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: Avilla Nolina						**2. Regulated Entity No.:**			
3. Customer Name: NexMetro Nolina LP						**4. Customer No.:**			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**			18.24
9. Application Fee:	$6,500		**10. Permanent BMP(s):**			Smart Pond Batch Detention			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			North Fork San Gabriel River			

Application Distribution

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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	___
Region (1 req.)	___	___	___
County(ies)	___	___	___
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.
Mark Ewing / Spiars Engineering Print Name of Customer/Authorized Agent
06/19/2025 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.

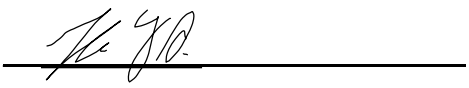
Signature

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: Mark Ewing

Date: 06/19/2025

Signature of Customer/Agent:



Regulated Entity Name: Avilla Nolina

Project Information

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

   Contact Person: Ryan Becker
   Entity: NexMetro Nolina, LP
   Mailing Address: 7000 N Mopac Expwy, Ste. 200
   City, State: Austin, TX Zip: 78731
   Telephone: 480-993-7894 Fax: N/A
   Email Address: ryan.becker@nexmetro.com

5. Agent/Representative (If any):

Contact Person: Mark Ewing
Entity: Spiars Engineering & Surveying
Mailing Address: 501 W President George Bush Hwy, Suite 200
City, State: Richardson, TX Zip: 75080
Telephone: 469-395-0077 Fax: N/A
Email Address: mark.ewing@spiarsengineering.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.

To the northwest of the intersection of Wild Nolina Way and Ronald Reagan Blvd.

8. ☒ **Attachment A - Road Map**. A road map showing directions to and the location of the project site is attached. The map clearly shows the boundary of the project site.

9. ☒ **Attachment B - USGS Quadrangle Map**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') is attached. The map(s) clearly show:

☒ Project site boundaries.
☒ USGS Quadrangle Name(s).

10. ☒ **Attachment C - Project Narrative**. A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:

☒ Area of the site
☒ Offsite areas
☒ Impervious cover
☒ Permanent BMP(s)
☒ Proposed site use
☒ Site history
☒ Previous development
☒ Area(s) to be demolished

11. Existing project site conditions are noted below:

☐ Existing commercial site
☐ Existing industrial site
☐ Existing residential site

☐ Existing paved and/or unpaved roads
☐ Undeveloped (Cleared)
☒ Undeveloped (Undisturbed/Not cleared)
☐ Other: _____

12. The type of project is:

☐ Residential: # of Lots: _____
☒ Residential: # of Living Unit Equivalents: 197
☐ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): 18.24 Acres

Total disturbed area: 18.24 Acres

14. Estimated projected population: 335

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

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	*Sq. Ft.*	*Sq. Ft./Acre*	*Acres*
Structures/Rooftops	232,810	÷ 43,560 =	5.34
Parking /Street	164,860	÷ 43,560 =	3.78
Other paved surfaces	38,465	÷ 43,560 =	0.88
Total Impervious Cover	436,135	÷ 43,560 =	10.01

Total Impervious Cover 10.01 **÷ Total Acreage** 18.24 **X 100 =** 54.9 **% Impervious Cover**

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

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

For Road Projects Only

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

☒ N/A

18. Type of project:

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

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

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: _____

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

Length of R.O.W.: _____ feet.
Width of R.O.W.: _____ feet.
L x W = _____Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

21. Pavement Area:

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

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

☐ A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

☐ N/A

26. Wastewater will be disposed of by:

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

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

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

☒ Sewage Collection System (Sewer Lines):
The sewage collection system will convey the wastewater to the Berry Creek Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

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

☒ N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
1			
2			
3			
4			
5			

Total x 1.5 = _____ Gallons

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

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

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

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

Table 3 - Secondary Containment

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

Total: _____ Gallons

30. Piping:

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

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

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

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

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

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

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

Site Plan Requirements

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

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

    Site Plan Scale: 1" = 40 '.

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 48491C0275E effective 09/25/2008

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. ☒ Sep. 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

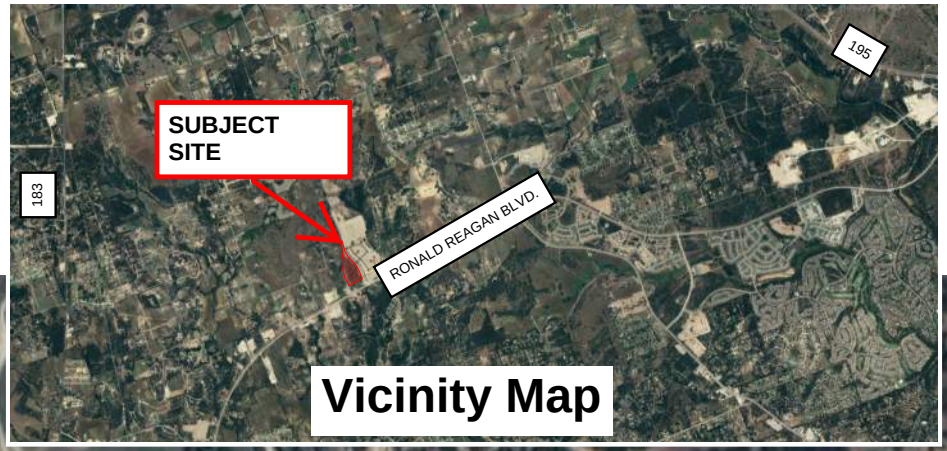
61. [X] Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.

62. [X] 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. [X] 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.

Road Map



WILD NOLINA WY

CROWNBEARD ST

SH 289

SUBJECT SITE

RONALD REAGAN BLVD

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

The National Map US Topo

LEANDER NE QUADRANGLE
TEXAS - WILLIAMSON COUNTY
7.5-MINUTE SERIES


Subject Site
RONALD W REAGAN BLVD
Rocky Hollow Cem
Britts Crosswind Airport
Fore Cem
Anderson Cem
Hunt Cem
Hilde-Griff Field
Santa Rita Ranch
Liberty Hill
LEANDER
GEORGETOWN
Lake Georgetown
North Fork San Gabriel River
Middle Fork San Gabriel River
Rocky Hollow
Camp Spring
Walnut Spring
Knight Spring
Jim Hogg Hollow
Hunt Hollow
Sawyer Hollow
Sycamore Hollow
Spring Hogg Hollow
Cedar Hollow
Oak Hollow
Anderson Dr
Sowers Jr
Dawes Dr
Brandon Dr
Cowan Cr
Jennings Branch
Independence Creek
CO RD 247
CO RD 255
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CO RD 238
CO RD 236
CO RD 234
CO RD 267
CO RD 242
PVT RD 902
RANCH RD 2338
RANCH RD 2243
FM 3405
TOWER RD
INDIAN SPRINGS RD
BIG VALLEY SPR
S VALLEY DR
CHEROKEE TRL
NAVAJO TRL
VISTA LN
VALLEY VIEW RD
MEADOW DR
FOUR T RANCH RD
LIGHTENING RANCH RD
CROSS CREEK LN
N LAKE RD
W LAKE PKWY
PARK RD 8
WOODLAND PARK
WILLIAMS DR
REEF LN
HARBOR DR
ALYSSA DR
STARLIGHT TRL
DIAMOND TRL
GOLDRIDGE DR
FOUNTAINWOOD DR
JIM HOGG PARK RD
WALNUT SPRING RD
DEER FIELD DR
HUNTERS POINT DR
PARK RD 8
KAUFFMAN LOOP
BONNET BLVD
CALLAHAN LN
TRELLIS BLVD
LARKSPUR PARK BLVD
KING EAGLE LN
KINGFISHER LN
EARL KEEN ST
SUNSET RIDGE DR
ROCK HOUSE DR
GREENLEAF DR
HUNTSMORE RD
JOYA DR
OLIVE OAK
RED OAK
SAN GABRIEL OAKS DR
GRAYGEN RD
TIERA ROSA BLVD
INSPIRATION DR
MORNINGSTAR BLVD
DORADO ST
MILLARD ST
VISTA PORTOFINO
ANDELEY WAY
LEON LOOP
SANTA RITA BLVD
NORCAL LOOP
PEGGY DR
ORCHARD RIDGE WAY
RED MATADOR LN
BUTTE CREST DR
GORDON LN
SCHIELS LOOP
PARK PLACE DR
OAK MEADOW DR
MONTALAND LN
RIDGEVIEW DR
VISTA SIENNA
CREEK CROSSING DR
E CIMARRON HILLS TRL
W CIMARRON HILLS TRL
GOODNIGHT DR
DOVETAIL LN
GREEN LEAF LN
INDIGO LN
LONGSHADOW LN
HIGHLAND RIDGE RD
CIMARRON LN
VISTA HEIGHTS RD
VISTA HEIGHTS DR
OLD CREEKSIDE RD
ESTANCIA WAY
WILDWOOD WAY
WATER OAK PKWY
RANCHO BUENO DR
BLUE QUAIL DR
OAKMANOR CIR
LOST RIVER RD
LOST OAK COVE
WIND RIDGE COVE
CEDAR HOLLOW RD
FLINT RIDGE TRL
CROCKETT GARDENS RD
PEBBLE POINT DR
HARRISON LN
W RIDGEWOOD RD
TEXAS RIDGE RD
WESTCREST RD
REDFIELD TRL
SEBASTIAN LN
JOSHUA DR
DAKOTA DR
SUNSET TRL
WOODLAND HILLS DR
BUTTE CREST TRL
WINDMILL RANCH RD
INDEPENDENCE DR
CAMP VERDE DR
BON WINDE RD
MUSTANG TRL
RABBIT RANCH RD
DAWN DR
CHRISTINE LN
MARBELLA WAY
REEF CREEK DR
KING REA
KING REA DR
CO RD 255
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501 W President George Bush Hwy, Suite 200
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TBPE No. F-2121 I TBPLS No. F-10043100

June 19, 2025

Prepared For:
Texas Commission on Environmental Quality
12100 Park 35 Cir
Austin, TX 78753

Prepared By:
Mark Ewing, P.E.
Spiars Engineering & Surveying
501 W President George Bush Hwy, Suite 200
Richardson, TX 75080

Attachment C: Project Narrative

Project Overview

The proposed multi-family residential development will use Smart Pond Batch Detention as the BMP for treatment of stormwater on the previously undeveloped site.

Area of the Site

Total Area: 794,429 Sq. Ft. / 18.24 Acres
Location: Lot 2, BLOCK R, Nolina Subdivision, Williamson County, Texas

Offsite Areas

The proposed development is not anticipated to have an impact on stormwater of offsite areas, as drainage patterns remain the same. The property to the west of the development is undeveloped, while the property to the east of the development is a proposed residential neighborhood that is currently in the process of development. The property to the south of the development is intended for future use as commercial, with no anticipated timeline for development.

Impervious Cover

Current Impervious Cover: No impervious cover in existing conditions as the site is undeveloped.
Proposed Impervious Cover: Impervious cover increased from zero acres to 10.01 acres, which is 54.9P% of the overall 18.24-acre site.

Permanent Best Management Practices

The SmartPond system uses advanced, automated outfall control technology to manage stormwater and reduce pollution effectively by enabling batch detention. The SmartPond Batch Detention with and outfall control valve will be implemented in both ponds as the proposed BMP to optimize stormwater treatment.

Key Features:

1. *Dynamic Water Storage:* The valve allows for precise control of water release, enabling temporary storage of stormwater during rainfall events. The delayed discharge allows sediments, nutrients, and pollutants to settle before water is released downstream.

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2. *Automated Outflow Control:* A solar-powered valve integrated into the outfall pipe is programmed to manage flow timing and release rates. The system uses real-time data inputs such as precipitation forecasts and pond water levels to optimize detention duration.
3. *Batch Detention Process:* This process includes three steps: capture, hold, and release.
    a. *Capture:* During a storm, the system captures inflow into the detention basin.
    b. *Hold:* Water is detained for a programmed period, allowing suspended solids and pollutants to settle out.
    c. *Release:* After the hold time, the valve gradually releases the treated water at a controlled rate to minimize erosion and downstream flooding.

Proposed Site Use

The site is proposed to be used as a multi-family residential site, with cottage-style units. See attached Site Plan for the proposed site layout.

Site History

Previous Use: Site was previously undeveloped with no existing structures.
Areas to be Demolished: The only demolition on the site is that involved with development, including the removal of fences and some tree removal.

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Attachment D: Factors Affecting Surface Water Quality

Project Overview

As discussed in the project narrative, SmartPond Batch Detention with outfall valves will be used on site to treat stormwater runoff before discharged along the southern end of the property. Main impacts to surface water are anticipated during construction and mitigated by the measures shown on the Erosion Control Plan in the attached civils. Once construction is complete, surface water quality may be impacted by the increase in impervious cover, but this is intended to be mitigated by the implemented BMP system.

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Attachment E: Volume and Character of Stormwater

Design Point 1 (Western Edge)

Pre-Development: Prior to development, a 4.17-ac. portion of the site sheet flows to the property west of the proposed development, near the midpoint of the property line. The flow rate under pre-development conditions at this point is calculated to be 19.2 cfs, using a runoff coefficient of 0.41. The character of this stormwater is impacted by predominantly pervious conditions, as the site is primarily undeveloped pasture/range land and relatively flat.

Post-Development: The discharge at this design point in proposed conditions (Design Point 1, as labeled on the proposed DAM) will have a weighted coefficient of 0.46, which is representative of an entirely pervious area equal to 0.41 ac. The stormwater quality will be unaffected, as the area draining to this point in proposed conditions will have no impervious conditions added. In developed conditions, the total runoff at this point will be 2.1 cfs.

Design Point 2 (Southwest Corner)

Pre-Development: Prior to development, a 6.92-ac. portion of the site sheet flows to the property south of the proposed development. The flow rate under pre-development conditions at this point is calculated to be 26.7 cfs, using a runoff coefficient of 0.41. The character of this stormwater is impacted by predominantly pervious conditions, as the site is primarily undeveloped pasture/range land and relatively flat.

Post-Development: The discharge at this design point in proposed conditions (Design Point 2, as labeled on the proposed DAM) will have a weighted coefficient of 0.79, which is representative of a 60% impervious area in this basin. The stormwater quality will be positively impacted by the Smart Pond Batch Detention and outfall valve system at the end of the line. This area will also include detention. Pre-detention, there will be a total of 69.83 cfs of runoff for this basin. The detention system is design to release the water at a rate of 26.6 cfs, so as not to exceed existing conditions.

Design Point 3 (Southeast Corner)

Pre-Development: Prior to development, a 7.16-ac. portion of the site sheet flows to the property south of the proposed development. The flow rate under pre-development conditions at this point is calculated to be 28.6 cfs, using a runoff coefficient of 0.41. The character of this stormwater is impacted by predominantly pervious conditions, as the site is primarily undeveloped pasture/range land and relatively flat.

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Post-Development: The discharge at this design point in proposed conditions (Design Point 5, as labeled on the proposed DAM) will be subdivided into direct discharge and detained water.

The direct discharge will come from a 0.22-ac portion of this basin that will remain entirely pervious, and thus was calculated with a coefficient of 0.46. The runoff produced in this area that will sheet flow directly to the south is 1.1 cfs. No treatment will be necessary here, as the stormwater quality is unaffected due to no impervious conditions added.

The remainder of this basin generates of runoff of 84.50 cfs prior to detention. This runoff is calculated with a weighted coefficient of 0.77, which is representative of a 54% impervious area in this basin. The stormwater quality will be positively impacted by the Smart Pond Batch Detention and outfall valve system at the end of the line. The detention system is design to release the water at a rate of 27.4 cfs, so as not to exceed existing conditions.

Both portions of this basin together will ultimately discharge a total of 28.5 so as not to exceed the runoff of existing conditions.

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Austin, TX 78753

Prepared By:
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Attachment J: BMPs for Upgradient Stormwater

Stormwater that originates upgradient of the site will flow to the east or west of the site and not through the site, thus no upgradient BMPs are necessary.

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Attachment K: BMPs for On-Site Stormwater

The BMPs proposed to treat on-site stormwater is the SmartPond Batch Detention with Outfall Valve system. This system is designed to manage stormwater and reduce pollution effectively and will be implemented as the proposed BMP to optimize stormwater treatment.

Key Features:

1. *Dynamic Water Storage:* The valve allows for precise control of water release, enabling temporary storage of stormwater during rainfall events. The delayed discharge allows sediments, nutrients, and pollutants to settle before water is released downstream.
2. *Automated Outflow Control:* A solar-powered valve integrated into the outfall pipe is programmed to manage flow timing and release rates. The system uses real-time data inputs such as precipitation forecasts and pond water levels to optimize detention duration.
3. *Batch Detention Process:* This process includes three steps: capture, hold, and release.
    a. *Capture:* During a storm, the system captures inflow into the detention basin.
    b. *Hold:* Water is detained for a programmed period, allowing suspended solids and pollutants to settle out.
    c. *Release:* After the hold time, the valve gradually releases the treated water at a controlled rate to minimize erosion and downstream flooding.

TCEQ SITE, GRADING, DRAINAGE, & EROSION CONTROL PLANS

FOR

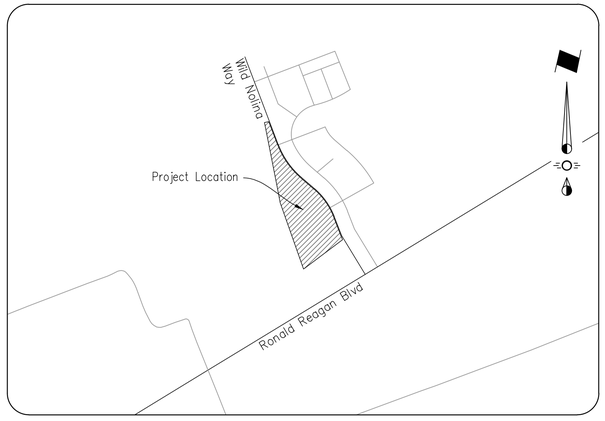
AVILLA NOLINA

LOT 2, BLOCK R, NOLINA SUBDIVISION

WILLIAMSON COUNTY, TEXAS

General Notes

1. These construction plans were prepared, sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore based on the engineer's concurrence of compliance, the construction plans for construction of the proposed project are hereby approved subject to the standard Construction Specifications and Details Manual and all other applicable City, State and Federal Requirements and Codes.
2. This project is subject to all City Standard Specifications and Details in effect at the time of submittal of the project to the City.
3. The site construction plans shall meet all requirements of the approved site plan.
4. Wastewater mains and service lines shall be SDR 26 PVC.
5. Wastewater mains shall be installed without horizontal or vertical bends.
6. Maximum distance between wastewater manholes is 500 feet.
7. Wastewater mains shall be low pressure air tested and mandrel tested by the contractor according to City of Georgetown and TCEQ requirements.
8. Wastewater manholes shall be vacuum tested and coated by the contractor according to City of Georgetown and TCEQ requirements.
9. Wastewater mains shall be camera tested by the contractor and submitted to the City on DVD format prior to paving the streets.
10. Private water system fire lines shall be tested by the contractor to 200 psi for 2 hours.
11. Private water system fire lines shall be ductile iron piping from the water main to the building sprinkler system, and 200 psi C900 PVC for all others.
12. Public water system mains shall be 150 psi C900 PVC and tested by the contractor at 150 psi for 2 hours.
13. All bends and changes in direction on water mains shall be restrained and thrust blocked.
14. Long fire hydrant leads shall be restrained.
15. All water lines are to be bacteria tested by the contractor according to the City standards and specifications.
16. Water and Sewer main crossings shall meet all requirements of the TCEQ and the City.
17. Flexible base material for public streets shall be TXDOT Type A Grade 1.
18. Hot mix asphaltic concrete pavement shall be Type D unless otherwise specified and shall be a minimum of 2 inches thick on public streets and roadways.
19. All sidewalk ramps are to be installed with the public infrastructure.
20. A maintenance bond is required to be submitted to the City prior to acceptance of the public improvements. This bond shall be established for 1 year in the amount of 25% of the cost of the public improvements and shall follow the City format.
21. Record drawings of the public improvements shall be submitted to the City by the design engineer prior to acceptance of the project. These drawings shall be on mylar or on TIFF or PDF disk (300dpi). If a disk is submitted, a bond set shall be included with the disk.



Vicinity Map

NTS

Notes:

1. Prior to beginning any construction or construction staking, it shall be the Contractor's responsibility to contact the civil engineer to ensure that all parties are in possession of the most current set of CD's.
2. All construction within public R.O.W. or easements shall conform to Williamson County and/or City of Georgetown detail/specifications as applicable.

INDEX OF DRAWINGS

	Cover Sheet
	Site Plan
	Site Plan
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C3	Paving & Horizontal Control Plan
C4	Paving & Horizontal Control Plan
C5	Grading Plan
C6	Grading Plan
C7	Grading Plan
C8	Grading Plan
C9	Grading Plan
C10	Grading Plan
C11	Grading Plan
C12	Grading Plan
C13	Grading Plan
C14	Pond A Plan
C15	Pond B Plan
C16	Pond Sections
C17	Existing Drainage Area Map
C18	Proposed Drainage Area Map
C19	Drainage Plan
C20	Drainage Plan
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C31	Drainage Profiles
C32	Drainage Profiles
C33	WQV Calculations
C34	Detention Calculations
C35	Detention Calculations
C44	Erosion Control Plan
C45	Private Site Details
C46	Site Details

Prepared By:

SPIARS ENGINEERING & SURVEYING

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TBPE No F-2121 • TBLPS No. F-10043100 • www.spiarseng.com

Mark Ewing • mark.ewing@spiarsengineering.com

STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED PROFESSIONAL ENGINEER
06.20.2025

Prepared For:
NexMetro Nolina, LP
807 Las Cimas Pkwy, Suite 245
Austin, TX 78746
Telephone (480) 846-0833
Jason P. Flory

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Vicinity Map
NTS

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1 inch = 40 ft.

LEGEND

- Private Street
- Prop. Catch Basin
- Prop. Sanitary Manhole
- Prop. Fire Hydrant
- Prop. Metal Fence
- Prop. Hard Wood Fence
- Prop. Retaining Wall
- Prop. Freestanding Wall

SITE DATA	LOT 2, BLOCK R
Lot Area: Gross Area	18.24 Ac. (794,429 Sq. Ft.)
Prop Net. Area	18.24 Ac. (794,429 Sq. Ft.)
Buildings:	No.
Type	Units:
Leasing Office	–
1 Bedroom	64 (32%)
2 Bedroom	76 (39%)
3 Bedroom	57 (29%)
Total:	197 Units
Density	10.80 Units/Acre
Parking Provided:	Spaces
Standard Spaces	171
Detached Covered Spaces	138
Detached Garage Spaces	35
Parallel Spaces	27
Leasing Office	8
Totals:	371
Total Impervious Surface	436,133 Sq.Ft./10.01 Ac.(54.9%)
Total Pervious Surface	358,296 Sq.Ft./8.23 Ac. (45.1%)

SITE PLAN

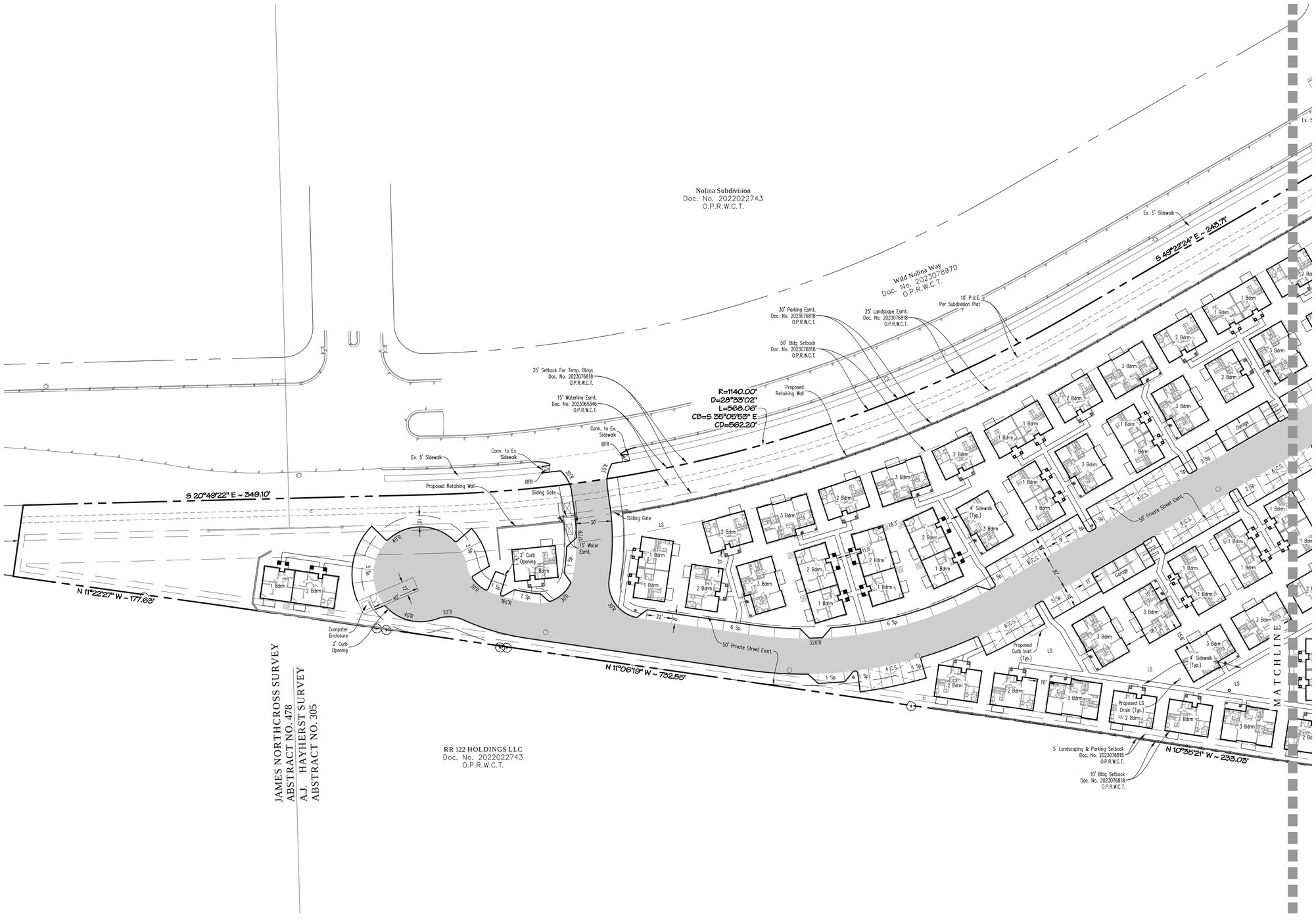
AVILLA NOLINA

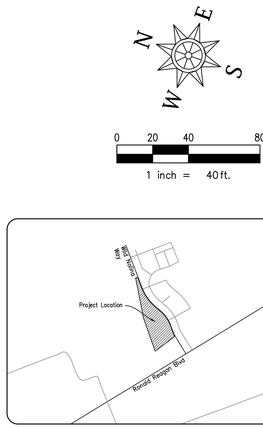
IN WILLIAMSON COUNTY, TEXAS
A.J. HAYHERST SURVEY ABSTRACT NO. 305 &
J. NORTHCROSS SURVEY ABSTRACT NO. 478
794,429 Sq. Ft./18.238 Acres

ENGINEER / SURVEYOR/ APPLICANT
Spiars Engineering, Inc.
765 Custer Road, Suite 100
Plano, TX 75075
Telephone: (972) 422-0077
TBPE No. F-2121
Contact: Mark Ewing

OWNER/DEVELOPER
NexMetro Communities
7000 N Mopac Expwy Suite 200
Austin, TX 78731
Telephone: (480) 846-0833
Contact: Jason P. Flory

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Vicinity Map
NTS

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1 inch = 40 ft.

LEGEND

- Private Street
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SITE PLAN

AVILLA NOLINA

IN WILLIAMSON COUNTY, TEXAS
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10. Private water system fire lines shall be tested by the contractor to 200 psi for 2 hours.
11. Private water system fire lines shall be ductile iron piping from the water main to the building sprinkler system, and 200 psi C900 PVC for all others.
12. Public water system mains shall be 150 psi C900 PVC and tested by the contractor at 200 psi for 15 minutes and 150 psi for 2 hours.
13. All bends and changes in direction on water mains shall be restrained and thrust blocked.
14. Long fire hydrant leads shall be restrained.
15. All water lines are to be bacteria tested by the contractor according to the City standards and specifications.

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(512) 930-3558 | (512) 930-3559 (fax) http://www.georgetown.org | gus@georgetown.org

Georgetown Utility Systems
City of Georgetown

16. Water and Sewer main crossings shall meet all requirements of the TCEQ and the City.
17. Flexible base material for public streets shall be TXDOT Type A Grade 1.
18. Hot mix asphaltic concrete pavement shall be Type D unless otherwise specified and shall be a minimum of 2 inches thick on public streets and roadways.
19. All sidewalk ramps are to be installed with the public infrastructure.
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STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED PROFESSIONAL ENGINEER
06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

GENERAL NOTES

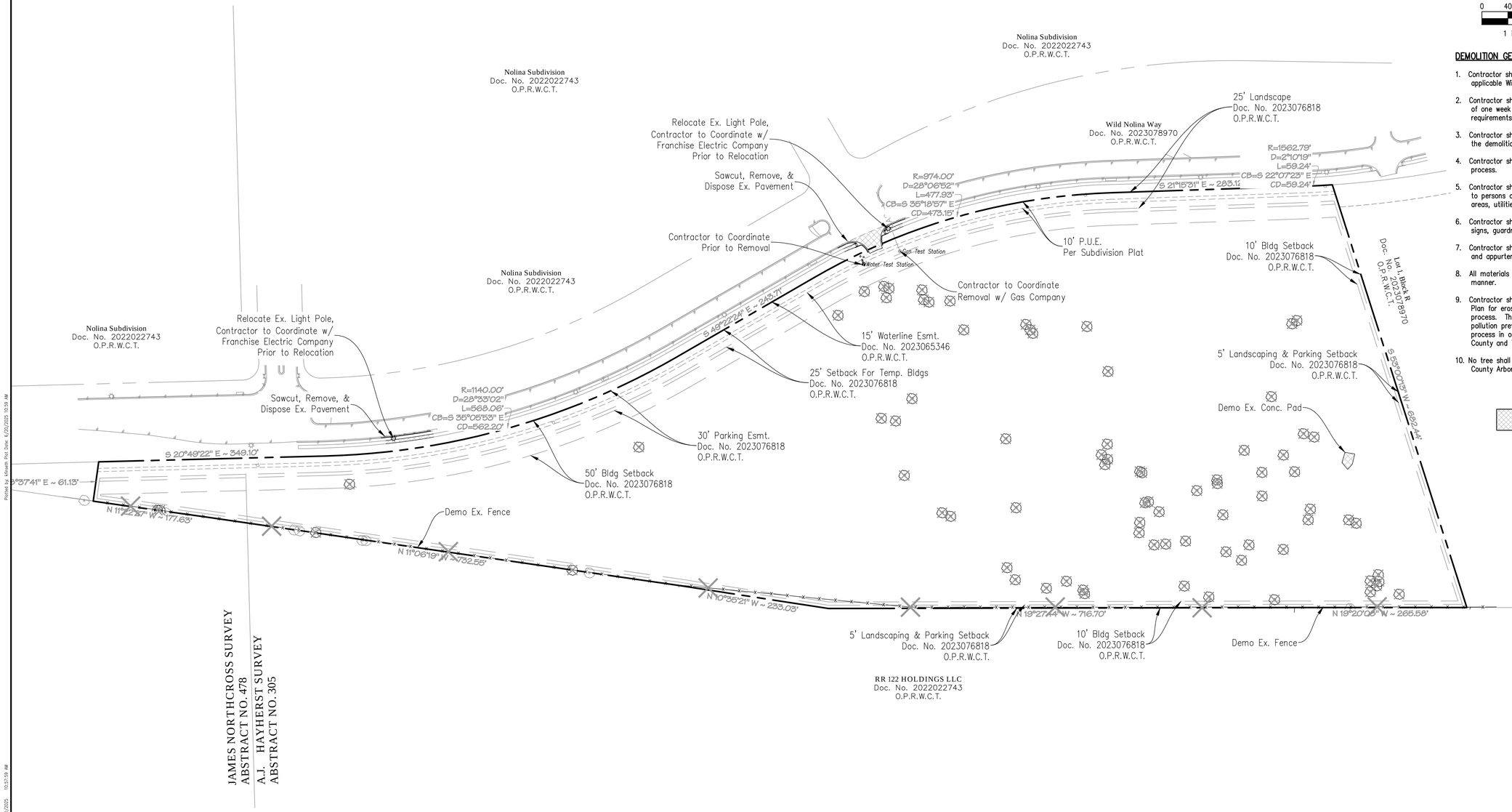
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0 40 80 160

1 inch = 80 ft.

DEMOLITION GENERAL NOTES

1. Contractor shall abide by the Demolition Specifications and all applicable Williamson County requirements, ordinances, etc.
2. Contractor shall notify all affected utility companies a minimum of one week prior to demolition in order to comply with their requirements.
3. Contractor shall maintain positive drainage at all times during the demolition process.
4. Contractor shall protect all existing utilities during the demolition process.
5. Contractor shall perform work in a manner to eliminate hazards to persons or property, and avoid interference with adjacent areas, utilities, and structures.
6. Contractor shall provide temporary barricades, fences, warning signs, guardrails, warning lights, etc.
7. Contractor shall protect existing structures, landscaping materials, and appurtenances which are not being demolished.
8. All materials removed shall be disposed of offsite in a legal manner.
9. Contractor shall refer to the Storm Water Pollution Prevention Plan for erosion and pollution control during the demolition process. The Contractor shall provide any additional erosion or pollution prevention devices as required during the demolition process in order to completely conform with the Williamson County and TCEQ requirements.
10. No tree shall be removed without prior approval by the Owner & County Arborist.

DEMOLITION LEGEND

Remove Existing Pavement

Remove Existing Tree – Reference Landscape Architect Plans for final removal and mitigation.

CAUTION !!!

EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

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Mark Ewing • mark.ewing@spiarsengineering.com

STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED
PROFESSIONAL ENGINEER
06.20.2025

AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DEMOLITION PLAN

Revisions	Date

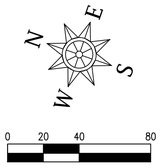
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Checked By: MEE

Sheet C2

SEI No. 24-002

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Plotted by: kilsworth Plot Date: 6/20/2025 10:59 AM





PAVING GENERAL NOTES:

1. All materials and construction shall conform to the Williamson County Standard Details and Specifications & NCTCOG 3rd Edition.
2. It shall be the responsibility of the Contractor to protect all public utilities in the construction of this project. All manholes, cleanouts, valve boxes, fire hydrants, etc. must be adjusted to proper line and grade by the Contractor prior to and after the placing of permanent paving. Utilities must be maintained to proper line and grade during construction of this project.
3. The Contractor shall be responsible for coordinating with all the appropriate utility companies for the location of all utilities within the construction area.
4. The Paving Contractor shall not place permanent pavement until all sleeving for irrigation, electric, gas, telephone, cable TV, site lighting, etc. has been installed. It shall be the Paving Contractor's responsibility to insure that all sleeving is in place prior to placing permanent paving.
5. All paving and earthwork operations shall conform to the recommendations in the Geotechnical Investigation, Investigation by ECS Southwest, LLP, Project 17:6577, Dated June 13, 2024 and the Williamson County Standard Construction Details.
6. All dimensions are to face of curb or edge of building unless otherwise noted.
7. Refer to Architectural Plans for exact building and related sidewalk dimensions.
8. Fences, berms walls, shrubs, trees, signs, structures, etc. are limited to a maximum height of 2 feet above the adjacent curb within visibility easements.
9. Contractor shall install traffic control for any work within R.O.W. to conform to part VI of the "Texas Manual on Uniform Traffic Control Devices."
10. Longitudinal (Key) Joints shall be placed as necessary.
11. Contractor shall extend all paving joints for concrete pavement through curbs.
12. Contractor shall verify building and parking lot layout with the Architect prior to forming of buildings, walks and parking lot areas.
13. Contractor shall back fill against top of curbs at 4:1 max. slope to existing grade unless noted otherwise.
14. Slope of paving shall not exceed 2% at handicap accessible spaces.
15. Contractor shall grade pavement around sidewalks & curbs for positive drainage to an inlet or designated drainage area.
16. The detention system shall be completely installed & functioning prior to any concrete/paving installation (including building slab).
17. All curb and gutter shall be concrete unless otherwise noted.

LEGEND

- 4" 3000 psi Conc. Pavement W/#3 @ 24" O.C.E.W. On 6" Compacted Subgrade (Private Sidewalk)
- 2" Hot Mixed Asphalt Concrete (HMAC) Over 8" Crushed Limestone Base (CLB) (Parking/Street)
- 6.5" 3500 psi Conc. Pavement W/#3 @ 18" O.C.E.W. Over 8" Compacted Subgrade (Dumpster)
- BFR — Barrier Free Ramp (Per City Standards)
- Metal Pool Fence (Ref. LS)
- Hard Wood Fence (Ref. LS)
- Prop. Retaining Wall
- Prop. Freestanding Wall

CAUTION !!!

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Curve Table

Curve #	Length	Radius	Delta	Chord Bearing	Chord Distance
C1	340.57'	652.00'	029.93°	N 34°24'48" W	336.71'
C2	23.70'	180.00'	007.54°	S 23°13'13" E	23.68'
C3	23.70'	180.00'	007.54°	S 23°13'13" E	23.68'
C4	188.72'	180.00'	060.07°	S 10°35'12" W	180.19'
C5	223.77'	335.00'	038.27°	S 30°14'29" E	219.63'
C6	74.40'	180.00'	023.68°	S 00°44'09" W	73.87'
C7	54.48'	192.00'	016.26°	N 70°45'57" E	54.30'

Line Table

Line #	Length	Direction
L1	181.66'	S 40°37'21" W
L2	173.26'	S 19°26'56" E
L3	64.30'	S 26°59'30" E
L4	314.60'	S 53°00'30" W
L5	110.24'	N 26°59'30" W
L6	445.14'	N 19°26'56" W

Line Table

Line #	Length	Direction
L7	85.08'	N 40°37'21" E
L8	447.84'	S 49°22'39" E
L9	189.42'	S 11°06'19" E
L10	25.75'	S 12°34'37" W
L11	48.57'	N 78°53'41" E
L12	22.58'	N 62°38'14" E

Point Table

Point #	Northing	Easting
1	10238948.2826	3083954.0828
2	10241008.4301	3083468.4803
3	10239989.8085	3084177.7072
4	10240562.0296	3083646.4170

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06.20.2025

AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
PAVING & HORIZONTAL CONTROL PLAN

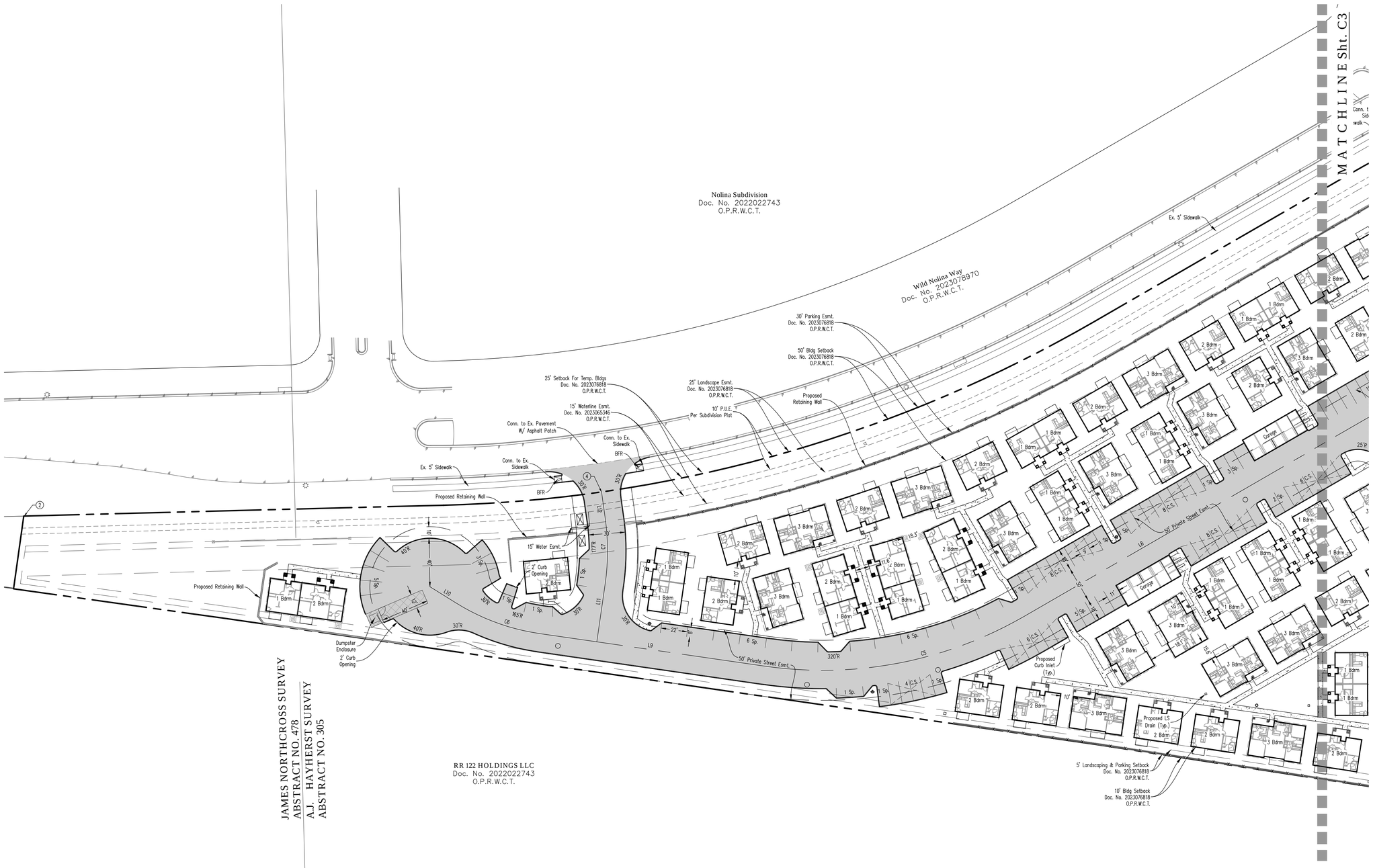
Date
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C3

SEI No. 24-002

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LEGEND

- 4" 3000 psi Conc. Pavement W/#3 @ 24" O.C.E.W. On 6" Compacted Subgrade (Private Sidewalk)
- 2" Hot Mixed Asphalt Concrete (HMAC) Over 8" Crushed Limestone Base (CLB) (Parking/Street)
- 6.5" 3500 psi Conc. Pavement W/#3 @ 18" O.C.E.W. Over 8" Compacted Subgrade (Dumpster)
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STATE OF TEXAS
06.20.2025

AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

PAVING & HORIZONTAL CONTROL PLAN

Date	Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C4

SEI No. 24-002

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MATCHLINE SHT. C7

MATCHLINE SHT. C5

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

Lot 1, Block R
Doc. No. 2023078970
O.P.R.W.C.T.

MATCHLINE SHT. C5

MATCHLINE SHT. C6

Ref. Sheet C14 for Pond A Grading

Match Ex. Grade @ PL

Proposed Free Standing Wall

Match Ex. Grade @ PL

N 19°20'09" W - 265.69'

S 20°07'15" W 682.44'

F.F.=962.90
F.F.=963.40
F.F.=962.90
F.F.=962.40
F.F.=962.40
F.F.=961.90
F.F.=961.85
F.F.=961.85
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BW 960.38
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BW 950.37
BW 950.64
BW 954.16

957
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961
960

GRADING GENERAL NOTES:

1. All materials and construction shall conform to the Williamson County Standard Construction Details and Specifications, except as noted herein and approved by the County.
2. Contractor shall be responsible for maintaining trench safety requirements in accordance with County Standards, Texas State Law, and O.S.H.A. Standards for all excavation in excess of five feet in depth.
3. The location of all utilities located on these plans are taken from existing public records. The exact location and elevation of all public utilities must be determined by the Contractor. It shall be the duty of the Contractor to ascertain whether any additional facilities other than those shown on the plans may be present.
4. It shall be the responsibility of the Contractor to protect all public utilities in the construction of this project. All manholes, clean-outs, valve boxes, fire hydrants, etc. must be adjusted to proper line and grade by the Contractor prior to and after the placing of permanent paving. Utilities must be maintained to proper line and grade during construction of the paving for this development.
5. Drainage should be maintained away from the foundations, both during and after construction.
6. All earthwork operations, pavement installation, etc. shall conform to the Geotechnical Investigation, Investigation by ECS Southwest, LLP, Project 17:6577, Dated June 13, 2024.
7. Trees shall remain unless specified otherwise on the Landscape Plan or approved by the Owner.
8. Prior to starting construction, the Contractor shall make certain that all required permits and approvals have been obtained. No construction or fabrication shall begin until the Contractor has received and thoroughly reviewed all plans and other documents approved by all of the permitting authorities.
9. In the event an item is not covered in the County's specifications, the County Engineer's decision shall apply.
10. Barricading, traffic control, and project signs shall conform to Texas Department of Transportation standards
11. The Contractor shall verify the suitability of all existing and proposed site conditions, including grades and dimensions before commencement of any construction. In the event of any conflict, and prior to commencement of any construction, immediately notify Engineer. Minor adjustments of finish grade to accomplish spot drainage are acceptable if necessary, upon prior approval of Engineer. All paving installed shall "flush out" at any juncture with existing paving.
12. Proposed spot elevations are finished grade elevations (Top of pavement, top of sod, etc.)
13. Erosion control shall be in place prior to the disturbance of any existing surface.
14. All sidewalk and crosswalk slopes in accessible areas shall conform to ADA requirements as follows: 1:20 longitudinal (along the walk) max. 1:50 transverse (across the walk) max.

LEGEND

- 79.00 — Gutter/Top of Pvmt. Elevation
- 684 — Proposed Contour
- 684 — Existing Contour
- TC=684.50 G=684.00 — Existing Spot Elevation
- Direction of Flow
- Prop. Retaining Wall
- Prop. Freestanding Wall

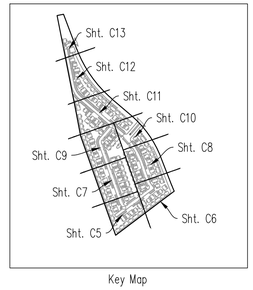
0 10 20 40
1 inch = 20 ft.

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Key Map

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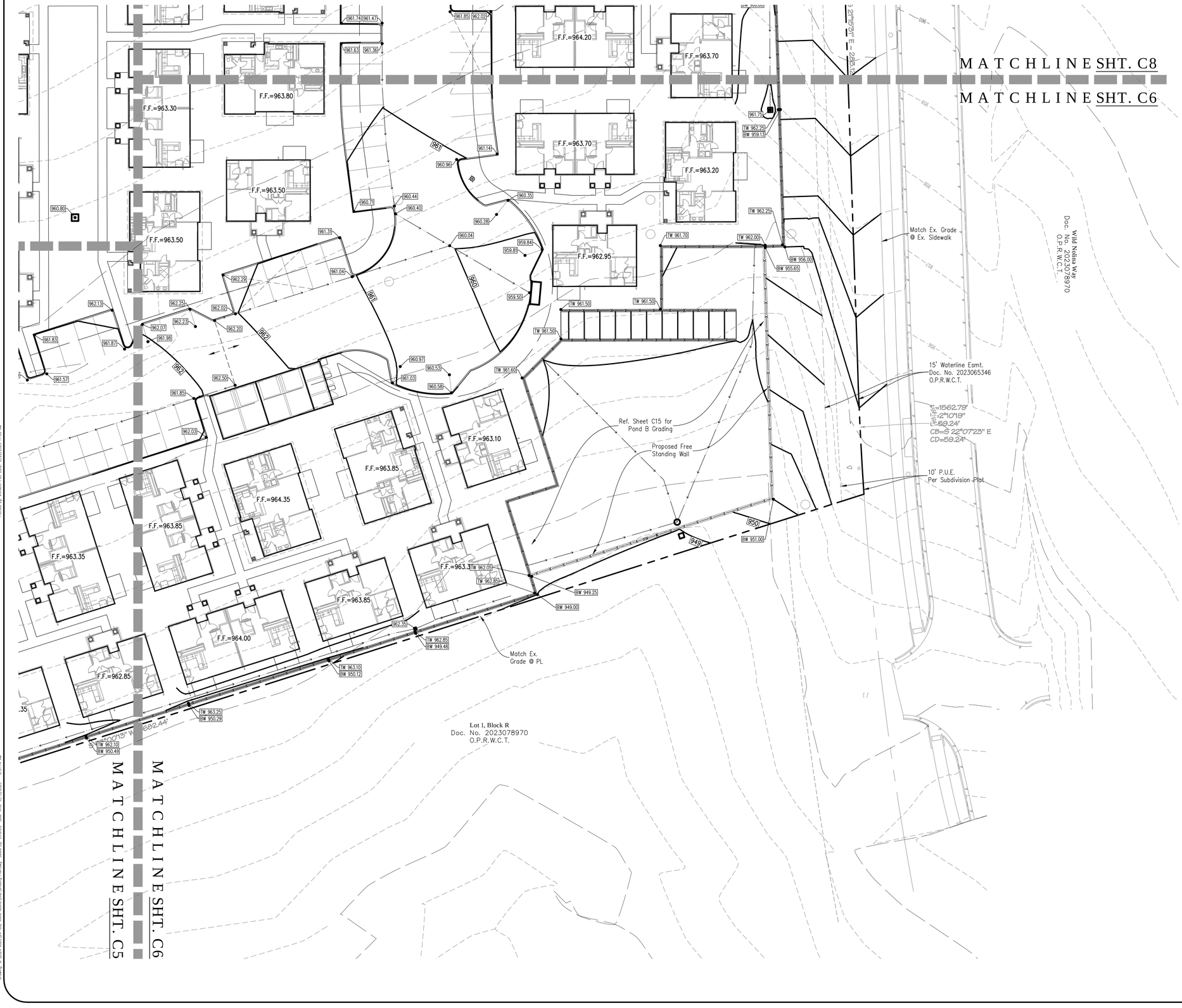
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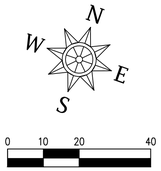
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GRADING PLAN

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Plotted by: Kenneth Plot Date: 6/20/2025 11:00 AM
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LEGEND

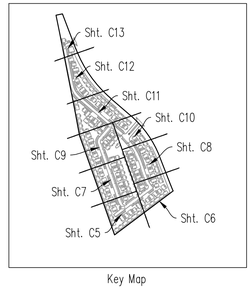
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AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
GRADING PLAN

Date
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE
Sheet C6
SEI No. 24-002

Plotted by: Kenneth Pot Date: 6/20/2025 11:00 AM
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MATCHLINE SHT. C9

MATCHLINE SHT. C7

MATCHLINE SHT. C7

MATCHLINE SHT. C5

MATCHLINE SHT. C8

RR 122 HOLDINGS LLC
Doc. No. 202022743
O.P.R.W.C.T.

Match Ex. Grade @ PL

N 67°44'W - 76.70'

TW 965.35
BW 964.45

TW 965.63
BW 964.85

TW 964.67
BW 964.25

TW 962.40
BW 961.70

F.F.=966.10
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N W E S

0 10 20 40
1 inch = 20 ft.

Sht. C13
Sht. C12
Sht. C11
Sht. C10
Sht. C8
Sht. C9
Sht. C7
Sht. C6
Sht. C5

Key Map

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Mark Ewing • mark.ewing@spiarsengineering.com

STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED PROFESSIONAL ENGINEER
06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
GRADING PLAN

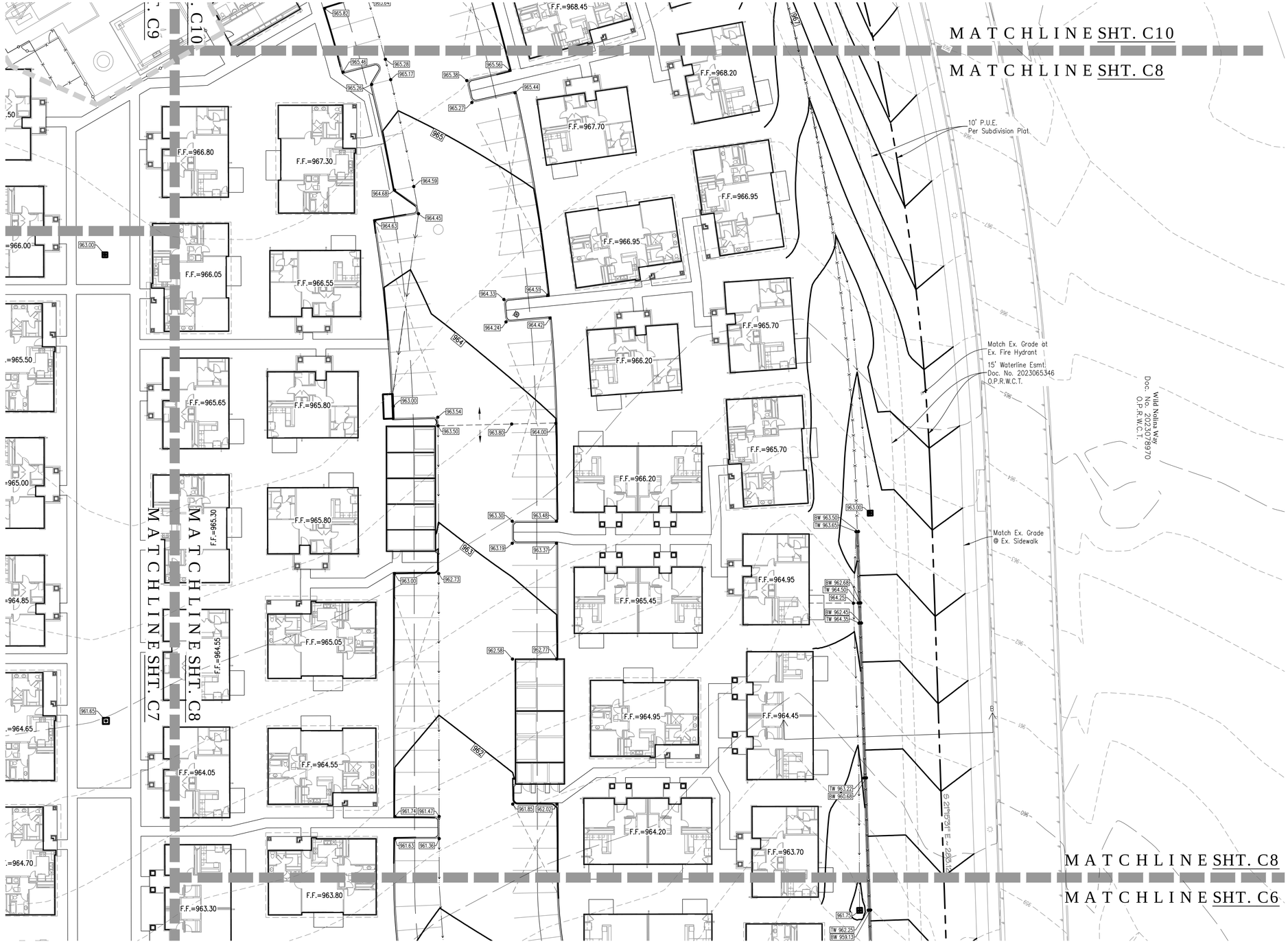
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Revisions

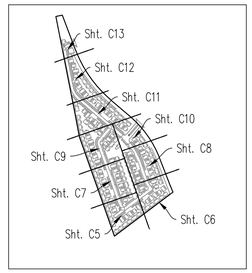
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Checked By: MEE

Sheet C7

SEI No. 24-002

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Plotted by: Kenneth Plot Date: 6/20/2025 11:00 AM





Key Map

CAUTION !!!

EXISTING UTILITIES

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- Direction of Flow
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- Prop. Freestanding Wall

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AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

GRADING PLAN

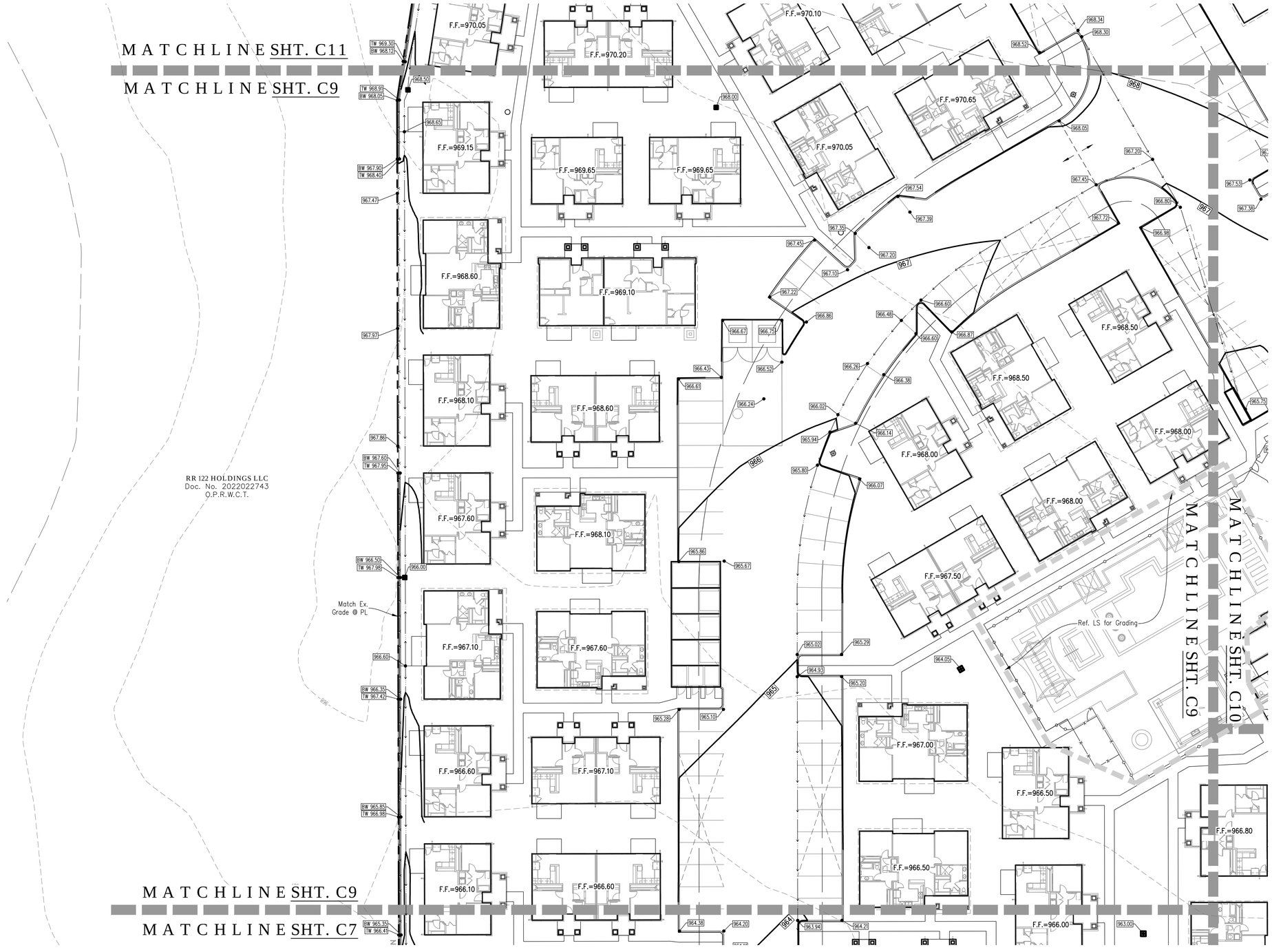
Date	Revisions

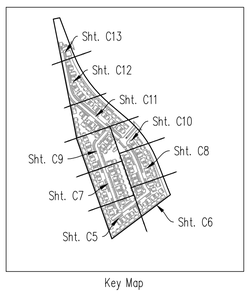
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Drawn By: CJF
Checked By: MEE

Sheet C8

SEI No. 24-002

Plotted by: Kenneth Plot Date: 6/20/2025 11:00 AM
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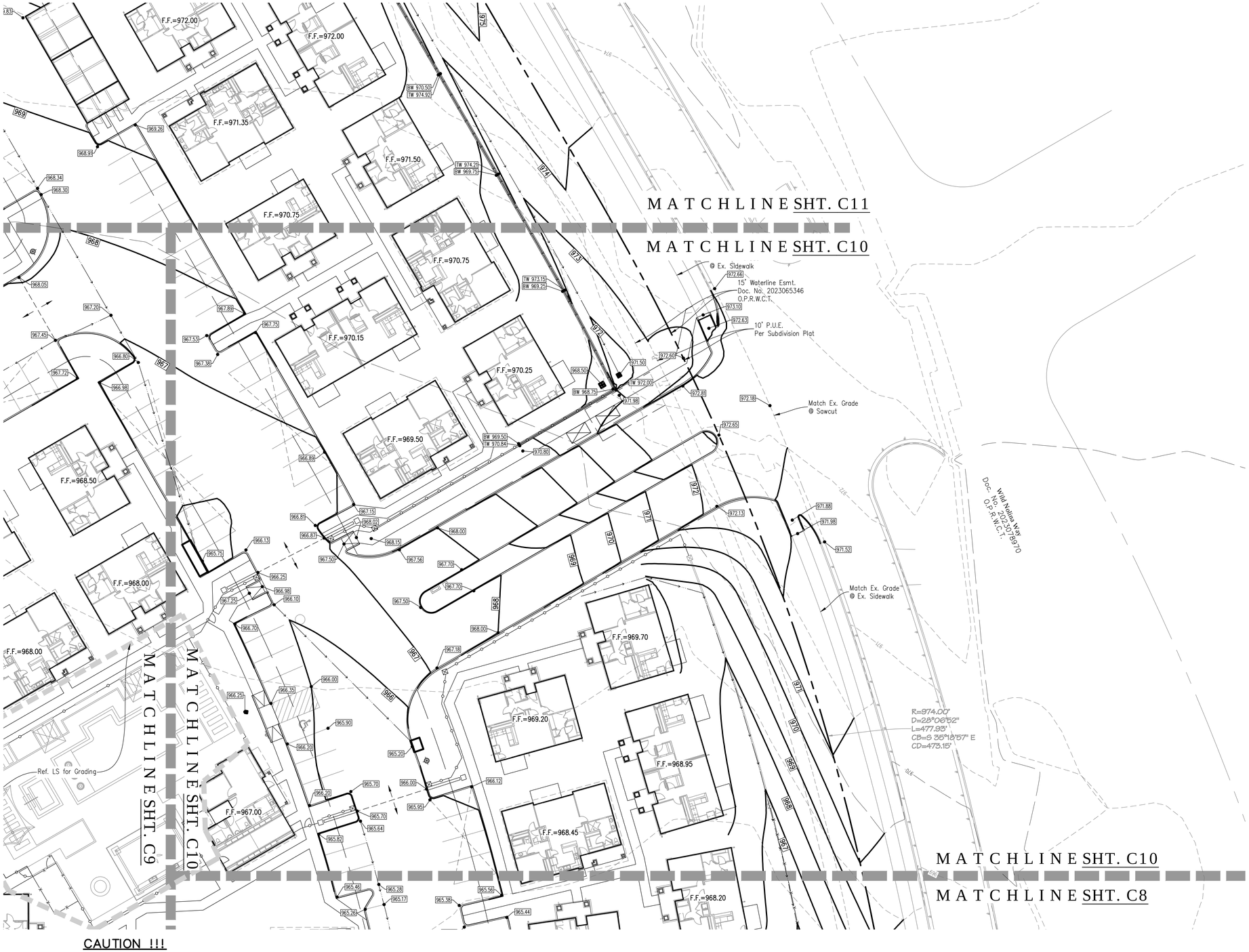
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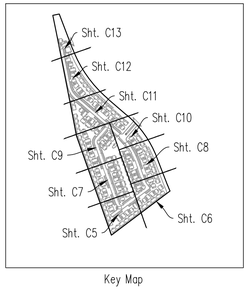
AVILLA NORTH
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
GRADING PLAN

Date
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE
Sheet C9
SEI No. 24-002

Plotted by: Kenneth Plot Date: 6/20/2025 11:00 AM
Drawing: C:\2024 JOBS\24-002 Avilla Nolina\CAD\Grading Plan.dwg Saved By: Chronos Save Time: 6/13/2025 8:51:14 AM





Key Map

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06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

GRADING PLAN

Date

Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C10

SEI No. 24-002

Plotted by: kfoseth Plot Date: 6/20/2025 11:01 AM
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MATCHLINE SHT. C12

MATCHLINE SHT. C11

MATCHLINE SHT. C11

MATCHLINE SHT. C9

MATCHLINE SHT. C11

MATCHLINE SHT. C10

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

10' P.U.E.
Per Subdivision Plat

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

WM Nolina Way
Doc. No. 2023019970
O.P.R.W.C.T.

Match Ex. Grade @ Ex. Sidewalk

Match Ex. Grade @ PL

N 0°25'21" W 235.09'

S 42°22'24" E - 225.72'

F.F.=975.70
F.F.=974.55
F.F.=975.50
F.F.=975.00
F.F.=973.80
F.F.=974.75
F.F.=974.85
F.F.=973.05
F.F.=974.00
F.F.=974.10
F.F.=973.55
F.F.=973.35
F.F.=973.25
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F.F.=972.00
F.F.=972.05
F.F.=970.80
F.F.=971.60
F.F.=971.35
F.F.=971.30
F.F.=971.50
F.F.=970.10
F.F.=970.05
F.F.=970.20
F.F.=970.75
F.F.=970.65

TW 973.75 / BW 973.75
TW 973.80 / BW 972.28
TW 973.05 / BW 971.29
TW 972.30 / BW 970.26
TW 971.55 / BW 969.52
TW 970.80 / BW 969.09
TW 970.05 / BW 968.41
TW 979.72
TW 979.03 / BW 973.75
BW 973.00 / TW 978.10
BW 972.25 / TW 977.40
BW 971.50 / TW 976.58
TW 975.87 / BW 971.00
BW 970.50 / TW 974.92
TW 974.29 / BW 969.75

973.00 973.60 973.42 974.05 973.55 973.73 973.04 973.22 973.21 972.87 973.21 972.85 971.97 971.75 972.25 972.43 972.27 971.99 972.14 971.76 971.55 971.73 970.62 970.80 970.75 970.77 970.41 970.63 970.27 970.19 969.83 969.55 969.73 969.41 969.59 969.26 968.91 968.34 968.30 968.52 968.70 968.00 968.50

975 974 973 972 971 970 969 968

Key Map

Sht. C13
Sht. C12
Sht. C11
Sht. C10
Sht. C9
Sht. C8
Sht. C7
Sht. C6
Sht. C5

0 10 20 40
1 inch = 20ft.

N W E S

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STATE OF TEXAS
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06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
GRADING PLAN

Date
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C11

SEI No. 24-002

Plotted by: Kenneth Plot Date: 6/20/2025 11:01 AM
Drawing: G:\2024 JOBS\24-002 Avilla Nolina\CAD\Grading Plan.dwg Saved By: CHancock Save Time: 6/13/2025 8:51:14 AM

Nolina Subdivision
Doc. No. 2022022743
O.P.R.W.C.T.

Wild Nolina Way
Doc. No. 2023078970
O.P.R.W.C.T.

R=1140.00'
D=28°33'02"
L=568.06'
CB=S 35°05'53" E
CD=562.20'

10' P.U.E.
Per Subdivision Plat

Match Grade at
Ex. Fire Hydrant

Match Ex.
Grade @ Sawcut

Match Ex. Grade
@ Ex. Sidewalk

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

N 11°06'19" W ~ 732.55'

Match Ex.
Grade @ PL

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

F.F.=982.00
F.F.=980.00
F.F.=979.25
F.F.=979.00
F.F.=978.25
F.F.=978.00
F.F.=977.50
F.F.=977.00
F.F.=976.45
F.F.=976.25
F.F.=975.70
F.F.=975.50
F.F.=975.00
F.F.=974.75
F.F.=974.55
F.F.=973.80

MATCHLINE SHT. C13
MATCHLINE SHT. C12
MATCHLINE SHT. C12
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N E S W

0 10 20 40
1 inch = 20 ft.

Sht. C13
Sht. C12
Sht. C11
Sht. C10
Sht. C8
Sht. C9
Sht. C7
Sht. C6
Sht. C5

Key Map

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AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

GRADING PLAN

Revisions | Date

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C12

SEI No. 24-002

Drawing: G:\2024_JOBS\24-002 Avila Nolina\CAD\Grading Plan.dwg Saved By: Charvos Save Time: 6/13/2025 8:51:14 AM
Plotted by: kilsworth Plot Date: 6/20/2025 11:01 AM

Nolina Subdivision
Doc. No. 2022022743
O.P.R.W.C.T.

Wild Nolina Way
Doc. No. 2023078970
O.P.R.W.C.T.

Tie into Ex. Pavement W/
Longitudinal Butt-Joint

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

10' P.U.E.
Per Subdivision Plat

Match Ex. Grade
@ Waterline Esmt.

S 20°49'22" E ~ 349.10'

N 78°53'41" E ~ 61.13'

N 11°22'27" W ~ 177.65'

F.F.=987.50

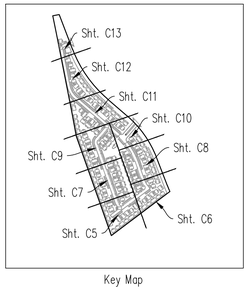
Match Ex.
Grade @ PL

RR 122 HOLDINGS LLC
Doc. No. 2022022743
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MATCHLINE SHT. C13

MATCHLINE SHT. C12

0 10 20 40
1 inch = 20ft.



