TCEQ CZP APPLICATION

For

Benbrook Plaza
Williamson County, Texas

Prepared For:

Zeta LLC
c/o Hari Pullakhandam
PO BOX 158
Round Rock, Texas 78680
Phone: (508) 353-6929

Prepared by:

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TBPE Reg. No. F-1386

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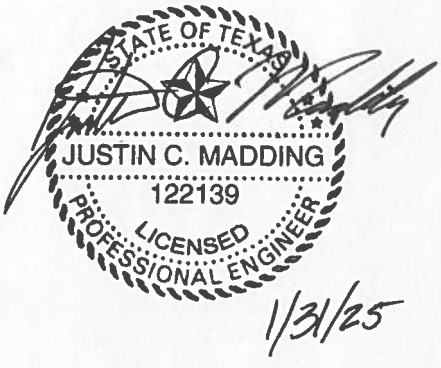

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Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

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

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Benbrook Plaza					**2. Regulated Entity No.:**			
3. Customer Name: Zeta LLC					**4. Customer No.:**			
5. Project Type: **(Please circle/check one)**	New		Modification		Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential		**8. Site (acres):**		5.05	
9. Application Fee:	$5,000		**10. Permanent BMP(s):**		1-Prop Ext. Batch Detention Pond			
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**					
13. County:	Williamson		**14. Watershed:**		Brushy Creek			

Application Distribution

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

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

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

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

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.	
Justin Madding, P.E., PMP Justin Madding Print Name of Customer/Authorized Agent	
Signature of Customer/Authorized Agent	Date: 1/31/25

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: Justin Madding, P.E., PMP

Date: 3/23/21

Signature of Customer/Agent:

Regulated Entity Name: Benbrook Plaza

Project Information

1. County: Williamson
2. Stream Basin: Brushy Creek
3. Groundwater Conservation District (if applicable): N/A
4. Customer (Applicant):

   Contact Person: Hari Pullakhandam
   Entity: Zeta, LLC
   Mailing Address: P.O Box 158
   City, State: Round Rock, Texas Zip: 78680
   Telephone: (508) 353-6929 Fax: _____
   Email Address: _____

5. Agent/Representative (If any):

   Contact Person: Justin Madding, P.E., PMP
   Entity: LJA Engineering, Inc.
   Mailing Address: 2700 La Frontera Blvd, Ste 150
   City, State: Round Rock, Texas Zip: 78681
   Telephone: (512)439-4700 Fax: _____
   Email Address: jmadding@lja.com

6. Project Location:

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

7. ☒ The location of the project site is described below. Sufficient detail and clarity has been provided so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

   North of N. Bagdad Rd (County Rd. 279)

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

13. Total project area (size of site): 5.05 Acres

Total disturbed area: 5.05 Acres

14. Estimated projected population: _____

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	40,630	÷ 43,560 =	0.93
Parking	76,827	÷ 43,560 =	1.76
Other paved surfaces	7,996	÷ 43,560 =	0.18
Total Impervious Cover	125,453	÷ 43,560 =	2.88

Total Impervious Cover 2.88 **÷ Total Acreage** 5.05 **X 100 =** 56.98**% 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 Leander Wastewater Plant (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" = 30'.

35. 100-year floodplain boundaries:

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

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

    The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM Map 48491C0435FE dated 12-20-2019.

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.

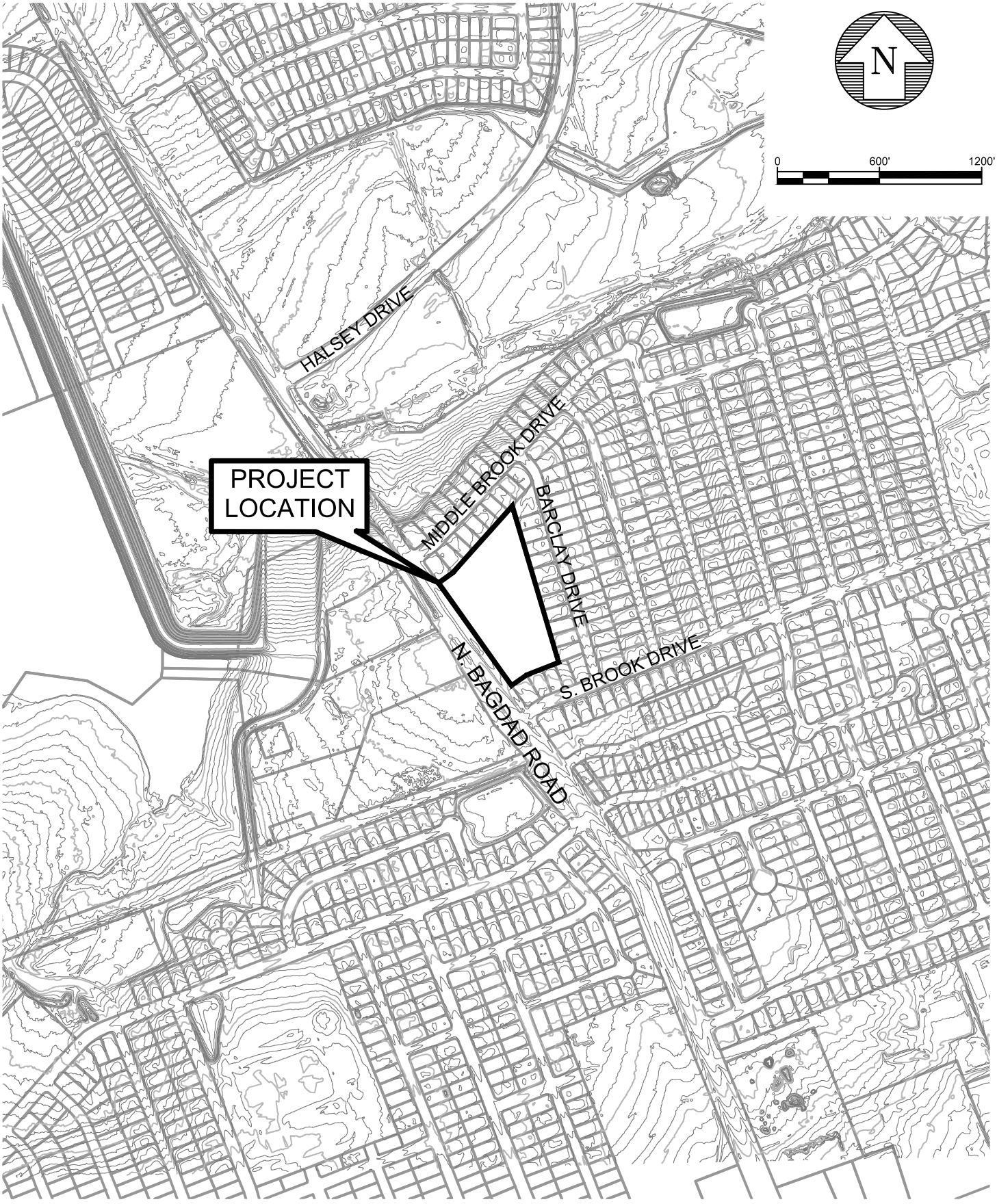
62. ☒ Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.

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.

ATTACHMENT 1A

ROAD MAP



LJA Engineering, Inc.
2700 La Frontera Blvd
Suite 150
Round Rock, TX 78681
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

BENBROOK PLAZA

3/17/2021

Date\Time : Wed, 17 Mar 2021 - 9:35am
User Name : abenitez
Path\Name : G:\A613-1001 Benbrook Plaza\ACAD\Exhibits\LOCATION MAP 8x11.dwg

ATTACHMENT 1B

USGS Quadrangle Map

ATTACHMENT 1B

N.T.S

USGS QUADRANGLE MAP

BENBROOK PLAZA

ATTACHMENT 1C

PROJECT NARRATIVE:

Benbrook Plaza is located in the City of Leander (Williamson County), south of N. Bagdad Rd (County Rd. 278) and east of Middle Brook Drive intersection. The Benbrook Plaza is a commercial lot consisting of 4 building pads, parking area, a commercial driveway, sidewalk, and landscape. This site has an area of 5.05 acres and is currently uncleared and undisturbed land. When construction is complete whole drainage area contributing to the BMP is 6.93 acres with 0.12 acres of offsite impervious cover. This added to the proposed 2.88 acres of impervious cover brings the total impervious cover of 3.00 acres draining to the BMP. Runoff from the proposed development is within the Brushy Creek Watershed. The site is not within FEMA mapped floodplain.

Water quality and Detention for this section will be provided by proposed Batch Detention Pond to be built with this project. A breakdown of the basin is included below, showing basin area, area of impervious cover, the required TSS removal for the site, and TSS removal per BMP:

Phase	BMP	Area (AC)	Impervious Cover (AC)	Required TSS Removal for site	TSS Removal Provided per BMP
1	**Batch Detention Pond**	5.05	2.88	2,507	2,936
				Total TSS Removal Provided =	***2,936***

This project is located within the Edwards Aquifer Contributing Zone. Any fill material used on this project shall consist of crushed limestone, select fill, and topsoil. The fill material will be used to facilitate drainage, roadway construction and re-vegetation of the property and to elevate the building foundations.

ATTACHMENT 1D

Factors Affecting Water Quality:

Non-Storm water Discharges: The following non-stormwater discharges may occur from the site during the construction period:

- Water from utility line flushing during initial line testing must use uncontaminated water that is not hyperchlorinated
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred)
- Groundwater (from dewatering of excavation) must be uncontaminated
- Water used to wash vehicles or control dust must be accomplished using potable water without detergents

All non-stormwater discharge will be directed to the Erosion and Sedimentation Controls (Best Management Practices) to remove any suspended solids contained therein.

Permanent Factors affecting water quality:

- Fertilizers and pesticides
- Household chemicals
- Pet waste
- Used oil
- Car washing
- Mulching
- Sediment

Residents will be encouraged to have a low impact, low maintenance native lawn to reduce the need for fertilizers and pesticides. Retaining yard clippings through mulching mowers and compost will be encouraged. Education will be used to encourage the proper disposal of household chemicals and motor oil. Residents will be encouraged to pick up and properly dispose of pet waste.

ATTACHMENT 1E

Volume and Character of Stormwater:

Benbrook Plaza has a site area of 5.05 acres with a proposed impervious cover total of 2.88 acres. The site receives an additional 1.88 acres with 0.12 acres of impervious cover from offsite sources. The offsite areas are the ROW and neighboring Benbrook subdivision. The majority of runoff from this impervious cover will be from rooftops, driveways, sidewalks, and streets. Proposed site improvements will increase the overall impervious cover to 0 to 56.98%. The proposed conditions after all improvements are complete can be characterized with an average curve number of 88. A batch detention pond provides a 91% TSS removal efficiency is proposed as a permanent BMP for water quality.

Erosion Controls will be installed to decrease and/or prevent sediment runoff during construction. The site's topography and proposed storm sewer system will minimize the potential for offsite runoff to flow across the site. The ponds will be rough cut early in the sequence of construction in order to act as sediment traps during construction.

Flow Description

Generally, the flow tracks through the basin as follows: Rain falls on an individual lot. Runoff is directed to the street downhill at which point it enters the pond. The runoff flows down to the pond and flows though the pipe to the area inlet, entering the storm sewer system. Runoff up to the water quality volume is diverted into the Water Quality Controls.

ATTACHMENT 1J

Best Management Practices for Upgradient Stormwater:

The proposed site receives some upgradient stormwater runoff from the neighboring single family lots at the north and south property lines. During construction, this runoff will be diverted using silt fence to the existing Benbrook Ranch Subdivision infrastructure. After construction is complete portion of this upgradient stormwater runoff will be captured in this site proposed infrastructure and treated in proposed extended batch detention pond.

ATTACHMENT 1K

Best Management Practices for On-site Stormwater:

Benbrook Plaza drains to the Batch Detention Pond to be built with this project. On site stormwater will be managed with silt fence and rock berms where needed until the storm sewer system is put into place.

A batch detention pond is proposed to remove at least eighty percent of the increased total suspended solids (TSS) from the proposed development. According to table 3-1 of TCEQ's Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices, extended batch detention pond of 91% TSS removal efficiency. On the next sheet you will find a copy of TCEQ's "TSS Removal Calculations" worksheet showing how the minimum water quality pond volume and area was calculated. The water quality storage volume for the water quality pond is as follows:

Pond Stage-Storage Table:

Stage	Area	Acres	Incremental Storage (cf)	Cumulative Storage (cf)	Cumulative Storage (ac-ft)
1007.00	0	0.000	0	0	0.00
1008.00	4221	0.097	2110	2110	0.05
1009.00	12763	0.293	8492	10603	0.24
1009.20	14988	0.344	2767	13370	0.31
1010.00	20203	0.464	16483	27086	0.62
1011.00	22481	0.516	21342	48429	1.11
1012.00	25038	0.575	23760	72188	1.66
1013.00	27739	0.637	26389	98576	2.26

The calculated required water quality volume is 12,381 cubic feet. The provided water quality volume is 13,370 cubic feet at an elevation of 1009.20.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Benbrook Plaza
Date Prepared: 2/11/2021

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-348A Pages 3-27 to 3-30

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

where:

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

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

County =	Williamson	
Total project area included in plan * =	6.93	acres
Predevelopment impervious area within the limits of the plan * =	0.12	acres
Total post-development impervious area within the limits of the plan * =	3.00	acres
Total post-development impervious cover fraction * =	0.43	
P =	32	inches

$L_{M\ TOTAL\ PROJECT}$ = **2507** lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 1

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	6.93	acres
Predevelopment impervious area within drainage basin/outfall area=	0.12	acres
Post-development impervious area within drainage basin/outfall area=	3.00	acres
Post-development impervious fraction within drainage basin/outfall area=	0.43	
$L_{M\ THIS\ BASIN}$ =	2507	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention Basin
Removal efficiency = 91 percent

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

RG-348A 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 =	5.05	acres
A_I =	2.88	acres
A_P =	2.17	acres
L_R =	2936	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 2507 lbs.

F = **0.85**

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

Rainfall Depth =	**1.32**	inches
Post Development Runoff Coefficient =	**0.40**	
On-site Water Quality Volume =	**9674**	cubic feet

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

Off-site area draining to BMP =	**1.88**	acres
Off-site Impervious cover draining to BMP =	**0.12**	acres
Impervious fraction of off-site area =	**0.06**	
Off-site Runoff Coefficient =	**0.09**	
Off-site Water Quality Volume =	**819**	cubic feet
Storage for Sediment =	**1889**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**12381**	cubic feet

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

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

Required Water Quality Volume for retention basin = **#REF!** cubic feet

Irrigation Area Calculations:

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

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = **#REF!** cubic feet

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

$E_{TOT} = [1 - ((1 - E_1) X (1 - 0.65E_2) x (1 - 0.25E_3))] X 100 =$ 96 percent NET EFFICIENCY OF THE BMPs IN THE SERIES

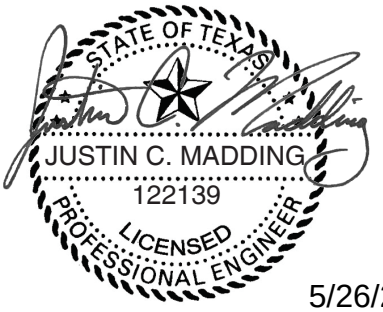
EFFICIENCY OF FIRST BMP IN THE SERIES = E_1 = 91 percent

EFFICIENCY OF THE SECOND BMP IN THE SERIES = E_2 = 85 percent

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)

$L_R = E_{TOT} X P X (A_I X 34.6 X A_P X0.54) =$ 3096.30 lbs



5/26/21

ATTACHMENT 1L

Best Management Practices for Surface Streams Stormwater:

No BMPS are proposed to specifically affect surface streams. The function of the proposed onsite BMPs is to filter stormwater runoff while retaining natural flow patterns. Therefore, the BMPs proposed for reducing pollutant loads in surface streams are described in the previous section: “Attachment 1K, BMPs for On-site Stormwater.”

ATTACHMENT 1M

Construction Plans:

Construction plans for the Storm Sewer Systems, Water Quality Controls, Erosion and Sedimentation Controls, General Notes, Standard Details and Final Plat are included with this submittal.

BENBROOK PLAZA
SITE PLAN
Street, Drainage, Water, and Wastewater Improvements

SUBMITTAL DATE: _____

21-SD-XXX

BENBROOK PLAZA
SITE PLAN
A613-1001

SUBMITTED FOR APPROVAL BY:
LJA ENGINEERING, INC.

STATE OF TEXAS
JUSTIN C. MADDING
122139
LICENSED
PROFESSIONAL ENGINEER
3/26/2021

3/26/2021
LJA ENGINEERING, INC. DATE
JUSTIN C. MADDING, P.E., PMP

APPROVED BY:

ROBIN . GRIFFIN, AICP, PLANNING DIRECTOR DATE

WAYNE S. WATTS, P.E., CFM, CITY ENGINEER

GINA ELLISON, P.E., PUBLIC WORKS DIRECTOR

MARK TUMMONS, CPRP, DIRECTOR OF PARKS AND RECREATION DATE

CHIEF JOSHUA DAVIS, FIRE MARSHAL DATE

WATERSHED STATUS

THIS SITE IS LOCATED WITHIN THE NORTH FORK BRUSHY CREEK WATERSHED

FLOODPLAIN INFORMATION

THE TRACT SHOWN IS ENCUMBERED BY ZONE X ACCORDING TO FIRM PANEL 48491C0435F, DATED 12/20/19.

