code of Ordinances as authorized by Section 52.001 of the Texas Local Government Code.

## 6. EFFECTIVE DATE

This Ordinance shall be effective immediately upon passage and publication as provided for by law.

## 7. PROPER NOTICE & MEETING

It is hereby officially found and determined that the meeting at which this Ordinance was passed was open to the public, and that public notice of the time, place, and purpose of said meeting was given as required by the Open Meetings Act, Texas Government Code, Chapter 551. Notice was also provided as required by Chapter 52 of the Texas Local Government Code.

**PASSED & APPROVED this, the 12th day of February 2008, by a vote of 5 (*ayes*) to 0 (*nays*) to 0 (*abstentions*) of the City Council of Dripping Springs, Texas.**

**CITY OF DRIPPING SPRINGS:**

by: _____
Mayor Todd Purcell

**ATTEST:**

_____
Jo Ann Touchstone, City Secretary

**APPROVED AS TO FORM:**
Alan J. Bojorquez, City Attorney

*Attachment "A"*

# City of Dripping Springs

# CODE OF ORDINANCES

## VOLUME: 2

## ARTICLE 15

## CHAPTER 13

## SECTION 1. ENACTMENT PROVISIONS

### 1.1. Popular Name

This Chapter shall be commonly cited as the "Landscape Ordinance".

### 1.2. Purpose

The purpose of this Chapter is to provide for the preservation of native trees, prevent the clear-cutting of land, and provide for minimum landscaping and screening requirements, in recognition that trees, landscaping, screening, and buffering protect the health and welfare of the community, while addressing the water conservation and drainage issues particular to the Hill Country region. The purpose of this Chapter is also to enhance the community's ecological, environmental, and aesthetic qualities.

#### 1.2.1 Health, Welfare, & General Well-Being

Preserving and improving the natural environment, and maintaining a working ecological balance are of increasing concern to the City. The fact that the proper use of landscape elements can contribute to the processes of air purification, oxygen regeneration, water absorption, water purification, and noise, glare, and heat abatement as well as the preservation of the community's aesthetic qualities indicates that the use of landscape elements is of benefit to the health, welfare, and general well-being of the community and, therefore, it is proper that the appropriate use of such elements be required.

#### 1.2.2 Water Conservation & Drainage

The City experiences frequent droughts and is characterized by thin soiled rock formations; therefore, it is the purpose of this Chapter to encourage the use of drought resistant vegetation and landscaping that minimizes runoff and erosion.

### 1.3. Scope

This Chapter applies to all **commercial** property within the incorporated municipal boundaries (i.e., "city limits") for which Site Plan approval by the City is required under the City's Code of Ordinances. This Chapter applies to actions taken after the date of enactment.

## SECTION 2. DEFINITIONS

### 2.1. Interpretation

Words and phrases used in this Chapter shall have the meanings set forth in this section. Terms that are not defined below, but are defined elsewhere in the Code of Ordinances, shall be given the meanings set forth in the Code. Words and phrases not defined in the Code of Ordinance shall be given their common, ordinary meaning unless the context clearly requires otherwise. When not inconsistent with the context, words used in the present tense shall include the future tense; words in the plural number shall include the

singular number (and vice versa); and words in the masculine gender shall include the feminine gender (and vice versa). The word "shall" is always mandatory, while the word "may" is merely directory. Headings and captions are for reference purposes only.

## 2.2. Terminology

***City:*** The City of Dripping Springs, an incorporated municipality located in Hays County, Texas.

***City Administrator:*** The chief administrative officer of the City of Dripping Springs, Texas. The term shall also include the Deputy City Administrator.

***City of Austin Environmental Criteria Manual:*** The document promulgated by the City of Austin, which is commonly used throughout the region and is widely regarded as the standard in the development community, as may be amended.

***City of Austin Grow Green Guide:*** The document promulgated in part by the City of Austin, entitled *Native and Adapted Landscape Plants: An Earthwise Guide for Central Texas*, as may be amended.

***City Council:*** The governing body of the City of Dripping Springs, Texas.

***City Permit:*** A city license, certificate, approval, registration, consent, permit, or other form of authorization required by a City ordinance, regulation, or rule in order to develop, construct, and operate the improvements on the Property.

***Code:*** The Code of Ordinances enacted by the City of Dripping Springs, as may be amended from time to time.

***DBH (diameter at breast height):*** The tree trunk diameter of an existing tree measured in inches at a height of 4.5 feet above the ground. If a tree splits into multiple trunks below 4.5 feet, the trunk is measured at its most narrow point beneath the split.

***Designated Tree:*** Any of the following:

**(a)** A hardwood tree having a trunk of eight (8) inches in caliper or greater measured at DBH;

**(b)** A multi-trunked hardwood tree having a total trunk DBH of thirty (30) inches or more (not counting trunks less than eight (8) inches in diameter); or

**(c)** A cluster of hardwood trees within a ten (10) foot radius circle having a total trunk DBH of forty (40) inches or more (not counting trunks less than eight (8) inches in diameter).

***Impervious Cover:*** Buildings, parking areas, roads, and other impermeable man-made improvements covering the natural land surface that prevents infiltration. For further

clarification on what is considered impervious cover, refer to the City's Water Quality Protection Ordinance.

***Landscape Architect:*** One whose profession is the decorative and functional alteration and planting of grounds, especially at or around a building site

***Landscaping:*** Consists of introduced vegetation, as well as related improvements to a lot including, but not limited to, forming and berming, irrigation systems, landscape subsurface drainage systems, site furnishings, and nonstructural retaining walls.

***Natural Area:*** An area where the naturally grown landscaping is left primarily undisturbed, except for the removal of poison ivy, greenbriar, and similar vegetation, oak wilt removal and/or prevention measures, and allowing for maintenance of the trees to maintain vigorous growth.

***Owner:*** A person with legal control over property in question.

***Person:*** A human individual, corporation, agency, unincorporated association, partnership, or sole proprietorship, or other legal entity.

***TCEQ:*** The Texas Commission on Environmental Quality, or its successor agency.

## SECTION 3. ADMINISTRATION

### 3.1 Application

This Chapter applies to all new **commercial** development requiring Site Plan approval subject to zoning requirements. All properties going through re-development through extension, reconstruction, resurfacing, or structural alteration must come into compliance. Site plan approval shall be conditioned on compliance with this Chapter.

### 3.2. Landscaping Fund

A fund is hereby created in which any cash-in-lieu paid to the City pursuant to the mandates of this Chapter shall be deposited. The fund may be drawn upon by the City to implement landscaping improvements on City land and City controlled right-of-ways.

### 3.3. Prohibition

No person shall damage or remove trees in violation of this Chapter.

## SECTION 4. LANDSCAPING

### 4.1. Landscape Requirements

#### 4.1.1. Landscape Buffer Planting Requirements:

**(a)** All plant material shall be of native or adapted species.
**(b)** All new proposed shade trees shall be a minimum of 4 inches in diameter.
**(c)** All proposed ornamental trees shall be a minimum of 2 inches in diameter.
**(d)** All large shrubs shall be a minimum of 5 gallon container size and small shrubs/groundcovers a minimum of 1 gallon container size.

#### 4.1.2. Landscape Buffer Spacing Requirements:

The following landscape buffer spacing requirements shall apply to all designated landscape buffers.

**(a)** Shade Trees (such as Live Oak or Cedar Elm):
one per 50' of buffer frontage
**(b)** Ornamental Trees (such as Crape Myrtle or Desert Willow):
one per 25' of buffer frontage
**(c)** Large Shrubs, five-gallon (such as Wax Myrtle, DW Yaupon, or Agarita):
one per 6' of buffer frontage
**(d)** Small Shrubs/Groundcovers, one-gallon (such as Lantana or Liriope):
one per 3' of buffer frontage

All plants shall comply with the City of Austin "Grow Green" recommended plant guide (www.ci.austin.tx.us/growgreen). Invasive plants in this guide are specifically prohibited.

### 4.2. Landscape Plan & Tree Survey Submittal

A landscape plan and tree survey shall be submitted to the City with the proposed Site Plan. The landscape plan shall comply with the Landscape Requirements. The landscape plan shall be signed and sealed by a Landscape Architect licensed by the State of Texas. The existing tree survey should be signed and sealed by a Surveyor licensed by the State of Texas.

### 4.3. Parking Area Landscaping Requirements

**4.3.1.** Parking lots and all vehicular parking and maneuvering areas, excluding driveways behind buildings, shall contain areas constructed, planted, and maintained as landscaped islands, peninsulas, or medians.
**4.3.2.** The minimum total area in landscaped islands, peninsulas, or medians in the parking lots in front of buildings shall be ninety (90) square feet for each twelve (12) parking spaces.

**4.3.3.** No parking space shall be located further than fifty (50) feet from a landscaped island, peninsula, median, or tree. They shall be located evenly through the parking areas, however the location of landscaped islands, peninsulas, and medians may be adjusted to accommodate existing trees or other natural features.

**4.3.4.** Landscape terminal islands (end islands) shall be located at the end of all parking modules in a configuration to allow for turning radii of intersecting aisles to protect parked vehicles, provide for visibility, confine moving traffic to aisles and driveways, and provide space for landscaping.

## 4.4. Dumpster Screening

**4.4.1.** For outdoor condensers, utility huts, and other building service equipment (other than a roof top), such equipment shall be reasonably screened from view on all sides using a masonry wall and vegetative screen using at least two (2) varieties of plant material from the "Grow Green" plant guide, that, at maturity, are at least the height of the equipment to be screened.

**4.4.2.** All refuse and/or recycling containers shall be reasonably screened with landscaping from public view and the view of adjoining properties.

## 4.5. Landscape Maintenance Requirements

**4.5.1.** The owner shall be responsible for:

**(a)** Regular maintenance of all required landscaped areas and plant materials in a vigorous and healthy condition, free from diseases, pests, weeds, and litter. This maintenance shall include weeding, watering, fertilization, pruning, mowing, edging, mulching, or other necessary maintenance in accordance with generally accepted horticultural practice;

**(b)** The repair or replacement of required landscape structures (walls, fences, etc.) to a structurally sound condition;

**(c)** The regular maintenance, repair, or replacement, where necessary, of any screening or buffering;

**(d)** Replacing planted trees if they die or become diseased beyond repair within five (5) years after planting; and

**(e)** Repairing damage to landscaped areas, structures, screening, buffering, or trees as a result of ingress or egress from site easements by authorized or unauthorized parties.

## 4.6. Integrated Pest Management

An integrated pest management plan (IPM) shall be submitted with the Site Plan. The IPM shall include the fertilizer ratios, brands, and types of fertilization application methods to be used. Fertilizers must be phosphate-free.

## 4.7. Tree Preservation Requirements

**4.7.1.** A grading and tree survey shall be submitted with the Site Plan.

**4.7.2.** The tree survey shall include all existing, live, healthy trees with an eight (8) inch DBH in diameter and larger. The survey shall indicate the size (DBH) and species of tree. Trees observed to be distressed will be indicated with an asterisk on the tree list. Trees shall be represented by circles using the formula of one (1) foot of radius for every one inch of trunk diameter. Unbroken circles indicate trees that are to remain. Dashed circles indicate trees that are to be removed (including trees identified to be distressed).

**4.7.3.** Healthy, designated Class I and II trees (as defined by the City of Austin Environmental Criteria Manual) that require removal to accommodate the development shall be replaced at a ratio of 1:1 or cash-in-lieu may be paid to the City, the amount equal to the cost of nursery stock required to replace the caliper amounts lost and the cost of installation on a per unit basis, not to exceed one hundred dollars ($100.00) per caliper inch or six thousand dollars **($6,000.00) per acre** (prorated for sites of more or less than one acre) for the entire site. Trees identified as distressed shall not be included in Tree Preservation Requirements evaluation.

**4.7.4.** Pre- and post-construction fertilization is required for existing trees that will be or have been disturbed by construction activities, including disturbance of the critical root zone. Fertilizers must be phosphate-free.

**4.7.5.** The planting, preserving, and maintaining of trees which are contagiously diseased trees or the storage of cut oak unless first determined by a certified arborist to be devoid of oak wilt or properly treated, shall be deemed a public nuisance and are prohibited.

**4.7.6.** During construction, take measures to protect trees, including fencing, shielding, and/or signage, as necessary.

### 4.8. Irrigation Requirements

**4.8.1.** An irrigation plan is required as part of the Site Plan and will be prepared by a licensed irrigator (i.e., licensed landscape architect or engineer). The plan should include rain/freeze sensors on all controllers. The irrigation plan should provide drip irrigation in shrub beds where appropriate and bubblers on all trees.

**4.8.2.** Turf grass plantings may be Buffalo, Zoysia, or Bermuda. St. Augustine is expressly prohibited.

**4.8.3.** Landscaped areas must be mulched to reduce evaporation and preserve water.

## SECTION 5. PROHIBITION

It shall be unlawful for any person to violate this Chapter.

## SECTION 6. ENFORCEMENT

**6.1. Compliance**

Violators of this Chapter will be required to come into compliance within sixty (60) days, unless a variance of has been approved by the City. Compliance with this Chapter may be grounds for withholding of other related, pending permits for the project by the City.

**6.2. Civil & Criminal Penalties**

The City shall have the power to administer and enforce the provisions of this Chapter as may be required by governing law. Any person violating any provision of this Chapter is subject to stop work order, suit for injunctive relief, and/or prosecution for criminal violations. Any violation of this Chapter is hereby declared to be a nuisance. Any violation of this Chapter may serve as grounds to withhold or delay issuance of other permits and revocation of a Certificate of Occupancy.

**6.3 Criminal Prosecution**

Any person violating any provision of this Chapter shall, upon conviction, be fined a sum not exceeding two thousand dollars ($2,000.00) to be deposited in the Landscaping Fund. Each day that a provision of this Chapter is violated shall constitute a separate offense. An offense under this Chapter is a misdemeanor.

**6.4 Civil Remedies**

Nothing in this Chapter shall be construed as a waiver of the City's right to bring a civil action to enforce the provisions of this Chapter and to seek remedies as allowed by law, including, but not limited to the following:

**6.4.1 Injunctive relief** to prevent specific conduct that violates the Chapter or to require specific conduct that is necessary for compliance with the Chapter; and

**6.4.2 A civil penalty** up to five hundred dollars ($500.00) a day to be deposited in the Landscaping Fund, when it is shown that the defendant was actually notified of the provisions of the Chapter and after receiving notice committed acts in violation of the Chapter or failed to take action necessary for compliance with the Chapter; and other available relief.

**6.4.3. Stop Work Order.** In the event work is not being performed in accordance with this Chapter, the City shall issue a stop work order and all work shall immediately cease. No further work shall be undertaken on the project as long as a stop work order is in effect.

----------AFFIDAVIT OF PUBLICATION----------

THE STATE OF TEXAS

COUNTY OF HAYS

BEFORE ME, the undersigned authority, on this day personally appeared Dale Roberson, publisher of THE NEWS DISPATCH, who being by me duly sworn, upon oath deposes and says:

That the attached LEGAL NOTICE was published in THE NEWS DISPATCH, a newspaper published in the English language, published in Dripping Springs, Texas, and having a general circulation within the CITY OF DRIPPING SPRINGS & the CITY OF WIMBERLEY, Texas, and the COUNTY OF HAYS, TEXAS, in the following issues: Feb. 21, 2008 - Ord. # 6300.1

and that the attached newspaper clipping is a true and correct copy of said published notice.

