

GRAY

Contributing Zone Plan

Orchard Ranch Subdivision

Prepared for: Clayton Properties Group, Inc.

Prepared by: Gray Civil, Inc.

TBPE Registered Firm #: 2946

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

Technical Review

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

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Orchard Ranch Subdivision				2. Regulated Entity No.:					
3. Customer Name: Clayton Properties Group, Inc.				4. Customer No.: CN600625057					
5. Project Type: (Please circle/check one)	<input checked="" type="radio"/> New	Modification		Extension	Exception				
6. Plan Type: (Please circle/check one)	WPAP	<input checked="" type="radio"/> CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	<input checked="" type="radio"/> Residential		Non-residential		8. Site (acres):		82.90 Ac		
9. Application Fee:	\$8,000		10. Permanent BMP(s):			Batch Detention Pond, Vegetative Filter Strip			
11. SCS (Linear Ft.):			12. AST/UST (No. Tanks):			N/A			
13. County:	Travis		14. Watershed:			Barton Creek and Slaughter Creek			

Application Distribution

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

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

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

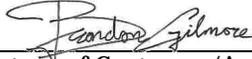
Austin Region			
County:	Hays	Travis	Williamson
Original (1 req.)	—	⊗	—
Region (1 req.)	—	⊗	—
County(ies)	—	⊗	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

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

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

Brandon Gilmore

Print Name of Customer/Authorized Agent



11/18/2025

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: Brandon Gilmore

Date: 12/18/2025

Signature of Customer/Agent:



Regulated Entity Name: Orchard Ranch Subdivision

Project Information

1. County: Travis
2. Stream Basin: Barton Creek and Slaughter Creek
3. Groundwater Conservation District (if applicable): None
4. Customer (Applicant):

Contact Person: Adam Boenig

Entity: Clayton Properties Group, Inc.

Mailing Address: 6720 Vaught Ranch Rd., Suite 200

City, State: Austin, TX

Zip: 78730

Telephone: (512) 320-8833

Fax: _____

Email Address: adamb@brohnhomes.com

5. Agent/Representative (If any):

Contact Person: Brandon Gilmore

Entity: Gray Engineering, Inc.

Mailing Address: 8834 North Capital of Texas Hwy., Suite 140

City, State: Austin, Texas

Zip: 78759

Telephone: (512) 452-0371

Fax: _____

Email Address: bgilmore@gray-civil.com

6. Project Location:

The project site is located inside the city limits of _____.

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

The project site is not located within any city's limits or ETJ.

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

North side of Fitzhugh Rd., Approx. 1500 linear ft. west from US Hwy. 290 Intersection

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: 264
- Residential: # of Living Unit Equivalents: _____
- Commercial
- Industrial
- Other: _____

13. Total project area (size of site): 82.90 Acres

Total disturbed area: 59.76 Acres

14. Estimated projected population: _____

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

Table 1 - Impervious Cover

<i>Impervious Cover of Proposed Project</i>	<i>Sq. Ft.</i>	<i>Sq. Ft./Acre</i>	<i>Acres</i>
Structures/Rooftops	660,000 sf	÷ 43,560 =	15.15 ac
Parking	0	÷ 43,560 =	0.00 ac
Other paved surfaces	486,694 sf	÷ 43,560 =	11.15 ac
Total Impervious Cover	1,146,694 sf	÷ 43,560 =	26.30 ac

Total Impervious Cover 26.30 ÷ Total Acreage 82.90 X 100 = 31.72% Impervious Cover

16. **Attachment D - Factors Affecting Surface Water Quality.** A detailed description of all factors that could affect surface water quality is attached. If applicable, this includes the location and description of any discharge associated with industrial activity other than construction.

17. Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

For Road Projects Only

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

N/A

18. Type of project:

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

19. Type of pavement or road surface to be used:

- Concrete
- Asphaltic concrete pavement
- Other: _____

20. Right of Way (R.O.W.):

Length of R.O.W.: _____ feet.

Width of R.O.W.: _____ feet.

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

21. Pavement Area:

Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

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

Pavement area _____ acres \div R.O.W. area _____ acres $\times 100 = \text{_____ \%}$ impervious cover.

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

A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

N/A

26. Wastewater will be disposed of by:

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

Attachment F - Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

Sewage Collection System (Sewer Lines):

The sewage collection system will convey the wastewater to the _____ (name) Treatment Plant. The treatment facility is: [Orchard Ranch Wastewater Treatment Facility](#)

Existing.

Proposed.

N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

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

N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

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

Total x 1.5 = _____ Gallons

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

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

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

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

Table 3 - Secondary Containment

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

Total: _____ Gallons

30. Piping:

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

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

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

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

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

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

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

Site Plan Requirements

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

34. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = _____'.
35. 100-year floodplain boundaries:
- Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
- No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): [FEMA FIRM Panel No. 4845C055J](#)
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

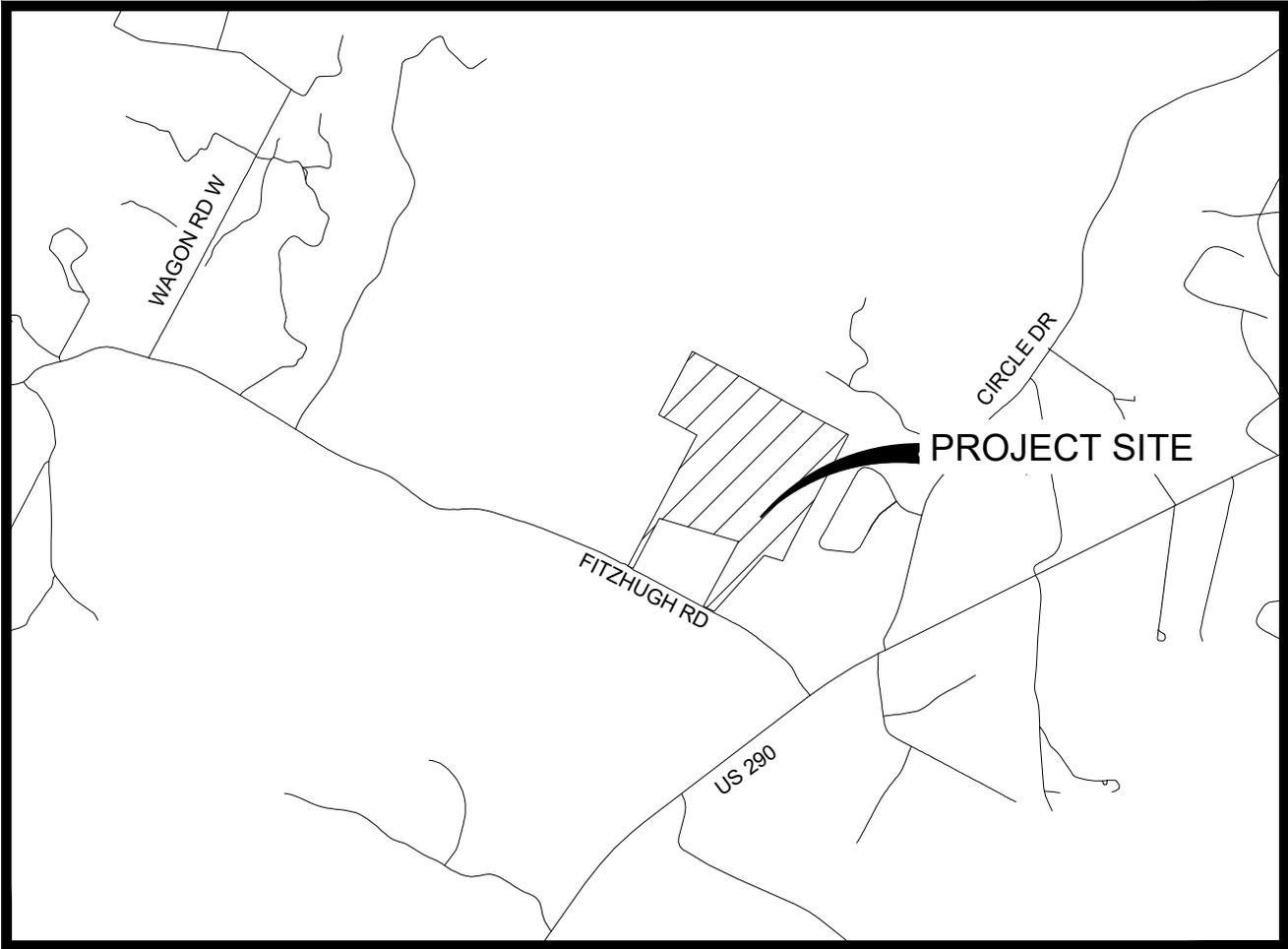
Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.

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

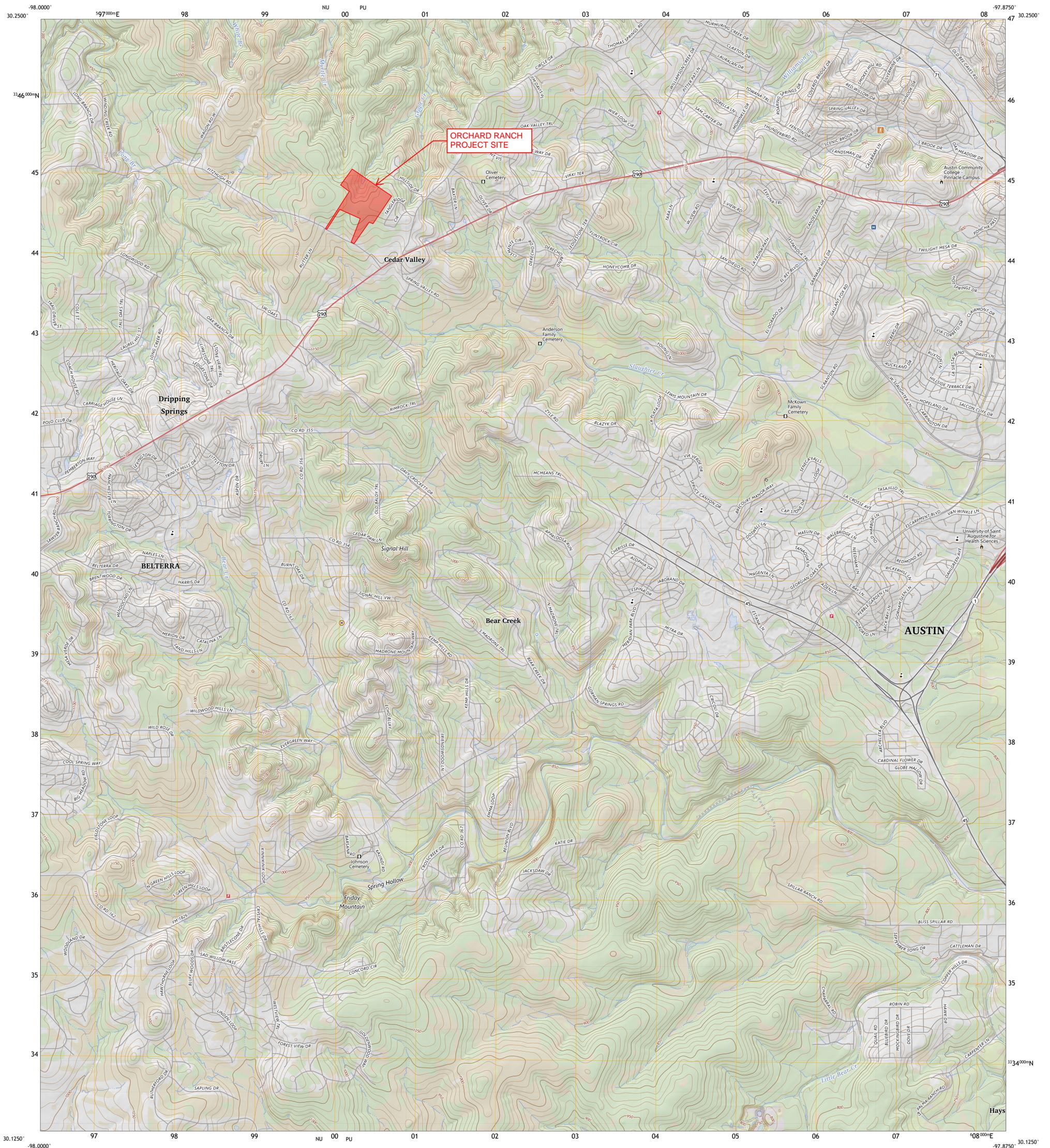
61. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.
62. Any modification 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.



ORCHARD RANCH LOCATION MAP

H:\PROJECTS\1636 - BROHN HOMES\1741 - ORCHARD RANCH\CAD\EXHIBITS\ORCHARD RANCH\LOCATION MAP.DWG DATE: 11/17/2025 3:31:01 PM BY: LCARTER

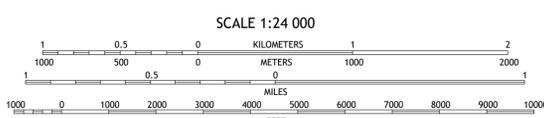
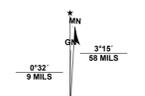
PROJECT NO. 1636-11741	DRAWN BY: CLO
DATE: 06/11/2024	CHECKED BY: CR
	GRAY CIVIL, INC.
	512-452-0371 gray-civil.com
	8834 N. Capital of Texas Highway, Suite 140
	5316 W. US Highway 290 Service Road, Suite 220 TBPELS FIRM #2946



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CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
CONTOUR SMOOTHNESS - Medium

USER DEFINED CONTENT



QUADRANGLE LOCATION

Shingle Hills	Bee Cave	Austin West
Dripping Springs	Signal Hill	Oak Hill
Driftwood	Mountain City	Buda

ROAD CLASSIFICATION

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

SIGNAL HILL, TX
2025

ADJOINING QUADRANGLES

Attachment C – Project Narrative

Area of Site

The Orchard Ranch Subdivision is located on the north side of Fitzhugh Road, approximately 1,500 linear feet west of the intersection of Fitzhugh Road and US Highway 290. The Subdivision is situated on 82.90 acres of land wholly within unincorporated Travis County.

Offsite Areas

Offsite areas that impact the Orchard Ranch Subdivision are located to the north and west of the project site. Runoff from these areas will flow through the site and BMPs, and is accommodated by the proposed drainage improvements in the site, but no specific or additional treatments is required or proposed for these offsite areas.

Impervious Cover

There is no existing impervious cover present within the project site. In total, 59.76 acres will be disturbed by regulated activities (grading, utility installation, road construction, and home construction) and will be accounted for in proposed erosion controls. Of the disturbed area, Orchard Ranch contains 26.30 acres of impervious cover. The proposed impervious cover is comprised of 264 single-family residential lots and the associated street and utility improvements.

Permanent BMPs

Seven (7) total permanent BMPs are proposed for this project: three (3) batch detention ponds, and four (4) engineered vegetative filter strips.

Slaughter East Pond is a batch detention pond receiving 18.65 acres of runoff, including 0.18 acres from an offsite drainage area, with 7.28 acres of impervious cover. This results in a required TSS load removal of 6337 lbs. In order to offset the portion of site runoff that is not being treated, this pond is sized to remove 7250 lbs.

Slaughter West Pond is a batch detention pond receiving 8.00 acres of runoff, including 0.99 acres from an offsite drainage area, with 2.52 acres of impervious cover. This results in a required TSS load removal of 2193 lbs. In order to offset the portion of site runoff that is not being treated, this pond is sized to remove 2530 lbs.

Barton Pond is a batch detention pond receiving 24.90 acres of runoff, with 12.09 acres of impervious cover. This results in a required TSS load removal of 10523 lbs. In order to offset the portion of site runoff that is not being treated, this pond is sized to remove 11947 lbs.

Barton Vegetative Filter Strip N1 receives 2.72 acres of runoff with 0.52 acres of impervious cover. This requires a TSS load removal of 453 lbs. This filter strip will provide 515 lbs. of treatment.

Barton Vegetative Filter Strip N2 receives 1.13 acres of runoff with 0.14 acres of impervious cover. This requires a TSS load removal of 122 lbs. This filter strip will provide 144 lbs. of treatment.

Slaughter Vegetative Filter Strip E receives 2.98 acres of runoff with 0.84 acres of impervious cover. This requires a TSS load removal of 731 lbs. This filter strip will provide 806 lbs. of treatment.

Slaughter Vegetative Filter Strip E2 receives 0.39 acres of runoff with 0.14 acres of impervious cover. This requires a TSS load removal of 122 lbs. This filter strip will provide 135 lbs. of treatment.

Site History, Previous Development & Areas to be Demolished

There is an existing residential structure on site that will be demolished prior to the beginning of construction.

Orchard Ranch Subdivision is located within the Edward's Aquifer Contributing Zone. No proposed development is located within the FEMA 100-yr floodplain in accordance with Flood Rate Insurance Map (FIRM) Panel No. 4845C0555J, effective January 22, 2020.

Table 1: TSS Removal Calculations Summary

BASIN	RUNOFF AREA	IMPERVIOUS AREA (AC)	TSS REQ (LB)	REQ. VOLUME	DES. VOLUME	TSS REMOVED (LB)
SLAUGHTER E POND	18.65	7.28	6337	72409	87421	7250
SLAUGHTER W POND	8.00	2.52	2193	26038	33476	2530
BARTON POND	24.90	12.09	10523	117105	143973	11947
BARTON VFS N1	2.72	0.52	453	-	-	515
BARTON VFS N2	1.13	0.14	122	-	-	144
SLAUGHTER VFS E	2.98	0.84	731	-	-	806
SLAUGHTER VFS E2	0.39	0.14	122	-	-	135
UNTREATED	24.14	2.77	2411	-	-	-
TOTAL	82.90	26.30	22891.43	-	-	23192.00

Attachment D – Factors Affecting Surface Water Quality

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

Attachment E – Volume and Character of Stormwater

The majority of runoff from Orchard Ranch will drain to on-site BMPs where it will be treated. Small areas of runoff will bypass treatment and discharge, via existing drainage patterns, to Slaughter and Barton Creeks. The site ultimately drains through to Slaughter Creek in the South and Barton Creek in the North-Northwest.

The total drainage area being conveyed to BMPs is 58.76 acres of runoff with 23.53 acres of impervious cover. These areas are conveyed to three batch detention ponds and four vegetative filter strips. 24.14 acres of the site, with 2.77 acres of impervious cover, are not being captured by BMPs. The peak flow to each BMP in a 100-year storm event is shown in Table 1 below:

Table 1: Peak Flow to BMPs in 100-year Storm Event

BMP	100-yr Flow Volume (cfs)
Slaughter E Pond	189.8
Slaughter W Pond	96.07
Barton Pond	265.81
Barton VFS N1	21.91
Barton VFS N2	8.18
Slaughter VFS E	26.99
Slaughter VFS E2	2.56

An overall drainage area map, water quality calculations, existing and proposed hydrology maps, and other pertinent information associated with the BMPs are included with this submittal.

Attachment F – Suitability Letter from Authorized Agent

Not applicable to this project.

Attachment G – Alternative Secondary Containment Methods

Not applicable to this project.

Attachment H – AST Containment Structure Drawings

Not applicable to this project.

Attachment I – 20% or Less Impervious Cover Waiver

Not applicable to this project.

Attachment J – BMPs for Upgradient Stormwater

The majority of upgradient stormwater will be conveyed through undeveloped portions of the site and therefore does not require treatment. Runoff from these areas will flow through the site and BMPs, and is accommodated by the proposed drainage improvements in the site, but no specific or additional treatment is required or proposed for these offsite areas.

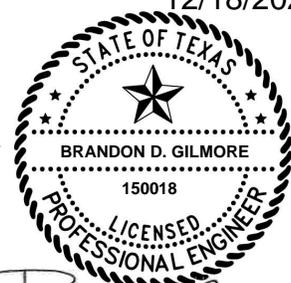
Attachment K – BMPs for On-Site Stormwater

The majority of TSS removal will occur by way of three batch detention water quality ponds. In addition, there will be four permanent vegetative filter strips. The location and calculations for these BMPs can be found in the attached construction plans, with the relevant TSS removal calculations also attached on the following sheets for reference.

Slaughter East Pond TSS Removal Calculations

1. The Required Load Reduction for the total project:		Calculations from RG-348	Pages 3-27 to 3-30
Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$			
where:	$L_{M \text{ TOTAL PROJECT}}$	= Required TSS removal resulting from the proposed development = 80% of increased load	
	A_N	= Net increase in impervious area for the project	
	P	= Average annual precipitation, inches	
Site Data: Determine Required Load Removal Based on the Entire Project		Criteria	
	County =	Travis	RG-348a
	Total project area included in plan *	82.90	acres
	Predevelopment impervious area within the limits of the plan *	0.00	acres
	Total post-development impervious area within the limits of the plan *	26.30	acres
	Total post-development impervious cover fraction *	0.32	
	P	32	inches
	$L_{M \text{ TOTAL PROJECT}}$	23312	lbs.
		Removed (Total)	23,327
		Remaining	-15
* The values entered in these fields should be for the total project area.			
	Number of drainage basins / outfalls areas leaving the plan area =	7	
2. Drainage Basin Parameters (This information should be provided for each basin):			
	Drainage Basin/Outfall Area No. =	3	
	Total drainage basin/outfall area =	18.65	acres
	Predevelopment impervious area within drainage basin/outfall area =		acres
	Post-development impervious area within drainage basin/outfall area =	7.28	acres
	Post-development impervious fraction within drainage basin/outfall area =	0.39	
	$L_{M \text{ THIS BASIN}}$	6337	lbs.
3. Indicate the proposed BMP Code for this basin.			
	Proposed BMP =	Batch Detention	
	Removal efficiency =	91	percent
		Aquaglogic 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: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$			
where:	A_C	= Total On-Site drainage area in the BMP catchment area	
	A_i	= Impervious area proposed in the BMP catchment area	
	A_p	= Pervious area remaining in the BMP catchment area	
	L_R	= TSS Load removed from this catchment area by the proposed BMP	
	A_C	18.65	acres
	A_i	7.28	acres
	A_p	11.37	acres
	L_R	7514	lbs
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area			
	Desired $L_{M \text{ THIS BASIN}}$	7250	lbs.
	F	0.96	
6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.			
	Rainfall Depth =	2.80	inches
	Post Development Runoff Coefficient =	0.38	
	On-site Water Quality Volume =	72373	cubic feet
Calculations from RG-348 Pages 3-36 to 3-37			
	Off-site area draining to BMP =	0.18	acres
	Off-site Impervious cover draining to BMP =	0.00	acres
	Impervious fraction of off-site area =	0.00	
	Off-site Runoff Coefficient =	0.02	
	Off-site Water Quality Volume =	37	cubic feet
	Storage for Sediment =	14482	
	Total Capture Volume (required water quality volume(s) x 1.20) =	86891	cubic feet

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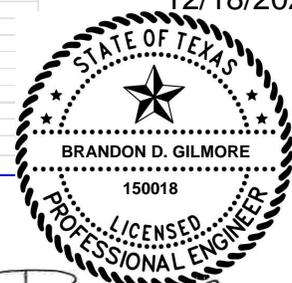


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Slaughter West Pond TSS Removal Calculations

1. The Required Load Reduction for the total project:		Calculations from RG-348	Pages 3-27 to 3-30
Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$			
where:	$L_{M \text{ TOTAL PROJECT}} =$ Required TSS removal resulting from the proposed development = 80% of increased load		
	$A_N =$ Net increase in impervious area for the project		
	$P =$ Average annual precipitation, inches		
Site Data: Determine Required Load Removal Based on the Entire Project		Criteria	
County =	Travis	RG-348a	
Total project area included in plan =	82.90	acres	
Predevelopment impervious area within the limits of the plan =	0.00	acres	
Total post-development impervious area within the limits of the plan =	26.30	acres	
Total post-development impervious cover fraction =	0.32		
P =	32	inches	
$L_{M \text{ TOTAL PROJECT}} =$	23312	lbs.	
			Removed (Total) 23,327
			Remaining -15
* The values entered in these fields should be for the total project area.			
Number of drainage basins / outfalls areas leaving the plan area =	7		
2. Drainage Basin Parameters (This information should be provided for each basin):			
Drainage Basin/Outfall Area No. =	2		
Total drainage basin/outfall area =	8.00	acres	
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres	
Post-development impervious area within drainage basin/outfall area =	2.52	acres	
Post-development impervious fraction within drainage basin/outfall area =	0.32		
$L_{M \text{ THIS BASIN}} =$	2193	lbs.	
3. Indicate the proposed BMP Code for this basin.			
Proposed BMP =	Batch Detention		
Removal efficiency =	91	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: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$			
where:	$A_C =$ Total On-Site drainage area in the BMP catchment area		
	$A_i =$ Impervious area proposed in the BMP catchment area		
	$A_p =$ Pervious area remaining in the BMP catchment area		
	$L_R =$ TSS Load removed from this catchment area by the proposed BMP		
	$A_C =$	8.00	acres
	$A_i =$	2.52	acres
	$A_p =$	5.48	acres
	$L_R =$	2625	lbs
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area			
Desired $L_{M \text{ THIS BASIN}} =$	2530	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 =	0.32		
On-site Water Quality Volume =	25837	cubic feet	
		Calculations from RG-348	Pages 3-36 to 3-37
Off-site area draining to BMP =	0.99	acres	
Off-site Impervious cover draining to BMP =	0.00	acres	
Impervious fraction of off-site area =	0.00		
Off-site Runoff Coefficient =	0.02		
Off-site Water Quality Volume =	201	cubic feet	
Storage for Sediment =	5208		
Total Capture Volume (required water quality volume(s) x 1.20) =	31246	cubic feet	

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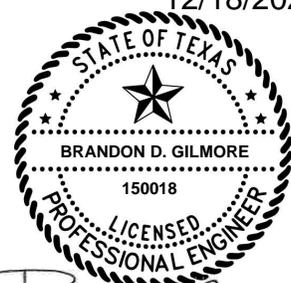


Brandon D. Gilmore

Barton Pond TSS Removal Calculations

1. The Required Load Reduction for the total project:		Calculations from RG-348	Pages 3-27 to 3-30
Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$			
where:	$L_{M \text{ TOTAL PROJECT}}$	Required TSS removal resulting from the proposed development = 80% of increased load	
	A_N	Net increase in impervious area for the project	
	P	Average annual precipitation, inches	
Site Data: Determine Required Load Removal Based on the Entire Project			
	County =	Travis	Criteria
	Total project area included in plan *	82.91 acres	RG-348a
	Predevelopment impervious area within the limits of the plan *	0.00 acres	
	Total post-development impervious area within the limits of the plan *	26.30 acres	
	Total post-development impervious cover fraction *	0.32	
	P	32 inches	
	$L_M \text{ TOTAL PROJECT}$	23312 lbs.	Removed (Total)
			Remaining
			23,327
			-15
* The values entered in these fields should be for the total project area.			
	Number of drainage basins / outfalls areas leaving the plan area =	7	
2. Drainage Basin Parameters (This information should be provided for each basin):			
	Drainage Basin/Outfall Area No. =	1	
	Total drainage basin/outfall area =	24.90 acres	
	Predevelopment impervious area within drainage basin/outfall area =	12.09 acres	
	Post-development impervious area within drainage basin/outfall area =	12.09 acres	
	Post-development impervious fraction within drainage basin/outfall area =	0.49	
	$L_M \text{ THIS BASIN}$	10523 lbs.	
3. Indicate the proposed BMP Code for this basin.			
	Proposed BMP =	Batch Detention	
	Removal efficiency =	91 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: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$		
where:	A_C	Total On-Site drainage area in the BMP catchment area	
	A_i	Impervious area proposed in the BMP catchment area	
	A_p	Pervious area remaining in the BMP catchment area	
	L_R	TSS Load removed from this catchment area by the proposed BMP	
	A_C	24.90 acres	
	A_i	12.09 acres	
	A_p	12.81 acres	
	L_R	12383 lbs	
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area			
	Desired $L_M \text{ THIS BASIN}$	11947 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
	Rainfall Depth =	2.80 inches	
	Post Development Runoff Coefficient =	0.46	
	On-site Water Quality Volume =	117105 cubic feet	
			Calculations from RG-348
			Pages 3-36 to 3-37
	Off-site area draining to BMP =	0.00 acres	
	Off-site Impervious cover draining to BMP =	0.00 acres	
	Impervious fraction of off-site area =	0	
	Off-site Runoff Coefficient =	0.00	
	Off-site Water Quality Volume =	0 cubic feet	
	Storage for Sediment =	23421	
	Total Capture Volume (required water quality volume(s) x 1.20) =	140525 cubic feet	

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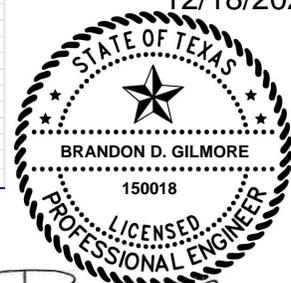


Brandon D. Gilmore

Barton Vegetative Filter Strip N1 TSS Removal Calculations

1. The Required Load Reduction for the total project:		Calculations from RG-348	Pages 3-27 to 3-30
Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$			
where:	$L_{M \text{ TOTAL PROJECT}}$	Required TSS removal resulting from the proposed development = 80% of increased load	
	A_N	Net increase in impervious area for the project	
	P	Average annual precipitation, inches	
Site Data: Determine Required Load Removal Based on the Entire Project		Criteria	
County =	Travis	RG-348a	
Total project area included in plan =	82.90	acres	
Predevelopment impervious area within the limits of the plan =	0.00	acres	
Total post-development impervious area within the limits of the plan =	26.30	acres	
Total post-development impervious cover fraction =	0.32		
P =	32	inches	
		Removed (Total)	Remaining
$L_{M \text{ TOTAL PROJECT}}$ =	23312	lbs.	23,327 -15
* The values entered in these fields should be for the total project area.			
Number of drainage basins / outfalls areas leaving the plan area =	7		
2. Drainage Basin Parameters (This information should be provided for each basin):			
Drainage Basin/Outfall Area No. =	4		
Total drainage basin/outfall area =	2.72	acres	
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres	
Post-development impervious area within drainage basin/outfall area =	0.52	acres	
Post-development impervious fraction within drainage basin/outfall area =	0.19		
$L_{M \text{ THIS BASIN}}$ =	453	lbs.	
3. Indicate the proposed BMP Code for this basin.			
Proposed BMP =	Vegetated Filter Strips		
Removal efficiency =	85	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: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$		
where:	A_C	Total On-Site drainage area in the BMP catchment area	
	A_i	Impervious area proposed in the BMP catchment area	
	A_p	Pervious area remaining in the BMP catchment area	
	L_R	TSS Load removed from this catchment area by the proposed BMP	
	A_C =	2.29	acres
	A_i =	0.52	acres
	A_p =	1.77	acres
	L_R =	515	lbs
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area			
	Desired $L_{M \text{ THIS BASIN}}$ =	515	lbs.
	F =	1.00	
6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.			
	Rainfall Depth =	4.00	inches
	Post Development Runoff Coefficient =	0.21	
	On-site Water Quality Volume =	7066	cubic feet
		Calculations from RG-348 Pages 3-36 to 3-37	
	Off-site area draining to BMP =	0.00	acres
	Off-site Impervious cover draining to BMP =	0.00	acres
	Impervious fraction of off-site area =	0	
	Off-site Runoff Coefficient =	0.00	
	Off-site Water Quality Volume =	0	cubic feet
	Storage for Sediment =	1413	
	Total Capture Volume (required water quality volume(s) x 1.20) =	8479	cubic feet

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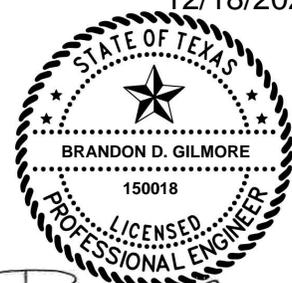


Brandon Gilmore

Barton Vegetative Filter Strip N2 TSS Removal Calculations

1. The Required Load Reduction for the total project:		Calculations from RG-348	Pages 3-27 to 3-30
Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$			
where:	$L_{M \text{ TOTAL PROJECT}}$	= Required TSS removal resulting from the proposed development = 80% of increased load	
	A_N	= Net increase in impervious area for the project	
	P	= Average annual precipitation, inches	
Site Data: Determine Required Load Removal Based on the Entire Project			Criteria
	County =	Travis	RG-348a
	Total project area included in plan =	82.90 acres	
	Predevelopment impervious area within the limits of the plan =	0.00 acres	
	Total post-development impervious area within the limits of the plan =	26.30 acres	
	Total post-development impervious cover fraction =	0.32	
	P =	32 inches	
	$L_{M \text{ TOTAL PROJECT}}$ =	23312 lbs.	Removed (Total) 23,327 Remaining -15
* The values entered in these fields should be for the total project area.			
	Number of drainage basins / outfalls areas leaving the plan area =	7	
2. Drainage Basin Parameters (This information should be provided for each basin):			
	Drainage Basin/Outfall Area No. =	5	
	Total drainage basin/outfall area =	1.13 acres	
	Predevelopment impervious area within drainage basin/outfall area =	acres	
	Post-development impervious area within drainage basin/outfall area =	0.14 acres	
	Post-development impervious fraction within drainage basin/outfall area =	0.12	
	$L_{M \text{ THIS BASIN}}$ =	122 lbs.	
3. Indicate the proposed BMP Code for this basin.			
	Proposed BMP =	Vegetated Filter Strips	
	Removal efficiency =	85 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: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$			
where:	A_C	= Total On-Site drainage area in the BMP catchment area	
	A_i	= Impervious area proposed in the BMP catchment area	
	A_p	= Pervious area remaining in the BMP catchment area	
	L_R	= TSS Load removed from this catchment area by the proposed BMP	
	A_C =	0.99 acres	
	A_i =	0.14 acres	
	A_p =	0.85 acres	
	L_R =	144 lbs	
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area			
	Desired $L_{M \text{ THIS BASIN}}$ =	144 lbs.	
	F =	1.00	
6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.			
	Rainfall Depth =	4.00 inches	
	Post Development Runoff Coefficient =	0.16	
	On-site Water Quality Volume =	2233 cubic feet	
			Calculations from RG-348 Pages 3-36 to 3-37
	Off-site area draining to BMP =	0.00 acres	
	Off-site Impervious cover draining to BMP =	0.00 acres	
	Impervious fraction of off-site area =	0	
	Off-site Runoff Coefficient =	0.00	
	Off-site Water Quality Volume =	0 cubic feet	
	Storage for Sediment =	447	
	Total Capture Volume (required water quality volume(s) x 1.20) =	2679 cubic feet	

12/18/2025



Brandon D. Gilmore

Slaughter Vegetative Filter Strip E TSS Removal Calculations

1. The Required Load Reduction for the total project:		Calculations from RG-348	Pages 3-27 to 3-30
Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$			
where:	L_M TOTAL PROJECT =	Required TSS removal resulting from the proposed development = 80% of increased load	
	A_N =	Net increase in impervious area for the project	
	P =	Average annual precipitation, inches	
Site Data: Determine Required Load Removal Based on the Entire Project			
	County =	Travis	Criteria RG-348a
	Total project area included in plan =	82.90	acres
	Predevelopment impervious area within the limits of the plan =	0.00	acres
	Total post-development impervious area within the limits of the plan =	26.30	acres
	Total post-development impervious cover fraction =	0.32	
	P =	32	inches
	L_M TOTAL PROJECT =	23312	lbs.
		Removed (Total)	Remaining
		23,327	-15
* The values entered in these fields should be for the total project area.			
	Number of drainage basins / outfalls areas leaving the plan area =	7	
2. Drainage Basin Parameters (This information should be provided for each basin):			
	Drainage Basin/Outfall Area No. =	6	
	Total drainage basin/outfall area =	2.98	acres
	Predevelopment impervious area within drainage basin/outfall area =		acres
	Post-development impervious area within drainage basin/outfall area =	0.84	acres
	Post-development impervious fraction within drainage basin/outfall area =	0.28	
	L_M THIS BASIN =	731	lbs.
3. Indicate the proposed BMP Code for this basin.			
	Proposed BMP =	Vegetated Filter Strips	
	Removal efficiency =	85	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: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$		
where:	A_C =	Total On-Site drainage area in the BMP catchment area	
	A_i =	Impervious area proposed in the BMP catchment area	
	A_p =	Pervious area remaining in the BMP catchment area	
	L_R =	TSS Load removed from this catchment area by the proposed BMP	
	A_C =	1.90	acres
	A_i =	0.84	acres
	A_p =	1.06	acres
	L_R =	806	lbs
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area			
	Desired L_M THIS BASIN =	806	lbs.
	F =	1.00	
6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.			
	Rainfall Depth =	4.00	inches
	Post Development Runoff Coefficient =	0.29	
	On-site Water Quality Volume =	7989	cubic feet
		Calculations from RG-348	Pages 3-36 to 3-37
	Off-site area draining to BMP =	1.04	acres
	Off-site Impervious cover draining to BMP =	0.00	acres
	Impervious fraction of off-site area =	0.00	
	Off-site Runoff Coefficient =	0.02	
	Off-site Water Quality Volume =	302	cubic feet
	Storage for Sediment =	1658	
	Total Capture Volume (required water quality volume(s) x 1.20) =	9950	cubic feet

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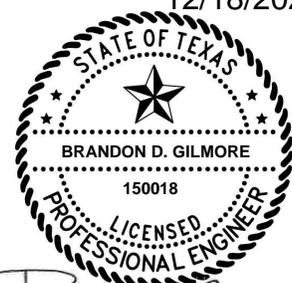


Brandon Gilmore

Slaughter Vegetative Filter Strip E2 TSS Removal Calculations

1. The Required Load Reduction for the total project:		Calculations from RG-348	Pages 3-27 to 3-30
Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$			
where:	$L_{M \text{ TOTAL PROJECT}} =$ Required TSS removal resulting from the proposed development = 80% of increased load		
	$A_N =$ Net increase in impervious area for the project		
	$P =$ Average annual precipitation, inches		
Site Data: Determine Required Load Removal Based on the Entire Project		Criteria	
County =	Travis	RG-348a	
Total project area included in plan =	82.90	acres	
Predevelopment impervious area within the limits of the plan =	0.00	acres	
Total post-development impervious area within the limits of the plan =	26.30	acres	
Total post-development impervious cover fraction =	0.32		
P =	32	inches	
		Removed (Total)	Remaining
$L_{M \text{ TOTAL PROJECT}} =$	23312	lbs.	23,327 -15
* The values entered in these fields should be for the total project area.			
Number of drainage basins / outfalls areas leaving the plan area =	7		
2. Drainage Basin Parameters (This information should be provided for each basin):			
Drainage Basin/Outfall Area No. =	7		
Total drainage basin/outfall area =	0.39	acres	
Predevelopment impervious area within drainage basin/outfall area =		acres	
Post-development impervious area within drainage basin/outfall area =	0.14	acres	
Post-development impervious fraction within drainage basin/outfall area =	0.36		
$L_{M \text{ THIS BASIN}} =$	122	lbs.	
3. Indicate the proposed BMP Code for this basin.			
Proposed BMP =	Vegetated Filter Strips		
Removal efficiency =	85	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: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$		
where:	$A_C =$ Total On-Site drainage area in the BMP catchment area		
	$A_i =$ Impervious area proposed in the BMP catchment area		
	$A_p =$ Pervious area remaining in the BMP catchment area		
	$L_R =$ TSS Load removed from this catchment area by the proposed BMP		
	$A_C =$	0.39	acres
	$A_i =$	0.14	acres
	$A_p =$	0.25	acres
	$L_R =$	135	lbs
5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area			
	Desired $L_{M \text{ THIS BASIN}} =$	135	lbs.
	F =	1.00	
6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.			
	Rainfall Depth =	4.00	inches
	Post Development Runoff Coefficient =	0.35	
	On-site Water Quality Volume =	2010	cubic feet
		Calculations from RG-348	Pages 3-36 to 3-37
	Off-site area draining to BMP =	1.04	acres
	Off-site impervious cover draining to BMP =	0.00	acres
	Impervious fraction of off-site area =	0.00	
	Off-site Runoff Coefficient =	0.02	
	Off-site Water Quality Volume =	302	cubic feet
	Storage for Sediment =	462	
	Total Capture Volume (required water quality volume(s) x 1.20) =	2774	cubic feet

12/18/2025



Brandon Gilmore

Attachment L – BMPs for Surface Streams

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

Attachment M – Construction Plans

Construction plans for temporary and permanent BMPs are attached.

SUMMARY NOTES

ENGINEER: GRAY ENGINEERING, INC. TBPE F-2946
8834 N. CAPITAL OF TEXAS HIGHWAY, SUITE 140
AUSTIN, TEXAS 78759
(512) 452-0371

SURVEYOR: G&R SURVEYING, LLC., TBPLS F-10032000
1805 QUIDA DR.
AUSTIN, TX 78728
(512) 267-7430

DEVELOPER/OWNER: CLAYTON PROPERTIES GROUP, INC.
6720 VAUGHT RANCH ROAD
SUITE 200
AUSTIN, TEXAS 78730

NOTES

1. THE ENGINEER WHO PREPARED THESE PLANS IS RESPONSIBLE FOR THEIR ADEQUACY. IN APPROVING THESE PLANS, TRAVIS COUNTY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. SUBJECT PROPERTY IS OUTSIDE ANY CITIES JURISDICTION - TRAVIS COUNTY, TEXAS
3. WATERSHED STATUS - THIS PROJECT IS LOCATED IN THE BARTON CREEK & SLAUGHTER CREEK WATERSHEDS
4. THIS PROJECT IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE
5. NO PORTION OF THIS PROJECT IS LOCATED WITHIN THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOODPLAIN AS IDENTIFIED ON MAP NO. 484530055J DATED JANUARY 22, 2020.
6. THIS PROJECT IS LOCATED WITHIN THE TRAVIS COUNTY ESD-3 (OAK HILL FIRE DEPT.)
7. ALL STRUCTURAL FIELD CHANGES REQUIRE A PLAN REVISION APPROVAL IN WRITING BEFORE COMMENCEMENT OF THE WORK
8. THE APPLICANT/OWNER MUST COORDINATE WITH UTILITY COMPANIES PRIOR TO CONSTRUCTION
9. CONTRACTOR SHALL COORDINATE CONTINUOUSLY AND AS NECESSARY WITH PROPERTY/BUSINESS OWNERS TO MAINTAIN CONTINUATION OF TRAFFIC CONTROL AND ACCESS.
10. BE INFORMED THAT THE CONTRACTOR MUST OBTAIN A SEPARATE PERMIT TO WORK WITHIN THE COUNTY ROW.
11. ALL CHANGES TO THE TRAFFIC CONTROL PLAN MUST BE APPROVED AND DOCUMENTED BY THE SEALING ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY PROPOSED CHANGES TO THE TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL.
12. THE DOWNSTREAM RECEIVING WATERS ARE BARTON CREEK AND SLAUGHTER CREEK.
13. THE OWNER'S ENGINEER WILL MAKE PERIODIC SITE VISITS AND OBSERVATIONS DURING CONSTRUCTION TO ENSURE ADEQUACY OF THE DESIGN AND SAFETY OF STRUCTURES IN COMPLIANCE WITH THE ISSUANCE OF THE CONSTRUCTION SUMMARY REPORT AND ENGINEERING CONCURRENCE LETTER AS REQUIRED AS PART OF THE PROJECT CLOSE-OUT PROCESS.

PRE-CONSTRUCTION NOTES

1. PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING ENSURE THAT ALL REQUIRED NOTICES AND PERMITS ARE POSTED AND THE CERTIFIED INSPECTOR FOR YOUR SITE HAS UPLOADED A SWP3 INSPECTION REPORT TO YOUR ACCOUNT THAT CONFIRMS THAT THE FIRST PHASE OF TEMPORARY ESC HAVE BEEN INSTALLED PER PLANS AND SPECIFICATIONS.