LEGAL DESCRIPTION

BENBROOK RANCH SEC. 1 PH. 1 , BLOCK A.
LOT 28, ACRES 5.056
DOC. # 2002084474

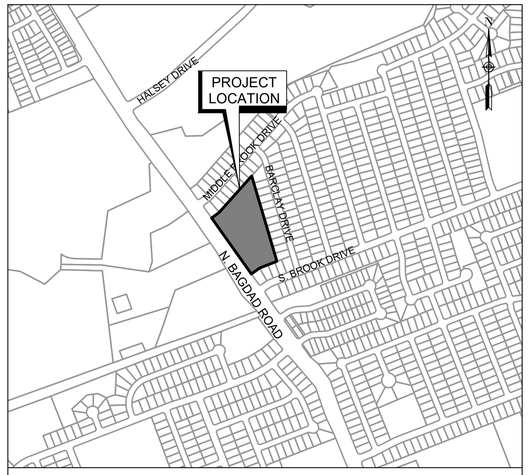
BENCHMARKS

BENCHMARK "A" IS A P.K. NAIL IN CONCRETE SIDEWALK ON THE NORTHWEST SIDE OF OUR TRACT, APPROXIMATELY 79 FEET SOUTHEAST OF TRACTS NORTHWEST CORNER.
ELEVATION=1018.010
N=10185131.939
E=3069423.537

BENCHMARK "B" IS A P.K. NAIL IN CONCRETE SIDEWALK ON THE SOUTHWEST SIDE OF OUR TRACT, APPOXIMATELY 11 FEET WEST OF TRACTS SOUTHERN CORNER.
ELEVATION=1020.29
N=10184731.133
E=3069709.823

LAND USE SUMMARY TABLE

ZONING	LC - 2 - B
FUTURE LAND USE	MIXED USE CORRIDOR
PROPOSED USE	DAYCARE, OFFICE, RETAIL, AND RESTAURANT
SITE AREA	5.056 AC.
TOTAL IC	2.88 AC. / 125750 SQ FT
BUILDING PAD IC	0.93 AC. / 40630 SQ FT



ADDRESS

LOCATION MAP
SCALE: N.T.S.

OWNER:
ZETA LLC
HARI PULLAKHANDAM
PO BOX 158
ROUND ROCK, TX 78680
HARI@ROVERRESOURCES.COM
PHONE: (508) 353-6929

ENGINEER:
LJA ENGINEERING INC.
FRN # F-1386
2700 LA FRONTERA BLVD, SUITE 150
CONTACT PERSON: JUSTIN MADDING, P.E., PMP
PHONE: (512)439-4700

SURVEYOR:
DONNIE BOERNER SURVEYING
228 HOLIDAY ROAD
COMFORT, TX 78013
DONNIEB@GVTC.COM
PHONE: (830) 377-2492

LANDSCAPE:
MELONCON DESIGN GROUP, INC.
1004 GREAT OAKS COVE
ROUND ROCK, TX 78681
TMELONCON@AUSTIN.RR.COM
PHONE: (512) 560-1185

Sheet List Table

Sheet Number	Sheet Title	Sheet Description
01	CV1	COVER SHEET
02	GN 1	GENERAL NOTES
03	FP 1	FINAL PLAT
04	FP2	FINAL PLAT
05	FP3	FINAL PLAT
06	FP4	FINAL PLAT
07	EX 1	EXISTING CONDITIONS AND DEMO MAP
08	EC 1	EROSION/SEDIMENTATION CONTROL & TREE PROTECTION PLAN, PHASE 1
09	EC2	EROSION/SEDIMENTATION CONTROL & TREE PROTECTION DETAILS
10	SP 1	SITE PLAN
11	SP 2	DIMENSION CONTROL PLAN
12	GP 1	GRADING PLAN
13	DM 1	EXISTING DRAINAGE AREA MAP
14	DM 2	PROPOSED DRAINAGE AREA MAP
15	WQ 1	WATER QUALITY POND PLAN & SECTION
16	WQ2	WATER QUALITY POND & SECTION
17	WL 1	PRIVATE WATER SERVICE LAYOUT
18	FL1	PRIVATE FIRE LINE PLAN
19	WW 1	PRIVATE WASTEWATER SERVICE LAYOUT
20	DT 1	GENERAL DETAILS
21	DT 2	GENERAL DETAILS
22	DT 3	GENERAL DETAILS
23	L1	LANDSCAPE PLAN
24	L2	LANDSCAPE NOTES, DETAILS, CALCULATIONS & PLANNING SCHEDULE
25	L3	MAJOR CORRIDOR STREETSCAPE PLAN

REVISIONS / CORRECTIONS

Number	Revision Description	Revise (R) Add (A) Void (V) Sheet No.'s	NET Change Imp. Cover (SF)	Total Site Imp. Cover (%)	COA Approval Date

NOTES

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF LEANDER MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. RELEASE OF THE APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.
3. EXISTING UTILITIES ARE SHOWN PER RECORD. CONTRACTOR SHALL VERIFY LOCATIONS & ELEVATIONS OF EXISTING UTILITIES PRIOR TO INSTALLATION OF ANY PIPE AND SHALL NOTIFY ENGINEER OF ANY CONFLICTS.
4. THIS SITE IS LOCATED IN THE EDWARDS AQUIFER CONTRIBUTING ZONE.
5. SURVEY DATA PROVIDED BY: DONNIE BOERNER SURVEYING DATED JANUARARY 13, 2021.
6. WATER QUALITY AND DETENTION FACILITIES SHALL BE COMPLETE AND ACCEPTED BY CITY OF LEANDER PRIOR TO ISSUANCE OF CERTIFICATES OF OCCUPANCY.SURVEY DATA PROVIDED BY: LANDESIGN, INC. DATED FEBRUARY 2020
7. WATER QUALITY AND DETENTION FACILITIES PROPOSED WITH ---------- SHALL BE COMPLETE AND ACCEPTED BY THE CITY OF LEANDER PRIOR TO THE ISSUANCE OF CERTIFICATES OF OCCUPANCY. THE FACILITIES PROVIDE WATER QUALITY AND DETENTION TREATMENT REQUIRED FOR BLOCK --, LOT -- PORTION OF THIS SITE PLAN.
8. WATER QUALITY AND DETENTION FACILITIES PROPOSED WITH THIS SITE PLAN SHALL BE MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION.

LJA Engineering, Inc.
2700 La Frontera Blvd
Suite 150
Round Rock, TX 78681
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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

Date/Time - Fri, 26 Mar 2021 - 9:56am User Name - jmadding
Path/Name - G:\A613-1001 Benbrook Plaza\ACAD_Sheet Files\A613100 1 CV1.dwg

GENERAL NOTES

REVISED DECEMBER 20, 2017

ANY CHANGES TO THESE NOTES SHOULD BE CLOUDED ON THE PLAN SET.

CITY CONTACTS:
ENGINEERING MAIN LINE: 512-528-2766
PLANNING DEPARTMENT: 512-528-2750
PUBLIC WORKS MAIN LINE: 512-259-2640
STORMWATER INSPECTIONS: 512-285-0055
UTILITIES MAIN LINE: 512-259-1142
UTILITIES ON-CALL: 512-690-4760

1. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.

2. THE CONTRACTOR SHALL CONTACT THE TEXAS EXCAVATION SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS 48 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES THAT ARE TO BE EXTENDED, TIED TO, CROSSED, OR ALTERED; OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS.

3. CONTACT THE CITY OF LEANDER PUBLIC WORKS DEPARTMENT FOR EXISTING WATER AND WASTEWATER LOCATIONS 48 HOURS PRIOR TO CONSTRUCTION.

4. ANY CHANGES OR REVISIONS TO THESE PLANS MUST FIRST BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO CONSTRUCTION OF THE REVISION.

5. A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO ANY PARTIAL OR COMPLETE ROADWAY CLOSURES. TRAFFIC CONTROL PLANS SHALL BE SITE SPECIFIC AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. LANE CLOSURES ON ARTERIALS AND ANY FULL ROAD CLOSURES REQUIRE MESSAGE BOARDS NOTIFYING THE PUBLIC ONE WEEK PRIOR TO THE CLOSURE.

6. NO WORK IS TO BE PERFORMED BETWEEN THE HOURS OF 6:00 P.M. AND 7:00 A.M. THE CITY INSPECTOR RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER ALL WORK PERFORMED WITHOUT INSPECTION. FURTHER, THERE IS A NOISE ORDINANCE IN EFFECT FOR CONSTRUCTION ACTIVITY BETWEEN THE HOURS OF 9 PM AND 7 AM. REQUESTS FOR EXCEPTIONS TO THE ORDINANCE MUST BE MADE TO LEANDER CITY COUNCIL.

7. CONTACT THE CITY INSPECTOR 4 DAYS PRIOR TO WORK TO SCHEDULE ANY INSPECTIONS ON WEEKENDS OR CITY HOLIDAYS.

8. NO STREET LIGHTS OR SIGNS OF ANY KIND ARE TO BE PLACED WITHIN ANY SIDEWALKS.

9. NO BLASTING IS ALLOWED.

10. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

11. THE CONTRACTOR SHALL GIVE THE CITY OF LEANDER 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. CONTACT ASSIGNED CITY INSPECTOR.

12. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND THE CITY OF LEANDER REPRESENTATIVES PRIOR TO INSTALLATION OF EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION MEASURES AND PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE CITY OF LEANDER PLANNING DEPARTMENT PLANNING COORDINATOR AT LEAST THREE (3) DAYS PRIOR TO THE MEETING DATE.

13. THE CONTRACTOR AND ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF LEANDER ACCURATE "RECORD DRAWINGS" FOLLOWING THE COMPLETION OF ALL CONSTRUCTION. THESE "RECORD DRAWINGS" SHALL MEET THE SATISFACTION OF THE ENGINEERING DEPARTMENTS PRIOR TO FINAL ACCEPTANCE

14. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT EASEMENTS. CLEANUP SHALL BE TO THE SATISFACTION OF THE ENGINEER.

15. CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO OWNER.

16. THE CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. IN THE EVENT THAT A FENCE MUST BE REMOVED, THE CONTRACTOR SHALL REPLACE SAID FENCE OR PORTION THEREOF WITH THE SAME TYPE OF FENCING TO A QUALITY OF EQUAL OR BETTER THAN THE ORIGINAL FENCE.

17. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF AUSTIN STANDARD SPECIFICATIONS. CITY OF AUSTIN STANDARDS SHALL BE USED UNLESS OTHERWISE NOTED IN DETAILS.

18. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 1033 LA POSADA DR. SUITE 375, AUSTIN, TEXAS 78752-3832.

19. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT WHERE NOT SPECIFICALLY COVERED IN THE PROJECT SPECIFICATIONS SHALL CONFORM TO ALL CITY OF LEANDER DETAILS AND CITY OF AUSTIN STANDARD SPECIFICATIONS.

20. PROJECT SPECIFICATIONS TAKE PRECEDENCE OVER PLANS AND SPECIAL CONDITIONS GOVERN OVER TECHNICAL SPECIFICATIONS.

21. HOT MIX ASPHALTIC CONCRETE PAVEMENT SHALL BE MINIMUM THICKNESS OF 2 INCHES WITH NO RECYCLED ASPHALT SHINGLES CONTENT.

22. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY RISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT.

23. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.

24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION BETWEEN HIMSELF AND OTHER CONTRACTORS AND UTILITIES IN THE VICINITY OF THE PROJECT. THIS INCLUDES GAS, WATER, WASTEWATER, ELECTRICAL, TELEPHONE, CABLE TV AND STREET DRAINAGE WORK. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER WITHIN TWENTY-FOUR (24) HOURS.

25. THE CONTRACTOR MUST OBTAIN A CONSTRUCTION WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO USE WATER.

26. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL, SEDIMENT AND DEBRIS. CONTRACTOR WILL NOT REMOVE SOIL, SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER. ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE.

27. THE CITY OF LEANDER SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.

28. AN ENGINEER'S CONCURRENCE LETTER AND RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT PRIOR TO THE ISSUANCE OF CERTIFICATE OF COMPLETION OR SUBDIVISION ACCEPTANCE. THE ENGINEER AND CONTRACTOR SHALL VERIFY THAT ALL FINAL REVISIONS AND CHANGES HAVE BEEN MADE TO THE DIGITAL COPY PRIOR TO CITY SUBMITTAL. RECORD CONSTRUCTION DRAWINGS, INCLUDING ROADWAY AND ALL UTILITIES SHALL BE PROVIDED TO THE CITY IN DIGITAL FORMAT AS AUTOCAD ".DWG" FILES, MICROSTATION ".DGN" FILES OR ESRI ".SHP" FILES ON CD ROM. LINE WEIGHTS, LINE TYPES AND TEXT SIZE SHALL BE SUCH THAT IF HALF-SIZE PRINTS (11"X17") WERE PRODUCED, THE PLANS WOULD STILL BE LEGIBLE. ALL REQUIRED DIGITAL FILES SHALL CONTAIN A MINIMUM OF TWO CONTROL POINTS REFERENCED TO THE STATE PLANE GRID COORDINATE SYSTEM - TEXAS CENTRAL ZONE (4203), IN US SURVEY FEET AND SHALL INCLUDE ROTATION INFORMATION AND SCALE FACTOR REQUIRED TO REDUCE SURFACE COORDINATES TO GRID COORDINATES IN US SURVEY FEET

29. TREES IN EXISTING ROW SHOULD BE PROTECTED OR NOTED IN THE PLANS TO BE REMOVED.

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTIVE FENCING PRIOR TO ANY WORK (CLEARING, GRUBBING OR EXCAVATION). CONTACT STORMWATER INSPECTOR FOR ON SITE INSPECTION PRIOR TO BEGINNING CONSTRUCTION.

2. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.

3. THE TEMPORARY SPOILS DISPOSAL SITE IS TO BE SHOWN IN THE EROSION CONTROL MAP.

4. ANY ON-SITE SPOILS DISPOSAL SHALL BE REMOVED PRIOR TO ACCEPTANCE UNLESS SPECIFICALLY SHOWN ON THE PLANS. THE DEPTH OF SPOIL SHALL NOT EXCEED 10 FEET IN ANY AREA.

5. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE RESTORED WITH A MINIMUM OF 6 INCHES OF TOPSOIL AND COMPOST BLEND. TOPSOIL ON SINGLE FAMILY LOTS MAY BE INSTALLED WITH HOME CONSTRUCTION. THE TOPSOIL AND COMPOST BLEND SHALL CONSIST OF 75% TOPSOIL AND 25% COMPOST.

6. SEEDING FOR REESTABLISHING VEGETATION SHALL COMPLY WITH THE AUSTIN GROW GREEN GUIDE OR WILLIAMSON COUNTY'S PROTOCOL FOR SUSTAINABLE ROADSIDES (SPEC 164--WC001 SEEDING FOR EROSION CONTROL). RESEEDING VARIETIES OF BERMUDA SHALL NOT BE USED.

7. STABILIZED CONSTRUCTION ENTRANCE IS REQUIRED AT ALL POINTS WHERE CONSTRUCTION TRAFFIC IS EXITING THE PROJECT ONTO EXISTING PAVEMENT. LINEAR CONSTRUCTION PROJECTS MAY REQUIRE SPECIAL CONSIDERATION. ROADWAYS SHALL REMAIN CLEAR OF SILT AND MUD.

8. TEMPORARY STOP SIGNS SHOULD BE INSTALLED AT ALL CONSTRUCTION ENTRANCES WHERE A STOP CONDITION DOES NOT ALREADY EXIST.

9. IN THE EVENT OF INCLEMENT WEATHER THAT MAY RESULT IN A FLOODING SITUATION, THE CONTRACTOR SHALL REMOVE INLET PROTECTION MEASURES UNTIL SUCH TIME AS THE WEATHER EVENT HAS PASSED.

WATER AND WASTEWATER NOTES

1. PRESSURE TAPS SHALL BE IN ACCORDANCE WITH CITY OF LEANDER STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION, ETC. AND SHALL FURNISH, INSTALL AND AIR TEST THE SLEEVE AND VALVE. A CITY OF LEANDER INSPECTOR MUST BE PRESENT WHEN THE CONTRACTOR MAKES A TAP, AND/OR ASSOCIATED TESTS. A MINIMUM OF TWO (2) WORKING DAYS NOTICE IS REQUIRED. "SIZE ON SIZE" TAPS WILL NOT BE PERMITTED UNLESS MADE BY THE USE OF AN APPROVED FULL-CIRCLE GASKETED TAPPING SLEEVE. CONCRETE BLOCKING SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES A MINIMUM OF 24 HOURS PRIOR TO THE BRANCH BEING PLACED INTO SERVICE. BLOCKING SHALL BE INSPECTED PRIOR TO BACKFILL.

2. FIRE HYDRANTS ON MAINS UNDER CONSTRUCTION SHALL BE SECURELY WRAPPED WITH A BLACK POLY WRAP BAG AND TAPED INTO PLACE. THE POLY WRAP SHALL BE REMOVED WHEN THE MAINS ARE ACCEPTED AND PLACED INTO SERVICE.