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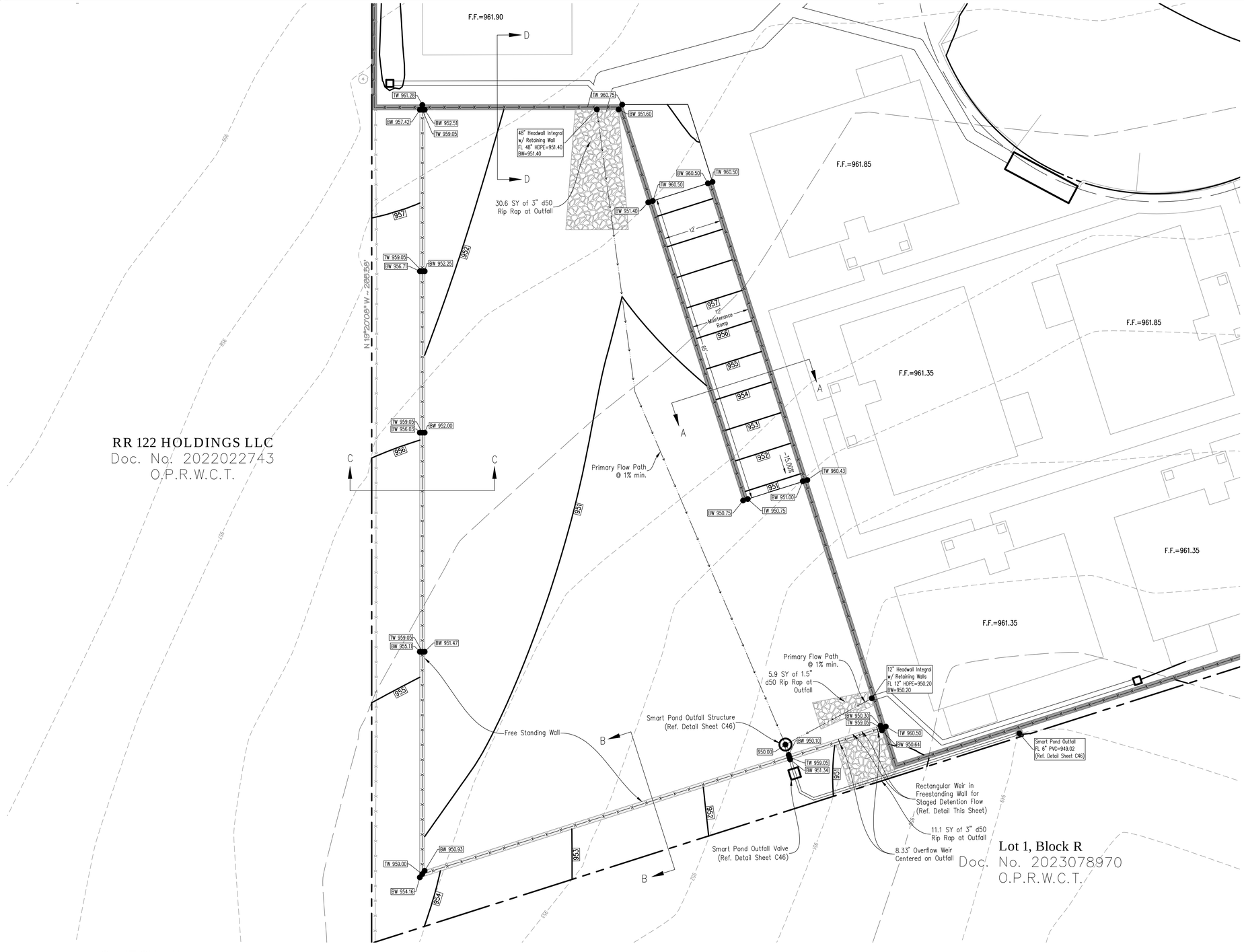
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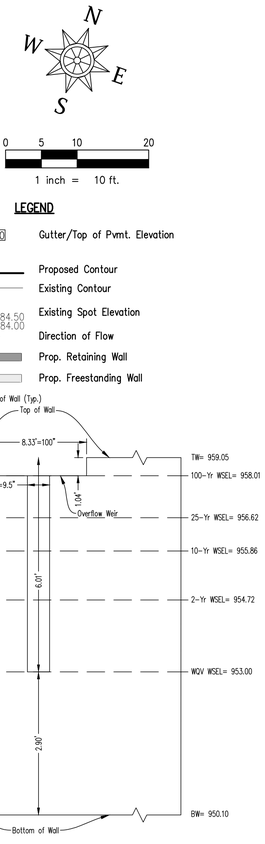
Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C13

SEI No. 24-002

Plotted by: kthweth Plot Date: 6/20/2025 11:01 AM
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Pond A Weir Detail
N.T.S.

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06.20.2025

AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
POND A PLAN

Date

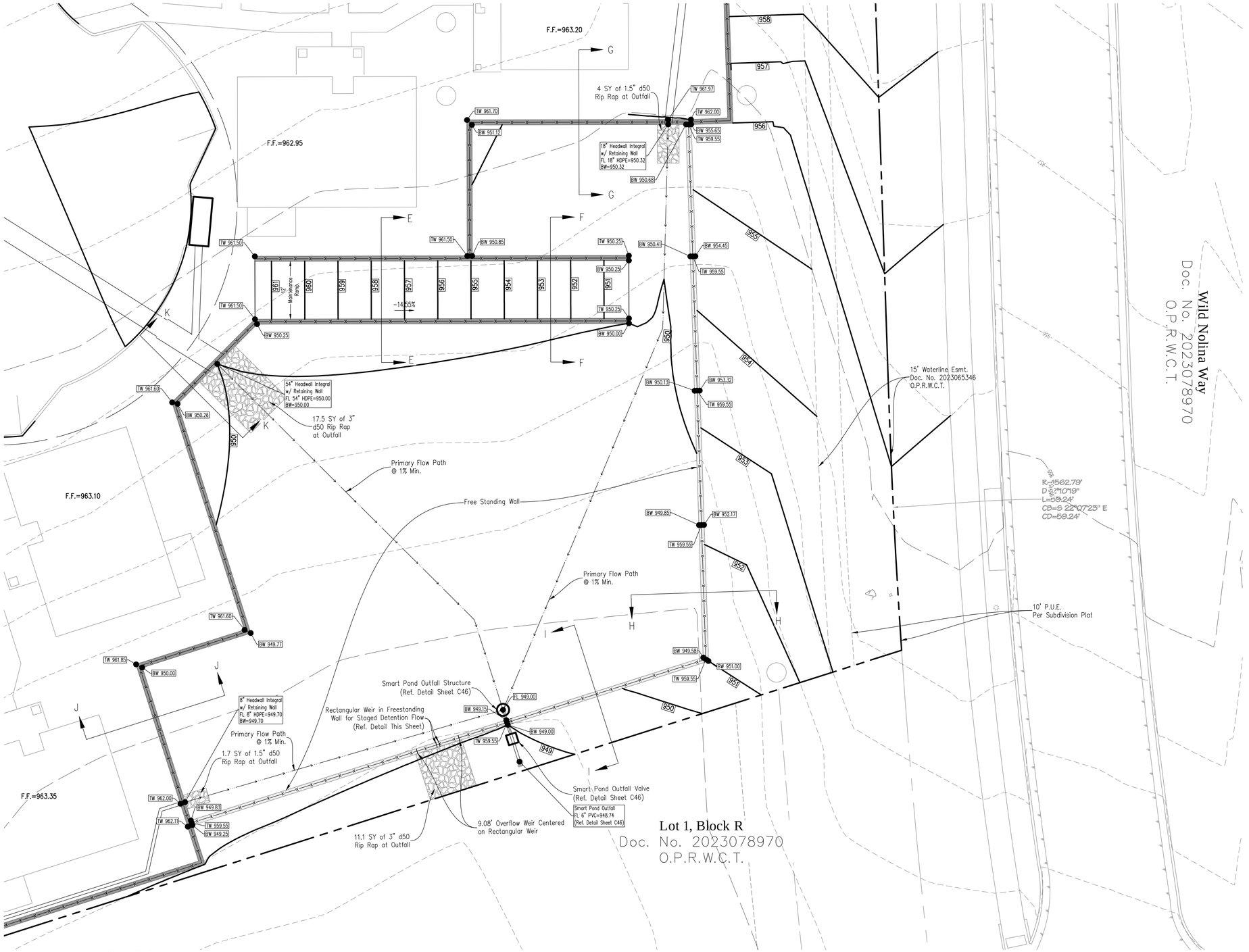
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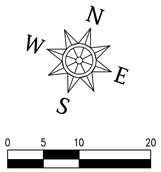
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Drawn By: CJF
Checked By: MEE

Sheet C14

SEI No. 24-002

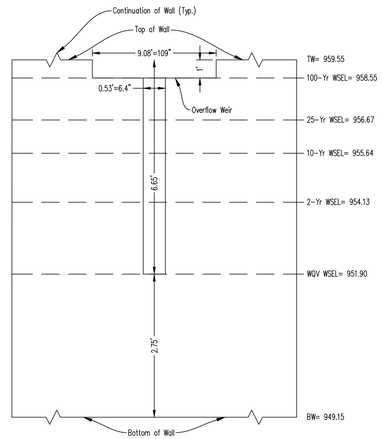
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Plotted by: Kfreeth Plot Date: 6/20/2025 11:01 AM





LEGEND

- 79.00 — Gutter/Top of Pvmt. Elevation
- 684 — Proposed Contour
- 684 — Existing Contour
- TC=684.50 G=684.00 — Existing Spot Elevation
- Direction of Flow
- Prop. Retaining Wall
- Prop. Freestanding Wall



Pond B Weir Detail
N.T.S.

CAUTION !!!
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Mark Ewing • mark.ewing@spiarsengineering.com

STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED
PROFESSIONAL ENGINEER
06.20.2025

AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

POND B PLAN

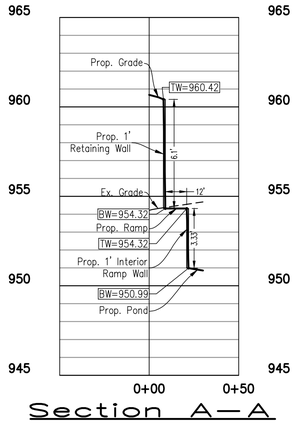
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Checked By: MEE

Sheet C15

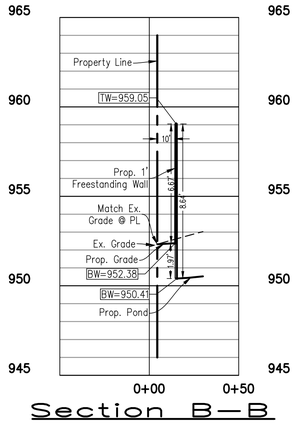
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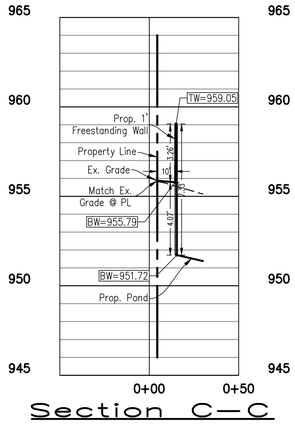
Section A—A

1"=40':H
1"=4':V



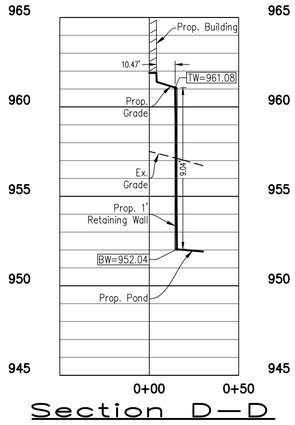
Section B—B

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1"=4':V



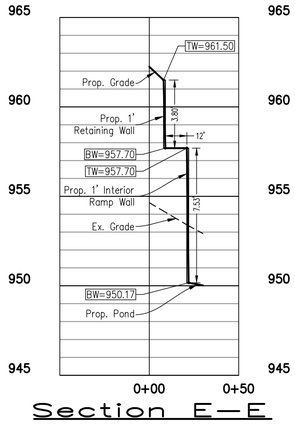
Section C—C

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1"=4':V



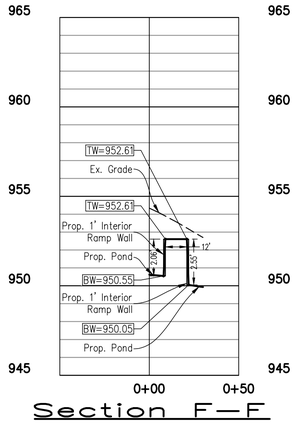
Section D—D

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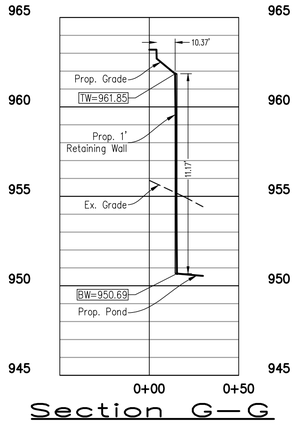
Section E—E

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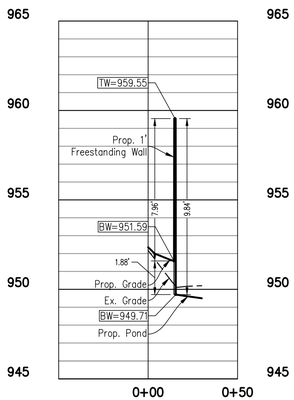
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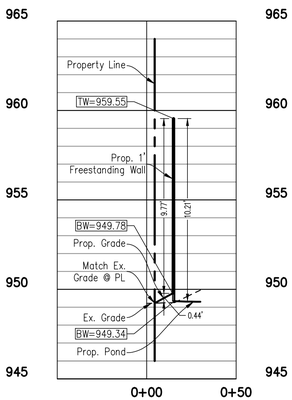
Section G—G

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1"=4':V



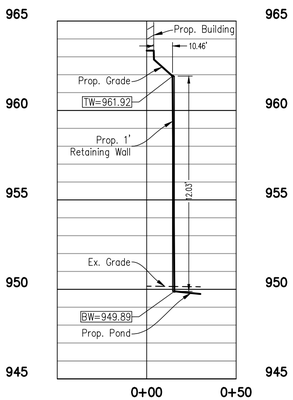
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1"=4':V



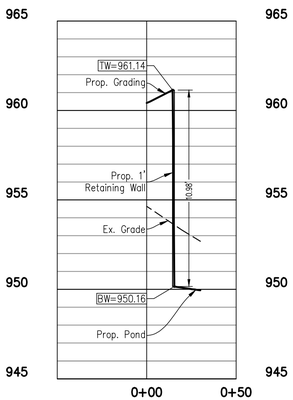
Section I—I

1"=40':H
1"=4':V



Section J—J

1"=40':H
1"=4':V



Section K—K

1"=40':H
1"=4':V

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AVILA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

POND SECTIONS

Date

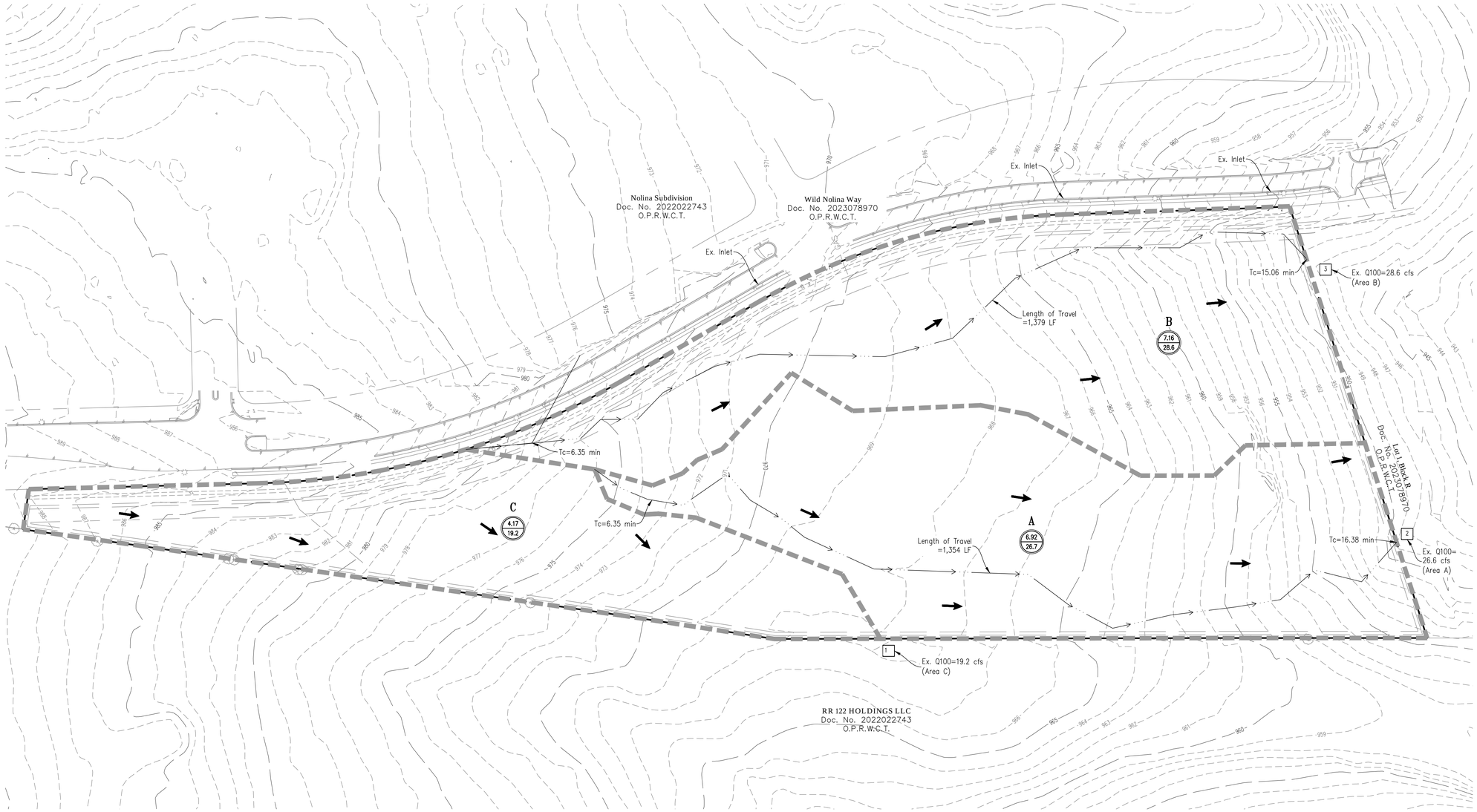
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C16

SEI No. 24-002

Plotted by: KHeath Plot Date: 6/20/2025 11:02 AM
Drawing: G:\2024_JOBS\24-002 Avila Nolina\CAD\Pond Plan.dwg Saved By: KHeath Save Time: 6/13/2025 2:11:46 PM



DRAINAGE CRITERIA

Q = C I A
C = 0.41
I_{100}= See Table
tc = See Table

D.A. No. — A
X.XX — Acres
XX.X — Q_{100}(cfs)

Drainage Divide Line

1 Design Point

Drainage Area Table							
Drainage Area No.	Drainage Area (Acres)	C	tc (Min.)	I100 (in./hr.)	Q100 (cfs)	Comments	
A	6.92	0.41	16.38	9.41	26.7	Flows to southwest	2
B	7.16	0.41	15.01	9.75	28.6	Flows to southeast	3
C	4.17	0.41	10	11.23	19.2	Sheet flows to west	1

EX. DESIGN POINT SUMMARY

1 Flow to West
Ex. Q100=19.2 cfs
(Area C)

2 Flow to Southwest
Ex. Q100=26.6 cfs
(Area A)

3 Flow to Southeast
Ex. Q100=28.6 cfs
(Area B)

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STATE OF TEXAS
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06.20.2025

AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

EXISTING DRAINAGE AREA MAP

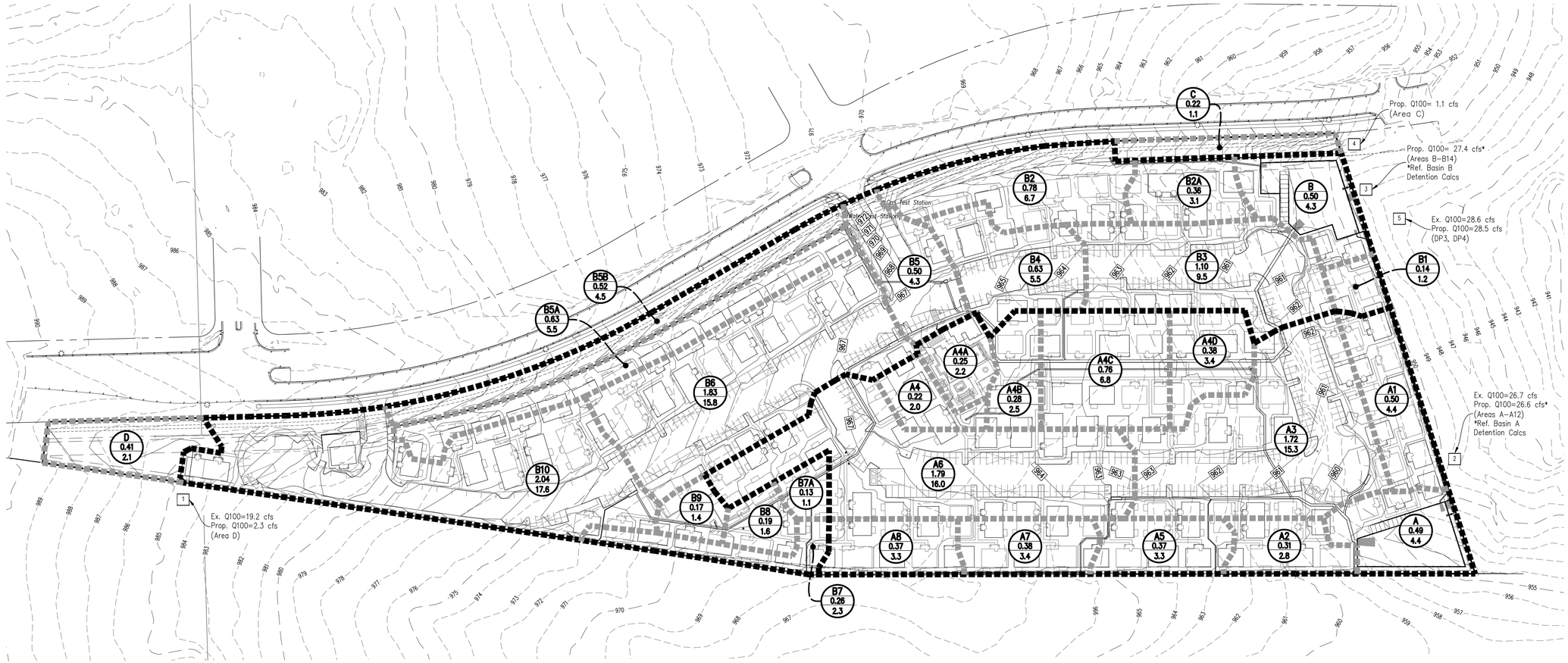
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Checked By: MEE

Sheet C17

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DRAINAGE CRITERIA

Q = C I A
C = See Table
I_{100}= 11.23 in/hr
tc = 10 Min.

D.A. No. → A
X.XX (Acres)
XXX (Q_{100}(cfs))

Drainage Divide Line
Basin Divide Line
1 Design Point

PROP. DESIGN POINT SUMMARY

1 Flow to West
Prop. Q100=2.3 cfs
Ex. Q100=19.2 cfs
(Area C)

2 Flow to Southwest
Ex. Q100=26.7 cfs
Prop. Q100=26.7 cfs*
*Ref. Basin A Detention Calcs

3 Flow Through Prop. Basin B Detention
Prop. Q100=27.1 cfs*
*Ref Basin B Detention Calcs

4 Flow Through Prop. Channel
Prop. Q100=1.1 cfs
(Area D)

5 Flow to Southeast
Prop. Q100=28.6 cfs
Ex. Q100=28.6 cfs
(DP3, DP4)

Drainage Area Table

Drainage Area No.	Drainage Area (Acres)	C	tc (Min.)	I100 (in./hr.)	Q100 (cfs)	Comments	
A	0.49	0.79	10	11.23	4.40	To Prop Inlet	2
A1	0.50	0.79	10	11.23	4.42	To Prop Inlet	2
A2	0.31	0.79	10	11.23	2.79	To Prop Inlet	2
A3	1.72	0.79	10	11.23	15.32	To Prop Inlet	2
A4	0.22	0.79	10	11.23	1.98	To Prop Inlet	2
A4A	0.25	0.79	10	11.23	2.21	To Prop Inlet	2
A4B	0.28	0.79	10	11.23	2.50	To Prop Inlet	2
A4C	0.76	0.79	10	11.23	6.79	To Prop Inlet	2
A4D	0.38	0.79	10	11.23	3.39	To Prop Inlet	2
A5	0.37	0.79	10	11.23	3.32	To Prop Inlet	2
A6	1.79	0.79	10	11.23	15.97	To Prop Inlet	2
A7	0.38	0.79	10	11.23	3.37	To Prop Inlet	2
A8	0.37	0.79	10	11.23	3.31	To Prop Inlet	2
B	0.50	0.77	10	11.23	4.29	To Prop. Inlet	3
B1	0.14	0.77	10	11.23	1.23	To Prop. Inlet	3

Drainage Area Table

Drainage Area No.	Drainage Area (Acres)	C	tc (Min.)	I100 (in./hr.)	Q100 (cfs)	Comments	
B2	0.78	0.77	10	11.23	6.73	To Prop. Inlet	3
B2A	0.36	0.77	10	11.23	3.10	To Prop. Inlet	3
B3	1.10	0.77	10	11.23	9.49	To Prop. Inlet	3
B4	0.63	0.77	10	11.23	5.48	To Prop. Inlet	3
B5	0.50	0.77	10	11.23	4.34	To Prop. Inlet	3
B5A	0.63	0.77	10	11.23	5.48	To Prop. Inlet	3
B5B	0.52	0.77	10	11.23	4.54	To Prop. Inlet	3
B6	1.83	0.77	10	11.23	15.84	To Prop. Inlet	3
B7	0.26	0.77	10	11.23	2.27	To Prop. Inlet	3
B7A	0.13	0.77	10	11.23	1.10	To Prop. Inlet	3
B8	0.19	0.77	10	11.23	1.61	To Prop. Inlet	3
B9	0.17	0.77	10	11.23	1.44	To Prop Inlet	3
B10	2.04	0.77	10	11.23	17.61	To Prop. Inlet	3
C	0.22	0.46	10	11.23	1.15	Sheetflow to South	4
D	0.41	0.46	10	11.23	2.13	Sheetflow to West	1

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147783
LICENSED PROFESSIONAL ENGINEER
06.20.2025

AVILLA NORTH CAROLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

PROPOSED DRAINAGE AREA MAP

Date
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

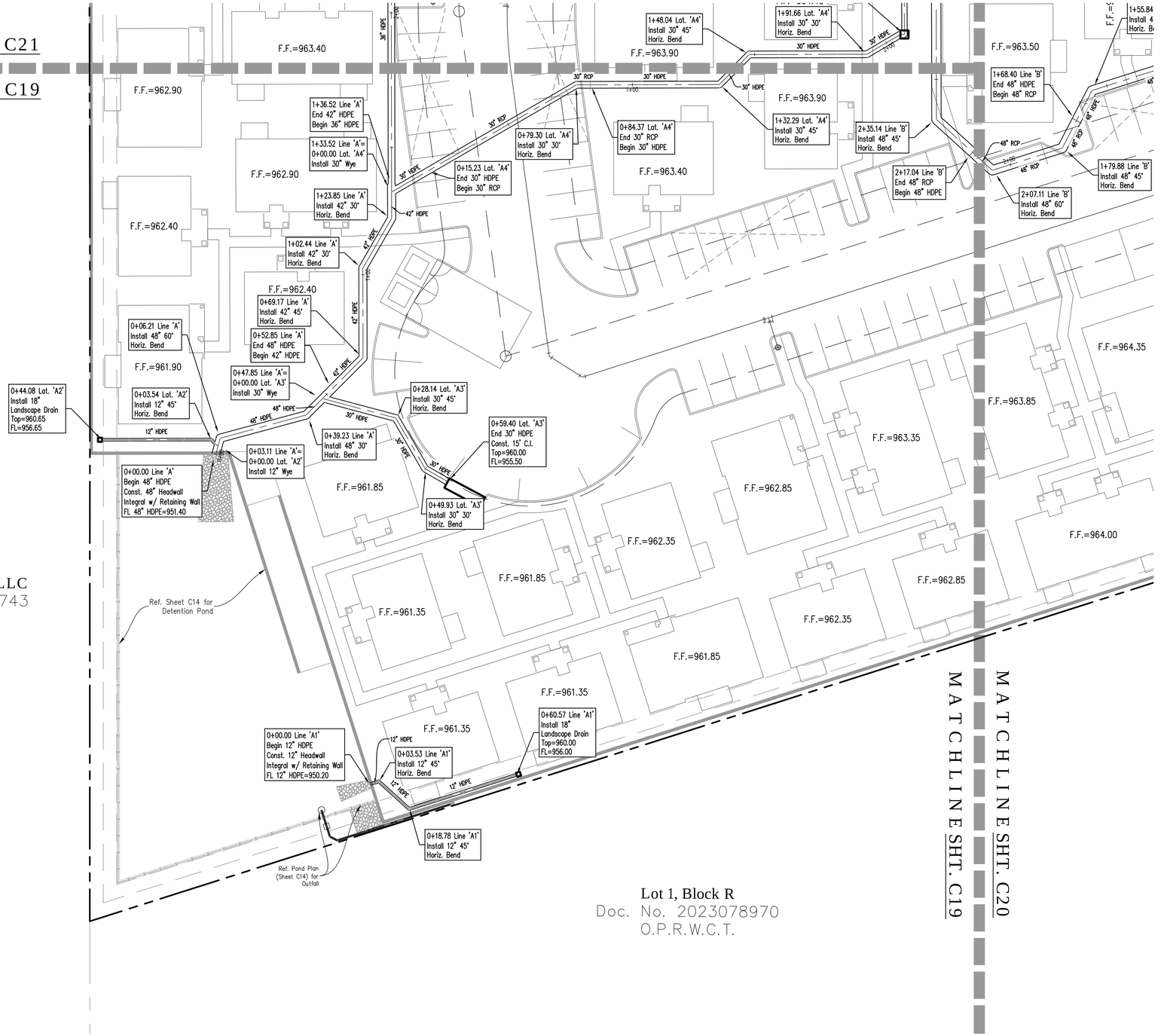
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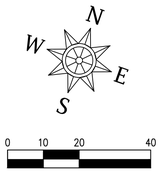
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MATCHLINE SHT. C19



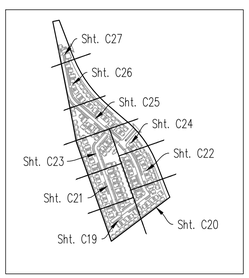
RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

Lot 1, Block R
Doc. No. 2023078970
O.P.R.W.C.T.



DRAINAGE GENERAL NOTES

1. All materials and construction shall conform to the Williamson County Standard Construction Details and Specifications, except as noted herein and approved by the County.
2. Contractor shall be responsible for maintaining trench safety requirements in accordance with County Standards, Texas State Law, and O.S.H.A. Standards for all excavation in excess of five feet in depth.
3. The location of all utilities located on these plans are taken from existing public records. The exact location and elevation of all public utilities must be determined by the Contractor. It shall be the duty of the Contractor to ascertain whether any additional facilities other than those shown on the plans may be present.
4. It shall be the responsibility of the Contractor to protect all public utilities in the construction of this project. All manholes, clean-outs, valve boxes, fire hydrants, etc. must be adjusted to proper line and grade by the Contractor prior to and after the placing of permanent paving. Utilities must be maintained to proper line and grade during construction of the paving for this development.
5. Drainage should be maintained away from the foundations, both during and after construction.
6. Backfill for utility lines should be carefully placed so that they will be stable. Where utility lines pass through the parking lot, the top 6" should be compacted similarly to the remainder of the lot. Utility ditches should be visually inspected during the excavation process to ensure that undesirable fill is not used.
7. Concrete for inlets and drainage structures shall be 4200 psi at 28 days.
8. If rock is encountered in the trench, rock spoil shall not be used in the upper 1.5 feet of the trench.
9. All earthwork operations, pavement installation, etc. shall conform to the Geotechnical Investigation.
10. Four-foot RCP sections with beveled ends shall be used if pipe radius is less than 100 feet.
11. All PVC shall be placed on 1.0% minimum slope unless otherwise noted.



Key Map

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Mark Ewing • mark.ewing@spiarsengineering.com

STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED PROFESSIONAL ENGINEER
06.20.2025

AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PLAN

Date

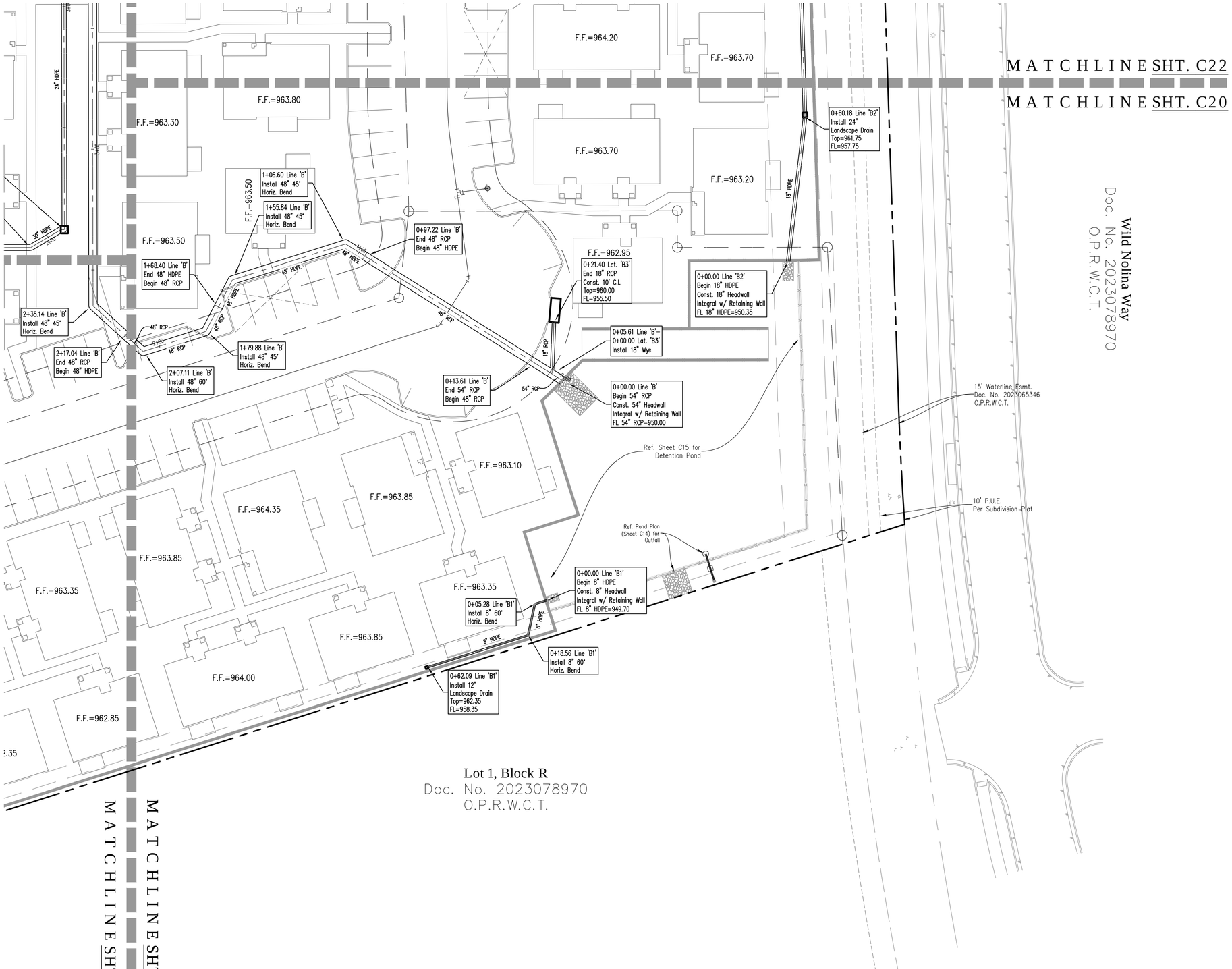
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C19

SEI No. 24-002

Drawing: C:\2024 JOBS\24-002 Avila Nolina\CAD\Drainage Plan.dwg Saved By: RESalerno Save Time: 6/13/2025 3:48:59 PM
Plotted by: kfinerth Plot Date: 6/20/2025 11:02 AM



N
W E
S

0 10 20 40

1 inch = 20 ft.

CAUTION !!!
EXISTING UTILITIES

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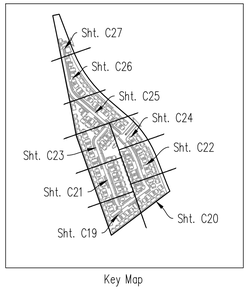
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06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PLAN

Date
Revisions



Key Map

Scale: As Shown
Drawn By: CJF
Checked By: MEE

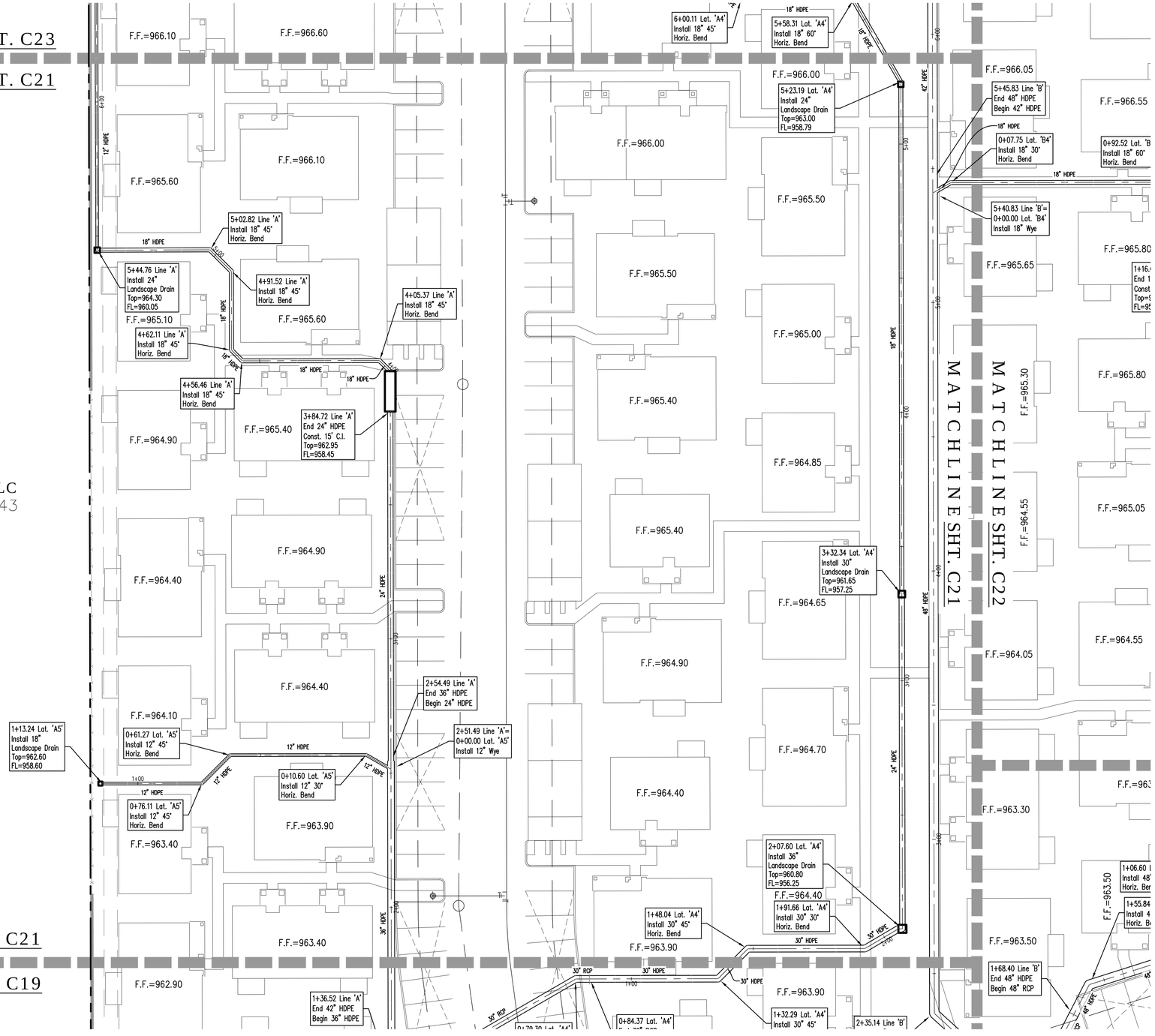
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SEI No. 24-002

Plotted by: kfoseth Plot Date: 6/20/2025 11:02 AM
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MATCHLINE SHT. C23

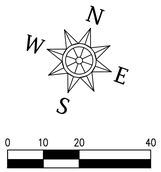
MATCHLINE SHT. C21



MATCHLINE SHT. C21

MATCHLINE SHT. C19

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

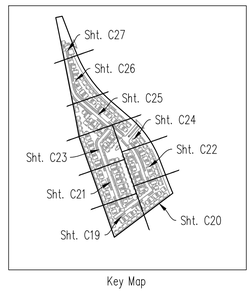


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Key Map

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06.20.2025

AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DRAINAGE PLAN

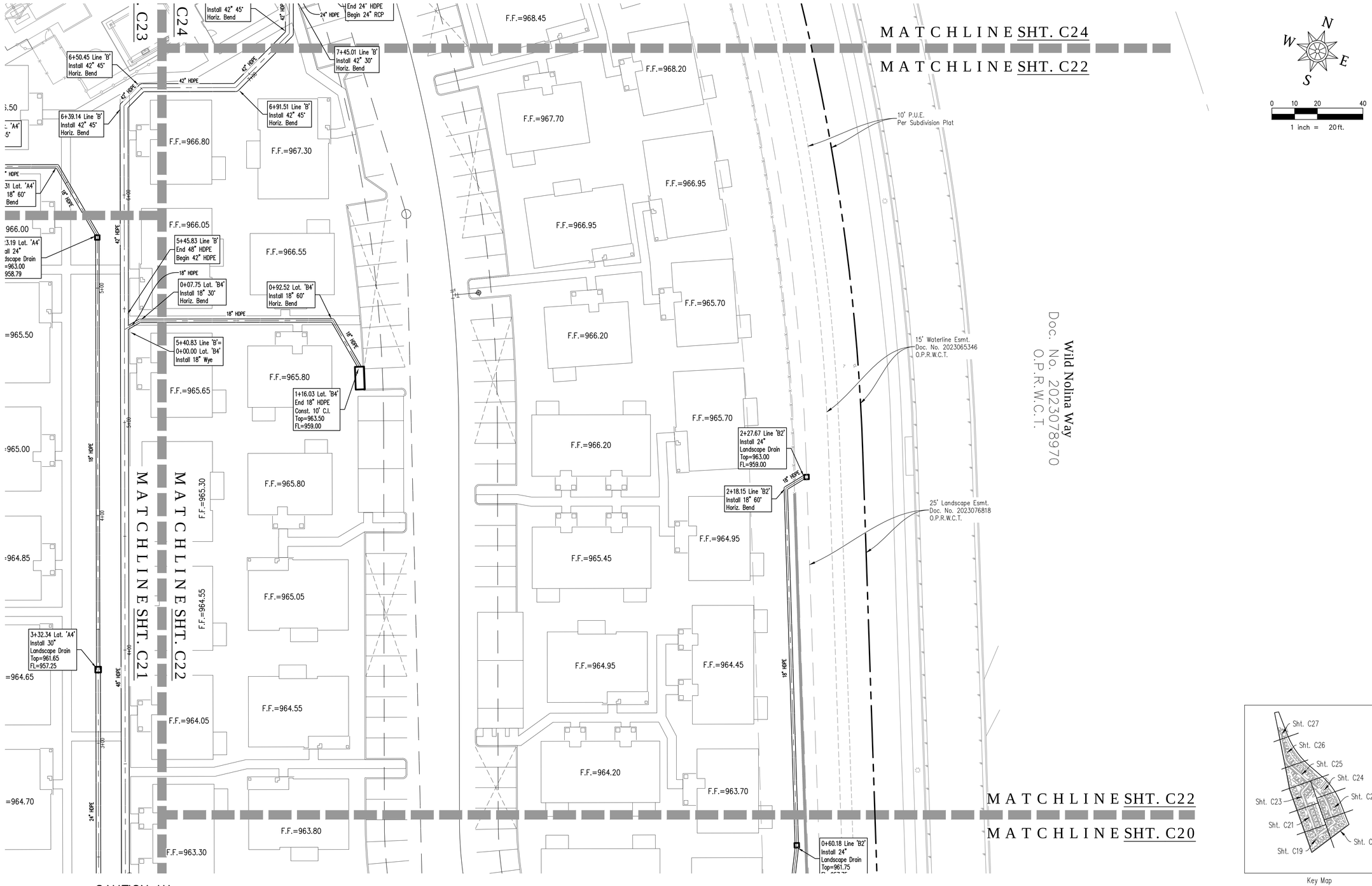
Date
Revisions

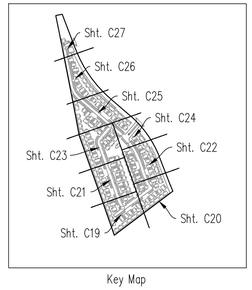
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Drawn By: CJF
Checked By: MEE

Sheet C21

SEI No. 24-002

Plotted by: Kenneth Pot Date: 6/20/2025 11:02 AM
Drawing: G:\2024 JOBS\24-002 Avila Nolina\CAD\Drainage Plan.dwg Saved By: REdelema Save Time: 6/13/2025 3:48:59 PM





Key Map

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STATE OF TEXAS
06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DRAINAGE PLAN

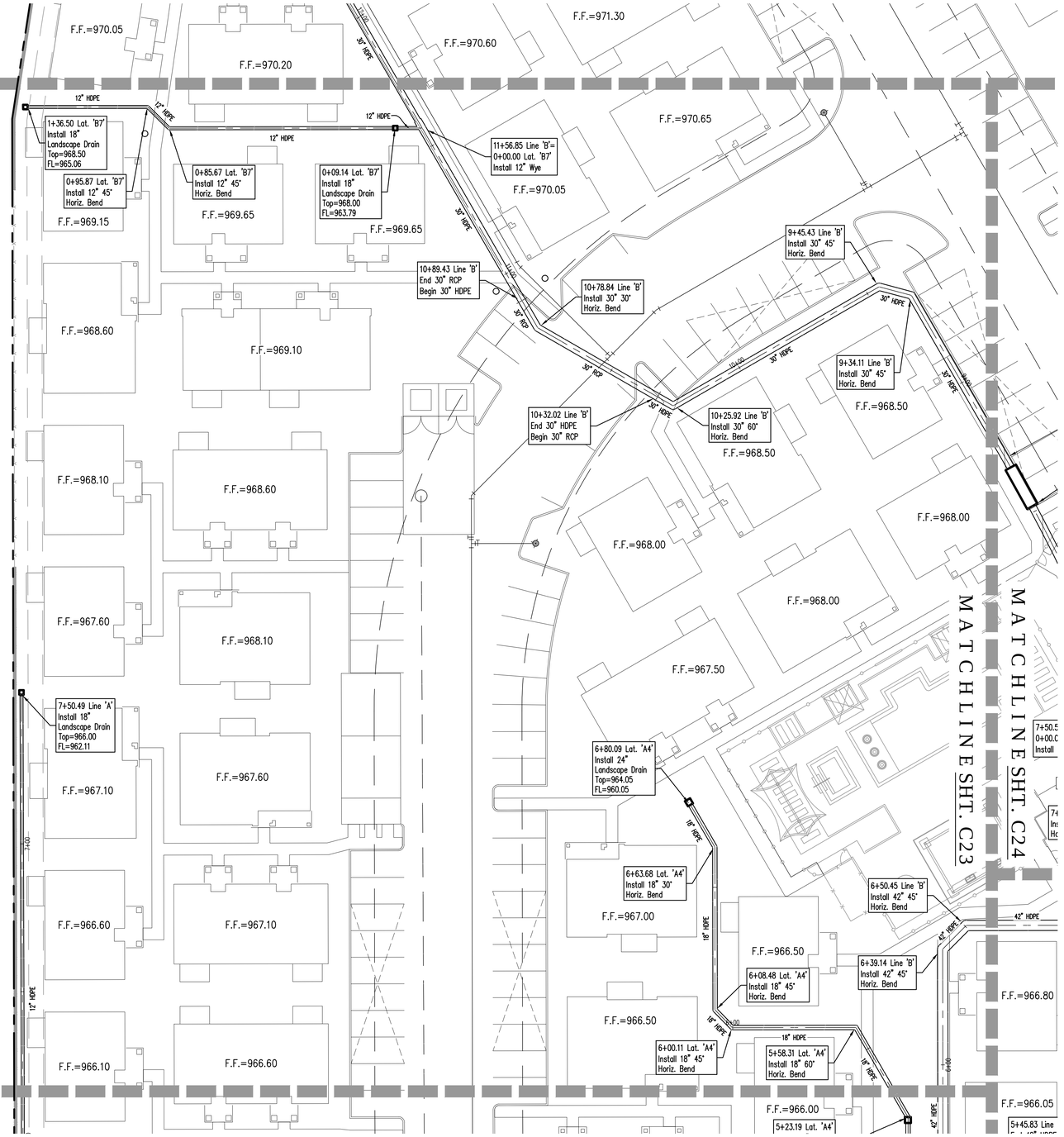
Date
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE
Sheet C22
SEI No. 24-002

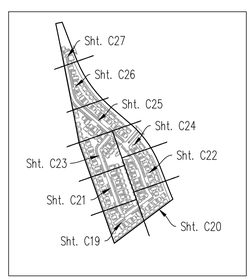
Plotted by: Kenneth Plot Date: 6/20/2025 11:02 AM
Drawing: G:\2024 JOBS\24-002 Avilla Nolina\CAD\Drainage Plan.dwg Saved By: RSteinmle Save Time: 6/13/2025 3:48:59 PM

MATCHLINE SHT. C25

MATCHLINE SHT. C23


F.F.=970.05
F.F.=970.20
F.F.=970.60
F.F.=971.30
F.F.=970.65
F.F.=970.05
F.F.=969.15
F.F.=969.65
F.F.=969.65
F.F.=968.60
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F.F.=966.50
F.F.=966.80
F.F.=966.00
F.F.=966.05
1+36.50 Lat. "B7" Install 18" Landscape Drain Top=968.50 FL=965.06
0+95.87 Lat. "B7" Install 12" 45° Horiz. Bend
0+85.67 Lat. "B7" Install 12" 45° Horiz. Bend
0+09.14 Lat. "B7" Install 18" Landscape Drain Top=968.00 FL=963.79
11+56.85 Line "B"= 0+00.00 Lat. "B7" Install 12" Wye
10+89.43 Line "B" End 30" RCP Begin 30" HDPE
10+78.84 Line "B" Install 30" 30° Horiz. Bend
9+45.43 Line "B" Install 30" 45° Horiz. Bend
9+34.11 Line "B" Install 30" 45° Horiz. Bend
10+32.02 Line "B" End 30" HDPE Begin 30" RCP
10+25.92 Line "B" Install 30" 60° Horiz. Bend
7+50.49 Line "A" Install 18" Landscape Drain Top=966.00 FL=962.11
6+80.09 Lat. "A4" Install 24" Landscape Drain Top=964.05 FL=960.05
6+63.68 Lat. "A4" Install 18" 30° Horiz. Bend
6+08.48 Lat. "A4" Install 18" 45° Horiz. Bend
6+00.11 Lat. "A4" Install 18" 45° Horiz. Bend
5+58.31 Lat. "A4" Install 18" 60° Horiz. Bend
5+23.19 Lat. "A4"
6+50.45 Line "B" Install 42" 45° Horiz. Bend
6+39.14 Line "B" Install 42" 45° Horiz. Bend
12" HDPE
18" HDPE
24" HDPE
30" HDPE
30" RCP
42" HDPE
1440
1440
1440





Key Map

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STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED PROFESSIONAL ENGINEER
06.20.2025

AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DRAINAGE PLAN

Date
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C24

SEI No. 24-002

Plotted by: kSheath Plot Date: 6/20/2025 11:03 AM
Drawing: G:\2024_JOBS\24-002 Avila Nolina\CAD\Drainage Plan.dwg Saved By: RSblankme Save Time: 6/13/2025 3:48:59 PM





0 10 20 40

1 inch = 20ft.

Key Map

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AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DRAINAGE PLAN

Date

Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE
Sheet C25
SEI No. 24-002

Plotted by: Kenneth Plot Date: 6/20/2025 11:03 AM
Drawing: G:\2024 JOBS\24-002 Avilla Nolina\CAD\Drainage Plan.dwg Saved By: RSkidmore Save Time: 6/13/2025 3:48:59 PM

Nolina Subdivision
Doc. No. 2022022743
O.P.R.W.C.T.

Wild Nolina Way
Doc. No. 2023078970
O.P.R.W.C.T.

10' P.U.E.
Per Subdivision Plat

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

F.F.=982.00
F.F.=980.00
F.F.=979.25
F.F.=979.00
F.F.=978.25
F.F.=978.00
F.F.=977.50
F.F.=977.00
F.F.=976.45
F.F.=976.25
F.F.=975.70
F.F.=975.50
F.F.=975.0
F.F.=974.55

8" HDPE

8" HDPE

Install 12"
Landscape Drain
Top=973.00
FL=969.00

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

MATCHLINE SHT. C27

MATCHLINE SHT. C26

MATCHLINE SHT. C26

MATCHLINE SHT. C25

0 10 20 40
1 inch = 20 ft.

Key Map
Sht. C27
Sht. C26
Sht. C25
Sht. C24
Sht. C23
Sht. C22
Sht. C21
Sht. C20
Sht. C19

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06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DRAINAGE PLAN

Date
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE
Sheet C26
SEI No. 24-002

Plotted by: kfaseth Plot Date: 6/20/2025 11:03 AM
Drawing: G:\2024 JOBS\24-002 Avilla Nolina\CAD\Drainage Plan.dwg Saved By: RStevenie Save Time: 6/13/2025 3:48:59 PM

Nolina Subdivision
Doc. No. 2022022743
O.P.R.W.C.T.

Wild Nolina Way
Doc. No. 2023078970
O.P.R.W.C.T.

N
Doc.

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

10' P.U.E.
Per Subdivision Plat

No Subsurface Storm
Sewer This Sheet

F.F.=987.50

F.F.=

MATCHLINE SHT. C27

MATCHLINE SHT. C26

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

N E S W

0 10 20 40
1 inch = 20 ft.

Sht. C27
Sht. C26
Sht. C25
Sht. C24
Sht. C23
Sht. C22
Sht. C21
Sht. C20
Sht. C19

Key Map

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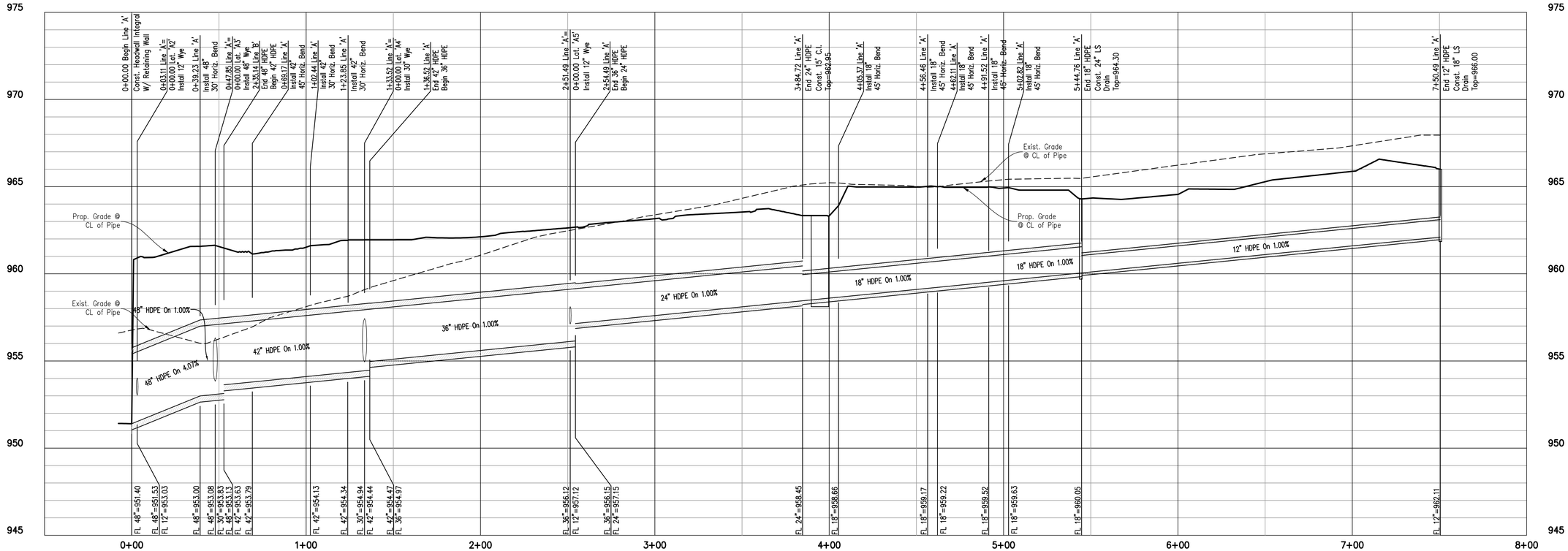
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Revisions

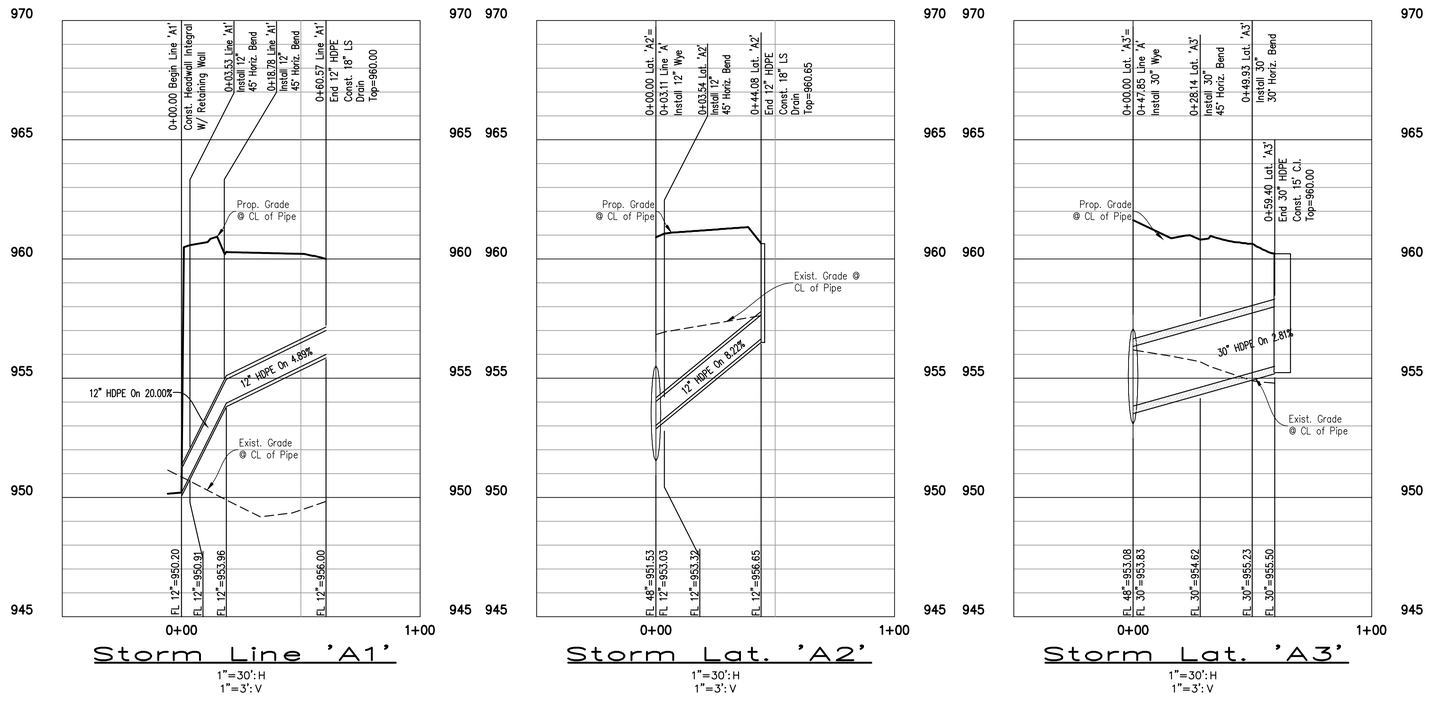
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Sheet C27
SEI No. 24-002

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Storm Line 'A'

1"=30': H
1"=3': V



Storm Line 'A1'

1"=30': H
1"=3': V

Storm Lat. 'A2'

1"=30': H
1"=3': V

Storm Lat. 'A3'

1"=30': H
1"=3': V

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AVILLA NOLINA

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WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILE

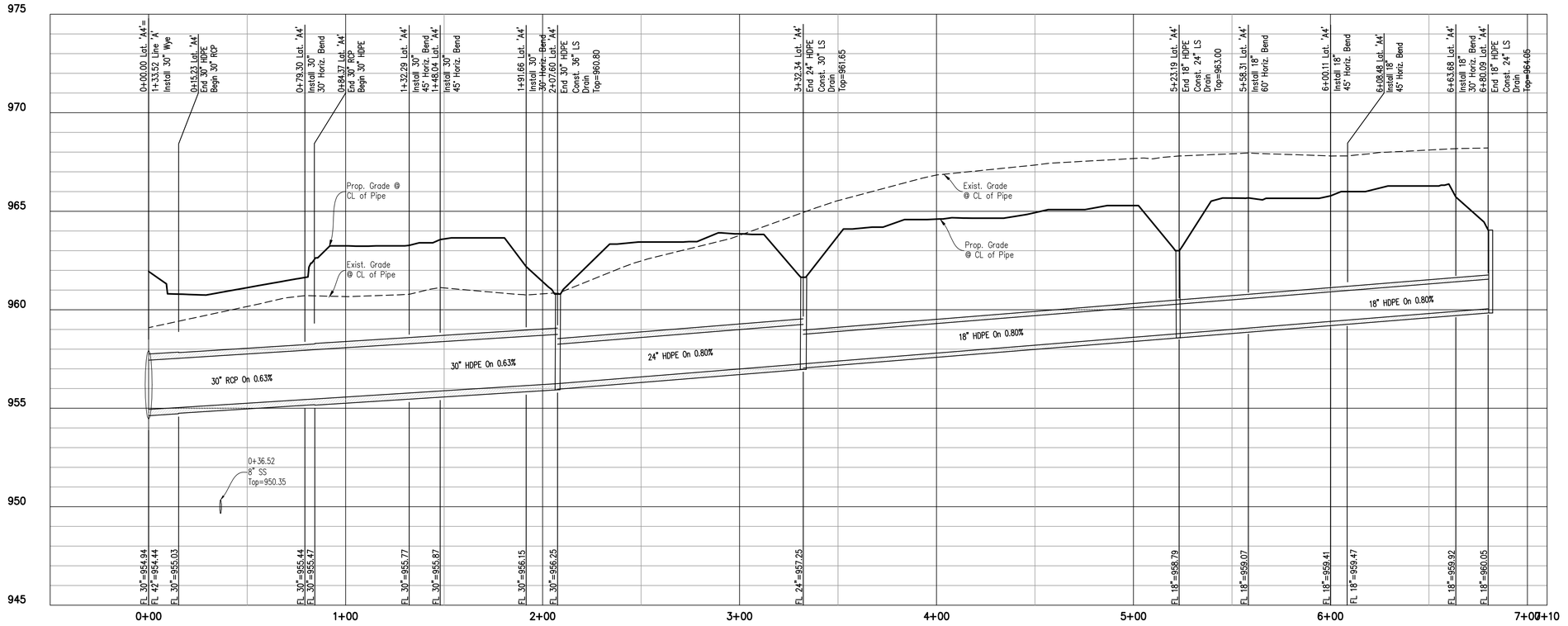
Revisions	Date

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Drawn By: CJF
Checked By: MEE

Sheet C28

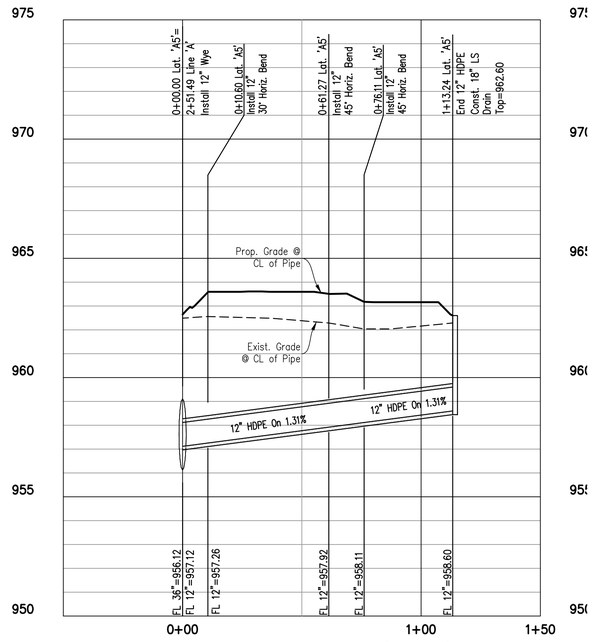
SEI No. 24-002

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Plotted by: kilsworth Plot Date: 6/20/2025 11:03 AM



Storm Lat. 'A4'

1"=30': H
1"=3': V



Storm Lat. 'A5'

1"=30': H
1"=3': V

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STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED
PROFESSIONAL ENGINEER
06.20.2025

AVILA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILE

Date

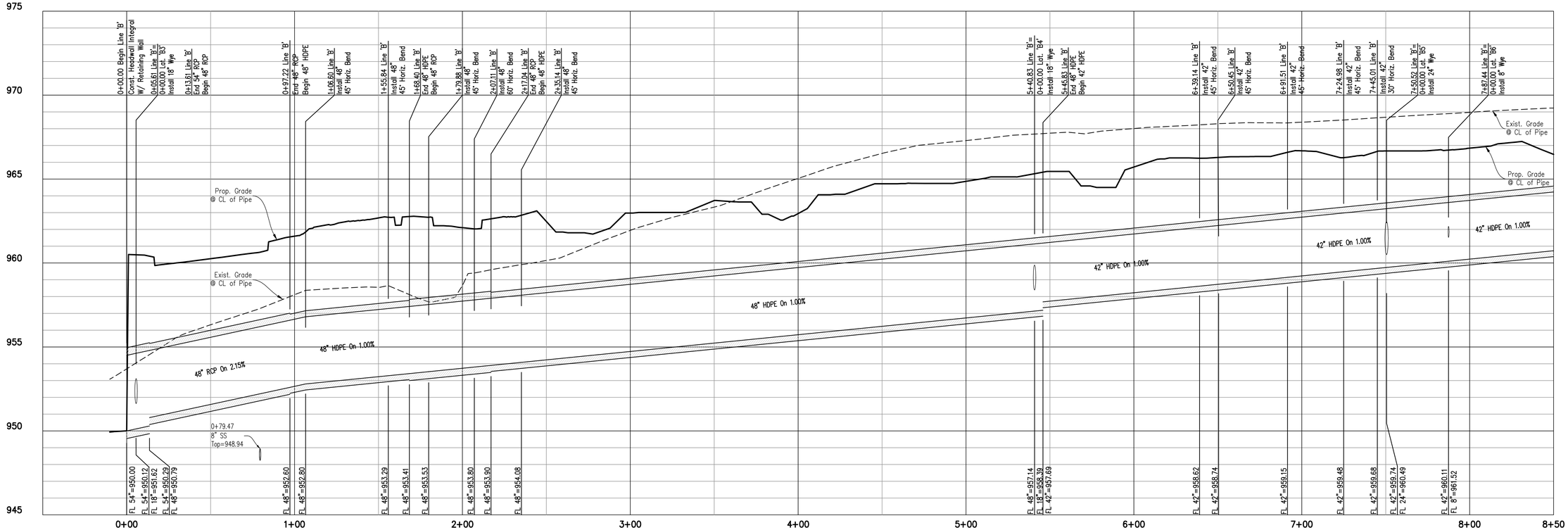
Revisions

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Drawn By: CJF
Checked By: MEE

Sheet C29

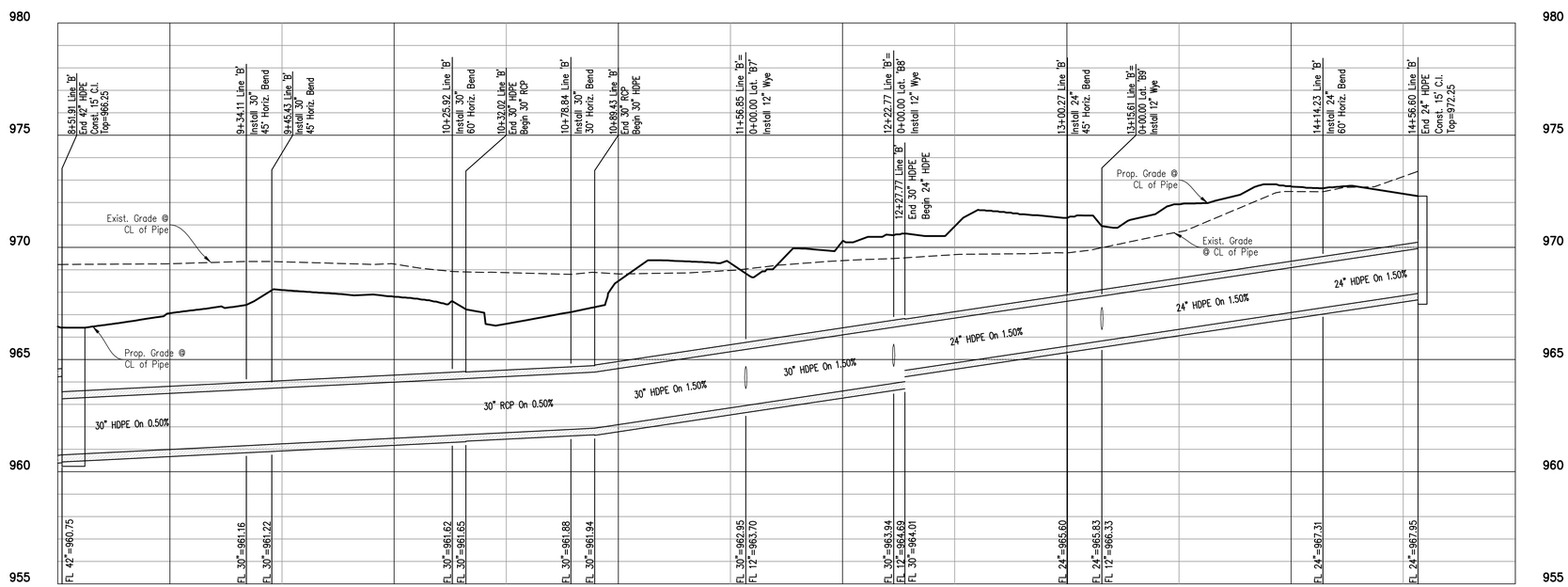
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Plotted by: kfaseth Plot Date: 6/20/2025 11:03 AM



Storm Line 'B'

1"=30': H
1"=3': V



Storm Line 'B'

1"=30': H
1"=3': V

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06.20.2025

AVILA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILES

Date

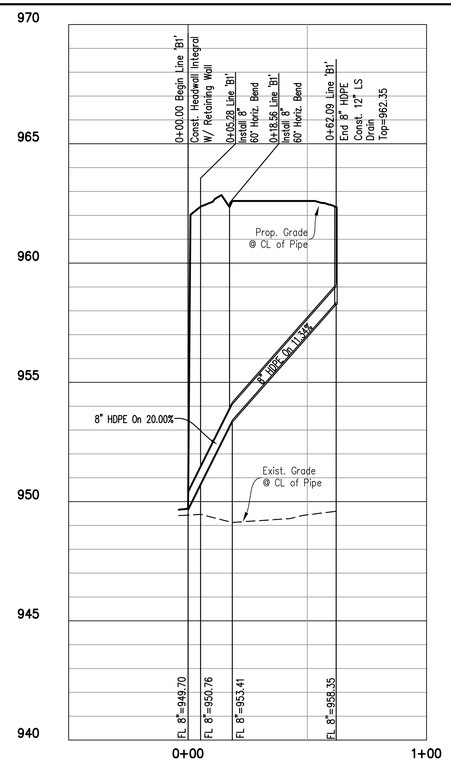
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Checked By: MEE

