Contributing Zone Plan (CZP)

Butler Farms Phase 13

WILLIAMSON COUNTY, TEXAS

October 23, 2024
HR Green Project No: 2402842

Prepared For:
366 TX 29, LTD.
2121 Midway Rd., Ste. 240
Carrollton, Texas 75006

Prepared By:
HR Green Development TX, LLC
5508 Highway 290 West, Suite 150
Austin, Texas 78735
TBPE Firm No. F-16384

10/23/2024

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Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.
3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or if not withdrawn the application will be denied and 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 to you:

- You can withdraw your application, and your fees will be refunded or credited for a resubmittal.
- 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 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 effected 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: Butler Farms Phase 13							**2. Regulated Entity No.:**		
3. Customer Name: 366 TX 29 LTD							**4. Customer No.:** 605772136		
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):**		19.94 (LOC = 19.74)	
9. Application Fee:	$4,000		**10. Permanent BMP(s):**			Wet Basins			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			South Fork San Gabriel River			

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 ___Leander X 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. Christine Campbell
Print Name of Customer/Authorized Agent Christine Campbell 10/23/2024
Signature of Customer/Authorized Agent Date

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

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.

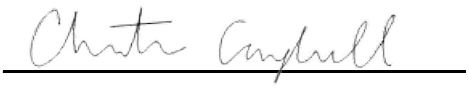
Signature

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: Christine Campbell

Date: 10/23/2024

Signature of Customer/Agent:



Regulated Entity Name: Butler Farms Phase 13

Project Information

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

   Contact Person: Wyatt Henderson
   Entity: 366 TX 29 LTD
   Mailing Address: 2121 Midway Rd., Ste. 240
   City, State: Carrollton, TX Zip: 75006
   Telephone: (972) 715-6450 Fax: _____
   Email Address: whenderson@madev.com

5. Agent/Representative (If any):

Contact Person: Christine Campbell
Entity: HR Green Development TX, LLC
Mailing Address: 5508 Highway 290 West, Suite 150
City, State: Austin, TX Zip: 78735
Telephone: (512) 872-6696 Fax: _____
Email Address: christine.campbell@hrgreen.com

6. Project Location:

☒ The project site is located inside the city limits of Liberty Hill.
☐ 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.

The project is located off W State Hwy 29 and NW of CR 277. Phase 13 is situated N of Phase 5 and SW of Phase 12. Butler Farms Blvd. borders the eastern portion of the site and Altamure Rd. runs along the northern boundary. The site is included in Parcel ID #R021816

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: 106
☐ Residential: # of Living Unit Equivalents: _____
☐ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): 19.94 Acres

    Total disturbed area: 19.74 Acres

14. Estimated projected population: 106 units * 3.5 people/unit = 371 people

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	315,600	÷ 43,560 =	7.25
Parking	0	÷ 43,560 =	0
Other paved surfaces	121,362	÷ 43,560 =	2.78
Total Impervious Cover	436,894	÷ 43,560 =	10.03

Total Impervious Cover 10.03 **÷ Total Acreage** 19.94 **X 100 =** 50.3**% 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 Liberty Hill Wastewater (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			

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
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" = 50'.

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 Panel No. 48491C0230F (December 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.

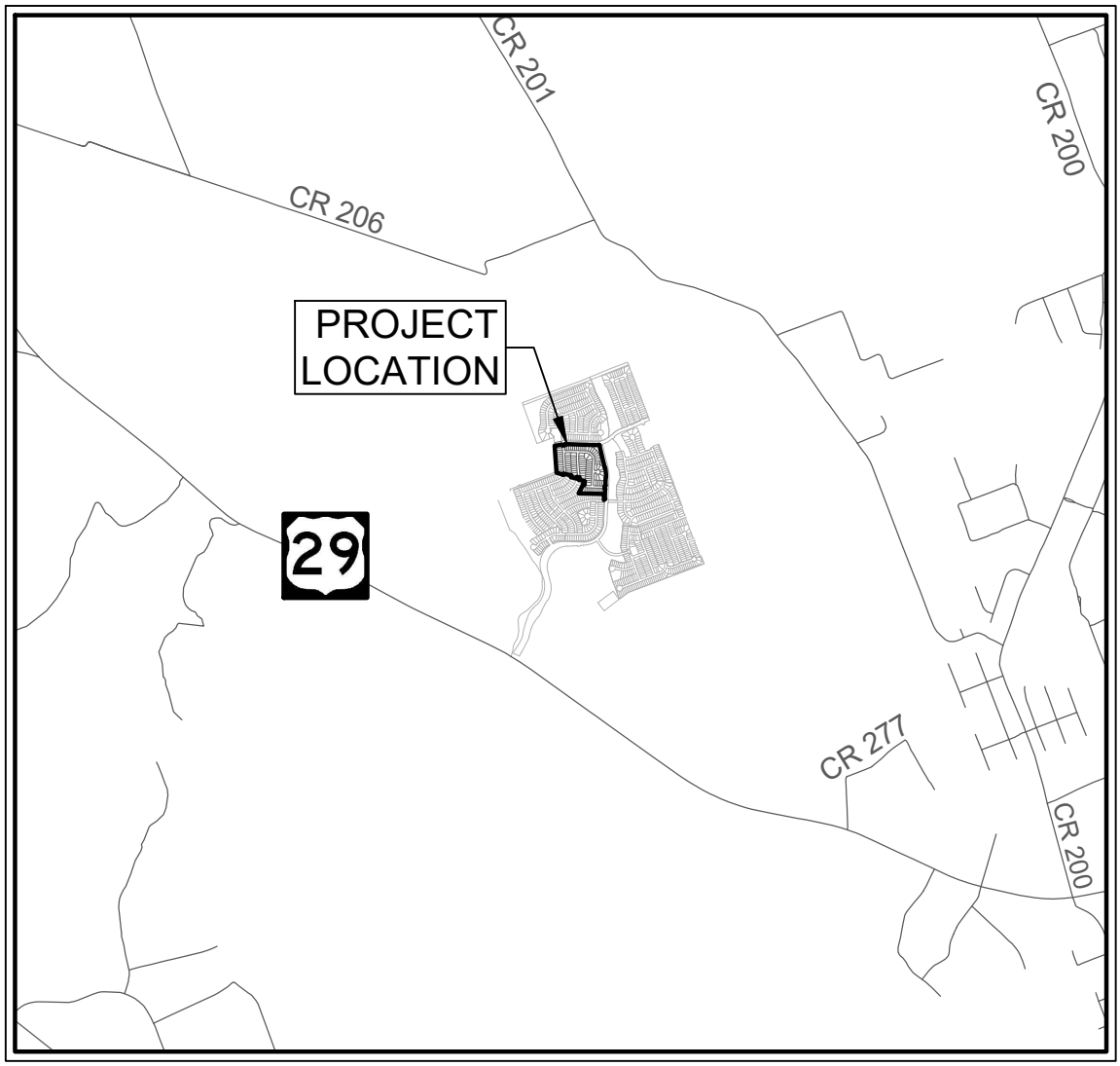
Administrative Information

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.



VICINITY MAP

SCALE: 1"=4000'

N

HRGreen.
DEVELOPMENT TX

5508 HIGHWAY 290 W
SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
HRGreen.com

TBPE NO: 16384
TBPLS NO: 10194101

BUTLER FARMS

PHASE 13

LOCATION MAP

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

LIBERTY HILL QUADRANGLE
TEXAS
7.5-MINUTE SERIES

SUBJECT SITE

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, August 2016 - November 2016
Roads..... U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 2008 - 2021
Hydrography.....National Hydrography Dataset, 2002 - 2020
Contours.....National Elevation Dataset, 2019
Boundaries.....Multiple sources; see metadata file 2019 - 2021

Wetlands.....FWS National Wetlands Inventory Not Available

MN
GN
3°50′
68 MILS
0°33′
10 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
NV PV
NU PU
Grid Zone Designation 14R

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

TEXAS
QUADRANGLE LOCATION

1 2 3
4 5
6 7 8
ADJOINING QUADRANGLES

1 Joppa
2 Mahomet
3 Florence
4 Bertram
5 Leander NE
6 Travis Peak
7 Nameless
8 Leander

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

LIBERTY HILL, TX
2022

NSN, 7643016397012
NGA REF NO. USGSX24K25631

ATTACHMENT C – PROJECT NARRATIVE

Butler Farms Phase 13 is a proposed development consisting of 106 single-family residential lots, associated with necessary right-of-way, drainage, and utilities infrastructure. It is in the Liberty Hill full purpose jurisdiction within Williamson County. The site resides in the Edwards Aquifer Contributing Zone and the South Fork San Gabriel watershed. The overall project site encompasses a 19.94-acre tract of land located off W SH 29 and NW of CR 277. Phase 13 is situated north of Phase 5 and southwest of Phase 12. Butler Farms Blvd. borders the Eastern portion of the site, and Altamure Rd. spans along the Northern boundary. The site is included in Parcel ID # R021816. There will be roughly 19.74 acres of disturbed land.

The project site is undeveloped wooded land with grass. The high point on the site is approximately 1,117ft. in the northwest corner with a low point at around 1,095 ft. in the southeast corner. Runoff generally flows northwest to southeast before reaching the existing water quality and detention ponds in Butler Farms Phase 1. No part of the project site is located within the boundaries of a 100-year floodplain as defined by FEMA FIRM Panel No. 48491C0230F, dated December 20, 2019.

The proposed development results in an impervious cover of 50.3% and will have the associated runoff treated by two existing wet basins, Pond A and Pond B (approved in the Butler Farms Phase 1 Main Infrastructure CZP application EAPP No. 11001488 and then modified in EAPP No. 11002006 and EAPP No. 11002294). Of the 19.94 acres of the proposed Butler Farms Phase 13 property, there is approximately 10.03 acres of impervious cover. Based on the 80% TSS removal requirement by TCEQ, we need to provide 8,730 lbs. of TSS removal for the proposed development. As shown in the calculations, the existing, approved wet basins satisfy the TSS removal requirement. The interim condition includes all previously approved phases of Butler Farms and is the expected condition once Butler Farms Phase 13 construction is complete. The fully developed condition is the projected condition once the entire Butler Farms development is complete. This includes future Butler Farms phases (after Phase 13) and the associated impervious cover. The water quality ponds are sized to treat the interim conditions, as well as the projected fully developed conditions, and the offsite flow. The existing Pond A was sized to remove the required 27,602 lbs. of TSS in the interim and the required 27,652 lbs. of TSS in the fully developed condition. Pond A will receive 86.51 acres of onsite flow and 135.95 acres of offsite flow and provide 29,750 lbs. of TSS removal in the interim condition. Pond A will receive 86.51 acres of onsite flow and 135.95 acres of offsite flow and provide 29,750 lbs. of TSS removal in the fully developed condition. The existing Pond B was sized to remove the required 73,829 lbs. of TSS in the interim and the required 77,850 lbs. of TSS in the fully developed condition. Pond B will receive 190.16 acres of onsite flow and 49.11 acres of offsite flow and provide 78,443 lbs. of TSS removal in the interim condition. Pond B will receive 190.16 acres of onsite flow and 51.14 acres of offsite flow and provide 83,000 lbs. of TSS removal in the fully developed condition.

ATTACHMENT D – FACTORS AFFECTING SURFACE WATER QUALITY

Potential sources of pollution that may be expected to affect the quality of the storm water discharges from the construction site include the following:

- Soil erosion due to the clearing of the site for roads and buildings and drainage structures.
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings.
- Hydrocarbons from asphalt paving operations.
- Miscellaneous trash and litter from construction.

Potential sources of pollution that may be expected to affect the quality of the storm water discharges from the site after construction is completed include the following:

- Oil, grease, fuel and hydraulic fluid contamination from vehicle drippings.
- Dirt and dust from vehicles.
- Trash and litter.

ATTACHMENT E – VOLUME AND CHARACTER OF STORMWATER

This project site naturally flows northwest to southeast. The runoff will be captured by proposed curb inlets along the roadways then conveyed via storm sewers to the existing water quality ponds. The pre-construction runoff

coefficient for the Phase 13 site limits is 0.02 (0% impervious cover) and the post construction runoff coefficient is 0.36 (50.3% impervious cover). Detailed existing and proposed flow data for the points of interest are provided on the drainage plan as part of the construction documents submitted with this application.

ATTACHMENT J – BMPS FOR UPGRADIENT STORMWATER

There is roughly 187.09 acres of offsite flow that will be captured in the overall Butler Farms proposed storm infrastructure in the fully developed condition. The existing wet basins have been sized to account for the flow.

ATTACHMENT K – BMPS FOR ON-SITE STORMWATER

The runoff originating from the impervious cover on the site will be captured by a series of curb inlets running parallel along all streets. This flow discharges directly into the pond. Refer to the attached, approved Butler Farms Phase 1 Construction Plans for Water Quality sediment treatment details.

ATTACHMENT L – BMPS FOR SURFACE STREAMS

There are no surface waters on our property. However, there is a natural 4’ wide jurisdictional waters and 0.03-acre herbaceous wetlands on the overall Butler Farms property located along the downstream of the Butler Farms Phase 1 spine infrastructure. No construction proposed in Butler Farms Phase 13 will impact the jurisdictional waters.

ATTACHMENT M – CONSTRUCTION PLANS

Construction plans are attached.

ATTACHMENT P – MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

There are no surface streams along the site. However, the site conveys stormwater through two water quality ponds before discharging to Brushy Creek.

Attachment N – Inspection, Maintenance, Repair, and Retrofit Plan

Wet Basin

A clear requirement for wet basins is that a firm commitment be made to carry out both routine and non-routine maintenance tasks.

- *Routine Maintenance*
  - *Mowing.* The side-slopes, embankment, and emergency spillway of the basin should be mowed at least twice a year to prevent woody growth and control weeds.
  - *Inspections.* Wet basins should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the basin is functioning properly. There are many functions and characteristics of these BMPs that should be inspected. The embankment should be checked for subsidence, erosion, leakage, cracking, and tree growth. The condition of the emergency spillway should be checked. The inlet, barrel, and outlet should be inspected for clogging. The adequacy of upstream and downstream channel erosion protection measures should be checked. Stability of the side slopes should be checked. Modifications to the basin structure and contributing watershed should be evaluated. During semi-annual inspections, replace any dead or displaced vegetation. Replanting of various species of wetland vegetation may be required at first, until a viable mix of species is established. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage. The inspections should be carried out with as-built pond plans in hand.
  - *Debris and Litter Removal.* As part of periodic mowing operations and inspections, debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the riser, and the outlet should be checked for possible clogging.
  - *Erosion Control.* The basin side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion. Corrective measures such as regrading and revegetation may be necessary. Similarly, the riprap protecting the channel near the outlet may need to be repaired or replaced.
  - *Nuisance Control.* Most public agencies surveyed indicate that control of insects, weeds, odors, and algae may be needed in some ponds. Nuisance control is probably the most frequent maintenance item demanded by local residents. If the ponds are properly sized and vegetated, these problems should be rare in wet ponds except under extremely dry weather conditions. Twice a year, the facility should be evaluated in terms of nuisance

control (insects, weeds, odors, algae, etc.). Biological control of algae and mosquitoes using fish such as fathead minnows is preferable to chemical applications.

- *Non-Routine Maintenance*
  - *Structural Repairs and Replacement.* Eventually, the various inlet/outlet and riser works in the wet basin will deteriorate and must be replaced. Some public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, while concrete barrels and risers may last from 50 to 75 yr. The actual life depends on the type of soil, pH of runoff, and other factors. Polyvinyl chloride (PVC) pipe is a corrosion resistant alternative to metal and concrete pipes. Local experience typically determines which materials are best suited to the site conditions. Leakage or seepage of water through the embankment can be avoided if the embankment has been constructed of impermeable material, has been compacted, and if anti-seep collars are used around the barrel. Correction of any of these design flaws is difficult.
  - *Sediment Removal.* Wet ponds will eventually accumulate enough sediment to significantly reduce storage capacity of the permanent pool. As might be expected, the accumulated sediment can reduce both the appearance and pollutant removal performance of the pond. Sediment accumulated in the sediment forebay area should be removed from the facility every two years to prevent accumulation in the permanent pool. Dredging of the permanent pool should occur at least every 20 years, or when accumulation of sediment impairs functioning of the outlet structure.
  - *Harvesting.* If vegetation is present on the fringes or in the pond, it can be periodically harvested and the clippings removed to provide export of nutrients and to prevent the basin from filling with decaying organic matter.

<u>Batch Detention Pond</u>

(1) 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.

(2) 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.

(3) 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.

(4) 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.

(5) 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.).

(6) 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.

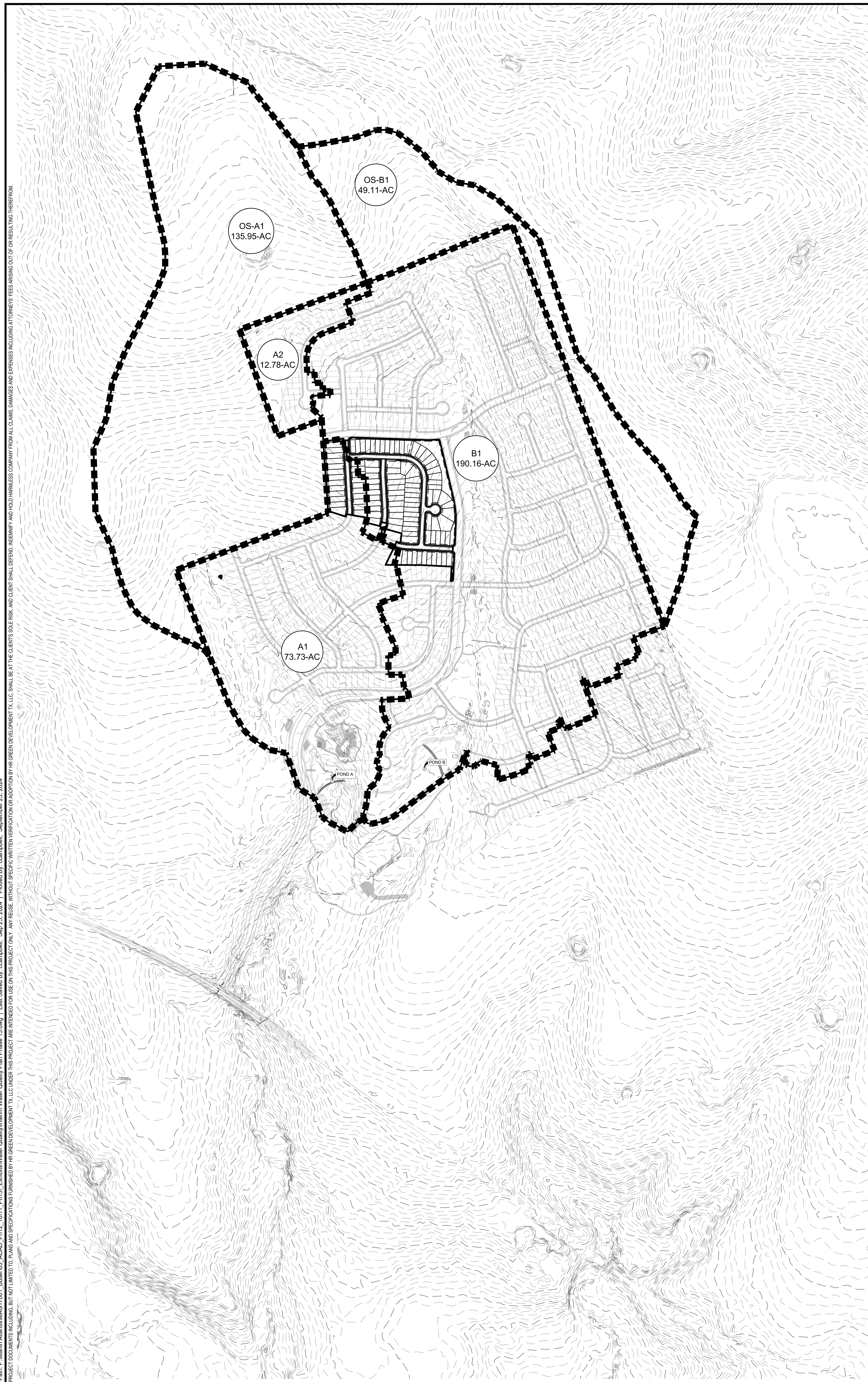
(7) A properly designed batch detention basin will accumulate quantities of sediment over time. The accumulated sediment can detract from the appearance of the facility and reduce the pollutant removal performance of the facility. The sediment also tends to accumulate near the outlet structure and can 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.

(8) 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.

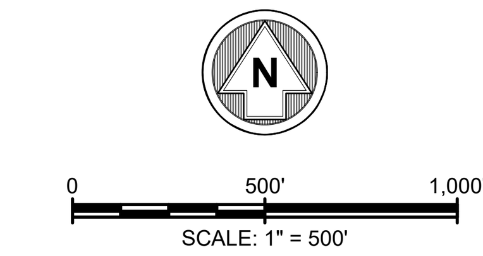
An amended copy of this document will be provided to the TCEQ within thirty days of any changes in the following information.

Responsible Party for Maintenance:	366 TX 29, LTD
Address:	15443 Knoll Trail Drive, Suite 130
City, State, Zip:	Dallas, TX 75248
Telephone Number:	(971)715-6440

Signature of Responsible Party  6-29-2020



BUTLER FARMS PHASE 13 PROJECT ONLY



Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler Farms Phase 13
Date Prepared: 9/24/2024

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-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

Page 3-29 Equation 3.3: L_M = 27.2(AN x 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 * =	19.94	acres
Predevelopment impervious area within the limits of the plan * =	-	acres
Total post-development impervious area within the limits of the plan* =	10.03	acres
Total post-development impervious cover fraction * =	0.50	
P =	32.00	inches
$L_{M\ TOTAL\ PROJECT}$ =	8,730	lbs.

WET BASIN A

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler Farms Phase 13
Date Prepared: 9/24/2024

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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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 * =	371.22	acres
Predevelopment impervious area within the limits of the plan * =	-	acres
Total post-development impervious area within the limits of the plan* =	135.65	acres
Total post-development impervious cover fraction * =	0.37	
P =	32.00	inches
$L_{M\ TOTAL\ PROJECT}$ =	118,067.86	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 2

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

Drainage Basin/Outfall Area No. =	A1 & A2	
Total drainage basin/outfall area =	86.51	acres
Predevelopment impervious area within drainage basin/outfall area =	-	acres
Post-development impervious area within drainage basin/outfall area =	31.71	acres
Post-development impervious fraction within drainage basin/outfall area =	0.37	
$L_{M\ THIS\ BASIN}$ =	27,602.33	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	Wet Basin	
Removal efficiency =	93.00	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (AI x 34.6 + AP x 0.54)

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

A_C =	86.51	acres
A_I =	31.71	acres
A_P =	54.80	acres
L_R =	33,534.59	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	29,750.00	lbs.
F =	0.89	

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

Rainfall Depth =	1.60	inches
Post Development Runoff Coefficient =	0.29	
On-site Water Quality Volume =	146,157.33	cubic feet

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

Off-site area draining to BMP =	135.95	acres
Off-site Impervious cover draining to BMP =	-	acres
Impervious fraction of off-site area =	-	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	15,791.95	cubic feet
Storage for Sediment =	32,389.86	
Total Capture Volume (required water quality volume(s) x 1.20) =	194,339.14	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.

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool =	194,339.14	cubic feet	**Permanent Pool Capacity is 1.20 times the WQV**
Required capacity at WQV Elevation =	356,288.42	cubic feet	**Total Capacity should be the Permanent Pool Capacity plus a second WQV.**

WET BASIN B

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler Farms Phase 13
Date Prepared: 9/24/2024

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

Page 3-29 Equation 3.3: L_M = 27.2(AN x 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 * =	371.22	acres
Predevelopment impervious area within the limits of the plan * =	-	acres
Total post-development impervious area within the limits of the plan* =	135.65	acres
Total post-development impervious cover fraction * =	0.37	
P =	32.00	inches
$L_{M\ TOTAL\ PROJECT}$ =	118,067.86	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 2

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

Drainage Basin/Outfall Area No. =	B1	
Total drainage basin/outfall area =	190.16	acres
Predevelopment impervious area within drainage basin/outfall area =	-	acres
Post-development impervious area within drainage basin/outfall area =	84.82	acres
Post-development impervious fraction within drainage basin/outfall area =	0.45	
$L_{M\ THIS\ BASIN}$ =	73,828.64	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	Wet Basin	
Removal efficiency =	93.00	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (AI x 34.6 + AP x 0.54)

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

A_C =	190.16	acres
A_I =	84.82	acres
A_P =	105.34	acres
L_R =	89,033.20	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	78,442.94	lbs.
F =	0.88	

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

Rainfall Depth =	1.50	inches
Post Development Runoff Coefficient =	0.33	
On-site Water Quality Volume =	341,000.00	cubic feet

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

Off-site area draining to BMP =	49.11	acres
Off-site Impervious cover draining to BMP =	-	acres
Impervious fraction of off-site area =	-	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	5,348.08	cubic feet
Storage for Sediment =	69,269.62	
Total Capture Volume (required water quality volume(s) x 1.20) =	415,617.69	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.

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool =	415,617.69	cubic feet	**Permanent Pool Capacity is 1.20 times the WQV**
Required capacity at WQV Elevation =	761,965.77	cubic feet	**Total Capacity should be the Permanent Pool Capacity plus a second WQV.**

NO.	REVISION	BY	DATE

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

HRGreen® DEVELOPMENT TX
5508 HIGHWAY 290 W
SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
HRGreen.com
TBPE NO: 16384
TBPLS NO: 10194101

STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/25/2024

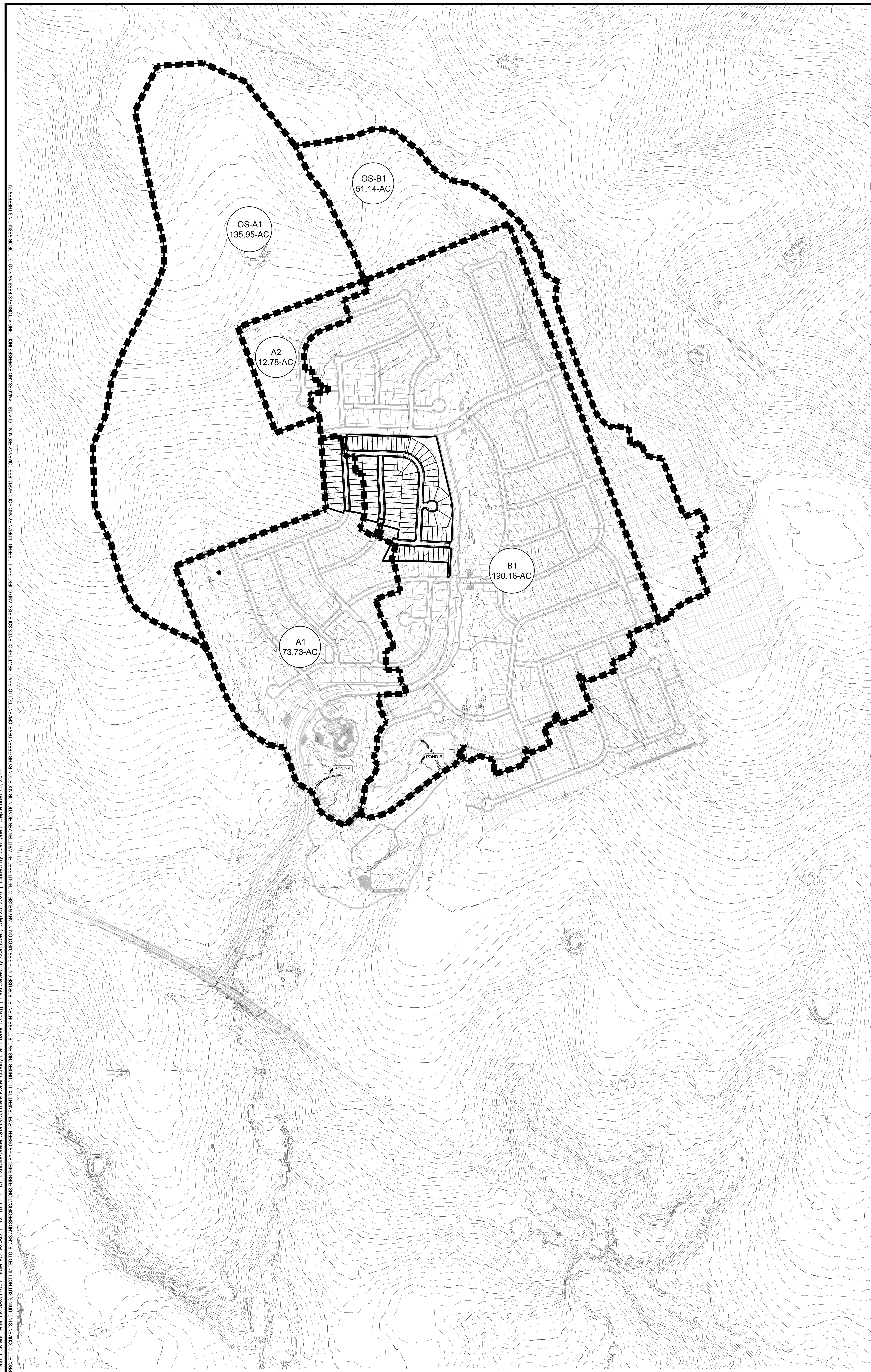
INTERIM WATER QUALITY DRAINAGE AREA MAP

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET WQ-I
##-###CON



N

0 500' 1,000'
SCALE: 1" = 500'

BUTLER FARMS PHASE 13 PROJECT ONLY

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler Farms Phase 13
Date Prepared: 9/24/2024

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

Page 3-29 Equation 3.3: L_M = 27.2(AN x 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 * =	19.94	acres
Predevelopment impervious area within the limits of the plan * =	-	acres
Total post-development impervious area within the limits of the plan* =	10.03	acres
Total post-development impervious cover fraction * =	0.50	
P =	32.00	inches
$L_{M\ TOTAL\ PROJECT}$ =	8,730	lbs.

WET BASIN A

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler (Ultimate Development)
Date Prepared: 9/24/2024

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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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 * =	366.46	acres
Predevelopment impervious area within the limits of the plan * =	-	acres
Total post-development impervious area within the limits of the plan* =	140.63	acres
Total post-development impervious cover fraction * =	0.38	
P =	32.00	inches
$L_{M\ TOTAL\ PROJECT}$ =	122,405.02	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 3

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

Drainage Basin/Outfall Area No. =	A1 & A2	
Total drainage basin/outfall area =	86.51	acres
Predevelopment impervious area within drainage basin/outfall area =	-	acres
Post-development impervious area within drainage basin/outfall area =	31.77	acres
Post-development impervious fraction within drainage basin/outfall area =	0.37	
$L_{M\ THIS\ BASIN}$ =	27,652.34	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	Wet Basin	
Removal efficiency =	93.00	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (AI x 34.6 + AP x 0.54)

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

A_C =	86.51	acres
A_I =	31.77	acres
A_P =	54.74	acres
L_R =	33,592.82	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	29,750.00	lbs.
F =	0.89	

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

Rainfall Depth =	1.60	inches
Post Development Runoff Coefficient =	0.29	
On-site Water Quality Volume =	146,317.17	cubic feet

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

Off-site area draining to BMP =	135.95	acres
Off-site Impervious cover draining to BMP =	-	acres
Impervious fraction of off-site area =	-	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	15,792.12	cubic feet
Storage for Sediment =	32,421.86	
Total Capture Volume (required water quality volume(s) x 1.20) =	194,531.16	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.

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool =	194,531.16	cubic feet	Permanent Pool Capacity is 1.20 times the WQV
Required capacity at WQV Elevation =	356,640.45	cubic feet	Total Capacity should be the Permanent Pool Capacity plus a second WQV.

WET BASIN B

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler (Ultimate Development)
Date Prepared: 9/24/2024

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: L_M = 27.2(AN x 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 * =	366.46	acres
Predevelopment impervious area within the limits of the plan * =	-	acres
Total post-development impervious area within the limits of the plan* =	140.63	acres
Total post-development impervious cover fraction * =	0.38	
P =	32.00	inches
$L_{M\ TOTAL\ PROJECT}$ =	122,405.02	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 3

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

Drainage Basin/Outfall Area No. =	B1	
Total drainage basin/outfall area =	190.16	acres
Predevelopment impervious area within drainage basin/outfall area =	-	acres
Post-development impervious area within drainage basin/outfall area =	89.44	acres
Post-development impervious fraction within drainage basin/outfall area =	0.47	
$L_{M\ THIS\ BASIN}$ =	77,850.17	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	Wet Basin	
Removal efficiency =	93.00	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (AI x 34.6 + AP x 0.54)

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

A_C =	190.16	acres
A_I =	89.44	acres
A_P =	100.72	acres
L_R =	93,716.47	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	83,000.00	lbs.
F =	0.89	

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

Rainfall Depth =	1.60	inches
Post Development Runoff Coefficient =	0.34	
On-site Water Quality Volume =	377,372.79	cubic feet

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

Off-site area draining to BMP =	51.14	acres
Off-site Impervious cover draining to BMP =	7.24	acres
Impervious fraction of off-site area =	0.14	
Off-site Runoff Coefficient =	0.16	
Off-site Water Quality Volume =	47,398.88	cubic feet
Storage for Sediment =	84,954.33	
Total Capture Volume (required water quality volume(s) x 1.20) =	509,726.00	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.

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool =	509,726.00	cubic feet	Permanent Pool Capacity is 1.20 times the WQV
Required capacity at WQV Elevation =	934,497.67	cubic feet	Total Capacity should be the Permanent Pool Capacity plus a second WQV.

NO.	REVISION	BY	DATE

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

5508 HIGHWAY 290 W
SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
HRGreen.com
TBPE NO: 16384
TBPLS NO: 10194101

HRGreen® DEVELOPMENT TX

STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/25/2024

ULTIMATE WATER QUALITY DRAINAGE AREA MAP

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET WQ-U

##-###CON

N

0 80' 160'

SCALE: 1" = 80'

LEGEND

- 834 EXISTING MINOR CONTOUR
- 835 EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- FLOODPLAIN
- CREEK CENTERLINE
- BERM — BERM
- FLOW DIRECTION
- PROPOSED WALL
- FIRE HYDRANT
- WATER VALVE
- SD STORM SEWER MAHNOLE
- WW WASTEWATER MANHOLE
- CURB INLET

BW - BOTTOM OF WALL
EG - EXISTING GRADE
FFE - FINISHED FLOOR ELEVATION
G - PROPOSED GRADE (GROUND)
HP - HIGH POINT
SW - SIDEWALK
TC - TOP OF CURB
TW - TOP OF WALL
FS - FINISHED SURFACE

NO.	REVISION	BY	DATE

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

LAND DEV CONSULTING, LLC
550B HIGHWAY 290 WEST, SUITE 150
AUSTIN, TX 78735
OFFICE: 512.872.6696
FIRM NO. 16384

STATE OF TEXAS
SHERVIN NOOSHIN
96807
LICENSED
PROFESSIONAL ENGINEER

09/16/2020

POND OVERALL

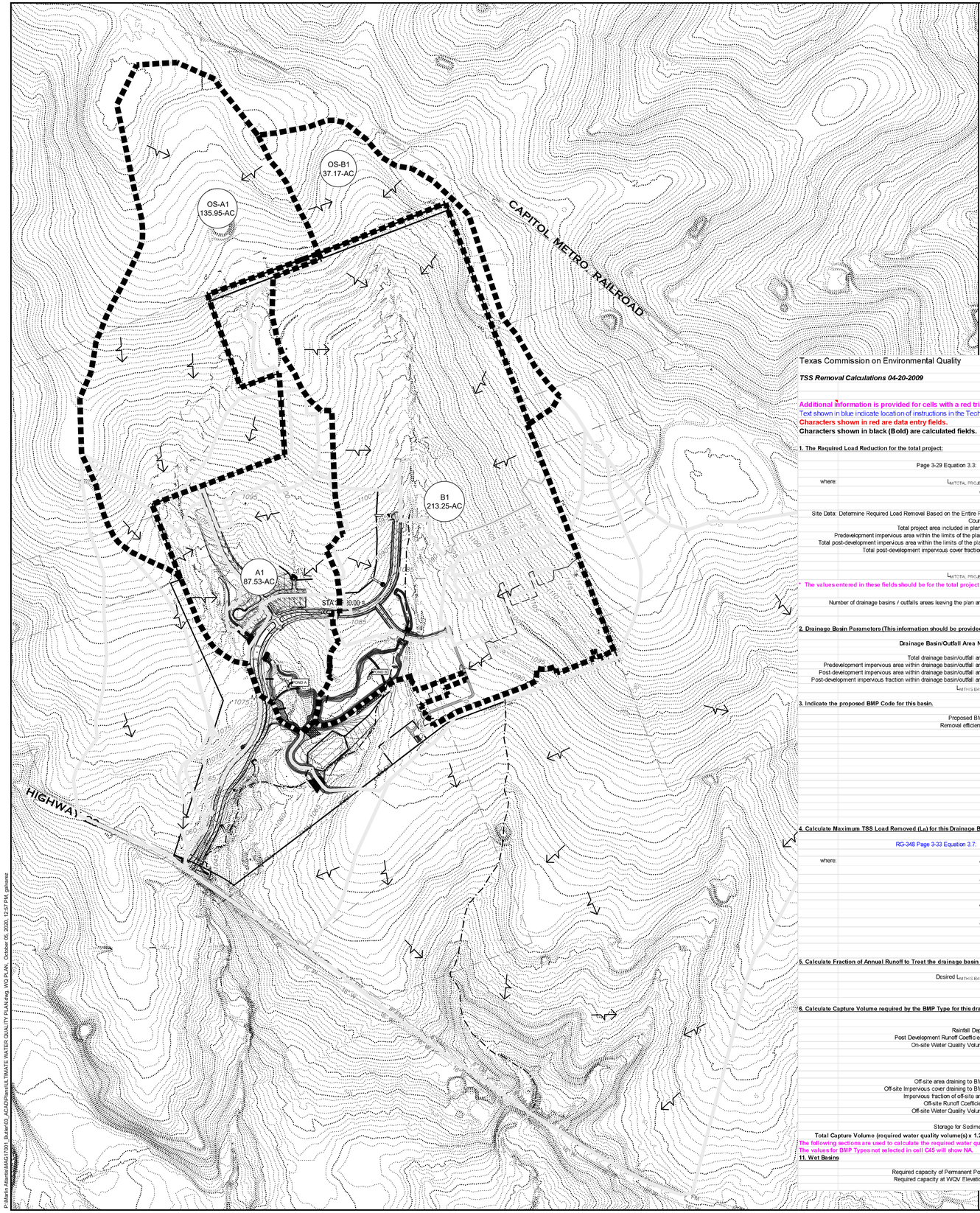
BUTLER FARMS PHASE ONE MAIN INFRASTRUCTURE CONSTRUCTION PLANS

LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 58 OF 121

P:\Martin Atlantic\MAG17001 Butler\03. ACAD\Plans\POND OVERALL.dwg, POND OVERALL, October 05, 2020, 12:26 PM, galvarez



0 500' 1,000'
SCALE: 1" = 500'

WET BASIN A

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler (Ultimate Development)
Date Prepared: 3/18/2020

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

Page 3-29 Equation 3.3: L_M = 27.2(AN x 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 * = 367.34 acres
Predevelopment impervious area within the limits of the plan * = - acres
Total post-development impervious area within the limits of the plan* = 135.30 acres
Total post-development impervious cover fraction * = 0.37
P = 32.00 inches

$L_{M\ TOTAL\ PROJECT}$ = **117,767.16** lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 2.00

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

Drainage Basin/Outfall Area No. = A1

Total drainage basin/outfall area = 87.53 acres
Predevelopment impervious area within drainage basin/outfall area = - acres
Post-development impervious area within drainage basin/outfall area = 29.39 acres
Post-development impervious fraction within drainage basin/outfall area = **0.34**
$L_{M\ THIS\ BASIN}$ = **25,581.06** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Wet Basin
Removal efficiency = **93.00** percent

- Aqualogic Cartridge Filter
- Bioretention
- Contech StormFilter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (AI x 34.6 + AP x 0.54)

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

A_C = 87.53 acres
A_I = 29.39 acres
A_P = **58.14** acres
L_R = **31,197.10** lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 30,000.00 lbs.

F = **0.96**

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

Rainfall Depth = **2.80** inches
Post Development Runoff Coefficient = **0.28**
On-site Water Quality Volume = **245,551.53** cubic feet

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

Off-site area draining to BMP = 132.16 acres
Off-site Impervious cover draining to BMP = - acres
Impervious fraction of off-site area = **-**
Off-site Runoff Coefficient = **0.02**
Off-site Water Quality Volume = **26,865.48** cubic feet

Storage for Sediment = **54,483.40**
Total Capture Volume (required water quality volume(s) x 1.20) = **326,900.42** 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.

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool = **326,900.42** cubic feet **Permanent Pool Capacity is 1.20 times the WQV**
Required capacity at WQV Elevation = **599,317.43** cubic feet **Total Capacity should be the Permanent Pool Capacity plus a second WQV.**

WET BASIN B

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler (Ultimate Development)
Date Prepared: 3/18/2020

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

Page 3-29 Equation 3.3: L_M = 27.2(AN x 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 * = 367.34 acres
Predevelopment impervious area within the limits of the plan * = - acres
Total post-development impervious area within the limits of the plan* = 135.30 acres
Total post-development impervious cover fraction * = 0.37
P = 32.00 inches

$L_{M\ TOTAL\ PROJECT}$ = **117,767.16** lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 2.00

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

Drainage Basin/Outfall Area No. = B1

Total drainage basin/outfall area = 213.25 acres
Predevelopment impervious area within drainage basin/outfall area = - acres
Post-development impervious area within drainage basin/outfall area = 101.84 acres
Post-development impervious fraction within drainage basin/outfall area = **0.48**
$L_{M\ THIS\ BASIN}$ = **88,641.54** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Wet Basin
Removal efficiency = **93.00** percent

- Aqualogic Cartridge Filter
- Bioretention
- Contech StormFilter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (AI x 34.6 + AP x 0.54)

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

A_C = 213.25 acres
A_I = 101.84 acres
A_P = **111.41** acres
L_R = **106,654.64** lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 95,000.00 lbs.

F = **0.89**

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

Rainfall Depth = **1.60** inches
Post Development Runoff Coefficient = **0.35**
On-site Water Quality Volume = **427,854.89** cubic feet

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

Off-site area draining to BMP = 37.17 acres
Off-site Impervious cover draining to BMP = - acres
Impervious fraction of off-site area = **-**
Off-site Runoff Coefficient = **0.02**
Off-site Water Quality Volume = **4,317.67** cubic feet

Storage for Sediment = **86,434.51**
Total Capture Volume (required water quality volume(s) x 1.20) = **518,607.07** 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.

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool = **518,607.07** cubic feet **Permanent Pool Capacity is 1.20 times the WQV**
Required capacity at WQV Elevation = **950,779.63** cubic feet **Total Capacity should be the Permanent Pool Capacity plus a second WQV.**

NO.	REVISION	BY	DATE

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

LAND DEV
CONSULTING, LLC
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TX . 78735
OFFICE: 512.872.6696
FIRM NO. 16384

SHERVIN NOOSHIN
96807
09/16/2020

WATER QUALITY PLAN (ULTMATE)

BUTLER FARMS PHASE ONE MAIN INFRASTRUCTURE CONSTRUCTION PLANS

LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 59 OF 121

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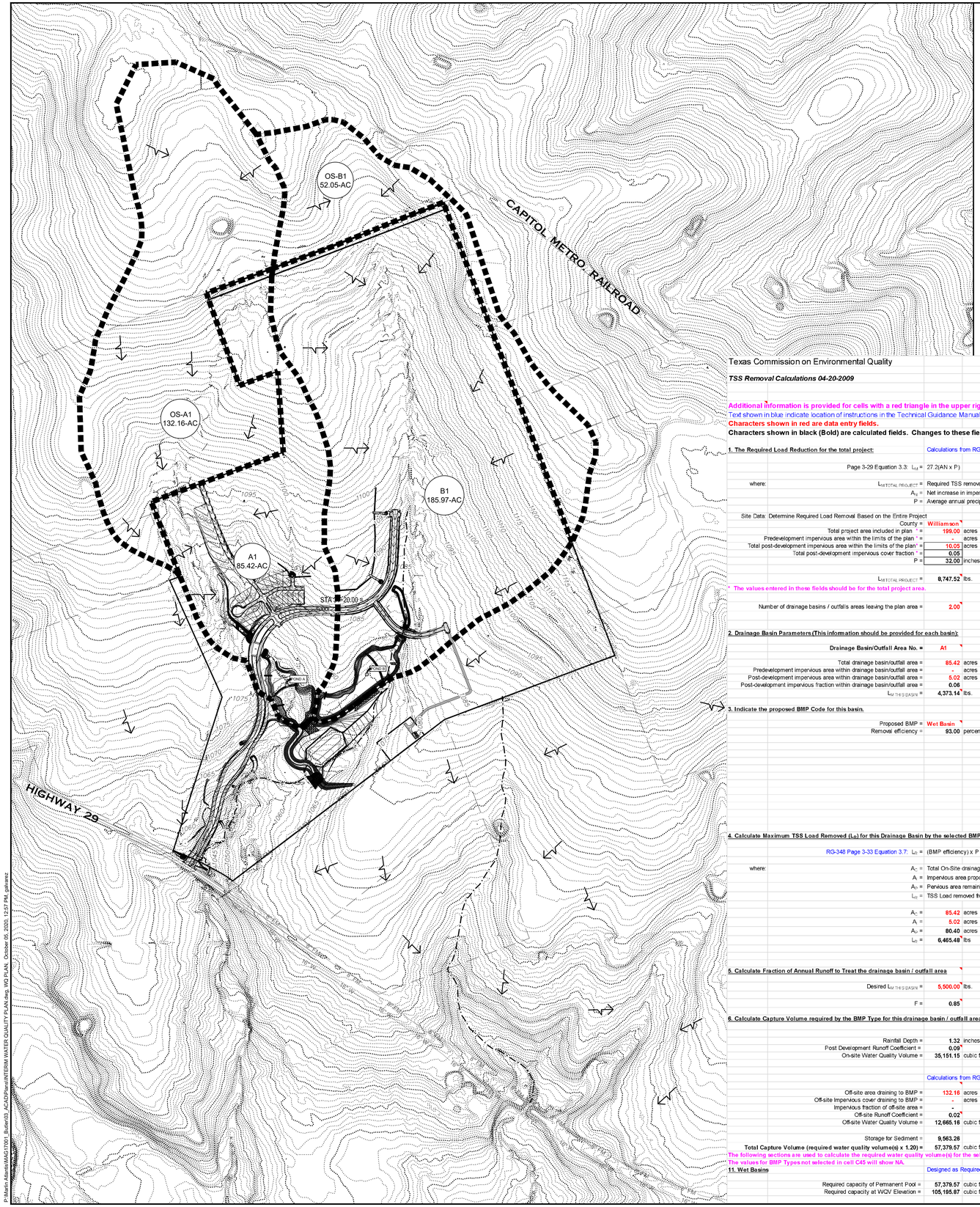

WET BASIN A

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler (Phase 1 Spine Infrastructure)
Date Prepared: 3/18/2020

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

Page 3-29 Equation 3.3: L_M = 27.2(AN x 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 * = 199.00 acres
Predevelopment impervious area within the limits of the plan * = - acres
Total post-development impervious area within the limits of the plan* = 10.05 acres
Total post-development impervious cover fraction * = 0.05
P = 32.00 inches

$L_{M\ TOTAL\ PROJECT}$ = **8,747.52** lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 2.00

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

Drainage Basin/Outfall Area No. = A1

Total drainage basin/outfall area = 85.42 acres
Predevelopment impervious area within drainage basin/outfall area = - acres
Post-development impervious area within drainage basin/outfall area = 5.02 acres
Post-development impervious fraction within drainage basin/outfall area = **0.06**
$L_{M\ THIS\ BASIN}$ = **4,373.14** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Wet Basin
Removal efficiency = **93.00** percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (AI x 34.6 + AP x 0.54)

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

A_C = 85.42 acres
A_I = 5.02 acres
A_P = **80.40** acres
L_R = **6,465.48** lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 5,500.00 lbs.

F = **0.85**

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

Rainfall Depth = **1.32** inches
Post Development Runoff Coefficient = **0.09**
On-site Water Quality Volume = **35,151.15** cubic feet

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

Off-site area draining to BMP = 132.16 acres
Off-site Impervious cover draining to BMP = - acres
Impervious fraction of off-site area = **-**
Off-site Runoff Coefficient = **0.02**
Off-site Water Quality Volume = **12,665.16** cubic feet

Storage for Sediment = **9,563.26**
Total Capture Volume (required water quality volume(s) x 1.20) = **57,379.57** 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.

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool = **57,379.57** cubic feet — Permanent Pool Capacity is 1.20 times the WQV
Required capacity at WQV Elevation = **105,195.87** cubic feet — Total Capacity should be the Permanent Pool Capacity plus a second WQV.

WET BASIN B

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Butler (Phase 1 Spine Infrastructure)
Date Prepared: 3/18/2020

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

Page 3-29 Equation 3.3: L_M = 27.2(AN x 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 * = 367.34 acres
Predevelopment impervious area within the limits of the plan * = - acres
Total post-development impervious area within the limits of the plan* = 10.05 acres
Total post-development impervious cover fraction * = 0.03
P = 32.00 inches

$L_{M\ TOTAL\ PROJECT}$ = **8,747.52** lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 2.00

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

Drainage Basin/Outfall Area No. = B1

Total drainage basin/outfall area = 185.97 acres
Predevelopment impervious area within drainage basin/outfall area = - acres
Post-development impervious area within drainage basin/outfall area = 2.52 acres
Post-development impervious fraction within drainage basin/outfall area = **0.01**
$L_{M\ THIS\ BASIN}$ = **2,196.74** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Wet Basin
Removal efficiency = **93.00** percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (AI x 34.6 + AP x 0.54)

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

A_C = 185.97 acres
A_I = 2.52 acres
A_P = **183.45** acres
L_R = **5,546.83** lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 4,000.00 lbs.

F = **0.72**

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

Rainfall Depth = **0.83** inches
Post Development Runoff Coefficient = **0.04**
On-site Water Quality Volume = **20,407.32** cubic feet

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

Off-site area draining to BMP = 52.05 acres
Off-site Impervious cover draining to BMP = - acres
Impervious fraction of off-site area = **-**
Off-site Runoff Coefficient = **0.02**
Off-site Water Quality Volume = **3,143.99** cubic feet

Storage for Sediment = **4,710.26**
Total Capture Volume (required water quality volume(s) x 1.20) = **28,261.57** 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.

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool = **28,261.57** cubic feet — Permanent Pool Capacity is 1.20 times the WQV
Required capacity at WQV Elevation = **51,812.89** cubic feet — Total Capacity should be the Permanent Pool Capacity plus a second WQV.

NO.	REVISION	BY	DATE

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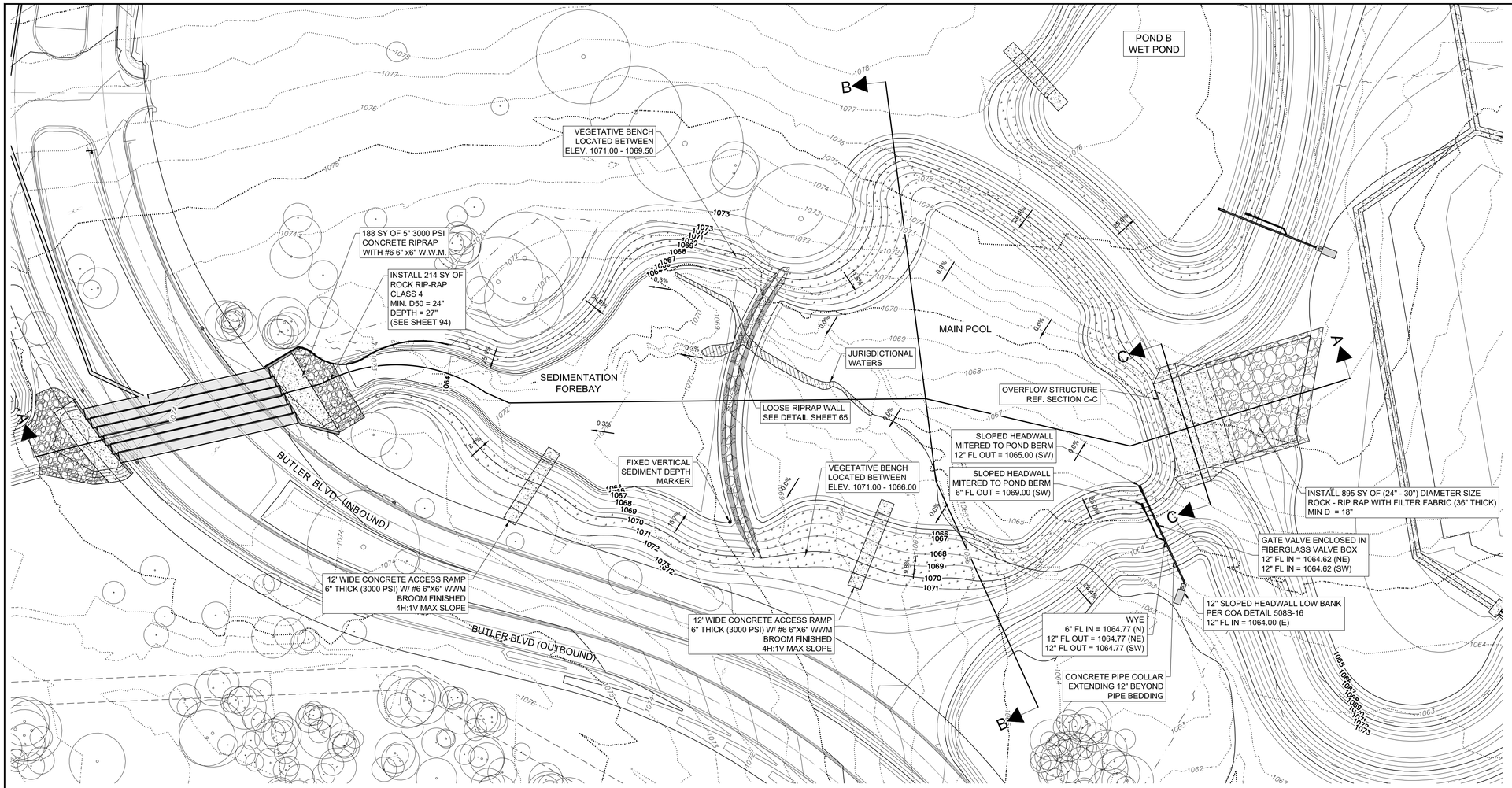
CONSULTING, LLC
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TX. 78735
OFFICE: 512.872.6696
FIRM NO. 16384

SHERVIN NOOSHIN
96807
Shervin Nooshin
09/16/2020

WATER QUALITY PLAN (INTERIM)

BUTLER FARMS PHASE ONE
MAIN INFRASTRUCTURE
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW



0 80' 160'

SCALE: 1" = 80'

LEGEND

- 834 EXISTING MINOR CONTOUR
- 835 EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- FLOODPLAIN
- CREEK CENTERLINE
- BERM BERM
- FLOW DIRECTION
- PROPOSED WALL
- FIRE HYDRANT
- WATER VALVE
- SD STORM SEWER MAHNOLE
- WW WASTEWATER MANHOLE
- CURB INLET

BW - BOTTOM OF WALL
EG - EXISTING GRADE
FFE - FINISHED FLOOR ELEVATION
G - PROPOSED GRADE (GROUND)
HP - HIGH POINT
SW - SIDEWALK
TC - TOP OF CURB
TW - TOP OF WALL
FS - FINISHED SURFACE

NOTE:
SEE GEOTECH REPORT FOR CLAY LINER RECOMMENDATIONS AND GUIDELINES.

NOTE: CONTRACTOR TO INSTALL VEGETATIVE BENCH PLANTS IN ACCORDANCE WITH TCEQ RG-348 SECTION 3.4.9(7).

DEWATERING PLAN NOTES:

1. 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 PRECONSTRUCTION MEETING.
2. THE SKIMMER IS TO BE USED DURING CONSTRUCTION AND SHALL BE REMOVED AFTER COMPLETING CONSTRUCTION OF THE WET POND.

ACCESS DRIVE NOTES:

1. FOR THE CONCRETE MAINTENANCE ACCESS THE CONTRACTOR SHALL INSTALL CONTRACTION JOINTS EVERY 12 FEET.

NOTES:

1. ALL POND BOTTOMS, SIDE SLOPES, AND EARTHEN EMBANKMENTS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY, IN ACCORDANCE WITH THE CITY OF LIBERTY HILL STANDARD SPECIFICATIONS. ALLOW ADEQUATE VOLUME FOR TOPSOIL TO SUPPORT VEGETATION.
2. GRADING WITHIN THE ½ CRITICAL ROOT ZONE OF PROTECTED TREES, IDENTIFIED BY A HATCH PATTERN ON THESE PLANS, SHALL BE LIMITED TO LESS THAN 12 INCHES OF DISTURBANCE. NO GRADING ACTIVITY WITH DISTURBANCE OF MORE THAN 6 INCHES IS ALLOWED IN THE ½ CRITICAL ROOT ZONE.
3. GRADING WORK WITHIN THE ½ CRITICAL ROOT ZONE OF PROTECTED TREES SHALL BE DONE BY HAND OR WITH RUBBER TIRED EQUIPMENT.
4. ALL RETAINING WALLS GREATER THAN FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF THE FOOTING TO THE TOP OF THE WALL SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER.
5. VEGETATE ALL DISTURBED AREAS PER CITY OF LIBERTY HILL SPECIFICATIONS.

NO.	REVISION	BY	DATE

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STATE OF TEXAS
SHERVIN NOOSHIN
96807
LICENSED
PROFESSIONAL ENGINEER

09/16/2020

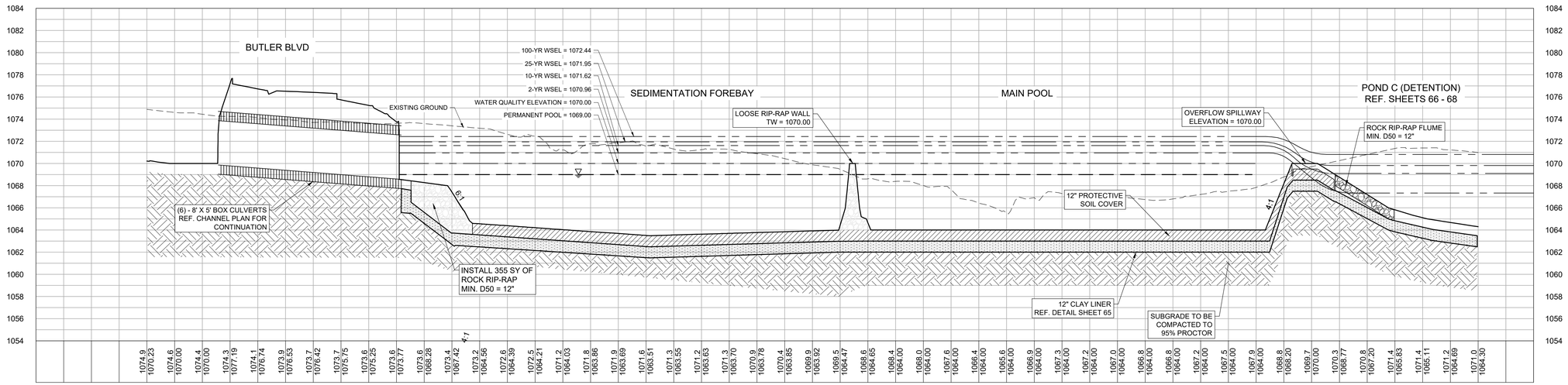
WATER QUALITY POND A PLAN

BUTLER FARMS PHASE ONE
MAIN INFRASTRUCTURE
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 61 OF 121

POND A SECTION A-A



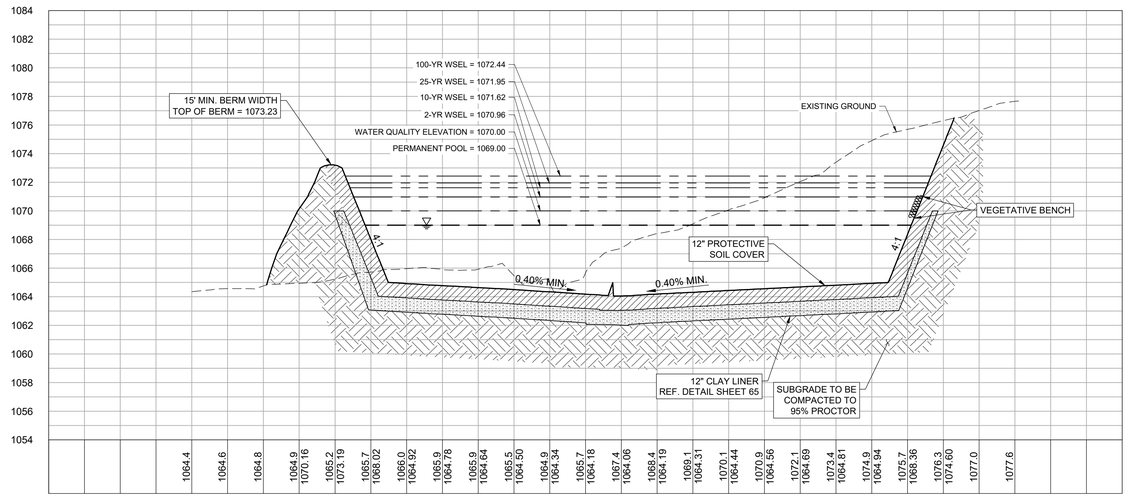
VERTICAL 5 / 0

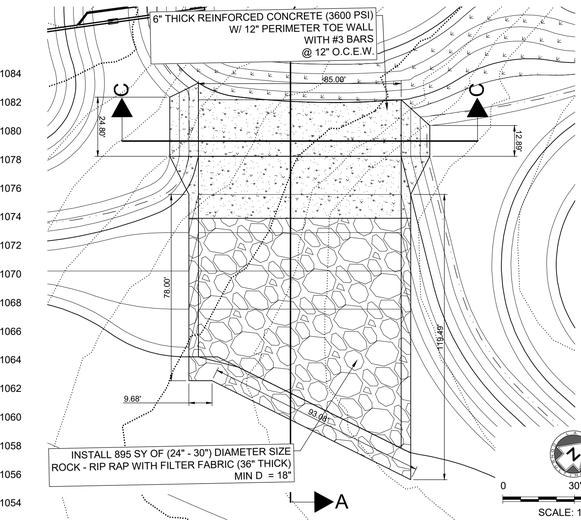
VERT. SCALE 1" = 5'
HORZ. SCALE 1" = 50'

EXISTING GRADE - CENTERLINE

PROPOSED GRADE - CENTERLINE

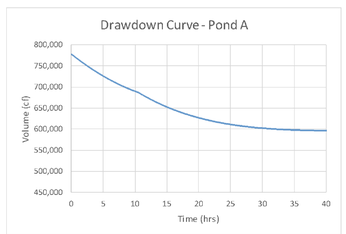
POND A SECTION B-B





Drawdown Calculations - Pond A		
WQV:	777,994	cf
PPV:	595,368	cf
WQE:	1070.00	msl
PPE:	1069.00	msl
Outlet Flowline:	1069.00	msl
Outlet Diameter, D:	6	in
Slope, S:	0.01	ft/ft
Outlet Area, A:	0.196	sf
Chart:	2, Circular CM	
Nomograph Scale:	2, Mitered to Slope	
Unsumberged K:	0.021	
Ku:	1	
Unsubmerged M:	1.33	
Submerged c:	0.0463	
Submerged Y:	0.75	
Calculation Timestep:	1	minute
Drawdown Time:	37.95	hrs

Drawdown Calculation Summary - Pond A			
Time (hrs)	WSEL	Volume (cf)	Discharge (cfs)
0	1070.00	777,994	3.34
1	1069.94	766,272	3.17
2	1069.88	755,188	2.99
3	1069.82	744,743	2.81
4	1069.76	734,937	2.63
5	1069.71	725,769	2.46
6	1069.67	717,239	2.28
12	1069.43	673,862	2.26
16	1069.28	646,004	1.63
20	1069.17	626,328	1.12
24	1069.10	613,043	0.74
37.95	1069.00	595,368	-



Stage-Storage Table - Wet Pond A							
Elevation	Sed. Basin Area (sf)	Wet Pond Area (sf)	Combined Area (sf)	Area (ac)	Sed Basin Volume (cf)	Total Volume (cf)	
1064.00	29,182	66,889	96,071	2.20549	0	0	
1065.00	34,498	71,280	105,778	2.42833	31,803	100,886	
1066.00	36,849	77,839	114,688	2.63287	67,470	211,089	
1067.00	39,344	82,264	121,608	2.79174	105,560	329,220	
1068.00	42,643	89,275	131,918	3.02842	146,542	455,948	
1068.90	50,002	95,237	145,239	3.33423	188,188	580,620	
1069.00	**48,250**	**101,478**	**149,728**	**3.43728**	**193,101**	**595,368**	**PPV**
1070.00	**53,647**	**163,986**	**217,633**	**4.99617**	**244,025**	**777,994**	**WQV**
1071.00		168,334	168,334	3.86442	0	970,450	
1072.00		181,123	181,123	4.15801	0	1,145,140	
1073.00		190,507	190,507	4.37345	0	1,330,935	

Elevation-Discharge Table - Pond A		
Storm Event	Water Surface Elevation	Discharge (cfs)
2-Year	1070.90	232-cfs
10-Year	1071.50	513-cfs
25-Year	1071.80	679-cfs
100-Year	1072.30	952-cfs

VERTICAL 3 / 0

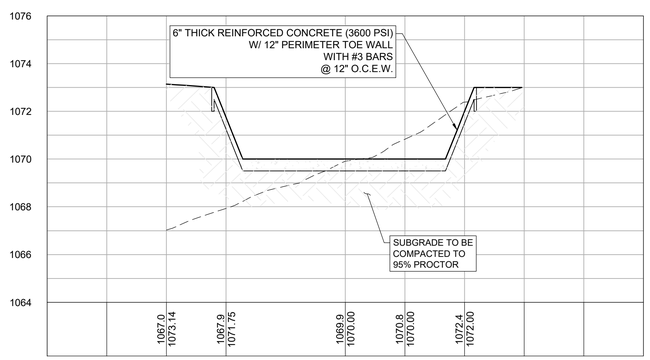
VERT. SCALE 1" = 3'
HORZ. SCALE 1" = 30'

EXISTING GRADE - CENTERLINE

PROPOSED GRADE - CENTERLINE

Required Sediment Forebay Volume	78,609
Provided Sediment Forebay Volume	118,910
Permanent Pond Depth:	5.00
Pond Berm Elevation:	1073.23
Water Quality Elevation:	1070.00
Spillway Elevation:	1070.00
Head required to pass Q25:	1.96
Max WSEL to pass Q25:	1071.96
Freeboard Provided to pass Q25:	1.27
Head required to pass Q100:	2.42
Max WSEL to pass Q100:	1072.42
Freeboard Provided to pass Q100:	0.81

POND A SECTION C-C



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FIRM NO. 16384

STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER
09/16/2020

WATER QUALITY POND A SECTIONS

BUTLER FARMS PHASE ONE
MAIN INFRASTRUCTURE
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 62 OF 121

NO	REVISION	BY	DATE

Know what's below. Call before you dig.