FAILURE TO FOLLOW THE PRE-CONSTRUCTION MEETING REQUIREMENTS MAY RESULT IN WORK STOPPAGE AND ADDITIONAL PERMIT FEES

SPECIAL PRE-CON NOTES:

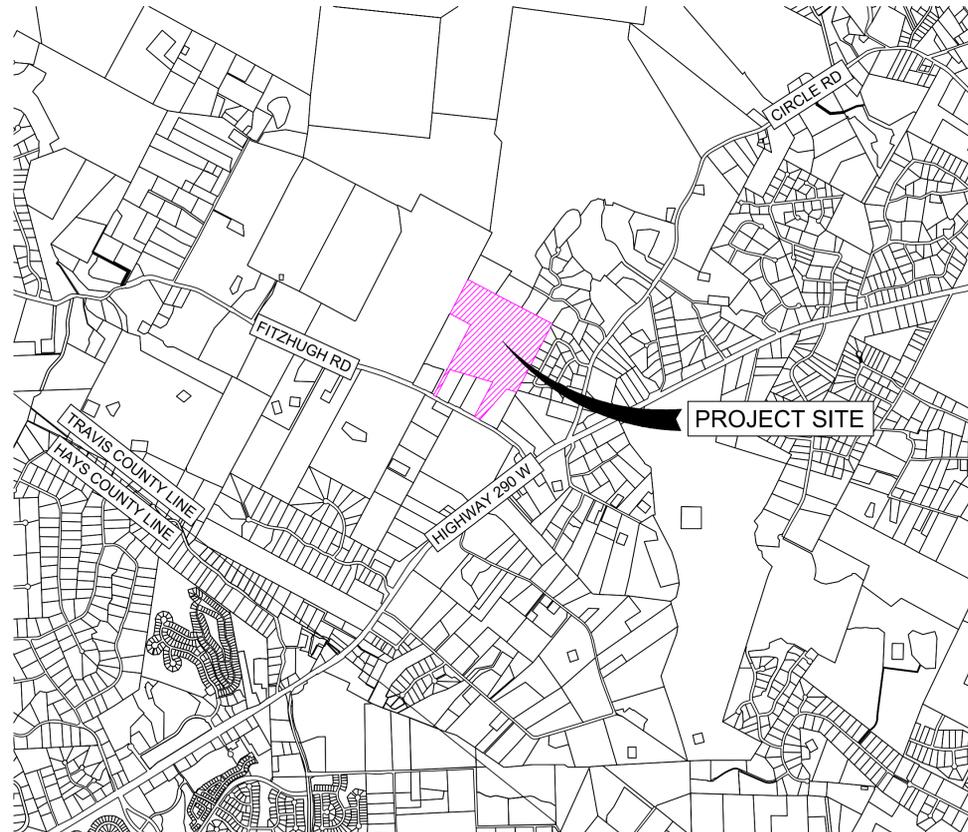
1. PROVIDE 48 HR. MINIMUM NOTICE TO SCHEDULE THE PRE-CON MEETING.
 2. PROVIDE A 1/2 SIZE SET OF PLANS FOR THE INSPECTOR AT THE PRE-CON.
 3. PROVIDE AN ANTICIPATED CONSTRUCTION SCHEDULE AT THE PRE-CON.
 4. BRING YOUR SWP3 FOR COMPLETENESS CHECK AT THE PRE-CON.
2. ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE PLANS APPROVED BY TRAVIS COUNTY
3. SCHEDULE YOUR PROJECTS PRE-CONSTRUCTION MEETING THROUGH THE [HTTPS://WWW.M3CONNECT.ORG/CIP/PORTAL](https://www.m3connect.org/cip/portal) AFTER THE INITIAL 3RD PARTY SWP3 INSPECTION REPORT HAS BEEN UPLOADED AND ALL PERMITS AND NOTICES HAVE BEEN POSTED. THEN FOLLOW UP WITH EMAIL TO THE ENGINEERING INSPECTOR, JOHNNY ANGLIN, AT johnny.anglin@traviscountytx.gov

REVIEWED BY:

TRAVIS COUNTY TRANSPORTATION AND NATURAL RESOURCES	DATE
TNR DEVELOPMENT PERMIT NUMBER	DATE
TRAVIS COUNTY FIRE MARSHAL	DATE
TCEQ EAPP ID NO.	

CONSTRUCTION PLANS FOR ORCHARD RANCH TRAVIS COUNTY, TEXAS PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS

NOVEMBER, 2025



VICINITY MAP
N.T.S.

NO.	DATE	SHEETS	REVISION DESCRIPTION

Sheet List Table		Sheet List Table	
SHEET NUMBER	SHEET TITLE	SHEET NUMBER	SHEET TITLE
1	COVER SHEET	61	SSL-C (STA 1+00 TO END) & LATS
2	GENERAL NOTES (1 OF 4)	62	SSL-D (STA 1+00 TO END) & LATS
3	GENERAL NOTES (2 OF 4)	63	SSL-E (STA 1+00 TO END) & SSL-G (STA 1+00 TO END) & LATS
4	GENERAL NOTES (3 OF 4)	64	SSL-F (STA 1+00 TO END)
5	GENERAL NOTES (4 OF 4)	65	SSL-H (STA 1+00 TO 7+00)
6	FINAL PLAT (1 OF 3)	66	SSL-I (STA 7+00 TO END)
7	FINAL PLAT (2 OF 3)	67	SSL-J (STA 1+00 TO END)
8	FINAL PLAT (3 OF 3)	68	SSL-K (STA 1+00 TO 4+00)
9	EROSION AND SEDIMENT CONTROL PLAN (1 OF 2)	69	SSL-L (STA 4+00 TO END)
10	EROSION AND SEDIMENT CONTROL PLAN (2 OF 2)	70	LATS (SSL-F & SSL-H & SSL-J)
11	EROSION AND SEDIMENT CONTROL PLAN DETAILS (1 OF 2)	71	SSL-K (STA 1+00 TO END) & LATS
12	EROSION AND SEDIMENT CONTROL PLAN DETAILS (2 OF 2)	72	SSL-L (STA 1+00 TO END) & LATS
13	TREE LIST	73	SSL-M (STA 1+00 TO END) & LATS
14	SIGNAGE AND STRIPING PLAN (2 OF 2)	74	SSL-N (1+00 TO END) & LATS
15	SIGNAGE AND STRIPING PLAN (1 OF 2)	75	SSL-O (STA 1+00 TO END) & LATS
16	GRADING PLAN (1 OF 2)	76	CHANNEL-A (STA 1+00 TO END)
17	GRADING PLAN (2 OF 2)	77	CHANNEL-B (STA 1+00 TO END)
18	SHADOW RIDER DRIVE (1+00 TO 8+00)	78	CHANNEL-C (STA 1+00 TO END)
19	SHADOW RIDER DRIVE (8+00 TO 16+00)	79	OVERALL WATER PLAN (1 OF 2)
20	SHADOW RIDER DRIVE (16+00 TO END)	80	OVERALL WATER PLAN (2 OF 2)
21	HIGHWHEEL ROAD (1+00 TO 8+00)	81	WL-A (STA 1+00 TO 11+00)
22	HIGHWHEEL ROAD (8+00 TO 14+00)	82	WL-A (STA 11+00 TO 16+00)
23	HIGHWHEEL ROAD (14+00 TO END)	83	WL-A (STA 16+00 TO 25+00)
24	HIGHWHEEL ROAD CDS	84	WL-A (STA 25+00 TO END)
25	CASA GRANDERA DRIVE (1+00 TO 7+00)	85	WL-B (STA 1+00 TO 11+00)
26	CASA GRANDERA DRIVE (7+00 TO END)	86	WL-B (STA 11+00 TO 16+00)
27	CASA GRANDERA DRIVE CDS	87	WL-B (16+00 TO 23+00)
28	DROVER TRACE (1+00 TO 8+00)	88	WL-B (23+00 TO END)
29	DROVER TRACE (8+00 TO END)	89	WL-C (STA 1+00 TO END)
30	DROVER TRACE CDS	90	WL-D (STA 1+00 TO END)
31	SADDLE IRON WAY (1+00 TO 7+00)	91	WL-E (STA 1+00 TO END)
32	SADDLE IRON WAY (7+00 TO END)	92	WL-F (STA 1+00 TO END)
33	CONCHO CAMP DRIVE (1+00 TO 7+00)	93	WL-G (STA 1+00 TO END)
34	CONCHO CAMP DRIVE (7+00 TO END)	94	WL-H (STA 1+00 TO 9+50)
35	ROUGH RIG ROAD (1+00 TO 7+00)	95	WL-H (STA 9+50 TO END)
36	ROUGH RIG ROAD (7+00 TO END)	96	WL-I (STA 1+00 TO END)
37	PARADA STREET (1+00 TO END)	97	OVERALL WASTEWATER COLLECTION PLAN (1 OF 2)
38	TWISTER ROAD (1+00 TO END)	98	OVERALL WASTEWATER COLLECTION PLAN (2 OF 2)
39	PAINT HORSE DRIVE (1+00 TO 6+00)	99	WWTR-A (STA 1+00 TO 7+50)
40	PAINT HORSE DRIVE (6+00 TO END)	100	WWTR-A (7+50 TO END)
41	FOX HOLE PLACE (1+00 TO END) & CDS	101	WWTR-A 2 (STA 1+00 TO 6+00)
42	EXISTING HYDROLOGY MAP	102	WWTR-A 2 (6+00 TO END)
43	PROPOSED HYDROLOGY MAP	103	WWTR-A 3 (STA 1+00 TO END)
44	DRAINAGE AREA MAP	104	WWTR-A 3-1 (STA 1+00 TO END)
45	DRAINAGE AREA CALCULATIONS (1 OF 2)	105	WWTR-B (STA 1+00 TO 5+50)
46	DRAINAGE AREA CALCULATIONS (2 OF 2)	106	WWTR-B (STA 5+50 TO END)
47	WATER QUALITY DRAINAGE AREA MAP	107	WWTR-B 2 (STA 1+00-TO END)
48	TCEQ VEGETATIVE FILTER STRIP CALCULATIONS	108	WWTR-C (STA 1+00 TO 9+50)
49	DETENTION & WATER QUALITY POND SLAUGHTER EAST	109	WWTR-C (STA 9+50 TO END)
50	DETENTION & WATER QUALITY POND SLAUGHTER WEST	110	WWTR-C 1 (STA 1+00- TO 6+50)
51	DETENTION & WATER QUALITY POND BARTON NORTH	111	WWTR-C 1 (STA 6+50 TO END)
52	POND DETAILS	112	WWTR-C 2 (STA 1+00 TO 5+50)
53	OVERALL STORM SEWER PLAN (1 OF 2)	113	WWTR-C 2 (STA 5+50 TO END)
54	OVERALL STORM SEWER PLAN (2 OF 2)	114	WWTR-C 3 (STA 1+00 TO END)
55	SSL-A (STA 1+00 TO 6+00)	115	WWTR-C 4 (STA 1+00 TO END)
56	SSL-A (STA 6+00 TO 10+00)	116	WWTR-C 5 (STA 1+00 TO END)
57	SSL-A (STA 10+00 TO 14+00) & (STA 14+00 TO END)	117	WWTR-C 6 (STA 1+00 TO END)
58	SSL-A LATS	118	WATER DETAILS & NOTES
59	SSL-B (STA 1+00 TO 9+00)		
60	SSL-B (STA 9+00 TO END) & LATS		

ORCHARD RANCH POND DAM SAFETY CERTIFICATION STATEMENT

I, BRANDON GILMORE, TEXAS LICENSE NUMBER 150018, CERTIFY THAT THE DESIGN OF THE DAM IN THIS SET OF PLANS CAN SAFELY PASS 75-PERCENT OF THE PROBABLE MAXIMUM FLOOD BASED ON THE HYDROLOGIC, HYDRAULIC, STRUCTURAL AND GEOTECHNICAL ANALYSIS USING STANDARD ACCEPTED ENGINEERING PRACTICES.

SUBMITTED BY



Brandon Gilmore

BRANDON GILMORE, P.E.,
LICENSED PROFESSIONAL ENGINEER NO. 150018
GRAY ENGINEERING, INC. TBPE F-2946
8834 N. CAPITAL OF TEXAS HIGHWAY, SUITE 140
AUSTIN, TEXAS 78759

12/18/2025
DATE

PROJECT NO. 1636-11741	DRAWN BY: SM
DATE: 04/04/2025	CHECKED BY: XXX
8834 N. Capital of Texas Hwy. Suite 140 Austin, Texas 78759 (512) 452-0371 FAX (512) 454-9933 TBPELS FIRM #2946	

TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES

- 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. AT A MINIMUM, CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS MEET TCEQ'S "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS."
- 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 [§290.44(A)(1)].
- 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 [§290.44(A)(2)].
- 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 [§290.44(A)(3)].
- ALL WATER LINE CROSSINGS OF WASTEWATER MAINS SHALL BE PERPENDICULAR [§290.44(E)(4)(B)].
- 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 [§290.44(A)(4)].
- THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25 PERCENT [§290.44(B)].
- THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES WITH VENT OPENINGS TO THE ATMOSPHERE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT [§290.44(D)(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 [§290.44(F)(1)].
- WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATERLINE 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 [§290.44(F)(2)].
- 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.

$$Q = \frac{LD\sqrt{P}}{148,000}$$

WHERE:

- Q = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR
- L = THE LENGTH OF PIPE SECTION BEING TESTED, IN FEET
- D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES
- 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-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;

$$L = \frac{SD\sqrt{P}}{148,000}$$

WHERE:

- L = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR
- S = THE LENGTH OF PIPE SECTION BEING TESTED, IN FEET
- D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES
- P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI)

- THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES. 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 §290.44(E)(1)-(4).
- 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 [§290.44(E)(5)].
- 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 [§290.44(E)(6)].
- 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 [§290.44(E)(7)].
- WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS [§290.44(E)(8)].
- THE CONTRACTOR SHALL DISINFECT THE NEW WATERLINES IN ACCORDANCE WITH AWWA STANDARD C651-14 OR MOST RECENT, 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 WATERLINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER [§290.44(F)(3)].
- DECHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C655-09 OR MOST RECENT.

482.1003, EXHIBIT 482.301E

SEQUENCE OF CONSTRUCTION AND PRIORITY INSPECTIONS - SUBDIVISION DEVELOPMENT

THE OWNER AND PRIMARY OPERATOR MUST FOLLOW THIS BASIC SEQUENCE OF CONSTRUCTION FOR EACH SUBDIVISION DEVELOPMENT. WITHIN THE FOLLOWING SEQUENCE OF CONSTRUCTION ARE LISTED PRIORITY INSPECTIONS THAT THE OWNER AND PRIMARY OPERATOR MUST REQUEST FROM A REPRESENTATIVE OF TRAVIS COUNTY'S STORM WATER MANAGEMENT PROGRAM INSPECTION TEAM. EACH PRIORITY INSPECTION MUST BE REQUESTED ON-LINE THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY. THE PRIORITY INSPECTIONS IN THIS EXHIBIT ARE CONSISTENT WITH THE PRIORITY INSPECTIONS FOUND IN THE CUSTOMER PORTAL FOR THE PROJECT. FOR ASSURANCE PURPOSES, A SECOND REQUEST TO TRAVIS COUNTY IS STRONGLY ENCOURAGED BY ADDITIONALLY SENDING AN E-MAIL TO THE FOLLOWING ADDRESS: ENV-INSPECT@TRAVISCOUNTYTX.GOV.

THE SEQUENCE FOR ITEMS 1-4 AND ITEMS 17-22 MUST NOT BE ALTERED, BUT THE SEQUENCE FOR ITEMS 5-16 MAY BE MODIFIED WITH THE WRITTEN APPROVAL OF THE COUNTY.

- ESC INSTALLATION. INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROLS (ESC) AND TREE PROTECTION MEASURES IN ACCORDANCE WITH THE APPROVED ESC PLAN SHEETS AND THE SWP3.
 - HAVE A QUALIFIED INSPECTOR (AS SPECIFIED IN SECTION 482.934(C)(3) OF THE TRAVIS COUNTY CODE) INSPECT THE TEMPORARY EROSION AND SEDIMENT CONTROLS AND PREPARE A CERTIFIED SWP3 INSPECTION REPORT REGARDING WHETHER THE TEMPORARY EROSION AND SEDIMENT CONTROLS WERE INSTALLED IN CONFORMANCE WITH THE APPROVED PLANS;
 - UPLOAD THE QUALIFIED INSPECTOR'S CERTIFIED SWP3 INSPECTION REPORT TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY; AND
 - REQUEST A MANDATORY PRE-CONSTRUCTION MEETING WITH TRAVIS COUNTY THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY GIVING AT LEAST 3 BUSINESS DAYS NOTIFICATION.
- PRE-CONSTRUCTION MEETING AND ESC INSPECTION. HOLD A MANDATORY PRE-CONSTRUCTION MEETING THAT ADDRESSES THE ITEMS IN EXHIBIT 482.950 AND THE ESC PRE-CONSTRUCTION INSPECTION BY THE COUNTY AND OBTAIN COUNTY'S APPROVAL TO START CONSTRUCTION. (PRIORITY INSPECTION)
- INSPECT FOR COMPLIANCE WITH SWP3 AND ESC PLAN. MAINTAIN AND INSPECT THE SWP3 CONTROLS AND PREPARE AND UPLOAD A WEEKLY CERTIFIED SWP3 INSPECTION REPORT THAT INCLUDES THE CONTENTS LISTED IN EXHIBIT 482.951 TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY.
- CONSTRUCT SEDIMENT BASIN(S). CONSTRUCT ANY STORM WATER POND(S) FIRST, WHENEVER APPLICABLE, TO BE FUNCTIONAL AS CONSTRUCTION SEDIMENT BASIN(S) BEFORE GRADING AND EXCAVATING THE ENTIRE SITE, AS FOLLOWS:
 - CLEAR, GRUB, AND EXCAVATE ONLY THE SITE AREAS AND CUT AND FILL QUANTITIES NECESSARY TO CONSTRUCT THE POND(S) IN ACCORDANCE WITH THESE APPROVED PLANS AND THE MINIMUM STANDARDS DESCRIBED IN THE SWP3 AND ESC PLAN SHEET NOTES FOR THE TEMPORARY SEDIMENT BASIN EMBANKMENTS, WALLS, INFLOWS, OUTFALLS, DRAINAGE CONVEYANCE MEASURES, SEDIMENT CONTROLS, AND STABILIZATION.
 - REQUEST COUNTY INSPECTION AND OBTAIN COUNTY'S WRITTEN APPROVAL OF THE TEMPORARY SEDIMENT BASIN(S) BEFORE PROCEEDING FURTHER IN THE SEQUENCE OF CONSTRUCTION. (PRIORITY INSPECTION)
- CONSTRUCT SUBDIVISION IMPROVEMENTS. BEGIN THE PRIMARY SUBDIVISION CLEARING, EXCAVATION, AND CONSTRUCTION ACTIVITIES AND CONTINUE THE SWP3 AND ESC PLAN IMPLEMENTATION AND MAINTENANCE PER THE APPROVED PLANS.
- ROUGH GRADE STREETS.
- INSTALL UTILITIES TO BE LOCATED UNDER THE PROPOSED PAVEMENT.
- BEGIN INSTALLATION OF STORM SEWER LINES.
- REGRADE STREETS TO SUBGRADE.
- PERFORM TEMPORARY STABILIZATION IN ALL DISTURBED AREAS THAT HAVE CEASED CONSTRUCTION ACTIVITIES FOR 14 DAYS OR LONGER.
- PERFORM PERMANENT SITE STABILIZATION/RE-VEGETATION IMMEDIATELY IN ALL SITE AREAS AT FINAL PLAN GRADE AND IN ALL SITE AREAS SPECIFIED FOR PHASED RE-VEGETATION.
- COMPLETE UNDERGROUND UTILITY CROSSINGS ON ALL STREETS.
- INSTALL CURB AND GUTTER.
- LAY FINAL BASE COURSE MATERIAL.
- INSTALL ALL TRAFFIC CONTROL SIGNING, STRIPING, AND PAVEMENT MARKERS.
- COMPLETE ALL UNDERGROUND INSTALLATIONS WITHIN THE RIGHT-OF-WAY.
- COMPLETE PERMANENT WATER QUALITY CONTROLS. BEGIN COMPLETION OF PERMANENT WATER QUALITY CONTROL(S) AND INSTALL THE UNDERDRAIN PER APPROVED PLANS, WHEN APPLICABLE.
 - REMOVE CONSTRUCTION SEDIMENT, RE-ESTABLISH THE BASIN SUBGRADE, AND INSTALL UNDERDRAIN PIPING.
 - REQUEST COUNTY INSPECTION AND OBTAIN COUNTY'S WRITTEN APPROVAL OF THE UNDERDRAIN PIPING INSTALLATION AND ASSOCIATED CONSTRUCTION MATERIALS (AGGREGATE, FILTER MEDIA, ETC.) BEFORE COVERING THE UNDERDRAIN AND PROCEEDING WITH CONSTRUCTION OF THE CONTROL. (PRIORITY INSPECTION)
- COMPLETE FINAL SITE STABILIZATION INCLUDING STABILIZATION OF ALL DISTURBED SUBDIVISION LOTS STILL UNDER THE SWP3 AND ESC PLAN OF THE PRIMARY OPERATOR FOR THE SUBDIVISION STREET AND DRAINAGE CONSTRUCTION.
- PROVIDE ENGINEER'S CONCURRENCE LETTER THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY WHEN CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND REQUEST A FINAL INSPECTION BY TRAVIS COUNTY.
- PERFORM A FINAL INSPECTION WITH THE COUNTY AND PREPARE A PUNCH LIST WITH REMAINING ITEMS THAT NEED TO BE COMPLETED FOR PROJECT ACCEPTANCE. (PRIORITY INSPECTION)
- OBTAIN A CERTIFICATE OF COMPLIANCE FOR FINAL STABILIZATION FROM THE COUNTY WHEN ALL FINAL INSPECTION PUNCH LIST ITEMS ARE FINISHED AND FINAL SITE STABILIZATION AND REMOVAL OF TEMPORARY SEDIMENT CONTROLS IS COMPLETE. (PRIORITY INSPECTION)
 - PROVIDE SEPARATE PERMIT DOCUMENTATION FOR ANY SUBDIVISION LOTS NOT STABILIZED AS PART OF THE FINAL SUBDIVISION STABILIZATION PLAN, IF NECESSARY - INCLUDING SEPARATE COUNTY DEVELOPMENT PERMIT(S), SWP3 NOTICE(S), ESC PLAN(S).
 - PROVIDE A DEVELOPERS CONTRACT, IF NECESSARY, IF ALL ITEMS ARE COMPLETE EXCEPT RE-VEGETATION COVERAGE AND CONDITIONAL ACCEPTANCE IS REQUESTED. REQUEST RE-INSPECTION WHEN RE-VEGETATION COVERAGE IS COMPLETE.
- RECEIVE A CONDITIONAL ACCEPTANCE FROM TRAVIS COUNTY TO BEGIN THE CONSTRUCTION WARRANTY PERIOD WHEN ALL PUNCH LIST ITEMS ARE COMPLETE. (PRIORITY INSPECTION).

NOTE:

- BEFORE PROJECT APPROVAL/ISSUANCE OF THE CERTIFICATE OF COMPLETION (COC) AND FISCAL RELEASE, THE FOLLOWING MUST BE COMPLETE:
- THE OWNER MUST CONTACT LCRA FOR THEIR REQUIREMENTS REGARDING PWQC (BMP) PERMITTING AND/OR MAINTENANCE PLAN
- UPON APPROVAL, THE PWQC MAINTENANCE PLAN ALONG WITH THE ORIGINAL NOTARIZED DOCUMENT MUST BE FILED IN THE REAL PROPERTY RECORDS OF TRAVIS COUNTY. A COPY OF RECORDED DOCUMENT MUST BE PROVIDED PRIOR TO THE PROJECT FINAL ACCEPTANCE.
- THE PWQC MAINTENANCE PLAN MUST BE SEALED AND SIGNED BY THE DESIGN ENGINEER.
- UPON REQUEST, A PWQC (BMP) MAINTENANCE PLAN EXAMPLE WILL BE PROVIDED OR UPLOADED TO THE MYPERMITNOW.ORG ACCOUNT.

482.1009, EXHIBIT 482.950

PRE-CONSTRUCTION CONFERENCE PLANNING AND AGENDA FOR SWP3 AND ESC PLAN

BEFORE STARTING CONSTRUCTION, THE OWNER OR THEIR REPRESENTATIVE MUST SUBMIT A REQUEST, USING THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY, TO PARTICIPATE IN A PRE-CONSTRUCTION CONFERENCE WITH THE DESIGNATED COUNTY INSPECTOR. PRIOR TO THE PRE-CONSTRUCTION CONFERENCE REQUEST, THE OWNER OR OWNER'S REPRESENTATIVE SHALL ENSURE THE FIRST PHASE OF THE ESC CONTROLS ARE INSTALLED IN CONFORMANCE WITH THE APPROVED PLANS, THE OWNER'S QUALIFIED INSPECTOR HAS INSPECTED THE CONTROLS AND VERIFIED COMPLIANCE WITH THE PLANS, AND AN SWP3 INSPECTION REPORT DOCUMENTING THIS INFORMATION HAS BEEN SENT TO THE COUNTY THROUGH THE METHOD SPECIFIED BY THE DESIGNATED COUNTY INSPECTOR.

AFTER ARRANGING AN AGREED UPON DATE WITH THE COUNTY AND PROVIDING THE INITIAL SWP3 INSPECTION REPORT, THE OWNER OR OWNER'S DESIGNATED REPRESENTATIVE SHALL PROVIDE NOTICE OF THE SWP3 PRE-CONSTRUCTION CONFERENCE AND A COPY OF THE APPROVED PLANS, IF REQUESTED, TO THE FOLLOWING PERSONS OR ENTITIES AT LEAST TWO BUSINESS DAYS BEFORE THE CONFERENCE:

- DESIGNATED COUNTY INSPECTOR(S)
- DESIGN ENGINEER FOR THE APPROVED PLANS AND SWP3, OR THEIR REPRESENTATIVE
- CONTRACTOR(S)/PRIMARY OPERATOR(S)
- PRIMARY OPERATOR'S QUALIFIED INSPECTOR RESPONSIBLE FOR PREPARING THE SWP3 INSPECTION REPORTS
- OTHER STAKEHOLDERS, AS APPROPRIATE: MUNICIPALITIES, UTILITIES, ETC.

THE SWP3 PRE-CONSTRUCTION CONFERENCE MAY BE A STANDALONE MEETING OR A PART OF A LARGER PRE-CONSTRUCTION CONFERENCE, BUT MUST INCLUDE AN ON-SITE INSPECTION APPROVAL OF THE FIRST PHASE OF THE PROJECT'S ESC PLAN BY THE COUNTY INSPECTOR BEFORE CONSTRUCTION BEGINS. THE COUNTY INSPECTOR WILL DISCUSS THE FOLLOWING APPLICABLE ITEMS IN THE APPROVED PLANS AND THE SWP3 WITH THE PARTICIPANTS:

- THE SWP3 SITE NOTEBOOK FOR THE PROJECT, INCLUDING REVIEW OF COMPLETENESS, SIGNATURES, CONSISTENCY WITH THE APPROVED CONSTRUCTION AND ESC PLANS, AND THE REQUIREMENTS FOR MAINTAINING THE SWP3 SITE NOTEBOOK DURING THE CONSTRUCTION PROCESS.
- THE SEQUENCE OF CONSTRUCTION AND ESC PLAN IMPLEMENTATION; SEDIMENT BASIN CONSTRUCTION SCOPE PRIOR TO FULL SITE GRADING; NON-STRUCTURAL EROSION SOURCE CONTROLS; START DATES AND SCHEDULE OF EVENTS.
- SEDIMENT CONTROLS; PHASING OF PERIMETER AND INTERIOR SEDIMENT CONTROLS DURING CONSTRUCTION; STRUCTURAL EROSION SOURCE CONTROLS SUCH AS DRAINAGE DIVERSION; ESC MAINTENANCE REQUIREMENTS.
- ADEQUACY OF THE FIRST ESC PHASE AND FUTURE ESC PHASES TO ADDRESS SPECIFIC SITE CONDITIONS, AND ADJUSTMENT AND REVISION OF THE ESC PLAN AND SWP3 CONTROLS DURING CONSTRUCTION.
- TEMPORARY AND PERMANENT STABILIZATION AND RE-VEGETATION REQUIREMENTS, INCLUDING SCHEDULE, CRITICAL SITE IMPROVEMENTS AND PRIORITY RE-VEGETATION AREAS.
- ON AND OFF-SITE TEMPORARY AND PERMANENT SPOIL AND FILL DISPOSAL AREAS, HAUL ROADS, STAGING AREAS, AND STABILIZED CONSTRUCTION ENTRANCES;
- PERMANENT WATER QUALITY CONTROLS CONSTRUCTION AND COUNTY INSPECTIONS, AND RELATED GRADING AND DRAINAGE CONSTRUCTION.
- SUPERVISION OF THE SWP3 IMPLEMENTATION BY THE PRIMARY OPERATOR'S DESIGNATED PROJECT MANAGER, INCLUDING ROLES, RESPONSIBILITIES, AND COORDINATION WHEN MORE THAN ONE OPERATOR IS RESPONSIBLE FOR IMPLEMENTATION.
- INSPECTION AND PREPARATION OF THE WEEKLY SWP3 INSPECTION REPORTS BY THE PRIMARY OPERATOR'S QUALIFIED INSPECTOR; REPORT SUBMITTAL BY THE PRIMARY OPERATOR, AND SWP3 MONITORING INSPECTIONS CONDUCTED BY THE COUNTY INSPECTOR.
- OBSERVATION AND DOCUMENTATION OF EXISTING SITE CONDITIONS ADJACENT TO THE LIMITS OF CONSTRUCTION BEFORE CONSTRUCTION, INCLUDING WATERWAYS AND POTENTIAL OUTFALL DISCHARGE ROUTES, RIGHTS-OF-WAY AND EASEMENTS, BUFFER ZONES, AND CRITICAL ENVIRONMENTAL FEATURES.
- SPECIAL SITE CONDITIONS AND PLAN PROVISIONS, SUCH AS PROTECTION OF WATERWAYS, CRITICAL ENVIRONMENTAL FEATURES, TREES TO BE SAVED, AND FUTURE HOMEBUILDING ON SUBDIVISION LOTS.
- RAIN GAGE LOCATION OR RAINFALL INFORMATION SOURCE TO BE USED DURING CONSTRUCTION AND REPORTING.
- FINAL INSPECTION AND ACCEPTANCE REQUIREMENTS, INCLUDING THE ENGINEER'S CONCURRENCE LETTER, COMPLETION OF REVEGETATION COVERAGE BEFORE THE NOTICE OF TERMINATION IS SUBMITTED BY THE PRIMARY OPERATOR, STABILIZATION OF RESIDENTIAL SUBDIVISION LOTS, REMOVAL OF TEMPORARY SEDIMENT CONTROLS, THE CERTIFICATE OF COMPLIANCE AND RELEASE OF ESC FISCAL SURETY.
- EXCHANGE OF TELEPHONE NUMBERS AND CONTACT INFORMATION FOR THE PRIMARY PARTICIPANTS.

THE DESIGN ENGINEER SHALL PREPARE AND DISTRIBUTE NOTES, KEY DECISIONS, AND FOLLOW UP FROM THE PRECONSTRUCTION CONFERENCE TO ALL PARTICIPANTS WITHIN THREE BUSINESS DAYS AFTER COMPLETION OF THE CONFERENCE.



NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH SUBDIVISION CONSTRUCTION PLANS

GENERAL NOTES (3 OF 4)

PROJECT NO: 1636-11741

DESIGNED BY: BG

DRAWN BY: TAM

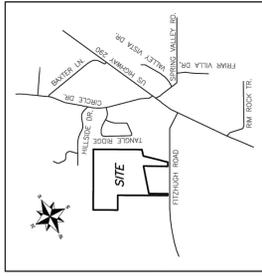
CHECKED BY: CR

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

12/18/2025



FINAL PLAT OF ORCHARD RANCH SUBDIVISION



BENCHMARK INFORMATION: T.B.M. = 4" ALUMINUM DISK IN CONCRETE FOUND SURFACE COORDINATES: N = 10054484.42 E = 3046483.09 GRID COORDINATES: N = 1117.36 E = 3046178.147 VERTICAL DATUM: NAVD 88 (GEOID 18)

LEGEND: 1/2" IRON ROD FOUND (UNLESS NOTED) 1/2" IRON ROD WITH CAP FOUND (UNLESS NOTED) 1/2" IRON ROD WITH G&R CAP SET CONCRETE MONUMENT SET G&R SURVEYING, LLC CALCULATED POINT S.L.E. SIGHT LINE EASEMENT (XXX) RECORD INFORMATION ... SIDEWALK REQUIRED BEARING BASIS: TEXAS CENTRAL ZONE STATE PLANE COORDINATES (NAD 83) DISTANCES SHOWN HEREON ARE SURFACE VALUES COMBINED SCALE FACTOR IS 1.000100

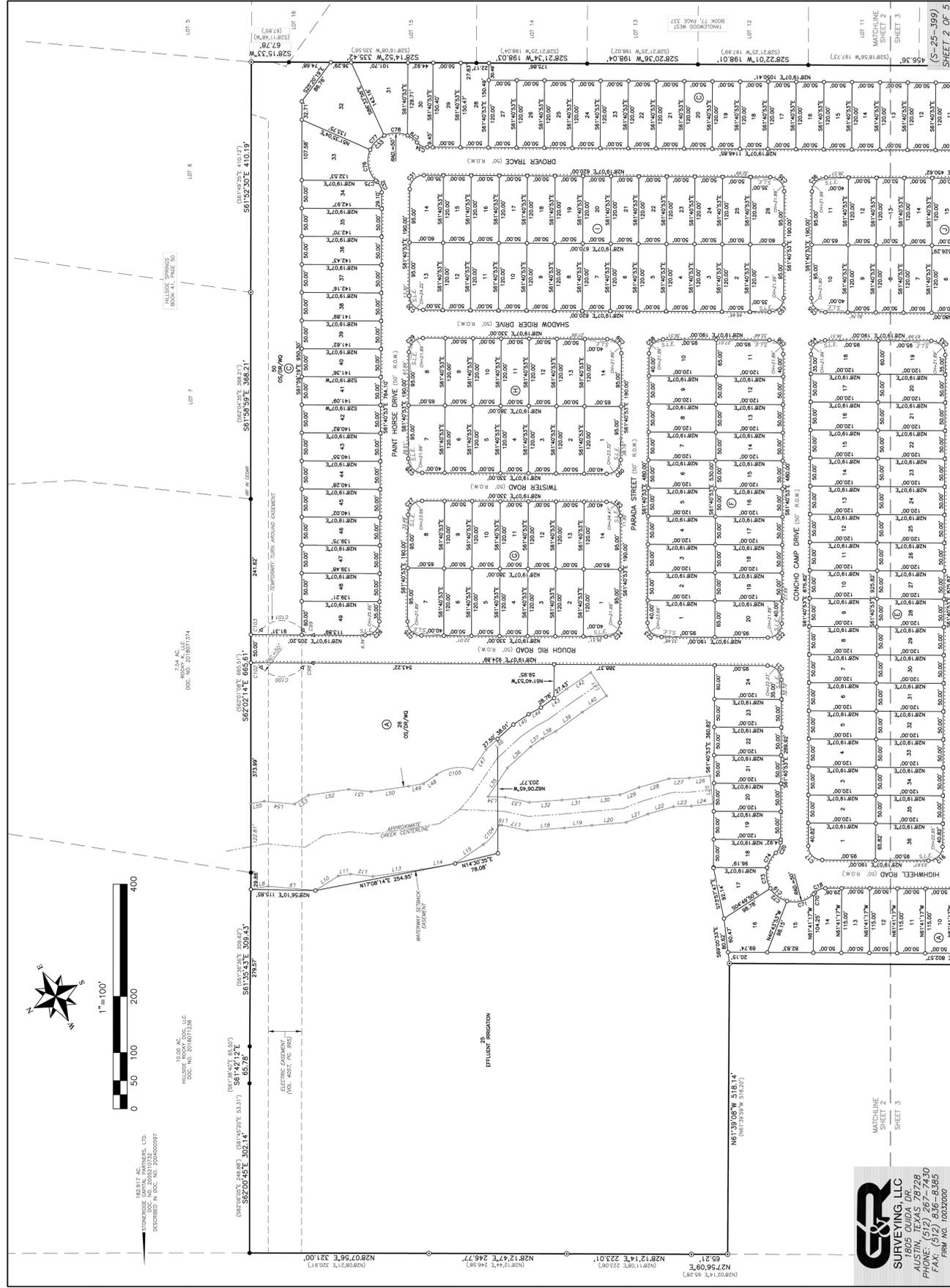
OWNER AND DEVELOPER: CLAYTON PROPERTIES GROUP, INC. 6720 VAUGHT RANCH ROAD, SUITE 200 AUSTIN, TEXAS 78730 SUPERVISOR: G&R SURVEYING, LLC 1805 OUIDA DRIVE AUSTIN, TEXAS 78728 ENGINEER: GRAY ENGINEERING, INC. 8834 N. CAPITAL OF TEXAS HWY., SUITE 140 AUSTIN, TEXAS 78759

TRAVIS COUNTY CONSUMER PROTECTION NOTICE FOR HOMEBUYERS:

IF YOU ARE BUYING A LOT OR HOME, YOU SHOULD DETERMINE WHETHER IT IS INSIDE OR OUTSIDE THE CITY LIMITS. DEPENDING ON STATE LAW AND OTHER FACTORS, LAND OUTSIDE THE CITY LIMITS MAY BE SUBJECT TO FEWER LOCAL GOVERNMENT CONTROLS OVER THE DEVELOPMENT AND USE OF LAND THAN INSIDE THE CITY LIMITS. BECAUSE OF THIS, LOCAL GOVERNMENT MAY NOT BE ABLE TO RESTRICT THE NATURE OR EXTENT OF DEVELOPMENT NEAR THE LOT OR HOME NOR PROHIBIT NEARBY LAND USES THAT ARE INCOMPATIBLE WITH A RESIDENTIAL NEIGHBORHOOD. THIS CAN AFFECT THE VALUE OF YOUR PROPERTY. TRAVIS COUNTY REQUIRES THIS NOTICE TO BE PLACED ON SUBDIVISION PLATS. IT IS NOT A STATEMENT OR REPRESENTATION OF THE OWNER OF THE PROPERTY, THE SUBDIVIDER, OR THEIR REPRESENTATIVES.

G&R SURVEYING, LLC 1805 OUIDA DR. AUSTIN, TEXAS 78728 PHONE: (512) 267-7430 FAX: (512) 836-8365 FIRM NO. 10022000

(5-25-399) SHEET 1 OF 5



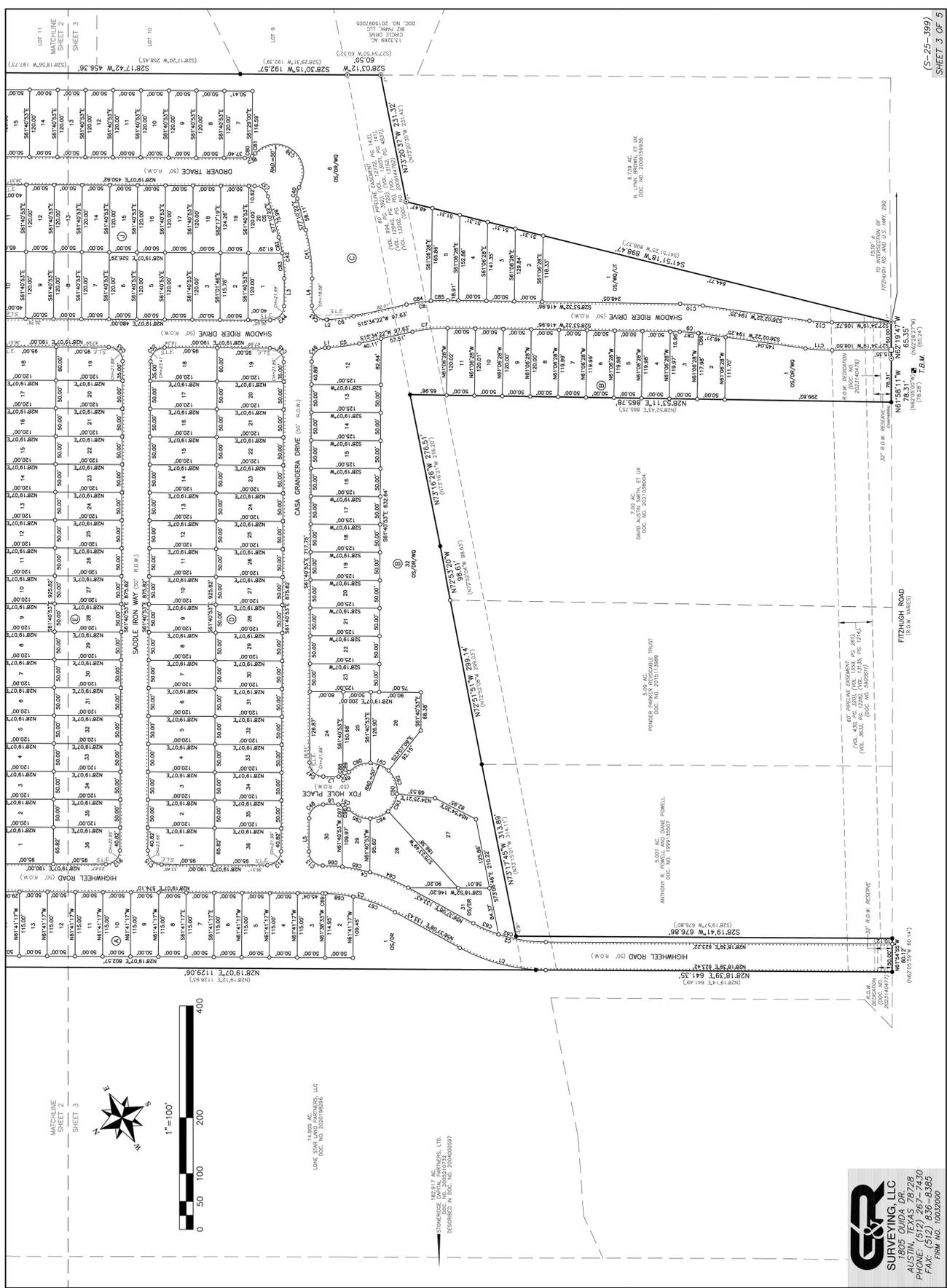
Professional Engineer seal for Brandon S. Gilmore, License No. 10022000, State of Texas, dated 12/18/2025.