3. CURVILINEAR WASTEWATER DESIGN LAYOUT IS NOT PERMITTED.

4. THRUST BLOCKING OR RESTRAINTS SHALL BE IN ACCORDANCE WITH THE CITY OF LEANDER STANDARD SPECIFICATIONS AND REQUIRED AT ALL FITTINGS PER DETAIL OR MANUFACTURER'S RECOMMENDATION. ALL FITTINGS SHALL HAVE BOTH THRUST BLOCKING AND RESTRAINTS.

5. MANDREL TESTING WILL BE REQUIRED ON ALL WASTEWATER PIPE. PER TCEQ, THIS TEST MUST BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.

6. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AND ORGANIZATION ACCREDITED BY ANSI

7. TRENCH BACKFILL MUST BE COMPACTED BY FLOODING THE TRENCHES.

8. ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY STAMPED AS FOLLOWS:

WATER SERVICE	W" ON TOP OF CURB
WASTEWATER SERVICE	"S" ON TOP OF
CURB VALVE	"V" ON TOP OF CURB

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

10. ALL PLASTIC PIPES FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 200 PSI.

11. NO PIPE OR FITTING WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY.

12. TYPICAL DEPTH OF COVER FOR ALL WASTEWATER LINES SHALL BE 48" MINIMUM, WATER LINES SHALL BE 36" MINIMUM UNDER BOTH PAVEMENT AND NATURAL GROUND. STORM SEWER SHALL BE 24" MINIMUM UNDER NATURAL GROUND

13. THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY AWWA FORMULAS.

14. ALL WATER MAINS, DISTRIBUTION LINES AND SERVICE LINES SHALL BE INSTALLED IN ENCASEMENT PIPE UNDERNEATH EXISTING STREETS AND OTHER PAVED SURFACES UNLESS APPROVED WITH PLANS.

15. ALL MECHANICAL RESTRAINTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

16. ALL DEAD-END WATER MAINS SHALL HAVE THRUST RESTRAINTS INSTALLED ON THE LAST THREE PIPE-LENGTHS (STANDARD 20' LAYING LENGTH), AT MINIMUM, AND THRUST BLOCKS INSTALLED ON THE PLUG. ADDITIONAL THRUST RESTRAINTS MAY BE REQUIRED BASED UPON THE MANUFACTURER'S RECOMMENDATIONS AND/OR CALCULATIONS BY THE ENGINEER OF RECORD.

17. WHERE WATER LINES CROSS WASTEWATER LINES AND THERE IS LESS THAN 9 FEET CLEARANCE BETWEEN LINES, THE WASTEWATER LINE SHALL BE PLACED SO THAT THE WASTEWATER PIPE SECTION IS CENTERED ON THE WATER LINE AND CONSTRUCTED IN ACCORDANCE WITH TCEQ CHAPTERS 217.53(B) AND 290.44(E).

18. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C900-16 MIN. 235 PSI PRESSURE RATING). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200PSI, SDR- (9)). DUCTILE IRON PIPE (AWWA C115/C151, MIN. PRESSURE CLASS 250) MAY BE USED FOR WATER MAINS WITH THE EXPRESS APPROVAL OF CITY OF LEANDER ENGINEERING.

19. PIPE FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C900-16), GREEN AND MARKED FOR SEWER. PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241, D3034 MAX. SDR-26 OR PS115 F679) OR FIBERGLASS WITH PIPE STIFFNESS OF 72 PSI PER COA SPL WW-509.

20. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C115/C151 PRESSURE CLASS 350).

21. INTERIOR SURFACES OF ALL DUCTILE IRON POTABLE OR RECLAIMED WATER PIPE SHALL BE CEMENT-MORTAR LINED AND SEAL COATED AS REQUIRED BY AWWA C104.

22. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE.

23. THE CONTRACTOR SHALL CONTACT THE ENGINEERING DEPARTMENT INSPECTOR AT 528-2700 AT LEAST 48 HOURS PRIOR TO CONNECTING TO THE EXISTING WATER LINES.

24. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE ALLOWED.

25. EXISTING MANHOLES MODIFIED BY CONSTRUCTION ACTIVITY SHALL BE TESTED FOR LEAKAGE BY VACUUM. ANY EXISTING MANHOLE WHICH FAILS TO PASS THE VACUUM TEST SHALL BE CLOSELY EXAMINED BY THE INSPECTOR AND THE CONTRACTOR TO DETERMINE IF THE MANHOLE CAN BE REPAIRED. THEREAFTER, THE CONTRACTOR SHALL EITHER REPAIR OR REMOVE AND REPLACE THE MANHOLE AS DIRECTED.

26. PIPE CONNECTIONS TO EXISTING MANHOLES AND JUNCTION BOXES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATION 506.5.F.

27. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE COORDINATED WITH THE PUBLIC WORKS DEPARTMENT.

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

29. SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTORS' REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF LEANDER NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE CITY.

30. TESTING SHALL BE PERFORMED FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED. THE OWNER'S CONTRACTOR SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. THE CONTRACTOR SHALL NOTIFY THE CITY OF LEANDER ENGINEERING DEPARTMENT NO LESS THAN 48 HOURS PRIOR TO PERFORMING STERILIZATION, QUALITY TESTS, OR PRESSURE TESTS. A CITY OF LEANDER INSPECTOR SHALL BE PRESENT FOR ALL TESTS AND SHALL BE PAID FOR BY THE OWNER/CONTRACTOR. THESE SERVICES ARE PAID FOR AT THE TIME OF CONSTRUCTION PLAN SUBMITTAL.

31. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVE UNLESS AUTHORIZED BY THE CITY OF LEANDER.

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

33. ALL WATER VALVE COVERS ARE TO BE PAINTED BLUE.

34. ALL WATER METER BOXES SHALL BE:

SINGLE, 1" METER AND BELOW	DFW37F-12-1CA, OR EQUAL
DUAL, 1" METERS AND BELOW	DFW39F-12-1CA, OR EQUAL
1.5" SINGLE METER	DFW65C-14-1CA, OR EQUAL
2" SINGLE METER	DFW1730F-12-1CA, OR EQUAL

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

SIEVE SIZE	PERCENT RETAINED BY WEIGHT
1/2"	0
3/8"	0-2
#4	40-85
#10	95-100

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

37. ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 30 TAC CHAPTER 217, AS APPLICABLE. WHENEVER TCEQ AND CITY OF LEANDER SPECIFICATION CONFLICT, THE MORE STRINGENT SHALL APPLY.

38. MANHOLES SHALL BE COATED PER CITY OF AUSTIN SPL WW-511 (RAVEN 405 OR SPRAYWALL).

39. DENSITY TESTING FOR TRENCH BACKFILL LOCATED WITHIN THE LIMITS OF THE PAVED AREA IS TO BE DONE IN 12" LIFTS EVERY 500' AND AT LEAST ONCE PER LINE SEGMENT.

40. ALL GRAVITY WASTEWATER MAINS TO BE TESTED BY CAMERA AND PAID FOR BY THE CONTRACTOR. CAMERA TESTING FOR WASTEWATER LINES IN ROADWAY SHALL OCCUR BEFORE PAVING. CONTRACTOR SHALL PROVIDE THE CITY WITH A DVD COPY OF THE FULL CAMERA INSPECTION.

41. RECLAIMED AND RECYCLED WATER LINE SHALL BE CONSTRUCTED OF "PURPLE PIPE." ALL RECLAIMED AND RECYCLED WATER VALVE COVERS SHALL BE SQUARE AND AND PAINTED PURPLE.

STREET AND DRAINAGE NOTES

1. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CITY OF LEANDER HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, OR ANY OTHER ACCESSIBILITY LEGISLATION, AND DOES NOT WARRANTY OR APPROVE THESE PLANS FOR ANY ACCESSIBILITY STANDARDS.

2. PRIOR TO ACCEPTANCE THE ENGINEER SHALL SUBMIT DOCUMENTATION THAT THE IMPROVEMENTS WERE INSPECTED BY TDLR OR A REGISTERED ACCESSIBLITY SPECIALIST (RAS) AND ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE TABA.

3. CONTRACTOR SHALL PROVIDE QUALITY TESTING FOR ALL INFRASTRUCTURES TO BE ACCEPTED AND MAINTAINED BY THE CITY OF LEANDER AFTER COMPLETION. THE CONTRACTOR SHALL NOTIFY THE CITY OF LEANDER ENGINEERING DEPARTMENT AT 528-2700 NO LESS THAN 48 HOURS PRIOR TO ANY TESTING.

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

5. A MINIMUM OF 6" OF TOPSOIL SHALL BE PLACED BETWEEN THE CURB AND RIGHT-OF-WAY AND IN ALL DRAINAGE CHANNELS EXCEPT CHANNELS CUT IN STABLE ROCK.

6. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT, INCLUDING GAS, ELECTRIC TELEPHONE, CABLE TV, ETC., SHALL BE A MINIMUM OF 36" BELOW SUBGRADE.

7. STREET RIGHT-OF-WAY SHALL BE GRADED AT A SLOPE OF ¼" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT ¼" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF LEANDER PUBLIC WORKS DEPARTMENT.

8. BARRICADES BUILT TO THE CITY OF LEANDER STANDARDS SHALL BE ERECTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.

9. ALL REINFORCED CONCRETE PIPE SHALL BE MINIMUM CLASS III OF TONGUE AND GROOVE OR O-RING JOINT DESIGN.

10. THE CONTRACTOR IS TO NOTIFY THE ENGINEERING INSPECTOR 48 HOURS PRIOR TO THE FOLLOWING TESTING: PROOF ROLLING SUB-GRADE AND EVERY LIFT OF ROADWAY EMBANKMENT, IN-PLACE DENSITY TESTING OF EVERY BASE COURSE, AND ASPHALT CORES. ALL OF THIS TESTING MUST BE WITNESSED BY A CITY OF LEANDER REPRESENTATIVE.

11. THE CONTRACTOR MUST PROVIDE A PNEUMATIC TRUCK PER TXDOT SPEC FOR PROOF ROLLING.

12. AT INTERSECTIONS WHICH HAVE VALLEY DRAINAGE, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40 FEET FROM INTERSECTING CURB LINE UNLESS OTHERWISE NOTED.

13. AT THE INTERSECTION OF TWO 44' STREETS OR LARGER, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40 FEET FROM INTERSECTING CURB LINE UNLESS OTHERWISE NOTED.

14. A CURB LAYDOWN IS REQUIRED AT ALL POINTS WHERE THE PROPOSED SIDEWALK INTERSECTS THE CURB.

15. ALL STRIPING, WITH THE EXCEPTION OF STOP BARS, CROSS WALKS, WORDS AND ARROWS, IS TO BE TYPE II (WATER BASED). STOP BARS, CROSS WALKS, WORDS AND ARROWS REQUIRE TYPE I THERMOPLASTIC.

16. MANHOLE FRAMES, COVERS, VALVES, CLEAN-OUTS, ETC. SHALL BE RAISED TO GRADE PRIOR TO FINAL PAVEMENT CONSTRUCTION.

17. CONTRACTOR SHALL NOTIFY THE LEANDER ENGINEERING DEPARTMENT AT 528-2700 AT LEAST 48 HOURS PRIOR TO THE INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET ROW. THE METHOD OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S ROW MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS.

18. A STOP BAR SHALL BE PLACED AT ALL STOP SIGN LOCATIONS.

19. A MINIMUM OF SEVEN DAYS OF CURE TIME IS REQUIRED FOR HMAC PRIOR TO THE INTRODUCTION OF PUBLIC VEHICULAR TRAFFIC TO ANY STREETS.

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

21. GEOTECHNICAL INVESTIGATION INFORMATION AND PAVEMENT RECOMMENDATIONS WERE PROVIDED BY XXXXX, INC. DATED X/XX/XX. PAVEMENT RECOMMENDATIONS ARE AS FOLLOWS:

STREET TYPE	CLB	HMAC	GEOGRID
LOCAL	X	X	X
MAJOR ARTERIAL	X	X	X

TRENCH SAFETY NOTES

1. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT ARE DESCRIBED IN ITEM 509S "TRENCH SAFETY SYSTEMS" OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND SHALL BE IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATION SAFETY AND HEALTH ADMINISTRATION REGULATIONS.

GRADING NOTES

1. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.

2. THE CONTRACTOR SHALL CONSTRUCT EARTHEN EMBANKMENTS WITH SLOPES NO STEEPER THAN 3:1 AND COMPACT SOIL TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATIONS.

3. AREAS OF SOIL DISTURBANCE ARE LIMITED TO GRADING AND IMPROVEMENTS SHOWN. ALL OTHER AREAS WILL NOT BE DISTURBED.

BENCHMARK NOTES

BENCHMARK "A" IS A P.K. NAIL IN CONCRETE SIDEWALK ON THE NORTHWEST SIDE OF OUR TRACT, APPROXIMATELY 79 FEET SOUTHEAST OF TRACTS NORTHWEST CORNER.
ELEVATION=1018.010
N=10185131.939
E=3069423.537

BENCHMARK "B" IS A P.K. NAIL IN CONCRETE SIDEWALK ON THE SOUTHWEST SIDE OF OUR TRACT, APPOXIMATELY 11 FEET WEST OF TRACTS SOUTHERN CORNER.
ELEVATION=1020.29
N=10184731.133
E=3069709.823

ATTACHMENT C - SEQUENCE OF MAJOR ACTIVITIES

1. THE ENVIRONMENTAL PROJECT MANAGER MUST CONTACT THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT TO SCHEDULE A PRECONSTRUCTION COORDINATION MEETING TO BE HELD ON SITE. (PROVIDE AT LEAST 72 HOURS NOTICE FOR THE ENVIRONMENTAL INSPECTOR PRIOR TO THE PRE-CONSTRUCTION COORDINATION MEETING).
2. INSTALL EROSION CONTROLS AS INDICATED ON THE EROSION CONTROL PLAN.
3. EROSION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH THE INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND EROSION PLAN.
4. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AS NEEDED.
5. CONTRACTOR TO CONTACT THE ONE CALL CENTER AT 1-800-344-8377 AND LOCATE ALL EXISTING UTILITIES WITHIN AND SURROUNDING THE SITE. ENGINEER SHALL REVIEW THE LOCATIONS OF EXISTING UTILITIES PROVIDED BY THE ONE CALL CENTER AND WILL NOTIFY CONTRACTOR OF ANY ADDITIONAL CONFLICTS.
6. ENGINEER SHALL NOTIFY CONTRACTOR WHEN CONSTRUCTION OF SITE UTILITIES CAN BEGIN.
7. SITE CLEARING AS PRESCRIBED IN THE APPROVED SITE PLAN.
8. ROUGH GRADE BATCH DETENTION PONDS TO FILL CAPACITY
9. COMPLETE THE TEMPORARY SEDIMENTATION PONDS
10. EXCAVATE AND INSTALL ALL UNDERGROUND UTILITIES AND APPURTENANCES.
11. ENVIRONMENTAL PROJECT MANAGER WILL SCHEDULE A MID-CONSTRUCTION CONFERENCE TO COORDINATE CHANGES IN THE CONSTRUCTION SCHEDULE AND EVALUATE THE EFFECTIVENESS OF THE EROSION CONTROL PLAN AFTER POSSIBLE CONSTRUCTION ALTERATIONS TO THE SITE. PARTICIPANTS SHALL INCLUDE THE CITY INSPECTOR, PROJECT ENGINEER, GENERAL CONTRACTOR, AND THE ENVIRONMENTAL PROJECT MANAGER. THE ANTICIPATED COMPLETION DATE AND FINAL CONSTRUCTION SEQUENCE AND INSPECTION SCHEDULE WILL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR.
12. PREPARE SUBGRADE AND PLACE BASE MATERIALS ON ALL PAVED AREAS.
13. FORM AND INSTALL ALL CURB AND GUTTER.
14. PLACE ASPHALT PAVEMENT.
15. COMPLETE ALL SITE FLAT WORK, AND FINE GRADING OF LOTS
16. FORM AND INSTALL SIDEWALKS AND ADA RAMPS.
17. COMPLETE BATCH DETENTION PONDS.
18. COMPLETE FINAL GRADING.
19. PERMANENT CONTROLS WILL BE CLEANED OUT PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.
20. BEGIN REVEGETATION OF DISTURBED AREAS AND EXECUTE A DEVELOPER'S CONTRACT FOR THE REVEGETATION ALONG WITH THE ENGINEER'S CONCURRENCE LETTER SUBMITTED TO THE CITY AFTER ENGINEER INSPECTS THE SITE.
21. PROJECT ENGINEER TO INSPECT THE JOB SITE AND WRITE A CONCURRENCE LETTER TO THE CITY OF LEANDER. FINAL INSPECTION IS SCHEDULED UPON RECEIPT OF LETTER. UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF OCCUPANCY BY THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT, THE ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DRAINAGE FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.
22. FINAL INSPECTION BY THE ENVIRONMENTAL AND LANDSCAPE INSPECTORS WILL BE SCHEDULED AFTER RECEIPT OF THE CONCURRENCE LETTERS FROM THE PROJECT ENGINEER AND THE LANDSCAPE ARCHITECT.
23. COMPLETE SITE RESTORATION. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROLS.
24. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR REVEGETATION MATTING.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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

BENBROOK PLAZA
SITE PLAN

GENERAL NOTES

REVISIONS			
NO.	DESCRIPTION	BY	DATE

DATE: 3/18/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A6131001 GN1.dwg

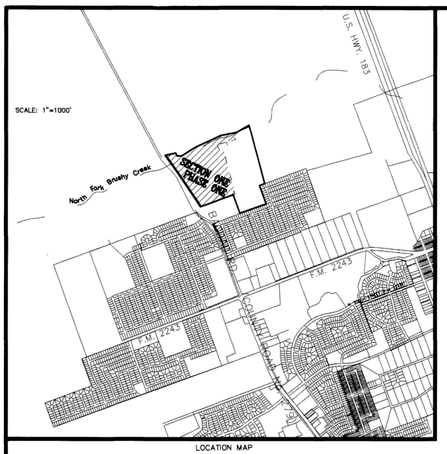
STATE OF TEXAS
JUSTIN C. MADDING
122139
LICENSED
PROFESSIONAL ENGINEER
3/18/2021

LJA Engineering, Inc.
2700 La Frontera Blvd
Suite 150
Round Rock, TX 78681
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

JOB NUMBER:
A613-1001

SHEET NO.
02
OF 24 SHEETS

PHOTOGRAPHIC MYLAR



OWNER OF RECORD:

BENBROOK PROPERTIES, LTD.