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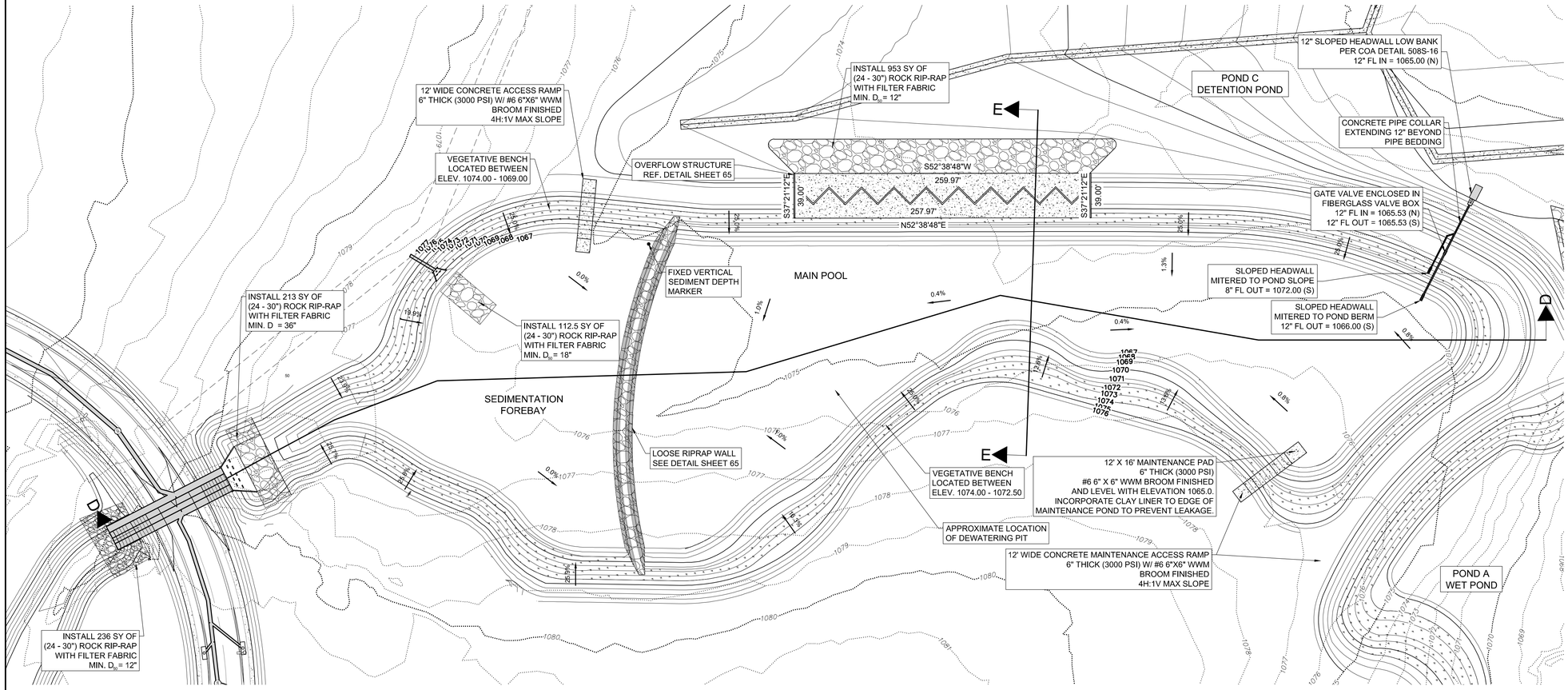

NOTE:
SEE GEOTECH REPORT FOR CLAY LINER RECOMMENDATIONS AND GUIDELINES.

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NO.	REVISION	BY	DATE

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PROFESSIONAL ENGINEER

09/16/2020

WATER QUALITY POND B PLAN

BUTLER FARMS PHASE ONE
MAIN INFRASTRUCTURE
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 63 OF 121

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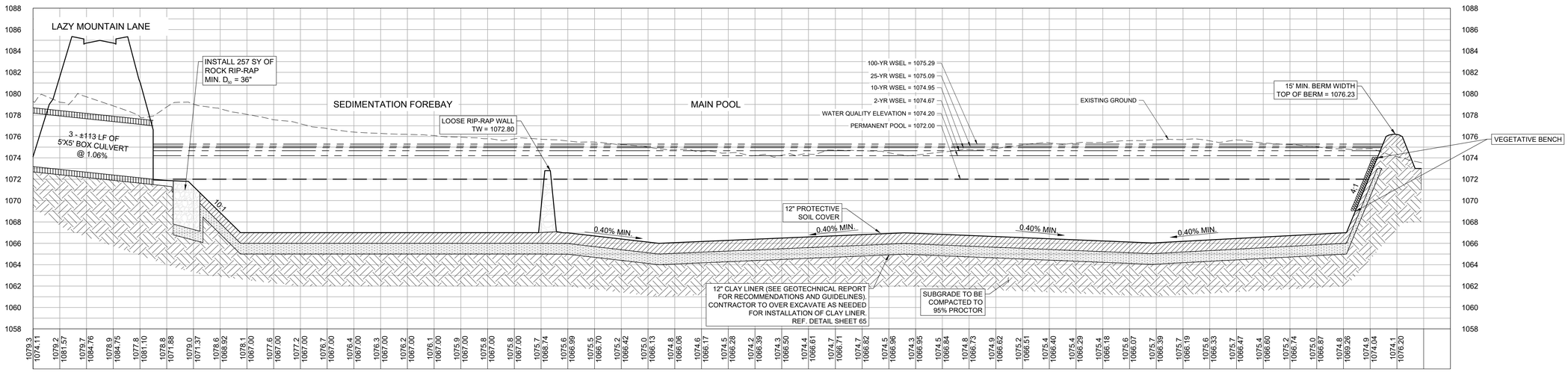
POND B SECTION D-D



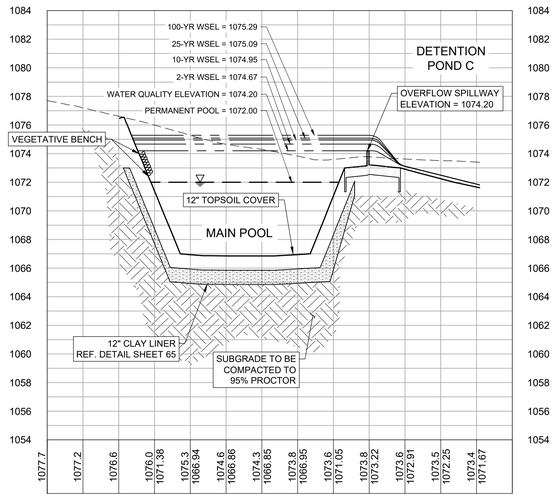
VERTICAL 5 / 0

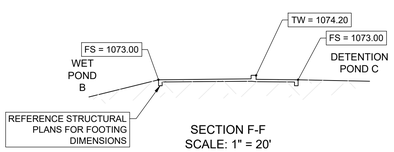
VERT. SCALE 1" = 5'
HORZ. SCALE 1" = 50'

EXISTING GRADE - CENTERLINE

PROPOSED GRADE - CENTERLINE

POND B SECTION E-E





SECTION F-F
SCALE: 1" = 20'

Elevation-Discharge Table - Pond B		
Storm Event	Water Surface Elevation	Discharge (cfs)
2-Year	1074.7	364-cfs
10-Year	1075.0	751-cfs
25-Year	1075.1	974-cfs
100-Year	1075.3	1342-cfs

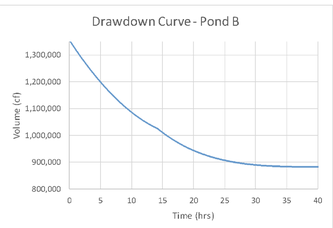
Stage-Storage Table - Wet Pond B							
Elevation	Sed. Basin Area (sf)	Wet Pond Area (sf)	Combined Area (sf)	Area (ac)	Sed Basin Volume (cf)	Total Volume (cf)	
1066.00	0	1	1	0.00002	0	0	
1067.00	41,606	99,097	140,703	3.23010	13,869	47,026	
1068.00	44,787	105,780	150,567	3.45654	57,055	192,634	
1069.00	48,128	112,425	160,553	3.68579	103,503	348,167	
1070.00	51,659	120,638	172,297	3.95539	153,386	514,557	
1071.00	55,381	128,820	184,201	4.22867	206,895	692,773	
1072.00	**60,817**	**136,900**	**197,717**	**4.53896**	**264,973**	**883,692**	**PPV**
1073.00	0	211,067	211,067	4.84543	0	1,088,048	
1074.00		228,759	228,759	5.25158	0	1,307,902	
1074.20		**236,451**	**236,451**	**5.42817**	**0**	**1,354,420**	**WQV**
1075.00		238,374	238,374	5.47231	0	1,544,350	
1076.00		247,574	247,574	5.68352	0	1,787,309	

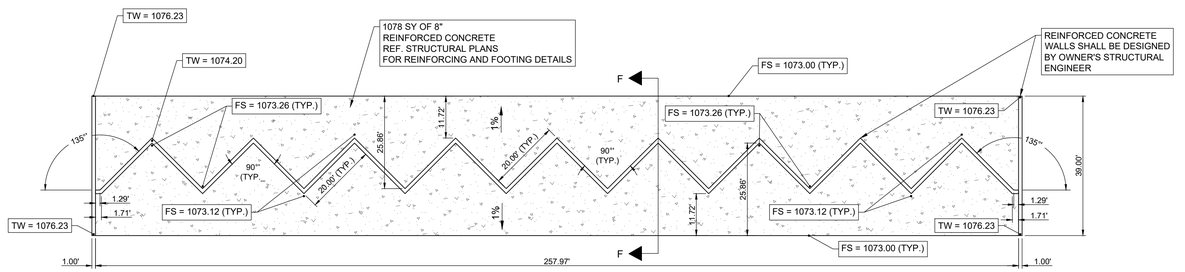
Trapezoidal Pond Weir Computations			
$Q = 3.1[B + .8Hz]H^{1.5}$ $V = Q/A$			
where:	B =	360	
	z =	4	
Q = Flow Rate (cfs)	Q_{25} =	974	cfs
B = Weir Bottom Width (ft)	H_{25} =	0.91	ft
H = Head over Weir Bottom (ft)	V_{25} =	2.96	ft/s
z = Side Slope (zH:1V)	Q_{100} =	1342	cfs
V = Flow Velocity (ft/s)	H_{100} =	1.12	ft
A = Flow Area (ft^2) = BH	V_{100} =	3.32	ft/s

Required Sediment Forebay Volume	137,834
Provided Sediment Forebay Volume	266,971
Permanent Pond Depth:	6.00
Pond Berm Elevation:	1076.23
Water Quality Elevation:	1074.20
Spillway Elevation:	1074.20
Head required to pass Q25:	0.91
Max WSEL to pass Q25:	1075.11
Freeboard Provided to pass Q25:	1.12
Head required to pass Q100:	1.12
Max WSEL to pass Q100:	1075.32
Freeboard Provided to pass Q100:	0.91

Drawdown Calculations - Pond B		
WQV:	1,354,420	cf
PPV:	883,692	cf
WQE:	1074.20	msl
PPE:	1072.00	msl
Outlet Flowline:	1072.00	msl
Outlet Diameter, D:	8	in
Slope, S:	0.01	ft/ft
Outlet Area, A:	0.349	sf
Chart:	2, Circular CM	
Nomograph Scale:	2, Mitered to Slope	
Unsumberged K:	0.021	
Ku:	1	
Unsubmerged M:	1.33	
Submerged c:	0.0463	
Submerged Y:	0.75	
Calculation Timestep:	1	minute
Drawdown Time:	35.73	hrs

Drawdown Calculation Summary - Pond B			
Time (hrs)	WSEL	Volume (cf)	Discharge (cfs)
0	1074.20	1,354,420	9.82
1	1074.04	1,319,928	9.34
2	1073.89	1,287,158	8.86
3	1073.74	1,256,109	8.38
4	1073.60	1,226,784	7.90
5	1073.47	1,199,180	7.42
6	1073.35	1,173,298	6.95
12	1072.80	1,054,183	4.07
16	1072.52	995,121	4.32
20	1072.29	944,731	2.75
24	1072.14	913,764	1.61
35.73	1072.00	883,692	-





WET POND B
OVERFLOW STRUCTURE DETAIL
SCALE: 1" = 20'

FS = FINISHED SURFACE
TW = TOP OF WALL

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

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09/16/2020

WATER QUALITY POND B SECTIONS

BUTLER FARMS PHASE ONE
MAIN INFRASTRUCTURE
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 64 OF 121

NO | REVISION | BY | DATE

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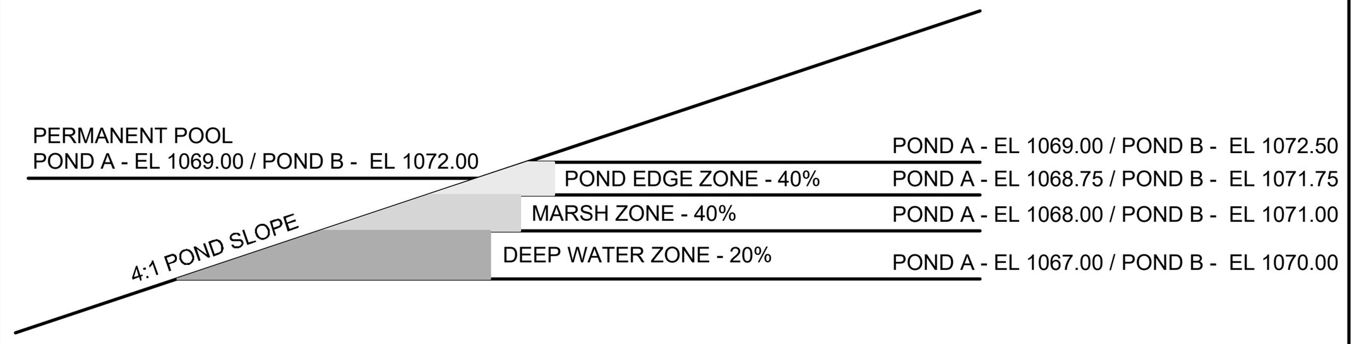


POND PLANTING ZONES (VEGETATIVE BENCH)

TOTAL NUMBER OF PLANTS REQUIRED
(ASSUMING 1 GALLON SIZE):
POND A - 4,492 PLANTS
POND B - 5,932 PLANTS

PLANTING RATIOS
POND EDGE ZONE - 40%
MARSH ZONE - 40%
DEEP WATER ZONE - 20%

Wetland Plant List

Install Bulrush in clumps, with individual plants spaced approximately three to four feet on center: At least two of the following species should be used:

BULRUSH	WATER DEPTH	NOTES
Scirpus validus, Bulrush	1' — 3'	8' tall evergreen, resists cattail encroachment
Scirpus californicus, Bulrush	1' — 3'	8' tall evergreen, resists cattail encroachment
Scirpus americanus, Three-square bulrush	2" — 6"	2' to 4' tall, w/ 3 distinct edges

At least two species of the following marsh plants should be used (additional species are encouraged). Install in clumps in shallow water, with individual plants spaced at approximately three feet on center:

MARSH DIVERSITY	WATER DEPTH	NOTES
1. Cyperus ochraeus, Flatsedge	2"—6"	1' to 2' tall, clump-forming, common to central Texas
2. Dichromena colorata, White-topped Sedge	2"—6"	1' to 2' tall, white bracts during warm season
3. Echinodorus rostratus, Burhead	3' - 1'	1' to 2' tall, annual, heart-shaped leaves, flower similar to arrowhead
4. Eleocharis quadrangulata, Four-square Spikerush	6" — 1'	1' to 2' tall, colonizes, inhabits deeper water than other Spikerushes
5. Iris Pseudacorus, Yellow Flag Iris	1' — 2'	3' to 4' tall. can be invasive, dense growth, yellow flowers
6. Juncus effusus, Soft Rush	6" — 1'	3' to 4' tall, forms a tight clump, evergreen, very attractive
7. Justicia americana, Water willow	2" — 6"	2' to 3' tall, common, white flowers, herbaceous, colonizes
8. Marsilea macropoda, Water Clover	2" — 6"	Looks like floating four-leaf clover, endemic to Texas
9. Najas guadalupensis, Water-Naiad	1' —4'	Submergent, valuable to fish and wildlife
10. Pontederia cordata, Pickerelweed	2" — 1'	3' tall, colonizes, cosmopolitan, purple flowers
11. Rhynchospora corniculata, Horned-rush	2" — 6"	2' to 3' tall, brass-colored flowers in May

Install spikerush at or near the water's edge, with individual plants spaced approximately three to six feet on center. At least two of the following species should be used:

SPIKERUSH	WATER DEPTH	NOTES
Eleocharis montevidensis, Spikerush	0" — 6"	1' tall, rhizomatous, reduces erosion at the pond edge
Eleocharis macrostachys, Spikerush	0" — 6"	1' tall, rhizomatous, reduces erosion at the pond edge
Eleocharis quadrangulata, Spikerush	3" — 1'	2' to 2.5' tall, rhizomatous, can accommodate deeper water, 4-angled

Install Arrowhead in clumps in shallow water, with individual plants spaced approximately three feet on center.

ARROWHEAD	WATER DEPTH	NOTES
Saggitaria latifolia, Arrowhead	2" — 1'	2' height, wildlife value, white flowers, proven water quality performer

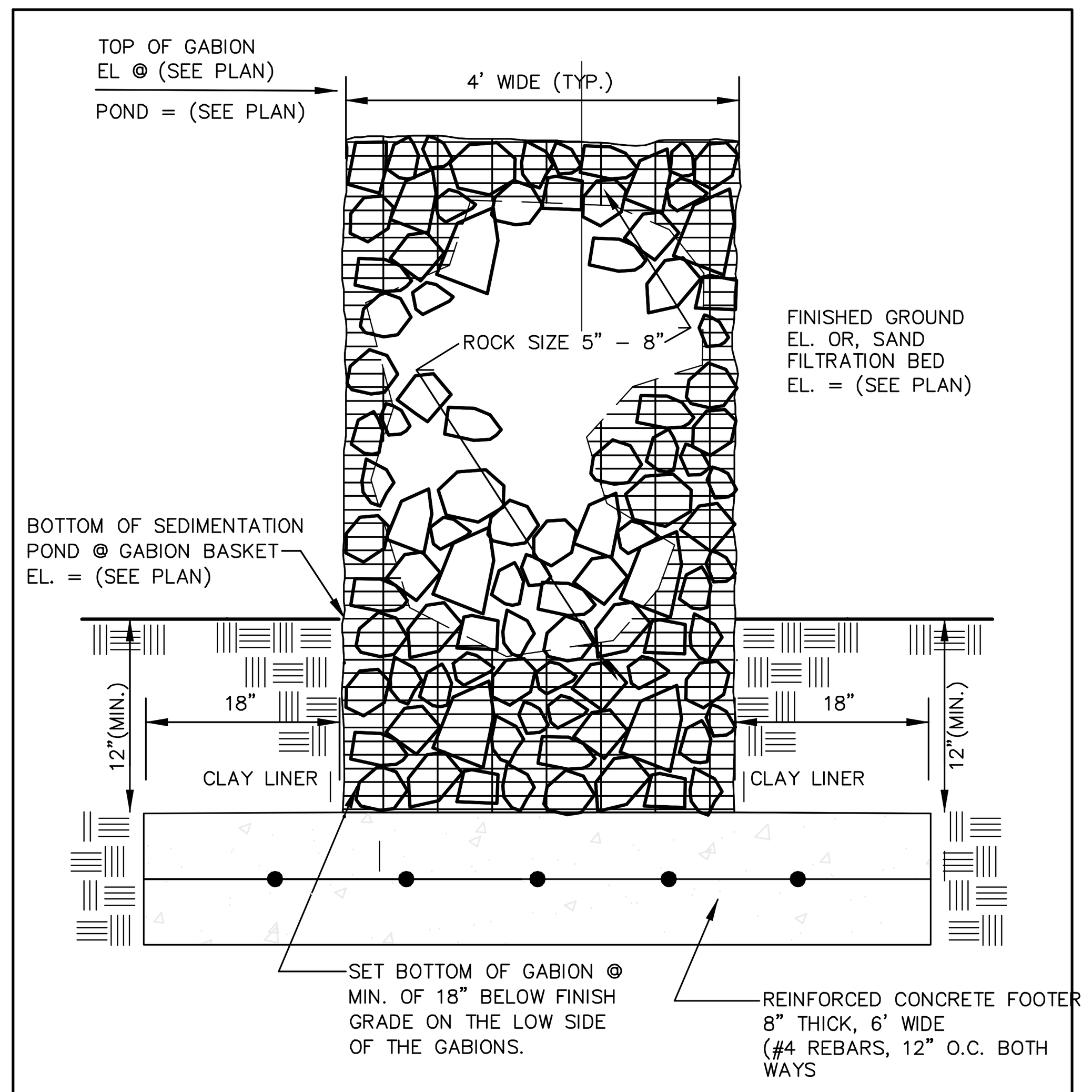
Floating-leafed aquatic plants are rooted in the sediment of the pond, and have leaves that float on the surface of the water. These leaves shade the water, which limits potential algae growth. At least two of the following species should be used and should be placed at random locations throughout the pond:

AQUATICS	WATER DEPTH	NOTES
1. Cabomba caroliniana, Fanwort	1' — 4'	Approximately 6' length underwater, submergent
2. Ceratophyllum spp., Coon-tail	1' —4'	Maximum 8' length, tolerant of turbidity and water fluctuation, wildlife food
3. Nymphaea odorata, Fanwort	6" —2'	A native, reliably hardy, floating- leaved aquatic, with white flowers
4. Potomageton pectinatus, Sago Pondweed	8" — 3'	Colonizes quickly, valuable to fish and wildlife; floating-leaved aquatic

Table 1-9C Plant Size Equivalents

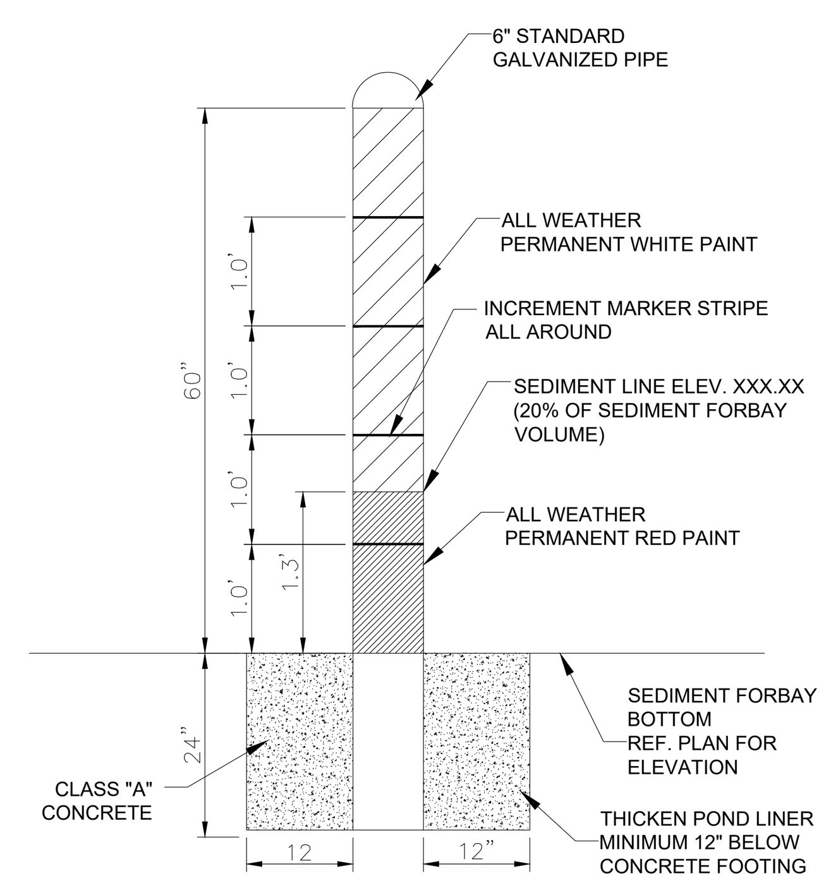
Proposed Substitute		Equivalent To	
Quantity	Plant Size	Quantity	Plant Size
1	Two-gallon	2	One-gallon
2	4" pots	1	One-gallon
4	Plugs	1	One-gallon

All wetland plants which fulfill the minimum landscape requirements shall be propagated from, or harvested from, regionally adapted stock: These are plant species or genotypes which are native to a range of within 200 miles of the project site. Wetland plants grown outside the state of Texas are not acceptable. The designer is not limited to the species described. Additional



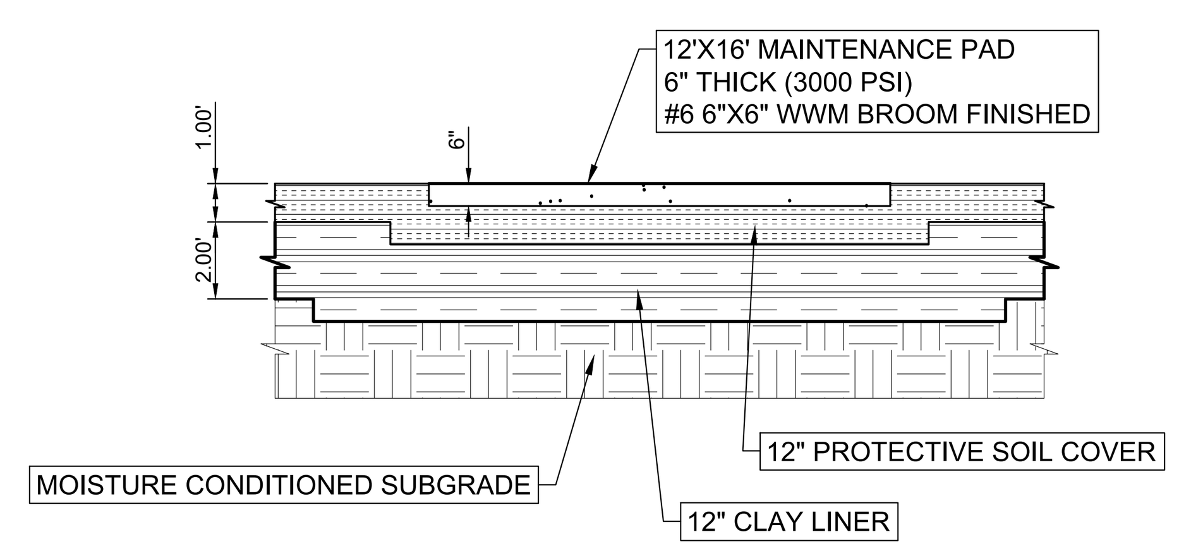
GABION DETAIL

N.T.S.



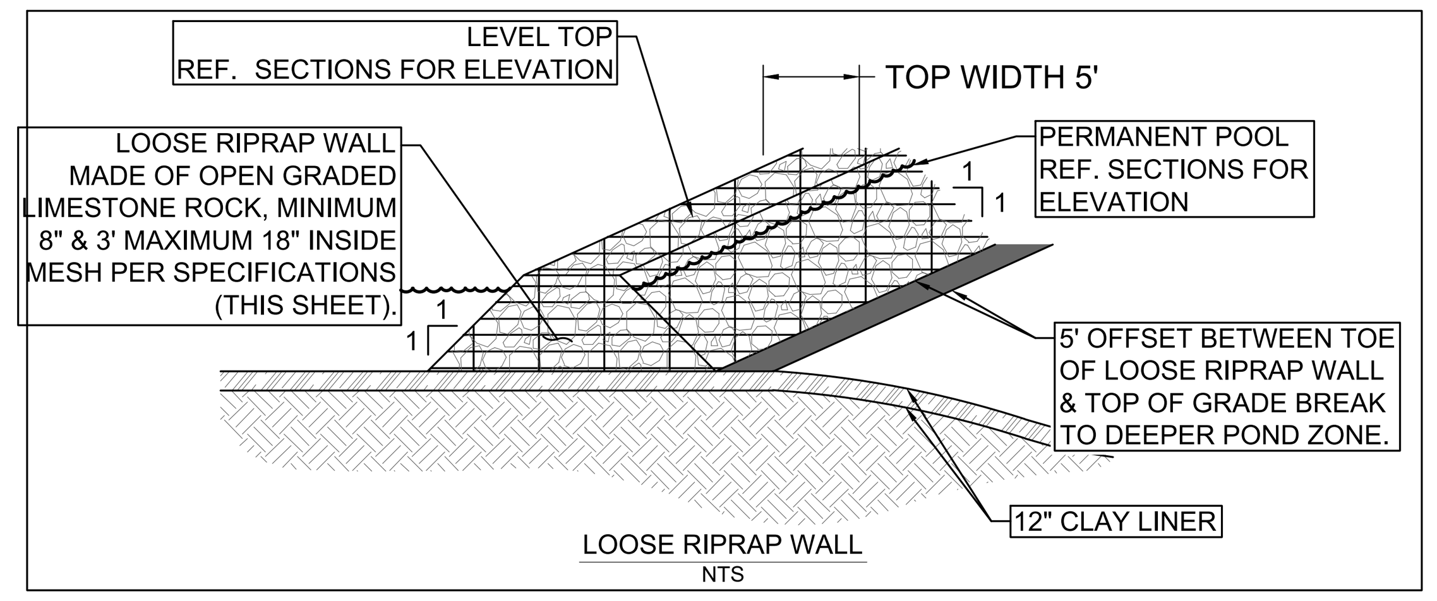
CONCRETE-FILLED FIXED VERTICAL SEDIMENT DEPTH MARKER

N.T.S.



MAINTENANCE PAD DETAIL

N.T.S.



LOOSE RIPRAP WALL
NTS

GABION MESH

(A) WOVEN MESH

WOVEN MESH SHALL BE OF A UNIFORM NON-RAVELING, DOUBLE TWIST HEXAGONAL PATTERN NOMINALLY OF DIMENSIONS 3.25 INCHES BY 4.5 INCHES (83 MM BY 114 MM). SELVEDGE WIRE SHALL BE 10 GAGS (NOMINAL DIAMETER OF 3.4 MM).

(B) WELDED MESH

MESH OPENING SHALL BE NOMINALLY 3 INCHES (75 MM BY 75 MM). STRENGTH OF WELDS SHALL MEET THE FOLLOWING REQUIREMENTS WHEN TESTED IN ACCORDANCE WITH SECTION 13.4 OF ASTM A-974.

MINIMUM WELD STRENGTH REQUIREMENTS

TYPE OF STRUCTURE	WIRE SIZE (DIAMETER)	MIN. AVERAGE WELD SHEAR STRENGTH
	GAGE (MM)	ENGLISH UNITS (SI UNITS)
GABIONS	12 (2.7)	472 LBF (2.10 kN)
REVET MATTRESS	13.5 (2.2)	292 LBF (1.30 kN)

(C) MANUFACTURING

TWISTED WIRE MESH GABION SHALL BE MANUFACTURED IN CONFORMANCE WITH ASTM A-975, WHILE WELDED WIRE MESH GABIONS SHALL BE MANUFACTURED IN CONFORMANCE WITH ASTM A-974.

COA SPECIFICATION 594S

NOTE:
THE WIRE MESH SHALL CONSIST OF PLASTIC-COATED (POLYVINYLCHLORIDE) GALVANIZED WIRE WITH A DIAMETER OF .0842" FOR REVET MATTRESS AND 0.155" FOR ALL OTHER APPLICATIONS. THE WIRE SALVAGES AND CORNER SHALL BE PLASTIC COATED GALVANIZED WIRE WITH A DIAMETER OF .1305". TIE AND CONNECTING WIRE SHALL BE PLASTIC COATED WIRE WITH A DIAMETER OF .804".

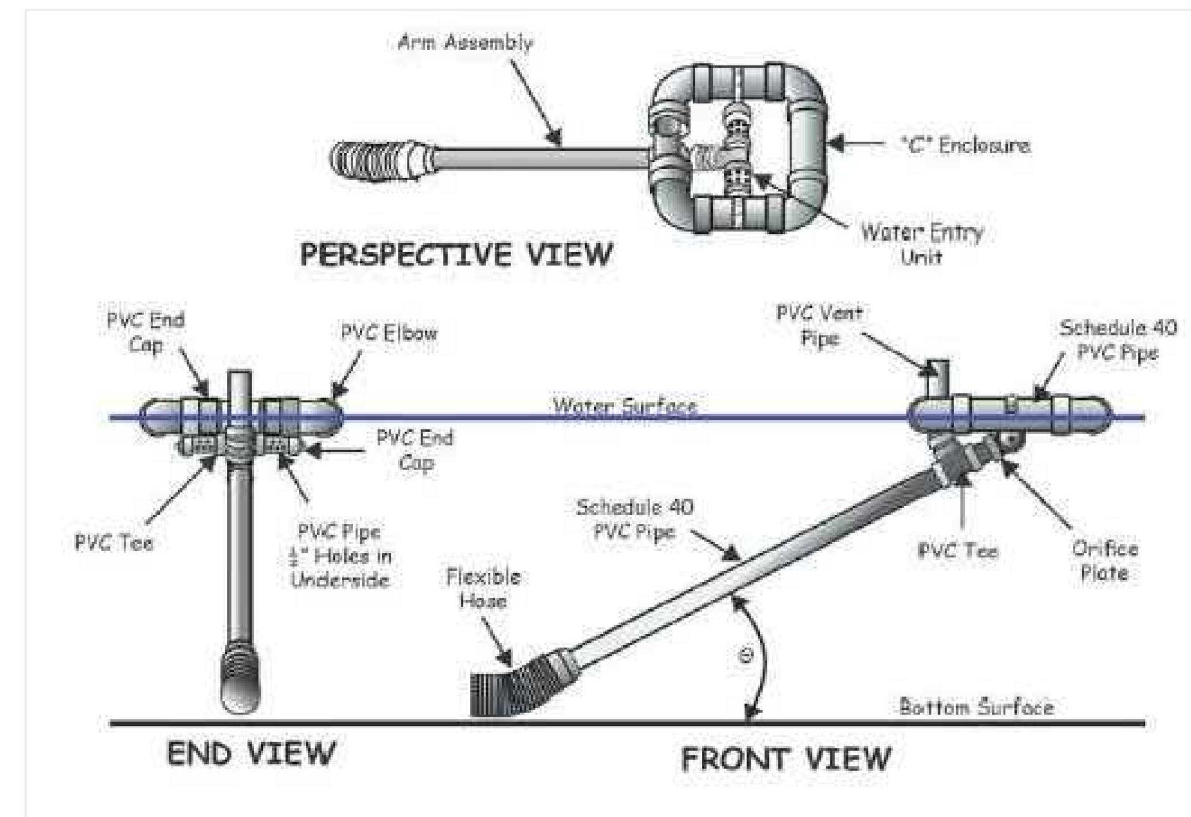
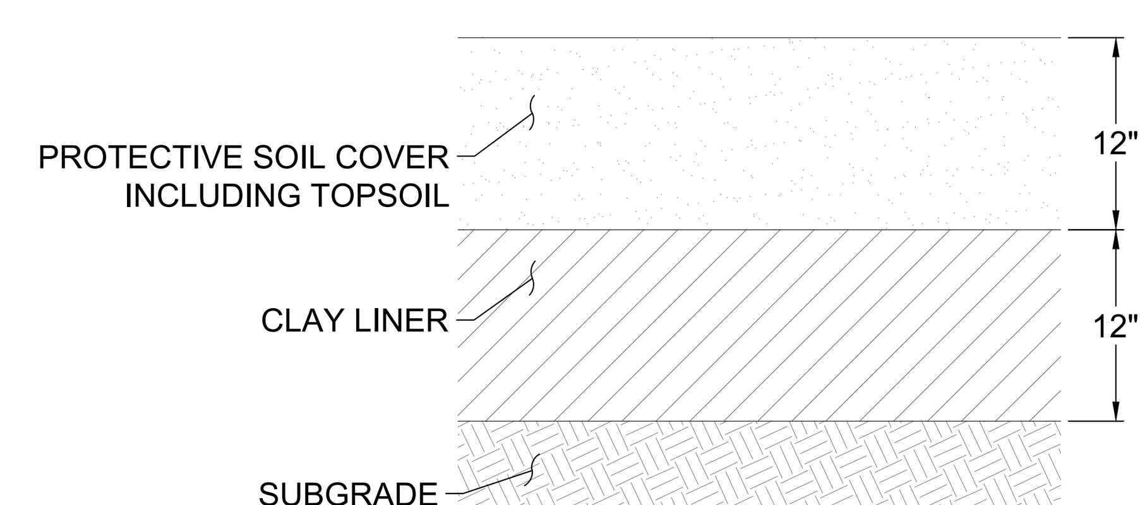


Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.

DEWATERING SKIMMER

N.T.S.

NOTE: DISCHARGE WATER MUST BE FILTERED USING FILTER BAG OR SOCK. DISCHARGE SHALL ALSO BE DIRECTED TOWARD SILT FENCE FOR ADDITIONAL FILTERING PRIOR TO LEAVING THE SITE.

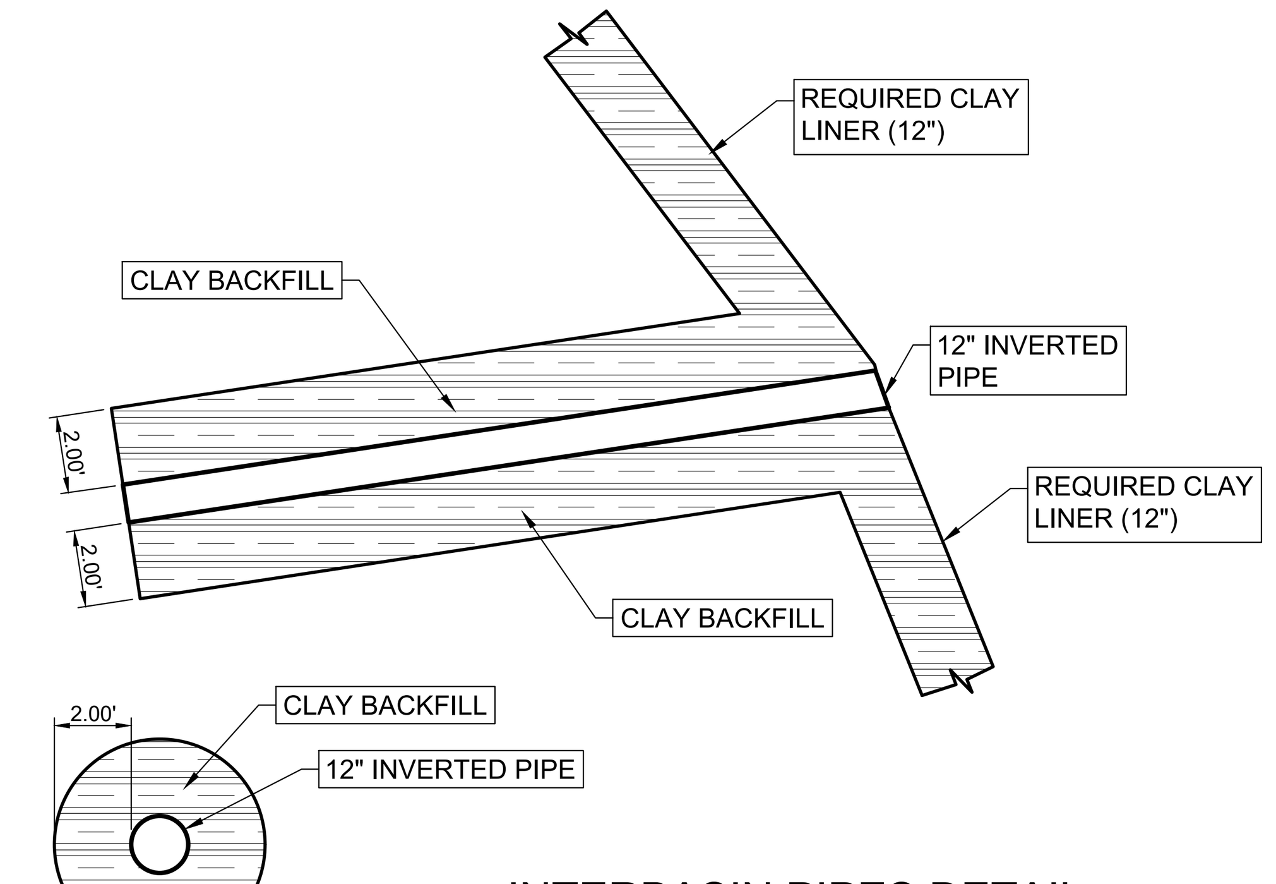


CLAY BASIN LINER DETAIL

N.T.S.

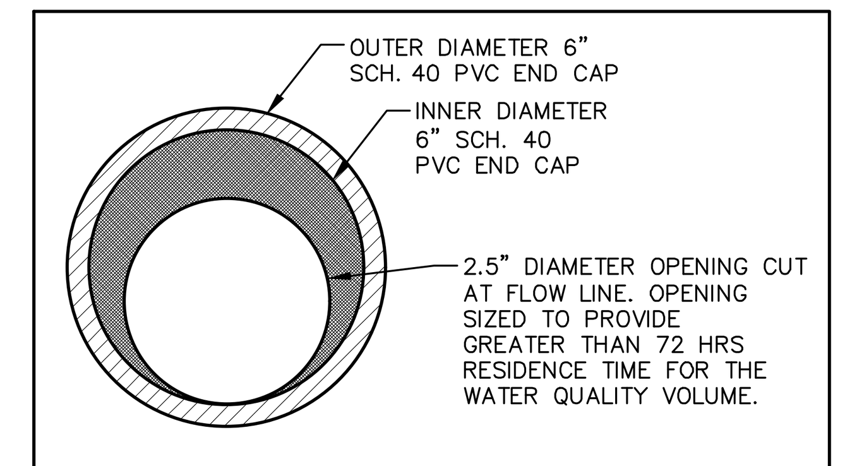
TABLE 3-6 CLAY LINER SPECIFICATIONS (COA, 2004)

PROPERTY	TEST METHOD	UNIT	SPECIFICATION
PERMEABILITY	ASTM D-2434	CM/SEC	1×10^{-6}
PLASTICITY INDEX OF CLAY	ASTM D-423 & D-424	%	NOT LESS THAN 15
LIQUID LIMIT OF CLAY	ASTM D-2216	%	NOT LESS THAN 30
CLAY PARTICLES PASSING	ASTM D-422	%	NOT LESS THAN 30
CLAY COMPACTION	ASTM D-2216	%	95% OF STANDARD PROCTOR DENSITY



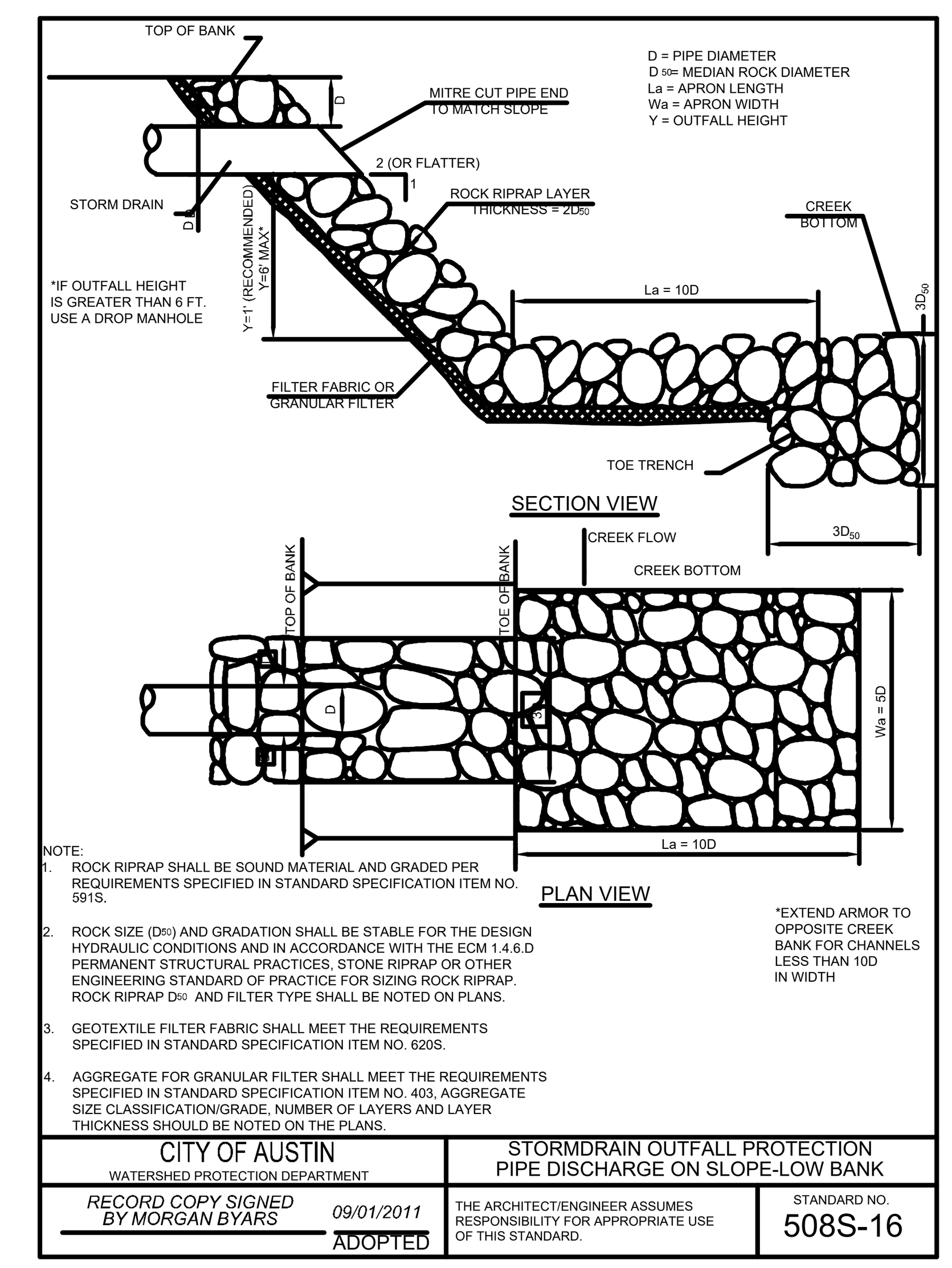
INTERBASIN PIPES DETAIL

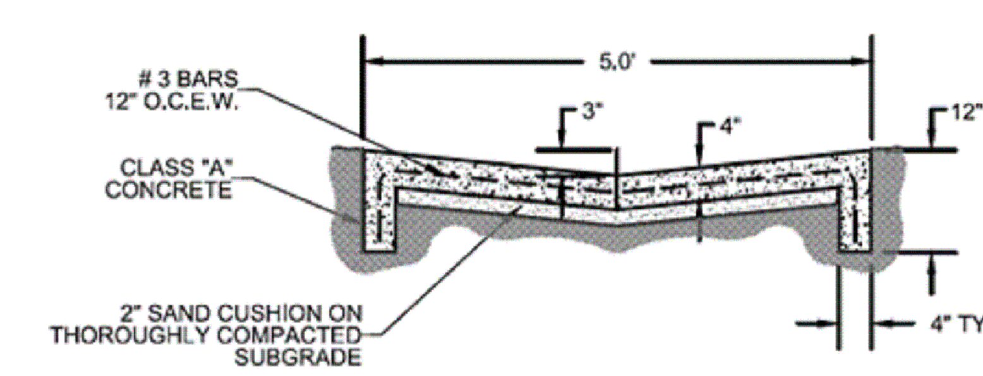
N.T.S.



6" PVC OUTLET CAP DETAIL

NTS





TRICKLE CHANNEL DETAIL

N.T.S.

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

LAND DEV
C O N S U L T I N G, L L C
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TX 78735
OFFICE: 512.872.6696
FIRM NO. 16384

STATE OF TEXAS
SHERVIN NOOSHIN
96807
LICENSED
PROFESSIONAL ENGINEER
09/16/2020

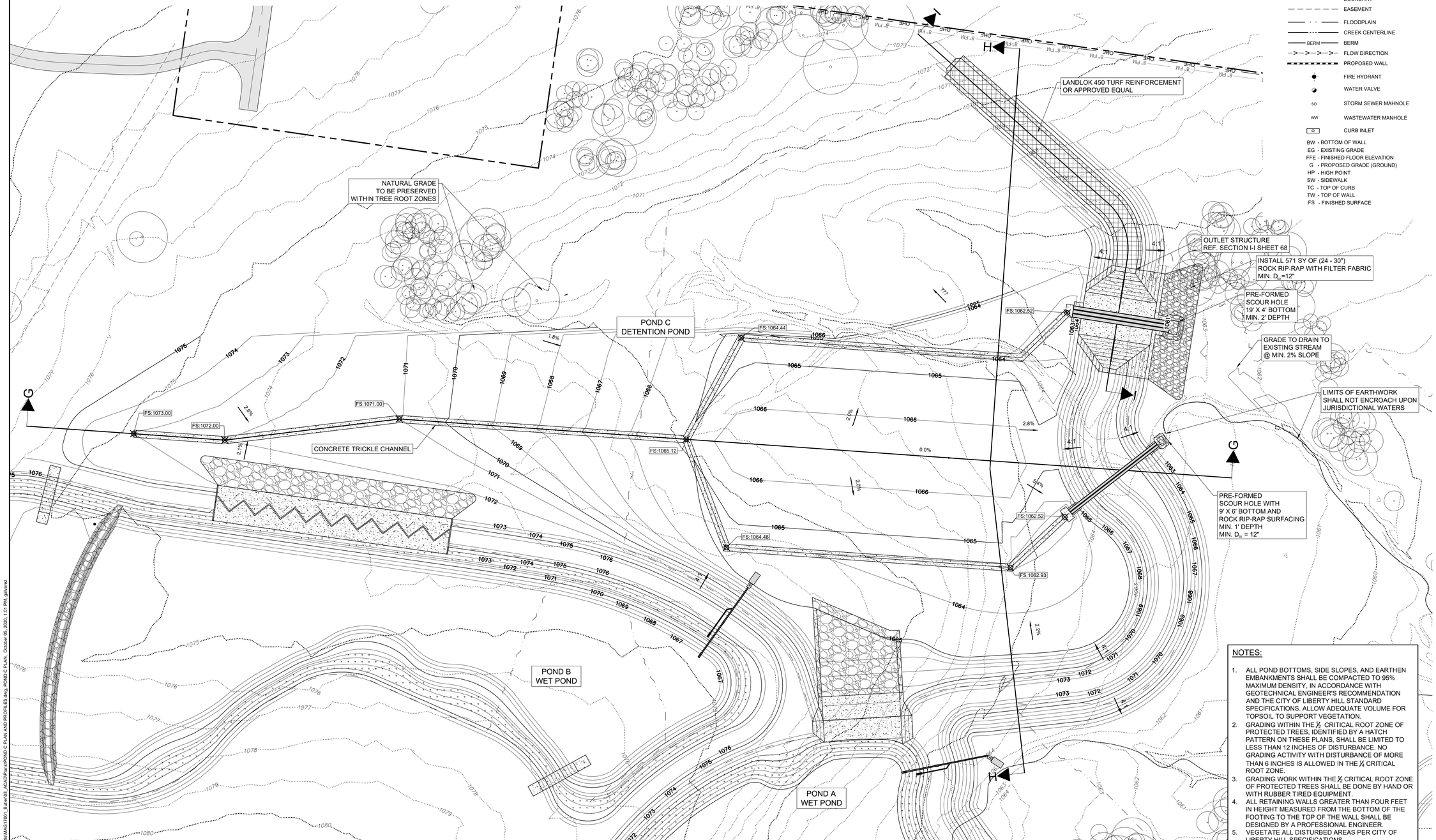
NO.	REVISION	BY	DATE

WATER QUALITY (WET BASIN) POND DETAILS

BUTLER FARMS PHASE ONE MAIN INFRASTRUCTURE CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 65 OF 121



NO.	REVISION	BY	DATE

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

LANDDEV
CONSULTING, LLC
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TX 78735
OFFICE: 512.872.6696
FIRM NO. 16384

STATE OF TEXAS
SHERVIN NOOSHIN
96807
LICENSED
PROFESSIONAL ENGINEER
09/16/2020

DETENTION POND C PLAN

BUTLER FARMS PHASE ONE MAIN INFRASTRUCTURE CONSTRUCTION PLANS

LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 66 OF 121

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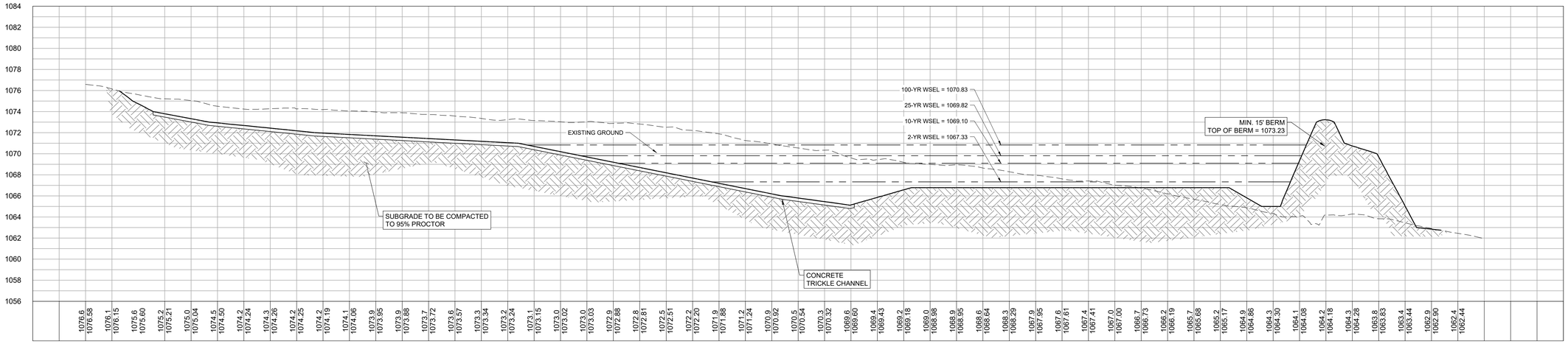
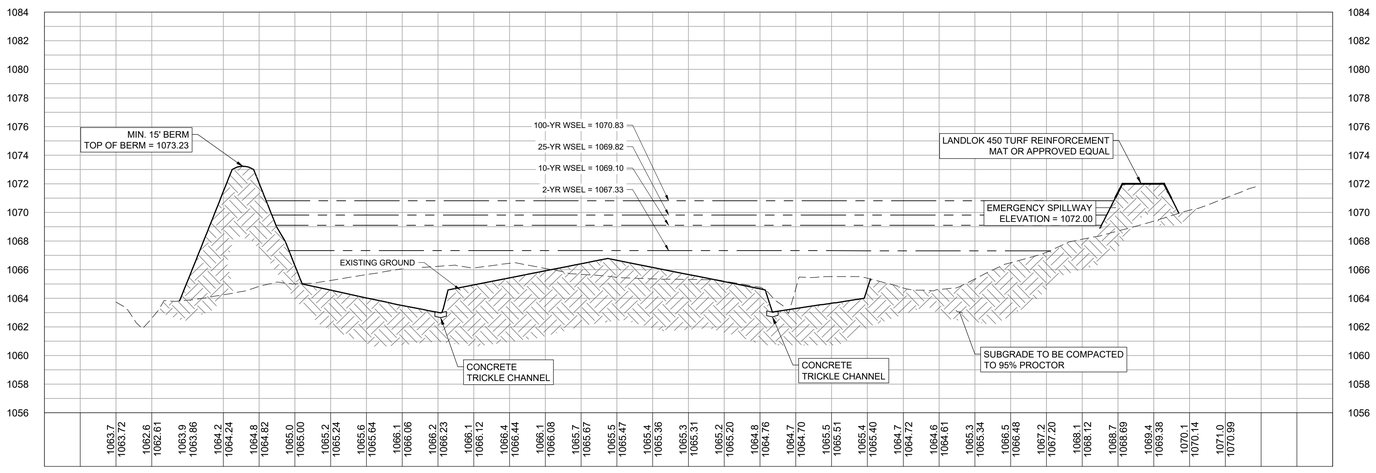
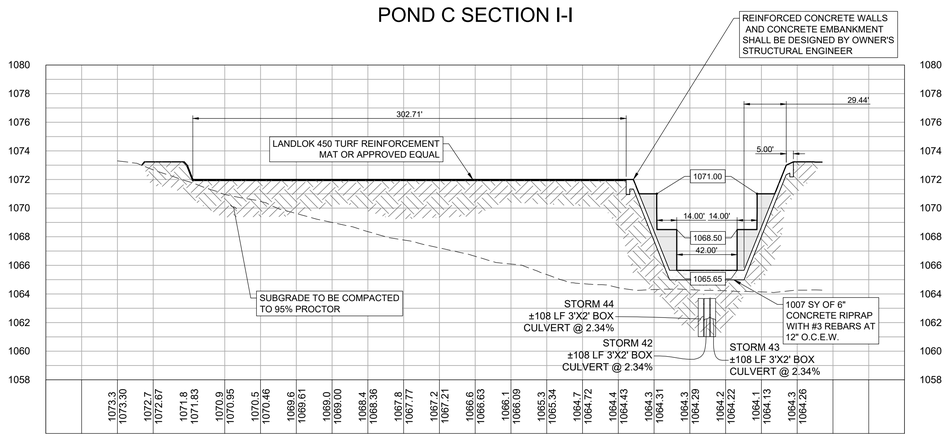
POND C SECTION G-G



POND C SECTION H-H



POND C SECTION I-I



VERTICAL 3 0

VERT. SCALE 1" = 3'
HORZ. SCALE 1" = 30'

EXISTING GRADE - CENTERLINE

PROPOSED GRADE - CENTERLINE

Stage-Storage Table - Detention Pond C

Elevation	Area (sf)	Area (ac)	Volume (cf)
1062.50	10	0.00023	0
1063.00	4,571	0.10494	799
1064.00	40,944	0.93994	20,531
1065.00	120,120	2.75758	97,596
1066.00	188,070	4.31749	250,427
1067.00	233,444	5.35914	460,775
1068.00	262,393	6.02371	708,553
1069.00	297,970	6.84045	988,546
1070.00	329,023	7.55333	1,301,914
1071.00	358,215	8.22348	1,645,430
1072.00	400,108	9.18522	2,024,398
1073.00	451,101	10.35585	2,449,748

Elevation-Discharge Table - Pond C

Storm Event	Water Surface Elevation	Discharge (cfs)
2-Year	1067.3	507-cfs
10-Year	1069.1	1168-cfs
25-Year	1069.8	1563-cfs
100-Year	1070.8	2207-cfs

NO.	REVISION	BY	DATE

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

LAND DEV CONSULTING, LLC
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TX 78735
OFFICE: 512.872.6696
FIRM NO. 16384

STATE OF TEXAS
SHERVIN NOOSHIN
96807
LICENSED
PROFESSIONAL ENGINEER
09/16/2020

DETENTION POND C SECTIONS, DETAILS AND CALCULATIONS

BUTLER FARMS PHASE ONE
MAIN INFRASTRUCTURE
CONSTRUCTION PLANS
LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 67 OF 121

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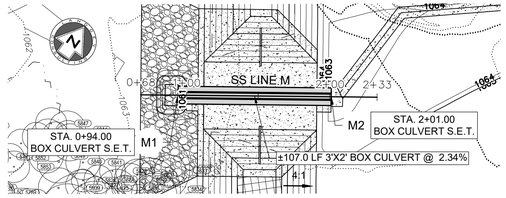
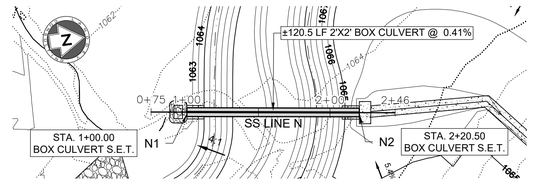
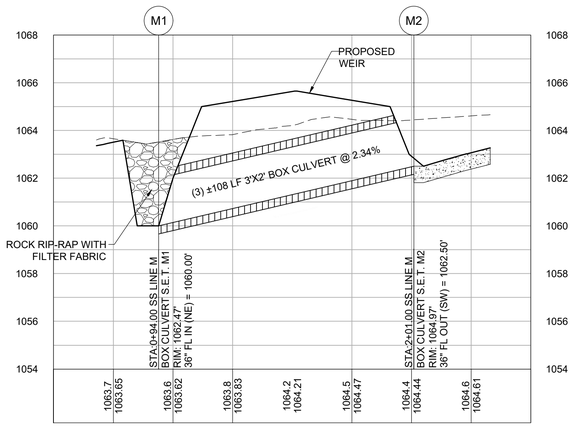
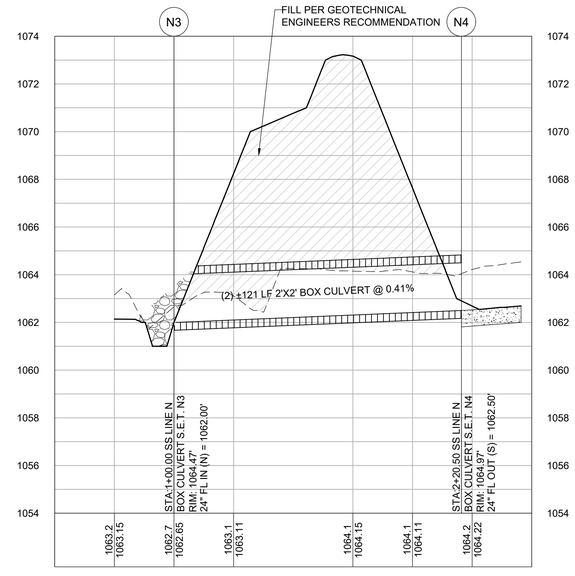




SS LINE M



SS LINE N



0 50' 100'

SCALE: 1" = 50'

VERTICAL 5 0

VERT. SCALE 1" = 5'
HORZ. SCALE 1" = 50'

EXISTING GRADE - CENTERLINE

PROPOSED GRADE - CENTERLINE

LEGEND

- 834 — EXISTING MINOR CONTOUR
- 835 — EXISTING MAJOR CONTOUR
- 834 — PROPOSED MINOR CONTOUR
- 835 — PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- FLOODPLAIN
- CREEK CENTERLINE
- SD — PROPOSED STORM LINE
- STORM SEWER JUNCTION BOX
- SD — STORM SEWER MAHNOLE
- CURB INLET
- AREA INLET
- GRATE INLET
- YARD INLET
- CONCRETE HEADWALL
- UPLAND SLOPED HEADWALL
- LOW BANK SLOPED HEADWALL
- WATER LINE
- FIRE HYDRANT
- WATER VALVE
- METER/FIRE METER
- BACKFLOW PREVENTER
- DRAIN VALVE
- AUTOMATIC AIR RELEASE VALVE
- FLUSH VALVE
- FIRE DEPARTMENT CONNECTION
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- WW — WASTE WATER LINE
- WW — WASTEWATER MANHOLE
- C.O. — WASTEWATER CLEANOUT
- SINGLE WASTEWATER SERVICE
- DOUBLE WASTEWATER SERVICE

NO.	REVISION	BY	DATE

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LAND DEV CONSULTING, LLC
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TX 78735
OFFICE: 512.872.6696
FIRM NO. 16384

STATE OF TEXAS
SHERVIN NOOSHIN
96807
LICENSED
PROFESSIONAL ENGINEER
09/16/2020

DETENTION POND C OUTFALL PLAN & PROFILES

BUTLER FARMS PHASE ONE MAIN INFRASTRUCTURE CONSTRUCTION PLANS

LIBERTY HILL, TEXAS

DESIGNED BY: SN/MK/CP
DRAWN BY: MK/GS/AA/CC
CHECKED BY: BG/SN/SH
APPROVED BY: JW

SHEET 68 OF 121

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 1, 2019

Mr. David Howell
Butler Family Partnership, LTD
15443 Knoll Trail Drive, Suite 130
Dallas, Texas 75248

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 1Main Infrastructure; located 2.5 miles west of CR 200 and SH 29, Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11001488; Regulated Entity No. RN110735917

Dear Mr. Howell:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP Application for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting, LLC on behalf of Butler Family Partnership, LTD on March 19, 2019. Final review of the CZP was completed after additional material was received on April 26, 2019. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 106.2 acres. It will include spine road infrastructure, two wet basin water quality structures, a detention pond, and water and wastewater infrastructure to support a future single-family residential development (separate approval required). The impervious cover will be 6.73 acres (6.3 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two wet basins (Wet Pond A and Wet Pond B), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 5,860 pounds of TSS generated from the 6.73 acres of impervious cover. The water quality facilities are being sized for future build-out on 367.34 acres with 153.78 acres of impervious cover. The required total suspended solids (TSS) treatment for the design is 133,849.78 pounds of TSS generated from the 153.78 acres of impervious cover. Wet Pond A is designed to treat 35,000 pounds of TSS. Wet Pond B is designed to treat 100,000 pounds of TSS. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to

the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

<u>After Completion of Construction:</u>

14. Owners of permanent BMPs and measures must insure that the 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 Austin Regional Office within 30 days of site completion.