Sheet C30

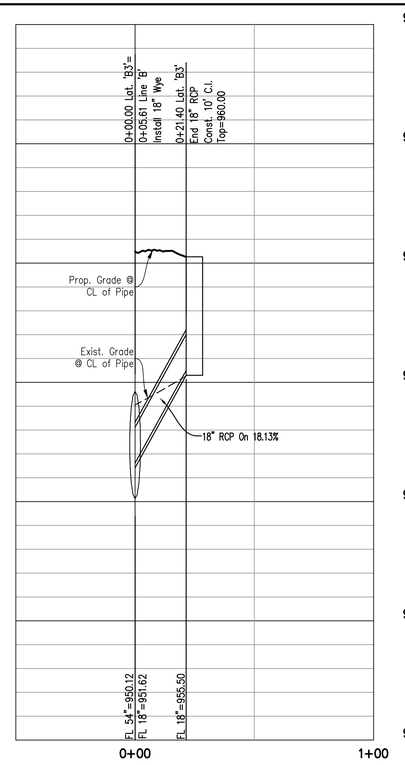
SEI No. 24-002

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Plotted by: kKreath Plot Date: 6/20/2025 11:03 AM



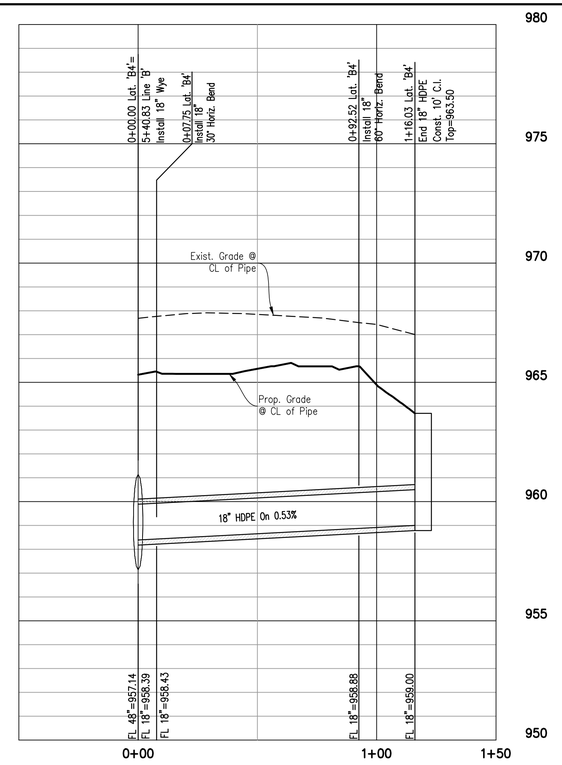
Storm Line 'B1'

1"=30': H
1"=3': V



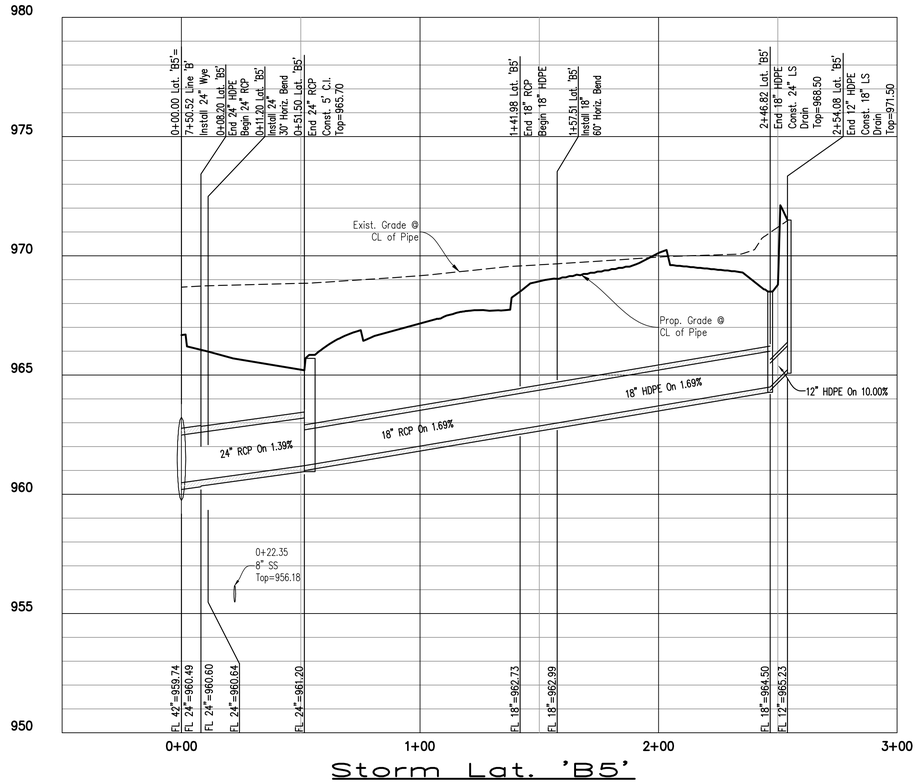
Storm Lat. 'B3'

1"=30': H
1"=3': V



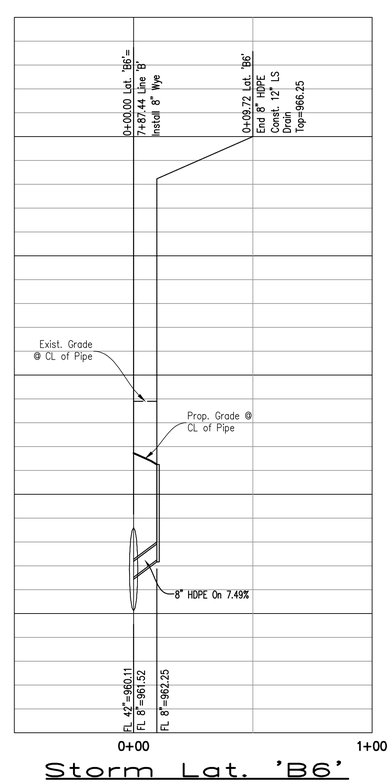
Storm Lat. 'B4'

1"=30': H
1"=3': V



Storm Lat. 'B5'

1"=30': H
1"=3': V



Storm Lat. 'B6'

1"=30': H
1"=3': V

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06.20.2025

AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILES

Date

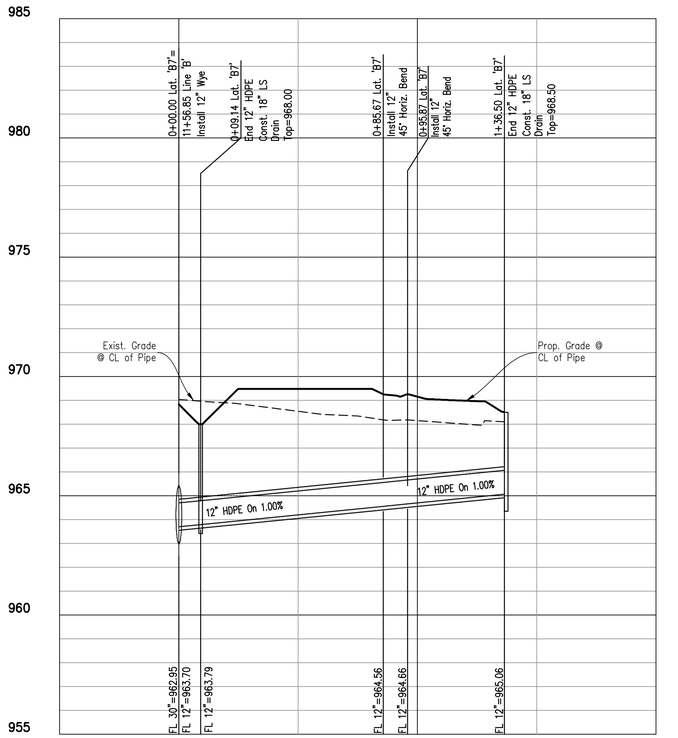
Revisions

Scale: As Shown
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Checked By: MEE

Sheet C31

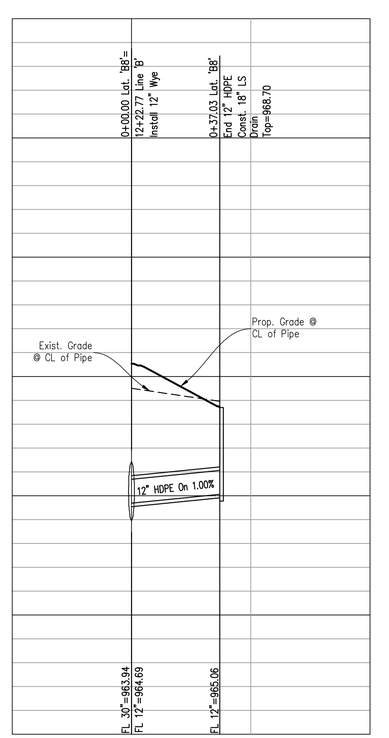
SEI No. 24-002

Plotted by: Kenneth Plot Date: 6/20/2025 11:03 AM
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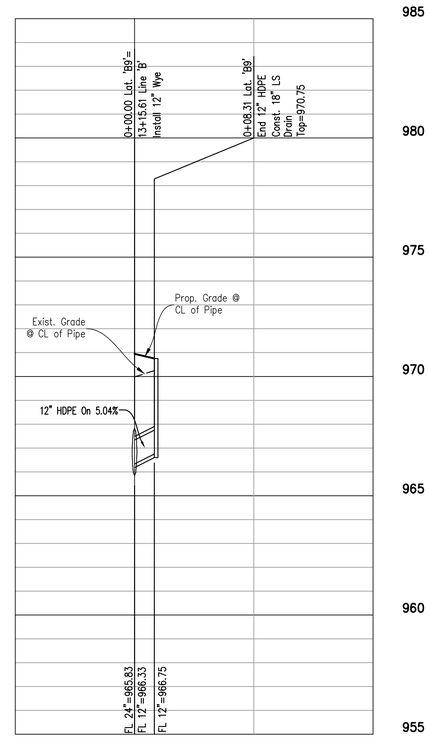
Storm Lat. 'B7'

1"=30': H
1"=3': V



Storm Lat. 'B8'

1"=30': H
1"=3': V



Storm Lat. 'B9'

1"=30': H
1"=3': V

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06.20.2025

AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILES

Revisions	Date

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C32

SEI No. 24-002

Drawing: G:\2024_JOBS\24-002 Avilla Nolina\CAD\Drainage Plan.dwg Saved By: RDiamine Save Time: 6/13/2025 3:48:59 PM
Plotted by: kSmith Plot Date: 6/20/2025 11:03 AM

POND 'A' BMP CALCULATIONS

WQV Calcs-Pond A	
Total Area	7.83
Prop. Impervious Area (ac)	4.70
Prop. Pervious Area (ac)	3.13
Existing Impervious Area (ac)	0
Step 1	
An (ac)	4.7
P (in) - WilCo	32
Lm (lbs)	4090.88
Step 2	
SmartPond	
TSS Removal Efficiency	91%
Step 3	
Lr (lbs)	4784.71
Step 4	
F	0.855
Step 5	
Rainfall Depth (Table 3-5)	1.38
IC	0.600
Runoff Coefficient	0.421
WQV (CF)	16,494
Sediment Storage (CF)	3,299
Total WQV (CF)	**19,792**

CONVERGENT WATER TECHNOLOGIES
BRINGING INNOVATION TO MARKET

BATCH DETENTION BMP VOLUME DRAWDOWN CALCULATIONS

PROJECT NAME: Avilla Nolina **ENGINEER OR RECORD**
PROJECT LOCATION: Williamson County, TX **DATE:** 6/16/2025

Per TCEQ RG-348 Addendum Sheet (Revised July 2005), the drawdown time of the BMP Volume in the basin should not exceed 48 hrs for a single storm event after the 12-hr required batch detention hold time.

Step 1. Determine the BMP Volume by applying a factor of 1.2 to the water quality volume (WQv) calculated per RG-348. The WQv is increased by a factor of 20% to accommodate for the reduction in available storage volume due to deposition of solids in time between full-scale maintenance activities.

Step 2. Determine the average release rate for the BMP Volume.

WSG DIRECT INPUTS by USER

$Q_{avg} = V/t_d$

Where:

Design BMP Volume (V)	19792	ft^3
Time (t_d)	24	hrs
Time (t_d)	86400	seconds
Average Flow Rate (Q_{avg})	0.23	CFS

Step 3. Using average hydraulic head (Havg) equal to one-half the maximum ponding depth for the BMP Volume, estimate the outlet orifice or pipe diameter and associated drawdown time.

$d_{orifice} = [Q_{avg}*4/(pi*C*(2gH_{avg})^{0.5})]^{0.5}$
$A_{orifice} = Q_{avg}/[C*(2*g*H_{avg})^{0.5}]$
$A_{orifice} = pi*d_{orifice}^2/4$
$Q_{avg} = C*A_{orifice}*(2*g*H_{avg})^{0.5}$
$Q_{avg} = (C*pi*d_{orifice}^2*(2*g*H_{avg})^{0.5})/4$
$t_d = V/Q_{avg}$

Where:

BMP Volume Elev	3	ft
Bottom of Pond	0	ft
Ponding Depth ((max allowable 5 ft)	3	ft
Average Head (H_{avg})	1.50	ft
Coefficient of Discharge (C)	0.6	(for sharp-edge orifice)
2g	64.4	(2 X acceleration of gravity (ft/s^2))
sqrt $2gH_{avg}$	9.8285299	ft/s
Diameter of Orifice ($d_{orifice}$)	0.22	ft
Diameter of Orifice ($d_{orifice}$)	2.7	inches
$A_{orifice}$	0.039	ft^2
Time (t_d)	86400	sec
Time (t_d)	24	hrs

Satisfies the not to exceed 48-hr draindown time **OK**

Step 4. What is the drawdown time (td) of a 6" diameter valve deployed with the smartPOND Vault Valve.

$t_d = V/(C*pi*dorifice^2*(2*g*Havg)^{0.5}/4)$

Diameter of Orifice ($d_{orifice}$)	0.5	ft
$A_{orifice}$	0.196	ft^2
Time (t_d)	17,093	sec
Time (t_d)	5	hrs

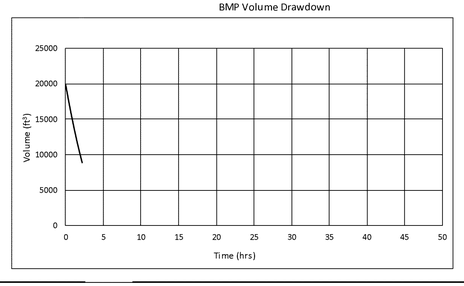
Satisfies the not to exceed 48-hr draindown time **OK**

Step 5. Engineer of record determines if standard 6" valve opening is acceptable or if a smaller pipe restrictor on the outlet of the smartPOND Vault Valve is needed.

Answer **6-inch Valve is okay**

Note - engineer of record is responsible for calculating the downstream pipe velocity at the peak and/or average discharge rate and making sure velocity controls at the discharge point are specified to prevent erosion and scour.

Step 6. Verify drawdown curve



POND 'B' BMP CALCULATIONS

WQV Calcs-Pond B	
Total Area	9.78
Prop. Impervious Area (ac)	5.32
Prop. Pervious Area (ac)	4.46
Existing Impervious Area (ac)	0
Step 1	
An (ac)	5.32
P (in) - WilCo	32
Lm (lbs)	4630.528
Step 2	
SmartPond	
TSS Removal Efficiency	91%
Step 3	
Lr (lbs)	5430.3092
Step 4	
F	0.853
Step 5	
Rainfall Depth (Table 3-5)	1.38
IC	0.544
Runoff Coefficient	0.383
WQV (CF)	18764
Sediment Storage (CF)	3753
Total WQV (CF)	**22,517**

CONVERGENT WATER TECHNOLOGIES
BRINGING INNOVATION TO MARKET

POND B
BATCH DETENTION BMP VOLUME DRAWDOWN CALCULATIONS

PROJECT NAME: Avilla Nolina **ENGINEER OR RECORD**
PROJECT LOCATION: Williamson County, TX **DATE:** 6/16/2025

Per TCEQ RG-348 Addendum Sheet (Revised July 2005), the drawdown time of the BMP Volume in the basin should not exceed 48 hrs for a single storm event after the 12-hr required batch detention hold time.

Step 1. Determine the BMP Volume by applying a factor of 1.2 to the water quality volume (WQv) calculated per RG-348. The WQv is increased by a factor of 20% to accommodate for the reduction in available storage volume due to deposition of solids in time between full-scale maintenance activities.

Step 2. Determine the average release rate for the BMP Volume.

DIRECT INPUTS by USER

$Q_{avg} = V/t_d$

Where:

Design BMP Volume (V)	22517	ft^3
Time (t_d)	24	hrs
Time (t_d)	86400	seconds
Average Flow Rate (Q_{avg})	0.26	CFS

Step 3. Using average hydraulic head (Havg) equal to one-half the maximum ponding depth for the BMP Volume, estimate the outlet orifice or pipe diameter and associated drawdown time.

$d_{orifice} = [Q_{avg}*4/(pi*C*(2gH_{avg})^{0.5})]^{0.5}$
$A_{orifice} = Q_{avg}/[C*(2*g*H_{avg})^{0.5}]$
$A_{orifice} = pi*d_{orifice}^2/4$
$Q_{avg} = C*A_{orifice}*(2*g*H_{avg})^{0.5}$
$Q_{avg} = (C*pi*d_{orifice}^2*(2*g*H_{avg})^{0.5})/4$
$t_d = V/Q_{avg}$

Where:

BMP Volume Elev	2.9	ft
Bottom of Pond	0	ft
Ponding Depth ((max allowable 5 ft)	2.9	ft
Average Head (H_{avg})	1.45	ft
Coefficient of Discharge (C)	0.6	(for sharp-edge orifice)
2g	64.4	(2 X acceleration of gravity (ft/s^2))
sqrt $2gH_{avg}$	9.663332758	ft/s
Diameter of Orifice ($d_{orifice}$)	0.24	ft
Diameter of Orifice ($d_{orifice}$)	2.9	inches
$A_{orifice}$	0.045	ft^2
Time (t_d)	86400	sec
Time (t_d)	24	hrs

Satisfies the not to exceed 48-hr draindown time **OK**

Step 4. What is the drawdown time (td) of a 6" diameter valve deployed with the smartPOND Vault Valve.

$t_d = V/(C*pi*dorifice^2*(2*g*Havg)^{0.5}/4)$

Diameter of Orifice ($d_{orifice}$)	0.5	ft
$A_{orifice}$	0.196	ft^2
Time (t_d)	19,779	sec
Time (t_d)	5	hrs

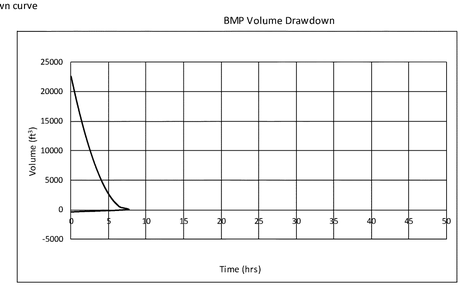
Satisfies the not to exceed 48-hr draindown time **OK**

Step 5. Engineer of record determines if standard 6" valve opening is acceptable or if a smaller pipe restrictor on the outlet of the smartPOND Vault Valve is needed.

Answer **6-inch Valve is okay**

Note - engineer of record is responsible for calculating the downstream pipe velocity at the peak and/or average discharge rate and making sure velocity controls at the discharge point are specified to prevent erosion and scour.

Step 6. Verify drawdown curve



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06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
WQV CALCULATIONS

Date
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C33

SEI No. 24-002

Plotted by: Kenneth Plot Date: 6/20/2025 11:03 AM
Drawing: G:\2024_JOBS\24-002 Avilla Nolin\CAD\Drainage Calculations.dwg Saved By: Kenneth Save Time: 6/19/2025 7:54:06 AM

LAG TIME CALCULATIONS

Basin Data		Overland Flow					Shallow Concentrated Flow					Channel/Conduit Flow							Time of Conc. Calc. (min) (20)
Basin Name	Calculated Longest Flowpath (ft) (1)	Length (ft) (2)	Slope (ft/ft) (3)	Surface Type (4)	Manning's n (5)	To (min) (6)	Length (ft) (7)	Slope (ft/ft) (8)	Surface Type (9)	K (10)	Ts (min) (11)	Length (ft) (12)	Slope (ft/ft) (13)	Manning's n (14)	X-Section Type	Area (ft^2) (15)	WP (ft) (16)	Channel Velocity (f/s) (17)	Tt (min) (19)	
A (EX)	1354	100	0.026	Grass-Range (Natural)	0.130	6.98	1254	0.019	unpaved	16.1	9.40									
					Total To (min)=	6.98				Total Ts (min)=	9.40							Total Tt (min)=	0.00	16.38
B (EX)	1379	100	0.033	Grass-Range (Natural)	0.130	6.35	1279	0.023	unpaved	16.1	8.71									
					Total To (min)=	6.35				Total Ts (min)=	8.71							Total Tt (min)=	0.00	15.06

BASIN 'A' DETENTION CALCULATIONS

2-YR

EXISTING DISCHARGE TO DP2	
DRAINAGE AREA (AC)	6.91
RUNOFF COEFFICIENT, C	0.25
Tc (MIN)	16.4
INTENSITY (IN/HR)	3.65
Q_{100-YR} (CFS)	6.3

$Q_{ALLOWABLE}$ (CFS)	6.3
Q_{ACTUAL} (CFS)	5.4

PROPOSED CONDITIONS TO POND A	
DRAINAGE AREA (AC)	7.83
RUNOFF COEFFICIENT, C	0.60
Tc (MIN)	10.00
INTENSITY (IN/HR)	4.51
$Q_{MAX\ INFLOW}$ (CFS)	21.12

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b10= 54.2839
d10= 11.4257
e10= 0.8119

MODIFIED RATIONAL METHOD - 2 YEAR STORM EVENT							
DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	2.64	12.36	22,254	5.35	6,420	15,834	0.364
35	2.41	11.27	23,669	5.35	7,223	16,447	0.378
40	2.21	10.37	24,895	5.35	8,025	16,870	0.387
50	1.92	8.98	26,938	5.35	9,630	17,308	0.397
60	1.70	7.94	28,600	5.35	11,235	17,365	0.399
70	1.53	7.14	29,999	5.35	12,840	17,159	0.394
80	1.39	6.50	31,207	5.35	14,445	16,762	0.385
90	1.28	5.98	32,271	5.35	16,050	16,221	0.372
100	1.18	5.54	33,221	5.35	17,655	15,566	0.357
110	1.10	5.16	34,080	5.35	19,260	14,820	0.340
120	1.03	4.84	34,864	5.35	20,865	13,999	0.321
130	0.97	4.56	35,586	5.35	22,470	13,116	0.301

<--REQUIRED STORAGE=0.399 AC-FT
=17365 CU. FT.

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 2YR	0.25	14.25
N/A	0	0
COMBINED	*0.250*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 2YR	0.75	4.70
Developed, Grass, Fair Condition-Steep, 2YR	0.37	3.13
COMBINED	*0.598*	*7.83*

25-YR

EXISTING DISCHARGE TO DP2	
DRAINAGE AREA (AC)	6.91
RUNOFF COEFFICIENT, C	0.34
Tc (MIN)	16.4
INTENSITY (IN/HR)	7.23
Q_{100-YR} (CFS)	16.98

$Q_{ALLOWABLE}$ (CFS)	17.0
Q_{ACTUAL} (CFS)	16.4

PROPOSED CONDITIONS TO POND A	
DRAINAGE AREA (AC)	7.83
RUNOFF COEFFICIENT, C	0.71
Tc (MIN)	10.00
INTENSITY (IN/HR)	8.74
$Q_{MAX\ INFLOW}$ (CFS)	48.76

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b25= 109.8397
d25= 13.7038
e25= 0.7994

MODIFIED RATIONAL METHOD - 25 YEAR STORM EVENT							
DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	5.36	29.90	53,816	16.38	19,656	34,160	0.784
35	4.92	27.42	57,577	16.38	22,113	35,464	0.814
40	4.55	25.36	60,857	16.38	24,570	36,287	0.833
50	3.97	22.12	66,365	16.38	29,484	36,881	0.847
60	3.53	19.69	70,876	16.38	34,398	36,478	0.837
70	3.19	17.78	74,692	16.38	39,312	35,380	0.812
80	2.91	16.25	77,998	16.38	44,226	33,772	0.775
90	2.69	14.98	80,916	16.38	49,140	31,776	0.729
100	2.50	13.92	83,528	16.38	54,054	29,474	0.677
110	2.33	13.01	85,893	16.38	58,968	26,925	0.618
120	2.19	12.23	88,056	16.38	63,882	24,174	0.555
130	2.07	11.54	90,049	16.38	68,796	21,253	0.488

<--REQUIRED STORAGE=0.847 AC-FT
=36881 CU. FT.

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 25YR	0.34	14.25
N/A	0	0
COMBINED	*0.340*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 25YR	0.88	4.70
Developed, Grass, Fair Condition-Steep, 25YR	0.46	3.13
COMBINED	*0.712*	*7.83*

10-YR

EXISTING DISCHARGE TO DP2	
DRAINAGE AREA (AC)	6.91
RUNOFF COEFFICIENT, C	0.30
Tc (MIN)	16.4
INTENSITY (IN/HR)	5.88
Q_{100-YR} (CFS)	12.19

$Q_{ALLOWABLE}$ (CFS)	12.2
Q_{ACTUAL} (CFS)	11.5

PROPOSED CONDITIONS TO POND A	
DRAINAGE AREA (AC)	7.83
RUNOFF COEFFICIENT, C	0.67
Tc (MIN)	10.00
INTENSITY (IN/HR)	7.17
$Q_{MAX\ INFLOW}$ (CFS)	37.40

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b10= 87.6048
d10= 12.7018
e10= 0.8016

MODIFIED RATIONAL METHOD - 10 YEAR STORM EVENT							
DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	4.32	22.54	40,564	11.50	13,800	26,764	0.614
35	3.95	20.62	43,305	11.50	15,525	27,780	0.638
40	3.65	19.04	45,691	11.50	17,250	28,441	0.653
50	3.18	16.56	49,688	11.50	20,700	28,988	0.665
60	2.82	14.71	52,957	11.50	24,150	28,807	0.661
70	2.54	13.27	55,719	11.50	27,600	28,119	0.646
80	2.32	12.11	58,111	11.50	31,050	27,061	0.621
90	2.14	11.15	60,221	11.50	34,500	25,721	0.590
100	1.98	10.35	62,109	11.50	37,950	24,159	0.555
110	1.85	9.67	63,819	11.50	41,400	22,419	0.515
120	1.74	9.08	65,383	11.50	44,850	20,533	0.471
130	1.64	8.57	66,825	11.50	48,300	18,525	0.425

<--REQUIRED STORAGE=0.665 AC-FT
=28988 CU. FT.

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 10YR	0.3	14.25
N/A	0	0
COMBINED	*0.300*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 10YR	0.83	4.70
Developed, Grass, Fair Condition-Steep, 10YR	0.42	3.13
COMBINED	*0.666*	*7.83*

100-YR

EXISTING DISCHARGE TO DP2	
DRAINAGE AREA (AC)	6.91
RUNOFF COEFFICIENT, C	0.41
Tc (MIN)	16.4
INTENSITY (IN/HR)	9.41
Q_{100-YR} (CFS)	26.67

$Q_{ALLOWABLE}$ (CFS)	26.7
Q_{ACTUAL} (CFS)	26.6

PROPOSED CONDITIONS TO POND A	
DRAINAGE AREA (AC)	7.83
RUNOFF COEFFICIENT, C	0.79
Tc (MIN)	10.00
INTENSITY (IN/HR)	11.23
$Q_{MAX\ INFLOW}$ (CFS)	69.83

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b100= 150.9468
d100= 15.8200
e100= 0.7992

MODIFIED RATIONAL METHOD - 100 YEAR STORM EVENT							
DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	7.10	44.15	79,474	26.61	31,932	47,542	1.091
35	6.54	40.64	85,354	26.61	35,924	49,431	1.135
40	6.06	37.71	90,499	26.61	39,915	50,584	1.161
50	5.32	33.05	99,165	26.61	47,898	51,267	1.177
60	4.75	29.52	106,279	26.61	55,881	50,398	1.157
70	4.30	26.74	112,303	26.61	63,864	48,439	1.112
80	3.94	24.48	117,525	26.61	71,847	45,678	1.049
90	3.64	22.62	122,131	26.61	79,830	42,301	0.971
100	3.38	21.04	126,253	26.61	87,813	38,440	0.882
110	3.17	19.69	129,985	26.61	95,796	34,189	0.785
120	2.98	18.53	133,394	26.61	103,779	29,615	0.680
130	2.82	17.50	136,534	26.61	111,762	24,772	0.569

<--REQUIRED STORAGE=1.177 AC-FT
=51267 CU. FT.

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 100YR	0.41	14.25
N/A	0	0
COMBINED	*0.410*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 100YR	0.97	4.70
Developed, Grass, Fair Condition-Steep, 100YR	0.53	3.13
COMBINED	*0.794*	*7.83*

POND A OUTFALL

2 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 opening in 100yr Storm Events

Weir #1

L	0.792	9.5 inches
H	1.72	20.6 inches
C =	3	

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H(Feet)	Q (cfs)	Q (allowable)
2 YR	954.72	1.72	5.35	6.30

Outfall Flowline 953.00

10 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 in 10yr Storm Events

Weir #1

L	0.79	
H	1.718	
C	3.00	

Weir #2

L	0.792	9.5 inches
H	1.14	13.6 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
10 YR	955.86	2.86	11.46	
		Head H2 (Feet)	Q2 (cfs)	
		1.14	0.00	
			Q (design)	Q (allowable)
			11.46	12.19

25 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 & Rectangular Weir #3 in 25yr Storm Events

Weir #1

L	0.79	
H	1.718	
C	3.00	

Weir #2

L	0.79	
H	1.137	

Weir #3

L	0.792	9.5 inches
H	0.77	9.2 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
25 YR	956.62	3.62	16.37	
		Head H2(Feet)	Q2 (cfs)	
		1.14	0.00	
		Head H3 (Feet)	Q3 (cfs)	
		0.77	0.00	
			Q (design)	Q (allowable)
			16.37	16.98

100 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 & Rectangular Weir #3 & Rectangular Weir #4 in 100 Yr Storm events

Weir #1

L	0.79	
H	1.718	
C	3.00	

Weir #2

L	0.79	
H	1.137	

Weir #3

L	0.79	
H	0.767	

Weir #4

L	0.792	9.5 inches
H	1.39	16.6 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
100 YR	958.01	5.01	26.62	
		Head H2 (Feet)	Q2 (cfs)	
		3.29	0.00	
		Head H3 (Feet)	Q3 (cfs)	
		2.15	0.00	
		Head H4 (Feet)	Q4 (cfs)	
		1.39	0.00	
			Q (design)	Q (allowable)
			26.62	26.67

Overflow Weir Calculations

100-Yr Flow through Overflow Weir

L	8.333	100 inches
H	1.04	12.5 inches
C =	3	

WEIR Flow Equation CLH ^ 3/2

Design Storm	Head H(Feet)	Q (cfs)	Q (allowable)
100 YR Overflow	1.04	26.51	26.67

STAGE-STORAGE SUMMARY - DETENTION POND 1		
STAGE	STORAGE (CF)	STORAGE (AC-FT)
953.00	0.000	0.000
953.50	5028.480	0.115
954.00	10077.210	0.231
954.50	15145.650	0.348
955.00	20234.340	0.465
955.50	25342.740	0.582
956.00	30471.390	0.700
956.50	35620.020	0.818
957.00	40788.360	0.936
957.50	45976.950	1.055
958.00	51185.520	1.175
958.50	56414.070	1.295
959.00	61662.600	1.416

REDQ. STORAGE:	1.177	AC-FT
100-YR WSEL:	958.01	FT

REDQ. STORAGE:	0.847	AC-FT
25-YR WSEL:	956.62	FT

REDQ. STORAGE:	0.665	AC-FT
10-YR WSEL:	955.86	FT

REDQ. STORAGE:	0.399	AC-FT
2-YR WSEL:	954.72	FT

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LICENSED PROFESSIONAL ENGINEER
06.20.2025

AVILLA NORTH CAROLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DETENTION CALCULATIONS

Date

Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C34

SEI No. 24-002

Drawing: G:\2024_JOBS\24-002 Avilla Nolina\CAD\Drainage Calculations.dwg Saved By: kflowth Save Time: 6/19/2025 7:54:06 AM Plotted by: kflowth Plot Date: 6/20/2025 11:03 AM

BASIN 'B' DETENTION CALCULATIONS

2-YR

EXISTING DISCHARGE TO DP5		PROPOSED CONDITIONS TO POND B		PERVIOUS BYPASS TO DP4	
DRAINAGE AREA (AC)	7.17	DRAINAGE AREA (AC)	9.78	DRAINAGE AREA (AC)	0.22
RUNOFF COEFFICIENT, C	0.25	RUNOFF COEFFICIENT, C	0.58	RUNOFF COEFFICIENT, C	0.29
Tc (MIN)	15.1	Tc (MIN)	10.00	Tc (MIN)	10.00
INTENSITY (IN/HR)	3.80	INTENSITY (IN/HR)	4.51	INTENSITY (IN/HR)	4.51
Q_{100-YR} (CFS)	6.8	$Q_{MAX\ INFLOW}$ (CFS)	25.43	$Q_{MAX\ INFLOW}$ (CFS)	0.29

Q_{BYPASS} (CFS)	0.3
$Q_{ALLOWABLE}$ (CFS)	6.5
Q_{ACTUAL} (CFS)	5.3

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$ b2= 54.2839 d2= 11.4257 e2= 0.8119

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 2YR	0.25	14.25
N/A	0	0
COMBINED	*0.250*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 2YR	0.75	5.32
Developed, Grass, Fair Condition-Steep, 2YR	0.37	4.46
COMBINED	*0.577*	*9.78*

Pervious Bypass WEIGHTED C		
LAND USE	C	A
Developed, Grass, Good Condition-Average, 2YR	0.29	1.17
N/A	0	0
COMBINED	*0.290*	*1.17*

MODIFIED RATIONAL METHOD - 2 YEAR STORM EVENT

DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	2.64	14.89	26,803	5.31	6,372	20,431	0.469
35	2.41	13.57	28,506	5.31	7,169	21,338	0.490
40	2.21	12.49	29,983	5.31	7,965	22,018	0.505
50	1.92	10.81	32,443	5.31	9,558	22,885	0.525
60	1.70	9.57	34,445	5.31	11,151	23,294	0.535
70	1.53	8.60	36,130	5.31	12,744	23,386	0.537
80	1.39	7.83	37,585	5.31	14,337	23,248	0.534
90	1.28	7.20	38,866	5.31	15,930	22,936	0.527
100	1.18	6.67	40,010	5.31	17,523	22,487	0.516
110	1.10	6.22	41,045	5.31	19,116	21,929	0.503
120	1.03	5.83	41,990	5.31	20,709	21,281	0.489
130	0.97	5.49	42,859	5.31	22,302	20,557	0.472

<--REQUIRED STORAGE=0.537 AC-FT
=23386 CU. FT.

25-YR

EXISTING DISCHARGE TO DP5		PROPOSED CONDITIONS TO POND B		PERVIOUS BYPASS TO DP4	
DRAINAGE AREA (AC)	7.17	DRAINAGE AREA (AC)	9.78	DRAINAGE AREA (AC)	0.22
RUNOFF COEFFICIENT, C	0.34	RUNOFF COEFFICIENT, C	0.69	RUNOFF COEFFICIENT, C	0.39
Tc (MIN)	15.1	Tc (MIN)	10.00	Tc (MIN)	10.00
INTENSITY (IN/HR)	7.49	INTENSITY (IN/HR)	8.74	INTENSITY (IN/HR)	8.74
Q_{100-YR} (CFS)	18.26	$Q_{MAX\ INFLOW}$ (CFS)	58.88	$Q_{MAX\ INFLOW}$ (CFS)	0.75

Q_{BYPASS} (CFS)	0.8
$Q_{ALLOWABLE}$ (CFS)	17.5
Q_{ACTUAL} (CFS)	16.7

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$ b25= 109.8397 d25= 13.7038 e25= 0.7994

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 25YR	0.34	14.25
N/A	0	0
COMBINED	*0.340*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 25YR	0.88	5.32
Developed, Grass, Fair Condition-Steep, 25YR	0.46	4.46
COMBINED	*0.688*	*9.78*

Pervious Bypass WEIGHTED C		
LAND USE	C	A
Developed, Grass, Good Condition-Average, 25YR	0.39	1.17
N/A	0	0
COMBINED	*0.390*	*1.17*

MODIFIED RATIONAL METHOD - 25 YEAR STORM EVENT

DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	5.36	36.10	64,986	16.67	20,004	44,982	1.033
35	4.92	33.11	69,528	16.67	22,505	47,024	1.080
40	4.55	30.62	73,490	16.67	25,005	48,485	1.113
50	3.97	26.71	80,141	16.67	30,006	50,135	1.151
60	3.53	23.77	85,588	16.67	35,007	50,581	1.161
70	3.19	21.48	90,196	16.67	40,008	50,188	1.152
80	2.91	19.62	94,189	16.67	45,009	49,180	1.129
90	2.69	18.09	97,712	16.67	50,010	47,702	1.095
100	2.50	16.81	100,866	16.67	55,011	45,855	1.053
110	2.33	15.72	103,723	16.67	60,012	43,711	1.003
120	2.19	14.77	106,334	16.67	65,013	41,321	0.949
130	2.07	13.94	108,742	16.67	70,014	38,728	0.889

<--REQUIRED STORAGE=1.161 AC-FT
=50581 CU. FT.

10-YR

EXISTING DISCHARGE TO DP5		PROPOSED CONDITIONS TO POND B		PERVIOUS BYPASS TO DP4	
DRAINAGE AREA (AC)	7.17	DRAINAGE AREA (AC)	9.78	DRAINAGE AREA (AC)	0.22
RUNOFF COEFFICIENT, C	0.30	RUNOFF COEFFICIENT, C	0.64	RUNOFF COEFFICIENT, C	0.35
Tc (MIN)	15.1	Tc (MIN)	10.00	Tc (MIN)	10.00
INTENSITY (IN/HR)	6.10	INTENSITY (IN/HR)	7.17	INTENSITY (IN/HR)	7.17
Q_{100-YR} (CFS)	13.13	$Q_{MAX\ INFLOW}$ (CFS)	45.09	$Q_{MAX\ INFLOW}$ (CFS)	0.55

Q_{BYPASS} (CFS)	0.6
$Q_{ALLOWABLE}$ (CFS)	12.6
Q_{ACTUAL} (CFS)	11.6

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$ b10= 87.6048 d10= 12.7018 e10= 0.8016

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 10YR	0.3	14.25
N/A	0	0
COMBINED	*0.300*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 10YR	0.83	5.32
Developed, Grass, Fair Condition-Steep, 10YR	0.42	4.46
COMBINED	*0.643*	*9.78*

Pervious Bypass WEIGHTED C		
LAND USE	C	A
Developed, Grass, Good Condition-Average, 10YR	0.35	1.17
N/A	0	0
COMBINED	*0.350*	*1.17*

MODIFIED RATIONAL METHOD - 10 YEAR STORM EVENT

DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	4.32	27.17	48,911	11.58	13,896	35,015	0.804
35	3.95	24.86	52,216	11.58	15,633	36,583	0.840
40	3.65	22.96	55,092	11.58	17,370	37,722	0.866
50	3.18	19.97	59,912	11.58	20,844	39,068	0.897
60	2.82	17.74	63,853	11.58	24,318	39,535	0.908
70	2.54	16.00	67,184	11.58	27,792	39,392	0.904
80	2.32	14.60	70,068	11.58	31,266	38,802	0.891
90	2.14	13.45	72,612	11.58	34,740	37,872	0.869
100	1.98	12.48	74,889	11.58	38,214	36,675	0.842
110	1.85	11.66	76,951	11.58	41,688	35,263	0.810
120	1.74	10.95	78,837	11.58	45,162	33,675	0.773
130	1.64	10.33	80,575	11.58	48,636	31,939	0.733

<--REQUIRED STORAGE=0.908 AC-FT
=39535 CU. FT.

100-YR

EXISTING DISCHARGE TO DP5		PROPOSED CONDITIONS TO POND B		PERVIOUS BYPASS TO DP4	
DRAINAGE AREA (AC)	7.17	DRAINAGE AREA (AC)	9.78	DRAINAGE AREA (AC)	0.22
RUNOFF COEFFICIENT, C	0.41	RUNOFF COEFFICIENT, C	0.77	RUNOFF COEFFICIENT, C	0.46
Tc (MIN)	15.1	Tc (MIN)	10.00	Tc (MIN)	10.00
INTENSITY (IN/HR)	9.73	INTENSITY (IN/HR)	11.23	INTENSITY (IN/HR)	11.23
Q_{100-YR} (CFS)	28.61	$Q_{MAX\ INFLOW}$ (CFS)	84.50	$Q_{MAX\ INFLOW}$ (CFS)	1.14

Q_{BYPASS} (CFS)	1.1
$Q_{ALLOWABLE}$ (CFS)	27.5
Q_{ACTUAL} (CFS)	27.4

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$ b100= 150.9468 d100= 15.8200 e100= 0.7992

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 100YR	0.41	14.25
N/A	0	0
COMBINED	*0.410*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 100YR	0.97	5.32
Developed, Grass, Fair Condition-Steep, 100YR	0.53	4.46
COMBINED	*0.769*	*9.78*

Pervious Bypass WEIGHTED C		
LAND USE	C	A
Developed, Grass, Good Condition-Average, 100YR	0.46	1.17
N/A	0	0
COMBINED	*0.460*	*1.17*

MODIFIED RATIONAL METHOD - 100 YEAR STORM EVENT

DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	7.10	53.43	96,170	27.43	32,916	63,254	1.452
35	6.54	49.18	103,286	27.43	37,031	66,255	1.521
40	6.06	45.63	109,512	27.43	41,145	68,367	1.569
50	5.32	40.00	119,998	27.43	49,374	70,624	1.621
60	4.75	35.72	128,607	27.43	57,603	71,004	1.630
70	4.30	32.36	135,897	27.43	65,832	70,065	1.608
80	3.94	29.63	142,215	27.43	74,061	68,154	1.565
90	3.64	27.37	147,789	27.43	82,290	65,499	1.504
100	3.38	25.46	152,778	27.43	90,519	62,259	1.429
110	3.17	23.83	157,293	27.43	98,748	58,545	1.344
120	2.98	22.42	161,418	27.43	106,977	54,441	1.250
130	2.82	21.18	165,218	27.43	115,206	50,012	1.148

<--REQUIRED STORAGE=1.63 AC-FT
=71004 CU. FT.

POND 'B' OUTFALL

2 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 opening in 100yr Storm Events

Weir #1

L	0.533	6.4 inches
H	2.23	26.7 inches
C =	3	

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H(Feet)	Q (cfs)	Q (allowable)
2 YR	954.13	2.23	5.32	6.52
Outfall Flowline				951.90

10 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 in 10yr Storm Events

Weir #1

L	0.53	
H	2.229	
C	3.00	

Weir #2

L	0.533	6.4 inches
H	1.52	18.2 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
10 YR	955.64	3.74	11.59	
		Head H2 (Feet)	Q2 (cfs)	
		1.52	0.00	
			Q (design)	Q (allowable)
			11.59	12.57

25 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 & Rectangular Weir #3 in 25yr Storm Events

Weir #1

L	0.53	
H	2.229	
C	3.00	

Weir #2

L	0.53	
H	1.516	

Weir #3

L	0.533	6.4 inches
H	1.03	12.3 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
25 YR	956.67	4.77	16.68	
		Head H2(Feet)	Q2 (cfs)	
		1.52	0.00	
		Head H3 (Feet)	Q3 (cfs)	
		1.03	0.00	
			Q (design)	Q (allowable)
			16.68	17.51

100 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 & Rectangular Weir #3 & Rectangular Weir #4 in 100 Yr Storm events

Weir #1

L	0.53	
H	2.229	
C	3.00	

Weir #2

L	0.53	
H	1.516	

Weir #3

L	0.53	
H	1.027	

Weir #4

L	0.533	6.4 inches
H	1.88	22.5 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
100 YR	958.55	6.65	27.44	
		Head H2 (Feet)	Q2 (cfs)	
		4.42	0.00	
		Head H3 (Feet)	Q3 (cfs)	
		2.91	0.00	
		Head H4 (Feet)	Q4 (cfs)	
		1.88	0.00	
			Q (design)	Q (allowable)
			27.44	27.48

Overflow Weir Calculations

100-Yr Flow through Overflow Weir

L	9.083	109 inches
H	1.00	12.0 inches
C =	3	

WEIR Flow Equation CLH ^ 3/2

Design Storm	Head H(Feet)	Q (cfs)	Q (allowable)
100 YR Overflow	1.00	27.25	27.48

STAGE-STORAGE SUMMARY - DETENTION POND 1		
STAGE	STORAGE (CF)	STORAGE (AC-FT)
951.90	0.000	0.000
952.00	1018.170	0.023
952.50	6239.430	0.143
953.00	11480.400	0.264
953.50	16741.350	0.384
954.00	22022.550	0.506
954.50	27323.460	0.627
955.00	32644.620	0.749
955.50	37985.760	0.872
956.00	43346.880	0.995
956.50	48727.710	1.119
957.00	54128.790	1.243
957.50	59549.850	1.367
958.00	64990.890	1.492
958.50	70451.910	1.617
959.00	75933.180	1.743

REDQ. STORAGE:	1.630	AC-FT
100-YR WSEL:	958.55	FT

REDQ. STORAGE:	1.161	AC-FT
25-YR WSEL:	956.67	FT

REDQ. STORAGE:	0.908	AC-FT
10-YR WSEL:	955.64	FT

REDQ. STORAGE:	0.537	AC-FT
2-YR WSEL:	954.13	FT

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TBPE No F-2121 • TBLPS No. F-10043100 • www.spiarseng.com
Mark Ewing • mark.ewing@spiarsengineering.com

STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED PROFESSIONAL ENGINEER
06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DETENTION CALCULATIONS

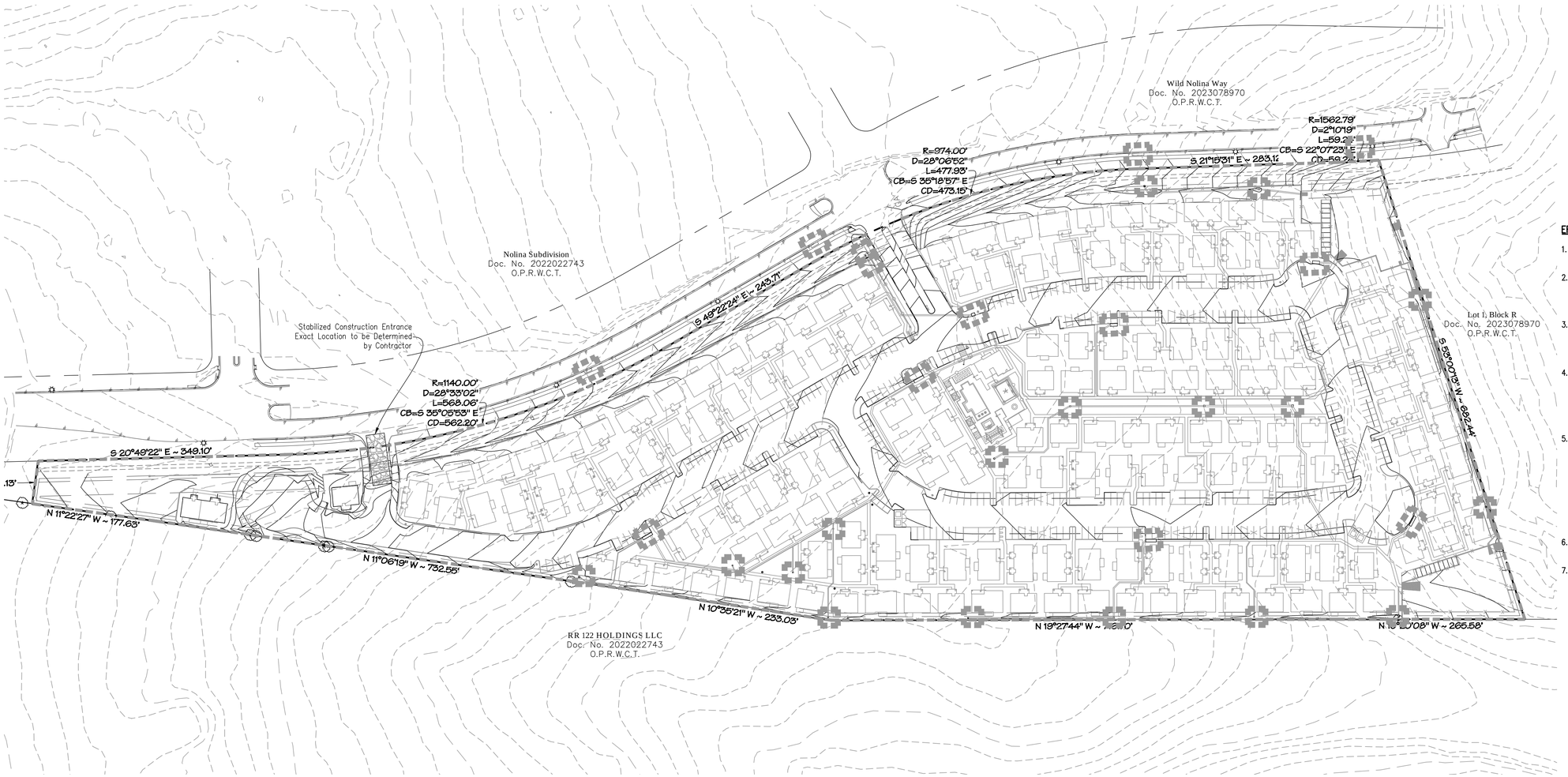
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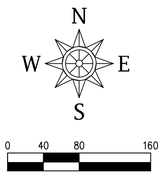
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Checked By: MEE

Sheet C35

SEI No. 24-002

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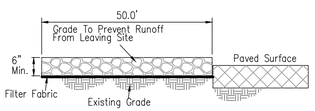


EROSION CONTROL GENERAL NOTES

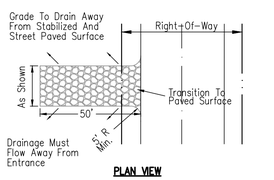
1. Erosion control devices shown on these plans shall be installed prior to the start of land disturbing activities on the project.
2. All erosion control devices are to installed in accordance with the approved plans and specifications for this project. Changes are to be approved before construction by the design Engineer and the Williamson County Engineering Division.
3. If the Erosion Control Plan as approved cannot control erosion and off-site sedimentation from the project the Erosion Control Plan will be required to be revised and/or additional erosion control devices will be required on site.
4. Off-site soil borrow and spoil areas are considered part of the project site, and must also comply with the erosion control requirements for this project. This includes the installation of BMPs to control offsite sedimentation and the establishment of permanent ground cover on disturbed areas prior to final approval of the project.
5. Inspections shall be made weekly and after rain storm events to insure that the devices are functioning properly. When sediment or mud had clogged the void spaces between stones or mud is being tracked onto a public roadway the aggregate pad must be washed down or replaced. Runoff from the washdown operation shall not be allowed to drain directly off the site without first flowing through another BMP to control off-site sedimentation. Periodic re-grading or the addition of new stone may be required to maintain the efficiency of the installation.
6. Contractor shall have a copy of Williamson County Erosion and Sediment Control Manual on site at all times.
7. Contractor shall be responsible for submittal of N.O.I., N.O.T. and any additional information required by T.C.E.Q. Contractor shall comply with all T.C.E.Q. stormwater pollution prevention requirements.

CONSTRUCTION ENTRANCE NOTES

1. Stone shall be 3 to 5 inch diameter crushed rock or acceptable crushed Portland Cement Concrete.
2. When necessary, vehicles shall be cleaned to remove sediment prior to entrance onto a public roadway. When washing is required, it shall be done on a area stabilized with crushed stone, with drainage flowing away from both the street and the stabilized entrance. All sediment shall be prevented from entering any storm drain, ditch, or watercourse using approved methods.
3. The entrance shall maintained in a condition which will prevent tracking or flowing of sediment onto paved surfaces. This may require periodic top dressing with additional stone as conditions demand. All sediment spilled, dropped, washed, or tracked onto paved surfaces must be removed immediately.
4. The entrance must be properly graded, or incorporate a drainage swale to prevent runoff from leaving the construction site.

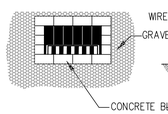


PROFILE VIEW

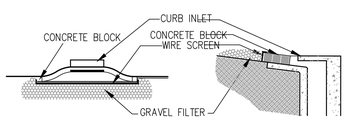


PLAN VIEW

STABILIZED CONSTRUCTION ENTRANCE



DROP INLET PROTECTION



PRIVATE CURB INLET PROTECTION

CAUTION !!!
EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

CALL TEXAS ONE-CALL (811) OR OTHER UTILITY LOCATION SERVICES 48 HOURS PRIOR TO CONSTRUCTION ACTIVITY. SPIARS ENGINEERING, INC. IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES OR DEPICTING EXACT LOCATIONS OF UTILITIES ON DRAWINGS.

Note:
The Contractor Shall Perform All Earthwork And Compaction Operations, Including But Not Limited To, Placement Of Fill During Earthwork Operations, Backfilling, Trench Backfilling, Utility Backfilling, Liming, And Subgrade Placement According To The Geotechnical Recommendations And City Standards. The Contractor Shall Use The Most Stringent Requirement If There Is A Conflict On Any Fill Or Backfill Operations. The Contractor Shall Inquire In Written Format With The Engineer Of Record Should There Be Any Questions Regarding Fill And Backfill Requirements.

LEGEND

- Silt Fence
- Drop Inlet Protection
- Curb Inlet Protection
- Construction Entrance

BMP LEGEND

PHASES 1-4	Silt Fence
PHASES 1-4	Inlet Protection
PHASES 1-4	Construction Entrance

CONSTRUCTION SCHEDULE AND PHASING

PHASE 1.	Install Phase 1 BMP'S Rough Grading
PHASE 2.	Install Phase 2 BMP'S Utility Installation
PHASE 3.	Install Phase 3 BMP'S Building Construction Paving
PHASE 4.	Install Phase 4 BMP'S Soil Stabilization/Landscaping

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Mark Ewing • mark.ewing@spiarsengineering.com

STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED
PROFESSIONAL ENGINEER
06.20.2025

AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
EROSION CONTROL PLAN

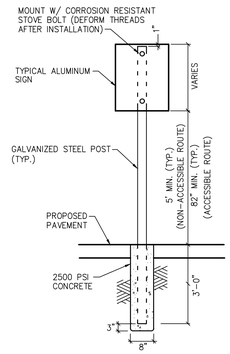
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Checked By: MEE

Sheet C44

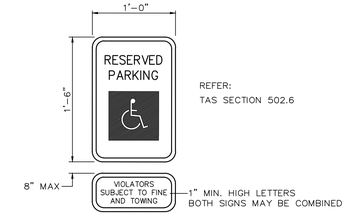
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TYPICAL SIGNAGE MOUNTING DETAIL

N.T.S.

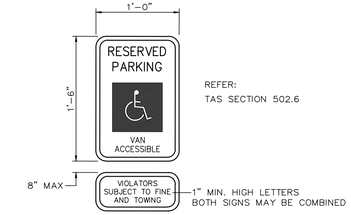


NOTES:

1. SPACING BETWEEN LETTERS, COLORS, AND PROCESSES SHALL CONFORM STANDARD HIGHWAY AND SIGN DESIGNS FOR TEXAS.
2. INSTALL WHERE INDICATED ON PLANS.
3. VAN–ACCESSIBLE SIGNAGE ON VAN SPACES ONLY.

TYPICAL SIGNAGE DETAIL
TYPE I

N.T.S.

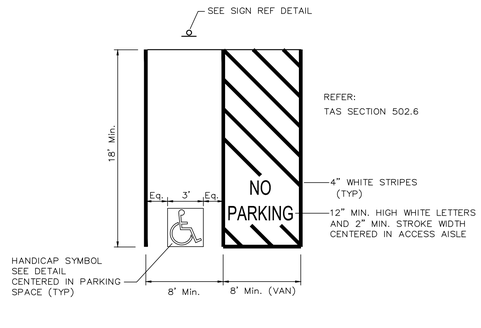


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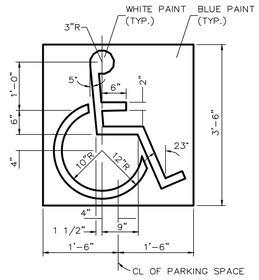
TYPICAL SIGNAGE DETAIL
TYPE II

N.T.S.



HANDICAP STRIPING DETAIL

N.T.S.



HANDICAP SYMBOL DETAIL

N.T.S.

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STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED PROFESSIONAL ENGINEER
06.20.2025

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

PRIVATE SITE DETAILS

Date

Revisions

Scale: As Shown

Drawn By: CJF

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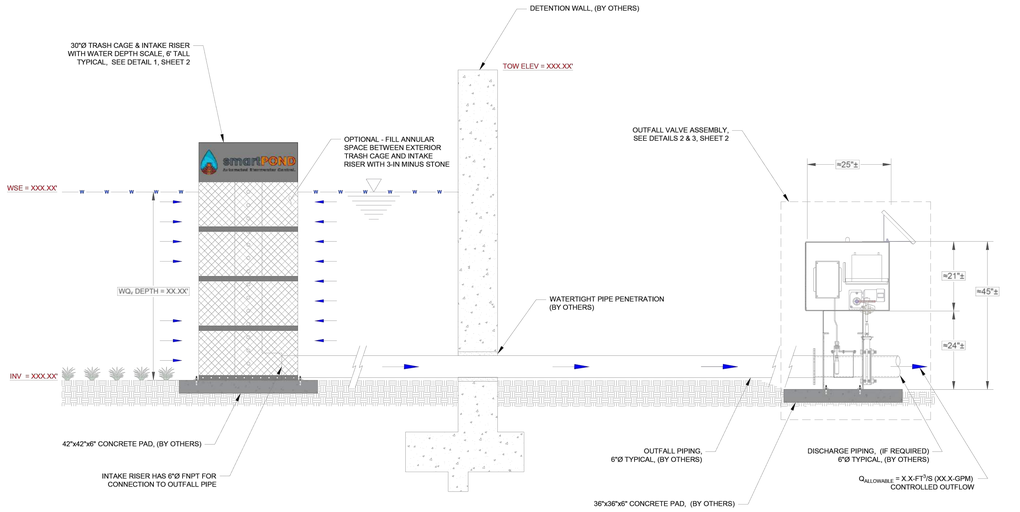
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SEI No. 24–002

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smartPOND OUTFALL VALVE CONFIGURED DOWNSTREAM OF VERTICAL DETENTION WALL

OUTFALL VALVE DISCHARGE RATE AND DETENTION SETTING	
ALLOWABLE DISCHARGE RATE ($Q_{ALLOWABLE}$)	X.XX-FT^3/S (XX.X-GPM)
REQUIRED DETENTION VOLUME	X.XX-FT^3
DETENTION VOLUME PROVIDED	X.XX-FT^3/S
REQUIRED DETENTION TIME	XX-HOURS



NOTE: ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

smartPOND Automates Stormwater Control.

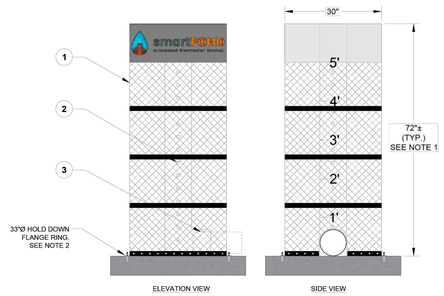
FOR ADDITIONAL INFORMATION PLEASE CONTACT
CONVERGENT WATER TECHNOLOGIES
1-800-711-5428
www.convergentwater.com

CONVERGENT WATER TECHNOLOGIES

smartPOND OUTFALL VALVE
DOWNSTREAM OF VERTICAL WALL CONFIGURATION

REVISION NO. 0
DATE 6/6/2023
SHEET NO. 1

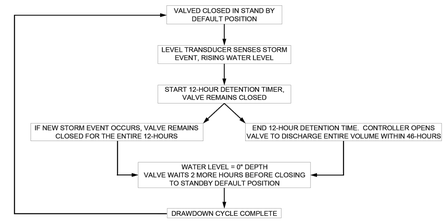
DETAIL 1 - TRASH CAGE & INTAKE RISER



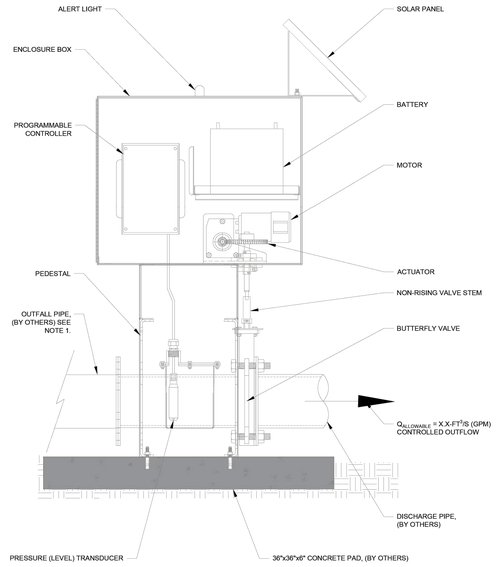
TRASH CAGE & INTAKE RISER NOTES:
1. DESIGN HEIGHT OF INTAKE TRASH CAGE AND INTAKE RISER TO MATCH REQUIRED DETENTION DEPTHS.
2. USE 4X, ⅞"Ø X 3.5" SS WEDGE ANCHOR BOLTS TO CONNECT OUTFALL ASSEMBLY TO CONCRETE PAD, 2.5" MINIMUM EMBEDMENT.

TRASH CAGE WITH INTAKE RISER - PARTS LIST	
ITEM	COMPONENT DESCRIPTION
1	30"Ø CAGE WITH 1.5" GALVANIZED MESH SCREEN
2	8" SQUARE PERFORATED TUBING WITH 1"Ø PERFORATIONS, SPACED 4" ON CENTERS WITH WATER DEPTH SCALE
3	6"Ø FNPTS PROVIDED AT BOTTOM DISCHARGE OF INTAKE RISER

DETAIL 2 - PROGRAMMABLE LOGIC FLOW CHART, OUTFALL VALVE OPERATION FOR DETENTION AND/OR WATER QUALITY



DETAIL 3 - OUTFALL VALVE ASSEMBLY



OUTFALL VALVE ASSEMBLY NOTES:
1. USE ANSI 16.5B CLASS 150 FLANGES TO CONNECT OUTFALL AND DISCHARGER PIPES.
2. USE 4X, ⅞"Ø X 3.5" SS WEDGE ANCHOR BOLTS TO CONNECT OUTFALL ASSEMBLY TO CONCRETE PAD, 2.5" MINIMUM EMBEDMENT.

smartPOND Automated Stormwater Control.

FOR ADDITIONAL INFORMATION CONTACT
CONVERGENT WATER TECHNOLOGIES
1-800-711-5428
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CONVERGENT WATER TECHNOLOGIES

smartPOND OUTFALL VALVE
OUTFALL VALVE DETAILS

REVISION NO. 0
DATE 8/18/2023
SHEET NO. 2

smartPOND OUTFALL VALVE SPECIFICATIONS

CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS), WITH PROGRAM CONTROLLED OUTFALL VALVE

1. **CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS) DEVICE**: THE CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS), SHOWN ON THE PLANS AS THE OUTFALL ASSEMBLY SHALL BE A smartPOND™ OUTFALL VALVE PROVIDED BY:

   CONVERGENT WATER TECHNOLOGIES
   800.711.5428
   WWW.CONVERGENTWATER.COM

   THE smartPOND™ OUTFALL VALVE SHALL SHALL PROVIDE FOR ACTIVE MANAGEMENT OF DETAINED STORMWATER VOLUME AND / OR ITS ALLOWABLE DISCHARGE RATE. THE smartPOND™ OUTFALL VALVE SHALL BE PROGRAMMABLE TO DETAIN A SPECIFIED VOLUME OF STORMWATER FOR A SPECIFIED REQUIRED PERIOD OF TIME AND / OR PROGRAMMED TO CONTROL THE OUTFLOW RATE TO MATCH THE MAXIMUM ALLOWABLE DISCHARGE RATE OR BOTH OF THIS OPERATIONS SIMULTANEOUSLY. THE smartPOND™ VAULT VALVE MAXIMIZES THE DETENTION TO PROMOTE THE SETTLEMENT OF SOLIDS BEFOR AUTOMATICALLY DEWATERING THE DETENTION POND COMPLETELY. FOR STORMWATER RETENTION SYSTEMS, THE SYSTEM SHALL BE PROGRAMMED TO MANAGE THE REQUIRED RETENTION VOLUME WHILE MAINTAINING A SPECIFIED AMOUNT OF CAPACITY FOR FLOOD STORAGE OR OTHER USE.

   THE FOLLOWING SPECIFICATIONS DESCRIBE THE COMPONENTS, GENERAL FUNCTIONS, AND APPLICATIONS OF A CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS), USING THE PROGRAMMED smartPOND™ OUTFALL VALVE.

   THIS smartPOND™ OUTFALL VALVE SHALL FUNCTION AS AN ELECTRONICALLY CONTROLLED, SOLAR POWERED STORMWATER MANAGEMENT DEVICE, PROVIDING PRECISION STORMWATER VOLUME MANAGEMENT CAPABILITIES AND REAL-TIME DATA. USING SENSORS, SOLAR POWER, AN ELECTRONIC ACTUATOR, AND AN INTERNET-BASED CONTROL INTERFACE. THE smartPOND™ OUTFALL VALVE CONNECTS TO A SPECIALIZED PERFORATED INTAKE RISER INSIDE THE STORMWATER IMPOUNDMENT AREA TO ENABLE PRECISE CONTROL OF REQUIRED DETAINED OR RETAINED STORMWATER CONTROL VOLUMES AND ALLOWABLE DISCHARGE RATES AUTOMATICALLY OR IN REAL TIME. THE smartPOND™ ASSEMBLY CAN BE CONFIGURED ABOVE GROUND OR BELOW IN SMALL MANHOLE OR VAULT STRUCTURE.

   1.1 PRE-PROGRAMMED OUTFALL VALVE CONTROL: THE OUTFALL VALVE SHALL BE PRE-PROGRAMMED TO EXECUTE COMMANDS BASED ON STORM EVENTS, REQUIRED CONTROL VOLUMES AND ALLOWABLE DISCHARGE RATES.

   1.1.1 DETENTION POND OPTIMIZATION: THE smartPOND™ OUTFALL VALVE SHALL BE PROGRAMMED TO DISCHARGE FLOWS FROM THE DETENTION SYSTEM AT THE MAXIMUM ALLOWABLE RELEASE, WHICH IS TYPICALLY A PREDEVELOPMENT VALUE. OTHER PROGRAM CONSIDERATIONS MAY INCLUDE INCLUDE PREVENTION OF OVERTOPPING OR BYPASS.

   1.1.2 BATCH DETENTION FUNCTION FOR STORMWATER QUALITY: THE smartPOND™ OUTFALL VALVE MAY BE PROGRAMMED TO PROVIDE BATCH DETENTION TO ACHIEVE STORMWATER QUALITY EFFLUENT GOAL OF 80% OR MORE REMOVAL OF TOTAL SUSPENDED SOLID (TSS) REMOVAL BY HOLDING THE WATER QUALITY VOLUME (WQ_v) FOR SETTLEMENT TREATMENT, FOR A REQUIRED PERIOD OF TIME. HOLDING TIMES ARE TYPICALLY SET FORTH IN STORMWATER MANAGEMENT REGULATIONS AS 2, 24 OR 48-HOURS.

   1.1.3 SPILL CONTROL OF HAZARDOUS MATERIAL (HAZMAT): smartPOND™ WHEN SPECIFIED FOR HAZMAT SPILL CONTROL SHALL BE EQUIPPED WITH POLLUTANT SPECIFIC SENSORS THAT WHEN TRIGGERED AUTOMATICALLY CLOSE THE OUTFALL VALVE UNTIL THE COMMAND IS OVERRIDDEN.

   1.2 REAL TIME MONITORING: smartPOND™ SHALL COME WITH TELEMETRY AND THE "AUTOFLOW APP" USER APPLICATION SOFTWARE AT NO ADDITIONAL COST FOR 1-YEAR. THIS AUTOFLOW APP ENABLES REAL TIME MONITORING OF THE DETENTION POND'S STORAGE-STAGE AND DISCHARGE RATE. THE AUTOFLOW APP SHALL ENABLE A USER TO:

   - CONTROL THE OUTFALL VALVE, EITHER OPEN OR CLOSE.
   - DETERMINE THE WATER SURFACE ELEVATION (WSE) OR POND DEPTH.
   - DETERMINE IF TRASH OR DEBRIS IS SURROUNDING THE TRASH CAGE AND INTAKE RISER.
   - RECEIVE MAINTENANCE ALERTS SUCH AS: LOW BATTERY, OUTFALL VALVE FAILURE, ETC.
   - MAINTAIN SPECIFIED WATER SURFACE LEVEL.

2. **COMPONENTS**: THE smartPOND™ OUTFALL VALVE MAY BE IMPLEMENTED EITHER ABOVE OR BELOW GROUND, AND IS COMPRISED OF THE FOLLOWING COMPONENTS:

   2.1 HARDWARE AND CONFIGURATION:

   THE STANDARD smartPOND™ OUTFALL VALVE ASSEMBLY CONSISTS OF A LOWER AND UPPER COMPONENT: THE LOWER COMPONENT IS THE PEDESTAL WITH 6"Ø PIPE SPOOL AND 6"Ø ACTUATED OUTFALL VALVE AND PRESSURE TRANSDUCER HOUSING. THIS LOWER PEDESTAL SHALL HAVE FLANGES ON EACH SIDE OF THE ASSEMBLY CONFORMING WITH AN ANSI 16.5B CLASS 150 FLANGE FOR CONNECTION OF THE OUTFALL PIPE FROM THE DETENTION SYSTEM AND TO A DOWNSTREAM DISCHARGE PIPE IF CALLED FOR ON THE PLANS. THE SECOND, UPPER COMPONENT IS THE LOCKABLE STEEL WEATHERPROOF ENCLOSURE BOX WITH A SOLAR PANEL AND ALERT LIGHT MOUNTED ON ITS TOP. THIS ENCLOSURE BOX HOUSES THE PROGRAMMABLE CONTROLLER INSIDE A NEMA-3R BOX, BATTERY, ELECTRIC MOTOR, ACTUATOR GEARING AND AN EXTENDABLE NON-RISING VALVE STEM BETWEEN THE ACTUATOR AND THE 6"Ø OUTFALL VALVE.

   FOR ABOVE GROUND APPLICATIONS, THE COMPLETE "OUTFALL VALVE ASSEMBLY" SHALL BE BOLTED TO A 36"X36, 6" THICK OR LARGER CONCRETE PAD USING ⅞"Ø, 3.5 LONG STAINLESS STEEL (SS) WEDGE ANCHORS. THE OUTFALL PIPE FROM THE DETENTION SYSTEM CONNECTS TO THE INLET OF THE OUTFALL VALVE ASSEMBLY WITH EIGHT (8X) ¾"Ø BOLTS AND NUTS THAT CONFORM TO ANSI 16.5B CLASS 150 FLANGE GRADE SPECIFICATIONS. THE DISCHARGE PIPE, IF ANY, CONNECTS WITH ONLY FOUR (4X) BOLTS TO PROPERLY FLANGE UP TO THE DISCHARGE SIDE OF THE ACTUATED VALVE.

   2.2 OTHER ELECTRONICS SPECIFICATIONS:

   - MOTOR - OPERATES ON 12-VOLTS AND HAS TWO WIRES CONNECTING TO THE MOTOR CONTROLLER BOARD.
   - BATTERY - THIS IS A GEL BATTERY THAT PROVIDES 12-VOLTS, 30 AMP/HOUR OF POWER TO THE OUTFALL VALVE ASSEMBLY.
   - SOLAR PANEL - PROVIDES 15-WATT CHARGING TO THE 12-VOLT GEL BATTERY.
   - SOLAR CHARGE CONTROLLER - REGULATES THE VOLTAGE AND CURRENT DELIVERED TO THE GEL BATTERY.