DEVELOPER:

JOHN S. LLOYD, PRESIDENT
BENBROOK G.P., L.L.C.
4111 LAKEPLACE LANE
AUSTIN, TEXAS 78746
(512) 328-0860 FAX (512) 328-1868

REPRESENTING:
BENBROOK PROPERTIES, LTD.

REGISTERED PROFESSIONAL LAND SURVEYOR

WILLIAM D. WARRICK, R.P.L.S. NO. 4426
STATE OF TEXAS
ZAMORA-WARRICK & ASSOCIATES, L.L.C.
5316 HWY. 290 W., SUITE 150
AUSTIN, TEXAS 78735
(512) 899-3333 FAX (512) 899-0655

LICENSED PROFESSIONAL ENGINEER

DANNY R. MARTIN, P.E.
STATE OF TEXAS NO. 44960
MALONE/WHEELER, INC.
5316 HWY. 290 W., SUITE 150
AUSTIN, TEXAS 78735
(512) 899-0601 FAX (512) 899-0655

GRAPHIC SCALE

T.B.M. DESCRIPTIONS

BM#1 SPINDLE SET IN POWER POLE, EAST SIDE OF C.R. 279, 1.5 MILES +/- NORTH OF THE INTERSECTION OF C.R. 2243 & C.R. 279 ELEVATION=1037.18'

BM#2 SPINDLE SET IN POWER POLE, EAST SIDE OF C.R. 279, 1.3 MILES +/- NORTH OF THE INTERSECTION OF C.R. 2243 & C.R. 279. ELEVATION= 1031.36'

BM#3 BOX CUT ON NORTH END OF HEADWALL OVER DRY BRUSH CREEK, EAST SIDE OF C.R. 279, 0.8 MILES +/- NORTH OF INTERSECTION ON C.R. 2243 & C.R. 279. ELEVATION=1001.06'

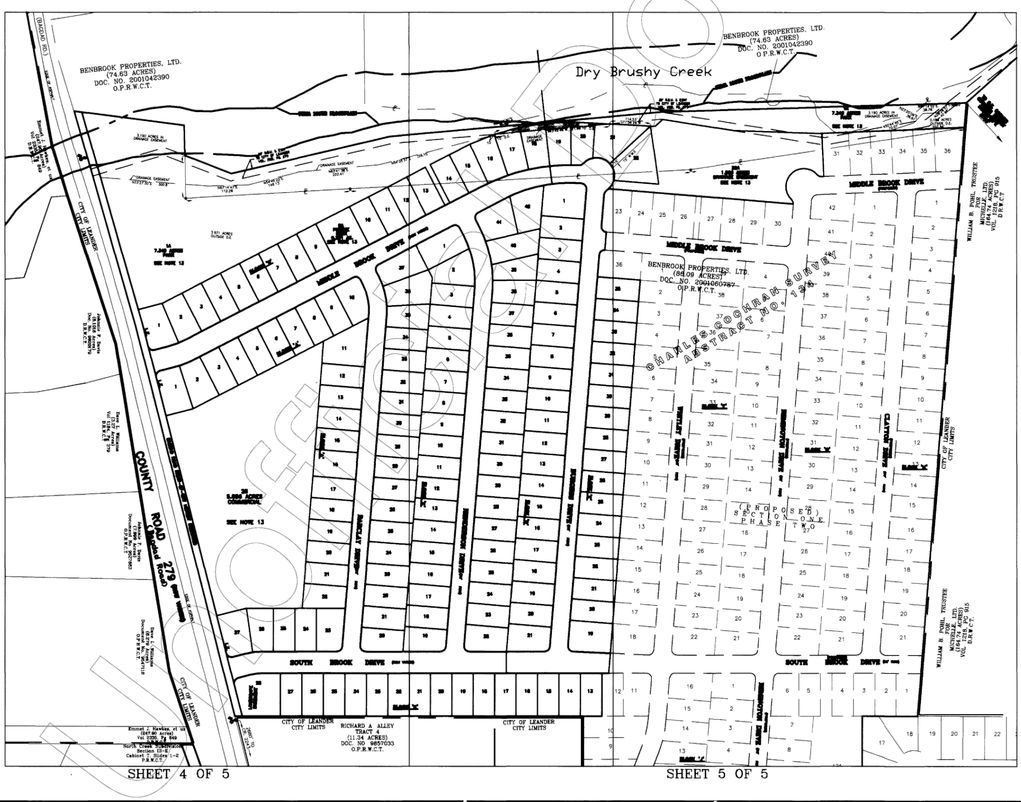
BM#4 SPINDLE SET IN POWER POLE, EAST SIDE OF C.R. 279, 17' +/- NORTH OF THE SOUTHWEST CORNER OF BENBROOK PHASE 1, SECTION 1. ELEVATION=1020.92'

GENERAL INFORMATION:

1. TOTAL ACRES: 51.184 ACRES
2. NUMBER OF LOTS: 165
3. NUMBER OF BLOCKS 6
4. AREA OF SMALLEST RESIDENTIAL LOT: 0.165 ACRES
5. PROPOSED USES: SINGLE FAMILY RESIDENTIAL, DRAINAGE EASEMENT, COMMERCIAL AND PARK.

LAND USE SUMMARY

DRAINAGE EASEMENT	1	1.993 ACRES
PARK	2	7.640 ACRES
COMMERCIAL LOT	1	5.056 ACRES
RESIDENTIAL LOTS	161	28.159 ACRES
SUBDIVISION RIGHT-OF-WAY	–	7.536 ACRES
BAGDAD ROAD RIGHT-OF-WAY	–	0.800 ACRE
	165	51.184 ACRES



SHEET 4 OF 5 SHEET 5 OF 5

PROJECT:	BENBROOK SEC 1, PH 1
JOB NUMBER:	Z01-010-04
DATE:	JANUARY 2002
SCALE:	1"=200'
SURVEYOR:	WARRICK
TECHNICIAN:	DANIEL CHAPMAN
DRAWING:	DWG/Z01-010/S1-P1/SH5
FIELDNOTES:	
PARTYCHIEF:	ROGERS
FIELDBOOKS:	

ZWA
Zamora-Warrick and Associates, L.L.C.
Professional Land Surveyors
5316 Highway 290 West, Suite 150 • Austin, Texas 78735
Tel (512) 899-3333 • Fax (512) 899-0655

BENBROOK RANCH SECTION ONE PHASE ONE

SHEET 1 OF 5

ZWA PLAT No. Z1-10-4-01

CABINET W SLIDE # 295 DOCUMENT # 200208474

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES SHOWN ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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

SHEET NO. 03 OF 24 SHEETS

JOB NUMBER: A613-1001

LJA Engineering, Inc.
2700 La Frontera Blvd
Suite 150
Round Rock, TX 78681
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

FOR INFORMATIONAL PURPOSES ONLY

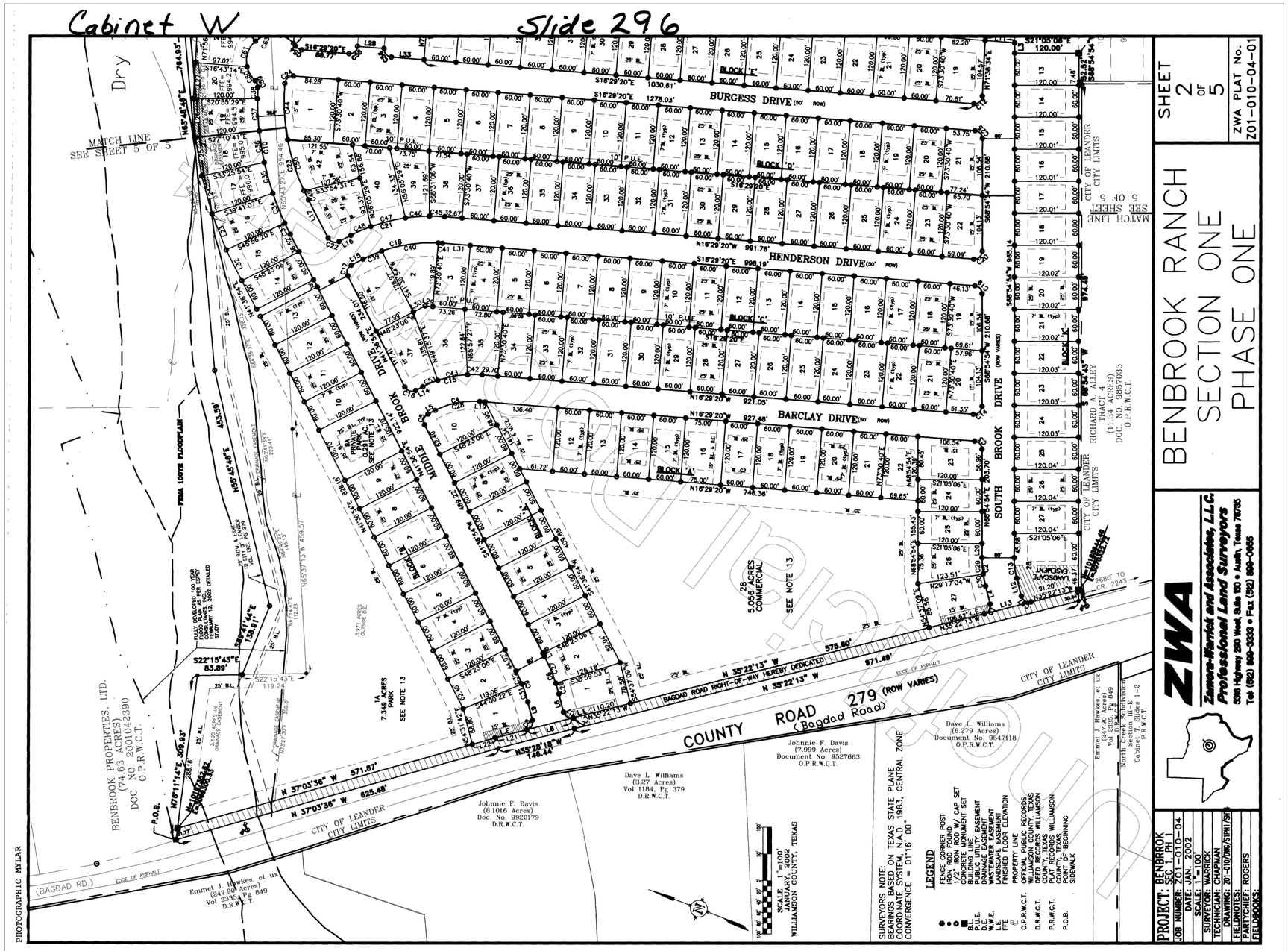
DATE: 3/18/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A6131001 FP1.dwg

REVISIONS			
NO.	DESCRIPTION	BY	DATE

BENBROOK PLAZA
SITE PLAN

FINAL PLAT

Cabinet W Slide 296



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BENBROOK PLAZA
SITE PLAN
FINAL PLAT

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/18/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A613001FP2.dwg

FOR INFORMATIONAL PURPOSES ONLY

LJA Engineering, Inc.
2700 La Frontera Blvd
Suite 150
Round Rock, TX 78681
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

JOB NUMBER: A613-1001

SHEET NO. 04 OF 24 SHEETS

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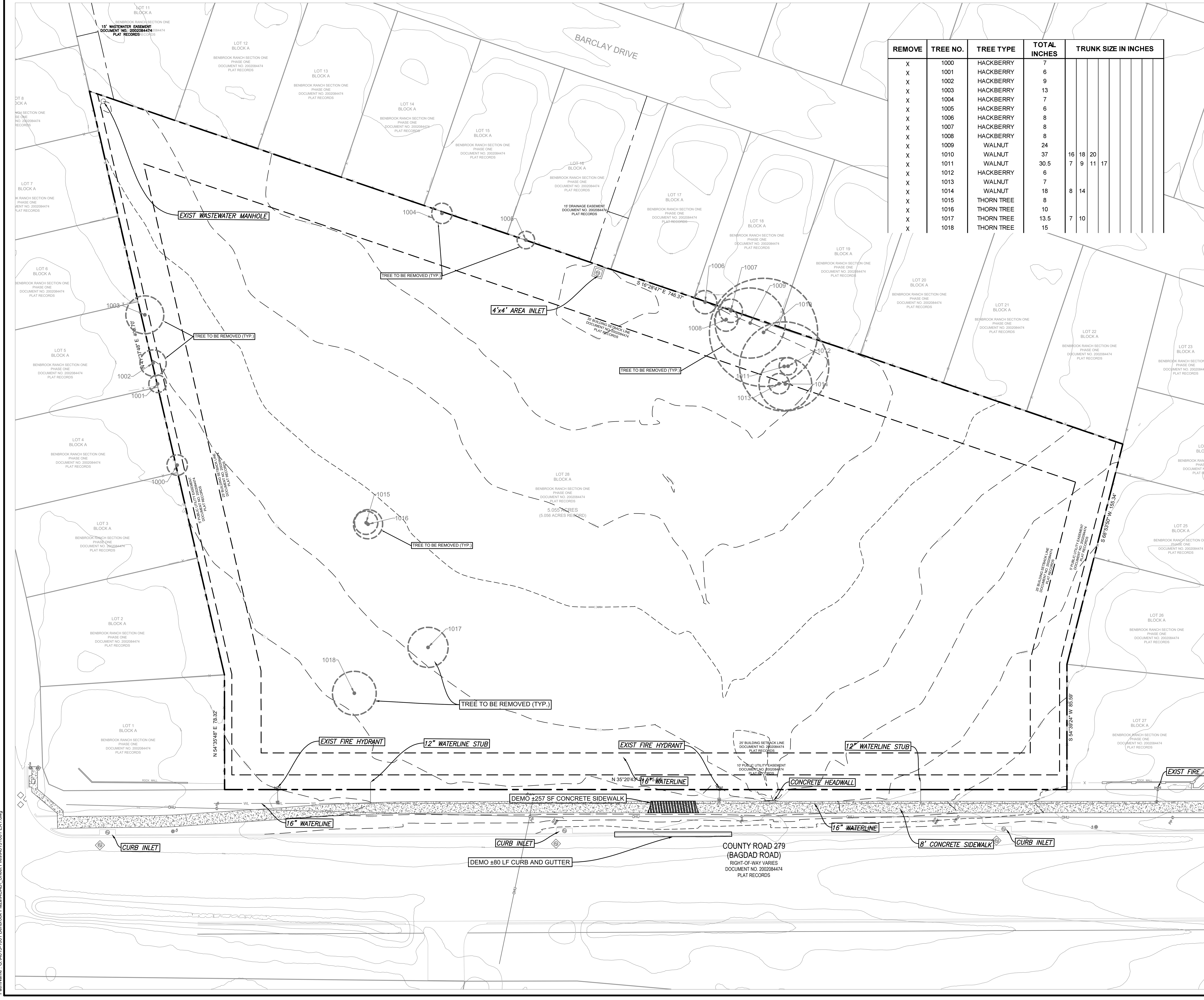

REMOVE	TREE NO.	TREE TYPE	TOTAL INCHES	TRUNK SIZE IN INCHES									
X	1000	HACKBERRY	7										
X	1001	HACKBERRY	6										
X	1002	HACKBERRY	9										
X	1003	HACKBERRY	13										
X	1004	HACKBERRY	7										
X	1005	HACKBERRY	6										
X	1006	HACKBERRY	8										
X	1007	HACKBERRY	8										
X	1008	HACKBERRY	8										
X	1009	WALNUT	24										
X	1010	WALNUT	37	16	18	20							
X	1011	WALNUT	30.5	7	9	11	17						
X	1012	HACKBERRY	6										
X	1013	WALNUT	7										
X	1014	WALNUT	18	8	14								
X	1015	THORN TREE	8										
X	1016	THORN TREE	10										
X	1017	THORN TREE	13.5	7	10								
X	1018	THORN TREE	15										

0 30' 60'

LEGEND:

- 700 PROPOSED CONTOURS
- 700 EXISTING CONTOURS
- LOT LINE
- BUILDING SETBACK
- 1234 TREE TO BE SAVED
- 1234 TREE TO BE REMOVED

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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