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact James "Bo" Slone, P.G. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Robert Sadlier, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

RCS/jcs

Enclosure: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 9, 2020

Mr. David Howell
366 TX 29 LTD
15443 Knoll Trail Dr., Ste. 130
Dallas, TX 78248

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 1 Main Infrastructure; Located 2.5 miles W. of CR 200 and SH 29; Liberty Hill, Texas

TYPE OF PLAN: Request for Modification of an Approved Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program (EAPP) ID No. 11002006; Regulated Entity No. RN110735917

Dear Mr. Howell:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP Modification for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting on behalf of 366 TX 29 LTD on April 9, 2020. Final review of the CZP was completed after additional material was received on June 10, 2020 and July 6, 2020. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The Butler Farms Phase 1 Main Infrastructure CZP (EAPP ID No. 11001488), approved by letter dated May 1, 2019, included the construction of two wet basins (Wet Pond A and Wet Pond B) designed to provide permanent water quality treatment for the proposed Butler Farms development.

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 120.08 acres. It will include the addition of 23 single-family residences with utilities, drives, and associated appurtenances to the previously approved Butler Farms development. The project will also include modifications to Wet Pond A and Wet Pond B; the depth will be decreased. The impervious cover will be 10.05 acres (8.4 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two wet basins (Wet Pond A and Wet Pond B; EAPP ID No. 11001488), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 8,478 pounds of TSS generated from the 10.05 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. This modification is subject to all Special and Standard Conditions listed in the CZP approval letter dated May 1, 2019.

II. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

III. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved CZP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the

payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must ensure that the 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 Austin Regional Office within 30 days of site completion.
15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved CZP. If the new owner intends to commence any new regulated activity on the site, a new CZP that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
17. A CZP approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new CZP must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ms. Michelle Zvonkovic of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Robert Sadlier, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

RCS/maz

Enclosure: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 28, 2021

Mr. David Howell
366 TX 29, LTD
15443 Knoll Trail Drive. Suite 130
Dallas, TX 75248

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 1 Main Infrastructure; Located 2.5 miles west of CR 200 and SH 29; Liberty Hills, Texas

TYPE OF PLAN: Request for Modification of an Approved Contributing Zone Plan (CZP-MOD); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002294; Regulated Entity No. RN110735917

Dear Mr. Howell:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP-MOD for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting LLC on behalf of 366 TX 29, LTD on November 25, 2020. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The Butler Farms Phase I Main Infrastructure CZP (EAPP ID No. 11001488) approved by letter dated May 1, 2019, included the construction of two wet basins (Wet Pond A and Wet Pond B), designed to provide permanent water quality treatment for the project site.

The Butler Farms Phase I Main Infrastructure CZP-MOD (EAPP ID No. 11002006) approved by letter dated July 9, 2020, included the addition of 23 single family residences with utilities, drives and associated appurtenances. The project also included modifications to Wet Pond A and Wet Pond B; the depth of the ponds was decreased.

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 120.08 acres. It will include modifications to Wet Pond A and Wet Pond B; the average depth of the ponds will be increased. The impervious cover will be 10.05 acres (8.4 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two wet basins (Wet Pond A and Wet Pond B; EAPP ID No. 1001488), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be modified to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 8,478 pounds of TSS generated from the 10.05 acres of impervious cover. The water quality facilities are being sized for future build-out on 367.34 acres with 135.30 impervious cover. The required total suspended solids (TSS) treatment for the design is 117,767 pounds of TSS generated from the 135.3 acres of impervious cover. Wet Pond A is designed to treat 30,000 pounds of TSS from 29.39 acres of impervious cover. Wet Pond B is designed to treat 95,000 pounds of TSS from 101.84 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. This modification is subject to all Special and Standard Conditions listed in the CZP approval letters EAPP ID No. 11001488 and EAPP ID No. 11002006.

II. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

III. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must ensure that the 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 Austin Regional Office within 30 days of site completion.

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Bob Castro, P.E. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Robert Sadlier, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

RCS/rbc

Enclosure: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 10, 2020

Mr. David Howell
366 TX 29, LTD
15443 Knoll Trail Drive, Suite 130
Dallas, Texas 75248

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 9; Located 2.5 miles west of CR 200 and SH 29; Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Regulated Entity No. RN110735917; Additional ID No. 11002106

Dear Mr. Howell:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting, LLC on behalf of 366 TX 29, LTD on July 9, 2020. Final review of the CZP was completed after additional material was received on August 24, 2020. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

This project proposes a residential development on a 28.18-acre site with 16.97 acres (60.22 percent) of impervious cover. The project proposes the construction of 151 single-family residential lots including associated rights-of-way, drainage and utilities. Project wastewater will be disposed of by conveyance to the Liberty Hill Wastewater Treatment Plant owned and operated by the City of Liberty Hill.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, an existing wet basin "B" (11001488) and batch detention basin "D", designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be utilized to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 14,771 pounds of TSS generated from the 16.97 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. The permanent pollution abatement measures shall be operational prior to first occupancy of respective drainage basins.

II. All sediment and/or media removed from the water quality basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and

the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must insure that the 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 Austin Regional Office within 30 days of site completion.
15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive

director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact the Edwards Aquifer Protection Program Austin Regional Office at (512) 339-2929.

Sincerely,

Robert Sadlier, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

RCS/dpm

Enclosure: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Shervin Nooshin, P.E., LandDev Consulting, LLC

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 4, 2021

Mr. Kyle Smith
Meritage Homes of Texas, LLC
8920 Business Park Dr., Ste 350
Austin, Texas 78735

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 7; Located 2.5 miles west of CR 200 and SH 29; Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Regulated Entity No. RN110735917; Additional ID No. 11002455

Dear Mr. Smith:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP Application for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting, LLC on behalf of Meritage Homes of Texas, LLC on March 31, 2021. Final review of the CZP was completed after additional material was received on June 2, 2021. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 48.4 acres. It will include the construction of 89 single-family residential homes with associated right-of-way, drainage, and utilities. The impervious cover will be 7.96 acres (16.4 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant owned by the City of Liberty Hill.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, one previously approved wet basin (Pond B, 11001488), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be utilized to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 6,928 pounds of TSS generated from the 7.96 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. The permanent pollution abatement measure shall be operational prior to first occupancy of the homes.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges

from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must insure that the 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 Austin Regional Office within 30 days of site completion.
15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new

regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact the Edwards Aquifer Protection Program of the Austin Regional Office at 512-339-2929.

Sincerely,

Monica Reyes for

David Van Soest
Regional Director
Austin and Waco Regions
Texas Commission on Environmental Quality

DVS/jv

Enclosures: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Shervin Nooshin, LandDev Consulting, LLC

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 17, 2021

Mr. Nagesh Basnyat
JNC Development, Inc.
12300 Montwood Dr.
El Paso, TX 799228

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phases 2, 3, & 4, located 2.5 miles W of CR 200 and SH 29, Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002600; Regulated Entity No. RN110735917

Dear Mr. Basnyat:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the request for approval of a Contributing Zone Plan Application for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting, LLC on behalf JNC Development, Inc. on July 27, 2021. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The Butler Farms Phases 1 Main Infrastructure CZP (EAPP ID: 11001488) approved by letter dated May 1, 2019, included the construction of two wet basins, “Wet Pond A” and “Wet Pond B” designed to provide permanent water quality treatment for the residential development. The wet basins were physically modified in approval letter dated July 9, 2020 (EAPP ID: 11002006) and approval letter dated January 28, 2021 (EAPP ID: 11002294). The Butler Farms Phase 9 was approved by letter dated September 10, 2020 (EAPP ID: 11002106). The Butler Farms Phase 7 was approved by letter dated June 4, 2021 (EAPP ID: 11002455).

PROJECT DESCRIPTION

The proposed residential development will have a site area of approximately 36.35 acres. It will include the construction of 198 single family lots, associated drives, drainage improvements, and utilities. The impervious cover will be 20.36 acres (56.0%). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two existing wet basins, "Wet Pond A" and "Wet Pond B" (EAPP ID: 11001488), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be used to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 17,721 pounds of TSS generated from the 20.36 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved CZP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated

activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved CZP, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.
12. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
13. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

14. Owners of permanent BMPs and measures must ensure that the 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 <Austin/San Antonio> Regional Office within 30 days of site completion.
15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
17. A CZP approval or extension will expire, and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A CZP must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ms. Jade Mendiola, of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/jkm

Enclosure: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 11, 2022

Mr. Wyatt Henderson
366 TX 29 LTD
15443 Knoll Trail Dr. Ste. 130
Dallas, TX 75248

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 12; Located 2.5 Mi. W of CR 200 and SH 29; Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002718; Regulated Entity No. RN110735917

Dear Mr. Henderson:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP Application for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting on behalf of 366 TX 29 LTD on October 8, 2021. Final review of the CZP was completed after additional material was received on January 10, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected, and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The Butler Farms Pond B, a wet basin, was approved by letter dated May 1, 2019 (EAPP ID No. 11001488). Pond B was later modified in approval letter dated July 9, 2020 (EAPP ID: 11002006) and approval letter dated January 28, 2021 (EAPP ID: 11002294).

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 13.50 acres. It will include a right-of-way, drainage, and utilities to support the future Butler Farms single-family residential development. The impervious cover will be 4.51 acres (33.4 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, an existing wet basin, Pond B (EAPP ID No. 11001488), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), was constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 3,926 pounds of TSS generated from the 4.51 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must ensure that the 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 Austin Regional Office within 30 days of site completion.
15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. A Contributing Zone Plan approval or extension will expire, and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Savannah Finger of the Edwards Aquifer Protection Program of the Austin Regional Office at 512-339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/sjf

Enclosure: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Shervin Nooshin, P.E., LandDev Consulting

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 28, 2022

Mr. Kyle Smith
Meritage Homes of Texas
8920 Business Park Dr., Ste. 350
Austin, Texas 78759

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 8; Located 2.5 Mi W of CR 200 and SH 29; Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002747; Regulated Entity No. RN110735917

Dear Mr. Smith:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP application for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting, LLC on behalf of Meritage Homes of Texas on October 26, 2021. Final review of the CZP was completed after additional material was received on January 5, 2022, and January 21, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected, and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

A CZP for Butler Farms Phase 1 (EAPP ID No. 11001488) was approved by letter dated May 1, 2019, and included the construction of two wet basins. Subsequent requests to modify the wet basins were approved by letters dated July 9, 2020 (EAPP ID No. 11002006) and January 28, 2021 (EAPP ID No. 11002294). A CZP for Butler Farms Phase 9 (EAPP ID No. 11002106) was approved by letter dated September 10, 2020, and included the construction of a batch detention basin.

PROJECT DESCRIPTION

The proposed single family residential project will have an area of approximately 23.31 acres. It will include 138 single family lots, associated right-of-way, utilities, and associated appurtenances. The impervious cover will be 12.33 acres (52.9 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, wet basin (Wet Pond B; EAPP ID No. 11002294) and a batch detention basin (Pond D; EAPP ID No. 11002106), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be used to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 10,732 pounds of TSS generated from the 12.33 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the residences.

II. All sediment and/or media removed from the water quality basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

<u>After Completion of Construction:</u>

14. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

15. A Contributing Zone Plan approval or extension will expire, and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
16. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Betsy Yockey of the Edwards Aquifer Protection Program of the Austin Regional Office at 512-339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/bmy

CC: Mr. Shervin Nooshin, P.E., LandDev Consulting, LLC

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 20, 2022

Mr. Wyatt Henderson
366 TX 29, Ltd.
15443 Knoll Trail Drive, Ste. 130
Dallas, Texas 75248-3451

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Amenity Center; Located NW of SH 29 and CR 277; Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002941; Regulated Entity No. RN111436234

Dear Mr. Henderson:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP application for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting, LLC on behalf of 366 TX 29, Ltd. on February 15, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected, and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

A CZP for Butler Farms Phase 1 (EAPP ID No. 11001488) was approved by letter dated May 1, 2019, and included the construction of two wet basins (Wet Pond A and Wet Pond B). The ponds were designed for future build-out within a 367.34-acre site. Subsequent requests to modify the wet basins were approved by letters dated July 9, 2020 (EAPP ID No. 11002006) and January 28, 2021 (EAPP ID No. 11002294).

PROJECT DESCRIPTION

The proposed project will have an area of approximately 4.55 acres. It will include the construction of an amenity center, utilities, and associated appurtenances. The impervious cover will be 1.62 acres (35.6 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a wet basin (Wet Pond A; EAPP ID No. 11001488), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be used to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 1,410 pounds of TSS generated from the 1.62 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the residences.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

<u>After Completion of Construction:</u>

14. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

15. A Contributing Zone Plan approval or extension will expire, and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
16. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ryan Soutter of the Edwards Aquifer Protection Program of the Austin Regional Office at 512-339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/rts

CC: Mr. Shervin Nooshin, P.E., LandDev Consulting, LLC

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 20, 2022

Mr. Kyle Smith
Meritage Homes of Texas
8920 Business Park Dr., Suite 350
Austin, Texas 78759

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 6; Located NW of SH 29 and CR 277; City of Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002957; Regulated Entity No. RN110735917

Dear Mr. Smith:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP application for the above-referenced project submitted to the Austin Regional Office by LandDev Consulting, LLC on behalf of Meritage Homes of Texas on February 25, 2022. Final review of the CZP was completed after additional material was received on May 19, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected, and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

A CZP for Butler Farms Phase 1 (EAPP ID No. 11001488) was approved by letter dated May 1, 2019, and included the construction of two wet basins. Subsequent requests to modify the wet basins were approved by letters dated July 9, 2020 (EAPP ID No. 11002006) and January 28, 2021 (EAPP ID No. 11002294).

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 23.83 acres. It will include 114 residential lots, associated right of way, drainage, and utilities. The impervious cover will be 12.96 acres (54.4 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a wet basin (Pond B; EAPP ID No. 11002294), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 11,280 pounds of TSS generated from the 12.96 acre increase of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the residences.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number

for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must insure that the 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 Austin Regional Office within 30 days of site completion.
15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Betsy Yockey of the Edwards Aquifer Protection Program of the Austin Regional Office at (512)339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/bmy

Enclosures: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

Cc: Mr. Shervin Nooshin, P.E., LandDev Consulting, LLC

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 7, 2022

Mr. Wyatt Henderson
366 TX 29, Ltd.
15443 Knoll Trail Dr., Ste. 130
Dallas, Texas 75248-3451

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 14; NW of SH 29 and CR 277.; Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11003184; Regulated Entity No. RN110735917

Dear Mr. Henderson:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP application for the above-referenced project submitted to the Austin Regional Office by HR Green, Inc. on behalf of 366 TX 29, Ltd. on July 27, 2022. Final review of the CZP was completed after additional material was received on September 23, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected, and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

A CZP for Butler Farms Phase 1 Main Infrastructure (EAPP ID No. 11001488) was approved by letter dated May 1, 2019 and included the construction of two wet basins with permanent pools (Wet Pond A and Wet Pond B). The ponds were designed for future build-out within a 367.34-acre site.

PROJECT DESCRIPTION

The proposed project will have an area of approximately 40.5 acres. It will include the construction of 166 single-family homes, driveways, roads, sidewalks, utilities, and associated appurtenances. The impervious cover will be 16.72 acres (41.3 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two wet basins (Wet Pond A and Wet Pond B; EAPP ID No. 11001488), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be utilized to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 14,553 pounds of TSS generated from the 16.72 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
15. A Contributing Zone Plan approval or extension will expire, and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

16. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ryan Soutter of the Edwards Aquifer Protection Program of the Austin Regional Office at 512-339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/rts

CC: Mr. Shervin Nooshin, P.E., HR Green, Inc.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 4, 2022

Mr. Wyatt Henderson
366 TX 29, LTD
15443 Knoll Trail Dr., Ste. 130
Dallas, Texas 75248

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farm Phase 15; located NW of SH 29 and CR 277; Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11003257; Regulated Entity No. RN111573101

Dear Mr. Henderson:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP Application for the above-referenced project submitted to the Austin Regional Office by HR Green Inc. on behalf of 366 TX 29, LTD. on September 15, 2022. Final review of the CZP was completed after additional material was received on November 1, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

A CZP was approved by letter dated May 1, 2019 (EAPP ID No. 11001488). The CZP included the construction of a wet basin named Pond B. A CZP Modification approved by letter dated July 9, 2022 (EAPP ID No. 11002006) modified Pond B. A second CZP Modification approved by letter dated January 28, 2021 (EAPP ID No. 11002994) also modified Pond B.

PROJECT DESCRIPTION

The proposed single-family residential project will have an area of approximately 24.999 acres. It will include 98 lots, streets, sidewalks, utilities, and associated appurtenances. The impervious cover will be 9.3 acres (37.2 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a wet basin (Pond B; EAPP ID no. 11002994), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be used to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 8,094.72 pounds of TSS generated from the 9.3 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must ensure that the 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 Austin Regional Office within 30 days of site completion.
15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive

director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact James "Bo" Slone, P.G. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/jcs

Enclosure: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

Cc: Shervin Nooshin, P.E., HR Green, Inc.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 9, 2022

Mr. Wyatt Henderson
366 TX 29, LTD
2121 Midway Road, Suite 320
Carrollton, Texas 75006

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Butler Farms Phase 10; Located northwest of SH 29 and CR 277; Liberty Hill, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Regulated Entity No. RN111583324; Additional ID No. 11003287

Dear Mr. Henderson:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP application for the above-referenced project submitted to the Austin Regional Office by HR Green Development TX, LLC on behalf of 366 TX 29, LTD on October 4, 2022. Final review of the CZP was completed after additional material was received on December 5, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 7.98 acres. It will include clearing and grading, installation of utilities, the construction of 26 single-family lots and right-of-way. The impervious cover will be 3.91-acres (49- percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant owned by the City of Liberty Hill.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two existing Wet Basins (Pond A and Pond B 11001488), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be utilized to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 3,403 pounds of TSS generated from the 3.91 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

II. All sediment and/or media removed from the water quality basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges

from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must insure that the 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 Austin Regional Office within 30 days of site completion.
15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new

regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact the Edwards Aquifer Protection Program of the Austin Regional Office at 512-339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/nbv

Enclosures: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Shervin Nooshin, P.E., HR Green Development TX, LLC

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 3, 2023

Mr. Wyatt Henderson
366 TX 29, LTD
15443 Knoll Trail Drive, Suite 130
Dallas, TX 75248

Re: Edwards Aquifer, Williamson County
NAME OF PROJECT: Butler Farms Phase 16; Located Northwest of SH 29 and CR 277; Liberty Hill, Texas
TYPE OF PLAN: Request Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer
Edwards Aquifer Protection Program ID No. 11003326; Regulated Entity No. RN111596110

Dear Mr. Henderson:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP for the above-referenced project submitted to the Austin Regional Office by HR Green Development TX, LLC on behalf of 366 TX 29, LTD on October 20, 2022. Final review of the CZP was completed after additional material was received on January 27, 2023. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

A CZP was approved by letter dated May 1, 2019 (EAPP ID No. 11001488). The CZP included the construction of a wet basin (Pond B). A CZP Modification approved by letter dated July 9, 2022 (EAPP ID No. 11002006) modified Pond B. A second CZP Modification, approved by letter dated January 28, 2021 (EAPP ID No. 11002994), also modified Pond B.

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 6.16 acres. It will include 31 single-family lots, streets, sidewalks, utilities and associated appurtenances. The impervious cover will be 3.13 acres (50.8 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a wet basin (Pond B; EAPP ID No. 1002994), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be used to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 2,724 pounds of TSS generated from the 3.13 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

Pond B (EAPP ID No. 1002994) is sized for future development and is designed to remove 81,000 pounds of TSS to treat stormwater runoff from a maximum of 84.35 acres of impervious cover.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number

for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
15. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

16. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Bob Castro, P.E. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/rbc

Cc: Shervin Nooshin, P.E., HR Green Development TX, LLC

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 18, 2023

Nagesh Basnyat
JNC Development, Inc
12300 Montwood Drive
El Paso, Texas, 79928

Re: Approval of a Contributing Zone Plan (CZP)
Butler Farms Phase 5; Located Northwest of Butler Farms Blvd. and Lazy Mountain St.;
Liberty Hill, Williamson County, Texas
Edwards Aquifer Protection Program ID: 11003778, Regulated Entity No. RN110735917

Dear Mr. Basnyat:

The Texas Commission on Environmental Quality (TCEQ) has completed its review on the application for the above-referenced project submitted to the Edwards Aquifer Protection Program (EAPP) by HR Green Development TX, LLC on behalf of the applicant, JNC Development, Inc. on October 30, 2023. Final review of the application was completed after additional material was received on December 11, 2023.

As presented to the TCEQ, the application was prepared in general compliance with the requirements of 30 Texas Administrative Codes (TAC) Chapter §213. The permanent best management practices (BMPs) and measures represented in the application were prepared by a Texas licensed professional engineer (PE). All construction plans and design information were sealed, signed, and dated by a Texas licensed PE. Therefore, the application for the construction of the proposed project and methods to protect the Edwards Aquifer are **approved,** subject to applicable state rules and the conditions in this letter.

This approval expires two years from the date of this letter, unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been officially requested. This approval or extension will expire, and no extension will be granted if more than 50 percent of the project has not been completed within ten years from the date of this letter.

The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this contributing zone plan or modification to a plan. A motion for reconsideration must be filed in accordance with 30 TAC §50.139.

BACKGROUND

The original CZP was approved by letter dated May 1, 2019 (EAPP ID No. 11001488). The CZP included the construction of two wet basins (Wet Basin A and Wet Basin B), designed to provide water quality treatment for the project site. Subsequent CZP applications were approved under the regulated entity number RN110735917.

PROJECT DESCRIPTION

The proposed residential project will have an area of approximately 9.61 acres. The project will include construction of 47 residential lots, drives, sidewalks, streets, drainage improvements, a utilities, and associated appurtenances. The impervious cover will be 4.88 acres (50.8 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two existing Wet Basins (Pond A and Pond B, 11001488), designed using the TCEQ technical guidance, *RG-348, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices,* will be implemented to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 4,248 pounds of TSS generated from the 4.88 acres of impervious cover. The approved permanent BMPs and measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The permanent BMPS shall be operational prior to occupancy or use of the proposed project. Inspection, maintenance, repair, and retrofit of the permanent BMPs shall be in accordance with the approved application.

STANDARD CONDITIONS

1. The plan holder (applicant) must comply with all provisions of 30 TAC Chapter §213 and all technical specifications in the approved plan. The plan holder should also acquire and comply with additional and separate approvals, permits, registrations or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, Dam Safety, Underground Injection Control) as required based on the specifics of the plan.

2. In addition to the rules of the Commission, the plan holder must also comply with state and local ordinances and regulations providing for the protection of water quality as applicable.

Prior to Commencement of Construction:

3. The plan holder of any approved contributing zone plan must notify the EAPP and obtain approval from the executive director prior to initiating any modification to the activities described in the referenced application following the date of the approval.

4. The plan holder must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the EAPP no later than 48 hours prior to commencement of the regulated activity. Notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person.

5. Temporary erosion and sedimentation (E&S) controls as described in the referenced application, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

6. The application must indicate the placement of permanent aboveground storage tanks facilities for static hydrocarbons and hazardous substances with cumulative storage capacity of 500 gallons or more. Subsequent permanent storage tanks on this project site require a modification to be submitted and approved prior to installation.

7. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

8. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge must be filtered through appropriately selected BMPs.

9. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

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

After Completion of Construction:

11. Owners of permanent BMPs and temporary measures must ensure that the BMPs and measures are constructed and function as designed. A Texas licensed PE **must certify** in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the EAPP within 30 days of site completion.

12. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property or the ownership of the property is transferred to the entity. A copy of the transfer of responsibility must be filed with the executive director through the EAPP within 30 days of the transfer. TCEQ form, Change in Responsibility for Maintenance on Permanent BMPs and Measures (TCEQ-10263), may be used.

The holder of the approved contributing zone plan is responsible for compliance with Chapter §213 subchapter B and any condition of the approved plan through all phases of plan implementation. Failure to comply with any condition within this approval letter is a violation of Chapter §213 subchapter B and is subject to administrative rule or orders and penalties as provided under §213.25 of this title (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. Upon legal transfer of this property, the new owner is required to comply with all terms of the approved contributing zone plan.

This action is taken as delegated by the executive director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Jasmine Brown of the Edwards Aquifer Protection Program at (512) 339-7006 or the regional office at 512-339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/job

cc: Christine Campbell, P.E., HR Green Development TX, LLC

		Estimated Impervious Cover Tracking Table																	
		Phase 1 (Mod. #2 Approved 1/28/21)			**Phase 9** (Approved 9/10/20)			**Phase 7** (Approved 6/04/21)			**Phases 2, 3, & 4** (Approved 9/17/21)			**Phase 12** (Approved 01/11/22)			**Phase 8** (Approved 01/28/22)			**Phase 6** (Approved 05/20/22)		
BMP		Impervious Cover (as of Ph1)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph9)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph7)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph2-4)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph12)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph8)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph6)	Required TSS Load Removal	Provided TSS Load Removal
Pond A	Wet Basin	5.02	4,373	4,373	Phase 9 does not drain to Pond A			Phase 7 does not drain to Pond A			22.87	19,906	19,906	Phase 12 does not drain to Pond A			Phase 8 does not drain to Pond A			Phase 6 does not drain to Pond A		
Pond B	Wet Basin	2.52	2,197	2,197	10.15	8,835	8,835	18.11	15,763	15,763	19.84	17,269	17,269	25.47	22,169	22,169	30.35	26,417	26,417	43.31	37,697	37,697

		Estimated Impervious Cover Tracking Table																	
		Amenity Center (Approved 05/20/22)			**Phase 14** (Approved 10/07/22)			**Phase 15** (Approved 11/04/22)			**Phase 10** (Approved 12/09/22)			**Phase 16** (Approved 02/03/23)			**Phase 5** (Approved 12/18/23)			**Phase 13**		
BMP		Impervious Cover (as of Amenity)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph14)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph15)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph10)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph16)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph5)	Required TSS Load Removal	Provided TSS Load Removal	Impervious Cover (as of Ph5)	Required TSS Load Removal	Provided TSS Load Removal
Pond A	Wet Basin	24.96	21,725	21,725	27.96	24,336	24,336	Phase 15 does not drain to Pond A			28.66	24,946	24,946	Phase 16 does not drain to Pond A			29.61	25,773	25,773	31.71	27,602	29,750
Pond B	Wet Basin	Amenity Center does not drain to Pond B			57.34	49,909	49,909	66.63	57,995	57,995	69.84	60,789	60,789	72.97	63,510	63,510	76.90	66,934	66,934	84.82	73,829	78,443

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.

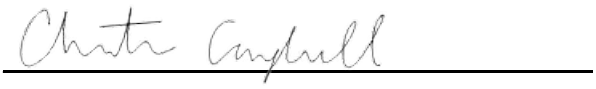
Signature

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: Christine Campbell

Date: 10/23/2024

Signature of Customer/Agent:



Regulated Entity Name: Butler Farms Phase 13

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

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

2. ☒ **Attachment A - Spill Response Actions**. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.

3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ☒ **Attachment B - Potential Sources of Contamination**. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

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

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

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

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: San Gabriel River

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☐ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

ATTACHMENT A – SPILL RESPONSE ACTIONS

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses. Measures include 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 practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well-ventilated, and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the Owner and to the appropriate State or local government agency, regardless of the size.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The site superintendent responsible for the day-to-day site operations will be the spill prevention and cleanup coordinator. He will designate at least three other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the office trailer onsite.
- Any reportable quantity hydrocarbon or hazardous material spill should be reported to the TCEQ at the following 24-hour toll free number 1-800-832-8224.

For a spill of Reportable Quantity:

- Initial notification. Upon the determination that a reportable discharge or spill has occurred, the responsible person shall notify the agency as soon as possible but not later than 24 hours after the discovery of the spill or discharge.
- Method of notification. The responsible person shall notify the agency in any reasonable manner including by telephone, in person, or by any other method approved by the agency. In all cases, the initial notification shall provide, to the extent known, the information listed in subsection (d) of Title 30, Part I, Chapter 327, Rule §327.3. Notice provided under this section satisfies the federal requirement to notify the State Emergency Response Commission in the State of Texas.
- Notification of local government authorities. If the discharge or spill creates an imminent health threat, the responsible person shall immediately notify and cooperate with local emergency authorities. The responsible party will cooperate with the local emergency authority in providing support to implement appropriate notification and response actions. The local emergency authority, as necessary, will implement its emergency management plan, which may include notifying and evacuating affected persons. In the absence of a local emergency authority, the responsible person shall take reasonable measures to notify potentially affected persons of the imminent health threat.
- As soon as possible, but no later than two (2) weeks after discovery of the spill or discharge, the Contractor shall reasonably attempt to notify the Owner (if identifiable) or Occupant of the property upon which the discharge or spill occurred as well as the occupants of any property that the Contractor believes is adversely affected.

More information on spill rules and appropriate responses is available on the TCEQ website at:
http://www.tceq.texas.gov /response/

Vehicle and Equipment Maintenance:

- 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.
- Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
- 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.
- Always use secondary containment, such as drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
  - Place drip pans or absorbent materials under paving equipment when not in use.
  - Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of them properly.
  - Promptly transfer used fluids to the proper waste or recycling drums. Do not leave full drip pans or other containers lying around.
  - Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over the 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.
  - Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all of 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.

ATTACHMENT B – POTENTIAL SOURCES OF CONTAMINATION

Once grading activities begin, erosion of bare soil during rainfall events is the most common source of contamination. Silt fences will be installed at the beginning of the grading operation to minimize the potential for transport of the soil offsite.

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

During construction activities, potential sources of contamination would include petroleum products leaking from construction equipment. The contractor will be advised to keep the equipment in working order and report any spills per the spill response plan.

Other potential sources of contamination include hydraulic fluid and diesel fuel from mechanical equipment and vehicles, as well as paints and chemicals used on site. Any spills shall be handled according to the Spill Response Actions in **Attachment A**.

ATTACHMENT C – SEQUENCE OF MAJOR ACTIVITIES

The first activity of construction will be to install erosion control measures, consisting of silt fences, storm drains, inlet protection, and stabilized construction entrances. Temporary erosion control measures will remain in place throughout the duration of construction and will be required to be maintained by the contractor to ensure proper functionality, especially after storm events. All disturbed areas to remain pervious will be vegetated using the procedures detailed in the construction plans and all temporary erosion control measures will be removed upon revegetation. Construction activities associated with this application is expected to disturb approximately 19.74 acres of the site.

Major Construction Activities and Sequencing:

The major construction activities for this project will include and be sequenced as follows:

1. Established Best Management Practices shall consist of the following: silt fencing, a temporary spoils area, a concrete truck washout pit, and temporary construction entrances (Estimated area to be disturbed = 0.65 Acres). These items are to remain and be maintained throughout all construction activities.

2. Initial site mass grading operation including right-of-way and first grading. (Estimated area to be disturbed = 13.67 Acres)
3. Installation of utilities including storm, water, and wastewater (Estimated area to be disturbed = 0.61 Acres).
4. Construction of street/driveway pavement including backfill behind curbs (estimated area to be disturbed = 2.65 Acres)
5. Construction (estimated area to be disturbed = 19.74 Acres).
6. Final soil stabilization for the site and removal of temporary BMPs once the soil has been stabilized.

The contractor is responsible for implementing and maintaining the storm water pollution prevention plan which includes maintaining all the necessary erosion controls throughout construction.

ATTACHMENT D – TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

As shown on the Construction Erosion Control Plans, temporary BMP practices and measures will include installing silt fences, inlet protection, stabilized construction entrances, a concrete truck washout, and a temporary spoils area prior to beginning grading operations on the site. Temporary measures are intended to provide a method of slowing the upgradient flow, onsite flow or runoff from the construction site in order to allow sediment and suspended solids to settle out of the water. By containing the sediment and solids within the site, they will not enter surface streams and/or sensitive features. As a temporary BMP, a silt fence will be installed to reduce pollutants. BMP measures utilized in this plan are intended to allow storm water to continue downstream after passing through for treatment.

Site Preparation:
The methodology for pollution prevention of all on-site stormwater will include a) the erection of silt fences along the downgradient boundary of the construction activities, b) installation of inlet protection at all inlets, c) installation of a stabilized construction entrance to reduce the dispersion of sediment from the site, and d) installation of a construction staging area.

Construction:
All installed erosion control measures will be inspected, and if necessary, repaired before any additional construction begins, as well as periodically throughout the construction process. The contractor will be responsible for all maintenance of erosion control measures, as well as the installation of all remaining on-site control measures, including the concrete truck washout, as necessary.

ATTACHMENT E – REQUEST TO TEMPORARILY SEAL A FEATURE

There are no sensitive features on-site.

ATTACHMENT F – STRUCTURAL PRACTICES

No flows toward exposed soils are anticipated and all runoff from the site will encounter a silt fence or wet basin before exiting the overall property.

ATTACHMENT G – DRAINAGE AREA MAPS

Refer to the construction plans attached.

ATTACHMENT H – TEMPORARY SEDIMENT POND(S) PLANS AND CALCULATIONS

The existing Wet Basins, Pond A and Pond B, will act as temporary and permanent sedimentation ponds. The calculated temporary sedimentation pond volume required for the Butler Farms Phase 13 property is calculated below.

Calculation: Required Volume = (Rainfall Depth*Runoff Coefficient*Drainage Area*120%)
= 1.60 in. * 0.36 * 19.94 acres * 120%
= 50,031 cf.

ATTACHMENT I – INSPECTION AND MAINTENANCE FOR BMPS

See construction plans included with this application submittal.

Temporary Best Management Practices (BMPs) and measures will be used during construction to prevent pollution of groundwater, surface water and naturally occurring environmental features. Silt fence, inlet protection, stabilized construction entrances, concrete washout area, and a temporary spoils area will be installed prior to beginning construction and prior to commencement of any of the activities defined in the sequence of construction as ***Attachment C***. Inspection and maintenance of the on-site controls shall be performed during the site clearing and rough grading process. Weekly inspections will be documented in an inspection report. The inspection reports will document maintenance activities, sediment removal, and any modifications to the erosion and sedimentation controls. The perimeter fence shall be regularly monitored to ensure that the buffers remain no-construction zones until the site work has been completed and authorization has been granted by the engineer. Refer to the construction plans attached for specific controls and details.

BMPs and measures will prevent pollution of surface water or groundwater that originates on site or flows off-site, including pollution caused by contaminated stormwater run-off from the site, through the use of silt fences placed immediately downstream of disturbed areas and inlet protection at all inlets. To minimize destruction to any portion of the Contributing Zone, on-site perimeter silt fence will also be implemented for pertinent areas throughout the entirety of construction. The Contractor is expected to inspect the controls weekly and after significant rainfalls to ensure proper function. When silt accumulates six (6) inches in depth the Contractor shall promptly remove the silt from the controls.

BMPs and measures will prevent pollutants from entering surface streams or the aquifer by intercepting stormwater potentially carrying sediment and other pollutants. BMPs and measures will implement stabilized construction entrances, a construction stockpiling/staging area, and a concrete washout area to help minimize pollutant run-off and erosion generated during construction. Paved streets and driveways adjacent to these sites will be cleaned regularly to remove excess mud, dirt or rock tracked from the site. Sedimentation will be concentrated only in these areas for efficient maintenance. Water trucks will be on-site as necessary to aid be cleaned regularly to remove excess mud, dirt or rock tracked from the site. Sedimentation will be concentrated only in these areas for efficient maintenance. Water trucks will be on-site as necessary to aid in controlling dust. BMPs will be implemented to limit/prevent contaminated inflow from entering surface streams or the aquifer. These practices are to include the following measures: the use of silt fence, vegetative buffer zones, and inlet protection. The fabricated silt fence barricade will provide help to reduce the likelihood of contaminated runoff from entering the aquifer. If any sensitive features are identified by TCEQ inspections, or during excavation or construction, measures appropriate to the sensitivity of the discovered feature will be enacted. No blasting is proposed.

<u>Temporary Erosion and Sedimentation Notes:</u>

1. The Contractor shall maintain, install erosion/sedimentation controls and tree/natural protective fencing prior to any site preparation work (clearing, grubbing or excavation).
2. The placement of erosion/sedimentation controls and tree/natural area protective fencing shall be in accordance with the TCEQ Technical Guidance Manual and the approved Erosion and Sedimentation Control Plan. No erosion controls shall be placed beyond the property lines of the site unless written permission has been obtained from adjacent property owners.
3. A pre-construction conference shall be held on-site with the Contractor, design engineer/permit applicant and Environmental Inspector after installation of the erosion/sedimentation and tree/natural area protection measures and prior to beginning any site preparation work. The Contractor shall notify the Environmental Inspector at least three (3) days prior to the meeting date.
4. Any major variation in materials or locations of controls or fences from those shown on the approved plans will require a revision and must be approved by the reviewing engineer, environmental specialist or city arborist as appropriate. Minor changes to be made as field revisions to the Erosion and

Sedimentation Control Plan may be required by the Environmental Inspector during the course of construction to correct control inadequacies.

5. The Contractor is required to inspect the controls at weekly intervals and after significant rainfall events to ensure that they are functioning properly. The person(s) responsible for maintenance of controls shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six (6) inches.
6. Prior to final acceptance by the City, haul roads and waterway crossing constructed for temporary Contractor access must be removed, accumulated sediment removed from the waterway and the area restored to the original grade and revegetated. All land clearing debris shall be disposed of in approved soil disposal sites.
7. All work must stop if a void in the rock substrate is discovered, which is one (1) square foot in total area, blows air from within the substrate, and/or consistently received water during any rain event. At this time, it is the responsibility of the project manager to immediately contact an Environmental Inspector for further investigation.
8. All slopes shall be sodded or seeded with approved grass, grass mixtures or ground cover suitable to the area and season in which they are applied.
9. Silt fences, rock berms, sedimentation basins and similarly recognized techniques and materials shall be employed during construction to prevent point source sedimentation loading of downstream facilities. Such installation shall be regularly inspected for effectiveness. Additional measures may be required if, in the opinion of the City Engineer, they are warranted.
10. All temporary erosion control measures shall not be removed until final inspection and approval of the project by the engineer. It shall be the responsibility of the Contractor to maintain all temporary erosion control structures and to remove each structure as approved by the engineer.
11. Any dirt, mud, rocks, debris, etc., that is spilled, tracked, or otherwise deposited on any existing paved street shall be cleaned up immediately.

Dewatering Operations

1. Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP area under way, inspect weekly to verify continued BMP implementation.
2. Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
3. Unit-specific maintenance requirements are included with the description of each technology.
4. Sediment removed during the maintenance of a dewatering device may be either spread onsite and stabilized or disposed of at a disposal site.
5. Sediment that is commingled with other pollutants must be disposed of in accordance with all applicable laws and regulations.

ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Contractors will ensure that existing vegetation is preserved where attainable and that disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to temporary seeding, permanent seeding, mulching, geotextiles, sodding, tree protection, preservation of natural vegetation and other appropriate measures. All slopes shall be sodded or seeded with approved grass, grass mixtures or ground cover suitable to the area and season in which they are applied. Except as noted below, stabilization shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the activity has temporarily or permanently ceased. Refer to the construction plans attached for the TCEQ Notes, the Existing Conditions, and the Erosion & Sedimentation Control Plan.

TCEQ Office Use Only
Permit No:
CN:
RN:

Notice of Intent (NOI) for an Authorization for Stormwater Discharges Associated with Construction Activity under TPDES General Permit TXR150000

IMPORTANT INFORMATION

Please read and use the General Information and Instructions prior to filling out each question in the NOI form.

Use the NOI Checklist to ensure all required information is completed correctly. **Incomplete applications delay approval or result in automatic denial.**

Once processed your permit authorization can be viewed by entering the following link into your internet browser: http://www2.tceq.texas.gov/wq_dpa/index.cfm or you can contact TCEQ Stormwater Processing Center at 512-239-3700.

ePERMITS

Effective September 1, 2018, this paper form must be submitted to TCEQ with a completed electronic reporting waiver form (TCEQ-20754).

To submit an NOI electronically, enter the following web address into your internet browser and follow the instructions: https://www3.tceq.texas.gov/steers/index.cfm

APPLICATION FEE AND PAYMENT

The application fee for submitting a paper NOI is $325. The application fee for electronic submittal of a NOI through the TCEQ ePermits system (STEERS) is $225.

Payment of the application fee can be submitted by mail or through the TCEQ ePay system. The payment and the NOI must be mailed to separate addresses. To access the TCEQ ePay system enter the following web address into your internet browser: http://www.tceq.texas.gov/epay.

Provide your payment information for verification of payment:

- If payment was mailed to TCEQ, provide the following:
  - Check/Money Order Number: Click here to enter text
  - Name printed on Check: Click here to enter text
- If payment was made via ePay, provide the following:
  - Voucher Number: Click here to enter text
  - A copy of the payment voucher is attached to this paper NOI form.

RENEWAL (This portion of the NOI is not applicable after June 3, 2018)

Is this NOI for a renewal of an existing authorization? ☐ Yes ☒ No

If Yes, provide the authorization number here: TXR15 Click here to enter text.

NOTE: If an authorization number is not provided, a new number will be assigned.

SECTION 1. OPERATOR (APPLICANT)

a) If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? CN 605772136

(Refer to Section 1.a) of the Instructions)

b) What is the Legal Name of the entity (applicant) applying for this permit? (The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal document forming the entity.)

366 TX 29, LTD

c) What is the contact information for the Operator (Responsible Authority)?

Prefix (Mr. Ms. Miss): Mr.

First and Last Name: Wyatt Henderson Suffix: Click here to enter text.

Title: Principal Credentials: Click here to enter text.

Phone Number: (972) 715-6450 Fax Number: Click here to enter text.

E-mail: whenderson@madev.com

Mailing Address: 2121 Midway Road, Suite 240

City, State, and Zip Code: Carrollton, Texas 75006

Mailing Information if outside USA:

Territory: Click here to enter text.

Country Code: Click here to enter text. Postal Code: Click here to enter text.

d) Indicate the type of customer:

☐ Individual	☐ Federal Government
☐ Limited Partnership	☐ County Government
☐ General Partnership	☐ State Government
☐ Trust	☐ City Government
☐ Sole Proprietorship (D.B.A.)	☐ Other Government
☒ Corporation	☐ Other: Click here to enter text.
☐ Estate	

e) Is the applicant an independent operator? ☒ Yes ☐ No

(If a governmental entity, a subsidiary, or part of a larger corporation, check No.)

f) Number of Employees. Select the range applicable to your company.

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

g) Customer Business Tax and Filing Numbers: (**Required** for Corporations and Limited Partnerships. **Not Required** for Individuals, Government, or Sole Proprietors.)

State Franchise Tax ID Number: 32072739991

Federal Tax ID: Click here to enter text.

Texas Secretary of State Charter (filing) Number: 0803487253

DUNS Number (if known): Click here to enter text.

SECTION 2. APPLICATION CONTACT

Is the application contact the same as the applicant identified above?

☐ Yes, go to Section 3

☒ No, complete this section

Prefix (Mr. Ms. Miss): Ms.

First and Last Name: Christine Campbell Suffix: Click here to enter text.

Title: Project Manager Credential: P.E.

Organization Name: HR Green Development TX, LLC

Phone Number: 512-872-6696 Fax Number: Click here to enter text.

E-mail: christine.campbell@hrgreen.com

Mailing Address: 5508 Highway 290 West, Suite 150

Internal Routing (Mail Code, Etc.): Click here to enter text.

City, State, and Zip Code: Austin, TX, 78735

Mailing information if outside USA:

Territory: Click here to enter text.

Country Code: Click here to enter text. Postal Code: Click here to enter text.

SECTION 3. REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

a) If this is an existing permitted site, what is the Regulated Entity Number (RN) issued to this site? RN Click here to enter text.

(Refer to Section 3.a) of the Instructions)

b) Name of project or site (the name known by the community where it's located): Butler Farms Phase 13

c) In your own words, briefly describe the type of construction occurring at the regulated site (residential, industrial, commercial, or other): Land development – single-family residential

d) County or Counties (if located in more than one): Williamson

e) Latitude: 30.699910 Longitude: -97.963840

f) Site Address/Location

If the site has a physical address such as 12100 Park 35 Circle, Austin, TX 78753, complete *Section A*.

If the site does not have a physical address, provide a location description in *Section B*. Example: located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1.

Section A:

Street Number and Name: Click here to enter text

City, State, and Zip Code: Click here to enter text

Section B:

Location Description: Located off W SH 29, NW of CR 277. Phase 13 is situated N of Phase 5 and SW of Phase 12. Butler Farms Blvd. borders the eastern portion of the site and Altamure Road runs along the northern boundary. Parcel ID #R021816

City (or city nearest to) where the site is located: Liberty Hill

Zip Code where the site is located: 78642

SECTION 4. GENERAL CHARACTERISTICS

a) Is the project or site located on Indian Country Lands?

☐ Yes, do not submit this form. You must obtain authorization through EPA Region 6.

☒ No

b) Is your construction activity associated with a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources?

☐ Yes. Note: The construction stormwater runoff may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization through EPA Region 6.

☒ No

c) What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site? **1521**

d) What is the Secondary SIC Code(s), if applicable? Click here to enter text

e) What is the total number of acres to be disturbed? 19.74

f) Is the project part of a larger common plan of development or sale?

☒ Yes

☐ No. The total number of acres disturbed, provided in e) above, must be 5 or more. If the total number of acres disturbed is less than 5, do not submit this form. See the requirements in the general permit for small construction sites.

g) What is the estimated start date of the project? 2025

h) What is the estimated end date of the project? 2025

i) Will concrete truck washout be performed at the site? ☒ Yes ☐ No

j) What is the name of the first water body(ies) to receive the stormwater runoff or potential runoff from the site? South Fork San Gabriel River

k) What is the segment number(s) of the classified water body(ies) that the discharge will eventually reach? 1250

l) Is the discharge into a Municipal Separate Storm Sewer System (MS4)?

☐ Yes ☒ No

If Yes, provide the name of the MS4 operator: Click here to enter text.

Note: The general permit requires you to send a copy of this NOI form to the MS4 operator.

m) Is the discharge or potential discharge from the site within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, as defined in 30 TAC Chapter 213?

☒ Yes, complete the certification below.

☐ No, go to Section 5

I certify that the copy of the TCEQ-approved Plan required by the Edwards Aquifer Rule (30 TAC Chapter 213) that is included or referenced in the Stormwater Pollution Prevention Plan will be implemented. ☒ Yes

SECTION 5. NOI CERTIFICATION

a) I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000). ☒ Yes

b) I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas. ☒ Yes

c) I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed. ☒ Yes

d) I certify that a Stormwater Pollution Prevention Plan has been developed, will be implemented prior to construction and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the Construction General Permit (TXR150000). ☒ Yes

Note: For multiple operators who prepare a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3, provided all obligations are confirmed by at least one operator.

SECTION 6. APPLICANT CERTIFICATION SIGNATURE

Operator Signatory Name: Wyatt Henderson

Operator Signatory Title: Principal

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under 30 Texas Administrative Code §305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signature (use blue ink): _____ Date: 10-17-24

NOTICE OF INTENT CHECKLIST (TXR150000)

Did you complete everything? Use this checklist to be sure!

Are you ready to mail your form to TCEQ? Go to the General Information Section of the Instructions for mailing addresses.

Confirm each item (or applicable item) in this form is complete. This checklist is for use by the applicant to ensure a complete application is being submitted. **Missing information may result in denial of coverage under the general permit.** (See NOI process description in the General Information and Instructions.)

APPLICATION FEE

If paying by check:

☐ Check was mailed **separately** to the TCEQs Cashier's Office. (See Instructions for Cashier's address and Application address.)

☐ Check number and name on check is provided in this application.

If using ePay:

☐ The voucher number is provided in this application and a copy of the voucher is attached.

RENEWAL

☐ If this application is for renewal of an existing authorization, the authorization number is provided.

OPERATOR INFORMATION

☐ Customer Number (CN) issued by TCEQ Central Registry

☐ Legal name as filed to do business in Texas. (Call TX SOS 512-463-5555 to verify.)

☐ Name and title of responsible authority signing the application.

☐ Phone number and e-mail address

☐ Mailing address is complete & verifiable with USPS. www.usps.com

☐ Type of operator (entity type). Is applicant an independent operator?

☐ Number of employees.

☐ For corporations or limited partnerships – Tax ID and SOS filing numbers.

☐ Application contact and address is complete & verifiable with USPS. http://www.usps.com

REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

☐ Regulated Entity Number (RN) (if site is already regulated by TCEQ)

☐ Site/project name and construction activity description

☐ County

☐ Latitude and longitude http://www.tceq.texas.gov/gis/sqmaview.html

☐ Site Address/Location. Do not use a rural route or post office box.

GENERAL CHARACTERISTICS

☐ Indian Country Lands –the facility is not on Indian Country Lands.

☐ Construction activity related to facility associated to oil, gas, or geothermal resources

☐ Primary SIC Code that best describes the construction activity being conducted at the site. www.osha.gov/oshstats/sicser.html

☐ Estimated starting and ending dates of the project.

☐ Confirmation of concrete truck washout.

☐ Acres disturbed is provided and qualifies for coverage through a NOI.

☐ Common plan of development or sale.

☐ Receiving water body or water bodies.

☐ Segment number or numbers.

☐ MS4 operator.

☐ Edwards Aquifer rule.

CERTIFICATION

☐ Certification statements have been checked indicating Yes.

☐ Signature meets 30 Texas Administrative Code (TAC) §305.44 and is original.

Instructions for Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity under TPDES General Permit (TXR150000)

GENERAL INFORMATION

Where to Send the Notice of Intent (NOI):

By Regular Mail:
TCEQ
Stormwater Processing Center (MC228)
P.O. Box 13087
Austin, Texas 78711-3087

By Overnight or Express Mail:
TCEQ
Stormwater Processing Center (MC228)
12100 Park 35 Circle
Austin, TX

Application Fee:

The application fee of $325 is required to be paid at the time the NOI is submitted. Failure to submit payment at the time the application is filed will cause delays in acknowledgment or denial of coverage under the general permit. Payment of the fee may be made by check or money order, payable to TCEQ, or through EPAY (electronic payment through the web).

Mailed Payments:

Use the attached General Permit Payment Submittal Form. The application fee is submitted to a different address than the NOI. Read the General Permit Payment Submittal Form for further instructions, including the address to send the payment.

ePAY Electronic Payment: http://www.tceq.texas.gov/epay

When making the payment you must select Water Quality, and then select the fee category "General Permit Construction Storm Water Discharge NOI Application". You must include a copy of the payment voucher with your NOI. Your NOI will not be considered complete without the payment voucher.

TCEQ Contact List:

Application – status and form questions:	512-239-3700, swpermit@tceq.texas.gov
Technical questions:	512-239-4671, swgp@tceq.texas.gov
Environmental Law Division:	512-239-0600
Records Management - obtain copies of forms:	512-239-0900
Reports from databases (as available):	512-239-DATA (3282)
Cashier's office:	512-239-0357 or 512-239-0187

Notice of Intent Process:

When your NOI is received by the program, the form will be processed as follows:

- **Administrative Review**: Each item on the form will be reviewed for a complete response. In addition, the operator's legal name must be verified with Texas Secretary of State as valid and active (if applicable). The address(es) on the form must be verified with the US Postal service as receiving regular mail delivery. Do not give an overnight/express mailing address.

- **Notice of Deficiency:** If an item is incomplete or not verifiable as indicated above, a notice of deficiency (NOD) will be mailed to the operator. The operator will have 30 days to respond to the NOD. The response will be reviewed for completeness.
- **Acknowledgment of Coverage:** An Acknowledgment Certificate will be mailed to the operator. This certificate acknowledges coverage under the general permit.

  or

  Denial of Coverage: If the operator fails to respond to the NOD or the response is inadequate, coverage under the general permit may be denied. If coverage is denied, the operator will be notified.

General Permit (Your Permit)

For NOIs submitted **electronically** through ePermits, provisional coverage under the general permit begins immediately following confirmation of receipt of the NOI form by the TCEQ.

For **paper** NOIs, provisional coverage under the general permit begins **7 days after a completed NOI is postmarked for delivery** to the TCEQ.

You should have a copy of your general permit when submitting your application. You may view and print your permit for which you are seeking coverage, on the TCEQ web site http://www.tceq.texas.gov. Search using keyword TXR150000.

Change in Operator

An authorization under the general permit is not transferable. If the operator of the regulated project or site changes, the present permittee must submit a Notice of Termination and the new operator must submit a Notice of Intent. The NOT and NOI must be submitted no later than 10 days prior to the change in Operator status.

TCEQ Central Registry Core Data Form

The Core Data Form has been incorporated into this form. Do not send a Core Data Form to TCEQ. After final acknowledgment of coverage under the general permit, the program will assign a Customer Number and Regulated Entity Number, if one has not already been assigned to this customer or site.

For existing customers and sites, you can find the Customer Number and Regulated Entity Number by entering the following web address into your internet browser: http://www15.tceq.texas.gov/crpub/ or you can contact the TCEQ Stormwater Processing Center at 512-239-3700 for assistance. On the website, you can search by your permit number, the Regulated Entity (RN) number, or the Customer Number (CN). If you do not know these numbers, you can select “Advanced Search” to search by permittee name, site address, etc.

The Customer (Permittee) is responsible for providing consistent information to the TCEQ, and for updating all CN and RN data for all authorizations as changes occur. For this permit, a Notice of Change form must be submitted to the program area.

INSTRUCTIONS FOR FILLING OUT THE NOI FORM

Renewal of General Permit. Dischargers holding active authorizations under the expired General Permit are required to submit a NOI to continue coverage. The existing permit number is required. If the permit number is not provided or has been terminated, expired, or denied, a new permit number will be issued.

Section 1. OPERATOR (APPLICANT)

a) Customer Number (CN)

TCEQ's Central Registry will assign each customer a number that begins with CN, followed by nine digits. **This is not a permit number, registration number, or license number**.

If the applicant is an existing TCEQ customer, the Customer Number is available at the following website: http://www15.tceq.texas.gov/crpub/. If the applicant is not an existing TCEQ customer, leave the space for CN blank.

b) Legal Name of Applicant

Provide the current legal name of the applicant. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, as filed in the county. You may contact the SOS at 512-463-5555, for more information related to filing in Texas. If filed in the county, provide a copy of the legal documents showing the legal name.

c) Contact Information for the Applicant (Responsible Authority)

Provide information for the person signing the application in the Certification section. This person is also referred to as the Responsible Authority.

Provide a complete mailing address for receiving mail from the TCEQ. The mailing address must be recognized by the US Postal Service. You may verify the address on the following website: https://tools.usps.com/go/ZipLookupAction!input.action.

The phone number should provide contact to the applicant.

The fax number and e-mail address are optional and should correspond to the applicant.

d) Type of Customer (Entity Type)

Check only one box that identifies the type of entity. Use the descriptions below to identify the appropriate entity type. Note that the selected entity type also indicates the name that must be provided as an applicant for an authorization.

Individual

An individual is a customer who has not established a business, but conducts an activity that needs to be regulated by the TCEQ.

Partnership

A customer that is established as a partnership as defined by the Texas Secretary of State Office (TX SOS). If the customer is a 'General Partnership' or 'Joint Venture' filed in the county (not filed with TX SOS), the legal name of each partner forming the 'General Partnership' or 'Joint Venture' must be provided. Each 'legal entity' must apply as a co-applicant.

Trust or Estate

A trust and an estate are fiduciary relationships governing the trustee/executor with respect to the trust/estate property.

Sole Proprietorship (DBA)

A sole proprietorship is a customer that is owned by only one person and has not been incorporated. This business may:

1. be under the person's name
2. have its own name (doing business as or DBA)
3. have any number of employees.

If the customer is a Sole Proprietorship or DBA, the 'legal name' of the individual business 'owner' must be provided. The DBA name is not recognized as the 'legal name' of the entity. The DBA name may be used for the site name (regulated entity).

Corporation

A customer that meets all of these conditions:

1. is a legally incorporated entity under the laws of any state or country
2. is recognized as a corporation by the Texas Secretary of State
3. has proper operating authority to operate in Texas

The corporation's 'legal name' as filed with the Texas Secretary of State must be provided as applicant. An 'assumed' name of a corporation is not recognized as the 'legal name' of the entity.

Government

Federal, state, county, or city government (as appropriate)

The customer is either an agency of one of these levels of government or the governmental body itself. The government agency's 'legal name' must be provided as the applicant. A department name or other description of the organization is not recognized as the 'legal name'.

Other

This may include a utility district, water district, tribal government, college district, council of governments, or river authority. Provide the specific type of government.

e) Independent Entity

Check No if this customer is a subsidiary, part of a larger company, or is a governmental entity. Otherwise, check Yes.

f) Number of Employees

Check one box to show the number of employees for this customer's entire company, at all locations. This is not necessarily the number of employees at the site named in the application.

g) Customer Business Tax and Filing Numbers

These are required for Corporations and Limited Partnerships. These are not required for Individuals, Government, and Sole Proprietors.

State Franchise Tax ID Number

Corporations and limited liability companies that operate in Texas are issued a franchise tax identification number. If this customer is a corporation or limited liability company, enter the Tax ID number.

Federal Tax ID

All businesses, except for some small sole proprietors, individuals, or general partnerships should have a federal taxpayer identification number (TIN). Enter this number here. Use no prefixes, dashes, or hyphens. Sole proprietors, individuals, or general partnerships do not need to provide a federal tax ID.

TX SOS Charter (filing) Number

Corporations and Limited Partnerships required to register with the Texas Secretary of State are issued a charter or filing number. You may obtain further information by calling SOS at 512-463-5555.

DUNS Number

Most businesses have a DUNS (Data Universal Numbering System) number issued by Dun and Bradstreet Corp. If this customer has one, enter it here.

Section 2. APPLICATION CONTACT

Provide the name and contact information for the person that TCEQ can contact for additional information regarding this application.

Section 3. REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

a) Regulated Entity Number (RN)

The RN is issued by TCEQ's Central Registry to sites where an activity is regulated by TCEQ. This is not a permit number, registration number, or license number. Search TCEQ's Central Registry to see if the site has an assigned RN at http://www15.tceq.texas.gov/crpub/. If this regulated entity has not been assigned an RN, leave this space blank.

If the site of your business is part of a larger business site, an RN may already be assigned for the larger site. Use the RN assigned for the larger site.

If the site is found, provide the assigned RN and provide the information for the site to be authorized through this application. The site information for this authorization may vary from the larger site information.

An example is a chemical plant where a unit is owned or operated by a separate corporation that is accessible by the same physical address of your unit or facility. Other examples include industrial parks identified by one common address but different corporations have control of defined areas within the site. In both cases, an RN would be assigned for the physical address location and the permitted sites would be identified separately under the same RN.

b) Name of the Project or Site

Provide the name of the site or project as known by the public in the area where the site is located. The name you provide on this application will be used in the TCEQ Central Registry as the Regulated Entity name.

c) Description of Activity Regulated

In your own words, briefly describe the primary business that you are doing that requires this authorization. Do not repeat the SIC Code description.

d) County

Provide the name of the county where the site or project is located. If the site or project is located in more than one county, provide the county names as secondary.

e) Latitude and Longitude

Enter the latitude and longitude of the site in degrees, minutes, and seconds or decimal form. For help obtaining the latitude and longitude, go to: http://www.tceq.texas.gov/gis/sqmaview.html.

f) Site Address/Location

If a site has an address that includes a street number and street name, enter the complete address for the site in *Section A*. If the physical address is not recognized as a USPS delivery address, you may need to validate the address with your local police (911 service) or through an online map site used to locate a site. Please confirm this to be a complete and valid address. Do not use a rural route or post office box for a site location.

If a site does not have an address that includes a street number and street name, provide a complete written location description in *Section B.* For example: "The site is located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1."

Provide the city (or nearest city) and zip code of the site location.

Section 4. GENERAL CHARACTERISTICS

a) Indian Country Lands

If your site is located on Indian Country Lands, the TCEQ does not have authority to process your application. You must obtain authorization through EPA Region 6, Dallas. Do not submit this form to TCEQ.

b) Construction activity associated with facility associated with exploration, development, or production of oil, gas, or geothermal resources

If your activity is associated with oil and gas exploration, development, or production, you may be under jurisdiction of the Railroad Commission of Texas (RRC) and may need to obtain authorization from EPA Region 6.

Construction activities associated with a facility related to oil, gas or geothermal resources may include the construction of a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a

carbon dioxide geologic storage facility; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel.

Where required by federal law, discharges of stormwater associated with construction activities under the RRC's jurisdiction must be authorized by the EPA and the RRC, as applicable. Activities under RRC jurisdiction include construction of a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources, such as a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility under the jurisdiction of the RRC; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel. The RRC also has jurisdiction over stormwater from land disturbance associated with a site survey that is conducted prior to construction of a facility that would be regulated by the RRC. Under 33 U.S.C. §1342(l)(2) and §1362(24), EPA cannot require a permit for discharges of stormwater from field activities or operations associated with {oil and gas} exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities unless the discharge is contaminated by contact with any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the facility. Under §3.8 of this title (relating to Water Protection), the RRC prohibits operators from causing or allowing pollution of surface or subsurface water. Operators are encouraged to implement and maintain best management practices (BMPs) to minimize discharges of pollutants, including sediment, in stormwater during construction activities to help ensure protection of surface water quality during storm events.

For more information about the jurisdictions of the RRC and the TCEQ, read the Memorandum of Understanding (MOU) between the RRC and TCEQ at 16 Texas Administrative Code, Part 1, Chapter 3, Rule 3.30, by entering the following link into an internet browser: http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=30 or contact the TCEQ Stormwater Team at 512-239-4671 for additional information.

c) Primary Standard Industrial Classification (SIC) Code

Provide the SIC Code that best describes the construction activity being conducted at this site.

Common SIC Codes related to construction activities include:

- 1521 - Construction of Single Family Homes
- 1522 - Construction of Residential Buildings Other than Single Family Homes
- 1541 - Construction of Industrial Buildings and Warehouses

- 1542 - Construction of Non-residential Buildings, other than Industrial Buildings and Warehouses
- 1611 - Highway and Street Construction, except Highway Construction
- 1622 - Bridge, Tunnel, and Elevated Highway Construction
- 1623 - Water, Sewer, Pipeline and Communications, and Power Line Construction

For help with SIC Codes, enter the following link into your internet browser: http://www.osha.gov/pls/imis/sicsearch.html or you can contact the TCEQ Small Business and Local Government Assistance Section at 800-447-2827 for assistance.

d) Secondary SIC Code

Secondary SIC Code(s) may be provided. Leave this blank if not applicable. For help with SIC Codes, enter the following link into your internet browser: http://www.osha.gov/pls/imis/sicsearch.html or you can contact the TCEQ Small Business and Environmental Assistance Section at 800-447-2827 for assistance.

e) Total Number of Acres Disturbed

Provide the approximate number of acres that the construction site will disturb. Construction activities that disturb less than one acre, unless they are part of a larger common plan that disturbs more than one acre, do not require permit coverage. Construction activities that disturb between one and five acres, unless they are part of a common plan that disturbs more than five acres, do not require submission of an NOI. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

If you have any questions about this item, please contact the stormwater technical staff by phone at 512-239-4671 or by email at swgp@tceq.texas.gov.

f) Common Plan of Development

Construction activities that disturb less than five acres do not require submission of an NOI unless they are part of a common plan of development or for sale where the area disturbed is five or more acres. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

For more information on what a common plan of development is, refer to the definition of "Common Plan of Development" in the Definitions section of the general permit or enter the following link into your internet browser: www.tceq.texas.gov/permitting/stormwater/common_plan_of_development_steps.html

For further information, go to the TCEQ stormwater construction webpage enter the following link into your internet browser: www.tceq.texas.gov/goto/construction and search for "Additional Guidance and Quick Links". If you have any further questions about the Common Plan of Development you can contact the TCEQ Stormwater Team at 512-239-4671 or the TCEQ Small Business and Environmental Assistance at 800-447-2827.

g) Estimated Start Date of the Project

This is the date that any construction activity or construction support activity is initiated at the site. If renewing the permit provide the original start date of when construction activity for this project began.

h) Estimated End Date of the Project

This is the date that any construction activity or construction support activity will end and final stabilization will be achieved at the site.

i) Will concrete truck washout be performed at the site?