Dale Roberson

Dale Roberson

SWORN TO AND SUBSCRIBED BEFORE ME this 22 day of Feb 2008

Wandean Turner

Notary Public

WANDEAN TURNER
NOTARY PUBLIC
State of Texas
Comm. Exp. 03-23-2009

**LEGAL NOTICES**

**PUBLIC NOTICE**

The City of Dripping Springs City Council Passed and Approved An Ordinance No. 6300.1 on February 12, 2008: An Ordinance Enacting Volume 2, Article 15, Chapter 13 of the Dripping Springs Code of Ordinances; Establishing Regulations for Landscaping and Tree Preservation; Providing for the Following: Rules; Standards; Procedures; Criminal Penalties not to Exceed $2,000 or Civil Penalties of up to $500 per Violation; and, Severability. Any person violating any provision of this Ordinance shall, upon conviction, be fined a sum not exceeding two thousand dollars ($2000.00). Each day that a provision of this Ordinance is violated shall constitute a separate offense. An offense under this Ordinance is a misdemeanor.

2/21-1t

**Exhibit K**

| RESIDENTIAL LOT WIDTH & SIZE TABLE | |
|---|---|
| **MINIMUM LOT WIDTH AT FRONT SETBACK** | **MINIMUM LOT SIZE (SF)** |
| 35' | 3600 |
| 40' | 4000 |
| 45 | 4500 |
| 50 | 5000 |
| 60' | 6000 |
| 70' | 7000 |
| 80' | 7500 |
| 90 | 8000 |
| 105' | 10000 |
| 1.0-Acre | 43560 |

## EXHIBIT L

### Tree Planting Requirements

Tree Classification:

Shade Trees (Large Trees) are required to be 3 caliper inches or greater in diameter at time of planting. These trees are larger in size and primarily function to create shade in the landscape.

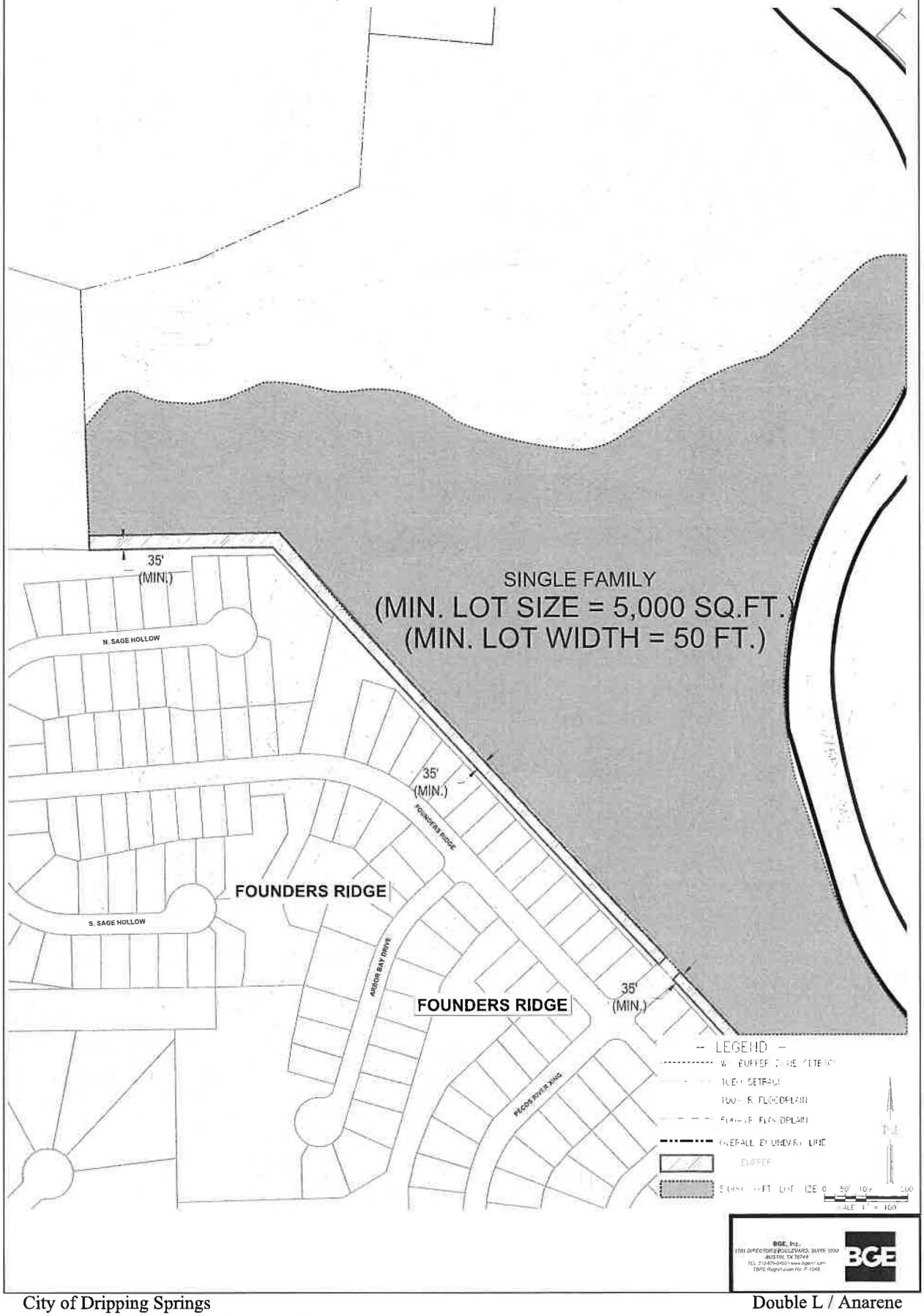
Ornamental Trees (small trees) are required to be 2-3 caliper inches in diameter at time of planting. These trees are smaller, colorful species that add color and accent to a landscape.

| **Lot Sizes** | **Tree Requirements** |
|---|---|
| 35' & 40' (35'-44') Lots | A minimum of one (1) shade tree in the front yard. One (1) shade tree in the rear yard if the lot backs up to a public use area. |
| 45' & 50' (45'-59') Lots | A minimum of one (1) shade tree in the front yard. One (1) shade tree in the rear yard if the lot backs up to a public use area. |
| 60' & 70' (60'-79') Lots | A minimum of two (2) shade trees and one (1) ornamental tree |
| 80' & 90' (80'-104') Lots | A minimum of three (3) shade trees and two (2) ornamental trees |
| 105' (105-less than an Acre) Lots | A minimum of four (4) shade trees and two (2) ornamental trees |
| Acreage (Acre and above) Lots | A minimum of four (4) shade trees and three (3) ornamental trees |

# DOUBLE 'L' - EXHIBIT M

## SETBACK EXHIBIT (1-of-3)

(A TREND DEVELOPMENT, INC. COMMUNITY)



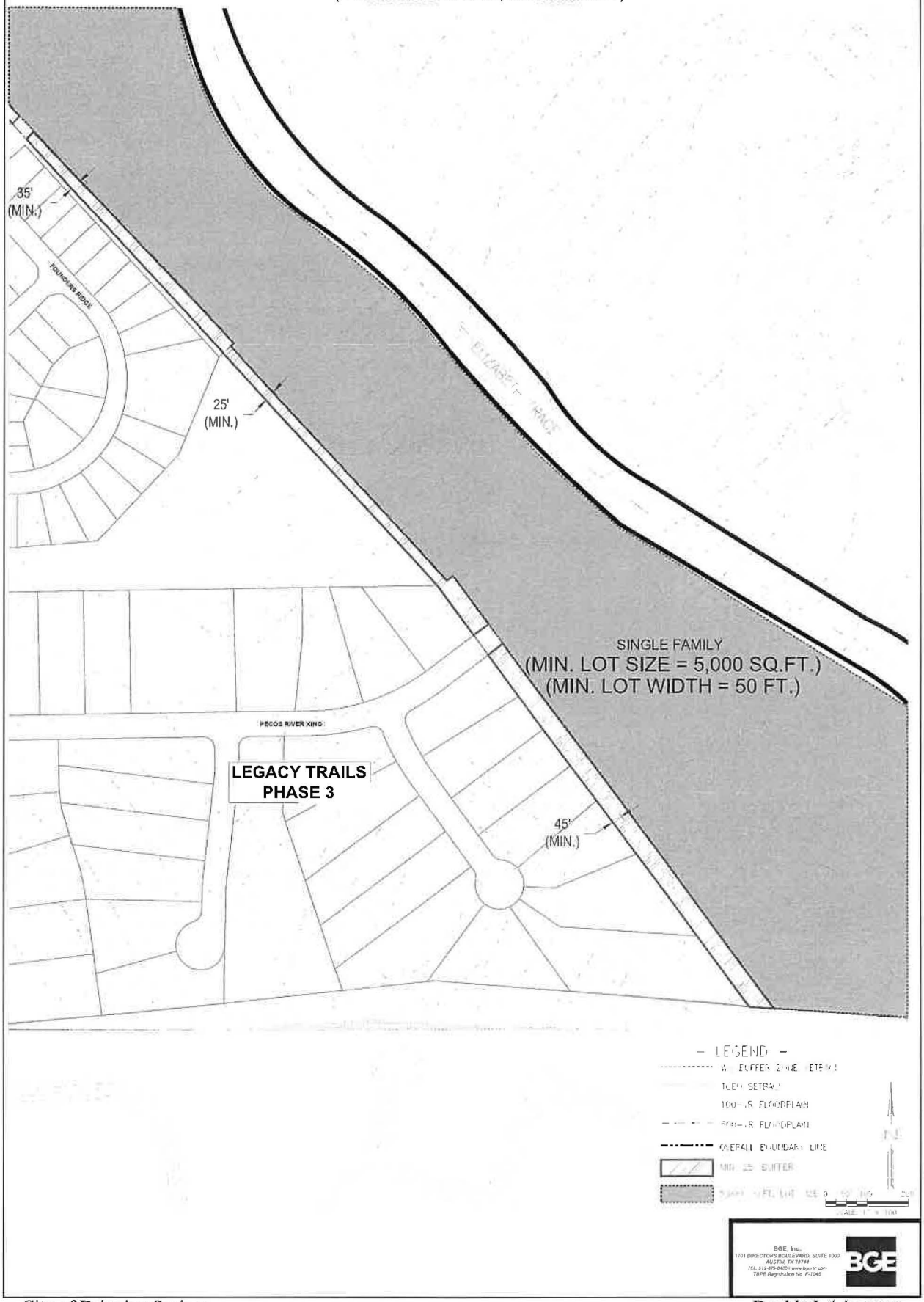

BGE, Inc.
1101 DIRECTORS BOULEVARD, SUITE 1000
AUSTIN, TX 78744
TEL 512.879.0400 www.bgeinc.com
TBPE Registration No. F-1046

BGE

# DOUBLE 'L' - EXHIBIT M

## SETBACK EXHIBIT (2-of-3)

(A TREND DEVELOPMENT, INC. COMMUNITY)

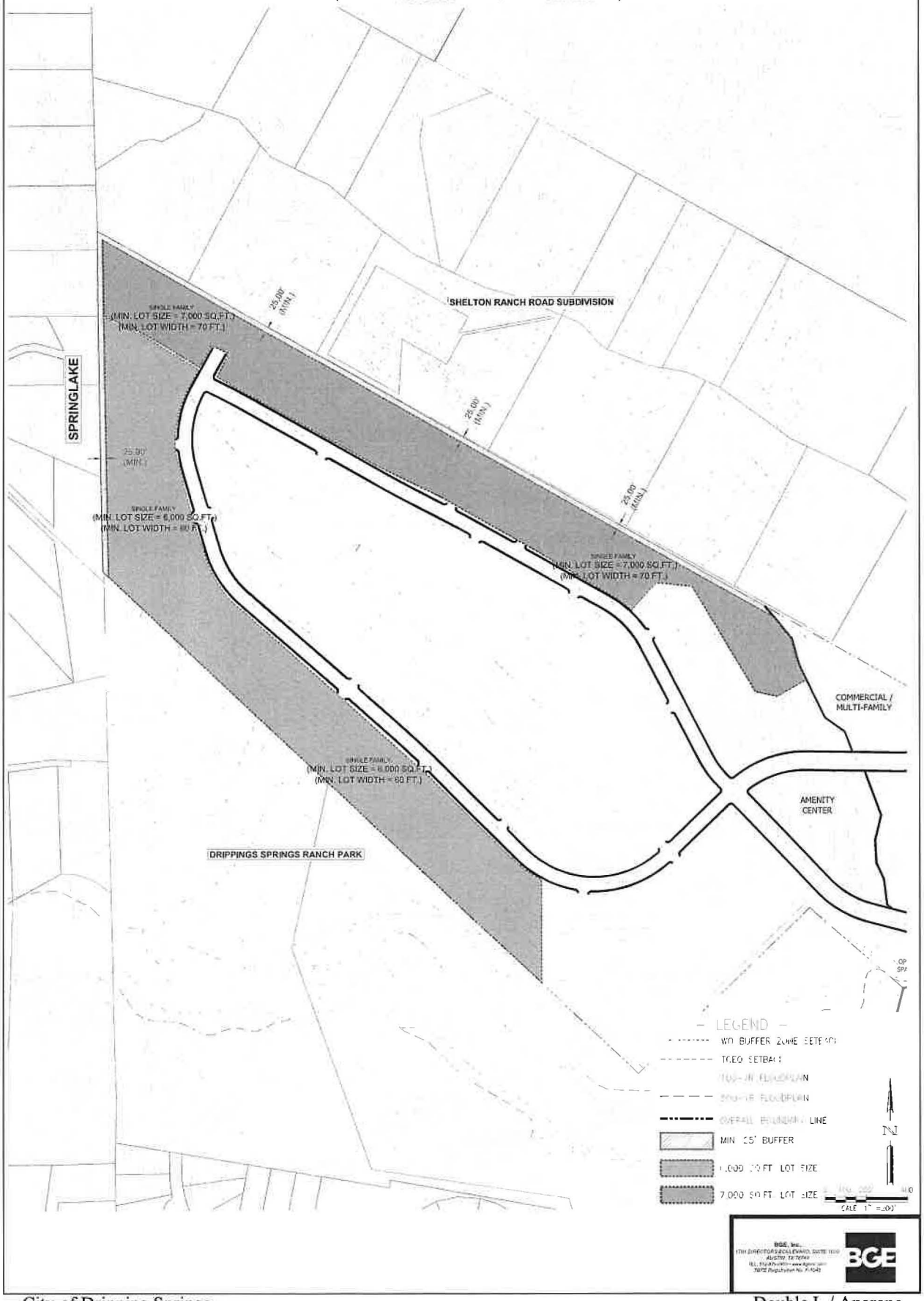



BGE, Inc.
1701 DIRECTORS BOULEVARD, SUITE 1000
AUSTIN, TX 78744
TEL: 512 879-0400 / www.bgeinc.com
TBPE Registration No. F-1046

# DOUBLE 'L' - EXHIBIT M

## SETBACK EXHIBIT (3-of-3)

(A TREND DEVELOPMENT, INC. COMMUNITY)



## EXHIBIT N
## LOT MIX AND ALLOWED VARIANCE

| LOT TYPE | TOTAL | 5% ALLOWED VARIANCE* | HIGH LIMIT | LOWER LIMIT |
|---|---|---|---|---|
| 35' | 73 | 0 | 73 | 73 |
| 40' | 96 | 0 | 96 | 96 |
| 45' | 110 | 0 | 110 | 110 |
| 50' | 417 | 21 | 438 | 396 |
| 60' | 302 | 15 | 317 | 287 |
| 70' | 315 | 16 | 331 | 299 |
| 80' | 269 | 13 | 282 | 256 |
| 90' | 282 | 14 | 296 | 268 |
| 105' TO 0.75 Acre | 178 | 9 | 187 | 169 |
| 0.75 Acre to 1.0 Acre | 189 | 9 | 198 | 180 |
| | 2231 | | | |

***MAXIMUM OVERALL LOT INCREASE CAPPED AT 75 LOTS**

# Geologic Assessment – Site Geology Report

Double L Pod A3
+/-14-acre
Dripping Springs ETJ, Hays County, Texas

***Prepared For:***
Scott Felder Homes



***Prepared By:***

BGE, Inc.
101 West Louis Henna Blvd., Suite 400
Austin, TX 78728
BGE PN: 14789-00
December 2025

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOSCIENTIST

12/12/2025

# Table of Contents

**Section 1 Introduction** ..... **1**

**Section 2 Methodology** ..... **1**

**Section 3 Results** ..... **1**

3.1 Overview ..... 1

3.2 Soils ..... 2

3.3 Geology ..... 2

3.4 Hydrogeologic Assessment ..... 3

**Section 4 Feature Descriptions** ..... **3**

**Section 5 Conclusion** ..... **3**

# Appendices

**Appendix A**: **Geologic Assessment Form**

**Appendix B:** **Geologic Assessment Table**

**Appendix C:** **Exhibits**
Site Soils Map
Site Geologic Map

**Appendix D**: **Project Area Photographs**

# Section 1 Introduction

A geologic assessment (GA) was conducted by Mr. Ricardo Flores, P.G. and environmental scientists of BGE, Inc. (BGE) on November 18-19 and December 9, 2025, on the Double L Pod A3, herein referred to as "project area". The project area is a +/-14-acre portion of a larger development located north of U.S. 290 and east of Ranch Road 12 in the Dripping Springs ETJ, Hays County, Texas. The project area is located within the *Dripping Springs*, TX U.S. Geological Survey (USGS) 7.5-minute topographic map (2025). Three geologic features (CD-1 through CD-3) were identified on the project area. None of these features would be considered sensitive according to the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules.