   SENSORS:

   - PRESSURE TRANSDUCER - A SENSOR CAPABLE OF STAYING SUBMERSED IN WATER INDEFINITELY AND IS MOUNTED IN CENTER PIPE SPOOL OF THE LOWER PEDESTAL COMPONENT.
   - OUTFALL VALVE POSITION SENSOR - DETERMINES THE POSITION OF THE OUTFALL VALVE.

   OPTIONAL SENSORS:

   - CELL DATA MODEM - REQUIRED FOR REAL TIME CONTROL AND ALERTS.
   - HYDROCARBON SENSOR - THIS OPTIONAL SENSOR MAY BE FITTED TO THE smartPOND™ OUTFALL VALVE TO PERFORM SPECIFIC FUNCTIONS BASED ON THE PRESENCE OF HYDROCARBON CONTAMINATION.

3. **ADDITIONAL COMPONENTS LIST**:

   3.1 INTAKE RISER: THIS SHALL BE A PERFORATED STEEL RISER CONNECTED TO THE 6"Ø OUTFALL PIPE WITHIN THE POND AREA. THIS INTAKE RISER SHALL BE AN 8" SQUARE STEEL WITH FOUR (4X) 1"Ø HOLES AT 90-DEGREES EACH, EVERY 4 VERTICAL INCHES. THE DISCHARGE OF THIS INTAKE TUBING SHALL HAVE FEMALE NATIONAL PIPE THREADS (FNPT) TO MATCH THE 6"Ø SCHEDULE 40 PVC OUTFALL PIPE.

   3.2 TRASH CAGE: THE TRASH CAGE ATTACHES TO THE PERFORATED RISER WITH A COUPLING AND CALDER PIN PROVIDED WITH THE THE SYSTEM. THE TRASH CAGE SHALL BE COMPRISED OF STEEL BANDING AND A 1.5" X 1.5" MESH TO PREVENT FLOATABLE'S AND OTHER CONTAMINANTS FROM ENTERING AND CLOGGING THE PERFORATED RISER. THE TRASH CAGE WILL SIT 0.5" ABOVE THE BOTTOM OF THE IMPOUNDMENT TO ALLOW THE LAST 0.5" OUT OF THE IMPOUNDMENT.

4. **REAL TIME MONITORING INTERFACE (OPTIONAL)**: THE AUTOFLOW APP SHALL BE THE SOFTWARE USED IF THE REAL TIME MONITORING OPTION IS SPECIFIED FOR LONG-TERM POND OPERATIONS. A COMPLETE SET OF USER INSTRUCTIONS SHALL BE PROVIDED IN THE CONSTRUCTION SUBMITTALS AND COPY OF THESE INSTRUCTIONS SHALL BE PLACED IN THE ENCLOSURE BOX.

   THIS AUTOFLOW APP SHALL PROVIDE LIVE AND HISTORICAL DATA AND PROVIDE THE ALERTS LISTED IN SECTION 6. IT WILL ALSO ENABLE COMMANDS TO BE SENT TO THE OUTFALL VALVE TO CHANGE THE VALVES POSITION TO CONTROL DISCHARGE RATE AND POND DEPTH.

5. **ALERTS**: THE smartPOND™ OUTFALL VALVE WILL INDICATE THE FOLLOWING ALERTS BY ILLUMINATING AN EXTERIORLY VISIBLE RED LED LIGHT ON TOP OF THE ENCLOSURE BOX:

   - LOW BATTERY
   - LOSS OF FUNCTION
   - OUTFALL VALVE MALFUNCTION
   - HYDROCARBON CONTAMINATION (OPTIONAL)

   IF THE TELEMETRY OPTION IS SELECTED, THE UNIT WILL UPLOAD THE ABOVE ALERTS TO THE AUTOFLOW APP AND NOTIFY THE OPERATOR VIA TEXT OR EMAIL.

6. **MAINTENANCE & OPERATION SUBMITTAL**: AN OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED, REVIEWED AND APPROVED DURING THE CONSTRUCTION SUBMITTAL PROCESS AND SHALL INCLUDE AT A MINIMUM: GREASING AND LUBRICATION ITEMS AND CYCLE FOR THE ACTUATOR, MOTOR AND VALVE; INSPECTION AND MAINTENANCE OF THE SOLAR PANEL, GEL BATTERY TRASH CAGE AND INTAKE RISER; AND PROCEDURES FOR VALVE OPERATION IN CASE OF TOTAL ELECTRONIC OR MOTOR FAILURE.

7. **SHIPPING AND HANDLING STORAGE**: THE smartPOND™ OUTFALL VALVE IS SHIPPED IN A NEAR-FULLY ASSEMBLED CONFIGURATION AND SHOULD BE STORED LIKEWISE. THE SYSTEMS ARE TRANSPORTED AND STORED ON PALLETS AND MUST REMAIN SECURED VIA STRAPS OR STEEL BANDS TO SAID PALLET AT ALL TIMES. THE SOLAR PANEL IS NOT INSTALLED AT TIMES OF TRANSPORT OR STORAGE AND SHOULD NOT BE INSTALLED UNTIL THE UNIT IS READY TO BEGIN OPERATION. THE BATTERY MAY BE STORED INSIDE THE ELECTRONICS BOX AND IF REMOVED, SHOULD NEVER BE STORED ON A CONCRETE SURFACE.

8. **INSTALLATION**: INSTALL THE smartPOND™ OUTFALL ASSEMBLY FIRST WITHOUT THE SOLAR PANEL. MOUNT SOLAR PANEL WITH THE CONNECTION BOLTS PROVIDED AFTER THE ASSEMBLY IS ANCHORED TO THE CONCRETE PAD USING THE ANCHOR BOLTS CALLED OUT ON THE PLANS, AS . BOLTS SHOULD BE REMOVED DURING THE INSTALLATION PROCESS. THERE ARE SEVERAL WAYS TO INSTALL THE smartPOND™ OUTFALL VALVE WITH THE KEY BEING STRUCTURED SUPPORT.

   8.1 BELOW GROUND INSTALLATIONS: THE UPPER COMPONENT CONSISTING OF THE ENCLOSURE BOX AND ALL ITS INTERNALS SHOULD BE FASTENED TO THE SURFACE OF THE CONCRETE VAULT. FOR VAULT INSTALLATIONS, SEE DESIGN DETAILS FOR STANDARD VAULT DESIGN.

9. **SAFETY INFORMATION AND WARNINGS**:

   - ALWAYS KEEP HANDS CLEAR OF THE OUTFALL VALVE AND MOTOR WHEN UNIT IS IN OPERATION.
   - TURN THE POWER SWITCH OFF WHEN DOING ANY ELECTRICAL WORK.
   - DO NOT ENTER THE WATER WHEN THE DEVICE IS ACTIVELY DRAINING WATER.
   - ALWAYS USE PROPER PERSONAL PROTECTION EQUIPMENT (PPE), AND CONFINED SPACE PROTOCOL WHEN SERVICING A OUTFALL VALVE BENEATH GROUND.

10. **PRODUCTS**: THE MANUFACTURER SHALL BE AN ESTABLISHED STORMWATER COMPANY THAT HAS AT LEAST FIVE (5X) INSTALLATIONS OF C-MASS DEVICES THAT HAVE BEEN IN USE AND FUNCTIONAL FOR FIVE (5X) OR MORE YEARS.

11. **QUALITY ASSURANCE AND PERFORMANCE SPECIFICATIONS**: THE QUALITY OF ALL SYSTEM COMPONENTS AND ALL OTHER APPURTENANCES AND THEIR ASSEMBLY PROCESS SHALL BE SUBJECT TO INSPECTION UPON DELIVERY OF THE SYSTEM TO THE WORK SITE. INSTALLATION IS TO BE PERFORMED ONLY BY SKILLED WORK PEOPLE WITH SATISFACTORY RECORD OF PERFORMANCE ON EARTHWORKS, PIPE, WELDING, CHAMBER, OR POND/LANDFILL CONSTRUCTION PROJECTS OF COMPARABLE SIZE AND QUALITY.

smartPOND Automated Stormwater Control.

FOR ADDITIONAL INFORMATION CONTACT
CONVERGENT WATER TECHNOLOGIES
1-800-711-5428
www.convergentwater.com

CONVERGENT WATER TECHNOLOGIES

smartPOND OUTFALL VALVE
SPECIFICATIONS

REVISION NO. 0
DATE 8/18/2023
SHEET NO. 3

SPIARS ENGINEERING & SURVEYING
501 W. President George Bush Hwy., Suite 200 Richardson, TX 75080 972.422.0077
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STATE OF TEXAS
MARK E. EWING JR.
147783
LICENSED PROFESSIONAL ENGINEER
06.20.2025

AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

PRIVATE SITE DETAILS

Revisions	Date

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C45

SEI No. 24-002

Plotted by: Kenneth Pot Date: 6/20/2025 11:04 AM
Drawing: G:\2024 JOBS\24-002 Avilla Nolina\CAD\Site Details.dwg Saved By: Kenneth Save Time: 6/13/2025 3:36:19 PM

smartPOND
Automated Stormwater Control.

smartPOND Outfall Valve System

-Operation, Inspection & Maintenance-

Operation

The smartPOND outlet valve configuration includes a weatherproof and lockable control cabinet housing all actuators and electronics, which flange mounted on the end of a pipe. Manual control, real time remote control, and pre-programmed automated functions are all standard options with this free-standing, self-contained system.

Periodic inspection and maintenance is required to guarantee proper functioning and optimal performance of the device. This document will detail those procedures.

Inspection

Environmental conditions on site as well as device condition must be inspected regularly. Inspection frequency of your system must be determined based on the contributing drainage area of the site, as well as each respective site's design and environmental conditions, but should never exceed one year between inspections (six months during the first year of operation).

Inspections may be required more frequently for active construction sites which still have disturbed soils in the stormwater basin. Preventative measures must be taken to avoid sediment buildup around the perforated inlet riser screen. Accumulation of garbage and debris must also be monitored and cleared on an as-needed basis per site conditions.

With the right equipment, your inspection and measurements can be accomplished from the surface without physically entering any confined spaces. If your inspection does require confined space entry, consideration of all local/regional requirements as well as OSHA standards should be given.

smartPOND outlet valve system receives water via a closed pipe that originates from a perforated inlet riser screen. The inspector should always conduct a visual inspection of the condition of the valve assembly, control cabinet, and solar panel–as well as the perforated inlet riser screen.

If sediment buildup or debris is observed around the inlet screen, the depth of the material should be determined. This is typically accomplished with a stadia rod or by reading the sediment depth marker lines on the inlet riser screen.

Maintenance

Sediment or debris buildup around the perforated inlet riser screen should be removed when it reaches depth of six inches or more from the base of the screen. Follow local guidelines to dispose of or relocate the sediment as allowed.

The basin should be well vegetated to prevent erosion and sediment accumulation around the device. Any damage or gaps in the vegetation in the basin should be repaired and re-planted as needed.

Ideally, appropriate vegetation should be established before installation of the smartPOND outlet valve in order to avoid excess sediment buildup around the inlet riser screen and clogging of the pipe leading to the valve. If the system is installed in disturbed-soil conditions, proper sediment control measures should be taken, such as a silt fence around the unit until the soil is stabilized and vegetated.

The hardware of the smartPOND outlet valve must be maintained as well—including conditions of the inlet riser screen, butterfly valve assembly, control box, and solar panel assembly. Check for signs of tampering or vandalism, ensure no components are missing, and confirm that the control cabinet door is locked and secured.

Step-by-step Inspection and Maintenance Routine

1. **Inspection**
    - **a.** Pond Conditions
        - **i.** Inspect the conditions of vegetation and note any exposed or disturbed soils.
        - **ii.** Inspect for signs of erosion on pond slopes
        - **iii.** Inspect condition of silt fence, if applicable
        - **iv.** Identify any significant accumulation of garbage or debris in the basin or around the perforated inlet riser
        - **v.** Use a stadia rod or tape measure to measure depth of any accumulated sediment at the base of the perforated inlet riser
    - **b.** Outfall Valve
        - **i.** Check for signs of erosion, animal burrows, etc. adjacent to and external to the manhole
        - **ii.** If daylight is poor use a flashlight to illuminate the area and look at the valve
        - **iii.** Inspect for accumulated sediment and debris

iv. Inspect the condition of water level sensor wire, noting any damage to the wire itself

c. Valve Stem
   i. Ensure the valve stem is fully seated between the outlet valve and bottom of control cabinet
   ii. Ensure the valve stem is rigid and does not rotate freely by hand

d. Control Cabinet
   i. Ensure cabinet is mounted securely and the door is locked in the closed position
   ii. Inspect for any signs of damage or vandalism

e. Solar Panel
   i. Ensure panel is clean of debris
   ii. Ensure panel is fastened securely and facing SOUTH
   iii. Ensure panel wires are connected and undamaged

2. **Maintenance**
   a. Use appropriate means to remove accumulated sediment around perforated inlet riser
   b. Use shovels and hand tools closest to the riser to avoid damage by large equipment.
   c. Stabilize soil and re-plant slopes and sump of basin as needed
   d. Clean solar panel and secure in the south-facing position
   e. If maintenance or repairs are required, please contact Convergent's manufacturing partner, Autoflow LLC (Ph: 601.842.6806, info@autoflowllc.com) to receive a Field Maintenance Request Form to discuss pricing and a service call to the device.

Owner's Signature: _____

STORMWATER POLLUTION PREVENTION PLAN

IMPORTANT:

Retain this complete document for three years after project completion.

AVILLA NOLINA

GEORGETOWN / WILLIAMSON COUNTY

NEXMETRO NOLINA, LP

2355 E CAMELBACK RD., SUITE 805
PHOENIX, AZ 85016

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INTRODUCTION AND BACKGROUND

In 1972, Congress passed the Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), to restore and maintain the quality of the nation's waters. The ultimate goal of the CWA was to ensure the nation's rivers and streams were fishable, swimmable, and drinkable. The CWA has been amended several times.

One important set of amendments was the Water Quality Act of 1987 that established a phased approach for Stormwater discharge regulation in the United States. The CWA established the National Pollutant Discharge Elimination System (NPDES), a Stormwater program which requires operators of construction sites disturbing one acre or more to obtain authorization to discharge under an NPDES construction Stormwater permit. The development and implementation of Stormwater pollution prevention plans (SWPPP) is the focus of NPDES Stormwater permits for regulated construction activities. The Texas Commission on Environmental Quality is authorized in the state of Texas to implement the NPDES program under the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit No. TXR150000.

Development, implementation, and maintenance of the SWPPP provides the framework for reducing soil erosion and minimizing pollutants in Stormwater during construction. The SWPPP describes and ensures the implementation of practices that will be used to reduce the pollutants in Stormwater discharges associated with construction activity at the construction site and assure compliance with the terms and conditions of the TCEQ TPDES program for construction sites.

Construction EcoServices is a solutions-oriented company focused on delivering innovative answers to Stormwater quality management problems. From turnkey SWPPP compliance services that relieve the regulatory burden on General Contractors during construction activity; to post-construction solutions for Civil Engineers that provide new answers for Stormwater quality treatment, slope and channel stabilization and underground detention; our objective is always the same—lowering total costs of compliance while raising compliance performance through the application of innovation and a service driven culture.

SPIARS
ENGINEERING & SURVEYING

Stormwater Pollution Prevention Plan

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    - Short and long-term goals and criteria
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SWPPP Objectives

The SWPPP outlines the steps you will take to comply with the terms and conditions of your construction general permit. Keeping the following objectives in mind as you proceed during construction will help guide you in addressing your permit requirements and in protecting water quality.

- **Minimize the area and duration of exposed soils**
  Clearing only land that will be under construction in the near future, a practice known as construction phasing, can reduce off-site sediment loads by 36 percent for a typical development. Additionally, minimizing the duration of soil exposure by stabilizing soils quickly can reduce erosion dramatically.
- **Control the perimeter of your site**
  Divert Stormwater coming on to your site by conveying it safely around, through, or under your site. Avoid allowing run-on to contact disturbed areas of the construction site. For the runoff from the disturbed areas of the site, remember that BMPs such as silt fence is there to capture sediment before it leaves your site.
- Protect receiving waters adjacent to your site
  Erosion and sediment controls are used around the site as needed, but operators should consider additional controls in areas that are adjacent to receiving waters or other environmentally sensitive areas. Remember, the primary purpose of erosion and sediment controls is to protect surface waters.
- **Follow pollution prevention measures**
  Provide proper containers for waste and garbage at your site. Store hazardous materials and chemicals so that they are not exposed to Stormwater. If dewatering is needed, remember that the dirty water must be filtered before discharged offsite. Pay particular attention to the viability and function of your stabilized construction exit and concrete wash out facility.
- **Protect slopes and channels**
  Convey concentrated Stormwater runoff around the top of slopes and stabilize slopes as soon as possible. This can be accomplished using pipe slope drains or earthen berms or other flow controls that will convey runoff around the exposed slope. Avoid disturbing natural channels and the vegetation along natural channels, if possible.
- **Stabilize the site as soon as possible**
  Get your site to final grade and either permanently or temporarily stabilize all bare soil areas as soon as possible. Take into consideration germination times for the grasses or other vegetation selected and provide additional stabilization materials (such as Flexible Growth Medium) on erosion prone areas such as slopes and drainage ways. Also consider seasonal limitations to plant establishment and growth, such as drought or cold temperatures, and make an effort to ensure that areas that are not showing adequate vegetation establishment are reseeded immediately. Areas needed for future roads, construction, or other purposes should be temporarily stabilized (see your permit for requirements related to areas of the site not currently under active construction). Establishing a vegetated cover on as much of the site as possible will help to minimize erosion and sediment problems. Perimeter controls should remain in place until final stabilization has been achieved.

Deadlines for SWPPP Preparation, Implementation and Compliance

The SWPPP must be prepared prior to filing the Notice of Intent (NOI) for a large site (≥ 5 AC) or posting the Construction Site Notice for a small site (≥1 AC but <5 AC) and implemented prior to commencing construction activities that result in soil disturbance.

Plan Review and Making Plans Available

The SWPPP must be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice must be posted describing the location of the SWPPP, it may be kept on site in a water-resistant lockbox for easy

access. The SWPPP must be made readily available at the time of an on-site inspection by federal, state, or local agencies approving sediment and erosion plans, grading plans, or Stormwater management plans; local government officials; and the operator of the pertinent municipal separate storm sewer (MS4) receiving discharges from the site.
Primary and secondary operators of large construction activities must each post a TCEQ Large Construction Site Notice (Primary Operatory: Form TCEQ-20961; Secondary Operator: Form TCEQ-20962), respective to their role as an operator at the construction site, as required above.

Primary and secondary operators of small construction activities must post the TCEQ site notice (Form TCEQ-20963), as required above.
These notices must be posted near the main entrance to the construction site and be readily available for viewing by the general public (without having to trespass on your site); local, state, and federal authorities, at least two (2) days prior to commencing construction activity and maintain the notice in that location until completion of the construction activity.

If the construction project is a linear construction project, such as a pipeline or highway, the notices must be placed in a publicly accessible location near where construction is actively underway. Site notices for small and large construction activities at these linear construction sites may be located, as necessary, along the length of the project, but must still be readily available for viewing by the general public; local, state, and federal authorities; and contain the following information:

- the site-specific TPDES authorization number for the project if assigned;
- the operator name, contact name, and contact phone number;
- a brief description of the project; and
- the location of the SWPPP.

Responsibilities of Operators

All secondary operators and primary operators with control over construction plans and specifications must:

- ensure the project specifications allow or provide that adequate BMPs are developed to meet the requirements of the Texas General Permit;
- ensure that the SWPPP indicates the areas of the project where they have control over project specifications (including the ability to make modifications in specifications) in the event that this project has multiple operators;
- ensure that any other operators that may be affected by modifications in project specifications are notified in a timely manner so that they may modify their best management practices as necessary to remain compliant with the conditions of the general permit; and
- Ensure that the SWPPP for portions of the project where each operator has control indicates the name and site-specific TPDES authorization numbers for permittees with the day-to-day operational control over those activities necessary to ensure compliance with the SWPPP and other permit conditions. If a primary operator has not been authorized or has abandoned the site, the secondary operator is considered to be the responsible party and must obtain authorization as a primary operator under the permit, until the authority for day-to-day operational control is transferred to another primary operator. The new primary operator must update or develop a new SWPPP that will reflect the transfer of operational control and include any additional updates to the SWPPP to meet requirements of the permit.

Primary Operators with day-to-day operational control of those activities at a project that are necessary to ensure compliance with your SWPPP and other permit conditions must ensure that the SWPPP accomplishes the following requirements:

- meets the requirements of this general permit for those portions of the project where they are operators;
- identifies the parties responsible for implementation of best management practices (BMPs) described in the SWP3;
- indicates areas of the project where they have operational control over day-to-day activities; and
- Includes, for areas where they have operational control over day-to-day activities, the name and site-specific TPDES authorization number of the parties with control over project specifications, including the ability to make modifications in specifications.

Terminating Coverage

Notice of Termination (NOT) Required

If you submitted an NOI for authorization under the general permit, you must apply to terminate that authorization by submitting a Notice of Termination (NOT) form. Compliance with the conditions and requirements of this SWPPP is required until an NOT is submitted.

The NOT must be submitted to TCEQ, and a copy of the NOT provided to the operator of any MS4 receiving the discharge within 30 days after any of the following conditions are met:

- final stabilization has been achieved on all portions of the site that are under your responsibility;
- a transfer of operational control has occurred (see below); or
- You have obtained alternative authorization under an alternative permit.

Termination of Coverage for Small Construction Sites

Each operator must remove the TCEQ Construction Site Notice (CSN) upon meeting any of the conditions listed below, complete the applicable portion of the CSN related to removal of the site notice, and submit a copy of the completed CSN to the operator of any MS4 receiving the discharge, within 30 days of meeting any of the following conditions:

- final stabilization has been achieved on all portions of the site that are under your responsibility;
- a transfer of operational control has occurred (see below); or
- You have obtained alternative authorization under an alternative permit.

For Small Construction Sites and Secondary Operators at Large Construction Sites, authorization to discharge under this general permit terminates immediately upon removal of the applicable site notice. Compliance with the conditions and requirements of this permit is required until the CSN is removed. The construction site notice cannot be removed until final stabilization has been achieved.

Transfer of Operational Control

Coverage under the general permit is not transferable. A transfer of operational control includes changes to the structure of your company, such as changing from a partnership to a corporation, or changing to a different corporation type such that a different filing (or charter) number is established with the Texas Secretary of State.

When the primary operator of a large construction activity changes or operational control is transferred, the original operator must submit a Notice of Termination (NOT) within ten (10) days prior to the date that responsibility for operations terminates, and the new operator must submit an NOI at least ten (10) days prior to the transfer of operational control.

Operators of small construction sites who were not required to file an NOI must remove the original TCEQ Construction Site Notice (CSN), and the new operator must post the required CSN prior to the transfer of operational control.

A transfer of operational control occurs when either of the following criteria is met:

- another operator has assumed control over all areas of the site that have not been finally stabilized; and
- all silt fences and other temporary erosion controls have been removed, scheduled for removal as defined in the SWPPP, or transferred to a new operator, provided that the permitted operator has attempted to notify the new operator in writing of the requirement to obtain permit coverage. Record of this notification (or attempt at notification) shall be retained by the operator with all other SWPPP documentation for three (3) years. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal.
- a homebuilder has purchased one or more lots from an operator who obtained coverage under this general permit for a common plan of development or sale. The homebuilder is considered a new operator and shall comply with the requirements of this permit. Under these circumstances, the homebuilder is only responsible for compliance with the general permit requirements as they apply to the lot(s) it has operational control over in a larger common plan of development, and the original operator remains responsible for common controls or discharges and must amend its SWPPP to remove the lot(s) transferred to the homebuilder.

Definitions of Terms Found in This SWPPP

Arid Areas
Areas with an average annual rainfall of zero (0) to ten (10) inches.

Best Management Practices (BMPs)
Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

Commencement of Construction
The initial disturbance of soils associated with clearing, grading, or excavation activities, as well as other construction-related activities (e.g., stockpiling of fill material, demolition). (e.g. demolition; grubbing; stockpiling of fill material; placement of raw materials at the site.)

Common Plan of Development
A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development (also known as a "common plan of development or sale") is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities. A common plan of development does not necessarily include all construction projects within the jurisdiction of a public entity (e.g., a city or university). Construction of roads or buildings in different parts of the jurisdiction would be considered separate "common plans," with only the interconnected parts of a project being considered part of a "common plan" (e.g., a building and its associated parking lot and driveways, airport runway and associated taxiways, a building complex, etc.). Where discrete construction projects occur within a larger common plan of development or sale but are located one quarter (¼) mile or more apart, and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale, provided that any interconnecting road, pipeline or utility project that is part of the same "common plan" is not included in the area to be disturbed.

Construction Activity
Includes soil disturbance activities, including clearing, grading, excavating, construction-related activity (e.g., stockpiling of fill material, demolition), and construction support activity. This does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing rights-of-way, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

Construction Support Activity
A construction-related activity that specifically supports construction activity, which can involve earth disturbance or pollutant-generating activities of its own, and can include, but are not limited to, activities associated with concrete or asphalt batch plants, rock crushers, equipment staging or storage areas, chemical storage areas, material storage areas, material borrow areas, and excavated material disposal areas. Construction support activity must only directly support the construction activity authorized under this general permit.

Dewatering
The act of draining accumulated stormwater or groundwater from building foundations, vaults, trenches, and other similar points of accumulation.

Discharge
For the purposes of this permit, the drainage, release, or disposal of pollutants in stormwater and certain non-stormwater from areas where soil disturbing activities (e.g., clearing, grading, excavation, stockpiling of fill material, and demolition), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck wash out, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

Drought-Stricken Area
For the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration's U.S. Seasonal Drought Outlook indicates for the period during which the construction will occur that any of the following conditions are likely: (1) "Drought

to persist or intensify", (2) "Drought ongoing, some improvement", (3) "Drought likely to improve, impacts ease", or (4) "Drought development likely". See http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html

Edwards Aquifer
As defined under Texas Administrative Code (TAC) § 213.3 of this title (relating to the Edwards Aquifer), that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone
Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the Texas Commission on Environmental Quality (TCEQ) and the appropriate regional office. The Edwards Aquifer Map Viewer, located at the following link, can be used to determine where the recharge zone is located.

- http://www.tceq.texas.gov/gis/edwards-viewer.html

Edwards Aquifer Contributing Zone
The area or watershed where runoff from precipitation flows downgradient to the recharge zone of the Edwards Aquifer. The contributing zone is located upstream (upgradient) and generally north and northwest of the recharge zone for the following counties: all areas within Kinney County, except the area within the watershed draining to Segment No. 2304 of the Rio Grande Basin; all areas within Uvalde, Medina, Bexar, and Comal Counties; all areas within Hays and Travis Counties, except the area within the watersheds draining to the Colorado River above a point 1.3 miles upstream from Tom Miller Dam, Lake Austin at the confluence of Barrow Brook Cove, Segment No. 1403 of the Colorado River Basin; and all areas within Williamson County, except the area within the watersheds draining to the Lampasas River above the dam at Stillhouse Hollow Reservoir, Segment No. 1216 of the Brazos River Basin. The contributing zone is illustrated on the Edwards Aquifer map viewer at:

- http://www.tceq.texas.gov/gis/edwards-viewer.html

Effluent Limitations Guideline (ELG)
Defined in 40 Code of Federal Regulations (CFR) § 122.2 as a regulation published by the Administrator under § 304(b) of the Clean Water Act (CWA) to adopt or revise effluent limitations.

Facility or Activity
For the purpose of this permit, referring to a construction site, the location of construction activity, or a construction support activity that is regulated under this general permit, including all contiguous land and fixtures (for example, ponds and materials stockpiles), structures, or appurtenances used at a construction site or industrial site.

Final Stabilization
A construction site status where any of the following conditions are met:

a) All soil disturbing activities at the site have been completed and a uniform (that is, evenly distributed, without large bare areas) perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, or gabions, have been employed.
b) For individual lots in a residential construction site by either:
    1) the homebuilder completing final stabilization as specified in condition (a) above; or
    2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization. If temporary stabilization is not feasible, then the homebuilder may fulfill this requirement by retaining perimeter controls or BMPs; and informing the homeowner of the need for removal of temporary controls and the establishment of final stabilization. Fulfillment of this requirement must be documented in the homebuilder's stormwater pollution prevention plan (SWP3).

c) For construction activities on land used for agricultural purposes (such as pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface water and areas that are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

d) In arid, semi-arid, and drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:
    1) Temporary erosion control measures (for example, degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the operator, and
    2) The temporary erosion control measures are selected, designed, and installed to achieve 70% of the native background vegetative coverage within three years.

High-Level Radioactive Waste – Meaning as assigned by 42 United States Code (U.S.C.) Section 10101 (12) and includes spent nuclear fuel as defined by 42 U.S.C. Section 10101 (23).

Hyper chlorination of Waterlines
Treatment of potable water lines or tanks with chlorine for disinfection purposes, typically following repair or partial replacement of the waterline or tank, and subsequently flushing the contents.

Impaired Water
A surface water body that is identified as impaired on the latest approved CWA §303(d) List or waters with an EPA-approved or established total maximum daily load (TMDL) that are found on the latest EPA approved Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d), which lists the category 4 and 5 water bodies.

Indian Country Land
(1) All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation; (2) all dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and (3) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. (40 CFR §122.2)

Indian Tribe
Any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian Reservation (40 CFR §122.2).

Infeasible
Not technologically possible, or not economically practicable and achievable in light of best industry practices. (40 CFR §450.11(b)).

Large Construction Activity
Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing rights-of-way, and similar maintenance activities.)

Linear Project
Includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.
Low Rainfall Erosivity Waiver (LREW) - A written submission to the executive director from an operator of a construction site that is considered as small construction activity under the permit, which qualifies for a waiver from the requirements for small construction activities, only during the period of time when the calculated rainfall erosivity factor is less than five (5).

Minimize
To reduce or eliminate to the extent achievable using stormwater controls that are technologically available and economically practicable and achievable considering best industry practices.

Municipal Separate Storm Sewer System (MS4)
A separate storm sewer system owned or operated by the United States, a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, that discharges to surface water in the state.

Notice of Change (NOC)
Written notification to the executive director from a discharger authorized under this permit, providing changes to information that was previously provided to the agency in a notice of intent form.

Notice of Intent (NOI)
A written submission to the executive director from an applicant requesting coverage under this general permit.

Notice of Termination (NOT)
A written submission to the executive director from a discharger authorized under this general permit requesting termination of coverage.

Operator
The person or persons associated with a large or small construction activity that is either a primary or secondary operator as defined below:

Primary Operator
the person or persons associated with a large or small construction activity that meets either of the following two criteria:

a) the person or persons have on-site operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
b) the person or persons have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (for example, they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

Secondary Operator
The person or entity, often the property owner, whose operational control is limited to:

a) the employment of other operators, such as a general contractor, to perform or supervise construction activities; or
b) the ability to approve or disapprove changes to construction plans and specifications, but who does not have day-to-day on-site operational control over construction activities at the site.

Secondary operators must either prepare their own SWP3 or participate in a shared SWP3 that covers the areas of the construction site, where they have control over the construction plans and specifications.

If there is not a primary operator at the construction site, then the secondary operator is defined as the primary operator and must comply with the requirements for primary operators.

Outfall
For the purpose of this permit, a point source at the point where stormwater runoff associated with construction activity discharges to surface water in the state and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other water of the U.S. and are used to convey waters of the U.S.

Permittee
An operator authorized under this general permit. The authorization may be gained through submission of a notice of intent, by waiver, or by meeting the requirements for automatic coverage to discharge stormwater runoff and certain non-stormwater discharges from construction activity.

Point Source
Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff (40 CFR §122.2).

Pollutant
Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into any surface water in the state. The term "pollutant" does not include tail water or runoff water from irrigation or rainwater runoff from cultivated or uncultivated rangeland, pastureland, and farmland. For the purpose of this permit, the term "pollutant" includes sediment.

Pollution
The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose (Texas Water Code (TWC) §26.001(14)).

Rainfall Erosivity Factor (R factor)
the total annual erosive potential that is due to climatic effects and is part of the Revised Universal Soil Loss Equation (RUSLE).

Receiving Water
A "Water of the United States" as defined in 40 CFR §122.2 or a surface water in the state into which the regulated stormwater discharges.

Semiarid Areas
areas with an average annual rainfall of 10 to 20 inches.

Separate Storm Sewer System
A conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), designed or used for collecting or conveying stormwater; that is not a combined sewer, and that is not part of a publicly owned treatment works (POTW).

Small Construction Activity
Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing rights-of-way, and similar maintenance activities).

Steep Slopes
Where a state, Tribe, local government, or industry technical manual (e.g. stormwater BMP manual) has defined what is to be considered a "steep slope", this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 15 percent or greater in grade.

Stormwater (or Stormwater Runoff)
Rainfall runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Construction Activity
Stormwater runoff, as defined above, from a construction activity.

Structural Control (or Practice)
A pollution prevention practice that requires the construction of a device, or the use of a device, to reduce or prevent pollution in stormwater runoff. Structural controls and practices may include but are not limited to: silt fences, earthen dikes, drainage swales,

sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Surface Water in the State
Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark (MHWM) out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.

Temporary Stabilization
A condition where exposed soils or disturbed areas are provided a protective cover or other structural control to prevent the migration of pollutants. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either permanent stabilization can be achieved or until further construction activities take place.

Thawing Conditions
for the purposes of this permit, thawing conditions are expected based on the historical likelihood of two (2) or more days with daytime temperatures greater than 32 degrees Fahrenheit (F). This date can be determined by looking at historical weather data. Note: The estimation of thawing conditions is for planning purposes only. During construction, the permittee will be required to conduct site inspections based upon actual conditions (i.e., if thawing conditions occur sooner than expected, the permittee will be required to conduct inspections at the regular frequency).

Total Maximum Daily Load (TMDL)
The total amount of a pollutant that a water body can assimilate and still meet the Texas Surface Water Quality Standards.

Turbidity
A condition of water quality characterized by the presence of suspended solids and/or organic material.

Waters of the United States
Waters of the United States or waters of the U.S. mean the term as defined in 40 CFR §122.2.

PROJECT AND RESPONSIBLE PARTIES INFORMATION

PROJECT NAME AND LOCATION

Avilla Nolina
205 Wild Nolina Way
Georgetown, TX 78633

OWNER NAME AND CONTACT INFORMATION

NexMetro Nolina, LP
2355 E Camelback Road
Suite 805
Pheonix, AZ 85016

Ryan Becker, VP of Development
480.993.7894

PRIMARY OPERATOR NAME AND CONTACT INFORMATION

Company: Catamount Constructors

Address: _____

City, ST Zip: _____

Contact Name: Kevin King

Title: _____

Phone Number: 719-426-8701

SECONDARY OPERATOR NAME AND CONTACT INFORMATION

NexMetro Nolina, LP
2355 E Camelback Road
Suite 805
Pheonix, AZ 85016

Ryan Becker, VP of Development
480.993.7894

AUTHORIZED SWPPP DELEGATE CONTACT INFORMATION

Company: _____

Address: _____

City, ST Zip: _____

Contact Name: _____

Title: _____

Phone Number: _____

STORM WATER POLLUTION PREVENTION PLAN CERTIFICATION

Avilla Nolina

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

Signed: _____

Printed Name: _____

Date: _____

SITE LOCATION

The construction site is located at 205 Wild Nolina Way, outside of the Georgetown city limits in Northwest Williamson County. The property is bounded on the East by Wild Nolina Way and on the South by Ronald Reagan Boulevard.

MAPSCO: 193 N/S

- Latitude: 30.733663◦ N
- Longitude: -97.829765◦ W

SITE AREA ESTIMATES

The total area of the entire property is 18.24 acres. The area to be disturbed, which may generally include off-site material storage areas, overburden and stockpiles of dirt, and borrow areas, and may be authorized under the permittee's NOI, is approximately 18.24 acres.

EXISTING CONDITIONS

The area to be disturbed is heavily vegetated with trees, grass, and other local vegetation.

RUNOFF FACTORS

The project site lies within Williamson County. The soil on this site as detailed by Web Soil Survey is described as clay loam, bedrock, silty clay, gravelly silty clay, cobbly clay, and very cobbly clay.

Williamson County, Texas (TX491)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
BktD	Brackett association, 1 to 8 percent slopes	0.6	3.4%
DnB	Denton silty clay, 1 to 3 percent slopes	0.6	3.1%
DnC	Denton silty clay, 3 to 5 percent slopes	1.1	6.1%
EaD	Eckrant cobbly clay, 1 to 8 percent slopes	15.8	87.4%
Totals for Area of Interest		**18.1**	**100.0%**

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: https://websoilsurvey.sc.egov.usda.gov/. Accessed [March 26, 2025].

The Pre-construction Runoff Coefficient "C" for the site is:

- 0.41

The Weighted Runoff Coefficient "C" for the overall project after construction, including utilized and reserved areas, is calculated as:

- 0.77

SITE LOCATION RELATIVE TO THE EDWARDS AQUIFER

According to the TCEQ Edwards Aquifer Viewer Map the site is located over the Contributing Zone of the Edwards Aquifer (see attached map).

CONSTRUCTION ACTIVITY

This project entails the construction of a new multi-family and single-family residential development.

INTENDED SEQUENCE OF MAJOR CONSTRUCTION ACTIVITY

The Construction Schedule for this project can be found in this section.

CONSTRUCTION SCHEDULE

INSERT CONSTRUCTION SCHEDULE HERE

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MAJOR GRADING AND OTHER SITEWORK ACTIVITIES

Notations as to ongoing grading and other site work activities can also be found in both the weekly SWPPP Inspection Reports and in the Project Superintendent's daily report on the status of this project and may be referenced therein as a part of the documentary record called for by TXR150000.

ACTIVITY	BEGIN DATE	END DATE
Demolition		
Clearing		
Rough Grade		
Underground Utilities		
Pad Preparation		
Paving Preparation		
Concrete Placement		
Construction Activities Temporarily or Permanently Ceased (if applicable)		
Final Grading		
Landscaping		
Final Stabilization		

GENERAL LOCATION MAP

Site location maps are located behind this page. If new site locations are identified later during construction, the location maps and this SWPPP will be revised as appropriate.

SITE PLANS

All available site plans and related engineer's construction drawings, which provide information on site conditions, drainage and stabilization, are located behind this page. In general, these drawings (to the extent applicable and practicable) include the following:

- Property boundary(ies)
- drainage patterns and approximate slopes anticipated before and after major grading activities
- areas where soil disturbance will occur (note any phasing), including any demolition activities
- locations of all major structural controls either planned or in place
- locations where temporary or permanent stabilization practices are expected to be used
- locations of construction support activities, including off-site activities, that are authorized under the permittee's NOI, including material, waste, borrow, fill, or equipment storage areas
- surface waters (including wetlands) either at, adjacent, or in close proximity to the site, and also indicate whether those waters are impaired;
    - Note: Surface waters adjacent to or in close proximity to the site means any receiving waters within the site and all receiving waters within one mile downstream of the site's discharge point(s).
- locations where Stormwater discharges from the site directly to a surface water body or a municipal separate storm sewer system; and
- Vehicle wash areas

If new construction drawings are made available later during construction, relevant drawings will be added to this section and this SWPPP will be revised as appropriate.

RECEIVING WATERS, WETLANDS AND SPECIAL AQUATIC SITES

This project is located in the North Fork San Gabriel River (Segment #1251) watershed, which ultimately receives stormwater runoff from the site through the existing storm drainage system.

No existing wetlands or other special aquatic sites have been identified at or near this site. However, if any are discovered, this SWPPP will be revised to reflect such information.

This site is located over the Contributing Zone of the Edwards Aquifer. A Contributing Zone plan will be completed and approved for this project.

SUPPORT FACILITIES

Offsite support for this project will be provided by the following vendors/sources. These facilities are not covered under this Operator's permit.

Concrete
The specific batch plant, certain only on the day of any particular pour, can be identified by contacting:

Company/Contact/Phone Number: _____

Select Fill/Soil
Will be sourced from:

Company/Contact/Phone Number: _____

Asphalt
Will be provided by the company indicated below. The specific batch plant can be identified by contacting:

Company/Contact/Phone Number: _____

INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION

There will be no discharge at this site that is associated with any activity other than construction.

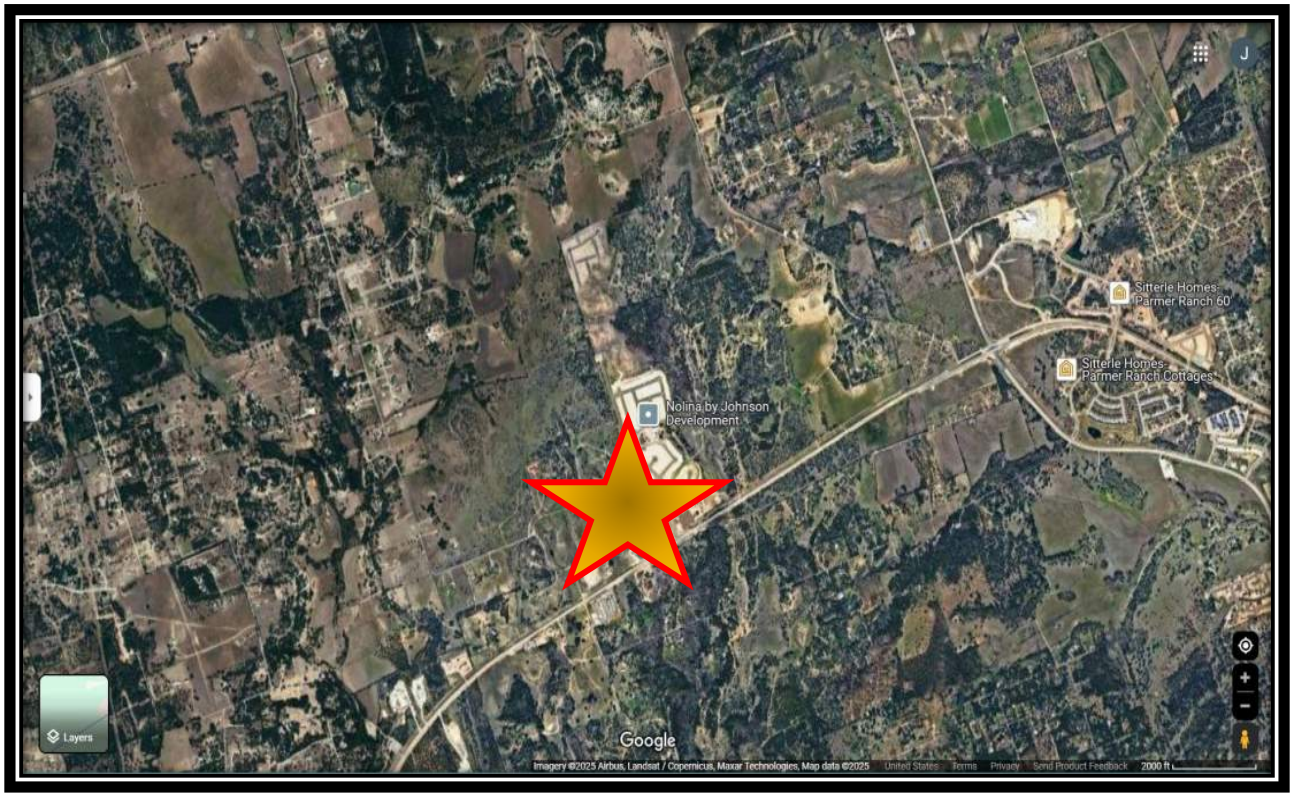
ENDANGERED OR THREATENED SPECIES OR CRITICAL HABITATS

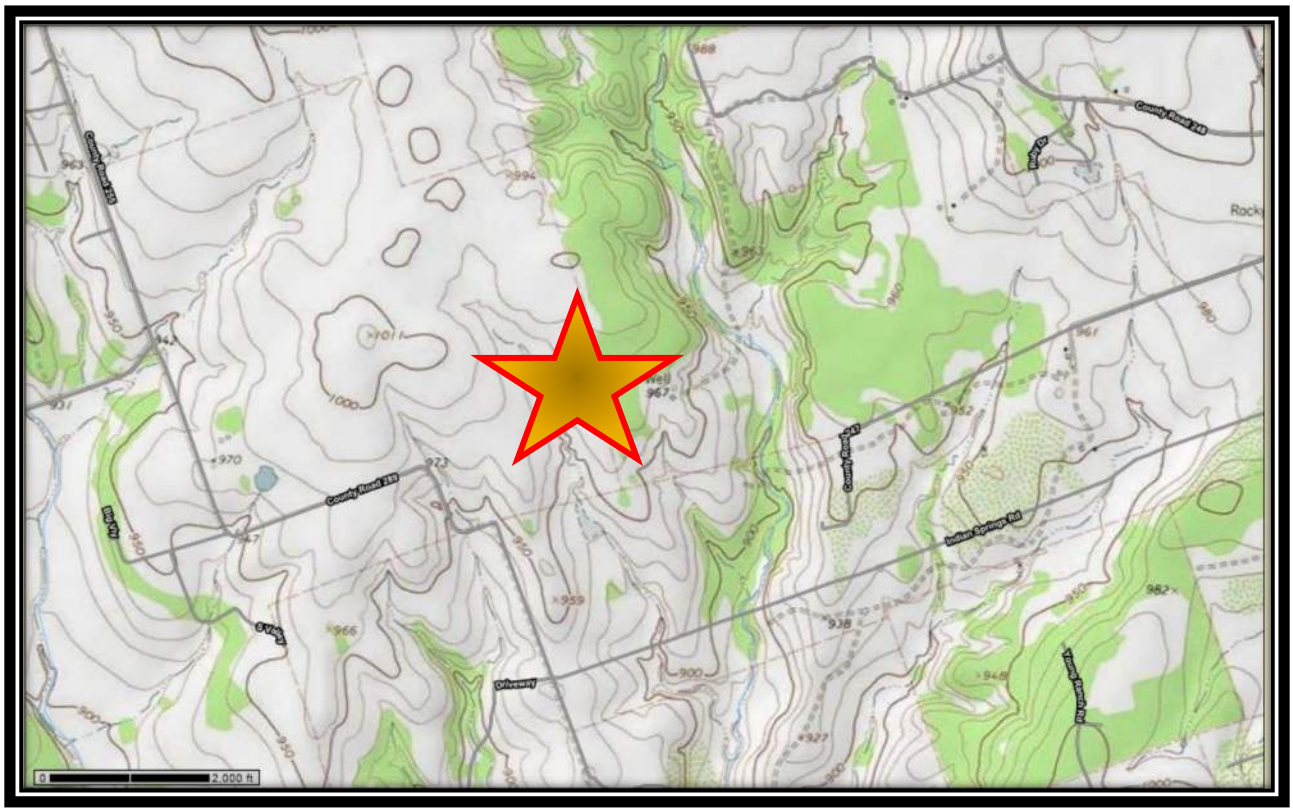
No endangered or threatened species or critical habitats are known to exist at this site. However, if any are discovered, this SWPPP will be revised to reflect such information.

HISTORIC PLACES

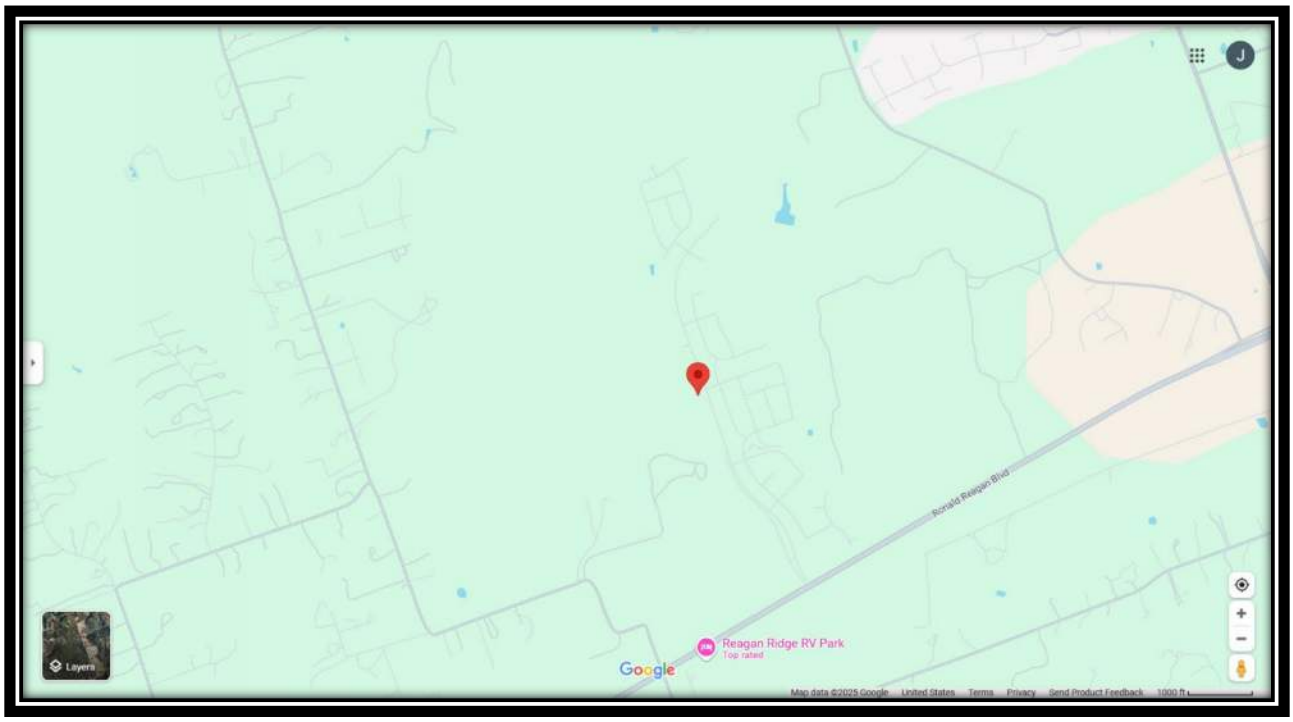
No historic sites are known to exist at this site. However, if any historic sites are discovered, this information will be revised to reflect such information.

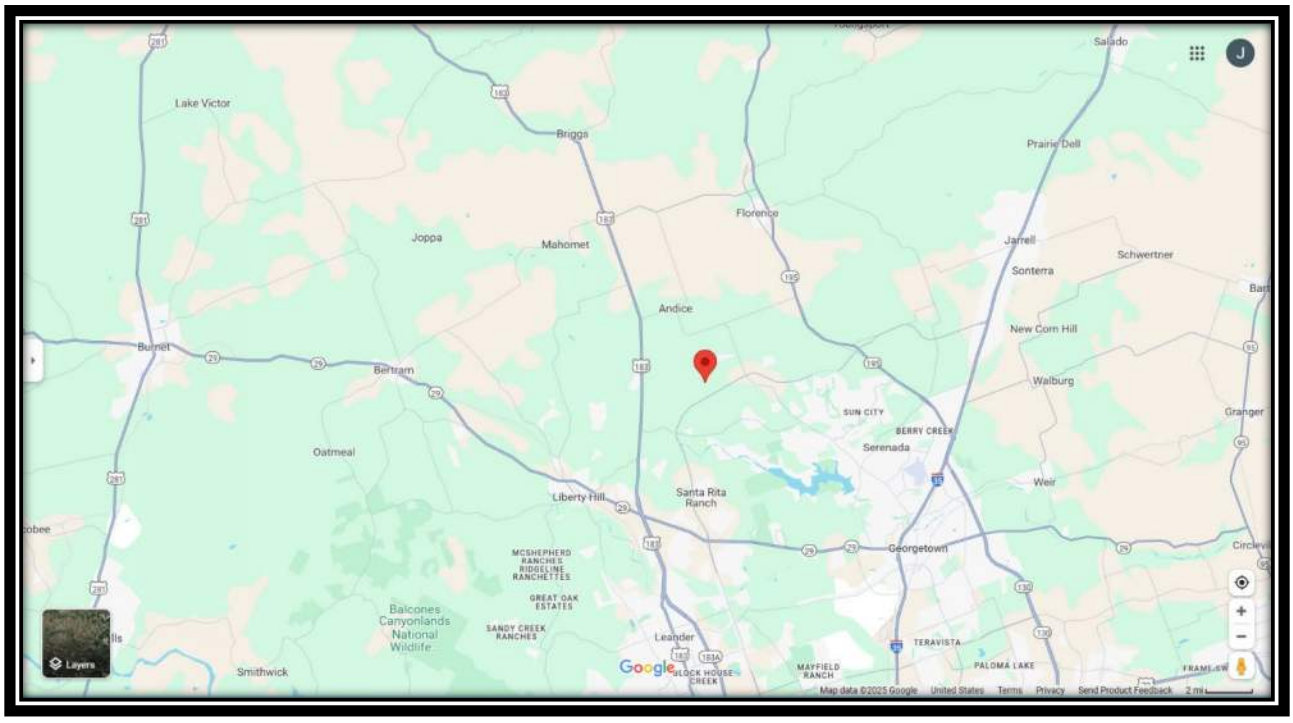
SITE LOCATION MAPS



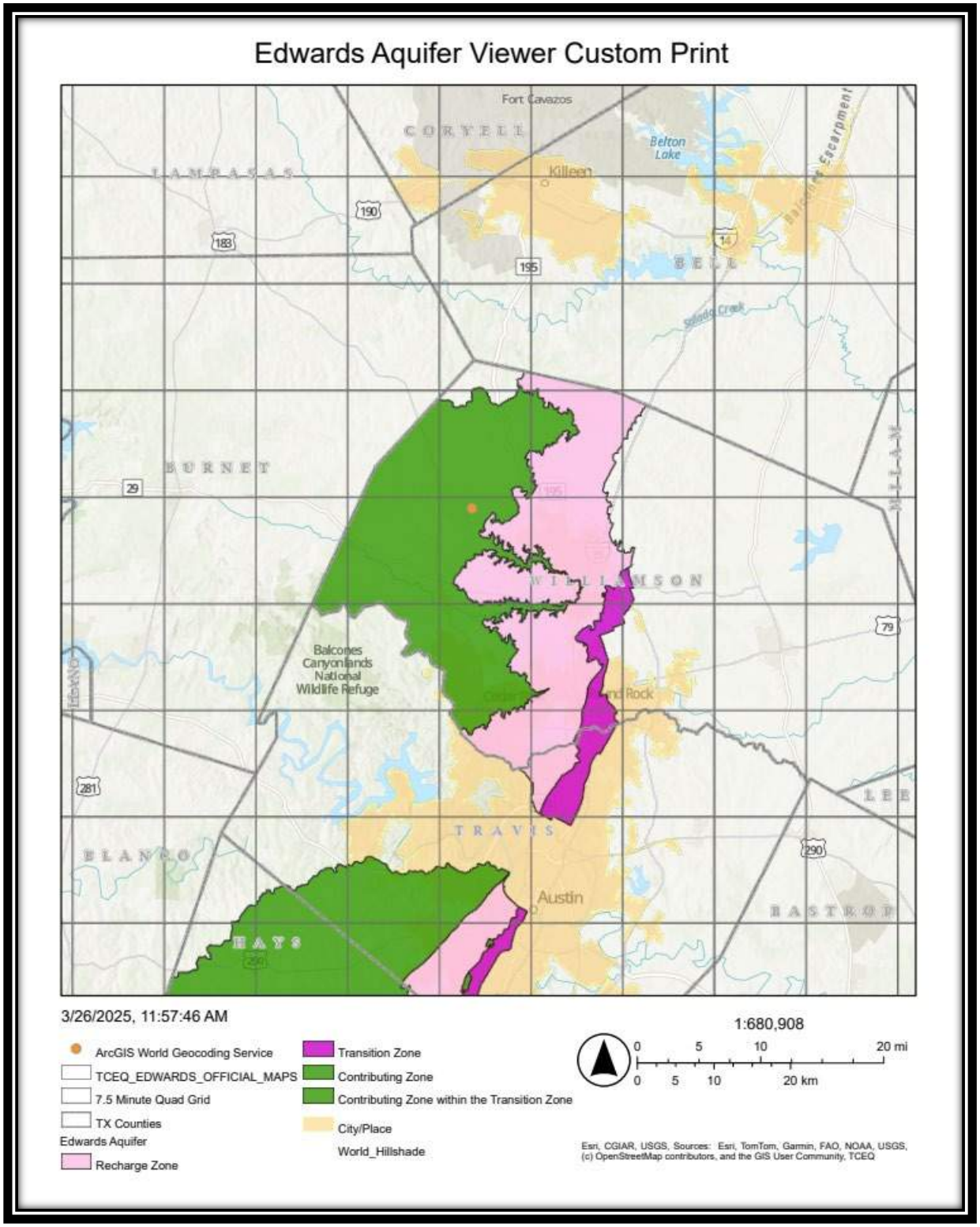


SITE LOCATION MAPS





EDWARDS AQUIFER LOCATION MAP



WEB SOIL SURVEY MAP



Williamson County, Texas (TX491)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BktD	Brackett association, 1 to 8 percent slopes	0.6	3.4%
DnB	Denton silty clay, 1 to 3 percent slopes	0.6	3.1%
DnC	Denton silty clay, 3 to 5 percent slopes	1.1	6.1%
EaD	Eckrant cobbly clay, 1 to 8 percent slopes	15.8	87.4%
	Totals for Area of Interest	18.1	100.0%

TCEQ SITE, GRADING, DRAINAGE, & EROSION CONTROL PLANS

FOR

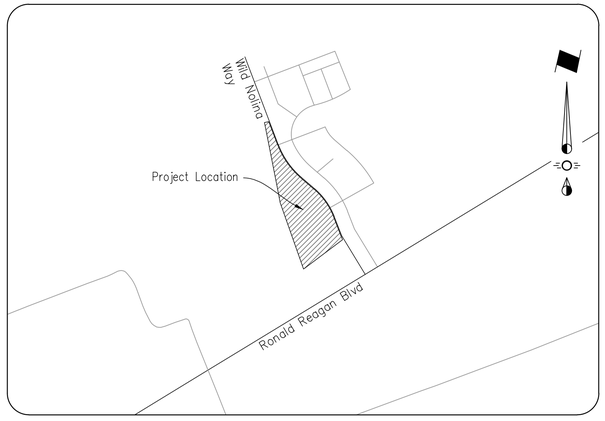
AVILLA NOLINA

LOT 2, BLOCK R, NOLINA SUBDIVISION

WILLIAMSON COUNTY, TEXAS

General Notes

1. These construction plans were prepared, sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore based on the engineer's concurrence of compliance, the construction plans for construction of the proposed project are hereby approved subject to the standard Construction Specifications and Details Manual and all other applicable City, State and Federal Requirements and Codes.
2. This project is subject to all City Standard Specifications and Details in effect at the time of submittal of the project to the City.
3. The site construction plans shall meet all requirements of the approved site plan.
4. Wastewater mains and service lines shall be SDR 26 PVC.
5. Wastewater mains shall be installed without horizontal or vertical bends.
6. Maximum distance between wastewater manholes is 500 feet.
7. Wastewater mains shall be low pressure air tested and mandrel tested by the contractor according to City of Georgetown and TCEQ requirements.
8. Wastewater manholes shall be vacuum tested and coated by the contractor according to City of Georgetown and TCEQ requirements.
9. Wastewater mains shall be camera tested by the contractor and submitted to the City on DVD format prior to paving the streets.
10. Private water system fire lines shall be tested by the contractor to 200 psi for 2 hours.
11. Private water system fire lines shall be ductile iron piping from the water main to the building sprinkler system, and 200 psi C900 PVC for all others.
12. Public water system mains shall be 150 psi C900 PVC and tested by the contractor at 150 psi for 2 hours.
13. All bends and changes in direction on water mains shall be restrained and thrust blocked.
14. Long fire hydrant leads shall be restrained.
15. All water lines are to be bacteria tested by the contractor according to the City standards and specifications.
16. Water and Sewer main crossings shall meet all requirements of the TCEQ and the City.
17. Flexible base material for public streets shall be TXDOT Type A Grade 1.
18. Hot mix asphaltic concrete pavement shall be Type D unless otherwise specified and shall be a minimum of 2 inches thick on public streets and roadways.
19. All sidewalk ramps are to be installed with the public infrastructure.
20. A maintenance bond is required to be submitted to the City prior to acceptance of the public improvements. This bond shall be established for 1 year in the amount of 25% of the cost of the public improvements and shall follow the City format.
21. Record drawings of the public improvements shall be submitted to the City by the design engineer prior to acceptance of the project. These drawings shall be on mylar or on TIFF or PDF disk (300dpi). If a disk is submitted, a bond set shall be included with the disk.



Vicinity Map

NTS

Notes:

1. Prior to beginning any construction or construction staking, it shall be the Contractor's responsibility to contact the civil engineer to ensure that all parties are in possession of the most current set of CD's.
2. All construction within public R.O.W. or easements shall conform to Williamson County and/or City of Georgetown detail/specifications as applicable.

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C33	WQV Calculations
C34	Detention Calculations
C35	Detention Calculations
C44	Erosion Control Plan
C45	Private Site Details
C46	Site Details

Prepared By:

SPIARS ENGINEERING & SURVEYING

501 W. President George Bush Hwy., Suite 200 Richardson, TX 75080 972.422.0077

TBPE No F-2121 • TBLPS No. F-10043100 • www.spiarseng.com

Mark Ewing • mark.ewing@spiarsengineering.com

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Prepared For:

NexMetro Nolina, LP

807 Las Cimas Pkwy, Suite 245

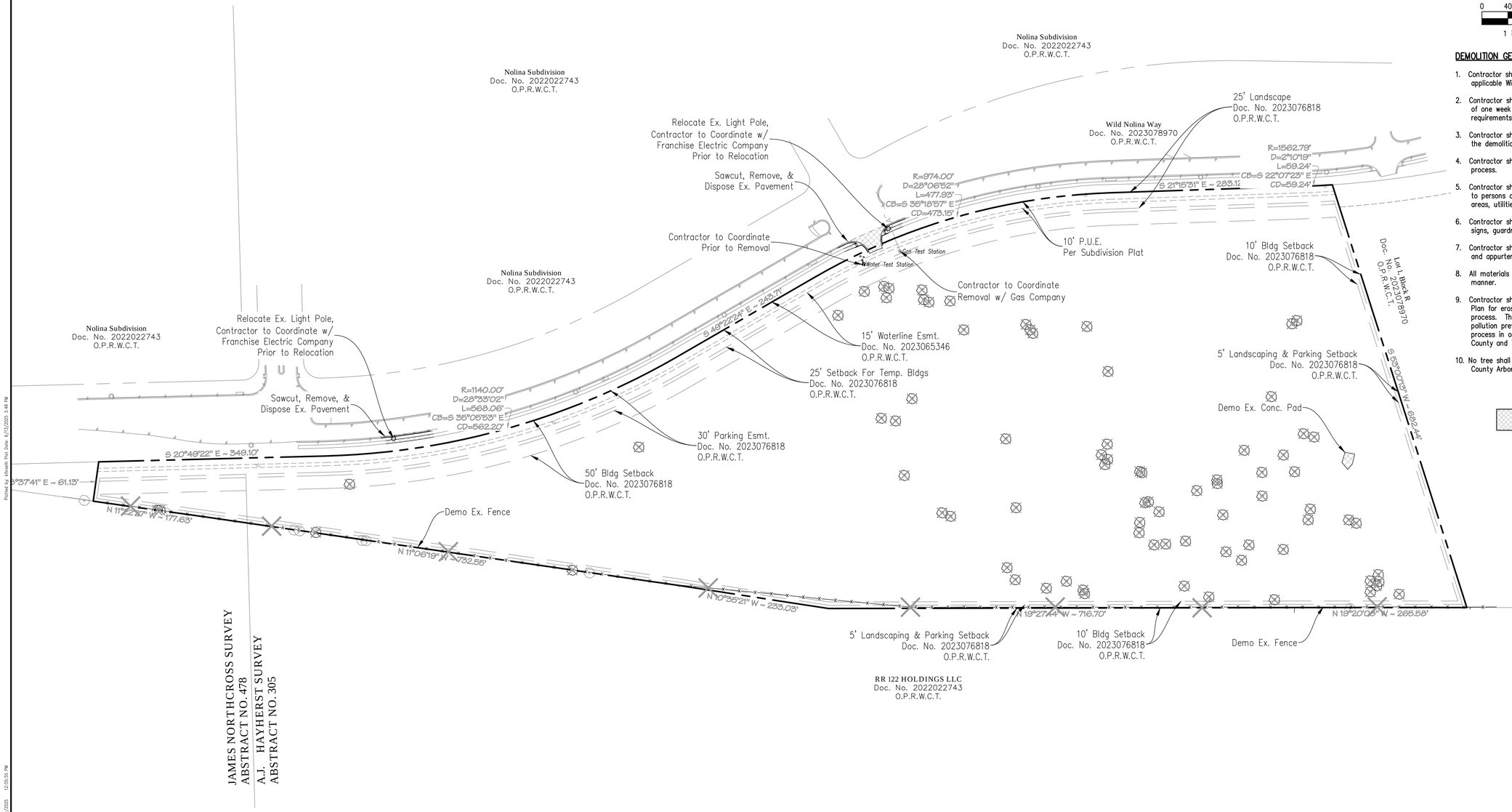
Austin, TX 78746

Telephone (480) 846-0833

Jason P. Flory

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0 40 80 160

1 inch = 80 ft.

DEMOLITION GENERAL NOTES

1. Contractor shall abide by the Demolition Specifications and all applicable Williamson County requirements, ordinances, etc.
2. Contractor shall notify all affected utility companies a minimum of one week prior to demolition in order to comply with their requirements.
3. Contractor shall maintain positive drainage at all times during the demolition process.
4. Contractor shall protect all existing utilities during the demolition process.
5. Contractor shall perform work in a manner to eliminate hazards to persons or property, and avoid interference with adjacent areas, utilities, and structures.
6. Contractor shall provide temporary barricades, fences, warning signs, guardrails, warning lights, etc.
7. Contractor shall protect existing structures, landscaping materials, and appurtenances which are not being demolished.
8. All materials removed shall be disposed of offsite in a legal manner.
9. Contractor shall refer to the Storm Water Pollution Prevention Plan for erosion and pollution control during the demolition process. The Contractor shall provide any additional erosion or pollution prevention devices as required during the demolition process in order to completely conform with the Williamson County and TCEQ requirements.
10. No tree shall be removed without prior approval by the Owner & County Arborist.

DEMOLITION LEGEND

Remove Existing Pavement

Remove Existing Tree – Reference Landscape Architect Plans for final removal and mitigation.

CAUTION !!!

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AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DEMOLITION PLAN

Revisions	Date

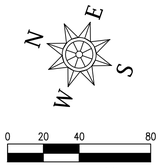
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Checked By: MEE

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PAVING GENERAL NOTES:

1. All materials and construction shall conform to the Williamson County Standard Details and Specifications & NCTCOG 3rd Edition.
2. It shall be the responsibility of the Contractor to protect all public utilities in the construction of this project. All manholes, cleanouts, valve boxes, fire hydrants, etc. must be adjusted to proper line and grade by the Contractor prior to and after the placing of permanent paving. Utilities must be maintained to proper line and grade during construction of this project.
3. The Contractor shall be responsible for coordinating with all the appropriate utility companies for the location of all utilities within the construction area.
4. The Paving Contractor shall not place permanent pavement until all sleeving for irrigation, electric, gas, telephone, cable TV, site lighting, etc. has been installed. It shall be the Paving Contractor's responsibility to insure that all sleeving is in place prior to placing permanent paving.
5. All paving and earthwork operations shall conform to the recommendations in the Geotechnical Investigation, Investigation by ECS Southwest, LLP, Project 17:6577, Dated June 13, 2024 and the Williamson County Standard Construction Details.
6. All dimensions are to face of curb or edge of building unless otherwise noted.
7. Refer to Architectural Plans for exact building and related sidewalk dimensions.
8. Fences, berms walls, shrubs, trees, signs, structures, etc. are limited to a maximum height of 2 feet above the adjacent curb within visibility easements.
9. Contractor shall install traffic control for any work within R.O.W. to conform to part VI of the "Texas Manual on Uniform Traffic Control Devices."
10. Longitudinal (Key) Joints shall be placed as necessary.
11. Contractor shall extend all paving joints for concrete pavement through curbs.
12. Contractor shall verify building and parking lot layout with the Architect prior to forming of buildings, walks and parking lot areas.
13. Contractor shall back fill against top of curbs at 4:1 max. slope to existing grade unless noted otherwise.
14. Slope of paving shall not exceed 2% at handicap accessible spaces.
15. Contractor shall grade pavement around sidewalks & curbs for positive drainage to an inlet or designated drainage area.
16. The detention system shall be completely installed & functioning prior to any concrete/paving installation (including building slab).
17. All curb and gutter shall be concrete unless otherwise noted.