Indicate if you expect that operators of concrete trucks will washout concrete trucks at the construction site.

j) Identify the water body(s) receiving stormwater runoff

The stormwater may be discharged directly to a receiving stream or through a MS4 from your site. It eventually reaches a receiving water body such as a local stream or lake, possibly via a drainage ditch. You must provide the name of the water body that receives the discharge from the site (a local stream or lake).

If your site has more than one outfall you need to include the name of the first water body for each outfall, if they are different.

k) Identify the segment number(s) of the classified water body(s)

Identify the classified segment number(s) receiving a discharge directly or indirectly. Enter the following link into your internet browser to find the segment number of the classified water body where stormwater will flow from the site: www.tceq.texas.gov/waterquality/monitoring/viewer.html or by contacting the TCEQ Water Quality Division at (512) 239-4671 for assistance.

You may also find the segment number in TCEQ publication GI-316 by entering the following link into your internet browser: www.tceq.texas.gov/publications/gi/gi-316 or by contacting the TCEQ Water Quality Division at (512) 239-4671 for assistance.

If the discharge is into an unclassified receiving water and then crosses state lines prior to entering a classified segment, select the appropriate watershed:

- 0100 (Canadian River Basin)
- 0200 (Red River Basin)
- 0300 (Sulfur River Basin)
- 0400 (Cypress Creek Basin)
- 0500 (Sabine River Basin)

Call the Water Quality Assessments section at 512-239-4671 for further assistance.

l) Discharge into MS4 – Identify the MS4 Operator

The discharge may initially be into a municipal separate storm sewer system (MS4). If the stormwater discharge is into an MS4, provide the name of the entity that operates the MS4 where the stormwater discharges. An MS4 operator is often a city, town, county, or utility district, but possibly can be another form of government. Please note that the Construction General Permit requires the Operator to supply the MS4 with a

copy of the NOI submitted to TCEQ. For assistance, you may call the technical staff at 512-239-4671.

m) Discharges to the Edwards Aquifer Recharge Zone and Certification

The general permit requires the approved Contributing Zone Plan or Water Pollution Abatement Plan to be included or referenced as a part of the Stormwater Pollution Prevention Plan.

See maps on the TCEQ website to determine if the site is located within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer by entering the following link into an internet browser: www.tceq.texas.gov/field/eapp/viewer.html or by contacting the TCEQ Water Quality Division at 512-239-4671 for assistance.

If the discharge or potential discharge is within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, a site-specific authorization approved by the Executive Director under the Edwards Aquifer Protection Program (30 TAC Chapter 213) is required before construction can begin.

For questions regarding the Edwards Aquifer Protection Program, contact the appropriate TCEQ Regional Office. For projects in Hays, Travis and Williamson Counties: Austin Regional Office, 12100 Park 35 Circle, Austin, TX 78753, 512-339-2929. For Projects in Bexar, Comal, Kinney, Medina and Uvalde Counties: TCEQ San Antonio Regional Office, 14250 Judson Rd., San Antonio, TX 78233-4480, 210-490-3096.

Section 5. NOI CERTIFICATION

Note: Failure to indicate Yes to all of the certification items may result in denial of coverage under the general permit.

a) Certification of Understanding the Terms and Conditions of Construction General Permit (TXR150000)

Provisional coverage under the Construction General Permit (TXR150000) begins 7 days after the completed paper NOI is postmarked for delivery to the TCEQ. Electronic applications submitted through ePermits have immediate provisional coverage. You must obtain a copy and read the Construction General Permit before submitting your application. You may view and print the Construction General Permit for which you are seeking coverage at the TCEQ web site by entering the following link into an internet browser: www.tceq.texas.gov/goto/construction or you may contact the TCEQ Stormwater processing Center at 512-239-3700 for assistance.

b) Certification of Legal Name

The full legal name of the applicant as authorized to do business in Texas is required. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, that is filed in the county where doing business. You may contact the SOS at 512-463 5555, for more information related to filing in Texas.

c) Understanding of Notice of Termination

A permittee shall terminate coverage under the Construction General Permit through the submittal of a NOT when the operator of the facility changes, final stabilization has

been reached, the discharge becomes authorized under an individual permit, or the construction activity never began at this site.

d) Certification of Stormwater Pollution Prevention Plan

The SWP3 identifies the areas and activities that could produce contaminated runoff at your site and then tells how you will ensure that this contamination is mitigated. For example, in describing your mitigation measures, your site's plan might identify the devices that collect and filter stormwater, tell how those devices are to be maintained, and tell how frequently that maintenance is to be carried out. You must develop this plan in accordance with the TCEQ general permit requirements. This plan must be developed and implemented before you complete this NOI. The SWP3 must be available for a TCEQ investigator to review on request.

Section 6. APPLICANT CERTIFICATION SIGNATURE

The certification must bear an original signature of a person meeting the signatory requirements specified under 30 Texas Administrative Code (TAC) §305.44.

If you are a corporation:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(1) (see below). According to this code provision, any corporate representative may sign an NOI or similar form so long as the authority to sign such a document has been delegated to that person in accordance with corporate procedures. By signing the NOI or similar form, you are certifying that such authority has been delegated to you. The TCEQ may request documentation evidencing such authority.

If you are a municipality or other government entity:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(3) (see below). According to this code provision, only a ranking elected official or principal executive officer may sign an NOI or similar form. Persons such as the City Mayor or County Commissioner will be considered ranking elected officials. In order to identify the principal executive officer of your government entity, it may be beneficial to consult your city charter, county or city ordinances, or the Texas statute(s) under which your government entity was formed. An NOI or similar document that is signed by a government official who is not a ranking elected official or principal executive officer does not conform to §305.44(a)(3). The signatory requirement may not be delegated to a government representative other than those identified in the regulation. By signing the NOI or similar form, you are certifying that you are either a ranking elected official or principal executive officer as required by the administrative code. Documentation demonstrating your position as a ranking elected official or principal executive officer may be requested by the TCEQ.

If you have any questions or need additional information concerning the signatory requirements discussed above, please contact the TCEQ's Environmental Law Division at 512-239-0600.

30 Texas Administrative Code

§305.44. Signatories to Applications

(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the

corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

Texas Commission on Environmental Quality
General Permit Payment Submittal Form

Use this form to submit your Application Fee only if you are mailing your payment.

Instructions:

- Complete items 1 through 5 below:
- Staple your check in the space provided at the bottom of this document.
- *Do not mail this form with your NOI form.*
- *Do not mail this form to the same address as your NOI.*

Mail this form and your check to either of the following:

By Regular U.S. Mail
Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, TX 78711-3088

By Overnight or Express Mail
Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753

Fee Code: GPA General Permit: TXR150000

1. Check or Money Order No: Click here to enter text
2. Amount of Check/Money Order: Click here to enter text
3. Date of Check or Money Order: Click here to enter text
4. Name on Check or Money Order: Click here to enter text
5. NOI Information:

   If the check is for more than one NOI, list each Project or Site (RE) Name and Physical Address exactly as provided on the NOI. **Do not submit a copy of the NOI with this form, as it could cause duplicate permit application entries!**

   If there is not enough space on the form to list all of the projects or sites the authorization will cover, then attach a list of the additional sites.

   Project/Site (RE) Name: Click here to enter text

   Project/Site (RE) Physical Address: Click here to enter text

Staple the check or money order to this form in this space.

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

I Wyatt Henderson,
Print Name

Principal,
Title - Manager

of 366 TX 29, LTD,
Corporation/Partnership/Entity Name

have authorized Christine Campbell
Print Name of Agent/Engineer

of HR Green Development TX, LLC
Print Name of Firm

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

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

10-17-24
Date

THE STATE OF Texas §

County of Dallas §

BEFORE ME, the undersigned authority, on this day personally appeared Wyatt Henderson 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 17th day of October, 2024.

SHENGYUN XUE
Notary Public, State of Texas
Comm. Expires 08-28-2026
Notary ID 131700550

NOTARY PUBLIC

SHENGYUN XUE
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 08-28-2026

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Butler Farms Phase 13

Regulated Entity Location: The project is located off W Hwy29 and NW of CR 277. Phase 13 is situated N of Phase 5 and S of Phase 12. Butler Farms Blvd. borders the eastern portion of the site, while Altamure Road runs along the northern boundary. The site is included in Parcel ID # R021816

Name of Customer: 366 TX 29 LTD

Contact Person: Wyatt Henderson Phone: (972) 715-6450

Customer Reference Number (if issued):CN 605772136

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	19.94 Acres	$ 4,000.00
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	$

Type of Plan	*Size*	*Fee Due*
Extension of Time	Each	$

Signature: Christie Caufield Date: 10/23/2024

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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 Core Data Form

TCEQ Use Only

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

SECTION I: General Information

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

☒ 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 605772136		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:*

366 TX 29, LTD

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
0803487253	32072739991		

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ 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 ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

2121 Midway Rd. Ste. 240

City	State	ZIP	ZIP + 4
Carrollton	TX	75006	

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

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(972) 715-6450		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC.)

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Butler Farms Phase 13

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	The site is located off W Hwy 29 and NW of CR 277. Phase 13 is situated N of Phase 5 and SW of Phase 12. Butler Farms Blvd. borders the eastern portion of the site, while Altamure Road runs along the northern boundary. The site is included in Parcel ID # R021816						
	City	Liberty Hill	**State**	TX	**ZIP**	78642	**ZIP + 4**
24. County	Williamson County						

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	The site is located off W Hwy 29 and NW of CR 277. Phase 13 is situated N of Phase 5 and S of Phase 12. Butler Farms Blvd. borders the eastern portion of the site, while Altamure Road runs along the northern boundary. The site is included in Parcel ID # R021816

26. Nearest City	**State**	**Nearest ZIP Code**
Liberty Hill	TX	78642

27. Latitude (N) In Decimal:	30.699910	**28. Longitude (W) In Decimal:**	-97.963840

Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	41	59.676N	97	57	49.824W

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
1521		236115	

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

Land Development - Single Family Residential

34. Mailing Address:	**2121 Midway Rd Suite 240**						
	City	**Carrollton**	**State**	**TX**	**ZIP**	**75006**	**ZIP + 4**

35. E-Mail Address:	**whenderson@madev.com**

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(972) 715-6450		**( ) -**

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	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

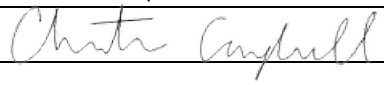
SECTION IV: Preparer Information

40. Name:	Christine Campbell	**41. Title:**	Project Engineer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 872-6696		( ) -	christine.campbell@hrgreen.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:	HR Green Development TX, LLC	**Job Title:**	Project Engineer		
Name*(In Print)* **:**	Christine Campbell			**Phone:**	**(** 512 **)** 872-6696
Signature:				**Date:**	10/23/2024

FIELD NOTES DESCRIPTION

DESCRIPTION OF 19.94 ACRES OF LAND IN THE JOHN B. BERRY SURVEY, ABSTRACT NO. 56, WILLIAMSON COUNTY, TEXAS; BEING A PORTION OF A CERTAIN CALLED 366.4641 ACRE TRACT OF LAND DESCRIBED IN EXHIBIT "A" IN THE WARRANTY DEED WITH VENDOR'S LIEN TO 366 TX 29, LTD, OF RECORD IN DOCUMENT NO. 2021021762, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 19.94 ACRES ALSO BEING A PORTION OF A CERTAIN CALLED 45.954 ACRE TRACT DESCRIBED IN THE SPECIAL WARRANTY DEED TO JNC DEVELOPMENT, INC. OF RECORD IN DOCUMENT NO. 2021022152, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 19.94 ACRES AS SURVEYED BY HR GREEN DEVELOPMENT TX, LLC, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING at a 1/2-inch iron rod found at a re-entrant corner in the west line of the said 366.4641 acre tract, at the southeast corner of a certain called 132.225 acre tract described in the General Warranty Deed to Butler Family Partnership, LTD., of record in Document No. 2021038920, Official Public Records of Williamson County, Texas, and being an angle point in the north line of Lot 19, Block Z, Butler Farms Phase 2, 3, & 4, a subdivision according to the plat or map of record in Document No. 2022083520, Official Public Records of Williamson County, Texas;

THENCE N 04°01'23" W, with the west line of the said 366.4641 acre tract, with the east line of the said 132.225 acre tract and the north line of said Lot 19, Block Z, Butler Farms Phase 2, 3, & 4, a distance of 17.40 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the most northerly corner of said Lot 19, Block Z, Butler Farms Phase 2, 3, & 4, for the westerly southwest corner and **POINT OF BEGINNING** of the tract described herein;

THENCE N 04°01'23" W, leaving the most northerly corner of said Lot 19, Block Z, Butler Farms Phase 2, 3, & 4, with the west line of the said 366.4641 acre tract and the east line of the said 132.225 acre tract, with the west line of the tract described herein, a distance of 574.29 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for the northwest corner of the tract described herein, from which a 1/2-inch iron rod found at a northeast corner of the said 132.225 acre tract, at a re-entrant corner in the west line of the said 366.4641 acre tract bears N 04°01'23" W, a distance of 182.29 feet;

THENCE leaving the east line of the said 132.225 acre tract, crossing the said 366.4641 acre tract, with the north and east lines of the tract described herein, the following sixteen (16) courses and distances:

1. N 80°57'14" E, a distance of 147.60 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point-of-curvature,

2. With the arc of a curve to the right, having a radius of 15.00 feet, an arc distance of 25.12 feet, and a chord which bears S 51°04'43" E, a distance of 22.28 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a non-tangent end-of-curve,

3. N 86°53'20" E, a distance of 50.00 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for an angle point,

4. N 03°06'40" W, a distance of 5.88 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point-of-curvature,

5. With the arc of a curve to the right, having a radius of 15.00 feet, an arc distance of 23.56 feet, and a chord which bears N 41°53'39" E, a distance of 21.22 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point of compound-curvature,

6. With the arc of a curve to the right, having a radius of 465.00 feet, an arc distance of 41.00 feet, and a chord which bears N 89°25'31" E, a distance of 40.98 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point-of-tangency,

7. S 88°02'57" E, a distance of 591.38 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point-of-curvature,

8. With the arc of a curve to the left, having a radius of 515.00 feet, an arc distance of 88.92 feet, and a chord which bears N 87°00'16" E, a distance of 88.81 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point of reverse-curvature,

9. With the arc of a curve to the right, having a radius of 15.00 feet, an arc distance of 22.14 feet, and a chord which bears S 55°38'55" E, a distance of 20.19 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point-of-tangency,

10. S 13°21'19" E, a distance of 488.83 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point-of-curvature,

11. With the arc of a curve to the right, having a radius of 765.00 feet, an arc distance of 215.77 feet, and a chord which bears S 05°16'30" E, a distance of 215.06 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point-of-tangency,

12. S 02°48'19" W, a distance of 166.60 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point-of-curvature,

13. With the arc of a curve to the right, having a radius of 15.00 feet, an arc distance of 23.56 feet, and a chord which bears S 47°48'19" W, a distance of 21.21 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a non-tangent end-of-curve,

14. S 02°48'19" W, a distance of 50.00 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a non-tangent point-of-curvature,

15. With the arc of a curve to the right, having a radius of 15.00 feet, an arc distance of 23.56 feet, and a chord which bears S 42°11'41" E, a distance of 21.21 feet to a 1/2-inch iron rod with a plastic cap stamped "HR GREEN" set for a point-of-tangency, and

16. S 02°48'19" W, a distance of 210.99 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the northwest terminus of Butler Farms Boulevard, a varying width right-of-way, as shown on Butler Farms Phase 1, a subdivision according to the plat or map of record in Document No. 2021181212, Official Public Records of Williamson County, Texas, for a point-of-curvature in the east line of the tract described herein;

THENCE continuing across the said 366.4641 acre tract, with the northwest right-of-way line of said Butler Farms Boulevard, with the southeast line of the tract described herein, with the arc of a curve to the right, having a radius of 15.00 feet, an arc distance of 23.56 feet, and a chord which bears S 47°48'18" W, a distance of 21.21 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the intersection of the west right-of-way line of said Butler Farms Boulevard and the north right-of-way line of Nightwoods Trail, a 50-foot right-of-way, as shown on said Butler Farms Phase 2, 3, & 4, same being a northeast corner of the said 45.954 acre tract, for a point-of-tangency in the south line of the tract described herein;

THENCE N 87°11'41" W, continuing across the said 366.4641 acre tract, with the north right-of-way line of said Nightwoods Trail, with a north line of the said 45.954 acre tract, with the south line of the tract described herein, a distance of 3.47 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the southeast corner of Lot 34, Block X, said Butler Farms Phase 2, 3, & 4, same being the most southerly southwest corner of the tract described herein;

THENCE N 02°48'19" E, continuing across the said 366.4641 acre tract, leaving the north right-of-way line of said Nightwoods Trail, with the east line of said Lot 34, Block X, Butler Farms Phase 2, 3, & 4, with a west line of the tract described herein, a distance of 120.58 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the northeast corner of said Lot 34, Block X, Butler Farms Phase 2, 3, & 4, same being a re-entrant corner of the tract described herein;

THENCE continuing across the said 366.4641 acre tract, with the north lines of Lots 22-34, Block X, and the east lines of Lots 1-3, Block X, said Butler Farms Phase 2, 3, & 4, and with the south and west lines of the tract described herein, the following three (3) courses and distances:

1. N 87°11'41" W, a distance of 249.29 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for an angle point,

2. N 89°43'56" W, a distance of 296.94 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for a southwest corner of the tract described herein, and

3. N 25°47'59" E, a distance of 163.75 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the terminus of the south right-of-way line of Ergot Street, a 50-foot right-of-way as shown on said Butler Farms Phase 2, 3, & 4, for the northeast corner of said Lot 1, Block X, Butler Farms Phase 2, 3, & 4, for an angle point in the west line of the tract described herein;

THENCE N 23°10'10" E, with the eastern terminus line of said Ergot Street, with the west line of the tract described herein, a distance of 50.00 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the terminus of the north right-of-way line of said Ergot Street, same being a point-of-tangency in the south line of Lot 1, Block AA, said Butler Farms Phase 2, 3, & 4, for a non-tangent point-of-curvature and re-entrant corner of the tract described herein;

THENCE continuing across the said 366.4641 acre tract, with the south, east and north lines of said Lot 1, Block AA, Butler Farms Phase 2, 3, & 4, same being the south and west lines of the tract described herein, the following three (3) courses and distances:

1. with the arc of a curve to the left, having a radius of 225.00 feet, an arc distance of 33.13 feet, and a chord which bears S 71°02'57" E, a distance of 33.10 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the southeast corner of said Lot 1, Block AA, Butler Farms Phase 2, 3, & 4, for a re-entrant corner of the tract described herein,

2. N 07°57'35" E, a distance of 78.84 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the northeast corner of said Lot 1, Block AA, Butler Farms Phase 2, 3, & 4, same being a re-entrant corner of the tract described herein, and

3. N 74°26'02" W, a distance of 136.23 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set in the south right-of-way line of Boulder Ridge Trail, a 50-foot right-of-way as shown on said Butler Farms Phase 2, 3, & 4, for the northwest corner of said Lot 1, Block AA, Butler Farms Phase 2, 3, & 4, same being a non-tangent point-of-curvature and a southwest corner of the tract described herein;

THENCE, continuing across the said 366.4641 acre tract, with the east, north and west right-of-way lines of said Boulder Ridge Trail, same being the east, south, and west lines of the tract described herein, the following three (3) courses and distances:

1. With the arc of a curve to the left, having a radius of 495.00 feet, an arc distance of 48.69 feet, and a chord which bears N 12°44'53" E, a distance of 48.67 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the northeast terminus of said Boulder Ridge Trail, same being a re-entrant corner of the tract described herein,

2. N 79°29'28" W, a distance of 50.00 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the northwest terminus of said Boulder Ridge Trail, same being a re-entrant corner and non-tangent point-of-curvature of the tract described herein, and

3. With the arc of a curve to the right, having a radius of 445.00 feet, an arc distance of 34.16 feet, and a chord which bears S 12°03'52" W, a distance of 34.15 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the northeast corner of Lot 22, Block Y, said Butler Farms Phase 2, 3, & 4, same being a non-tangent end-of-curve and a southeast corner of the tract described herein;

THENCE N 75°44'11" W, continuing across the said 366.4641 acre tract, with the north line of said Lot 22, Block Y, Butler Farms Phase 2, 3, & 4, same being the south line of the tract described herein, a distance of 122.93 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set in the east line of Lot 1, Block Y, said Butler Farms Phase 2, 3, & 4, for the northwest corner of said Lot 22, Block Y, Butler Farms Phase 2, 3, & 4, same being a southwest corner of the tract described herein;

THENCE N 14°15'49" E, continuing across the said 366.4641 acre tract, with the east line of said Lot 1, Block Y, Butler Farms Phase 2, 3, & 4, same being a west line of the tract described herein, a distance of 40.50 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the northeast corner of said Lot 1, Block Y, Butler Farms Phase 2, 3, & 4, same being a re-entrant corner of the tract described herein;

THENCE N 79°58'28" W, continuing across the said 366.4641 acre tract, with the north line of said Lot 1, Block Y, Butler Farms Phase 2, 3, & 4, with the south line of the tract described herein, at a distance of 123.05 feet, passing a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set in an east line of the said 45.954 acre tract, for the northeast terminus of Windstar Road, a 50-foot right-of-way as shown on said Butler Farms Phase 2, 3, & 4, for the northwest corner of said Lot 1, Block Y, Butler Farms Phase 2, 3, & 4, and crossing the said 45.954 acre tract, with the north terminus line of said Windstar Road, for a total distance of 173.05 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set in a west line of the said 45.954 acre tract, for the northwest terminus of said Windstar Road, same being a non-tangent point-of-curvature and re-entrant corner of the tract described herein;

THENCE continuing across the said 366.4641 acre tract, with the west right-of-way line of said Windstar Road, with the south line of the tract described herein, with the arc of a curve to the right, having a radius of 155.00 feet, an arc distance of 21.99 feet, and a chord which bears S 14°05'24" W, a distance of 21.97 feet to a 1/2-inch iron rod with a plastic cap stamped "LANDDEV" previously set for the northeast corner of Lot 1, Block Z, said Butler Farms Phase 2, 3, & 4, same being a non-tangent end-of-curve and a southeast corner of the tract described herein;

THENCE N 71°50'45" W, continuing across the said 366.4641 acre tract, with the north line of said Lot 1, Block Z, Butler Farms Phase 2, 3, & 4, with the south line of the tract described herein, a distance of 154.16 feet to the **POINT OF BEGINNING** and containing 19.94 acres of land, more or less.

BEARING BASIS: Texas Coordinate System, Central Zone, NAD83, Grid.

THE STATE OF TEXAS

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF TRAVIS

That I, Ernesto Navarrete, a Registered Professional Land Surveyor, do hereby certify that the above description is true and correct to the best of my knowledge and belief and that the parcel of land described herein is based upon a survey performed upon the ground under my direct supervision during the months of April and May, 2020, and March, 2022.

WITNESS MY HAND AND SEAL at Austin, Travis County, Texas, this 8th day of November 2024 A.D.

HR GREEN DEVELOPMENT TX, LLC
5508 Highway 290 West, Suite 150
Austin, Texas 78735

Ernesto Navarrete
Registered Professional Land Surveyor
No. 6642 – State of Texas

ELECTRONICALLY RECORDED 2021021762
Williamson County, Texas Total Pages: 15

STATE OF TEXAS

WARRANTY DEED

COUNTY OF WILLIAMSON WITH VENDOR'S LIEN

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

EFFECTIVE DATE:	February 10, 2021
GRANTOR:	**BUTLER FAMILY PARTNERSHIP, LTD., a Texas limited partnership**
GRANTEE:	**366 TX 29, LTD., a Texas limited partnership**
GRANTEE'S ADDRESS:	230 Klattenhoff Lane, Ste. 102 Hutto, Texas 78634
CONSIDERATION:	TEN DOLLARS ($10.00) cash and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by Grantor; with the further consideration of the execution and delivery by Grantee of a Promissory Note ("Note") in the principal amount of **$4,128,900.00** of even date herewith payable to the order of Travis County Exchange Corporation, as Qualified Intermediary for Butler Family Partnership, Ltd., a Texas limited partnership ("Lender").

REAL PROPERTY

A tract of land containing 366.4641 acres out of the John B. Berry Survey, Abstract No. 56, in Williamson County, Texas, more fully described on the attached Exhibit "A", BUT SAVE AND EXCEPT that certain 95.555 acres of land, in the John B. Berry Survey, Abstract No. 56, in Williamson County, Texas, as more fully described on the attached Exhibit "B", and SAVE AND EXCEPT that certain 45.954 acres of land, in the John B. Berry Survey, Abstract No. 56, in Williamson County, Texas, as more fully described on the attached Exhibit "C" (the "Land").

(together with all improvements and fixtures, if any, located on the Land (the "Improvements"); all of Grantor's rights, title and interests, if any, in and to any and all rights, privileges, easements, hereditaments, and appurtenances to the Land, the ("Appurtenances"), including, without limitation, water, and any right, title and interest of Grantor in and to any creeks and streams, and any road, easements, alleys, streets, and rights-of-way, bounding or existing for the benefit of the Land, existing, vacated or proposed, in front of, or adjoining the Land, together with all rights of ingress and egress unto the Land; all of Grantor's right, title and interest, if any, in and to any development rights (the "Development Rights") benefiting or associated with the Land, including, but not limited to, any and all applications, permits, licenses, approvals, utility living or service unit equivalent allocations, utility service commitments, utility taps, letters of credit, prepaid utility capital recovery or impact fees, posted fiscal deposits and fees, reimbursement rights, credits, drainage discharge rights, entitlements, contracts, rights under traffic phasing agreement, access permits, or other development rights, and benefits now or hereafter associated with the Land, together will all construction plans, surveys and engineering work product relating to the Land and proposed improvements thereon. The Land and Improvements are referred to herein as the "Real Property." The Land, Improvements, Appurtenances, and Development Rights are referred to herein as the "Property.")

RESERVATIONS FROM & EXCEPTIONS TO CONVEYANCE & WARRANTY:

This conveyance is made and accepted subject to all restrictions, covenants, reservations, conditions, rights-of-way, and easements, if any, affecting the Property that are valid, existing, and properly of record; and subject, further, to all zoning laws, regulations, and ordinances of municipal or other governmental authorities, if any, but only to the extent that they are still in effect and relate to the Property.

OIL, GAS, AND OTHER MINERALS: Grantor hereby reserves for Grantor and Grantor's successors, and assigns forever, all oil, gas, and other minerals in and under and that may be produced from the Land. However, Grantor hereby waives and conveys to Grantee the right of ingress and egress to and from the surface of the Land and 500 feet thereunder, whether for exploration, production, or otherwise, relating to the mineral estate reserved by Grantor. Nothing will restrict or prohibit the pooling or unitization of the portion of the mineral estate reserved by Grantor with tracts other than the Land, provided that these operations in no manner interfere with the surface or subsurface support of any improvements constructed or to be constructed on the Land.

***AD VALOREM* TAXES:**

Ad valorem taxes on the Property for the year 2021 are assumed by Grantee. If this conveyance or a change in use of the Property or denial of a special use valuation on the Property claimed by Grantor results in the assessment after Closing of additional taxes for periods prior to Closing, the additional taxes plus any penalties and interest shall be paid by Grantee.

VENDOR'S LIEN:

It is expressly agreed that a VENDOR'S LIEN, as well as the Superior Title in and to the Property, is retained against the Property, premises, and improvements until the above-described Note and all interest thereon are fully paid according to the face, tenor, effect, and reading thereof, when this Deed shall become

absolute. To secure payment of the Note, Grantor hereby ASSIGNS and TRANSFERS to Lender the Vendor's Lien and Superior Title without recourse on Grantor.

DEED OF TRUST:

As additional security for the payment of the Note, Grantee has executed and delivered a Deed of Trust conveying title to the Property to **William D. Brown,** Trustee, for the benefit of Lender.

CONVEYANCE:

Grantor, for the consideration and subject to the reservations from and exceptions to conveyance and warranty, GRANTS, SELLS, and CONVEYS to Grantee the Property, together with all and singular the rights and appurtenances thereto in any wise belonging, to have and hold it to Grantee, Grantee's heirs, executors, administrators, successors, or assigns forever. Grantor binds Grantor and Grantor's heirs, executors, administrators, successors, and assigns to WARRANT AND FOREVER DEFEND all and singular the Real Property to Grantee and Grantee's heirs, executors, administrators, successors, and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, except as to the reservations from and exceptions to conveyance and warranty.

AS IS. GRANTEE ACKNOWLEDGES AND AGREES THAT EXCEPT FOR THE WARRANTY OF TITLE CONTAINED HEREIN AND FOR THE EXPRESS REPRESENTATIONS AND WARRANTIES OF GRANTOR MADE IN PARAGRAPH 6.1 OF THE CONTRACT BETWEEN GRANTOR AND GRANTEE, THAT (1) NEITHER GRANTOR NOR ITS REPRESENTATIVES HAVE MADE ANY REPRESENTATIONS OR WARRANTIES AS TO THE PROPERTY OR ITS ENVIRONMENTAL OR PHYSICAL CONDITION, UPON WHICH GRANTEE HAS RELIED; and (2) GRANTEE IS NOT RELYING ON ANY WRITTEN, ORAL, IMPLIED OR OTHER REPRESENTATIONS, STATEMENTS OR WARRANTIES BY GRANTOR OR ANY AGENT OF GRANTOR OR ANY REAL ESTATE BROKER OR SALESMAN; and (3) GRANTEE FURTHER ACKNOWLEDGES AND AGREES THAT HAVING BEEN GIVEN THE OPPORTUNITY TO INSPECT THE PROPERTY, GRANTEE IS RELYING SOLELY ON ITS OWN INVESTIGATION OF THE PROPERTY AND NOT ON ANY INFORMATION PROVIDED OR TO BE PROVIDED BY GRANTOR. GRANTEE FURTHER ACKNOWLEDGES AND AGREES THAT ANY INFORMATION PROVIDED OR TO BE PROVIDED WITH RESPECT TO THE PROPERTY WAS OBTAINED FROM A VARIETY OF SOURCES AND THAT GRANTOR HAS NOT MADE ANY INDEPENDENT INVESTIGATION OR VERIFICATION OF SUCH INFORMATION. GRANTEE FURTHER ACKNOWLEDGES AND AGREES THAT THE SALE OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS, WHERE IS" CONDITION AND BASIS "WITH ALL FAULTS". GRANTEE ACKNOWLEDGES AND AGREES THAT THE PROVISIONS OF THIS PARAGRAPH WERE A MATERIAL FACTOR IN THE DETERMINATION OF THE PURCHASE PRICE OF THE PROPERTY.

TERMS: When the context requires, singular nouns and pronouns include the plural; and masculine forms include the feminine.

[signature page to follow]

EXECUTED this 10th day of February, 2021, to be EFFECTIVE on the date set forth above.

GRANTOR: **BUTLER FAMILY PARTNERSHIP, LTD.,**
a Texas limited partnership
By: BCP GP, LLC,
a Texas limited liability company,
Its General Partner

By: _____
Edward S. Butler, Sole Member

ACKNOWLEDGMENT

STATE OF TEXAS *
*
COUNTY OF WILLIAMSON *

ACKNOWLEDGED BEFORE ME by the said **Edward S. Butler, as Sole Member of BCP GP, LLC, a Texas limited liability company, the General Partner of Butler Family Partnership, Ltd., a Texas limited partnership,** on this 10 day of February, 2021, on behalf of said entities.

_____
NOTARY PUBLIC STATE OF TEXAS

ALAN M. MCGRAW
NOTARY PUBLIC
ID# 10472570
State of Texas
Comm. Exp. 04-19-2024

EXHIBIT "A"

4WARD Land Surveying
PO Box 90876
Austin, TX 78709
512.537.2384
www.4wardls.com

Legal Description

BEING A DESCRIPTION OF A TRACT OF LAND CONTAINING 366.4641 ACRES (15,963,175 SQUARE FEET) OUT OF THE JOHN B. BERRY SURVEY, ABSTRACT NO. 56, IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 546.33 ACRE TRACT OF LAND CONVEYED TO BUTLER FAMILY PARTNERSHIP, LTD. IN DOCUMENT NO. 2010087926 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.T.), SAID 366.4641 ACRES BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING, at a 1/2-inch iron rod with "RPLS 5025" cap found in the southwest line of said 546.33 acre tract, same being the northeast right-of-way line of Highway 29 (right-of-way width varies), at the south corner of a called 80.00 acre tract of land conveyed to 3AM Ventures, LLC in Document No. 2016028473 (O.P.R.W.C.T.), for the southwest corner and **POINT OF BEGINNING** hereof;

THENCE, crossing said 546.33 acre tract with the east line of said 80.00 acre tract, the following two (2) courses and distances:

1) **N17°41'30"E**, a distance of **1,532.13** feet to a 1/2-inch iron rod with "RPLS 5025" cap found for an angle point hereof, and
2) **N24°12'30"W**, a distance of **1,219.76** feet to a 1/2-inch iron rod with "RPLS 5025" cap found for an angle point hereof, being the northeast corner of said 80.00 acre tract, and being in the northwest line of said 546.33 acre tract, same being the southeast line of a called 16.92 acre tract conveyed to Rachel Osterloh, et ux. in Document No. 2015020206 (O.P.R.W.C.T.);

THENCE, with the common line of said 546.33 acre tract and said 16.92 acre tract, **N69°47'24"E**, a distance of **55.34** feet to a 1/2-inch iron rod found for an angle point hereof, being the east corner of said 16.92 acre tract, same being the easterly south corner of a called 134.741 acre tract conveyed to Dinah Beth Brothers in Document No. 2008063553 (O.P.R.W.C.T.);

THENCE, with the common line of said 546.33 acre tract and said 134.741 acre tract, the following seven (7) courses and distances:

1) **N70°05'25"E**, a distance of **49.84** feet to a 1/2-inch iron rod with "RPLS 5025" cap found for an angle point hereof,
2) **N21°07'49"W**, a distance of **701.45** feet to a 1/2-inch iron rod found for an angle point hereof,
3) **N20°53'28"W**, a distance of **60.64** feet to a 1/2-inch iron rod with "RPLS 5785" cap found for an angle point hereof,
4) **N69°24'55"E**, a distance of **1,344.86** feet to a 1/2-inch iron rod found for an angle point hereof,
5) **N04°00'11"W**, a distance of **774.04** feet to a 1/2-inch iron rod found for an angle point hereof,
6) **S69°33'52"W**, a distance of **388.52** feet to a 2" steel fence corner post found for an angle point hereof, and
7) **N19°44'16"W**, a distance of **935.31** feet to a 1/2-inch iron rod with "RPLS 5025" cap found for the northwest corner hereof, being the northwest corner of said 546.33 acre tract, same being the northernmost corner of said 134.741 acre tract, also being in the southeast line of a called 250.00 acre tract described in Document No. 2006073171 (O.P.R.W.C.T.);

THENCE, with the northwest line of said 546.33 acre tract, same being the southeast line of said 250.00 acre tract, the following four (4) courses and distances:

1) **N69°41'18"E**, a distance of **955.17** feet to a 1/2-inch iron rod found for an angle point hereof,
2) **N69°39'26"E**, a distance of **380.56** feet to a 1/2-inch iron rod found for an angle point hereof,
3) **N67°54'51"E**, a distance of **681.59** feet to a 1/2-inch iron rod found for an angle point hereof, and

4) **N68°42'12"E**, a distance of **401.14** feet to a 1/2-inch iron rod found for the northernmost corner hereof, being the northernmost corner of said 546.33 acre tract, and being the northwest corner of a called 22.005 acre tract conveyed to Jack R. Campbell in Volume 1062, Page 562 of the of the Official Records of Williamson County, Texas (O.R.W.C.T.);

THENCE, with the northeast line of said 546.33 acre tract, in part being the southwest line of said 22.005 acre tract, and part being the southwest line of a called 22.005 acre tract conveyed to Robert L. Harris in Document No. 2015031715 (O.P.R.W.C.T.) and described in Volume 817, Page 299 of the Deed Records Williamson County, Texas (D.R.W.C.T.), and part being southwest line of a called 11.544 acre tract conveyed to Robert L. Harris and Edena Harris in Volume 1456, Page 72 (O.R.W.C.T.), and part being the southwest line of a called 20.00 acre tract conveyed to Robert L. Harris and Edena B. Harris in Volume 2272, Page 749 (O.R.W.C.T.) and described in Volume 817, Page 319 (D.R.W.C.T.), and part being the southwest line of a called 20.00 acre tract conveyed to Robert L. Harris and Edena B. Harris in Volume 2272, Page 747 (O.R.W.C.T.) and described in Volume 817, Page 284 (D.R.W.C.T.), and part being the southwest line of a called 94.57 acre tract described in Volume 816, Page 349 (D.R.W.C.T.) and a portion conveyed in Document No. 2015075886 (O.P.R.W.C.T.), **S20°44'38"E**, a distance of **4,617.74** feet to a 6" cedar fence corner post found in the southwest line of said 94.57 acre tract, for the easternmost corner hereof, same being the easternmost corner of said 546.33 acre tract, also being the north corner of a called 100 acre tract conveyed to Leroy O. Hall and Thelma M. Hall Revocable Living Trust in Document No. 9819014 (O.R.W.C.T.);

THENCE, with the common line of said 546.33 acre tract and said 100 acre tract, **S69°23'02"W**, a distance of **1,733.09** feet to a 6" cedar fence corner post found for an angle point hereof, and being the west corner of said 100 acre tract, same being the north corner of a called 45.00 acre tract conveyed to Saraja, LLC in Document No. 2015108887 (O.P.R.W.C.T.);

THENCE, crossing said 546.33 acre tract with the northwest line of said 45.00 acre tract, **S52°40'43"W**, a distance of **2,538.65** feet to a 1/2-inch iron rod found for the southernmost corner hereof, and being the west corner of said 45.00 acre tract, same being in the southwest line of said 546.33 acre tract and in the northeast right-of-way line of Highway 29;

THENCE, with the common line of said 546.33 acre tract and Highway 29, the following three (3) courses and distances:

1) Along the arc of a curve to the left, whose radius is **1,005.40** feet, whose arc length is **209.79** feet and whose chord bears **N58°44'55"W**, a distance of **209.41** feet to a 1/2-inch iron rod with "3DS Land Surveying" cap found for a non-tangent point of compound curvature hereof;
2) Along the arc of a curve to the left, whose radius is **2,249.81** feet, whose arc length is **359.71** feet and whose chord bears **N64°38'13"W**, a distance of **359.33** feet to a 1/2-inch iron rod found for an angle point hereof, and
3) **N64°23'37"W**, a distance of **70.52** feet to the **POINT OF BEGINNING** hereof, and containing 366.4641 Acres (15,963,175 Square Feet) more or less.

NOTE:

Surveyed on the ground on July 5, 2018. All bearings are based on the Texas State Plane Coordinate System, Grid North, Central Zone (4203), all distances were adjusted to surface using a combined scale factor of 1.000153849973. See attached drawing (reference drawing: 00743_Title Survey Overall.dwg).

12/13/19

Steven M. Duarte, RPLS #5940
4Ward Land Surveying, LLC
TBPLS Firm #10174300

"EXHIBIT B"

DESCRIPTION OF 95.555 ACRES OF LAND IN THE JOHN B. BERRY SURVEY, ABSTRACT NO. 56, WILLIAMSON COUNTY, TEXAS; BEING A PORTION OF A CERTAIN CALLED 546.33 ACRE TRACT OF LAND DESCRIBED IN THE ADMINISTRATOR'S SPECIAL WARRANTY DEED TO BUTLER FAMILY PARTNERSHIP, LTD. OF RECORD IN DOCUMENT NO. 2010087926, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 95.555 ACRES, ALSO BEING A PORTION OF A CERTAIN CALLED 366.455 ACRES DESCRIBED IN THE DEED OF TRUST RECORDED IN DOCUMENT NO. 2020023667, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 95.555 ACRES OF LAND, AS SURVEYED BY LANDDEV CONSULTING, LLC, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING at a ½-inch iron rod found in the curving northeast right-of-way line of State Highway 29, a variable-width right-of-way, in the southwest line of the said 546.33 acre tract, at the southwest corner of the said 366.455 acre tract, at the northwest corner of a certain called 45.00 acre tract described in the deed to Saraja, LLC of record in Document No. 2015108887, Official Public Records of Williamson County, Texas;

THENCE N 52°40'32" E, leaving the curving northeast right-of-way line of said State Highway 29, crossing the said 546.33 acre tract, with the south line of the said 366.455 acre tract, with the northwest line of the said 45.00 acre tract, a distance of 2,302.20 feet to a calculated point for the southwest corner and **POINT OF BEGINNING** of the tract described herein;

THENCE leaving the northwest line of the said 45.00 acre tract, crossing the said 546.33 acre tract and the said 366.455 acre tract, with the west and north lines of the tract described herein, the following forty-nine (49) courses and distances:

1. N 20°57'17" W, a distance of 173.51 feet to a calculated angle point,
2. N 19°23'17" W, a distance of 81.94 feet to a calculated angle point,
3. N 20°57'17" W, a distance of 138.07 feet to a calculated angle point,
4. N 17°24'12" W, a distance of 292.21 feet to a calculated angle point,
5. N 15°56'58" E, a distance of 200.02 feet to a calculated angle point,
6. S 74°03'02" E, a distance of 200.00 feet to a calculated angle point,
7. S 81°07'58" E, a distance of 76.12 feet to a calculated angle point,
8. N 69°04'37" E, a distance of 45.82 feet to a calculated angle point,
9. N 20°57'17" W, a distance of 170.00 feet to a calculated angle point,
10. N 69°18'57" E, a distance of 105.07 feet to a calculated point-of-curvature,
11. with the arc of a curve to the right, having a radius of 15.00 feet, an arc distance of 23.49 feet, and a chord which bears S 65°49'10" E, a distance of 21.16 feet to a calculated point for a non-tangent end of curve,
12. S 20°57'17" E, a distance of 17.33 feet to a calculate angle point,
13. N 69°12'37" E, a distance of 50.00 feet to a calculate angle point,
14. N 20°57'17" W, a distance of 97.02 feet to a calculate angle point,
15. S 69°32'34" W, a distance of 50.00 feet to a calculated point for a non-tangent curve,
16. with a curve to the right, having a radius of 15.00 feet, an arc distance of 23.61 feet, and a chord which bears S 24°13'33" W, a distance of 21.25 feet to a calculated point-of-tangency,
17. S 69°18'57" W, a distance of 107.23 feet to a calculate angle point,

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18. N 16°17'55" W, a distance of 125.42 feet to a calculated angle point,
19. N 06°15'56" E, a distance of 521.64 feet to a calculated angle point,
20. N 29°41'39" W, a distance of 214.69 feet to a calculated angle point,
21. N 09°59'21" W, a distance of 74.87 feet to a calculated angle point,
22. N 01°05'48" E, a distance of 175.39 feet to a calculated angle point,
23. N 88°54'12" W, a distance of 200.35 feet to a calculated angle point,
24. N 05°29'27" E, a distance of 50.15 feet to a calculated angle point,
25. S 88°54'12" E, a distance of 189.26 feet to a calculated angle point,
26. N 14°12'32" W, a distance of 109.14 feet to a calculated angle point,
27. N 01°41'30" E, a distance of 203.33 feet to a calculate angle point,
28. N 25°18'15" E, a distance of 185.11 feet to a calculate angle point,
29. N 08°21'54" W, a distance of 200.00 feet to a calculate angle point,
30. N 35°54'33" W, a distance of 85.46 feet to a calculate angle point,
31. N 00°19'19" W, a distance of 175.96 feet to a calculate angle point,
32. N 11°21'23" W, a distance of 100.14 feet to a calculate angle point,
33. N 81°38'05" E, a distance of 120.00 feet to a calculate angle point,
34. N 68°32'59" E, a distance of 50.00 feet to a calculated point of a non-tangent curve,
35. with the arc of a curve to the right, having a radius of 825.00 feet, an arc distance of 138.49 feet, and a chord which bears S 16°38'28" E, a distance of 138.33 feet to a calculated point of reverse curvature,
36. with the arc of a curve to the left, having a radius of 15.00 feet, an arc distance of 22.93 feet, and a chord which bears S 55°37'37" E, a distance of 20.76 feet to a calculated point-of-tangency,
37. N 80°34'42" E, a distance of 38.62 feet to a calculated point-of-curvature,
38. with the arc of a curve to the left, having a radius of 670.00 feet, an arc distance of 83.36 feet, and a chord which bears N 77°00'50" E, a distance of 83.31 feet to a calculated point for a non-tangent end of curve,
39. N 19°04'21" W, a distance of 169.35 feet to a calculate angle point,
40. N 28°26'27" W, a distance of 352.03 feet to a calculate angle point,
41. N 60°57'35" E, a distance of 211.25 feet to a calculate angle point,
42. N 74°10'23" E, a distance of 166.35 feet to a calculate angle point,
43. S 23°58'12" E, a distance of 167.10 feet to a calculate angle point,
44. S 12°17'42" E, a distance of 161.34 feet to a calculate angle point,
45. S 21°27'30" E, a distance of 210.02 feet to a calculate angle point,
46. N 69°18'57" E, a distance of 116.67 feet to a calculated point-of-curvature,

B

47. with the arc of a curve to the left, having a radius of 15.00 feet, an arc distance of 23.58 feet, and a chord which bears N 24°17'09" E, a distance of 21.22 feet to a calculated point-of-tangency,

48. N 20°44'38" W, a distance of 10.01 feet to a calculate angle point, and

49. N 69°40'57" E, a distance of 185.00 feet to a calculated point in the east line of the said 546.33 acre tract and the said 366.455 acre tract, in the west line of a certain called 22.005 acre tract designated as Tract 1 and conveyed in the Executor's Deed to Edna Bray Harris of record in Document No. 2018052583, Official Public Records of Williamson County, Texas, and described in the deed to Robert L. Harris of record in Volume 1456, Page 72, Official Records of Williamson County, Texas, for a northeast corner of the tract described herein;

THENCE S 20°44'37" E, with the east line of the said 546.33 acre tract and the said 366.455 acre tract, with the west line of the said 22.005 acre tract, with the west lines of Tract 5 (11.544 acres), Tract 4 (20.00 acres) and Tract 3 (20.00 acres) conveyed in the said Executor's Deed to Edna Bray Harris of record in said Document No. 2018052583, Official Public Records of Williamson County, Texas, and described in a deed to Veterans' Land Board of the State of Texas of record in said Volume 817, Page 319, Deed Records of Williamson County, Texas, and the west line of a certain called 94.57 acre tract, save and except 10.00 acres and 15.00 acres, conveyed in the deed to 1047 Liberty Hill Series, a Series of Lechow Investments LLC, of record in Document No. 2015075887, Official Public Records of Williamson County, Texas, and described in the deed to John D. Pope and wife, Ada L. Pope of record in Volume 816, Page 349, Deed Records of Williamson County, Texas, with an east line of the tract described herein, a distance of 2,721.12 feet to a 6-inch cedar fence post found in the west line of the said 94.57 acre tract, at the easterly southeast corner of the said 546.33 acre tract, at the southeast corner of the said 366.455 acre tract, same being the northeast corner of a certain called 100 acre tract described in the deed to Leroy O. Hall and Thelma M. Hall Revocable Living Trust of record in Document No. 9819014, Official Records of Williamson County, Texas, for the easterly southeast corner of the tract described herein, from which a 60-d nail found for reference bears N 60°03'01" E, a distance of 0.74 feet;

THENCE S 69°22'46" W, with a south line of the said 546.33 acre tract and the said 366.455 acre tract, and the north line of the said 100 acre tract, with the south line of the tract described herein, a distance of 1,733.10 feet to a 6-inch cedar fence post found at the northwest corner of the said 100 acre tract and the northeast corner of the said 45.00 acre tract, same being a re-entrant corner of the said 546.33 acre tract, at an angle point in the south line of the said 366.455 acre tract, for an angle point in the south line of the tract described herein;

THENCE S 52°40'32" W, crossing the said 546.33 acre tract, continuing with the south line of the said 366.445 acre tract, with the north line of the said 45.00 acre tract, continuing with the south line of the tract described herein, a distance of 236.34 feet to the **POINT OF BEGINNING** and containing 95.555 acres of land, more or less.

BEARING BASIS: Texas Coordinate System, Central Zone, NAD83, Grid.

THE STATE OF TEXAS

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF TRAVIS

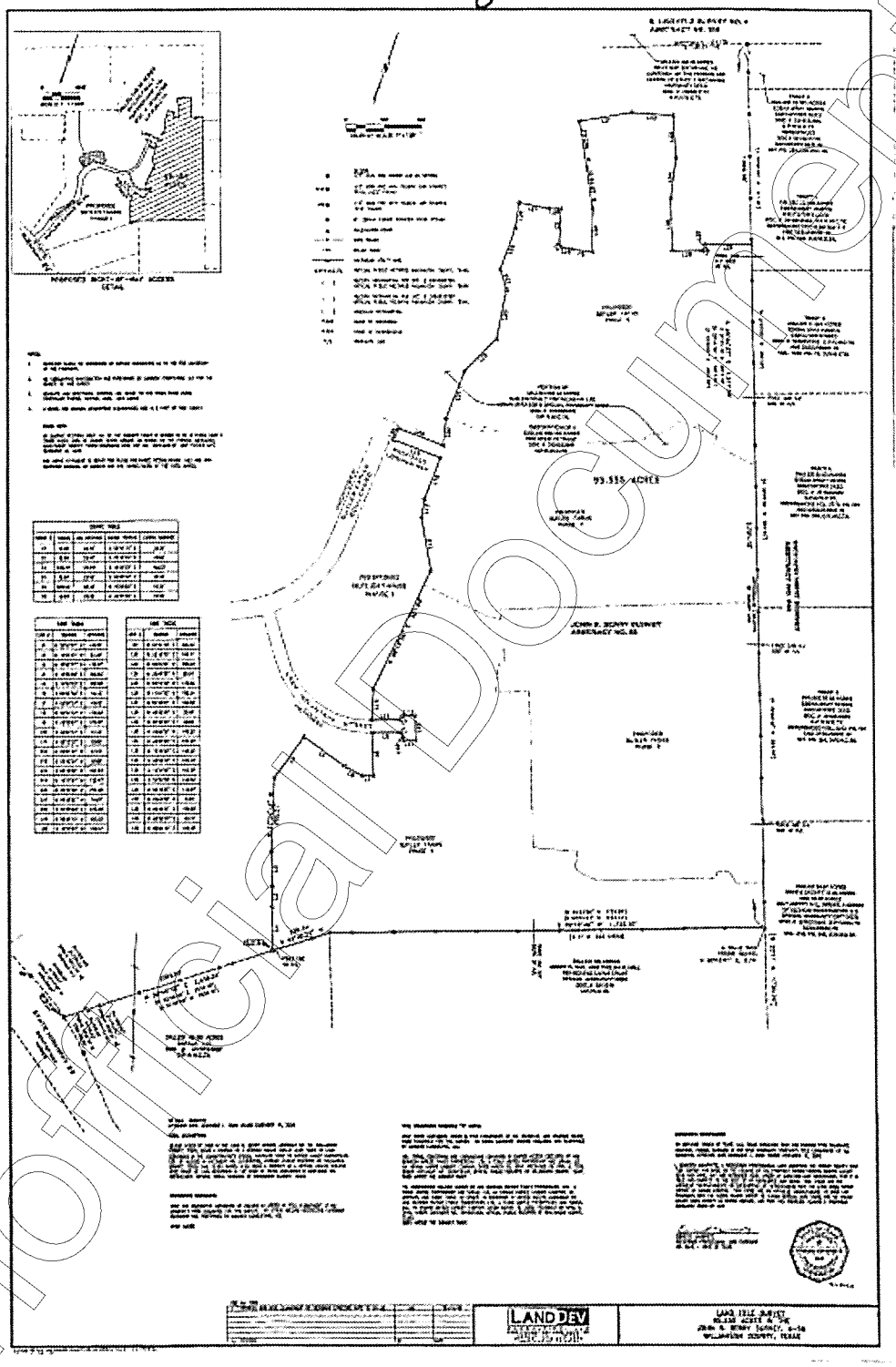
That I, Ernesto Navarrete, a Registered Professional Land Surveyor, do hereby certify that the above description is true and correct to the best of my knowledge and belief and that the parcel of land described herein is based upon a survey performed upon the ground under my direct supervision during the months of August, 2019 and April, May and December, 2020.

WITNESS MY HAND AND SEAL at Austin, Travis County, Texas, this 11th day of December 2020 A.D.

LANDDEV CONSULTING, LLC
5508 Highway 290 West, Suite 150
Austin, Texas 78735

Ernesto Navarrete
Registered Professional Land Surveyor
No. 6642 – State of Texas

B



"EXHIBIT C"

DESCRIPTION OF 45.954 ACRES OF LAND IN THE JOHN B. BERRY SURVEY, ABSTRACT NO. 56, WILLIAMSON COUNTY, TEXAS; BEING A PORTION OF A CERTAIN CALLED 546.33 ACRE TRACT OF LAND DESCRIBED IN THE ADMINISTRATOR'S SPECIAL WARRANTY DEED TO BUTLER FAMILY PARTNERSHIP, LTD. OF RECORD IN DOCUMENT NO. 2010087926, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 45.954 ACRES, ALSO BEING A PORTION OF A CERTAIN CALLED 366.455 ACRE TRACT OF LAND DESCRIBED IN THE DEED OF TRUST RECORDED IN DOCUMENT NO. 2020023667, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 45.954 ACRES OF LAND, AS SURVEYED BY LANDDEV CONSULTING, LLC, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING at a ½-inch iron rod found in the curving northeast right-of-way line of State Highway 29, a variable-width right-of-way, in the southwest line of the said 546.33 acre tract, at the southwest corner of the said 366.455 acre tract, same being the northwest corner of a certain called 45.00 acre tract of land described in the Special Warranty Deed to Saraja, LLC of record in Document No. 2015108887, Official Public Records of Williamson County, Texas;

THENCE N 14°25'59" E, leaving the curving northeast right-of-way line of said State Highway 29, crossing the said 546.33 acre tract and the said 366.455 acre tract, a distance of 2,714.15 feet to a calculated point for the most southerly southwest corner and **POINT OF BEGINNING** of the tract described herein;

THENCE, crossing the said 546.33 acre tract and the said 366.455 acre tract, with the west and south lines of the tract described herein, the following fifteen (15) courses and distances:

1. N 00°11'36" W, a distance of 132.00 feet to a calculated angle point,
2. N 89°48'24" E, a distance of 5.03 feet to a calculated angle point,
3. N 00°11'36" W, a distance of 50.00 feet to a calculated angle point,
4. S 89°48'24" W, a distance of 70.00 feet to a calculated point-of-curvature,
5. with the arc of a curve to the right, having a radius of 15.00 feet, an arc distance of 23.56 feet, and a chord which bears N 45°11'36" W, a distance of 21.21 feet to a calculated point-of-tangency,
6. N 00°11'36" W, a distance of 35.15 feet to a calculated point-of-curvature,
7. with the arc of a curve to the left, having a radius of 205.00 feet, an arc distance of 28.31 feet, and a chord which bears N 04°08'56" W, a distance of 28.28 feet to a calculated point for a non-tangent end of curve,
8. S 81°53'43" W, a distance of 50.00 feet to a calculated point of non-tangent curvature,
9. with the arc of a curve to the left, having a radius of 155.00 feet, an arc distance of 80.92 feet, and a chord which bears N 23°03'41" W, a distance of 80.01 feet to a calculated point of non-tangency,
10. S 72°47'55" W, a distance of 189.60 feet to a calculated angle point,
11. S 58°30'07" W, a distance of 292.23 feet to a calculated point for the most westerly southwest corner of the tract described herein, from which a ½-inch iron rod with a plastic cap stamped "RPLS 5025" found at a re-entrant corner of the said 546.33 acre tract, same being a re-entrant corner of the said 366.455 acre tract, at a southeast corner of a certain called 134.741 acre tract of land designated as Tract 1 and described in the Warranty Deed with Vendor's Lien to Dinah Beth Brothers of record in Document No. 2008063553, Official Public Records of Williamson County, Texas, bears N 75°11'25" W, a distance of 605.88 feet,
12. N 44°05'01" W, a distance of 257.32 feet to a calculated angle point,
13. N 34°41'44" W, a distance of 113.90 feet to a calculated angle point,
14. N 28°17'28" W, a distance of 113.82 feet to a calculated angle point, and

15. N 20°21'04" W, a distance of 653.69 feet to a calculated point in a north line of the said 546.33 acre tract, in a north line of the said 366.455 tract, and in a south line of the said 134.741 acre tract, for the most westerly northwest corner of the tract described herein, from which a ½-inch iron rod with a plastic cap stamped "RPLS 5025" found at a northwest corner of the said 546.33 acre tract and a northwest corner of the said 366.455 acre tract, same being a re-entrant corner of the said 134.741 acre tract bears S 69°25'22" W, a distance of 357.99 feet;

THENCE, with a north and a west line of the said 546.33 acre tract, with a north and a west line of the said 366.455 acre tract, with a south and an east line of the said 134.741 acre tract, with a north and west line of the tract described herein, the following two (2) courses and distances:

1. N 69°25'22" E, a distance of 987.23 feet to a ½-inch iron rod found at a re-entrant corner of the said 546.33 acre tract and the said 366.455 acre tract, same being the most easterly southeast corner of the said 134.741 acre tract, for a re-entrant corner of the tract described herein, and

2. N 04°01'23" W, a distance of 17.40 feet to a calculated point for a northwest corner of the tract described herein, from which a ½-inch iron rod found at a re-entrant corner of the said 546.33 acre tract and the said 366.455 acre tract, same being a northeast corner of the said 134.741 acre tract bears N 04°01'23" W, a distance of 756.57 feet;

THENCE, leaving the east line of the said 134.741 acre tract, crossing the said 546.33 acre tract and the said 366.455 acre tract, with the north, east and south lines of the tract described herein, the following thirty (30) courses and distances:

1. S 71°50'45" E, a distance of 154.16 feet to a calculated point of non-tangent curvature,

2. with the arc of a curve to the left, having a radius of 155.00 feet, an arc distance of 29.51 feet, and a chord which bears N 12°41'59" E, a distance of 29.47 feet to a calculated point of compound curvature,

3. with the arc of a curve to the left, having a radius of 25.00 feet, an arc distance of 27.22 feet, and a chord which bears N 23°56'36" W, a distance of 25.89 feet to a calculated point of reverse curvature,

4. with the arc of a curve to the right, having a radius of 60.00 feet, an arc distance of 300.96 feet, and a chord which bears N 88°33'52" E, a distance of 71.05 feet to a calculated point of reverse curvature,

5. with the arc of a curve to the left, having a radius of 25.00 feet, an arc distance of 21.29 feet, and a chord which bears S 27°51'35" W, a distance of 20.66 feet to a calculated point of reverse curvature,

6. with the arc of a curve to the right, having a radius of 205.00 feet, an arc distance of 23.50 feet, and a chord which bears S 06°44'31" W, a distance of 23.48 feet to a calculated point for a non-tangent end of curve,

7. S 79°58'28" E, a distance of 123.05 feet to a calculated angle point,

8. S 14°15'49" W, a distance of 40.50 feet to a calculated angle point,

9. S 75°44'11" E, a distance of 122.93 feet to a calculated point of non-tangent curvature,

10. with the arc of a curve to the left, having a radius of 445.00 feet, an arc distance of 29.16 feet, and a chord which bears N 12°23'11" E, a distance of 29.16 feet to a calculated point for a non-tangent end of curve,

11. S 79°29'28" E, a distance of 50.00 feet to a calculated point of non-tangent curvature,

12. with the arc of a curve to the right, having a radius of 495.00 feet, an arc distance of 47.93 feet, and a chord which bears S 13°16'58" W, a distance of 47.91 feet to a calculated point for a non-tangent end of curve,

13. S 73°56'37" E, a distance of 136.98 feet to a calculated angle point,

14. S 07°57'35" W, a distance of 73.38 feet to a calculated point of non-tangent curvature,

15. with the arc of a curve to the right, having a radius of 225.00 feet, an arc distance of 33.13 feet, and a chord which bears N 71°02'57" W, a distance of 33.10 feet to a calculated point for a non-tangent end of curve,

16. S 23°10'10" W, a distance of 50.00 feet to a calculated angle point,

17. S 25°47'59" W, a distance of 163.75 feet to a calculated angle point,

18. S 89°43'56" E, a distance of 296.94 feet to a calculated angle point,
19. S 87°11'41" E, a distance of 244.29 feet to a calculated angle point,
20. S 02°48'19" W, a distance of 120.58 feet to a calculated angle point,
21. S 87°11'41" E, a distance of 8.47 feet to a calculated angle point,
22. S 01°05'14" W, a distance of 50.02 feet to a calculated point of non-tangent curvature,
23. with the arc of a curve to the right, having a radius of 13.50 feet, an arc distance of 21.21 feet, and a chord which bears S 42°11'41" E, a distance of 19.09 feet to a calculated point-of-tangency,
24. S 02°48'19" W, a distance of 428.64 feet to a calculated point-of-curvature,
25. with the arc of a curve to the right, having a radius of 435.00 feet, an arc distance of 653.70 feet, and a chord which bears S 45°51'22" W, a distance of 593.90 feet to a calculated point of compound curvature,
26. with the arc of a curve to the right, having a radius of 187.00 feet, an arc distance of 11.47 feet, and a chord which bears N 89°20'10" W, a distance of 11.47 feet to a calculated point-of-tangency,
27. N 87°34'45" W, a distance of 224.16 feet to a calculated angle point,
28. N 78°12'05" W, a distance of 18.41 feet to a calculated point-of-curvature,
29. with the arc of a curve to the left, having a radius of 216.00 feet, an arc distance of 9.86 feet, and a chord which bears N 88°53'10" W, a distance of 9.85 feet to a calculated point-of-tangency, and
30. S 89°48'24" W, a distance of 123.91 feet to the **POINT OF BEGINNING** and containing 45.954 acres of land, more or less.

BEARING BASIS: Texas Coordinate System, Central Zone, NAD83, Grid.

THE STATE OF TEXAS

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF TRAVIS

That I, Ernesto Navarrete, a Registered Professional Land Surveyor, do hereby certify that the above description is true and correct to the best of my knowledge and belief and that the parcel of land described herein is based upon a survey performed upon the ground under my direct supervision during the months of August, 2019 and April, May and December, 2020.

WITNESS MY HAND AND SEAL at Austin, Travis County, Texas, this 11th day of December 2020 A.D.

LANDDEV CONSULTING, LLC
5508 Highway 290 W, Suite 150
Austin, Texas 78735

Ernesto Navarrete
Registered Professional Land Surveyor
No. 6642 – State of Texas

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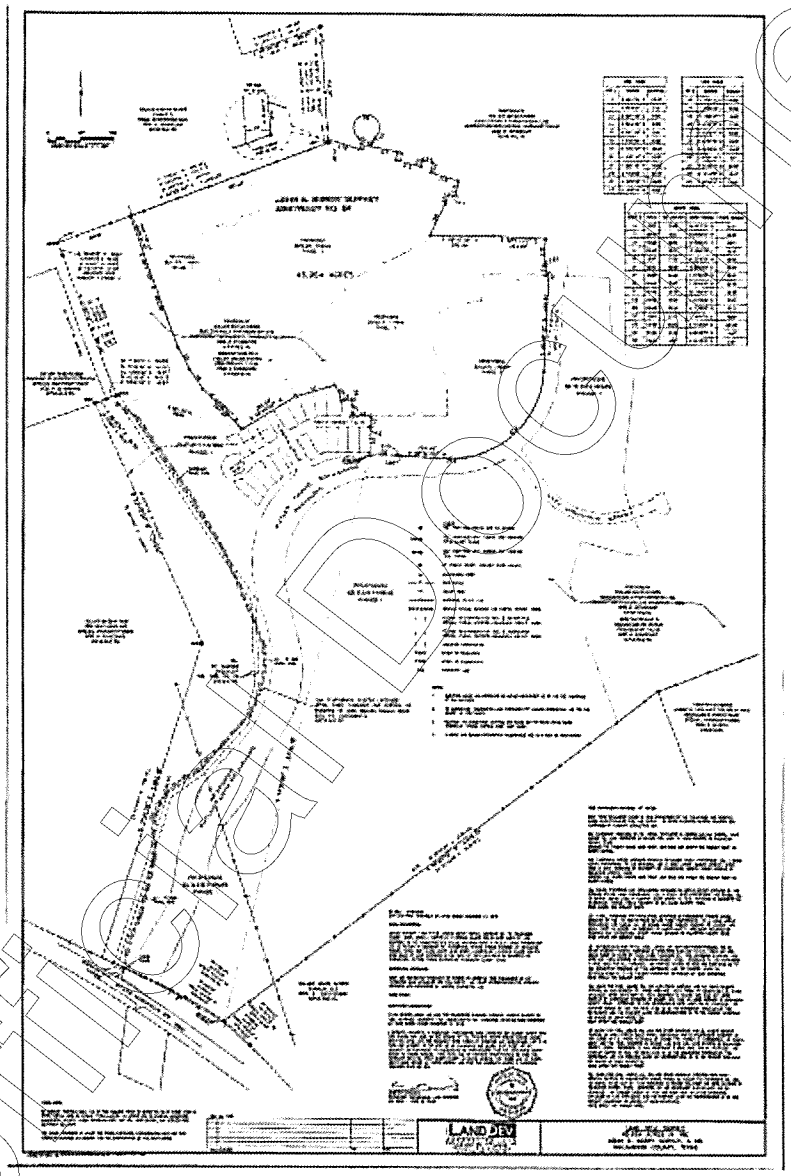


ELECTRONICALLY RECORDED
OFFICIAL PUBLIC RECORDS

2021021762

Pages: 15 Fee: $81.00
02/12/2021 12:59 PM

Nancy E. Rister,County Clerk
Williamson County,Texas

CONSTRUCTION PLANS
FOR
BUTLER FARMS
PHASE 13

CITY OF LIBERTY HILL, TEXAS
CITY PROJECT NO. ##-###CON

INITIAL SUBMITTAL:
SEPTEMBER 06, 2024

ENGINEER: **HR GREEN DEVELOPMENT TX, LLC**
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TX 78735
(512) 872-6696

SURVEYOR: **HR GREEN DEVELOPMENT TX, LLC**
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TX 78735
(512) 872-6696

OWNER: **366 TX 29, LTD**
2121 MIDWAY ROAD, SUITE 240
CARROLLTON, TX 75006
(972) 715-6450

PLANNER: **SEC PLANNING, LLC**
4201 W PARMER LANE, SUITE 220
AUSTIN, TX 78727
(512) 246-7003

WATERSHED STATUS:

THIS SITE IS LOCATED IN THE SOUTH FORK OF THE SAN GABRIEL RIVER WATERSHED. THIS SITE IS LOCATED OVER THE EDWARDS AQUIFER CONTRIBUTING ZONE.