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

PROJECT NO: 1636-11741 DESIGNED BY: BG DRAWN BY: TAM CHECKED BY: CR

ORCHARD RANCH SUBDIVISION CONSTRUCTION PLANS

GRAY ENGINEERING logo and contact information: 8834 N. Capital of Texas Hwy., Suite 140 Austin, Texas 78759 (512) 452-0371 FAX: (512) 454-9933 TBPELS FIRM #2946



(S-25-399)
SHEET 3 OF 5

G&R
SURVEYING, LLC
1805 QUIDA DR.
AUSTIN, TEXAS 78728
PHONE: (512) 267-7430
FAX: (512) 636-6365
FIRM NO. 10022000

FINAL PLAT OF
ORCHARD RANCH SUBDIVISION

LINE TABLE

LINE NO.	BEARING	DISTANCE
L1	S28°17'42"W	456.36
L2	S28°17'42"W	456.36
L3	N12°00'00"W	50.00
L4	N12°00'00"W	50.00
L5	N12°00'00"W	50.00
L6	N12°00'00"W	50.00
L7	N12°00'00"W	50.00
L8	N12°00'00"W	50.00
L9	N12°00'00"W	50.00
L10	N12°00'00"W	50.00
L11	N12°00'00"W	50.00
L12	N12°00'00"W	50.00
L13	N12°00'00"W	50.00
L14	N12°00'00"W	50.00
L15	N12°00'00"W	50.00
L16	N12°00'00"W	50.00
L17	N12°00'00"W	50.00
L18	N12°00'00"W	50.00
L19	N12°00'00"W	50.00
L20	N12°00'00"W	50.00
L21	N12°00'00"W	50.00
L22	N12°00'00"W	50.00
L23	N12°00'00"W	50.00
L24	N12°00'00"W	50.00
L25	N12°00'00"W	50.00
L26	N12°00'00"W	50.00
L27	N12°00'00"W	50.00
L28	N12°00'00"W	50.00
L29	N12°00'00"W	50.00
L30	N12°00'00"W	50.00
L31	N12°00'00"W	50.00
L32	N12°00'00"W	50.00
L33	N12°00'00"W	50.00
L34	N12°00'00"W	50.00
L35	N12°00'00"W	50.00
L36	N12°00'00"W	50.00
L37	N12°00'00"W	50.00
L38	N12°00'00"W	50.00
L39	N12°00'00"W	50.00
L40	N12°00'00"W	50.00
L41	N12°00'00"W	50.00
L42	N12°00'00"W	50.00
L43	N12°00'00"W	50.00
L44	N12°00'00"W	50.00
L45	N12°00'00"W	50.00
L46	N12°00'00"W	50.00
L47	N12°00'00"W	50.00
L48	N12°00'00"W	50.00
L49	N12°00'00"W	50.00
L50	N12°00'00"W	50.00
L51	N12°00'00"W	50.00
L52	N12°00'00"W	50.00
L53	N12°00'00"W	50.00
L54	N12°00'00"W	50.00
L55	N12°00'00"W	50.00
L56	N12°00'00"W	50.00
L57	N12°00'00"W	50.00
L58	N12°00'00"W	50.00
L59	N12°00'00"W	50.00
L60	N12°00'00"W	50.00

STREET TABLE

STREET NAME	R.O.W. WIDTH	LENGTH (L.F.)	CLASSIFICATION
HIGHWHEEL ROAD	50'	1853'	LOCAL
SHADOW RIDER DRIVE	50'	2373'	LOCAL
PARADISE DRIVE	50'	1771'	LOCAL
CONCHO CAMP DRIVE	50'	1268'	LOCAL
PARADISE STREET	50'	880'	LOCAL
PANT HORSE DRIVE	50'	970'	LOCAL
MASTER ROAD	50'	430'	LOCAL
DRIVER TRACE	50'	1259'	LOCAL
FOX HOLE PLACE	50'	133'	LOCAL

LAND USE SCHEDULE

DESCRIPTION	NO.	ACREAGE
RESIDENTIAL	264	38.881
OPEN SPACE	1	0.128
OPEN SPACE/DRAINAGE	2	0.853
OPEN SPACE/WATER/WATER QUALITY	5	12.295
OPEN SPACE/WATER QUALITY/UTILITY	1	0.823
RECREATION	1	13.532
EIGHT-OF-NINE	-	-
TOTAL	274	82.811

CURVE TABLE

NO.	DELTA	RADIUS	ARC	CHORD	BEARING	CHORD	LENGTH	TANGENT
C1	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C2	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C3	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C4	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C5	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C6	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C7	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C8	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C9	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C10	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C11	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C12	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C13	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C14	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C15	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C16	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C17	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C18	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C19	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C20	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C21	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C22	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C23	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C24	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C25	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C26	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C27	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C28	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C29	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C30	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C31	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C32	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
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C34	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
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C39	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C40	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C41	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C42	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C43	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C44	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C45	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C46	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C47	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C48	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C49	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C50	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C51	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C52	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C53	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C54	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C55	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C56	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C57	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C58	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C59	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
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C63	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C64	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
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C66	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C67	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
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C85	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C86	180.00	100.00	157.08	100.00	N27°14'49"	100.00	157.08	100.00
C87	180.00	100.00	157.08	100.00				

FINAL PLAT OF ORCHARD RANCH SUBDIVISION

PLAT NOTES:

- 1) WATER SERVICE FOR THIS SUBDIVISION WILL BE PROVIDED BY WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY. WASTEWATER SHALL BE PROVIDED BY OWNER AND REGULATED BY TCCD.
2) NO LOT SHALL BE OCCUPIED UNTIL THE STRUCTURE IS CONNECTED TO THE WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY WATER SYSTEM. WASTEWATER TREATMENT PLANT HAS BEEN CONSTRUCTED AND APPROVED FOR OPERATION BY TCCD.
3) THE OWNER OF THIS SUBDIVISION, AND HIS OR HER SUCCESSORS AND ASSIGNS, ASSUMES RESPONSIBILITY FOR PLANS AND SPECIFICATIONS PRESCRIBED BY THE COMMISSIONERS COURT OF TRAVIS COUNTY. THE OWNER UNDERSTANDS AND ACKNOWLEDGES THAT PLAT VARIATION OR REPEATING MAY BE IN VIOLATION OF THE TRAVIS COUNTY SUBDIVISION REGULATIONS.
4) REVIEW, MANUAL RUN-OFF SHALL BE SUBMITTED TO TRAVIS COUNTY FOR APPROVED METHODS.
5) THE OWNER SHALL BE RESPONSIBLE FOR INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES AND THE PROTECTION OF THE TRAVIS COUNTY COMMISSIONERS COURT AT THE OWNER'S EXPENSE. THE PROPERTY OWNER SHALL PROVIDE FOR ACCESS TO THE DRAINAGE EASEMENTS AS WELL AS TO MAINTAIN AN UNOBSTRUCTED NEW CONDUIT WITHIN THE BOUNDS OF SUCH EASEMENT AT ALL TIMES.
6) A TEN FOOT ELECTRIC AND TELECOMMUNICATIONS EASEMENT IS REQUIRED ADJACENT TO ALL STREET RIGHTS-OF-WAY.
7) THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE DRAINAGE FOR THE ENTIRE SUBDIVISION.
8) BY APPROVING THIS PLAT, TRAVIS COUNTY ASSUMES NO OBLIGATION TO CONSTRUCT ANY INFRASTRUCTURE IN CONNECTION WITH THIS SUBDIVISION. THE OWNER SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF ALL INFRASTRUCTURE REQUIRED TO SERVE THIS SUBDIVISION.
9) PARKLAND DEDICATION HAS BEEN SATISFIED VIA PAYMENT OF A FEE IN LIEU OF LAND TO TRAVIS COUNTY FOR 284 DWELLING UNITS.
10) NO OBJECTS, INCLUDING BUT NOT LIMITED TO, BUILDINGS, FENCES, OR LANDSCAPING SHALL BE ALLOWED IN A DRAINAGE EASEMENT EXCEPT AS APPROVED BY TRAVIS COUNTY (AND OTHER APPROPRIATE JURISDICTION).
11) PROPERTY OWNER AND/OR HIS/HER ASSIGNS SHALL PROVIDE FOR ACCESS TO THE DRAINAGE EASEMENTS AS WELL AS TO MAINTAIN AN UNOBSTRUCTED NEW CONDUIT WITHIN THE BOUNDS OF SUCH EASEMENT AT ALL TIMES.
12) ALL DRAINAGE EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE OWNER AND/OR HIS/HER ASSIGNS.
13) A TRAVIS COUNTY DEVELOPMENT PERMIT IS REQUIRED PRIOR TO SITE DEVELOPMENT.
14) BLOCK A, LOTS 1, 25, AND 26; BLOCK B, LOTS 1, 31, AND 32; BLOCK C, LOTS 1, 6, AND 50, WILL BE OWNED AND MAINTAINED BY THE ESTABLISHED HOMEOWNERS ASSOCIATION OF THIS SUBDIVISION.
15) THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE DRAINAGE FOR THE ENTIRE SUBDIVISION.
16) THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE DRAINAGE FOR THE ENTIRE SUBDIVISION.
17) NO LOTS IN THIS SUBDIVISION CONTAIN UPSTREAM BUFFER ZONES AND/OR SENSITIVE FEATURE BUFFER ZONES.
18) HOMEOWNERS ASSOCIATION OF THIS SUBDIVISION. LOTS WILL BE OWNED AND MAINTAINED BY THE ESTABLISHED HOMEOWNERS ASSOCIATION OF THIS SUBDIVISION.
19) PROPERTY OWNER SHALL SUBMIT PLANS FOR CONSTRUCTION ACTIVITY, INCLUDING BUT NOT LIMITED TO, GRADE CHANGES, TEMPORARY OR PERMANENT FENCE INSTALLATIONS, ROADS, ABOVE GROUND APPURTENANCES, SEPTIC SYSTEMS) WITHIN THE BOUNDS OF SUCH EASEMENT AT ALL TIMES.
20) PROPERTY OWNER SHALL NOTIFY PEC 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
21) HABITABLE STRUCTURE WITHIN FLOOD TRANSMISSION EASEMENT AND RIGHT-OF-WAY.
22) PROPERTY OWNER SHALL NOT STORE MATERIALS, EQUIPMENT, OR SPOILS WITHIN THE PEC ELECTRIC TRANSMISSION EASEMENT AND A GEE WITH A MINIMUM OF 15 FEET OPENING SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE INSTALLATION OF A FEE LOCK.
23) TEMPORARY OR PERMANENT FENCING LOCATED WITHIN THE PEC ELECTRIC TRANSMISSION EASEMENT SHALL NOT INTERFERE WITH PEC'S 24-HOUR ACCESS TO FACILITIES INSTALLED WITHIN THE EASEMENT.
24) AS DEPicted ON THE PLAT, EACH PROTECTIVE EASEMENT FROM A CRITICAL ENVIRONMENTAL FEATURE, INCLUDING A CRITICAL ENVIRONMENTAL FEATURE, NATURAL SITE, NATURAL VEGETATIVE COVER, MUST BE RETAINED. CONSTRUCTION ACTIVITIES, WASTEWATER DISPOSAL, AND OTHER ACTIVITIES THAT MAY ADVERSELY AFFECT A TREE OF EIGHT INCHES OR MORE IN TRUNK DIAMETER (MEASURED AT FOUR INCHES ABOVE THE GROUND) SHALL BE PROHIBITED. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE INSTALLATION OF A FEE LOCK.
25) THE SETBACK AREA IDENTIFIED FOR EACH WATERWAY IS A PROTECTIVE EASEMENT THAT MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION, DEVELOPMENT, AND OTHER ALTERNATIVES EXCEPT WHEN SPECIFICALLY APPROVED IN A TRAVIS COUNTY DEVELOPMENT PERMIT.
26) DEVELOPMENT PERMIT AND, WHEN APPLICABLE, OBTAIN AND IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP REQUIRES IMPLEMENTATION OF TEMPORARY AND PERMANENT BEST MANAGEMENT PRACTICES, INCLUDING EROSION CONTROL, FOR PROTECTION OF STORM WATER RUNOFF QUALITY, IN ACCORDANCE WITH THE TRAVIS COUNTY CODE.
27) THE OWNER SHALL BE RESPONSIBLE FOR MAINTAINING AND OPERATING ALL PERMANENT WATER QUALITY CONTROLS IN COMPLIANCE WITH ALL APPLICABLE STANDARDS AND REQUIREMENTS OF THE TRAVIS COUNTY CODE.
28) AN ACTIVITY THAT MAY ADVERSELY AFFECT A TREE OF EIGHT INCHES OR MORE IN TRUNK DIAMETER (MEASURED AT FOUR INCHES ABOVE THE GROUND) SHALL BE PROHIBITED. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE INSTALLATION OF A FEE LOCK.
29) EROSION/SEDIMENTATION CONTROLS ARE REQUIRED FOR ALL CONSTRUCTION ON EACH LOT INCLUDING SINGLE FAMILY AND DUPLEX CONSTRUCTION PURSUANT TO THE LAND DEVELOPMENT CODE AND THE ENVIRONMENTAL CRITERIA MANUAL.
30) THE OWNER SHALL CONSTRUCT AND POST FISCAL SECURITY FOR SIDEWALKS AND CURB RAMPS ON ARTERIAL AND COLLECTOR STREETS. THE OWNER SHALL CONSTRUCT AND POST FISCAL SECURITY FOR SIDEWALKS AND CURB RAMPS ON ARTERIAL AND COLLECTOR STREETS. THE OWNER SHALL CONSTRUCT AND POST FISCAL SECURITY FOR SIDEWALKS AND CURB RAMPS ON ARTERIAL AND COLLECTOR STREETS. THE OWNER SHALL CONSTRUCT AND POST FISCAL SECURITY FOR SIDEWALKS AND CURB RAMPS ON ARTERIAL AND COLLECTOR STREETS.
31) OCCUR SHORTLY AFTER STREET CONSTRUCTION, THE COUNTY EXECUTIVE MAY GRANT VARIANCES WHEREBY SIDEWALKS AND CURB RAMPS MAY BE CONSTRUCTED AND POSTED IN LIEU OF THE OWNER.

TRAVIS COUNTY COMMISSIONERS COURT RESOLUTION

IN APPROVING THIS PLAT BY THE COMMISSIONERS COURT OF TRAVIS COUNTY, TEXAS, ASSUMES NO OBLIGATION TO BUILD THE INFRASTRUCTURE REQUIRED TO SERVE THIS SUBDIVISION. THE OWNER SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF ALL INFRASTRUCTURE REQUIRED TO SERVE THIS SUBDIVISION. THE OWNER SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF ALL INFRASTRUCTURE REQUIRED TO SERVE THIS SUBDIVISION.

THIS SUBDIVISION IS NOT LOCATED IN THE CITY OF AUSTIN'S EXTRA-TERRITORIAL JURISDICTION. IN APPROVING THIS PLAT, THE COMMISSIONERS COURT OF TRAVIS COUNTY, TEXAS, ASSUMES NO OBLIGATION TO BUILD THE INFRASTRUCTURE REQUIRED TO SERVE THIS SUBDIVISION. THE OWNER SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF ALL INFRASTRUCTURE REQUIRED TO SERVE THIS SUBDIVISION.

BY APPROVING THIS PLAT, THE TRAVIS COUNTY ASSUMES NO OBLIGATION TO CONSTRUCT ANY INFRASTRUCTURE IN CONNECTION WITH THIS SUBDIVISION. ANY SUBDIVISION INFRASTRUCTURE REQUIRED FOR THE DEVELOPMENT OF THE LOTS IN THIS SUBDIVISION SHALL BE THE RESPONSIBILITY OF THE OWNER AND HIS SUCCESSORS AND ASSIGNS. THE TRAVIS COUNTY COMMISSIONERS COURT OF TRAVIS COUNTY, TEXAS, ASSUMES NO OBLIGATION TO BUILD THE INFRASTRUCTURE REQUIRED TO SERVE THIS SUBDIVISION.

STATE OF TEXAS, COUNTY OF TRAVIS, I, DINA LIMON-MERCADO, CLERK OF THE COUNTY COURT OF SAID COUNTY, TEXAS, DO HEREBY CERTIFY THAT ON THIS _____ DAY OF _____, 20____, A.D., I HAVE OPENED THE FILING FOR RECORD OF THIS PLAT AND THAT SAID ORDER HAS BEEN ENTERED IN THE MINUTES OF SAID COURT.

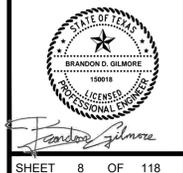
STATE OF TEXAS, COUNTY OF TRAVIS, I, DINA LIMON-MERCADO, CLERK OF THE COUNTY COURT OF SAID COUNTY, TEXAS, DO HEREBY CERTIFY THAT ON THIS _____ DAY OF _____, 20____, A.D., I HAVE OPENED THE FILING FOR RECORD OF THIS PLAT AND THAT SAID ORDER HAS BEEN ENTERED IN THE MINUTES OF SAID COURT.

STATE OF TEXAS, COUNTY OF TRAVIS, I, DINA LIMON-MERCADO, CLERK OF THE COUNTY COURT OF SAID COUNTY, TEXAS, DO HEREBY CERTIFY THAT ON THIS _____ DAY OF _____, 20____, A.D., I HAVE OPENED THE FILING FOR RECORD OF THIS PLAT AND THAT SAID ORDER HAS BEEN ENTERED IN THE MINUTES OF SAID COURT.

STATE OF TEXAS, COUNTY OF TRAVIS, I, DINA LIMON-MERCADO, CLERK OF THE COUNTY COURT OF SAID COUNTY, TEXAS, DO HEREBY CERTIFY THAT ON THIS _____ DAY OF _____, 20____, A.D., I HAVE OPENED THE FILING FOR RECORD OF THIS PLAT AND THAT SAID ORDER HAS BEEN ENTERED IN THE MINUTES OF SAID COURT.



PHILIP L. McLAUGHLIN, R.E.P.L.S. NO. 5330, GEAR SURVEYING, LLC, 1805 GUIDA DR, AUSTIN, TX 78728, (512) 267-7430. BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED _____, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE HAS EXECUTED THE SAME IN THE CAPACITY THEREIN STATED FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.



NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

CHECKED BY: CR, DRAWN BY: TAM, DESIGNED BY: BG, PROJECT NO: 1636-11741

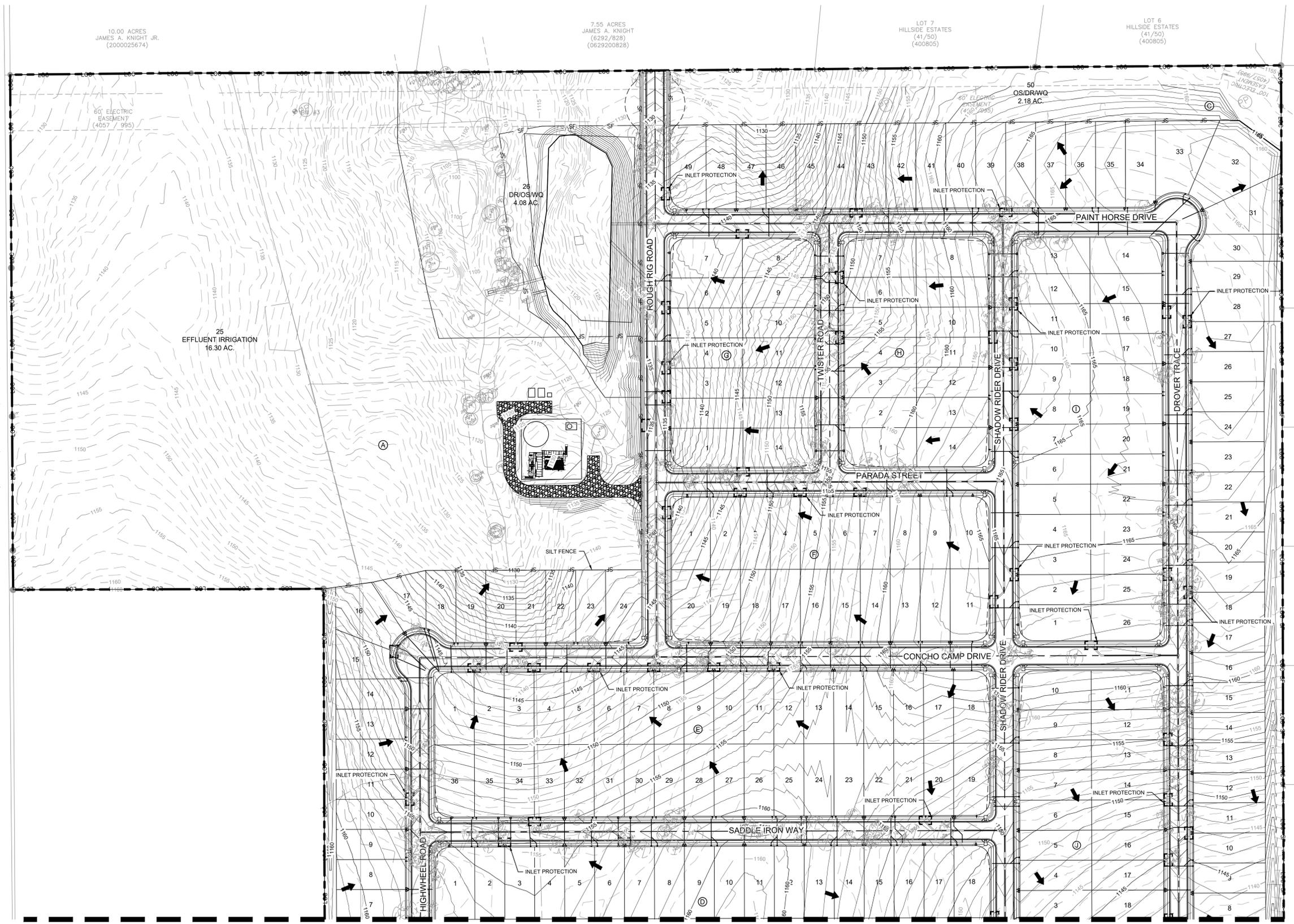
FINAL PLAT (3 OF 3)

ORCHARD RANCH SUBDIVISION CONSTRUCTION PLANS

Table with columns: NO., BY, DATE, REVISION DESCRIPTION

GRAY ENGINEERING logo and contact information: 8834 N. Capital of Texas Hwy., Suite 140, Austin, Texas 78759, (512) 452-0371, FAX: (512) 454-9933, TBPELS FIRM #2946

H:\PROJECTS\1636 - BROHN HOMES\1174 - ORCHARD RANCH\HEADSHEETS\1174-C-ESC.DWG DATE: 12/30/2025 1:30:08 PM BY: BGL/MORE



MATCHLINE TO SHEET 10



SCALE: 1" = 80'
GRAPHIC SCALE IN FEET

LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	LIMITS OF CONSTRUCTION
	SILT FENCE
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	PROPOSED MAJOR CONTOURS
	PROPOSED MINOR CONTOURS
	TREE PROTECTION
	INLET PROTECTION
	ROCK BERM
	FLOW DIRECTION
	DIVERSION DIKE

	CONSTRUCTION ENTRANCE
	CONCRETE WASHOUT AREA
	SPOILS PILE
	CEP BUFFER
	WETLAND

- TRAVIS COUNTY ESC NOTES:**
- IF AN ADDITIONAL CONCRETE WASHOUT IS NEEDED, THE LOCATION WILL BE DETERMINED ONCE CONSTRUCTION HAS BEGUN AND WILL BE PROPERLY NOTATED ON THE ESC PLAN SHEET AND SWP3 AT THAT TIME.
 - ALL REQUIRED NOTICES AND PERMITS MUST BE PLACED IN A HIGHLY VISIBLE LOCATION ON SITE BEFORE THE COMMENCEMENT OF CONSTRUCTION.
 - ALL EROSION AND SEDIMENTATION CONTROLS (ESC) MUST BE INSTALLED PRIOR TO ANY DISTURBANCE TO THE PROJECT SITE. INSTALL SILT FENCE ACCORDINGLY FOR RUN-ON DIVERSION OR OFF-SITE SEDIMENT CONTROL DEPENDING ON UP OR DOWN SLOPE, FACING POST SIDE ON THE DOWN GRADIENT SIDE.
 - ALL ESC USED ON SITE MUST BE REGULARLY MONITORED AND MAINTAINED AS NEEDED.
 - MUD AND/OR DIRT TRACKED INTO THE ROADWAY MUST BE IMMEDIATELY REMOVED UPON DISCOVERY.
 - EXCESS MATERIALS THAT WILL BE TRANSPORTED TO AN OFF-SITE LOCATION MUST HAVE THAT LOCATION CLEARED BY COUNTY INSPECTOR.
 - LOOSE TRASH AND DEBRIS MUST BE DISPOSED OF PROPERLY ON SITE. CONTRACTOR SHALL MAINTAIN AND UTILIZE DUST CONTROL FOR THE DURATION OF THE PROJECT.
 - THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING ONTO THE PUBLIC ROADWAY ON AN ONGOING/REGULAR BASIS.
 - INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY UPON INLET INSTALLATION.
 - INITIATE TEMPORARY STABILIZATION WHEN CONSTRUCTION CEASES IN A DISTURBED AREA FOR 14 DAYS.
 - INITIATE PERMANENT STABILIZATION IMMEDIATELY ONCE WORK HAS CEASED AND FINAL GRADE HAS BEEN ACHIEVED.
 - ALL DISTURBED/BARE AREAS WILL REQUIRE PERMANENT STABILIZATION BEFORE FINAL ACCEPTANCE CAN BE ACHIEVED. AVOID DISTURBING AREAS OF THE PROJECT THAT ARE NOT NECESSARY FOR CONSTRUCTION.
 - COUNTY INSPECTOR MAY REQUEST ADDITIONAL CONTROLS BE INSTALLED ON SITE AS NEEDED.
 - TEMPORARY ESC MEASURES SHALL REMAIN IN PLACE IN ALL DISTURBED AREAS UNTIL ADEQUATE STABILIZATION HAS BEEN ACHIEVED.
 - CONTRACTOR MUST REMOVE SEDIMENT FROM ALL STORM SEWER INLET BOXES, LINES, PIPES AND CULVERTS BEFORE CONDITIONAL FINAL ACCEPTANCE CAN OBTAINED.
 - TRAVIS COUNTY REQUIRES CERTIFIED SWP3 INSPECTORS TO CONDUCT SWP3 INSPECTIONS AND REPORTING ON ALL PROJECTS WITH ONE ACRE OF DISTURBANCE AND LARGER.
 - PERMITTEE SHALL INSPECT ALL INLET PROTECTION DEVICES AS PART OF THE WEEKLY SWP3 REPORT. UPON RECEIVING A FORECAST CALLING FOR A RAIN EVENT FOR AN EXTENDED PERIOD, MODIFICATION OF INLET PROTECTION SHOULD BE MADE TO PREVENT FLOODING OR PONDING OF WATER IF TRAFFIC OR PROPERTY CONCERNS ARISE.

8834 N. Capital of Texas Hwy.
Suite 140
Austin, Texas 78759
(512) 452-0371
FAX (512) 454-9933
TBPELS FRM # 2946

NO.	BY	DATE	REVISION DESCRIPTION

**ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS**

**EROSION AND SEDIMENT
CONTROL PLAN (1 OF 2)**

PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

NOTICE:
ALTERATION OF A
SEALED DRAWING
WITHOUT PROPER
NOTIFICATION TO THE
RESPONSIBLE ENGINEER
IS A VIOLATION OF THE
TEXAS ENGINEERING
PRACTICE ACT.

12/18/2025

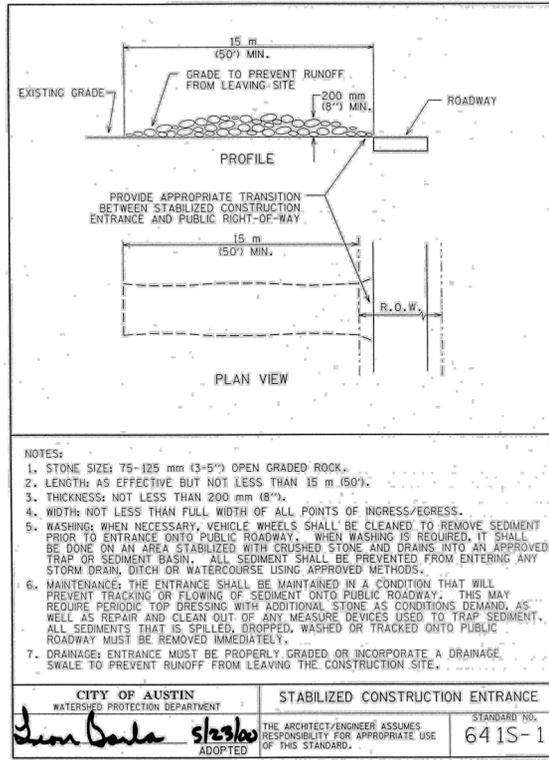


Figure 1.4.5.G.1 Silt Fence Installation

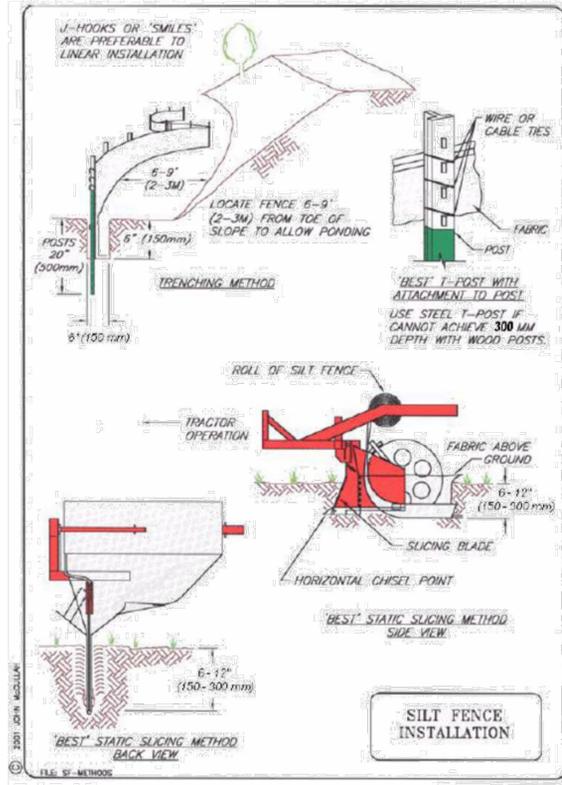


Figure 1.4.5.G.3 Silt Fence Placement for Perimeter Control

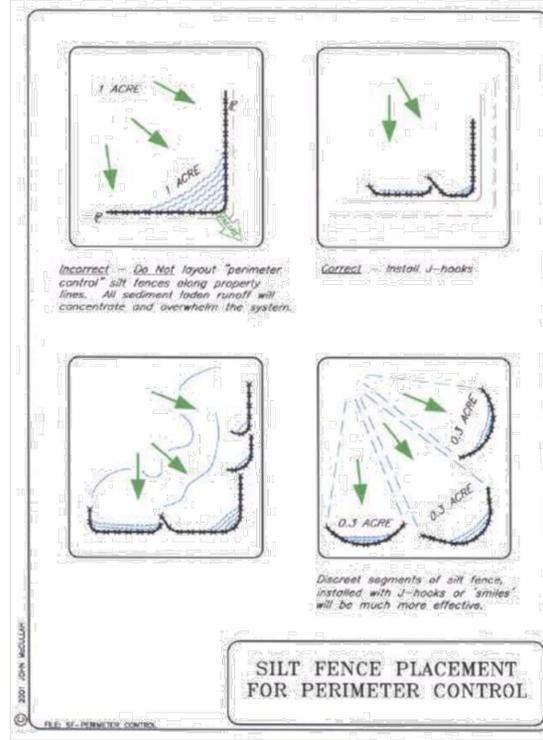
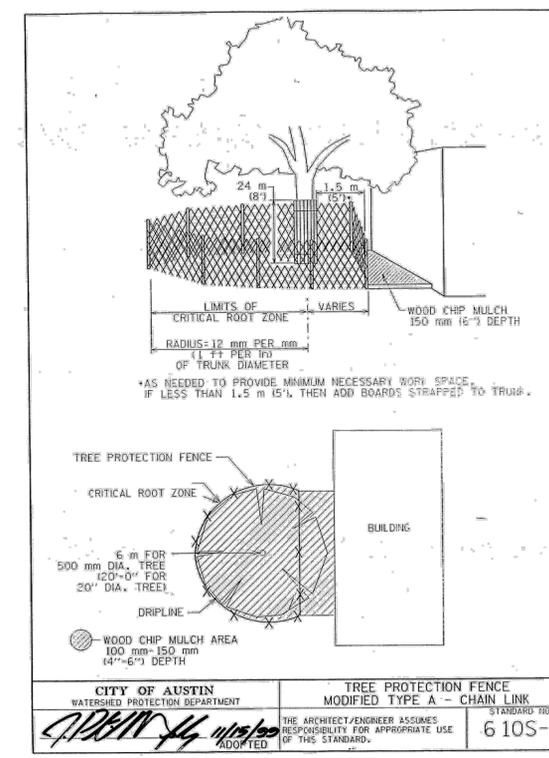
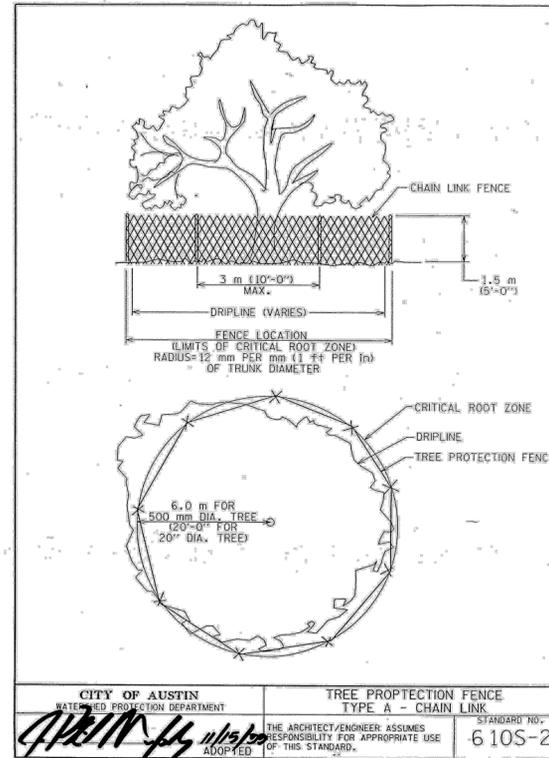
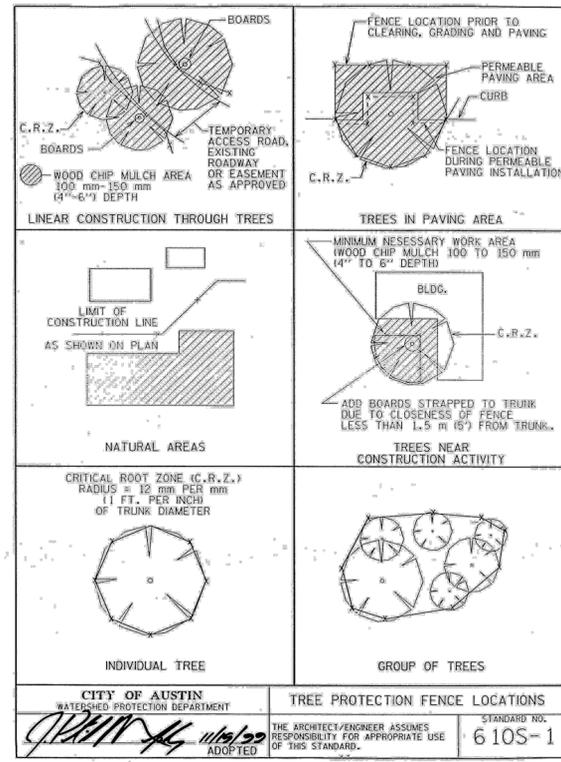
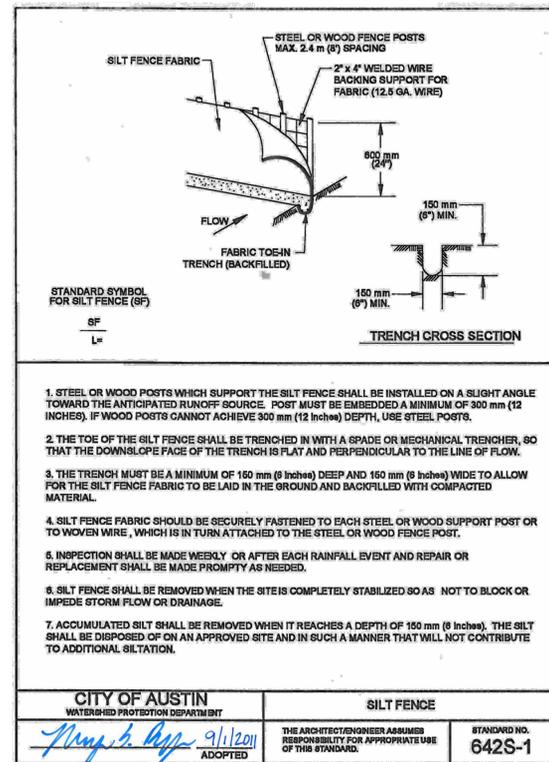
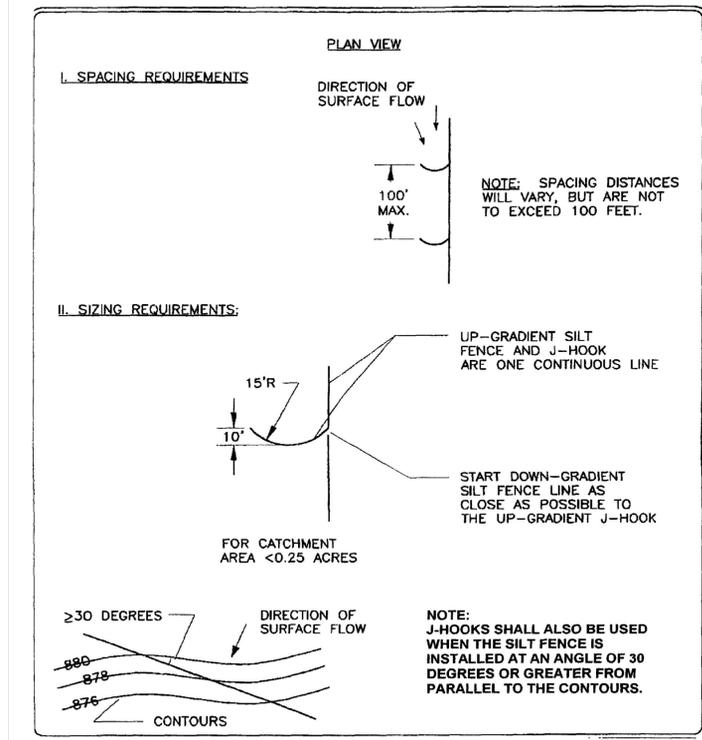
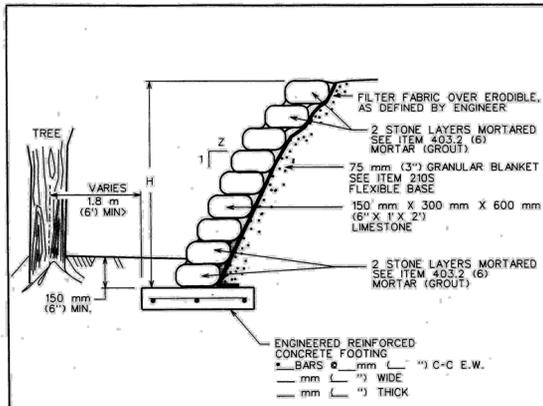


Figure 1.4.5.G.4 Silt Fence J - Hook Detail



NO.	BY	DATE	REVISION DESCRIPTION



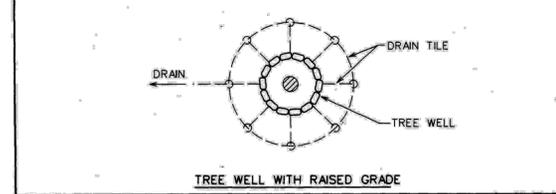
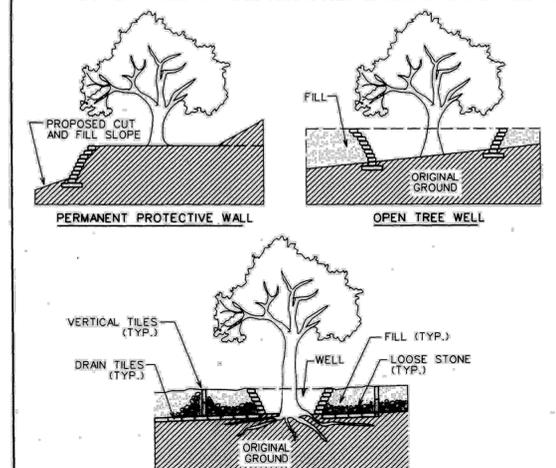
THIS STANDARD APPLIES ONLY UNDER THE FOLLOWING CONDITIONS:

- H AND Z ARE SPECIFIED ON THE DRAWING.
- GROUNDWATER IS NO HIGHER THAN THE BOTTOM OF THE FOOTING.
- THE MATERIAL BELOW THE FOOTING IS FIRM AND STABLE.
- THE MATERIAL BEHIND THE WALL HAS A LEVEL SURFACE.
- THE MATERIAL IN FRONT OF THE WALL HAS A SLOPE NO STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
- THE FACE OF THE WALL IS NO STEEPER THAN 1 HORIZONTAL TO 2 VERTICAL.
- SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN DISTANCE H FROM THE TOP OF WALL.

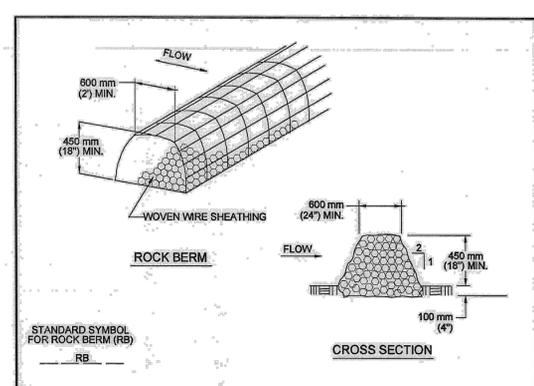
NOTES:

- DESIGN AND CONSTRUCTION OF ROCK WALL SHALL CONFORM TO THE REQUIREMENTS OF CITY CODE 16-7-2, PLACEMENT OF FENCES IN STREET CORNER AREAS, AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL FOR MINIMUM SIGHT DISTANCE.
- CONCRETE SHALL CONFORM TO ITEM 403S, "CONCRETE FOR STRUCTURES".

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	SLOPE PROTECTION AND TREE WELLS	STANDARD NO. 610S-6
<i>APL</i>	ADOPTED	1 OF 2



CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	SLOPE PROTECTION AND TREE WELLS	STANDARD NO. 610S-6
<i>APL</i>	ADOPTED	2 OF 2

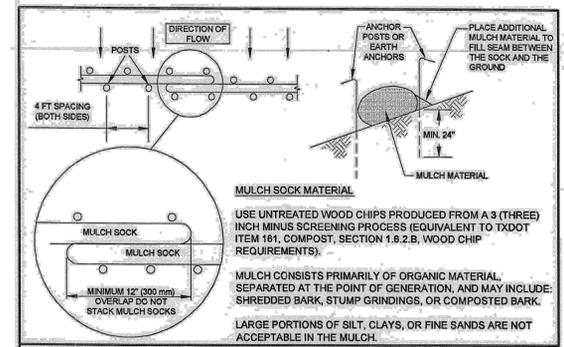


STANDARD SYMBOL FOR ROCK BERM (RB)

NOTES:

- USE ONLY OPEN GRADED ROCK 75 TO 125 mm (3 TO 5") DIAMETER FOR ALL CONDITIONS.
- THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
- 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.
- IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
- WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	ROCK BERM	STANDARD NO. 639S-1
<i>M. S. P. R. E.</i>	ADOPTED	8/24/2010



NOTES:

- STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
- THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OF MULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
- MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
- SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
- MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 14.5.F.1 FOR A GIVEN SLOPE CATEGORY.
- ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	MULCH SOCK	STANDARD NO. 648S-1
<i>M. S. P. R. E.</i>	ADOPTED	08/24/2010

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TBP ELS FIRM # 2946

GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

EROSION AND
SEDIMENT CONTROL
PLAN DETAILS (2 OF 2)

PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

NOTICE:
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12/18/2025

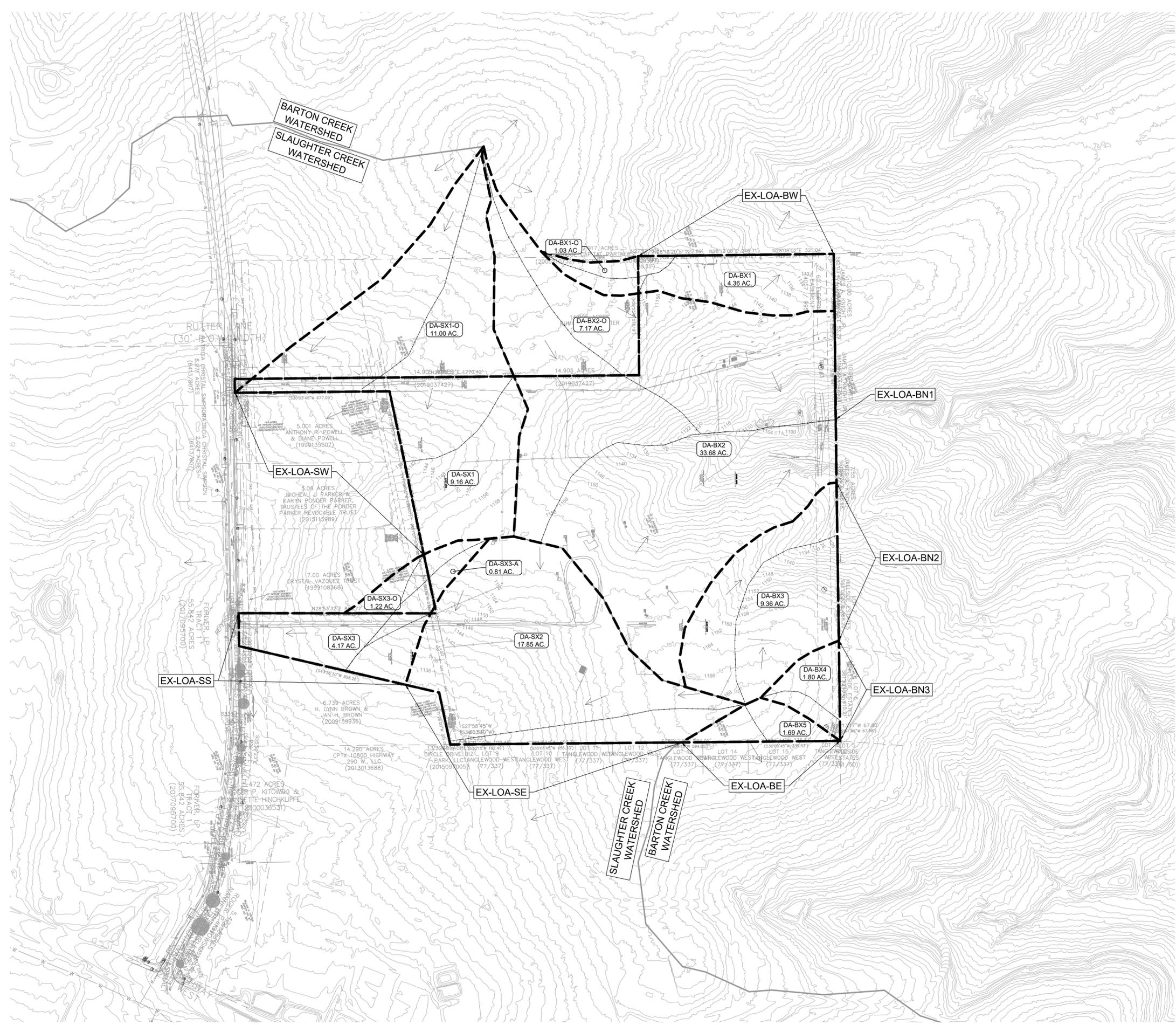
J. Gordon Gilmore

STATE OF TEXAS
BRANDON D. GILMORE
LICENSED PROFESSIONAL ENGINEER

SHEET 12 OF 118

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CD\SHETS\11741-CE-EROS DETL.DWG DATE: 12/30/2025 1:36:50 PM BY: LRYAN

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SCALE: 1" = 200'
GRAPHIC SCALE IN FEET

LEGEND

- PROPERTY BOUNDARY
- - - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- FLOW ARROW
- DRAINAGE DIVIDE
- DA INLET ID
- XX AC DRAINAGE AREA

Pre-Development Runoff					
Drainage Basin	Area AC	Q ₂ cfs	Q ₁₀ cfs	Q ₂₅ cfs	Q ₁₀₀ cfs
BX1	4.36	14.40	26.70	34.90	48.30
BX1-O	1.03	3.00	5.60	7.30	10.10
BX2	33.68	80.90	150.30	197.00	271.60
BX2-O	7.17	17.70	32.90	43.10	59.40
BX3	9.36	23.20	43.10	56.50	77.90
BX4	1.80	5.20	9.60	12.50	17.30
BX5	1.68	5.30	9.80	12.90	17.80
SX1	9.16	25.40	47.00	61.60	84.90
SX1-O	11.00	26.50	49.20	64.40	88.80
SX2	17.85	39.80	74.00	97.10	133.90
SX3	4.17	11.70	21.70	28.50	39.20
SX3-A	0.81	2.10	4.00	5.20	7.20
SX3-O	1.22	3.80	7.00	9.10	12.60

Point/Line of Analysis					
EX-LOA-BW	5.39	17.30	31.90	41.80	57.70
EX-LOA-BN1	40.85	98.60	182.80	239.70	330.60
EX-LOA-BN2	9.36	23.20	43.10	56.50	77.90
EX-LOA-BN3	1.80	5.20	9.60	12.50	17.30
EX-LOA-BE	1.68	5.30	9.80	12.90	17.80
EX-LOA-SW	20.16	50.60	94.10	123.30	170.00
EX-LOA-SE	17.85	39.80	74.00	97.10	133.90
EX-LOA-S5	6.20	17.40	32.10	42.00	57.90

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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

**ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS**

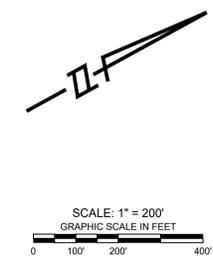
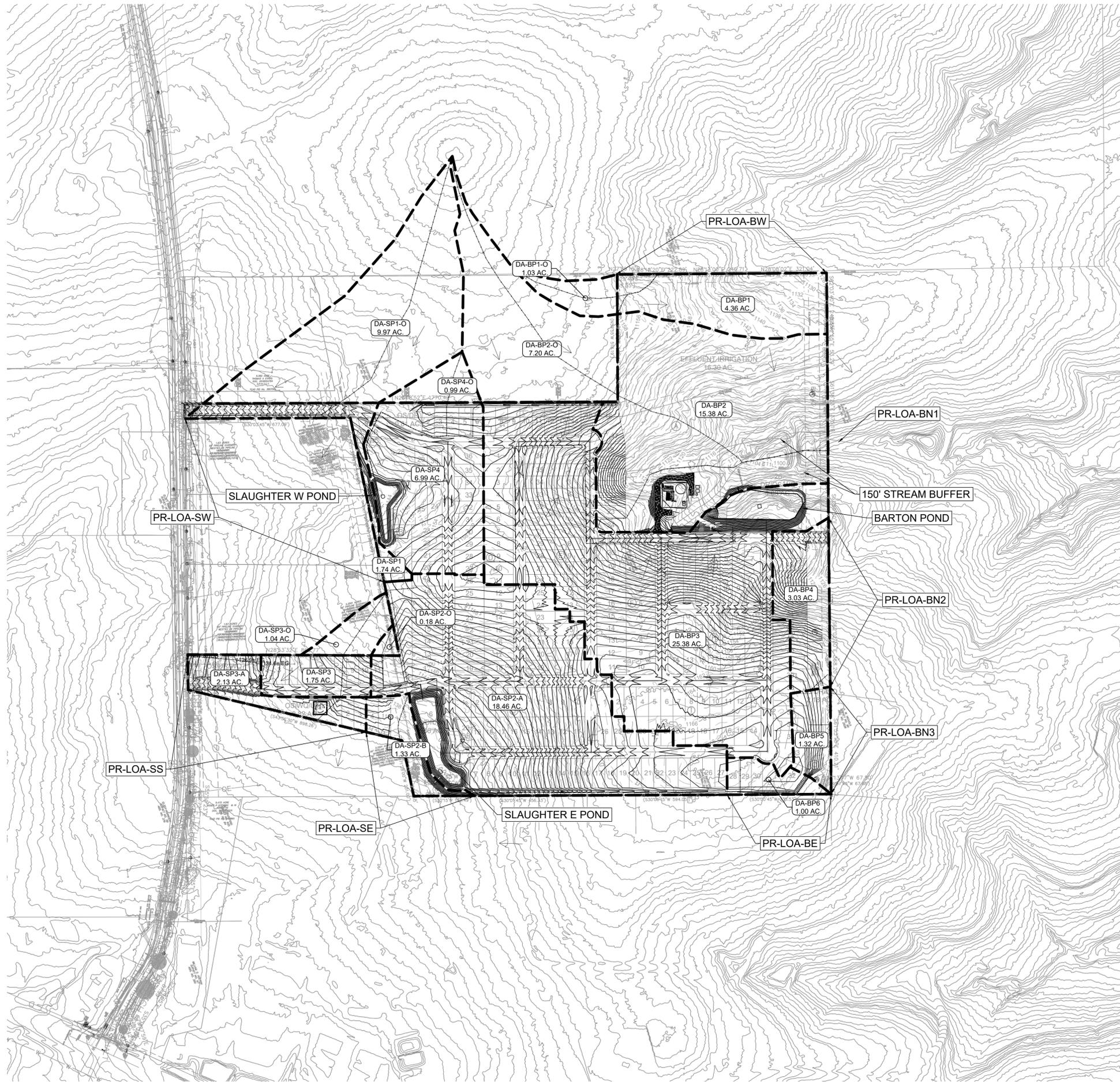
EXISTING HYDROLOGY MAP

PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

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PRACTICE ACT.