# Section 2 Methodology

The GA was completed on the project area following the methods described in the *TCEQ Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (hereafter Instructions to Geologists) and augmented with the TCEQ Edwards Aquifer Guidance Manual.

BGE scientists, including a Texas Licensed Professional Geologist (PG), conducted a 100 percent pedestrian survey during the site visits on November 18-19 and December 9, 2025. During the site visits, transects spaced no more than 50 feet apart and drainages were systematically walked to observe surface features. BGE surveyed the entire +/-14-acre project area which is located within the Edwards Aquifer Contributing Zone. Surface soil and visible geology were recorded during the field visit. Data was collected in the field using a Samsung phone with a GPS internal receiver and a Trimble DA2 Receiver capable of sub-meter accuracy. The technique used to determine the depth, thickness, and consistency of fill material of identified features included probing with a digging implement. Although not found, air flow from features was also analyzed, to identify the presence of a sub-surface void space.

Following the field investigations, BGE completed a Geologic Assessment Form (**Appendix A: Geologic Assessment Form**) and a Geologic Assessment Table (**Appendix B: Geologic Assessment Table**) according to the standards in the TCEQ Instructions to Geologists in addition to all maps and attachments required by the TCEQ Edwards Aquifer Rules.

# Section 3 Results

## 3.1 Overview

The project area is primarily undeveloped land currently used for cattle and horse grazing, featuring areas of native vegetation. The vegetation on the property consists of a mix of open grassy fields, interspersed with cedar and oak thickets. One unnamed tributary of Little Barton Creek runs adjacent to the east of the project area.

## 3.2 Soils

The project area is mapped within the Soil Survey of Comal and Hays Counties (**Appendix C: Site Soils Map**). Soil survey data was utilized to establish the geomorphological setting and soil types present. Detailed soil map unit descriptions and soil characteristics were derived from information available in the online National Resources Conservation Service (NRCS) Web Soil Survey, and soil series locations were determined from information available in the online NRCS Soil Survey Geographic Database (SSURGO). The NRCS National Hydric Soils List was also used to identify the limits of mapped hydric soils within the project area. The soil map units identified in the project area and the characteristics of each soil map unit are provided in **Table 1.**

**Table 1: Soil Units, Infiltration Characteristics, and Thickness**

| Soil Map Unit | Group | Thickness (feet) | Drainage Class | Permeability | Surface Runoff | Hydric |
|---|---|---|---|---|---|---|
| Brackett-Rock outcrop-Comfort complex, 1 to 8 percent slopes | D | 1.67 | Well drained | Moderately low to high | High | No |
| Real-Comfort-Doss complex, 1 to 8 percent slopes | D | 1.67 | Well drained | Moderately low to high | High | No |

Source: SSURGO

## 3.3 Geology

The Llano Sheet of the Geologic Atlas of Texas was utilized to identify underlying geology. The geologic unit present on the project area has been identified as Upper Glen Rose Limestone (**Appendix C: Site Geologic Map**). The Upper Glen Rose limestone has an approximate thickness of 220 feet. Its lithology includes limestone, dolomite, and marl. Due to weathering and the nature of alternating resistant and recessive beds, stairstep topography is commonly formed.

The **Stratigraphic Column** outlining the geologic features on the project area is provided below in **Table 2**. Upper Glen Rose Limestone was seen in the field.

**Table 2: Stratigraphic Column**

| Age | Approximate Thickness | Geologic Unit |
|---|---|---|
| Cretaceous | 200 feet thick | Upper Glen Rose Limestone |

Source: USGS 2022

### 3.4 Hydrogeologic Assessment

According to the National Hydrography Dataset, one unnamed tributary of Little Barton Creek, a tributary of the Colorado River, runs adjacent to the project area. The elevation on the project area ranges from 1,148 to 1,179 feet above mean sea level.

No wells were identified on the project area at the time of the site visits. Per review of data from TCEQ and the Texas Water Development Board, the closest water well recorded is within 0.59 miles of the project area.

The project area is located within the Edwards Aquifer Contributing Zone. U.S. Fish and Wildlife karst zone data obtained for Hays County indicates that the project area is mapped within Karst Zone 4b. Karst Zone 4b is defined as “areas which do not contain karst invertebrate species”.

# Section 4 Feature Descriptions

BGE identified three geologic features within the project area. Per the required calculations, none of these features are considered sensitive. Geologic features identified within the project area are described below. Photographs were taken to characterize site conditions and the identified features (**Appendix D: Project Area Photographs**).

Features CD-1 through CD-3 are non-karst closed depressions. These features consisted of animal burrows occurring within Upper Glen Rose Limestone. These features were relatively small with diameters less than two feet. The infill material within the depressions consisted of organic materials (leaf litter, twigs, and other breakdown), roots, and moderately compacted clay-rich sediment. Due to the low infiltration rate and lack of connectivity to the subsurface, these features are not considered to be sensitive. Catchment areas were less than 1.6 acres.

# Section 5 Conclusion

Site visits to perform a GA for the Double L Pod A3 were conducted on November 18-19 and December 9, 2025, by BGE scientists, including a Texas Licensed PG, over the +/-14-acre project area. BGE identified three geologic features (CD-1 through CD-3). None of these features met the criteria to be considered sensitive features according to the TCEQ Instructions for Geologists standards.

# Appendix A: Geologic Assessment Form

# Geologic Assessment

**Texas Commission on Environmental Quality**

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

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

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

## *Signature*

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

Print Name of Geologist: Ricardo Flores

Telephone: (210) 581-3633

Date: 12/12/2025

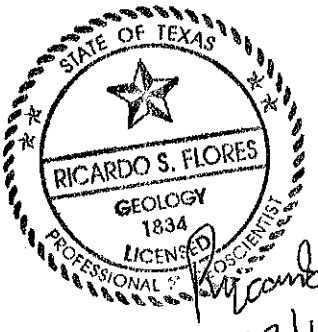
Fax: _____

Representing: BGE, Inc.

TBPG Registration #1834

(Name of Company and TBPG or TBPE registration number)

Signature of Geologist:




12/12/2025

**Regulated Entity Name:** Double L Pod A3

## *Project Information*

1. Date(s) Geologic Assessment was performed: 11/18/2025, 11/19/2025, and 12/09/2025
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☐ Recharge Zone
   - ☐ Transition Zone

☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

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

**Table 1 - Soil Units, Infiltration Characteristics and Thickness**

| Soil Name | Group* | Thickness(feet) |
|---|---|---|
| | | |

| Soil Name | Group* | Thickness(feet) |
|---|---|---|
| Please see Table 1 in the Site Geology Report | | |
| | | |
| | | |
| | | |

** Soil Group Definitions (Abbreviated)*

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

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

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

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

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

   Applicant's Site Plan Scale: 1" = _____'
   Site Geologic Map Scale: 1" = 600'
   Site Soils Map Scale (if more than 1 soil type): 1" = 600'

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.
   ☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.
13. ☐ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    - ☐ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☐ The wells are in use and comply with 16 TAC Chapter 76.

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

## *Administrative Information*

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

# Appendix B: Geologic Assessment Table

## GEOLOGIC ASSESSMENT TABLE

**PROJECT NAME:** Double L Pod A3

| LOCATION | | | FEATURE CHARACTERISTICS | | | | | | | | | | | | EVALUATION | | | PHYSICAL SETTING | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A | 1B * | 1C* | 2A | 2B | 3 | 4 | | | 5 | 8A | 8 | 7 | 8A | 8B | 9 | 10 | | 11 | | 12 |
| FEATURE ID | LATITUDE | LONGITUDE | FEATURE TYPE | POINTS | FORMATION | DIMENSIONS (FEET) | | | TREND (DEGREES) | WIDE | DENSITY (NO/FT) | APERTURE (FEET) | INFILL | RELATIVE INFILTRATION RATE | TOTAL | SENSITIVITY | | CATCHMENT AREA (ACRES) | | TOPOGRAPHY |
| | | | | | | X | Y | Z | | 10 | | | | | | <40 | ≥40 | <1.6 | ≥1.6 | |
| CD-1 | 30.210050 | -98.078391 | CD | 5 | Kgru | 0.5 | 0.5 | 0.4 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-2 | 30.209664 | -98.077650 | CD | 5 | Kgru | 1 | 0.8 | 0.6 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-3 | 30.209141 | -98.076986 | CD | 5 | Kgru | 0.3 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |

* DATUM WGS84

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

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

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

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

Date 12/12/2025

Sheet 1 of 1

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

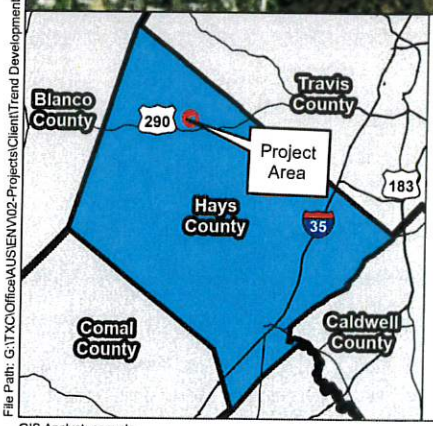
STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOSCIENTIST

12/12/2025

## Appendix C: Exhibits

- Site Soils Map
- Site Geologic Map




**Legend**

- Project Area
- Soil Unit (NRCS)
- Stream (NHD)
- Wetland (NWI)
- Roadway (TxDOT)

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOSCIENTIST

N

0 300 600
Feet

12/12/2025

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pod A3

## Site Soils Map
Hays County, TX

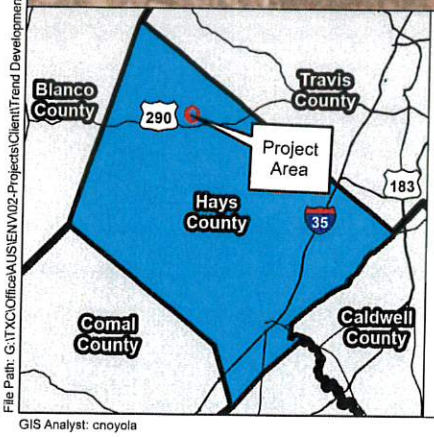
Date: December 2025 | Project: 14789-00

Data Source: NRCS (2025), NHD (2024), NWI (2024), TxDOT (2022)

File Path: G:\TX\Office\AUSTEN\002-Projects\Client\Trend Development\Double L\21- Pod A3\07- GIS\A3_GA Maps_2025-12-04.aprx

GIS Analyst: cnoyola




**Legend**

- Project Area
- Non-karst closed depression (BGE)
- Upper Glen Rose Limestone (USGS)
- Roadway (TxDOT)

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOSCIENTIST

12/12/2025

N

0 300 600
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L Pod A3

## Site Geologic Map

Hays County, TX

Date: December 2025 | Project: 14789-00

Data Source: USGS (2024), TxDOT (2022)

File Path: G:\TX\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\21- Pod A3\07- GIS\A3_GA Maps_2025-12-04.aprx

GIS Analyst: cnoyola

# Appendix D: Project Area Photographs

**Double L Pod A3**
Geologic Assessment – Site Geology Report
Project Area Photographs



**Photograph 1**: Facing west, overview of the project area.



**Photograph 2**: Facing south, view of an animal burrow, non-karst closed depression (CD-1) located on the southwestern portion of the project area.



**Photograph 3:** Facing southwest, view of an animal burrow, non-karst closed depression (CD-2) located on the southern portion of the project area.



**Photograph 4**: Facing southwest, view of an animal burrow, non-karst closed depression (CD-3) located on the southeastern portion of the project area.

# Geologic Assessment – Site Geology Report

Double L Pod Arterial
+/-17-acre
Dripping Springs ETJ, Hays County, Texas

***Prepared For:***
Trend Development, LLC



***Prepared By:***

BGE, Inc.
101 West Louis Henna Blvd., Suite 400
Austin, TX 78728
BGE PN: 14789-00
December 2025

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOSCIENTIST
12/12/2025

# Table of Contents

**Section 1 Introduction....1**

**Section 2 Methodology....1**

**Section 3 Results....1**

3.1 Overview....1

3.2 Soils....2

3.3 Geology....2

3.4 Hydrogeologic Assessment....3

**Section 4 Feature Descriptions....3**

**Section 5 Conclusion....3**

# Appendices

**Appendix A**: **Geologic Assessment Form**

**Appendix B:** **Geologic Assessment Table**

**Appendix C:** **Exhibits**
Site Soils Map
Site Geologic Map

**Appendix D**: **Project Area Photographs**

# Section 1 Introduction

A geologic assessment (GA) was conducted by Mr. Ricardo Flores, P.G. and environmental scientists of BGE, Inc. (BGE) on November 18-19 and December 9, 2025, on the Double L Pod Arterial, herein referred to as "project area". The project area is a +/-17-acre portion of a larger development located north of U.S. 290 and east of Ranch Road 12 in the Dripping Springs ETJ, Hays County, Texas. The project area is located within the *Dripping Springs*, TX U.S. Geological Survey (USGS) 7.5-minute topographic map (2025). Six geologic features (CD-1 through CD-6) were identified on the project area. None of these features would be considered sensitive according to the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules.

# Section 2 Methodology

The GA was completed on the project area following the methods described in the *TCEQ Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (hereafter Instructions to Geologists) and augmented with the TCEQ Edwards Aquifer Guidance Manual.

BGE scientists, including a Texas Licensed Professional Geologist (PG), conducted a 100 percent pedestrian survey during the site visits on November 18-19 and December 9, 2025. During the site visits, transects spaced no more than 50 feet apart and drainages were systematically walked to observe surface features. BGE surveyed the entire +/-17-acre project area which is located within the Edwards Aquifer Contributing Zone. Surface soil and visible geology were recorded during the field visit. Data was collected in the field using a Samsung phone with a GPS internal receiver and a Trimble DA2 Receiver capable of sub-meter accuracy. The technique used to determine the depth, thickness, and consistency of fill material of identified features included probing with a digging implement. Although not found, air flow from features was also analyzed, to identify the presence of a sub-surface void space.

Following the field investigations, BGE completed a Geologic Assessment Form (**Appendix A: Geologic Assessment Form**) and a Geologic Assessment Table (**Appendix B: Geologic Assessment Table**) according to the standards in the TCEQ Instructions to Geologists in addition to all maps and attachments required by the TCEQ Edwards Aquifer Rules.