FLOODPLAIN INFORMATION:

THIS PROPERTY IS LOCATED WITHIN ZONE 'X', AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON F.I.R.M. PANEL NO. 48491C 0250E, WILLIAMSON COUNTY, TEXAS DATED SEPTEMBER 26, 2008.

THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

BENCHMARK:

VERTICAL DATUM: NAVD 88
BENCHMARK ELEVATIONS LISTED BELOW ARE BASED ON OPUS
HORIZONTAL CONTROL AND COORDINATES SHOWN HEREON ARE BASED ON TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NAD83, GRID.

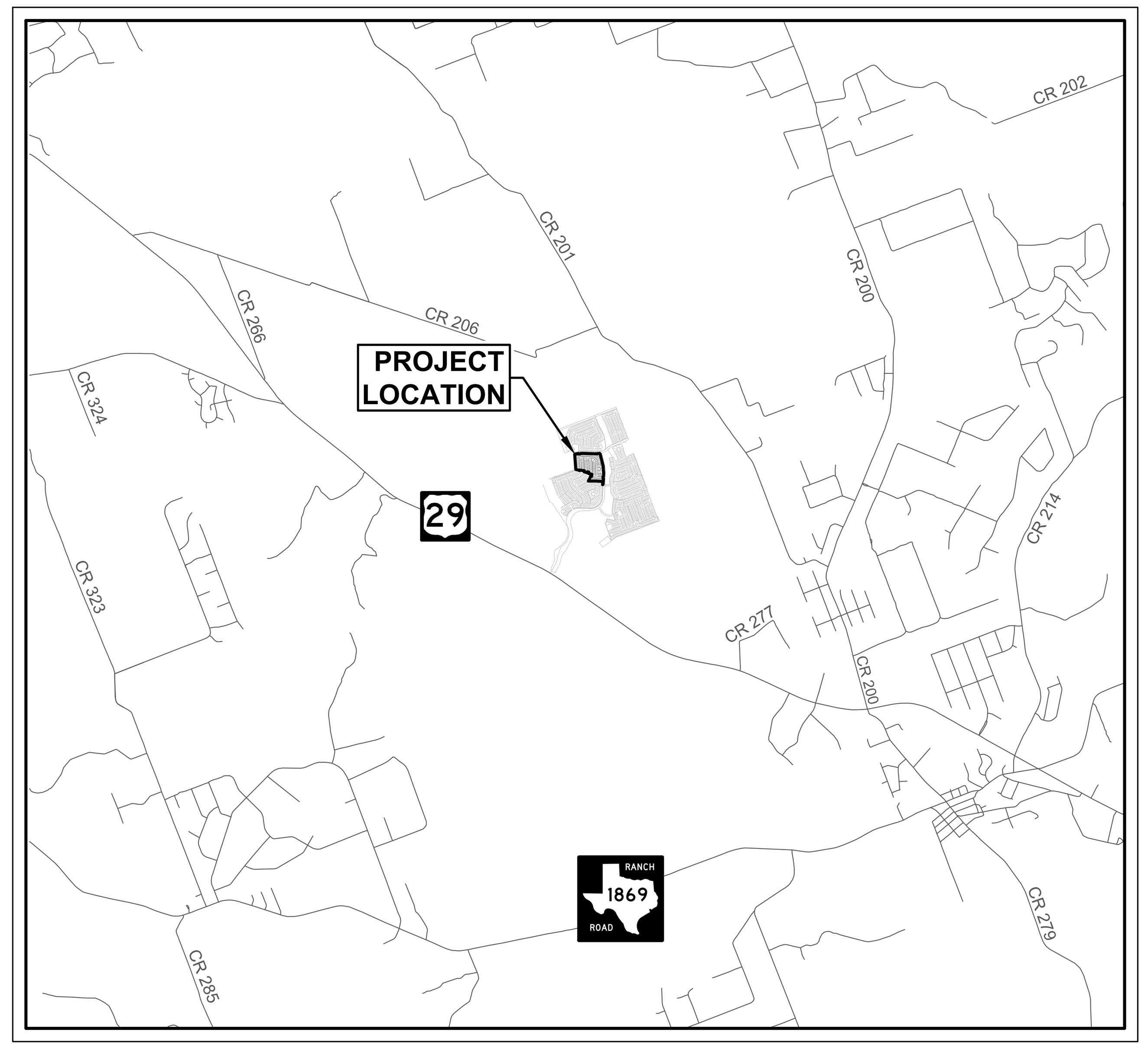
BM:1389_375:
"SQUARE" CUT IN BACK OF CURB ON EAST SIDE OF ARENA DRIVE 6' NORTH OF FIRE HYDRANT, APPROXIMATELY 120' NORTH OF INTERSECTION WITH WINDSTAR ROAD.
GRID NORTHING 10,226,017.01
GRID EASTING 3,039,604.03
ELEVATION 1,096.32'

BM:1389_376:
"SQUARE" CUT IN BACK OF CURB ON WEST SIDE OF WINDSTAR ROAD AT THE BEGINNING OF CUL-DE-SAC.
GRID NORTHING 10,226,324.10
GRID EASTING 3,040,527.60
ELEVATION 1,108.10'

BM:1389_377:
COTTON GIN SPINDLE SET AT THE INTERSECTION OF THE SOUTHEAST RIGHT-OF-WAY LINE OF BOULDER RIDGE TRAIL AND THE SOUTHWEST RIGHT-OF-WAY LINE OF ERGOT STREET.
GRID NORTHING 10,226,111.05
GRID EASTING 3,040,813.35
ELEVATION 1,105.73'

TCEQ:

TCEQ WWPR SYSTEM LOG NO. __________________ (PENDING)
TCEQ WATER PLAN REVIEW LOG NO.______________ (PENDING)



VICINITY MAP
1" = 5,000'

LEGAL DESCRIPTION

19.936 ACRES OUT OF THE JOHN B. BERRY SURVEY, ABSTRACT NO. 56, IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF A CALLED 546.33 ACRE TRACT OF LAND CONVEYED TO BUTLER FAMILY PARTNERSHIP, LTD. IN DOCUMENT NO. 2010087926 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

SHEET LIST TABLE

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAIN WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF LIBERTY HILL MUST RELY UPON THE ADEQUACY OF THE DESIGN ENGINEER. THE PLANS WERE PREPARED IN ACCORDANCE WITH CITY OF LIBERTY HILL REGULATIONS.

SUBMITTED BY :

Christine Campbell 09/06/2024

STATE OF TEXAS — CHRISTINE N. CAMPBELL — 142536 — LICENSED PROFESSIONAL ENGINEER

CHRISTINE CAMPBELL, P.E. DATE
REGISTERED PROFESSIONAL ENGINEER NO. 142536
HR GREEN DEVELOPMENT TX, LLC
5508 HIGHWAY 290 WEST, SUITE 150
AUSTIN, TEXAS 78735
(512) 872-6696

APPROVED AND ACCEPTANCE:

JENNIFER GLAESS, P.E., CITY ENGINEER DATE
CITY OF LIBERTY HILL

MCKENZI HICKS, INTERIM DIRECTOR OF PLANNING DATE
CITY OF LIBERTY HILL

REVISIONS

NUMBER	DESCRIPTION	REVISE (R) | ADD (A) | VOID (V) SHEET NO.'S	SHEETS IN PLAN SET	CITY OF LIBERTY HILL APPROVAL SIGNATURE, DATE

NO.	REVISION	BY	DATE

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

5508 HIGHWAY 290 W
SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
HRGreen.com
TBPE NO: 16384
TBPLS NO: 10194101

HRGreen® DEVELOPMENT TX

COVER

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET 1 OF 49

##-###CON

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK STANDARD SPECIFICATIONS MANUAL.
2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS AS APPROPRIATE.
4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
5. THE CONTRACTOR SHALL GIVE THE CITY OF LIBERTY HILL 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE 512-778-5449 (PLANNING & DEVELOPMENT DEPARTMENT).
6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.
7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF LIBERTY HILL, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF LIBERTY HILL ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE PLANNING & DEVELOPMENT DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
9. THE LIBERTY HILL CITY COUNCIL SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.
10. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE CONTRACTOR'S WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER AND/OR CITY INSPECTOR.
11. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.
12. BENCHMARKS UTILIZED FOR THE CONSTRUCTION OF THIS PROJECT ARE DESCRIBED AS FOLLOWS:

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT (WILL BE PROVIDED BY THE CONTRACTOR; ARE ON SHEET _______, ETC.).
2. IN ACCORDANCE WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4-FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY OF LIBERTY HILL.

STREET AND DRAINAGE NOTES:

1. ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING. TELEPHONE 512-778-5449 (INSPECTIONS).
2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.
3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.
4. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" 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 LIBERTY HILL PLANNING & DEVELOPMENT DEPARTMENT.
5. BARRICADES BUILT TO CITY OF LIBERTY HILL STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.
6. ALL R.C.P. SHALL BE MINIMUM CLASS III.
7. THE SUBGRADE MATERIAL FOR THE STREETS SHOWN HEREIN WAS TESTED BY MLA GEOTECHNICAL FOR BUTLER FARMS SECTIONS 2 & 3 DATED NOVEMBER 2021, ENGINEER'S JOB #21101100.084 AND THE PAVING SECTIONS DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF LIBERTY HILL DESIGN CRITERIA. THE PAVING SECTIONS ARE TO BE CONSTRUCTED AS FOLLOWS:

Butler Farms Sections 2 & 3
Engineer's Job No. 21101100.084

RECOMMENDATIONS - PAVEMENT THICKNESS SECTIONS

Street Classification	Subgrade Material	Hot Mix Asphaltic Concrete, in	Crushed Limestone Base, in	Lime Stabilized Subgrade, in	Geogrid
Local Residential	Subgrade PI less than 20	1.5	8	-	-
	Subgrade PI greater than 20	1.5	10	10	-
	Subgrade PI greater than 20**	1.5	15	-	-
	Subgrade PI greater than 20**	1.5	10	-	X*
Local Collector	Subgrade PI less than 20	2.0	10	-	-
	Subgrade PI greater than 20	2.0	12	10	-
	Subgrade PI greater than 20**	2.0	18	-	-
	Subgrade PI greater than 20**	2.0	12	-	X*
Major Collector	Subgrade PI less than 20	3.0	15	-	-
	Subgrade PI greater than 20	3.0	15	10	-
	Subgrade PI greater than 20**	3.0	23	-	-
	Subgrade PI greater than 20**	3.0	15	-	X*

Notes:
1. * - A single layer of Tensar TX130S grid or approved equivalent should be placed below the crushed limestone base layer.
2. ** - The increased base and geogrid options are considered equivalent to the lime stabilization option.
3. The surface clay must first be tested for sulfate reaction and a mix design should be completed to determine the proper lime content, lime type, mixing procedure and curing conditions required.
4. The subgrade improvement should be extended 3 feet beyond the back of the curb line.
5. Any expansive fill (PI > 20) placed in the subgrade after boring and test pit completion shall be considered expansive subgrade.
6. **Delineation between these different pavement thickness sections should be completed in the field by observation of open utilities trenches and the pavement subgrade by the Geotechnical Engineer of his designate.** Given the known variability of surface soils at this site, the geotechnical engineer must verify the subgrade before installation of the pavement system can proceed. Multiple site visits may be required depending upon the construction schedule. Finalized distinction between pavement thickness section options shall be provided as addendums to this report as these observations are completed. Please contact the geotechnical engineer when the utility trenches are open
7. These pavement thickness designs are intended to transfer the load from the anticipated traffic conditions.
8. The responsibility of assigning street classification to the streets in this project is left to the civil engineer.
9. If pavement designs other than those listed above are desired, please contact MLA Geotechnical.

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 REVISION OF THE CONSTRUCTION PLANS.

7. WHERE PI'S ARE OVER 20, SUBGRADES MUST BE STABILIZED UTILIZING A METHOD ACCEPTABLE TO THE CITY ENGINEER. THE GEOTECHNICAL ENGINEER SHALL RECOMMEND AN APPROPRIATE SUBGRADE STABILIZATION IF SULFATES ARE DETERMINED TO BE PRESENT.

TRAFFIC MARKING NOTES:

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
2. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF LIBERTY HILL EROSION AND SEDIMENTATION CONTROL ORDINANCE.
2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.
3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF LIBERTY HILL FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.
4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.
5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

WILLIAMSON COUNTY EMERGENCY SERVICE DISTRICT No. 4
LIBERTY HILL FIRE DEPARTMENT

(2) SECTION C105.2 INSTALLATION.
FIRE HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FIVE (5) INCH STEAMER OPENING AT LEAST 18 INCHES ABOVE FINISHED GRADE. THE FIVE (5) INCH OPENING MUST FACE THE DRIVEWAY OR STREET AND MUST BE TOTALLY UNOBSTRUCTED TO THE STREET. FIRE HYDRANT DESIGN SHALL BE 2- 2.5" NST OUTLETS, 1 - 5.0" STORZ CONNECTION WITH A CAP TO INCLUDE A HEX NUT TO FIT A HYDRANT WRENCH ALONG WITH A REFLECTIVE BAND. THE FIRE HYDRANT SHALL BE PAINTED SILVER IN COLOR AND DESIGNATED BY A BLUE REFLECTOR IN THE CENTER OF THE STREET (SEE DETAIL, SHEET 65).

LIBERTY HILL WATER & WASTEWATER NOTES:

1. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 200), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9).
2. PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 150), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241 OR D3034, MAX. DR-26), DUCTILE IRON (AWWA C-100, MIN. CLASS 200). PIPE FOR BOTH PRESSURE AND GRAVITY WASTEWATER MAINS SHALL BE GREEN IN COLOR. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE LINED WITH INDURON PROTECTO 401 (P401) OR APPROVED QUAL.
3. UNLESS OTHERWISE ACCEPTED BY THE CITY ENGINEER, DEPTH OF COVER FOR ALL LINES OUT OF THE PAVEMENT SHALL BE 42" MIN., AND DEPTH OF COVER FOR ALL LINES UNDER PAVEMENT SHALL BE A MIN. OF 30" BELOW SUBGRADE.
4. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200).
5. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE AND SEALED WITH DUCT TAPE OR EQUAL ACCEPTED BY THE CITY ENGINEER.
6. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR AT 512-778-5449 TO COORDINATE UTILITY TIE-INS AND NOTIFY HIM AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING LINES.
7. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF THE PAVEMENT SHALL HAVE BOLTED COVERS AND GASKETED COVERS AND HAVE RIM ELEVATIONS 6" MIN. ABOVE FINISHED GRADE. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE ALLOWED.
8. ALL MANHOLES SHALL BE LINED WITH RAVEN LINING SYSTEMS RAVEN 405 OR APPROVED EQUAL.
9. THE CONTRACTOR MUST OBTAIN A BULK WATER PERMIT OR PURCHASE AND INSTALL A WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO USE WATER.
10. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE SCHEDULED WITH THE WATER & WASTEWATER SUPERINTENDENT, TELEPHONE 512-778-5449.
11. THE CONTRACTOR, AT CONTRACTOR'S EXPENSE, SHALL PERFORM STERILIZATION OF ALL POTABLE WATER LINES CONSTRUCTED 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 LIBERTY HILL PERSONNEL. WATER SAMPLES WILL BE COLLECTED BY THE CITY OF LIBERTY HILL TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM. WHERE MEANS OF FLUSHING IS NECESSARY, THE CONTRACTOR, AT CONTRACTOR'S EXPENSE, SHALL PROVIDE FLUSHING DEVICES AND REMOVE SAID DEVICES PRIOR TO FINAL ACCEPTANCE BY THE CITY OF LIBERTY HILL.
12. SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTOR'S REQUEST, AND IN CONTRACTOR'S PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF LIBERTY HILL 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. THE CONTRACTOR SHALL SUPPLY A CHECK OR MONEY ORDER, PAYABLE TO THE CITY OF LIBERTY HILL, TO COVER THE FEE CHARGED FOR TESTING EACH WATER SAMPLE. CITY OF LIBERTY HILL FEE AMOUNTS MAY BE OBTAINED BY CALLING THE PLANNING & DEVELOPMENT DEPARTMENT AT 512-778-5449 .
13. THE CONTRACTOR, AT CONTRACTOR'S EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY CITY OF LIBERTY HILL PERSONNEL.
14. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY OF INSPECTOR AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.
15. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF LIBERTY HILL.
16. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
17. ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:

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

TOOLS FOR MARKING THE CURB SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF MARKING SHALL BE AS SPECIFIED BY THE ENGINEER AND ACCEPTED BY THE CITY OF LIBERTY HILL.

18. CONTACT THE CITY OF LIBERTY HILL WATER & WASTEWATER SUPERINTENDENT AT 512-778-5449 FOR ASSISTANCE IN OBTAINING EXISTING WATER AND WASTEWATER LOCATIONS.
19. THE CITY OF LIBERTY HILL FIRE DEPARTMENT SHALL BE NOTIFIED 48 HOURS PRIOR TO TESTING OF ANY BUILDING SPRINKLER PIPING IN ORDER THAT THE FIRE DEPARTMENT MAY MONITOR SUCH TESTING.
20. SAND, AS DESCRIBED IN 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

21. 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 A.M. AND 6 A.M.
22. ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 317, AS APPLICABLE. WHENEVER TCEQ AND CITY OF LIBERTY HILL SPECIFICATIONS CONFLICT, THE MORE STRINGENT SHALL APPLY.

TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES

1. THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS, AT A MINIMUM, MEET TCEQ'S "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS.
2. AN APPOINTED ENGINEER SHALL NOTIFY IN WRITING THE LOCAL TCEQ'S REGIONAL OFFICE WHEN CONSTRUCTION WILL START. PLEASE KEEP IN MIND THAT UPON COMPLETION OF THE WATER WORKS PROJECT, THE ENGINEER OR OWNER SHALL NOTIFY THE COMMISSION'S WATER SUPPLY DIVISION, IN WRITING, AS TO ITS COMPLETION AND ATTEST TO THE FACT THAT THE WORK HAS BEEN COMPLETED ESSENTIALLY ACCORDING TO THE PLANS AND CHANGE ORDERS ON FILE WITH THE COMMISSION AS REQUIRED IN 30 TAC §290.39(H)(3).
3. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/NSF INTERNATIONAL STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI, AS REQUIRED BY 30 TAC §290.44(A)(1).
4. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS, AS REQUIRED BY 30 TAC §290.44(A)(2).
5. NO PIPE 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, AS REQUIRED BY 30 TAC §290.44(A)(3).
6. WATER TRANSMISSION AND DISTRIBUTION LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE, AS REQUIRED BY 30 TAC §290.44(A)(4).
7. PURSUANT TO 30 TAC §290.44(A)(5), THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE. INCLUDE THE FORMULAS IN THE NOTES ON THE PLANS.
   - THE HYDROSTATIC LEAKAGE RATE FOR POLYVINYL CHLORIDE (PVC) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-605 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

$$Q = \frac{LD\sqrt{P}}{148,000}$$

WHERE:

Q = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
L = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

   - THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-600 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

$$L = \frac{SD\sqrt{P}}{148,000}$$

WHERE:

L = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
S = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

8. THE SYSTEM MUST BE DESIGNED TO MAINTAIN A MINIMUM PRESSURE OF 35 PSI AT ALL POINTS WITHIN THE DISTRIBUTION NETWORK AT FLOW RATES OF AT LEAST 1.5 GALLONS PER MINUTE PER CONNECTION. WHEN THE SYSTEM IS INTENDED TO PROVIDE FIREFIGHTING CAPABILITY, IT MUST ALSO BE DESIGNED TO MAINTAIN A MINIMUM PRESSURE OF 20 PSI UNDER COMBINED FIRE AND DRINKING WATER FLOW CONDITIONS AS REQUIRED BY 30 TAC §290.44(D).
9. THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES IN THE DISTRIBUTION SYSTEM AT ALL POINTS WHERE TOPOGRAPHY OR OTHER FACTORS MAY CREATE AIR LOCKS IN THE LINES. ALL VENT OPENINGS TO THE ATMOSPHERE SHALL BE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT AS REQUIRED BY 30 TAC §290.44(D)(1).
10. PURSUANT TO 30 TAC §290.44(D)(4), ACCURATE WATER METERS SHALL BE PROVIDED. SERVICE CONNECTIONS AND METER LOCATIONS SHOULD BE SHOWN ON THE PLANS.
11. PURSUANT TO 30 TAC §290.44(D)(5), SUFFICIENT VALVES AND BLOWOFFS TO MAKE REPAIRS. THE ENGINEERING REPORT SHALL ESTABLISH CRITERIA FOR THIS DESIGN.
12. PURSUANT TO 30 TAC §290.44(D)(6), THE SYSTEM SHALL BE DESIGNED TO AFFORD EFFECTIVE CIRCULATION OF WATER WITH A MINIMUM OF DEAD ENDS. ALL DEAD-END MAINS SHALL BE PROVIDED WITH ACCEPTABLE FLUSH VALVES AND DISCHARGE PIPING. ALL DEAD-END LINES LESS THAN TWO INCHES IN DIAMETER WILL NOT REQUIRE FLUSH VALVES IF THEY END AT A CUSTOMER SERVICE. WHERE DEAD ENDS ARE NECESSARY AS A STAGE IN THE GROWTH OF THE SYSTEM, THEY SHALL BE LOCATED AND ARRANGED TO ULTIMATELY CONNECT THE ENDS TO PROVIDE CIRCULATION.
13. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES AND SEPTIC TANK DRAINFIELDS. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET 30 TAC §290.44(E)(1 - 4) OF THE CURRENT RULES.
14. PURSUANT TO 30 TAC §290.44(E)(5), THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT.
15. PURSUANT TO 30 TAC §290.44(E)(6), FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
16. PURSUANT TO 30 TAC §290.44(E)(7), SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE.
17. PURSUANT TO 30 TAC §290.44(E)(8), WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS.
18. PURSUANT TO 30 TAC §290.44(F)(1), THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION.
19. PURSUANT TO 30 TAC §290.44(F)(2), WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE WATERTIGHT PIPE ENCASEMENT. VALVES MUST BE PROVIDED ON EACH SIDE OF THE CROSSING WITH FACILITIES TO ALLOW THE UNDERWATER PORTION OF THE SYSTEM TO BE ISOLATED AND TESTED.
20. THE CONTRACTOR SHALL DISINFECT THE NEW WATER MAINS IN ACCORDANCE WITH AWWA STANDARD C-651 AND THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATER LINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER, IN ACCORDANCE WITH 30 TAC §290.44(F)(3).

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CONTRIBUTING ZONE PLAN
GENERAL CONSTRUCTION NOTES

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. INFORMATION SHOULD INCLUDE THE DATE ON WHICH THE REGULATED ACTIVITY WILL COMMENCE, THE NAME OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR WITH THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ON-SITE.
3. NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM MAY BE INSTALLED WITHIN 150 FEET IF A DOMESTIC, INDUSTRIAL, IRRIGATION, OR PUBLIC WATER SUPPLY WELL.
4. PRIOR TO COMMENCING CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE SWPPP SECTION OF THE APPROVED EDWARDS AQUIFER CONTRIBUTING ZONE PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.
5. 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).
6. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS NOT LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME.
7. 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).
8. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE AND STORED ON-SITE MUST HAVE PROPER E&S CONTROLS INSTALLED.
9. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND CONSTRUCTION ACTIVITIES WILL NOT RESUME WITHIN 21 DAYS. WHEN THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
11. THE HOLDER OF ANY APPROVED CONTRIBUTING ZONE PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
    A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
    B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
    C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER AND HYDROLOGICALLY CONNECTED SURFACE WATER; OR
    D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED IN A CONTRIBUTING ZONE PLAN AS UNDEVELOPED.

AUSTIN REGIONAL OFFICE
2800 S. IH 35, SUITE 100
AUSTIN, TEXAS 78704-5712
PHONE (512) 339-2929
FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

IMPERVIOUS COVER ASSUMPTIONS
LOTS <10K SQ FT= 3500 SQ FT
LOTS >10K SQ FT= 4000 SQ FT

LOCAL RESIDENTIAL
TYPICAL STREET SECTION

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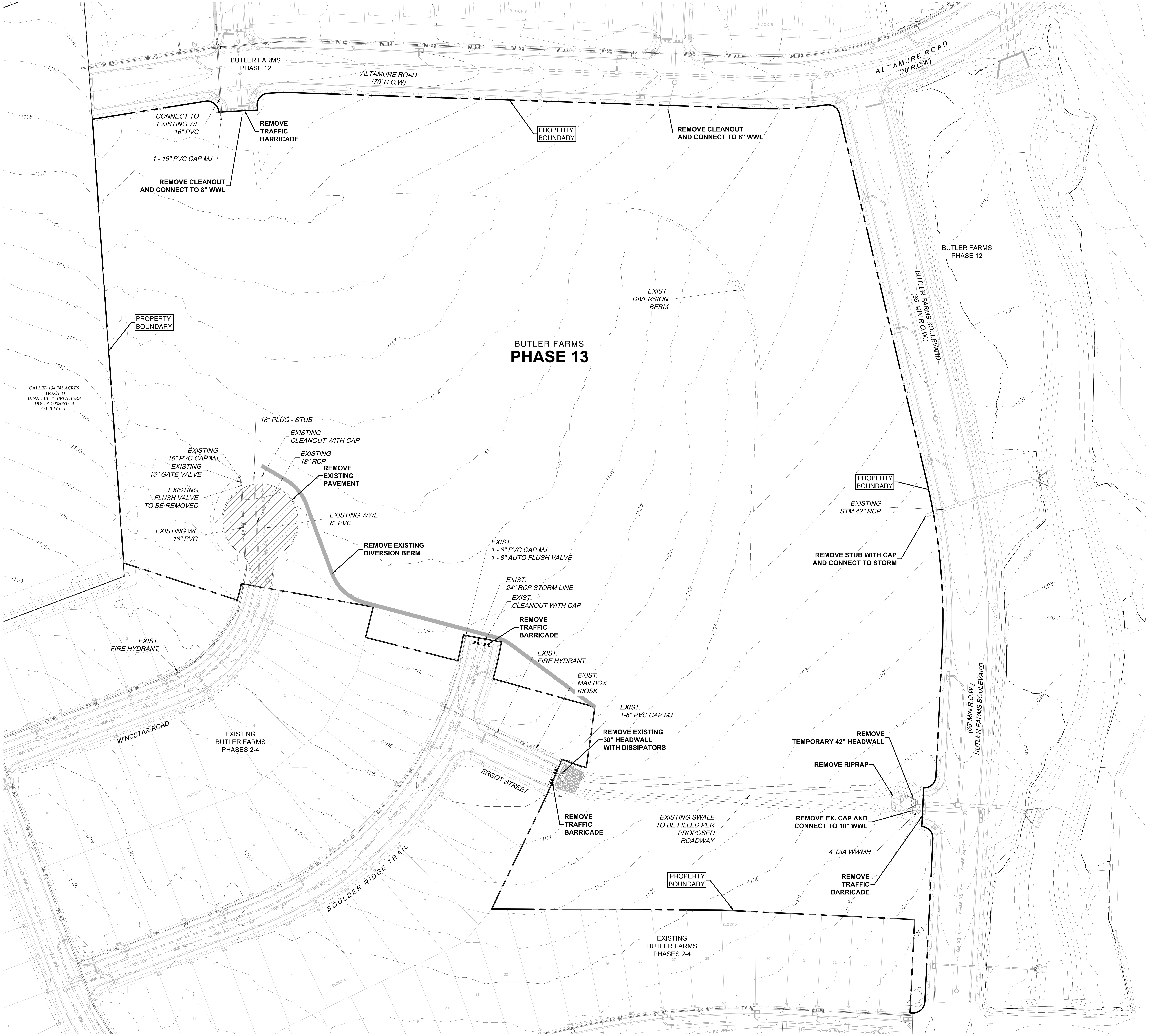
CHRISTINE N. CAMPBELL
142536
Christine Campbell
09/06/2024

GENERAL NOTES
BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET 2 OF 49
##-###CON


BUTLER FARMS
PHASE 12
ALTAMURE ROAD
(70' R.O.W)
ALTAMURE ROAD
(70' R.O.W)
CONNECT TO
EXISTING WL
16" PVC
REMOVE
TRAFFIC
BARRICADE
PROPERTY
BOUNDARY
REMOVE CLEANOUT
AND CONNECT TO 8" WWL
1 - 16" PVC CAP MJ
REMOVE CLEANOUT
AND CONNECT TO 8" WWL
BUTLER FARMS
PHASE 12
BUTLER FARMS BOULEVARD
(65' MIN R.O.W.)
EXIST.
DIVERSION
BERM
PROPERTY
BOUNDARY
BUTLER FARMS
PHASE 13
CALLED 134.741 ACRES
(TRACT 1)
DINAH BETH BROTHERS
DOC. # 2008063553
O.P.R.W.C.T.
18" PLUG - STUB
EXISTING
CLEANOUT WITH CAP
EXISTING
18" RCP
REMOVE
EXISTING
PAVEMENT
EXISTING
16" PVC CAP MJ
EXISTING
16" GATE VALVE
EXISTING
FLUSH VALVE
TO BE REMOVED
EXISTING WL
16" PVC
EXISTING WWL
8" PVC
REMOVE EXISTING
DIVERSION BERM
PROPERTY
BOUNDARY
EXISTING
STM 42" RCP
REMOVE STUB WITH CAP
AND CONNECT TO STORM
EXIST.
1 - 8" PVC CAP MJ
1 - 8" AUTO FLUSH VALVE
EXIST.
24" RCP STORM LINE
EXIST.
CLEANOUT WITH CAP
REMOVE
TRAFFIC
BARRICADE
EXIST.
FIRE HYDRANT
EXIST.
FIRE HYDRANT
EXIST.
MAILBOX
KIOSK
EXIST.
1-8" PVC CAP MJ
REMOVE EXISTING
30" HEADWALL
WITH DISSIPATORS
WINDSTAR ROAD
EXISTING
BUTLER FARMS
PHASES 2-4
ERGOT STREET
REMOVE
TRAFFIC
BARRICADE
REMOVE
TEMPORARY 42" HEADWALL
REMOVE RIPRAP
EXISTING SWALE
TO BE FILLED PER
PROPOSED
ROADWAY
REMOVE EX. CAP AND
CONNECT TO 10" WWL
4' DIA WWMH
REMOVE
TRAFFIC
BARRICADE
(65' MIN R.O.W.)
BUTLER FARMS BOULEVARD
BOULDER RIDGE TRAIL
PROPERTY
BOUNDARY
EXISTING
BUTLER FARMS
PHASES 2-4

N

0 60' 120'
SCALE: 1" = 60'

LEGEND

- PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING FLOODPLAIN
- 100YR CALCULATED 100-YR FLOODPLAIN
- 834 EXISTING MINOR CONTOUR
- 835 EXISTING MAJOR CONTOUR
- 101 EXISTING TREE

NOTE:
THERE ARE NO TREES 18"+ WITHIN THE PROPERTY BOUNDARY.

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STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED
PROFESSIONAL ENGINEER
09/06/2024

EXISTING CONDITIONS & DEMOLITION PLAN

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

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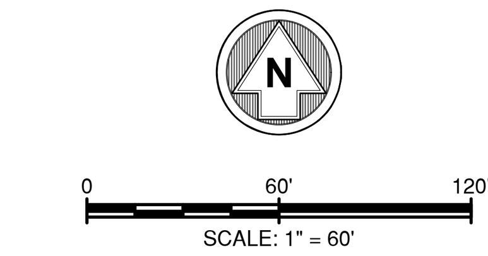
APPROVED BY:	SN



LEGEND

834	EXISTING MINOR CONTOUR
835	EXISTING MAJOR CONTOUR
834	PROPOSED MINOR CONTOUR
835	PROPOSED MAJOR CONTOUR
	BOUNDARY
	EASEMENT
LOC	LIMITS OF CONSTRUCTION
LOC/SF	LIMITS OF CONSTRUCTION/SILT FENCE
SF	SILT FENCE
TP	TREE PROTECTION
100YR	CALCULATED 100-YR ATLAS-14 FLOODPLAIN
	EXISTING TREE TO REMAIN
	EXISTING TREE TO BE REMOVED
	INLET PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE
	TEMPORARY SPOILS AREA AND STAGING AREA
	CONCRETE WASHOUT AREA

SEQUENCE OF MAJOR ACTIVITIES:

1. TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO INCLUDE SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCES AND SHALL BE INSTALLED ACCORDING TO CONSTRUCTION PLANS AND IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
2. TREE PROTECTION MEASURES WILL ALSO BE INSTALLED FOR ALL TREES WITHIN THE LIMITS OF CONSTRUCTION IN ACCORDANCE WITH APPLICABLE STANDARD DETAILS SHOWN ON SHEET 6.
3. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR THE REMOVAL OR PROTECTION OF TREES NOT IDENTIFIED IN THIS PLAN.
4. TEMPORARY SPOILS, CONSTRUCTION STAGING, AND CONCRETE WASHOUT AREA WILL BE CONSTRUCTED.
5. AFTER THE SITE IS MASS GRADED, THE ONSITE DRAINAGE, UTILITIES, AND PAVING WILL BE INSTALLED.
6. INLET PROTECTION BARRIERS WILL BE INSTALLED AS CONSTRUCTION OF STORM SEWER TAKES PLACE IN ORDER TO PREVENT SEDIMENTS FROM ENTERING THE SYSTEM.
7. THE DISTURBED AREA TO REMAIN PERVIOUS WILL BE VEGETATED USING THE PROCEDURES DETAILED IN THE CONSTRUCTION PLANS AND ALL TEMPORARY EROSION CONTROL MEASURES WILL BE REMOVED UPON RE-VEGETATION.

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STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

EROSION AND SEDIMENTATION CONTROL PLAN

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY:	MV / CC
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SHEET 5 OF 49

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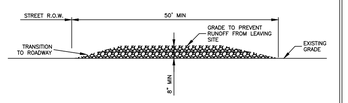

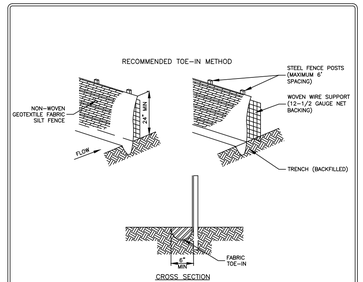

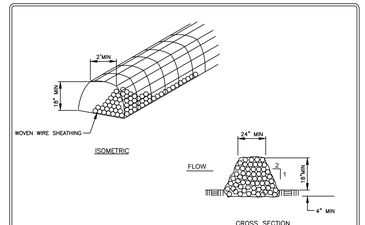

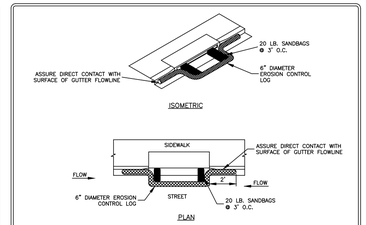

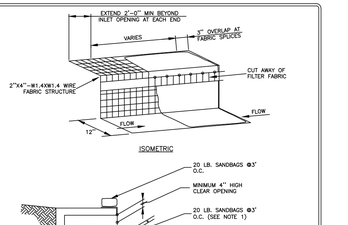

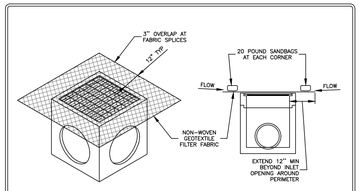

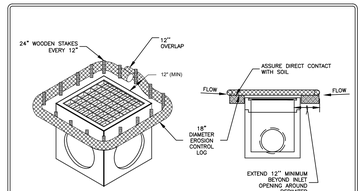

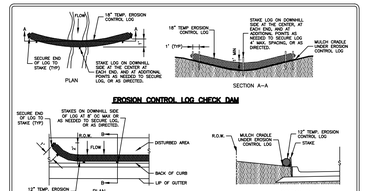

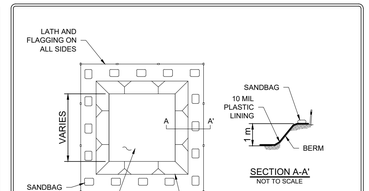

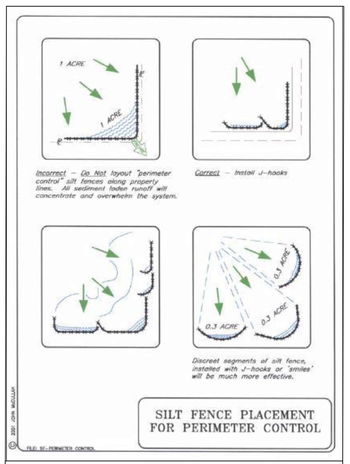

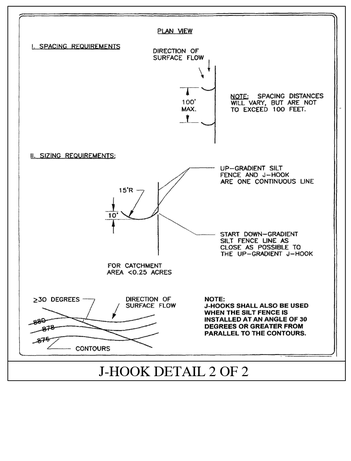

NOTES:

1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

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03-25-11
DATE
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CITY OF ROUND ROCK

STABILIZED CONSTRUCTION ENTRANCE DETAIL

DRAWING NO: EC-09

NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1') FOOT.
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. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
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 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED

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CITY OF ROUND ROCK

SILT FENCE DETAIL

DRAWING NO: EC-10

NOTES:

1. USE ONLY OPEN GRADED ROCK (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENING AND MINIMUM WIRE DIAMETER OF 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 OF 6", THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

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CITY OF ROUND ROCK

ROCK BERM DETAIL

DRAWING NO: EC-12

NOTES:

1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM WATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

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CITY OF ROUND ROCK

CURB INLET PROTECTION WITH EROSION CONTROL LOG DETAIL

DRAWING NO: EC-13

NOTES:

1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1" X 4" BOARD SECURED WITH CONCRETE NAILS 3' O.C. NAILED INTO THE GUTTER IN LIEU OF SANDBAGS TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, CLEAN ANY DIRT/DEBRIS FROM NAILING LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH SURFACE OF GUTTER.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

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CITY OF ROUND ROCK

CURB INLET PROTECTION DETAIL

DRAWING NO: EC-14

NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
3. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

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CITY OF ROUND ROCK

AREA INLET PROTECTION DETAIL

DRAWING NO: EC-15

NOTES:

1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

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CITY OF ROUND ROCK

AREA INLET PROTECTION WITH EROSION CONTROL LOG DETAIL

DRAWING NO: EC-16

NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF LOGS DURING RAINFALL EVENT FOR PROPER PERFORMANCE.
3. LOGS SHALL CONSIST OF 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE CONTAINMENT MESH STUFFED WITH FILTER MATERIAL.
4. STUFF LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE DENSITY THAT WILL HOLD SHAPE WITHOUT EXCESSIVE DEFORMATION. FILTER MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR WOOD FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS,100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL, EXCLUDING STRAW AND HAY.
5. STAKES SHALL BE 2" X 2" WOOD, 4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED.

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CITY OF ROUND ROCK

EROSION CONTROL LOG DETAIL

DRAWING NO: EC-17

NOTES:
ACTUAL LAYOUT DETERMINED IN THE FIELD.

CONCRETE WASHOUT AREA

J-HOOK DETAIL 1 OF 2

NOTE: SPACING DISTANCES WILL VARY, BUT ARE NOT TO EXCEED 100 FEET.

NOTE:
J-HOOKS SHALL ALSO BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

J-HOOK DETAIL 2 OF 2

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CHRISTINE N. CAMPBELL
142536

Christine Campbell
09/06/2024

EROSION CONTROL DETAILS

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
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SHEET 6 OF 49

##-###CON

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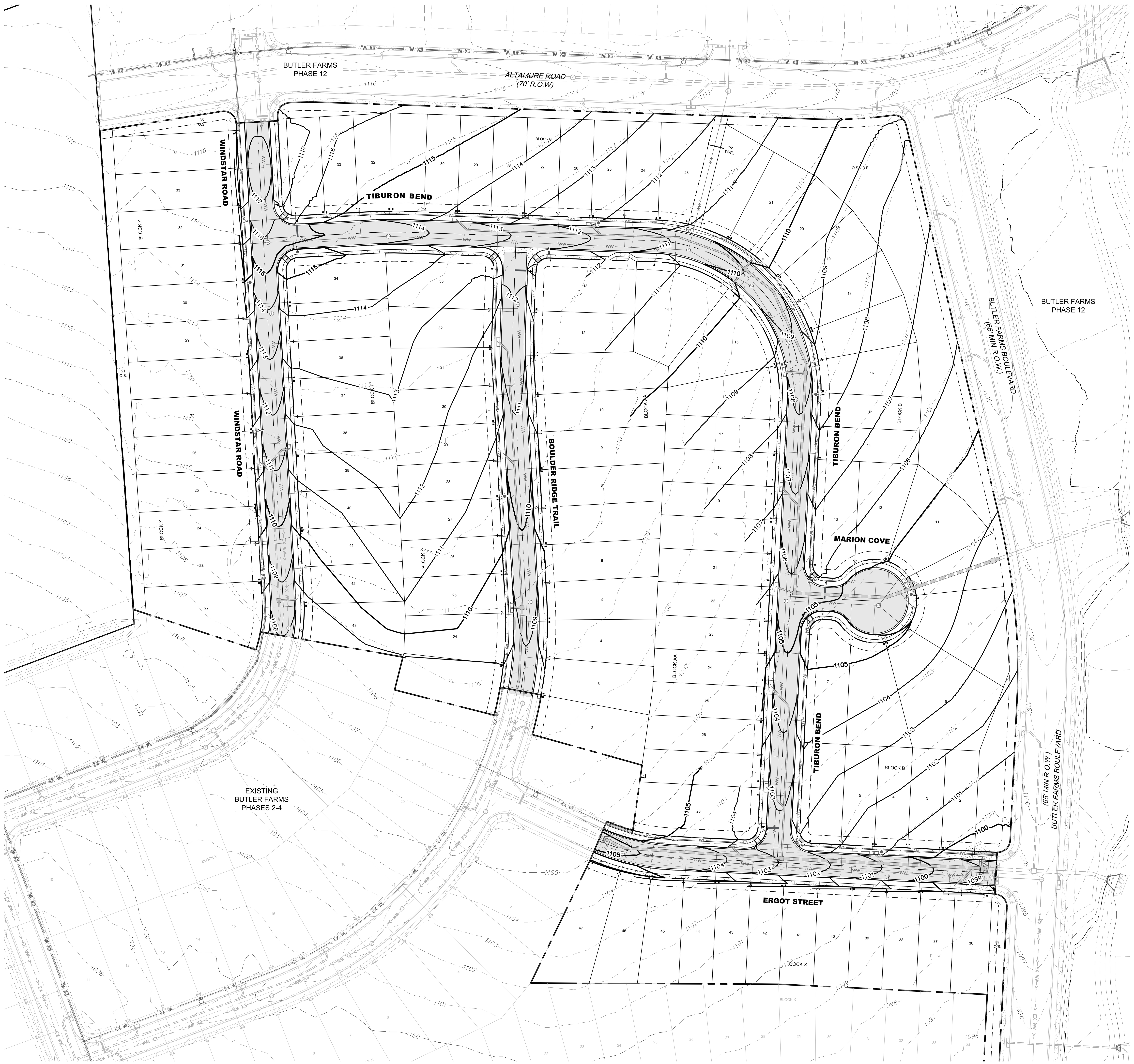


SCALE: 1" = 60'

LEGEND

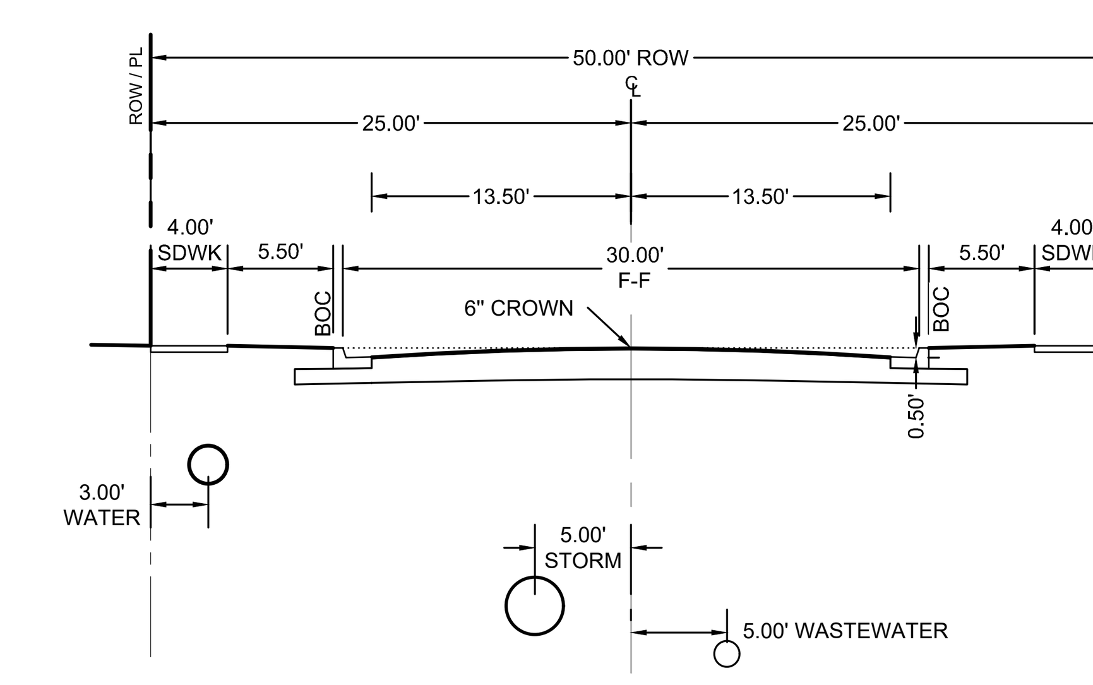
834	EXISTING MINOR CONTOUR
835	EXISTING MAJOR CONTOUR
834	PROPOSED MINOR CONTOUR
835	PROPOSED MAJOR CONTOUR
	BOUNDARY
	EASEMENT
HP	HIGH POINT
101	EXISTING TREE TO REMAIN
	ASPHALT PAVING (REF. GEOTECH REPORT FOR PAVEMENT DESIGN SECTIONS, SHEET 2)

ABBREVIATIONS

- BW - BOTTOM OF WALL
- EG - EXISTING GRADE
- FFE - FINISHED FLOOR ELEVATION
- G - PROPOSED GRADE (GROUND)
- HP - HIGH POINT
- SW - SIDEWALK
- TC - TOP OF CURB
- TW - TOP OF WALL
- GR - GRATE ELEVATION
- FL - FLOW LINE / GUTTER FLOW LINE
- CL - CENTERLINE

NOTES:

1. FILL WITHIN THE R.O.W. SHOULD BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY TxDOT TEX-114-E, AND PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
2. FILL WITHIN THE RESIDENTIAL LOT AREAS SHALL BE PLACED ACCORDING TO HUD 79G REQUIREMENTS AND SPECIFICATIONS.
3. VEGETATE ALL DISTURBED AREAS PER CITY OF LIBERTY HILL SPECIFICATIONS, WITH THE EXCEPTION OF SINGLE FAMILY LOTS.



LOCAL RESIDENTIAL
TYPICAL STREET SECTION

NO.	REVISION	BY	DATE

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STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

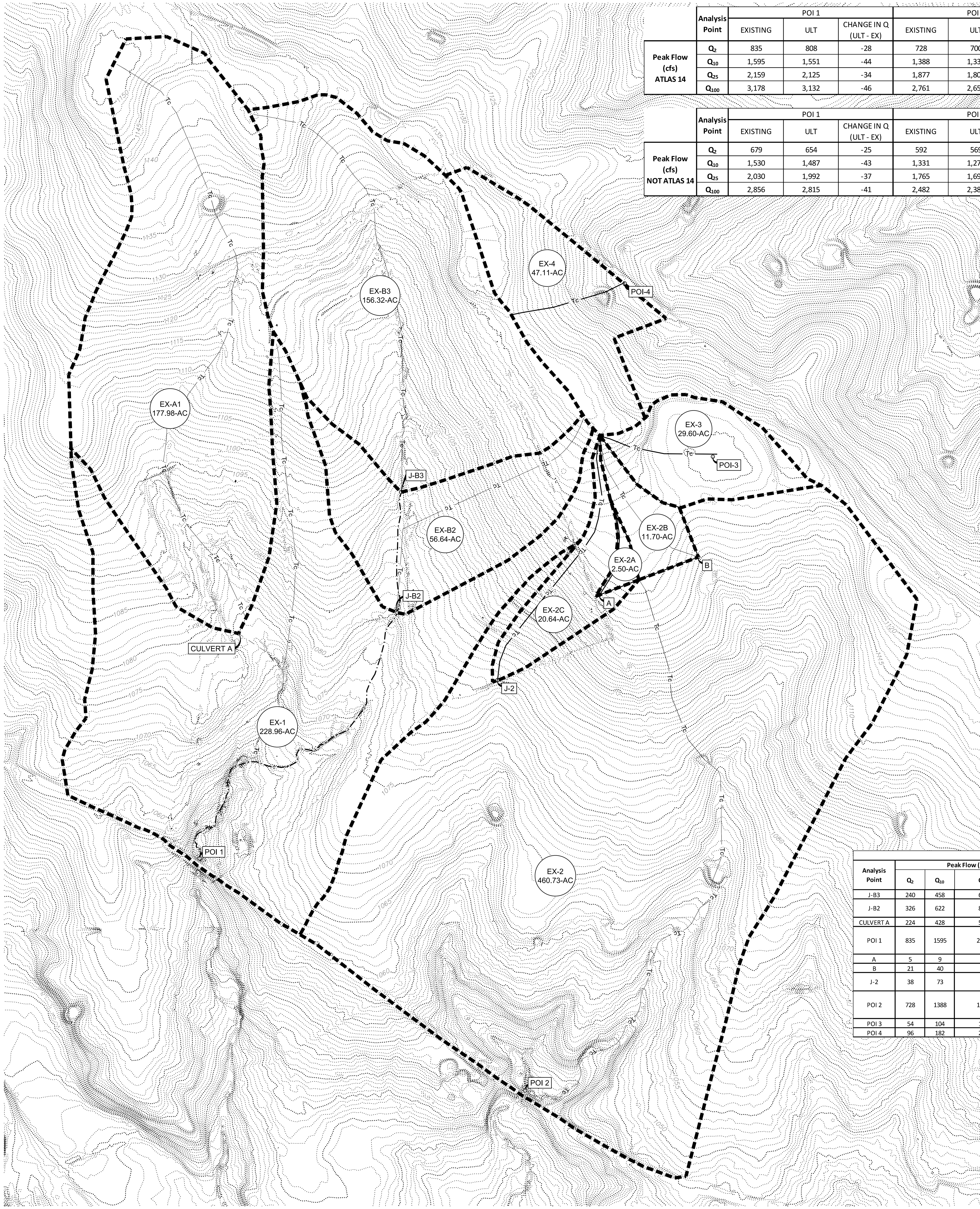
OVERALL PAVING AND GRADING PLAN

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY:	MV / CC
DRAWN BY:	MV / TG
CHECKED BY:	CC / SN
APPROVED BY:	SN

SHEET 7 OF 49

##-###CON



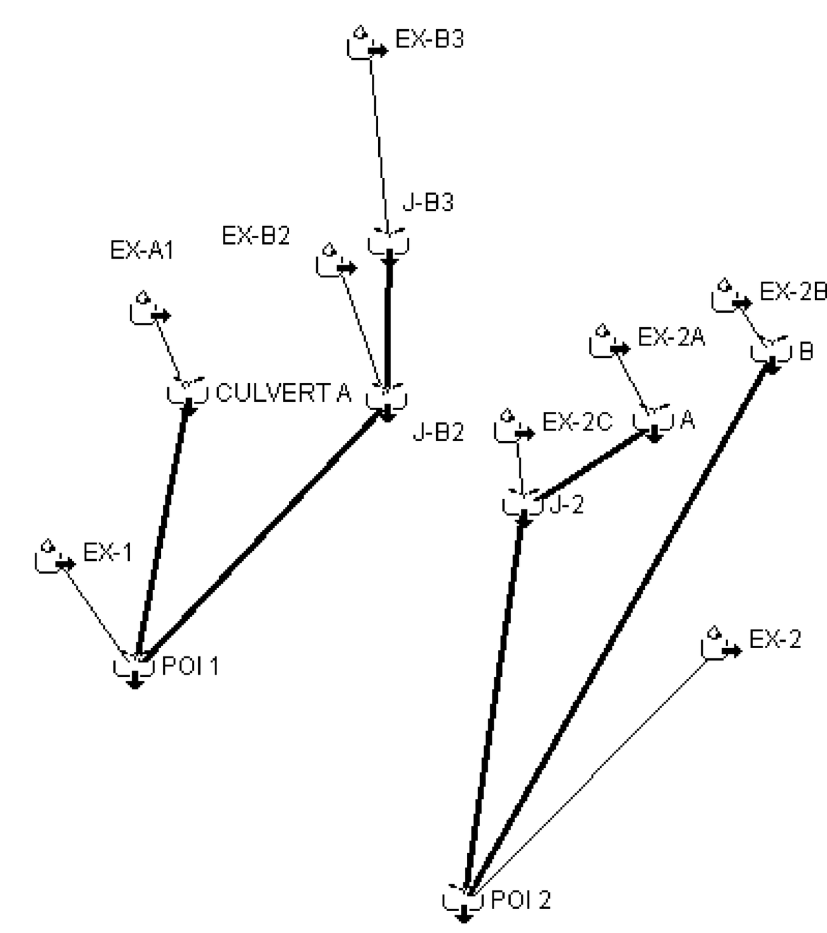
	Analysis Point	POI 1			POI 2			POI 3			POI 4		
		EXISTING	ULT	CHANGE IN Q (ULT - EX)	EXISTING	ULT	CHANGE IN Q (ULT - EX)	EXISTING	ULT	CHANGE IN Q (ULT - EX)	EXISTING	ULT	CHANGE IN Q (ULT - EX)
Peak Flow (cfs) ATLAS 14	Q_2	835	808	-28	728	700	-28	54	52	-2	96	93	-3
	Q_{10}	1,595	1,551	-44	1,388	1,332	-56	104	99	-5	182	166	-16
	Q_{25}	2,159	2,125	-34	1,877	1,802	-76	140	133	-7	246	220	-26
	Q_{100}	3,178	3,132	-46	2,761	2,655	-106	206	195	-11	361	322	-39

	Analysis Point	POI 1			POI 2			POI 3			POI 4		
		EXISTING	ULT	CHANGE IN Q (ULT - EX)	EXISTING	ULT	CHANGE IN Q (ULT - EX)	EXISTING	ULT	CHANGE IN Q (ULT - EX)	EXISTING	ULT	CHANGE IN Q (ULT - EX)
Peak Flow (cfs) NOT ATLAS 14	Q_2	679	654	-25	592	569	-23	44	43	-1	78	70	-8
	Q_{10}	1,530	1,487	-43	1,331	1,278	-54	99	95	-4	175	159	-15
	Q_{25}	2,030	1,992	-37	1,765	1,694	-71	132	125	-6	231	207	-24
	Q_{100}	2,856	2,815	-41	2,482	2,386	-97	185	176	-10	325	290	-35

0 500' 1,000'
SCALE: 1" = 500'

LEGEND

- P-1 — DRAINAGE AREA NAME
- 5.00 Ac — DRAINAGE AREA (IN ACRES)
- Tc — TIME OF CONCENTRATION
- POI-15 — DRAINAGE DESIGN POINT
- DIRECTION OF FLOW
- DRAINAGE AREA
- 835 — EXISTING MAJOR CONTOUR
- 834 — EXISTING MINOR CONTOUR
- 835 — PROPOSED MAJOR CONTOUR
- 834 — PROPOSED MINOR CONTOUR
- 100YR — 100 YR CALCULATED FLOODPLAIN



Butler Farms - Existing Conditions Hydrology Summary

Analysis Point	Peak Flow (cfs) Q_2	Q_{10}	Q_{25}	Q_{100}	User Inputs: Contributing Area	Area (sf)	CN (Open Space/Pasture)	CN (Pavement)	Auto-Calculation: Impervious Cover (sf)	Impervious Cover (%)	Area (ac)	TOC Calculation Table: TOC (min)	Routing Analysis Inputs: Area (sq. mi.)	Composite Curve Number	Lag Time	Connecting Reach
J-B3	240	458	619	911	EX-B3	6,809,100	84	98		0%	156.32	32.91	0.2442429	84.00	19.75	
J-B2	326	622	842	1239	EX-B2	2,467,173	84	98		0%	56.64	24.91	0.0884976	84.00	14.94	
					J-B3											R_JB3-JB2
CULVERT A	224	428	579	852	EX-A1	7,752,620	84	98		0%	177.98	49.62	0.2780870	84.00	29.77	
POI 1	835	1595	2159	3178	EX-1	9,973,448	84	98		0%	228.96	45.60	0.3577482	84.00	27.36	
					CULVERT A											R_CULVERT A - POI 1
					J-B2											R_JB2- POI 1
A	5	9	12	17	EX-2A	108,797	84	98		0%	2.50	21.13	0.0039026	84.00	12.68	
B	21	40	53	79	EX-2B	509,691	84	98		0%	11.70	23.48	0.0182826	84.00	14.09	
J-2	38	73	98	145	EX-2C	899,296	84	98		0%	20.64	28.53	0.0322578	84.00	17.12	
					A											R_A-J-2
POI 2	728	1388	1877	2761	EX-2	20,069,305	84	98		0%	460.73	35.86	0.7198873	84.00	21.52	
					B											R_B-POI2
					J-2											R_J-2-POI2
POI 3	54	104	140	206	EX-3	1,289,363	84	98		0%	29.60	21.81	0.0462495	84.00	13.09	
POI 4	96	182	246	361	EX-4	2,052,059	84	98		0%	47.11	16.11	0.0736075	84.00	9.67	

Time of Concentration Calculations

Contributing Area	Sheet Flow: Length	Slope (ft/ft)	Roughness Coefficient	T_{sheet}	Shallow Concentrated Flow (Unpaved): Length (ft)	Slope (ft/ft)	$T_{unpaved}$	Shallow Concentrated Flow (Paved): Length (ft)	Slope (ft/ft)	T_{paved}	Pipe/Channel Flow 1: Length (ft)	Velocity (ft)	$T_{channel}$ (min)	Pipe/Channel Flow 2: Length (ft)	Velocity (ft)	$T_{channel}$ (min)	Reach: Length (ft)	Velocity (ft)	$T_{channel}$ (min)
EX-B3	100	0.01	0.15	12.47	1723	0.0168	13.73			0.00	2417	6	6.71			0.00			0.00
EX-B2	100	0.02	0.15	9.45	1950	0.0231	13.25			0.00	793	6	2.20			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	1144	6	3.18
EX-A1	100	0.01	0.15	12.47	3033	0.012	28.60			0.00	3077	6	8.55			0.00			0.00
EX-1	100	0.007	0.15	14.38	2946	0.015	24.85			0.00	2295	6	6.38			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	2839	6	7.89
-				0.00			0.00			0.00			0.00			0.00	3558	6	9.88
EX-2A	100	0.01	0.15	12.47	795	0.009	8.66			0.00			0.00			0.00			0.00
EX-2B	100	0.02	0.15	9.45	1398	0.0106	14.03			0.00			0.00			0.00			0.00
EX-2C	100	0.02	0.15	9.45	2471	0.0179	19.08			0.00			0.00			0.00			0.00
-				0.00	1252	0.024	8.35			0.00			0.00			0.00			0.00
EX-2	100	0.01	0.15	12.47	1717	0.0245	11.33			0.00	4341	6	12.06			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	6534	6	18.15
-				0.00			0.00			0.00			0.00			0.00	4396	6	12.21
EX-3	100	0.01	0.15	12.47	991	0.012	9.34			0.00			0.00			0.00			0.00
EX-4	100	0.02	0.15	9.45	999	0.024	6.66			0.00			0.00			0.00			0.00