12/18/2025

Brandon Gilmore
SHEET 42 OF 118



LEGEND

- PROPERTY BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- FLOW ARROW
- DRAINAGE DIVIDE
- DA DRAINAGE AREA ID
- XX AC DRAINAGE AREA

Post-Development Runoff					
Drainage Basin	Area AC	Q ₂ cfs	Q ₁₀ cfs	Q ₂₅ cfs	Q ₁₀₀ cfs
BP1	4.36	13.40	25.60	33.90	47.40
BP1-O	1.03	3.00	5.60	7.30	10.10
BP2	15.61	52.40	99.30	131.20	182.90
BP2-O	7.20	19.40	36.00	47.10	64.90
BP3	25.15	90.10	154.40	196.90	264.80
BP4	3.03	10.50	18.80	24.30	33.20
BP5	1.32	4.40	8.10	10.60	14.70
BP6	1.00	4.30	7.60	9.80	13.30
SP1	1.93	7.20	12.60	16.30	22.10
SP1-O	0.97	24.30	45.10	59.10	81.40
SP2	19.79	67.50	116.40	148.70	200.20
SP2-O	0.18	0.60	1.10	1.40	2.00
SP3	3.88	14.60	25.60	32.90	44.60
SP3-O	1.04	3.40	6.20	8.10	11.20
SP4	6.81	29.60	51.30	65.70	89.10
SP4-O	0.99	2.90	5.40	7.10	9.80

Point/Line of Analysis	Q ₂	Q ₁₀	Q ₂₅	Q ₁₀₀
PR-LOA-BW	5.39	16.30	30.90	56.80
PR-LOA-BN1	47.96	93.50	164.10	211.60
PR-LOA-BN2	3.03	10.50	18.80	24.30
PR-LOA-BN3	1.32	4.40	8.10	10.60
PR-LOA-BE	1.00	4.30	7.60	9.80
PR-LOA-SW	19.70	49.80	91.10	118.60
PR-LOA-SE	19.97	39.10	73.50	96.30
PR-LOA-SS	4.92	17.80	31.70	40.80

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NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

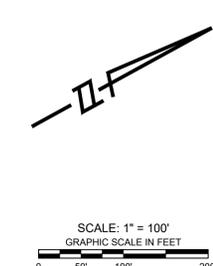
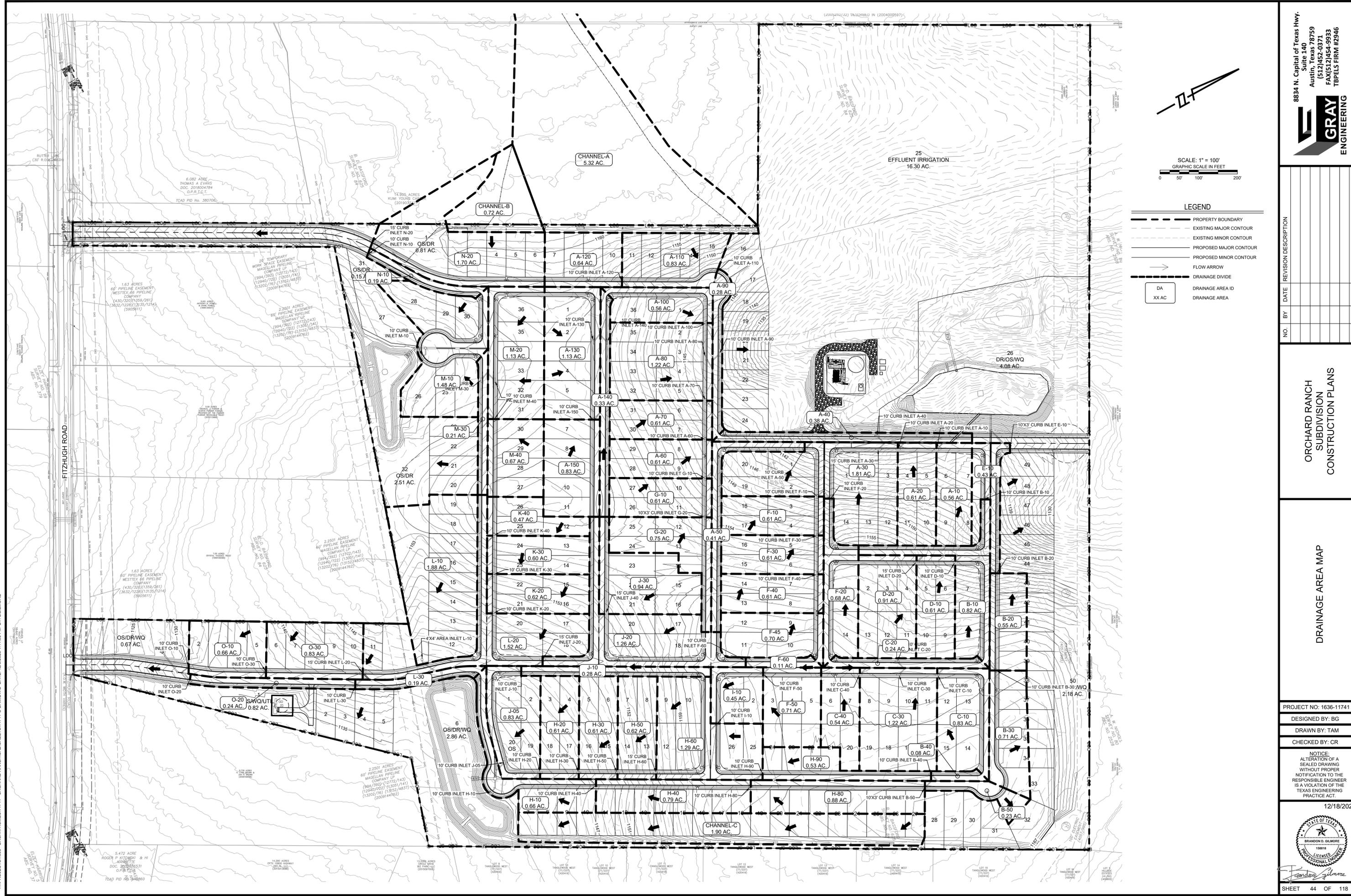
PROPOSED HYDROLOGY MAP

PROJECT NO: 1636-11741
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CHECKED BY: CR

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LEGEND

- PROPERTY BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- FLOW ARROW
- DRAINAGE DIVIDE
- DA DRAINAGE AREA ID
- XX AC DRAINAGE AREA

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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

**ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS**

DRAINAGE AREA MAP

PROJECT NO: 1636-11741
DESIGNED BY: BG
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CHECKED BY: CR

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12/18/2025

Brandon Gilmore

SHEET 44 OF 118

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	2 Yr	10 Yr	25 Yr	100 Yr	Avg. Imperv. per lot 2,500 sf
Asphalt	0.73	0.81	0.86	0.95	
Conc. / Roof	0.75	0.83	0.88	0.97	
Grass (0-2%)	0.21	0.25	0.29	0.36	
Grass (2-7%)	0.29	0.35	0.39	0.46	

Drainage Area	Total Area (sf)	Total Area (Ac)	STREET				IMPERVIOUS				GRASS				COMPOSITE					
			Street Width (ft)	Sidewalk Width (ft)	% of Street	Area Street (sf)	Area Street (Ac)	Area Street (%)	Num Homes in Area	Area Imperv. Op.	Area Imperv. (Ac)	Area Imperv. (%)	Area Grass (sf)	Area Grass (Ac)	Area Grass (%)	Composite 2 Yr "C"	Composite 10 Yr "C"	Composite 25 Yr "C"	Composite 100 Yr "C"	
A-150	36,247	0.83	30	4	50%	250	4,750	0.11	13.1%	5.00	12500	0.29	34.5%	18,997	0.44	52.4%	0.464	0.523	0.568	0.648
A-140	14,524	0.33	30	4	50%	591	11,229	0.26	77.3%	0.00	0	0.00	0.0%	3,295	0.08	22.7%	0.612	0.683	0.731	0.816
A-130	49,411	1.13	30	4	50%	341	6,479	0.15	13.1%	6.00	15000	0.34	30.4%	27,932	0.64	56.5%	0.442	0.500	0.544	0.623
A-120	32,069	0.74	30	4	50%	200	3,800	0.09	11.8%	4.00	10000	0.23	31.2%	18,269	0.42	57.0%	0.440	0.497	0.542	0.620
A-110	41,704	0.96	30	4	50%	235	4,465	0.10	10.7%	5.00	12500	0.29	30.0%	24,739	0.57	59.3%	0.428	0.484	0.528	0.606
A-100	24,314	0.56	30	4	50%	381	7,239	0.17	29.8%	2.00	5000	0.11	20.6%	12,075	0.28	49.7%	0.476	0.536	0.581	0.661
A-90	12,100	0.28	30	4	50%	445	8,455	0.19	69.9%	0.00	0	0.00	0.0%	3,645	0.08	30.1%	0.573	0.641	0.688	0.772
A-80	53,000	1.22	30	4	50%	200	3,800	0.09	7.2%	8.00	20000	0.46	37.7%	29,200	0.67	55.1%	0.451	0.509	0.554	0.632
A-70	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
A-60	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
A-50	17,744	0.41	30	4	50%	792	15,048	0.35	84.8%	0.00	0	0.00	0.0%	2,696	0.06	15.2%	0.651	0.725	0.773	0.860
A-40	16,550	0.38	30	4	50%	655	12,445	0.29	75.2%	0.00	0	0.00	0.0%	4,105	0.09	24.8%	0.601	0.671	0.719	0.804
A-30	78,821	1.81	30	4	50%	365	9,055	0.21	11.5%	10.00	25000	0.57	31.7%	44,766	1.03	56.8%	0.441	0.498	0.543	0.621
A-20	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
A-10	24,329	0.56	30	4	50%	62	1,748	0.04	7.2%	4.00	10000	0.23	41.1%	12,581	0.29	51.7%	0.469	0.529	0.573	0.653
B-50	10,206	0.23	30	4	50%	206	3,914	0.09	38.3%	0.50	1250	0.03	12.2%	5,042	0.12	49.4%	0.476	0.536	0.581	0.661
B-40	3,493	0.08	30	4	50%	150	2,850	0.07	81.6%	0.00	0	0.00	0.0%	643	0.01	18.4%	0.634	0.707	0.755	0.841
B-30	30,902	0.71	30	4	50%	325	6,175	0.14	20.0%	3.00	7500	0.17	24.3%	17,227	0.40	55.7%	0.445	0.503	0.547	0.626
B-20	23,903	0.55	30	4	50%	250	4,750	0.11	19.9%	2.50	6250	0.14	26.1%	12,903	0.30	54.0%	0.455	0.513	0.558	0.637
B-10	35,729	0.82	30	4	50%	762	14,352	0.00	40.2%	2.00	5000	0.11	14.0%	16,377	0.38	45.8%	0.494	0.556	0.602	0.682
C-40	23,500	0.54	30	4	50%	100	1,900	0.04	8.1%	3.50	8750	0.20	37.2%	12,850	0.29	54.7%	0.453	0.511	0.556	0.635
C-30	53,000	1.22	30	4	50%	200	3,800	0.09	7.2%	8.00	20000	0.46	37.7%	29,200	0.67	55.1%	0.451	0.509	0.554	0.632
C-20	10,259	0.24	30	4	50%	430	8,170	0.19	79.6%	0.00	0	0.00	0.0%	2,089	0.05	20.4%	0.624	0.696	0.744	0.830
C-10	36,020	0.83	30	4	50%	425	8,075	0.19	22.4%	4.00	10000	0.23	27.8%	17,945	0.41	49.8%	0.476	0.537	0.582	0.662
D-20	39,750	0.91	30	4	50%	150	2,850	0.07	7.2%	6.00	15000	0.34	37.7%	21,900	0.50	55.1%	0.451	0.509	0.554	0.632
D-10	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
E-10	18,770	0.43	30	4	50%	413	9,972	0.23	53.1%	0.50	1250	0.03	6.7%	7,548	0.17	40.2%	0.522	0.586	0.632	0.714
F-60	4,735	0.11	30	4	50%	180	3,420	0.08	71.9%	0.00	0	0.00	0.0%	1,335	0.03	28.1%	0.584	0.653	0.700	0.784
F-50	30,750	0.71	30	4	50%	140	2,860	0.06	9.7%	4.50	11250	0.26	36.8%	16,840	0.39	54.8%	0.453	0.511	0.555	0.634
F-45	30,586	0.70	30	4	50%	115	2,185	0.05	7.1%	4.00	10000	0.23	32.7%	18,401	0.42	60.2%	0.424	0.480	0.524	0.602
F-40	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
F-30	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
F-20	29,481	0.68	30	4	50%	497	10,403	0.24	35.3%	2.00	5000	0.11	17.0%	14,078	0.32	47.8%	0.485	0.546	0.591	0.672
F-10	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
G-20	32,558	0.75	30	4	50%	295	5,605	0.13	17.2%	4.50	11250	0.26	34.6%	15,703	0.36	48.2%	0.486	0.547	0.592	0.672
G-10	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
H-90	22,887	0.53	30	4	50%	435	8,265	0.19	36.1%	2.00	5000	0.11	21.8%	9,622	0.22	42.0%	0.516	0.579	0.625	0.706
H-80	38,415	0.88	30	4	50%	435	8,265	0.19	21.5%	4.50	11250	0.26	29.3%	18,900	0.43	49.2%	0.480	0.540	0.585	0.666
H-60	56,383	1.29	30	4	50%	515	11,885	0.27	21.1%	6.00	15000	0.34	26.6%	29,498	0.68	52.3%	0.463	0.522	0.567	0.647
H-50	26,792	0.62	30	4	50%	100	1,900	0.04	7.1%	4.00	10000	0.23	37.3%	14,892	0.34	55.6%	0.448	0.506	0.551	0.630
H-40	34,422	0.79	30	4	50%	400	7,600	0.17	22.1%	4.00	10000	0.23	29.1%	16,822	0.39	48.9%	0.482	0.542	0.587	0.667
H-30	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
H-20	26,500	0.61	30	4	50%	100	1,900	0.04	7.2%	4.00	10000	0.23	37.7%	14,600	0.34	55.1%	0.451	0.509	0.554	0.632
H-10	29,891	0.66	20	4	50%	550	7,700	0.18	26.7%	4.00	10000	0.23	34.7%	11,101	0.25	38.5%	0.537	0.601	0.647	0.730
J-05	36,190	0.83	30	4	50%	484	17,819	0.41	49.2%	4.00	10000	0.23	27.6%	8,371	0.19	23.1%	0.615	0.686	0.734	0.819
L-10	19,575	0.45	30	4	50%	280	5,320	0.12	27.2%	2.00	5000	0.11	25.5%	9,255	0.21	47.3%	0.489	0.550	0.596	0.676
J-30	41,067	0.94	30	4	50%	250	4,750	0.11	11.6%	5.00	13750	0.32	33.5%	22,567	0.52	55.0%	0.451	0.509	0.553	0.632
J-20	54,793	1.26	30	4	50%	525	21,139	0.49	38.6%	0.00	0	0.00	0.0%	33,654	0.77	61.4%	0.411	0.466	0.510	0.588
J-10	12,250	0.28	30	4	50%	490	9,310	0.21	76.0%	0.00	0	0.00	0.0%	2,940	0.07	24.0%	0.605	0.676	0.723	0.808
K-40	20,499	0.47	30	4	50%	100	1,900	0.04	9.3%	3.00	7500	0.17	36.6%	11,099	0.25	54.1%	0.456	0.514	0.559	0.638
K-30	26,110	0.60	30	4	50%	100	1,900	0.04	7.3%	4.00	10000	0.23	38.3%	14,210	0.33	54.4%	0.455	0.513	0.557	0.637
K-20	26,890	0.62	30	4	50%	101	1,919	0.04	7.1%	4.00	10000	0.23	37.2%	14,971	0.34	55.7%	0.448	0.506	0.550	0.629
L-30	8,255	0.19	30	4	50%	342	6,498	0.15	78.7%	2.00	5000	0.11	60.6%	-3,243	-0.07	-39.3%	0.946	1.042	1.096	1.194
L-20	66,282	1.52	30	4	50%	887	18,725	0.43	28.3%	5.00	12500	0.29	18.9%	35,057	0.80	52.9%	0.459	0.518	0.562	0.642
L-10	82,096	1.88	30	4	0%	0	0	0.00	0.0%	8.00	20000	0.46	24.4%	62,096	1.43	75.6%	0.342	0.391	0.434	0.509
M-40	29,003	0.67	30	4	50%	198	3,762	0.09	13.0%	4.00	10000	0.23	34.5%	15,241	0.35	52.5%	0.464	0.523	0.567	0.647
M-30	9,091	0.21	30	4	50%	377	7,163	0.16	78.8%	0.00	0	0.00	0.0%	1,928	0.04	21.2%	0.620	0.691	0.739	0.825
M-20	49,427	1.13	30	4	50%	340	6,460	0.15	13.1%	6.00	15000	0.34	30.3%	27,967	0.64	56.6%	0.442	0.499	0.544	0.622
M-10	64,272	1.48	30	4	100%	253	8,602	0.20	13.4%	6.00	15000	0.34	23.3%	40,870	0.93	63.3%	0.406	0.460	0.504	0.581
N-20	105,361	2.42	30	4	50%	471	8,949	0.21	8.5%	5.00	12500	0.29	11.9%	83,912	1.93	79.6%	0.318	0.366	0.408	0.482
N-10	8,100	0.19	30	4	50%	328	6,232	0.14	76.9%	0.00	0									

BARTON VFS N1

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Orchard Ranch - Bart
Date Prepared: 6/11/2024

Additional information is provided for cells with a red triangle in the upper right corner. 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 s

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: Lw = 27.2(Au x P)

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

Table with 2 columns: Criteria, Values. Includes County = Travis, Total project area included in plan = 82.90 acres, Predevelopment impervious area within the limits of the plan = 0.00 acres, etc.

Removed (Total) 23,327
Remaining -15

* The values entered in these fields should be for the total project area.
Number of drainage basins / outfalls areas leaving the plan area = 7

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

Table with 2 columns: Drainage Basin/Outfall Area No., Values. Includes Total drainage basin/outfall area = 2.72 acres, Predevelopment impervious area within drainage basin/outfall area = 0.00 acres, etc.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

- Aquaglogic Cartridge Filter
Bioretention
Cortech 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 (Lr) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: Lr = (BMP efficiency) x P x (A1 x 34.6 + A2 x 0.54)

where: Ac = Total On-Site drainage area in the BMP catchment area
A1 = Impervious area proposed in the BMP catchment area
A2 = Pervious area remaining in the BMP catchment area
Lr = TSS Load removed from this catchment area by the proposed BMP

Ac = 2.29 acres
A1 = 0.52 acres
A2 = 1.77 acres
Lr = 515 lbs

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

Desired Lw THIS BASIN = 515 lbs.
F = 1.00

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

Rainfall Depth = 4.00 inches
Post Development Runoff Coefficient = 0.21
On-site Water Quality Volume = 7066 cubic feet

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

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

Storage for Sediment = 1413
Total Capture Volume (required water quality volume(s) x 1.20) = 8479 cubic feet

BARTON VFS N2

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Orchard Ranch - Bart
Date Prepared: 6/11/2024

Additional information is provided for cells with a red triangle in the upper right corner. 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 s

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: Lw = 27.2(Au x P)

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

Table with 2 columns: Criteria, Values. Includes County = Travis, Total project area included in plan = 82.90 acres, Predevelopment impervious area within the limits of the plan = 0.00 acres, etc.

Removed (Total) 23,327
Remaining -15

* The values entered in these fields should be for the total project area.
Number of drainage basins / outfalls areas leaving the plan area = 7

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

Table with 2 columns: Drainage Basin/Outfall Area No., Values. Includes Total drainage basin/outfall area = 1.13 acres, Predevelopment impervious area within drainage basin/outfall area = 0.14 acres, etc.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

- Aquaglogic Cartridge Filter
Bioretention
Cortech 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 (Lr) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: Lr = (BMP efficiency) x P x (A1 x 34.6 + A2 x 0.54)

where: Ac = Total On-Site drainage area in the BMP catchment area
A1 = Impervious area proposed in the BMP catchment area
A2 = Pervious area remaining in the BMP catchment area
Lr = TSS Load removed from this catchment area by the proposed BMP

Ac = 0.99 acres
A1 = 0.14 acres
A2 = 0.85 acres
Lr = 144 lbs

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

Desired Lw THIS BASIN = 144 lbs.
F = 1.00

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

Rainfall Depth = 4.00 inches
Post Development Runoff Coefficient = 0.16
On-site Water Quality Volume = 2233 cubic feet

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

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

Storage for Sediment = 447
Total Capture Volume (required water quality volume(s) x 1.20) = 2679 cubic feet

SLAUGHTER VFS E

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Orchard Ranch - Slau
Date Prepared: 6/11/2024

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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: Lw = 27.2(Au x P)

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

Table with 2 columns: Criteria, Values. Includes County = Travis, Total project area included in plan = 82.90 acres, Predevelopment impervious area within the limits of the plan = 0.00 acres, etc.

Removed (Total) 23,327
Remaining -15

* The values entered in these fields should be for the total project area.
Number of drainage basins / outfalls areas leaving the plan area = 7

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

Table with 2 columns: Drainage Basin/Outfall Area No., Values. Includes Total drainage basin/outfall area = 2.98 acres, Predevelopment impervious area within drainage basin/outfall area = 0.34 acres, etc.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

- Aquaglogic Cartridge Filter
Bioretention
Cortech 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 (Lr) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: Lr = (BMP efficiency) x P x (A1 x 34.6 + A2 x 0.54)

where: Ac = Total On-Site drainage area in the BMP catchment area
A1 = Impervious area proposed in the BMP catchment area
A2 = Pervious area remaining in the BMP catchment area
Lr = TSS Load removed from this catchment area by the proposed BMP

Ac = 1.90 acres
A1 = 0.34 acres
A2 = 1.06 acres
Lr = 806 lbs

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

Desired Lw THIS BASIN = 806 lbs.
F = 1.00

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

Rainfall Depth = 4.00 inches
Post Development Runoff Coefficient = 0.29
On-site Water Quality Volume = 7989 cubic feet

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

Off-site area draining to BMP = 1.04 acres
Off-site impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0.02
Off-site Runoff Coefficient = 0.02
Off-site Water Quality Volume = 302 cubic feet

Storage for Sediment = 1658
Total Capture Volume (required water quality volume(s) x 1.20) = 9950 cubic feet

SLAUGHTER VFS E2

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Orchard Ranch - Slau
Date Prepared: 6/11/2024

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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: Lw = 27.2(Au x P)

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

Table with 2 columns: Criteria, Values. Includes County = Travis, Total project area included in plan = 82.90 acres, Predevelopment impervious area within the limits of the plan = 0.00 acres, etc.

Removed (Total) 23,327
Remaining -15

* The values entered in these fields should be for the total project area.
Number of drainage basins / outfalls areas leaving the plan area = 7

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

Table with 2 columns: Drainage Basin/Outfall Area No., Values. Includes Total drainage basin/outfall area = 0.39 acres, Predevelopment impervious area within drainage basin/outfall area = 0.14 acres, etc.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

- Aquaglogic Cartridge Filter
Bioretention
Cortech 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 (Lr) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: Lr = (BMP efficiency) x P x (A1 x 34.6 + A2 x 0.54)

where: Ac = Total On-Site drainage area in the BMP catchment area
A1 = Impervious area proposed in the BMP catchment area
A2 = Pervious area remaining in the BMP catchment area
Lr = TSS Load removed from this catchment area by the proposed BMP

Ac = 0.39 acres
A1 = 0.14 acres
A2 = 0.25 acres
Lr = 135 lbs

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

Desired Lw THIS BASIN = 135 lbs.
F = 1.00

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

Rainfall Depth = 4.00 inches
Post Development Runoff Coefficient = 0.35
On-site Water Quality Volume = 2010 cubic feet

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

Off-site area draining to BMP = 1.04 acres
Off-site impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0.00
Off-site Runoff Coefficient = 0.02
Off-site Water Quality Volume = 302 cubic feet

Storage for Sediment = 462
Total Capture Volume (required water quality volume(s) x 1.20) = 2774 cubic feet



Table with 3 columns: NO., BY, DATE. Revision description area.

ORCHARD RANCH FINAL PLAN

WATER QUALITY DRAINAGE AREA MAP

PROJECT NO: 1636-11741

DESIGNED BY: BG

DRAWN BY: TAM

CHECKED BY: CR

NOTICE: ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

12/18/2025



Signature of Brandon Gilmore

SHEET 47 OF 118

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 s

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30
 Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
 where: $L_{M \text{ TOTAL PROJECT}} =$ Required TSS removal resulting from the proposed development = 80% of incr
 $A_N =$ 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 = Travis	Criteria
Total project area included in plan =	82.90 acres	RG-348a
Predevelopment impervious area within the limits of the plan =	0.00 acres	
Total post-development impervious area within the limits of the plan =	26.30 acres	
Total post-development impervious cover fraction =	0.32	
P =	32 inches	

$L_{M \text{ TOTAL PROJECT}} = 23312$ lbs.
 Removed (Total) 23,327 Remaining -15
 * The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 7

2. Drainage Basin Parameters (This information should be provided for each basin):
 Drainage Basin/Outfall Area No. = 2
 Total drainage basin/outfall area = 8.00 acres
 Predevelopment impervious area within drainage basin/outfall area = 0.00 acres
 Post-development impervious area within drainage basin/outfall area = 2.52 acres
 Post-development impervious fraction within drainage basin/outfall area = 0.32
 $L_M \text{ THIS BASIN} = 2193$ lbs.

3. Indicate the proposed BMP Code for this basin.
 Proposed BMP = Batch Detention
 Removal efficiency = 91 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

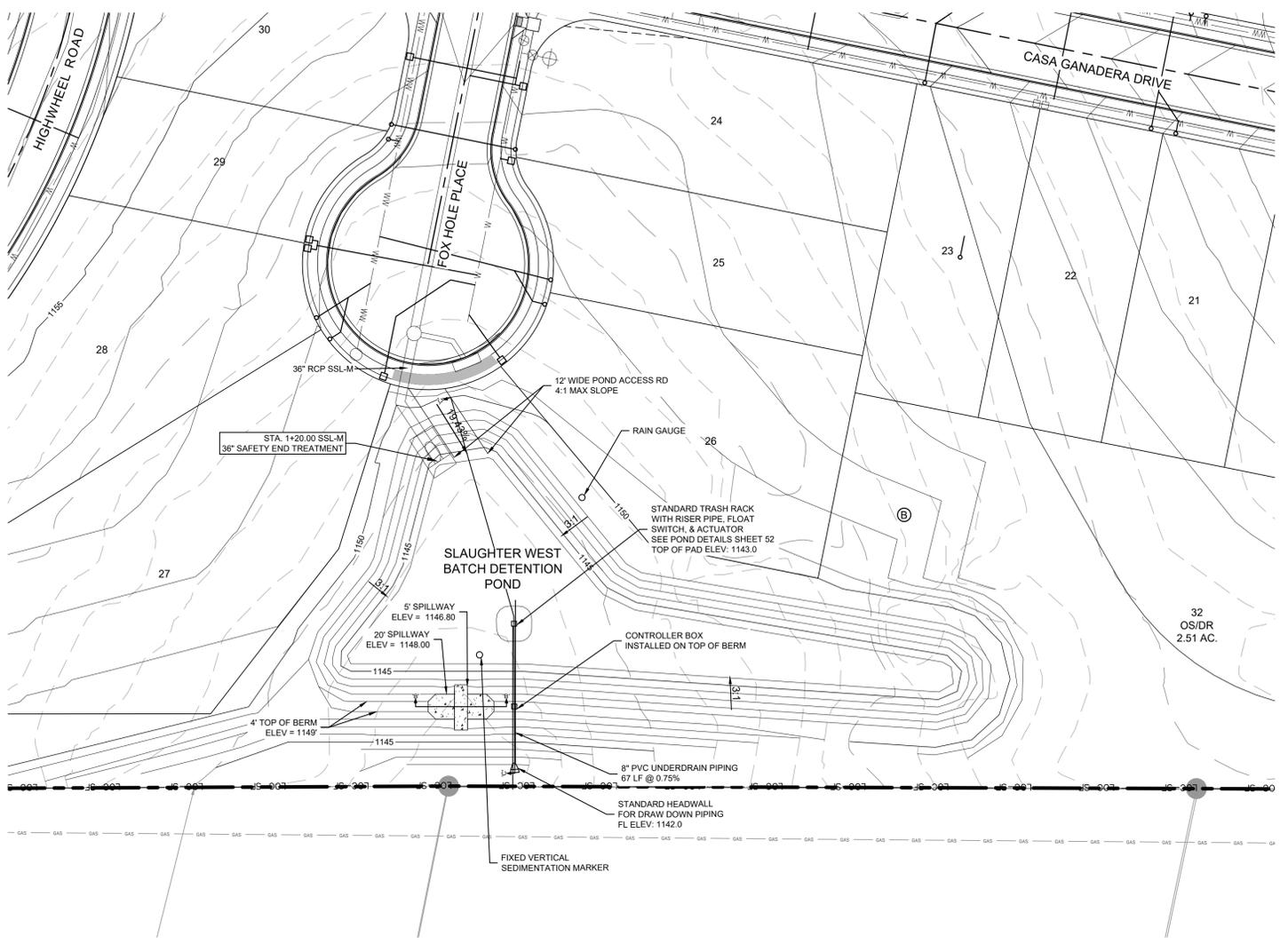
4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.
 RG-348 Page 3-33 Equation 3.7: $L_R = (BMP \text{ efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where:
 $A_C =$ Total On-Site drainage area in the BMP catchment area
 $A_i =$ Impervious area proposed in the BMP catchment area
 $A_p =$ Pervious area remaining in the BMP catchment area
 $L_R =$ TSS Load removed from this catchment area by the proposed BMP
 $A_C = 8.00$ acres
 $A_i = 2.52$ acres
 $A_p = 5.48$ acres
 $L_R = 2625$ lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area
 Desired $L_M \text{ THIS BASIN} = 2530$ 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 3-37

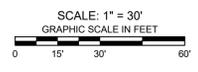
Rainfall Depth = 2.80 inches
 Post Development Runoff Coefficient = 0.32
 On-site Water Quality Volume = 25837 cubic feet
 Calculations from RG-348 Pages 3-36 to 3-37
 Off-site area draining to BMP = 0.99 acres
 Off-site impervious cover draining to BMP = 0.00 acres
 Impervious fraction of off-site area = 0.00
 Off-site Runoff Coefficient = 0.02
 Off-site Water Quality Volume = 201 cubic feet
 Storage for Sediment = 5208
 Total Capture Volume (required water quality volume(s) x 1.20) = 31246 cubic feet



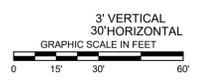
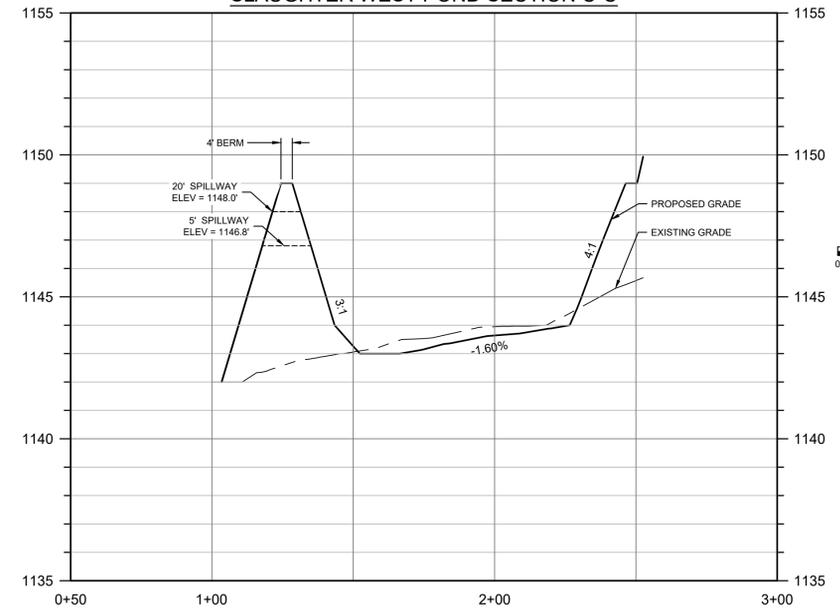
ELEVATION	AREA (SF)	INC. VOLUME (CF)	CUM. VOLUME (CF)
1143	100	0	0
1144	7956	4028	4028
1145	9710	8833	12861
1146	11521	10615.5	23476.5
1146.8	13014.6	9814.24	33290.74
1147	13388	12454.5	45745.24
1148	15311	14349.5	60094.74
1149	17291	16301	76395.74

Slaughter W Pond		
	Water Surface Elevation (ft)	Top of Berm (ft)
2-Year	1148.0	1149.0
10-Year	1148.4	
25-Year	1148.6	
100-Year	1148.9	

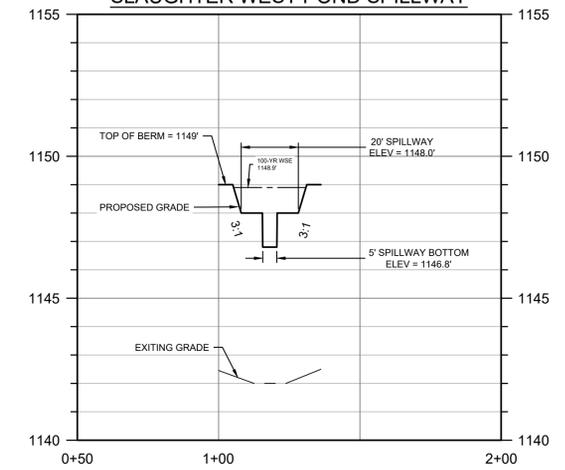
Slaughter W Pond		
	Pond Inflow (cfs)	Pond Discharge (cfs)
2-Year	32.0	19.9
10-Year	55.5	44.2
25-Year	71	60.3
100-Year	96.1	84.4



SLAUGHTER WEST POND SECTION C-C



SLAUGHTER WEST POND SPILLWAY



8834 N. Capital of Texas Hwy.
Suite 140
Austin, Texas 78759
(512) 952-0371
FAX (512) 954-9933
TBP/ELS FRM #2946

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

DETENTION & WATER QUALITY
POND SLAUGHTER WEST

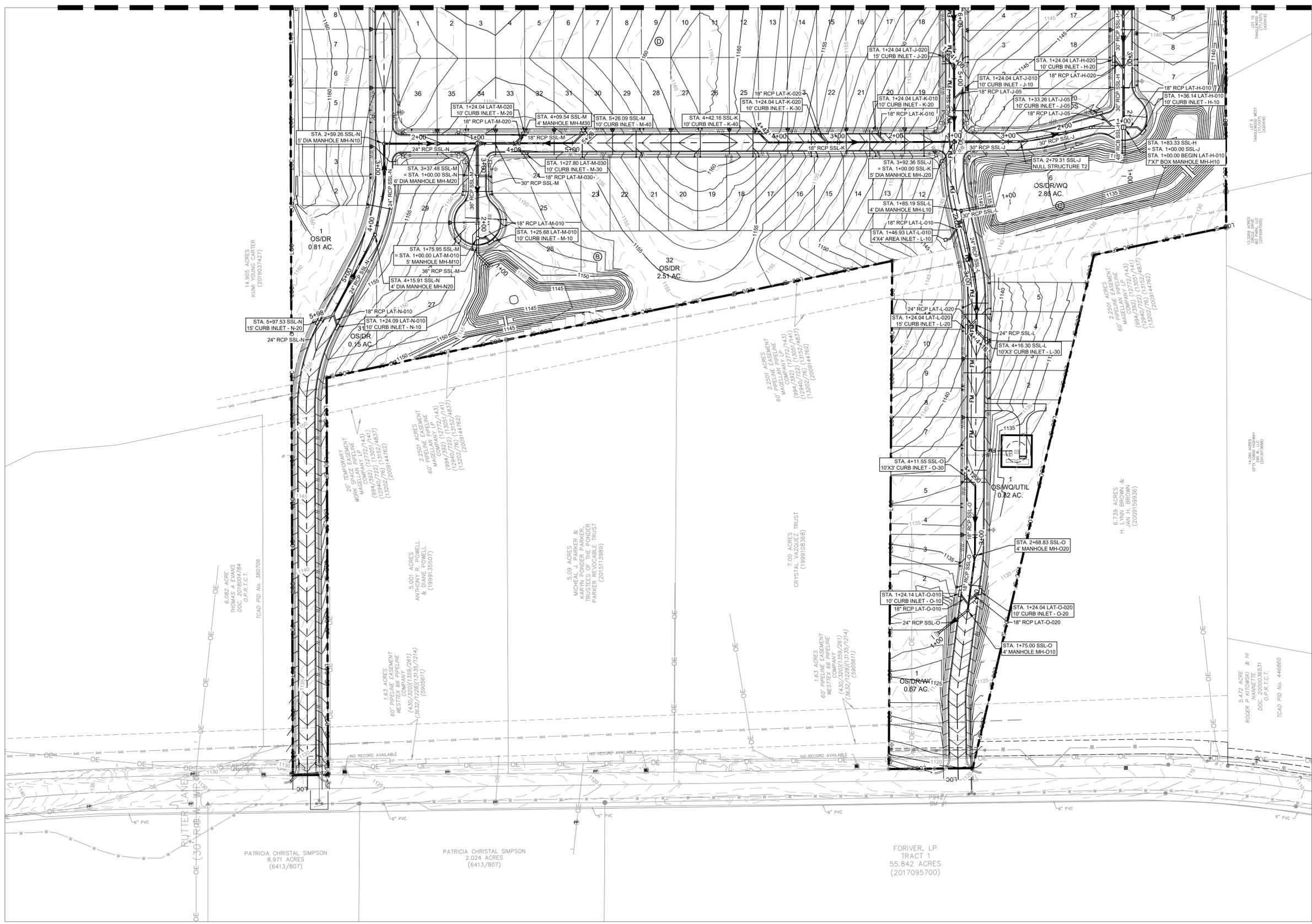
PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM

CHECKED BY: CR
NOTICE:
ALTERATION OF A
SEALED DRAWING
WITHOUT PROPER
NOTIFICATION TO THE
RESPONSIBLE ENGINEER
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TEXAS ENGINEERING
PRACTICE ACT.

12/18/2025

Brandon Gilmore
SHEET 50 OF 118

MATCHLINE TO SHEET 53



SCALE: 1" = 80'
GRAPHIC SCALE IN FEET

LEGEND

- PROPERTY BOUNDARY
- - - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED BOX MANHOLE
- PROPOSED CURB INLET

- NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
 2. CONTRACTOR TO BE AWARE OF OVERHEAD ELECTRIC LINES AT ALL TIMES.
 3. ALL MANHOLE COVERS SHALL BE STAMPED "STORM DRAIN" ONLY WITHOUT ANY CITY REFERENCES.