BENBROOK PLAZA SITE PLAN

EXISTING CONDITIONS AND DEMO PLAN

REVISIONS			
NO.	DESCRIPTION	BY	DATE

DATE: 3/26/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A6131001 EX1.dwg

STATE OF TEXAS
JUSTIN C. MADDING
122139
LICENSED
PROFESSIONAL ENGINEER
[illegible]
3/26/2021

LJA Engineering, Inc.
2700 La Frontera Blvd
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Round Rock, TX 78681
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FRN - F-1386

JOB NUMBER: A613-1001

EX 1

SHEET NO. 07 OF 24 SHEETS

Date\Time : Fri, 26 Mar 2021 - 9:56am User Name : jmadding
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REMOVE	TREE NO.	TREE TYPE	TOTAL INCHES	TRUNK SIZE IN INCHES
X	1000	HACKBERRY	7	
X	1001	HACKBERRY	6	
X	1002	HACKBERRY	9	
X	1003	HACKBERRY	13	
X	1004	HACKBERRY	7	
X	1005	HACKBERRY	6	
X	1006	HACKBERRY	8	
X	1007	HACKBERRY	8	
X	1008	HACKBERRY	8	
X	1009	WALNUT	24	
X	1010	WALNUT	37	16 18 20
X	1011	WALNUT	30.5	7 9 11 17
X	1012	HACKBERRY	6	
X	1013	WALNUT	7	
X	1014	WALNUT	18	8 14
X	1015	THORN TREE	8	
X	1016	THORN TREE	10	
X	1017	THORN TREE	13.5	7 10
X	1018	THORN TREE	15	

LEGEND:

- ROCK BERM
- INLET PROTECTION
- SILT FENCE
- LIMITS OF CONSTRUCTION
- LIMITS OF CONSTRUCTION/SILT FENCE
- TREE PROTECTION FENCE
- PROPOSED CONTOURS
- EXISTING CONTOURS
- STABILIZED CONSTRUCTION EXIT
- STAGING & SPOILS SITE
- LOT LINE
- TREE TO BE SAVED
- TREE TO BE REMOVED
- CONCRETE WASHOUT

NOTES:

1. IF DISTURBED AREA IS NOT WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION MATTING. (ECM 1.4.4.B.3, SECTION 5, I.).
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 LEANDER RULES AND REGULATIONS. (LDC 1.4.4.D.4)
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER ECM 1.4.4.3(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY. (ECM 1.4.4.D.4)
5. LIMITS OF CONSTRUCTION & SILT FENCE SHOWN OFF BOUNDARY LINES FOR CLARITY ONLY. SILT FENCE SHALL BE PLACED WITHIN TRACT BOUNDARIES.
6. NO MORE THAN 2000 LINEAR FEET OF DISTURBANCE FOR UTILITY INSTALLATION SHALL OCCUR AT ANY TIME WITH CLEAN UP AND RESTORATION WORK OCCURING BEFORE PROCEEDING TO THE NEXT SECTION. THE CONTRACTOR IS REQUIRED TO RESTORE ALL DISTURBED AREAS AS THE WORK PROGRESSES.
7. CONTRACTOR SHALL MAINTAIN THE DEWATERING SYSTEM TO ENSURE PERFORMANCE. IF THE DEWATERING SYSTEM IS NOT PERFORMING, THE CONTRACTOR MUST IMMEDIATELY MAKE THE NECESSARY MODIFICATIONS. FOLLOWING THE ENVIRONMENTAL INSPECTOR'S DIRECTION TO ENSURE ADEQUATE SYSTEM PERFORMANCE. CONTRACTOR SHALL PROVIDE THE DEWATERING PLAN AT THE PRE-CONSTRUCTION MEETING.
8. ALL SILT FENCE ALONG EXISTING PAVED R.O.W.S SHALL BE SET AT A MINIMUM OF 3' AWAY FROM BACK OF CURB OR EDGE OF PAVING TO AVOID STANDING WATER ON SUBGRADE SURFACES.
9. SILT FENCE ALONG BACK OF CURB MAY BE TEMPORARILY REMOVED FOR GRADING TO CURB EDGES BUT SHALL BE REINSTALLED DAILY.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE SITE TO THE WATER QUALITY/DETENTION PONDS.

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BENBROOK PLAZA
SITE PLAN

EROSION/SEDIMENTATION CONTROL & TREE PROTECTION PLAN, PHASE 1

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/26/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A613100 EC1.dwg

STATE OF TEXAS
JUSTIN C. MADDING
122139
LICENSED PROFESSIONAL ENGINEER
3/26/2021

LJA Engineering, Inc.
2700 La Frontera Blvd
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FRN - F-1386

JOB NUMBER: A613-1001

EC 1

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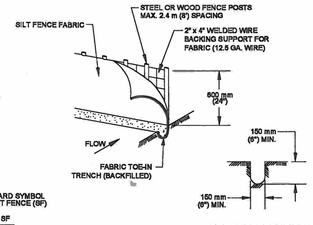


STANDARD SYMBOL
FOR SILT FENCE (SF)

SF
L=

TRENCH CROSS SECTION

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.

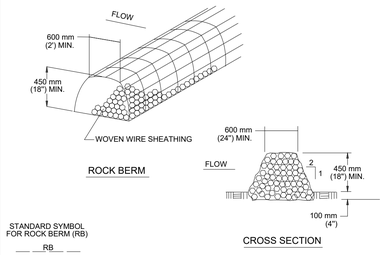
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

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:

SILT FENCE TO BE "NON-WOVEN" GEOTEXTILE FENCE,
WITH A MINIMUM WEIGHT OF 4.5 OZ/SQFT PER COA SPEC 642S



STANDARD SYMBOL
FOR ROCK BERM (RB)

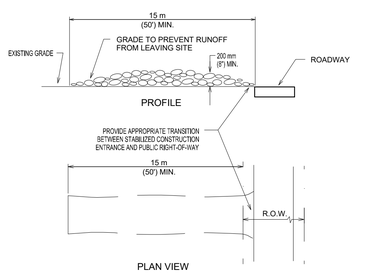
RB

CROSS SECTION

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

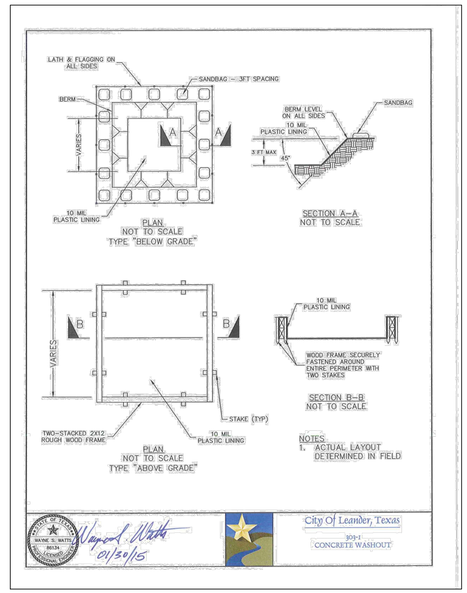


PLAN VIEW

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	
RECORD COPY SIGNED BY J. PATRICK MURPHY 5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1



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BENBROOK PLAZA
SITE PLAN

EROSION/SEDIMENTATION CONTROL & TREE PROTECTION DETAILS

REVISIONS			
NO.	DESCRIPTION	BY	DATE

DATE: 3/18/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A613-1001 EC2.dwg

STATE OF TEXAS
JUSTIN C. MADDING
122139
LICENSED
PROFESSIONAL ENGINEER
3/18/2021

LJA Engineering, Inc.
2700 La Frontera Blvd
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Fax 512.439.4716
FRN - F-1386

JOB NUMBER:
A613-1001

EC 2

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Date/Time : Thu, 18 Mar 2021 - 11:09am
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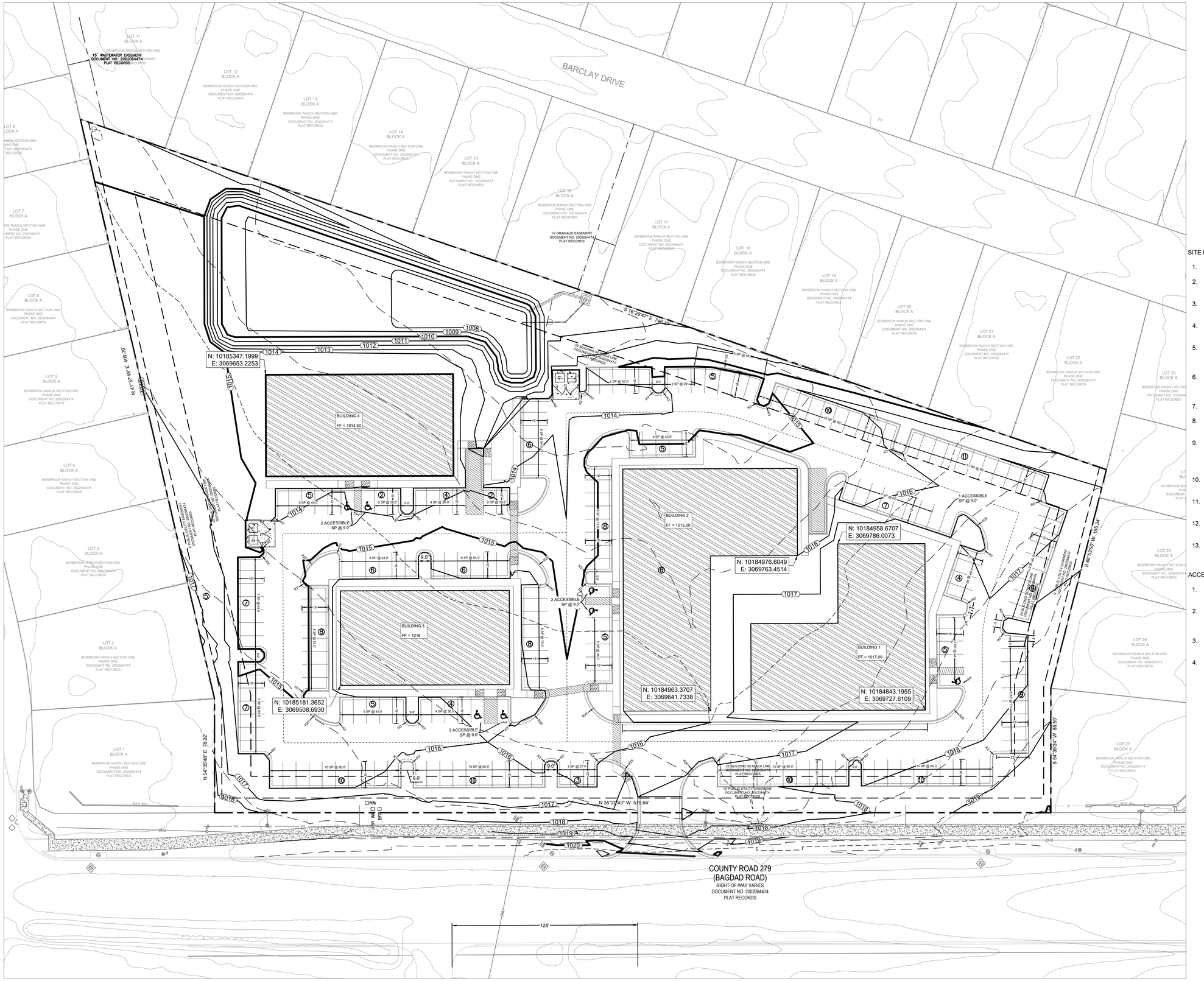

0 30' 60'

LEGEND:

- ACCESSIBLE ROUTE
- CURB & GUTTER
- FIRE LANE
- SIDEWALK
- 100.0' BUILDING CORNER DIMENSION

SITE PLAN NOTES:

1. ALL CURB RADII ARE 3.0' UNLESS OTHERWISE NOTED ON PLANS.
2. ALL DIMENSIONS ARE FACE OF CURB/FACE OF BUILDING UNLESS NOTED ON PLANS.
3. BUILDING DIMENSIONS SHALL BE VERIFIED WITH ARCHITECTURAL PLANS, PRIOR TO LAYOUT OF SITE.
4. FOR DRIVEWAY CONSTRUCTION: THE OWNER IS RESPONSIBLE FOR ALL COSTS OF RELOCATION OF OR DAMAGE TO UTILITIES.
5. ALL ADA ACCESSIBLE SIDEWALKS SHALL BE CONCRETE, WITH A COURSE BROOM FINISH WITH A MINIMUM WIDTH OF 4' UNLESS OTHERWISE NOTED.
6. THIS SITE MEETS TEXAS ACCESSIBILITY STANDARDS AND AN ACCESSIBLE ROUTE WILL BE PROVIDED TO THE OTHER BUILDINGS AS NECESSARY.
7. SEE SHEET ########################## FOR PARKING DETAILS.
8. ALL ON-SITE UTILITIES SHALL BE LOCATED UNDERGROUND UNLESS REQUIRED.
9. ANY PROPOSED MODIFICATIONS, WHICH INCLUDE MOVING A STRUCTURE MORE THAN TWENTY-FIVE (25) FEET OR INCREASING THE HEIGHT OF SQUARE FOOTAGE OF A BUILDING, WILL REQUIRE REVIEW BY THE PLANNING COMMISSION AND/OR CITY COUNCIL.
10. EACH COMPACT PARKING SPACE/AISLE WILL BE SIGNED "SMALL CAR ONLY".
11. THERE ARE NO EXISTING BUILDINGS WITHIN 50' OF THE PROJECT BOUNDARIES.
12. ALL BUILDINGS ON THIS SITE SHALL COMPLY WITH AEBG ONE STAR RATING REQUIREMENTS.
13. NO EXISTING STRUCTURES LIE WITHIN 50' OF THE PROPOSED SITE ON ADJOINING LOTS.

ACCESSIBLE ROUTE NOTES

1. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP (TAS 403.3).
2. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 INCHES (TAS 405.2, 405.6).
3. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:48 (TAS 403.3).
4. GROUND SURFACES ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM, AND SLIP RESISTANT (TAS 302).

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BENBROOK PLAZA
SITE PLAN
DIMENSION CONTROL PLAN

NO.	DESCRIPTION	BY	DATE
	REVISIONS		

DATE: 3/18/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A613-1001 SP2.dwg

STATE OF TEXAS
JUSTIN C. MADDING
122139
LICENSED
PROFESSIONAL ENGINEER
3/18/2021

LJA Engineering, Inc.
2700 La Frontera Blvd
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JOB NUMBER: A613-1001

SP 2

SHEET NO. 11

OF 24 SHEETS

User Name: jmadding
Date/Time: Thu, 18 Mar 2021 - 11:10am
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BENBROOK PLAZA
SITE PLAN
GRADING PLAN

0 30' 60'

LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TOP OF PAVEMENT ELEVATION
- TOP OF WALL ELEVATION
- BOTTOM OF WALL ELEVATION
- TOP OF CURB ELEVATION
- TOP OF GRADE/GRATE ELEVATION
- TOP OF LAY DOWN CURB ELEVATION
- PROPOSED STORM SEWER LINE
- PROPOSED RETAINING WALL
- PROPOSED TREE WELL

BARCLAY DRIVE

COUNTY ROAD 279
(BAGDAD ROAD)
RIGHT-OF-WAY VARIES
DOCUMENT NO. 2002084474
PLAT RECORDS

BUILDING 1
FF = 1017.00

BUILDING 2
FF = 1015.00

BUILDING 3
FF = 1016

BUILDING 4
FF = 1014.50

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/18/2021
DESIGNED BY: JM
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CHECKED BY: JM
DRAWING NAME: A613100I GP1.dwg

STATE OF TEXAS
JUSTIN C. MADDING
122139
LICENSED
PROFESSIONAL ENGINEER
3/18/2021

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FRN - F-1386

JOB NUMBER: A613-1001

GP 1

SHEET NO. 12 OF 24 SHEETS

Date/Time: Thu, 18 Mar 2021 - 11:10am
User Name: jmadding
Path Name: G:\A613-1001 Benbrook Plaza\ACAD_Sheet Files\A613100I GP1.dwg

LEGEND:

- EXISTING MAJOR CONTOUR (730)
- EXISTING MINOR CONTOUR (733)
- TIME OF CONCENTRATION PATH
- FLOW ARROW
- DRAINAGE BOUNDARY
- EXISTING PROPERTY LINE

EX-X — DRAINAGE BASIN NO.
X.XX — DRAINAGE AREA (ACRES)

Existing Drainage

Drainage Area	Area acres	Time of Conc. mins	Curve Number	Q 2-yr cfs	Q 10-yr cfs	Q 25-yr cfs	Q 100-yr cfs	Notes
Ex 1	1.134	8.58	81.88	3.08	5.64	7.45	10.52	
Ex 2	5.798	11.34	81.53	15.14	28.22	37.48	53.27	To SP A
SP A	-	-	-	15.14	28.22	37.48	53.27	Study Point 1

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BENBROOK PLAZA
SITE PLAN
XX DRAINAGE AREA MAP

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/18/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A6131001 DM1.dwg

STATE OF TEXAS — JUSTIN C. MADDING — 122139 — LICENSED PROFESSIONAL ENGINEER
3/18/2021

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JOB NUMBER: A613-1001

DM 1

SHEET NO. 13 OF 24 SHEETS

0 50' 100'

LEGEND:

- 730 EXISTING MAJOR CONTOUR
- 733 EXISTING MINOR CONTOUR
- TIME OF CONCENTRATION PATH
- FLOW ARROW
- DRAINAGE BOUNDARY
- EXISTING PROPERTY LINE