LEGEND

- 4" 3000 psi Conc. Pavement W/#3 @ 24" O.C.E.W. On 6" Compacted Subgrade (Private Sidewalk)
- 2" Hot Mixed Asphalt Concrete (HMAC) Over 8" Crushed Limestone Base (CLB) (Parking/Street)
- 6.5" 3500 psi Conc. Pavement W/#3 @ 18" O.C.E.W. Over 8" Compacted Subgrade (Dumpster)
- BFR — Barrier Free Ramp (Per City Standards)
- Metal Pool Fence (Ref. LS)
- Hard Wood Fence (Ref. LS)
- Prop. Retaining Wall
- Prop. Freestanding Wall

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Curve Table

Curve #	Length	Radius	Delta	Chord Bearing	Chord Distance
C1	340.57'	652.00'	029.93°	N 34°24'48" W	336.71'
C2	23.70'	180.00'	007.54°	S 23°13'13" E	23.68'
C3	23.70'	180.00'	007.54°	S 23°13'13" E	23.68'
C4	188.72'	180.00'	060.07°	S 10°35'12" W	180.19'
C5	223.77'	335.00'	038.27°	S 30°14'29" E	219.63'
C6	74.40'	180.00'	023.68°	S 00°44'09" W	73.87'
C7	54.48'	192.00'	016.26°	N 70°45'57" E	54.30'

Line Table

Line #	Length	Direction
L1	181.66'	S 40°37'21" W
L2	173.26'	S 19°26'56" E
L3	64.30'	S 26°59'30" E
L4	314.60'	S 53°00'30" W
L5	110.24'	N 26°59'30" W
L6	445.14'	N 19°26'56" W

Line Table

Line #	Length	Direction
L7	85.08'	N 40°37'21" E
L8	447.84'	S 49°22'39" E
L9	189.42'	S 11°06'19" E
L10	25.75'	S 12°34'37" W
L11	48.57'	N 78°53'41" E
L12	22.58'	N 62°38'14" E

Point Table

Point #	Northing	Easting
1	10238948.2826	3083954.0828
2	10241008.4301	3083468.4803
3	10239989.8085	3084177.7072
4	10240562.0296	3083646.4170

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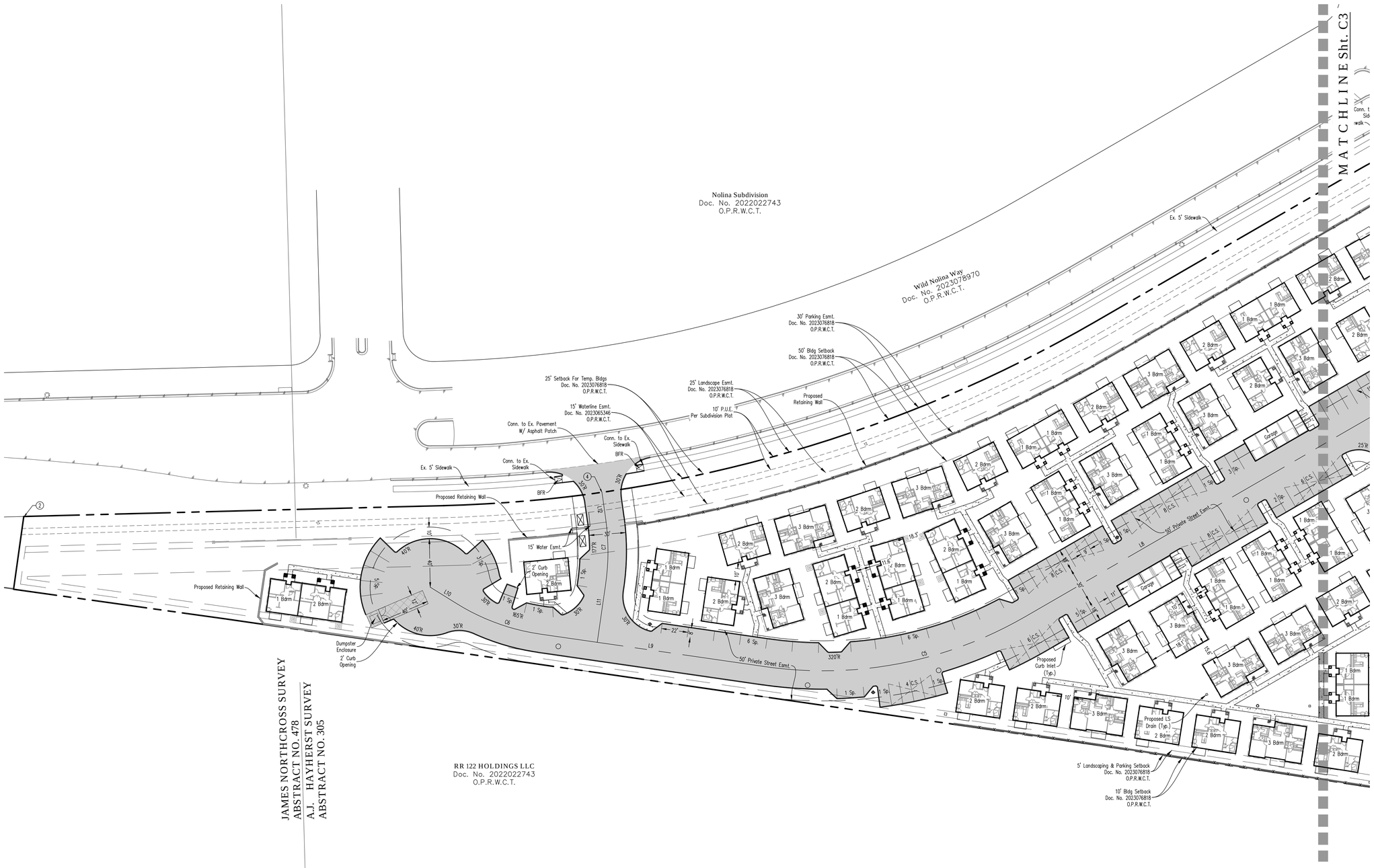
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AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
PAVING & HORIZONTAL CONTROL PLAN

Revisions	Date

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Drawn By: CJF
Checked By: MEE
Sheet C3
SEI No. 24-002

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LEGEND

- 4" 3000 psi Conc. Pavement W/#3 @ 24" O.C.E.W. On 6" Compacted Subgrade (Private Sidewalk)
- 2" Hot Mixed Asphalt Concrete (HMAC) Over 8" Crushed Limestone Base (CLB) (Parking/Street)
- 6.5" 3500 psi Conc. Pavement W/#3 @ 18" O.C.E.W. Over 8" Compacted Subgrade (Dumpster)
- BFR — Barrier Free Ramp (Per City Standards)
- Metal Pool Fence (Ref. LS)
- Hard Wood Fence (Ref. LS)
- Prop. Retaining Wall
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LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

PAVING & HORIZONTAL CONTROL PLAN

Date

Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C4

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MATCHLINE SHT. C7

MATCHLINE SHT. C5

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

Lot 1, Block R
Doc. No. 2023078970
O.P.R.W.C.T.

MATCHLINE SHT. C5

MATCHLINE SHT. C6

Ref. Sheet C14 for Pond A Grading

Match Ex. Grade @ PL

Proposed Free Standing Wall

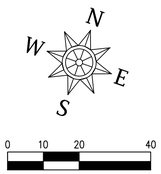
Match Ex. Grade @ PL

N 19°20'09" W - 265.69'

S 70°39'51" W - 682.44'

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TW 961.10 / BW 950.57
TW 961.59 / BW 950.54
TW 962.10 / BW 950.49
TW 963.25 / BW 950.29



GRADING GENERAL NOTES:

1. All materials and construction shall conform to the Williamson County Standard Construction Details and Specifications, except as noted herein and approved by the County.
2. Contractor shall be responsible for maintaining trench safety requirements in accordance with County Standards, Texas State Law, and O.S.H.A. Standards for all excavation in excess of five feet in depth.
3. The location of all utilities located on these plans are taken from existing public records. The exact location and elevation of all public utilities must be determined by the Contractor. It shall be the duty of the Contractor to ascertain whether any additional facilities other than those shown on the plans may be present.
4. It shall be the responsibility of the Contractor to protect all public utilities in the construction of this project. All manholes, clean-outs, valve boxes, fire hydrants, etc. must be adjusted to proper line and grade by the Contractor prior to and after the placing of permanent paving. Utilities must be maintained to proper line and grade during construction of the paving for this development.
5. Drainage should be maintained away from the foundations, both during and after construction.
6. All earthwork operations, pavement installation, etc. shall conform to the Geotechnical Investigation, Investigation by ECS Southwest, LLP, Project 17:6577, Dated June 13, 2024.
7. Trees shall remain unless specified otherwise on the Landscape Plan or approved by the Owner.
8. Prior to starting construction, the Contractor shall make certain that all required permits and approvals have been obtained. No construction or fabrication shall begin until the Contractor has received and thoroughly reviewed all plans and other documents approved by all of the permitting authorities.
9. In the event an item is not covered in the County's specifications, the County Engineer's decision shall apply.
10. Barricading, traffic control, and project signs shall conform to Texas Department of Transportation standards
11. The Contractor shall verify the suitability of all existing and proposed site conditions, including grades and dimensions before commencement of any construction. In the event of any conflict, and prior to commencement of any construction, immediately notify Engineer. Minor adjustments of finish grade to accomplish spot drainage are acceptable if necessary, upon prior approval of Engineer. All paving installed shall "flush out" at any juncture with existing paving.
12. Proposed spot elevations are finished grade elevations (Top of pavement, top of sod, etc.)
13. Erosion control shall be in place prior to the disturbance of any existing surface.
14. All sidewalk and crosswalk slopes in accessible areas shall conform to ADA requirements as follows: 1:20 longitudinal (along the walk) max. 1:50 transverse (across the walk) max.

LEGEND

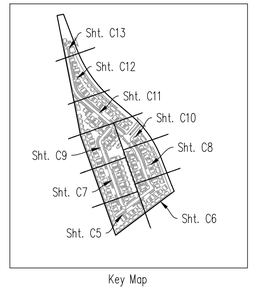
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Key Map

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LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

GRADING PLAN

Date

Revisions

Scale: As Shown

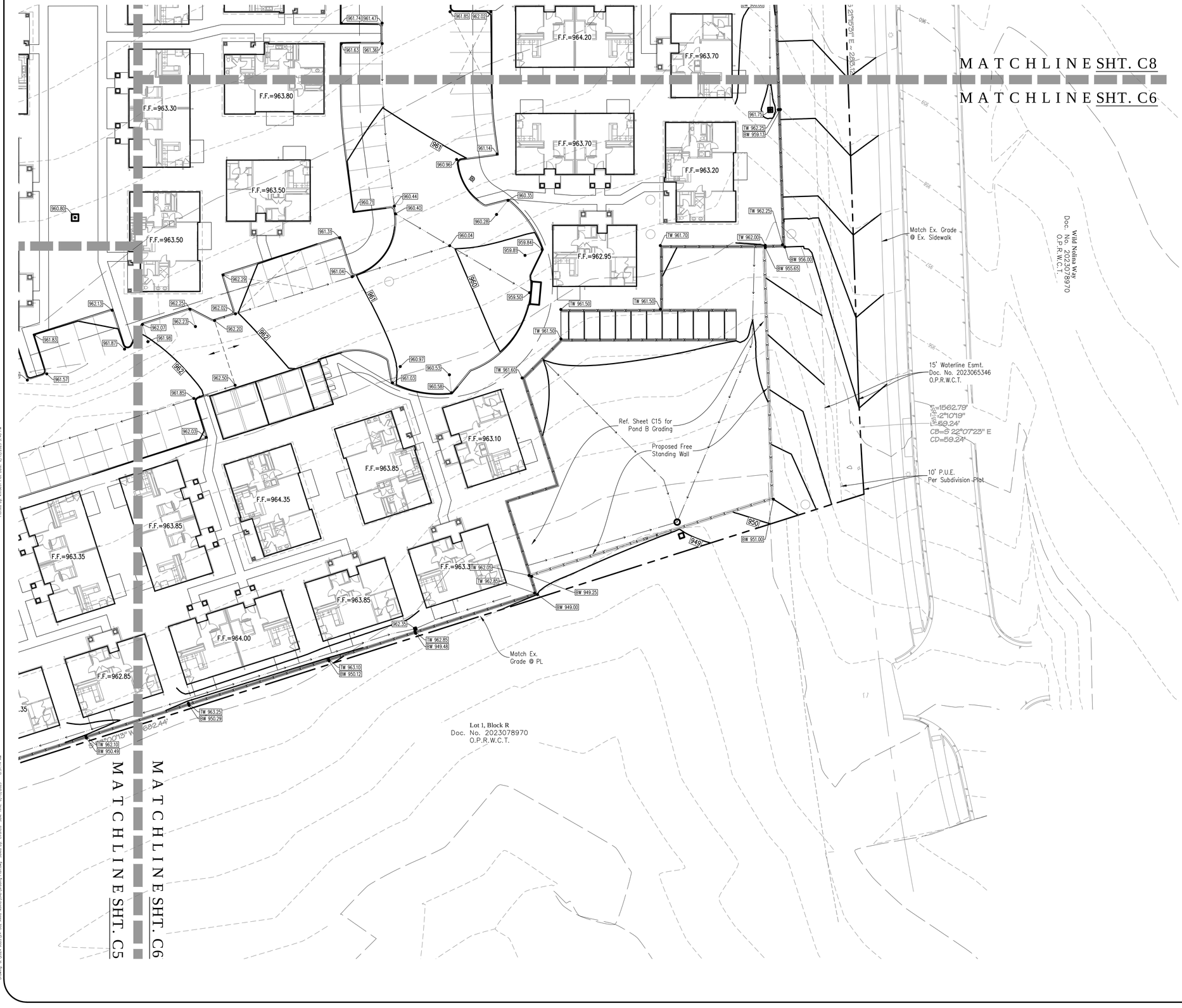
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Checked By: MEE

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1 inch = 20 ft.

LEGEND

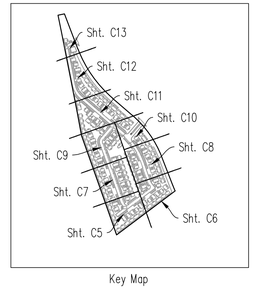
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Key Map

SPIARS
ENGINEERING & SURVEYING
501 W. President George Bush Hwy., Suite 200 Richardson, TX 75080 972.422.0077
TBPE No F-2121 • TBLPS No. F-10043100 • www.spiarseng.com
Mark Ewing • mark.ewing@spiarsengineering.com

This plan is released for the purpose of interim review and pricing under the authority of MARK E. EWING JR., P.E. 147783

Date: 6/13/2025

It is not to be used for construction.

AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
GRADING PLAN

Revisions	Date

Scale: As Shown

Drawn By: CJF

Checked By: MEE

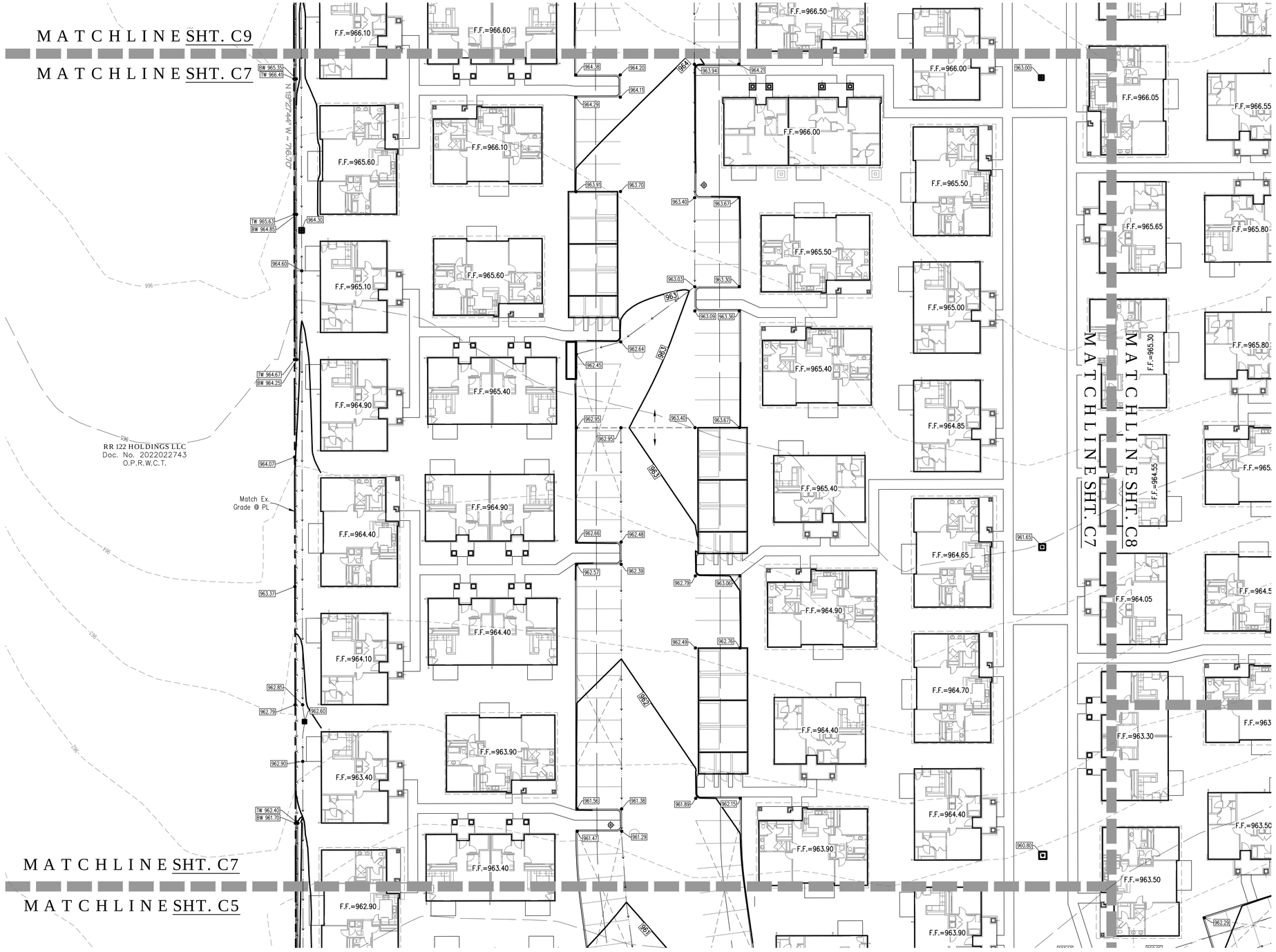
Sheet C6

SEI No. 24-002

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MATCHLINE SHT. C9

MATCHLINE SHT. C7



N
W E
S

0 10 20 40

1 inch = 20 ft.

CAUTION !!!

EXISTING UTILITIES

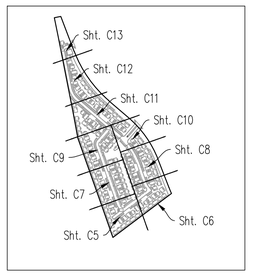
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LOT 2, BLOCK R
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GRADING PLAN

Date

Revisions

Scale: As Shown

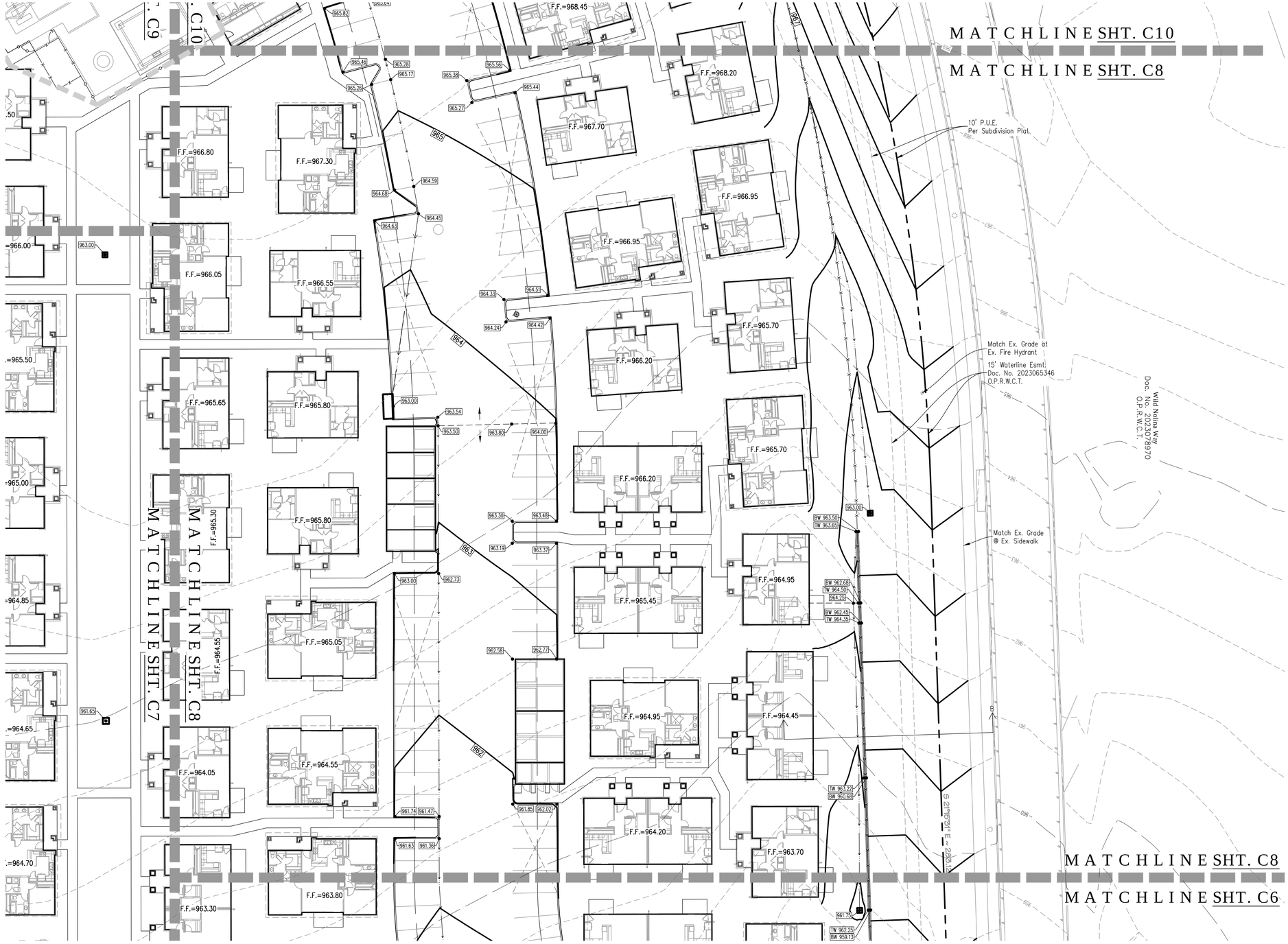
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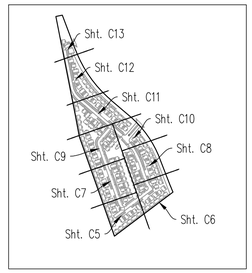
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Sheet C7

SEI No. 24-002

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Key Map

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AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

GRADING PLAN

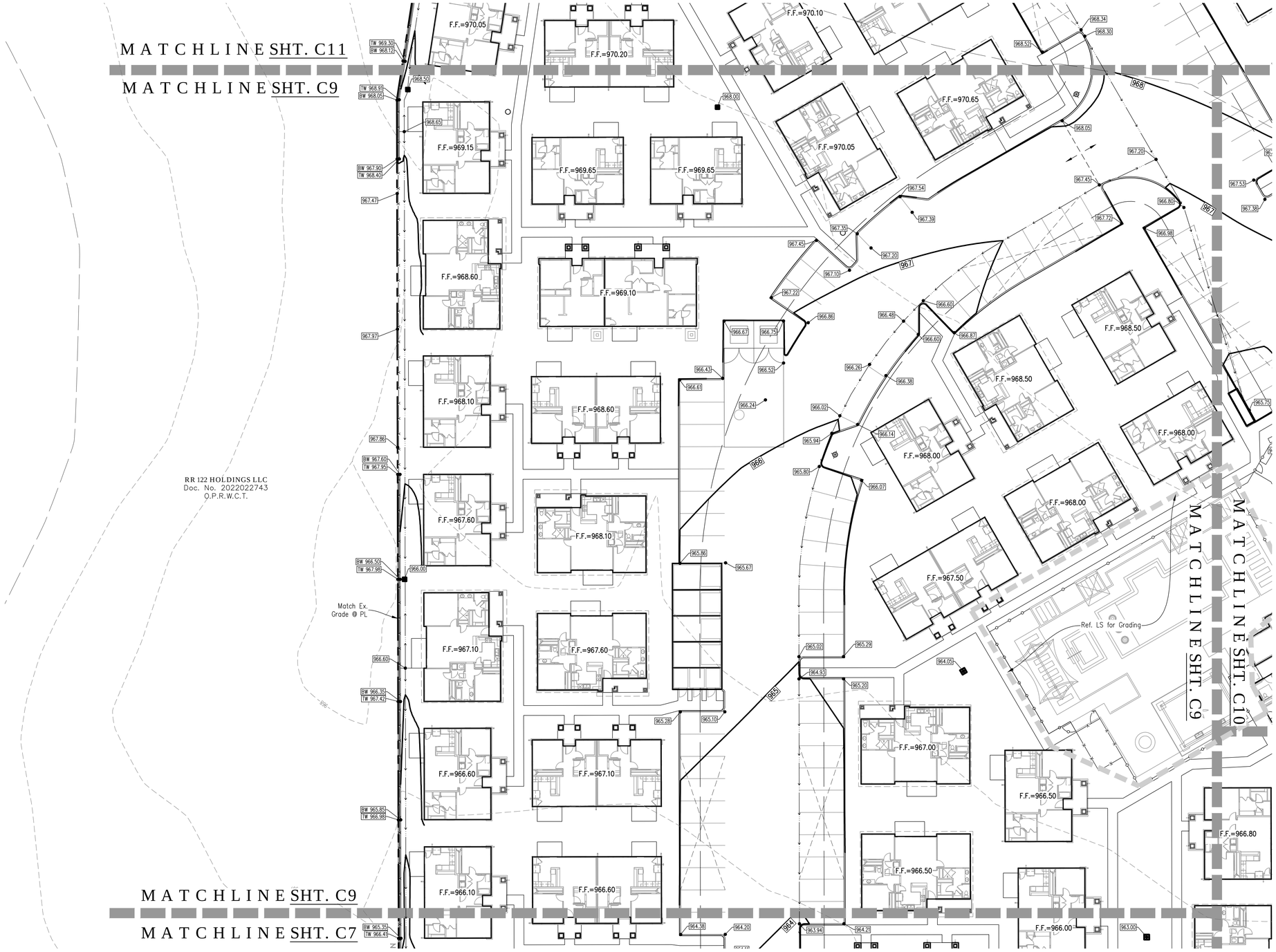
Date	Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C8

SEI No. 24-002

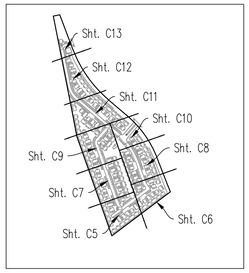
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N W E S

0 10 20 40

1 inch = 20 ft.



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LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

GRADING PLAN

Date

Revisions

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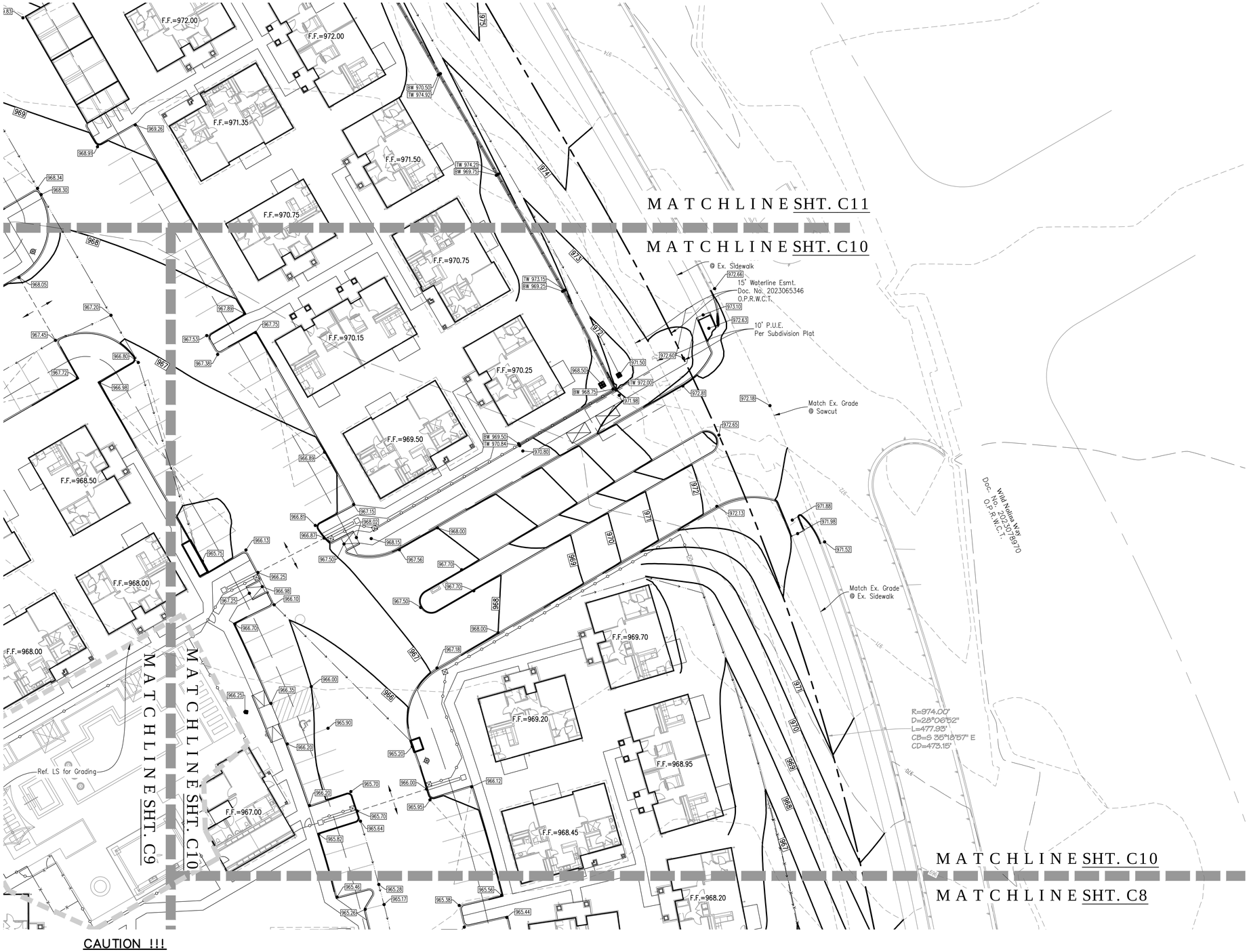
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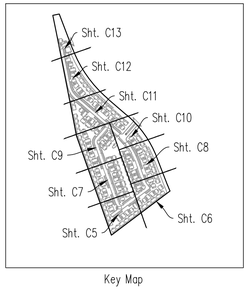
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Sheet C9

SEI No. 24-002

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Key Map

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Date

Revisions

Scale: As Shown

Drawn By: CJF

Checked By: MEE

Sheet C10

SEI No. 24-002

Plotted by: kfoseth Plot Date: 6/13/2025 3:49 PM
Drawing: G:\2024_JOBS\24-002 Avilla Nolina\CAD\Grading Plan.dwg Saved By: Chanoa Save Time: 6/13/2025 8:51:14 AM

MATCHLINE SHT. C12

MATCHLINE SHT. C11

MATCHLINE SHT. C11

MATCHLINE SHT. C9

MATCHLINE SHT. C11

MATCHLINE SHT. C10

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

10' P.U.E.
Per Subdivision Plat

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

WIA Nalita Way
Doc. No. 2023015970
O.P.R.W.C.T.

Match Ex. Grade @ Ex. Sidewalk

Match Ex. Grade @ PL

N 0°25'21" W 235.09'

S 42°22'24" E 225.72'

F.F.=975.70
F.F.=975.50
F.F.=975.00
F.F.=974.75
F.F.=974.85
F.F.=974.55
F.F.=974.10
F.F.=974.00
F.F.=973.80
F.F.=973.35
F.F.=973.25
F.F.=973.05
F.F.=973.55
F.F.=972.60
F.F.=972.50
F.F.=972.30
F.F.=972.80
F.F.=972.00
F.F.=971.55
F.F.=972.60
F.F.=972.05
F.F.=970.80
F.F.=971.60
F.F.=971.35
F.F.=971.30
F.F.=971.50
F.F.=970.10
F.F.=970.05
F.F.=970.20
F.F.=970.75
F.F.=970.65
F.F.=970.75

TW 973.75; BW 973.60; 973.00; 973.42; 974.05; TW 973.80; BW 972.28; 972.55; 973.04; 973.22; 973.21; 972.73; 972.87; 973.28; 972.85; 971.97; 971.75; 972.25; 972.43; 972.27; 971.99; 972.14; 971.76; 971.55; 971.73; 970.62; 970.80; 970.77; 970.41; 970.63; 970.27; 970.19; 969.83; 969.55; 969.73; 969.41; 969.59; 969.26; 968.91; 968.34; 968.30; 968.52; 968.00; TW 973.05; BW 971.29; TW 972.30; BW 970.26; TW 971.55; BW 969.52; TW 970.80; BW 969.09; TW 970.05; BW 968.41; 970.75; 968.70; 968.50; BW 979.72; TW 979.03; BW 973.75; BW 973.00; TW 978.10; BW 972.25; TW 977.40; BW 971.50; TW 976.58; TW 975.87; BW 971.00; BW 970.50; TW 974.92; TW 974.29; BW 969.75

0 10 20 40
1 inch = 20 ft.

Key Map
Sht. C13
Sht. C12
Sht. C11
Sht. C10
Sht. C9
Sht. C8
Sht. C7
Sht. C6
Sht. C5

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GRADING PLAN

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Drawn By: CJF
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Sheet C11
SEI No. 24-002

Plotted by: Kenneth Plot Date: 6/13/2025 3:49 PM
Drawing: G:\2024 JOBS\24-002 Avilla Nolina\CAD\Grading Plan.dwg Saved By: Orlando Save Time: 6/13/2025 8:51:14 AM

Nolina Subdivision
Doc. No. 2022022743
O.P.R.W.C.T.

Wild Nolina Way
Doc. No. 202307897O
O.P.R.W.C.T.

R=1140.00'
D=28°33'02"
L=568.06'
CB=S 35°05'53" E
CD=562.20'

10' P.U.E.
Per Subdivision Plat

Match Grade at
Ex. Fire Hydrant

Match Ex.
Grade @ Sawcut

Match Ex. Grade
@ Ex. Sidewalk

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

F.F.=982.00
F.F.=980.00
F.F.=979.25
F.F.=979.00
F.F.=978.25
F.F.=978.00
F.F.=977.50
F.F.=977.00
F.F.=976.45
F.F.=976.25
F.F.=975.70
F.F.=975.50
F.F.=975.00
F.F.=974.75
F.F.=974.55
F.F.=973.80

N 11°06'19" W ~ 732.55'

Match Ex.
Grade @ PL

RR 122 HOLDINGS LLC
Doc. No. 2022022743
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MATCHLINE SHT. C13
MATCHLINE SHT. C12
MATCHLINE SHT. C12
MATCHLINE SHT. C11

0 10 20 40
1 inch = 20 ft.

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Sheet C12

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Wild Nolina Way
Doc. No. 2023078970
O.P.R.W.C.T.

Tie into Ex. Pavement W/
Longitudinal Butt-Joint

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

10' P.U.E.
Per Subdivision Plat

Match Ex. Grade
@ Waterline Esmt.

S 20°49'22" E ~ 349.10'

N 78°53'41" E ~ 61.13'

N 11°22'27" W ~ 177.65'

F.F.=987.50

Match Ex.
Grade @ PL

RR 122 HOLDINGS LLC
Doc. No. 2022022743
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MATCHLINE SHT. C13

MATCHLINE SHT. C12

0 10 20 40
1 inch = 20 ft.

Key Map
Sht. C13
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LEGEND

- 79.00 — Gutter/Top of Pvmt. Elevation
- 684 — Proposed Contour
- 684 — Existing Contour
- TC=684.50 G=684.00 — Existing Spot Elevation
- Direction of Flow
- Prop. Retaining Wall
- Prop. Freestanding Wall

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501 W. President George Bush Hwy., Suite 200 Richardson, TX 75080 972.422.0077
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Mark Ewing • mark.ewing@spiarsengineering.com

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Date: 6/13/2025

It is not to be used for construction.

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

GRADING PLAN

Date

Revisions

Scale: As Shown

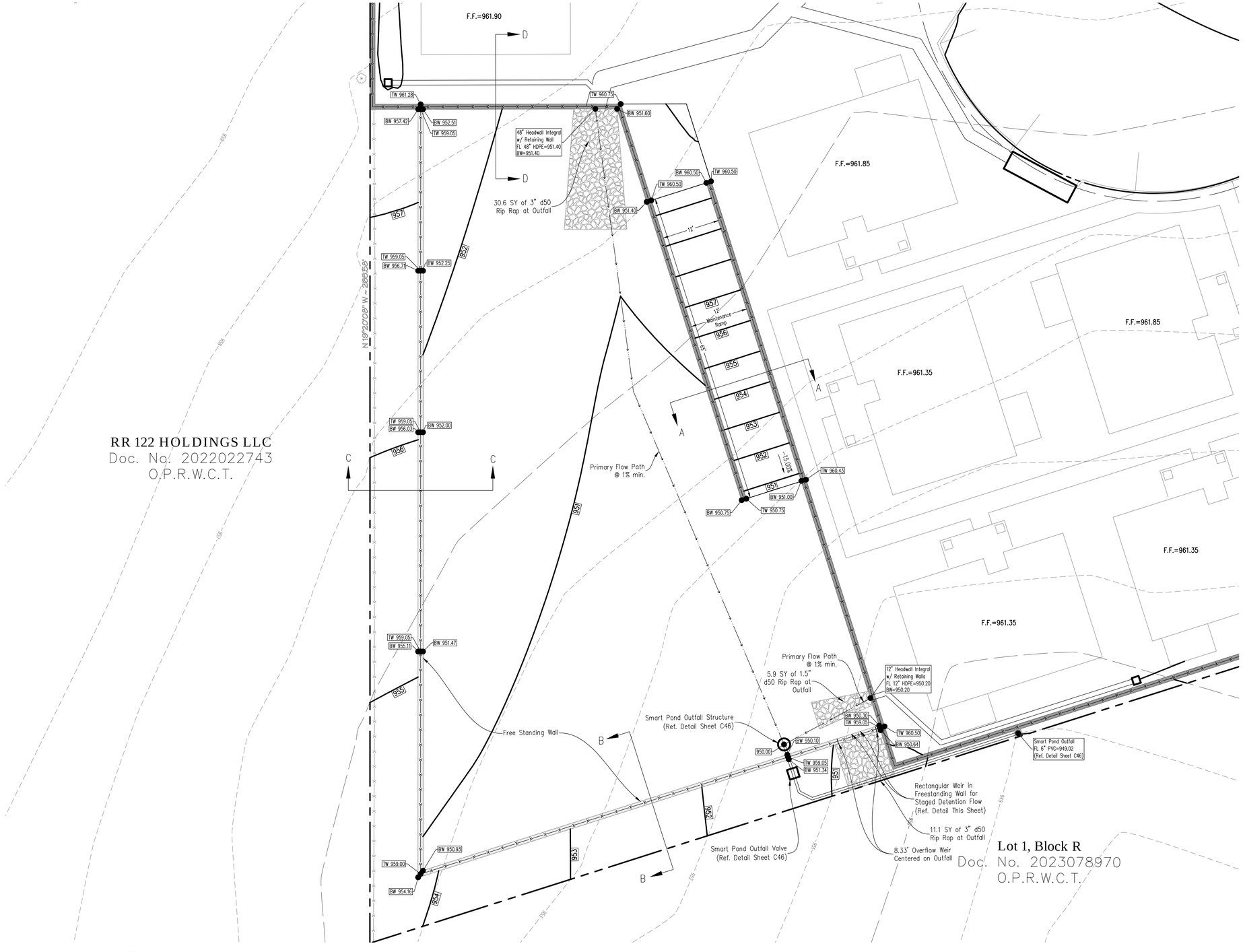
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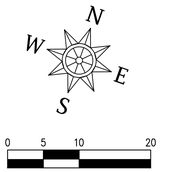
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Sheet C13

SEI No. 24-002

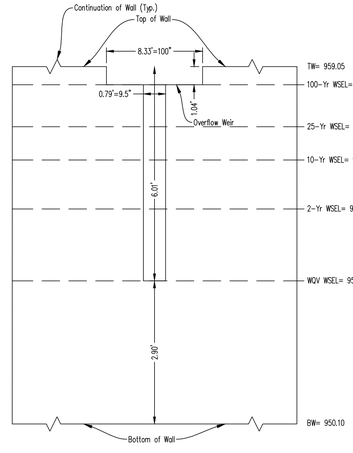
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- TC=684.50 G=684.00 — Existing Spot Elevation
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Pond A Weir Detail
N.T.S.

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AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
POND A PLAN

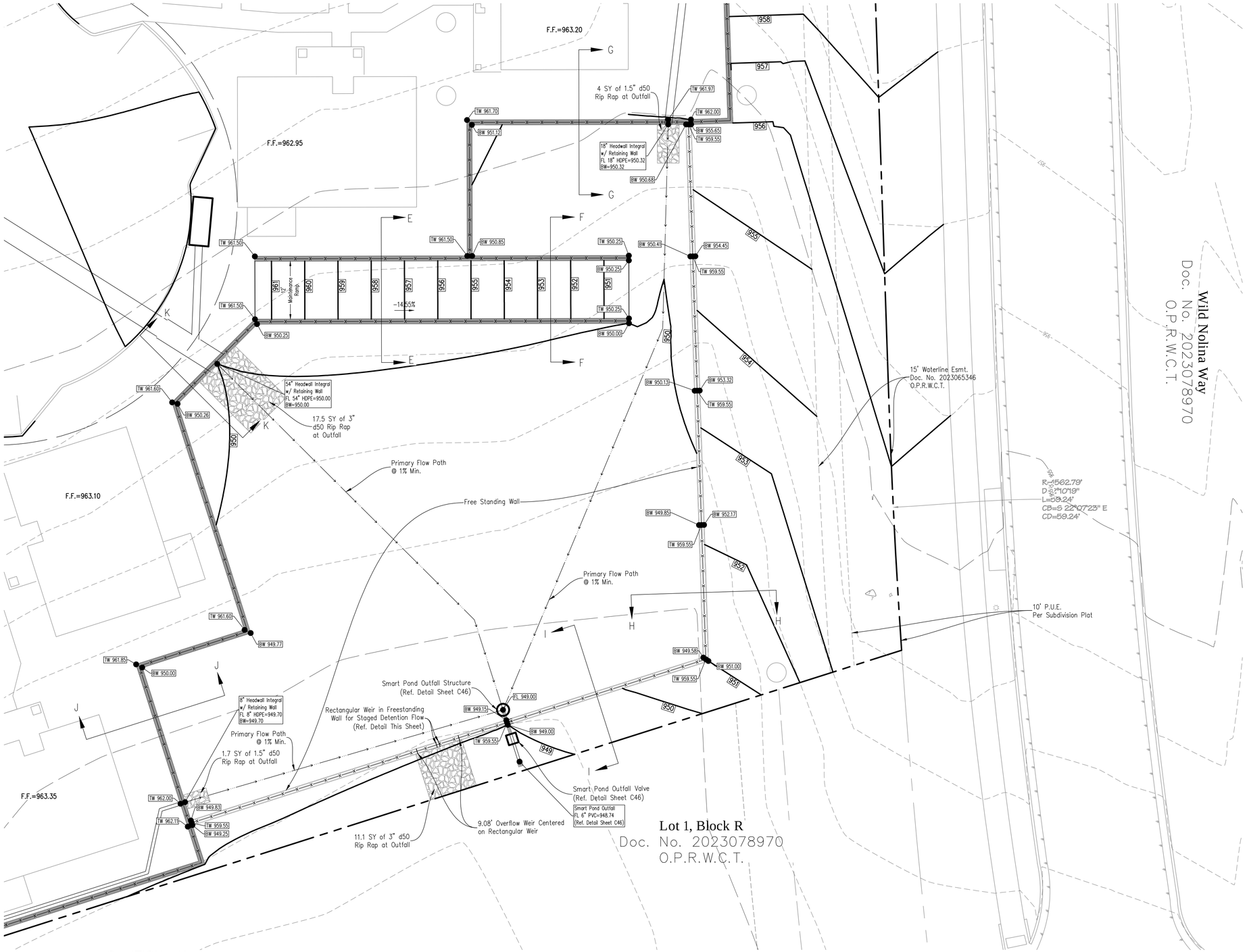
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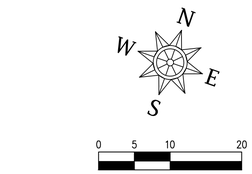
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Sheet C14

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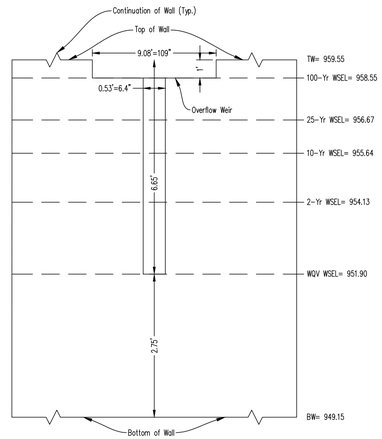
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LEGEND

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Pond B Weir Detail
N.T.S.

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WILLIAMSON COUNTY, TEXAS

POND B PLAN

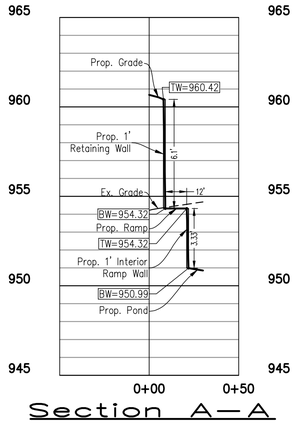
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Checked By: MEE

Sheet C15

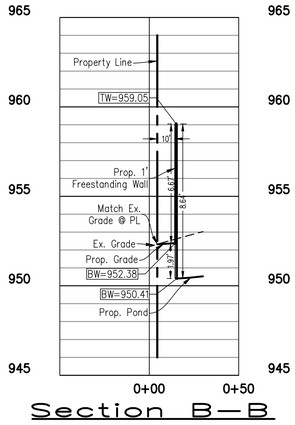
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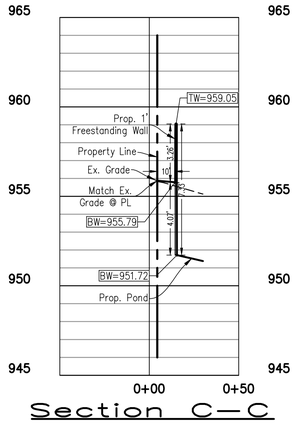
Section A—A

1"=40':H
1"=4':V



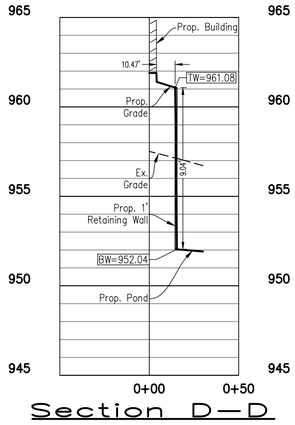
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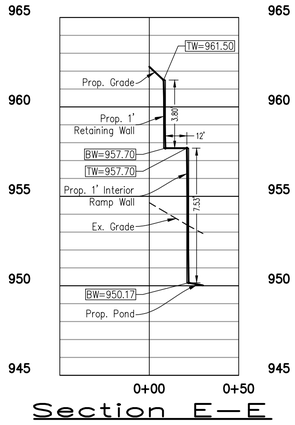
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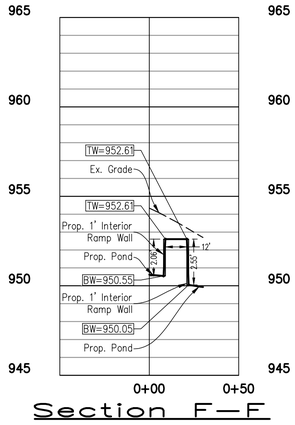
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1"=4':V



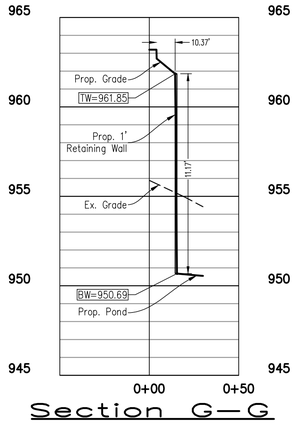
Section E—E

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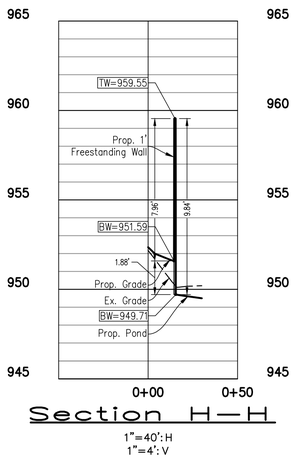
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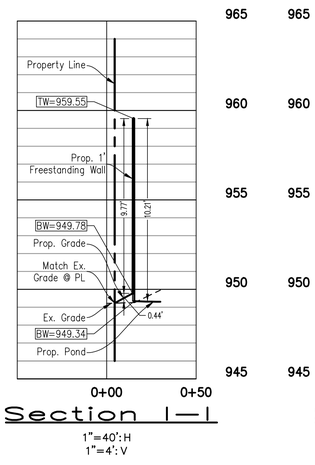
Section G—G

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1"=4':V



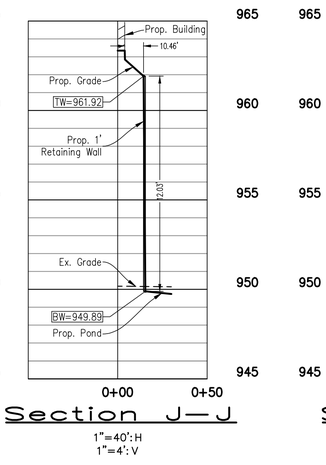
Section H—H

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1"=4':V



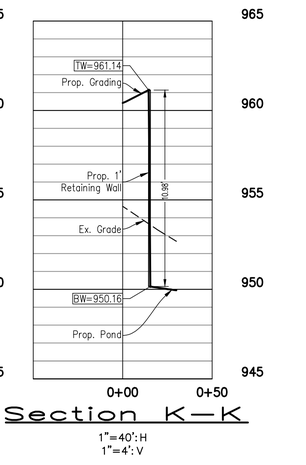
Section I—I

1"=40':H
1"=4':V



Section J—J

1"=40':H
1"=4':V



Section K—K

1"=40':H
1"=4':V

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AVILA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

POND SECTIONS

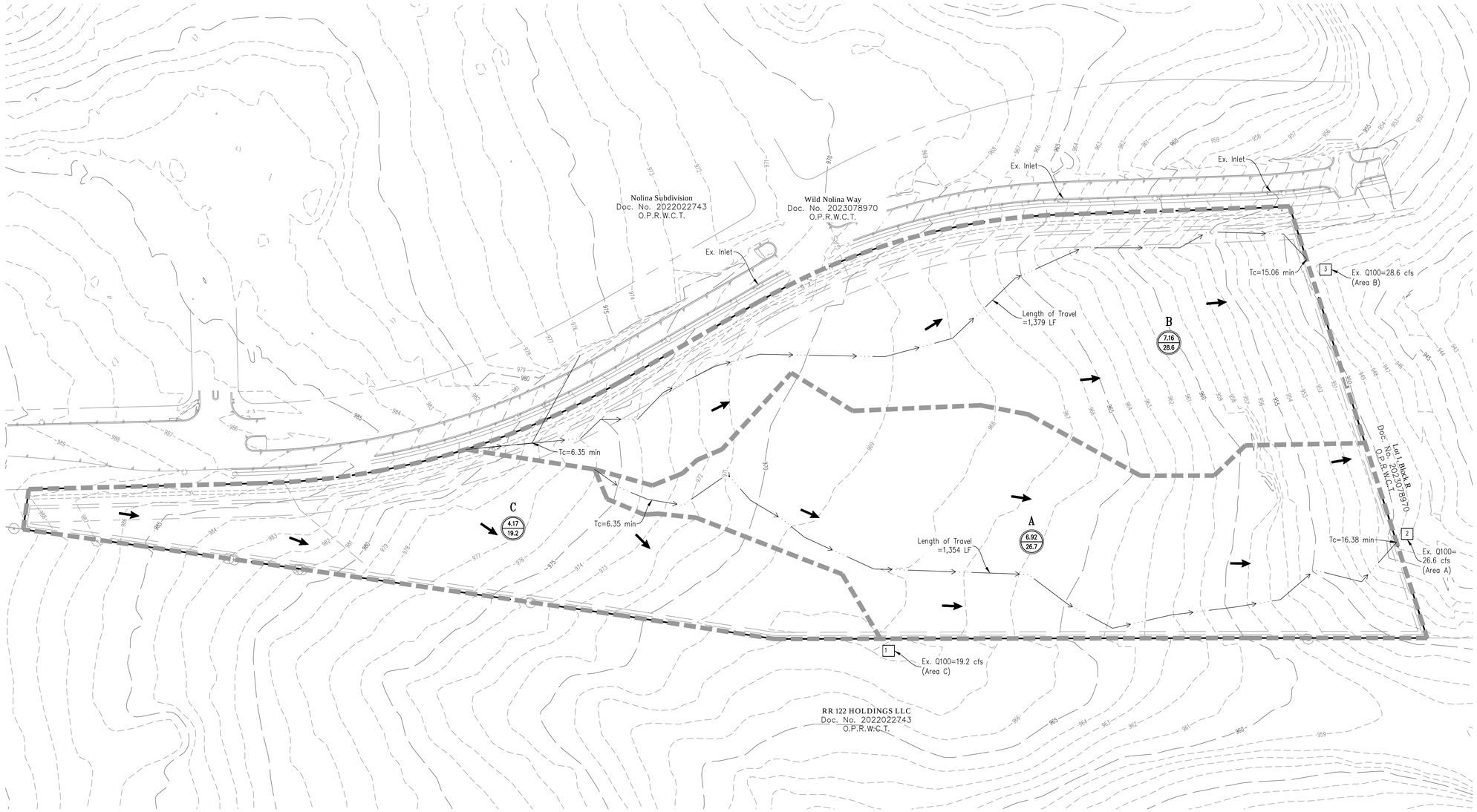
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Drawn By: CJF
Checked By: MEE

Sheet C16

SEI No. 24-002

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DRAINAGE CRITERIA

Q = C I A
C = 0.41
I_{100}= See Table
tc = See Table

D.A. No. — A
X.XX — Acres
XX.X — Q_{100}(cfs)

Drainage Divide Line

1 Design Point

Drainage Area Table							
Drainage Area No.	Drainage Area (Acres)	C	tc (Min.)	I100 (in./hr.)	Q100 (cfs)	Comments	
A	6.92	0.41	16.38	9.41	26.7	Flows to southwest	2
B	7.16	0.41	15.01	9.75	28.6	Flows to southeast	3
C	4.17	0.41	10	11.23	19.2	Sheet flows to west	1

EX. DESIGN POINT SUMMARY

1 Flow to West
Ex. Q100=19.2 cfs
(Area C)

2 Flow to Southwest
Ex. Q100=26.6 cfs
(Area A)

3 Flow to Southeast
Ex. Q100=28.6 cfs
(Area B)

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EXISTING DRAINAGE AREA MAP

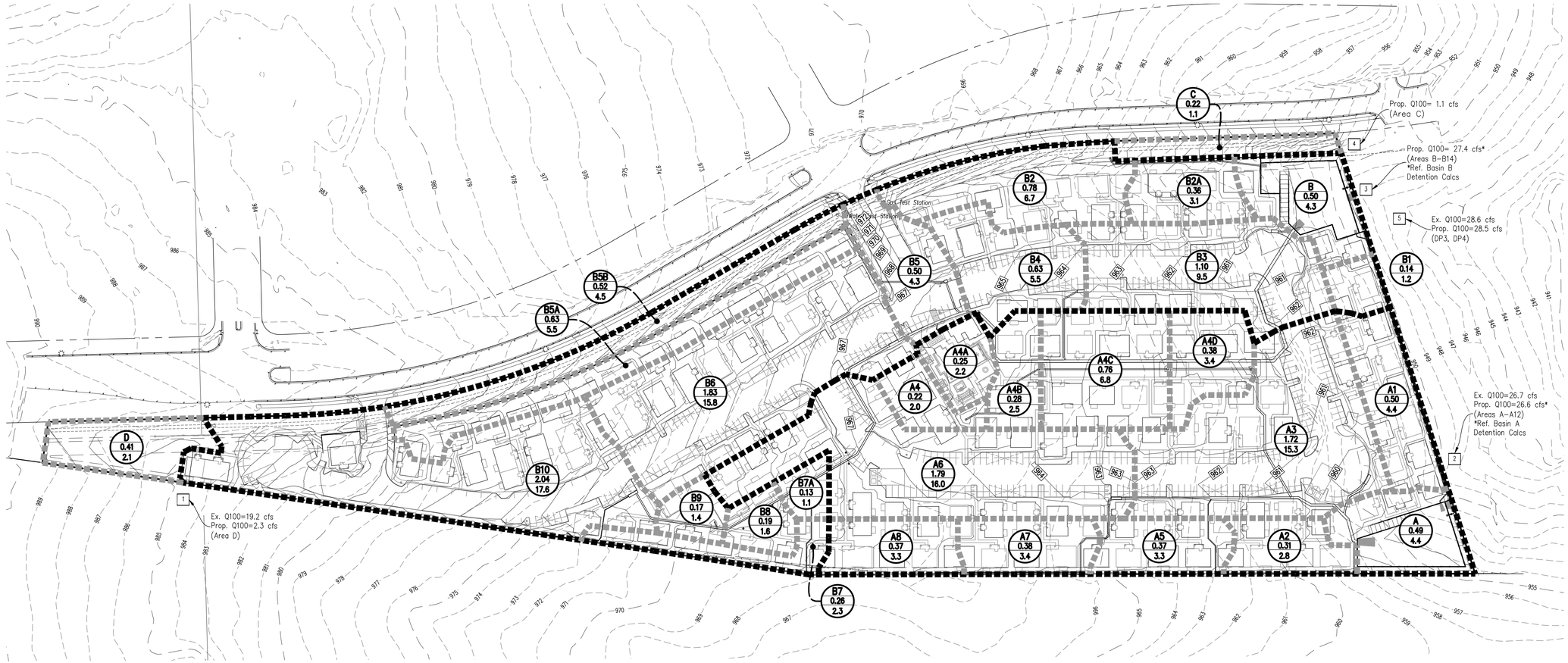
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Revisions

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Checked By: MEE

Sheet C17

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DRAINAGE CRITERIA

Q = C I A

C = See Table

I_{100}= 11.23 in/hr

tc = 10 Min.

D.A. No. → A

X.XX / XX.X — Acres / Q_{100}(cfs)

Drainage Divide Line

Basin Divide Line

1 Design Point

PROP. DESIGN POINT SUMMARY

1 Flow to West
Prop. Q100=2.3 cfs
Ex. Q100=19.2 cfs
(Area C)

2 Flow to Southwest
Ex. Q100=26.7 cfs
Prop. Q100=26.7 cfs*
*Ref. Basin A Detention Calcs

3 Flow Through Prop. Basin B Detention
Prop. Q100=27.1 cfs*
*Ref Basin B Detention Calcs

4 Flow Through Prop. Channel
Prop. Q100=1.1 cfs
(Area D)

5 Flow to Southeast
Prop. Q100=28.6 cfs
Ex. Q100=28.6 cfs
(DP3, DP4)

Drainage Area Table

Drainage Area No.	Drainage Area (Acres)	C	tc (Min.)	I100 (in./hr.)	Q100 (cfs)	Comments	
A	0.49	0.79	10	11.23	4.40	To Prop Inlet	2
A1	0.50	0.79	10	11.23	4.42	To Prop Inlet	2
A2	0.31	0.79	10	11.23	2.79	To Prop Inlet	2
A3	1.72	0.79	10	11.23	15.32	To Prop Inlet	2
A4	0.22	0.79	10	11.23	1.98	To Prop Inlet	2
A4A	0.25	0.79	10	11.23	2.21	To Prop Inlet	2
A4B	0.28	0.79	10	11.23	2.50	To Prop Inlet	2
A4C	0.76	0.79	10	11.23	6.79	To Prop Inlet	2
A4D	0.38	0.79	10	11.23	3.39	To Prop Inlet	2
A5	0.37	0.79	10	11.23	3.32	To Prop Inlet	2
A6	1.79	0.79	10	11.23	15.97	To Prop Inlet	2
A7	0.38	0.79	10	11.23	3.37	To Prop Inlet	2
A8	0.37	0.79	10	11.23	3.31	To Prop Inlet	2
B	0.50	0.77	10	11.23	4.29	To Prop. Inlet	3
B1	0.14	0.77	10	11.23	1.23	To Prop. Inlet	3

Drainage Area Table

Drainage Area No.	Drainage Area (Acres)	C	tc (Min.)	I100 (in./hr.)	Q100 (cfs)	Comments	
B2	0.78	0.77	10	11.23	6.73	To Prop. Inlet	3
B2A	0.36	0.77	10	11.23	3.10	To Prop. Inlet	3
B3	1.10	0.77	10	11.23	9.49	To Prop. Inlet	3
B4	0.63	0.77	10	11.23	5.48	To Prop. Inlet	3
B5	0.50	0.77	10	11.23	4.34	To Prop. Inlet	3
B5A	0.63	0.77	10	11.23	5.48	To Prop. Inlet	3
B5B	0.52	0.77	10	11.23	4.54	To Prop. Inlet	3
B6	1.83	0.77	10	11.23	15.84	To Prop. Inlet	3
B7	0.26	0.77	10	11.23	2.27	To Prop. Inlet	3
B7A	0.13	0.77	10	11.23	1.10	To Prop. Inlet	3
B8	0.19	0.77	10	11.23	1.61	To Prop. Inlet	3
B9	0.17	0.77	10	11.23	1.44	To Prop Inlet	3
B10	2.04	0.77	10	11.23	17.61	To Prop. Inlet	3
C	0.22	0.46	10	11.23	1.15	Sheetflow to South	4
D	0.41	0.46	10	11.23	2.13	Sheetflow to West	1

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Mark Ewing • mark.ewing@spiarsengineering.com

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Date: 6/13/2025

It is not to be used for construction.

AVILLA NOLINA

LOT 2, BLOCK R

WILLIAMSON COUNTY, TEXAS

PROPOSED DRAINAGE AREA MAP

Date

Revisions

Scale: As Shown

Drawn By: CJF

Checked By: MEE

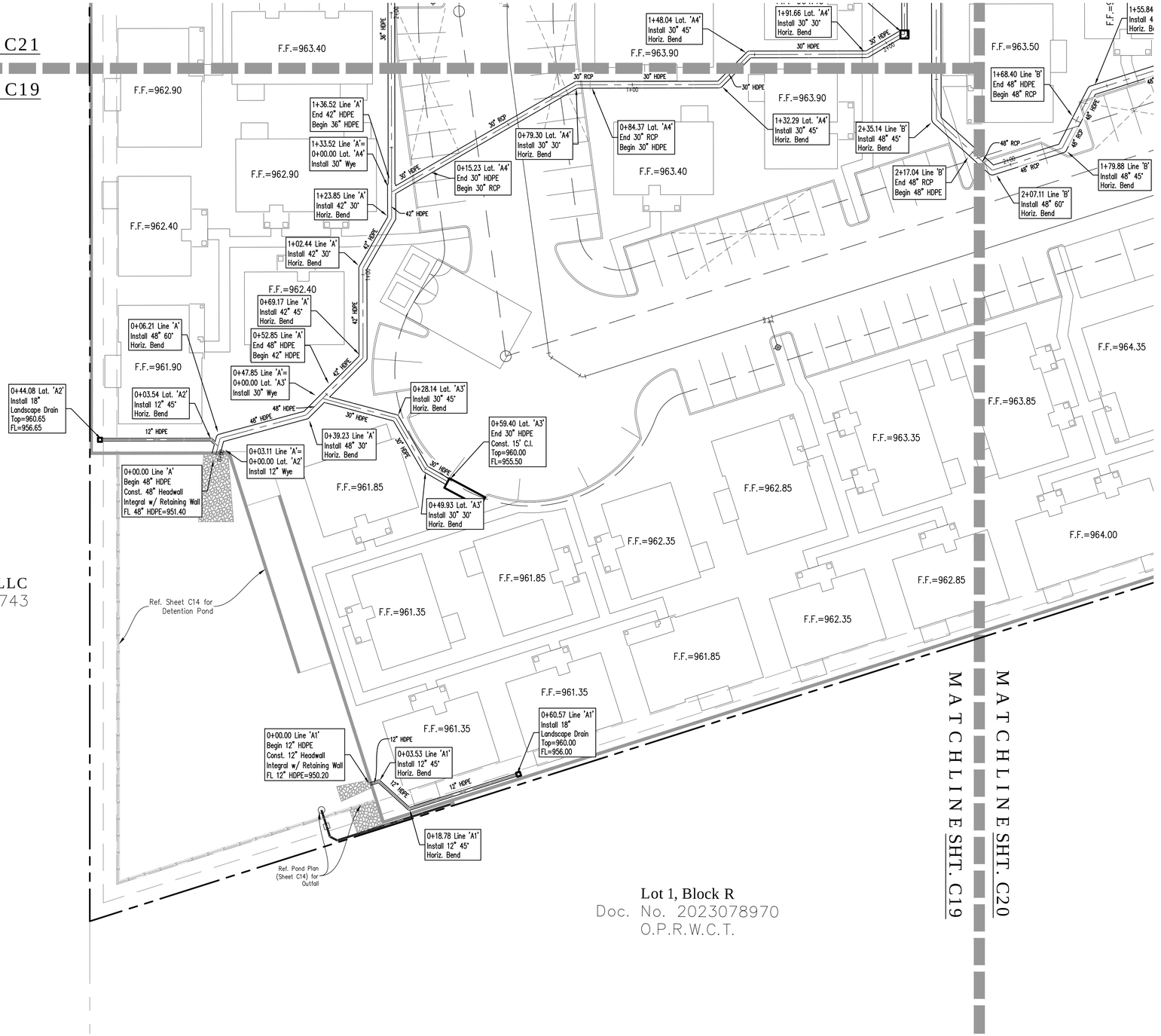
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SEI No. 24-002

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MATCHLINE SHT. C21

MATCHLINE SHT. C19

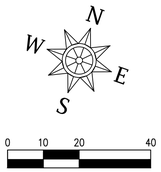


RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

Lot 1, Block R
Doc. No. 2023078970
O.P.R.W.C.T.

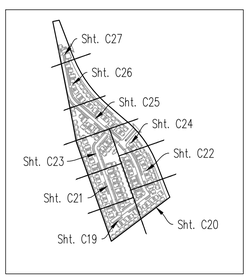
MATCHLINE SHT. C20

MATCHLINE SHT. C19



DRAINAGE GENERAL NOTES

1. All materials and construction shall conform to the Williamson County Standard Construction Details and Specifications, except as noted herein and approved by the County.
2. Contractor shall be responsible for maintaining trench safety requirements in accordance with County Standards, Texas State Law, and O.S.H.A. Standards for all excavation in excess of five feet in depth.
3. The location of all utilities located on these plans are taken from existing public records. The exact location and elevation of all public utilities must be determined by the Contractor. It shall be the duty of the Contractor to ascertain whether any additional facilities other than those shown on the plans may be present.
4. It shall be the responsibility of the Contractor to protect all public utilities in the construction of this project. All manholes, clean-outs, valve boxes, fire hydrants, etc. must be adjusted to proper line and grade by the Contractor prior to and after the placing of permanent paving. Utilities must be maintained to proper line and grade during construction of the paving for this development.
5. Drainage should be maintained away from the foundations, both during and after construction.
6. Backfill for utility lines should be carefully placed so that they will be stable. Where utility lines pass through the parking lot, the top 6" should be compacted similarly to the remainder of the lot. Utility ditches should be visually inspected during the excavation process to ensure that undesirable fill is not used.
7. Concrete for inlets and drainage structures shall be 4200 psi at 28 days.
8. If rock is encountered in the trench, rock spoil shall not be used in the upper 1.5 feet of the trench.
9. All earthwork operations, pavement installation, etc. shall conform to the Geotechnical Investigation.
10. Four-foot RCP sections with beveled ends shall be used if pipe radius is less than 100 feet.
11. All PVC shall be placed on 1.0% minimum slope unless otherwise noted.



Key Map

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AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PLAN

Revisions	Date

Scale: As Shown

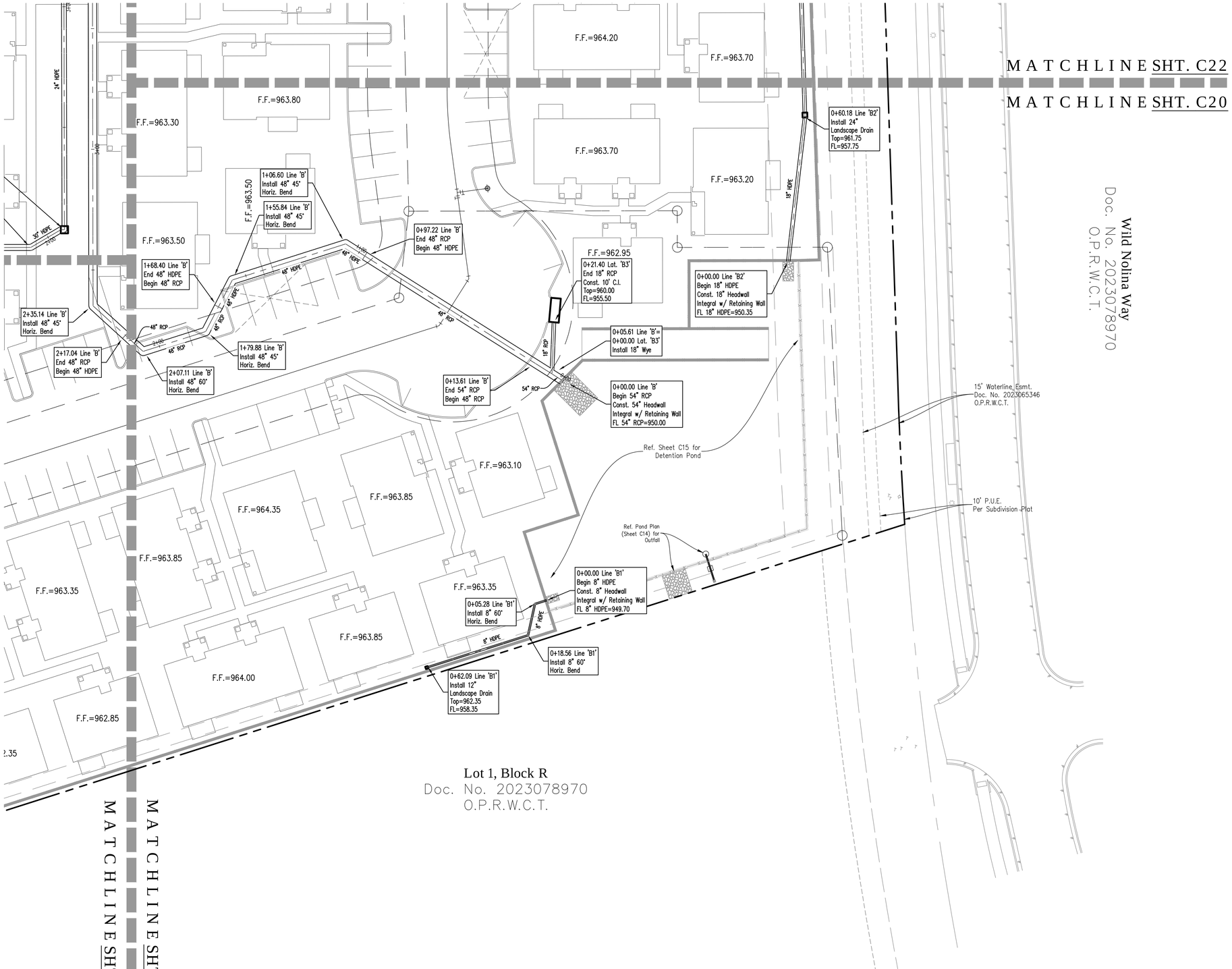
Drawn By: CJF

Checked By: MEE

Sheet C19

SEI No. 24-002

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Plotted by: kfinerth Plot Date: 6/13/2025



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1 inch = 20 ft.