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TBPELS FIRM #2946

GRAY
ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

OVERALL STORM SEWER
PLAN (2 OF 2)

PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

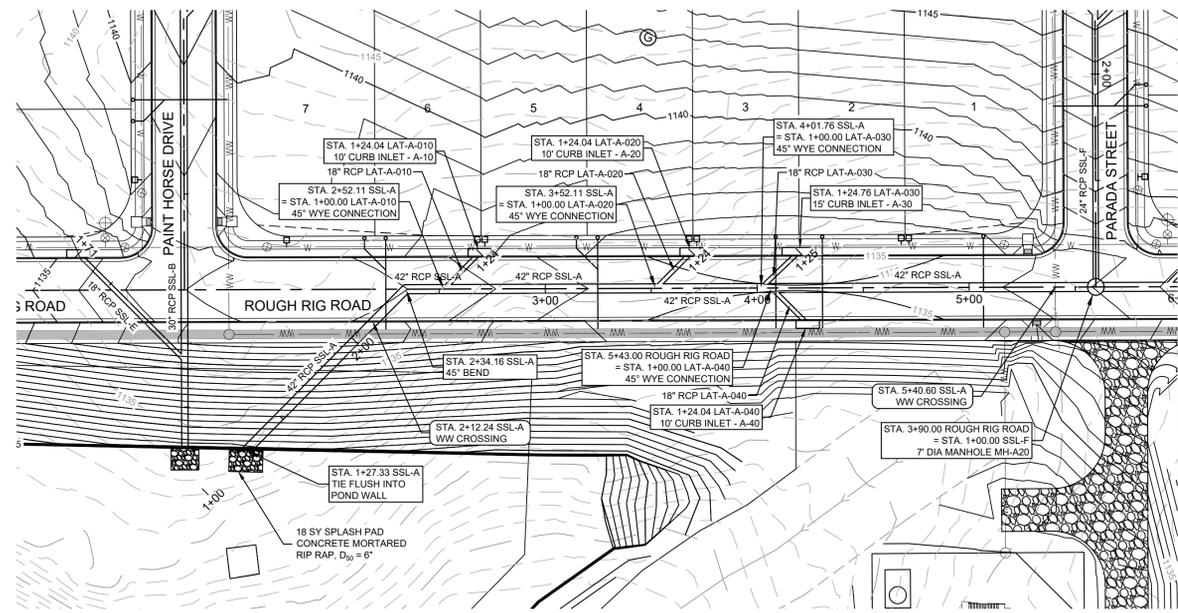
NOTICE:
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12/18/2025

Brandon D. Gilmore
Professional Engineer
No. 12458

SHEET 54 OF 118

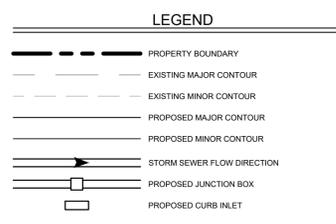
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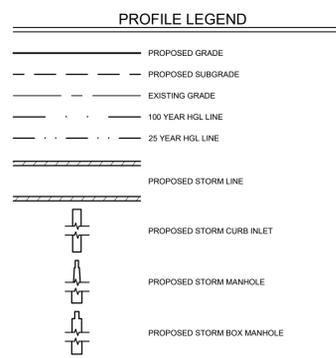
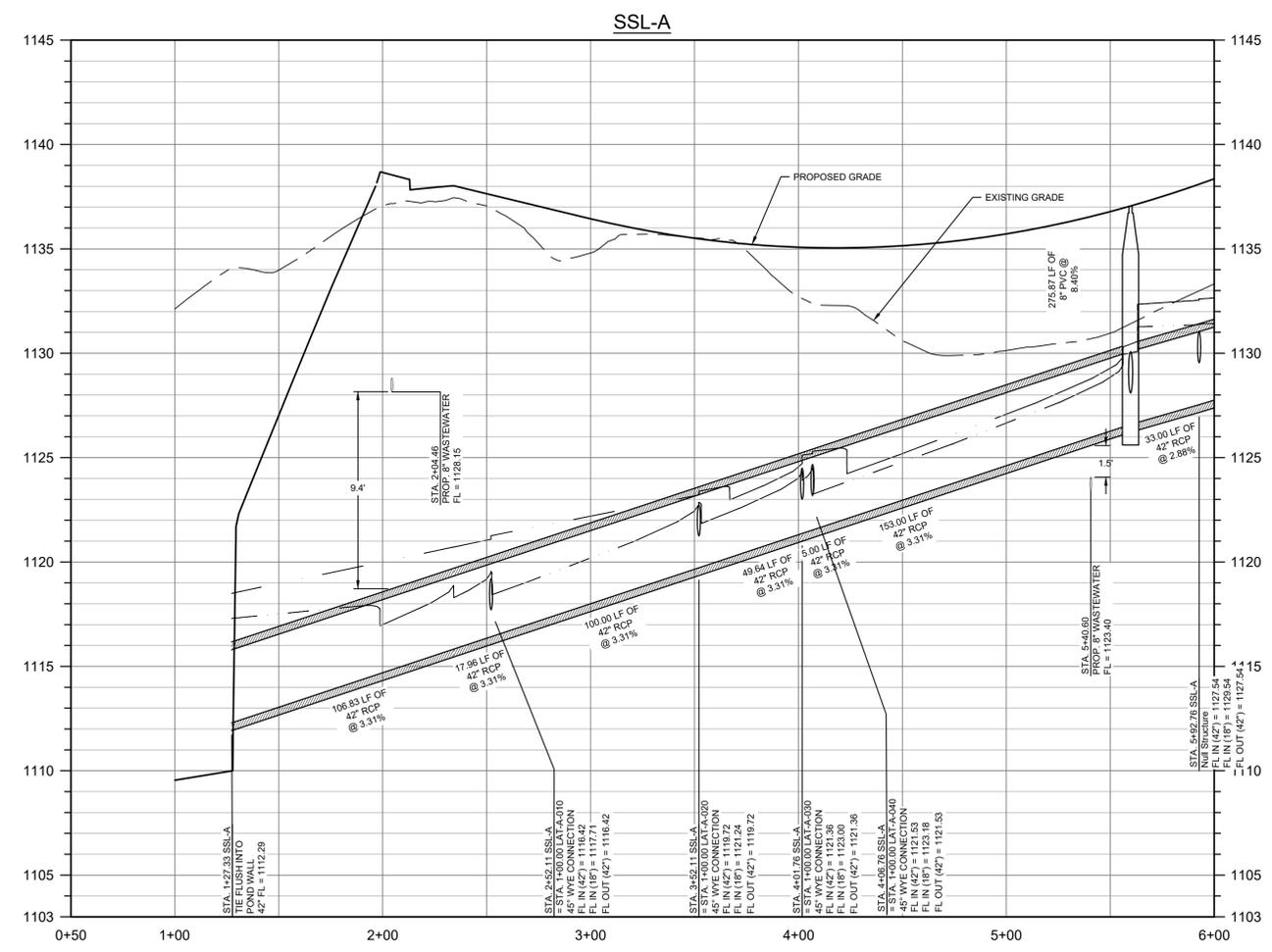
MATCHLINE TO SHEET 56



SCALE: 1" = 40'
GRAPHIC SCALE IN FEET



NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.



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ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

SSL-A (STA 1+00 TO 6+00)

PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

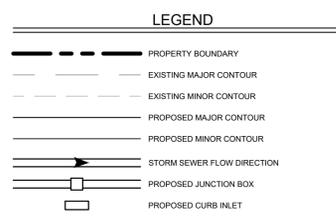
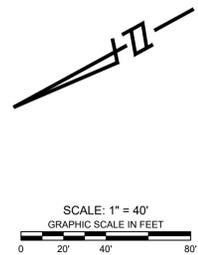
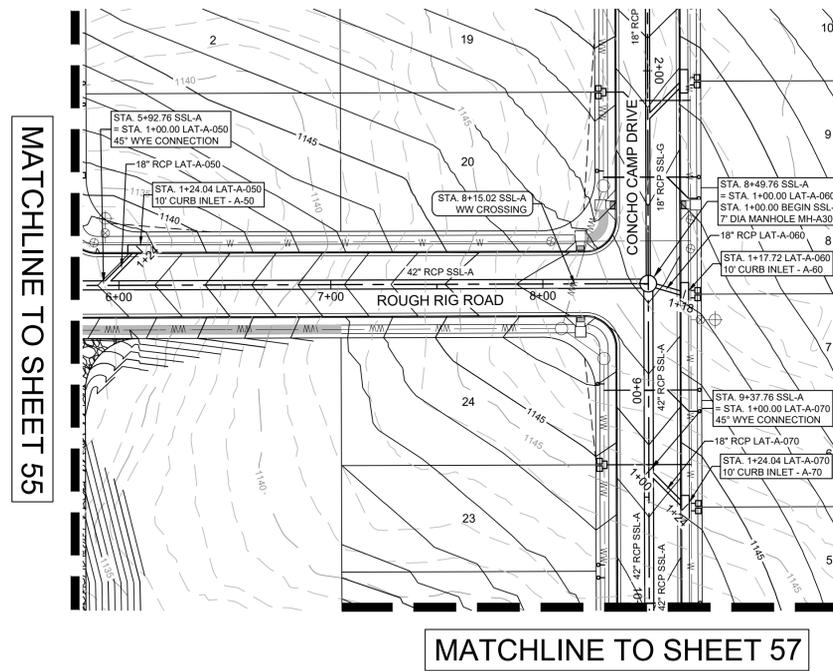
NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

12/18/2025

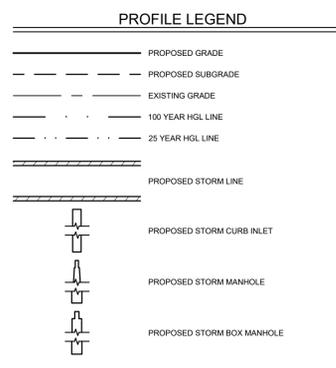
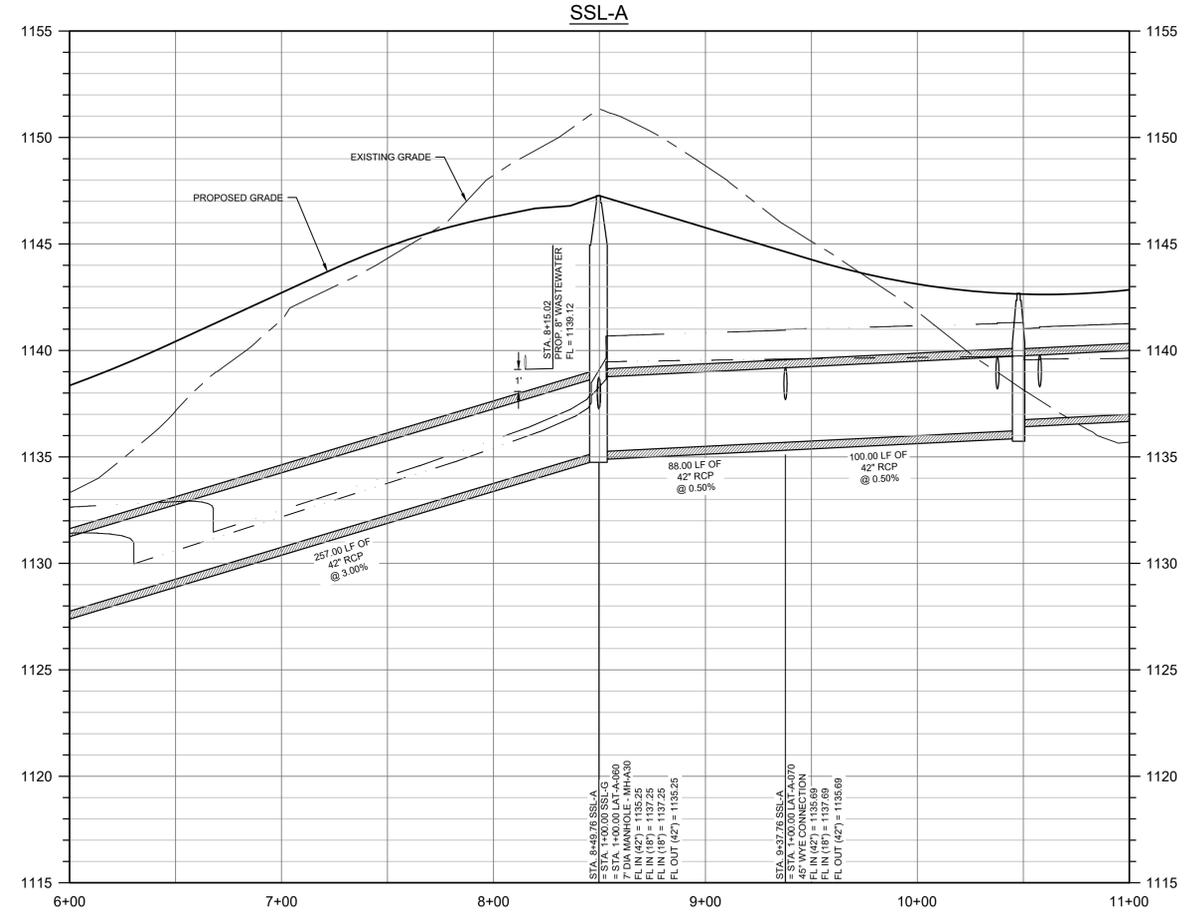
Brandon Gilmore

SHEET 55 OF 118

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NOTES:
 1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.



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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
 SUBDIVISION
 CONSTRUCTION PLANS

SSL-A (STA 6+00 TO 10+00)

PROJECT NO: 1636-11741
 DESIGNED BY: BG
 DRAWN BY: TAM
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NOTICE:
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12/18/2025

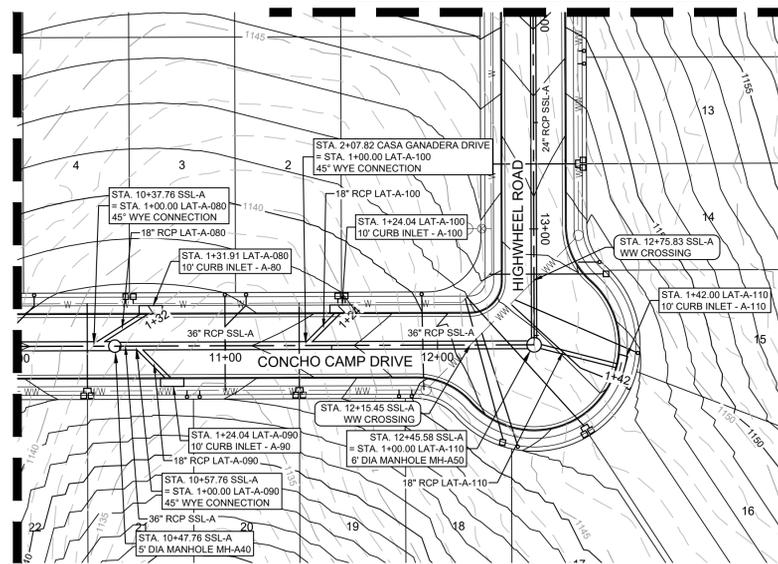
Brandon G. Gilmore
 LICENSED PROFESSIONAL ENGINEER
 STATE OF TEXAS
 19808

SHEET 56 OF 118

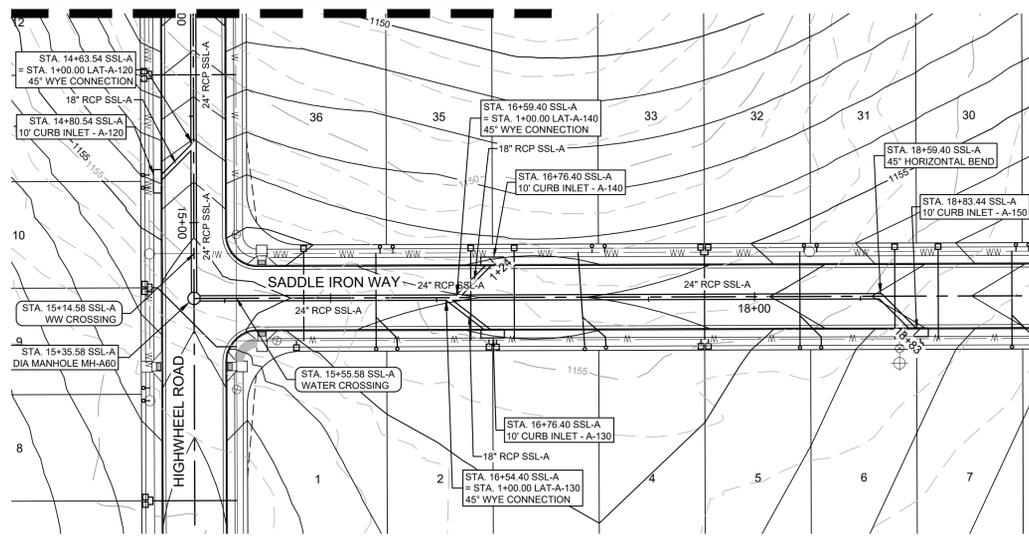
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MATCHLINE TO SHEET 56

MATCH TO CURRENT SHEET

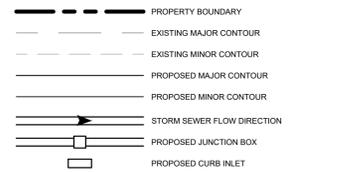


MATCH TO CURRENT SHEET



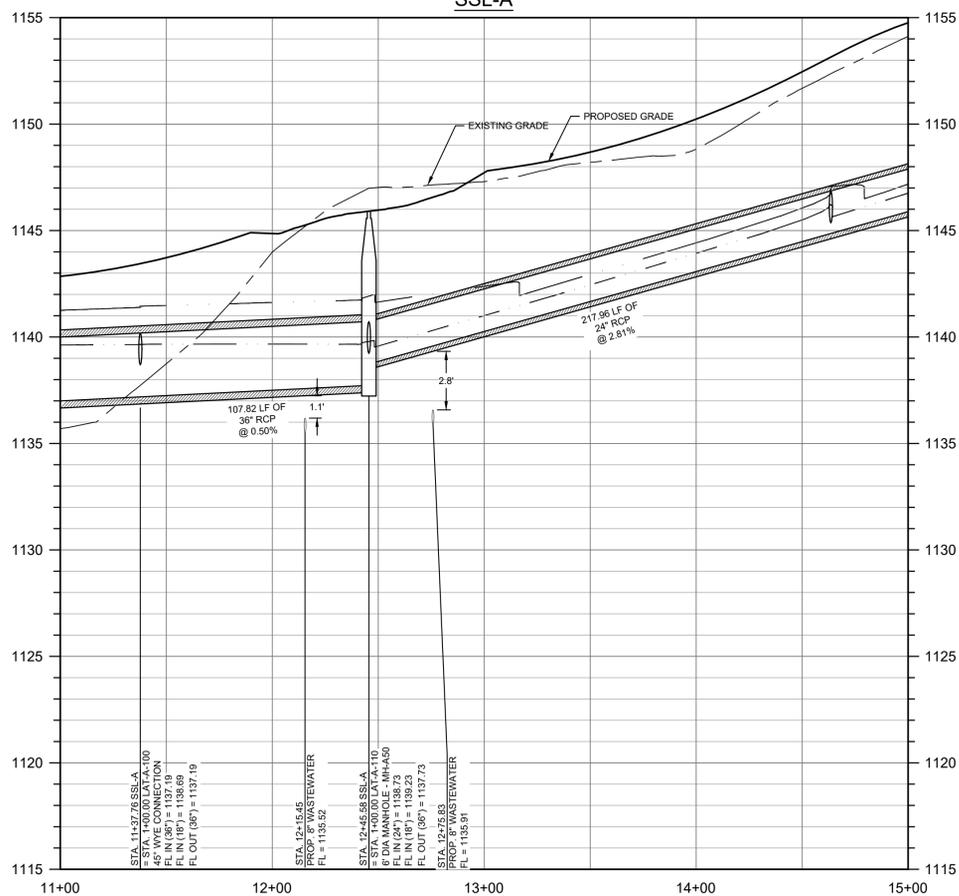
SCALE: 1" = 40'
GRAPHIC SCALE IN FEET

LEGEND

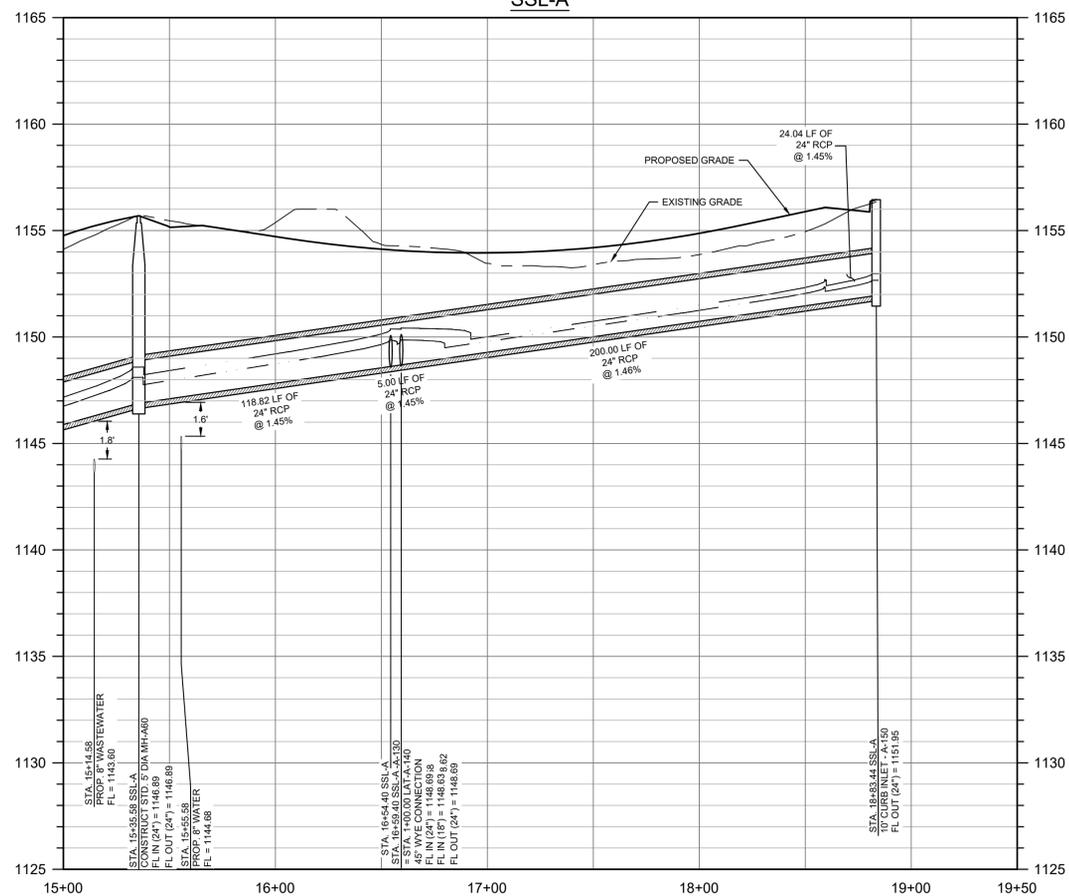


NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.

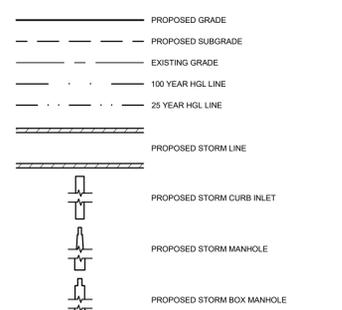
SSL-A



SSL-A



PROFILE LEGEND



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NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

SSL-A (STA 10+00 TO
14+00) & (STA 14+00 TO
END)

PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

NOTICE:
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SHEET 57 OF 118

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\HEADSHEETS\1174-C-STRM.DWG DATE: 12/23/2025 1:50:32 PM BY: BCGILMORE

NO.	BY	DATE	REVISION DESCRIPTION

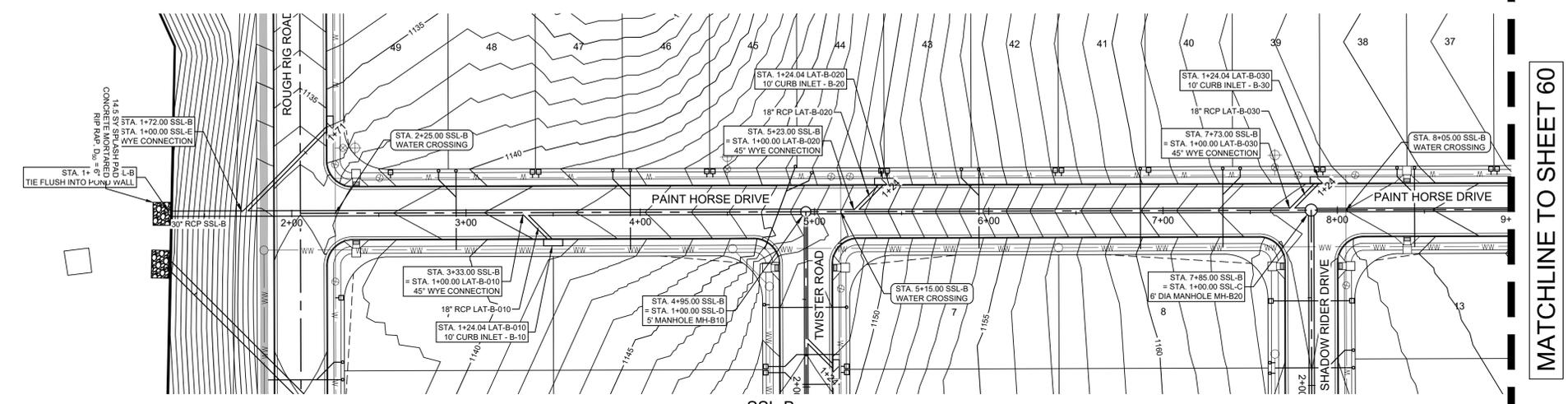
ORCHARD RANCH
 SUBDIVISION
 CONSTRUCTION PLANS

SSL-B (STA 1+00 TO 9+00)

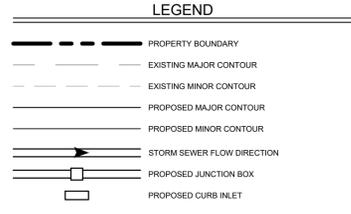
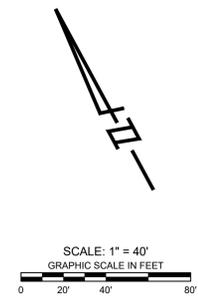
PROJECT NO: 1636-11741
 DESIGNED BY: BG
 DRAWN BY: TAM
 CHECKED BY: CR

NOTICE:
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 IS A VIOLATION OF THE
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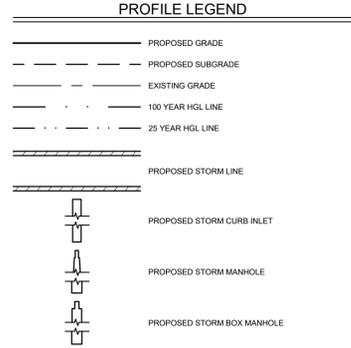
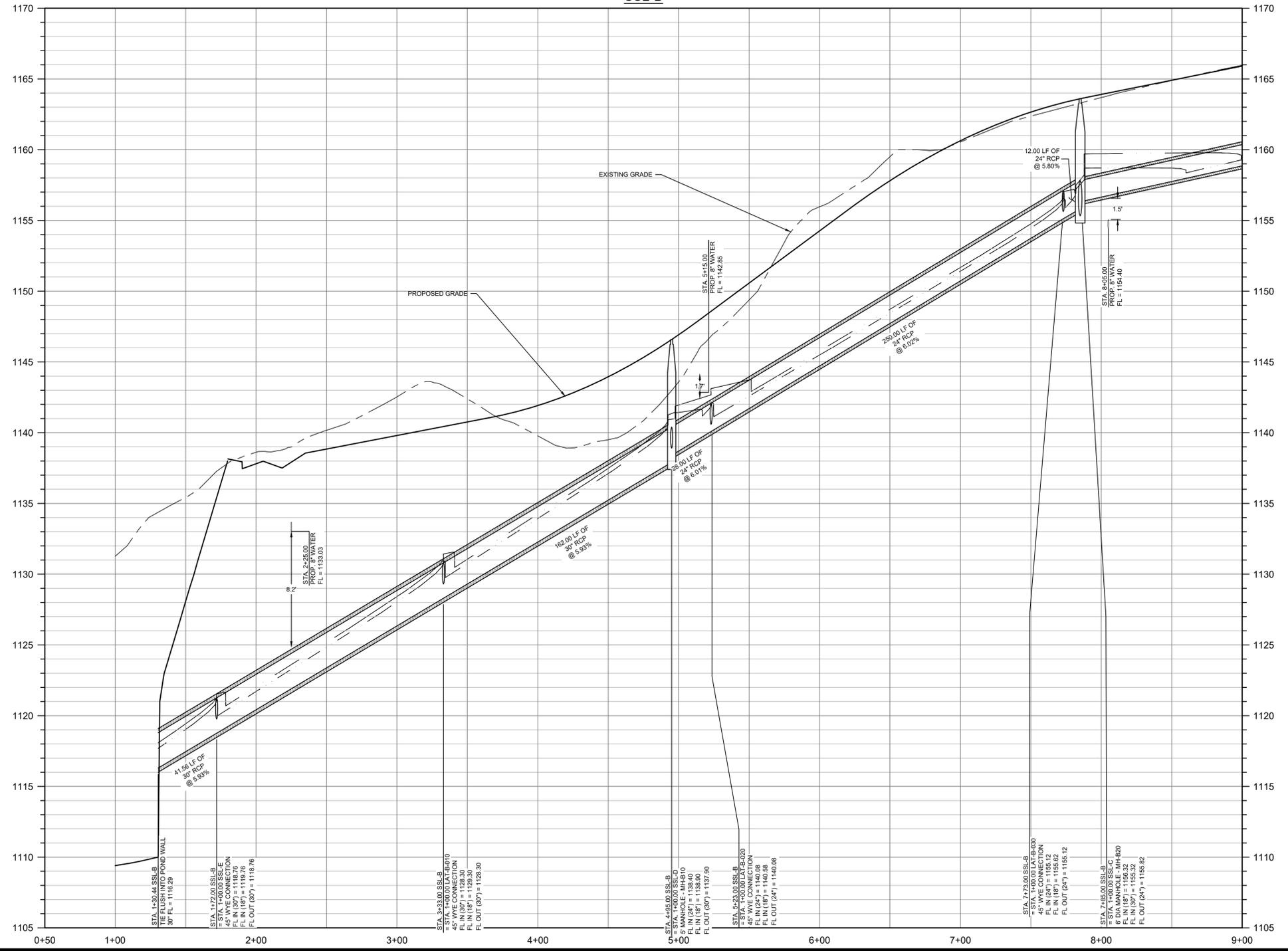
12/18/2025

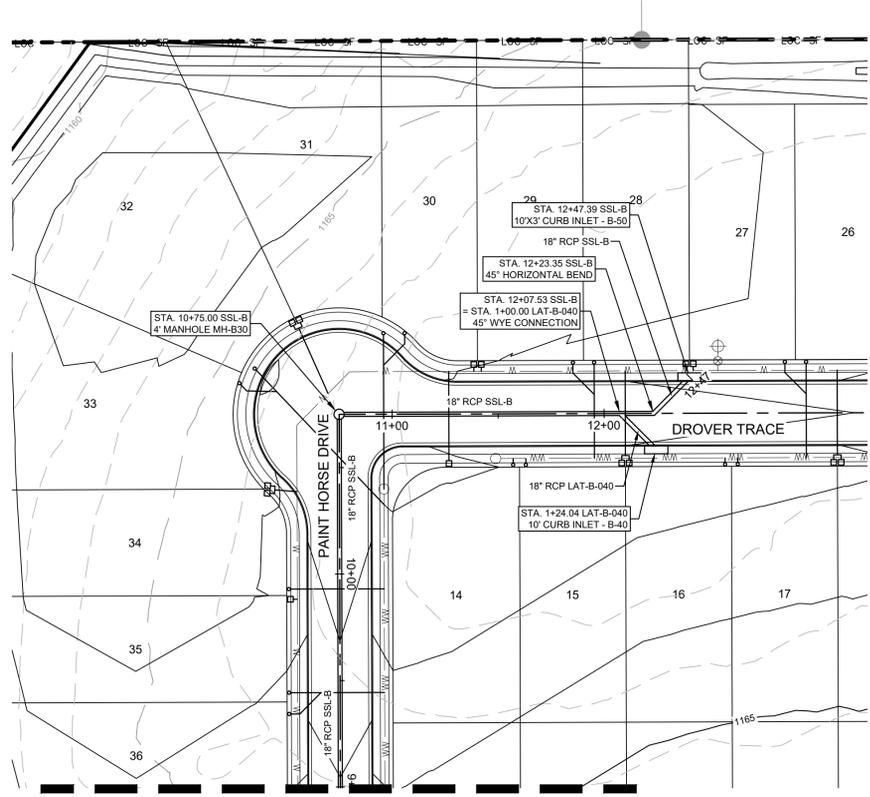


MATCHLINE TO SHEET 60

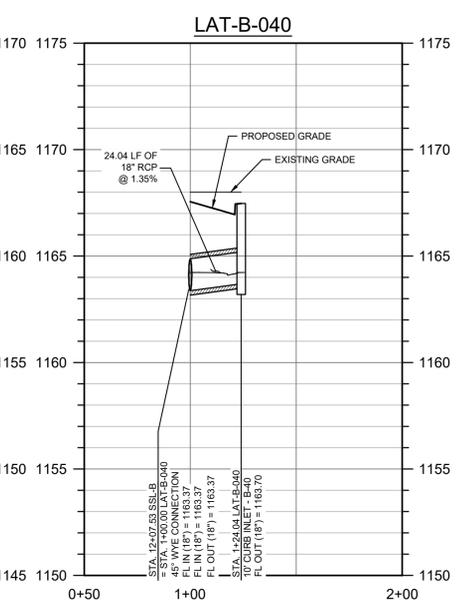
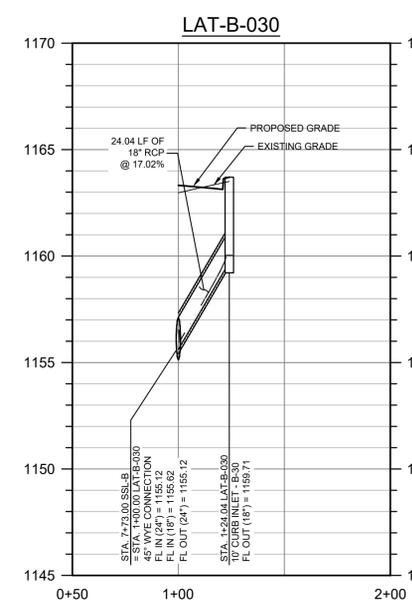
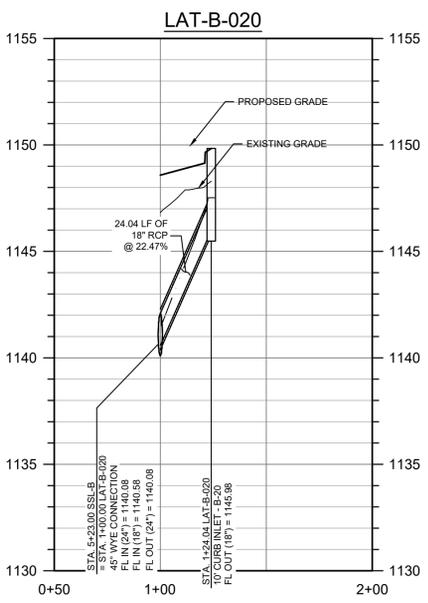
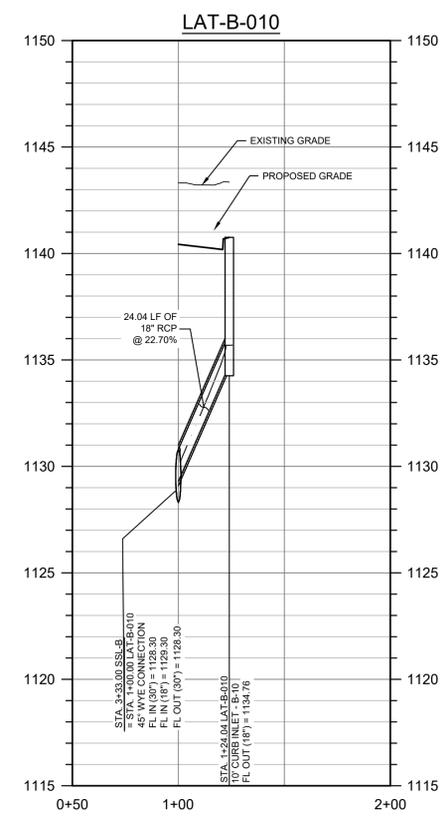
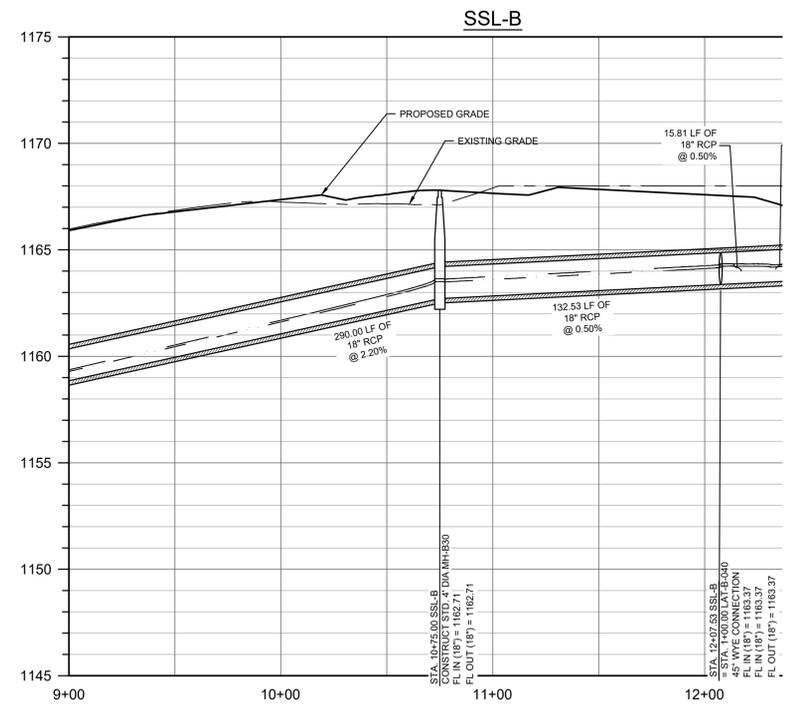


NOTES:
 1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.





MATCHLINE TO SHEET 59



SCALE: 1" = 40'
GRAPHIC SCALE IN FEET

- LEGEND**
- PROPERTY BOUNDARY
 - - - EXISTING MAJOR CONTOUR
 - - - EXISTING MINOR CONTOUR
 - - - PROPOSED MAJOR CONTOUR
 - - - PROPOSED MINOR CONTOUR
 - STORM SEWER FLOW DIRECTION
 - PROPOSED JUNCTION BOX
 - PROPOSED CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.

- PROFILE LEGEND**
- PROPOSED GRADE
 - - - PROPOSED SUBGRADE
 - - - EXISTING GRADE
 - - - 100 YEAR HGL LINE
 - - - 25 YEAR HGL LINE
 - PROPOSED STORM LINE
 - PROPOSED STORM CURB INLET
 - PROPOSED STORM MANHOLE
 - PROPOSED STORM BOX MANHOLE

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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

SSL-B (STA 9+00 TO END) &
LATS

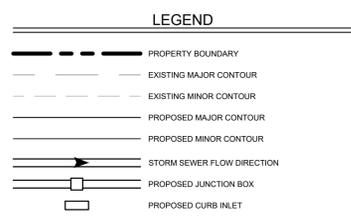
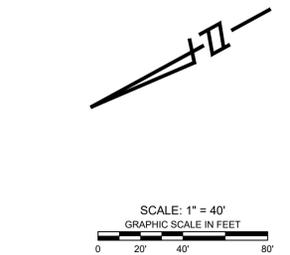
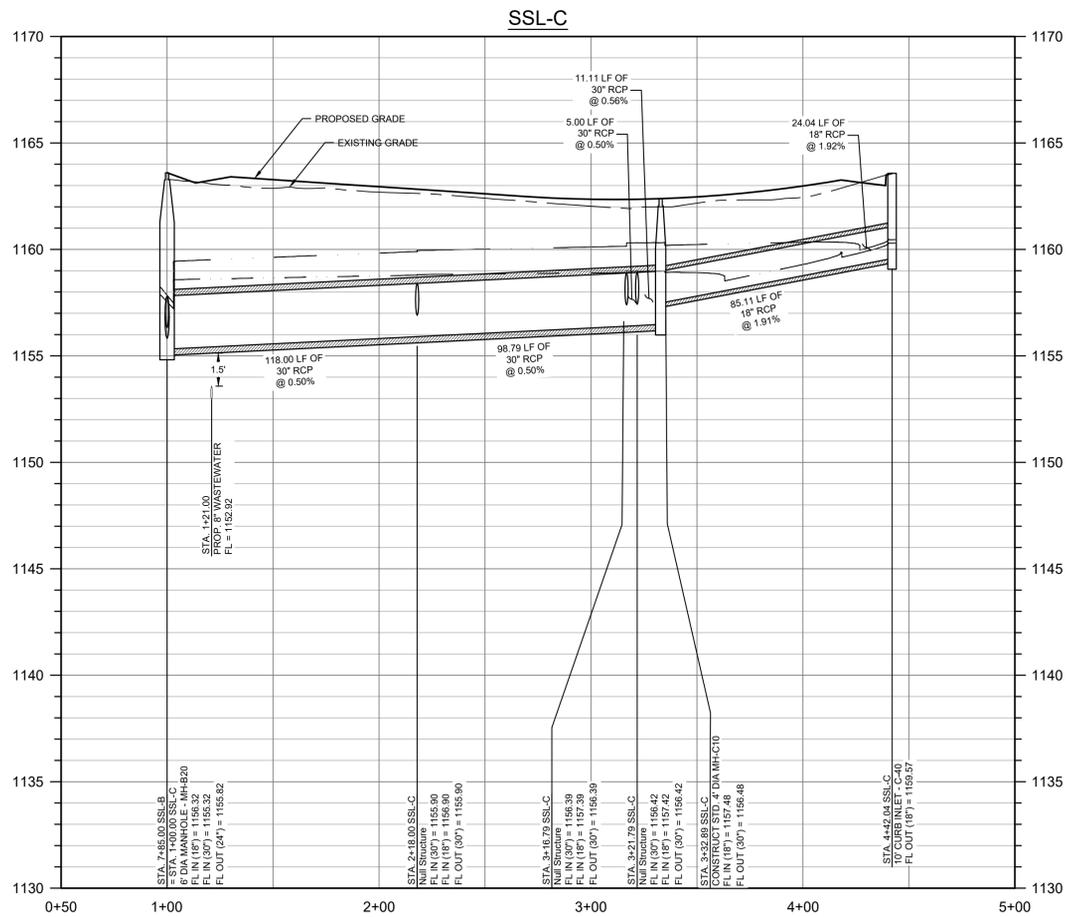
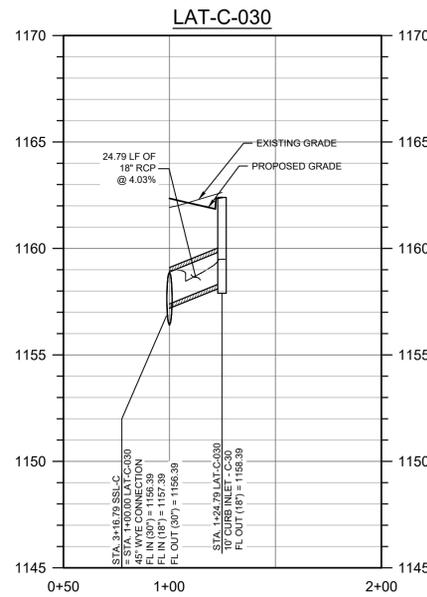
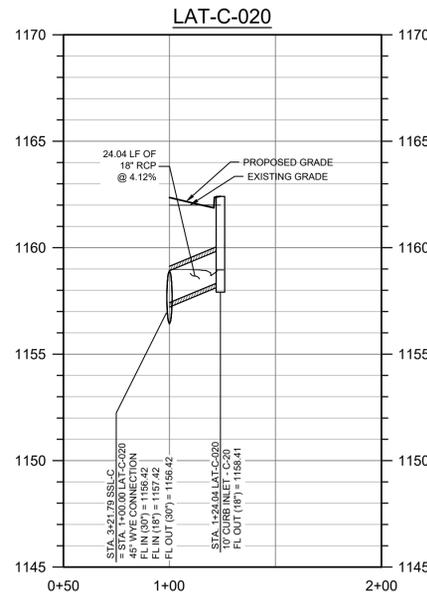
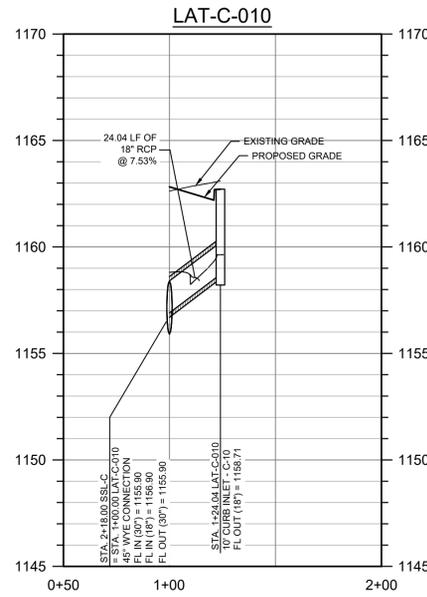
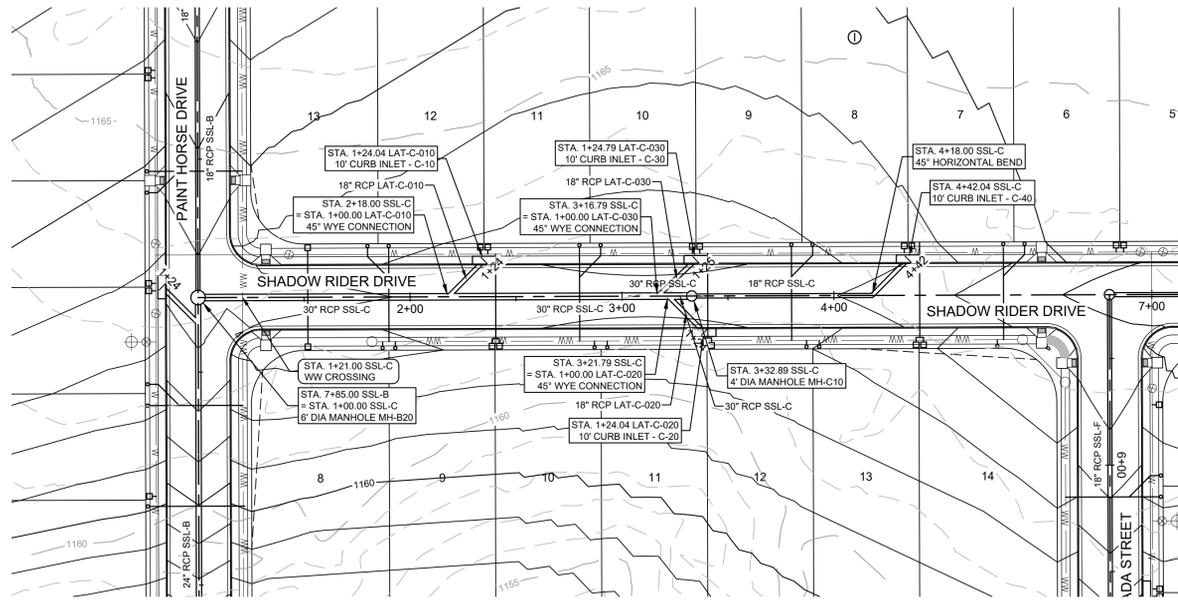
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DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

NOTICE:
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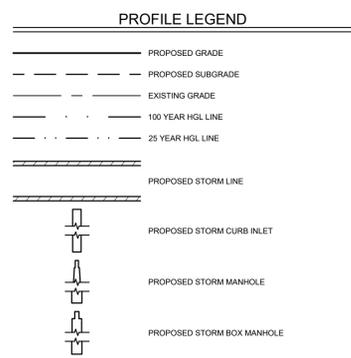
12/18/2025

Brandon Gilmore
SHEET 60 OF 118

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NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.