EX-X — DRAINAGE BASIN NO.
X.XX — DRAINAGE AREA (ACRES)

Proposed Drainage

Drainage Area	Area acres	Time of Conc. mins	Curve Number	Q 2-yr cfs	Q 10-yr cfs	Q 25-yr cfs	Q 100-yr cfs	Notes
Da 1	1.893	6.00	81.70	5.82	10.89	14.47	20.60	To Pond
Da 2	2.888	6.00	93.02	12.52	19.82	24.95	33.77	To Pond
Da 3	2.138	6.00	92.17	9.07	14.50	18.31	24.88	To Pond
Pond Out	-	-	-	4.68	13.02	24.19	46.06	
Study Point 1	-	-	-	4.68	13.02	24.19	46.06	Study Point 1

Study Point Comparison

Strudy Point	Q 2-yr cfs	Q 10-yr cfs	Q 25-yr cfs	Q 100-yr cfs
Existing	15.14	28.22	37.48	53.27
Proposed	4.68	13.02	24.19	46.06
Delta	-10.46	-15.20	-13.29	-7.21

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BENBROOK PLAZA
SITE PLAN
XX DRAINAGE AREA MAP

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/18/2021 DESIGNED BY: JM CAD
DRAWN BY: JM CHECKED BY:
DRAWING NAME: A613-1001 DM2.dwg

STATE OF TEXAS
JUSTIN C. MADDING
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JOB NUMBER: A613-1001

DM 2

SHEET NO. 14 OF 24 SHEETS

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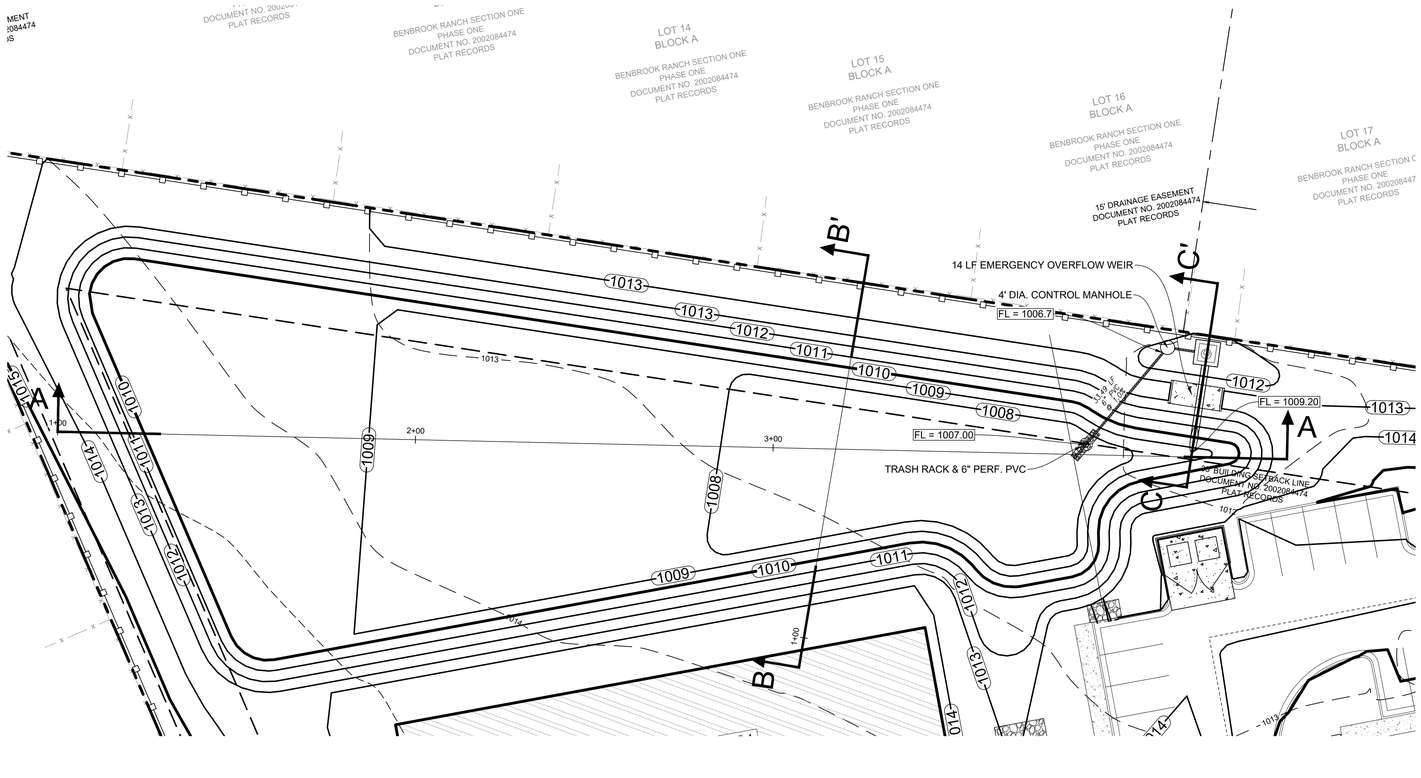
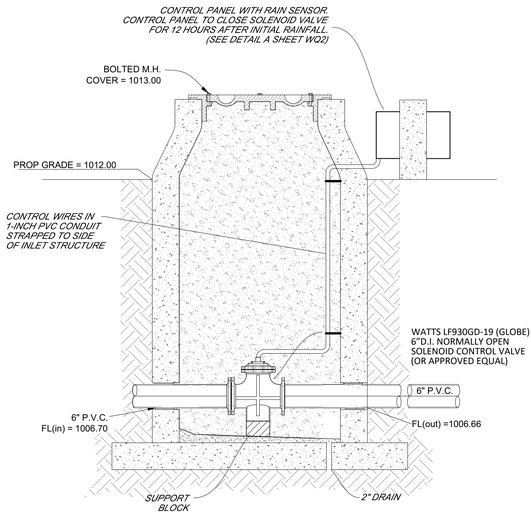
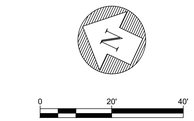


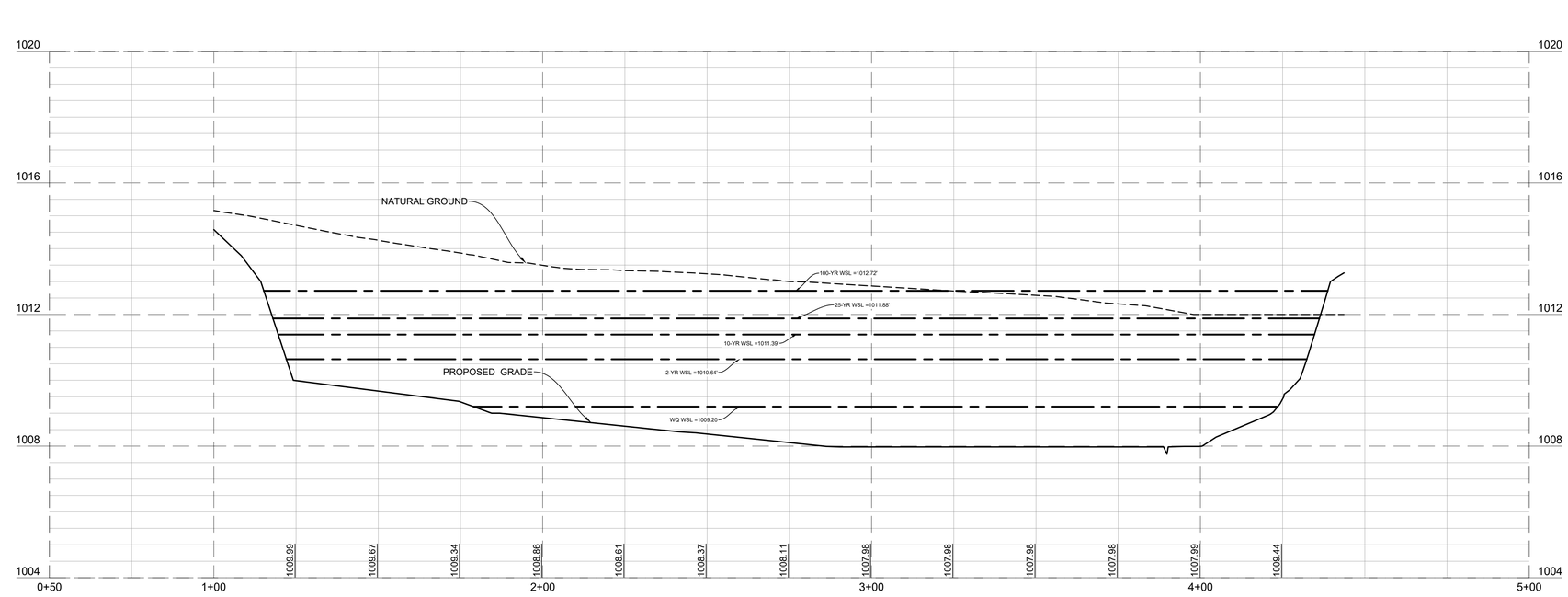


CONTROL MANHOLE DETAIL
N.T.S.

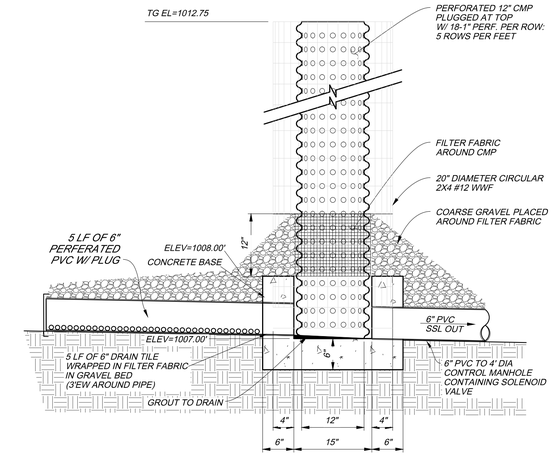


LEGEND:

- EXISTING CONTOURS (610)
- PROPOSED CONTOURS (608)
- TP = 1000.00 — TOP OF PAVEMENT ELEVATION
- TW = 1000.00 — TOP OF WALL ELEVATION
- BW = 1000.00 — BOTTOM OF WALL ELEVATION
- TC = 1000.00 — TOP OF CURB ELEVATION
- TG = 1000.00 — TOP OF GRADE/GRATE ELEVATION
- TLC = 1000.00 — TOP OF LAY DOWN CURB ELEVATION
- PROPOSED STORM SEWER LINE
- DRY STACK ROCK WALL
- MORTARED ROCK WALL



SECTION A-A'
STA. 0+50 - STA. 5+00
SCALE:
1=20' (HORIZONTAL)
1=2" (VERTICAL)



TYPICAL STAND PIPE WITH TRASH RACK
N.T.S.

NOTES:
1. OUTLET STRUCTURE TO BE TEMPORARILY PLUGGED DURING CONSTRUCTION.

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BENBROOK PLAZA SITE PLAN
964 N. BAGDAD RD. LEANDER, TX 78641

WATER QUALITY POND PLAN & SECTION

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 5/26/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A613100 WQ1.dwg

STATE OF TEXAS
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JOB NUMBER: A613-1001

WQ1

SHEET NO. 16
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Date/Time Wed, 26 May 2021 - 4:23pm
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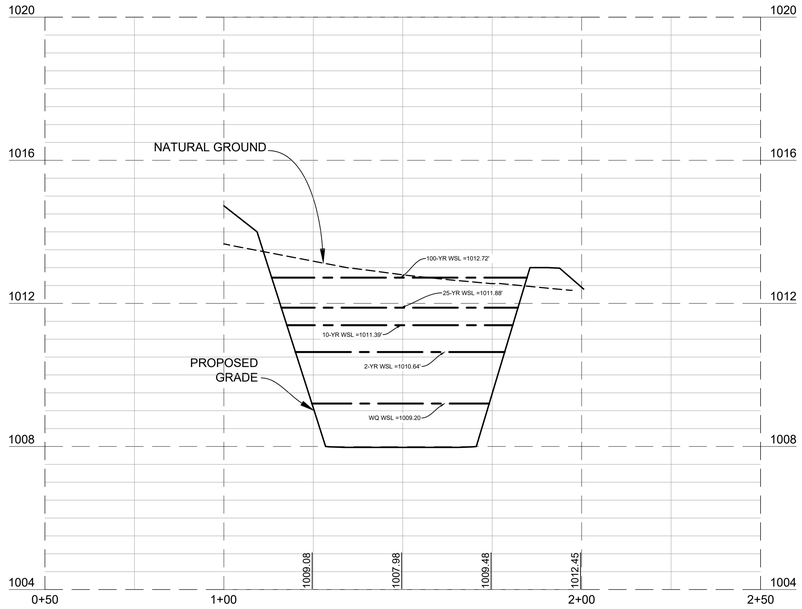
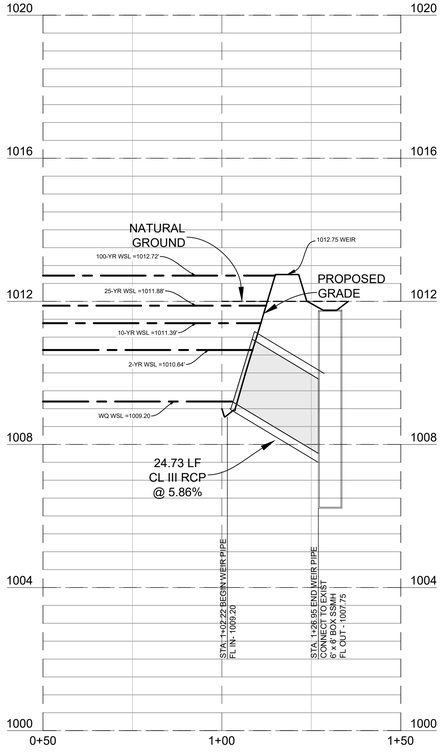
User Name: jmadding



SECTION B-B'
STA. 0+00 - STA. 2+50
SCALE:
1=20' (HORIZONTAL)
1=2" (VERTICAL)



SECTION C-C'
STA. 0+50 - STA. 1+50
SCALE:
1=20' (HORIZONTAL)
1=2" (VERTICAL)

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Benbrook Plaza
Date Prepared: 2/11/2021

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-348A Pages 3-27 to 3-30

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

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

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

County =	Williamson	
Total project area included in plan * =	6.93	acres
Predevelopment impervious area within the limits of the plan * =	0.12	acres
Total post-development impervious area within the limits of the plan* =	3.00	acres
Total post-development impervious cover fraction * =	0.43	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	2507	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 1

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	6.93	acres
Predevelopment impervious area within drainage basin/outfall area =	0.12	acres
Post-development impervious area within drainage basin/outfall area =	3.00	acres
Post-development impervious fraction within drainage basin/outfall area =	0.43	
$L_{M\ THIS\ BASIN}$ =	2507	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention Basin
Removal efficiency = 91 percent

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

RG-348A 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 =	5.05	acres
A_I =	2.88	acres
A_P =	2.17	acres
L_R =	2936	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 2507 lbs.

F = 0.85

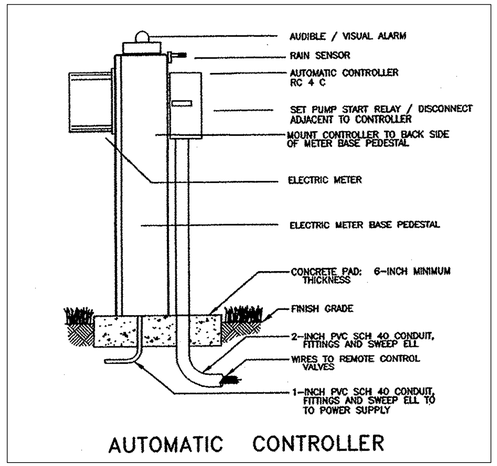
6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348A Pages 3-34 to 3-36

Rainfall Depth =	1.32	inches
Post Development Runoff Coefficient =	0.40	
On-site Water Quality Volume =	9674	cubic feet

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

Off-site area draining to BMP =	1.88	acres
Off-site Impervious cover draining to BMP =	0.12	acres
Impervious fraction of off-site area =	0.06	
Off-site Runoff Coefficient =	0.09	
Off-site Water Quality Volume =	819	cubic feet
Storage for Sediment =	1889	
Total Capture Volume (required water quality volume(s) x 1.20) =	**12381**	**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.