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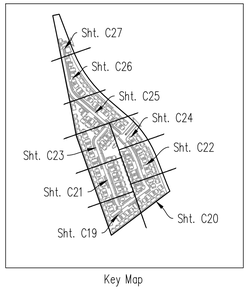
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AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PLAN



Key Map

Date

Revisions

Scale: As Shown

Drawn By: CJF

Checked By: MEE

Sheet C20

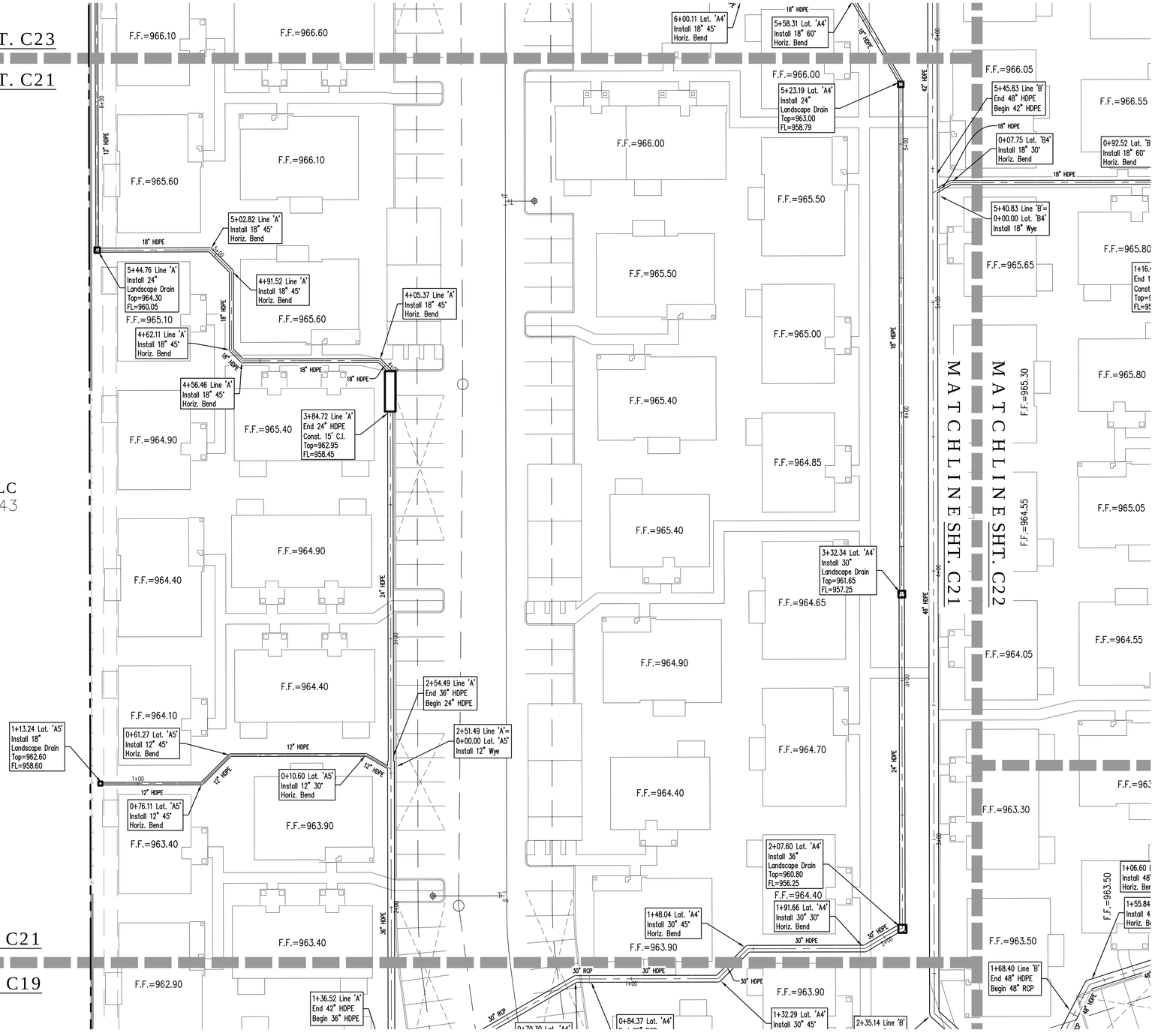
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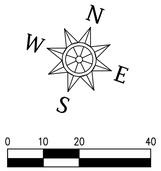
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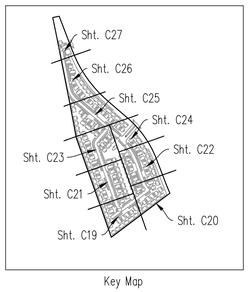
MATCHLINE SHT. C23

MATCHLINE SHT. C21

RR 122 HOLDINGS LLC
Doc. No. 2022022743
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Key Map

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AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DRAINAGE PLAN

Date

Revisions

Scale: As Shown

Drawn By: CJF

Checked By: MEE

Sheet C21

SEI No. 24-002

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MATCHLINE SHT. C24

MATCHLINE SHT. C22

MATCHLINE SHT. C21

MATCHLINE SHT. C22

MATCHLINE SHT. C20

Wild Nolina Way
Doc. No. 2023078970
O.P.R.W.C.T.

10' P.U.E.
Per Subdivision Plat

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

25' Landscape Esmt.
Doc. No. 2023076818
O.P.R.W.C.T.

F.F.=968.45
F.F.=968.20
F.F.=967.70
F.F.=967.30
F.F.=966.80
F.F.=966.95
F.F.=966.95
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F.F.=964.20
F.F.=963.70
F.F.=963.80
F.F.=963.30

6+50.45 Line 'B'
Install 42" 45°
Horiz. Bend

6+39.14 Line 'B'
Install 42" 45°
Horiz. Bend

Install 42" 45°
Horiz. Bend

End 24" HDPE
Begin 24" RCP

7+45.01 Line 'B'
Install 42" 30°
Horiz. Bend

6+91.51 Line 'B'
Install 42" 45°
Horiz. Bend

5+45.83 Line 'B'
End 48" HDPE
Begin 42" HDPE

0+07.75 Lat. 'B4'
Install 18" 30°
Horiz. Bend

0+92.52 Lat. 'B4'
Install 18" 60°
Horiz. Bend

5+40.83 Line 'B'=
0+00.00 Lat. 'B4'
Install 18" Wye

1+16.03 Lat. 'B4'
End 18" HDPE
Const. 10' C.I.
Top=963.50
FL=959.00

2+27.67 Line 'B2'
Install 24"
Landscape Drain
Top=963.00
FL=959.00

2+18.15 Line 'B2'
Install 18" 60°
Horiz. Bend

0+60.18 Line 'B2'
Install 24"
Landscape Drain
Top=961.75

3+32.34 Lat. 'A4'
Install 30"
Landscape Drain
Top=961.65
FL=957.25

42" HDPE
24" HDPE
18" HDPE

N
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0 10 20 40
1 inch = 20 ft.

Key Map

Sht. C27
Sht. C26
Sht. C25
Sht. C24
Sht. C23
Sht. C22
Sht. C21
Sht. C20
Sht. C19

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AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PLAN

Date

Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

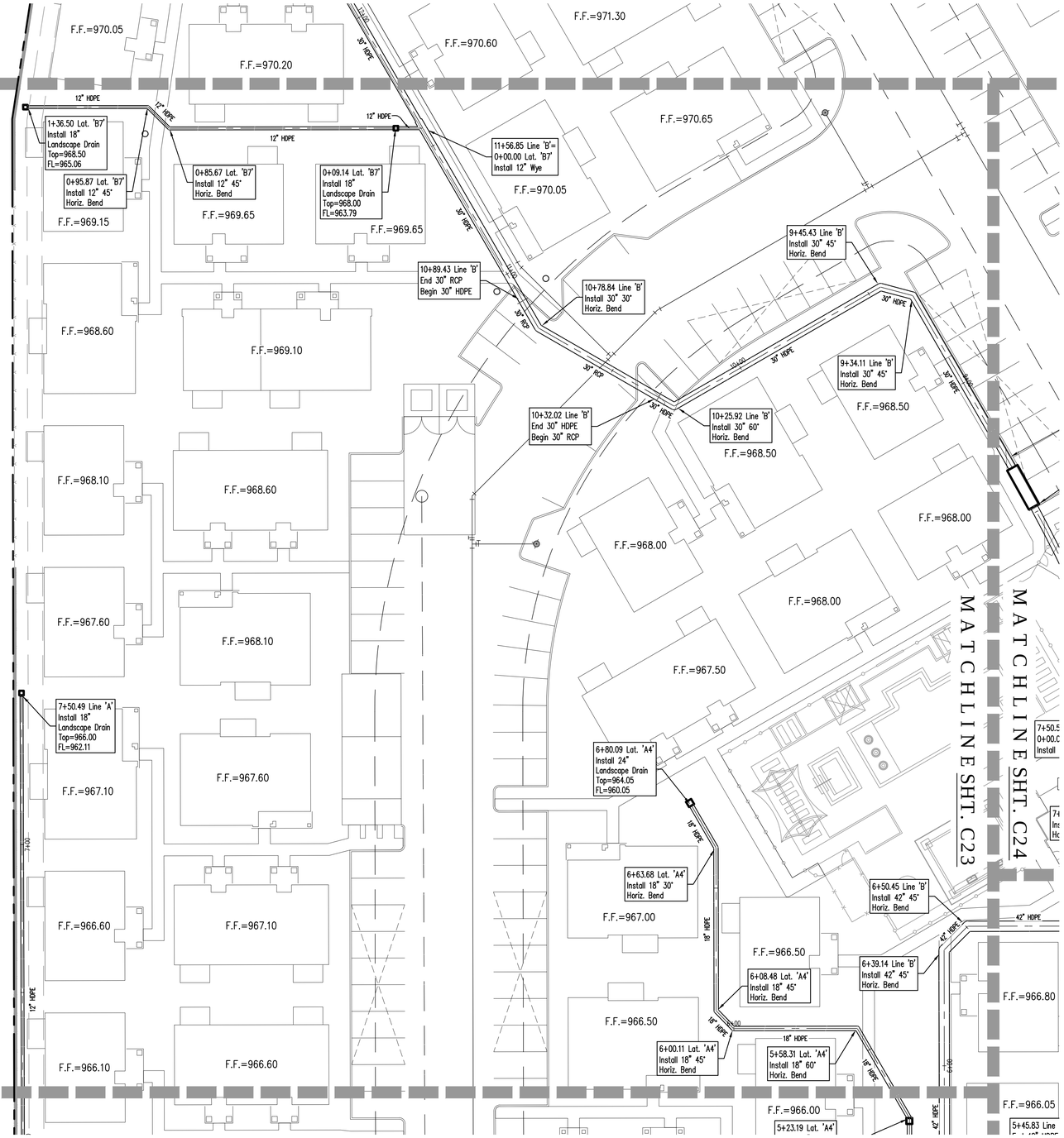
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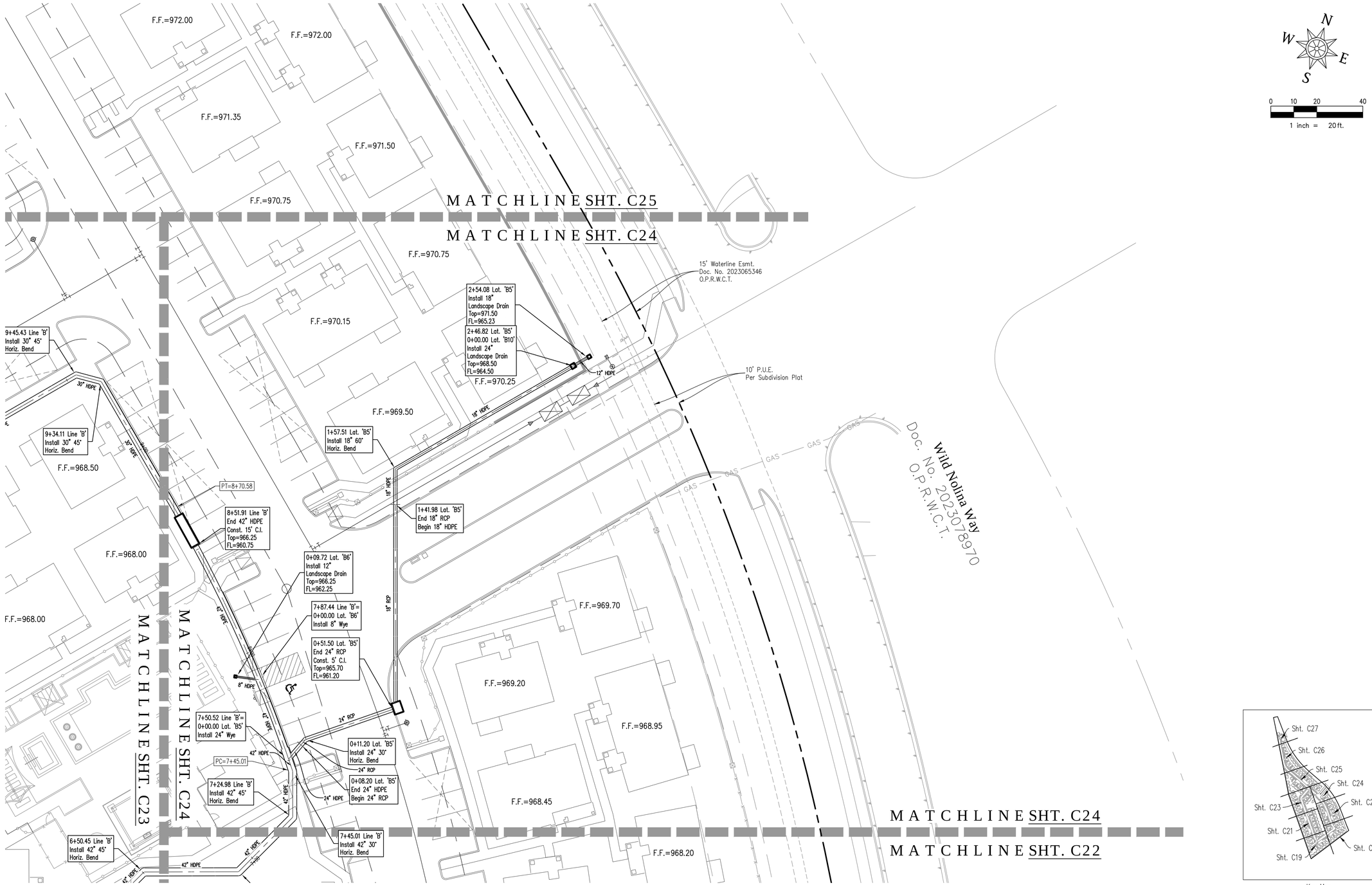
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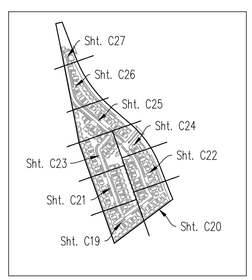
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MATCHLINE SHT. C25

MATCHLINE SHT. C23


F.F.=970.05
F.F.=970.20
F.F.=970.60
F.F.=971.30
F.F.=970.65
F.F.=970.05
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F.F.=966.50
F.F.=966.50
F.F.=966.80
F.F.=966.00
F.F.=966.05
1+36.50 Lat. "B7" Install 18" Landscape Drain Top=968.50 FL=965.06
0+95.87 Lat. "B7" Install 12" 45° Horiz. Bend
0+85.67 Lat. "B7" Install 12" 45° Horiz. Bend
0+09.14 Lat. "B7" Install 18" Landscape Drain Top=968.00 FL=963.79
11+56.85 Line "B"= 0+00.00 Lat. "B7" Install 12" Wye
10+89.43 Line "B" End 30" RCP Begin 30" HDPE
10+78.84 Line "B" Install 30" 30° Horiz. Bend
9+45.43 Line "B" Install 30" 45° Horiz. Bend
9+34.11 Line "B" Install 30" 45° Horiz. Bend
10+32.02 Line "B" End 30" HDPE Begin 30" RCP
10+25.92 Line "B" Install 30" 60° Horiz. Bend
7+50.49 Line "A" Install 18" Landscape Drain Top=966.00 FL=962.11
6+80.09 Lat. "A4" Install 24" Landscape Drain Top=964.05 FL=960.05
6+63.68 Lat. "A4" Install 18" 30° Horiz. Bend
6+08.48 Lat. "A4" Install 18" 45° Horiz. Bend
6+00.11 Lat. "A4" Install 18" 45° Horiz. Bend
5+58.31 Lat. "A4" Install 18" 60° Horiz. Bend
5+23.19 Lat. "A4"
6+50.45 Line "B" Install 42" 45° Horiz. Bend
6+39.14 Line "B" Install 42" 45° Horiz. Bend
12" HDPE
18" HDPE
24" HDPE
30" HDPE
30" RCP
42" HDPE
1140
1140
1140





Key Map

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AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DRAINAGE PLAN

Revisions

Date

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C24

SEI No. 24-002

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1 inch = 20 ft.

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Mark Ewing • mark.ewing@spiarsengineering.com

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Date: 6/13/2025
It is not to be used for construction.

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DRAINAGE PLAN

Date	Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C25

SEI No. 24-002

Plotted by: Kenneth Post Date: 6/13/2025 3:51 PM
Drawing: G:\2024 JOBS\24-002 Avilla Nolina\CAD\Drainage Plan.dwg Saved By: RSteinmle Save Time: 6/13/2025 3:48:59 PM

Nolina Subdivision
Doc. No. 2022022743
O.P.R.W.C.T.

Wild Nolina Way
Doc. No. 2023078970
O.P.R.W.C.T.

10' P.U.E.
Per Subdivision Plat

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

F.F.=982.00
F.F.=980.00
F.F.=979.25
F.F.=979.00
F.F.=978.25
F.F.=978.00
F.F.=977.50
F.F.=977.00
F.F.=976.45
F.F.=976.25
F.F.=975.70
F.F.=975.50
F.F.=974.55

8" HDPE

Install 12"
Landscape Drain
Top=973.00
FL=969.00

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

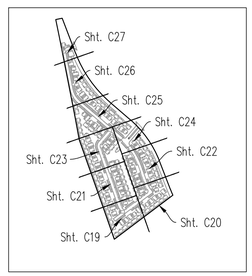
MATCHLINE SHT. C27

MATCHLINE SHT. C26

MATCHLINE SHT. C26

MATCHLINE SHT. C25

0 10 20 40
1 inch = 20 ft.



Key Map

CAUTION !!!
EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

CALL TEXAS ONE-CALL (811) OR OTHER UTILITY LOCATION SERVICES 48 HOURS PRIOR TO CONSTRUCTION ACTIVITY. SPIARS ENGINEERING, INC. IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES OR DEPICTING EXACT LOCATIONS OF UTILITIES ON DRAWINGS.

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AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PLAN

Date	Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C26

SEI No. 24-002

Plotted by: kmeeth Plot Date: 6/13/2025 3:51 PM
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Nolina Subdivision
Doc. No. 2022022743
O.P.R.W.C.T.

Wild Nolina Way
Doc. No. 2023078970
O.P.R.W.C.T.

N
Doc.

15' Waterline Esmt.
Doc. No. 2023065346
O.P.R.W.C.T.

10' P.U.E.
Per Subdivision Plat

No Subsurface Storm
Sewer This Sheet

F.F.=987.50

F.F.=

MATCHLINE SHT. C27

MATCHLINE SHT. C26

RR 122 HOLDINGS LLC
Doc. No. 2022022743
O.P.R.W.C.T.

N E S W

0 10 20 40
1 inch = 20 ft.

Sht. C27
Sht. C26
Sht. C25
Sht. C24
Sht. C23
Sht. C22
Sht. C21
Sht. C20
Sht. C19

Key Map

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AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PLAN

Date

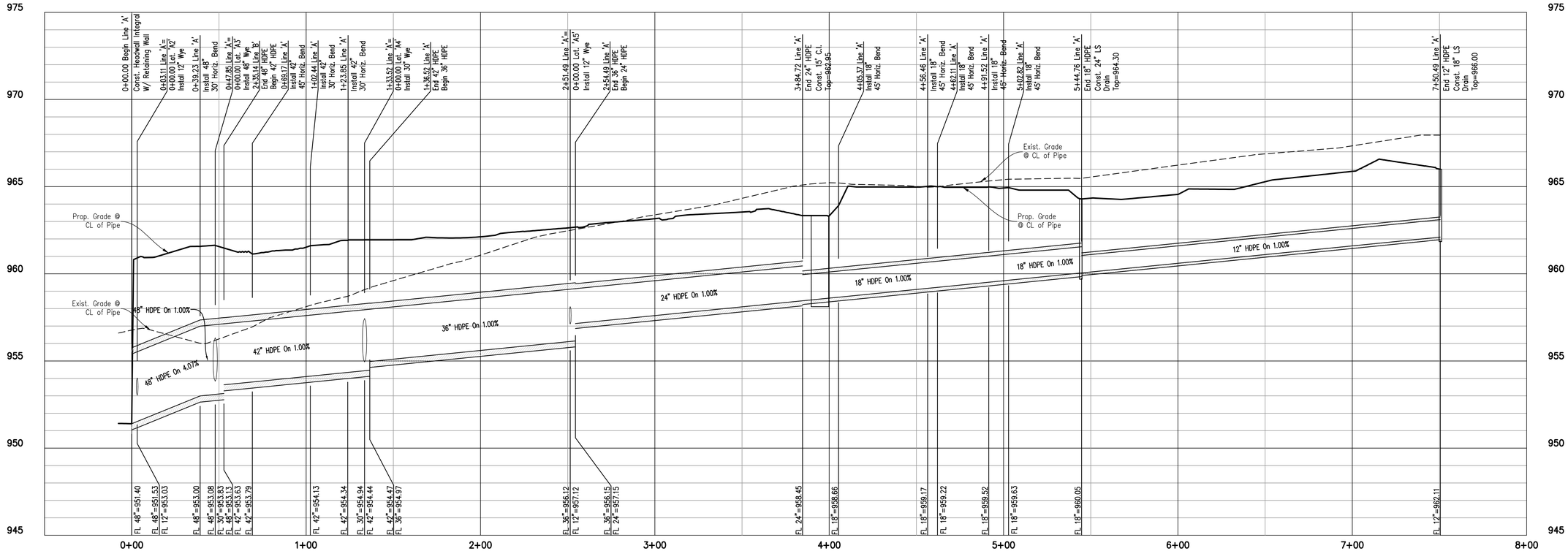
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C27

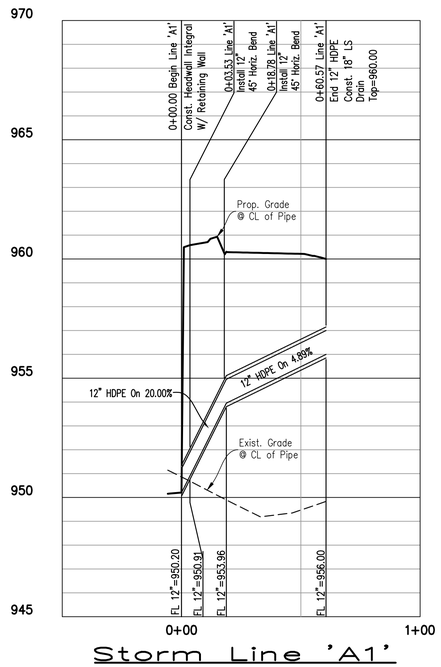
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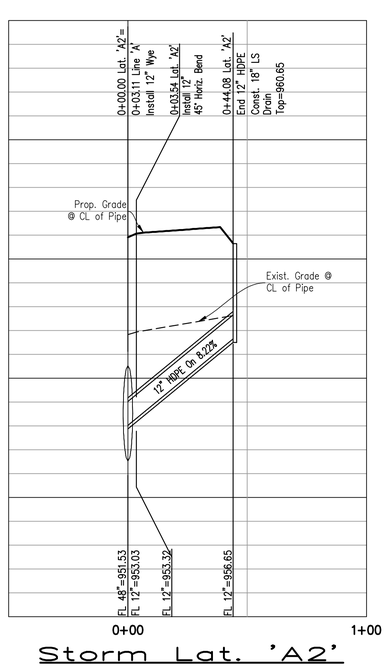
Storm Line 'A'

1"=30': H
1"=3': V



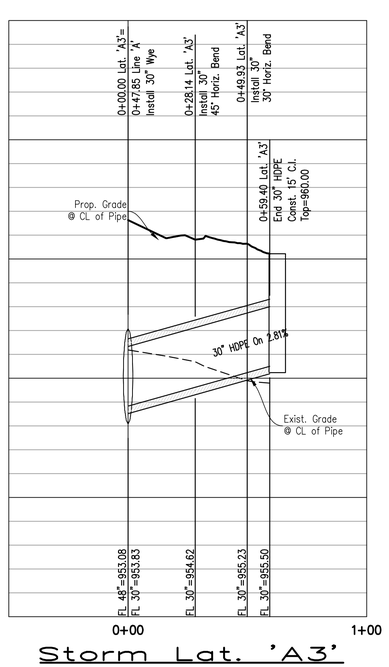
Storm Line 'A1'

1"=30': H
1"=3': V



Storm Lat. 'A2'

1"=30': H
1"=3': V



Storm Lat. 'A3'

1"=30': H
1"=3': V

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AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILE

Date

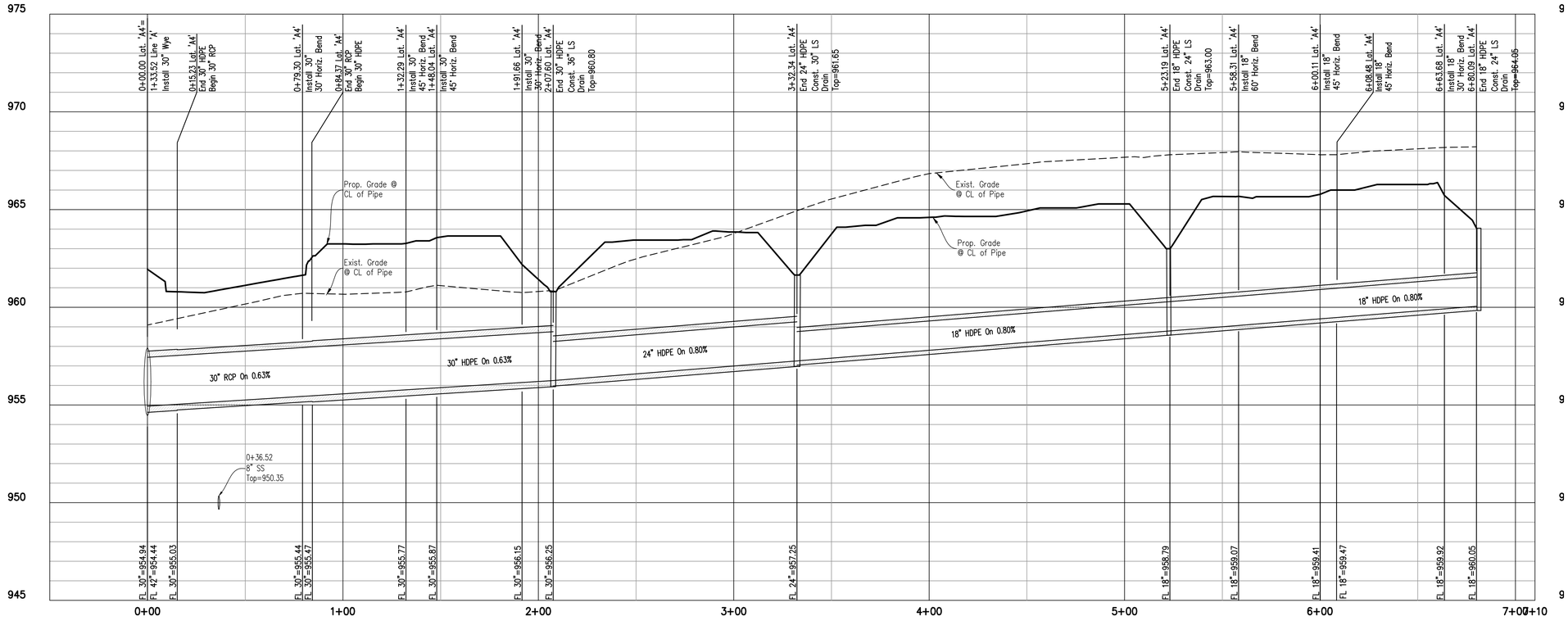
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C28

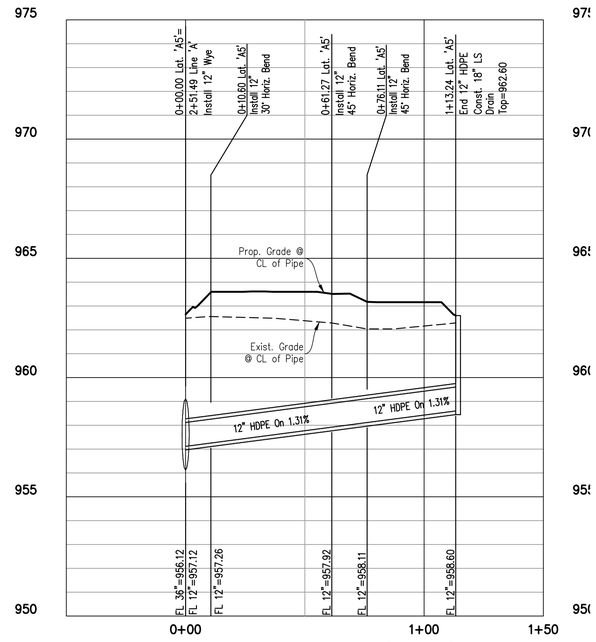
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Plotted by: kilsweth Plot Date: 6/13/2025 3:51 PM



Storm Lat. 'A4'

1"=30': H
1"=3': V



Storm Lat. 'A5'

1"=30': H
1"=3': V

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AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILE

Date	Revisions

Scale: As Shown

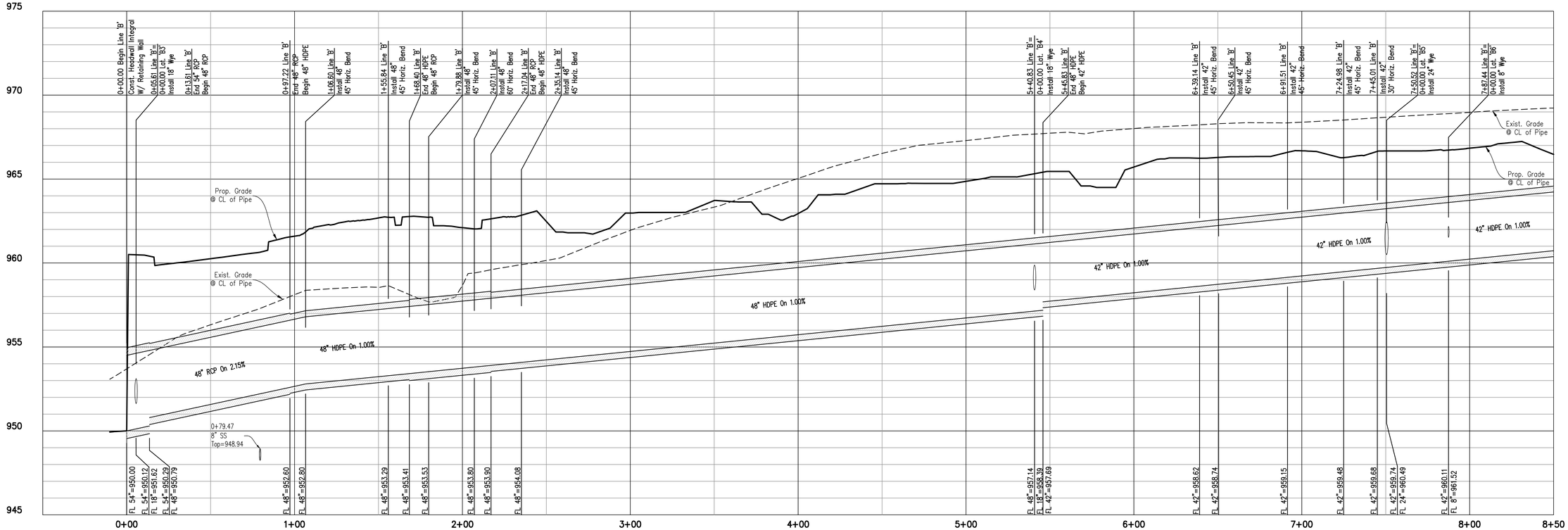
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Checked By: MEE

Sheet C29

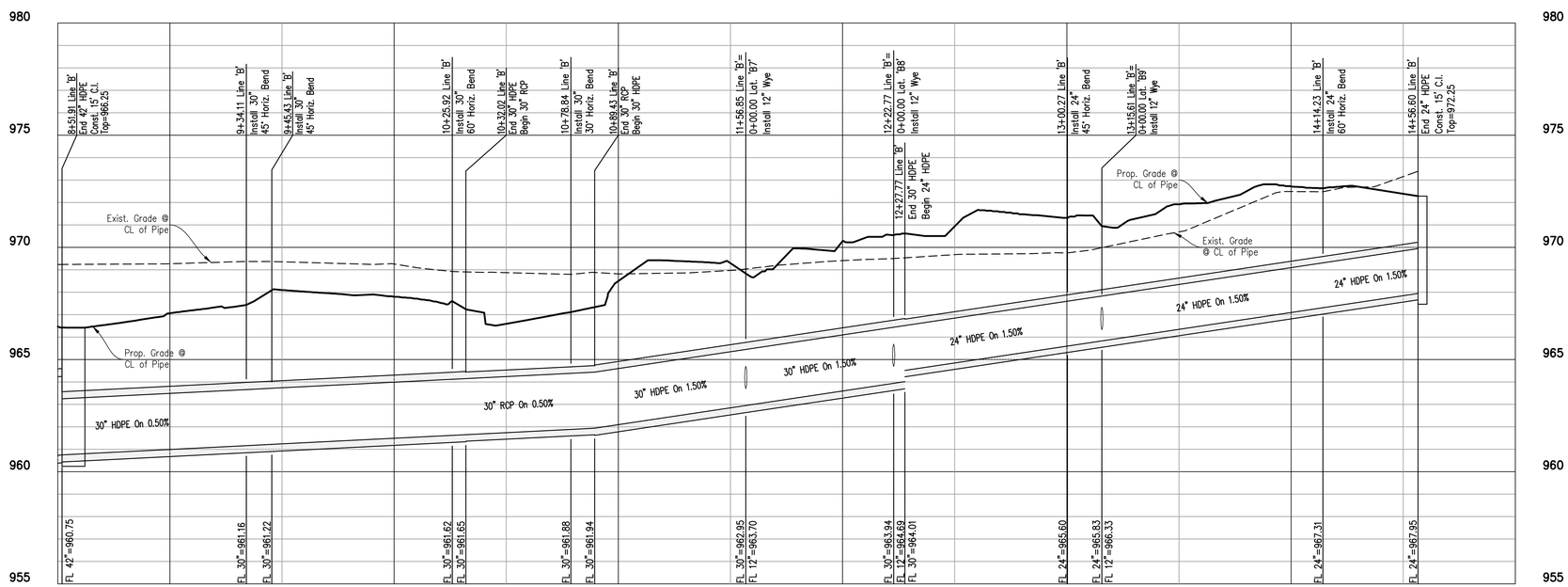
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Storm Line 'B'

1"=30': H
1"=3': V



Storm Line 'B'

1"=30': H
1"=3': V

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AVILA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILES

Date

Revisions

Scale: As Shown

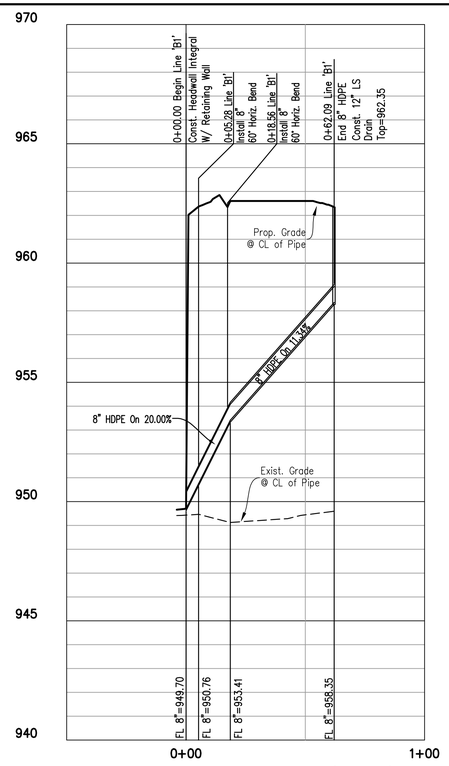
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Checked By: MEE

Sheet C30

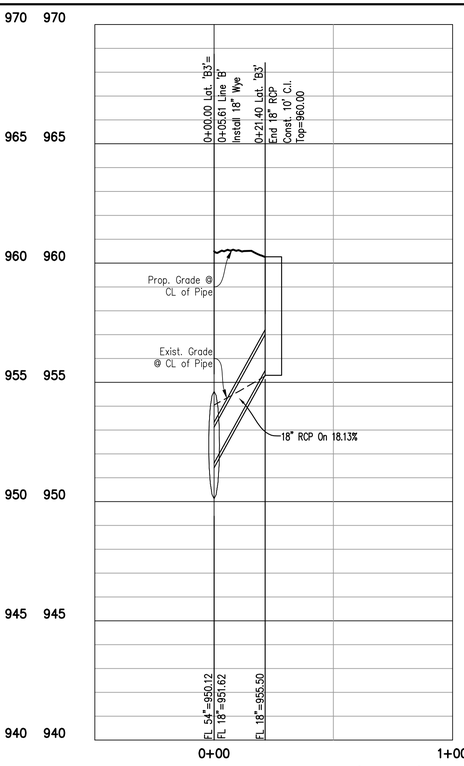
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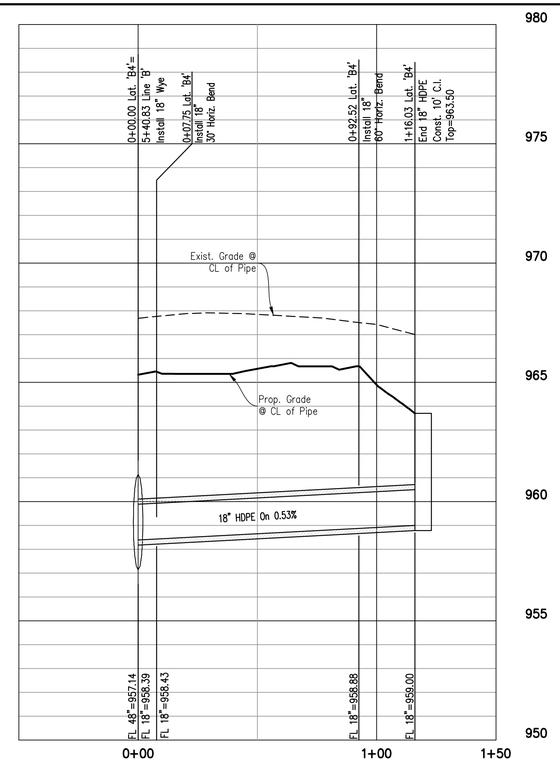
Storm Line 'B1'

1"=30': H
1"=3': V



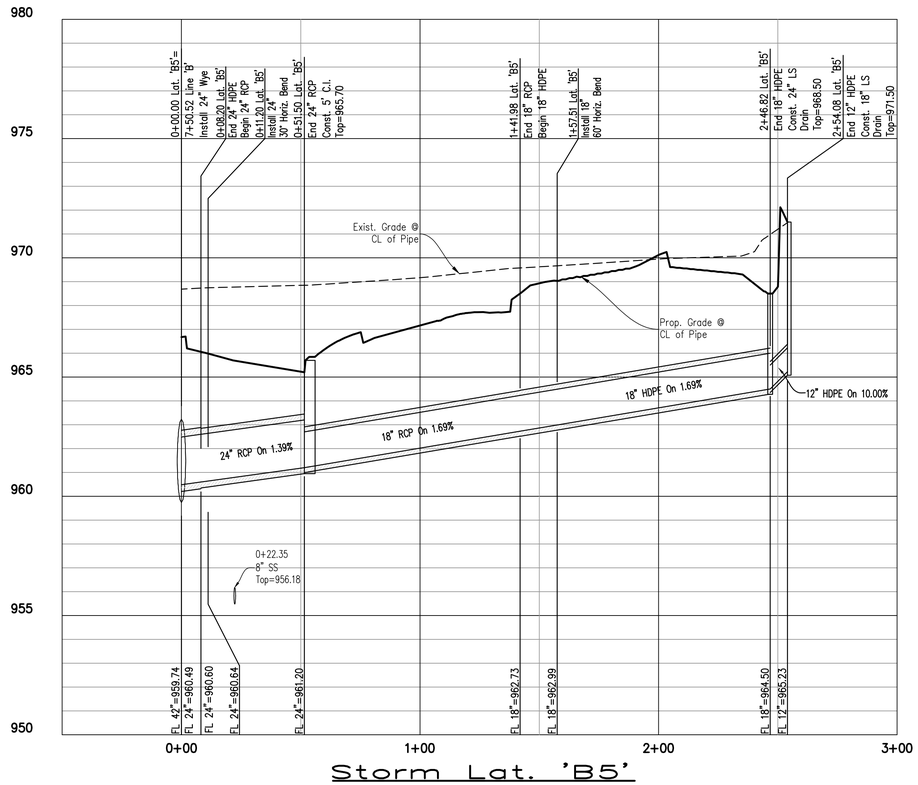
Storm Lat. 'B3'

1"=30': H
1"=3': V



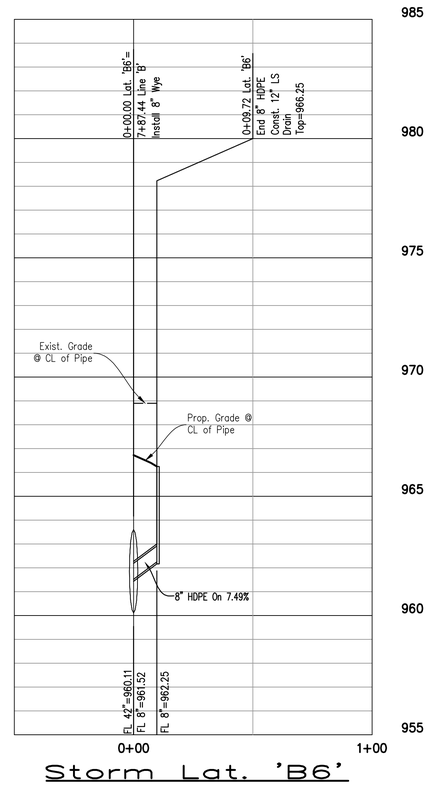
Storm Lat. 'B4'

1"=30': H
1"=3': V



Storm Lat. 'B5'

1"=30': H
1"=3': V



Storm Lat. 'B6'

1"=30': H
1"=3': V

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AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILES

Date

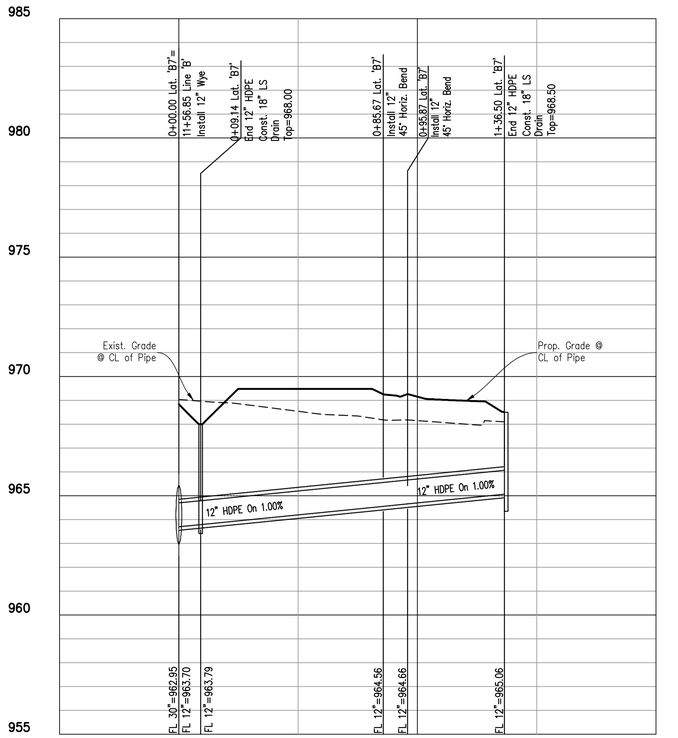
Revisions

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C31

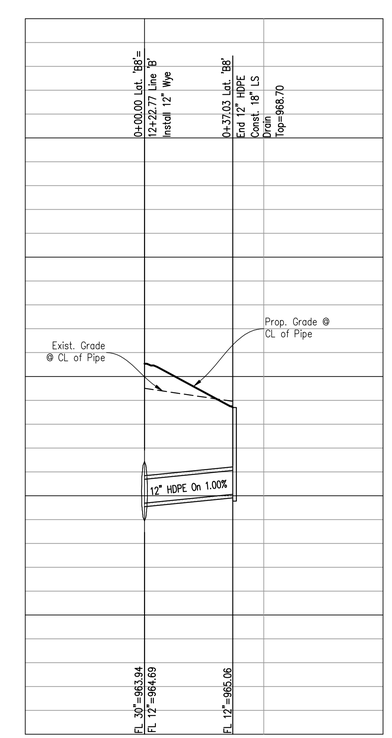
SEI No. 24-002

Plotted by: Kenneth Plot Date: 6/13/2025 3:51 PM
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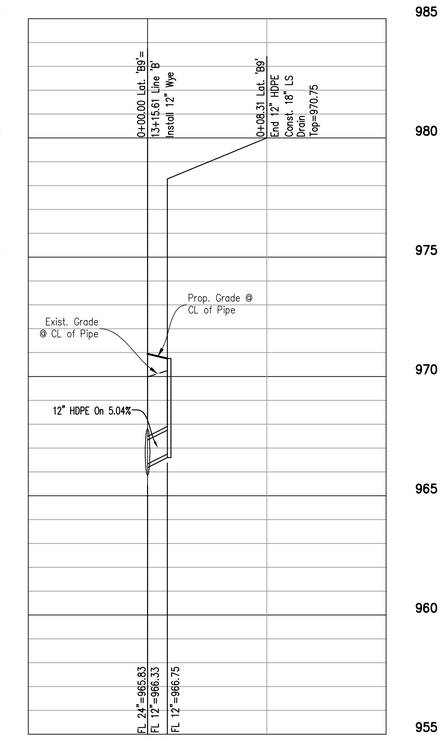
Storm Lat. 'B7'

1"=30': H
1"=3': V



Storm Lat. 'B8'

1"=30': H
1"=3': V



Storm Lat. 'B9'

1"=30': H
1"=3': V

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LOT 2, BLOCK R

WILLIAMSON COUNTY, TEXAS

DRAINAGE PROFILES

Revisions	Date

Scale: As Shown

Drawn By: CJF

Checked By: MEE

Sheet C32

SEI No. 24-002

Plotted by: kSmith Plot Date: 6/13/2025 3:51 PM
Drawing: G:\2024_JOBS\24-002 Avilla Nolina\CAD\Drainage Plan.dwg Saved By: RSbarnie Save Time: 6/13/2025 3:48:59 PM

POND 'A' BMP CALCULATIONS

WQV Calcs-Pond A	
Total Area	7.83
Prop. Impervious Area (ac)	4.70
Prop. Pervious Area (ac)	3.13
Existing Impervious Area (ac)	0
Step 1	
An (ac)	4.7
P (in) - WilCo	32
Lm (lbs)	4090.88
Step 2	
SmartPond	
TSS Removal Efficiency	91%
Step 3	
Lr (lbs)	4784.71
Step 4	
F	0.855
Step 5	
Rainfall Depth (Table 3-5)	1.38
IC	0.600
Runoff Coefficient	0.421
WQV (CF)	16,494
Sediment Storage (CF)	3,299
Total WQV (CF)	**19,792**

POND 'B' BMP CALCULATIONS

WQV Calcs-Pond B	
Total Area	9.78
Prop. Impervious Area (ac)	5.32
Prop. Pervious Area (ac)	4.46
Existing Impervious Area (ac)	0
Step 1	
An (ac)	5.32
P (in) - WilCo	32
Lm (lbs)	4630.528
Step 2	
SmartPond	
TSS Removal Efficiency	91%
Step 3	
Lr (lbs)	5430.3092
Step 4	
F	0.853
Step 5	
Rainfall Depth (Table 3-5)	1.38
IC	0.544
Runoff Coefficient	0.383
WQV (CF)	18764
Sediment Storage (CF)	3753
Total WQV (CF)	**22,517**

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AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

WQV CALCULATIONS

Date

Revisions

Scale: As Shown

Drawn By: CJF

Checked By: MEE

Sheet C33

SEI No. 24-002

Drawing: C:\2024 JOBS\24-002 Avilla Nolina\CAD\Drainage Calculations.dwg Saved By: Kenneth Save Time: 6/13/2025 3:33:53 PM
Plotted by: Kenneth Plot Date: 6/13/2025 3:51 PM

LAG TIME CALCULATIONS

Basin Name	Calculated Longest Flowpath (ft) (1)	Overland Flow: Length (ft) (2)	Slope (ft/ft) (3)	Surface Type (4)	Manning's n (5)	To (min) (6)	Shallow Concentrated Flow: Length (ft) (7)	Slope (ft/ft) (8)	Surface Type (9)	K (10)	Ts (min) (11)	Channel/Conduit Flow: Length (ft) (12)	Slope (ft/ft) (13)	Manning's n (14)	X-Section Type	Area (ft^2) (15)	WP (ft) (16)	Channel Velocity (f/s) (17)	Tt (min) (19)	Time of Conc. Calc. (min) (20)
A (EX)	1354	100	0.026	Grass-Range (Natural)	0.130	6.98	1254	0.019	unpaved	16.1	9.40									
					Total To (min)=	6.98				Total Ts (min)=	9.40								Total Tt (min)=	0.00	16.38
B (EX)	1379	100	0.033	Grass-Range (Natural)	0.130	6.35	1279	0.023	unpaved	16.1	8.71									
					Total To (min)=	6.35				Total Ts (min)=	8.71								Total Tt (min)=	0.00	15.06

BASIN 'A' DETENTION CALCULATIONS

2-YR

EXISTING DISCHARGE TO DP2	
DRAINAGE AREA (AC)	6.91
RUNOFF COEFFICIENT, C	0.25
Tc (MIN)	16.4
INTENSITY (IN/HR)	3.65
Q_{100-YR} (CFS)	6.3

$Q_{ALLOWABLE}$ (CFS)	6.3
Q_{ACTUAL} (CFS)	5.4

PROPOSED CONDITIONS TO POND A	
DRAINAGE AREA (AC)	7.83
RUNOFF COEFFICIENT, C	0.60
Tc (MIN)	10.00
INTENSITY (IN/HR)	4.51
$Q_{MAX\ INFLOW}$ (CFS)	21.12

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b10= 54.2839
d10= 11.4257
e10= 0.8119

MODIFIED RATIONAL METHOD - 2 YEAR STORM EVENT							
DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	2.64	12.36	22,254	5.35	6,420	15,834	0.364
35	2.41	11.27	23,669	5.35	7,223	16,447	0.378
40	2.21	10.37	24,895	5.35	8,025	16,870	0.387
50	1.92	8.98	26,938	5.35	9,630	17,308	0.397
60	1.70	7.94	28,600	5.35	11,235	17,365	0.399
70	1.53	7.14	29,999	5.35	12,840	17,159	0.394
80	1.39	6.50	31,207	5.35	14,445	16,762	0.385
90	1.28	5.98	32,271	5.35	16,050	16,221	0.372
100	1.18	5.54	33,221	5.35	17,655	15,566	0.357
110	1.10	5.16	34,080	5.35	19,260	14,820	0.340
120	1.03	4.84	34,864	5.35	20,865	13,999	0.321
130	0.97	4.56	35,586	5.35	22,470	13,116	0.301

<--REQUIRED STORAGE=0.399 AC-FT
=17365 CU. FT.

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 2YR	0.25	14.25
N/A	0	0
COMBINED	*0.250*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 2YR	0.75	4.70
Developed, Grass, Fair Condition-Steep, 2YR	0.37	3.13
COMBINED	*0.598*	*7.83*

25-YR

EXISTING DISCHARGE TO DP2	
DRAINAGE AREA (AC)	6.91
RUNOFF COEFFICIENT, C	0.34
Tc (MIN)	16.4
INTENSITY (IN/HR)	7.23
Q_{100-YR} (CFS)	16.98

$Q_{ALLOWABLE}$ (CFS)	17.0
Q_{ACTUAL} (CFS)	16.4

PROPOSED CONDITIONS TO POND A	
DRAINAGE AREA (AC)	7.83
RUNOFF COEFFICIENT, C	0.71
Tc (MIN)	10.00
INTENSITY (IN/HR)	8.74
$Q_{MAX\ INFLOW}$ (CFS)	48.76

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b25= 109.8397
d25= 13.7038
e25= 0.7994

MODIFIED RATIONAL METHOD - 25 YEAR STORM EVENT							
DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	5.36	29.90	53,816	16.38	19,656	34,160	0.784
35	4.92	27.42	57,577	16.38	22,113	35,464	0.814
40	4.55	25.36	60,857	16.38	24,570	36,287	0.833
50	3.97	22.12	66,365	16.38	29,484	36,881	0.847
60	3.53	19.69	70,876	16.38	34,398	36,478	0.837
70	3.19	17.78	74,692	16.38	39,312	35,380	0.812
80	2.91	16.25	77,998	16.38	44,226	33,772	0.775
90	2.69	14.98	80,916	16.38	49,140	31,776	0.729
100	2.50	13.92	83,528	16.38	54,054	29,474	0.677
110	2.33	13.01	85,893	16.38	58,968	26,925	0.618
120	2.19	12.23	88,056	16.38	63,882	24,174	0.555
130	2.07	11.54	90,049	16.38	68,796	21,253	0.488

<--REQUIRED STORAGE=0.847 AC-FT
=36881 CU. FT.

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 25YR	0.34	14.25
N/A	0	0
COMBINED	*0.340*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 25YR	0.88	4.70
Developed, Grass, Fair Condition-Steep, 25YR	0.46	3.13
COMBINED	*0.712*	*7.83*

10-YR

EXISTING DISCHARGE TO DP2	
DRAINAGE AREA (AC)	6.91
RUNOFF COEFFICIENT, C	0.30
Tc (MIN)	16.4
INTENSITY (IN/HR)	5.88
Q_{100-YR} (CFS)	12.19

$Q_{ALLOWABLE}$ (CFS)	12.2
Q_{ACTUAL} (CFS)	11.5

PROPOSED CONDITIONS TO POND A	
DRAINAGE AREA (AC)	7.83
RUNOFF COEFFICIENT, C	0.67
Tc (MIN)	10.00
INTENSITY (IN/HR)	7.17
$Q_{MAX\ INFLOW}$ (CFS)	37.40

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b10= 87.6048
d10= 12.7018
e10= 0.8016

MODIFIED RATIONAL METHOD - 10 YEAR STORM EVENT							
DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	4.32	22.54	40,564	11.50	13,800	26,764	0.614
35	3.95	20.62	43,305	11.50	15,525	27,780	0.638
40	3.65	19.04	45,691	11.50	17,250	28,441	0.653
50	3.18	16.56	49,688	11.50	20,700	28,988	0.665
60	2.82	14.71	52,957	11.50	24,150	28,807	0.661
70	2.54	13.27	55,719	11.50	27,600	28,119	0.646
80	2.32	12.11	58,111	11.50	31,050	27,061	0.621
90	2.14	11.15	60,221	11.50	34,500	25,721	0.590
100	1.98	10.35	62,109	11.50	37,950	24,159	0.555
110	1.85	9.67	63,819	11.50	41,400	22,419	0.515
120	1.74	9.08	65,383	11.50	44,850	20,533	0.471
130	1.64	8.57	66,825	11.50	48,300	18,525	0.425

<--REQUIRED STORAGE=0.665 AC-FT
=28988 CU. FT.

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 10YR	0.3	14.25
N/A	0	0
COMBINED	*0.300*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 10YR	0.83	4.70
Developed, Grass, Fair Condition-Steep, 10YR	0.42	3.13
COMBINED	*0.666*	*7.83*

100-YR

EXISTING DISCHARGE TO DP2	
DRAINAGE AREA (AC)	6.91
RUNOFF COEFFICIENT, C	0.41
Tc (MIN)	16.4
INTENSITY (IN/HR)	9.41
Q_{100-YR} (CFS)	26.67

$Q_{ALLOWABLE}$ (CFS)	26.7
Q_{ACTUAL} (CFS)	26.6

PROPOSED CONDITIONS TO POND A	
DRAINAGE AREA (AC)	7.83
RUNOFF COEFFICIENT, C	0.79
Tc (MIN)	10.00
INTENSITY (IN/HR)	11.23
$Q_{MAX\ INFLOW}$ (CFS)	69.83

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b100= 150.9468
d100= 15.8200
e100= 0.7992

MODIFIED RATIONAL METHOD - 100 YEAR STORM EVENT							
DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	7.10	44.15	79,474	26.61	31,932	47,542	1.091
35	6.54	40.64	85,354	26.61	35,924	49,431	1.135
40	6.06	37.71	90,499	26.61	39,915	50,584	1.161
50	5.32	33.05	99,165	26.61	47,898	51,267	1.177
60	4.75	29.52	106,279	26.61	55,881	50,398	1.157
70	4.30	26.74	112,303	26.61	63,864	48,439	1.112
80	3.94	24.48	117,525	26.61	71,847	45,678	1.049
90	3.64	22.62	122,131	26.61	79,830	42,301	0.971
100	3.38	21.04	126,253	26.61	87,813	38,440	0.882
110	3.17	19.69	129,985	26.61	95,796	34,189	0.785
120	2.98	18.53	133,394	26.61	103,779	29,615	0.680
130	2.82	17.50	136,534	26.61	111,762	24,772	0.569

<--REQUIRED STORAGE=1.177 AC-FT
=51267 CU. FT.

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 100YR	0.41	14.25
N/A	0	0
COMBINED	*0.410*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 100YR	0.97	4.70
Developed, Grass, Fair Condition-Steep, 100YR	0.53	3.13
COMBINED	*0.794*	*7.83*

POND A OUTFALL

2 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 opening in 100yr Storm Events

Weir #1

L	0.792	9.5 inches
H	1.72	20.6 inches
C =	3	

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H(Feet)	Q (cfs)	Q (allowable)
2 YR	954.72	1.72	5.35	6.30

Outfall Flowline 953.00

10 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 in 10yr Storm Events

Weir #1

L	0.79	
H	1.718	
C	3.00	

Weir #2

L	0.792	9.5 inches
H	1.14	13.6 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
10 YR	955.86	2.86	11.46	
		Head H2 (Feet)	Q2 (cfs)	
		1.14	0.00	
			Q (design)	Q (allowable)
			11.46	12.19

25 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 & Rectangular Weir #3 in 25yr Storm Events

Weir #1

L	0.79	
H	1.718	
C	3.00	

Weir #2

L	0.79	
H	1.137	

Weir #3

L	0.792	9.5 inches
H	0.77	9.2 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
25 YR	956.62	3.62	16.37	
		Head H2(Feet)	Q2 (cfs)	
		1.14	0.00	
		Head H3 (Feet)	Q3 (cfs)	
		0.77	0.00	
			Q (design)	Q (allowable)
			16.37	16.98

100 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 & Rectangular Weir #3 & Rectangular Weir #4 in 100 Yr Storm events

Weir #1

L	0.79	
H	1.718	
C	3.00	

Weir #2

L	0.79	
H	1.137	

Weir #3

L	0.79	
H	0.767	

Weir #4

L	0.792	9.5 inches
H	1.39	16.6 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
100 YR	958.01	5.01	26.62	
		Head H2 (Feet)	Q2 (cfs)	
		3.29	0.00	
		Head H3 (Feet)	Q3 (cfs)	
		2.15	0.00	
		Head H4 (Feet)	Q4 (cfs)	
		1.39	0.00	
			Q (design)	Q (allowable)
			26.62	26.67

Overflow Weir Calculations

100-Yr Flow through Overflow Weir

L	8.333	100 inches
H	1.04	12.5 inches
C =	3	

WEIR Flow Equation CLH ^ 3/2

Design Storm	Head H(Feet)	Q (cfs)	Q (allowable)
100 YR Overflow	1.04	26.51	26.67

STAGE-STORAGE SUMMARY - DETENTION POND 1		
STAGE	STORAGE (CF)	STORAGE (AC-FT)
953.00	0.000	0.000
953.50	5028.480	0.115
954.00	10077.210	0.231
954.50	15145.650	0.348
955.00	20234.340	0.465
955.50	25342.740	0.582
956.00	30471.390	0.700
956.50	35620.020	0.818
957.00	40788.360	0.936
957.50	45976.950	1.055
958.00	51185.520	1.175
958.50	56414.070	1.295
959.00	61662.600	1.416

REDQ. STORAGE:	1.177	AC-FT
100-YR WSEL.:	958.01	FT

REDQ. STORAGE:	0.847	AC-FT
25-YR WSEL.:	956.62	FT

REDQ. STORAGE:	0.665	AC-FT
10-YR WSEL.:	955.86	FT

REDQ. STORAGE:	0.399	AC-FT
2-YR WSEL.:	954.72	FT

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This plan is released for the purpose of interim review and pricing under the authority of MARK E. EWING JR., P.E. 147783

Date: 6/13/2025

It is not to be used for construction.

AVILLA NORTH

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

DETENTION CALCULATIONS

Date

Revisions

Scale: As Shown

Drawn By: CJF

Checked By: MEE

Sheet C34

SEI No. 24-002

Drawing: G:\2024_JOBS\24-002 Avilla Nolina\CAD\Drainage Calculations.dwg Saved By: kforsyth Save Time: 6/13/2025 3:13:52 PM Plotted by: kforsyth Plot Date: 6/13/2025 3:51 PM

BASIN 'B' DETENTION CALCULATIONS

2-YR

EXISTING DISCHARGE TO DP5		PROPOSED CONDITIONS TO POND B		PERVIOUS BYPASS TO DP4	
DRAINAGE AREA (AC)	7.17	DRAINAGE AREA (AC)	9.78	DRAINAGE AREA (AC)	0.22
RUNOFF COEFFICIENT, C	0.25	RUNOFF COEFFICIENT, C	0.58	RUNOFF COEFFICIENT, C	0.29
Tc (MIN)	15.1	Tc (MIN)	10.00	Tc (MIN)	10.00
INTENSITY (IN/HR)	3.80	INTENSITY (IN/HR)	4.51	INTENSITY (IN/HR)	4.51
Q_{100-YR} (CFS)	6.8	$Q_{MAX\ INFLOW}$ (CFS)	25.43	$Q_{MAX\ INFLOW}$ (CFS)	0.29

Q_{BYPASS} (CFS)	0.3
$Q_{ALLOWABLE}$ (CFS)	6.5
Q_{ACTUAL} (CFS)	5.3

MODIFIED RATIONAL METHOD - 2 YEAR STORM EVENT

DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	2.64	14.89	26,803	5.31	6,372	20,431	0.469
35	2.41	13.57	28,506	5.31	7,169	21,338	0.490
40	2.21	12.49	29,983	5.31	7,965	22,018	0.505
50	1.92	10.81	32,443	5.31	9,558	22,885	0.525
60	1.70	9.57	34,445	5.31	11,151	23,294	0.535
70	1.53	8.60	36,130	5.31	12,744	23,386	0.537
80	1.39	7.83	37,585	5.31	14,337	23,248	0.534
90	1.28	7.20	38,866	5.31	15,930	22,936	0.527
100	1.18	6.67	40,010	5.31	17,523	22,487	0.516
110	1.10	6.22	41,045	5.31	19,116	21,929	0.503
120	1.03	5.83	41,990	5.31	20,709	21,281	0.489
130	0.97	5.49	42,859	5.31	22,302	20,557	0.472

<--REQUIRED STORAGE=0.537 AC-FT
=23386 CU. FT.

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b2= 54.2839
d2= 11.4257
e2= 0.8119

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 2YR	0.25	14.25
N/A	0	0
COMBINED	*0.250*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 2YR	0.75	5.32
Developed, Grass, Fair Condition-Steep, 2YR	0.37	4.46
COMBINED	*0.577*	*9.78*

Pervious Bypass WEIGHTED C		
LAND USE	C	A
Developed, Grass, Good Condition-Average, 2YR	0.29	1.17
N/A	0	0
COMBINED	*0.290*	*1.17*

25-YR

EXISTING DISCHARGE TO DP5		PROPOSED CONDITIONS TO POND B		PERVIOUS BYPASS TO DP4	
DRAINAGE AREA (AC)	7.17	DRAINAGE AREA (AC)	9.78	DRAINAGE AREA (AC)	0.22
RUNOFF COEFFICIENT, C	0.34	RUNOFF COEFFICIENT, C	0.69	RUNOFF COEFFICIENT, C	0.39
Tc (MIN)	15.1	Tc (MIN)	10.00	Tc (MIN)	10.00
INTENSITY (IN/HR)	7.49	INTENSITY (IN/HR)	8.74	INTENSITY (IN/HR)	8.74
Q_{100-YR} (CFS)	18.26	$Q_{MAX\ INFLOW}$ (CFS)	58.88	$Q_{MAX\ INFLOW}$ (CFS)	0.75

Q_{BYPASS} (CFS)	0.8
$Q_{ALLOWABLE}$ (CFS)	17.5
Q_{ACTUAL} (CFS)	16.7

MODIFIED RATIONAL METHOD - 25 YEAR STORM EVENT

DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	5.36	36.10	64,986	16.67	20,004	44,982	1.033
35	4.92	33.11	69,528	16.67	22,505	47,024	1.080
40	4.55	30.62	73,490	16.67	25,005	48,485	1.113
50	3.97	26.71	80,141	16.67	30,006	50,135	1.151
60	3.53	23.77	85,588	16.67	35,007	50,581	1.161
70	3.19	21.48	90,196	16.67	40,008	50,188	1.152
80	2.91	19.62	94,189	16.67	45,009	49,180	1.129
90	2.69	18.09	97,712	16.67	50,010	47,702	1.095
100	2.50	16.81	100,866	16.67	55,011	45,855	1.053
110	2.33	15.72	103,723	16.67	60,012	43,711	1.003
120	2.19	14.77	106,334	16.67	65,013	41,321	0.949
130	2.07	13.94	108,742	16.67	70,014	38,728	0.889

<--REQUIRED STORAGE=1.161 AC-FT
=50581 CU. FT.

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b25= 109.8397
d25= 13.7038
e25= 0.7994

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 25YR	0.34	14.25
N/A	0	0
COMBINED	*0.340*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 25YR	0.88	5.32
Developed, Grass, Fair Condition-Steep, 25YR	0.46	4.46
COMBINED	*0.688*	*9.78*

Pervious Bypass WEIGHTED C		
LAND USE	C	A
Developed, Grass, Good Condition-Average, 25YR	0.39	1.17
N/A	0	0
COMBINED	*0.390*	*1.17*

10-YR

EXISTING DISCHARGE TO DP5		PROPOSED CONDITIONS TO POND B		PERVIOUS BYPASS TO DP4	
DRAINAGE AREA (AC)	7.17	DRAINAGE AREA (AC)	9.78	DRAINAGE AREA (AC)	0.22
RUNOFF COEFFICIENT, C	0.30	RUNOFF COEFFICIENT, C	0.64	RUNOFF COEFFICIENT, C	0.35
Tc (MIN)	15.1	Tc (MIN)	10.00	Tc (MIN)	10.00
INTENSITY (IN/HR)	6.10	INTENSITY (IN/HR)	7.17	INTENSITY (IN/HR)	7.17
Q_{100-YR} (CFS)	13.13	$Q_{MAX\ INFLOW}$ (CFS)	45.09	$Q_{MAX\ INFLOW}$ (CFS)	0.55

Q_{BYPASS} (CFS)	0.6
$Q_{ALLOWABLE}$ (CFS)	12.6
Q_{ACTUAL} (CFS)	11.6

MODIFIED RATIONAL METHOD - 10 YEAR STORM EVENT

DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	4.32	27.17	48,911	11.58	13,896	35,015	0.804
35	3.95	24.86	52,216	11.58	15,633	36,583	0.840
40	3.65	22.96	55,092	11.58	17,370	37,722	0.866
50	3.18	19.97	59,912	11.58	20,844	39,068	0.897
60	2.82	17.74	63,853	11.58	24,318	39,535	0.908
70	2.54	16.00	67,184	11.58	27,792	39,392	0.904
80	2.32	14.60	70,068	11.58	31,266	38,802	0.891
90	2.14	13.45	72,612	11.58	34,740	37,872	0.869
100	1.98	12.48	74,889	11.58	38,214	36,675	0.842
110	1.85	11.66	76,951	11.58	41,688	35,263	0.810
120	1.74	10.95	78,837	11.58	45,162	33,675	0.773
130	1.64	10.33	80,575	11.58	48,636	31,939	0.733

<--REQUIRED STORAGE=0.908 AC-FT
=39535 CU. FT.

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b10= 87.6048
d10= 12.7018
e10= 0.8016

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 10YR	0.3	14.25
N/A	0	0
COMBINED	*0.300*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 10YR	0.83	5.32
Developed, Grass, Fair Condition-Steep, 10YR	0.42	4.46
COMBINED	*0.643*	*9.78*

Pervious Bypass WEIGHTED C		
LAND USE	C	A
Developed, Grass, Good Condition-Average, 10YR	0.35	1.17
N/A	0	0
COMBINED	*0.350*	*1.17*

100-YR

EXISTING DISCHARGE TO DP5		PROPOSED CONDITIONS TO POND B		PERVIOUS BYPASS TO DP4	
DRAINAGE AREA (AC)	7.17	DRAINAGE AREA (AC)	9.78	DRAINAGE AREA (AC)	0.22
RUNOFF COEFFICIENT, C	0.41	RUNOFF COEFFICIENT, C	0.77	RUNOFF COEFFICIENT, C	0.46
Tc (MIN)	15.1	Tc (MIN)	10.00	Tc (MIN)	10.00
INTENSITY (IN/HR)	9.73	INTENSITY (IN/HR)	11.23	INTENSITY (IN/HR)	11.23
Q_{100-YR} (CFS)	28.61	$Q_{MAX\ INFLOW}$ (CFS)	84.50	$Q_{MAX\ INFLOW}$ (CFS)	1.14

Q_{BYPASS} (CFS)	1.1
$Q_{ALLOWABLE}$ (CFS)	27.5
Q_{ACTUAL} (CFS)	27.4

MODIFIED RATIONAL METHOD - 100 YEAR STORM EVENT

DURATION	INTENSITY	INFLOW RATE	INFLOW VOLUME	OUTFLOW RATE	OUTFLOW VOLUME	REQ. STORAGE	REQ. STORAGE
MIN	IN/HR	CFS	CF	CFS	CF	CF	AC-FT
30	7.10	53.43	96,170	27.43	32,916	63,254	1.452
35	6.54	49.18	103,286	27.43	37,031	66,255	1.521
40	6.06	45.63	109,512	27.43	41,145	68,367	1.569
50	5.32	40.00	119,998	27.43	49,374	70,624	1.621
60	4.75	35.72	128,607	27.43	57,603	71,004	1.630
70	4.30	32.36	135,897	27.43	65,832	70,065	1.608
80	3.94	29.63	142,215	27.43	74,061	68,154	1.565
90	3.64	27.37	147,789	27.43	82,290	65,499	1.504
100	3.38	25.46	152,778	27.43	90,519	62,259	1.429
110	3.17	23.83	157,293	27.43	98,748	58,545	1.344
120	2.98	22.42	161,418	27.43	106,977	54,441	1.250
130	2.82	21.18	165,218	27.43	115,206	50,012	1.148

<--REQUIRED STORAGE=1.63 AC-FT
=71004 CU. FT.