# Section 3 Results

## 3.1 Overview

The project area is primarily undeveloped land currently used for cattle and horse grazing, featuring a dirt road through the center and areas of native vegetation. The vegetation on the property consists of a mix of open grassy fields, interspersed with cedar and oak thickets. Little Barton Creek runs north of the project area while three unnamed tributaries of Little Barton Creek intersect the project area.

## 3.2 Soils

The project area is mapped within the Soil Survey of Comal and Hays Counties (**Appendix C: Site Soils Map**). Soil survey data was utilized to establish the geomorphological setting and soil types present. Detailed soil map unit descriptions and soil characteristics were derived from information available in the online National Resources Conservation Service (NRCS) Web Soil Survey, and soil series locations were determined from information available in the online NRCS Soil Survey Geographic Database (SSURGO). The NRCS National Hydric Soils List was also used to identify the limits of mapped hydric soils within the project area. The soil map units identified in the project area and the characteristics of each soil map unit are provided in **Table 1.**

**Table 1: Soil Units, Infiltration Characteristics, and Thickness**

| Soil Map Unit | Group | Thickness (feet) | Drainage Class | Permeability | Surface Runoff | Hydric |
|---|---|---|---|---|---|---|
| Brackett-Rock outcrop-Comfort complex, 1 to 8 percent slopes | D | 1.67 | Well drained | Moderately low to high | High | No |
| Brackett-Rock outcrop-Real complex, 8 to 30 percent slopes | D | 1.67 | Well drained | Moderately low to high | High | No |
| Real-Comfort-Doss complex, 1 to 8 percent slopes | D | 1.67 | Well drained | Moderately low to high | High | No |

Source: SSURGO

## 3.3 Geology

The Llano Sheet of the Geologic Atlas of Texas was utilized to identify underlying geology. The geologic unit present on the project area has been identified as Upper Glen Rose Limestone (**Appendix C: Site Geologic Map**). The Upper Glen Rose limestone has an approximate thickness of 220 feet. Its lithology includes limestone, dolomite, and marl. Due to weathering and the nature of alternating resistant and recessive beds, stairstep topography is commonly formed.

The **Stratigraphic Column** outlining the geologic features on the project area is provided below in **Table 2**. Upper Glen Rose Limestone was seen in the field.

**Table 2: Stratigraphic Column**

| Age | Approximate Thickness | Geologic Unit |
|---|---|---|
| Cretaceous | 200 feet thick | Upper Glen Rose Limestone |

Source: USGS 2022

## 3.4 Hydrogeologic Assessment

According to the National Hydrography Dataset, Little Barton Creek, a tributary of the Colorado River, runs north of the project area. Additionally, three unnamed streams intersect the project area; all are tributaries to Little Barton Creek. The elevation on the project area ranges from 1,091 to 1,184 feet above mean sea level.

No wells were identified on the project area at the time of the site visits. Per review of data from TCEQ and the Texas Water Development Board, the closest water well recorded is within 0.61 miles of the project area.

The project area is located within the Edwards Aquifer Contributing Zone. U.S. Fish and Wildlife karst zone data obtained for Hays County indicates that the project area is mapped within Karst Zone 4b. Karst Zone 4b is defined as “areas which do not contain karst invertebrate species”.

# Section 4 Feature Descriptions

BGE identified six geologic features within the project area. Per the required calculations, none of these features are considered sensitive. Geologic features identified within the project area are described below. Photographs were taken to characterize site conditions and the identified features (**Appendix D: Project Area Photographs**).

Features CD-1 through CD-6 are non-karst closed depressions. These features consisted of animal burrows occurring within Upper Glen Rose Limestone. These features were relatively small with diameters less than two feet. The infill material within the depressions consisted of organic materials (leaf litter, twigs, and other breakdown), roots, and moderately compacted clay-rich sediment. Due to the low infiltration rate and lack of connectivity to the subsurface, these features are not considered to be sensitive. Catchment areas were less than 1.6 acres.

# Section 5 Conclusion

Site visits to perform a GA for the Double L Pod Arterial were conducted on November 18-19 and December 9, 2025, by BGE scientists, including a Texas Licensed PG, over the +/-17-acre project area. BGE identified six geologic features (CD-1 through CD-6). None of these features met the criteria to be considered sensitive features according to the TCEQ Instructions for Geologists standards.

# Appendix A: Geologic Assessment Form

# Geologic Assessment

**Texas Commission on Environmental Quality**

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

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

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

## *Signature*

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

Print Name of Geologist: Ricardo Flores  Telephone: (210) 581-3633

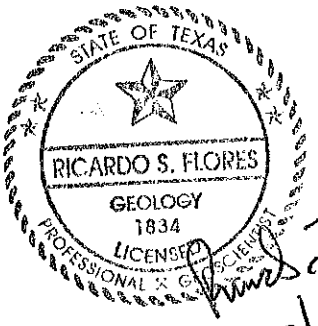
Date: 12/12/2025  Fax: _____

Representing: BGE, Inc.

TBPG Registration #1834

(Name of Company and TBPG or TBPE registration number)

Signature of Geologist:




**Regulated Entity Name:** Double L Pod Arterial

## *Project Information*

1. Date(s) Geologic Assessment was performed: 11/18/2025, 11/19/2025, and 12/09/2025
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☐ Recharge Zone
   - ☐ Transition Zone

☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

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

**Table 1 - Soil Units, Infiltration Characteristics and Thickness**

| Soil Name | Group* | Thickness(feet) |
|---|---|---|
| | | |

| Soil Name | Group* | Thickness(feet) |
|---|---|---|
| Please see Table 1 in the Site Geology Report | | |
| | | |
| | | |
| | | |

** Soil Group Definitions (Abbreviated)*

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

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

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

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

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

   Applicant's Site Plan Scale: 1" = _____'
   Site Geologic Map Scale: 1" = 600'
   Site Soils Map Scale (if more than 1 soil type): 1" = 600'

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.
   ☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.
13. ☐ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    - ☐ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☐ The wells are in use and comply with 16 TAC Chapter 76.

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

## *Administrative Information*

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

# Appendix B: Geologic Assessment Table

## GEOLOGIC ASSESSMENT TABLE

**PROJECT NAME:** Double L Pod Arterial

| LOCATION | | | FEATURE CHARACTERISTICS | | | | | | | | | | | | EVALUATION | | | PHYSICAL SETTING | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A | 1B * | 1C* | 2A | 2B | 3 | 4 | | | 5 | 5A | 6 | 7 | 8A | 8B | 9 | 10 | | 11 | | | 12 |
| FEATURE ID | LATITUDE | LONGITUDE | FEATURE TYPE | POINTS | FORMATION | DIMENSIONS (FEET) | | | TREND (DEGREES) | NODE | DENSITY (NO/FT) | APERTURE (FEET) | INFILL | RELATIVE INFILTRATION RATE | TOTAL | SENSITIVITY | | CATCHMENT AREA (ACRES) | | | TOPOGRAPHY |
| | | | | | | X | Y | Z | | 10 | | | | | | <40 | >40 | <1.6 | >1.6 | | |
| CD-1 | 30.204830 | -98.071104 | CD | 5 | Kgru | 0.8 | 0.4 | 1 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | | Hillside |
| CD-2 | 30.205378 | -98.071237 | CD | 5 | Kgru | 0.5 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | | Hillside |
| CD-3 | 30.205632 | -98.071443 | CD | 5 | Kgru | 1 | 0.3 | 0.5 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | | Hillside |
| CD-4 | 30.205759 | -98.071739 | CD | 5 | Kgru | 0.6 | 0.4 | 0.3 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | | Hillside |
| CD-5 | 30.20874 | -98.075470 | CD | 5 | Kgru | 0.5 | 0.3 | 0.5 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | | Hillside |
| CD-6 | 30.211066 | -98.077184 | CD | 5 | Kgru | 0.6 | 0.4 | 0.3 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | | Hillside |

* DATUM WGS84

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

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

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

Date 12/12/2025

Sheet 1 of 1

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

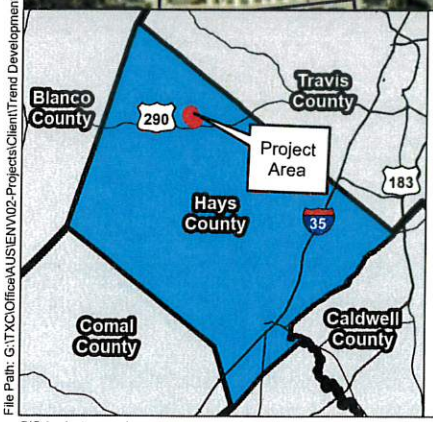
STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED PROFESSIONAL GEOSCIENTIST

12/12/2025

## Appendix C: Exhibits

- Site Soils Map
- Site Geologic Map




**Legend**

- Project Area
- Soil Unit (NRCS)
- Stream (NHD)
- Wetland (NWI)
- Roadway (TxDOT)

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED PROFESSIONAL GEOLOGIST

N

0 300 600
Feet

12/12/2025

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L Pod Arterial

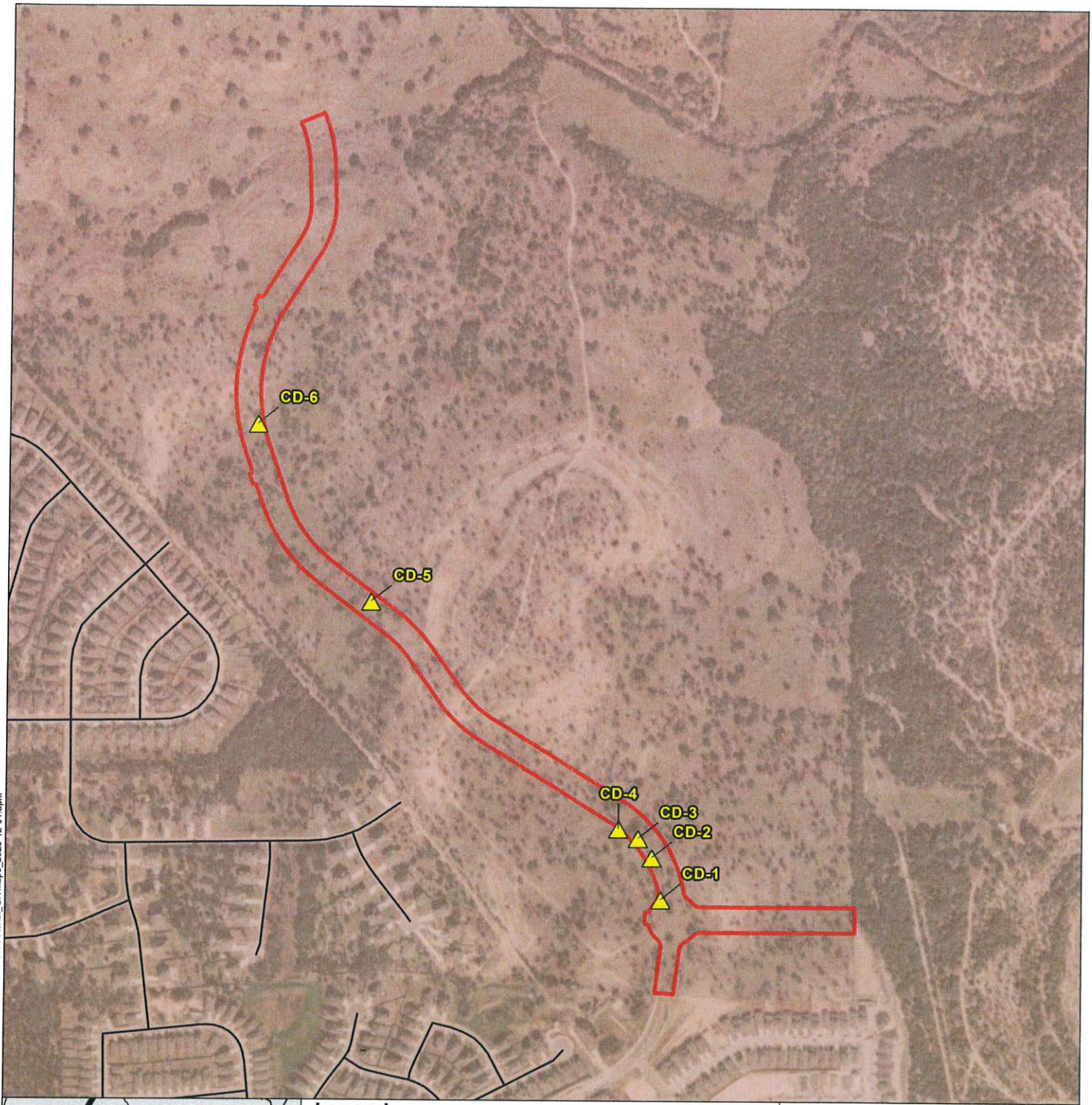
## Site Soils Map
Hays County, TX

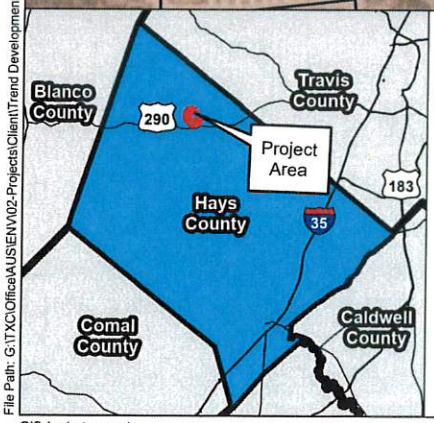
Date: December 2025 | Project: 14789-00

Data Source: NRCS (2025), NHD (2024), NWI (2024), TxDOT (2022)

File Path: G:\TXC\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\20- Pod Arterial\07- GIS\Arterial_GA Maps_2025-12-01.aprx

GIS Analyst: cnoyola




**Legend**

- Project Area
- Non-karst closed depression (BGE)
- Upper Glen Rose Limestone (USGS)
- Roadway (TxDOT)

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOLOGIST

12/12/2025

N

0 300 600
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L Pod Arterial

## Site Geologic Map
Hays County, TX

Date: December 2025 | Project: 14789-00

Data Source: USGS (2024), TxDOT (2022)

File Path: G:\TX\Cl\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\20- Pod Arterial\07- GIS\Arterial_GA Maps_2025-12-01.aprx

GIS Analyst: cnoyola

# Appendix D: Project Area Photographs

**Double L Pod Arterial**
Geologic Assessment – Site Geology Report
Project Area Photographs



**Photograph 1**: Facing east, overview of the project area.



**Photograph 2**: Facing southeast, view of an animal burrow, non-karst closed depression (CD-1) located on the southern portion of the project area.



**Photograph 3:** Facing east, view of an animal burrow, non-karst closed depression (CD-2) located on the southern portion of the project area.



**Photograph 4**: Facing southeast, view of an animal burrow, non-karst closed depression (CD-3) located on the southern portion of the project area.



**Photograph 5**: Facing west, view of an animal burrow, non-karst closed depression (CD-4) located on the southern portion of the project area.



**Photograph 6:** Facing east, view of an animal burrow, non-karst closed depression (CD-5) located on the central portion of the project area.



**Photograph 7:** Facing north, view of an animal burrow, non-karst closed depression (CD-6) located on the northern portion of the project area.