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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

SSL-C (STA 1+00 TO END) & LATS

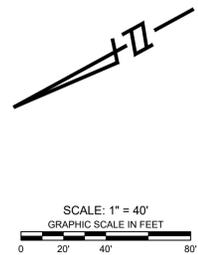
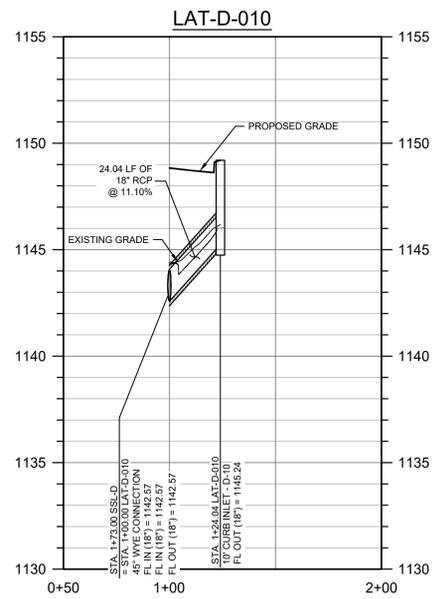
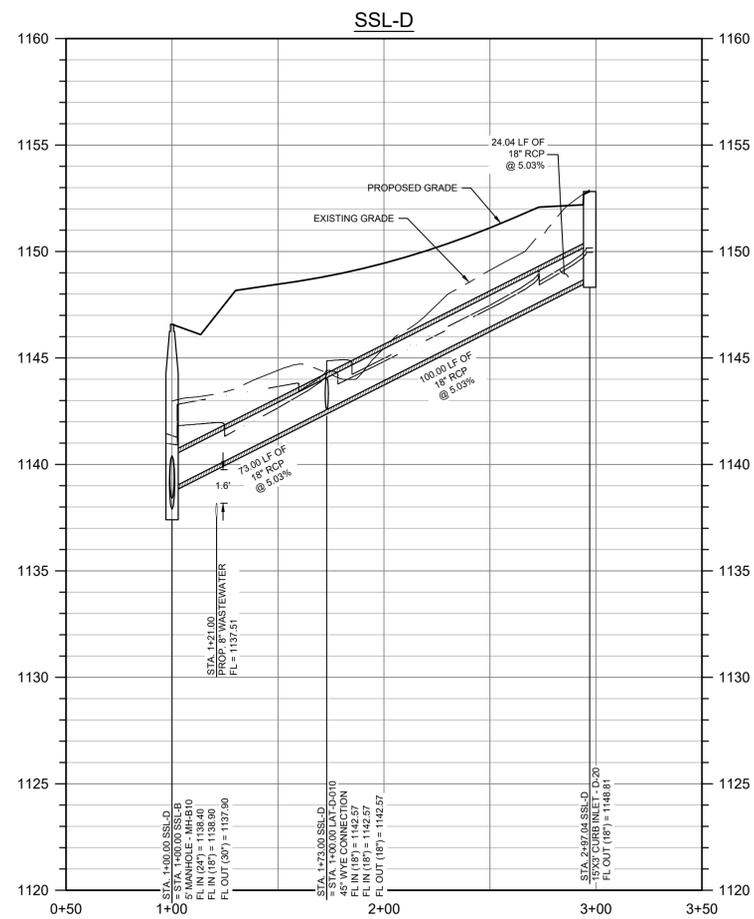
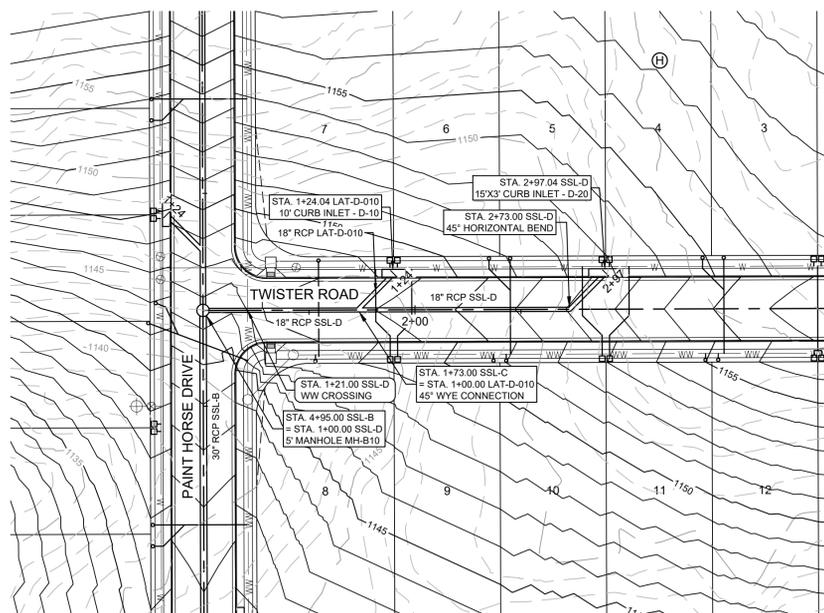
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DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

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12/18/2025

Brandon Gilmore

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LEGEND

---	PROPERTY BOUNDARY
---	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	PROPOSED MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
---	STORM SEWER FLOW DIRECTION
---	PROPOSED JUNCTION BOX
---	PROPOSED CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.

PROFILE LEGEND

---	PROPOSED GRADE
---	PROPOSED SUBGRADE
---	EXISTING GRADE
---	100 YEAR HGL LINE
---	25 YEAR HGL LINE
---	PROPOSED STORM LINE
---	PROPOSED STORM CURB INLET
---	PROPOSED STORM MANHOLE
---	PROPOSED STORM BOX MANHOLE

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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

SSL-D (STA 1+00 TO END) &
LAT

PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

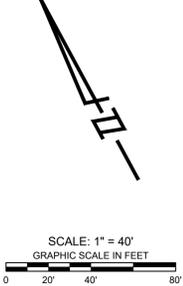
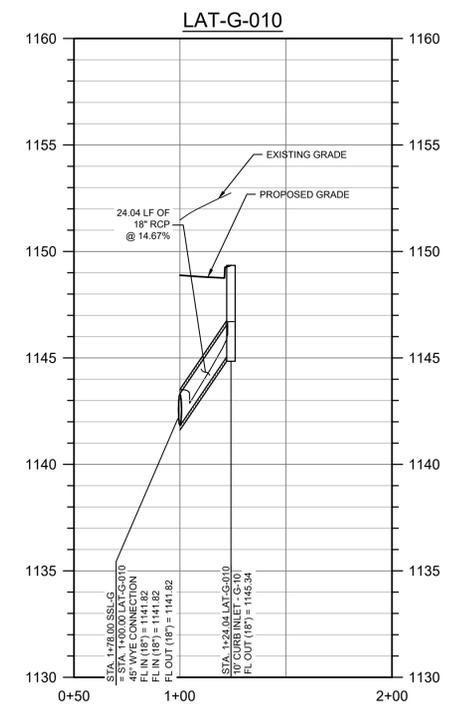
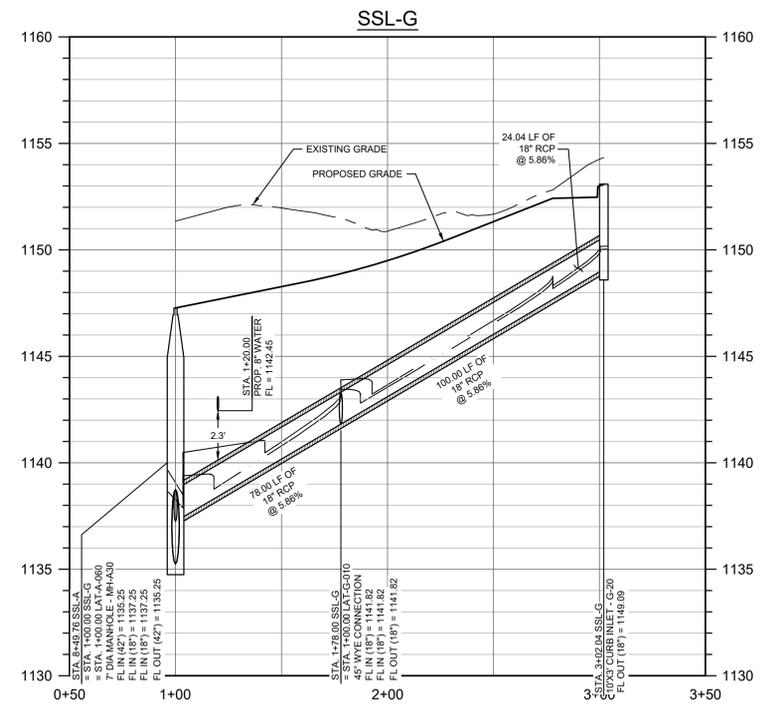
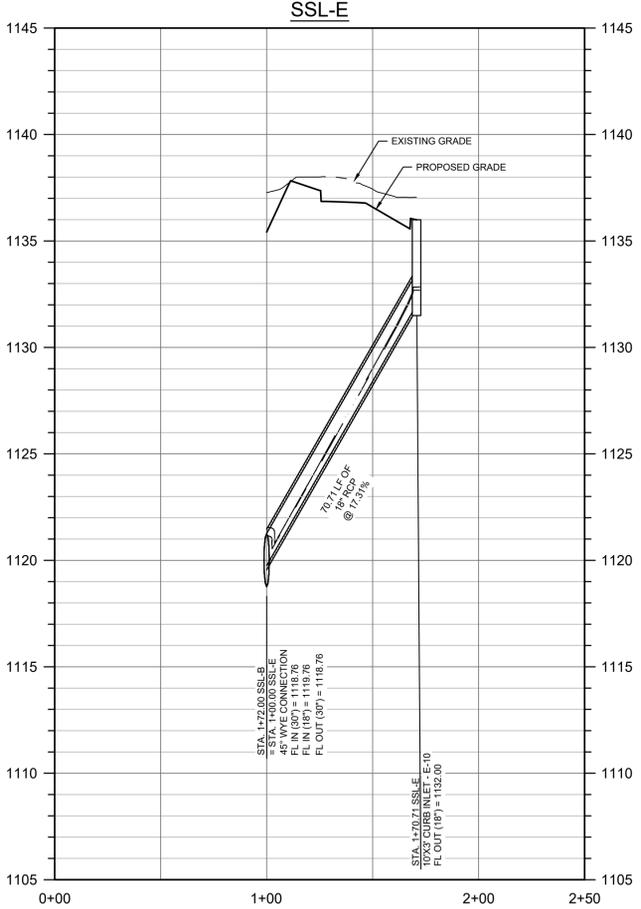
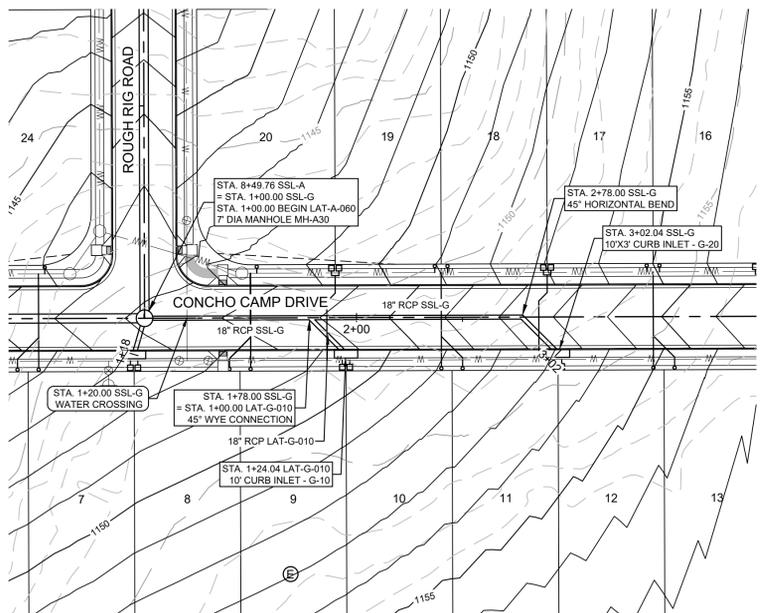
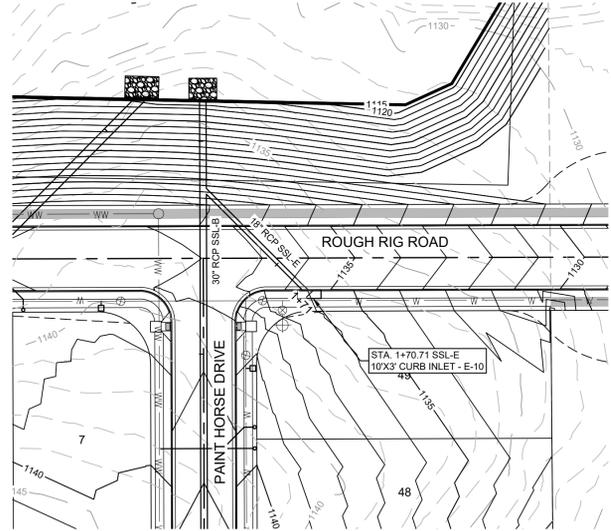
NOTICE:
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PRACTICE ACT.

12/18/2025

Brandon Gilmore
BRANDON GILMORE
1988
LICENSED PROFESSIONAL ENGINEER

SHEET 62 OF 118

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\HEADSHEETS\1174-C-STRM.DWG DATE: 12/23/2025 1:52:55 PM BY: BCGILMORE



LEGEND

	PROPERTY BOUNDARY
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	STORM SEWER FLOW DIRECTION
	PROPOSED JUNCTION BOX
	PROPOSED CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.

PROFILE LEGEND

	PROPOSED GRADE
	PROPOSED SUBGRADE
	EXISTING GRADE
	100 YEAR HGL LINE
	25 YEAR HGL LINE
	PROPOSED STORM LINE
	PROPOSED STORM CURB INLET
	PROPOSED STORM MANHOLE
	PROPOSED STORM BOX MANHOLE

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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

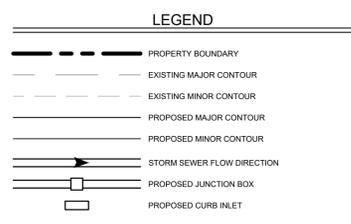
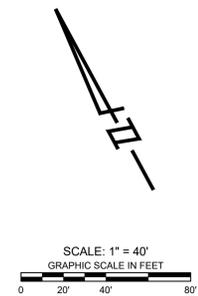
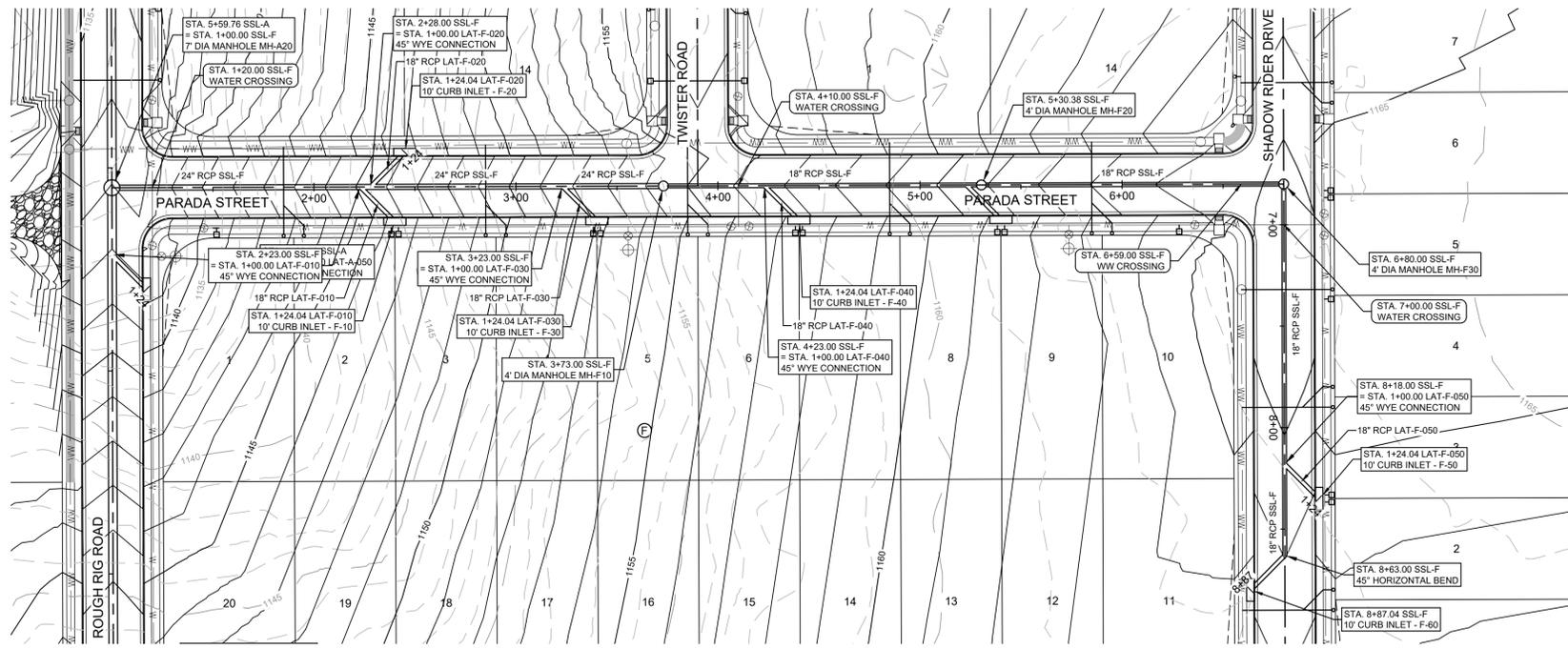
SSL E (STA 1+00 TO END) &
SSL-G (STA 1+00 TO END) &
LAT

PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

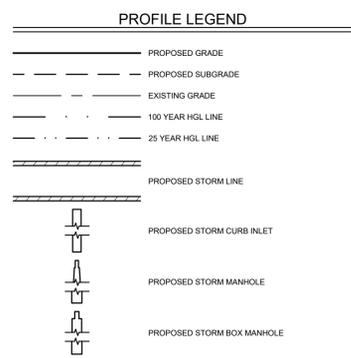
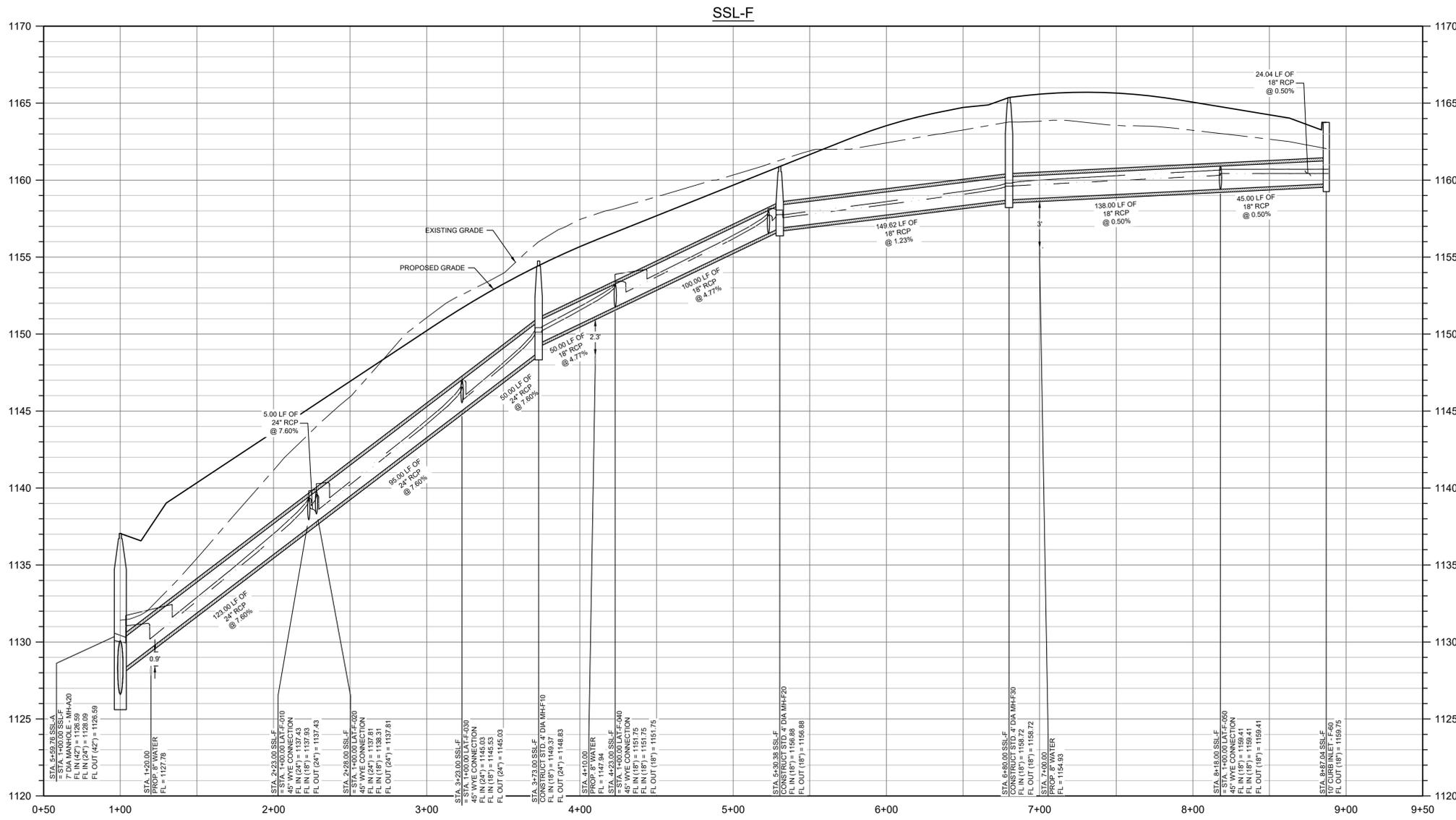
NOTICE:
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12/18/2025

Brandon D. Gilmore
SHEET 63 OF 118



NOTES:
 1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.



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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

**ORCHARD RANCH
 SUBDIVISION
 CONSTRUCTION PLANS**

SSL-F (STA 1+00 TO END)

PROJECT NO: 1636-11741
 DESIGNED BY: BG
 DRAWN BY: TAM
 CHECKED BY: CR

NOTICE:
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 SEALED DRAWING
 WITHOUT PROPER
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12/18/2025

Brandon Gilmore

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CD\SSHEETS\11741-C-STRM.DWG DATE: 12/20/2025 1:53:15 PM BY: BCGILMORE

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

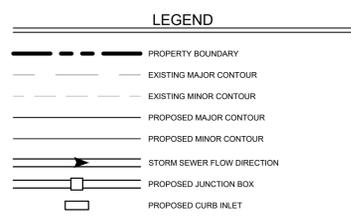
SSL-H (STA 1+00 TO 7+00)

PROJECT NO: 1636-11741
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DRAWN BY: TAM
CHECKED BY: CR

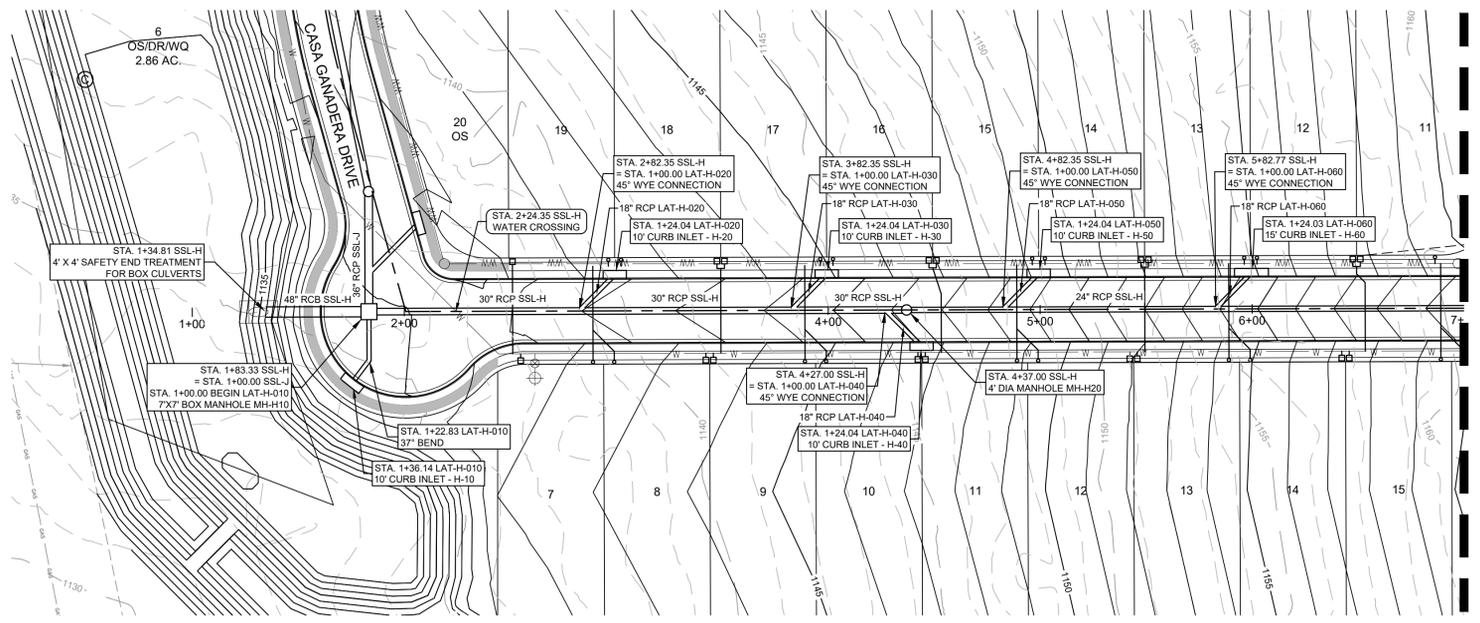
NOTICE:
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RESPONSIBLE ENGINEER
IS A VIOLATION OF THE
TEXAS ENGINEERING
PRACTICE ACT.



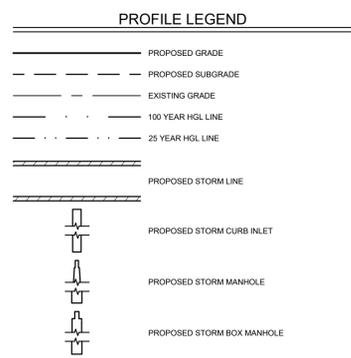
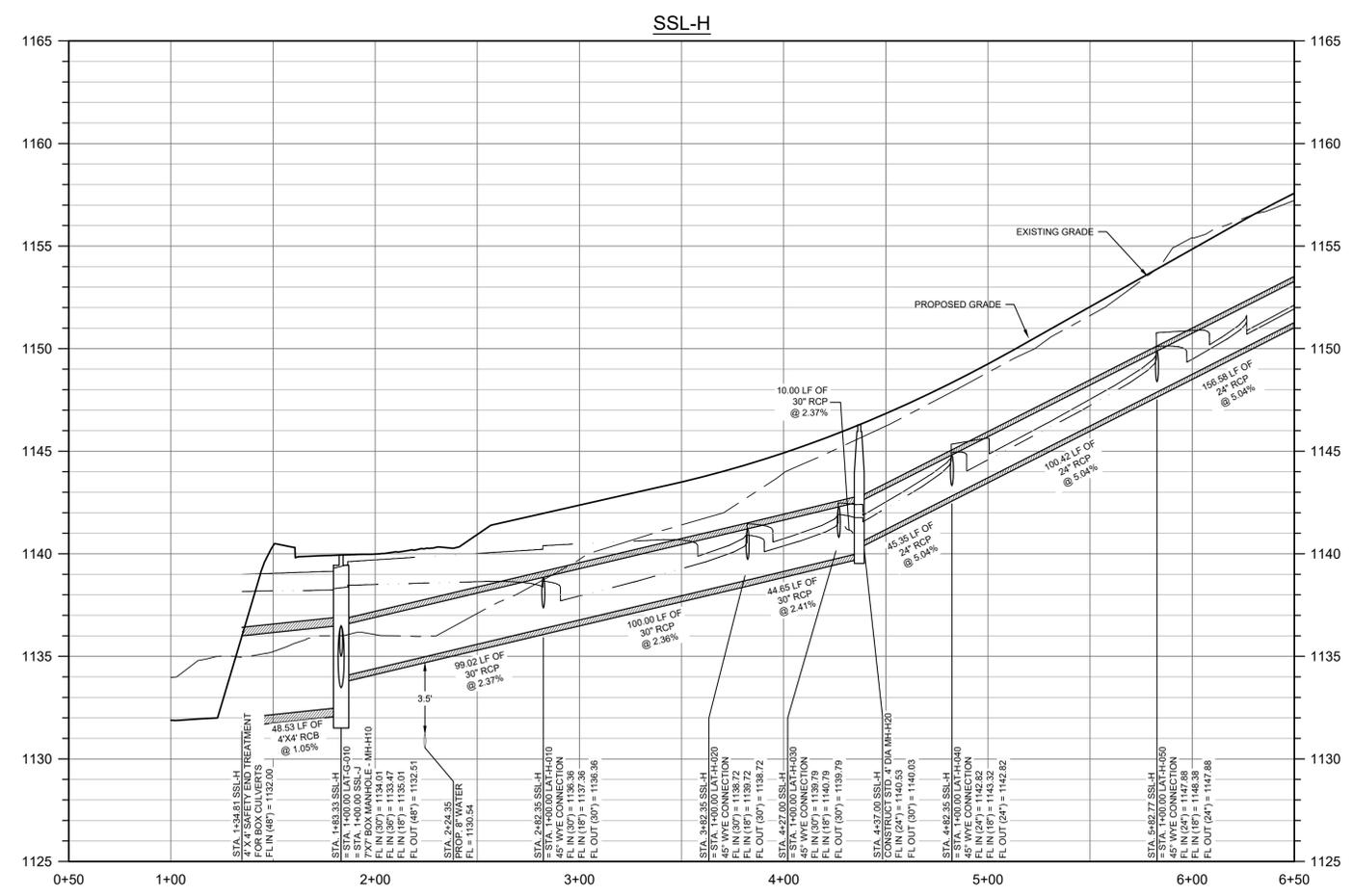
SCALE: 1" = 40'
GRAPHIC SCALE IN FEET

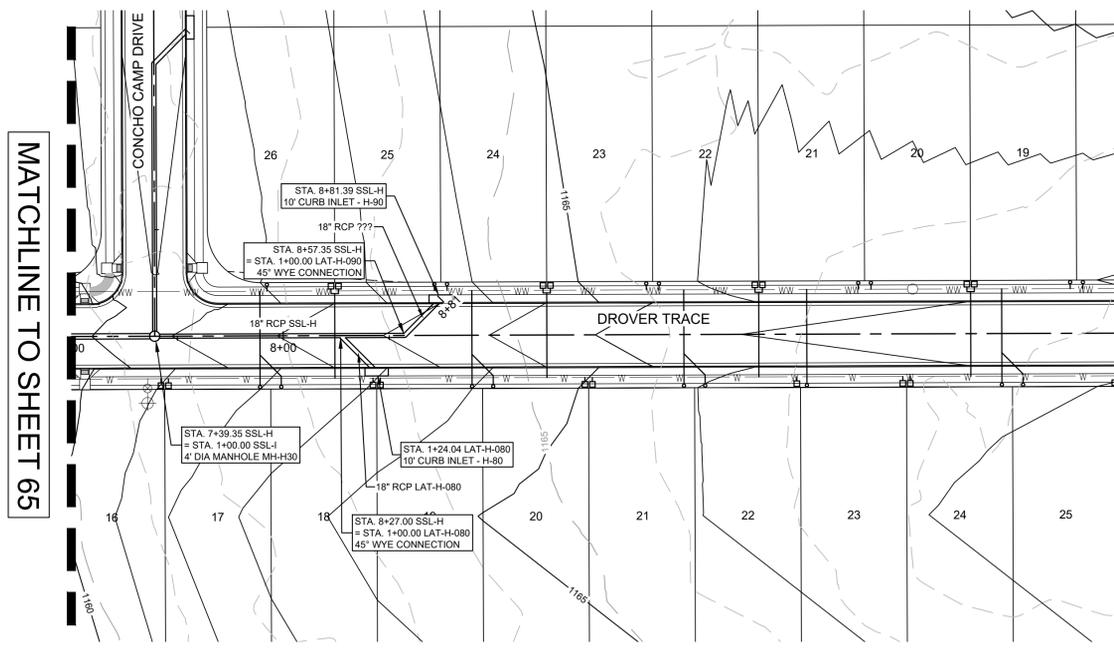


NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.



MATCHLINE TO SHEET 66





MATCHLINE TO SHEET 65

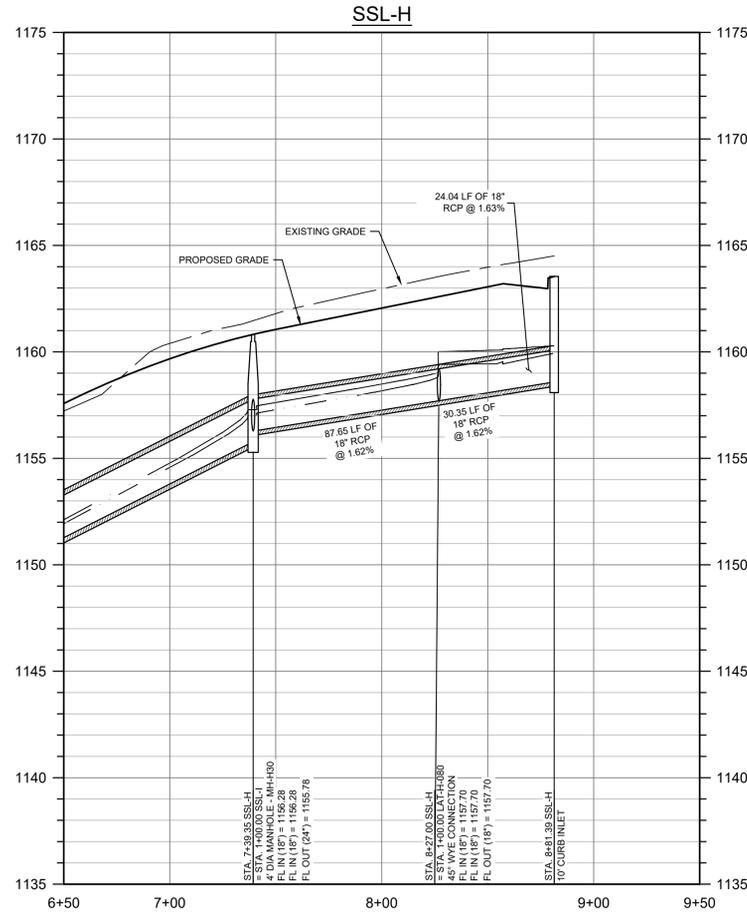


SCALE: 1" = 40'
GRAPHIC SCALE IN FEET

LEGEND

---	PROPERTY BOUNDARY
---	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	PROPOSED MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
→	STORM SEWER FLOW DIRECTION
□	PROPOSED JUNCTION BOX
□	PROPOSED CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.



PROFILE LEGEND

---	PROPOSED GRADE
---	PROPOSED SUBGRADE
---	EXISTING GRADE
---	100 YEAR HGL LINE
---	25 YEAR HGL LINE
---	PROPOSED STORM LINE
□	PROPOSED STORM CURB INLET
□	PROPOSED STORM MANHOLE
□	PROPOSED STORM BOX MANHOLE

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ORCHARD RANCH
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SSL-H (STA 7+00 TO END)

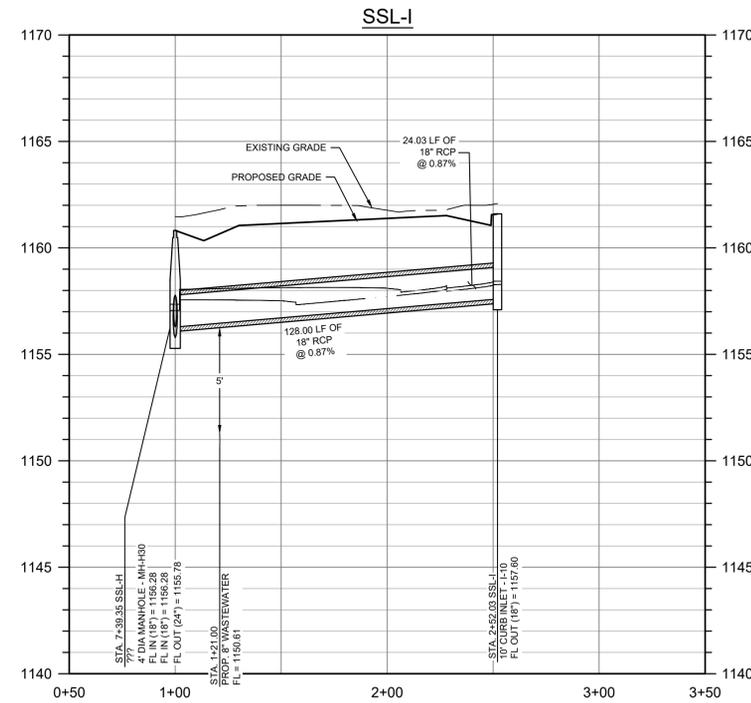
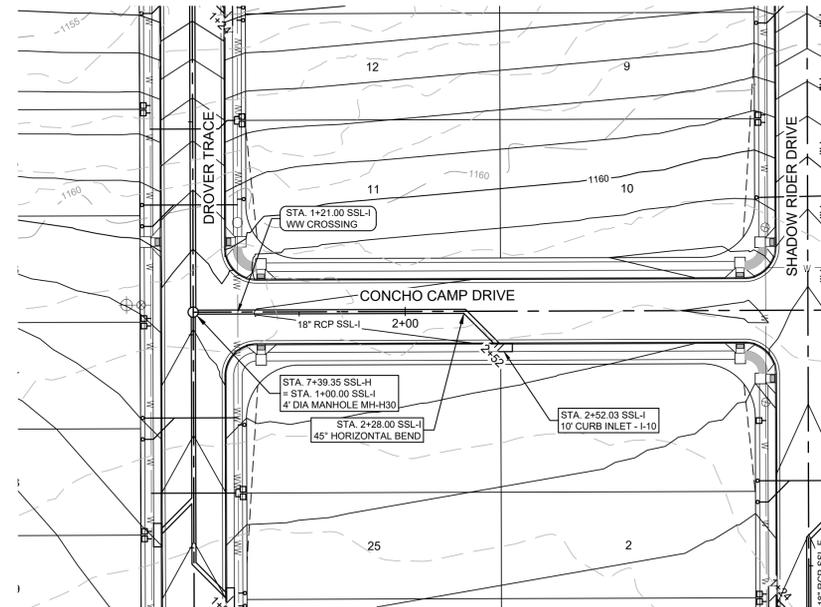
PROJECT NO: 1636-11741
DESIGNED BY: BG
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CHECKED BY: CR

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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET

0 20 40 80

LEGEND

- PROPERTY BOUNDARY
- - - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- - - PROPOSED MAJOR CONTOUR
- - - PROPOSED MINOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED JUNCTION BOX
- PROPOSED CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.