NO.	REVISION	BY	DATE

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DEVELOPMENT TX

STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

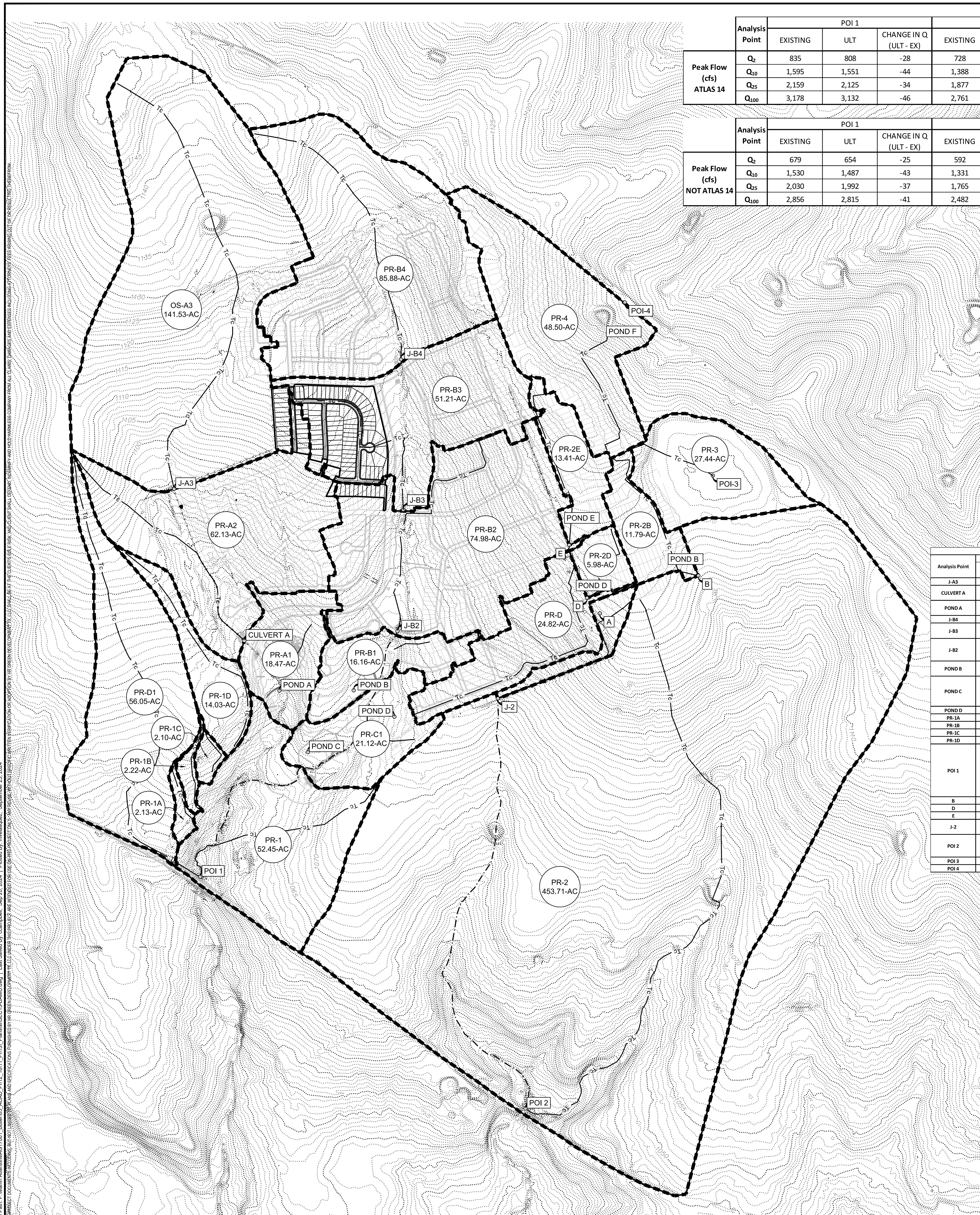
EXISTING DRAINAGE AREA MAP

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET 19 OF 49

##-###CON



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LEGEND

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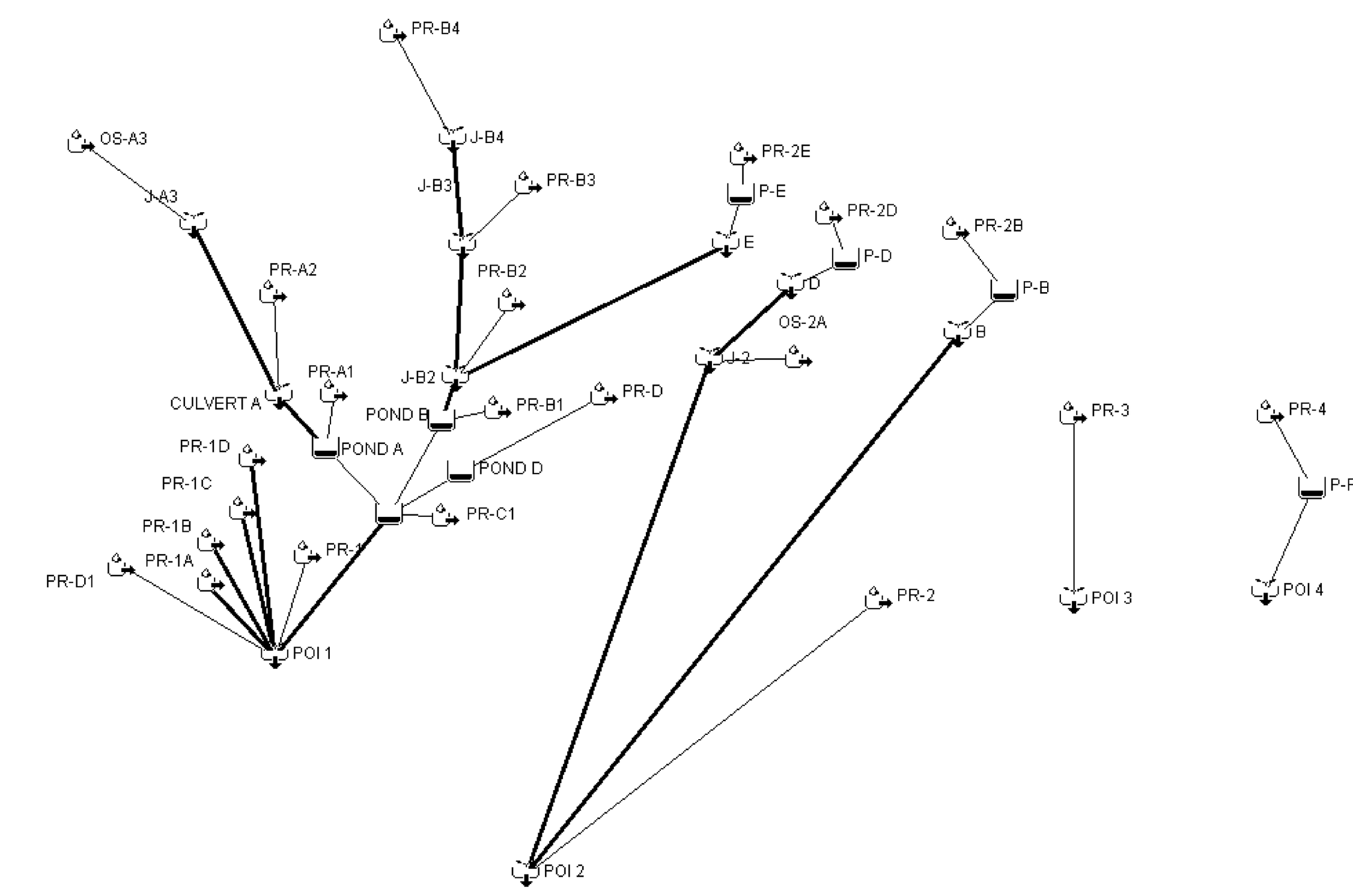

Butler Farms - Ultimate Conditions Hydrology Summary

Analysis Point	Peak Flow (cfs) ATLAS 14 Q_2	Q_{10}	Q_{25}	Q_{100}	Contributing Area (User Inputs)	Area (sf)	CN (Pervious)	CN (Impervious)	Impervious Cover (Lots) (sf)	Impervious Cover (Other) (sf) (Auto-Calculation)	Impervious Cover (%)	Area (ac)	TOC (min) (TOC Calculation Table)	Area (sq. mi.) (Routing Analysis Inputs)	Composite Curve Number	Lag Time	DS Reach
J-A3	205	389	525	771	OS-A3	6,165,024	84	98	128,000	46,849	2.8%	141.53	38.50	0.2211398	84.40	23.10	
CULVERT A	303	563	756	1,102	PR-A2	2,706,401	84	98	649,200	313,830	35.6%	62.13	25.15	0.0970788	88.98	15.09	
					J-A3												R_J-A3_CULVERT A
POND A	310	583	787	1,153	PR-A1	804,671	84	98	70,200	145,024	26.7%	18.47	15.74	0.0288636	87.74	9.44	
					CULVERT A												R_CULVERT A_POND A
J-B4	159	286	379	547	PR-B4	3,740,781	84	98	730,000	288,164	27.2%	85.88	28.91	0.1341821	87.81	17.35	
J-B3	250	444	586	842	PR-B3	2,230,518	84	98	638,800	440,236	48.4%	51.21	14.18	0.0800088	90.77	8.51	
					J-B4												R_J-B4_J-B3
J-B2	422	743	977	1,400	PR-B2	3,265,926	84	98	948,000	579,975	46.8%	74.98	15.71	0.1171490	90.55	9.43	
					E												R_E_J-B2
					J-B3												R_J-B3_J-B2
POND B	441	787	1,040	1,495	PR-B1	703,986	84	98	143,200	59,586	28.8%	16.16	15.55	0.0252520	88.03	9.33	
					J-B2												R_J-B2_POND B
POND C	663	1,260	1,718	2,520	PR-C1	919,957	84	98	6,000	90	0.7%	21.12	21.45	0.0329989	84.09	12.87	
					POND A												
					POND B												
					POND D												
POND D	59	99	129	182	PR-D	1,081,230	84	98	432,600	217,675	60.1%	24.82	21.74	0.0387838	92.42	13.05	
PR-1A	4	8	11	16	PR-1A	92,831	84	98	0	0	0.0%	2.13	18.79	0.0033299	84.00	11.27	
PR-1B	4	8	10	15	PR-1B	96,825	84	98	0	0	0.0%	2.22	22.72	0.0034731	84.00	13.63	
PR-1C	4	8	10	15	PR-1C	91,367	84	98	0	0	0.0%	2.10	19.46	0.0032773	84.00	11.67	
PR-1D	22	42	57	84	PR-1D	611,279	84	98	0	0	0.0%	14.03	31.34	0.0219266	84.00	18.80	
POI 1	808	1,551	2,125	3,132	PR-1	2,284,709	84	98	0	116,310	5.1%	52.45	27.10	0.0819527	84.71	16.26	
					PR-D1	2,441,711	84	98	0	0	0.0%	56.05	40.35	0.0875843	84.00	24.21	
					PR-1A												R_PR-1A_POI 1
					PR-1B												R_PR-1B_POI 1
					PR-1C												R_PR-1C_POI 1
					PR-1D												R_PR-1D_POI 1
					POND C												R_POND C_POI 1
B	19	36	51	78	PR-2B	513,427	84	98	155,200	109,880	51.6%	11.79	12.72	0.0184167	91.23	7.63	
D	7	12	17	24	PR-2D	260,321	84	98	81,200	45,751	48.8%	5.98	11.23	0.0093377	90.83	6.74	
E	6	12	16	25	PR-2E	584,312	84	98	170,000	111,092	48.1%	13.41	12.75	0.0209593	90.73	7.65	
J-2	18	32	44	63	OS-2A	256,227	84	98	65,000	975	25.7%	5.88	18.88	0.0091909	87.60	11.33	
					D												R_D-J-2
POI 2	700	1,332	1,802	2,655	PR-2	19,763,777	84	98	29,400	4,795	0.2%	453.71	35.86	0.7089280	84.02	21.52	
					B												R_B_POI 2
					J-2												R_J-2_POI 2
POI 3	52	99	133	195	PR-3	1,195,355	84	98	58,800	0	4.9%	27.44	20.56	0.0428775	84.69	12.34	
POI 4	93	166	220	322	PR-4	2,112,743	84	98	578,400	281,615	40.7%	48.50	12.77	0.0757842	89.70	7.66	

Time of Concentration Calculations / Reach Calculations

Contributing Area	Sheet Flow Length	Sheet Flow Slope (ft/ft)	Roughness Coefficient	T_{sheet}	Shallow Conc. Flow (Unpaved) Length (ft)	Slope (ft/ft)	$T_{unpaved}$	Shallow Conc. Flow (Paved) Length (ft)	Slope (ft/ft)	T_{paved}	Pipe/Channel Flow 1 Length (ft)	Velocity (ft)	$T_{channel}$ (min)	Pipe/Channel Flow 2 Length (ft)	Velocity (ft)	$T_{channel}$ (min)	Reach Lag Length (ft)	Velocity (ft)	Lag (min)
OS-A3	100	0.01	0.15	12.47	2224	0.013	20.15			0.00	2119	6	5.89			0.00			0.00
PR-A2	100	0.01	0.15	12.47	1362	0.02	9.95			0.00	982	6	2.73			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	1624	6	4.51
PR-A1	100	0.025	0.24	12.59	431	0.02	3.15			0.00			0.00			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	302	6	0.84
PR-B4	100	0.01	0.15	12.47	1723	0.017	13.65			0.00	1006	6	2.79			0.00			0.00
PR-B3	50	0.02	0.24	7.91	92	0.02	0.67			0.00	2016	6	5.60			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	1402	6	3.89
PR-B2	50	0.02	0.24	7.91	135	0.02	0.99			0.00	2455	6	6.82			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	2261	6	6.28
-				0.00			0.00			0.00			0.00			0.00	1173	6	3.26
PR-B1	100	0.02	0.24	13.76	245	0.02	1.79			0.00			0.00			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	224	6	0.62
PR-C1	100	0.01	0.24	18.16	472	0.022	3.29			0.00			0.00			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00			0.00
PR-D	100	0.02	0.24	13.76	174	0.02	1.27			0.00	2415	6	6.71			0.00			0.00
PR-1A	100	0.02	0.24	13.76	688	0.02	5.03			0.00			0.00			0.00			0.00
PR-1B	100	0.01	0.24	18.16	625	0.03	3.73			0.00	301	6	0.84			0.00			0.00
PR-1C	100	0.01	0.24	18.16	212	0.07	0.83			0.00	169	6	0.47			0.00			0.00
PR-1D	100	0.01	0.24	18.16	1536	0.02	11.22			0.00	705	6	1.96			0.00			0.00
PR-1	100	0.01	0.24	18.16	1661	0.05	7.67			0.00	457	6	1.27			0.00			0.00
PR-D1	100	0.0112	0.15	11.92	2839	0.0151	23.87			0.00	1646	6	4.57			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	542	6	1.51
-				0.00			0.00			0.00			0.00			0.00	824	6	2.29
-				0.00			0.00			0.00			0.00			0.00	1258	6	3.49
-				0.00			0.00			0.00			0.00			0.00	1534	6	4.26
-				0.00			0.00			0.00			0.00			0.00	1847	6	5.13
PR-2B	50	0.02	0.24	7.91	120	0.02	0.88			0.00	1419	6	3.94			0.00			0.00
PR-2D	50	0.02	0.24	7.91	198	0.02	1.45			0.00	677	6	1.88			0.00			0.00
PR-2E	50	0.02	0.24	7.91	103	0.02	0.75			0.00	1472	6	4.09			0.00			0.00
OS-2A	100	0.01	0.15	12.47	291	0.015	2.45			0.00	1424	6	3.96			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	1684	6	4.68
PR-2	100	0.01	0.15	12.47	1717	0.0245	11.33			0.00	4341	6	12.06			0.00			0.00
-				0.00			0.00			0.00			0.00			0.00	6534	6	18.15
-				0.00			0.00			0.00			0.00			0.00	4396	6	12.21
PR-3	100	0.02	0.24	13.76	750	0.013	6.79			0.00			0.00			0.00			0.00
PR-4	50	0.02	0.24	7.91	197	0.02	1.44			0.00	1233	6	3.43			0.00			0.00

NO.	REVISION	BY	DATE

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

5508 HIGHWAY 290 W
SUITE 150
AUSTIN, TX 78735
PHONE: 512.872.6696
HRGreen.com
TBPE NO: 16384
TBPLS NO: 10194101

HRGreen® DEVELOPMENT TX

STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

ULTIMATE DRAINAGE AREA MAP

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

##-###CON

SCALE: 1" = 50'

LEGEND

P-1	DRAINAGE AREA NAME
5.00 Ac	DRAINAGE AREA (IN ACRES)
Tc	TIME OF CONCENTRATION
POI-15	DRAINAGE DESIGN POINT
	DIRECTION OF FLOW
	DRAINAGE AREA
835	EXISTING MAJOR CONTOUR
834	EXISTING MINOR CONTOUR
835	PROPOSED MAJOR CONTOUR
834	PROPOSED MINOR CONTOUR
100YR	100 YR CALCULATED FLOODPLAIN

NO.	REVISION	BY	DATE

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STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

INLET DRAINAGE AREA MAP

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY:	MV / CC
DRAWN BY:	MV / TG
CHECKED BY:	CC / SN
APPROVED BY:	SN

SHEET 21 OF 49

##-###CON

BUTLER FARMS PHASE 13 INFRASTRUCTURE
RATIONAL METHOD FLOW CALCULATIONS FOR STORM INLETS

BASIN LABEL	INLET LABEL	INLET TYPE*	AREA (SQ FT)	AREA (AC)	IMPERVIOUS (LOTS) (SF)	IMPERVIOUS (OTHER) (SF)	IMPERVIOUS %	PERVIOUS %	TC (MIN)	2-YR C	2-YR I	2-YR Q	10-YR C	10-YR I	10-YR Q	25-YR C	25-YR I	25-YR Q	100-YR C	100-YR I	100-YR Q
1	I-07	CSAG	33,541	0.77	5600	16396	66%	34%	7	0.61	5.52	2.57	0.66	8.22	4.15	0.72	10.00	5.56	0.80	12.99	8.05
2	I-01	CGRD	27,619	0.63	11200	2321	49%	51%	8	0.54	5.29	1.80	0.59	7.88	2.93	0.65	9.60	3.93	0.72	12.49	5.74
3	I-03	CGRD	35,398	0.81	10200	10340	58%	42%	8	0.57	5.29	2.47	0.62	7.88	3.99	0.69	9.60	5.36	0.77	12.49	7.80
4	I-02	CGRD	13,810	0.32	0	10737	78%	22%	5	0.66	6.12	1.27	0.71	9.08	2.03	0.78	11.10	2.74	0.86	14.30	3.91
5	I-04	CGRD	25,130	0.58	5600	5530	44%	56%	7	0.52	5.52	1.64	0.57	8.22	2.68	0.62	10.00	3.60	0.70	12.99	5.27
6	I-05	CGRD	33,778	0.78	14800	2394	51%	49%	9	0.54	5.07	2.14	0.59	7.56	3.48	0.65	9.21	4.67	0.73	11.99	6.83
7	I-06	CGRD	31,955	0.73	14800	2304	54%	46%	9	0.55	5.07	2.06	0.60	7.56	3.35	0.67	9.21	4.50	0.75	11.99	6.57
8	I-08	CGRD	38,191	0.88	18000	2345	53%	47%	9	0.55	5.07	2.46	0.60	7.56	4.00	0.67	9.21	5.37	0.75	11.99	7.84
9	I-09	CGRD	41,762	0.96	18000	2919	50%	50%	9	0.54	5.07	2.63	0.59	7.56	4.28	0.65	9.21	5.74	0.73	11.99	8.40
10	I-10	CGRD	34,153	0.78	12400	2359	43%	57%	9	0.51	5.07	2.03	0.56	7.56	3.33	0.62	9.21	4.47	0.70	11.99	6.56
11	I-11	CGRD	13,886	0.32	0	11142	80%	20%	5	0.67	6.12	1.30	0.72	9.08	2.08	0.79	11.10	2.79	0.88	14.30	3.99
12	I-12	CGRD	28,784	0.66	11600	3843	54%	46%	8	0.56	5.29	1.94	0.61	7.88	3.15	0.67	9.60	4.23	0.75	12.49	6.17
13	I-13	CGRD	24,342	0.56	11200	3142	59%	41%	8	0.58	5.29	1.71	0.63	7.88	2.76	0.69	9.60	3.71	0.77	12.49	5.39
14	I-14	CGRD	32,929	0.76	14000	5767	60%	40%	8	0.58	5.29	2.33	0.63	7.88	3.77	0.70	9.60	5.05	0.78	12.49	7.35
15	I-19	CGRD	8,813	0.20	0	6851	78%	22%	5	0.66	6.12	0.81	0.71	9.08	1.30	0.78	11.10	1.75	0.86	14.30	2.50
16	I-20	CGRD	25,588	0.59	11800	4831	65%	35%	8	0.60	5.29	1.87	0.65	7.88	3.02	0.72	9.60	4.05	0.80	12.49	5.88
17	I-17	CGRD	22,633	0.52	9200	2065	50%	50%	8	0.54	5.29	1.48	0.59	7.88	2.41	0.65	9.60	3.24	0.73	12.49	4.73
18	I-16	CGRD	22,655	0.52	11000	3371	63%	37%	8	0.60	5.29	1.64	0.65	7.88	2.65	0.71	9.60	3.55	0.79	12.49	5.16
19	I-15	CGRD	26,353	0.60	12800	3558	62%	38%	8	0.59	5.29	1.89	0.64	7.88	3.05	0.71	9.60	4.10	0.79	12.49	5.95
20	I-18	CGRD	26,170	0.60	12800	3452	62%	38%	8	0.59	5.29	1.88	0.64	7.88	3.03	0.71	9.60	4.07	0.79	12.49	5.91

BUTLER FARMS PHASE 13 INFRASTRUCTURE
TIME OF CONCENTRATION CALCULATIONS

Contributing Area	Sheet Flow Length (ft)	Sheet Flow Slope (ft/ft)	Sheet Flow Roughness Coefficient	T_{sheet}	Shallow Concentrated Flow (Unpaved) Length (ft)	Shallow Concentrated Flow (Unpaved) Slope (ft/ft)	$T_{unpaved}$	Gutter Flow Length (ft)	Gutter Flow Velocity (ft/s)	T_{paved}
1	40	0.02	0.24	6.61	107	0.02	0.78	62	6	0.02
2	40	0.02	0.24	6.61	223	0.02	1.63	80	6	0.03
3	40	0.02	0.24	6.61	223	0.02	1.63	40	6	0.01
4				0.00			0.00			0.00
5	40	0.02	0.24	6.61	64	0.02	0.47	121	6	0.34
6	40	0.02	0.24	6.61	240	0.02	1.75	81	6	0.23
7	40	0.02	0.24	6.61	243	0.02	1.77	80	6	0.22
8	40	0.02	0.24	6.61	264	0.02	1.93	80	6	0.22
9	40	0.02	0.24	6.61	294	0.02	2.15	80	6	0.22
10	40	0.02	0.24	6.61	338	0.02	2.47		6	0.00
11				0.00			0.00			0.00
12	40	0.02	0.24	6.61	110	0.02	0.80	159	6	0.44
13	40	0.02	0.24	6.61	104	0.02	0.76	120	6	0.33
14	40	0.02	0.24	6.61	102	0.02	0.75	118	6	0.33
15				0.00			0.00			0.00
16	40	0.02	0.24	6.61	109	0.02	0.80	38	6	0.11
17	40	0.02	0.24	6.61	161	0.02	1.18	38	6	0.11
18	40	0.02	0.24	6.61	164	0.02	1.20	83	6	0.23
19	40	0.02	0.24	6.61	97	0.02	0.71	132	6	0.37
20	40	0.02	0.24	6.61	103	0.02	0.75	128	6	0.36

Curb Inlets On Grade Calculation Summary: 25 year

Drainage Area No.	Inlet No.	Q_{25} (cfs)	Q_{pass} (cfs)	Q_{total} (cfs)	Slope (%)	n	Ku	Street Width (ft)	Crown Height (ft)	Inlet Depression, a (ft)	K0	K1	K2	y0 (ft)	a	b	Flow Spread, T (ft)	H1 (ft)	H2 (ft)	Qa/La (cfs/ft)	Length (ft)	Qa	Q_{pass} (cfs)	% Captured	Bypass to Inlet	Flow Captured by Inlet (cfs)
2	I-01	3.93	0.00	3.93	1.50%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.36	0.0667	0.0022	7.07	0.78	0.42	0.82	10.00	8.16		100%		3.93
3	I-03	5.36	0.00	5.36	1.60%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.39	0.0667	0.0022	8.12	0.81	0.42	0.85	10.00	8.53		100%	I-01	5.36
4	I-02	2.74	0.00	2.74	1.60%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.32	0.0667	0.0022	5.91	0.73	0.42	0.77	10.00	7.70		100%		2.74
5	I-04	3.60	0.00	3.60	1.60%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.35	0.0667	0.0022	6.68	0.76	0.42	0.80	10.00	8.01		100%	I-03	3.60
6	I-05	4.67	0.00	4.67	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.41	0.0667	0.0022	8.56	0.82	0.42	0.87	10.00	8.67		100%	I-03	4.67
7	I-06	4.50	0.00	4.50	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.40	0.0667	0.0022	8.39	0.82	0.42	0.86	10.00	8.62		100%	I-05	4.50
8	I-08	5.37	0.00	5.37	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.43	0.0667	0.0022	9.27	0.84	0.42	0.89	10.00	8.88		100%	I-06	5.37
9	I-09	5.74	0.00	5.74	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.44	0.0667	0.0022	9.65	0.85	0.42	0.90	10.00	8.98		100%	I-08	5.74
10	I-10	4.47	0.00	4.47	1.10%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.40	0.0667	0.0022	8.14	0.81	0.42	0.85	10.00	8.54		100%	I-09	4.47
11	I-11	2.79	0.00	2.79	1.10%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.34	0.0667	0.0022	6.48	0.76	0.42	0.79	10.00	7.93		100%	I-10	2.79
12	I-12	4.23	0.00	4.23	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.39	0.0667	0.0022	8.11	0.81	0.42	0.85	10.00	8.53		100%	I-07	4.23
13	I-13	3.71	0.00	3.71	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.38	0.0667	0.0022	7.58	0.79	0.42	0.83	10.00	8.35		100%	I-12	3.71
14	I-14	5.05	0.00	5.05	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.42	0.0667	0.0022	8.94	0.84	0.42	0.88	10.00	8.79		100%	I-13	5.05
15	I-19	1.75	0.00	1.75	1.50%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.28	0.0667	0.0022	4.95	0.69	0.42	0.73	10.00	7.28		100%		1.75
16	I-20	4.05	0.00	4.05	1.50%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.36	0.0667	0.0022	7.17	0.78	0.42	0.82	10.00	8.20		100%	I-18	4.05
17	I-17	3.24	0.00	3.24	0.70%	0.020	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.38	0.0667	0.0022	7.75	0.80	0.42	0.84	10.00	8.40		100%	I-16	3.24
18	I-16	3.55	0.00	3.55	0.70%	0.020	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.40	0.0667	0.0022	8.13	0.81	0.42	0.85	10.00	8.53		100%	I-15	3.55
19	I-15	4.10	0.00	4.10	0.70%	0.020	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.41	0.0667	0.0022	8.78	0.83	0.42	0.87	10.00	8.74		100%		4.10
20	I-18	4.07	0.00	4.07	1.50%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.36	0.0667	0.0022	7.19	0.78	0.42	0.82	10.00	8.20		100%		4.07

Curb Inlets On Grade Calculation Summary: 100 year

Drainage Area No.	Inlet No.	Q_{100} (cfs)	Q_{pass} (cfs)	Q_{total} (cfs)	Slope (%)	n	Ku	Street Width (ft)	Crown Height (ft)	Inlet Depression, a (ft)	K0	K1	K2	y0 (ft)	a	b	Flow Spread, T (ft)	H1 (ft)	H2 (ft)	Qa/La (cfs/ft)	Length (ft)	Qa	Q_{pass} (cfs)	% Captured	Bypass to Inlet	Flow Captured by Inlet (cfs)
2	I-01	5.74	0.00	5.74	1.50%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.41	0.0667	0.0022	8.57	0.82	0.42	0.87	10.00	8.68		100%		5.74
3	I-03	7.80	0.00	7.80	1.60%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.45	0.0667	0.0022	10.11	0.86	0.42	0.91	10.00	9.10		100%	I-01	7.80
4	I-02	3.91	0.00	3.91	1.60%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.36	0.0667	0.0022	6.95	0.77	0.42	0.81	10.00	8.11		100%		3.91
5	I-04	5.27	0.00	5.27	1.60%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.39	0.0667	0.0022	8.04	0.81	0.42	0.85	10.00	8.51		100%	I-03	5.27
6	I-05	6.83	0.00	6.83	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.46	0.0667	0.0022	10.87	0.88	0.42	0.93	10.00	9.27		100%	I-03	6.83
7	I-06	6.57	0.00	6.57	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.46	0.0667	0.0022	10.57	0.87	0.42	0.92	10.00	9.20		100%	I-05	6.57
8	I-08	7.84	0.00	7.84	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.48	0.0667	0.0022	12.29	0.90	0.42	0.95	10.00	9.51		100%	I-06	7.84
9	I-09	8.40	0.00	8.40	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.49	0.0667	0.0022	13.47	0.91	0.42	0.96	10.00	9.64		100%	I-08	8.40
10	I-10	6.56	0.00	6.56	1.10%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.45	0.0667	0.0022	10.20	0.87	0.42	0.91	10.00	9.12		100%	I-09	6.56
11	I-11	3.99	0.00	3.99	1.10%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.38	0.0667	0.0022	7.68	0.80	0.42	0.84	10.00	8.38		100%	I-10	3.99
12	I-12	6.17	0.00	6.17	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.45	0.0667	0.0022	10.11	0.86	0.42	0.91	10.00	9.10		100%	I-07	6.17
13	I-13	5.39	0.00	5.39	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.43	0.0667	0.0022	9.29	0.84	0.42	0.89	10.00	8.89		100%	I-12	5.39
14	I-14	7.35	0.00	7.35	1.00%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.47	0.0667	0.0022	11.54	0.89	0.42	0.94	10.00	9.40		100%	I-13	7.35
15	I-19	2.50	0.00	2.50	1.50%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.31	0.0667	0.0022	5.76	0.73	0.42	0.76	10.00	7.64		100%		2.50
16	I-20	5.88	0.00	5.88	1.50%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.41	0.0667	0.0022	8.69	0.83	0.42	0.87	10.00	8.71		100%	I-18	5.88
17	I-17	4.73	0.00	4.73	0.70%	0.020	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.43	0.0667	0.0022	9.56	0.85	0.42	0.90	10.00	8.96		100%	I-16	4.73
18	I-16	5.16	0.00	5.16	0.70%	0.020	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.45	0.0667	0.0022	10.11	0.86	0.42	0.91	10.00	9.10		100%	I-15	5.16
19	I-15	5.95	0.00	5.95	0.70%	0.020	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.47	0.0667	0.0022	11.24	0.89	0.42	0.93	10.00	9.34		100%		5.95
20	I-18	5.91	0.00	5.91	1.50%	0.016	0.560	30.00	0.500	0.42	2.85	0.50	3.03	0.41	0.0667	0.0022	8.71	0.83	0.42	0.87	10.00	8.72		100%		5.91

Curb Inlets in Sump Calculation Summary: 25 year

Drainage Area No.	Inlet No.	Q_{25} (cfs)	Qpass (cfs)	Qtotal (cfs)	W (ft)	Inlet Depression, a (ft)	Curb opening height, h (ft)	Street Width (ft)	Crown Height (%)	Reduction Factor (ft)	Inlet Length (ft)	d_{weir} Above S_x (ft)	$d_{orifice}$ above S_x (ft)	a	b	Depth of Ponding over S_x, y0 (ft)	Ponded Width (ft)
1	I-07	5.56	0.00	5.56	1.50	0.42	0.52	30.00	0.50	1.00	10.00	0.33	0.00	0.07	0.00	0.31	5.73

Curb Inlets in Sump Calculation Summary: 100 year

Drainage Area No.	Inlet No.	Q_{100} (cfs)	Qpass (cfs)	Qtotal (cfs)	W (ft)	Inlet Depression, a (ft)	Curb opening height, h (ft)	Street Width (ft)	Crown Height (%)	Reduction Factor (ft)	Inlet Length (ft)	d_{weir} Above S_x (ft)	$d_{orifice}$ above S_x (ft)	a	b	Depth of Ponding over S_x, d (ft)	Ponded Width (ft)
1	I-07	8.05	0.00	8.05	1.50	0.42	0.52	30.00	0.50	1.00	10.00	0.42	0.00	0.07	0.00	0.31	5.73

NO.	REVISION	BY	DATE

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TBPLS NO: 10194101

STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

INLET CALCULATIONS

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET 22 OF 49

##-###CON

FUTURE
BUTLER FARMS
PHASE 14
BLOCK E
BLOCK B
BUTLER FARMS
PHASE 12
ALTAMURE ROAD
(70' R.O.W)
15' WASTEWATER
EASEMENT
TIBURON BEND
10' CURB INLET I-14
10' CURB INLET I-13
18" RCP STM B1
10' CURB INLET I-12
4'X4' JUNCTION BOX B6
10' CURB INLET I-11
24" RCP STM B1
FUTURE
BUTLER FARMS
SCHOOL SITE
BLOCK Z
WINDSTAR ROAD
10' CURB INLET I-17
4'X4' JUNCTION BOX B5
10' CURB INLET I-10
BLOCK Y
BLOCK AA
BLOCK B
BUTLER FARMS BOULEVARD
(65' MIN R.O.W.)
BUTLER FARMS
PHASE 12
10' CURB INLET I-20
10' CURB INLET I-16
18" RCP STM E1
10' CURB INLET I-19
10' CURB INLET I-09
BOULDER RIDGE TRAIL
CONNECT TO EXISTING STORM SEWER SYSTEM (PHASES 2-4). CONTRACTOR TO VERIFY LOCATION (HORIZONTALLY AND VERTICALLY) PRIOR TO INSTALLATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
18" RCP STM F1
4'X4' JUNCTION BOX
CONNECT TO EXISTING STORM SEWER SYSTEM (PHASES 2-4). CONTRACTOR TO VERIFY LOCATION (HORIZONTALLY AND VERTICALLY) PRIOR TO INSTALLATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. F1
MARION COVE
10' CURB INLET I-07
42" RCP
36" RCP STM B1
10' CURB INLET I-18
10' CURB INLET I-08
30" RCP STM B1
10' CURB INLET I-15
4'X4' JUNCTION BOX E1
CONNECT TO EXISTING STORM SEWER SYSTEM (PHASE 12). CONTRACTOR TO VERIFY LOCATION (HORIZONTALLY AND VERTICALLY) PRIOR TO INSTALLATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
LAT F1-1
4'X4' JUNCTION BOX B4
18" RCP
24" RCP STM E1
5'x5' JUNCTION BOX B3
10' CURB INLET I-06
CONNECT TO EXISTING STORM SEWER SYSTEM (PHASES 2-4). CONTRACTOR TO VERIFY LOCATION (HORIZONTALLY AND VERTICALLY) PRIOR TO INSTALLATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
24" RCP
EXISTING
BUTLER FARMS
PHASES 2-4
10' CURB INLET I-05
18" RCP STM A3
TIBURON BEND
BLOCK B
4'X4' JUNCTION BOX
REF. PHASES 2-4
CONSTRUCTION PLANS
10' CURB INLET I-04
10' CURB INLET I-03
10' CURB INLET I-01
ERGOT STREET
30" RCP
30" RCP STM A1
36" RCP STM A1
42" RCP
CONNECT TO EXISTING STORM SEWER SYSTEM (PHASES 2-4). CONTRACTOR TO VERIFY LOCATION (HORIZONTALLY AND VERTICALLY) PRIOR TO INSTALLATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
4'X4' JUNCTION BOX A4
10' CURB INLET I-02
CONNECT TO EXISTING STORM SEWER SYSTEM (PHASE 12). CONTRACTOR TO VERIFY LOCATION (HORIZONTALLY AND VERTICALLY) PRIOR TO INSTALLATION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
5'x5' JUNCTION BOX A3
BLOCK X
EXISTING
BUTLER FARMS
PHASES 2-4

N

0 60' 120'
SCALE: 1" = 60'

LEGEND

- 834 EXISTING MINOR CONTOUR
- 835 EXISTING MAJOR CONTOUR
- 834 PROPOSED MINOR CONTOUR
- 835 PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- 100YR CALCULATED 100-YR ATLAS-14 FLOODPLAIN
- PROPOSED STORM LINE
- STORM SEWER JUNCTION BOX
- STORM SEWER MAHNOLE
- CURB INLET
- WATER LINE
- FIRE HYDRANT
- WATER VALVE
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- SINGLE WASTEWATER SERVICE
- DOUBLE WASTEWATER SERVICE

NOTES:

1. ALL PROPOSED STORM SEWER PIPE LINES SHALL BE CLASS III REINFORCED CONCRETE UNLESS NOTED OTHERWISE.
2. FILL SHALL BE PLACED ACCORDING TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND CITY OF LIBERTY HILL SPECIFICATIONS.
3. BENDS, WYES, AND PIPE SIZE CHANGES IN THE STORM SEWER SHALL BE PREFABRICATED OR SHALL OCCUR AT MANHOLES / JUNCTION BOXES.

NO.	REVISION	BY	DATE

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TBPLS NO: 10194101

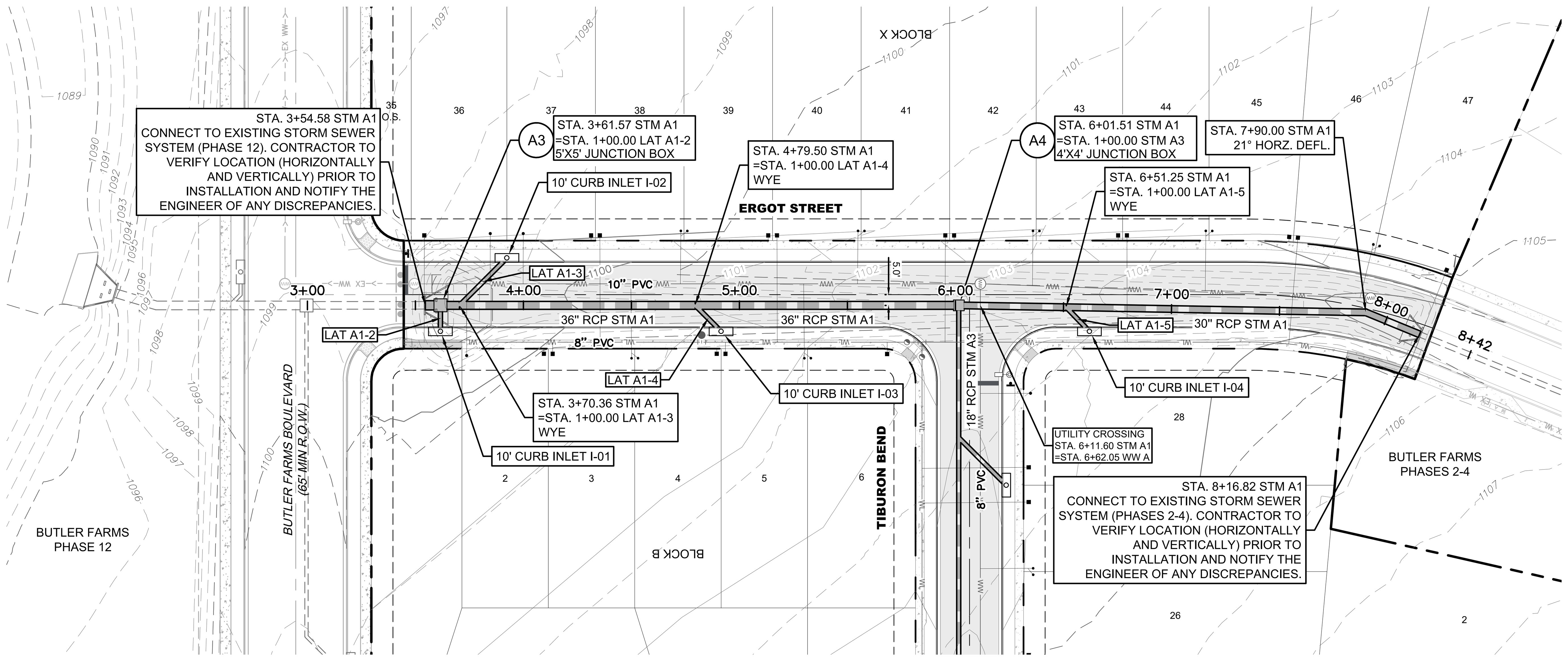
STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

OVERALL STORM SEWER PLAN

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET 23 OF 49
##-###CON



SCALE: 1" = 40'

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- CALCULATED 100-YR ATLAS-14 FLOODPLAIN
- PROPOSED STORM LINE
- STORM SEWER JUNCTION BOX
- STORM SEWER MAHNOLE
- CURB INLET
- WATER LINE
- FIRE HYDRANT
- WATER VALVE
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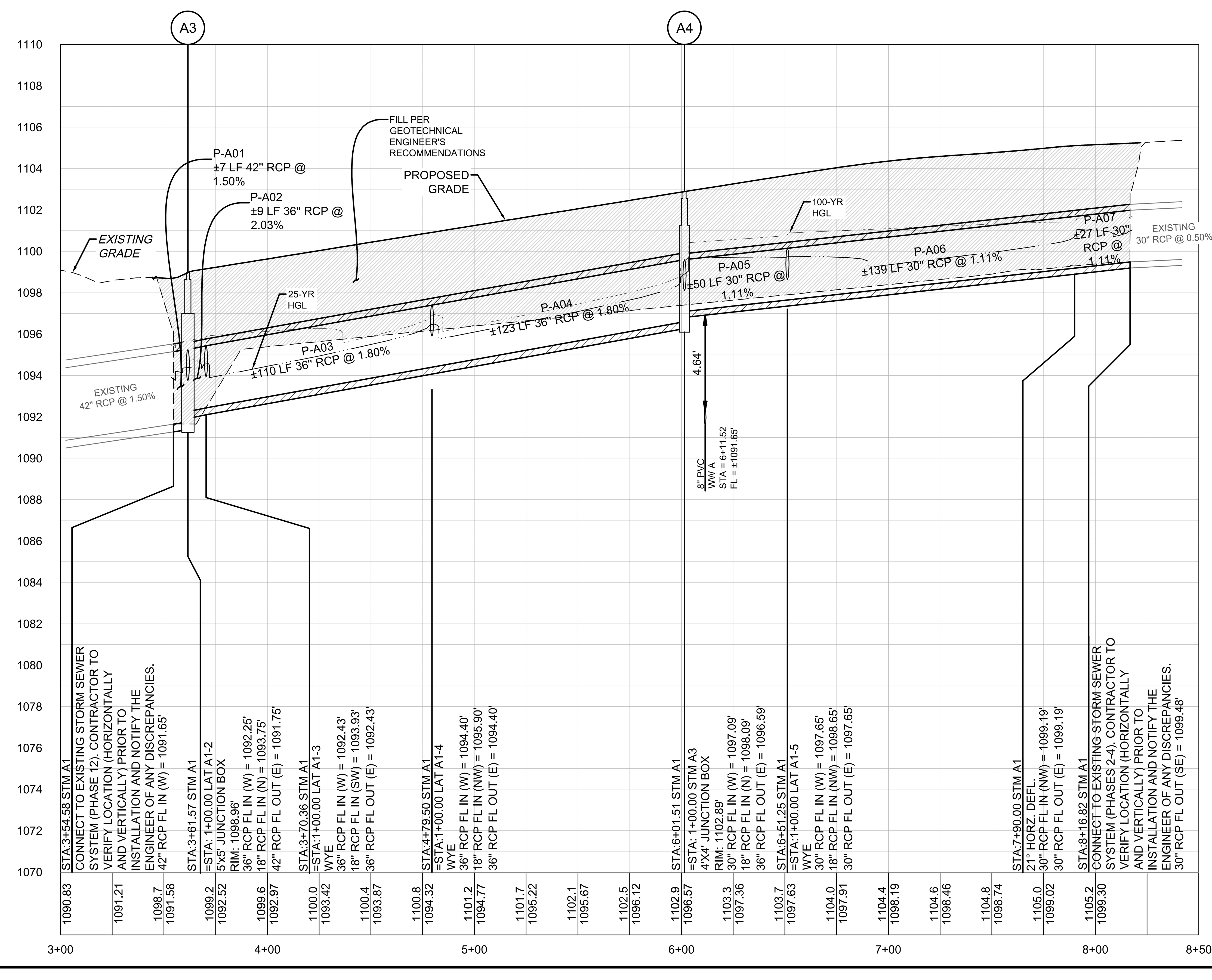
STM A1



PROFILE SCALE
1"=40' HORZ.
1"=4' VERT.

PROFILE LEGEND

- FINISHED GRADE - CENTERLINE (FG)
- EXISTING GRADE - CENTERLINE (EG)
- PIPE

EXISTING GRADE 900.1 / 897.10 PROPOSED FLOWLINE

NOTES:

1. ALL PROPOSED STORM SEWER PIPE LINES SHALL BE CLASS III REINFORCED CONCRETE UNLESS NOTED OTHERWISE.
2. FILL SHALL BE PLACED ACCORDING TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND CITY OF LIBERTY HILL SPECIFICATIONS.
3. BENDS, WYES, AND PIPE SIZE CHANGES IN THE STORM SEWER SHALL BE PREFABRICATED OR SHALL OCCUR AT MANHOLES / JUNCTION BOXES.

Pipe Label	Slope (%)	Q25 (cfs)	V25 (ft/s)	D25 (ft)	Q100 (cfs)	V100 (ft/s)	D100 (ft)
P-A01	1.50%	45.96	6.37	2.56	66.63	6.93	3.81
P-A02	2.03%	42.03	7.30	2.49	60.89	8.61	3.47
P-A03	1.80%	39.29	7.49	2.14	56.98	8.65	3.49
P-A04	1.80%	33.93	6.85	2.08	49.18	8.11	2.55
P-A05	1.11%	22.93	4.99	2.56	33.24	6.77	3.32
P-A06	1.11%	18.54	5.21	2.11	26.88	5.65	3.24
P-A07	1.11%	18.54	5.47	1.87	26.88	5.80	2.41

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STATE OF TEXAS — CHRISTINE N. CAMPBELL — 142536 — LICENSED PROFESSIONAL ENGINEER
09/06/2024

STORM A1 PLAN & PROFILE STA 2+00 - END

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET 24 OF 49
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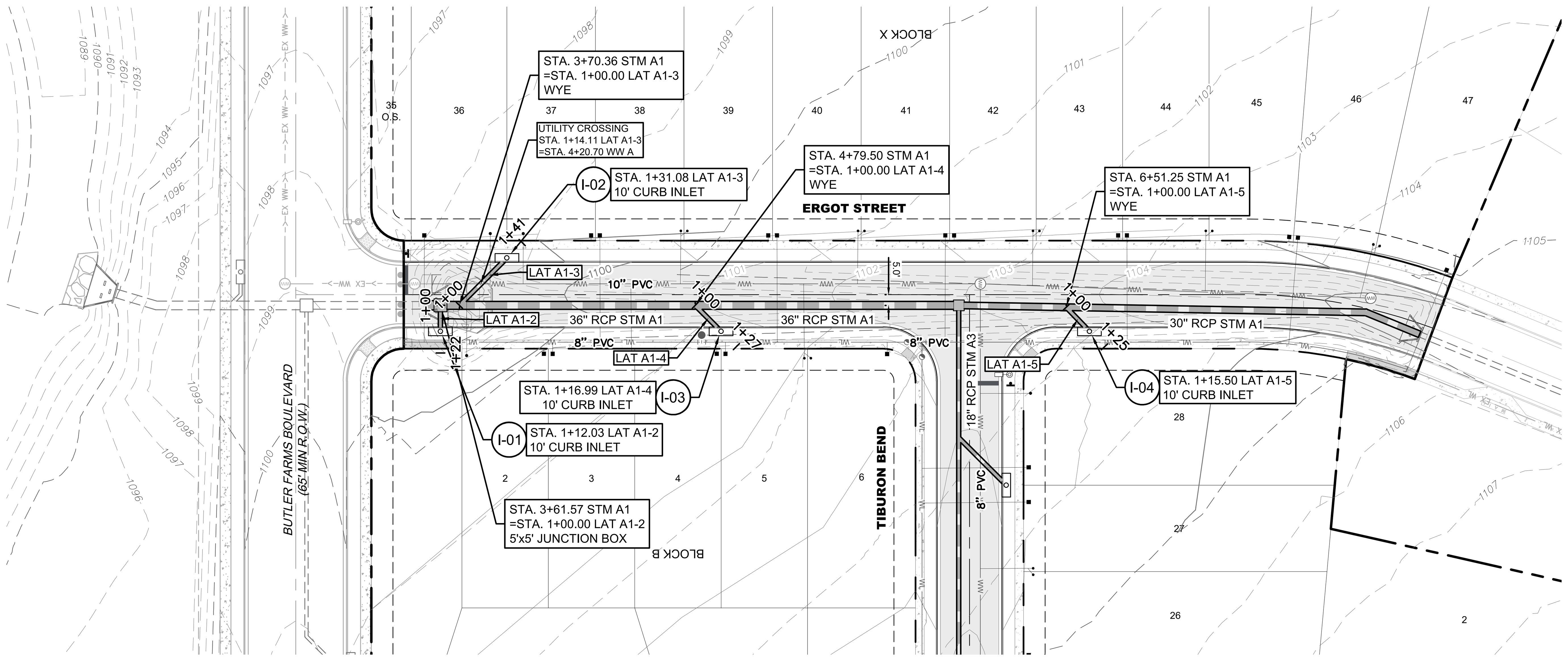

SCALE: 1" = 40'

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- CALCULATED 100-YR ATLAS-14 FLOODPLAIN
- PROPOSED STORM LINE
- STORM SEWER JUNCTION BOX
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- WASTEWATER MANHOLE
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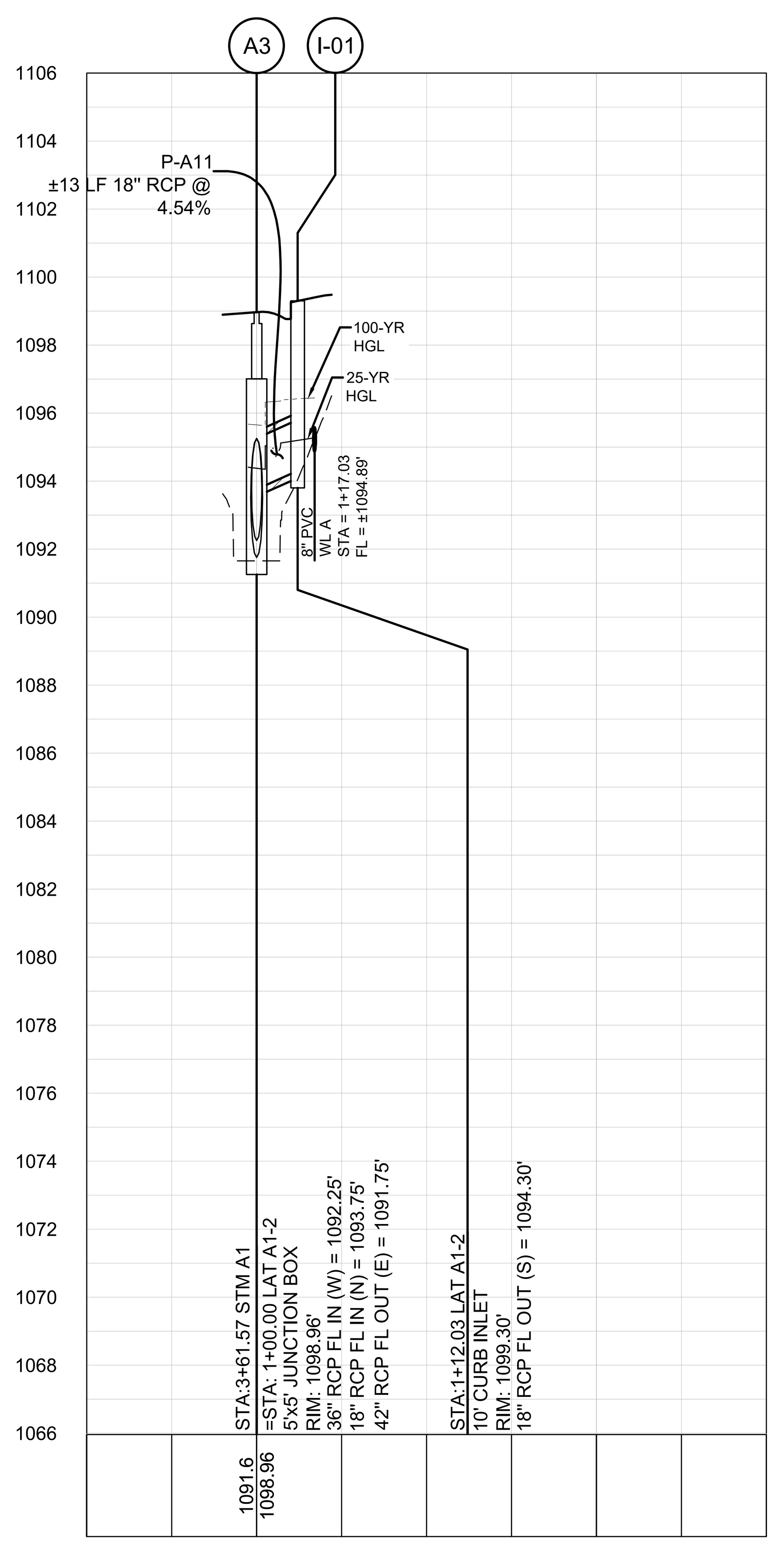
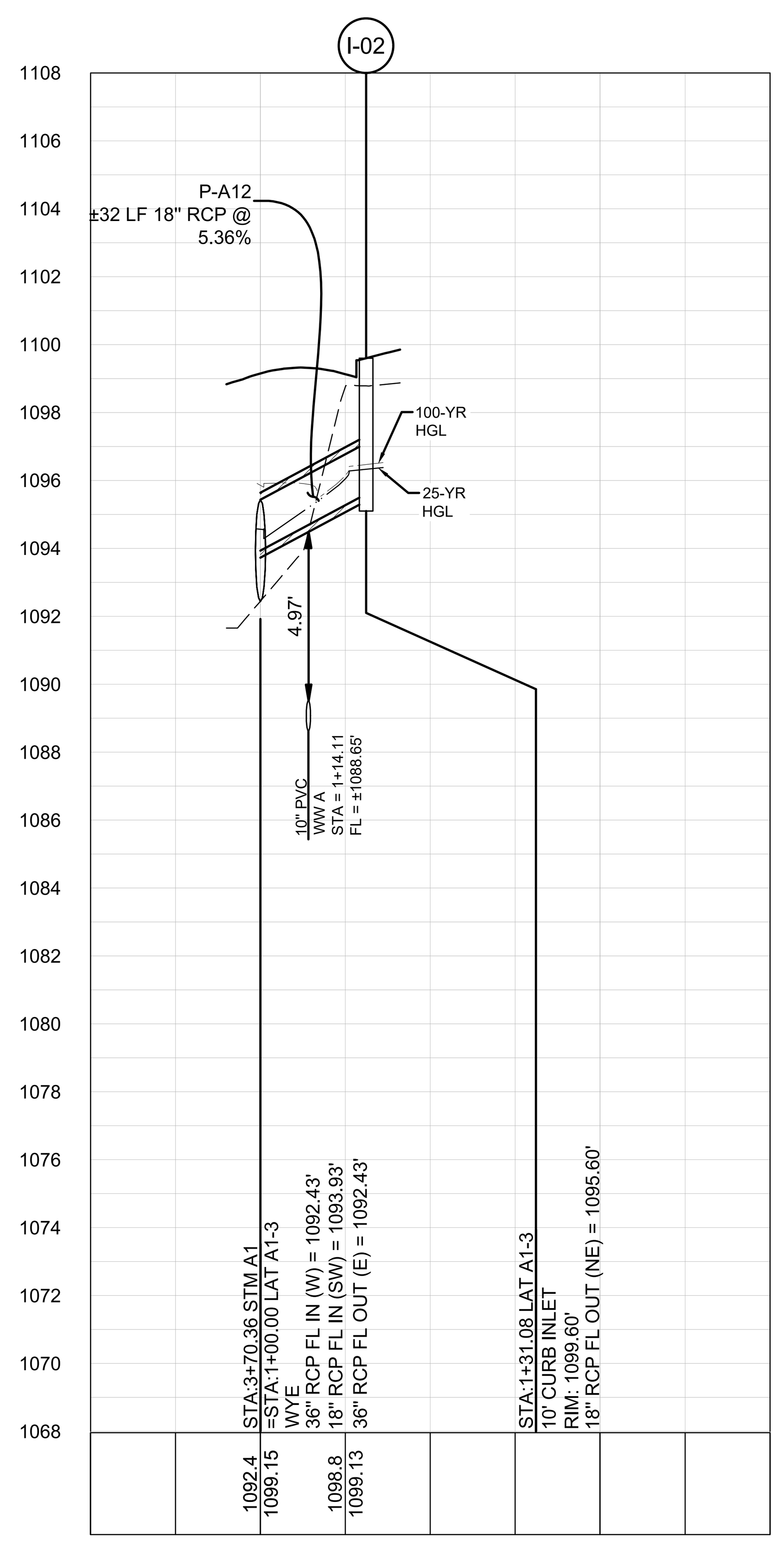
- DOUBLE WASTEWATER SERVICE

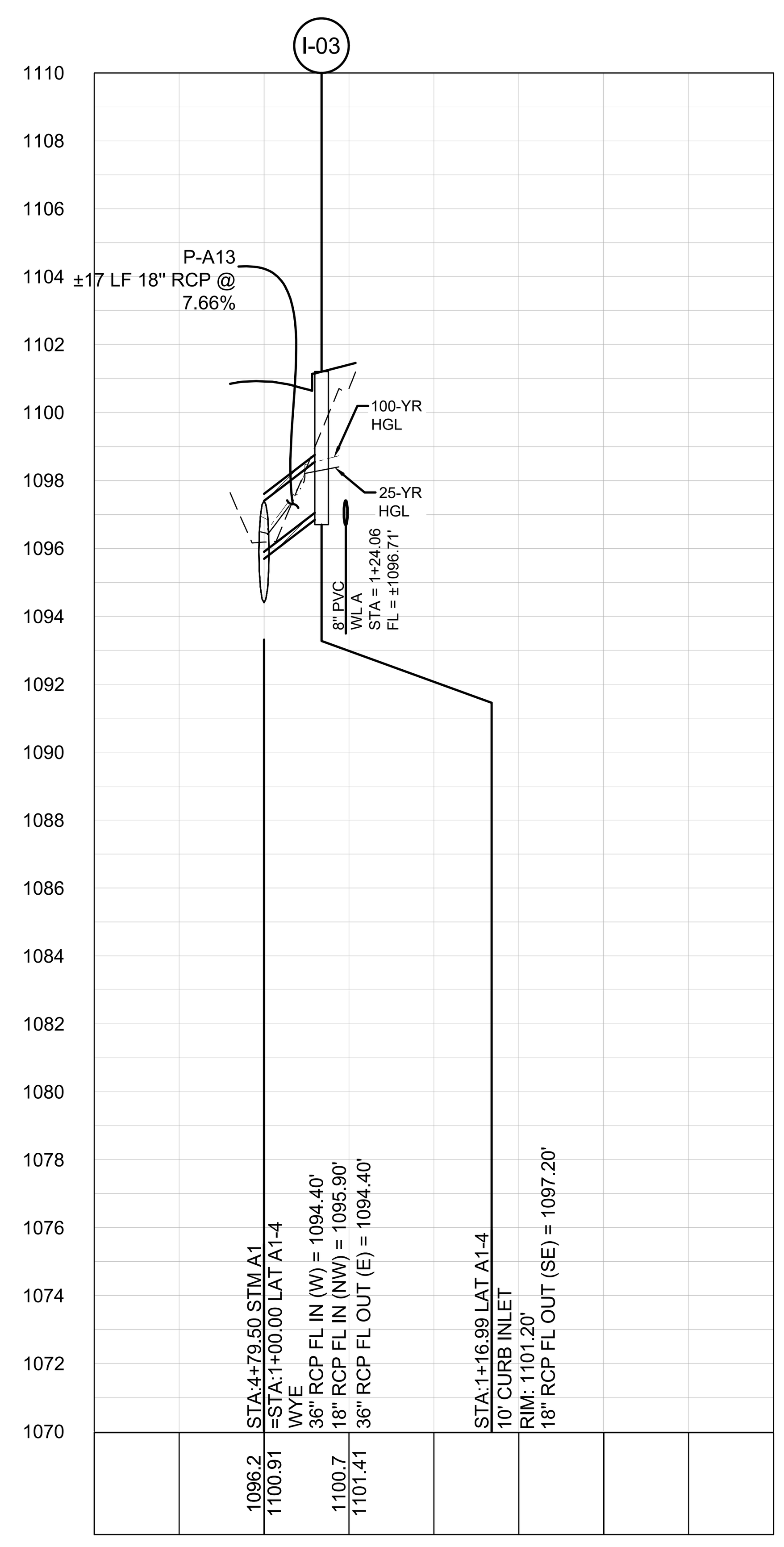
LAT A1-2



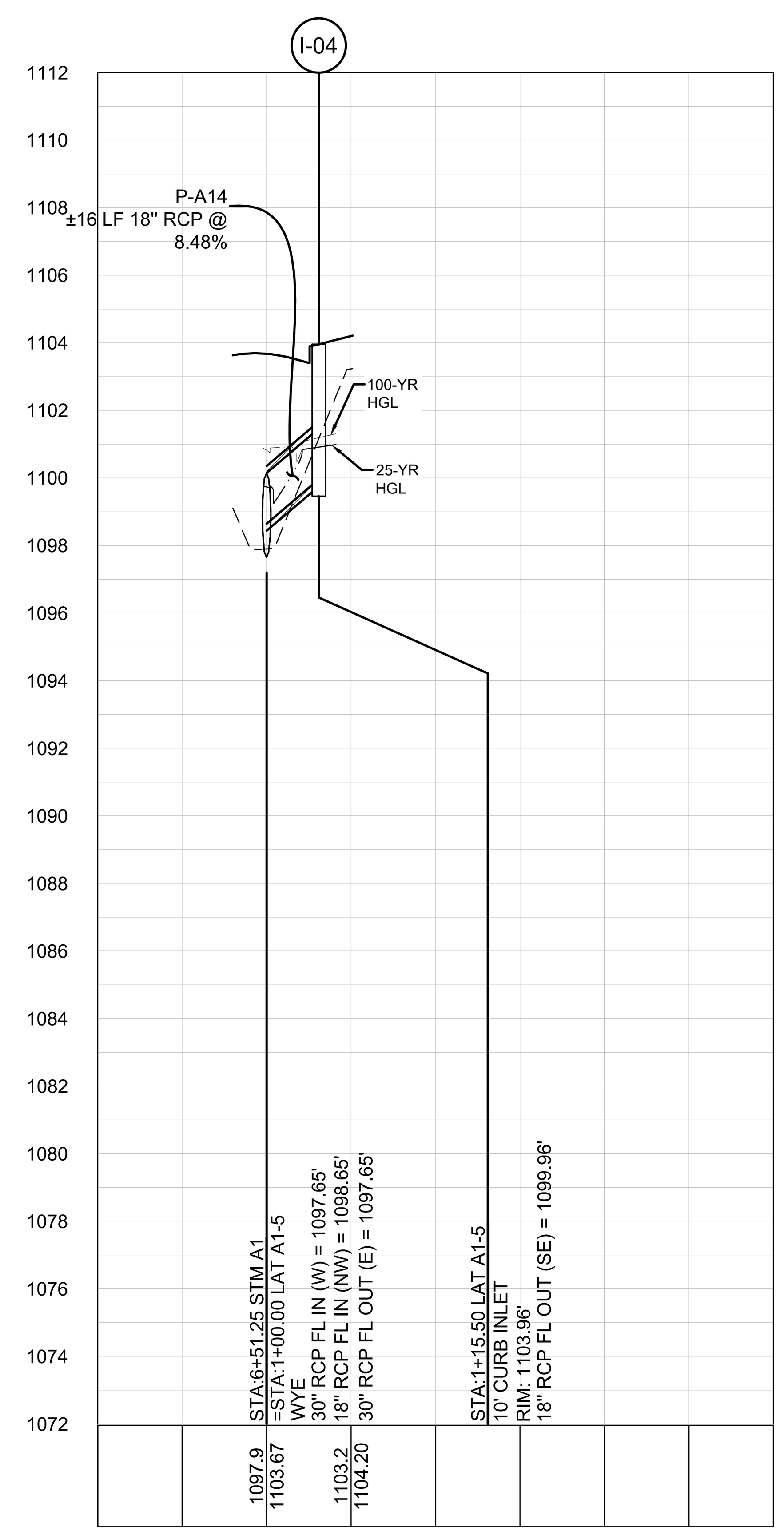
LAT A1-3



LAT A1-4



LAT A1-5



PROFILE SCALE
1"=40' HORZ.
1"=4' VERT.

PROFILE LEGEND
- FINISHED GRADE - CENTERLINE (FG)
- EXISTING GRADE - CENTERLINE (EG)
- PIPE
- EXISTING GRADE 900.1 / 897.10 PROPOSED FLOWLINE

NOTES:

1. ALL PROPOSED STORM SEWER PIPE LINES SHALL BE CLASS III REINFORCED CONCRETE UNLESS NOTED OTHERWISE.
2. FILL SHALL BE PLACED ACCORDING TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND CITY OF LIBERTY HILL SPECIFICATIONS.
3. BENDS, WYES, AND PIPE SIZE CHANGES IN THE STORM SEWER SHALL BE PREFABRICATED OR SHALL OCCUR AT MANHOLES / JUNCTION BOXES.