# Geologic Assessment – Site Geology Report

Double L Pods A1 & A2
+/-32-acre
Dripping Springs ETJ, Hays County, Texas

***Prepared For:***
Highland Homes



***Prepared By:***

BGE, Inc.
101 West Louis Henna Blvd., Suite 400
Austin, TX 78728
BGE PN: 14789-00
December 2025

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOSCIENTIST

12/12/2025

# Table of Contents

**Section 1 Introduction** ..... **1**

**Section 2 Methodology** ..... **1**

**Section 3 Results** ..... **1**

3.1 Overview ..... 1

3.2 Soils ..... 2

3.3 Geology ..... 2

3.4 Hydrogeologic Assessment ..... 3

**Section 4 Feature Descriptions** ..... **3**

**Section 5 Conclusion** ..... **3**

# Appendices

**Appendix A**: **Geologic Assessment Form**

**Appendix B:** **Geologic Assessment Table**

**Appendix C:** **Exhibits**
Site Soils Map
Site Geologic Map

**Appendix D**: **Project Area Photographs**

# Section 1 Introduction

A geologic assessment (GA) was conducted by Mr. Ricardo Flores, P.G. and environmental scientists of BGE, Inc. (BGE) on November 18-19 and December 9, 2025, on the Double L Pods A1 & A2, herein referred to as "project area". The project area is a +/-32-acre portion of a larger development located north of U.S. 290 and east of Ranch Road 12 in the Dripping Springs ETJ, Hays County, Texas. The project area is located within the *Dripping Springs*, TX U.S. Geological Survey (USGS) 7.5-minute topographic map (2025). 32 geologic features (SF-1 and CD-1 through CD-31) were identified on the project area. None of these features would be considered sensitive according to the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules.

# Section 2 Methodology

The GA was completed on the project area following the methods described in the *TCEQ Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (hereafter Instructions to Geologists) and augmented with the TCEQ Edwards Aquifer Guidance Manual.

BGE scientists, including a Texas Licensed Professional Geologist (PG), conducted a 100 percent pedestrian survey during the site visits on November 18-19 and December 9, 2025. During the site visits, transects spaced no more than 50 feet apart and drainages were systematically walked to observe surface features. BGE surveyed the entire +/-32-acre project area which is located within the Edwards Aquifer Contributing Zone. Surface soil and visible geology were recorded during the field visit. Data was collected in the field with a Samsung phone with a GPS internal receiver and a Trimble DA2 Receiver capable of sub-meter accuracy. The technique used to determine the depth, thickness, and consistency of fill material of identified features included probing with a digging implement. Although not found, air flow from features was also analyzed, to identify the presence of a sub-surface void space.

Following the field investigations, BGE completed a Geologic Assessment Form (**Appendix A: Geologic Assessment Form**) and a Geologic Assessment Table (**Appendix B: Geologic Assessment Table**) according to the standards in the TCEQ Instructions to Geologists in addition to all maps and attachments required by the TCEQ Edwards Aquifer Rules.

# Section 3 Results

## 3.1 Overview

The project area is primarily undeveloped land currently used for cattle and horse grazing, featuring areas of native vegetation. The vegetation on the property consists of a mix of open grassy fields, cedar and oak thickets, and riparian corridors of mixed hardwoods with thick understories. Two unnamed tributaries of Little Barton Creek intersect the project area.

## 3.2 Soils

The project area is mapped within the Soil Survey of Comal and Hays Counties (**Appendix C: Site Soils Map**). Soil survey data was utilized to establish the geomorphological setting and soil types present. Detailed soil map unit descriptions and soil characteristics were derived from information available in the online National Resources Conservation Service (NRCS) Web Soil Survey, and soil series locations were determined from information available in the online NRCS Soil Survey Geographic Database (SSURGO). The NRCS National Hydric Soils List was also used to identify the limits of mapped hydric soils within the project area. The soil map units identified in the project area and the characteristics of each soil map unit are provided in **Table 1.**

**Table 1: Soil Units, Infiltration Characteristics, and Thickness**

| Soil Map Unit | Group | Thickness (feet) | Drainage Class | Permeability | Surface Runoff | Hydric |
|---|---|---|---|---|---|---|
| Brackett-Rock outcrop-Comfort complex, 1 to 8 percent slopes | D | 1.67 | Well drained | Moderately low to high | High | No |
| Real-Comfort-Doss complex, 1 to 8 percent slopes | D | 1.67 | Well drained | Moderately low to high | High | No |

Source: SSURGO

## 3.3 Geology

The Llano Sheet of the Geologic Atlas of Texas was utilized to identify underlying geology. The geologic unit present on the project area has been identified as Upper Glen Rose Limestone (**Appendix C: Site Geologic Map**). The Upper Glen Rose limestone has an approximate thickness of 220 feet. Its lithology includes limestone, dolomite, and marl. Due to weathering and the nature of alternating resistant and recessive beds, stairstep topography is commonly formed.

The **Stratigraphic Column** outlining the geologic features on the project area is provided below in **Table 2**. Upper Glen Rose Limestone was seen in the field.

**Table 2: Stratigraphic Column**

| Age | Approximate Thickness | Geologic Unit |
|---|---|---|
| Cretaceous | 200 feet thick | Upper Glen Rose Limestone |

Source: USGS 2022

## 3.4 Hydrogeologic Assessment

According to the National Hydrography Dataset, two unnamed streams intersect the project area; all are tributaries to Little Barton Creek. The elevation on the project area ranges from 1,127 to 1,168 feet above mean sea level.

No wells were identified on the project area at the time of the site visits. Per review of data from TCEQ and the Texas Water Development Board, the closest water well recorded is within 0.58 miles of the project area.

The project area is located within the Edwards Aquifer Contributing Zone. U.S. Fish and Wildlife karst zone data obtained for Hays County indicates that the project area is mapped within Karst Zone 4b. Karst Zone 4b is defined as “areas which do not contain karst invertebrate species”.

# Section 4 Feature Descriptions

BGE identified 32 geologic features within the project area. Per the required calculations, none of these features are considered sensitive. Geologic features identified within the project area are described below. Photographs were taken to characterize site conditions and the identified features (**Appendix D: Subject Property Photographs**).

A solution-enlarged fracture (SF-1) was identified on the northeastern portion of the project area. This feature occurs within Upper Glen Rose Limestone. Fractures within the limestone were visible; however, infiltration appeared to be low with the compacted clay infill. Due to the low infiltration rate, this feature is not considered to be sensitive.

Features CD-1 through CD-31 are non-karst closed depressions. These features consisted of closed depressions, animal burrows and a root ball occurring within Upper Glen Rose Limestone. The closed depression features were relatively small with diameters less than two feet. The infill material within the depressions consisted of organic materials (leaf litter, twigs, and other breakdown), roots, and moderately compacted clay-rich sediment. Due to the low infiltration rate and lack of connectivity to the subsurface, these features are not considered to be sensitive. Catchment areas were less than 1.6 acres.

# Section 5 Conclusion

Site visits to perform a GA for the Double L Pods A1 & A2 were conducted on November 18-19 and December 9, 2025, by BGE scientists, including a Texas Licensed PG, over the +/-32-acre project area. BGE identified 32 geologic features (SF-1 and CD-1 through CD-31). None of these features met the criteria to be considered sensitive features according to the TCEQ Instructions for Geologists standards.

# Appendix A: Geologic Assessment Form

# Geologic Assessment

**Texas Commission on Environmental Quality**

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

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

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

## *Signature*

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

Print Name of Geologist: Ricardo Flores

Telephone: 210-581-3633

Date: 12/12/2025

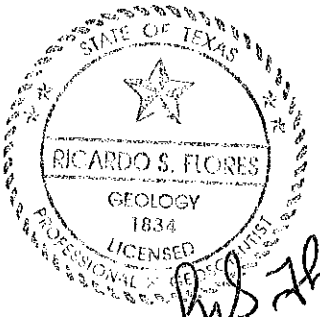
Fax: _____

Representing: BGE, Inc.

TBPG Registration #1834

(Name of Company and TBPG or TBPE registration number)

Signature of Geologist:




12/12/2025

**Regulated Entity Name:** Double L Pods A1 & A2

## *Project Information*

1. Date(s) Geologic Assessment was performed: 11/18/2025, 11/19/2025, and 12/09/2025
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☐ Recharge Zone
   - ☐ Transition Zone

☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

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

**Table 1 - Soil Units, Infiltration Characteristics and Thickness**

| Soil Name | Group* | Thickness(feet) |
|---|---|---|
| | | |

| Soil Name | Group* | Thickness(feet) |
|---|---|---|
| Please see Table 1 in the Site Geology Report | | |
| | | |
| | | |
| | | |

** Soil Group Definitions (Abbreviated)*

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

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

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

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

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

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

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.
   ☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.
13. ☐ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    - ☐ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☐ The wells are in use and comply with 16 TAC Chapter 76.

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

## *Administrative Information*

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

# Appendix B: Geologic Assessment Table

## GEOLOGIC ASSESSMENT TABLE

**PROJECT NAME:** Double L Pods A1 & A2

| LOCATION | | | FEATURE CHARACTERISTICS | | | | | | | | | | | | | EVALUATION | | PHYSICAL SETTING | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A | 1B* | 1C* | 2A | 2B | 3 | 4 | | | 5 | 5A | 6 | 7 | 8A | 8B | 9 | 10 | 11 | | 12 |
| FEATURE ID | LATITUDE | LONGITUDE | FEATURE TYPE | POINTS | FORMATION | DIMENSIONS (FEET) | | | TREND (DEGREES) | KRS | DENSITY (#/0/F) | APERTURE (FEET) | INFILL | RELATIVE INFILTRATION RATE | TOTAL | SENSITIVITY | CATCHMENT AREA (ACRES) | | TOPOGRAPHY |
| | | | | | | X | Y | Z | | 10 | | | | | | | <40 | ≥40 | ≤1.6 | ≥1.6 | |
| SF-1 | 30.213696 | -98.078313 | SF | 20 | Kgru | 1.5 | 0.3 | 0.5 | N40E | 0 | N/A | N/A | O | 10 | X | | X | | | Hillside |
| CD-1 | 30.213719 | -98.077994 | CD | 5 | Kgru | 1 | 0.5 | 1 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-2 | 30.2137 | -98.078177 | CD | 5 | Kgru | 2 | 0.5 | 1.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-3 | 30.21369 | -98.078175 | CD | 5 | Kgru | 0.5 | 1.5 | 2 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-4 | 30.213666 | -98.07823 | CD | 5 | Kgru | 0.5 | 0.3 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-5 | 30.213666 | -98.078269 | CD | 5 | Kgru | 1 | 0.5 | 0.7 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-6 | 30.213647 | -98.078373 | CD | 5 | Kgru | 0.5 | 1 | 2 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-7 | 30.213612 | -98.078446 | CD | 5 | Kgru | 4 | 0.3 | 1.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-8 | 30.213362 | -98.078827 | CD | 5 | Kgru | 0.5 | 0.5 | 1 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-9 | 30.213345 | -98.078828 | CD | 5 | Kgru | 0.5 | 1 | 1 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-10 | 30.213371 | -98.078889 | CD | 5 | Kgru | 2.5 | 0.5 | 1 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-11 | 30.213301 | -98.078996 | CD | 5 | Kgru | 2 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-12 | 30.213259 | -98.079416 | CD | 5 | Kgru | 0.4 | 0.8 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-13 | 30.213409 | -98.079926 | CD | 5 | Kgru | 0.5 | 0.5 | 1 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-14 | 30.213499 | -98.080664 | CD | 5 | Kgru | 0.5 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-15 | 30.213623 | -98.082021 | CD | 5 | Kgru | 0.5 | 1 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-16 | 30.213664 | -98.082196 | CD | 5 | Kgru | 1.5 | 0.3 | 0.7 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-17 | 30.213403 | -98.082441 | CD | 5 | Kgru | 0.5 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-18 | 30.213394 | -98.082458 | CD | 5 | Kgru | 0.5 | 0.8 | 0.3 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-19 | 30.213253 | -98.082452 | CD | 5 | Kgru | 1 | 0.2 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-20 | 30.213292 | -98.082668 | CD | 5 | Kgru | 0.3 | 0.2 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-21 | 30.213282 | -98.082689 | CD | 5 | Kgru | 0.5 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-22 | 30.213099 | -98.082762 | CD | 5 | Kgru | 0.5 | 0.5 | 1 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-23 | 30.213068 | -98.082283 | CD | 5 | Kgru | 0.5 | 0.3 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-24 | 30.212309 | -98.080835 | CD | 5 | Kgru | 0.3 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-25 | 30.212222 | -98.080447 | CD | 5 | Kgru | 2 | 1 | 2 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-26 | 30.212049 | -98.080242 | CD | 5 | Kgru | 0.5 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-27 | 30.211176 | -98.079668 | CD | 5 | Kgru | 1 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-28 | 30.21172 | -98.07926 | CD | 5 | Kgru | 0.5 | 0.5 | 1 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-29 | 30.210655 | -98.079388 | CD | 5 | Kgru | 0.3 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-30 | 30.210472 | -98.079044 | CD | 5 | Kgru | 0.5 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |
| CD-31 | 30.21311 | -98.077608 | CD | 5 | Kgru | 3 | 0.3 | 0.5 | - | 0 | N/A | N/A | O | 5 | X | | X | | | Hillside |

* DATUM: WGS84

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

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

**12 TOPOGRAPHY**

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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

Date 12/12/2025

Sheet 1 of 1

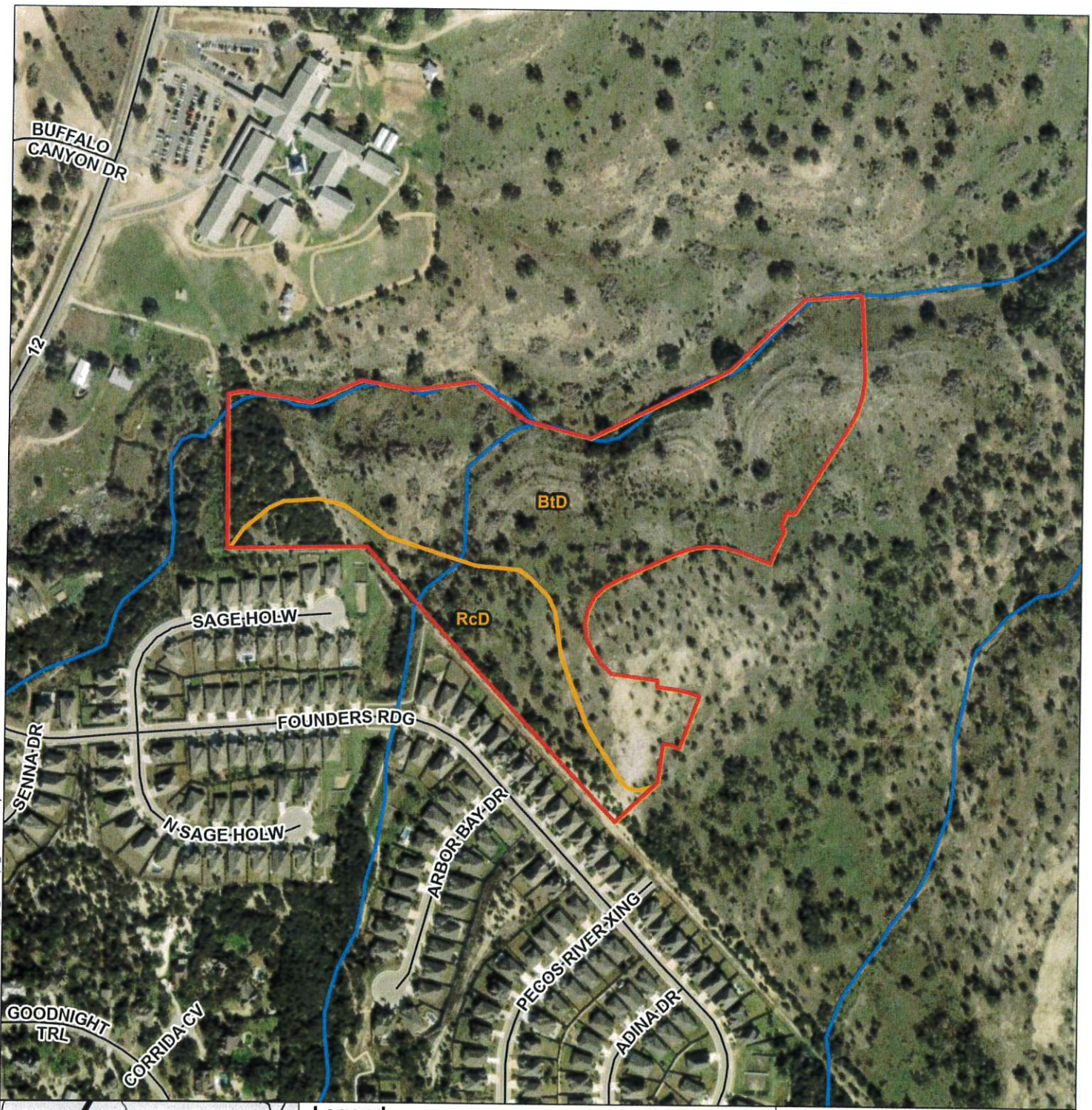
TCEQ-0585-Table (Rev. 10-01-04)