AUTOMATIC CONTROLLER

Pond Stage-Storage Table:

Stage	Area	Acres	Incremental Storage (cf)	Cumulative Storage (cf)	Cumulative Storage (ac-ft)
1007.00	0	0.000	0	0	0.00
1008.00	4221	0.097	2,110	2,110	0.05
1009.00	12763	0.293	8,492	10,603	0.24
1010.00	20203	0.464	16,483	27,086	0.62
1011.00	22481	0.516	21,342	48,428	1.11
1012.00	25038	0.575	23,760	72,188	1.66
1013.00	27739	0.637	26,389	98,576	2.26

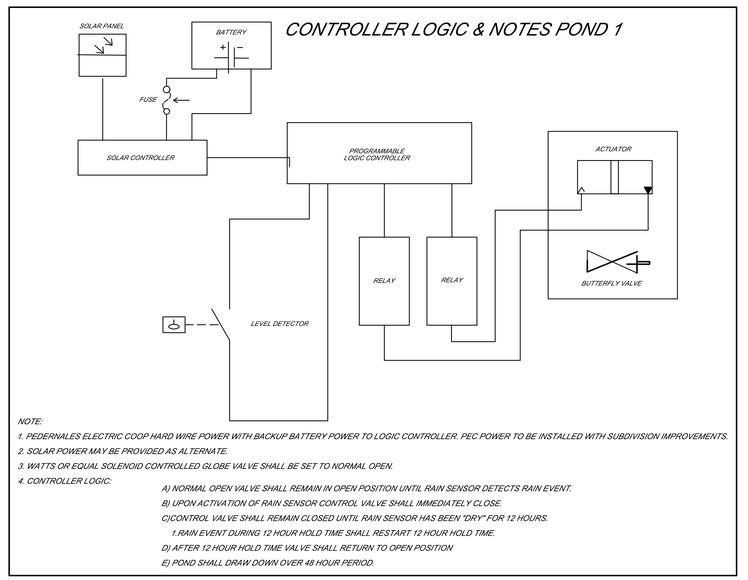
Water Quality Volume Summary:

Water Quality Volume Required (cf):	12,381
Water Quality Volume Provided (cf):	13,370
Water Quality Volume Elevation (ft):	1009.20

0 20' 40'

LEGEND:

- EXISTING CONTOURS (610)
- PROPOSED CONTOURS (608)
- TOP OF PAVEMENT ELEVATION (TP = 1000.00)
- TOP OF WALL ELEVATION (TW = 1000.00)
- BOTTOM OF WALL ELEVATION (BW = 1000.00)
- TOP OF CURB ELEVATION (TC = 1000.00)
- TOP OF GRADE/GRATE ELEVATION (TG = 1000.00)
- TOP OF LAY DOWN CURB ELEVATION (TLC = 1000.00)
- PROPOSED STORM SEWER LINE
- DRY STACK ROCK WALL
- MORTARED ROCK WALL



NOTE:
1. PEDERNALES ELECTRIC COOP HARD WIRE POWER WITH BACKUP BATTERY POWER TO LOGIC CONTROLLER. PEC POWER TO BE INSTALLED WITH SUBDIVISION IMPROVEMENTS.
2. SOLAR POWER MAY BE PROVIDED AS ALTERNATE.
3. WATTS OR EQUAL SOLENOID CONTROLLED GLOBE VALVE SHALL BE SET TO NORMAL OPEN.
4. CONTROLLER LOGIC:
A) NORMAL OPEN VALVE SHALL REMAIN IN OPEN POSITION UNTIL RAIN SENSOR DETECTS RAIN EVENT.
B) UPON ACTIVATION OF RAIN SENSOR CONTROL VALVE SHALL IMMEDIATELY CLOSE.
C) CONTROL VALVE SHALL REMAIN CLOSED UNTIL RAIN SENSOR HAS BEEN "DRY" FOR 12 HOURS.
1. RAIN EVENT DURING 12 HOUR HOLD TIME SHALL RESTART 12 HOUR HOLD TIME.
D) AFTER 12 HOUR HOLD TIME VALVE SHALL RETURN TO OPEN POSITION
E) POND SHALL DRAW DOWN OVER 48 HOUR PERIOD.

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BENBROOK PLAZA SITE PLAN
964 N. BAGDAD RD. LEANDER, TX 78641

WATER QUALITY PLAN & SECTION

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 5/26/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A613-1001 WQ2.dwg

STATE OF TEXAS
JUSTIN C. MADDING
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5/26/2021

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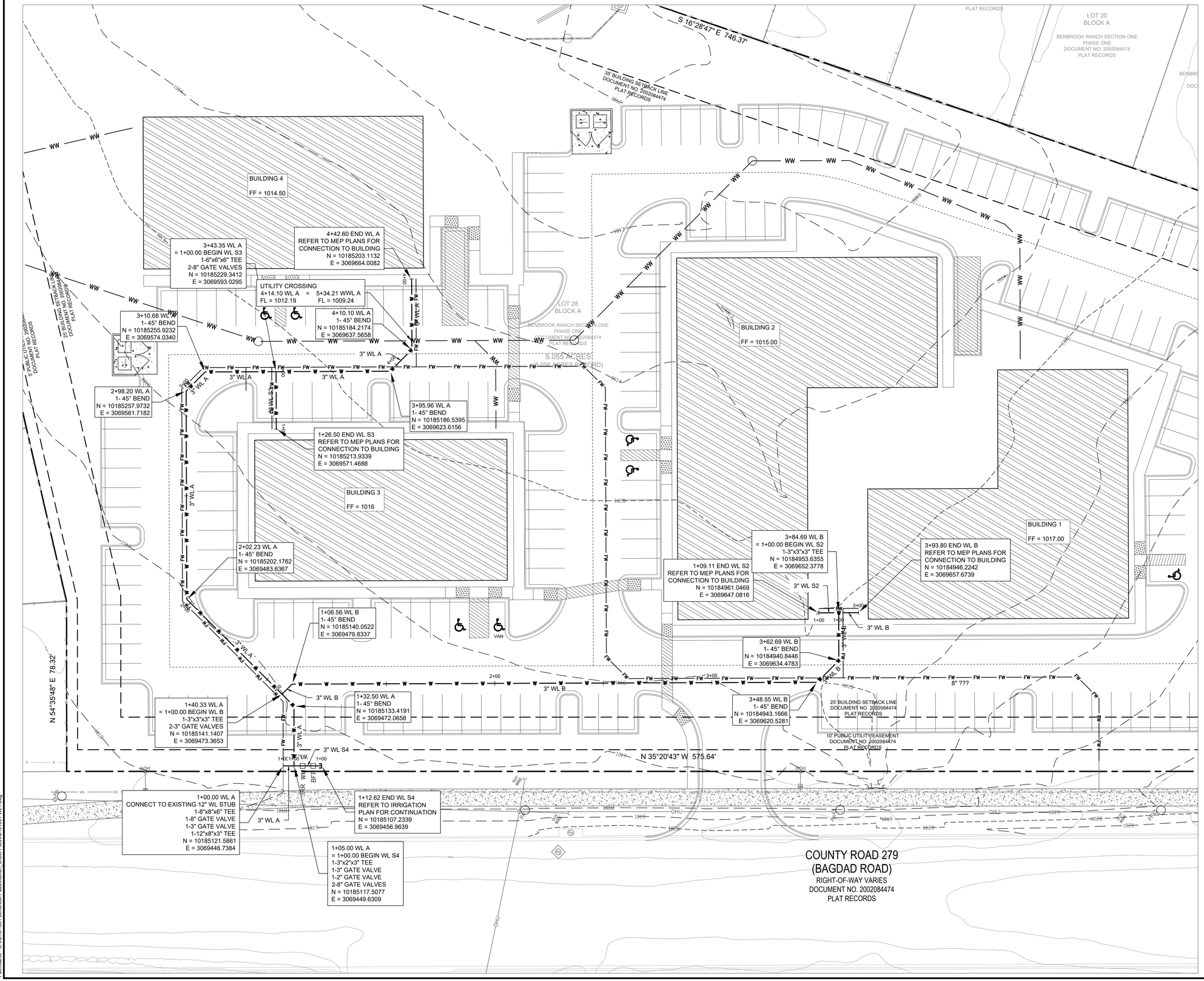
JOB NUMBER: A613-1001

WQ2

SHEET NO. 17
OF 27 SHEETS

Date/Time: Wed, 26 May 2021 - 4:24pm User Name: jmadding
Path/Name: G:\A613-1001 Benbrook Plaza\ACAD_Sheet Files\A613-1001 WQ2.dwg



LEGEND:

- PROPOSED FIRE HYDRANT ASSEMBLY
- EXISTING FIRE HYDRANT
- PROPOSED GATE VALVE
- EXISTING GATE VALVE
- PROPOSED AIR RELEASE VALVE
- EXISTING AIR RELEASE VALVE
- PROPOSED PLUG OR CAP
- EXISTING PLUG OR CAP
- PROPOSED CLEAN OUT
- EXISTING CLEAN OUT
- PROPOSED WATER LINE
- PROPOSED WASTEWATER LINE AND MANHOLE
- PROPOSED STORM SEWER LINE AND MANHOLE
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE AND MANHOLE
- EXISTING STORM SEWER LINE
- DOUBLE SANITARY SERVICE LEAD
- SINGLE SANITARY SERVICE LEAD
- DOUBLE WATER SERVICE LEAD
- SINGLE WATER SERVICE LEAD
- SINGLE WASTEWATER PRESSURE SERVICE LEAD

NOTES:

1. ALL GATE VALVES TO BE INSTALLED PER DETAIL 511-AW-01 AT P.C. OF CURB AT ALL INTERSECTIONS UNLESS OTHERWISE INDICATED ON PLANS.
2. ALL WATER SERVICES TO BE INSTALLED PER COL DETAIL 101-1 OR EFFECTIVE DRAFT VERSION THERE OF & PURSUANT TO TCEQ CRITERIA.
3. FIRE HYDRANTS SHALL BE CONSTRUCTED PER COL DETAIL 101-4. ALL FIRE HYDRANT LEADS TO BE CONSTRUCTED WITH DUCTILE IRON PIPE. FIRE HYDRANTS MUST BE LOCATED IN THE R.O.W. AND MAY NOT BE CLOSER THAN 7.5' TO A STORM SEWER INLET.
4. ALL WATER LINES TO BE LOCATED PER COL ASSIGNMENT UNLESS OTHERWISE NOTED. ALL WATER AND WASTEWATER LINES SHALL HAVE A MINIMUM OF 9' HORIZONTAL SEPARATION, AND 2' VERTICAL SEPARATION BETWEEN THEM.
5. MAXIMUM STATIC PRESSURE= 107 PSI (LOT 1, BLOCK A)
   MINIMUM STATIC PRESSURE= 93 PSI (LOT 15, BLOCK G)
6. ALL LOTS IN THIS SUBDIVISION ARE REQUIRED TO HAVE A PRESSURE REDUCING VALVE SET TO 65 PSI ON THE PROPERTY OWNER'S SIDE OF THE METER. ALL PRESSURE REDUCING VALVES SHALL BE MAINTAINED BY THE PROPERTY OWNER.

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BENBROOK PLAZA
SITE PLAN
WATER LINE 'X' PLAN AND PROFILE
STA. 1+00.00 TO END

REVISIONS			
NO.	DESCRIPTION	BY	DATE

DATE: 3/18/2021
DESIGNED BY: JM
DRAWN BY: CAD
CHECKED BY: JM
DRAWING NAME: A613-1001 WL1.dwg

STATE OF TEXAS
JUSTIN C. MADDING
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3/18/2021

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Round Rock, TX 78681
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

JOB NUMBER: A613-1001

WL 1

SHEET NO. 17 OF 24 SHEETS

Date/Time : Thu, 18 Mar 2021 - 11:11am
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User Name : jmadding

ATTACHMENT 1N

Inspection, Maintenance, Repair and Retrofit Plan:

Temporary BMP's:

Best Management Practices (BMP's) installed during construction will be maintained in accordance with the requirements of the EPA's NPDES stormwater pollution prevention program. The construction superintendent will inspect temporary erosion controls on a regular basis and adjust the controls and/or remove any sediment buildup in accordance with the erosion/sedimentation control notes and as otherwise directed by the Owner or his designated representative. The following maintenance procedures shall be followed until permanent stabilization occurs.

Silt Fence

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

Rock Berm

a. Inspect weekly 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 silt accumulation among the rocks, washout, construction traffic damage, etc. event and repair or replacement shall be made promptly as needed.
b. When silt reaches a depth equal to one-third the height of the berm or 6", whichever is less, the silt shall be disposed of on an approved site and in such a manner that will not contribute to additional siltation.
c. Accumulated silt shall be removed when it reaches a depth of 6 inches. The silt shall be disposed of on an approved site and in such a manner that will not contribute to additional siltation.
d. Severe service rock berms shall be inspected daily. Silt shall be removed when it reaches a depth of 6"
e. Rock berms shall be removed when the site is completely stabilized so as to not block or impede storm flow or drainage.

Stabilized Construction Entrance

a. 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 devices used to trap sediment.
b. Entrance must be properly graded to incorporate a drain swale or a similar measure to prevent runoff from leaving the construction site.

Inlet Protection

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

Following inspection of the BMP's, deficiencies shall be noted and corrected by the contractor.

Permanent BMP's:

Maintenance Guidelines for Batch Detention Basins Batch detention basins may have somewhat higher maintenance requirements than an extended detention basin since they are active stormwater controls. The maintenance activities are identical to those of extended detention basins with the addition of maintenance and inspections of the automatic controller and the valve at the outlet.

Inspections.

Inspections should take place a minimum of twice a year. One inspection should take place during wet weather to determine if the basin is meeting the target detention time of 12 hours and a drawdown time of no more than 48 hours. The remaining inspections should occur between storm events so that manual operation of the valve and controller can be verified. The level sensor in the basin should be inspected and any debris or sediment in the area should be removed. The outlet structure and the trash screen should be inspected for signs of clogging. Debris and sediment should be removed from the orifice and outlet(s) as described in previous sections. Debris obstructing the valve should be removed. During each inspection, erosion areas inside and downstream of this BMP should be identified and repaired/revegetated immediately.

Mowing.

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.

Litter and Debris Removal.

Litter and debris removal should take place at least twice a year, as part of the periodic mowing operations and inspections. Debris and litter 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.

Erosion control.
The basin side slopes and embankment all may periodically suffer from slumping and erosion. To correct these problems, corrective action, such as regrading and revegetation, may be necessary. Correction of erosion control should take place whenever required based on the periodic inspections.

Nuisance Control.
Standing water or soggy conditions may occur in the basin. Some standing water may occur after a storm event since the valve may close with 2 to 3 inches of water in the basin. Some flow into the basin may also occur between storms due to spring flow and residential water use that enters the storm sewer system. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.).

Structural Repairs and Replacement.
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 Removal.
A properly designed batch detention basin will accumulate quantities of sediment over time. The accumulated sediment can detract from the appearance of the facility and reduce the pollutant removal performance of the facility. The sediment also tends to accumulate near the outlet structure and can interfere with the level sensor operation. 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.

Logic Controller.
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.

Acknowledged by: P. Hari Krishnan Digitally signed by Hari K Pullakhandam
DN: cn=Hari K Pullakhandam, o=Rover Resources, Inc, ou=RoverResources, email=hari@roverresources.com, c=US
Date: 2021.05.26 14:46:26 -05'00'

ZETA, LLC

ATTACHMENT 1P

Measures for Minimizing Surface Stream Contamination:

BMPs proposed to reduce pollutants in surface streams are discussed in Attachment 1K: "BMPs for On-Site Stormwater." Stormwater runoff from the site will be routed to the proposed extended batch detention pond. After the stormwater is filtered, it will drain into a storm inlet. The batch detention pond utilizes a combination of a culvert pipe, and emergency overflow weir to release stormwater runoff towards the existing 4' x 4' area inlet at a flow rate that is less than the existing conditions in the 2-year, 10-year, 25-year, and 100-year storm event. The culvert is a 24" diameter pipe with a flowline of 1009.20'. The emergency overflow weir is 14' wide and has a flowline elevation of 1012.75 which is 0.25' below the top of berm at 1013'. The storage capacity of the proposed detention pond is as follows:

Pond Stage-Storage Table:

Stage	Area	Acres	Incremental Storage (cf)	Cumulative Storage (cf)	Cumulative Storage (ac-ft)
1007.00	0	0.000	0	0	0.00
1008.00	4221	0.097	2110	2110	0.05
1009.00	12763	0.293	8492	10603	0.24
1009.20	14988	0.344	2767	13370	0.31
1010.00	20203	0.464	16483	27086	0.62
1011.00	22481	0.516	21342	48429	1.11
1012.00	25038	0.575	23760	72188	1.66
1013.00	27739	0.637	26389	98576	2.26

The summary of calculations for from the HEC-HMS model for the existing conditions are as follows:

Existing Conditions Drainage Calculations						
Event	Area of Acres	Time of Conc.	2-YR (CFS)	10-YR (CFS)	25-YR (CFS)	100-YR (CFS)
EX-1	1.134	8.58	2.88	5.41	7.19	10.23
EX-2	5.798	11.34	14.12	27.02	36.11	51.69

Developed Conditions Drainage Calculations						
Event	Area (AC.)	Time of Conc.	2-YR (CFS)	10-YR (CFS)	25-YR (CFS)	100-YR (CFS)
DA-1	1.89	6.0	5.44	10.42	13.94	19.99
DA-2	2.88	6.0	12.36	19.60	24.60	33.30
DA-3	2.14	6.0	8.93	14.30	18.05	24.50
POND OUT	-	-	8.00	14.72	19.26	24.90

"POI A" is located at the culvert under LCRA Road. The summary of the difference between the existing and proposed development conditions at this point can be found in the table below.

Developed Conditions vs. Existing Conditions				
Event	2-YR (CFS)	5-YR (CFS)	10-YR (CFS)	25-YR (CFS)
POI A	-6.12	-12.30	-16.85	-26.79

The natural drainage patterns are such that the stormwater runoff from this site enters the existing 4' x 4' area inlet connected to the Benbrook subdivision storm sewer system. The proposed stormwater system retains the current natural flow patterns.