PROFILE LEGEND

- PROPOSED GRADE
- - - PROPOSED SUBGRADE
- - - EXISTING GRADE
- - - 100 YEAR HGL LINE
- - - 25 YEAR HGL LINE
- PROPOSED STORM LINE
- PROPOSED STORM CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM BOX MANHOLE

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GRAY
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NO.	BY	DATE	REVISION DESCRIPTION

**ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS**

SSL-I (STA 1+00 TO END)

PROJECT NO: 1636-11741
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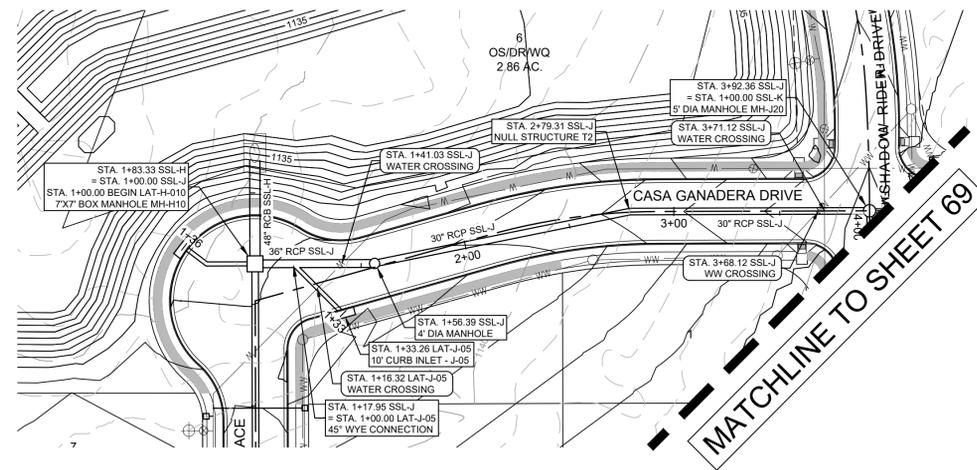
Brandon Gilmore

SHEET 67 OF 118

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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET



LEGEND

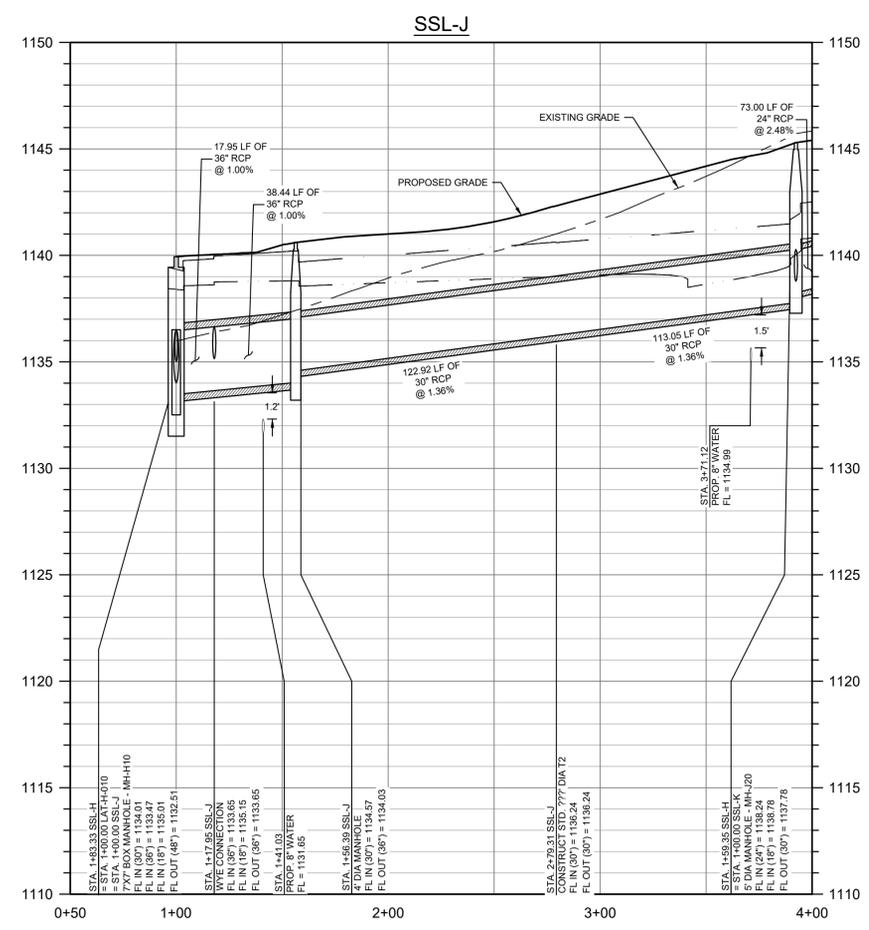
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	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	STORM SEWER FLOW DIRECTION
	PROPOSED JUNCTION BOX
	PROPOSED CURB INLET

NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

SSL-J (STA 1+00 TO 4+00)



PROFILE LEGEND

	PROPOSED GRADE
	PROPOSED SUBGRADE
	EXISTING GRADE
	100 YEAR HGL LINE
	25 YEAR HGL LINE
	PROPOSED STORM LINE
	PROPOSED STORM CURB INLET
	PROPOSED STORM MANHOLE
	PROPOSED STORM BOX MANHOLE

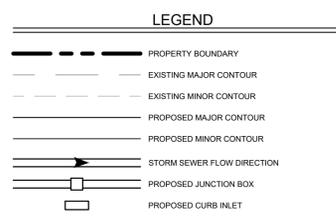
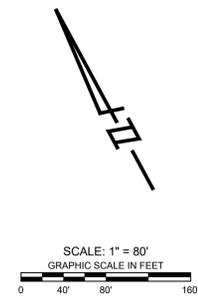
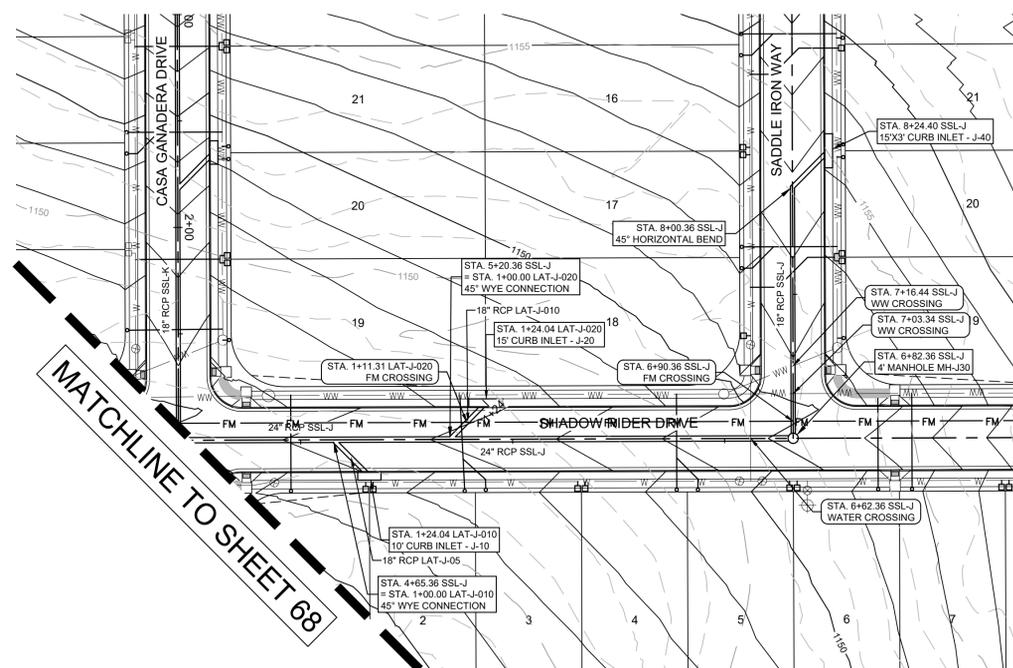
PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

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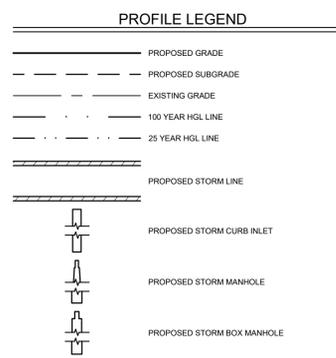
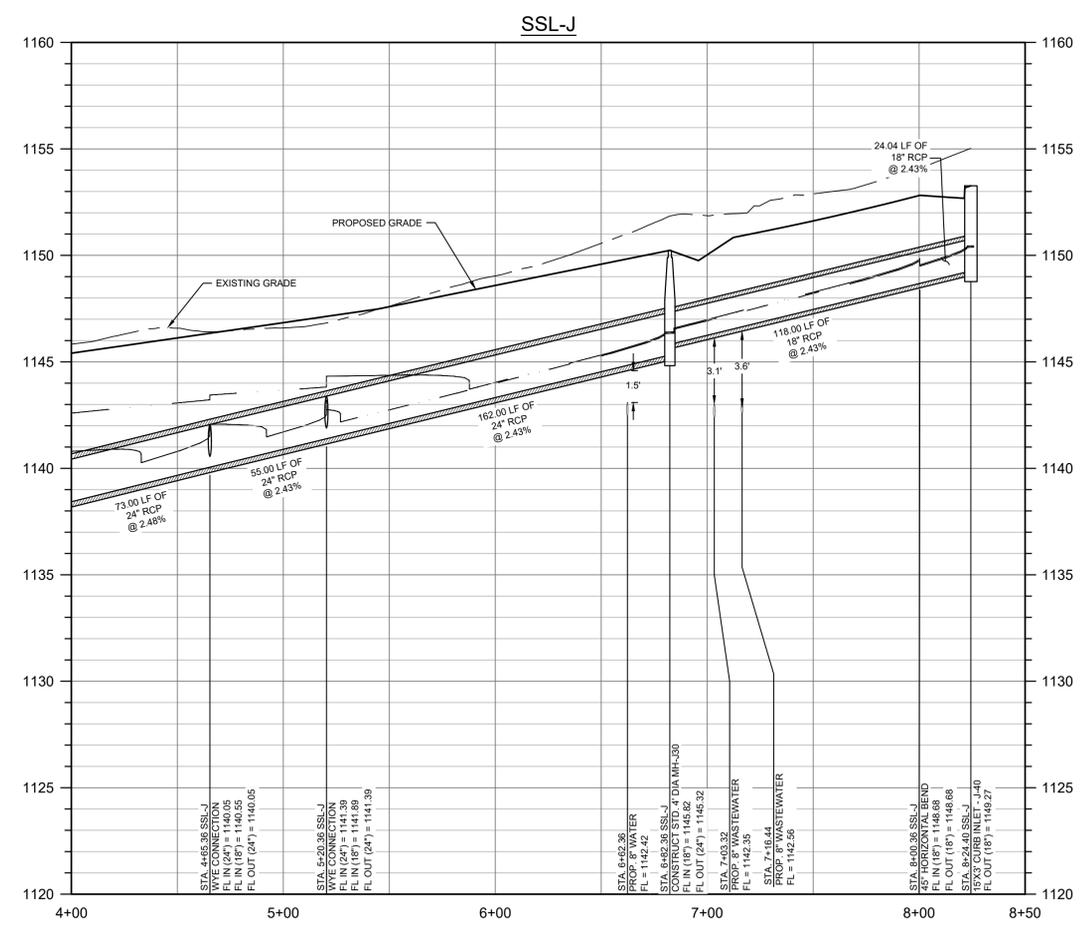
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Brandon Gilmore



NOTES:
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GRAY ENGINEERING

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**ORCHARD RANCH
 SUBDIVISION
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SSL-J (STA 4+00 TO END)

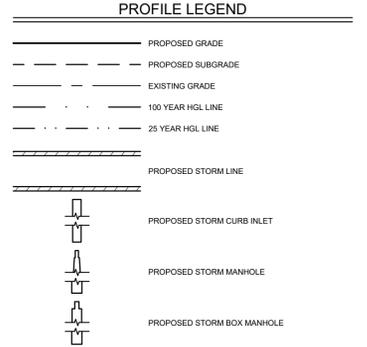
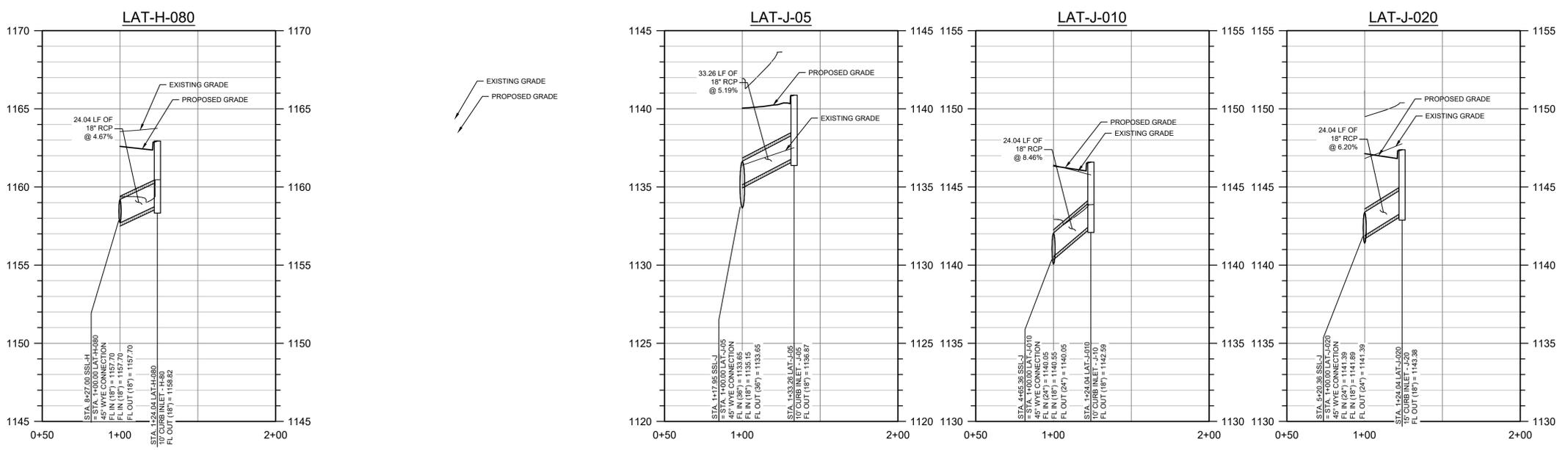
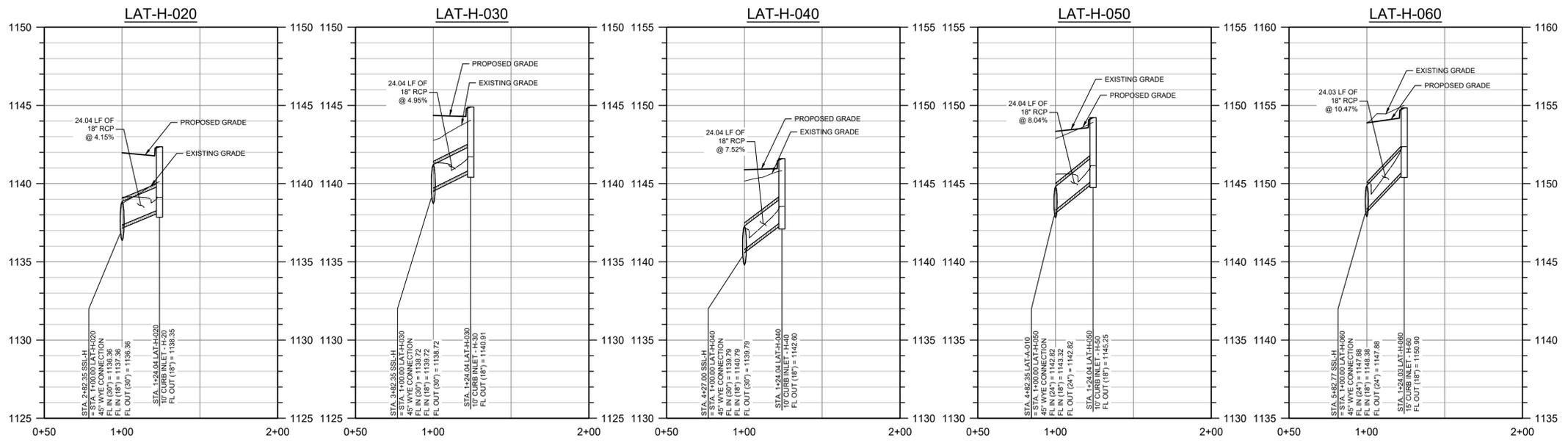
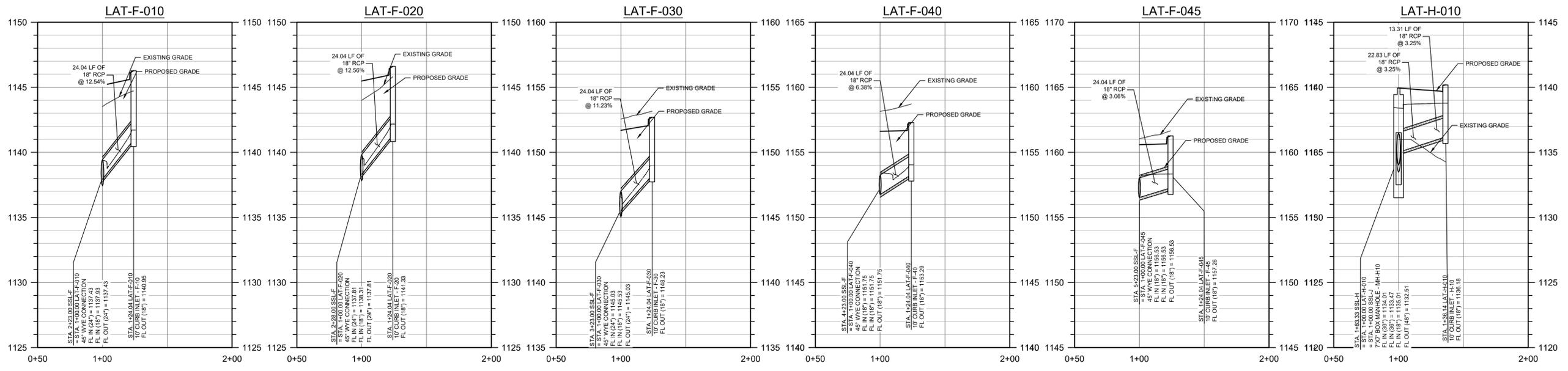
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 DESIGNED BY: BG
 DRAWN BY: TAM
 CHECKED BY: CR

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Brandon S. Gilmore
 LICENSED PROFESSIONAL ENGINEER
 STATE OF TEXAS
 19888

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NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

LATS (SSL-F & SSL-H & SSL-J)

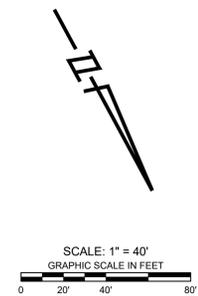
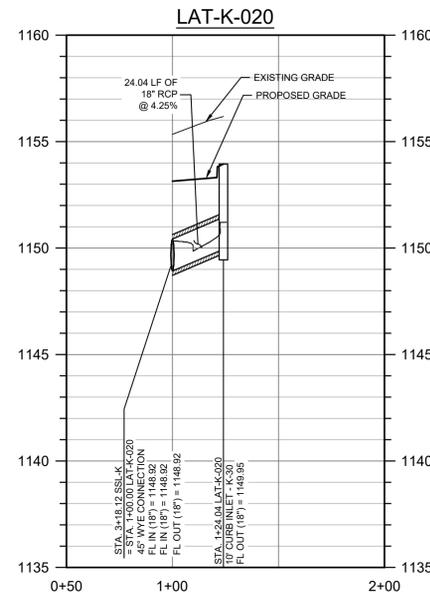
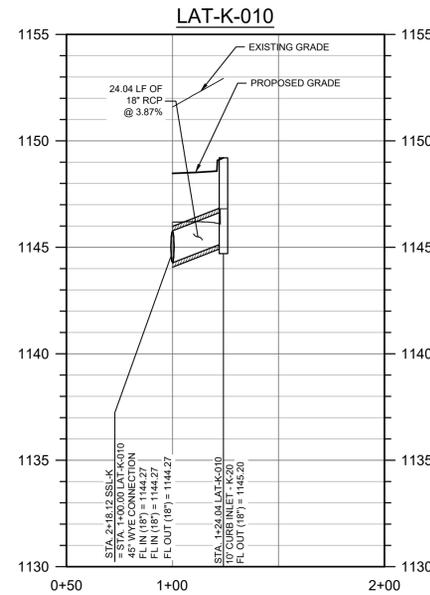
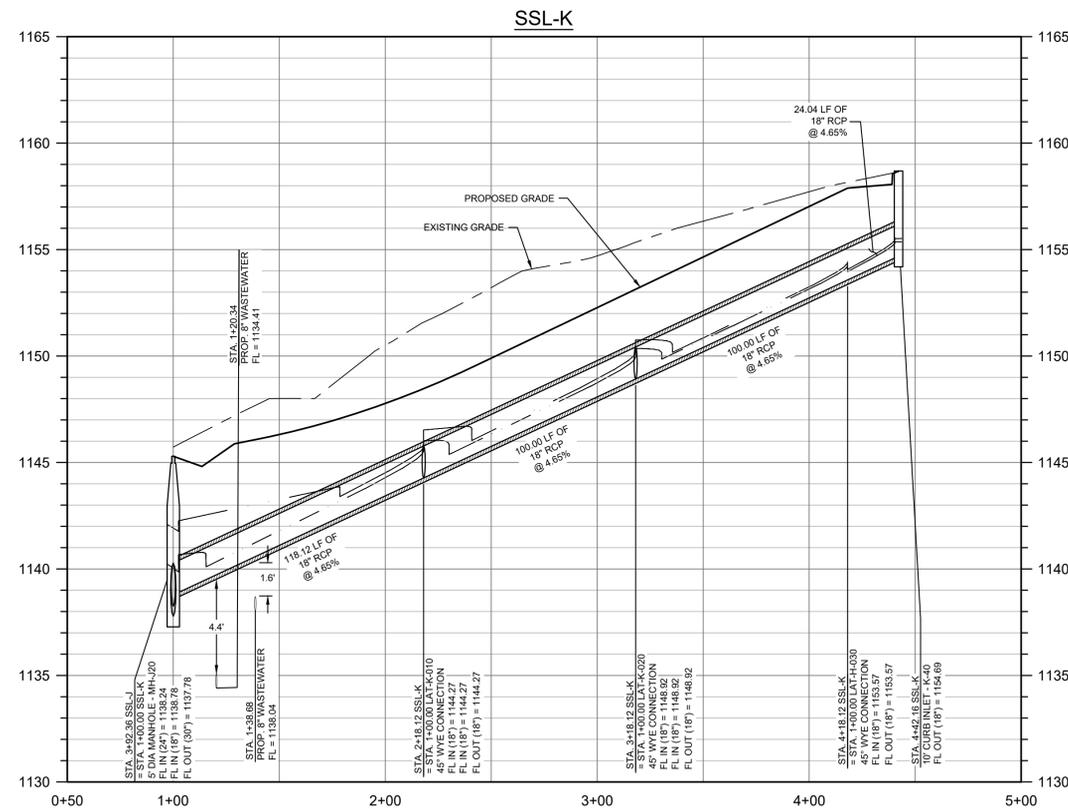
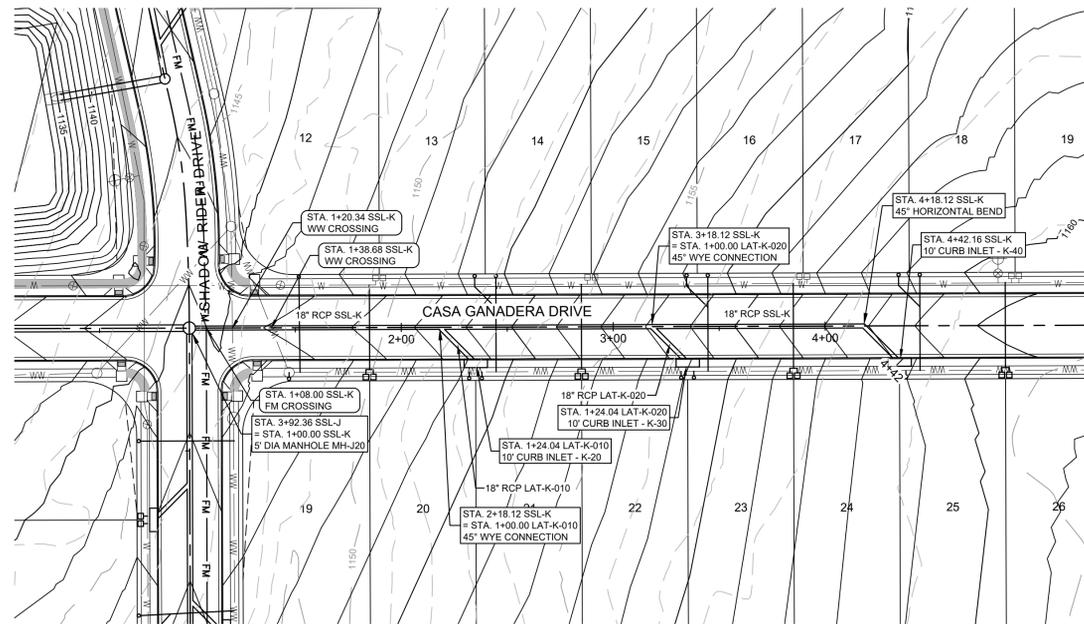
PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

NOTICE:
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12/18/2025

Brandon D. Glumke
Professional Engineer

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- LEGEND**
- PROPERTY BOUNDARY
 - - - EXISTING MAJOR CONTOUR
 - - - EXISTING MINOR CONTOUR
 - - - PROPOSED MAJOR CONTOUR
 - - - PROPOSED MINOR CONTOUR
 - STORM SEWER FLOW DIRECTION
 - PROPOSED JUNCTION BOX
 - PROPOSED CURB INLET
- NOTES:**
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.

- PROFILE LEGEND**
- PROPOSED GRADE
 - - - PROPOSED SUBGRADE
 - - - EXISTING GRADE
 - - - 100 YEAR HGL LINE
 - - - 25 YEAR HGL LINE
 - PROPOSED STORM LINE
 - PROPOSED STORM CURB INLET
 - PROPOSED STORM MANHOLE
 - PROPOSED STORM BOX MANHOLE

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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

SSL-K (STA 1+00 TO END) & LATS

PROJECT NO: 1636-11741
DESIGNED BY: BG
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CHECKED BY: CR

NOTICE:
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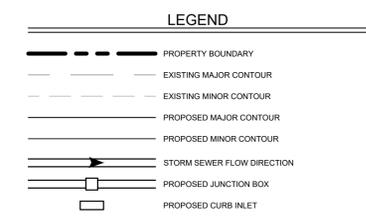
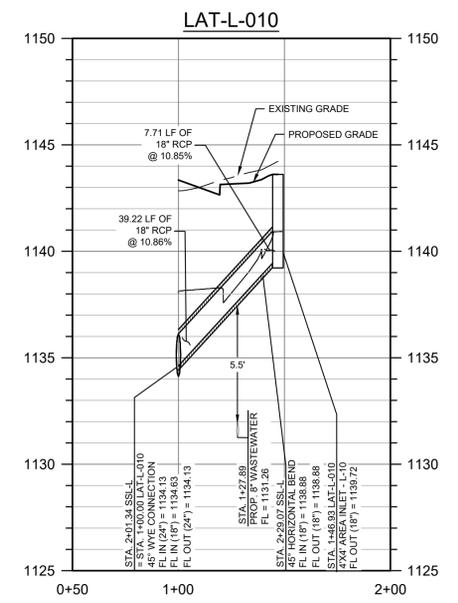
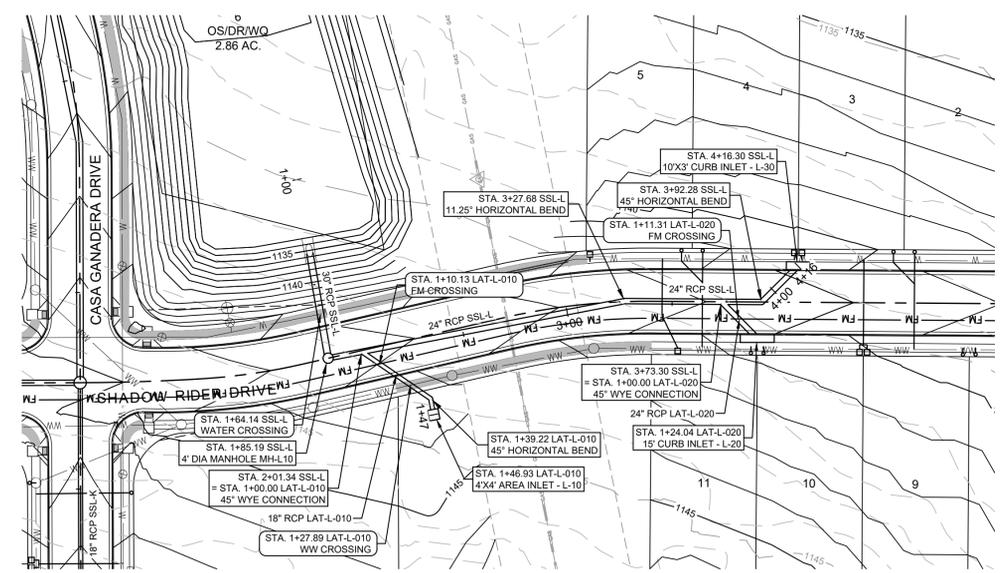
12/18/2025

Brandon Gilmore
SHEET 71 OF 118

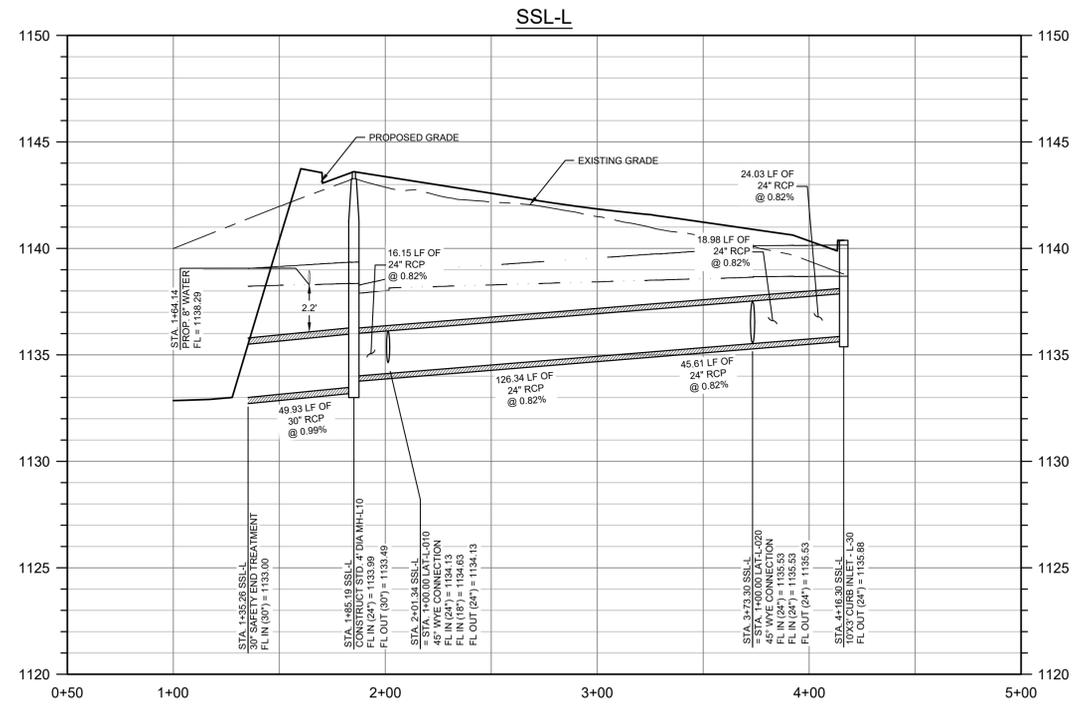
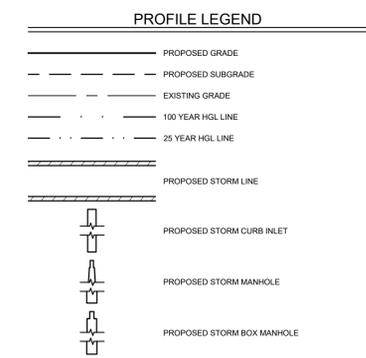
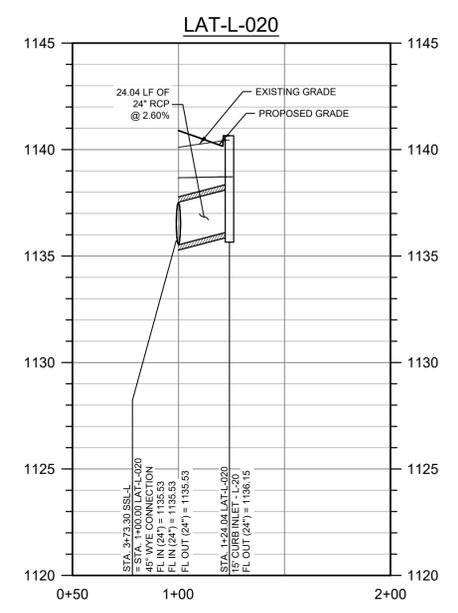
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET



NOTES:
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NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

SSL-L (STA 1+00 TO END) & LATS

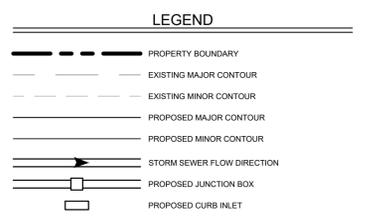
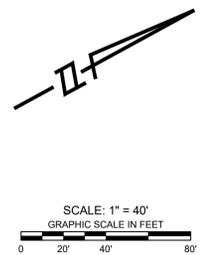
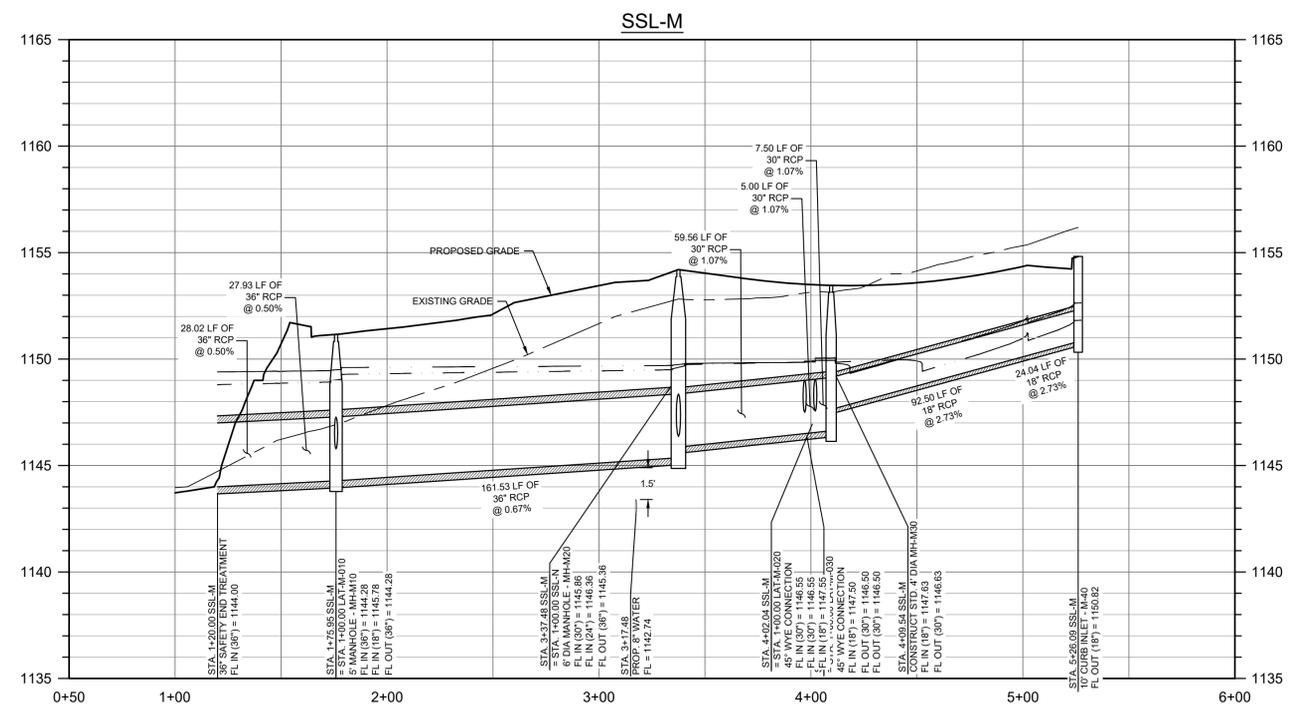
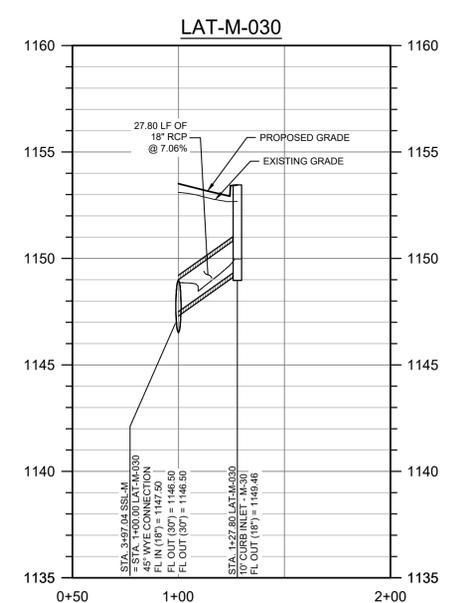
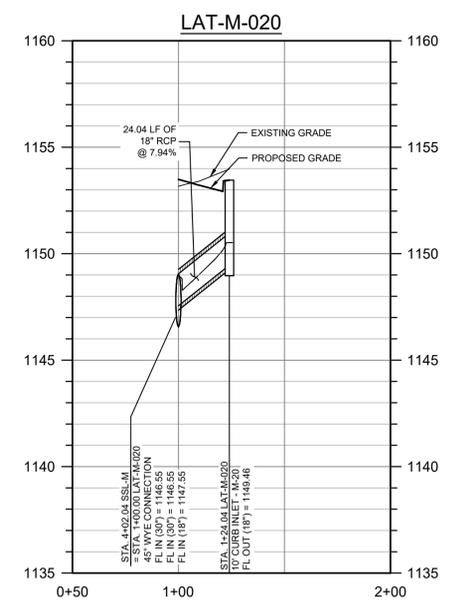
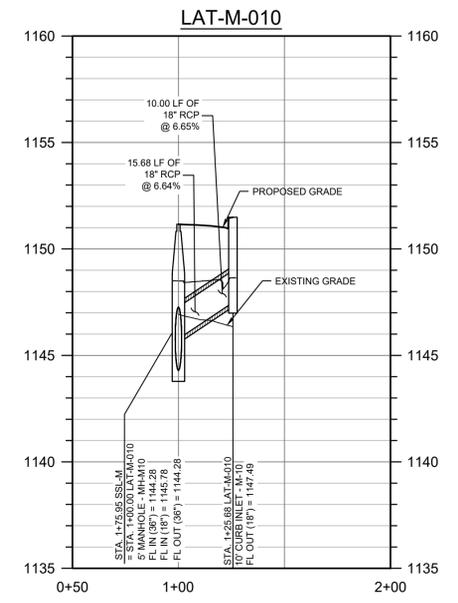
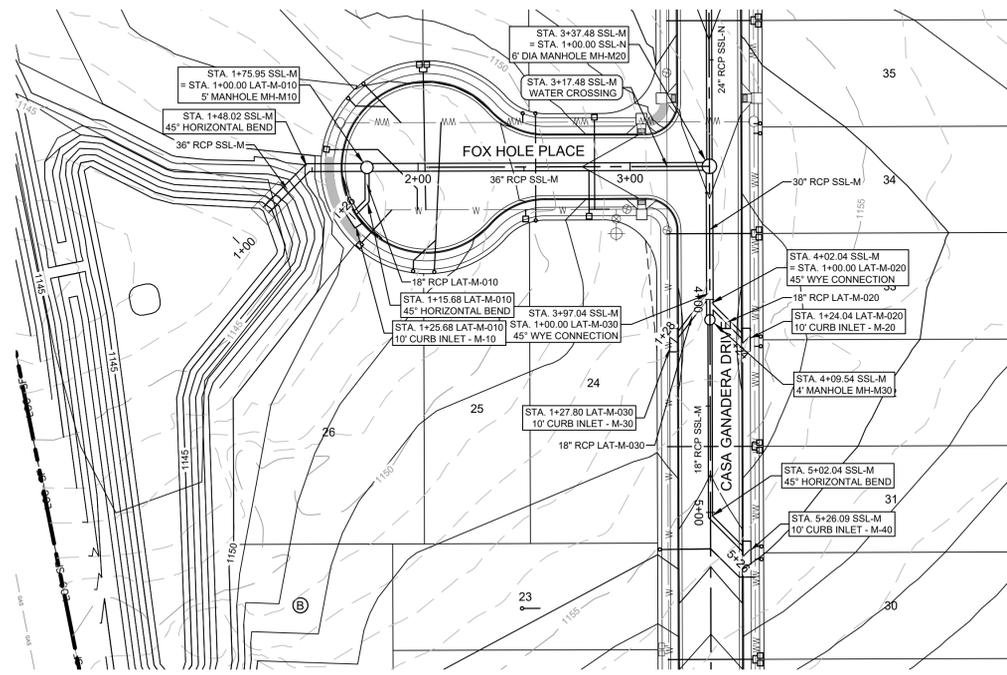
PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

NOTICE:
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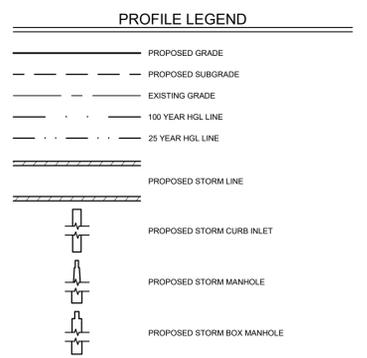
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SHEET 72 OF 118



NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.



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NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

SSL-M (STA 1+00 TO END) &
LATS

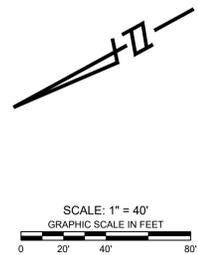
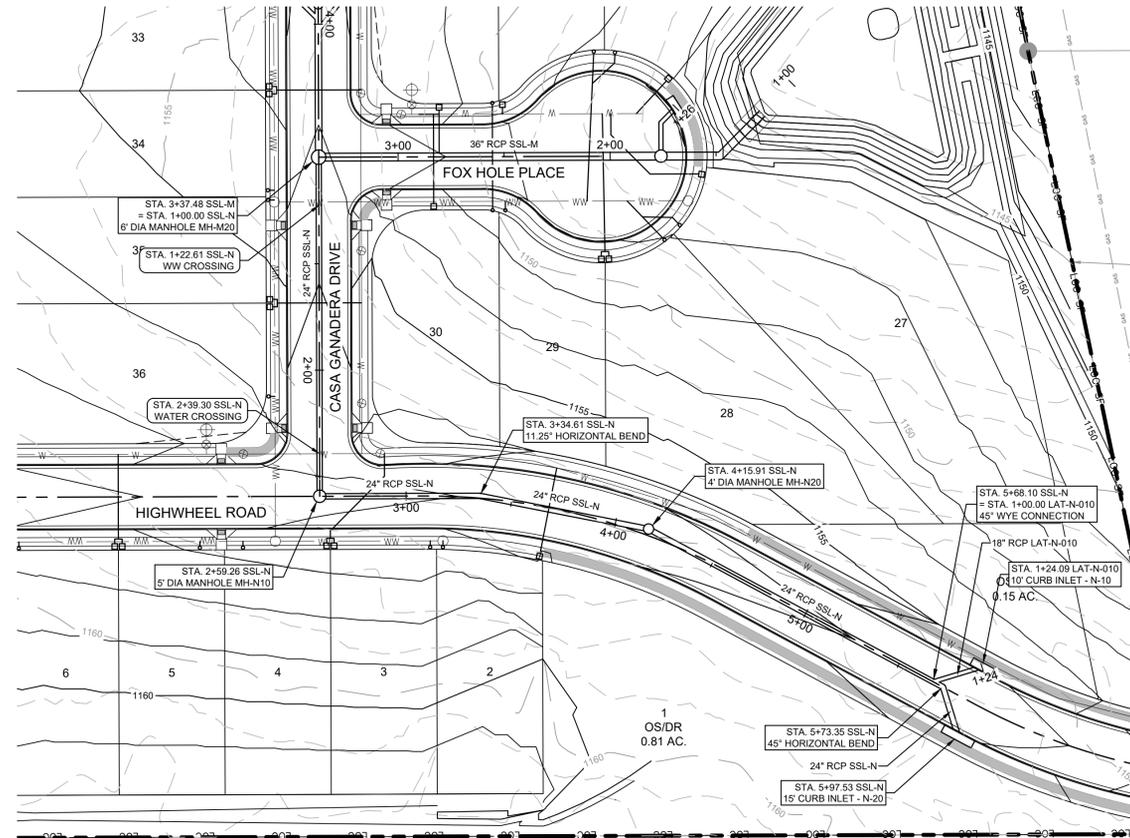
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DRAWN BY: TAM
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12/18/2025

Brandon S. Gilmore
SHEET 73 OF 118

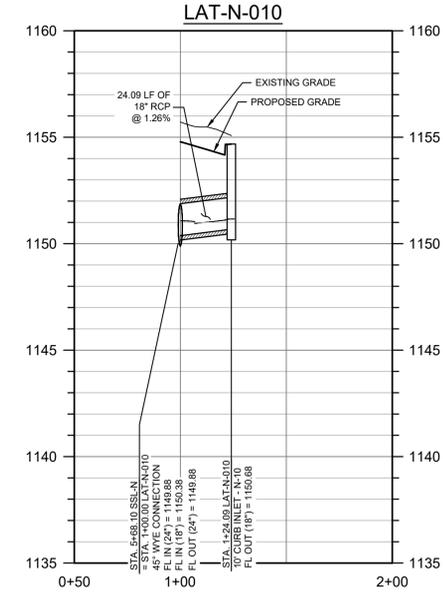
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LEGEND

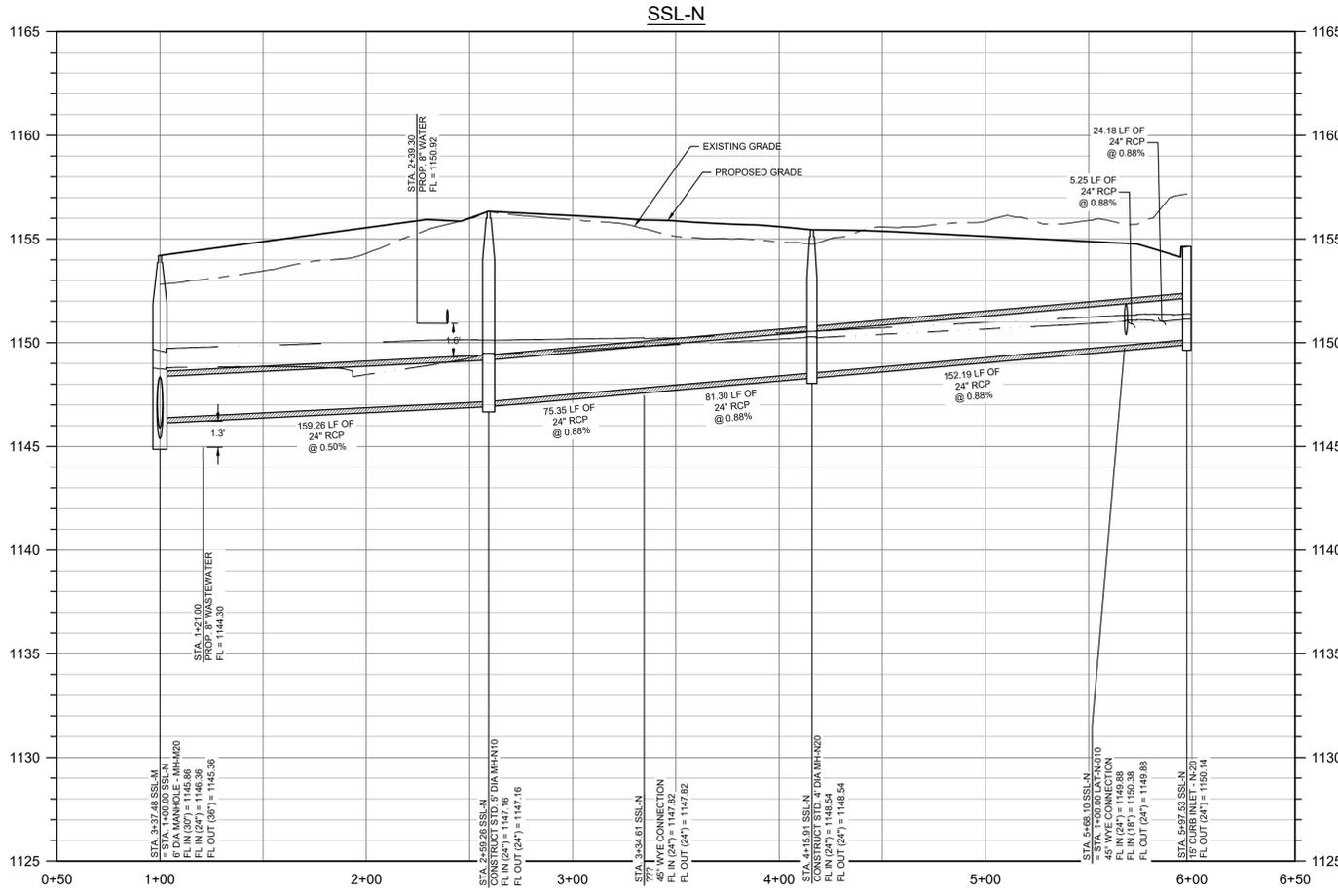
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	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	STORM SEWER FLOW DIRECTION
	PROPOSED JUNCTION BOX
	PROPOSED CURB INLET

NOTES:
 1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.