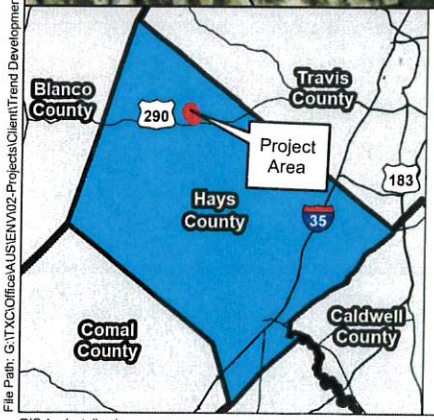
STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOLOGIST

12/12/2025

## Appendix C: Exhibits

- Site Soils Map
- Site Geologic Map




**Legend**

- Project Area
- Soils (NRCS)
- Stream (NHD)
- Roadway (TxDOT)

RICARDO S. FLORES
GEOLOGY
1634
LICENSED

N

0 200 400
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pods A1 & A2

## Site Soils Map
Hays County, TX

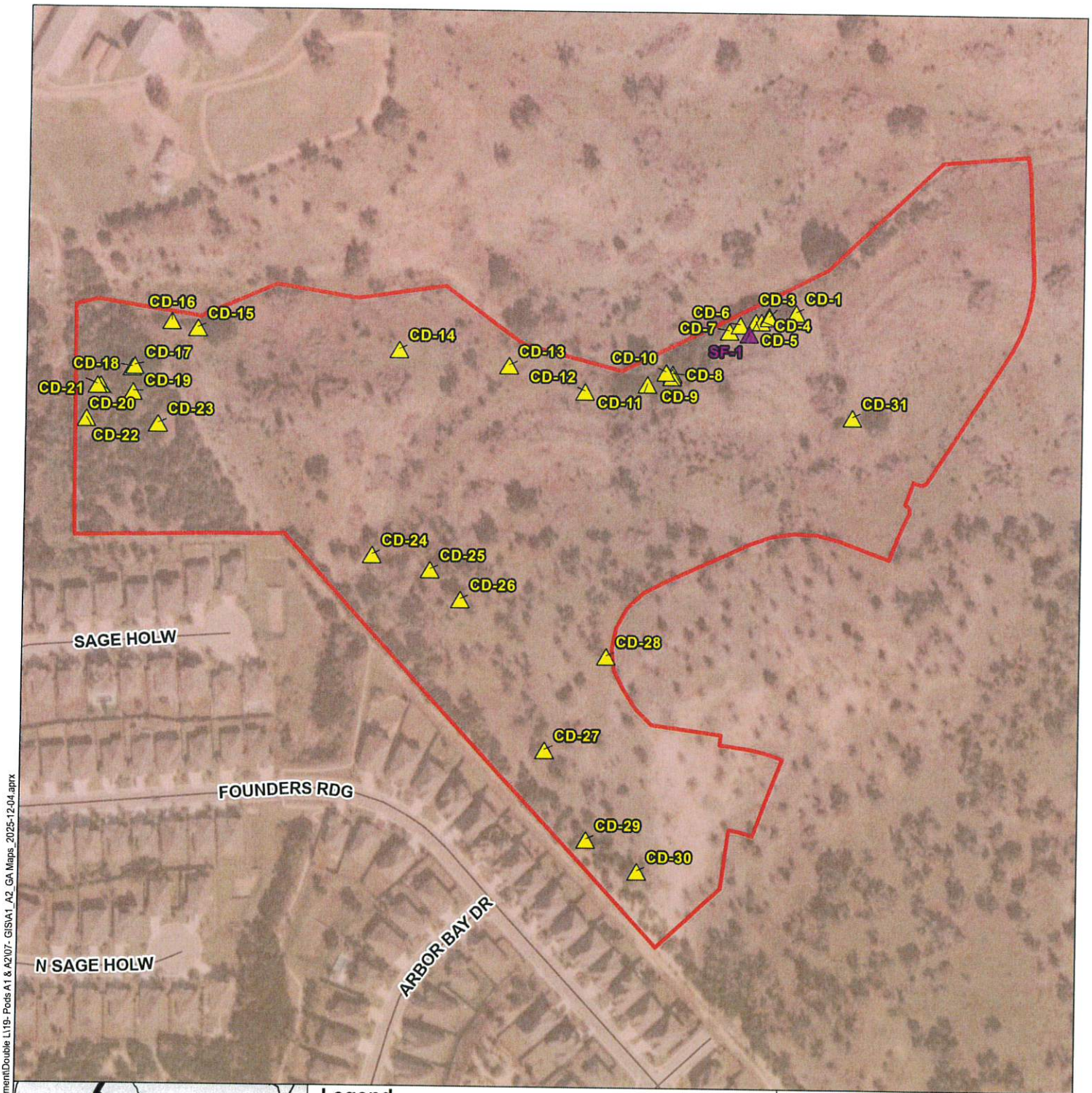
Date: December 2025 | Project: 14789-00

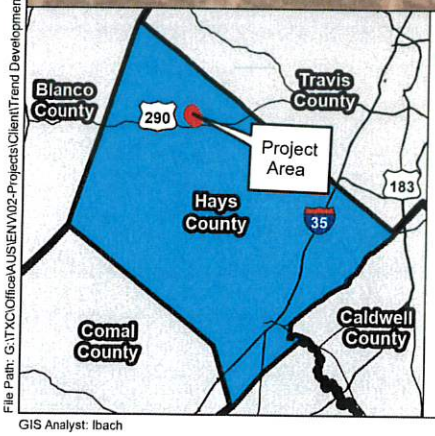
Data Source: NRCS (2025), NHD (2024), TxDOT (2024)

12/12/2025

File Path: G:\TX\Cl\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\19- Pods A1 & A2\07- GIS\A1_A2_GA Maps_2025-12-04.aprx

GIS Analyst: lbach




**Legend**

- Project Area
- Solution-Enlarged Fracture (BGE)
- Non-Karst Closed Depression (BGE)
- Upper Glen Rose Limestone (USGS)
- Roadway (TxDOT)

N

0 130 260
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pods A1 & A2

## Site Geologic Map
Hays County, TX

Date: December 2025 | Project: 14789-00

Data Source: USGS (2024), TxDOT (2024)

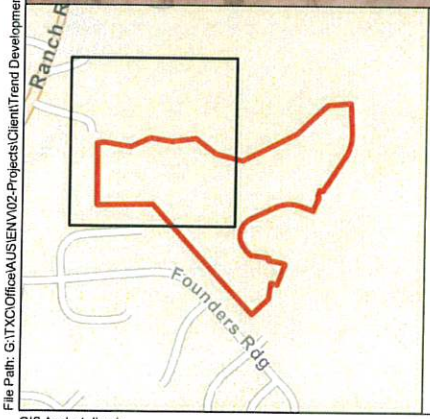
File Path: G:\TXC\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\19- Pods A1 & A2\07- GIS\A1_A2_GA Maps_2025-12-04.aprx

GIS Analyst: lbach

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOSCIENTIST

12/12/2025




**Legend**

- Project Area
- Non-Karst Closed Depression (BGE)
- Upper Glen Rose Limestone (USGS)

N

0 75 150
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pods A1 & A2

## Site Geologic Map
Hays County, TX
Page 1

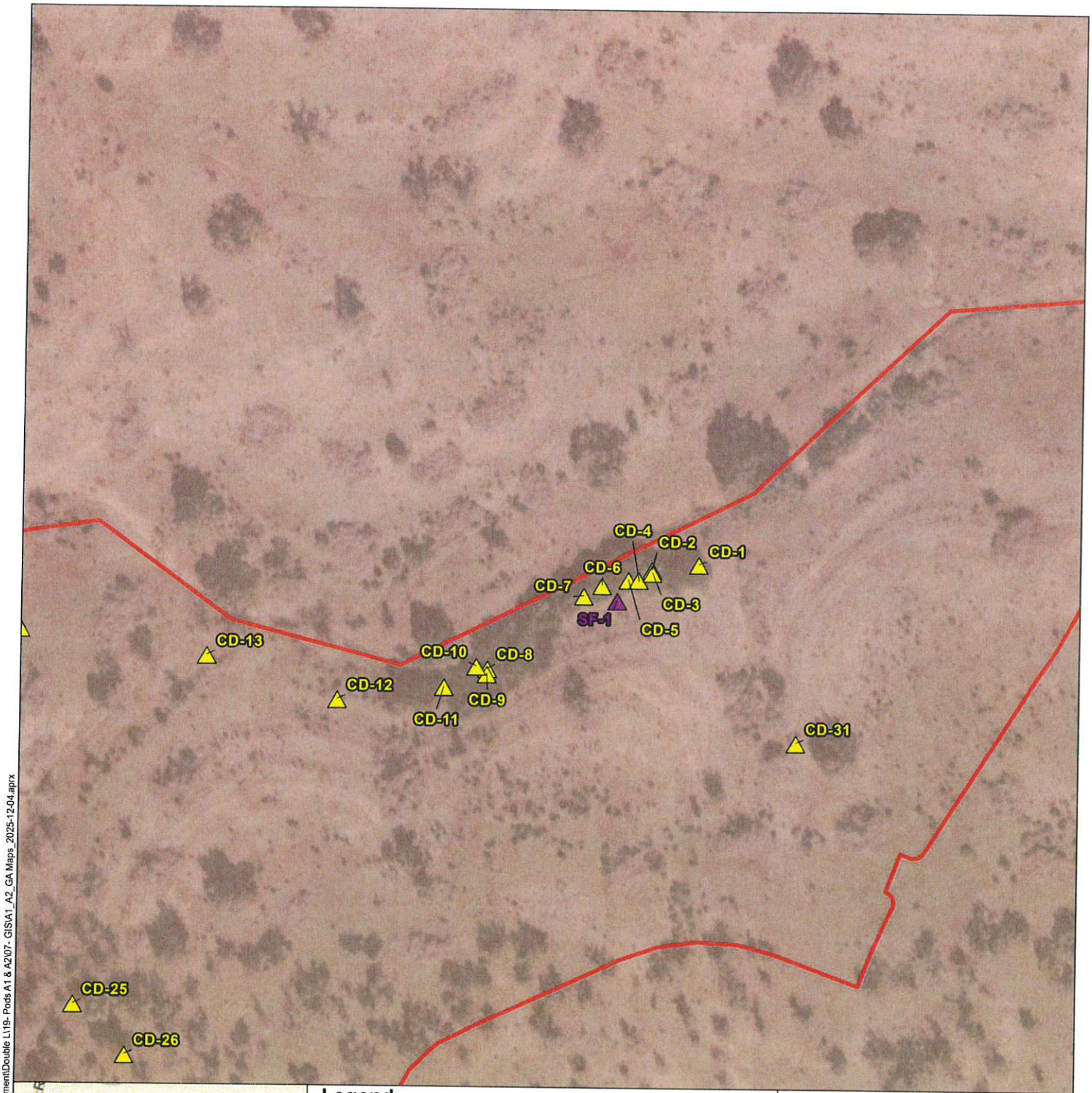
Date: December 2025 | Project: 14789-00

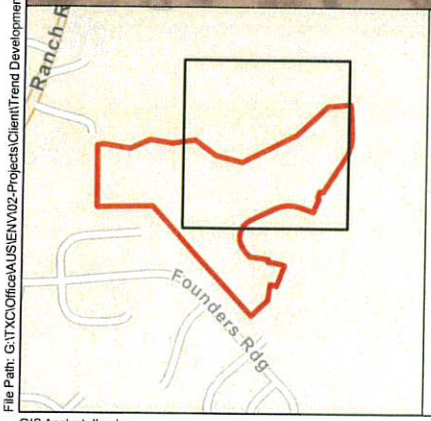
Data Source: USGS (2024), TxDOT (2024)

File Path: G:\TXC\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\19- Pods A1 & A2\07- GIS\A1_A2_GA Maps_2025-12-04.aprx

GIS Analyst: Ibach

12/12/2025




## Legend

- Project Area
- Non-Karst Closed Depression (BGE)
- Upper Glen Rose Limestone (USGS)
- Solution-Enlarged Fracture (BGE)

N

0 75 150
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pods A1 & A2

## Site Geologic Map
Hays County, TX
Page 2

Date: December 2025 | Project: 14789-00

Data Source: USGS (2024), TxDOT (2024)

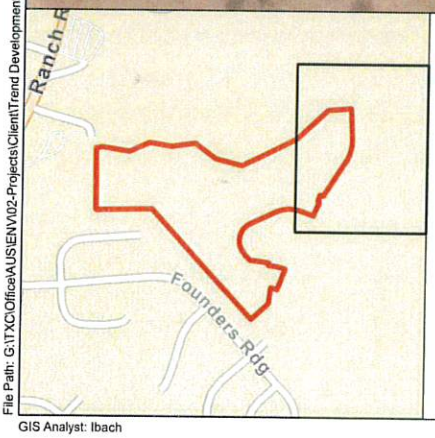
STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1034
LICENSED

12/12/2025

File Path: G:\TX\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\19- Pods A1 & A2\07- GIS\A1_A2_GA Maps_2025-12-04.aprx

GIS Analyst: lbach




**Legend**

- Project Area
- Non-Karst Closed Depression (BGE)
- Upper Glen Rose Limestone (USGS)

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOLOGIST

12/12/2025

N

0 75 150
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pods A1 & A2

## Site Geologic Map

Hays County, TX
Page 3

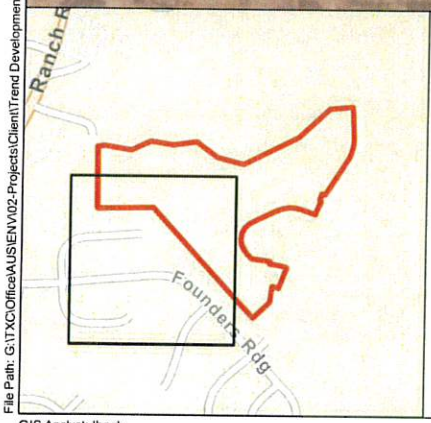
Date: December 2025 | Project: 14789-00

Data Source: USGS (2024), TxDOT (2024)

File Path: G:\TX\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\19- Pods A1 & A2\07- GIS\A1_A2_GA Maps_2025-12-04.aprx

GIS Analyst: Ibach




**Legend**

- Project Area
- Non-Karst Closed Depression (BGE)
- Upper Glen Rose Limestone (USGS)
- Roadway (TxDOT)