Pipe Label	Slope (%)	Q25 (cfs)	V25 (ft/s)	D25 (ft)	Q100 (cfs)	V100 (ft/s)	D100 (ft)
P-A11	4.54%	3.93	3.41	1.29	5.74	3.25	2.57
P-A12	5.36%	2.74	3.88	0.64	3.91	3.30	1.99
P-A13	7.66%	5.36	7.52	0.89	7.80	8.27	1.08
P-A14	8.48%	4.39	3.84	1.11	6.36	4.42	2.24

NO.	REVISION	BY	DATE

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HRGreen® DEVELOPMENT TX

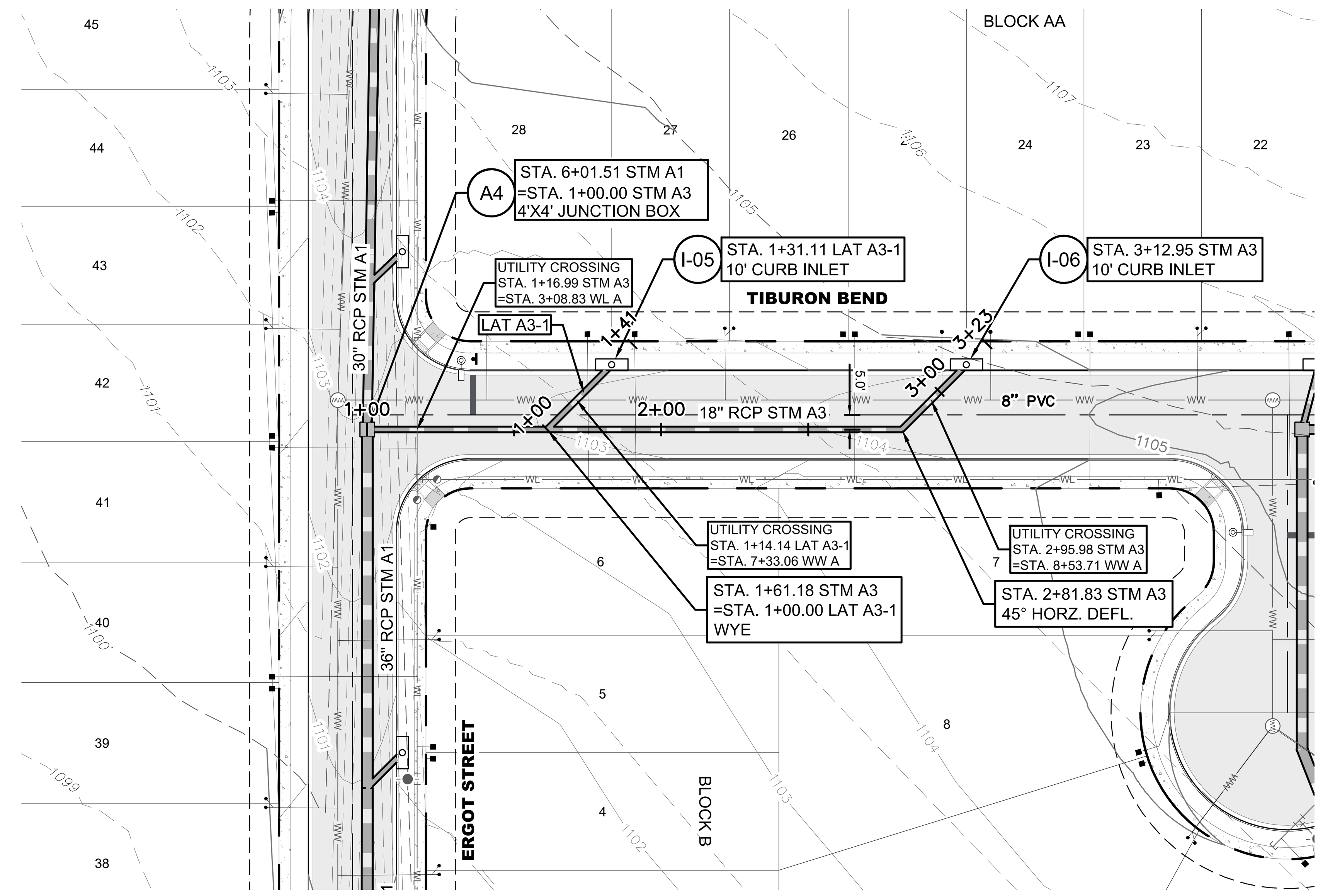
STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

STORM LAT A1-2 - A1-5 PLAN & PROFILES

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET 25 OF 49
##-###CON



SCALE: 1" = 40'

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- CALCULATED 100-YR ATLAS-14 FLOODPLAIN
- PROPOSED STORM LINE
- STORM SEWER JUNCTION BOX
- STORM SEWER MAHNOLE
- CURB INLET
- WATER LINE
- FIRE HYDRANT
- WATER VALVE
- SINGLE WATER SERVICE
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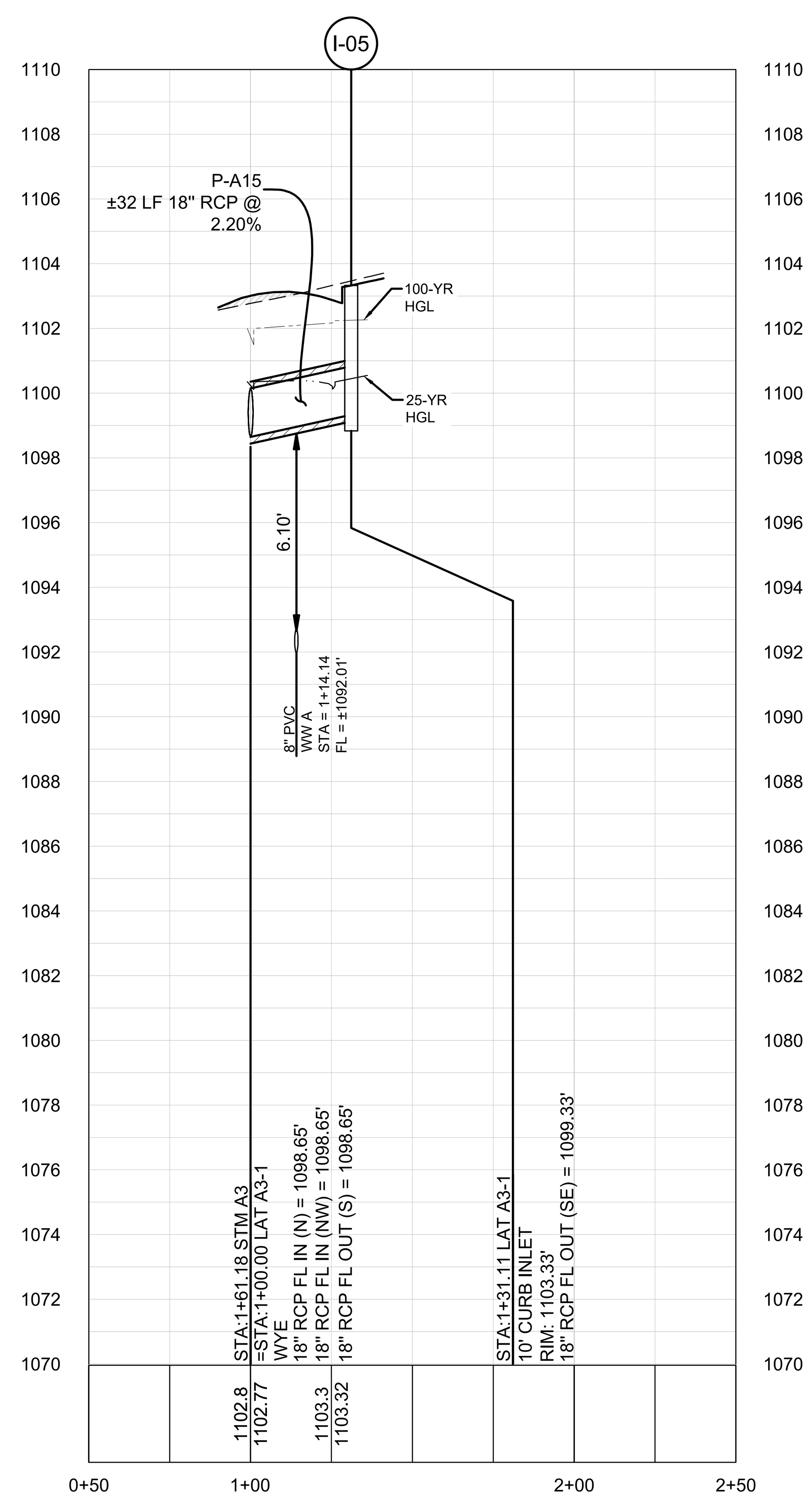
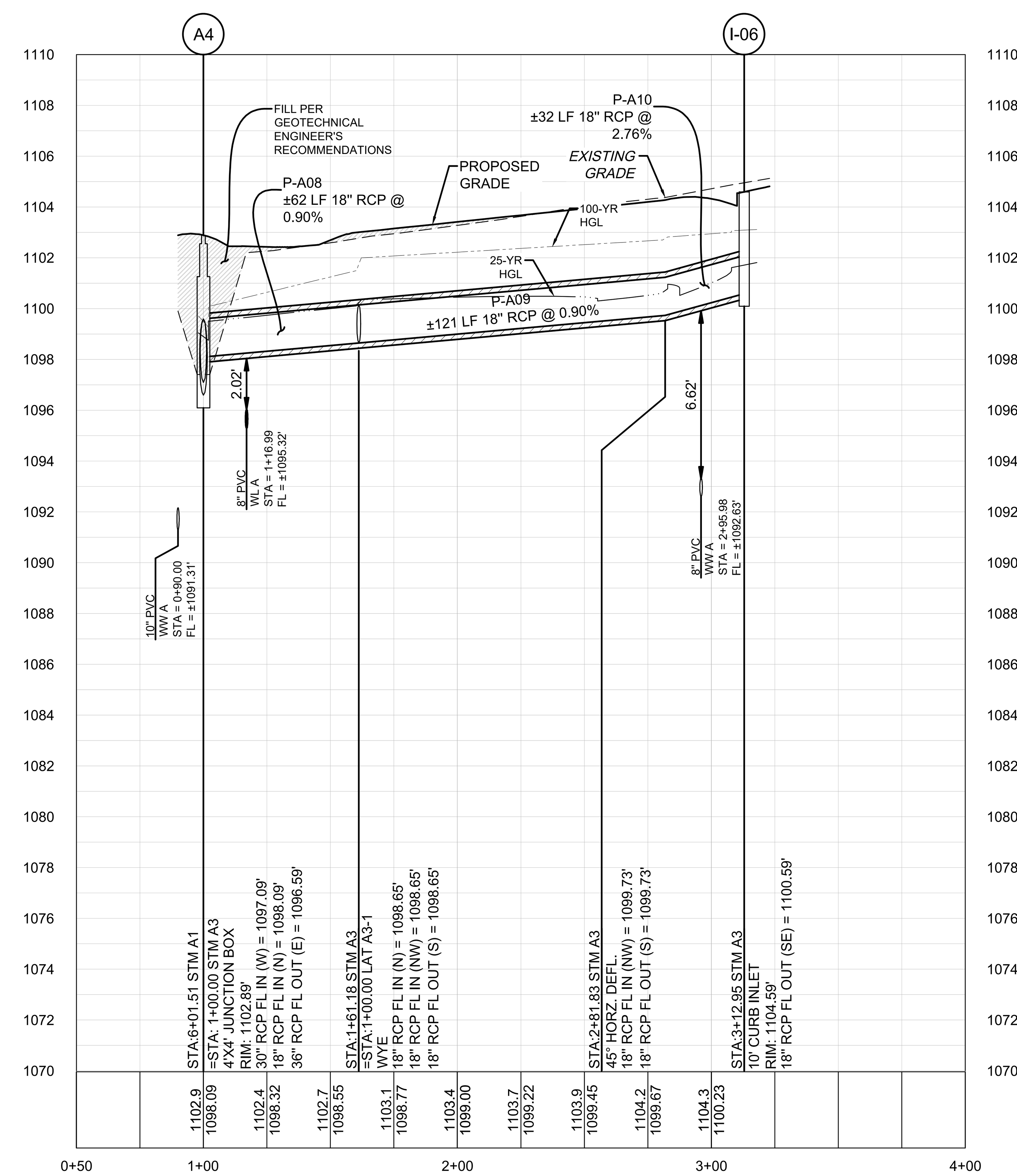
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- SINGLE WASTEWATER SERVICE
- DOUBLE WASTEWATER SERVICE

LAT A3-1



STM A3



PROFILE SCALE

VERTICAL 4 – 0

1'=40' HORZ.
1'=4' VERT.

PROFILE LEGEND

- FINISHED GRADE - CENTERLINE (FG)
- EXISTING GRADE - CENTERLINE (EG)
- PIPE

EXISTING GRADE → 900.1 | 897.10 ← PROPOSED FLOWLINE

NOTES:

1. ALL PROPOSED STORM SEWER PIPE LINES SHALL BE CLASS III REINFORCED CONCRETE UNLESS NOTED OTHERWISE.
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3. BENDS, WYES, AND PIPE SIZE CHANGES IN THE STORM SEWER SHALL BE PREFABRICATED OR SHALL OCCUR AT MANHOLES / JUNCTION BOXES.

Pipe Label	Slope (%)	Q25 (cfs)	V25 (ft/s)	D25 (ft)	Q100 (cfs)	V100 (ft/s)	D100 (ft)
P-A08	0.90%	11.00	6.33	1.46	15.94	9.02	2.85
P-A09	0.90%	5.54	4.04	1.70	8.03	4.54	3.35
P-A10	2.76%	5.54	4.26	1.23	8.03	4.54	3.09
P-A15	2.20%	5.46	4.01	1.70	7.91	4.48	3.35

NO.	REVISION	BY	DATE

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STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

STORM A3, LAT A3-1 PLAN & PROFILES

BUTLER FARMS
PHASE 13
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

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SHEET 26 OF 49

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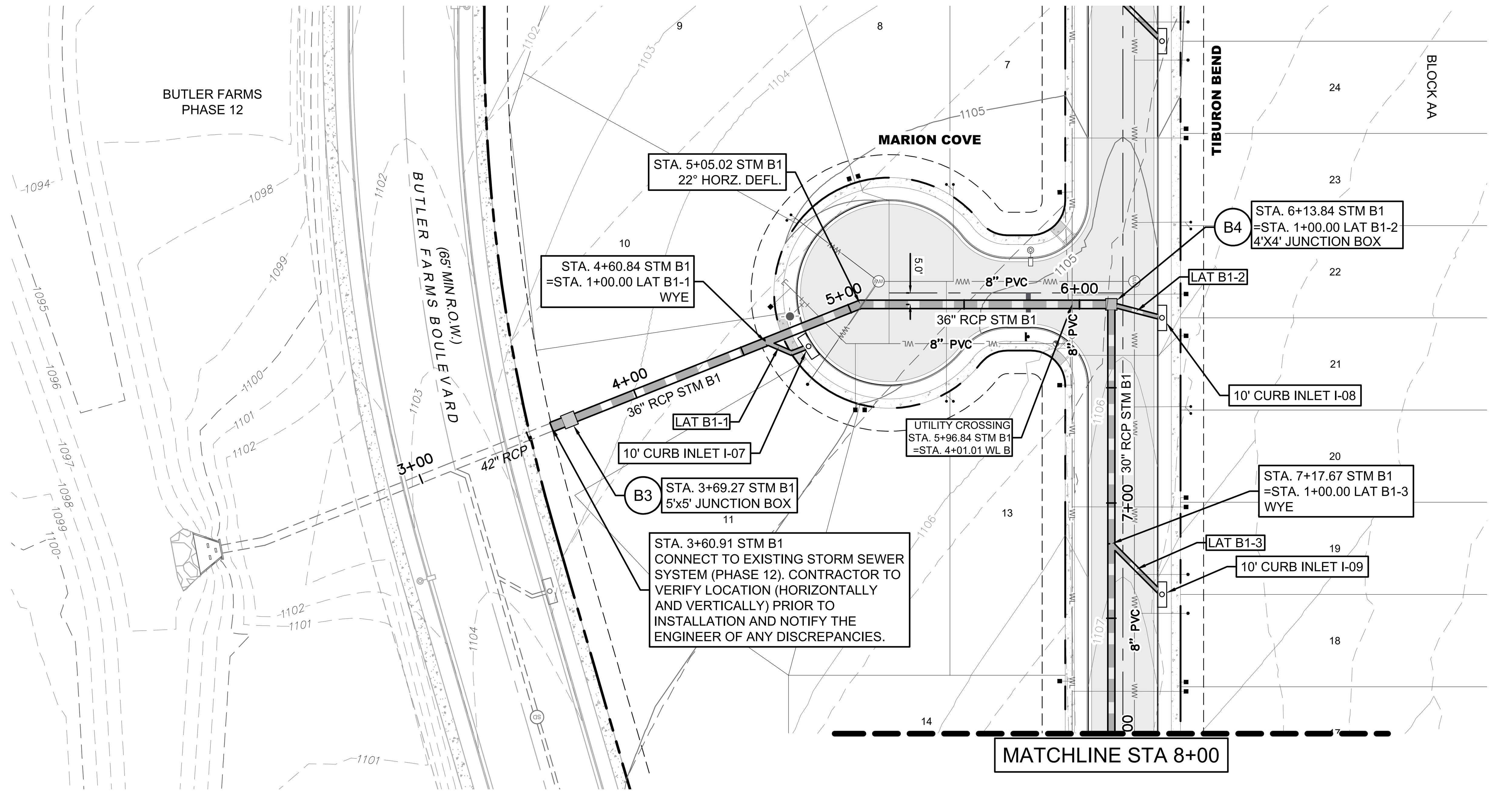

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- CALCULATED 100-YR ATLAS-14 FLOODPLAIN
- PROPOSED STORM LINE
- STORM SEWER JUNCTION BOX
- STORM SEWER MAHNOLE
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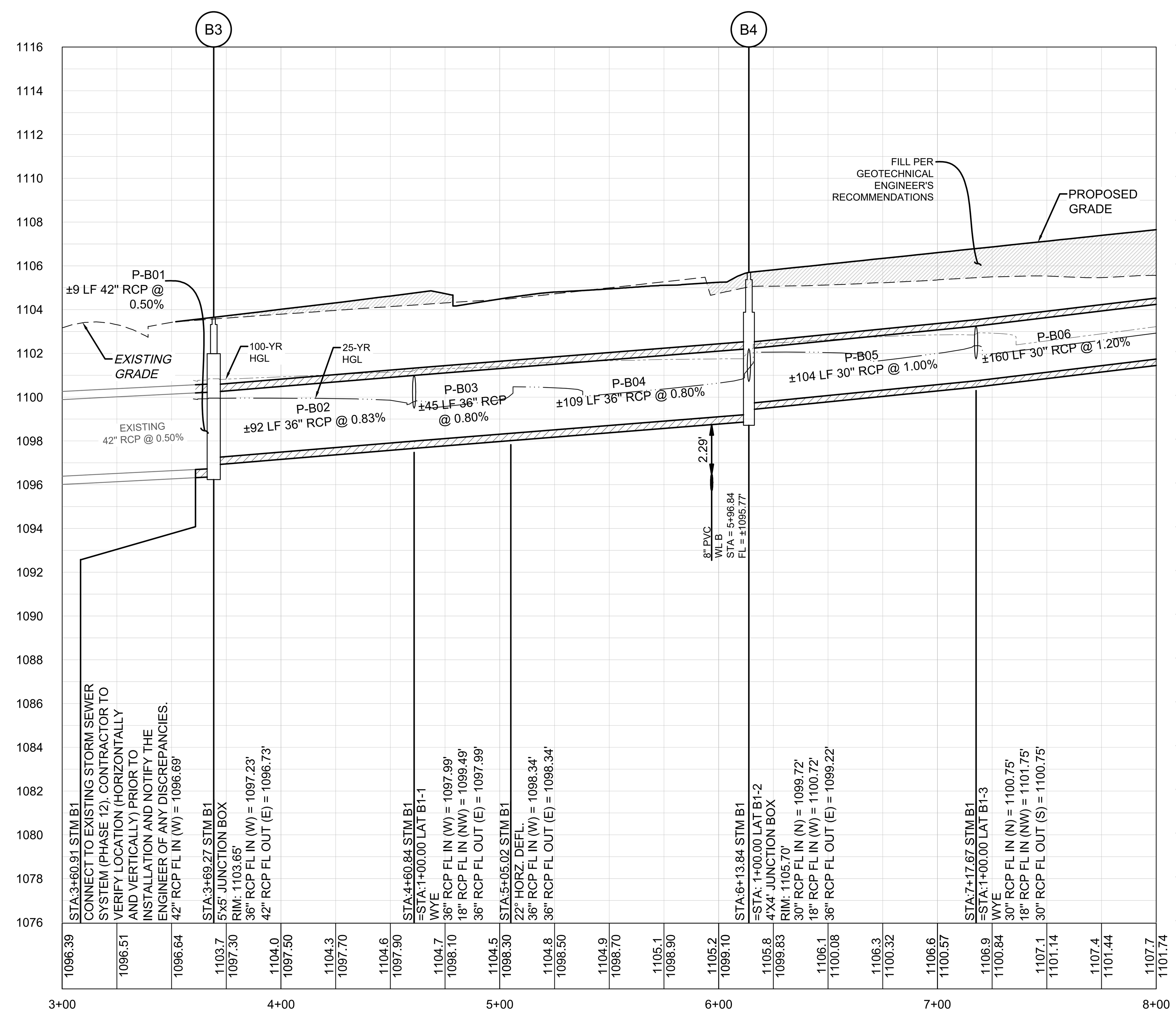
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- SINGLE WASTEWATER SERVICE
- DOUBLE WASTEWATER SERVICE

STM B1



PROFILE SCALE
1"=40' HORZ.
1"=4' VERT.

PROFILE LEGEND

- FINISHED GRADE - CENTERLINE (FG)
- EXISTING GRADE - CENTERLINE (EG)
- PIPE
- EXISTING GRADE 900.1 — 897.10 PROPOSED FLOWLINE

NOTES:

1. ALL PROPOSED STORM SEWER PIPE LINES SHALL BE CLASS III REINFORCED CONCRETE UNLESS NOTED OTHERWISE.
2. FILL SHALL BE PLACED ACCORDING TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND CITY OF LIBERTY HILL SPECIFICATIONS.
3. BENDS, WYES, AND PIPE SIZE CHANGES IN THE STORM SEWER SHALL BE PREFABRICATED OR SHALL OCCUR AT MANHOLES / JUNCTION BOXES.

Pipe Label	Slope (%)	Q25 (cfs)	V25 (ft/s)	D25 (ft)	Q100 (cfs)	V100 (ft/s)	D100 (ft)
P-B01	0.50%	29.45	3.19	3.22	42.60	4.43	4.07
P-B02	0.83%	29.45	5.61	2.71	42.60	6.03	3.57
P-B03	0.80%	26.55	6.22	1.84	38.44	5.44	3.26
P-B04	0.80%	26.55	5.78	2.13	38.44	5.74	3.17
P-B05	1.00%	22.03	5.64	2.33	31.86	6.89	2.69

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STATE OF TEXAS — CHRISTINE N. CAMPBELL — 142536 — LICENSED PROFESSIONAL ENGINEER — 09/06/2024

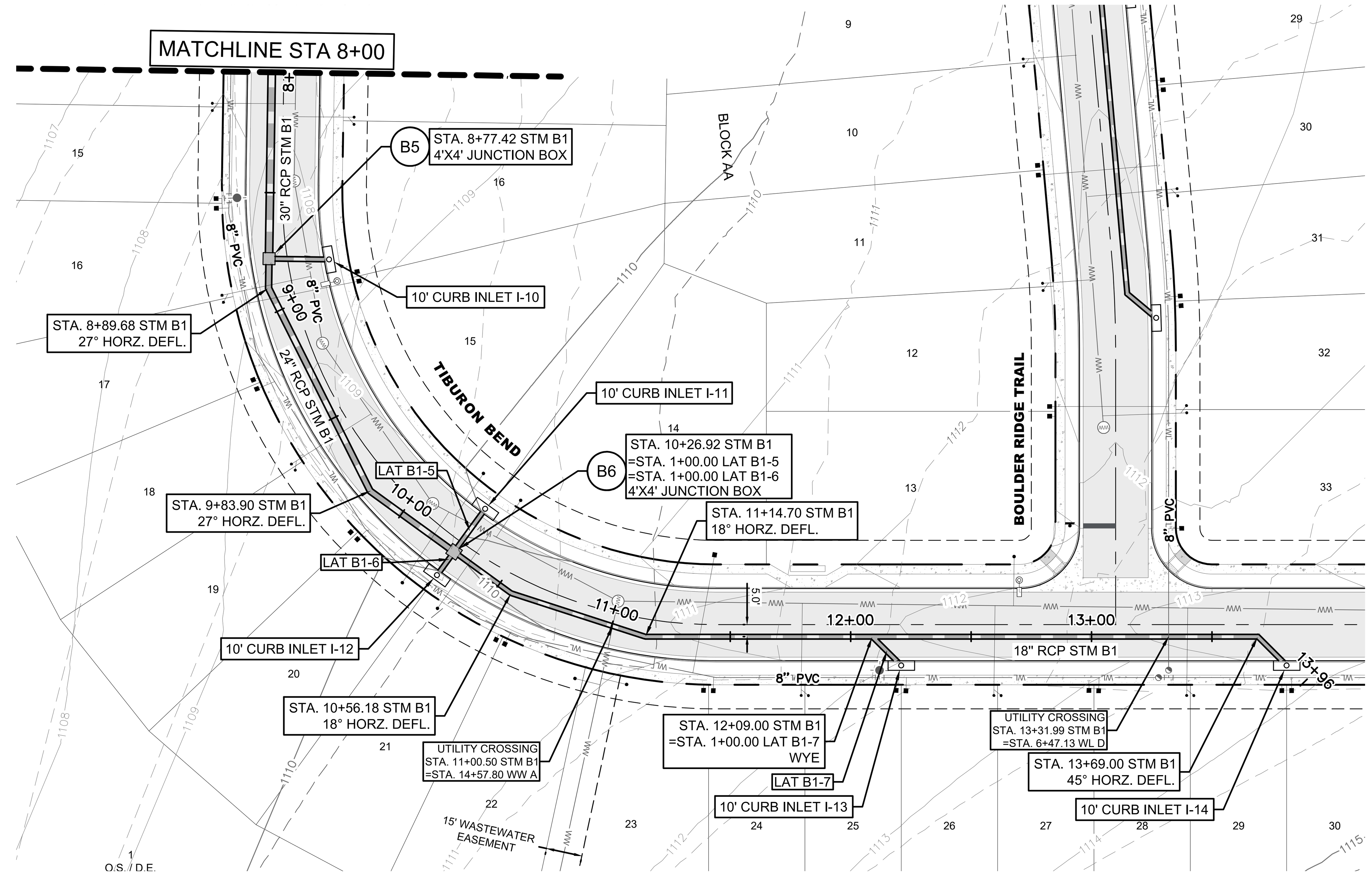
STORM B1 PLAN & PROFILE STA 3+00 - 8+00

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY:	MV / CC
DRAWN BY:	MV / TG
CHECKED BY:	CC / SN
APPROVED BY:	SN

NO.	REVISION	BY	DATE



SCALE: 1" = 40'

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- CALCULATED 100-YR ATLAS-14 FLOODPLAIN
- PROPOSED STORM LINE
- STORM SEWER JUNCTION BOX
- STORM SEWER MAHNOLE
- CURB INLET
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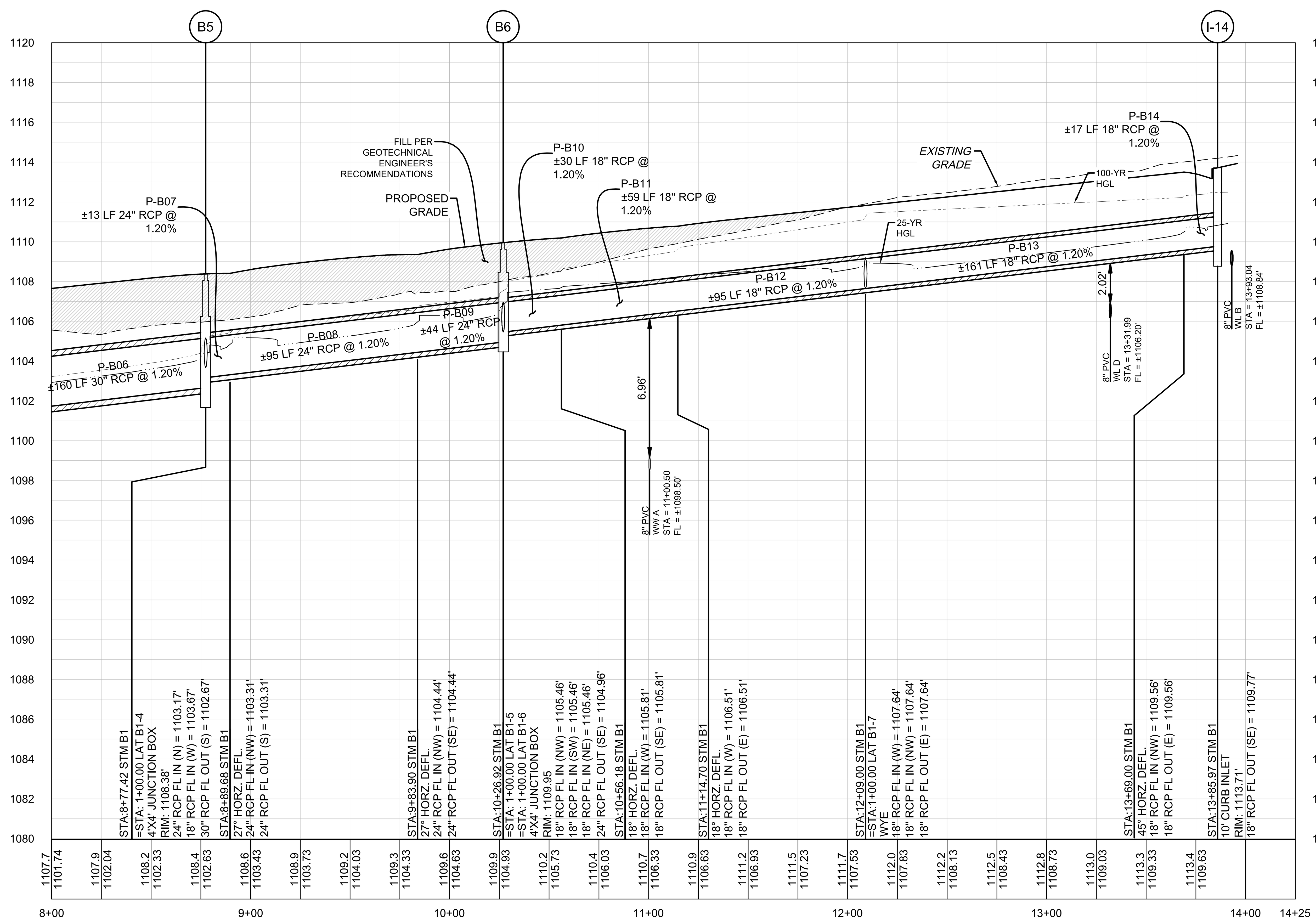
- FIRE HYDRANT
- WATER VALVE
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- SINGLE WASTEWATER SERVICE
- DOUBLE WASTEWATER SERVICE

STM B1



PROFILE SCALE

1"=40' HORZ.
1"=4' VERT.

PROFILE LEGEND

- FINISHED GRADE - CENTERLINE (FG)
- EXISTING GRADE - CENTERLINE (EG)
- PIPE

EXISTING GRADE 900.1 — 897.10 PROPOSED FLOWLINE

NOTES:

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2. FILL SHALL BE PLACED ACCORDING TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND CITY OF LIBERTY HILL SPECIFICATIONS.
3. BENDS, WYES, AND PIPE SIZE CHANGES IN THE STORM SEWER SHALL BE PREFABRICATED OR SHALL OCCUR AT MANHOLES / JUNCTION BOXES.

Pipe Label	Slope (%)	Q25 (cfs)	V25 (ft/s)	D25 (ft)	Q100 (cfs)	V100 (ft/s)	D100 (ft)
P-B06	1.20%	19.19	6.05	1.60	27.76	6.72	2.19
P-B07	1.20%	15.95	6.18	1.65	23.08	7.35	2.10
P-B08	1.20%	15.95	5.92	1.85	23.08	7.35	2.29
P-B09	1.20%	15.95	5.92	1.85	23.08	7.35	2.35
P-B10	1.20%	8.76	4.96	1.99	12.74	7.21	2.63
P-B11	1.20%	8.76	4.96	1.94	12.74	7.21	2.99
P-B12	1.20%	8.76	5.51	1.74	12.74	7.21	3.45
P-B13	1.20%	5.05	3.97	1.28	7.35	4.16	3.79
P-B14	1.20%	5.05	4.10	1.17	7.35	4.16	2.75

NO. | REVISION | BY | DATE

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STATE OF TEXAS — CHRISTINE N. CAMPBELL — 142536 — LICENSED PROFESSIONAL ENGINEER
09/06/2024

STORM B1 PLAN & PROFILE STA 8+00 - END

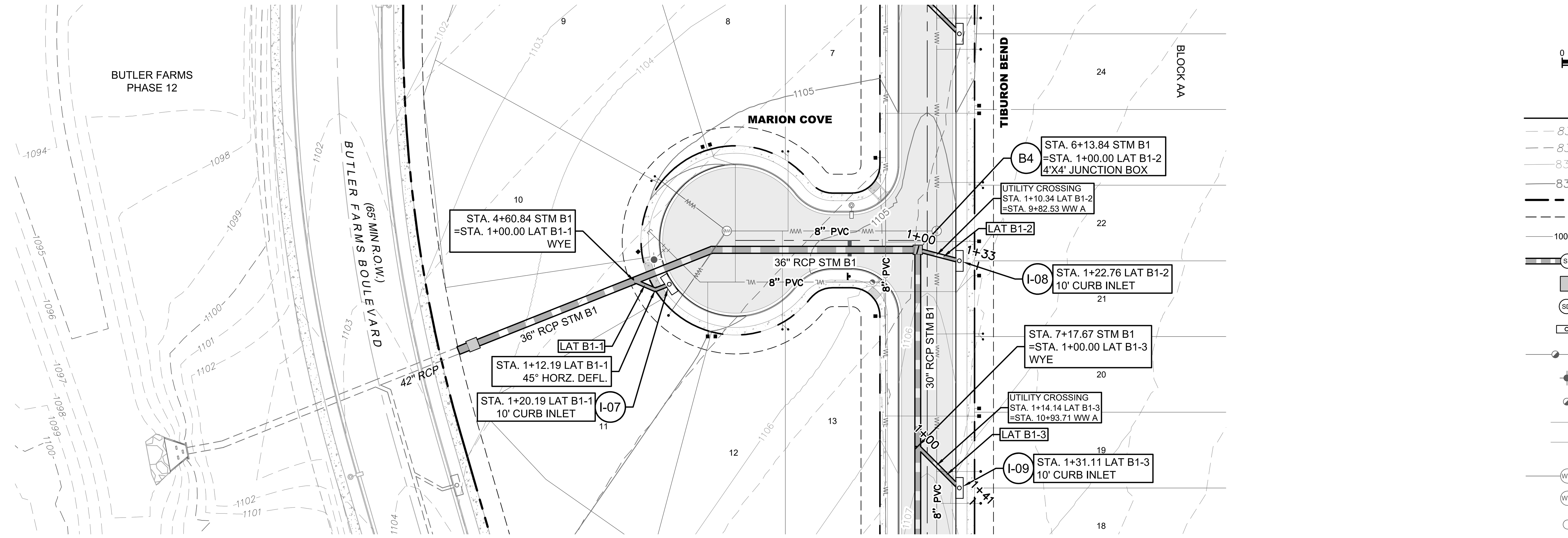
BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
DRAWN BY: MV / TG
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET 28 OF 49

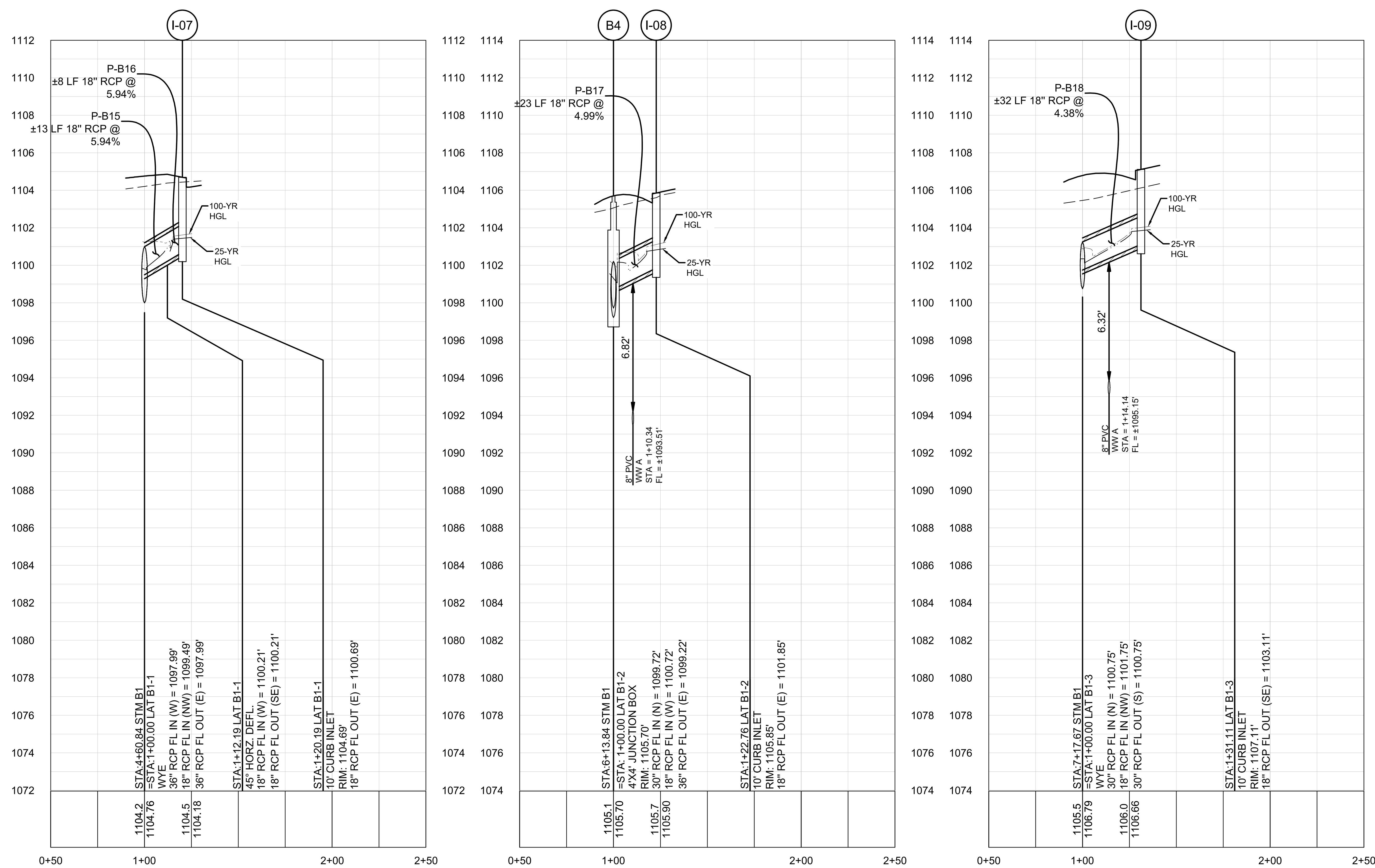
##-###CON



SCALE: 1" = 40'

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- CALCULATED 100-YR ATLAS-14 FLOODPLAIN
- PROPOSED STORM LINE
- STORM SEWER JUNCTION BOX
- STORM SEWER MAHNOLE
- CURB INLET
- WATER LINE
- FIRE HYDRANT
- WATER VALVE
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- SINGLE WASTEWATER SERVICE
- DOUBLE WASTEWATER SERVICE



PROFILE SCALE

1"=40' HORZ.
1"=4' VERT.

PROFILE LEGEND

- FINISHED GRADE - CENTERLINE (FG)
- EXISTING GRADE - CENTERLINE (EG)
- PIPE

EXISTING GRADE 900.1 — 897.10 PROPOSED FLOWLINE

NOTES:

1. ALL PROPOSED STORM SEWER PIPE LINES SHALL BE CLASS III REINFORCED CONCRETE UNLESS NOTED OTHERWISE.
2. FILL SHALL BE PLACED ACCORDING TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND CITY OF LIBERTY HILL SPECIFICATIONS.
3. BENDS, WYES, AND PIPE SIZE CHANGES IN THE STORM SEWER SHALL BE PREFABRICATED OR SHALL OCCUR AT MANHOLES / JUNCTION BOXES.

Pipe Label	Slope	Q25	V25	D25	Q100	V100	D100
	(%)	(cfs)	(ft/s)	(ft)	(cfs)	(ft/s)	(ft)
P-B15	5.94%	2.90	5.92	0.65	4.16	2.94	1.76
P-B16	5.94%	2.90	3.37	0.87	4.16	3.79	1.07
P-B17	4.99%	4.52	3.59	1.46	6.58	4.51	1.96
P-B18	4.38%	2.84	6.08	0.64	4.10	3.59	1.19

NO.	REVISION	BY	DATE

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STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

STORM LAT B1-1 - B1-3 PLAN & PROFILES

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
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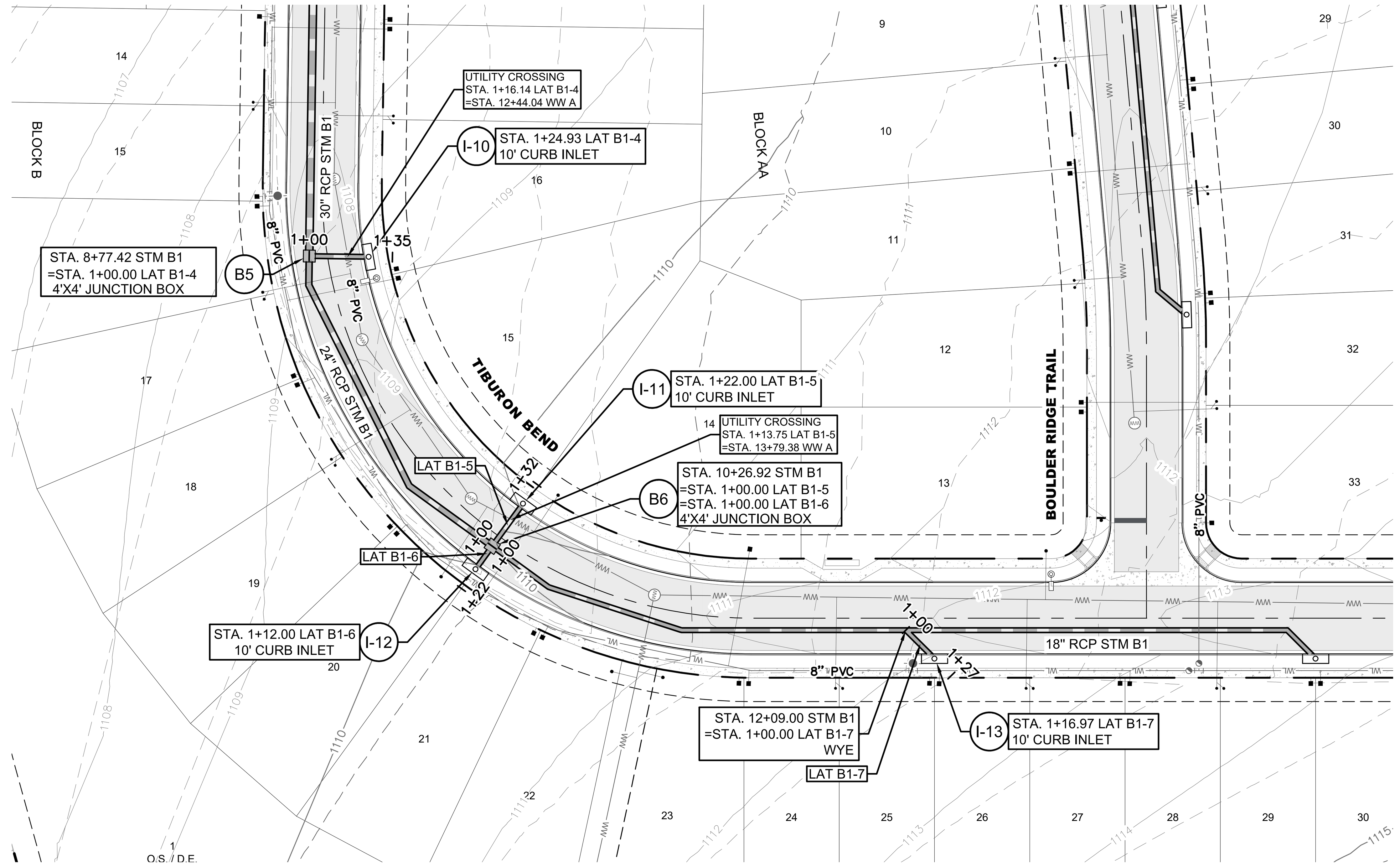
SHEET 29 OF 49

##-###CON



SCALE: 1" = 40'

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- CALCULATED 100-YR ATLAS-14 FLOODPLAIN
- PROPOSED STORM LINE
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- STORM SEWER MAHNOLE
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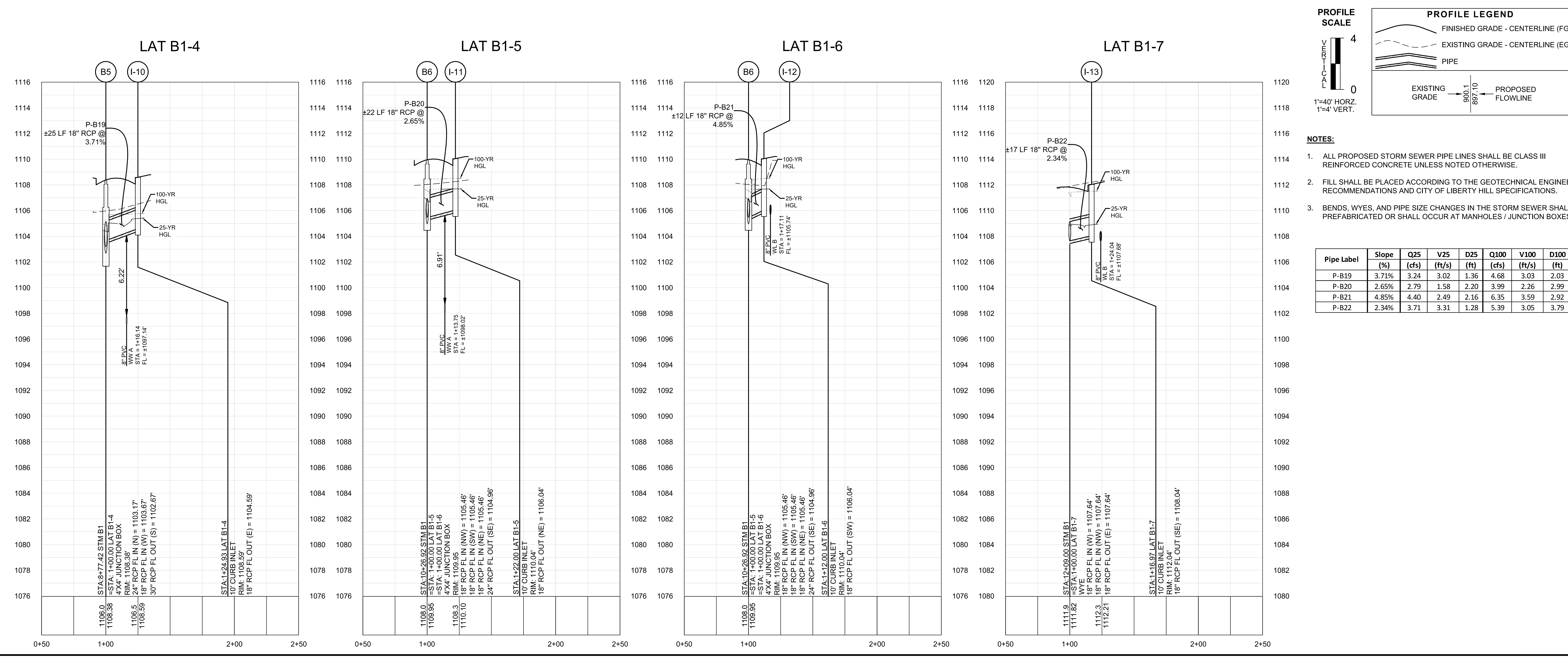

NOTES:

1. ALL PROPOSED STORM SEWER PIPE LINES SHALL BE CLASS III REINFORCED CONCRETE UNLESS NOTED OTHERWISE.
2. FILL SHALL BE PLACED ACCORDING TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND CITY OF LIBERTY HILL SPECIFICATIONS.
3. BENDS, WYES, AND PIPE SIZE CHANGES IN THE STORM SEWER SHALL BE PREFABRICATED OR SHALL OCCUR AT MANHOLES / JUNCTION BOXES.

Pipe Label	Slope (%)	Q25 (cfs)	V25 (ft/s)	D25 (ft)	Q100 (cfs)	V100 (ft/s)	D100 (ft)
P-B19	3.71%	3.24	3.02	1.36	4.68	3.03	2.03
P-B20	2.65%	2.79	1.58	2.20	3.99	2.26	2.99
P-B21	4.85%	4.40	2.49	2.16	6.35	3.59	2.92
P-B22	2.34%	3.71	3.31	1.28	5.39	3.05	3.79

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STATE OF TEXAS — CHRISTINE N. CAMPBELL — 142536 — LICENSED PROFESSIONAL ENGINEER — 09/06/2024

STORM LAT B1-4 - B1-7 PLAN & PROFILES

BUTLER FARMS

PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
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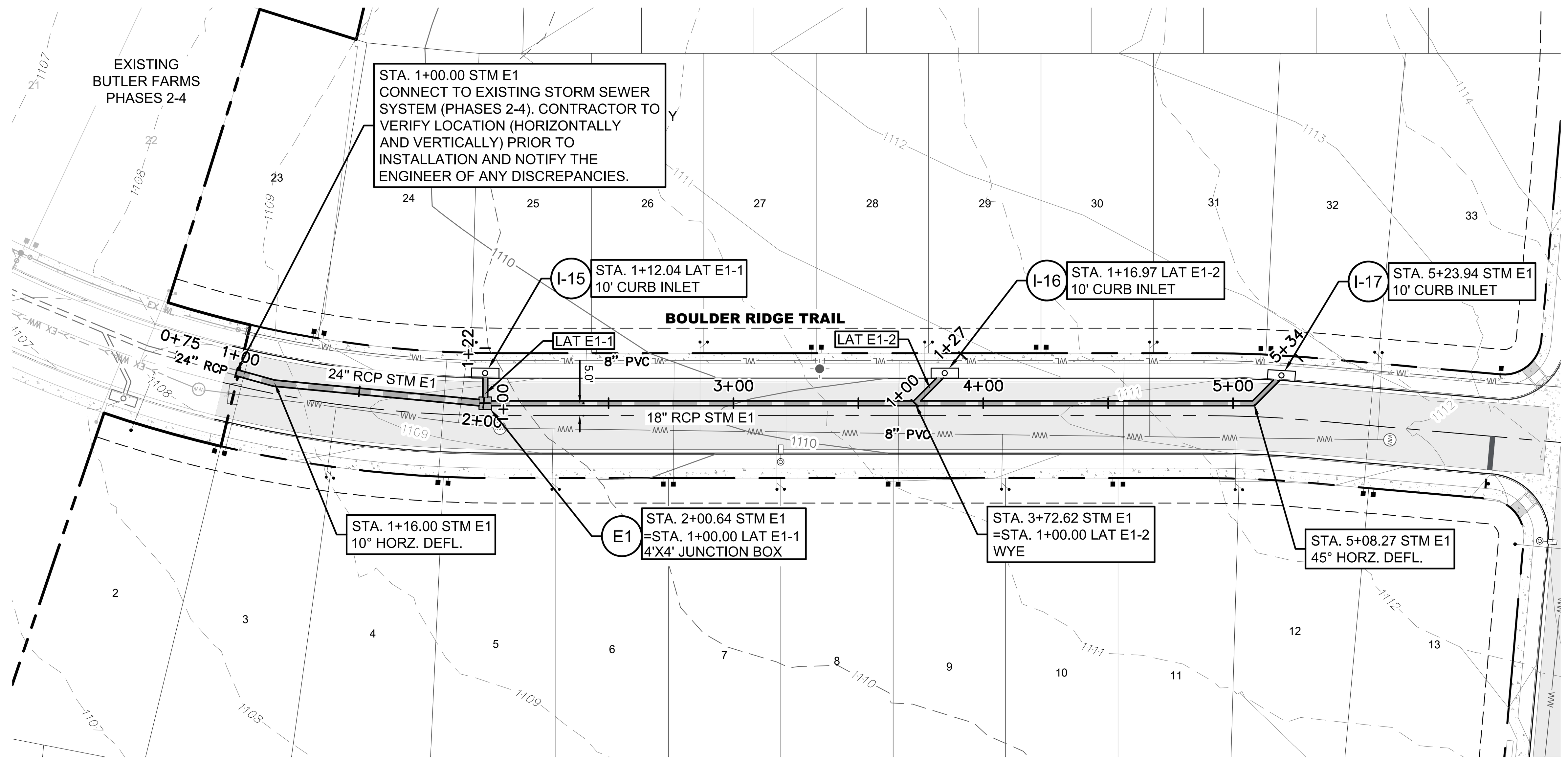
APPROVED BY: SN

SHEET 30 OF 49

##-###CON



SCALE: 1" = 40'

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- CALCULATED 100-YR ATLAS-14 FLOODPLAIN
- PROPOSED STORM LINE
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- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- SINGLE WASTEWATER SERVICE
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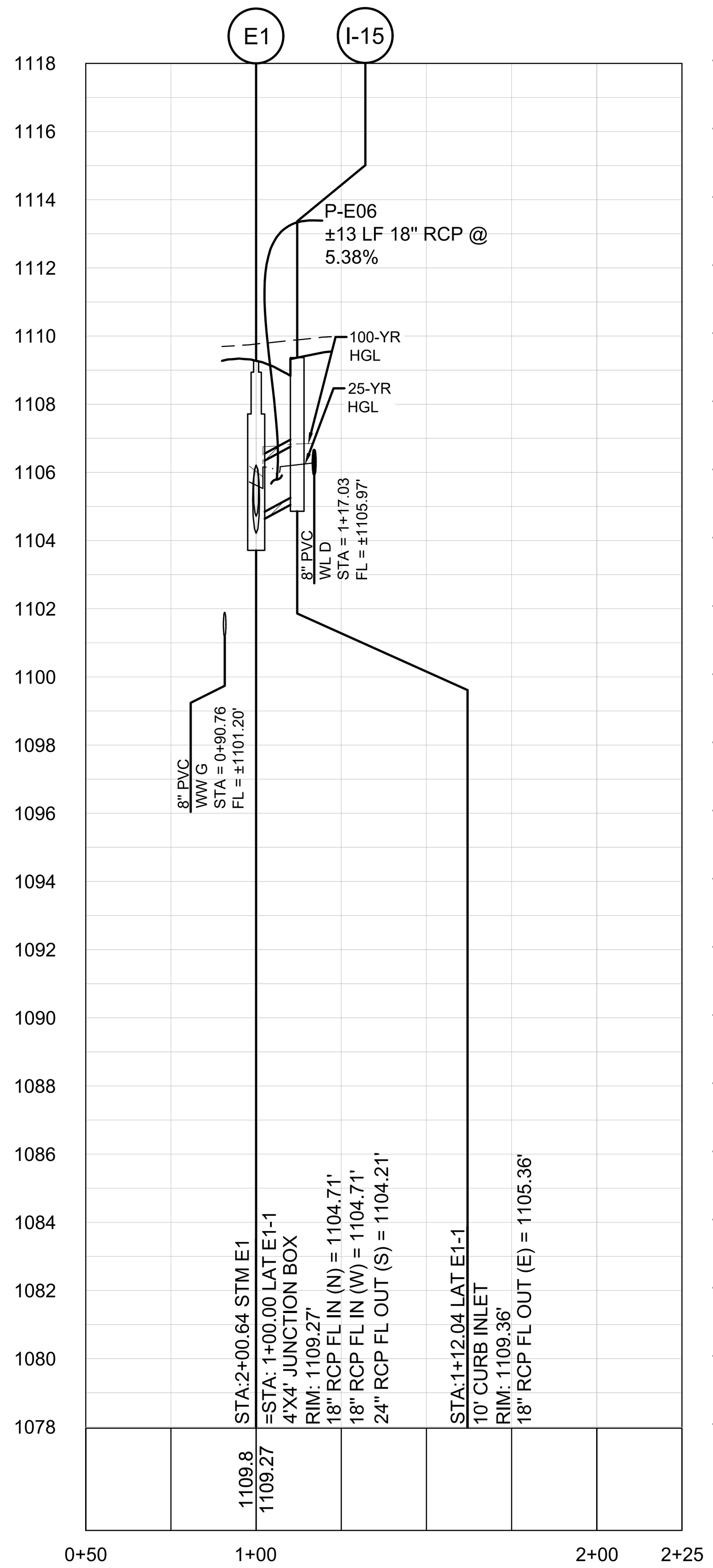
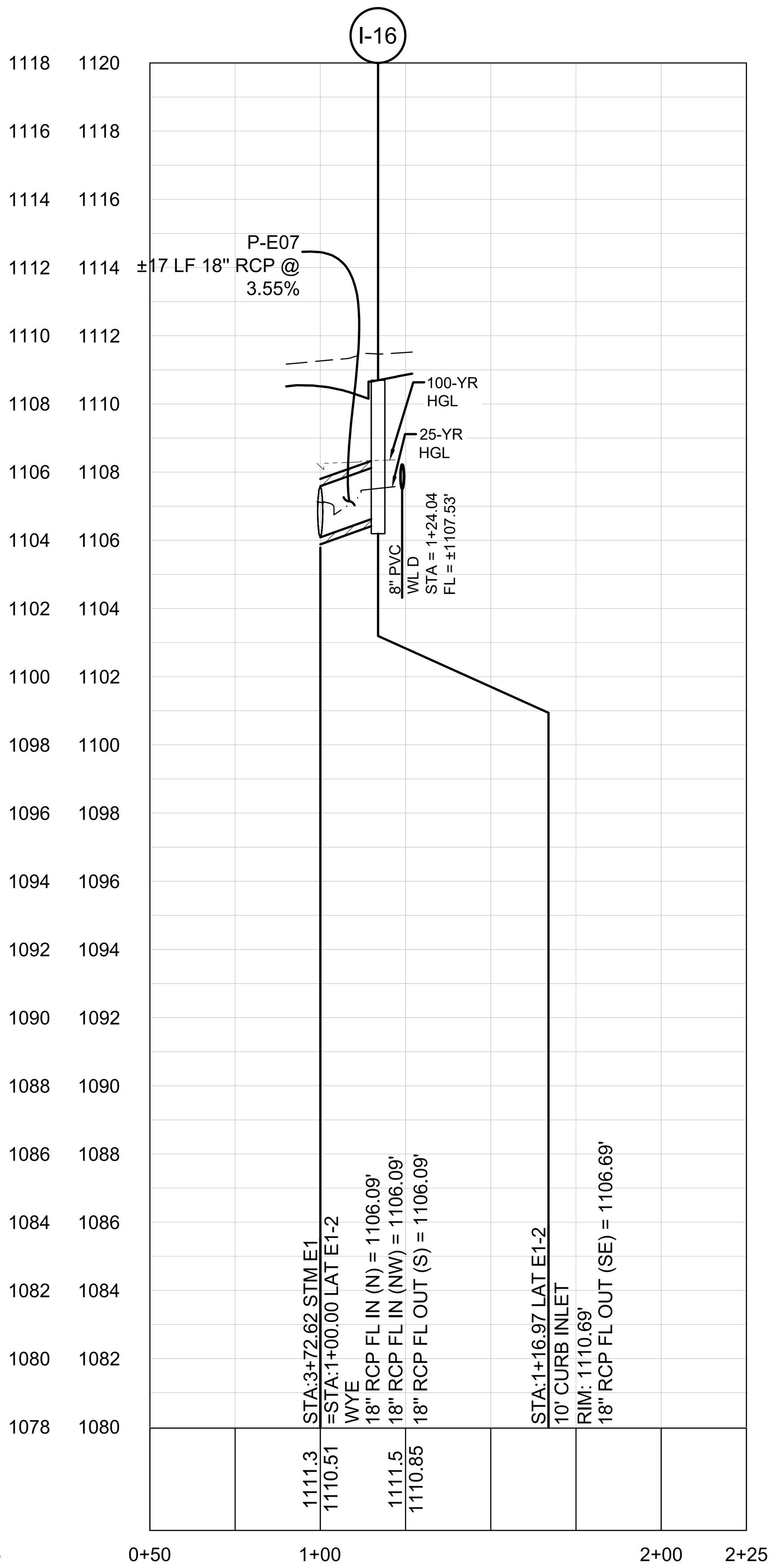
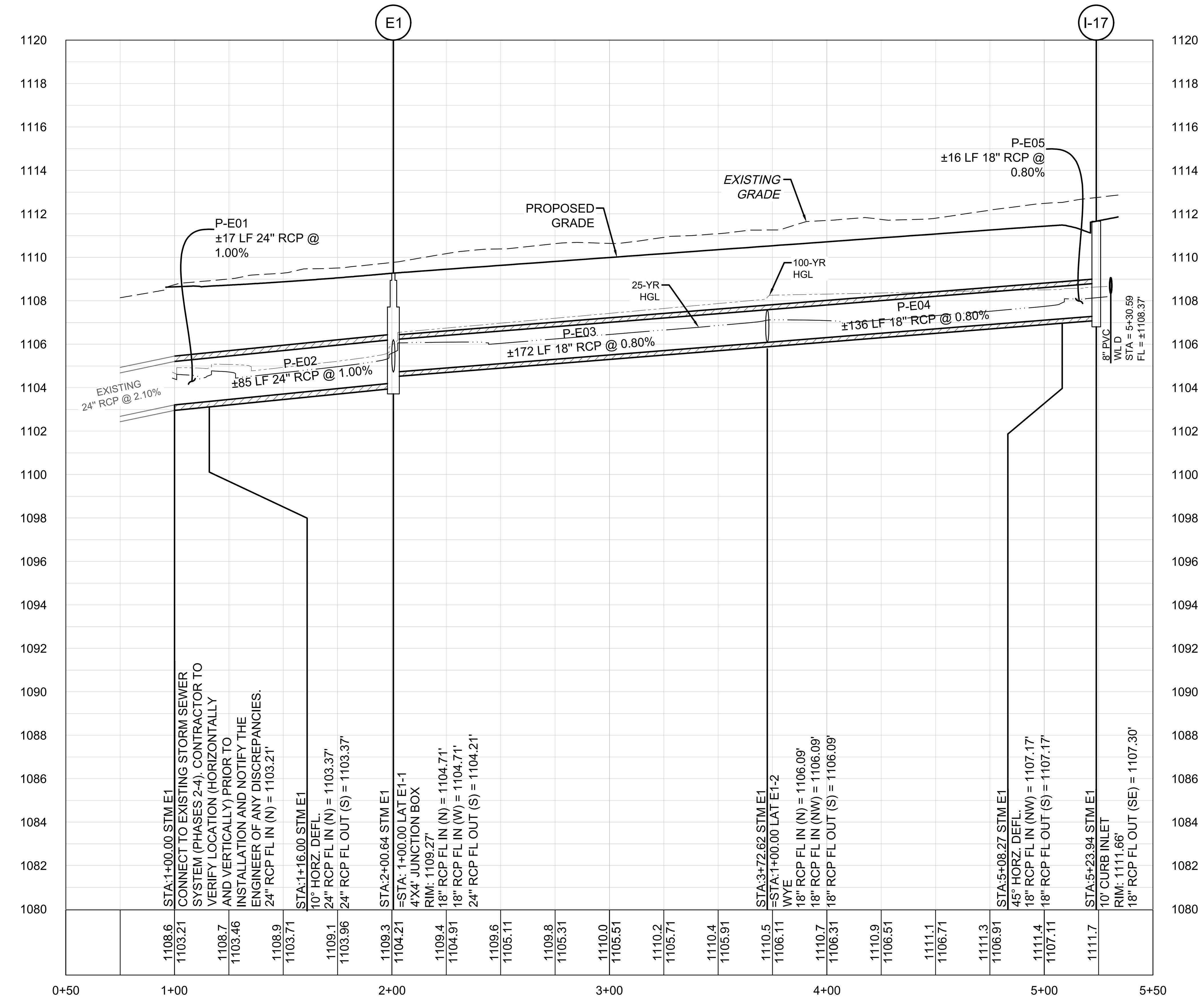
LAT E1-1



LAT E1-2



STM E1



PROFILE SCALE

1"=40' HORZ.
1"=4' VERT.