PROFILE LEGEND

	PROPOSED GRADE
	PROPOSED SUBGRADE
	EXISTING GRADE
	100 YEAR HGL LINE
	25 YEAR HGL LINE
	PROPOSED STORM LINE
	PROPOSED STORM CURB INLET
	PROPOSED STORM MANHOLE
	PROPOSED STORM BOX MANHOLE



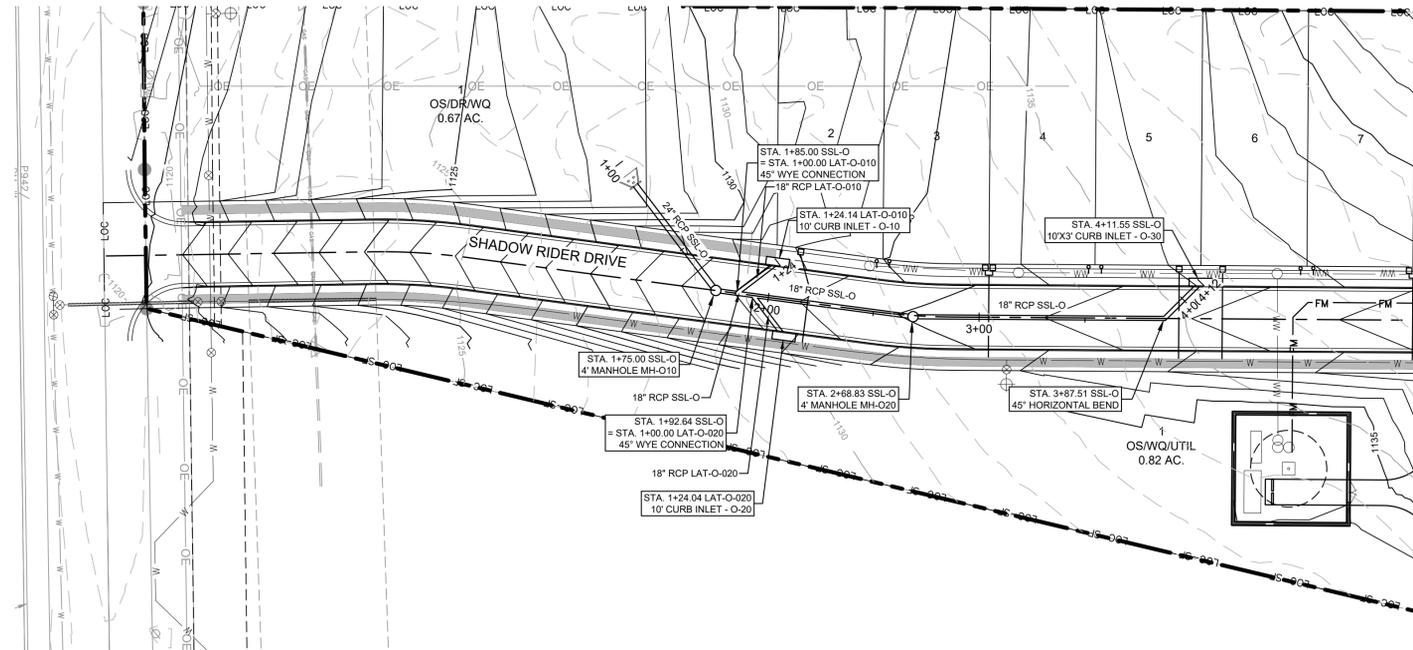
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**ORCHARD RANCH
 SUBDIVISION
 CONSTRUCTION PLANS**

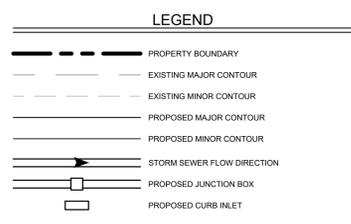
SSL N (1+00 TO END) & LAT

PROJECT NO: 1636-11741
 DESIGNED BY: BG
 DRAWN BY: TAM
 CHECKED BY: CR

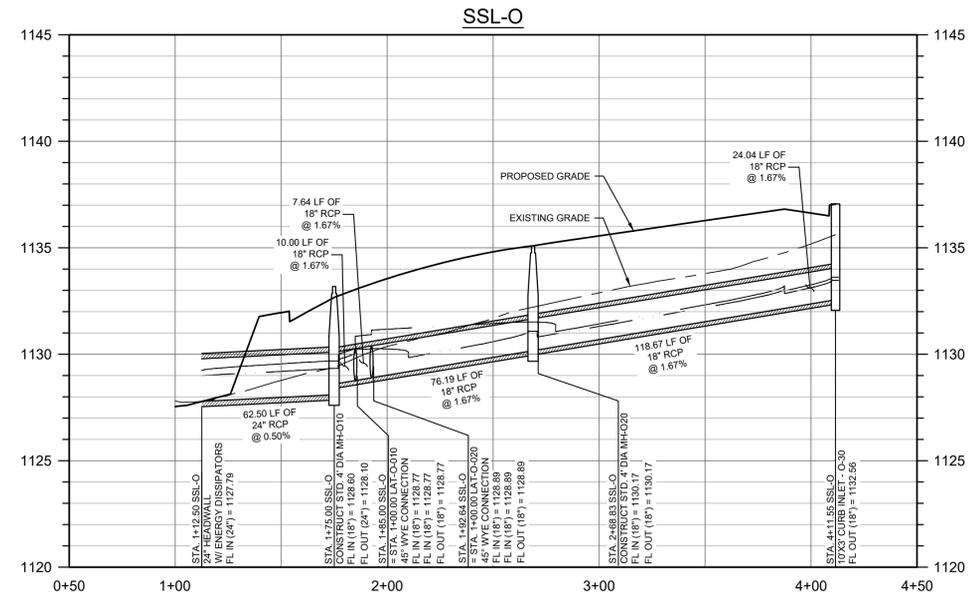
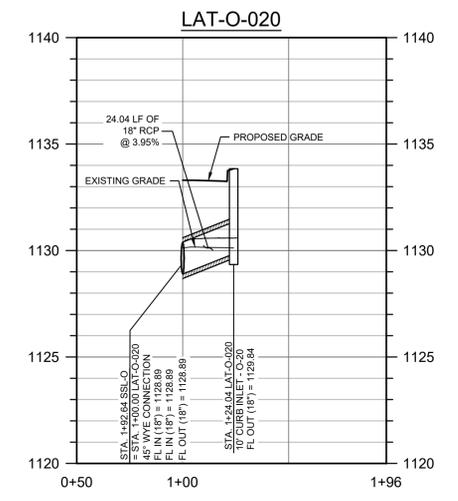
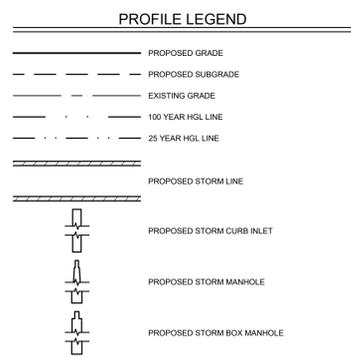
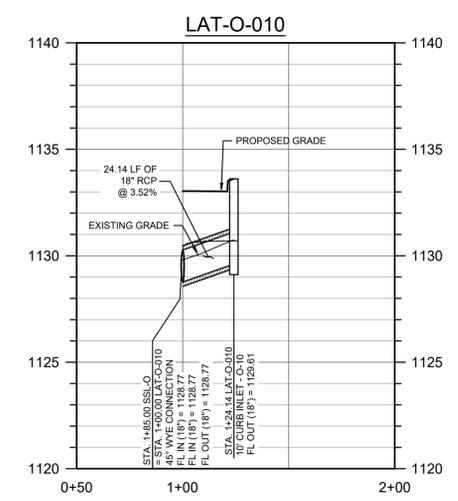
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SCALE: 1" = 40'
GRAPHIC SCALE IN FEET



NOTES:
1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.



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ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

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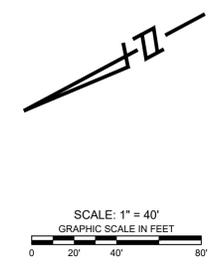
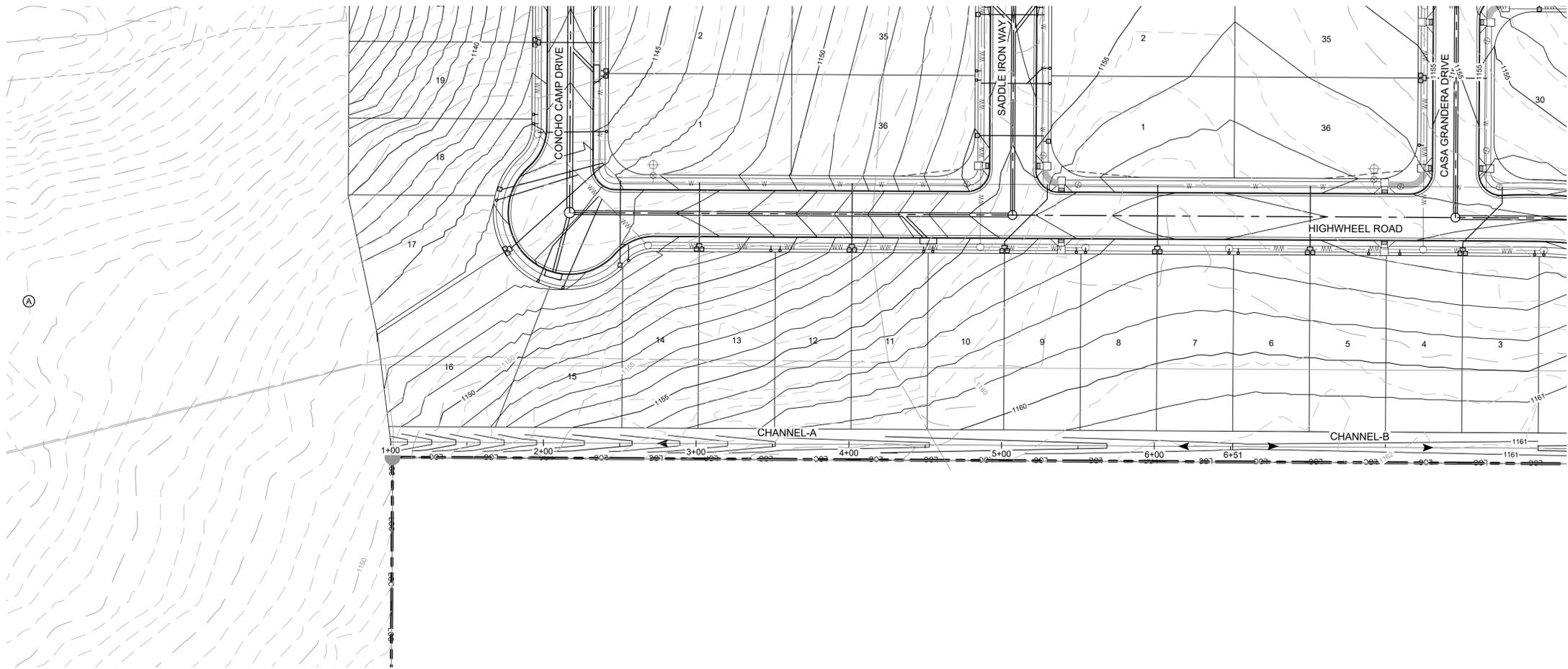
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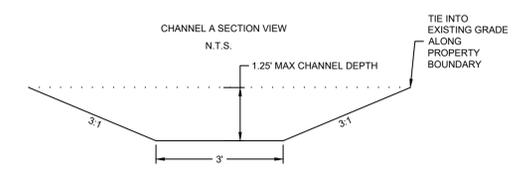
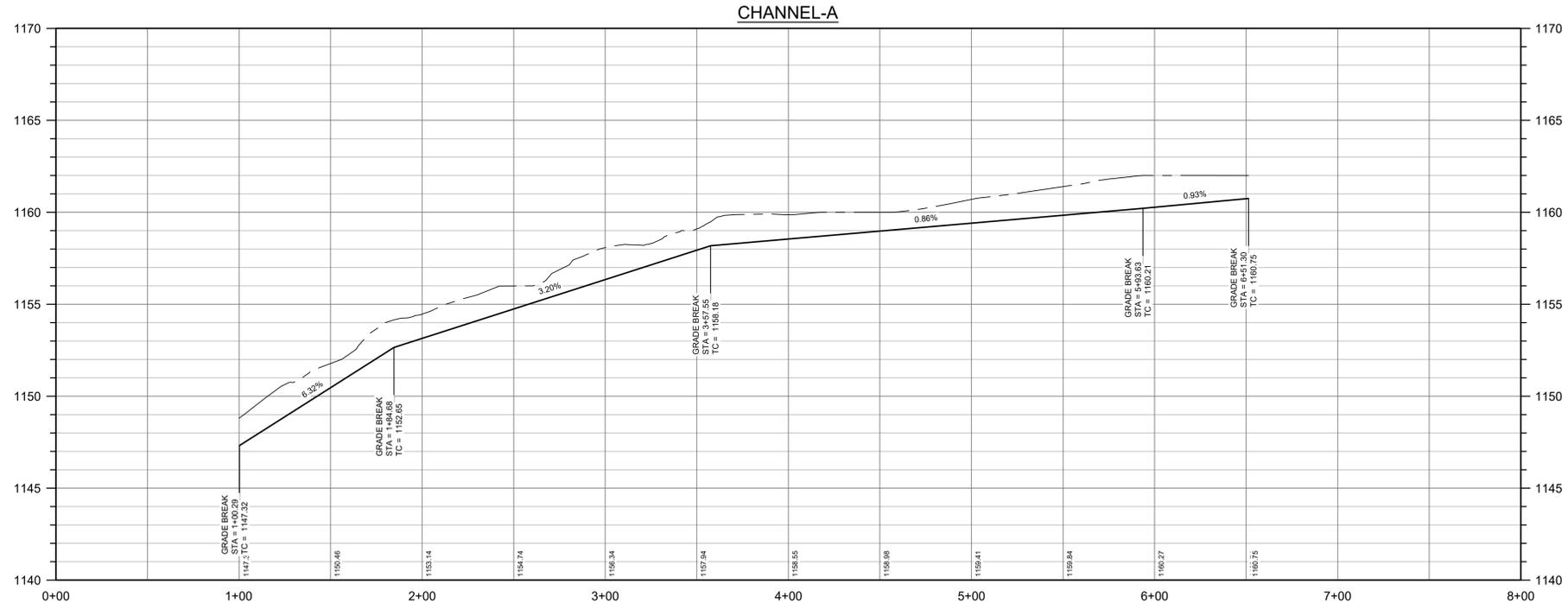
12/18/2025

Brandon Gilmore

SHEET 75 OF 118



CHANNEL-A				CHANNEL-A			
STA.	Q ₁₀₀ (cfs)	V ₁₀₀ (fps)	D ₁₀₀ (ft)	STA.	Q ₂₅ (cfs)	V ₂₅ (fps)	D ₂₅ (ft)
01+00	18.81	5.59	0.67	01+00	11.59	4.87	0.52
02+00	16.02	4.19	0.74	02+00	9.87	3.65	0.57
03+00	13.23	3.97	0.67	03+00	8.15	3.46	0.52
04+00	10.61	2.32	0.83	04+00	6.53	2.03	0.65
05+00	5.94	1.98	0.62	05+00	3.66	1.72	0.72
06+00	4.16	1.47	0.59	06+00	2.56	1.28	0.46



8834 N. Capital of Texas Hwy.
Suite 140
Austin, Texas 78759
(512) 452-0371
FAX (512) 454-9933
TBPELS FRM #2946

GRAY
ENGINEERING

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CONSTRUCTION PLANS

PROJECT NO: 1636-11741
DESIGNED BY: BG
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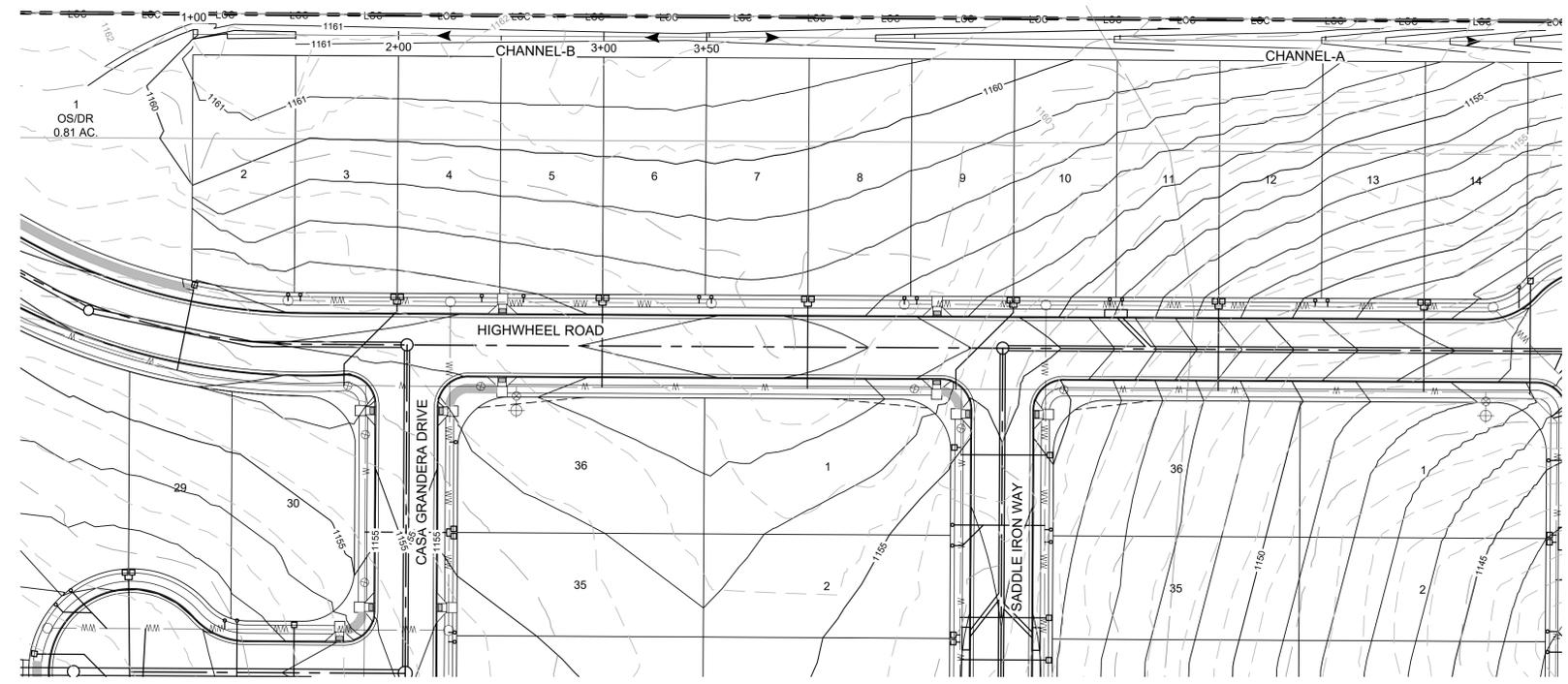
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Brandon Gilmore

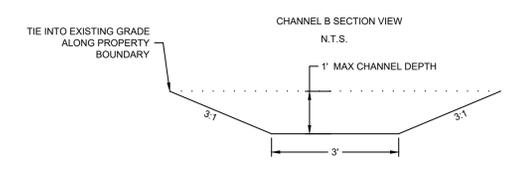
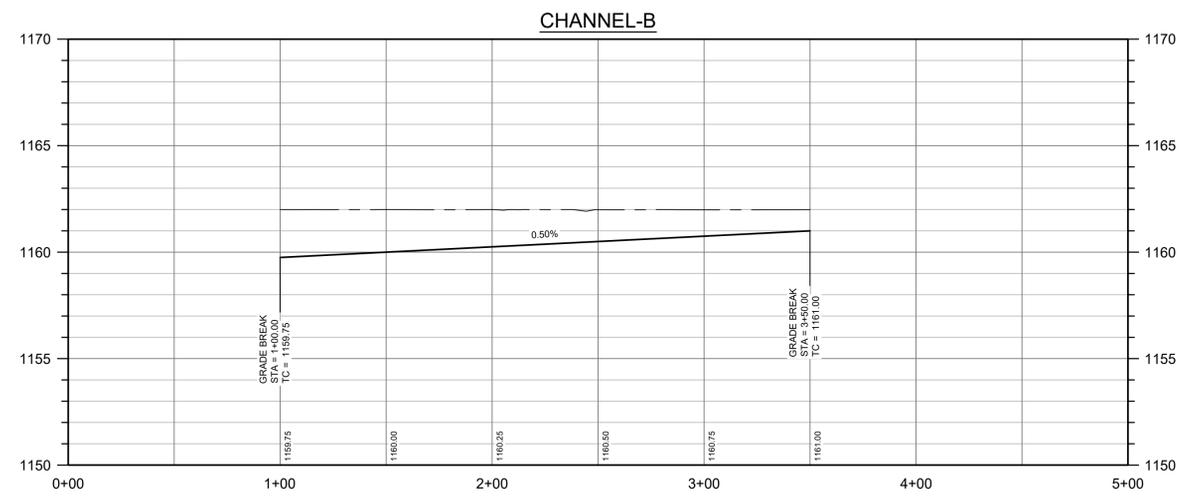
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NO.	BY	DATE	REVISION DESCRIPTION

**ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS**



CHANNEL-B				CHANNEL-B			
STA.	Q ₁₀₀ (cfs)	V ₁₀₀ (fps)	D ₁₀₀ (ft)	STA.	Q ₂₅ (cfs)	V ₂₅ (fps)	D ₂₅ (ft)
01+00	2.92	1.33	0.49	01+00	1.80	1.15	0.38
02+00	1.44	1.08	0.33	02+00	0.89	0.92	0.26
03+00	0.19	0.55	0.10	03+00	0.12	0.46	0.08



PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

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Brandon Gilmore

SHEET OF 118

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

Batch Detention Pond:

The pond should be inspected at least twice per year, preferably during wet weather. The inspections should check for clogging of the primary outfall mechanism, as well as erosion issues in the upper stage pilot channel and its flow path to the lower stage, if any. Erosion within and downstream of the BMP should be identified and repaired and/or revegetated immediately.

The basin, basin side slopes, and embankment 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 for landscaped areas. At the time of mowing, litter and debris should be removed from the surface of the basin. Particular attention should be given to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed. Additionally, at this time, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.).

With each inspection, any damage to structural elements of the basin, such as pipes, concrete drainage structures, or retaining walls, should be identified and repaired immediately. Examples of these types of repairs include patching of cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. The various inlet and outlet structures apart of a basin will eventually deteriorate and must be replaced.

Sediment shall be removed from the basin at least every 5 years, when sediment depth exceeds 6 inches, when the sediment interferes with the level sensor, or when the basin does not drain within 48 hours. Care should be taken to avoid compromising the basin lining during maintenance.

The Logic Controller should be inspected as part of the twice yearly investigations. Verify that the external indicators (active, cycle in progress) are operating properly by turning the controller off and on, and by initiating a cycle by triggering the level sensor in the basin. The valve should be manually opened and closed using the open/close switch to verify valve operation and to assist in inspecting the valve for debris. The solar panel should be inspected and any dust or debris on the panel should be carefully removed. The controller and all other circuitry and wiring should be inspected for signs of corrosion, damage from insects, water leaks, or other damage. At the end of the inspection, the controller should be reset.

Vegetated Filter Strips:

Inspection of vegetated filter strips should occur at least twice per year for erosion and damage to vegetation. Additional inspections should occur after heavy rainfall. The filter strip should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. If bare spots and/or areas of erosion are found, the strip must be replanted and restored to meet TCEQ specifications.

Inspections for trash should be performed at least twice a year to prevent obstructions and any debris flowing downstream.

Grass areas must be mowed at least four times a year to limit vegetation height to 18 inches. A mulch mower must be used. Grass clippings and brush debris cannot be discarded onto the filter strips. Frequent mowing should include weed control practices, with herbicide use kept to a minimum.

All inspection and maintenance records must be kept at the office of the operator for the previous three years.

An amended copy of this document will be provided to TCEQ within thirty (30) days of any changes in the following information.

Responsible Party: Adam Boenig

Mailing Address: 6720 Vaught Ranch Rd

City, State, Zip: Austin, TX 78730

Telephone: 512-320-8833

(Signature of Responsible Party)

Agent/Engineer: Brandon Gilmore

Mailing Address: 8834 North Capital of Texas Highway, Suite 140

City, State, Zip: Austin, Texas 78759

Telephone: (512) 452-0371

(Signature of Agent/Engineer)

Attachment O – Pilot-Scale Field Testing Plan

Not applicable to this project.

Attachment P – Measures for Minimizing Surface Stream Contamination

The site will be stabilized using silt fence; all stabilization will be installed prior to construction and will be removed after construction has been completed. These methods will minimize any increases in erosion caused by construction. Additionally, the proposed permanent BMPs will treat any stormwater passing through the site prior to that stormwater's returning to existing drainage patterns and eventually flowing to surface streams.

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.

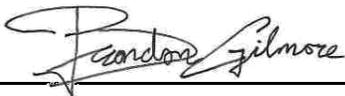
Signature

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: Brandon Gilmore

Date: 11/18/2025

Signature of Customer/Agent:



Regulated Entity Name: Orchard Ranch Subdivision

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: Barton Creek and Slaughter Creek

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

N/A

12. **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
13. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
14. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
15. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
16. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

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

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

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

Administrative Information

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

Attachment A – Spill Response Action

No spills of hydrocarbons or hazardous substances are expected. However, in the event that such an incident does occur, the contractor should carefully follow the following TCEQ guidelines:

Cleanup:

1. Onsite personnel must be trained in spill prevention and spill cleanup.
2. Clean up leaks and spills immediately
3. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
4. Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly.

Minor Spills:

1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
2. Use absorbent materials on small spills rather than hosing down or burying the spill.
3. Absorbent materials should be promptly removed and disposed of properly.
4. Follow the practice below for a minor spill:
 - a. Contain the spread of the spill.
 - b. Recover spilled materials.
 - c. Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills:

Semi-significant spills can still be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. this response may require the cessation of all other activities. Spills should be cleaned up immediately, using the following practices:

1. Contain spread of the spill.
2. Notify the project foreman immediately.
3. If the spill occurs on paved or impermeable surfaces, clean up using “dry” methods (absorbent materials, cat litter, and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
4. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
5. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills:

For highly toxic materials, the Reportable Quantity (RQ) > 25 gallons. For petroleum/hydrocarbon liquids, RQ > 250 gallons (on land) or any amount which creates a "sheen" on water. Only certified Haz-Mat teams will be responsible for handling the material at the site.

For significant or hazardous spills that are in reportable quantities:

1. Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site. Additionally, in the event of a hazardous material spill, local Travis County police, fire, and potentially EMS should be contacted in order to initiate the hazardous material response team.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 191, and 302, the contractor should notify the National Response Center at (800) 424-8802.
3. Notification should first be made by telephone and followed up with a written report of which one copy is to be kept on-site in the report binder and one copy is to be provided to the TCEQ.
4. The services of a spill contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
5. Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff's Office, Fire Department, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: <http://www.tceq.state.tx.us/response/spills.html>

Attachment B – Potential Sources of Contamination

No particular activity or process during construction of the project is anticipated to present a significant risk of being a potential source of contamination. However, during regular construction operations, several common and minor risks of contamination are anticipated. Should any unforeseen mishaps occur during construction, the contractor shall follow the guidelines set forth in “Attachment A – Spill Response Plan.”

Potential Sources of Sediment to Stormwater Runoff:

- Clearing and grubbing
- Grading and excavation
- Vehicle tracking
- Topsoil stripping and stockpiling
- Landscaping

Potential Pollutants and Sources, other than Sediment, to Stormwater Runoff:

- Combined Staging Area – small fueling, minor equipment maintenance, sanitary facility.
- Materials Staging Area – solvents, adhesives, paving materials, aggregate, trash, etc.
- Construction Activities – paving, concrete pouring
- Concrete washout areas

Potential On-Site Pollutants:

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

Attachment C – Sequence of Major Activities

1. Temporary erosion and sedimentation controls are to be installed as indicated on the approved subdivision construction plans and in accordance with the stormwater pollution prevention plan (SWPPP) that is required to be posted on the site. Install tree protection and initiate tree mitigation measures.
2. The environmental project manager, and/or site supervisor, and/or designated responsible party, and the general contractor will follow the storm water pollution prevention plan (SWPPP) posted on the site. Temporary erosion and sedimentation controls will be revised, if needed to comply with city inspectors' directives, and revised construction schedule relative to the water quality plan requirements and the erosion and sedimentation plan.
3. Temporary erosion and sedimentation controls will be inspected maintained in accordance with the storm water pollution prevention plan (SWPPP) posted on the site.
4. A sequence of major construction activities, as well as an estimated area of disturbance for each, is listed below:
 - Clearing and grubbing – 59.76 acres
 - Rough Cut BMPs –3.04 acres
 - Grading and excavation for roadway and lots – 48.32 acres
 - Excavation for utilities and storm sewer – 1.08 acres
 - Install Final BMPs and stabilize – 3.04 acres
 - Construction of utilities and storm sewer system – 1.08 acres
 - Paving, striping, etc. – 9.32 acres
 - Revegetation – 11.42 acres
 - Landscaping – 0.00 acres
5. Upon completion of construction and revegetation, the design engineer shall submit an engineer's letter of concurrence to Travis County. indicating that construction, including revegetation, is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the appropriate inspector.
6. After construction is complete and all disturbed areas have been revegetated per plan to at least 90 percent established, remove the temporary erosion and sedimentation controls and complete any necessary final revegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the permanent BMPs.

Attachment D – Temporary Best Management Practices and Measures

Prior to the commencement of any construction activity, the contractor shall install silt fence, and construction entrances, per the Erosion and Sedimentation Control Plan. Once inlets are installed, inlet protection shall be installed. All temporary BMPs are to be installed per TCEQ and local requirements.

As surface water flows from and through disturbed areas, the proposed temporary BMPs will prevent pollution by filtering the increased sediment loads and other pollutant sources (listed in “Attachment B – Potential Sources of Contamination”) prior to any runoff leaving the site. As shown in attached construction plans, silt fence will be utilized downstream of any grading and construction activities to remove debris and sediment from runoff in the area (activities here will primarily involve road grading and storm sewer excavation). Inlet protection will prevent sediment laden runoff from entering the storm sewer system during construction. Concrete washout basins will contain pollutants discharged when concrete trucks are washed out, and stabilized construction entrances will prevent the transport of sediment off-site.

In using these treatment methods and maintaining natural drainage patterns downgradient of the proposed site, any flow to naturally occurring sensitive features, both known and unknown, will be maintained.

Attachment E – Request to Temporarily Seal a Feature

Not applicable to this project.

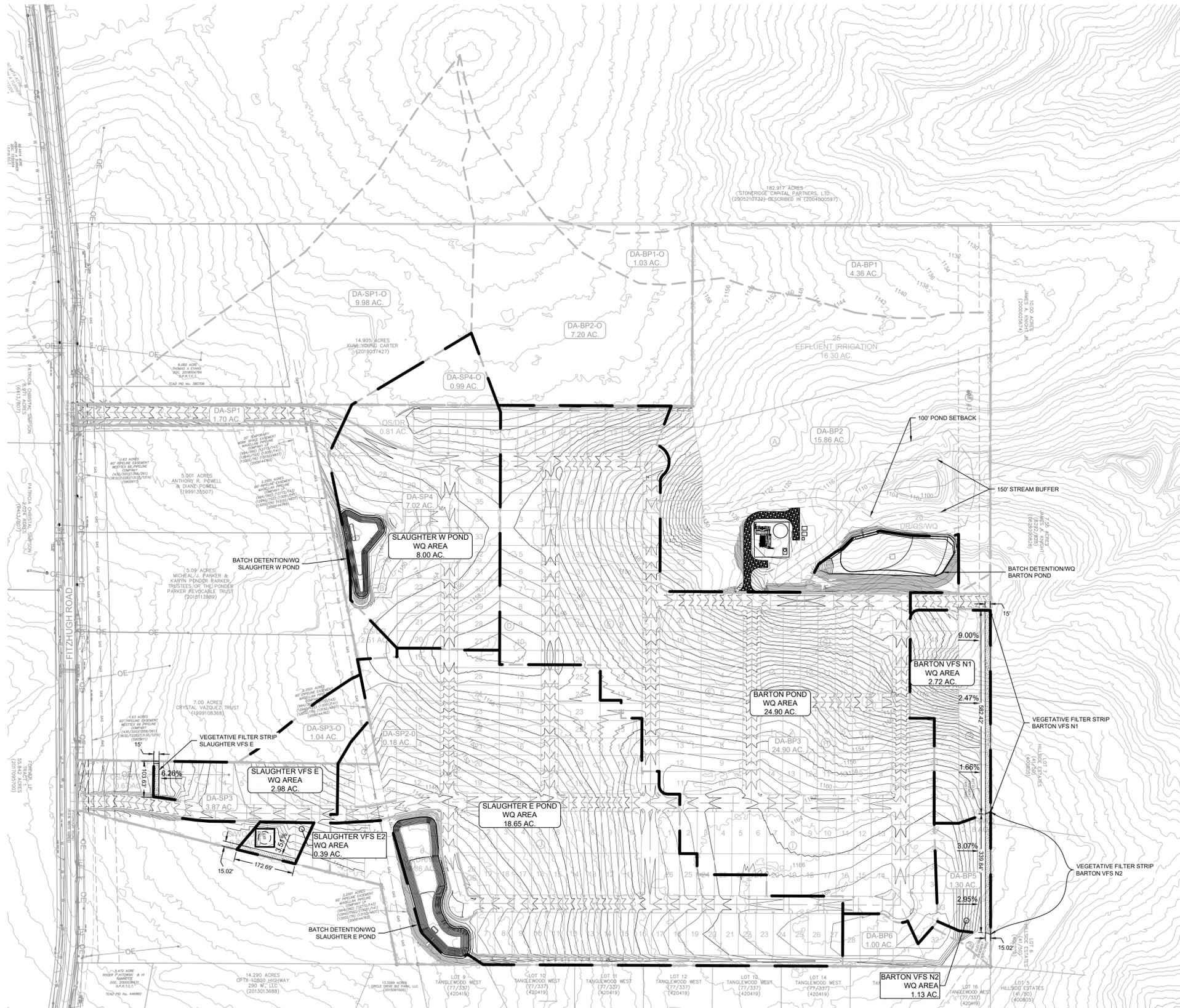
Attachment F – Structural Practices

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

- Silt Fence – used for sediment filtration along the downslope perimeter of portions of the project, as well as to prevent runoff from storage to excavated materials during utility construction. The fence retains sediment primarily by retarding flow and promoting deposition of sediment on the uphill side of the slope. Runoff is filtered as it passes through the geotextile.
- Inlet Protection – to be provided around all proposed storm sewer inlets during construction. Locations are indicated on the attached site plan. The measures will trap and settle out sediment and debris prior to runoff entering the proposed storm sewer system.
- Construction Entrance – stone pads will be constructed at entrances and exists to the project to prevent off-site transport of sediment by construction vehicles. They will be graded to prevent runoff from leaving the site.

Attachment G – Drainage Area Map

Drainage area maps are shown in the attached construction plans and an overall BMP map showing interim and final condition drainage area designations is included with this submittal.



LEGEND	
	PROPERTY BOUNDARY
	EXISTING CONTOUR
	EASEMENT LINE
	WATER QUALITY AREA BOUNDARY
	WATER QUALITY AREA LABEL
	DRAINAGE AREA BOUNDARY
	DRAINAGE AREA LABEL

NO.	BY	DATE	REVISION DESCRIPTION

**ORCHARD RANCH
FINAL PLAN**

WATER QUALITY DRAINAGE AREA MAP

PROJECT NO: 1636-11741
DESIGNED BY: BG
DRAWN BY: TAM
CHECKED BY: CR

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Attachment H – Temporary Sediment Pond Plan and Calculations

As part of managing erosion control, the contractor will construct Slaughter East Pond and Barton Pond to be temporary sedimentation ponds prior to the installation of any stormwater networks. These temporary sedimentation ponds will then be converted into batch detention ponds for permanent stormwater management.

Attachment I – Inspection and Maintenance for BMPs

The inspection and maintenance of temporary BMPs will be made according to TCEQ RG-348, “Complying with the Edwards Aquifer Rules: technical Guidance on Best Management Practices.”

Inspection Personnel:

Inspections shall be conducted by qualified representatives of the contractor acting on behalf of the owner or a designated party, if hired separately by the owner. Each operator must delegate authority to the specifically described position or person performing inspections, as provided by 30 TAC 305.128, as an authorized person for signing reports and performing certain activities requested by the director or required by TPDES general permit. This delegation of authority must be provided to the director of TCEQ in writing and a copy shall be kept along with the signed effective copy of the SWPPP.

Inspection Schedule and Procedures:

An inspection shall occur weekly and after any rain event.

The authorized party shall inspect all disturbed areas of the site, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site.

Disturbed areas and areas used for storage of materials that are exposed to precipitation or within the limits of the 1% annual chance (100 year) floodplain must be inspected for evidence of, or the potential for, pollutants entering the runoff from the site. Erosion and sediment control measures identified in the plan must be observed to ensure that they are operating correctly. Observations can be made during wet or dry weather conditions. Where discharge locations or points are accessible, they must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. This can be done by inspecting receiving waters to see where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

Based on the results of the inspection, the site description and the pollution prevention measures identified in the plan must be revised as soon as possible after an inspection that reveals inadequacies. The inspection and plan review process must provide for timely implementation of any changes to the plan within 7 calendar days of the inspection.

An inspection report shall be completed, which summarizes the scope of the inspection, name(s) and qualifications of personnel conducting the inspection, the date(s) of the inspection, and major observations relating to the implementation of the SWPPP. Major observations shall include, at a minimum, location of discharges of sediment or other pollutants from the site, location of BMPs that need to be maintained, location of BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where BMPs are needed.

Actions taken as a result of the inspections must be described within, and retained as a part of, the SWPPP. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SWPPP and the TPDES general permit. The report must be signed by the authorized representative delegated by the operators in accordance with TAC 305.128.

Maintenance and Corrective Actions:

Maintenance of erosion control facilities shall consist of the minimum requirements as follows:

- In ongoing construction areas, inspect erosion control improvements to confirm facilities are in place and operable. Where facilities have been temporarily set aside or damaged due to construction activity, place facilities in service before leaving job site.
- If weather forecast predicts possibility of rain, check entire facilities throughout site to ensure that they are in place and operable. If job site weather conditions indicate high probability of rain, make special inspection of erosion control facilities.
- After rainfall events, review erosion control facilities as soon as site is accessible. Clean rock berms, construction entrances, and other structural facilities. Determine where additional facilities or alternative techniques are needed to control sediment leaving site.
- After portions of site have been seeded, review these areas on regular basis in accordance with project specifications to assure proper watering until grass is established. Re-seed areas where grass is not well-established.
- Spills are to be handled as specified by the manufacturer of the product in a timely and safe manner by qualified personnel. The site superintendent will be responsible for coordinating spill prevention and cleanup operations.
- Concrete trucks will discharge extra concrete or wash out drum only at an approved location on site. Residual product shall be properly disposed of.
- Inspect vehicle entrance and exits for evidence of off-site tracking and correct as needed.
- Remove sediment from traps/ponds no later than when the design capacity has been reduced by 50%.
- If sediment escapes the site, the contractor, where feasible and where access is available, shall collect and remove sedimentation material by appropriate non-damaging methods. Additionally, the contractor shall correct the condition causing discharges.
- If inspections or other information sources reveal a control that has been used incorrectly, or that control is performing inadequately, the contractor must replace, correct, or modify the control as soon as practical after discovery of the deficiency.

Attachment J – Schedule of Interim and Permanent Soil Stabilization Practices

Silt fence will be used during the period of construction near the perimeter of the disturbed area to intercept sediment while allowing water to percolate through. Silt fencing will be installed prior to any site clearing. This silt fence will remain in place until the disturbed area is permanently stabilized. Tree protection fencing will be installed around all protected trees. A stabilized pad of crushed stone will be placed at the point where traffic will be entering and leaving the construction site to eliminate the tracking or flowing of sediment onto public rights-of-way. Once all site grading activities and landscaping plantings have been completed, all disturbed areas and exposed soil will be revegetated with hydro-mulch as needed. All controls will remain in place until the revegetated areas are permanently stabilized.

If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 14 days, soil stabilization (via hydro-mulch revegetation) in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.

Should construction activities be interrupted for a period of at least 4 weeks of non-activity, Contractor shall revegetate all disturbed areas as required for permanent revegetation. Contractor shall keep all temporary BMPs in place until the disturbed areas become permanently stabilized.

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

I Adam Boenig,
Print Name

Vice President,
Title - Owner/President/Other

of Clayton Properties Group Inc., DBA Brohn Homes,
Corporation/Partnership/Entity Name

have authorized Brandon Gilmore
Print Name of Agent/Engineer

of Gray Civil, Inc.
Print Name of Firm

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

I also understand that:

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

SIGNATURE PAGE:

[Signature]
Applicant's Signature

11/18/25
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Adam Baenig 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 19th day of November, 2025.

[Signature]

NOTARY PUBLIC

Makinley LaBure
Typed or Printed Name of Notary



MY COMMISSION EXPIRES: 4/15/28

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Orchard Ranch Subdivision

Regulated Entity Location: North Side of Fitzhugh Rd., ~1500 LF West of Us Hwy. 290 Intersection

Name of Customer: Clayton Properties Group, Inc.

Contact Person: Adam Boenig

Phone: (512) 320-8833

Customer Reference Number (if issued): CN 600625057

Regulated Entity Reference Number (if issued): RN _____

Austin Regional Office (3373)

Hays

Travis

Williamson

San Antonio Regional Office (3362)

Bexar

Medina

Uvalde

Comal

Kinney

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

Austin Regional Office

San Antonio Regional Office

Mailed to: TCEQ - Cashier

Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

Site Location (Check All That Apply):

Recharge Zone

Contributing Zone

Transition Zone

Type of Plan	Size	Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	82.90 Acres	\$ 6,500
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	\$
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: 

Date: 12/18/2025

Application Fee Schedule

Texas Commission on Environmental Quality

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

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

Extension of Time Requests

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



TCEQ Core Data Form

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

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input checked="" type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
2. Customer Reference Number (if issued)	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number (if issued)
CN 600625057		RN

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)	
<input type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)			
<i>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).</i>			
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)		<i>If new Customer, enter previous Customer below:</i>	
Clayton Properties Group, Inc.			
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
11. Type of Customer:		Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited	
<input type="checkbox"/> Corporation Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Individual <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Other:	
12. Number of Employees		13. Independently Owned and Operated?	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following			
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant			
15. Mailing Address:			
City	State	ZIP	ZIP + 4
16. Country Mailing Information (if outside USA)		17. E-Mail Address (if applicable)	

18. Telephone Number () -	19. Extension or Code	20. Fax Number (if applicable) () -
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SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected, a new permit application is also required.)							
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information							
<i>The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).</i>							
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)							
Orchard Ranch							
23. Street Address of the Regulated Entity: (No PO Boxes)	Fitzhugh Road						
	City	Austin	State	TX	ZIP	78736	ZIP + 4
24. County							

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

25. Description to Physical Location:							
26. Nearest City	State				Nearest ZIP Code		
<i>Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).</i>							
27. Latitude (N) In Decimal:		30.229112			28. Longitude (W) In Decimal:		-97.959079
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
29. Primary SIC Code (4 digits)		30. Secondary SIC Code (4 digits)		31. Primary NAICS Code (5 or 6 digits)		32. Secondary NAICS Code (5 or 6 digits)	
6552				237210			
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)							
Single Family Residential							
34. Mailing Address:	6720 Vaught Ranch Rd						
	STE 200						
	City	AUSTIN	State	TX	ZIP	78730	ZIP + 4
35. E-Mail Address:	adamb@brohnhomes.com						
36. Telephone Number		37. Extension or Code			38. Fax Number (if applicable)		
() - (512) 320-8833					() -		

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

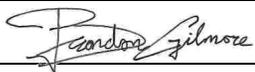
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source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

SECTION IV: Preparer Information

40. Name:	Brandon Gilmore, P.E.	41. Title:	Project Engineer
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 452-0371		() -	bgilmore@gray-civil.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:	Gray Civil Inc.	Job Title:	Project Engineer
Name (In Print):	Brandon Gilmore, P.E.	Phone:	(512) 452- 0371
Signature:		Date:	11/18/2025