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOLOGIST

12/12/2025

N

0 75 150
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pods A1 & A2

## Site Geologic Map

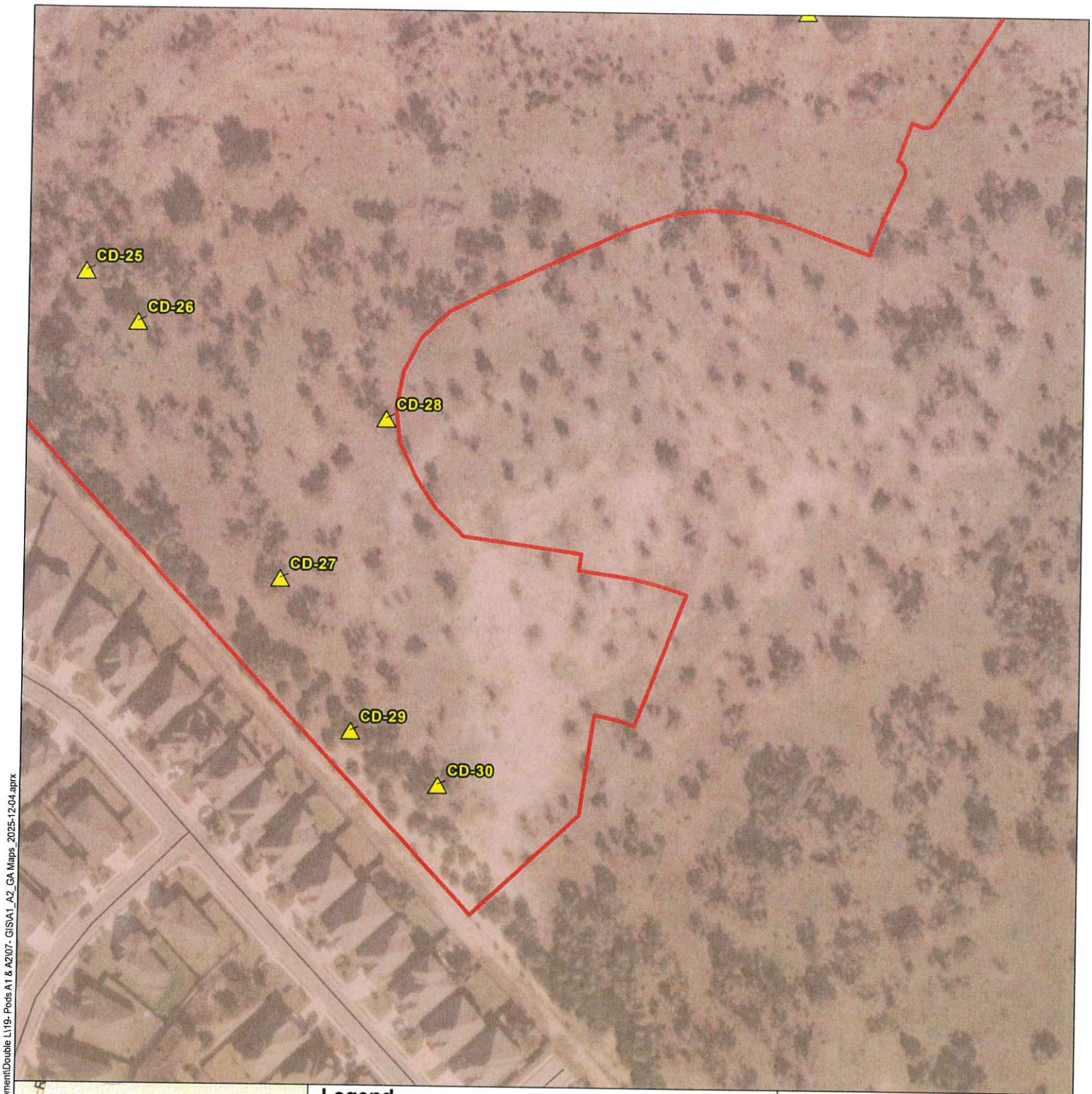
Hays County, TX
Page 4

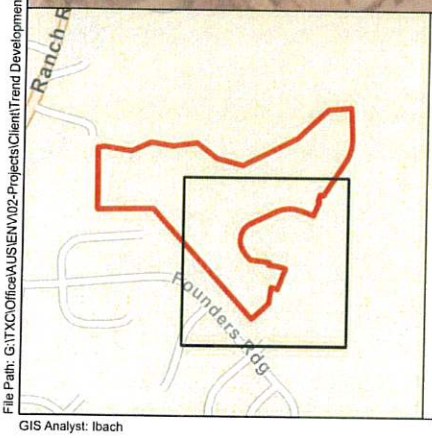
Date: December 2025 | Project: 14789-00

Data Source: USGS (2024), TxDOT (2024)

File Path: G:\TXO\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\19- Pods A1 & A2\07- GIS\A1_A2_GA Maps_2025-12-04.aprx

GIS Analyst: lbach




**Legend**

- Project Area
- Non-Karst Closed Depression (BGE)
- Upper Glen Rose Limestone (USGS)
- Roadway (TxDOT)

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED

N

0 75 150
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pods A1 & A2

## Site Geologic Map
Hays County, TX
Page 5

Date: December 2025 | Project: 14789-00

Data Source: USGS (2024), TxDOT (2024)

12/12/2025

File Path: G:\TXC\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\19- Pods A1 & A2\07- GIS\A1_A2_GA Maps_2025-12-04.aprx

GIS Analyst: Ibach

# Appendix D: Project Area Photographs

**Double L Pods A1 & A2**
Geologic Assessment – Site Geology Report
Project Area Photographs



**Photograph 1**: Facing southeast, overview of the project area.



**Photograph 2**: Facing north, view of a solution-enlarged fracture (SF-1) located on the northeastern portion of the project area.



**Photograph 3:** Facing south, representative photo of a closed depression, non-karst closed depression (CD-7) found on the northeastern portion of the project area**.**



**Photograph 4**: Facing southeast, representative photo of a closed depression, non-karst closed depression (CD-11) found on the northeastern portion of the project area**.**



**Photograph 5**: Facing north, representative photo of an animal burrow, non-karst closed depression (CD-18) located on the northwestern portion of the project area.



**Photograph 6:** Facing west, representative photo an animal burrow, non-karst closed depression (CD-27) located on the southern portion of the project area.



**Photograph 7:** Facing northeast, representative photo of a root ball, non-karst closed depression (CD-25) located on the central portion of the project area.

# Geologic Assessment – Site Geology Report

Double L Pods A4, B1, & B4
+/-41-acre
Dripping Springs ETJ, Hays County, Texas

***Prepared For:***
2025 ALD, LLC



***Prepared By:***

BGE, Inc.
101 West Louis Henna Blvd., Suite 400
Austin, TX 78728
BGE PN: 14789-00
December 2025

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOSCIENTIST

12/12/2025

# Table of Contents

**Section 1 Introduction** ..... **1**

**Section 2 Methodology** ..... **1**

**Section 3 Results** ..... **1**

3.1 Overview ..... 1

3.2 Soils ..... 2

3.3 Geology ..... 2

3.4 Hydrogeologic Assessment ..... 3

**Section 4 Feature Descriptions** ..... **3**

**Section 5 Conclusion** ..... **4**

# Appendices

**Appendix A**: **Geologic Assessment Form**

**Appendix B:** **Geologic Assessment Table**

**Appendix C:** **Exhibits**
Site Soils Map
Site Geologic Map

**Appendix D**: **Project Area Photographs**

# Section 1 Introduction

A geologic assessment (GA) was conducted by Mr. Ricardo Flores, P.G. and environmental scientists of BGE, Inc. (BGE) on November 18-19, 2025 and December 9, 2025, on the Double L Pods A4, B1, & B4, herein referred to as "project area". The project area is a +/-41-acre portion of a larger development located north of U.S. 290 and east of Ranch Road 12 in the Dripping Springs ETJ, Hays County, Texas. The project area is located within the *Dripping Springs*, TX U.S. Geological Survey (USGS) 7.5-minute topographic map (2025). Nine geologic features (CD-1 through CD-9) were identified on the project area. None of these features would be considered sensitive according to the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules.

# Section 2 Methodology

The GA was completed on the project area following the methods described in the *TCEQ Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones* (hereafter Instructions to Geologists) and augmented with the TCEQ Edwards Aquifer Guidance Manual.

BGE scientists, including a Texas Licensed Professional Geologist (PG), conducted a 100 percent pedestrian survey during the site visits on November 18-19 and December 9, 2025. During the site visits, transects spaced no more than 50 feet apart and drainages were systematically walked to observe surface features. BGE surveyed the entire +/-41-acre project area which is located within the Edwards Aquifer Contributing Zone. Surface soil and visible geology were recorded during the field visit. Visual observations were documented in Data was collected in the field using a Samsung phone with a GPS internal receiver and a Trimble DA2 Receiver capable of sub-meter accuracy. The technique used to determine the depth, thickness, and consistency of fill material of identified features included probing with a digging implement. Although not found, air flow from features was also analyzed, to identify the presence of a sub-surface void space.

Following the field investigations, BGE completed a Geologic Assessment Form (**Appendix A: Geologic Assessment Form**) and a Geologic Assessment Table (**Appendix B: Geologic Assessment Table**) according to the standards in the TCEQ Instructions to Geologists in addition to all maps and attachments required by the TCEQ Edwards Aquifer Rules.

# Section 3 Results

## 3.1 Overview

The project area is primarily undeveloped land currently used for cattle and horse grazing, featuring a dirt road through the center and areas of native vegetation. The vegetation on the property consists of a mix of open grassy fields, interspersed with cedar and oak thickets. Two unnamed tributaries of Little Barton Creek run adjacent to the project area while one unnamed tributary of Little Barton Creek intersects the project area.

## 3.2 Soils

The project area is mapped within the Soil Survey of Comal and Hays Counties (**Appendix C: Site Soils Map**). Soil survey data was utilized to establish the geomorphological setting and soil types present. Detailed soil map unit descriptions and soil characteristics were derived from information available in the online National Resources Conservation Service (NRCS) Web Soil Survey, and soil series locations were determined from information available in the online NRCS Soil Survey Geographic Database (SSURGO). The NRCS National Hydric Soils List was also used to identify the limits of mapped hydric soils within the project area. The soil map units identified in the project area and the characteristics of each soil map unit are provided in **Table 1.**

**Table 1: Soil Units, Infiltration Characteristics, and Thickness**

| Soil Map Unit | Group | Thickness (feet) | Drainage Class | Permeability | Surface Runoff | Hydric |
|---|---|---|---|---|---|---|
| Brackett-Rock outcrop-Comfort complex, 1 to 8 percent slopes | D | 1.17 | Well drained | Moderately low to high | High | No |
| Brackett-Rock outcrop-Real Complex, 8 to 30 percent slopes | D | 1.17 | Well drained | Moderately low to high | High | No |
| Real-Comfort-Doss complex, 1 to 8 percent slopes | D | 1.17 | Well drained | Moderately low to high | High | No |
| Sunev clay loam, 1 to 3 percent slopes | B | 3.75 | Well drained | Moderately high to high | Low | No |

Source: SSURGO

## 3.3 Geology

The Llano Sheet of the Geologic Atlas of Texas was utilized to identify underlying geology. The geologic unit present on the project area has been identified as Upper Glen Rose Limestone (**Appendix C: Site Geologic Map**). The Upper Glen Rose limestone has an approximate thickness of 220 feet. Its lithology includes limestone, dolomite, and marl. Due to weathering and the nature of alternating resistant and recessive beds, stairstep topography is commonly formed.

The **Stratigraphic Column** outlining the geologic features on the project area is provided below in **Table 2**. Upper Glen Rose Limestone was seen in the field.

**Table 2: Stratigraphic Column**

| Age | Approximate Thickness | Geologic Unit |
|---|---|---|
| Cretaceous | 200 feet thick | Upper Glen Rose Limestone |

Source: USGS 2022

## 3.4 Hydrogeologic Assessment

According to the National Hydrography Dataset, two unnamed tributaries of Little Barton Creek run adjacent to the project area while one unnamed tributary of Little Barton Creek intersects the project area. The elevation on the project area ranges from 1,119 to 1,203 feet above mean sea level.

No wells were identified on the project area at the time of the site visits. Per review of data from TCEQ and the Texas Water Development Board, the closest water well recorded is within 0.51 miles of the project area.

The project area is located within the Edwards Aquifer Contributing Zone. U.S. Fish and Wildlife karst zone data obtained for Hays County indicates that the project area is mapped within Karst Zone 4b. Karst Zone 4b is defined as “areas which do not contain karst invertebrate species”.

# Section 4 Feature Descriptions

BGE identified nine geologic features within the project area. Per the required calculations, none of these features are considered sensitive. Geologic features identified within the project area are described below. Photographs were taken to characterize site conditions and the identified features (**Appendix D: Project Area Photographs**).

Features CD-1 through CD-9 are non-karst closed depressions. These features consisted of animal burrows occurring within Upper Glen Rose Limestone. These features were relatively small with diameters less than two feet. The infill material within the depressions consisted of organics (leaf litter, twigs, and other breakdown), roots, and moderately compacted clay-rich sediment. Due to the low infiltration rate and lack of connectivity to the subsurface, these features are not considered to be sensitive. Catchment areas were less than 1.6 acres.

# Section 5 Conclusion

Site visits to perform a GA for the Double L Pods A4, B1, & B4 were conducted on November 18-19 and December 9, 2025, by BGE scientists, including a Texas Licensed PG, over the +/-41-acre project area. BGE identified nine geologic features (CD-1 through CD-9). None of these features met the criteria to be considered sensitive features according to the TCEQ Instructions for Geologists standards.

# Appendix A: Geologic Assessment Form

# Geologic Assessment

**Texas Commission on Environmental Quality**

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

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

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

## *Signature*

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

Print Name of Geologist: Ricardo Flores  Telephone: (210) 581-3633

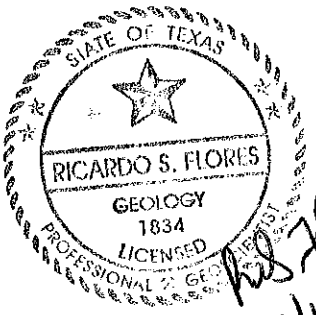
Date: 12/12/2025  Fax: _____

Representing: BGE, Inc.

TBPG Registration #1834

(Name of Company and TBPG or TBPE registration number)

Signature of Geologist:




**Regulated Entity Name:** Double L Pods A4, B1, & B4

## *Project Information*

1. Date(s) Geologic Assessment was performed: 11/18/2025, 11/19/2025, and 12/09/2025
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☐ Recharge Zone
   - ☐ Transition Zone

☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

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

**Table 1 - Soil Units, Infiltration Characteristics and Thickness**

| Soil Name | Group* | Thickness(feet) |
|---|---|---|
| | | |

| Soil Name | Group* | Thickness(feet) |
|---|---|---|
| Please see Table 1 in the Site Geology Report | | |
| | | |
| | | |
| | | |

** Soil Group Definitions (Abbreviated)*

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

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

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

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

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1": 400'

   Applicant's Site Plan Scale: 1" = _____'
   Site Geologic Map Scale: 1" = 600'
   Site Soils Map Scale (if more than 1 soil type): 1" = 600'

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.
   ☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.
13. ☐ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    - ☐ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☐ The wells are in use and comply with 16 TAC Chapter 76.