Intensity from NOAA Atlas 14 per WilCo Subdivision Regulations (also Exhibit 2)

$i = \frac{b}{(t+d)^e}$

b100= 150.9468
d100= 15.8200
e100= 0.7992

Ex. WEIGHTED C		
LAND USE	C	A
Undeveloped, Pasture/Range-Flat, 100YR	0.41	14.25
N/A	0	0
COMBINED	*0.410*	*14.25*

Prop WEIGHTED C to Detention Pond		
LAND USE	C	A
Impervious Area, Concrete, 100YR	0.97	5.32
Developed, Grass, Fair Condition-Steep, 100YR	0.53	4.46
COMBINED	*0.769*	*9.78*

Pervious Bypass WEIGHTED C		
LAND USE	C	A
Developed, Grass, Good Condition-Average, 100YR	0.46	1.17
N/A	0	0
COMBINED	*0.460*	*1.17*

POND 'B' OUTFALL

2 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 opening in 100yr Storm Events

Weir #1

L	0.533	6.4 inches
H	2.23	26.7 inches
C =	3	

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H(Feet)	Q (cfs)	Q (allowable)
2 YR	954.13	2.23	5.32	6.52
Outfall Flowline				951.90

10 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 in 10yr Storm Events

Weir #1

L	0.53	
H	2.229	
C	3.00	

Weir #2

L	0.533	6.4 inches
H	1.52	18.2 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
10 YR	955.64	3.74	11.59	
		Head H2 (Feet)	Q2 (cfs)	
		1.52	0.00	
			Q (design)	Q (allowable)
			11.59	12.57

25 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 & Rectangular Weir #3 in 25yr Storm Events

Weir #1

L	0.53
H	2.229
C	3.00

Weir #2

L	0.53
H	1.516

Weir #3

L	0.533	6.4 inches
H	1.03	12.3 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
25 YR	956.67	4.77	16.68	
		Head H2(Feet)	Q2 (cfs)	
		1.52	0.00	
		Head H3 (Feet)	Q3 (cfs)	
		1.03	0.00	
			Q (design)	Q (allowable)
			16.68	17.51

100 YR Detention Outlet Structure Calculations

Flow through Rectangular Weir #1 & Rectangular Weir #2 & Rectangular Weir #3 & Rectangular Weir #4 in 100 Yr Storm events

Weir #1

L	0.53
H	2.229
C	3.00

Weir #2

L	0.53
H	1.516

Weir #3

L	0.53
H	1.027

Weir #4

L	0.533	6.4 inches
H	1.88	22.5 inches

WEIR Flow Equation CLH ^ 3/2

Design Storm	WSEL	Head H1(Feet)	Q 1 (cfs)	
100 YR	958.55	6.65	27.44	
		Head H2 (Feet)	Q2 (cfs)	
		4.42	0.00	
		Head H3 (Feet)	Q3 (cfs)	
		2.91	0.00	
		Head H4 (Feet)	Q4 (cfs)	
		1.88	0.00	
			Q (design)	Q (allowable)
			27.44	27.48

Overflow Weir Calculations

100-Yr Flow through Overflow Weir

L	9.083	109 inches
H	1.00	12.0 inches
C =	3	

WEIR Flow Equation CLH ^ 3/2

Design Storm	Head H(Feet)	Q (cfs)	Q (allowable)
100 YR Overflow	1.00	27.25	27.48

STAGE-STORAGE SUMMARY - DETENTION POND 1		
STAGE	STORAGE (CF)	STORAGE (AC-FT)
951.90	0.000	0.000
952.00	1018.170	0.023
952.50	6239.430	0.143
953.00	11480.400	0.264
953.50	16741.350	0.384
954.00	22022.550	0.506
954.50	27323.460	0.627
955.00	32644.620	0.749
955.50	37985.760	0.872
956.00	43346.880	0.995
956.50	48727.710	1.119
957.00	54128.790	1.243
957.50	59549.850	1.367
958.00	64990.890	1.492
958.50	70451.910	1.617
959.00	75933.180	1.743

REDQ. STORAGE:	1.630	AC-FT
100-YR WSEL:	958.55	FT

REDQ. STORAGE:	1.161	AC-FT
25-YR WSEL:	956.67	FT

REDQ. STORAGE:	0.908	AC-FT
10-YR WSEL:	955.64	FT

REDQ. STORAGE:	0.537	AC-FT
2-YR WSEL:	954.13	FT

SPIARS ENGINEERING & SURVEYING
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TBPE No F-2121 • TBLPS No. F-10043100 • www.spiarseng.com
Mark Ewing • mark.ewing@spiarsengineering.com

This plan is released for the purpose of interim review and pricing under the authority of MARK E. EWING JR., P.E. 147783

Date: 6/13/2025

It is not to be used for construction.

AVILLA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
DETENTION CALCULATIONS

Date

Revisions

Scale: As Shown

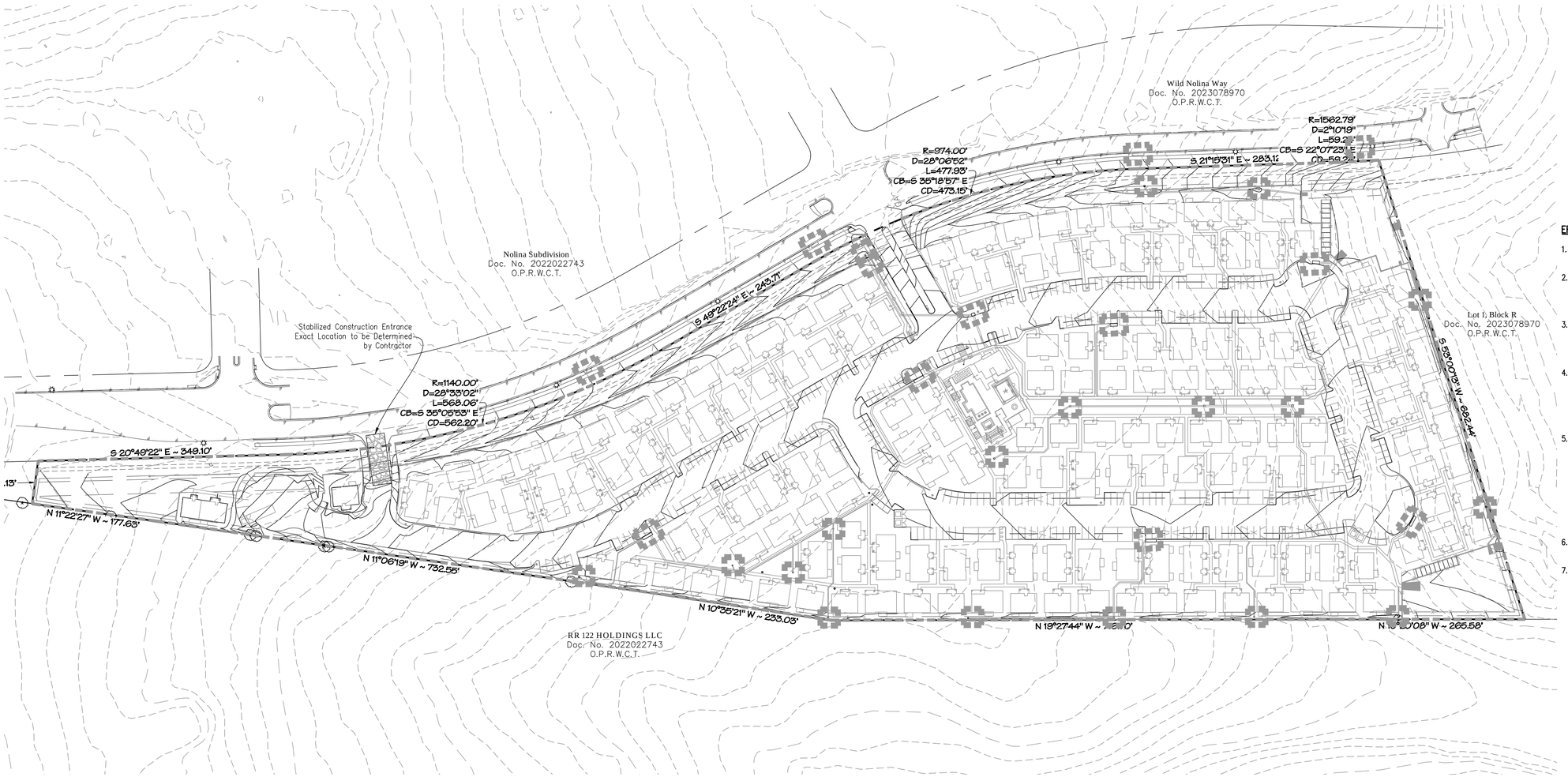
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Checked By: MEE

Sheet C35

SEI No. 24-002

Plotted by: Kfoseth Plot Date: 6/13/2025 3:51 PM
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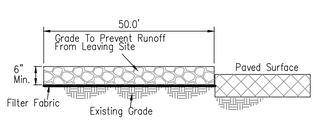


EROSION CONTROL GENERAL NOTES

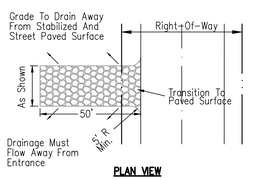
1. Erosion control devices shown on these plans shall be installed prior to the start of land disturbing activities on the project.
2. All erosion control devices are to installed in accordance with the approved plans and specifications for this project. Changes are to be approved before construction by the design Engineer and the Williamson County Engineering Division.
3. If the Erosion Control Plan as approved cannot control erosion and off-site sedimentation from the project the Erosion Control Plan will be required to be revised and/or additional erosion control devices will be required on site.
4. Off-site soil borrow and spoil areas are considered part of the project site, and must also comply with the erosion control requirements for this project. This includes the installation of BMPs to control offsite sedimentation and the establishment of permanent ground cover on disturbed areas prior to final approval of the project.
5. Inspections shall be made weekly and after rain storm events to insure that the devices are functioning properly. When sediment or mud had clogged the void spaces between stones or mud is being tracked onto a public roadway the aggregate pad must be washed down or replaced. Runoff from the washdown operation shall not be allowed to drain directly off the site without first flowing through another BMP to control off-site sedimentation. Periodic re-grading or the addition of new stone may be required to maintain the efficiency of the installation.
6. Contractor shall have a copy of Williamson County Erosion and Sediment Control Manual on site at all times.
7. Contractor shall be responsible for submittal of N.O.I., N.O.T. and any additional information required by T.C.E.Q. Contractor shall comply with all T.C.E.Q. stormwater pollution prevention requirements.

CONSTRUCTION ENTRANCE NOTES

1. Stone shall be 3 to 5 inch diameter crushed rock or acceptable crushed Portland Cement Concrete.
2. When necessary, vehicles shall be cleaned to remove sediment prior to entrance onto a public roadway. When washing is required, it shall be done on a area stabilized with crushed stone, with drainage flowing away from both the street and the stabilized entrance. All sediment shall be prevented from entering any storm drain, ditch, or watercourse using approved methods.
3. The entrance shall maintained in a condition which will prevent tracking or flowing of sediment onto paved surfaces. This may require periodic top dressing with additional stone as conditions demand. All sediment spilled, dropped, washed, or tracked onto paved surfaces must be removed immediately.
4. The entrance must be properly graded, or incorporate a drainage swale to prevent runoff from leaving the construction site.

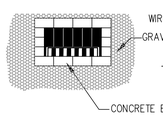


PROFILE VIEW

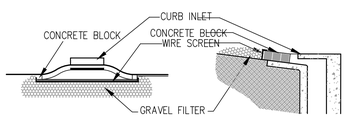


PLAN VIEW

STABILIZED CONSTRUCTION ENTRANCE



DROP INLET PROTECTION



PRIVATE CURB INLET PROTECTION

LEGEND

- Silt Fence
- Drop Inlet Protection
- Curb Inlet Protection
- Construction Entrance

BMP LEGEND

PHASES 1-4	Silt Fence
PHASES 1-4	Inlet Protection
PHASES 1-4	Construction Entrance

CONSTRUCTION SCHEDULE AND PHASING

PHASE 1.	Install Phase 1 BMP'S Rough Grading
PHASE 2.	Install Phase 2 BMP'S Utility Installation
PHASE 3.	Install Phase 3 BMP'S Building Construction Paving
PHASE 4.	Install Phase 4 BMP'S Soil Stabilization/Landscaping

CAUTION !!!
EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

CALL TEXAS ONE-CALL (811) OR OTHER UTILITY LOCATION SERVICES 48 HOURS PRIOR TO CONSTRUCTION ACTIVITY. SPIARS ENGINEERING, INC. IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES OR DEPICTING EXACT LOCATIONS OF UTILITIES ON DRAWINGS.

Note:
The Contractor Shall Perform All Earthwork And Compaction Operations, Including But Not Limited To, Placement Of Fill During Earthwork Operations, Backfilling, Trench Backfilling, Utility Backfilling, Liming, And Subgrade Placement According To The Geotechnical Recommendations And City Standards. The Contractor Shall Use The Most Stringent Requirement If There Is A Conflict On Any Fill Or Backfill Operations. The Contractor Shall Inquire In Written Format With The Engineer Of Record Should There Be Any Questions Regarding Fill And Backfill Requirements.

SPIARS
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Mark Ewing • mark.ewing@spiarsengineering.com

This plan is released for the purpose of interim review and pricing under the authority of MARK E. EWING JR., P.E. 147783

Date: 6/13/2025

It is not to be used for construction.

AVILA NOLINA
LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS
EROSION CONTROL PLAN

Revisions

Date

Scale: As Shown

Drawn By: CJF

Checked By: MEE

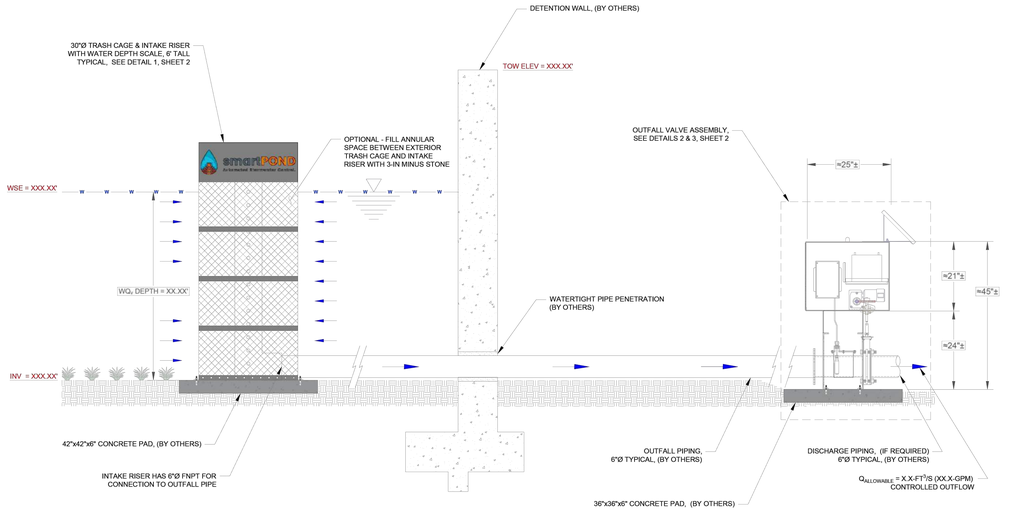
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SEI No. 24-002

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smartPOND OUTFALL VALVE CONFIGURED DOWNSTREAM OF VERTICAL DETENTION WALL

OUTFALL VALVE DISCHARGE RATE AND DETENTION SETTING	
ALLOWABLE DISCHARGE RATE ($Q_{ALLOWABLE}$)	X.XX-FT^3/S (XX.X-GPM)
REQUIRED DETENTION VOLUME	X.XX-FT^3
DETENTION VOLUME PROVIDED	X.XX-FT^3/S
REQUIRED DETENTION TIME	XX-HOURS



NOTE: ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

smartPOND Automated Stormwater Control.

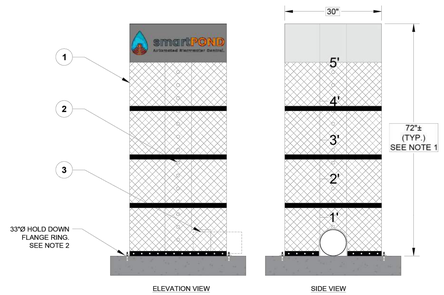
FOR ADDITIONAL INFORMATION PLEASE CONTACT
CONVERGENT WATER TECHNOLOGIES
1-800-711-5428
www.convergentwater.com

CONVERGENT WATER TECHNOLOGIES

smartPOND OUTFALL VALVE
DOWNSTREAM OF VERTICAL WALL CONFIGURATION

REVISION NO. 0
DATE 6/6/2023
SHEET NO. 1

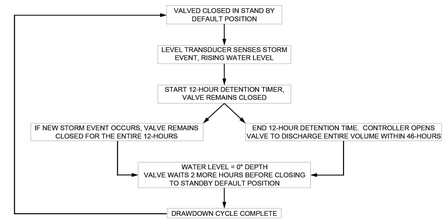
DETAIL 1 - TRASH CAGE & INTAKE RISER



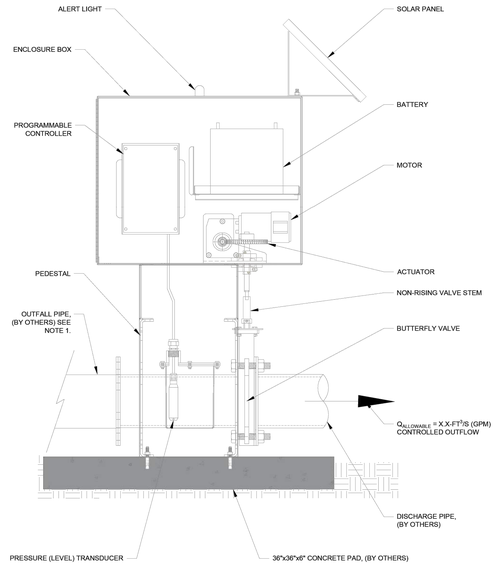
TRASH CAGE & INTAKE RISER NOTES:
1. DESIGN HEIGHT OF INTAKE TRASH CAGE AND INTAKE RISER TO MATCH REQUIRED DETENTION DEPTHS.
2. USE 4X, ⅞"Ø X 3.5" SS WEDGE ANCHOR BOLTS TO CONNECT OUTFALL ASSEMBLY TO CONCRETE PAD, 2.5" MINIMUM EMBEDMENT.

TRASH CAGE WITH INTAKE RISER - PARTS LIST	
ITEM	COMPONENT DESCRIPTION
1	30"Ø CAGE WITH 1.5" GALVANIZED MESH SCREEN
2	8" SQUARE PERFORATED TUBING WITH 1"Ø PERFORATIONS, SPACED 4" ON CENTERS WITH WATER DEPTH SCALE
3	6"Ø FNPTS PROVIDED AT BOTTOM DISCHARGE OF INTAKE RISER

DETAIL 2 - PROGRAMMABLE LOGIC FLOW CHART, OUTFALL VALVE OPERATION FOR DETENTION AND/OR WATER QUALITY



DETAIL 3 - OUTFALL VALVE ASSEMBLY



OUTFALL VALVE ASSEMBLY NOTES:
1. USE ANSI 16.5B CLASS 150 FLANGES TO CONNECT OUTFALL AND DISCHARGER PIPES.
2. USE 4X, ⅞"Ø X 3.5" SS WEDGE ANCHOR BOLTS TO CONNECT OUTFALL ASSEMBLY TO CONCRETE PAD, 2.5" MINIMUM EMBEDMENT.

smartPOND Automated Stormwater Control.

FOR ADDITIONAL INFORMATION CONTACT
CONVERGENT WATER TECHNOLOGIES
1-800-711-5428
www.convergentwater.com

CONVERGENT WATER TECHNOLOGIES

smartPOND OUTFALL VALVE
OUTFALL VALVE DETAILS

REVISION NO. 0
DATE 8/18/2023
SHEET NO. 2

smartPOND OUTFALL VALVE SPECIFICATIONS

CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS), WITH PROGRAM CONTROLLED OUTFALL VALVE

1. **CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS) DEVICE**: THE CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS), SHOWN ON THE PLANS AS THE OUTFALL ASSEMBLY SHALL BE A smartPOND™ OUTFALL VALVE PROVIDED BY:

   CONVERGENT WATER TECHNOLOGIES
   800.711.5428
   WWW.CONVERGENTWATER.COM

   THE smartPOND™ OUTFALL VALVE SHALL SHALL PROVIDE FOR ACTIVE MANAGEMENT OF DETAINED STORMWATER VOLUME AND / OR ITS ALLOWABLE DISCHARGE RATE. THE smartPOND™ OUTFALL VALVE SHALL BE PROGRAMMABLE TO DETAIN A SPECIFIED VOLUME OF STORMWATER FOR A SPECIFIED REQUIRED PERIOD OF TIME AND / OR PROGRAMMED TO CONTROL THE OUTFLOW RATE TO MATCH THE MAXIMUM ALLOWABLE DISCHARGE RATE OR BOTH OF THIS OPERATIONS SIMULTANEOUSLY. THE smartPOND™ VAULT VALVE MAXIMIZES THE DETENTION TO PROMOTE THE SETTLEMENT OF SOLIDS BEFOR AUTOMATICALLY DEWATERING THE DETENTION POND COMPLETELY. FOR STORMWATER RETENTION SYSTEMS, THE SYSTEM SHALL BE PROGRAMMED TO MANAGE THE REQUIRED RETENTION VOLUME WHILE MAINTAINING A SPECIFIED AMOUNT OF CAPACITY FOR FLOOD STORAGE OR OTHER USE.

   THE FOLLOWING SPECIFICATIONS DESCRIBE THE COMPONENTS, GENERAL FUNCTIONS, AND APPLICATIONS OF A CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS), USING THE PROGRAMMED smartPOND™ OUTFALL VALVE.

   THIS smartPOND™ OUTFALL VALVE SHALL FUNCTION AS AN ELECTRONICALLY CONTROLLED, SOLAR POWERED STORMWATER MANAGEMENT DEVICE, PROVIDING PRECISION STORMWATER VOLUME MANAGEMENT CAPABILITIES AND REAL-TIME DATA. USING SENSORS, SOLAR POWER, AN ELECTRONIC ACTUATOR, AND AN INTERNET-BASED CONTROL INTERFACE. THE smartPOND™ OUTFALL VALVE CONNECTS TO A SPECIALIZED PERFORATED INTAKE RISER INSIDE THE STORMWATER IMPOUNDMENT AREA TO ENABLE PRECISE CONTROL OF REQUIRED DETAINED OR RETAINED STORMWATER CONTROL VOLUMES AND ALLOWABLE DISCHARGE RATES AUTOMATICALLY OR IN REAL TIME. THE smartPOND™ ASSEMBLY CAN BE CONFIGURED ABOVE GROUND OR BELOW IN SMALL MANHOLE OR VAULT STRUCTURE.

   1.1 PRE-PROGRAMMED OUTFALL VALVE CONTROL: THE OUTFALL VALVE SHALL BE PRE-PROGRAMMED TO EXECUTE COMMANDS BASED ON STORM EVENTS, REQUIRED CONTROL VOLUMES AND ALLOWABLE DISCHARGE RATES.

   1.1.1 DETENTION POND OPTIMIZATION: THE smartPOND™ OUTFALL VALVE SHALL BE PROGRAMMED TO DISCHARGE FLOWS FROM THE DETENTION SYSTEM AT THE MAXIMUM ALLOWABLE RELEASE, WHICH IS TYPICALLY A PREDEVELOPMENT VALUE. OTHER PROGRAM CONSIDERATIONS MAY INCLUDE INCLUDE PREVENTION OF OVERTOPPING OR BYPASS.

   1.1.2 BATCH DETENTION FUNCTION FOR STORMWATER QUALITY: THE smartPOND™ OUTFALL VALVE MAY BE PROGRAMMED TO PROVIDE BATCH DETENTION TO ACHIEVE STORMWATER QUALITY EFFLUENT GOAL OF 80% OR MORE REMOVAL OF TOTAL SUSPENDED SOLID (TSS) REMOVAL BY HOLDING THE WATER QUALITY VOLUME (WQ_v) FOR SETTLEMENT TREATMENT, FOR A REQUIRED PERIOD OF TIME. HOLDING TIMES ARE TYPICALLY SET FORTH IN STORMWATER MANAGEMENT REGULATIONS AS 2, 24 OR 48-HOURS.

   1.1.3 SPILL CONTROL OF HAZARDOUS MATERIAL (HAZMAT): smartPOND™ WHEN SPECIFIED FOR HAZMAT SPILL CONTROL SHALL BE EQUIPPED WITH POLLUTANT SPECIFIC SENSORS THAT WHEN TRIGGERED AUTOMATICALLY CLOSE THE OUTFALL VALVE UNTIL THE COMMAND IS OVERRIDDEN.

   1.2 REAL TIME MONITORING: smartPOND™ SHALL COME WITH TELEMETRY AND THE "AUTOFLOW APP" USER APPLICATION SOFTWARE AT NO ADDITIONAL COST FOR 1-YEAR. THIS AUTOFLOW APP ENABLES REAL TIME MONITORING OF THE DETENTION POND'S STORAGE-STAGE AND DISCHARGE RATE. THE AUTOFLOW APP SHALL ENABLE A USER TO:

   - CONTROL THE OUTFALL VALVE, EITHER OPEN OR CLOSE.
   - DETERMINE THE WATER SURFACE ELEVATION (WSE) OR POND DEPTH.
   - DETERMINE IF TRASH OR DEBRIS IS SURROUNDING THE TRASH CAGE AND INTAKE RISER.
   - RECEIVE MAINTENANCE ALERTS SUCH AS: LOW BATTERY, OUTFALL VALVE FAILURE, ETC.
   - MAINTAIN SPECIFIED WATER SURFACE LEVEL.

2. **COMPONENTS**: THE smartPOND™ OUTFALL VALVE MAY BE IMPLEMENTED EITHER ABOVE OR BELOW GROUND, AND IS COMPRISED OF THE FOLLOWING COMPONENTS:

   2.1 HARDWARE AND CONFIGURATION:

   THE STANDARD smartPOND™ OUTFALL VALVE ASSEMBLY CONSISTS OF A LOWER AND UPPER COMPONENT: THE LOWER COMPONENT IS THE PEDESTAL WITH 6"Ø PIPE SPOOL AND 6"Ø ACTUATED OUTFALL VALVE AND PRESSURE TRANSDUCER HOUSING. THIS LOWER PEDESTAL SHALL HAVE FLANGES ON EACH SIDE OF THE ASSEMBLY CONFORMING WITH AN ANSI 16.5B CLASS 150 FLANGE FOR CONNECTION OF THE OUTFALL PIPE FROM THE DETENTION SYSTEM AND TO A DOWNSTREAM DISCHARGE PIPE IF CALLED FOR ON THE PLANS. THE SECOND, UPPER COMPONENT IS THE LOCKABLE STEEL WEATHERPROOF ENCLOSURE BOX WITH A SOLAR PANEL AND ALERT LIGHT MOUNTED ON ITS TOP. THIS ENCLOSURE BOX HOUSES THE PROGRAMMABLE CONTROLLER INSIDE A NEMA-3R BOX, BATTERY, ELECTRIC MOTOR, ACTUATOR GEARING AND AN EXTENDABLE NON-RISING VALVE STEM BETWEEN THE ACTUATOR AND THE 6"Ø OUTFALL VALVE.

   FOR ABOVE GROUND APPLICATIONS, THE COMPLETE "OUTFALL VALVE ASSEMBLY" SHALL BE BOLTED TO A 36"X36, 6" THICK OR LARGER CONCRETE PAD USING ⅞"Ø, 3.5 LONG STAINLESS STEEL (SS) WEDGE ANCHORS. THE OUTFALL PIPE FROM THE DETENTION SYSTEM CONNECTS TO THE INLET OF THE OUTFALL VALVE ASSEMBLY WITH EIGHT (8X) ½"Ø BOLTS AND NUTS THAT CONFORM TO ANSI 16.5B CLASS 150 FLANGE GRADE SPECIFICATIONS. THE DISCHARGE PIPE, IF ANY, CONNECTS WITH ONLY FOUR (4X) BOLTS TO PROPERLY FLANGE UP TO THE DISCHARGE SIDE OF THE ACTUATED VALVE.

   2.2 OTHER ELECTRONICS SPECIFICATIONS:

   - MOTOR - OPERATES ON 12-VOLTS AND HAS TWO WIRES CONNECTING TO THE MOTOR CONTROLLER BOARD.
   - BATTERY - THIS IS A GEL BATTERY THAT PROVIDES 12-VOLTS, 30 AMP/HOUR OF POWER TO THE OUTFALL VALVE ASSEMBLY.
   - SOLAR PANEL - PROVIDES 15-WATT CHARGING TO THE 12-VOLT GEL BATTERY.
   - SOLAR CHARGE CONTROLLER - REGULATES THE VOLTAGE AND CURRENT DELIVERED TO THE GEL BATTERY.

   SENSORS:

   - PRESSURE TRANSDUCER - A SENSOR CAPABLE OF STAYING SUBMERSED IN WATER INDEFINITELY AND IS MOUNTED IN CENTER PIPE SPOOL OF THE LOWER PEDESTAL COMPONENT.
   - OUTFALL VALVE POSITION SENSOR - DETERMINES THE POSITION OF THE OUTFALL VALVE.

   OPTIONAL SENSORS:

   - CELL DATA MODEM - REQUIRED FOR REAL TIME CONTROL AND ALERTS.
   - HYDROCARBON SENSOR - THIS OPTIONAL SENSOR MAY BE FITTED TO THE smartPOND™ OUTFALL VALVE TO PERFORM SPECIFIC FUNCTIONS BASED ON THE PRESENCE OF HYDROCARBON CONTAMINATION.

3. **ADDITIONAL COMPONENTS LIST**:

   3.1 INTAKE RISER: THIS SHALL BE A PERFORATED STEEL RISER CONNECTED TO THE 6"Ø OUTFALL PIPE WITHIN THE POND AREA. THIS INTAKE RISER SHALL BE AN 8" SQUARE STEEL WITH FOUR (4X) 1"Ø HOLES AT 90-DEGREES EACH, EVERY 4 VERTICAL INCHES. THE DISCHARGE OF THIS INTAKE TUBING SHALL HAVE FEMALE NATIONAL PIPE THREADS (FNPT) TO MATCH THE 6"Ø SCHEDULE 40 PVC OUTFALL PIPE.

   3.2 TRASH CAGE: THE TRASH CAGE ATTACHES TO THE PERFORATED RISER WITH A COUPLING AND CALDER PIN PROVIDED WITH THE THE SYSTEM. THE TRASH CAGE SHALL BE COMPRISED OF STEEL BANDING AND A 1.5" X 1.5" MESH TO PREVENT FLOATABLE'S AND OTHER CONTAMINANTS FROM ENTERING AND CLOGGING THE PERFORATED RISER. THE TRASH CAGE WILL SIT 0.5" ABOVE THE BOTTOM OF THE IMPOUNDMENT TO ALLOW THE LAST 0.5" OUT OF THE IMPOUNDMENT.

4. **REAL TIME MONITORING INTERFACE (OPTIONAL)**: THE AUTOFLOW APP SHALL BE THE SOFTWARE USED IF THE REAL TIME MONITORING OPTION IS SPECIFIED FOR LONG-TERM POND OPERATIONS. A COMPLETE SET OF USER INSTRUCTIONS SHALL BE PROVIDED IN THE CONSTRUCTION SUBMITTALS AND COPY OF THESE INSTRUCTIONS SHALL BE PLACED IN THE ENCLOSURE BOX.

   THIS AUTOFLOW APP SHALL PROVIDE LIVE AND HISTORICAL DATA AND PROVIDE THE ALERTS LISTED IN SECTION 6. IT WILL ALSO ENABLE COMMANDS TO BE SENT TO THE OUTFALL VALVE TO CHANGE THE VALVES POSITION TO CONTROL DISCHARGE RATE AND POND DEPTH.

5. **ALERTS**: THE smartPOND™ OUTFALL VALVE WILL INDICATE THE FOLLOWING ALERTS BY ILLUMINATING AN EXTERIORLY VISIBLE RED LED LIGHT ON TOP OF THE ENCLOSURE BOX:

   - LOW BATTERY
   - LOSS OF FUNCTION
   - OUTFALL VALVE MALFUNCTION
   - HYDROCARBON CONTAMINATION (OPTIONAL)

   IF THE TELEMETRY OPTION IS SELECTED, THE UNIT WILL UPLOAD THE ABOVE ALERTS TO THE AUTOFLOW APP AND NOTIFY THE OPERATOR VIA TEXT OR EMAIL.

6. **MAINTENANCE & OPERATION SUBMITTAL**: AN OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED, REVIEWED AND APPROVED DURING THE CONSTRUCTION SUBMITTAL PROCESS AND SHALL INCLUDE AT A MINIMUM: GREASING AND LUBRICATION ITEMS AND CYCLE FOR THE ACTUATOR, MOTOR AND VALVE; INSPECTION AND MAINTENANCE OF THE SOLAR PANEL, GEL BATTERY TRASH CAGE AND INTAKE RISER; AND PROCEDURES FOR VALVE OPERATION IN CASE OF TOTAL ELECTRONIC OR MOTOR FAILURE.

7. **SHIPPING AND HANDLING STORAGE**: THE smartPOND™ OUTFALL VALVE IS SHIPPED IN A NEAR-FULLY ASSEMBLED CONFIGURATION AND SHOULD BE STORED LIKEWISE. THE SYSTEMS ARE TRANSPORTED AND STORED ON PALLETS AND MUST REMAIN SECURED VIA STRAPS OR STEEL BANDS TO SAID PALLET AT ALL TIMES. THE SOLAR PANEL IS NOT INSTALLED AT TIMES OF TRANSPORT OR STORAGE AND SHOULD NOT BE INSTALLED UNTIL THE UNIT IS READY TO BEGIN OPERATION. THE BATTERY MAY BE STORED INSIDE THE ELECTRONICS BOX AND IF REMOVED, SHOULD NEVER BE STORED ON A CONCRETE SURFACE.

8. **INSTALLATION**: INSTALL THE smartPOND™ OUTFALL ASSEMBLY FIRST WITHOUT THE SOLAR PANEL. MOUNT SOLAR PANEL WITH THE CONNECTION BOLTS PROVIDED AFTER THE ASSEMBLY IS ANCHORED TO THE CONCRETE PAD USING THE ANCHOR BOLTS CALLED OUT ON THE PLANS, AS . BOLTS SHOULD BE REMOVED DURING THE INSTALLATION PROCESS. THERE ARE SEVERAL WAYS TO INSTALL THE smartPOND™ OUTFALL VALVE WITH THE KEY BEING STRUCTURED SUPPORT.

   8.1 BELOW GROUND INSTALLATIONS: THE UPPER COMPONENT CONSISTING OF THE ENCLOSURE BOX AND ALL ITS INTERNALS SHOULD BE FASTENED TO THE SURFACE OF THE CONCRETE VAULT. FOR VAULT INSTALLATIONS, SEE DESIGN DETAILS FOR STANDARD VAULT DESIGN.

9. **SAFETY INFORMATION AND WARNINGS**:

   - ALWAYS KEEP HANDS CLEAR OF THE OUTFALL VALVE AND MOTOR WHEN UNIT IS IN OPERATION.
   - TURN THE POWER SWITCH OFF WHEN DOING ANY ELECTRICAL WORK.
   - DO NOT ENTER THE WATER WHEN THE DEVICE IS ACTIVELY DRAINING WATER.
   - ALWAYS USE PROPER PERSONAL PROTECTION EQUIPMENT (PPE), AND CONFINED SPACE PROTOCOL WHEN SERVICING A OUTFALL VALVE BENEATH GROUND.

10. **PRODUCTS**: THE MANUFACTURER SHALL BE AN ESTABLISHED STORMWATER COMPANY THAT HAS AT LEAST FIVE (5X) INSTALLATIONS OF C-MASS DEVICES THAT HAVE BEEN IN USE AND FUNCTIONAL FOR FIVE (5X) OR MORE YEARS.

11. **QUALITY ASSURANCE AND PERFORMANCE SPECIFICATIONS**: THE QUALITY OF ALL SYSTEM COMPONENTS AND ALL OTHER APPURTENANCES AND THEIR ASSEMBLY PROCESS SHALL BE SUBJECT TO INSPECTION UPON DELIVERY OF THE SYSTEM TO THE WORK SITE. INSTALLATION IS TO BE PERFORMED ONLY BY SKILLED WORK PEOPLE WITH SATISFACTORY RECORD OF PERFORMANCE ON EARTHWORKS, PIPE, WELDING, CHAMBER, OR POND/LANDFILL CONSTRUCTION PROJECTS OF COMPARABLE SIZE AND QUALITY.

smartPOND Automated Stormwater Control.

FOR ADDITIONAL INFORMATION CONTACT
CONVERGENT WATER TECHNOLOGIES
1-800-711-5428
www.convergentwater.com

CONVERGENT WATER TECHNOLOGIES

smartPOND OUTFALL VALVE
SPECIFICATIONS

REVISION NO. 0
DATE 8/18/2023
SHEET NO. 3

SPIARS ENGINEERING & SURVEYING
501 W. President George Bush Hwy., Suite 200 Richardson, TX 75080 972.422.0077
TBPE No F-2121 • TBLPS No. F-10043100 • www.spiarseng.com
Mark Ewing • mark.ewing@spiarsengineering.com

This plan is released for the purpose of interim review and pricing under the authority of MARK E. EWING JR., P.E. 147783

Date: 6/13/2025

It is not to be used for construction.

AVILLA NOLINA

LOT 2, BLOCK R
WILLIAMSON COUNTY, TEXAS

PRIVATE SITE DETAILS

Revisions	Date

Scale: As Shown
Drawn By: CJF
Checked By: MEE

Sheet C45

SEI No. 24-002

Plotted by: Kenneth Plot Date: 6/13/2025 3:52 PM
Drawing: G:\2024 JOBS\24-002 Avilla Nolina\CAD\Site Details.dwg Saved By: Kenneth Save Time: 6/13/2025 3:36:19 PM

Effluent Limitation Guidelines (ELG) have been established under the renewed March 2018 TPDES General Permit. Please see Section G., page 40 of TXR15000 contained herein behind Tab 9.

EROSION AND SEDIMENTATION CONTROLS

Erosion control and stabilization practices may include but are not limited to, the establishment of temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, slope texturing, temporary velocity dissipation devices, flow diversion mechanisms, and other similar measures.
Major erosion and sedimentation controls are indicated on the SWPPP Site Plan, located in the previous section, Section 3 Maps and Plans.

Short and Long-Term Goals and Criteria:

- Sediment will be retained on site to the extent practicable with consideration for local topography, soil type, and rainfall.
- Control measures will be properly selected, installed, and maintained in accordance with manufacturers' specifications and good engineering practices.
- If periodic inspections or other information indicates that a control is being used incorrectly, or that the control is performing inadequately, it will be replaced or modified immediately upon discovery.
- If sediment escapes the site, off-site accumulations will be removed at a frequency to minimize negative impacts and whenever feasible, prior to the next rain event.
- Sediment will be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%.
- Litter, construction debris, and construction chemicals exposed to Stormwater will be removed, covered or otherwise prevented from becoming a pollutant source.
- Offsite materials storage areas, if used (also including overburden and stockpiles of dirt, borrow areas, etc.), are considered a part of the project and will be addressed in the SWPPP.

STABILIZATION PRACTICES

Short and Long-Term Goals and Criteria:

- Erosion Control and Stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. Stabilization measures that provide a protective cover must be initiated immediately in portions of the site where construction activities have permanently ceased. The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next workday, following the day when the earth-disturbing activities have temporarily or permanently ceased
    - Erosion control and stabilization practices may include but are not limited to, establishment of temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, slope texturing, temporary velocity dissipation devices, flow diversion mechanisms, and other similar measures.
- Except as provided below, these measures must be completed as soon practicable, but no more than 14 calendar days after the initial of soil stabilization measures:
    - Where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased due to frozen conditions, non-vegetative controls must be implemented until thawing conditions are present, and vegetative stabilization measures can be initiated as soon as practicable.
    - In arid areas, semi-arid areas, or drought-stricken areas, as they are defined in Part I.B of this general permit, where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased or is precluded by arid conditions, other types of erosion control and stabilization measures must be initiated at the site as soon as practicable. Where vegetative controls are infeasible due to

arid conditions, and within 14 calendar days of a temporary or permanent cessation of construction activity in any portion of the site, the operator shall immediately install non-vegetative erosion controls in areas of the construction site where construction activity is complete or has ceased. If non-vegetative controls are infeasible, the operator shall install temporary sediment controls

- In areas where non-vegetative controls are infeasible, the operator may alternatively utilize temporary perimeter controls. The operator must document in the SWPPP the reason why stabilization measures are not feasible; and must demonstrate that the perimeter controls will retain sediment on site to the extent practicable. The operator must continue to inspect the BMPs at the frequency established for unstabilized sites.
- The requirement for permittees to initiate stabilization is triggered as soon as it is known with reasonable certainty that construction activity at the site or in certain areas of the site will be stopped for 14 or more additional calendar days. If the initiation or completion of vegetative stabilization is prevented by circumstances beyond the control of the permittee, the permittee must employ and implement alternative stabilization measures immediately. When conditions at the site changes that would allow for vegetative stabilization, then the permittee must initiate or complete vegetative stabilization as soon as practicable.
- TCEQ does not expect that temporary or permanent stabilization measures to be applied to areas that are intended to be left un-vegetated or un-stabilized following construction (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, or materials).

Interim and Permanent Stabilization Practices for this Site include:

- A stabilized construction exit will be constructed of 3x5 crushed concrete to minimize, to the extent practicable, the offsite tracking of sediment and generation of dust unless existing pavement is available.
- Any staging or parking areas will also be stabilized to minimize to the extent practicable, the offsite tracking of sediment and generation of dust.
- Newly graded areas will have textured soil surfaces to reduce sheet flow and improve surface water impoundment.
- Filter Fabric Fence will be used to protect perimeters and temporary earth stockpiles while they are in use.
- Vegetative stabilization will be initiated on all disturbed soil at the completion of construction.
- Upon completion of construction, landscaping, consisting of sod/hydro-mulch, mulch, trees, shrubs, and miscellaneous plant material will be installed.

STRUCTURAL PRACTICES

These practices will be utilized to divert flows away from exposed soils, to limit contact of runoff with disturbed areas, or to lessen the off-site transport of eroded soils.

- Filter Fabric Fence will be erected at the perimeter of the area to be disturbed, as needed to prevent the escape of silt and sediment from the construction activity.
- Inlet Protection Barriers will be placed in new storm drain inlets as they are installed.
- Landscape drains and odd-sized grates will be wrapped with non-woven geo-textile fabric to prevent the escape of sediment.

Any additional controls which are implemented in response to changing conditions during construction are to be noted below:

- _____
- _____
- _____
- _____
- _____
- _____

- _____

Sequence of Major Erosion and Sediment Control Activities

Phase 1
The Filter Fabric Fence will be installed at the site boundaries where needed to prevent the escape of silt and sediment, prior to any disturbance of the soil on this site.

Phase 2
Inlet Protection Barriers will be placed in new storm drain inlets as they are installed. Odd-sized/landscape grates will be wrapped with non-woven geo-textile fabric.

Phase 3
When construction activity is substantially complete, temporary structural controls will then be removed and all disturbed soils will be stabilized with plant material.

SEDIMENTATION CONTROL PRACTICES

Sedimentation Basin(s) or Similar Impoundments

A sedimentation basin or similar impoundment is deemed not required or feasible on this site, for a variety of reasons, including site soils, slope, available area, public safety, precipitation patterns, site geometry, site vegetation, infiltration capacity, geotechnical factors, depth to groundwater, and other similar considerations. Equivalent measures, as described above, will be implemented.

PERMANENT STORMWATER MANAGEMENT

The area surrounding the new development will be planted with shrubs and other plant material providing flow attenuation and partial vegetative filtration in unpaved areas disturbed by construction activities. Additional measures shall be performed as required to ensure establishment of soil cover where evidence of erosion occurs.

Stormwater will discharge from the site via area inlets and landscape drains through the onsite storm sewer system to one of two proposed detention ponds along the southeast and southwest corner of the site. Both ponds will be equipped with a SmartPOND Automated Stormwater Control system to utilize batch detention, and will each have a weir in freestanding walls for staged detention flow with both ponds having a final outfall to the south end of the site through open drainage areas.

This Operator is responsible only for the installation and maintenance of the described stormwater management measures prior to final stabilization of the site or prior to submission of an NOT.

OTHER CONTROLS

Waste Disposal

- Waste Materials
  Minimize the exposure of waste materials by closing lids at the end of the workday. For waste containers that do not have lids, where the container itself is not sufficiently secure enough to prevent the discharge of pollutants absent a cover and cold leak, the permittee must provide either a cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, stormwater, and wind, or a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment). Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

  Minimize the exposure of wastes by implementing good housekeeping measures. Wastes must be cleaned up and disposed of in designated waste containers on days of operation at the site. Wastes must be cleaned up immediately if containers overflow.

All waste materials will be collected and stored in a metal dumpster provided by:

_____: The dumpster will meet all local and state solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The trash and debris will be hauled to an approved landfill. No construction waste material will be buried or burned onsite. Maintenance work on vehicles/equipment will not be allowed onsite except for emergency repair. All construction personnel will be instructed regarding the correct procedure for waste disposal. The Project Superintendent, who manages the day-to-day site operations, will be responsible for seeing that these procedures are followed.

- Hazardous Waste
  No hazardous waste is expected to be generated or encountered in this project. In the event that hazardous waste is encountered, all hazardous waste materials will be disposed of in the manner specified by local or state regulation or by the manufacturer. The Project Superintendent, who manages day-to-day site operations, will be responsible for seeing that these practices are followed.

- Sanitary Waste
  Minimize the exposure of sanitary waste by positioning portable toilets so that they are secure and will not be tipped or knocked over, and so that they are located away from surface water in the state and stormwater inlets or conveyances. Sanitary portable units will be provided for use by construction personnel. Sanitary waste will be collected and disposed of offsite. A licensed sanitary waste management contractor:
  _____: will regularly collect all sanitary waste from the portable units.

- Compliance with State, Tribal and Local Disposal Regulations
  Methods for collecting, hauling and disposing of spoil, waste material, sanitary and hazardous wastes will be in compliance with applicable federal, state, and local regulations.

Offsite Vehicle Tracking
A stabilized construction entrance will be provided at necessary locations to minimize offsite tracking of sediments and generation of dust, to the extent practicable. In the event that tracking occurs, the paved public roadways affected by work operations will be cleaned as necessary to remove any excess mud, dirt or other matter tracked from the site.

Concrete Truck Wash Out
Concrete washouts are used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solids for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drainpipes and cause flooding.

Direct discharge of concrete truck wash out water to surface waters or storm drain conveyances is prohibited. Wash out water will be discharged only to structural controls which have been designed specifically for this purpose. Wash out during rain events should be avoided.

Concrete Sawcutting Waste Management (SWM)
This management practice is to prevent by-products of sawcutting from entering the storm sewer system and polluting receiving waters.

Establish ahead of time appropriately designated areas to dispose of sawcutting waste. Sawcutting waste should not be allowed to drain to any Stormwater conveyance system or to remain on the pavement to dry out.

An appropriate disposal area is one protected by one or more sediment removal Best Management Practices (BMP's) which prevents the slurry and cuttings from contaminating surface or ground waters. While cutting, continuously vacuuming waste will help prevent contaminated water from leaving the site.

Pressure Washing
If pressure washing is done at the site, all run-off will be captured and treated as necessary (per guidelines detailed in the TPDES General Permit, TXR150000).

Dust Control
The transport of air-borne dust and sediment from this site will be controlled as needed, to the extent practicable, by appropriate methods which may include periodic watering or use of approved chemical stabilizers.

Pollutant Sources from Support Activities and Controls
No discharges of Stormwater from associated construction activities, including concrete batch plants, asphalt batch plants, equipment staging areas, and material storage yards, material borrow areas and excavated material disposal areas will take place under this SWPPP. All work will be conducted at the project site. If any support activities occur off site, this SWPPP will be amended to describe them and any additional control measures that may be needed beyond those described herein.

Measures to Protect Certain Species, or Critical Habitat
There are no special measures required to protect threatened or endangered species/critical habitat on this site.

Measures to Protect Historical Sites
There are no historical sites known to exist at this site. However, if any historical sites are discovered, this information will be revised to reflect appropriate coordination.

Dewatering
Should site dewatering be required, all Stormwater runoff that requires dewatering shall be filtered to reduce sediment transport.

When pumping (dewatering) standing Stormwater from the site, the operator shall use appropriate Best Management Practices (BMPs) from the Stormwater Management Handbook for Construction Activities that address dewatering activities. Untreated/Direct discharge into a storm sewer will not be allowed.

Personnel provided by the permittee must observe and evaluate dewatering controls at a minimum of once per day on the days where dewatering discharges from the construction site occur. Personnel conducting these evaluations must be knowledgeable of the Texas General Permit, the construction activities at the site, and information included in this SWPPP. Personnel conducting these evaluations are not required to have signatory authority for reports under 30 TAC § 305.128 (relating to Signatories to Reports). Observations and evaluations must be recorded within 24 hours following the evaluation.

OBSERVATIONS AND EVALUATION OF DEWATERING CONTROLS

Date/ Start Time/ End Time	Name/Title	Quantity (Gallons/Day)	Pollutants Observed (e.g., foam, oil sheen, odor, solids, etc)	Notes/Other Major Observations

DEWATERING CONTACT INFORMATION

QUALIFICATIONS FOR DEWATERING EVALUATIONS

NAMES AND QUALIFICATIONS OF PERSONNEL MAKING DEWATERING EVALUATIONS FOR THE PERMITTEE NAMED WITHIN THIS SWPPP DOCUMENT MAY BE DETAILED BELOW RATHER THAN ON EACH REPORT.

NAME: _____

TITLE: _____

COMPANY: _____

QUALIFICATIONS INCLUDE:

_____

_____

SIGNED: _____

DATE: _____

APPROVED STATE, LOCAL OR TRIBAL PLANS

This plan meets the stormwater management and erosion and sediment control measure requirements of Williamson County, and the TPDES General Permit TXR150000, under which it was developed.

This SWPPP will be updated as necessary to remain consistent with any changes applicable to protecting surface water resources in sediment erosion site plans or site permits, or stormwater management site plans or site permits approved by state or local officials from whom the permittee receives written notice.

No tribal land is known to occur at the site. However, if tribal land is found to occur at the site, then the information will be revised to reflect appropriate coordination.

MAINTAINENCE

All erosion and sedimentation control measures and practices identified in this SWPPP are to be maintained in effective operating condition as follows:

- Erosion and sediment control measures that have been improperly installed or have been disabled, run over, removed, or otherwise rendered ineffective will be replaced or corrected immediately upon discovery.
    - If periodic inspections or other information indicates a control has been used incorrectly, is performing inadequately, or is damaged, then the control will be replaced or modified as practicable after making the discovery.
- Maintenance and repairs identified as necessary in an inspection (see Section 6 Site Inspections below) will be conducted before the next anticipated storm event, if feasible.
- If maintenance prior to the next anticipated storm event is impracticable, the reason will be documented in the SWPPP and maintenance will be scheduled and accomplished as soon as practicable.
- Sediment will be removed from the sediment fences and inlet protection barriers before it reaches 50% of the above ground height of the barrier.
- If sediment escapes the site, accumulations will be removed at a frequency that minimizes off-site impacts, and prior to the next rain event, if feasible. If the permittee does not own or operate the off-site conveyance, then the permittee will work with the owner or operator of the property to remove the sediment.

SCOPE OF INSPECTIONS

- Disturbed areas of the construction site which have not been finally stabilized;
- Areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system;
- Erosion and sediment control measures identified in the plan will be observed for evidence of, or the potential for, pollutant entering the drainage system---and to ensure that they are operating correctly;
- Locations where vehicles enter or exit the site will be inspected for evidence of offsite sediment tracking; and,
- Where discharge locations or points are accessible, they will be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

SCHEDULE OF INSPECTIONS

- Inspections will be conducted by the responsible person at least once every 7 calendar days or,
- Inspections will be conducted by the responsible person at least once every 14 calendar days and within 24 hours after a rain event of 0.5 inch or greater.
- In the event of flooding or other uncontrollable situations which prohibit access to the site, inspections will be conducted as soon as access is practicable.
- The above detailed schedule may be changed a maximum of one time each month but must be implemented at the beginning of a calendar month, and the reason to the schedule change must be documented in this SWPPP.

SWPPP MODIFICATIONS AS A RESULT OF INSPECTIONS

Based on the results of each inspection, Section 2 Site Description and Section 4 Controls elsewhere in this SWPPP will be revised as appropriate, but in no case later than 7 calendar days following the inspection. If modifications to BMPs are necessary, they will be implemented whenever possible before the next storm event, or if that is impracticable, the changes will be implemented as soon as practicable. Major modifications to this SWPPP will be logged in Section 11 SWPPP Amendments Log as they are made.
In addition to indication changing BMP needs and locations on the SWPPP Site Map, current locations of the following shall also be noted when applicable:

- Portable toilets
- Material storage areas
- Vehicle and equipment fueling and maintenance areas
- Concrete Washouts
- Paint and stucco washouts
- Dumpsters or other trash and debris containers
- Spill Kits
- Stockpiles
- Any temporarily removed structural BMPs

INSPECTION REPORT FORMAT

A report summarizing the scope of the inspection, name of personnel making the inspection, the date of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance the schedule noted above will be made and retained as part of this SWPPP for at least three years from the date that the site is finally stabilized. The reports will be signed in accordance with the TPDES General Permit. The completed Inspection Reports related to this SWPPP are found in Section 12 Inspection Records.

A sample of the Inspection Report Form to be used in conjunction with this SWPPP is included immediately behind this page. Qualifications of the site inspector(s) may be found in Section 10 Certifications and Documents, elsewhere in this SWPPP, as well as the formal delegation of inspection responsibility by the Operator, to this individual/entity.

SWPPP INSPECTION REPORT

7 DAY CYCLE

PROJECT NAME:	DATE OF INSPECTION:	INSPECTOR NAME:

PHASE: (I) (II)

CONSTRUCTION PHASE (MAJOR GRADING AND/OR STABILIZATION ACTIVITIES): DEMO ☐ CLEARING ☐ ROUGH GRADE ☐ UTILITY INSTALL ☐ PAD PREP ☐ SLAB/PAVING PREP ☐ CONCRETE PLACEMENT ☐ FINAL GRADING ☐ LANDSCAPING ☐ FINAL STABILIZATION ☐

SWPPP SIGNAGE: IN PLACE & PROPERLY LOCATED? (Y) (N)
SWPPP POSTINGS: ACCURATE, LEGIBLE & UP TO DATE? (Y) (N)

SWPPP BOOK: ONSITE & ACCESSIBLE? (Y) (N)
SWPPP NARRATIVE: COMPLETE & UP TO DATE? (Y) (N)

SWPPP INSPECTOR QUALIFICATIONS: DOCUMENTED IN THE SWPPP? (Y) (N)

BMP OBSERVATIONS AND COMMENTS

DOCUMENT, INITIAL, & DATE IN FAR RIGHT COLUMN WHEN ISSUES ARE CORRECTED →

INITIAL & DATE CORRECTIONS HERE

SCE — STABILIZED CONSTRUCTION EXIT

- DOES ALL TRAFFIC USE THE SCE? (Y) (N)
- DOES SCE NEED REHABILITATION? (Y) (N)
- DOES SEDIMENT NEED TO BE CLEANED FROM STREET? (Y) (N)

SF — SILT FENCE (N/A)

- DOES SF NEED REPAIR OR RESET IN ANY AREA? (Y) (N)
- IS SEDIMENT REMOVAL NEEDED IN ANY AREA? (Y) (N)
- ANY EVIDENCE OF OVER-TOPPING OR WASHING-OUT? (Y) (N)

IPB — INLET PROTECTION BARRIERS (N/A)

- ARE IPBs IN PLACE & FUNCTIONING PROPERLY? (Y) (N)
- DO ANY IPBs NEED TO BE CLEANED & RESET? (Y) (N)
- DO ANY IPBs NEED TO BE REPLACED? (Y) (N)

CW — CONCRETE WASHOUT (N/A)

- IS CW IN PLACE, LOCATED & FUNCTIONING PROPERLY? (Y) (N)
- DO SOLIDS AND/OR LIQUIDS NEED TO BE REMOVED? (Y) (N)

OTHER — CONTROLS AND STABILIZATION

- OTHER BMPs: (N/A)
- ARE THESE BMPs FUNCTIONING PROPERLY? (Y) (N) (N/A)
- ARE CHANNELS AND OUTFALLS PROTECTED PROPERLY? (Y) (N) (N/A)
- ARE ANY OTHER BMPs NECESSARY? (Y) (N)
- ARE ANY STABILIZATION MEASURES REQUIRED? (Y) (N)

HAZ ♦ MAT — HAZARDOUS MATERIALS ONSITE (N/A)

- ARE HAZARDOUS CHEMICALS STORED PROPERLY? (Y) (N) (N/A)
- ARE FUEL TANKS PROPERLY LOCATED & PROTECTED? (Y) (N) (N/A)
- ARE CHEMICAL TOILETS PROPERLY LOCATED? (Y) (N) (N/A)
- IS DUMPSTER LOCATED & USED APPROPRIATELY? (Y) (N) (N/A)
- IS TRASH COLLECTED & STORED PROPERLY? (Y) (N) (N/A)
- ARE ANY IMPROPER WASHDOWN ACTIVITIES EVIDENT? (Y) (N) (N/A)
- IS ANY IMPROPER EQUIPMENT MAINTENANCE EVIDENT? (Y) (N) (N/A)
- ARE ANY IMPROPER DEWATERING PRACTICES EVIDENT? (Y) (N) (N/A)

ADDITIONAL OBSERVATIONS AND COMMENTS:

CERTIFICATION: I CERTIFY UNDER THE PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHER THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

IF NO EXCEPTIONS FOUND, I CERTIFY THAT ALL CONTROLS ARE ACCEPTABLE AND THIS PROJECT IS IN COMPLIANCE WITH THE SWPPP AND THE CONSTRUCTION GENERAL PERMIT. ☐

SIGNATURE:

_____

_____

NON-STORMWATER DISCHARGES

The following eligible non-Stormwater discharges at the site will be allowed only when such flows are diverted to site erosion and sediment control measures as detailed in Section 4 Controls:

- discharges from emergency firefighting activities (emergency firefighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, and similar activities);
- uncontaminated fire hydrant flushing's (excluding discharges of hyper chlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life), which include flushing's from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushing's do not include systems utilizing reclaimed wastewater as a source water);
- water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where detergents and soaps are not used and where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;
- uncontaminated water used to control dust;
- potable water sources including waterline flushing's (excluding discharges of hyper chlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life);
- uncontaminated air conditioning condensate;
- uncontaminated ground water or spring water, including foundation or footing drains
- where flows are not contaminated with industrial materials such as solvents; and
- lawn watering and similar irrigation drainage.

OTHER PERMITTED DISCHARGES

Any discharge authorized under a separate NPDES, TPDES, or TCEQ permit may be combined with discharges authorized by this general permit, provided those discharges comply with the associated permit.

SPILL PREVENTION

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to Stormwater runoff.

Good Housekeeping Practices
The following good housekeeping practices will be followed onsite during the construction project.

- An effort will be made to store only enough products required to construct the project.
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer, and only when ready to be used.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The Project Superintendent will inspect daily to ensure proper use and disposal of materials onsite.

Hazardous Product Practices
These practices will be used to reduce the risks associated with hazardous materials, if hazardous materials are used.
Products will be kept in original containers unless they are not re-sealable.

- Original labels and material safety data will be retained.
- If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal will be followed.
- In the event that demolition of any structure with at least 10,000 square feet of floor space that was built or renovated before January 1980, will take place, and the receiving waterbody is impaired for polychlorinated biphenyls (PCBs):
- Implement control to minimize the exposure of PCB-containing building materials, including paint
- caulk and pre-1980 fluorescent lighting fixtures to precipitation and to stormwater; and ensure that disposal
- of such materials is performed in compliance with applicable state, federal and local laws.

POTENTIALLY POLLUTING MATERIALS

The following potential pollutants listed below are expected to be stored onsite during construction. As they are utilized, they or the waste material generated in utilizing them, may also be stored as waste material prior to being properly disposed of:

Material/Chemical	Physical Description	Stormwater Pollutants	Location *
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	Herbicides used for noxious weed control
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	Newly seeded areas
Plaster	White granules or powder	Calcium sulphate, calcium carbonate, sulfuric acid	Building construction
Cleaning solvents	Colorless, blue or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	No equipment cleaning allowed in project areas
Asphalt	Black solid	Oil, petroleum distillates	Streets and roofing
Concrete	White solid/grey liquid	Limestone, sand, pH, chromium	Curb and gutter, building construction
Glue, adhesives	White or yellow liquid	Polymers, epoxies	Building construction
Paints	Various colored liquid	Metal oxides, Stoddard solvent, talc, calcium carbonate, arsenic	Building construction
Curing compounds	Creamy white liquid	Naphtha	Curb and gutter
Wood preserves	Clear Amber or dark brown liquid	Stoddard solvent, petroleum distillates, arsenic, copper, chromium	Timber pads and building construction
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	Leaks or broken hoses from equipment
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment/staging area
Diesel Fuel	Clear, blue green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes	Secondary containment/staging area
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates	Secondary containment/staging area
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment
Sanitary toilets	Various colored liquid	Bacteria, parasites and viruses	Staging area

*** Area where material/chemical is used on site.**

PRODUCT SPECIFIC PRACTICES

The following product specific practices will be followed onsite:

Petroleum Products
All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers, which are clearly labeled. Any asphalt substances used onsite will be applied according to manufacturer's recommendations.

Paints
All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the Stormwater sewer system but will be properly disposed of according to manufacturer's instructions or State and local regulations.

Fertilizers
Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked in the soil to limit exposure to Stormwater. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills or suitably covered storage area.

Concrete Trucks
Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash on this site, except into a specified and properly designated area designed for this purpose.

SPILL PREVENTION PRACTICES

In addition to the good housekeeping and material management practices discussed above, the following practices will be followed for spill prevention and cleanup:

- Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency regardless of size.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The Project Superintendent responsible for day-to-day site operations will be the spill prevention and cleanup coordinator. He will designate other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup.

RELEASES IN EXCESS OF REPORTABLE QUANTITIES

The discharge of hazardous substances or oil in the Stormwater discharges will be prevented or minimized as provided below. The General Contractor will comply with the reporting requirements under the Construction General Permit. Spills or releases will be reported immediately to the Texas Commission on Environmental Quality 800.832.8224. The SWPPP will be modified within 14 days to provide description of release, circumstances leading to release and the date of the release.

SPILL RESPONSE PLAN

Leak or Spill

- Employees will not be punished for reporting spills.
- Contain spill and start cleanup
- Report if over reportable quantity.

Point of Contact in Case of Reportable Quantity Release

Texas Commission on Environmental Quality 800.832.8224

Reportable Quantities		
Material	**Material Released To**	**Reportable Quantity**
Engine oil, fuel, hydraulic & brake fluid	Land	~25 gallons
Engine oil, fuel, hydraulic & brake fluid	Water	Visible Sheen
Anti-freeze	Land	100 lbs (~13 Gallons)
Battery Acid	Land, Water	100 lbs (~6 Gallons)
Freon	Air	1 lb
Gasoline	Air, Land, Water	100 lbs (~15 Gallons)
Engine Degreasers	Air, Land, Water	100 lbs (~14 Gallons)

Information to Report
When making a telephone report of a spill or pollution complaint, it will be helpful if the following information is available:
The date and time of the spill or release;

- The identity or chemical name of material released or spill as well as whether the substance is an extremely hazardous material;
- An estimate of the quantity of material released or spilled and the time or duration of the event;
- The exact location of the spill, including the name of the waters involved or threatened, and/or other medium or media affected by the release or spill;
- The source of the release or spill;
- The name, address, and telephone number of the party in charge of, or responsible for the facility, vessel, or activity associated with the release or spill;
- The extent of actual and potential water pollution;
- The party at the release or spill site, who is in charge of operations at the site and the telephone number of this party;
- The steps being taken or proposed to contain and clean up the released or spilled material and any precautions taken to minimize impacts including evacuation;
- The extent of injuries, if any;
- Any known or anticipated health risks associated with the incident and, where appropriate, advice regarding medical attention necessary for exposed individuals;
- Possible hazards to the environment (air, soil, water, wildlife, etc.). This assessment may include references to accepted chemical databases, material safety data sheets, and health advisories. Estimated or measured concentrations of a contaminant may be requested by the TCEQ for the state's hazard assessment; and,
- Identity of governmental and/or private sector representatives responding on-scene.

POTENTIALLY POLLUTING ACTIVITIES

The activities in the following chart have been identified as potentially polluting. The Best Management Practices described in this section, and those described in Section 4 Controls are to be implemented to protect the water quality of any discharge from this site or escape to any adjacent waterway.

Areas of Consideration	Primary Pollutant	Other Pollutants							
	Sediment	Nutrients	Heavy Materials	pH (acids & bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris & Solids	Other Toxic Chemicals
Clearing, grading, excavating and unstabilized areas	✓							✓	
Paving operations	✓							✓	
Concrete washout and waste			✓	✓				✓	
Structure construction/painting/clearing		✓		✓				✓	✓
Demolition and debris disposal	✓							✓	
Dewatering operations	✓	✓							
Drilling and blasting operations	✓			✓				✓	
Material delivery and storage	✓	✓	✓	✓	✓	✓		✓	✓
Material use during building process		✓	✓	✓	✓	✓		✓	✓
Solid waste (trash and debris)								✓	✓
Hazardous waste				✓	✓	✓			✓
Contaminated spills		✓	✓	✓	✓	✓			✓
Sanitary/septic waste		✓		✓			✓		✓
Vehicle/equipment fueling and maintenance						✓			✓
Vehicle/equipment use and storage						✓			✓
Landscaping operation	✓	✓						✓	

Although not required under the General Permit, details for suggested Best Management Practices are found in this section. They may differ from those found in the construction drawings, and in that case, these should be considered recommended alternatives. It is the Operator's responsibility to select the most effective control for specific site conditions.

Items Specified for Erosion Control

- Dust Control
- Geotextiles
    - Erosion Control Blankets
- Flexible Growth Medium
    - Flexterra

Items Specified for Runoff Control

- Check Dams and Other Flow Control Barriers
    - Straw Wattles
    - GeoHay
    - Erosion Eels
- Dewatering Devices
    - Dirtbag
    - Site constructed dewatering system

Items Specified for Sediment Control

- Filter Fabric Fence
    - Slice-inserted Silt fence
    - Reinforced Silt Fence (trenched)
    - Rock on Tail
- Inlet Protection Barrier
    - Siltsack IPB
    - GutterGator IPB
    - GrateGator IPB
    - Gutter Eels
- Stabilized Construction Exit

Items Specified for Good Housekeeping/Materials Management

- Concrete Washout
- Spill Response Kit

EROSION EEL (100% Rubber Erosion Eel)

Product Description:
The Erosion Eel is highly effective sediment-control product used at construction sites to prevent suspended soils from contaminating area streams and wetlands during storm events. It is a sediment tube filled with an effective filter ballast material, consisting of 100% shredded, recycled tire rubber.

Applications:
The Erosion Eel is used on any active construction site where soils have been disturbed. The Eel is used in lieu of silt fencing, rock check dams, wattles, hay bales, gravel bags, and other conventional BMP items. The Eel can be used for perimeter controls, check dams, and diversion berms.

Product Dimensions and Weights:

The Erosion Eel comes in four sizes:

- 9.5-inch diameter, 2.5 ft length
- 9.5-inch diameter, 10 ft length
- 9.5-inch diameter, 4.5 ft length
- 20-inch diameter, 10 ft length

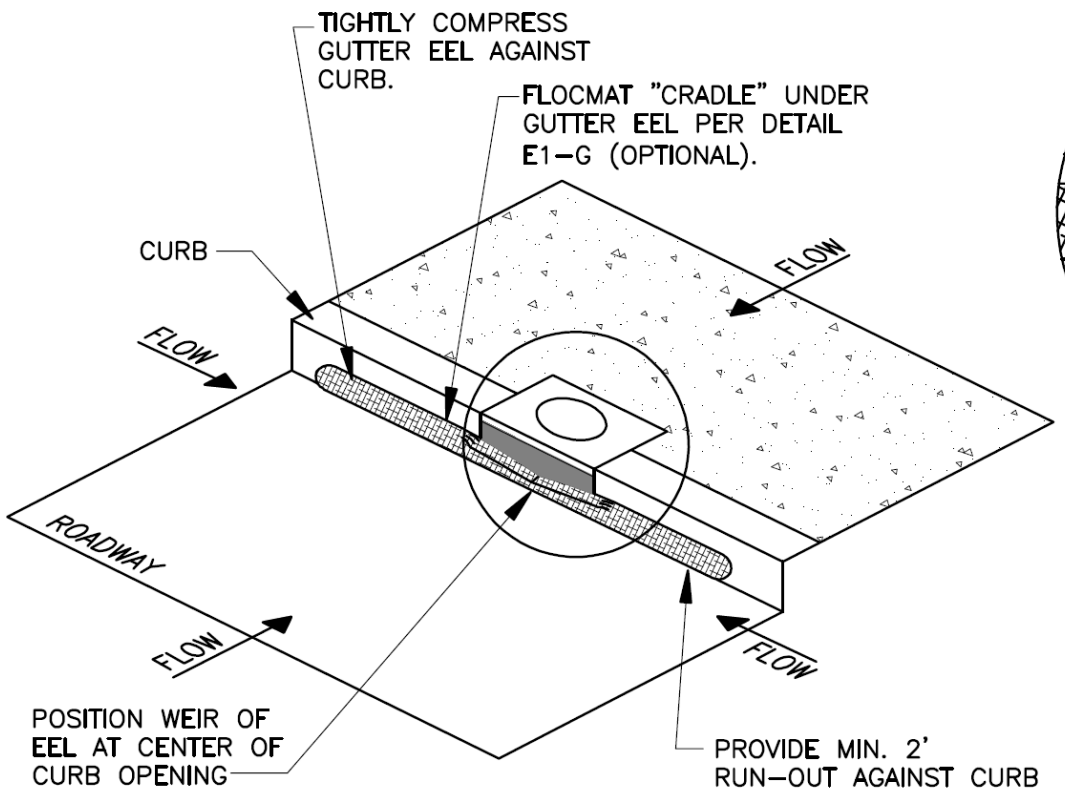
The unit weight per foot for each manufactured diameter is:

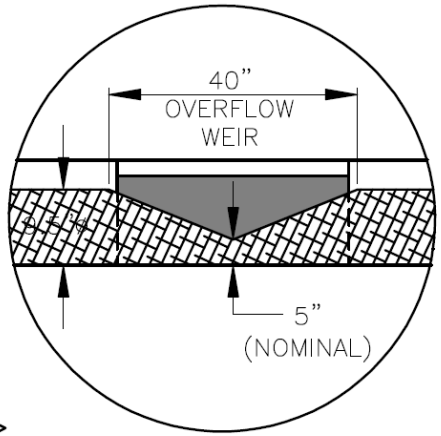
- 9.5-inch diameter = 14 lbs/ft
- 20-inch diameter = 60 lbs/ft

Interior Filter Material:
Shredded, recycled, used, tire, rubber particles. Greater than 98% of metal is removed from shredded rubber filtrate material. The rubber is washed during manufacturing.

Interior Filter material Particle Size Gradation:
½ inch to ¾ inch for 9.5-inch diameter Eel. 2-inch size for 20-inch Eel.

Installation Requirements:
Each Eel is designed with high-strength handles. One can move the Eels either manually (e.g., two individuals holding onto the handles at both ends of the Eel, or one person dragging the Eel by one of the end handles) or can be moved mechanically using any number of different types of construction equipment. The Eel does not require any ground disturbance at all. Staking is only required for applications when the Eel is used as a check dam (concentrated flow applications). Also, the Eels need to be staked on steep hillsides (>25%).





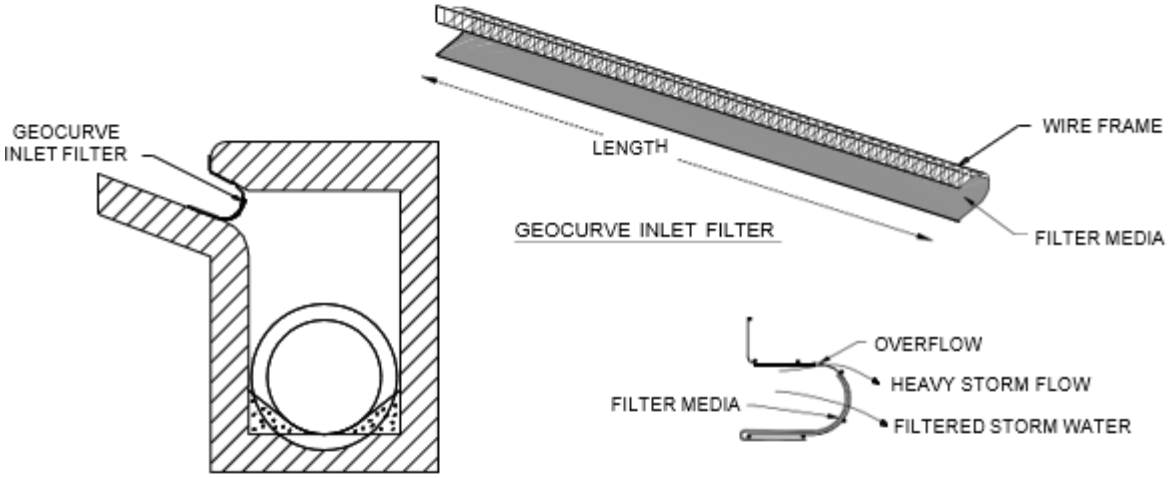
NOTE:
PERIODIC MAINTENANCE SHALL INCLUDE CLEANING GUTTER EEL SURFACE WITH HIGH PRESSURE WASH OR BRUSHING SURFACE WITH BROOM.