PROFILE LEGEND

- FINISHED GRADE - CENTERLINE (FG)
- EXISTING GRADE - CENTERLINE (EG)
- PIPE

EXISTING GRADE 900.1 / 897.10 PROPOSED FLOWLINE

NOTES:

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Pipe Label	Slope (%)	Q25 (cfs)	V25 (ft/s)	D25 (ft)	Q100 (cfs)	V100 (ft/s)	D100 (ft)
P-E01	1.00%	10.58	5.03	1.41	15.38	5.70	1.72
P-E02	1.00%	10.58	5.03	1.41	15.38	5.92	1.72
P-E03	0.80%	6.79	4.71	1.35	9.89	5.60	1.98
P-E04	0.80%	3.24	3.31	1.04	4.73	2.76	2.17
P-E05	0.80%	3.24	3.24	0.92	4.73	2.85	1.39
P-E06	5.38%	3.79	3.25	1.44	5.49	3.15	2.03
P-E07	3.55%	3.55	3.49	1.04	5.16	2.92	2.17

NO.	REVISION	BY	DATE

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TBPE NO: 16384 TBPLS NO: 10194101

STATE OF TEXAS CHRISTINE N. CAMPBELL 142536 LICENSED PROFESSIONAL ENGINEER
09/06/2024

STORM E1, LAT E1-1 - E1-2 PLAN & PROFILES

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
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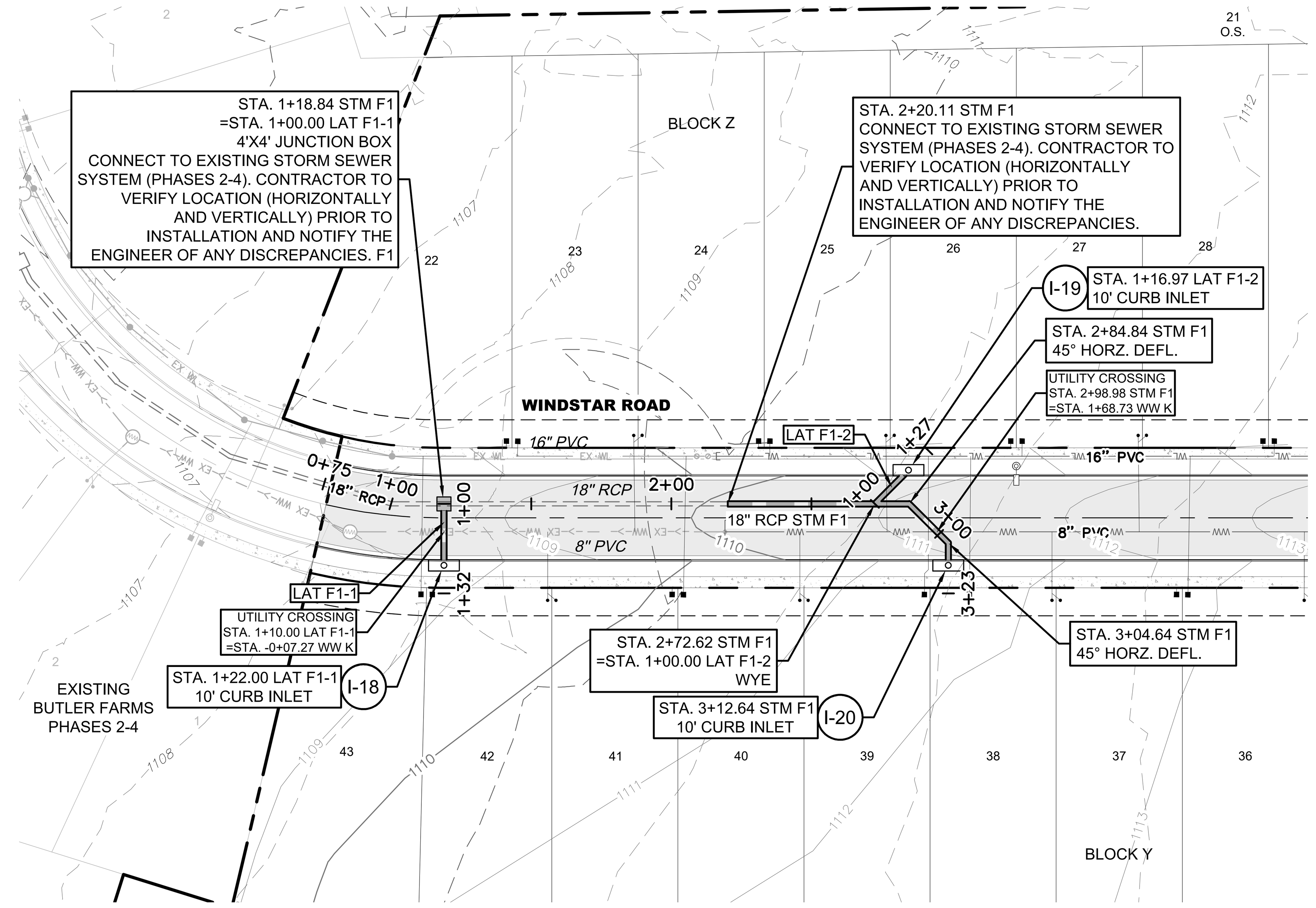
CHECKED BY: CC / SN
APPROVED BY: SN

SHEET 31 OF 49

##-###CON



SCALE: 1" = 40'

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- BOUNDARY
- EASEMENT
- CALCULATED 100-YR ATLAS-14 FLOODPLAIN
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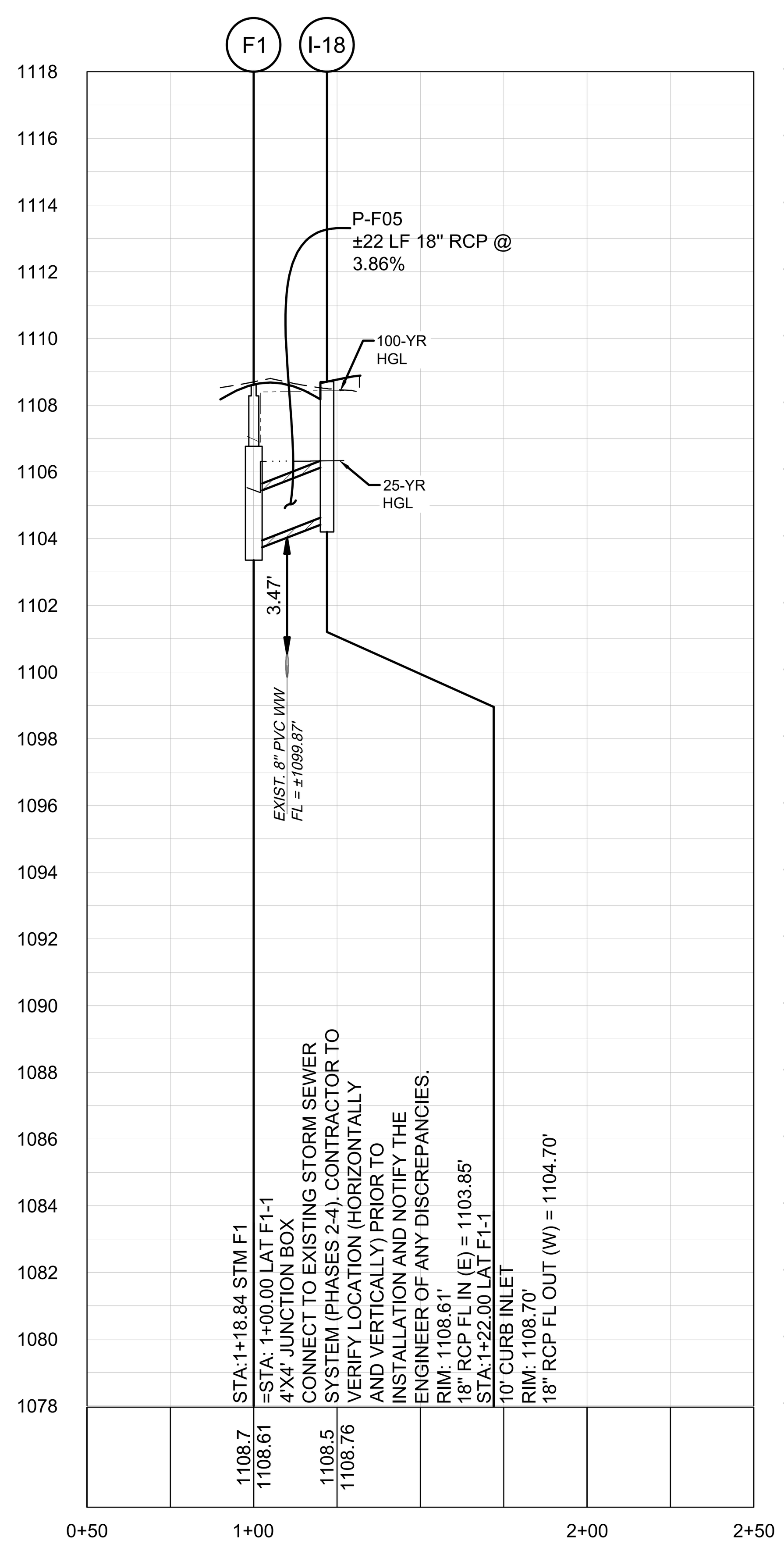
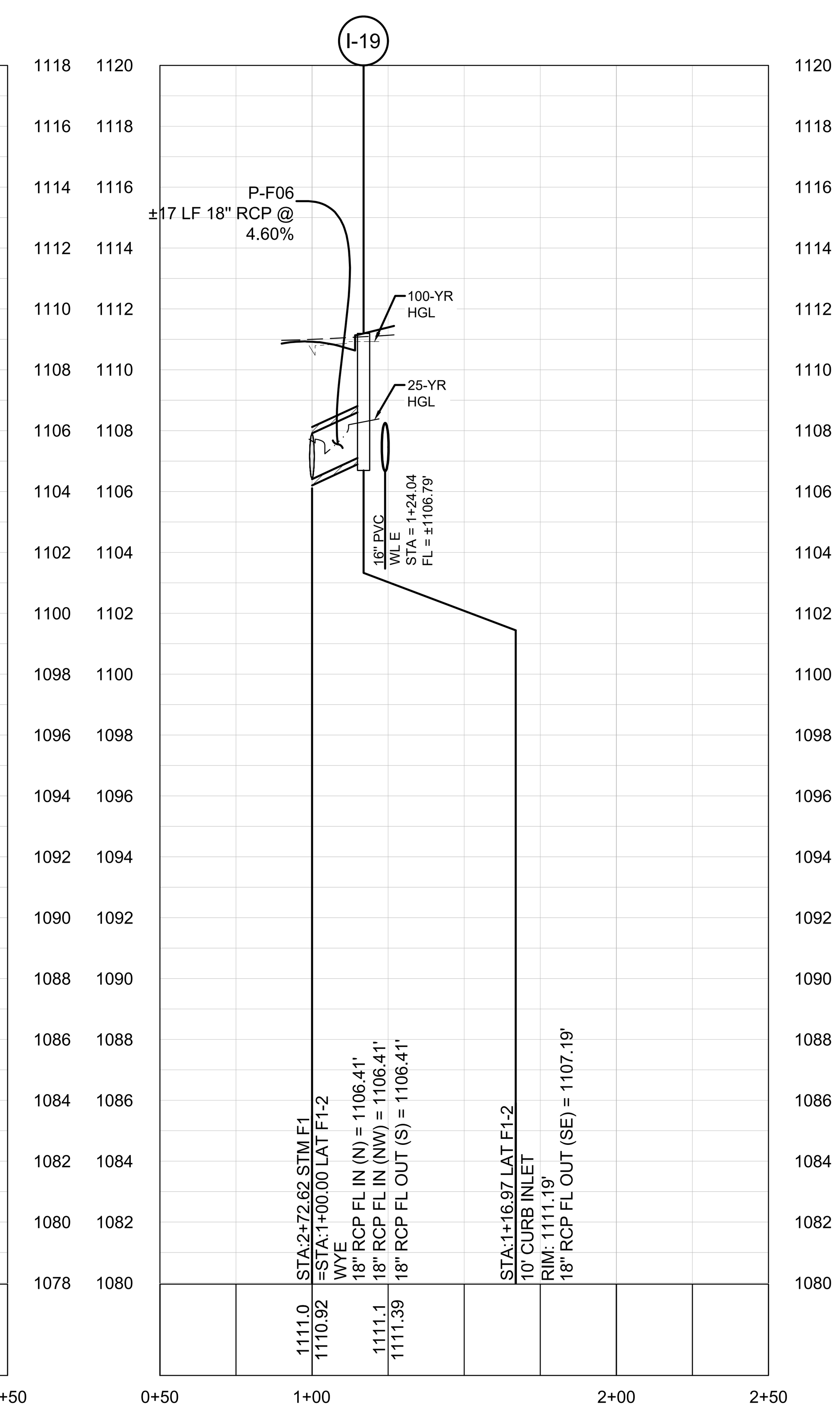
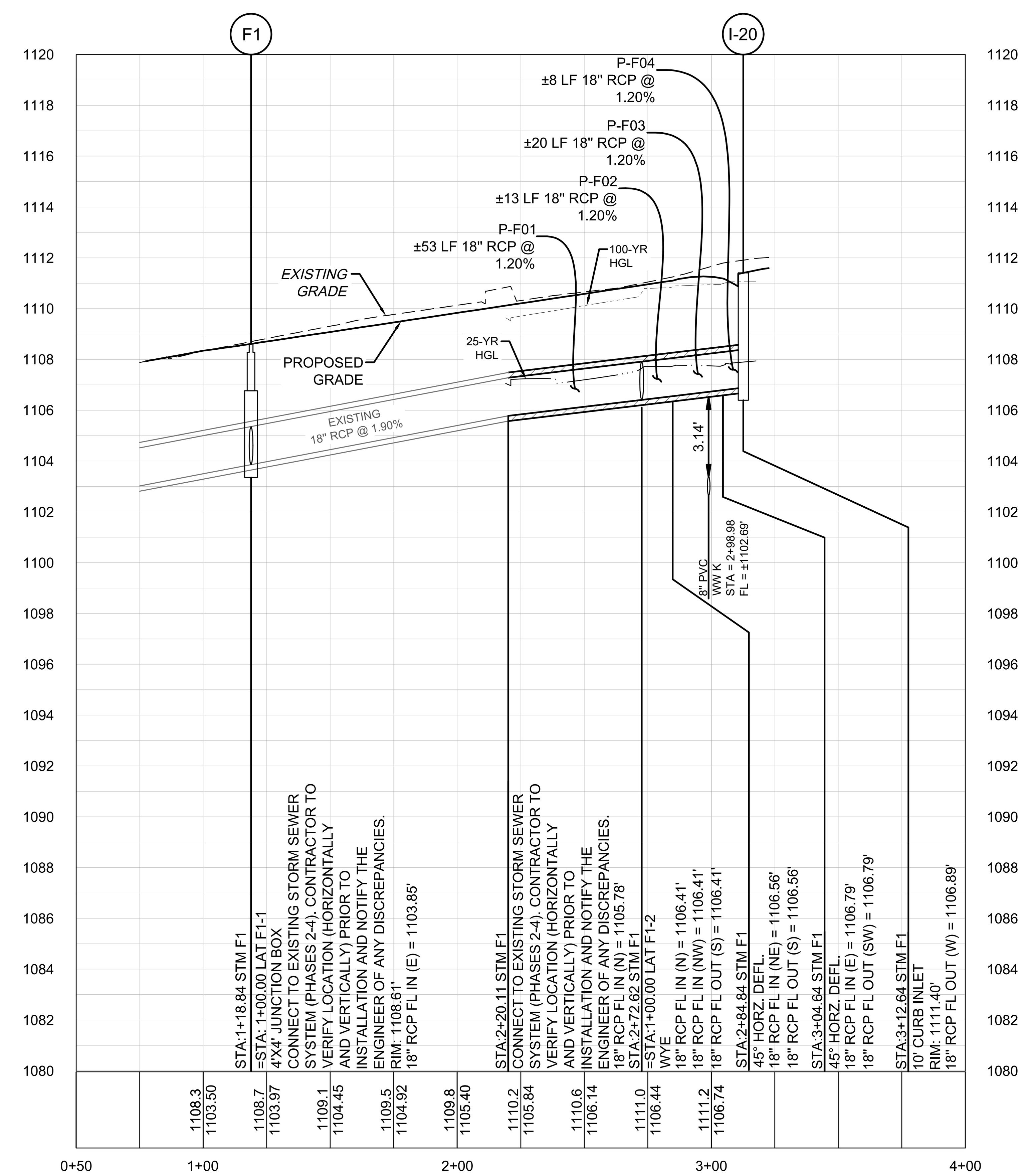
LAT F1-1



LAT F1-2



STM F1



PROFILE SCALE

1"=40' HORZ.
1"=4' VERT.

PROFILE LEGEND

- FINISHED GRADE - CENTERLINE (FG)
- EXISTING GRADE - CENTERLINE (EG)
- PIPE

EXISTING GRADE 900.1 / 897.10 PROPOSED FLOWLINE

NOTES:

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Pipe Label	Slope (%)	Q25 (cfs)	V25 (ft/s)	D25 (ft)	Q100 (cfs)	V100 (ft/s)	D100 (ft)
P-F01	1.20%	9.38	5.83	1.43	13.21	7.48	4.06
P-F02	1.20%	4.05	2.62	1.31	5.88	3.33	4.38
P-F03	1.20%	4.05	3.07	1.21	5.88	3.33	4.34
P-F04	1.20%	4.05	3.31	1.05	5.88	3.33	4.22
P-F05	3.86%	2.35	1.33	2.46	3.35	1.90	4.54
P-F06	4.60%	5.33	4.07	1.31	7.33	4.15	4.38

NO.	REVISION	BY	DATE

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HRGreen.com
TBPE NO: 16384
TBPLS NO: 10194101

STATE OF TEXAS
CHRISTINE N. CAMPBELL
142536
LICENSED PROFESSIONAL ENGINEER
09/06/2024

STORM F1, LAT F1-1 - F1-2 PLAN & PROFILES

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY: MV / CC
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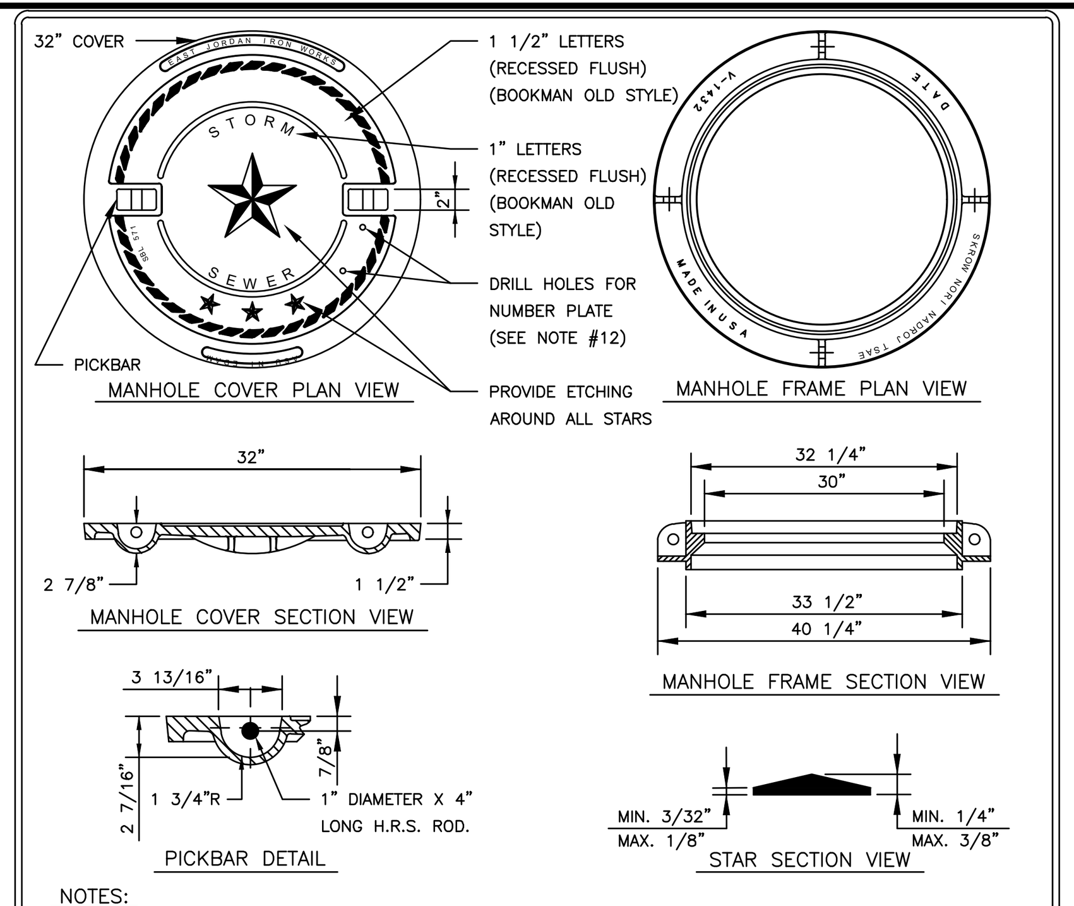
APPROVED BY: SN

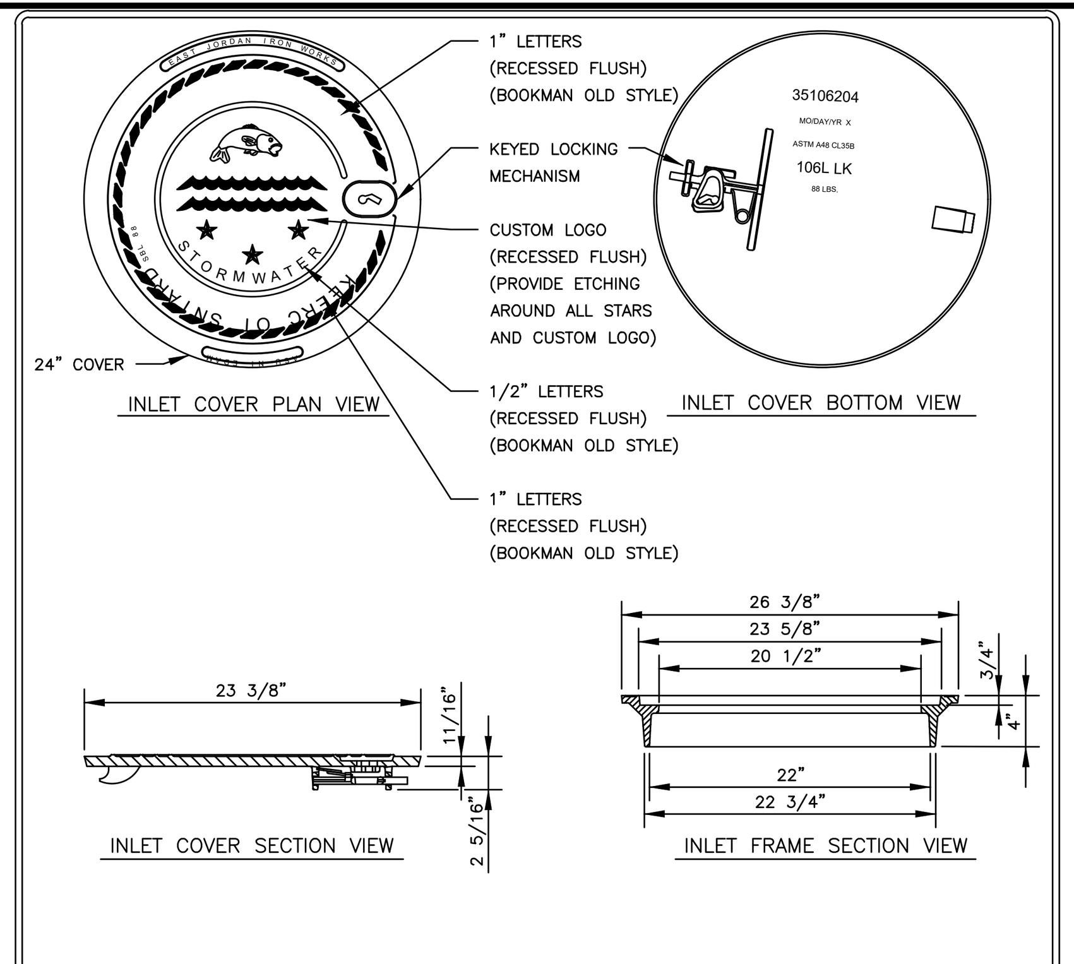
SHEET 32 OF 49

##-###CON



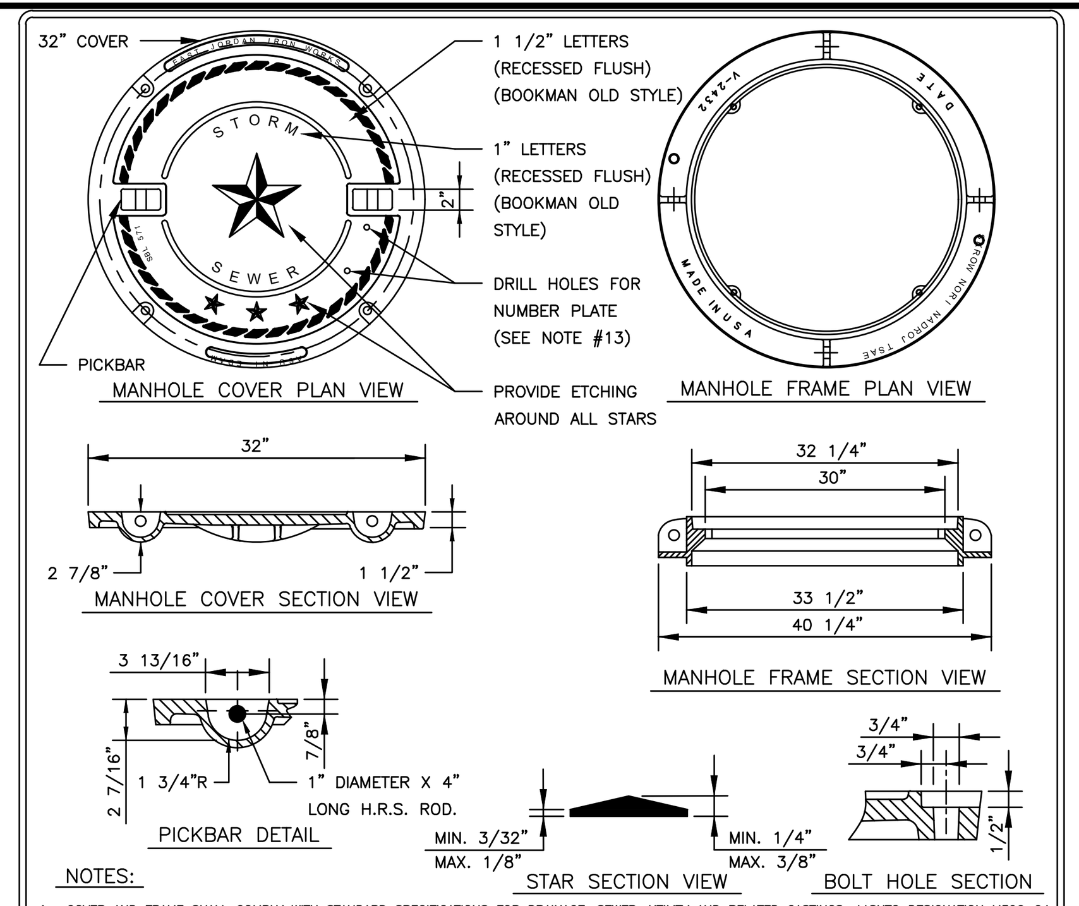
NOTES:

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 08-09-05 DATE	CITY OF ROUND ROCK	DRAWING NO: DR-06
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	NON-BOLTED STORMSEWER MANHOLE COVER AND FRAME DETAIL	



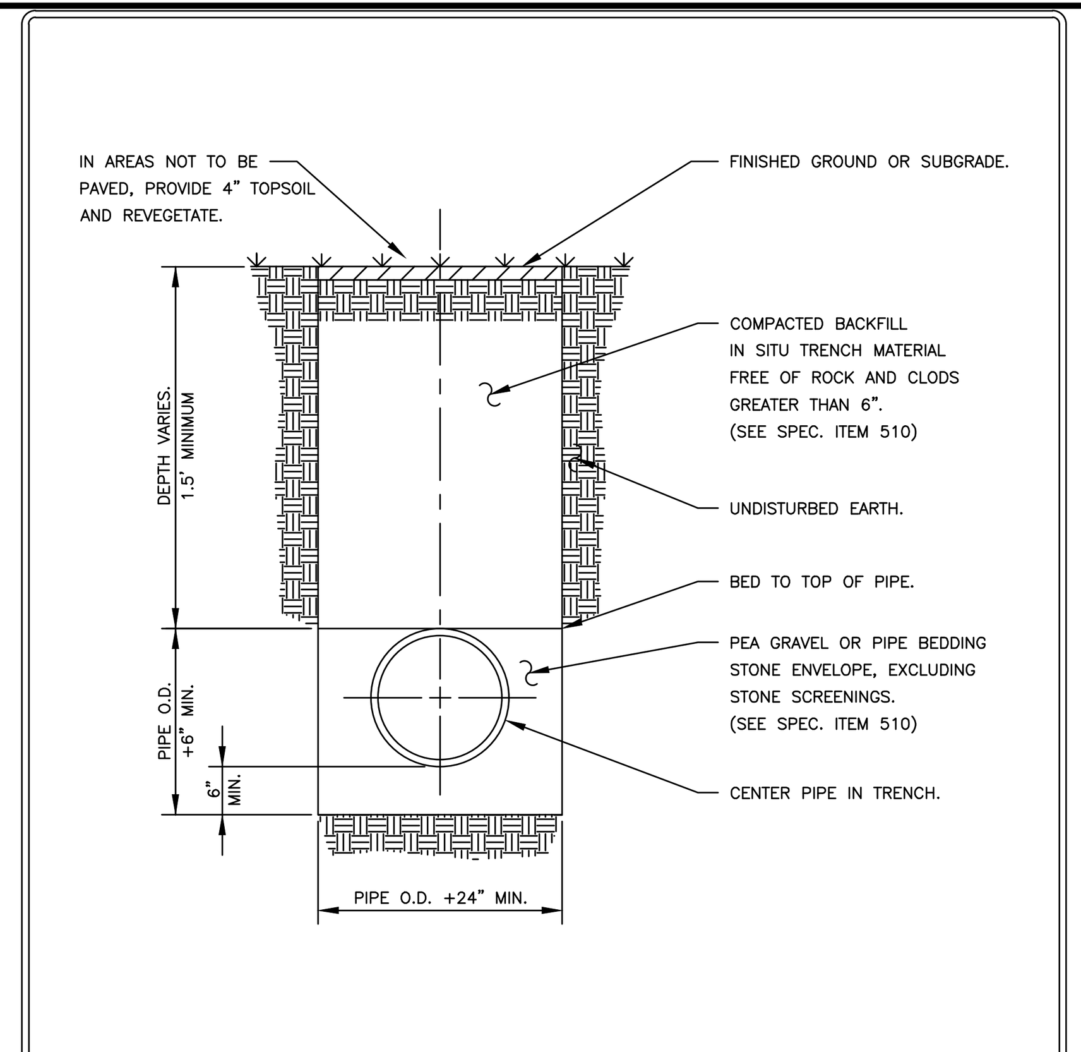
NOTES:

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 09-13-05 DATE	CITY OF ROUND ROCK	DRAWING NO: DR-07
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	STORM SEWER INLET COVER AND FRAME DETAIL	



NOTES:

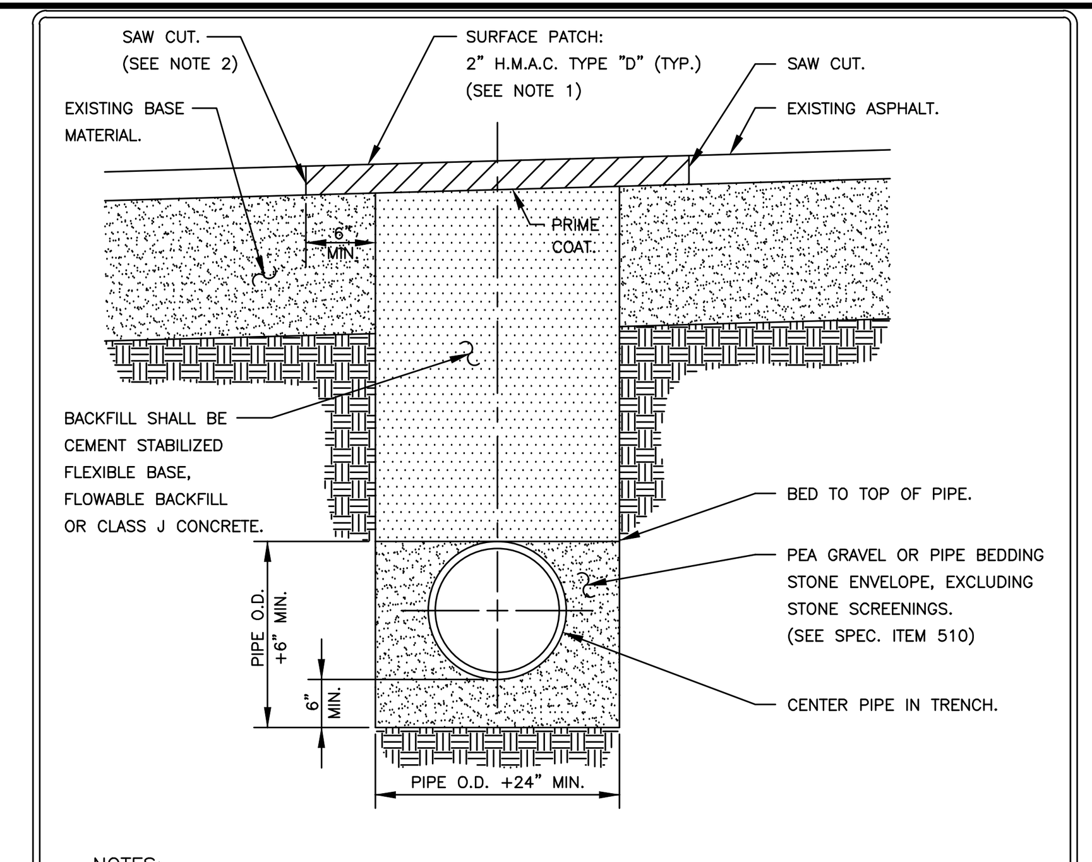
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 08-09-05 DATE	CITY OF ROUND ROCK	DRAWING NO: DR-05
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	BOLTED STORMSEWER MANHOLE COVER AND FRAME DETAIL	



NOTE:

ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

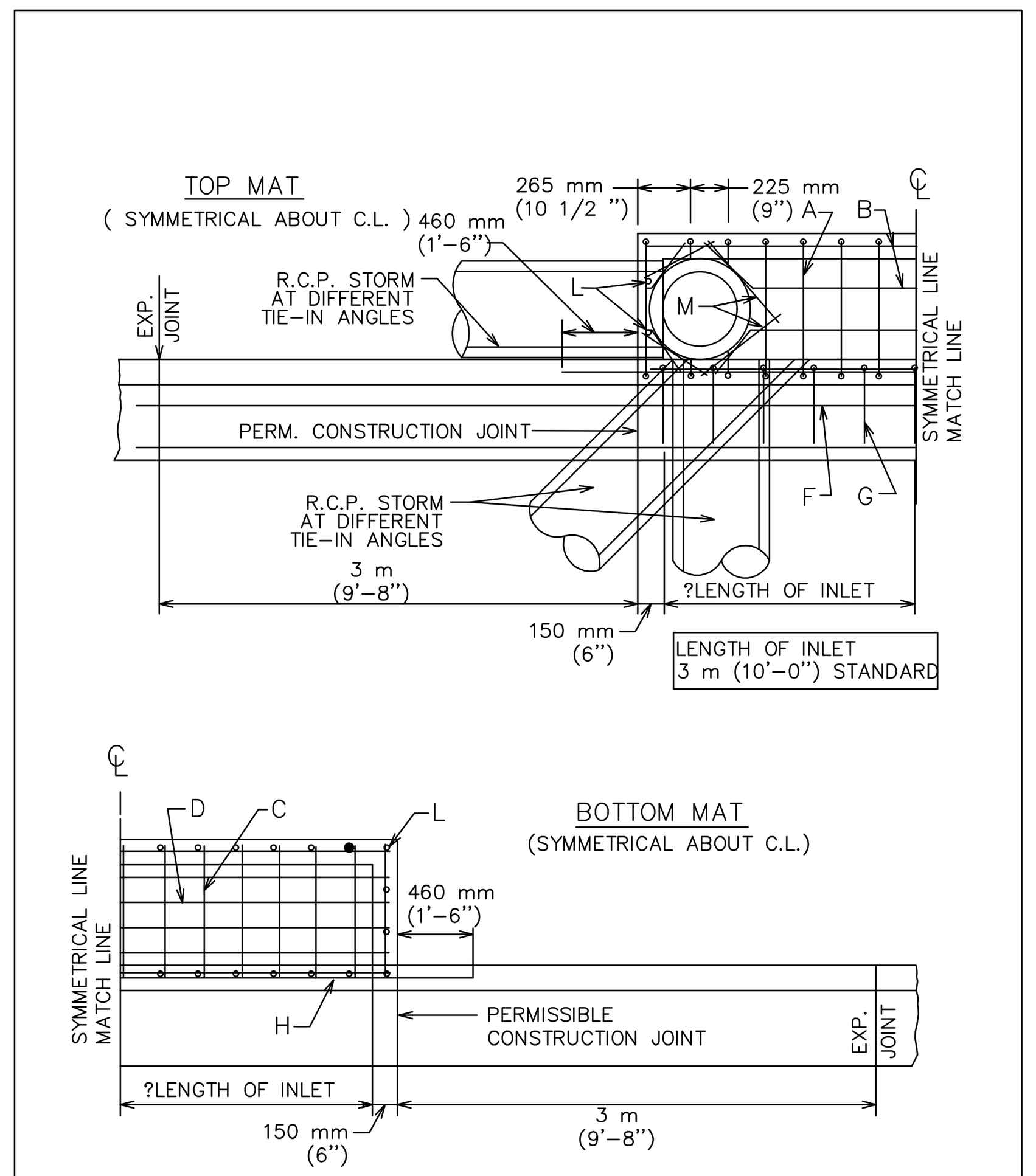
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 08-21-03 DATE	CITY OF ROUND ROCK	DRAWING NO: DR-02
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	STORM SEWER LINE BEDDING DETAIL (NON-PAVED SURFACE)	



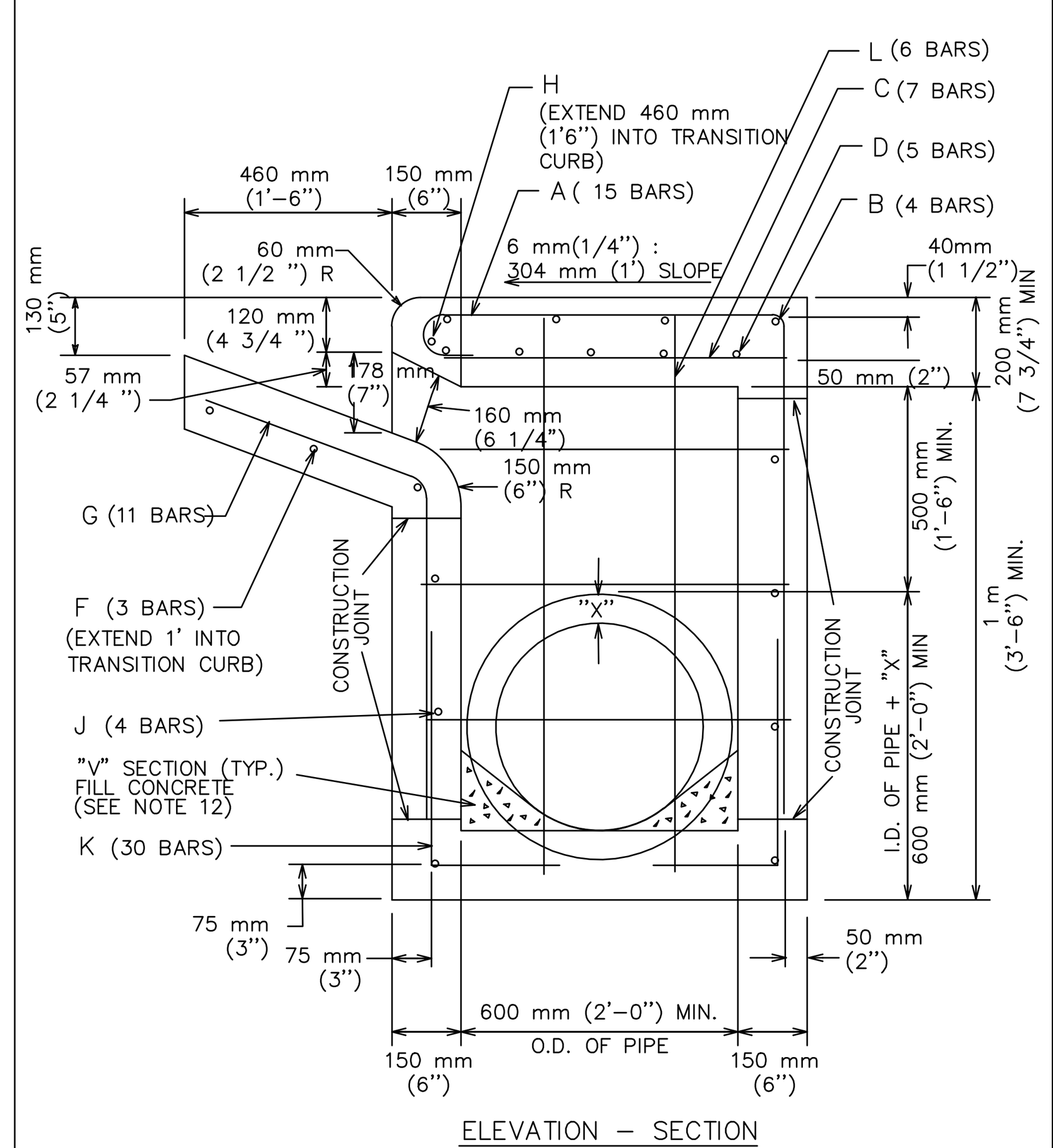
NOTES:

1. H.M.A.C. SHOWN IN THIS DETAIL IS SEPARATE FROM ANY ADDITIONAL THICKNESS CREATED BY ANY OVERLAY ITEM IN CONTRACT.
2. THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING PAVEMENT A MINIMUM OF 6" BEYOND EITHER THE EDGE OF THE STORM SEWER TRENCH OR THE POINT WHERE EXISTING PAVEMENT IS DAMAGED DUE TO TRENCHING OPERATIONS, WHICHEVER IS GREATER.
3. INSTALLATION OF BACKFILL, SAW CUTTING AND REMOVAL OF EXISTING PAVEMENT AND SURFACE PATCH, SHALL NOT BE PAID FOR SEPARATELY. COSTS FOR THESE ITEMS SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
4. THE CONTRACTOR SHALL PROVIDE STEEL PLATES TO SPAN THE TRENCH AS NECESSARY OR TO ALLOW BACKFILL TO CURE. SUCH PLATES SHALL BE SUITABLE FOR VEHICLE PASSAGE OVER THE TRENCH AND SHALL BE SATISFACTORILY ANCHORED IN PLACE. COSTS FOR THIS ITEM SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
5. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 08-21-03 DATE	CITY OF ROUND ROCK	DRAWING NO: DR-01
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	STORM SEWER LINE BEDDING DETAIL (EXISTING PAVED SURFACE)	



TYPICAL DETAILS FOR CURB INLET (1 OF 4)

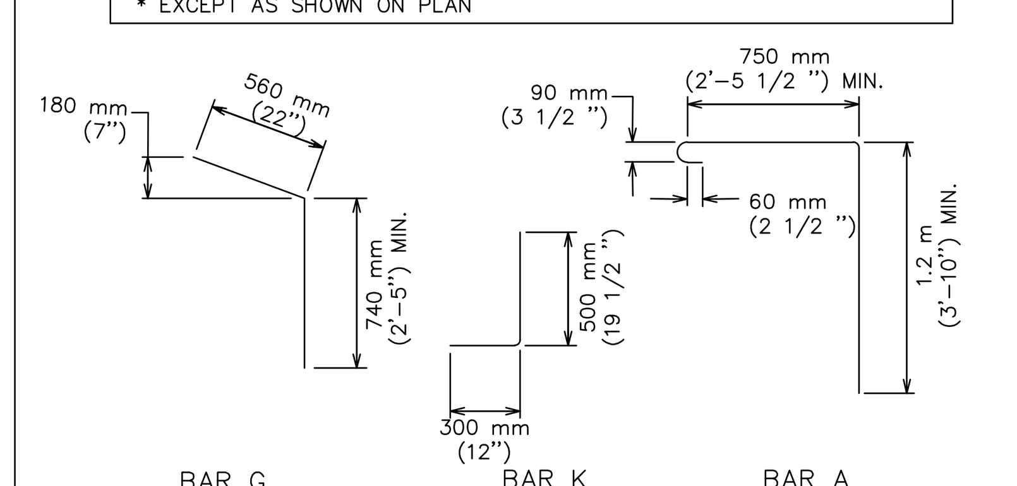


TYPICAL DETAILS FOR CURB INLET (2 OF 4)

TABLE OF QUANTITIES
FOR 18" OUTLET PIPE
REINFORCING STEEL QUANTITIES

BARS	SIZE	SPACING	NUMBER	LENGTH	WEIGHT
A	4	230mm (9")*	15	2 m (7'-0")	73
B	4	250 mm (10")	4	3.25 m (10'-8")	29
C	4	460 mm (18")	7	760 mm (2'-6")	12
D	6	150 mm (6")	5	3.25 m (10'-8")	80
E	4	300 mm (12")	6	760 mm (2'-6")	10
F	4	250 mm (10")	3	4 m (13'-0")	35
G	4	300 mm (12")	11	1.25 m (4'-3")	31
H	6	—	1	4.25 m (14'-0")	20
J	4	300 mm (12")	7	3.25 m (10'-8")	50
K	4	230 mm (9")*	30	800 mm (2'-7 1/2")	52
L	4	300 mm (12")*	6	1.3 m (4'-4")	17
M	4	–	4	500 mm (1'-8") AVG	4
TOTAL STEEL, LB.					413
TOTAL CONCRETE, C.Y.					4.06

* EXCEPT AS SHOWN ON PLAN



TYPICAL DETAILS FOR CURB INLET (3 OF 4)

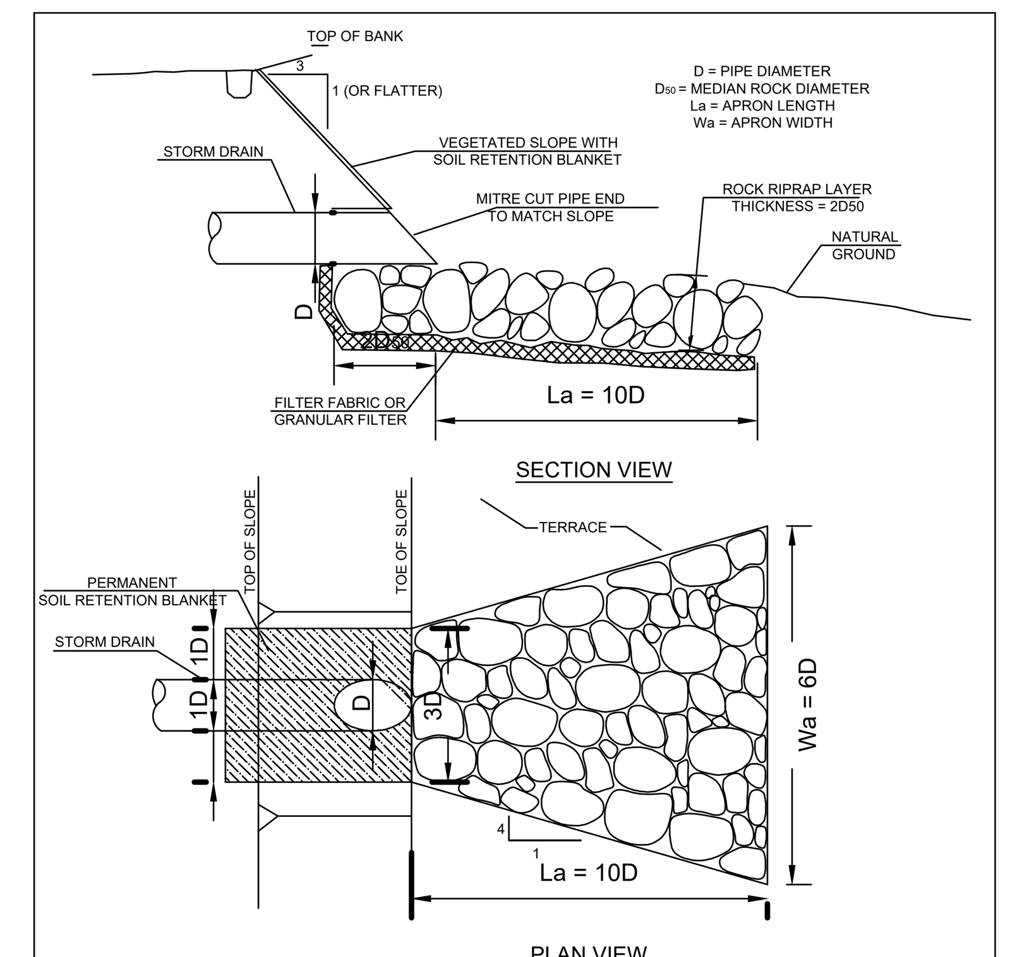
NOTES:
1. ALL CONCRETE SHALL BE CLASS "A"
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (380 mm or 15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. QUANTITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S INFORMATION ONLY. PAYMENT WILL BE MADE FOR EACH INLET OF THE TYPE SPECIFIED, COMPLETE IN PLACE INCLUDING MANHOLE FRAME AND OVER.
7. CHAMFER ALL EXPOSED EDGES 20 mm (3/4 ").
8. MANHOLE FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S-1.
9. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION.
10. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES.
11. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
12. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE, SHAPED AS "V" SECTION
13. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED UNLESS OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.

REFERENCES:

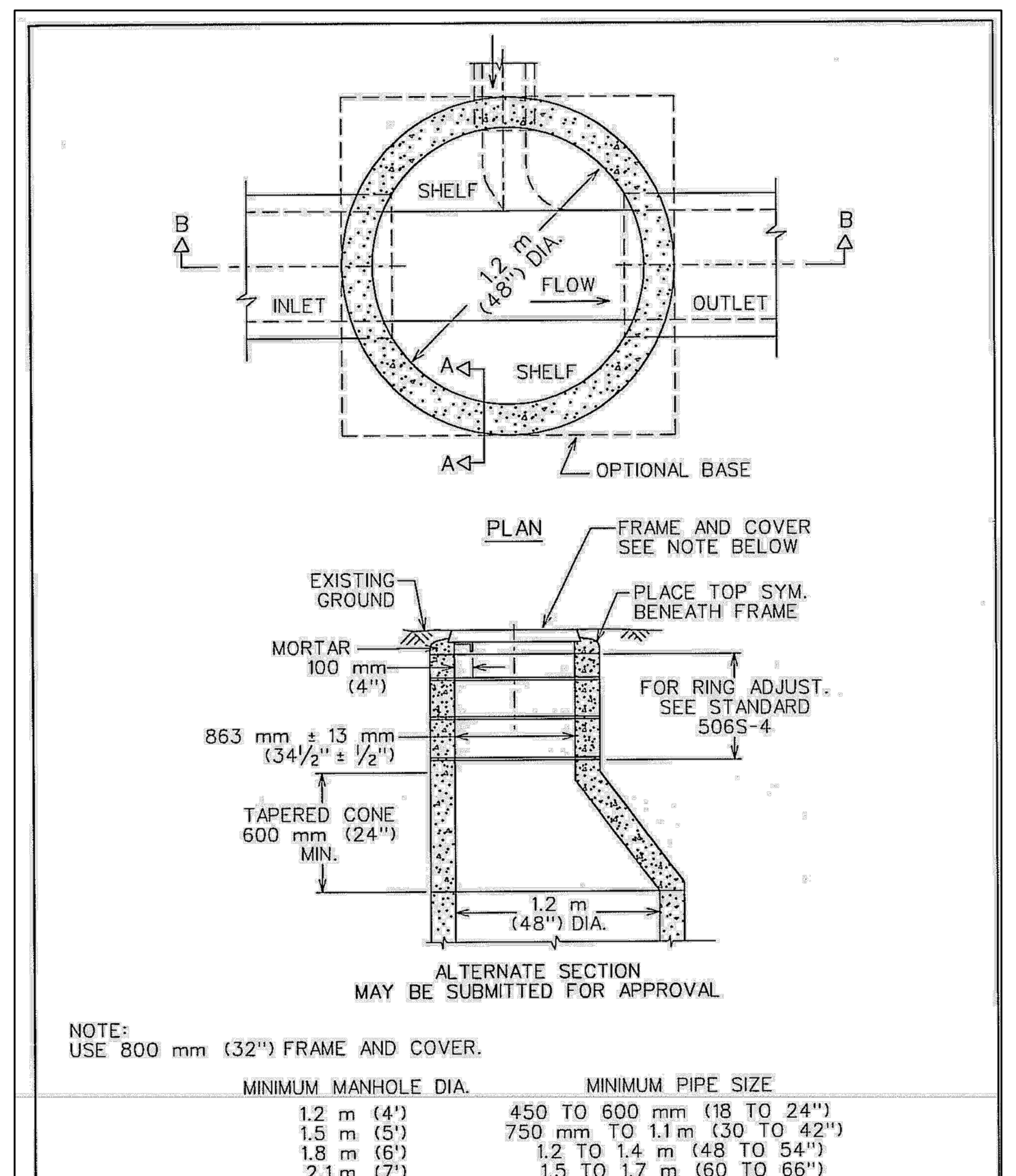
FOR EXPANSION JOINT DOWEL AND DOWEL LOCATION DETAILS SEE STD. 430S-3, "CURB EXPANSION JOINT DOWEL DETAIL".

FOR 18" MANHOLE FRAME AND COVER DETAILS SEE STD. 503S-1, "18" COVER AND FRAME".

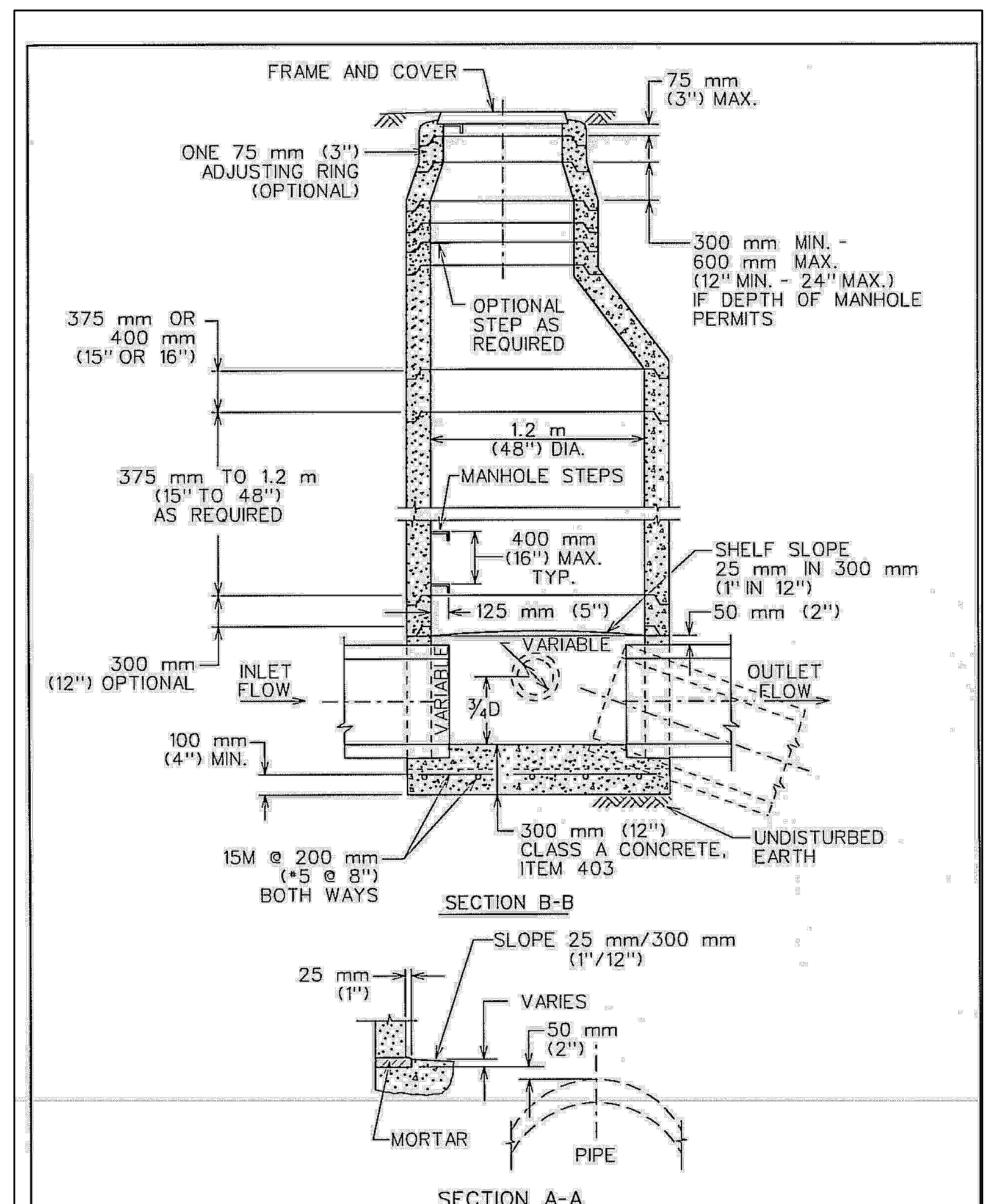
TYPICAL DETAILS FOR CURB INLET (4 OF 4)



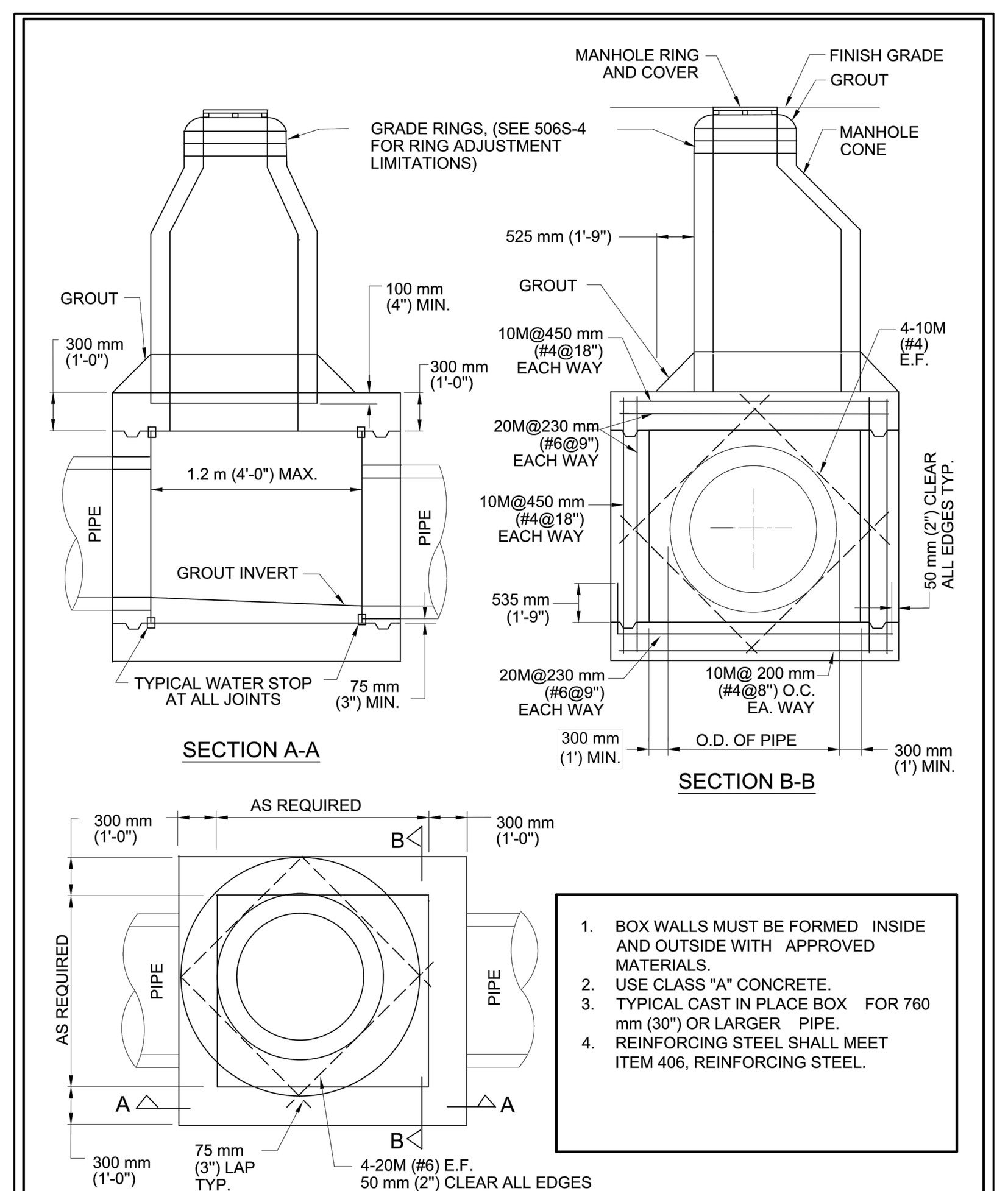
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STORMDRAIN OUTFALL PROTECTION PIPE DISCHARGE ON TERRACE/UPLANDS	
RECORD COPY SIGNED BY MORGAN BYARS 09/01/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-17



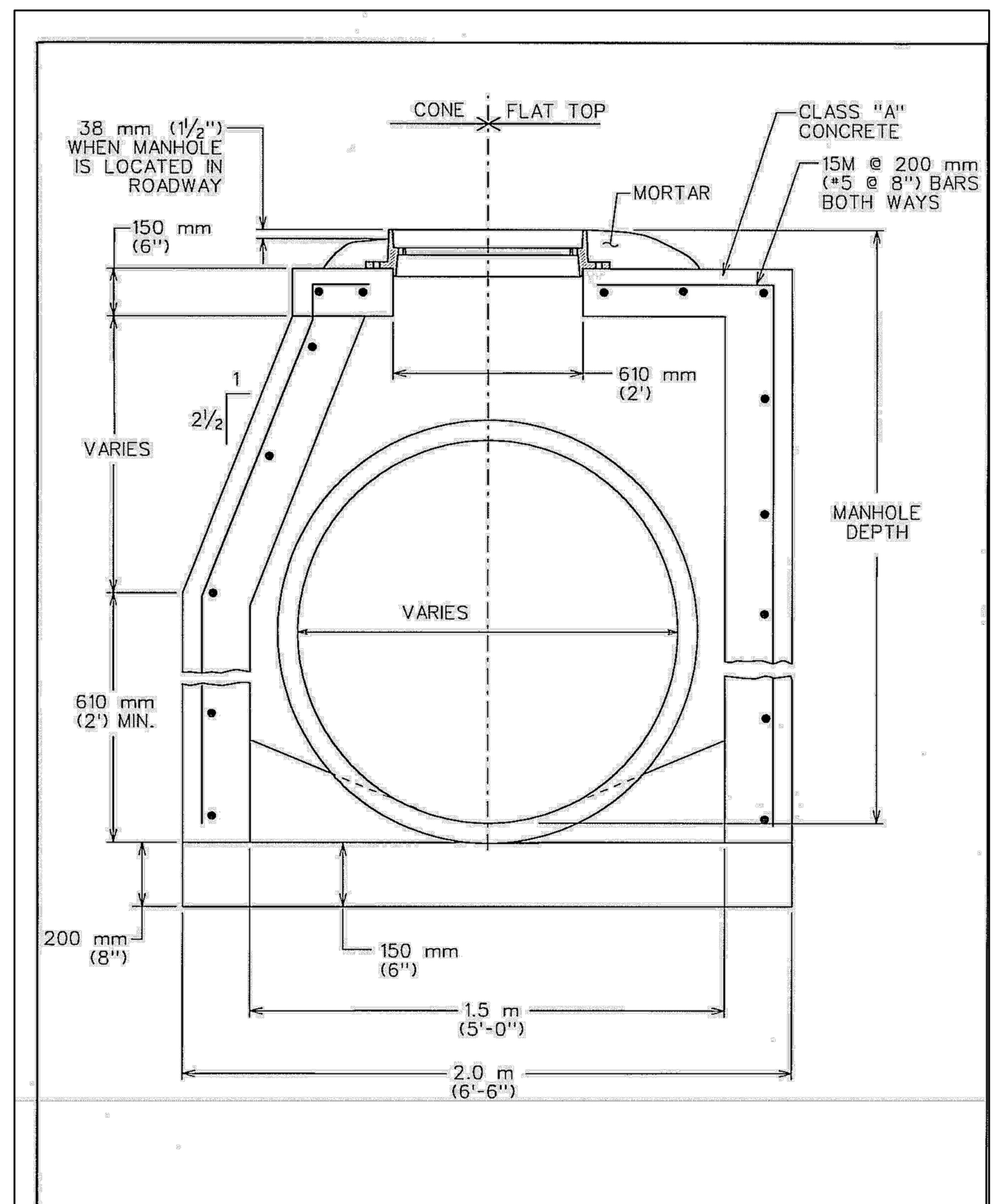
CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	PRE-CAST CONCRETE STORM DRAIN MANHOLE	
ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-3 1 OF 2



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	PRE-CAST CONCRETE STORM DRAIN MANHOLE	
ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-3



CITY OF AUSTIN WATER AND WASTEWATER UTILITY	TYPICAL BOX MANHOLE 760 mm (30") & LARGER PIPE	
RECORD COPY SIGNED BY KATHI F. PAYNE 2/17/00 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 506S-5 1 OF 1



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STORM DRAIN MANHOLE DETAIL	
ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 506S-11

RIP-RAP CLASSIFICATION SPECIFICATIONS

CLASS 1 RIP-RAP

No more than 10% of the stone will have a diameter greater than twelve (12) inches; no more than 50% of the stone will have a diameter less than ten (10) inches; and no more than 10% of the stone will have a diameter of less than six (6) inches. The thickness of the rip-rap liner will be no less than twelve (12) inches.

CLASS 2 RIP-RAP

No more than 10% of the stone will have a diameter greater than sixteen (16) inches; no more than 50% of the stone will have a diameter less than twelve (12) inches; and no more than 10% of the stone will have a diameter of less than six (6) inches. The thickness of the rip-rap liner will be no less than sixteen (16) inches.

CLASS 3 RIP-RAP

No more than 10% of the stone will have a diameter greater than twenty two (22) inches; no more than 50% of the stone will have a diameter less than sixteen (16) inches; and no more than 10% of the stone will have a diameter of less than eight (8) inches. The thickness of the rip-rap liner will be no less than twenty two (22) inches.

CLASS 4 RIP-RAP

No more than 10% of the stone will have a diameter greater than twenty seven (27) inches; no more than 50% of the stone will have a diameter less than twenty two (22) inches; and no more than 10% of the stone will have a diameter of less than ten (10) inches. The thickness of the rip-rap liner will be no less than twenty seven (27) inches.

CLASS 5 RIP-RAP

No more than 10% of the stone will have a diameter greater than thirty four (34) inches; no more than 50% of the stone will have a diameter less than twenty seven (27) inches; and no more than 10% of the stone will have a diameter of less than sixteen (16) inches. The thickness of the rip-rap liner will be no less than thirty four (34) inches.

NO.	REVISION	BY	DATE

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STATE OF TEXAS — CHRISTINE N. CAMPBELL — 142536 — LICENSED PROFESSIONAL ENGINEER — 09/06/2024

DRAINAGE DETAILS

BUTLER FARMS PHASE 13

LIBERTY HILL, WILLIAMSON COUNTY, TEXAS

DESIGNED BY:	MV / CC
DRAWN BY:	MV / TG
CHECKED BY:	CC / SN
APPROVED BY:	SN

SHEET 33 OF 49

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