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

## *Administrative Information*

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

# Appendix B: Geologic Assessment Table

**GEOLOGIC ASSESSMENT TABLE** — **PROJECT NAME:** Double L Pods A4, B1, & B4

| LOCATION | | | FEATURE CHARACTERISTICS | | | | | | | | | | | | EVALUATION | | | PHYSICAL SETTING | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A | 1B * | 1C* | 2A | 2B | 3 | 4 | | | 5 | 5A | 6 | 7 | 8A | 8B | 9 | 10 | | 11 | | 12 |
| FEATURE ID | LATITUDE | LONGITUDE | FEATURE TYPE | POINTS | FORMATION | DIMENSIONS (FEET) | | | TREND (DEGREES) | PIPE | DENSITY (NO/FT) | APERTURE (FEET) | INFILL | RELATIVE INFILTRATION RATE | TOTAL | SENSITIVITY | | CATCHMENT AREA (ACRES) | | TOPOGRAPHY |
| | | | | | | X | Y | Z | | 10 | | | | | | <40 | ≥40 | <1.6 | ≥1.6 | |
| CD-1 | 30.206365 | -98.073444 | CD | 5 | Kgru | 0.4 | 0.4 | 0.6 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-2 | 30.205121 | -98.069345 | CD | 5 | Kgru | 1.5 | 0.5 | 0.5 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-3 | 30.205709 | -98.070499 | CD | 5 | Kgru | 0.5 | 1 | 0.5 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-4 | 30.208940 | -98.076313 | CD | 5 | Kgru | 0.6 | 0.4 | 0.6 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-5 | 30.208905 | -98.076279 | CD | 5 | Kgru | 0.7 | 0.4 | 1 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-6 | 30.208311 | -98.075574 | CD | 5 | Kgru | 0.6 | 0.4 | 1 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-7 | 30.207619 | -98.075130 | CD | 5 | Kgru | 0.6 | 0.4 | 1 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-8 | 30.207396 | -98.076034 | CD | 5 | Kgru | 0.4 | 0.3 | 0.4 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |
| CD-9 | 30.206343 | -98.074564 | CD | 5 | Kgru | 0.4 | 0.4 | 0.5 | - | 0 | N/A | N/A | O | 5 | 10 | X | | X | | Hillside |

* DATUM WGS84

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

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

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

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

Date 12/12/2025

Sheet 1 of 1

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

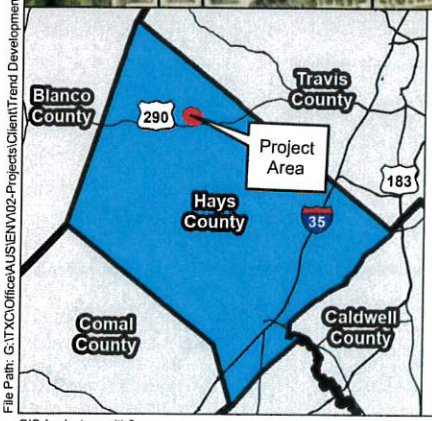
STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOLOGIST

12/12/2025

## Appendix C: Exhibits

- Site Soils Map
- Site Geologic Map




## Legend

- Project Area
- Soil Unit (NRCS)
- Stream (NHD)
- Wetland (NWI)
- Roadway (TxDOT)

N

0 300 600
Feet

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pods A4, B1, & B4

## Site Soils Map
Hays County, TX

Date: December 2025 | Project: 14789-00

Data Source: NRCS (2025), NHD (2024), NWI (2024), TxDOT (2022)

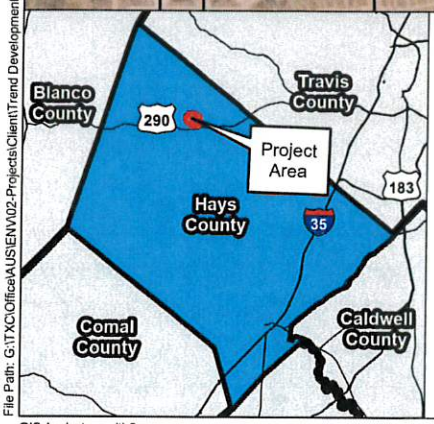
STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOLOGIST

12/12/2025

File Path: G:\TX\Office\AUS\ENV\002-Projects\Client\Trend Development\Double L\22- Pods A4, B1, & B4\07- GIS\A4_B1_B4_GA Maps_2025-12-04.aprx

GIS Analyst: csmith2




## Legend

- Project Area
- Non-karst closed depression (BGE)
- Upper Glen Rose Limestone (USGS)
- Roadway (TxDOT)

STATE OF TEXAS
RICARDO S. FLORES
GEOLOGY
1834
LICENSED
PROFESSIONAL GEOSCIENTIST

N

0 300 600
Feet

12/12/2025

BGE, Inc.
101 West Louis Henna Blvd, Suite 400
Austin, TX 78728
Tel: 512-879-0400 Fax: 512-879-0499
www.bgeinc.com

# Double L
# Pods A4, B1, & B4

## Site Geologic Map
Hays County, TX

Date: December 2025 | Project: 14789-00

Data Source: USGS (2024), TxDOT (2022)

File Path: G:\TX\Office\AUS\ENV\02-Projects\Client\Trend Development\Double L\22- Pods A4, B1, & B4\07- GIS\A4_B1_B4_GA Maps_2025-12-04.aprx

GIS Analyst: csmith2

# Appendix D: Project Area Photographs

**Double L Pods A4, B1, & B4**
Geologic Assessment – Site Geology Report
Project Area Photographs



**Photograph 1**: Facing southwest, overview of the project area.



**Photograph 2**: Facing southeast, view of an animal burrow, non-karst closed depression (CD-1) located on the central portion of the project area.



**Photograph 3:** Facing southeast, view of an animal burrow, non-karst closed depression (CD-2) located on the southeastern portion of the project area.



**Photograph 4**: Facing southeast, view of an animal burrow, non-karst closed depression (CD-3) located on the southeastern portion of the project area.



**Photograph 5**: Facing northwest, view of an animal burrow, non-karst closed depression (CD-4) located on the northwestern portion of the project area.



**Photograph 6:** Facing southeast, view of an animal burrow, non-karst closed depression (CD-5) located on the northwestern portion of the project area.



**Photograph 7**: Facing east, view of an animal burrow, non-karst closed depression (CD-6) located on the northwestern portion of the project area.



**Photograph 8:** Facing east, view of an animal burrow, non-karst closed depression (CD-7) located on the northwestern portion of the project area.



**Photograph 9**: Facing west, view of an animal burrow, non-karst closed depression (CD-8) located on the northwestern portion of the project area.



**Photograph 10:** Facing southeast, view of an animal burrow, non-karst closed depression (CD-9) located on the southwestern portion of the project area.

Brooke Paup, *Chairwoman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

May 2, 2025

Mr. Robert Fondren
Double L Development, LLC
1600 West Loop S., Ste. 2600
Houston, TX 77027

Re: Approval of a Contributing Zone Plan with Optional Enhanced Measures (CZP-OEM)
Double L Ranch Phase 1; Located 1.5 Mi N of US 290 and RR 12; Dripping Springs (ETJ), Williamson County, Texas
Edwards Aquifer Protection Program ID No. 11004376; Regulated Entity No. RN111556569

Dear Mr. Fondren:

The Texas Commission on Environmental Quality (TCEQ) has completed its review on the application for the above-referenced project submitted to the Edwards Aquifer Protection Program (EAPP) by BGE, Inc. on behalf of the applicant, Double L Development, LLC, on March 24, 2025. Final review of the application was completed after additional material was received on April 23, 2025, April 30, 2025, and May 1, 2025.

As presented to the TCEQ, the application was prepared in general compliance with the requirements of 30 Texas Administrative Codes (TAC) Chapter §213. The permanent best management practices (BMPs) and measures represented in the application were prepared by a Texas licensed professional engineer (PE). All construction plans and design information were sealed, signed, and dated by a Texas licensed PE. Therefore, the application for the construction of the proposed project and methods to protect the Edwards Aquifer are **approved,** subject to applicable state rules and the conditions in this letter.

**This approval expires two years from the date of this letter**, unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been officially requested. This approval or extension will expire, and no extension will be granted if more than 50 percent of the project has not been completed within ten years from the date of this letter.

The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this contributing zone plan or modification to a plan. A motion for reconsideration must be filed in accordance with 30 TAC §50.139.

## PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 219.76 acres. The project will include the construction of a subdivision with 244 single-family lots, an amenity center, drives and roadways, drainage improvements, utilities, and associated appurtenances. The impervious cover will be 61.25 acres (27.87 percent). Project wastewater will be disposed of by conveyance to the existing City of Dripping Springs Wastewater Treatment Plant.

## PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, five batch detention basins (Pond 1A – Pond 1E), designed using the TCEQ technical guidance, *RG-348, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices* and *RG-348A Optional Enhanced Measures for the Protection of Water Quality in the Edward Aquifer (Revised),* will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 55,989 pounds of TSS generated from the 61.25 acres of impervious cover. The approved permanent BMPs and measures meet the required 80 percent removal of the increased load in TSS caused by the project.

**The permanent BMPS shall be operational prior to occupancy or use of the proposed project.** Inspection, maintenance, repair, and retrofit of the permanent BMPs shall be in accordance with the approved application.

## GEOLOGY

According to the Geologic Assessment (GA) included with the application, the surficial unit of the site is the Upper Glen Rose Formation (Kgr(u)). No sensitive geologic features were identified in the GA. The site assessment conducted on April 10, 2025, by TCEQ staff determined the site to be generally as described by the GA.

## STANDARD CONDITIONS

1. The plan holder (applicant) must comply with all provisions of 30 TAC Chapter §213 and all technical specifications in the approved plan. The plan holder should also acquire and comply with additional and separate approvals, permits, registrations or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, Dam Safety, Underground Injection Control) as required based on the specifics of the plan.

2. In addition to the rules of the Commission, the plan holder must also comply with state and local ordinances and regulations providing for the protection of water quality as applicable.

Prior to Commencement of Construction:

3. The plan holder of any approved contributing zone plan must notify the EAPP and obtain approval from the executive director prior to initiating any modification to the activities described in the referenced application following the date of the approval.

4. The plan holder must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the EAPP no later than 48 hours prior to commencement of the regulated activity. Notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person.

5. Temporary erosion and sedimentation (E&S) controls as described in the referenced application, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

6. The application must indicate the placement of permanent aboveground storage tanks facilities for static hydrocarbons and hazardous substances with cumulative storage capacity of 500 gallons or more. Subsequent permanent storage tanks on this project site require a modification to be submitted and approved prior to installation.

7. If sediment escapes the construction site, the 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). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

8. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge must be filtered through appropriately selected BMPs.

9. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

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

After Completion of Construction:

11. Owners of permanent BMPs and temporary measures must ensure that the BMPs and measures are constructed and function as designed. A Texas licensed PE **must certify** in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the EAPP within 30 days of site completion.

12. The applicant shall be 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 or the ownership of the property is transferred to the entity. A copy of the transfer of responsibility must be filed with the executive director through the EAPP within 30 days of the transfer. TCEQ form, Change in Responsibility for Maintenance on Permanent BMPs and Measures (TCEQ-10263), may be used.

The holder of the approved contributing zone plan is responsible for compliance with Chapter §213 subchapter B and any condition of the approved plan through all phases of plan implementation. Failure to comply with any condition within this approval letter is a violation of Chapter §213 subchapter B and is subject to administrative rule or orders and penalties as provided under §213.25 of this title (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. Upon legal transfer of this property, the new owner is required to comply with all terms of the approved contributing zone plan.

This action is taken as delegated by the executive director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. Colin Gearing of the Edwards Aquifer Protection Program at 512-239-7015 or the regional office at 512-339-2929.

Sincerely,

Monica Reyes

Monica Reyes, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

MR/cmg

cc: Ms. Stacy Mulholland, P.E., BGE, Inc.

Brooke Paup, *Chairwoman*
Catarina R. Gonzales, *Commissioner*
Tonya R. Miller, *Commissioner*
Kelly Keel, *Executive Director*

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

January 28, 2026

Robert E. Fondren
Double L Development, LLC
1600 West Loop South, Suite 2600
Houston, Texas, 77027

Re: Approval of a Contributing Zone Plan with Optional Enhanced Measures (CZP-OEM)
Double L Ranch Reclaimed Water Production Facility; Located Northeast of Ellis Road and RM 12; Dripping Springs ETJ, Hays County, Texas
Edwards Aquifer Protection Program ID: 11004629, Regulated Entity No. RN112303946

Dear Mr. Fondren:

The Texas Commission on Environmental Quality (TCEQ) has completed its review on the application for the above-referenced project submitted to the Edwards Aquifer Protection Program (EAPP) by BGE, Inc. on behalf of the applicant, Double L Development, LLC on October 16, 2025. Final review of the application was completed after additional material was received on January 27, 2026.

As presented to the TCEQ, the application was prepared in general compliance with the requirements of 30 Texas Administrative Codes (TAC) Chapter §213. The permanent best management practices (BMPs) and measures represented in the application were prepared by a Texas licensed professional engineer (PE). All construction plans and design information were sealed, signed, and dated by a Texas licensed PE. Therefore, the application for the construction of the proposed project and methods to protect the Edwards Aquifer are **approved,** subject to applicable state rules and the conditions in this letter.

**This approval expires two years from the date of this letter**, unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been officially requested. This approval or extension will expire, and no extension will be granted if more than 50 percent of the project has not been completed within ten years from the date of this letter.

The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this contributing zone plan or modification to a plan. A motion for reconsideration must be filed in accordance with 30 TAC §50.139.

## PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 22.06 acres. The project will include reclaimed water production facility. The impervious cover will be 1.45 acres (6.5 percent). Project wastewater will be disposed of by conveyance to the existing Dripping Spring Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, vegetative filter strip designed using the TCEQ technical guidance, *RG-348, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices* and *RG-348A Optional Enhanced Measures for the Protection of Water Quality in the Edward Aquifer (Revised),* will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 1325 pounds of TSS generated from the 1.45 acres of impervious cover. The approved permanent BMPs and measures meet the required 80 percent removal of the increased load in TSS caused by the project.

**The permanent BMPS shall be operational prior to occupancy or use of the proposed project.** Inspection, maintenance, repair, and retrofit of the permanent BMPs shall be in accordance with the approved application.

STANDARD CONDITIONS

1. The plan holder (applicant) must comply with all provisions of 30 TAC Chapter §213 and all technical specifications in the approved plan. The plan holder should also acquire and comply with additional and separate approvals, permits, registrations or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, Dam Safety, Underground Injection Control) as required based on the specifics of the plan.

2. In addition to the rules of the Commission, the plan holder must also comply with state and local ordinances and regulations providing for the protection of water quality as applicable.

Prior to Commencement of Construction:

3. The plan holder of any approved contributing zone plan must notify the EAPP and obtain approval from the executive director prior to initiating any modification to the activities described in the referenced application following the date of the approval.

4. The plan holder must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the EAPP no later than 48 hours prior to commencement of the regulated activity. Notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person.

5. Temporary erosion and sedimentation (E&S) controls as described in the referenced application, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

6. The application must indicate the placement of permanent aboveground storage tanks facilities for static hydrocarbons and hazardous substances with cumulative storage capacity of 500 gallons or more. Subsequent permanent storage tanks on this project site require a modification to be submitted and approved prior to installation.

7. If sediment escapes the construction site, the 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). Sediment must be

removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

8. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge must be filtered through appropriately selected BMPs.

9. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

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

<u>After Completion of Construction:</u>

11. Owners of permanent BMPs and temporary measures must ensure that the BMPs and measures are constructed and function as designed. A Texas licensed PE **must certify** in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the EAPP within 30 days of site completion.

12. The applicant shall be 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 or the ownership of the property is transferred to the entity. A copy of the transfer of responsibility must be filed with the executive director through the EAPP within 30 days of the transfer. TCEQ form, Change in Responsibility for Maintenance on Permanent BMPs and Measures (TCEQ-10263), may be used.

The holder of the approved contributing zone plan is responsible for compliance with Chapter §213 subchapter B and any condition of the approved plan through all phases of plan implementation. Failure to comply with any condition within this approval letter is a violation of Chapter §213 subchapter B and is subject to administrative rule or orders and penalties as provided under §213.25 of this title (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. Upon legal transfer of this property, the new owner is required to comply with all terms of the approved contributing zone plan.

This action is taken as delegated by the executive director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ms. Emily Kerschner of the Edwards Aquifer Protection Program at 512-239-1929 or the regional office at 512-339-2929.

Sincerely,

Monica Reyes

Monica Reyes, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

MR/efk

cc: Stacy Mulholland, BGE, Inc.