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: Justin Madding, P.E., PMP

Date: 3/23/21

Signature of Customer/Agent:

Regulated Entity Name: Benbrook Plaza

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: Brushy Creek

Temporary Best Management Practices (TBMPs)

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

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

☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

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

☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

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

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

☒ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

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

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

☐ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

ATTACHMENT 2A

Spill Response Actions:

1) Contain the spill.
2) Immediately stake off area.
3) Notify Hazardous Material team (if necessary); notify TCEQ:
   (512) 339-2929 or Emergency # 1-800-832-8224
4) Take necessary steps to clean up, i.e. notify remediation contractor if large spill, or small spills will be cleaned by the construction contractor

All Site personnel will be made aware of the manufacturers' recommended methods for spill cleanup and the location of information and cleanup supplies.

Spills will be reported according to the Reportable Quantity, attached on the following page.

Materials and equipment necessary for spill cleanup will be kept onsite in an accessible location known to site personnel.

All spills will be cleaned up immediately upon discovery. Any spill of hydrocarbons or hazardous substances greater than 25 gallons will require notification to the Fire Department Hazardous Materials Team and the TCEQ. As with all spills, an effort shall be made to prevent materials from entering surface streams and storm drains by using rock or earth berms to contain the material.

1.4.16 Spill Prevention and Control

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

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

(1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.
(2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
(3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
(4) Establish a continuing education program to indoctrinate new employees.
(5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

(1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
(2) Store hazardous materials and wastes in covered containers and protect from vandalism.
(3) Place a stockpile of spill cleanup materials where it will be readily accessible.
(4) Train employees in spill prevention and cleanup.
(5) Designate responsible individuals to oversee and enforce control measures.
(6) Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean up activities.
(7) Do not bury or wash spills with water.
(8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
(9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
(10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
(11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
(12) Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

(1) Clean up leaks and spills immediately.

(2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the 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. See the waste management BMPs in this section for specific information.

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:
(5) Contain the spread of the spill.
(6) Recover spilled materials.
(7) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can 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:
(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

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.
(2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, 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.
(4) The services of a spills 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 Sheriff Office, Fire Departments, etc. More information on spill rules and appropriate responses is available on the TCEQ website at:
http://www.tnrcc.state.tx.us/enforcement/emergency_response.html

Vehicle and Equipment Maintenance

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

Vehicle and Equipment Fueling

(1) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
(2) Discourage "topping off" of fuel tanks.
(3) Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

ATTACHMENT 2B

No particular activity or process during construction 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 the unforeseeable mishap occur during construction or regular operation of the facility, the contractor shall follow the guidelines set forth in "Attachment 2A – 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 facilities.
- Materials Storage Area – solvents, adhesives, paving materials, aggregates, trash, etc.
- Construction Activities – paving, concrete pouring
- Concrete Washout Area

Potential Onsite Pollutants:

- Fertilizer
- Concrete
- Glue, adhesives
- Gasoline, diesel fuel, hydraulic fluids, antifreeze
- Sanitary toilets

Kind of spill	Where discharged	Reportable quantity
Hazardous substance	onto land	"Final RQ" in Table 302.4 in 40 CFR 302.4 (PDF)
	into water	"Final RQ" or 100 lbs, whichever is **less**
Any oil	coastal waters	as required by the Texas General Land Office
Crude oil, oil that is neither a petroleum product nor used oil	onto land	210 gallons (five barrels)
	directly into water	enough to create a sheen
Petroleum product, used oil	onto land, from an exempt PST facility	210 gallons (five barrels)
	onto land, or onto land from a non-exempt PST facility	25 gallons
	directly into water	enough to create a sheen
Associated with the exploration, development and production of oil, gas, or geothermal resources	under the jurisdiction of the Railroad Commission of Texas	as required by the Railroad Commission of Texas
Industrial solid waste or other substances	into water	100 lbs
From petroleum storage tanks, underground or aboveground	into water	enough to create a sheen on water
From petroleum storage tanks, underground or aboveground	onto land	25 gallons or equal to the RQ under 40 CFR 302
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	into water	100 lbs

ATTACHMENT 2C

SEQUENCE of MAJOR ACTIVITIES:

1) Written construction notification should be provided to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the regulated activity. Call the One Call Center at 472-2822 and the Texas Underground Facility Notification Corporation for utility locations and obtain permit for any work within the right of way. Prior to beginning construction the owner or his authorized representative shall convene a Pre-Construction Conference between the TCEQ, Williamson County, consulting engineer, contractor, and any other affected parties.

2) Install temporary erosion control measures (temporary sediment pond), stabilized construction entrance, and tree protection according to the plans and specifications prior to any clearing and grubbing, grading, excavating, etc. Notify Construction Inspection Division when installed.

3) Deliver approved rough cut sheets to Construction Inspection Division of the Department of Infrastructure (Road & Bridge) prior to clearing and grubbing.

4) Establish spoils area.

5) Rough grade streets. Install all utilities to be located under proposed pavement. No development of embankment will be permitted at this time.

6) Install all utilities to be located under the proposed pavement.

7) Deliver storm sewer cut sheets to Construction Inspection Division of the Department of Infrastructure (Road & Bridge).

8) Begin installation of storm sewer lines and channels. Upon completion, revegetate as much disturbed areas as possible, particularly channels and large open areas. Review and adjust temporary erosion control locations as necessary.

9) Deliver final grade cut sheets to the Construction Inspection Division of the Department of Infrastructure (Road & Bridge).

10) Regrade streets to subgrade. Begin grading on lots.

11) Insure that all underground utility crossings are completed. Lay first course base material on all streets.

12) Lay first course base material.

13) Lay final base course on all streets.

14) Lay asphalt.

15) Install all traffic control signing, striping, and pavement markers.

16) Complete all underground installations within the R.O.W.

17) Complete permanent erosion control and restoration of site vegetation.

18) Remove and dispose of temporary erosion controls and accumulated sediment after approval of Construction Inspection Division.

19) Complete any necessary final dress up of areas disturbed by Item 18.

Clearing and grubbing under a development permit, solely for the purpose of surveying and soil exploration, shall be a hand cutting or blade-up operation.

ATTACHMENT 2D

Temporary Best Management Practices and Measures:

Install temporary erosion control measures, stabilized construction entrance, concrete washout area, inlet protection, and tree protection according to the plans and specifications prior to any clearing and grubbing, grading, excavating, etc.

Stormwater flows crossing disturbed areas within the site will be filtered utilizing standard Best Management Practices such as rock berms and silt fences prior to leaving the site. The silt fences will be placed along upgradient areas of the site to prevent any sediment from entering storm sewers or surface streams.

A) The site does not receive any off-site stormwater runoff from the west or north. The drive aisle to the south of the site drains away from the proposed site. Existing drainage swales run along the northern and western edges of the proposed site. The site does receive stormwater runoff from the lot to the east. Silt fencing is utilized to prevent any sediment from leaving the site from stormwater generated upstream of the site.

B) The temporary BMPs proposed during construction activities will prevent pollution of surface water by filtering the increased sediment loads and other pollutant sources listed in 'Attachment 2B – Potential Sources of Contamination' by preventing stormwater with increased TSS from exiting the site without first being filtered. The primary methods of treating sediment-laden stormwater runoff are through silt control fencing, inlet protection, a concrete washout area, and stabilized construction entrances. These temporary BMPs will be placed per the erosion and sedimentation control plan

C) The proposed project seeks to honor the natural drainage patterns that currently exist in the proposed project area. There are no known sensitive geologic features on the site. After construction is completed, the site will maintain its current drainage patterns with the stormwater runoff draining towards the existing culvert under LCRA road.

ATTACHMENT 2F

Structural Practices:

The following temporary BMP structural practices will be employed on the site:

1) Silt Fence – used as barrier protection around the downslope perimeter of the project. The fence retains sediment primarily by retarding flow and promoting deposition on the uphill side of the slope. Runoff is filtered as it passes through the geotextile fabric.
2) Inlet Protection – used to prevent sediment from entering the storm drain system.
3) Concrete Washout Area – used to prevent or reduce the discharge of pollutants to stormwater from concrete waste. The concrete washout area is a designated area to wash out wastes into the temporary pit where the concrete can set, be broken up, and the disposed of properly.
4) Stabilized Construction Entrance – used to provide a stable entrance/exit condition from the construction site and keep mud and sediment off public roads. The stabilized construction entrance is a stabilized pad of crushed stone and should be located at any point traffic will be entering or leaving the construction site from a public right-of-way.
5) Contractor Staging Area – used as an area for the contractor to store and prepare equipment and materials before using them during the construction phase

ATTACHMENT 2G

Drainage Area Map:

An overall drainage area map is included within the Site Plans provided with this application.

ATTACHMENT 2H

Temporary Sediment Pond Plans and Calculations:

There are no temporary sediment ponds or basins proposed as a temporary BMP for stormwater management on this project.

This section is not applicable to this project.

ATTACHMENT 2I

Inspection and Maintenance for Best Management Practices:

The inspection and maintenance of temporary BMP's 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 SWP3.

Inspection Schedule and Procedures - Inspections must comply with the following:

A) An inspection shall occur weekly and after any rain event. This inspection should include an inspection of the temporary concrete washout area.
B) The authorized party shall inspect all disturbed areas of the site, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site.
C) 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 whether any signs or erosion or sediment are associated with the discharge location. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.
D) 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 with 7 calendar days following the inspection.
E) An inspection report that summarizes the scope of the inspection, name(s) and qualifications of personnel conducting the inspection, the dates of the inspection, major observations relating to the implementation of the SWP3. 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 SWP3. 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 SWP3 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 assure facilities 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, berm/swales 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. Reseed areas where grass is not well established.
E) Spills are to be handled as specified by the manufacturer of the product in a timely safe manner by 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) 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.
I) If inspections or other information sources reveal a control has been used incorrectly, or that a control is performing inadequately, the contractor must replace, correct or modify the control as soon as practical after discovery of the deficiency.

Silt Fence – Inspection and maintenance guidelines for silt fences are as follows:

A) Inspect all fencing weekly, and after any rainfall.
B) Remove sediment when buildup reaches 6 inches.
C) Replace any torn fabric or install a second line of fencing parallel to the torn section.
D) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
E) When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

Inlet Protection – Inspection and maintenance guidelines for inlet protection is as follows:

A) Inspection should be made weekly and after each rainfall. Repair or replacement should be made promptly as needed by the contractor.
B) Remove sediment when buildup reaches a depth of 3 inches. Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.

C) Check placement of device to prevent gaps between device and curb.
D) Inspect filter fabric and patch or replace if torn or missing.
E) Structures should be removed, and the area stabilized only after the remaining drainage area has been properly stabilized.

Stabilized Construction Entrance

A) The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.
B) All sediments spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
C) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public rights-of-way.
D) When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
E) All sediment should be prevented from entering any storm drain, ditch, or water course by using approved methods.

Concrete Washout Area

A) Concrete washout areas should be located at least 50 feet from sensitive features, storm drains, open ditches, or water bodies.
B) Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
C) Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.
D) When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials sued to construct temporary concrete washout facilities should be removed from the site of the work and disposed of. Holes, depressions, or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

ATTACHMENT 2J

Schedule of Interim and Permanent Soil Stabilization Practices:

Soil Stabilization for all disturbed areas shall be accomplished by hydraulic planting. Following is an outline to accomplish the required stabilization.

1. Preparing Seed Bed. After the designated areas have been rough graded to the lines, grades and typical sections indicated in the Drawings or as provided for in other items of this contract and for any other soil area disturbed by the construction, a suitable seedbed shall be prepared. The seedbed shall consist of a minimum of either 4 inches (100 millimeters) of approved topsoil or 4 inches (100 millimeters) of approved salvaged topsoil, cultivated and rolled sufficiently to enhance the soil to a state of good health, when the soil particles on the surface are small enough and lie closely enough together to prevent the seed from being covered too deeply for optimum germination. The optimum depth for seeding shall be 1/4 inch (6 millimeters). Water shall be gently applied as required to prepare the seedbed prior to the planting operation either by broadcast seeding or hydraulic planting. Bare soils should be seeded or otherwise stabilized within 14 calendar days after final grading or where construction activity has temporarily ceased for more than 21 days. Seeding shall be performed in accordance with the requirements hereinafter described.

2. Watering. All watering shall comply with Chisholm Trail Subdivision Rules and Regulations. Broadcast seeded areas shall immediately be watered with a minimum of 5 gallons of water per square yard (22.5 liters of water per square meter) or as needed and in the manner and quantity as directed by the Engineer or designated representative. Hydraulic seeded areas and native grass seeded areas shall be watered commencing after the tackifier has dried with a minimum of 5 gallons of water per square yard (22.5 liters of water per square meter) or as needed to keep the seedbed in a wet condition favorable for the growth of grass.

Watering applications shall constantly maintain the seedbed in a wet condition favorable for the growth of grass. Watering shall continue until the grass is uniformly 1 1/2 inches (40 mm) in height and accepted by the Engineer or designated representative. Watering can be postponed immediately after a 1/2 inch (12.5 mm) or greater rainfall on the site but shall be resumed before the soil dries out.

3. Hydraulic Planting. The seedbed shall be prepared as specified above and hydraulic planting equipment, which is capable of placing all materials in a single operation, shall be used.

March 1 to September 15

Hydraulic planting mixture and minimum rate of application pounds per 1000 square feet (kilograms per 100 square meters):

Planting Mixture			
Hulled Bermuda Seed (PLS=0.83)	Fiber Mulch		Soil Tackifier
	Cellulose	Wood	
1 Lbs/1000 ft2 (0.5 kgs/100 m2))	45.9 Lbs/1000 ft2 (22.5 kgs/100 m2))		1.4 Lbs/1000 ft2 (0.7 kgs/100 m2))
		57.4 Lbs/1000 ft2 (28.01 kgs/100 m2))	1.5 Lbs/1000 ft2 (0.75 kgs/100 m2))

September 15 to March 1

Add 1.5 pounds per 1000 square feet (0.75 kilograms per 100 square meters) of cool season cover crop (see Table 1) to above mixture. The fertilizer shall conform to City of Austin Standard Specification Item No. 606S, "Fertilizer".

Table 1: Cool Season Cover Crop

Common Name	Botanical Name	Application rates	
		Lbs/1000 feet ^{2}	kg/ 100 meter^2
Wheat	Triticum aestivum	0.5	0.25
Oats	Avena sativa	0.5	0.25
Cereal Rye Grain	Secale cereale	0.5	0.25
Total Cool Season Cover Crop Seeding Rate		1.5	0.75
Total Cool Season Seeding Rate (Grass, Wildflowers, & Cover Crop)		4.5	2.25

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 including silt fences, material storage areas, sanitary toilets, etc.) will also be removed and any areas disturbed during removal will be seeded immediately.

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Benbrook Plaza
Regulated Entity Location: Williamson County
Name of Customer: Zeta, LLC
Contact Person: Hari Pullakhandam Phone: 508.353.6929
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	*Size*	*Fee Due*
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	5.05 Acres	$ 5,000.00
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: 3/23/21

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

I Hari Pullakhandam,
Print Name

Owner,
Title - Owner/President/Other

of Zeta, LLC.,
Corporation/Partnership/Entity Name

have authorized Justin Madding, P.E., PMP
Print Name of Agent/Engineer

of LJA Engineering, 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:

P. Harikrishnan
Applicant's Signature

04/05/2021
Date

THE STATE OF TX §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Hari Krishnan Pullaichandaram 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 5 day of April, 2021.

NOTARY PUBLIC

Diego Soto
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 6-19-22

DIEGO SOTO
Notary Public, State of Texas
My Comm. Exp. 06-19-2022
ID No. 12926918-3

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

☐ Other

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

SECTION II: Customer Information

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

☐ 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:*

Zeta, 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)*

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☒ Limited

Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees

☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?

☐ Yes ☒ No

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

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

15. Mailing Address:	PO Box 158							
		City	Round Rock	State	TX	ZIP	78680	ZIP + 4

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

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

(508) 353-6929		( ) -

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.)*

Benbrook Plaza

23. Street Address of the Regulated Entity: *(No PO Boxes)*	CR 278 N. Bagdad Rd.							
	City	Leander	**State**	TX	**ZIP**	78641	**ZIP + 4**	
24. County	Williamson							

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

25. Description to Physical Location:	East of Middle Brook Drive and North of N. Bagdad Rd (CR 278)

26. Nearest City	**State**	**Nearest ZIP Code**
Leander	TX	78641

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:	30.585171		**28. Longitude (W) In Decimal:**	-97.876204	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	35	6.62	-97	52	34.33

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)

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

Land Development

34. Mailing Address:	**PO Box 158**							
	City	Round Rock	**State**	TX	**ZIP**	78680	**ZIP + 4**	
35. E-Mail Address:	Hari@RoverResources.com							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(508) 353-6929		( ) -

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:

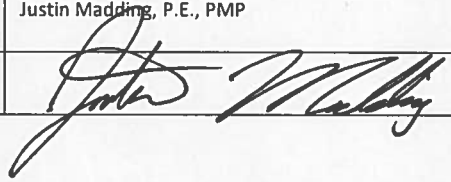
SECTION IV: Preparer Information

40. Name:	Justin Madding, P.E., PMP	41. Title:	Project Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 507-1732	6010	( ) -	jmadding@lja.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:	LJA Engineering	Job Title:	Project Engineer
Name *(In Print)*:	Justin Madding, P.E., PMP	Phone:	(512) 507- 1732
Signature:		Date:	1/31/25