ISOMETRIC DETAIL E3–C: SMALL CURB INLET SEDIMENT TRAP – GUTTER EEL
N.T.S.

GeoSolutions, Inc. Product Data Sheet

GeoCurve Inlet Filter

The GeoCurve Inlet Filter is a stormwater filter for placement into a stormwater curb inlet for the purpose of capturing debris and sediment that is transported by stormwater runoff. The device is comprised of a filter media (woven monofilament filter fabric) affixed to the lower portion of a "C" shaped 12 gauge welded wire frame (2" x 4" openings) with an upper retention flange. The device effectively filters stormwater, can easily be removed for maintenance and cleaning and incorporates an overflow window for heavy storm events.



CROSS-SECTION SHOWING PLACEMENT OF GEOCURVE IN CURB INLET

GEOCURVE INLET FILTER CROSS-SECTION

FILTER MEDIA PROPERTIES: Mono-filament Woven Filter Fabric

PROPERTY	ASTM TEST METHOD	VALUE	C.O.A. REQ'T
Fabric Weight	D 3776	4.5 oz/sy	3 oz/sy
Grab Tensile Strength	D 4632	170 lbs	----
Mullen Burst Strength	D 3786	410 lbs/sq in	120 lbs/sq in
UV Stability	D 4355	80 %	70 %
Water Flow Rate	D 4491	325 gal/min/sf	275 gal/min/sf

GeoSolutions, Inc. 4417 Burleson Road Austin, Texas 78744 512-330-0796

HANES GEO COMPONENTS
A Leggett & Platt® COMPANY

Silt Fence for the City of Austin Materials Spec

This is to announce that the products mentioned below are manufactured under standard procedures and that quality verifications show the compliance to the following specifications.

Part	Description and Specifications
Welded Wire	Wire gauge: 12 (0.098”-0.117”) Regular zinc coating Opening: 2” x 4” Height: 36” Length: Custom
Filter Fabric	Terratex No6 6.0oz (203 gram) Non-Woven Polyester Filter Fabric 315 psi Mullen Burst

HANES GEO COMPONENTS
A Leggett & Platt COMPANY

City of Austin Silt Fence

TerraTex N06

Nonwoven Geotextile

TerraTex N06 is a nonwoven geotextile made up of polypropylene fibers. These fibers are needled to form a stable and durable network such that the fibers retain their relative position. It is non- biodegradable and resistant to most soil chemicals, acids and alkali with a pH range of 3 to 12.
TerraTex N06 is manufactured to meet or exceed the following minimum average roll values:

Property	Test Method	Minimum Average Roll Value English	Minimum Average Roll Value Metric
Weight	ASTM D5261	6.0 oz/yd2	203 g/m^2
Tensile Strength	ASTM D-4632	160 lb	.711 kN
Tensile Elongation	ASTM D-4632	50%	50%
Mullen Burst	ASTM D-3786	315 psi	2170 kPa
Puncture Strength	ASTM D-4833	90 lb	.40 kN
Trapezoid Tear	ASTM D-4533	65 lb	.289 kN
UV Resistance	ASTM D-4355	70% @ 500 hr	70% @ 500 hr
AOS	ASTM D-4751	70 US Sieve	.212 mm
Permittivity	ASTM D-4491	1.6 sec^{-1}	1.6 sec^{-1}
Water Flow Rate	ASTM D-4491	110 gal/min/ft^2	4480 l/min/m^2

Welded Utility Fence

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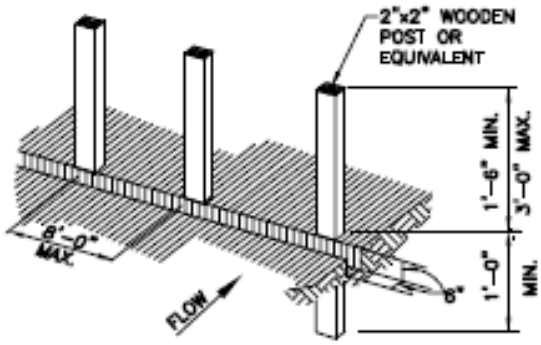
Part	Description and Specifications
12.5 gauge	Wire gauge: 12.5 (0.094”-0.098”) Regular zinc coating Opening: 2” x 4” Height: 24” Length: 100’

Certification # 3954

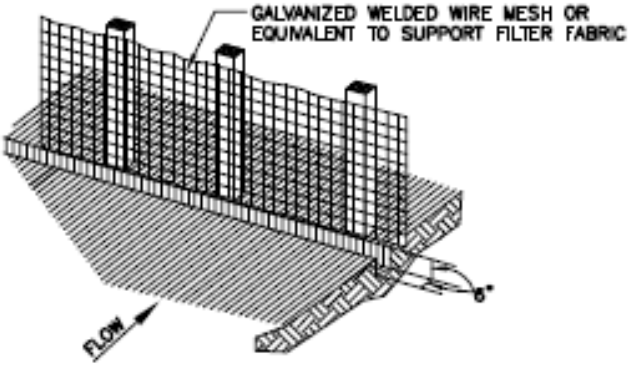
4101 S. Industrial Dr. Ste 100, Austin TX 78744 512-670-2050 Fax 512-670-2035

REINFORCED FILTER FABRIC BARRIER

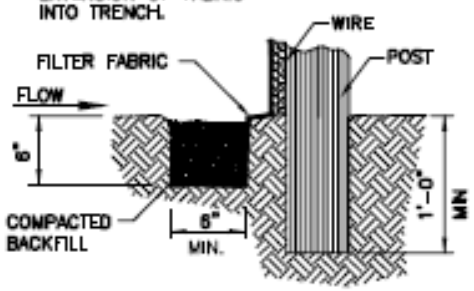
1. SET POSTS AT REQUIRED SPACING AND DEPTH. EXCAVATE 6" x 6" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



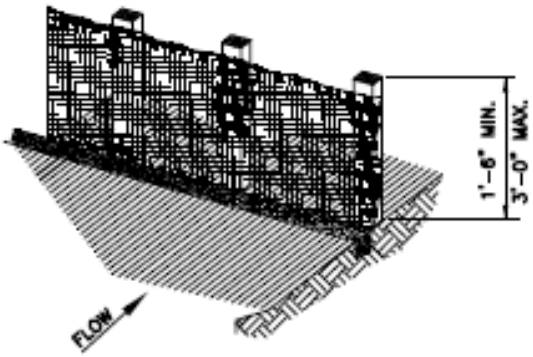
2. SECURE MESH FENCING TO POSTS



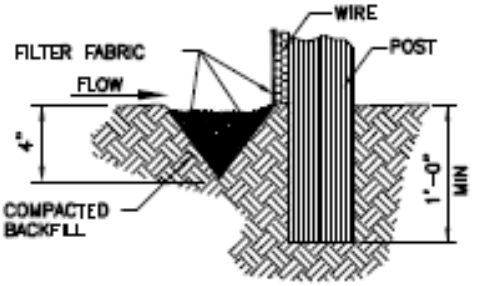
EXTENSION OF FABRIC INTO TRENCH.



3. ATTACH FILTER MATERIAL TO WIRE FENCE AND EXTEND IT INTO THE TRENCH. BACKFILL AND COMPACT THE EXCAVATED SOIL.



ALTERNATE V-TRENCH EXTENSION OF FABRIC INTO TRENCH



Notes:

- Provide wooden stakes or steel fence supports having a minimum length of 4 feet.
- For reinforced fence, provide mesh reinforcement of galvanized 2 inch by 4-inch welded wire fabric mesh or plastic grid mesh reinforcement
- Securely fasten mesh fencing to posts with staples or tie wires
- Securely fasten filter fabric to mesh fencing.
- When two sections of filter fabric adjoin each other, overlap 6" at a post, fold together, and attach to a post.
- Remove sediment deposits when silt reaches 1/3 of the height of the fence depth.

SILTSACK® (Catch Basin Sediment Control)

Description:

This work shall consist of furnishing, installing, maintaining, and removing SILTSACK® Sediment Control Device as directed by the engineer or as shown on the contract drawings. The SILTSACK® Sediment Control Device is manufactured by:

ACF Environmental, Inc.
2831 Cardwell Drive
Richmond, Virginia 23234
Phone: 800-448-3636
Fax: 804.743.7779

Materials:

SILTSACK®

- The SILTSACK® shall be manufactured from a woven polypropylene and sewn by a double needle machine, using a high strength nylon thread.
- The SILTSACK® seams shall have a certified average wide width strength per ASTM D-4884 standard as follows:

SILTSACK® Style	Test Method	Test Method
Regular Flow	ASTM D-4884	165.0 lbs/in
High-Flow	ASTM D-4884	114.6 lbs/in

- The SILTSACK® will be manufactured to fit the opening of the catch basin or drop inlet. The SILTSACK® will have the following features: two dump straps attached at the bottom to facilitate the emptying of the SILTSACK®; The SILTSACK® shall have lifting loops as an integral part of the system to be used to lift the SILTSACK® shall have a restraint cord approximately halfway up the sack to keep the sides away from the catch basin walls, this yellow cord is also a visual means of indicating when the sack should be emptied. Once the strap is covered with sediment, the SILTSACK® should be emptied, cleaned, and placed back into the basin.
- The geotextile fabric shall be woven polypropylene fabric with the following properties:

Property	Test Method	Test Result
Grab Tensile	ASTM D-4632	300 lbs
Grab Elongation	ASTM D-4632	20%
Puncture	ASTM D-4833	120 lbs
Mullen Burst	ASTM D-3786	800 P.S.I.
Trapezoid Tear	ASTM D-4533	120 lbs
UV Resistance	ASTM D-4355	80%
Apparent Opening	ASTM D-4751	40 US Sieve
Flow Rat	ASTM D-4491	40 Gal/Min/Ft^2
Permittivity	ASTM D-4491	0.55 sec^{-1}

SILTSACK® High-Flow

Property	Test Method	Test Results
Grab Tensile	ASTM D-4632	265 lbs
Grab Elongation	ASTM D-4632	20%
Puncture	ASTM D-4833	135 lbs
Mullen Burst	ASTM D-3786	420 P.S.I.
Trapezoid Tear	ASTM D-4533	45 LBS
UV Resistance	ASTM D-4355	90%
Apparent Opening	ASTM D-4751	20 US Sieve
Flow Rate	ASTM D-4491	200 Gal/Min/Ft^2
Permittivity	ASTM D-4491	1.5 sec^{-1}

All properties are minimum average roll values

Construction Sequence:

- To install the SILTSACK® in the catch basin, remove the grate and place the sack in the opening. Hold out approximately six inches of the sack outside the frame. This is the area of the lifting straps. Replace the grate to hold the sack in place.
- The SILTSACK® is full and should be emptied when the restraint cord is no longer visible.
- To remove the SILTSACK®, take two pieces of 1" diameter rebar and place through the lifting loops on each side of the sack to facilitate the lifting of the SILTSACK®.
- To empty the SILTSACK®, place it where the contents will be collected. Place the rebar through the lift strap
- The SILTSACK® is reusable. Once the construction cycle is complete, remove the SILTSACK® from the basin and clean. The SILTSACK® should be stored out of the sunlight until needed on another project.

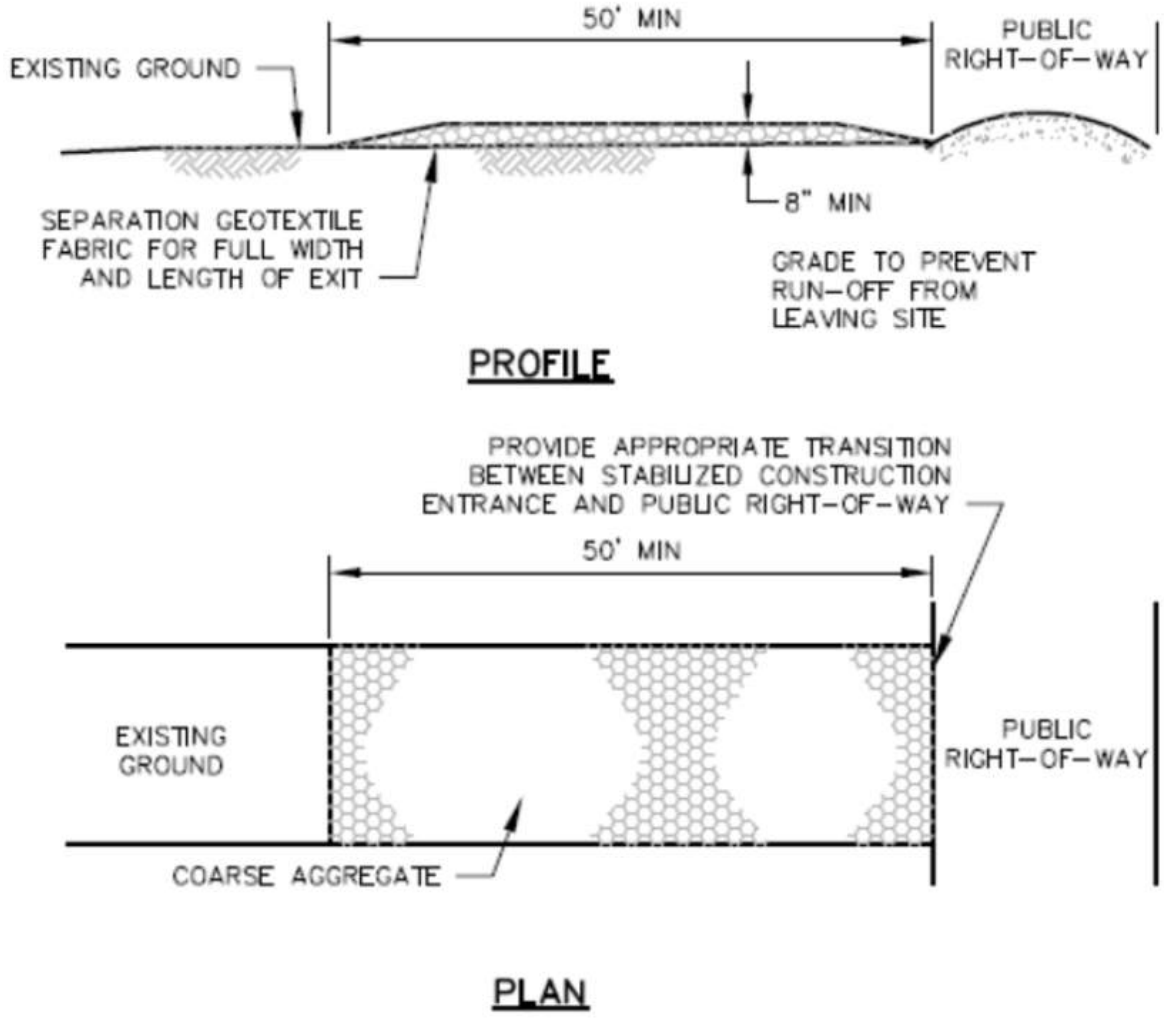
Basis of Payment:

Payment for all SILTSACKS® used during the construction is to be included in the bid price for the overall erosion and sediment control plan unless unit price is requested. Maintenance of SILTSACK® also to be included in this price.

Available From:

Construction EcoServices
13810 Hollister Drive, #100
Houston, TX 77086
(832) 456-1000

STABILIZED CONSTRUCTION EXIT



Notes:

- Length shall be as shown on the constr5uction drawings, but not less than 50 feet
- Thickness shall be not less than 8"
- Width shall be not less than full width of all points of ingress or egress.
- Stabilization for other areas shall have the same aggregate thickness and width requirements as the stabilized construction exit, unless otherwise shown on the construction drawings
- Stabilized area may be widened or lengthened to accommodate a truck washing area. An outlet sediment trap must be provided for the truck washing area.
- Stabilized construction exit shall be maintained free of sediment for the duration of the project.

GUTTERGATOR™

Description:

This work shall consist of furnishing, installing, maintaining, and removing GutterGator Sediment Control Device as directed by the engineer or as shown on the contract drawings. The GutterGator Sediment Control Device is manufactured by:

ACF Environmental, Inc.
2831 Cardwell Drive
Richmond, Virginia 23234
Phone: 800-448-3636
Fax: 804.743.7779

Materials:

GutterGator

The GutterGator will be manufactured to 3' molds in 3', 6', 9', 12', 15' and 18' lengths and a minimum of twenty-four (24) inches longer than the curb inlet opening. This will allow for sufficient length to cover the inlet with twelve (12) inches beyond the inlet on both ends.

Construction Sequence

- Install the GutterGator in front of the curb inlet opening. Drop 7lb weight sock into inlet opening, secure tie back straps, if applicable. Each end of the GutterGator should overlap the curb inlet approximately 12".
- The GutterGator should be cleaned if a visual inspection shows sediment and debris build up around the GutterGator.
- To remove the GutterGator, lift out of curb opening with provided carrying handle.
- The GutterGator is reusable. Once the construction project is complete and it is no longer needed for sediment control, remove, clean and store it out of the sunlight until needed on the next project.
- Ponding is likely if sediment is not removed regularly. Inspection of GutterGator should be on a regular basis and immediately after wet weather.

Basis of Payment:

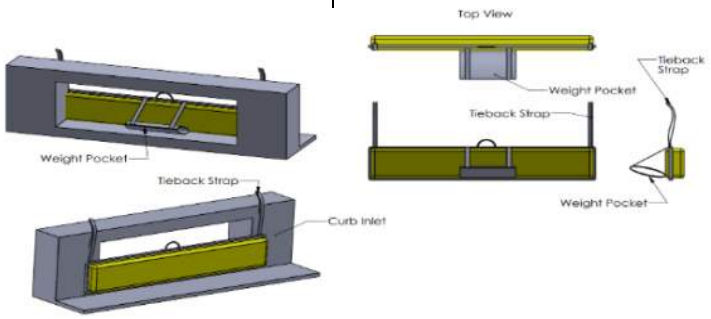
Payment for GutterGator used during the construction is to be included in the bid price for the overall erosion and sediment control plan and priced by the linear foot.

Installation and Maintenance:

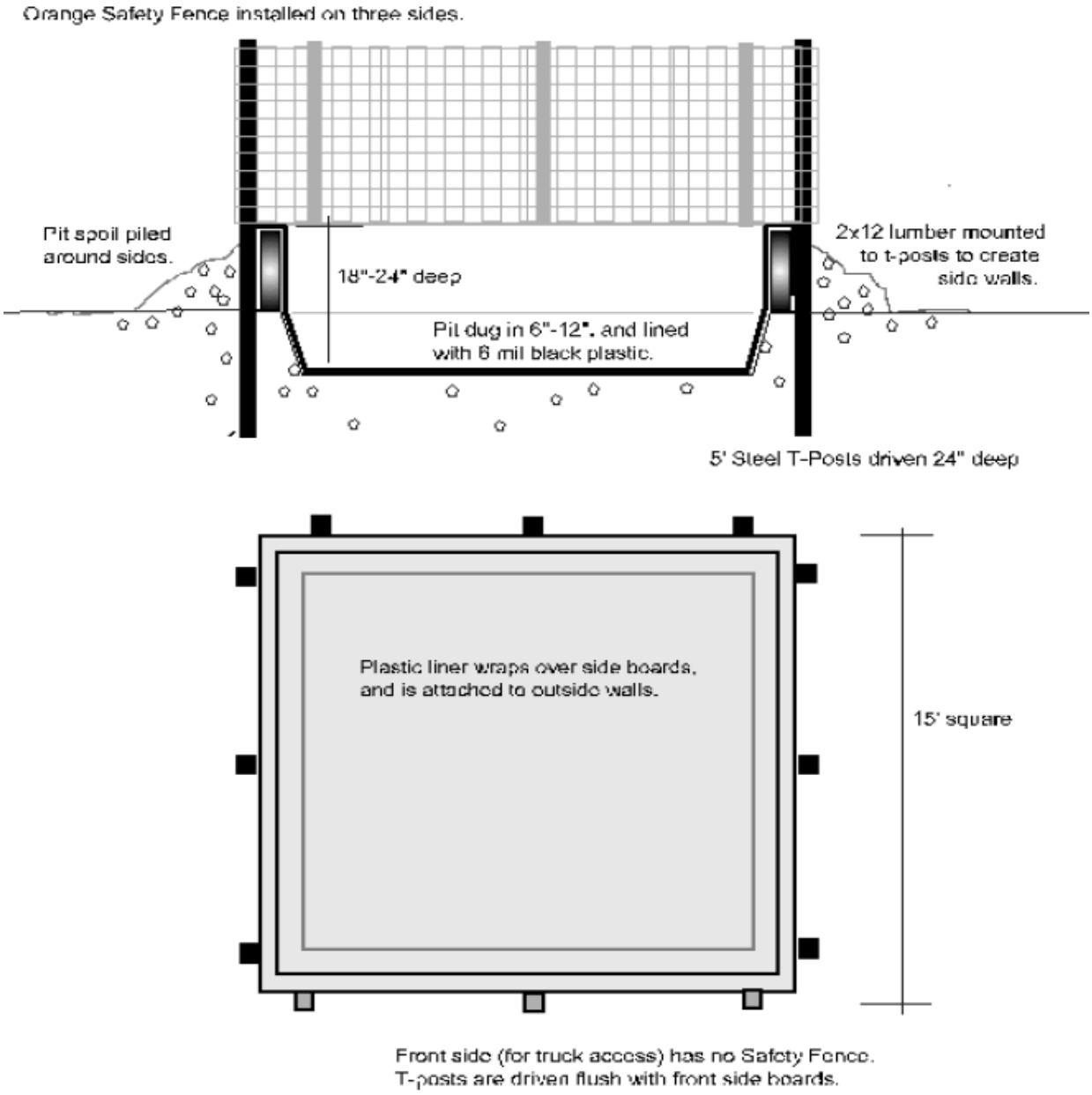
- Place GutterGator on the ground near the curb inlet.
- Place unit in curb inlet so weighted flap hangs down in the curb inlet holding GutterGator firmly in place.
- Center unit so 1' of GutterGator extends beyond each end of curb inlet.
- Secure tie back straps with sod pin or stake if applicable.
- Inspection each wet weather event is recommended.
- Remove all sediment and debris from surface after each wet weather event.
- Remove GutterGator, clean out and replace, as needed.

Available From:

Construction EcoServices
13810 Hollister Drive, #100
Houston, TX 77086
(832) 456-1000



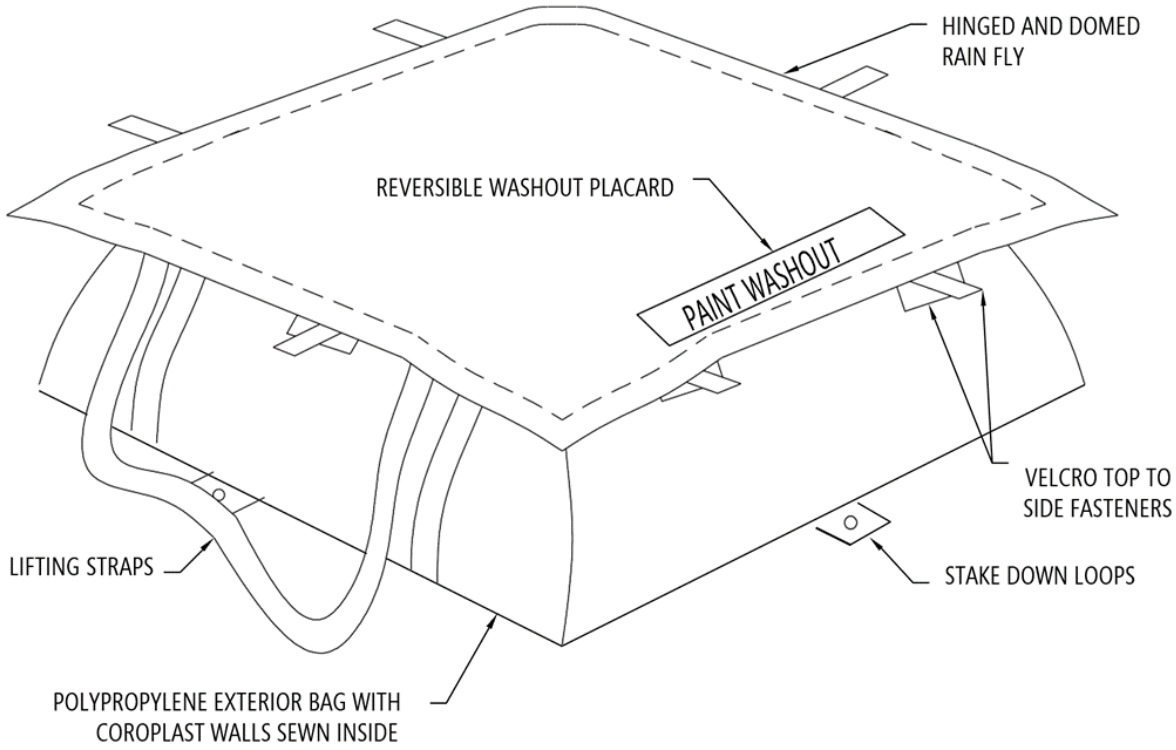
CONCRETE WASHOUT



Notes:

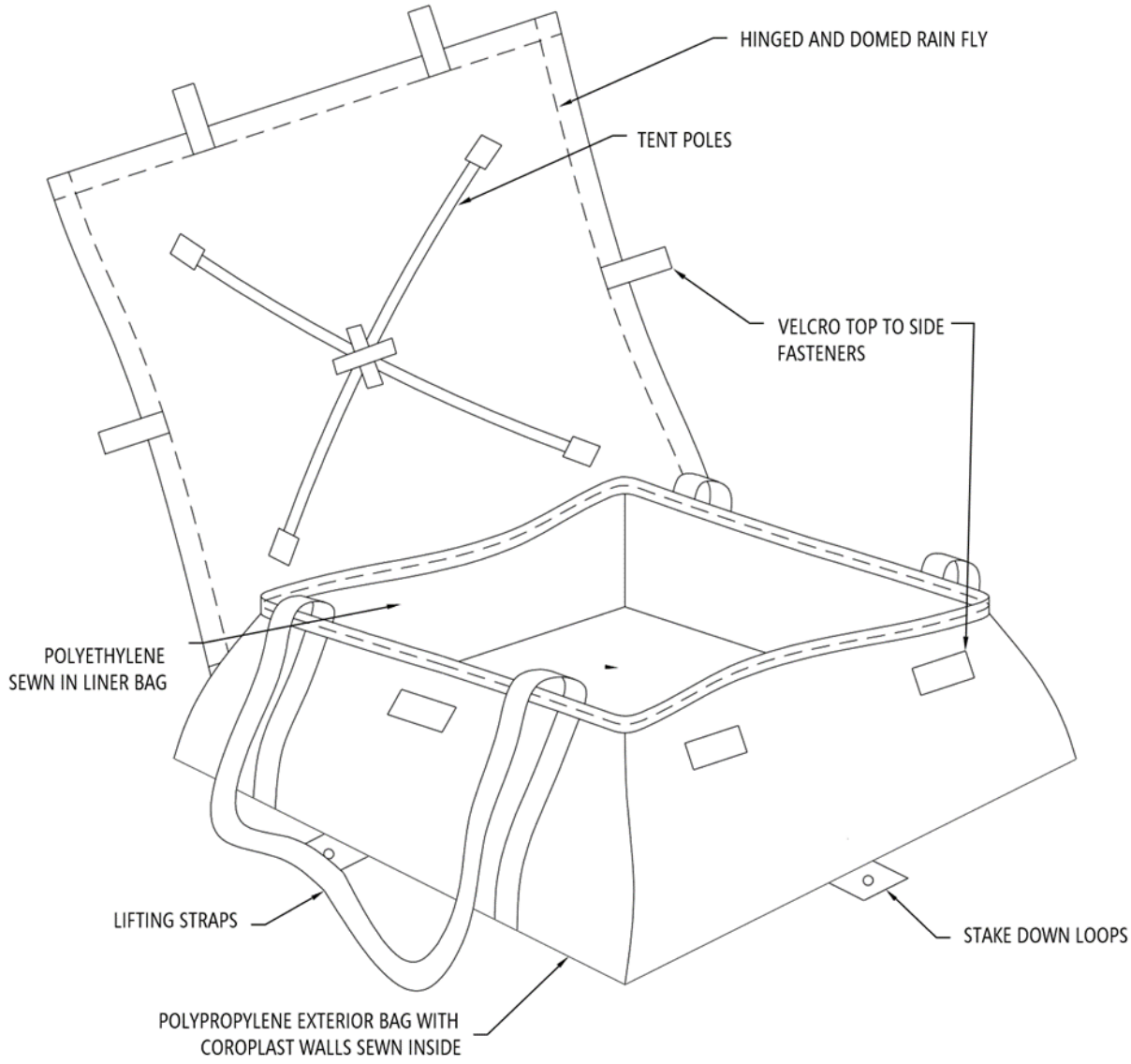
- The purpose of this BMP is to provide a controlled location for the dumping of waste concrete and concrete truck washout water. With its liner, this BMP will trap the waste concrete liquids, keeping them from leaching into the soil and allowing them to evaporate.
- The solids can then be removed and disposed of properly.

CONCRETE WASHOUT (Continued)



Notes:

- The washout shall be installed prior to using materials that require washout on this project.
- As necessary, signs shall be placed throughout the site to indicate the location of the washout.
- The washout area will be replaced as necessary to maintain capacity for liquid waste.
- Washout residue shall be removed from the site and disposed of at an approved waste facility.
- Do not washout into storm drains, open ditches, streets, or streams.
- Avoid dumping excess concrete in non-designated dumping areas.
- Locate washout at least 50' (15 meters) from storm drain, open ditches, or water bodies.
- The washout shall be used only for non-hazardous wastes.
- Let washout set or evaporate before lifting. do not move wet.



CONCRETE WASHOUT (Continued)

PART 1: GENERAL

1.01 Description

- Work shall consist of furnishing and installing an ALL-WEATHER WASHOUT in accordance with these specifications and in conformity with the plans.
- Work includes preparing foundation soil, furnishing and installing leveling pad, washout setup and removal and disposal of washout

1.02 Submittals/Certification

- Contractor shall submit a Manufacturer's certification, prior to start of work, that the washout meets the requirements of this specification.

- The washout location should be shown on the Project specific Stormwater Pollution Plan (SWPPP) drawings or Erosion and Sediment Control Plan (ESCP) drawings.

1.03 Delivery, Storage and Handling

- Contractor shall check all materials upon delivery to assure that the size, type, and quantities have been received.
- Contractor shall protect all materials from damage due to jobsite conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

2.01 Washout

- The Washout consists of a heavy-duty, woven polypropylene outer bag with 6-mm corrugated plastic inner walls, a 6-mm polyethylene liner. The Washout comes in two available dimensions, 45"x45"x16"h or 75"x75"x12" h.

2.02 Rain Fly

- Hinged and domed (tent poles) 5 oz. attached rain fly with Velcro straps.

2.03 Lifting Straps

- Four lifting straps stitched from two sides of the 2" black stiff webbing with 5000 lbs. min tensile strength.

2.04 Sign

- Pre-printed, reversible sign for either concrete or paint washout.

2.05 Base

- Material shall consist of native or imported soil. May also be level asphalt or concrete surface.

PART 3: EXECUTION

3.01 Prepare Level Surface

- Locate level area to deploy. The washout should be located away from storm drains, gutters, or other stormwater conveyances as much as practical.
- Clear area where washout is to be deployed of debris, rocks, and other materials that may puncture the liners. If rocks or other debris cannot be removed, cover protection with imported sand.

3.02 Set Up Washout

- Locate a level area to deploy the Washout and clear it of any debris that may cause damage.
- Unfold the washout on level ground.
- Unroll the rain fly and insert the provided tent poles into the corner slots. Secure the poles together using the straps sewn to the underside of the rain fly.
- Place the washout in an appropriate location, away from storm drains and accessible to trucks.
- Stake down in necessary.
- If a storm is imminent secure the rain fly using the Velcro straps to prevent overflow.

3.03 Dispose ALL-WEATHER Washout

- After the Washout has been filled with washout residue, allow the wastewater to evaporate leaving only solid concrete residue Wastewater can be pumped form the washout and disposed of a facility permitted to receive liquid waste. Alternatively, use ALL-WEATHER'S Slurry Solution to solidify wastewater.
- After residue has dried, load the hardened unit onto a flat-bed truck or dump truck with construction equipment such as a forklift or loader. Full, hardened units can be stacked for easy transportation.

3.04 Field Quality Control

- Check washout unit for leaks ensure wash water is not leaking out of washout.
- Stake down the washout if necessary. Tie down the rainfly with straps when needed.
- Do not move wet.
- Washouts may be used for multiple washout events and concrete placement events. Make sure that the washout has enough free space to hold the next planned washout event.
- If the washout is moved, note the new location in the project stormwater pollution prevention documents.

STRAW WATTLE - INSTALLATION

Proper installation of the straw wattle is essential to ensure the success of the product. Straw wattles are designed for low surface flows, not to exceed one cfs for small areas. While they work well on-stream banks, they should not be placed in the path of high-water flow. On slopes, wattles should be installed on contour with a slight downward angle at the end of the row to prevent ponding at the mid-section. No overall slope preparation is needed prior to installation; however, straw wattles should always be installed in shallow trenches according to the guidelines given below. Running lengths of wattles should be abutted firmly to ensure no leakage at the abutments. Guidelines regarding vertical spacing are given below. The wattles should be pinned securely to the ground according to instructions to ensure their stability and the success of the installation.

Spacing - Downslope
Vertical spacing for slope installations should be determined by site conditions: slope gradient and soil type are the main factors.

A good rule-of-thumb is:

- 1:1 slopes = 10 feet apart
- 2:1 slopes = 20 feet apart
- 3:1 slopes = 30 feet apart
- 4:1 slopes = 40 feet apart, etc.



However, adjustments may have to be made for the soil type:

- For soft, loamy soils - adjust the rows closer together.
- For hard, rocky soils - adjust the rows further apart.

Trenching
Use a hand tool such as a maddox or pick to score the ground. Using a shovel, dig the trench to the needed depth. Soil from excavating the trenches can be placed on the uphill, or flow side, of the trench to be used during installation.

- For soft, loamy soils: dig a 3″-5″ trench.
- For hard, rocky soils: dig a 2″-3″ trench.

Installing
Lay the first straw wattle snugly in the trench. No daylight should be seen under the wattle. Pack soil from trenching against the wattle on the uphill side. When installing running lengths of straw wattles, you must butt the second wattle tightly against the first wattle. DO NOT overlap the ends on top of each other. Overlapping behind each other has been done with some success. Stake the straw wattles at each end and 4′ on center.

For example:

- 25-foot wattle uses 6 stakes
- 20-foot wattle uses 5 stakes
- 12-foot wattle uses 4 stakes

Stakes should be driven through the middle of the wattle, leaving 2-3 inches of the stake protruding above the wattle. A heavy sediment load will tend to pick the wattle up and could pull it off the stakes if they are driven down too low. It may be necessary to make a hole in the wattle with the pick end of your maddox in order to get the stake through the straw. When straw wattles are used for flat ground applications, drive the stakes straight down; when installing wattles on slopes, drive the stakes perpendicular to the slope.

Drive the first end stake of the second wattle at an angle toward the first wattle in order to help about them tightly together. If you have difficulty driving the stake into extremely hard or rocky slopes, a pilot bar may be needed to begin the stake hole.

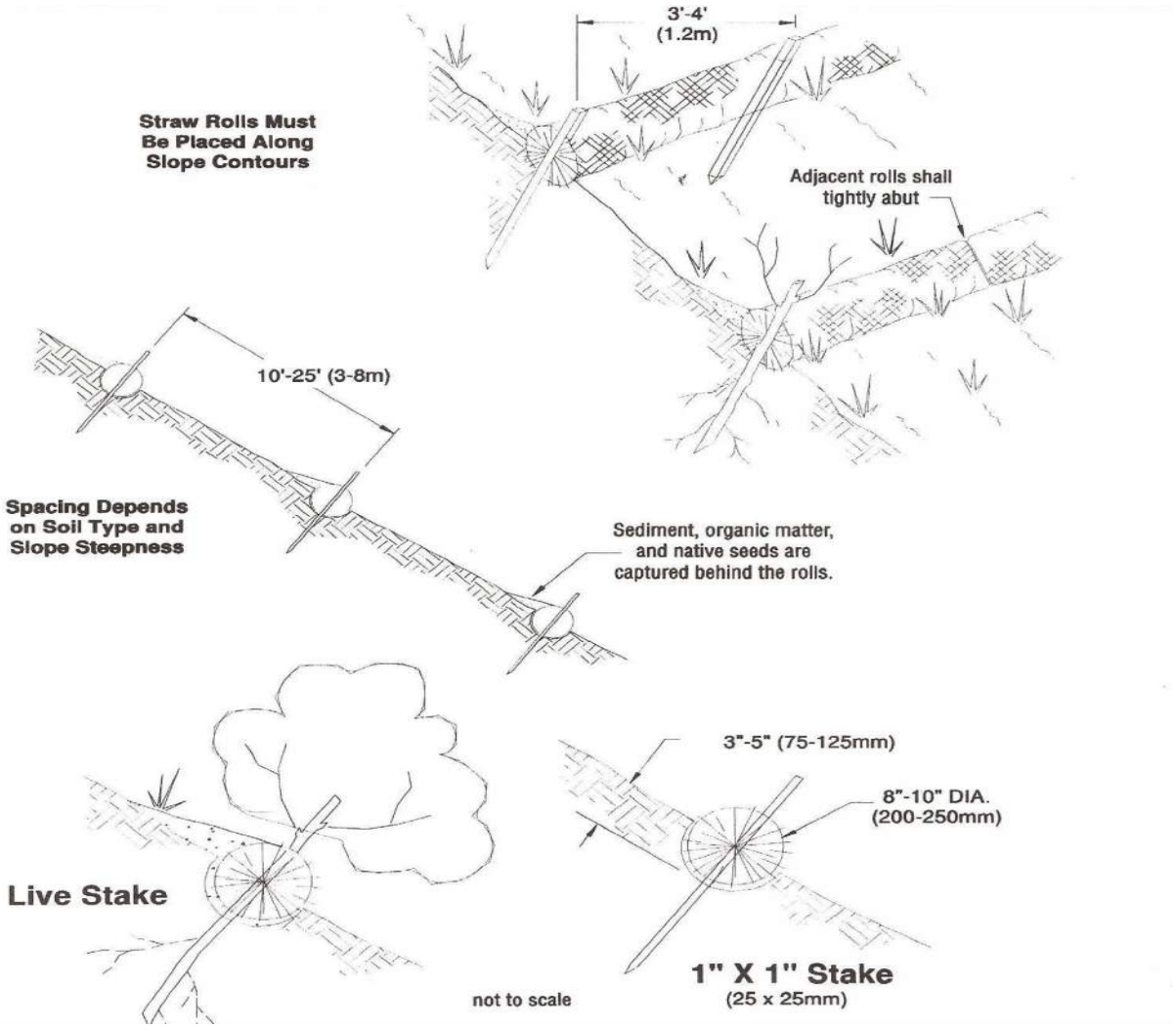
Flat Ground Applications

For installations along sidewalks or behind curbs it may not be necessary to stake the wattles, however, trenches must still be dug. If you have not yet back filled behind the sidewalk or curb, lay the wattle snuggly against it first, then backfill behind the wattle. Your trench is done! For installations around storm drains and inlets, trenches and staking will be needed.

Fit wattle in trench snugly up against the sidewalk or curb. Around storm drains or inlets, the wattle should be back 1–1½ ft. and should direct water flow toward the angle of drainage. If all drainage angles into the inlet, snake the wattle all the way around the inlet, using more than one wattle if needed.

Staking

We recommend using wood stakes or willow cuttings, rather than metal pins, to secure the straw wattles. Wood stakes will eventually bio-degrade, and willow cuttings will grow and provide extra stabilization. Be sure to use a stake that is long enough to protrude several inches above the wattle: 18" is a good length for hard, rocky soil. For soft, loamy soil use a 24" stake for greater security. The diameter of the stake should be approximately 1" for ease of driving through the wattle.



Note:

- Straw roll installation requires the placement and secure staking of the roll in a trench 3"-5" (75-125mm) deep, dug on contour. Runoff must not be allowed to run under or around the roll.

A COPY OF THE CONSTRUCTION GENERAL PERMIT CAN BE FOUND IMMEDIATELY BEHIND THIS PAGE OR BY USING THE QR CODE BELOW.

NOTICE OF INTENT [NOI]

A copy of the Notice of Intent (NOI) executed and filed with the TCEQ by the Primary Operator for this project is provided in this section.

CONSTRUCTION SITE NOTICE [CSN]

A copy of the Construction Site Notice(s) posted at this site is provided in this section and will remain posted until such time that final stabilization has met been.

NOTIFICATIONS

This site is located within the MS4 jurisdiction of Williamson County. This entity has been notified of the project by means of the letter copied herein and a copy of the NOI noted above.

In accordance with the Texas General Permit, the Secondary Operator has been notified of the commencement of construction, as exhibited in the letter found in this section.

A copy of the signed Construction Site Notice (CSN) for the Secondary Operator of this project is provided in this section and has been posted at the project site. The MS4 entity has been notified by means of a letter, as exhibited in this section.

CERTIFICATIONS

Any required Certifications are located in this section.

DELEGATION OF AUTHORITY AND INSPECTOR QUALIFICATIONS

Inspection authority is delegated to _____ by an Officer of the Primary Operator entity executed and filed with the TCEQ. A copy of this document can be found in this section.

The appropriate Inspector(s) qualifications are also located in this section.

April 1, 2025

Roger Hickman, PE, OS 031853
Williamson County OSSF Program
3151 SE Inner Loop
Georgetown, TX 78626

RE: MS4 Notification of Discharge – **Avilla Nolina**

To Whom it May Concern:

Pursuant to the TPDES General Permit TXR150000 administered by the TCEQ, enclosed you'll find a copy of the Notice of Intent for the project described above. A copy of the Construction Site Notice will be posted at the project site. Please be advised that this site falls under Phase I regulations.

Sincerely,

_____
Catamount Constructors

DRAFT

TCEQ Office Use Only
Permit No:
CN:
RN:

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

IMPORTANT INFORMATION

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

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

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

ePERMITS

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

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

APPLICATION FEE AND PAYMENT

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

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

Provide your payment information for verification of payment:

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

DRAFT

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

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

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

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

SECTION 1. OPERATOR (APPLICANT)

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

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

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

Catamount Constructors

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

Prefix (Mr. Ms. Miss): Click here to enter text

First and Last Name: Click here to enter text Suffix: Click here to enter text

Title: Click here to enter text Credentials: Click here to enter text

Phone Number: Click here to enter text Fax Number: Click here to enter text

E-mail: Click here to enter text

Mailing Address: Click here to enter text

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

Mailing Information if outside USA:

Territory: Click here to enter text

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

d) Indicate the type of customer:

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

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

DRAFT

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

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

☐ 0-20 ☐ 251-500

☐ 21-100 ☐ 501 or higher

☐ 101-250

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

State Franchise Tax ID Number: Click here to enter text.

Federal Tax ID: Click here to enter text.

Texas Secretary of State Charter (filing) Number: Click here to enter text.

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

SECTION 2. APPLICATION CONTACT

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

☐ Yes, go to Section 3

☐ No, complete this section

Prefix (Mr. Ms. Miss): Click here to enter text.

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

Title: Click here to enter text. Credential: Click here to enter text.

Organization Name: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail: Click here to enter text.

Mailing Address: Click here to enter text.

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

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

Mailing information if outside USA:

Territory: Click here to enter text.

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

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

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

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

DRAFT

b) Name of project or site (the name known by the community where it's located): Avilla Nolina

c) In your own words, briefly describe the type of construction occurring at the regulated site (residential, industrial, commercial, or other): Residential

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

e) Latitude: 30.733663 Longitude: -97.829765

f) Site Address/Location

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

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

Section A:

Street Number and Name: 205 Wild Nolina Way

City, State, and Zip Code: Georgetown, TX 78633

Section B:

Location Description:

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

Zip Code where the site is located:

SECTION 4. GENERAL CHARACTERISTICS

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

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

■ No

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

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

■ No

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

d) What is the Secondary SIC Code(s), if applicable? 1522

e) What is the total number of acres to be disturbed? 18.24

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

DRAFT

☐ Yes

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

g) What is the estimated start date of the project? Click here to enter text.

h) What is the estimated end date of the project? Click here to enter text.

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

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

k) What is the segment number(s) of the classified water body(ies) that the discharge will eventually reach? 1251

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

■ Yes ☐ No

If Yes, provide the name of the MS4 operator: Williamson County

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

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

■ Yes, complete the certification below.

☐ No, go to Section 5

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

SECTION 5. NOI CERTIFICATION

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

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

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

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

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

DRAFT

SECTION 6. APPLICANT CERTIFICATION SIGNATURE

Operator Signatory Name: Click here to enter text.

Operator Signatory Title: Click here to enter text.

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

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

Signature (use blue ink): _____Date: _____

DRAFT

TCEQ Large Construction Site Notice

Primary Operator

Large construction sites disturb more than five acres or are part of a larger common plan of development that disturbs more than five acres. Primary operators of large construction sites will fill out this notice. Primary operators will then post this notice at the construction site in a location where it is safely and readily available for viewing by the general public and local, state, and federal authorities. Additional information about the TCEQ Construction Stormwater General Permit may be found on TCEQ's webpage on Assistance Tools for Construction Stormwater General Permits.

Note: You must also develop a Stormwater Pollution Prevention Plan prior to the commencement of construction.

Site-Specific TPDES Authorization Number: TXR15 _____

Primary Operator Name: Catamount Constructors

Contact Name and Phone Number: Kevin King (719) 426-8701

Project Description: Avilla Nolina

Physical Location/Description 205 Wild Nolina Way
Georgetown, TX 78633

Estimated Start Date _____

Projected End Date or Date Disturbed Soils Will Be Stabilized _____

Location of Stormwater Pollution Prevention Plan (SWP3): _____

DRAFT

April 1, 2025

Roger Hickman, PE, OS 031853
Williamson County OSSF Program
3151 SE Inner Loop
Georgetown, TX 78626

RE: MS4 Notification of Discharge for a Secondary Operator – **Avilla Nolina**

To Whom it May Concern:

Pursuant to the TPDES General Permit TXR150000 administered by the TCEQ, enclosed you'll find a copy of the Large Construction Site Notice for a Secondary Operator for the project described above. A copy of this document will be posted at the project site.

Best Regards,

_____
NexMetro Nolina, LP

enclosure

cc: SWPPP

DRAFT

TCEQ Large Construction Site Notice

Secondary Operator

Large construction sites disturb more than five acres or are part of a larger common plan of development that disturbs more than five acres. Secondary operators of large construction sites will fill out this notice. Secondary operators will then post this notice at the construction site in a location where it is safely and readily available for viewing by the general public and local, state, and federal authorities. Additional information about the TCEQ Construction Stormwater General Permit may be found on TCEQ's webpage on Assistance Tools for Construction Stormwater General Permits.

Note: You must also develop a Stormwater Pollution Prevention Plan prior to the commencement of construction.

Site-Specific TPDES Authorization Number: TXR15 _____

Secondary Operator Name: NexMetro Nolina, LP

Contact Name and Phone Number: Ryan Becker (480) 993-7894

Project Description: Avilla Nolina

Physical Location/Description 205 Wild Nolina Way

Georgetown, TX 78633

Estimated Start Date _____

Projected End Date or Date Disturbed Soils Will Be Stabilized _____

Location of Stormwater Pollution Prevention Plan (SWP3): _____

For Large Construction Activities Authorized Under Part II.E.3. (Obtaining Authorization to Discharge) the following certification must be completed:

I _____ (*Typed or Printed Name Person Completing This Certification*) certify under penalty of law that I have read and understand the eligibility requirements for claiming an authorization under Part II.E.3. of TPDES General Permit TXR150000 and agree to comply with the terms of this permit. A stormwater pollution prevention plan has been developed and will be implemented prior to construction, according to permit requirements. A copy of this signed notice is supplied to the operator of the Municipal Separate Storm Sewer System (MS4) if discharges enter an MS4. I am aware there are significant penalties for providing false information or for conducting unauthorized discharges, including the possibility of fine and imprisonment for knowing violations.

Signature and Title _____ Date _____

Name of MS4 Operator notified: Williamson County *and Date notified (per Part II.F.3.):* _____

Date Site Notice Removed _____

DRAFT

April 1, 2025

Ryan Becker
2355 E Camelback Road
Suite 805
Phoenix, AZ 85016

RE: Avilla Nolina

Please be advised that we will be commencing construction activities on the site named above.

Pursuant to the Texas Commission on Environmental Quality's (TCEQ) Texas General Permit TXR150000 concerning discharge of storm water associated with construction activity, and in our capacity as a Primary Operator for this project, we are obligated to make this notice and to attach a copy of the Permit for the project. We have also used this document, as required, to make similar notification to the MS4 receiving discharge from this site.

Contact information for the MS4 to whom we have made notification is as follows:

Roger Hickman, PE, OS 031853
Williamson County OSSF Program
3151 SE Inner Loop
Georgetown, TX 78626

If you have any questions regarding our obligations, or your own, under these regulations, you may visit the TCEQ website and find a copy of the Texas General Permit at:

https://www.tceq.texas.gov/assets/public/permitting/stormwater/txr150000-cgp.pdf

Respectfully,

_____
Catamount Constructors

DRAFT

April 1, 2025

Kevin King
Catamount Constructors
15510 Vance Jackson Road
#201
San Antonio, TX 78249

RE: Avilla Nolina

Please be advised that pursuant to the Texas Commission on Environmental Quality's (TCEQ) Texas General Permit TXR150000 concerning discharge of storm water associated with construction activity, you are required to obtain permit coverage prior to commencement of construction activity.

If you have any questions regarding your obligations under these regulations, you may visit the TCEQ website and find a copy of the Texas General Permit at:

https://www.tceq.texas.gov/assets/public/permitting/stormwater/txr150000-cgp.pdf

Respectfully,

_____

NexMetro Nolina, LP

DRAFT

April 1, 2025

Executive Director
Texas Commission on Environmental Quality
Storm Water and Pretreatment Team
P.O. Box 13087, MC-148
Austin, TX 78711-3087

Subject: Delegation for Signatories to Reports

Project Site Name: Avilla Nolina
TPDES Permit Number: TXR15_____

Dear Executive Director:

This letter serves to designate the following people or positions as authorized personnel for signing reports, storm water pollution prevention plans, certifications or other information requested by the Executive Director or required by the general permit, as set forth by 30 TAC §305.128.

Site Inspector, _____

I understand that this authorization does not extend to the signing of a Notice of Intent for obtaining coverage under a storm water general permit.

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in 30 TAC §305.44.

Sincerely,

_____
Catamount Constructors

_____
Printed Name and Title

_____
Date

DRAFT

RELEVANT PROVISIONS

305.128(a) All reports requested by permits and other information requested by the executive director shall be signed by a person described in §305.44(a) of this title (relating to Signatories to Applications) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) the authorization is made in writing by a person described in §305.44(a) of this title (relating to Signatories to Applications);

(2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity or for environmental matters for the applicant, such as the position of plant manager, operator of a well or well field, environmental manager, or a position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(3) the written authorization is submitted to the executive director.

(b) If an authorization under this section is no longer accurate because of a change in individuals or position, a new authorization satisfying the requirements of this section must be submitted to the executive director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(c) Any person signing a report required by a permit shall make the certification set forth in §305.44(b) of this title (relating to Signatories to Applications).

305.44(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

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

DRAFT

STORM WATER POLLUTION PREVENTION PLAN CERTIFICATION

AVILLA NOLINA

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

Primary Operator:

Signed: _____

Printed Name: _____

Date: _____

DRAFT

STORM WATER POLLUTION PREVENTION PLAN CERTIFICATION

AVILLA NOLINA

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

Secondary Operator:

Signed: _____

Printed Name: _____

Date: _____

DRAFT

STORMWATER POLLUTION PREVENTION PLAN CERTIFICATION

SWPPP INSPECTOR CERTIFICATION

INSPECTOR QUALIFICATIONS STATEMENT

I HAVE READ AND UNDERSTAND THE TEXAS GENERAL PERMIT (TXR150000). I AM FAMILIAR WITH THIS JOB SITE AND HAVE READ AND UNDERSTAND THE SWPPP FOR THIS PROJECT. I ALSO UNDERSTAND MY OBLIGATIONS HEREIN.

ADDITIONAL QUALIFICATIONS INCLUDE:

_____

_____

_____

_____

SIGNED: _____

NAME: _____

TITLE: _____

COMPANY: _____

DATE: _____

Stormwater Pollution Prevention Plan

AMENDMENT LOGS

AMENDMENT #	DATE	BRIEF DESCRIPTION OF AMENDMENT	PREPARED BY

INSPECTION RECORDS

AVILLA NOLINA

YOUR STORM WATER POLLUTION PREVENTION PLAN

ACTION ITEMS:

- If you'd like assistance with these Action Items, or if you have any questions, please call our Documentation Services Department, at docservicesTX@greenrisetech.com to go over this document and your responsibilities under the regulations that mandate it.
- The letter to the TCEQ regarding the Delegation of Signatories of Reports (template attached) in Section 10 must be signed by an officer of your company and mailed to the TCEQ. A copy of this letter remains in the SWPPP.
- The Primary Operator Notification Letter (template attached) must be executed and mailed to the Secondary Operator (typically the owner), notifying them that an NOI has been prepared and filed with the TCEQ as well as mailed to the MS4 receiving discharge from the project site.
- The person responsible for making Site Inspections must sign the Inspector Certification found in Section 10 and fill in the Qualifications section of that document.
- Fill in the vendor information as indicated in Sections 3 and 4 if not already completed.
- Insert a copy of your Construction Schedule in Section 2 if one has not already been inserted.
- Make copies of the Inspection Report form you'll find in Section 6 for your use during the course of the project.
- Post the Spill Response Plan poster (provided) prominently in the construction office.
- Install the Best Management Practices called for, as shown on the SWPPP Site Plan.
- Begin making weekly inspections when the project starts, on the same day each week. Use the Inspection Report form copies to record your findings.
- Store all Inspection Reports chronologically, in Section 12.
- As major grading activities begin and end, note the dates in the table found in Section 2.
- Modify the SWPPP as needed during the course of the project. This will typically involve making notes both on the Site Plan and in the Controls section.
- Log all major modifications in the SWPPP Amendments Log in Section 11.
- Call us if you have any questions, concerns or problems regarding your SWPPP at any time during the course of the project.

NOTICE OF INTENT (NOI):

Enclosed is a paper template Notice of Intent for this project. Please note, as of September 1, 2018, all Notice of Intents need to be filed electronically at STEERS.

- **You will need to set up a STEERS Account to file your NOI (State of Texas Environmental Electronic Reporting System), if you do not already have one**
- **To set up an account, or log in, please visit:** https://www3.tceq.texas.gov/steers/
  - File / Sign / Pay and Submit Online
  - Fee is $225.00
  - Instant Approval

CONSTRUCTION SITE NOTICE (CSN):

Enclosed is your Construction Site Notice for this project.

- Fill in the contact information section with the Superintendent's name and phone number.
- Fill in the estimated begin and end dates of the project.
- Make two copies of the document and file one behind Section 10 of the SWPPP binder.
- Laminate the other copy for posting.

SWPPP SIGNAGE:

- Post a laminated copy of the Construction Site Notice on a purpose-specific sign board at the main entrance to your site. [Citizens must be able to read the document without trespassing onto your site.]

DELEGATION LETTER:

- Enclosed is a paper template Delegation of Signatories form for this project. Please note, all Delegation of Signatories Applications for Large Sites need to be filed electronically at STEERS.
- **To log in, please visit:** https://www3.tceq.texas.gov/steers/
- Insert a copy in the SWPPP narrative behind Tab 10

MS4 NOTIFICATION LETTER:

Enclosed is a template for the letter to the jurisdictional MS4 for this project.

- Copy or re-type the letter onto your letterhead, sign it and make copies.
- Enclose the signed NOI (make sure you have made your copies) along with the letter and mail it to the designated address.
- File a copy of the signed letter and NOI behind Section 10 in the SWPPP binder.

PRIMARY OPERATOR NOTIFICATION TO SECONDARY OPERATOR INSTRUCTIONS

Enclosed is a template for the Notification Letter from the Primary Operator (typically the General Contractor) to the Secondary Operator (typically the Owner)

- Copy or re-type the letter onto your letterhead, complete the MS4 information requested, sign the letter and make copies
- Mail the letter to the Secondary Operator with:
  - Copy of the signed NOI
- File a signed copy of the letter behind Section 10 in the SWPPP binder.

PRIMARY SWPPP CERTIFICATION FORM

Enclosed is a template for the SWPPP Certification Form that is required for all City of San Antonio Projects

- Copy or re-type the letter onto your letterhead, have the letter signed by a company officer, and make copies
- File a signed copy of the letter behind Section 10 in the SWPPP binder.

TCEQ Office Use Only
Permit No:
CN:
RN:

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

IMPORTANT INFORMATION

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

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

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

ePERMITS

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

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

APPLICATION FEE AND PAYMENT

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

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

Provide your payment information for verification of payment:

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

DRAFT

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

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

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

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

SECTION 1. OPERATOR (APPLICANT)

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

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

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

Catamount Constructors

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

Prefix (Mr. Ms. Miss): Click here to enter text

First and Last Name: Click here to enter text Suffix: Click here to enter text

Title: Click here to enter text Credentials: Click here to enter text

Phone Number: Click here to enter text Fax Number: Click here to enter text

E-mail: Click here to enter text

Mailing Address: Click here to enter text

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

Mailing Information if outside USA:

Territory: Click here to enter text

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

d) Indicate the type of customer:

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

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

DRAFT

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

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

☐ 0-20 ☐ 251-500

☐ 21-100 ☐ 501 or higher

☐ 101-250

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

State Franchise Tax ID Number: Click here to enter text.

Federal Tax ID: Click here to enter text.

Texas Secretary of State Charter (filing) Number: Click here to enter text.

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

SECTION 2. APPLICATION CONTACT

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

☐ Yes, go to Section 3

☐ No, complete this section

Prefix (Mr. Ms. Miss): Click here to enter text.

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

Title: Click here to enter text. Credential: Click here to enter text.

Organization Name: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail: Click here to enter text.

Mailing Address: Click here to enter text.

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

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

Mailing information if outside USA:

Territory: Click here to enter text.

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

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

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

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

DRAFT

b) Name of project or site (the name known by the community where it's located): Avilla Nolina

c) In your own words, briefly describe the type of construction occurring at the regulated site (residential, industrial, commercial, or other): Residential

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

e) Latitude: 30.733663 Longitude: -97.829765

f) Site Address/Location

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

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

Section A:

Street Number and Name: 205 Wild Nolina Way

City, State, and Zip Code: Georgetown, TX 78633

Section B:

Location Description:

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

Zip Code where the site is located:

SECTION 4. GENERAL CHARACTERISTICS

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

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

■ No

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

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

■ No

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

d) What is the Secondary SIC Code(s), if applicable? 1522

e) What is the total number of acres to be disturbed? 18.24

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

DRAFT

☐ Yes

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

g) What is the estimated start date of the project? Click here to enter text.

h) What is the estimated end date of the project? Click here to enter text.

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

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

k) What is the segment number(s) of the classified water body(ies) that the discharge will eventually reach? 1251

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

■ Yes ☐ No

If Yes, provide the name of the MS4 operator: Williamson County

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

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

■ Yes, complete the certification below.

☐ No, go to Section 5

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

SECTION 5. NOI CERTIFICATION

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

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

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

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

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

DRAFT

SECTION 6. APPLICANT CERTIFICATION SIGNATURE

Operator Signatory Name: Click here to enter text.

Operator Signatory Title: Click here to enter text.

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

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

Signature (use blue ink): _____Date: _____

DRAFT

TCEQ Large Construction Site Notice

Primary Operator

Large construction sites disturb more than five acres or are part of a larger common plan of development that disturbs more than five acres. Primary operators of large construction sites will fill out this notice. Primary operators will then post this notice at the construction site in a location where it is safely and readily available for viewing by the general public and local, state, and federal authorities. Additional information about the TCEQ Construction Stormwater General Permit may be found on TCEQ's webpage on Assistance Tools for Construction Stormwater General Permits.

Note: You must also develop a Stormwater Pollution Prevention Plan prior to the commencement of construction.

Site-Specific TPDES Authorization Number: TXR15 _____

Primary Operator Name: Catamount Constructors

Contact Name and Phone Number: Kevin King (719) 426-8701

Project Description: Avilla Nolina

Physical Location/Description 205 Wild Nolina Way
Georgetown, TX 78633

Estimated Start Date _____

Projected End Date or Date Disturbed Soils Will Be Stabilized _____

Location of Stormwater Pollution Prevention Plan (SWP3): _____

DRAFT

April 1, 2025

Executive Director
Texas Commission on Environmental Quality
Storm Water and Pretreatment Team
P.O. Box 13087, MC-148
Austin, TX 78711-3087

Subject: Delegation for Signatories to Reports

Project Site Name: Avilla Nolina
TPDES Permit Number: TXR15_____

Dear Executive Director:

This letter serves to designate the following people or positions as authorized personnel for signing reports, storm water pollution prevention plans, certifications or other information requested by the Executive Director or required by the general permit, as set forth by 30 TAC §305.128.

Site Inspector, _____

I understand that this authorization does not extend to the signing of a Notice of Intent for obtaining coverage under a storm water general permit.

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in 30 TAC §305.44.

Sincerely,

_____
Catamount Constructors

_____
Printed Name and Title

_____
Date

DRAFT

RELEVANT PROVISIONS

305.128(a) All reports requested by permits and other information requested by the executive director shall be signed by a person described in §305.44(a) of this title (relating to Signatories to Applications) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) the authorization is made in writing by a person described in §305.44(a) of this title (relating to Signatories to Applications);

(2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity or for environmental matters for the applicant, such as the position of plant manager, operator of a well or well field, environmental manager, or a position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(3) the written authorization is submitted to the executive director.

(b) If an authorization under this section is no longer accurate because of a change in individuals or position, a new authorization satisfying the requirements of this section must be submitted to the executive director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(c) Any person signing a report required by a permit shall make the certification set forth in §305.44(b) of this title (relating to Signatories to Applications).

305.44(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

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

DRAFT

April 1, 2025

Roger Hickman, PE, OS 031853
Williamson County OSSF Program
3151 SE Inner Loop
Georgetown, TX 78626

RE: MS4 Notification of Discharge – **Avilla Nolina**

To Whom it May Concern:

Pursuant to the TPDES General Permit TXR150000 administered by the TCEQ, enclosed you'll find a copy of the Notice of Intent for the project described above. A copy of the Construction Site Notice will be posted at the project site. Please be advised that this site falls under Phase I regulations.

Sincerely,

_____
Catamount Constructors

DRAFT

April 1, 2025

Ryan Becker
2355 E Camelback Road
Suite 805
Phoenix, AZ 85016

RE: Avilla Nolina

Please be advised that we will be commencing construction activities on the site named above.

Pursuant to the Texas Commission on Environmental Quality's (TCEQ) Texas General Permit TXR150000 concerning discharge of storm water associated with construction activity, and in our capacity as a Primary Operator for this project, we are obligated to make this notice and to attach a copy of the Permit for the project. We have also used this document, as required, to make similar notification to the MS4 receiving discharge from this site.

Contact information for the MS4 to whom we have made notification is as follows:

Roger Hickman, PE, OS 031853
Williamson County OSSF Program
3151 SE Inner Loop
Georgetown, TX 78626

If you have any questions regarding our obligations, or your own, under these regulations, you may visit the TCEQ website and find a copy of the Texas General Permit at:

https://www.tceq.texas.gov/assets/public/permitting/stormwater/txr150000-cgp.pdf

Respectfully,

_____
Catamount Constructors

DRAFT

STORM WATER POLLUTION PREVENTION PLAN CERTIFICATION

AVILLA NOLINA

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

Primary Operator:

Signed: _____

Printed Name: _____

Date: _____

DRAFT

AVILLA NOLINA

As a 'Secondary Operator' you have certain duties and obligations under the revised Texas General Permit.

http://www.tceq.texas.gov/assets/public/permitting/stormwater/TXR150000_CGP.pdf

Part of those obligations involves creating specific paperwork, making certain notifications and postings that document your coverage under the permit, as required.

CONSTRUCTION SITE NOTICE (CSN)

- Have an officer of the company sign the document
- Make copies
- Laminate one of the copies to be posted at the project site
- Insert a signed copy in the SWPPP narrative at the project site

MS4 NOTIFICATION LETTER OF DISCHARGE

- Attached a copy of the signed CSN and mail to the MS4 Operator associated with this project site
- Insert a copy of the signed MS4 Notification Letter in the SWPPP narrative at the project site

NOTIFICATION LETTER TO THE PRIMARY OPERATOR

- Mail this signed letter to the Primary Operator
- Insert a signed copy in the SWPPP narrative at the project site

DELEGATION LETTER:

Enclosed is a template for the Notification Letter from the Primary Operator (typically the General Contractor) to the Secondary Operator (typically the Owner)

- Copy or re-type the letter onto your letterhead, complete the MS4 information requested, sign the letter and make copies
- Mail the letter to the Secondary Operator with:
  - Copy of the signed NOI
- File a signed copy of the letter behind Section 10 in the SWPPP binder.

SECONDARY SWPPP CERTIFICATION FORM

Enclosed is a template for the SWPPP Certification Form that is required for all City of San Antonio Projects

- Copy or re-type the letter onto your letterhead, have the letter signed by a company officer, and make copies
- File a signed copy of the letter behind Section 10 in the SWPPP binder.

**You are also required to notify the MS4 Operator with a Letter of Termination upon removal of the Construction Site Notice (once site is stabilized)

TCEQ Large Construction Site Notice

Secondary Operator

Large construction sites disturb more than five acres or are part of a larger common plan of development that disturbs more than five acres. Secondary operators of large construction sites will fill out this notice. Secondary operators will then post this notice at the construction site in a location where it is safely and readily available for viewing by the general public and local, state, and federal authorities. Additional information about the TCEQ Construction Stormwater General Permit may be found on TCEQ's webpage on Assistance Tools for Construction Stormwater General Permits.

Note: You must also develop a Stormwater Pollution Prevention Plan prior to the commencement of construction.

Site-Specific TPDES Authorization Number: TXR15 _____

Secondary Operator Name: NexMetro Nolina, LP

Contact Name and Phone Number: Ryan Becker (480) 993-7894

Project Description: Avilla Nolina

Physical Location/Description 205 Wild Nolina Way

Georgetown, TX 78633

Estimated Start Date _____

Projected End Date or Date Disturbed Soils Will Be Stabilized _____

Location of Stormwater Pollution Prevention Plan (SWP3): _____

For Large Construction Activities Authorized Under Part II.E.3. (Obtaining Authorization to Discharge) the following certification must be completed:

I _____ (*Typed or Printed Name Person Completing This Certification*) certify under penalty of law that I have read and understand the eligibility requirements for claiming an authorization under Part II.E.3. of TPDES General Permit TXR150000 and agree to comply with the terms of this permit. A stormwater pollution prevention plan has been developed and will be implemented prior to construction, according to permit requirements. A copy of this signed notice is supplied to the operator of the Municipal Separate Storm Sewer System (MS4) if discharges enter an MS4. I am aware there are significant penalties for providing false information or for conducting unauthorized discharges, including the possibility of fine and imprisonment for knowing violations.

Signature and Title _____ Date _____

Name of MS4 Operator notified: Williamson County *and Date notified (per Part II.F.3.):* _____

Date Site Notice Removed _____

DRAFT

April 1, 2025

Roger Hickman, PE, OS 031853
Williamson County OSSF Program
3151 SE Inner Loop
Georgetown, TX 78626

RE: MS4 Notification of Discharge for a Secondary Operator – **Avilla Nolina**

To Whom it May Concern:

Pursuant to the TPDES General Permit TXR150000 administered by the TCEQ, enclosed you'll find a copy of the Large Construction Site Notice for a Secondary Operator for the project described above. A copy of this document will be posted at the project site.

Best Regards,

_____
NexMetro Nolina, LP

enclosure

cc: SWPPP

DRAFT

April 1, 2025

Kevin King
Catamount Constructors
15510 Vance Jackson Road
#201
San Antonio, TX 78249

RE: Avilla Nolina

Please be advised that pursuant to the Texas Commission on Environmental Quality's (TCEQ) Texas General Permit TXR150000 concerning discharge of storm water associated with construction activity, you are required to obtain permit coverage prior to commencement of construction activity.

If you have any questions regarding your obligations under these regulations, you may visit the TCEQ website and find a copy of the Texas General Permit at:

https://www.tceq.texas.gov/assets/public/permitting/stormwater/txr150000-cgp.pdf

Respectfully,

_____

NexMetro Nolina, LP

DRAFT

April 1, 2025

Executive Director
Texas Commission on Environmental Quality
Storm Water and Pretreatment Team
P.O. Box 13087, MC-148
Austin, TX 78711-3087

Subject: Delegation for Signatories to Reports

Project Site Name: Avilla Nolina
TPDES Permit Number: TXR15_____

Dear Executive Director:

This letter serves to designate the following people or positions as authorized personnel for signing reports, storm water pollution prevention plans, certifications or other information requested by the Executive Director or required by the general permit, as set forth by 30 TAC §305.128.

Site Inspector, _____

I understand that this authorization does not extend to the signing of a Notice of Intent for obtaining coverage under a storm water general permit.

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in 30 TAC §305.44.

Sincerely,

_____
NexMetro Nolina, LP

_____
Printed Name and Title

_____
Date

DRAFT

RELEVANT PROVISIONS

305.128(a) All reports requested by permits and other information requested by the executive director shall be signed by a person described in §305.44(a) of this title (relating to Signatories to Applications) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) the authorization is made in writing by a person described in §305.44(a) of this title (relating to Signatories to Applications);

(2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity or for environmental matters for the applicant, such as the position of plant manager, operator of a well or well field, environmental manager, or a position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(3) the written authorization is submitted to the executive director.

(b) If an authorization under this section is no longer accurate because of a change in individuals or position, a new authorization satisfying the requirements of this section must be submitted to the executive director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(c) Any person signing a report required by a permit shall make the certification set forth in §305.44(b) of this title (relating to Signatories to Applications).

305.44(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

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

DRAFT

STORM WATER POLLUTION PREVENTION PLAN CERTIFICATION

AVILLA NOLINA

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

Secondary Operator:

Signed: _____

Printed Name: _____

Date: _____

DRAFT

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

I Jason Flory,
Print Name

Managing Director,
Title - Owner/President/Other

of NexMetro Development, LLC, as manager of NexMetro Nolina Holding, LLC, manager of NMD Nolina GP, LLC, general partner of NexMetro Nolina, LP,
Corporation/Partnership/Entity Name

have authorized Mark Ewing
Print Name of Agent/Engineer

of Spiars Engineering
Print Name of Firm

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

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

01/27/25
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Jason Flory 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 27 day of January, 2025.

DANE LESLIE RYMER
Notary ID #133926938
My Commission Expires
August 24, 2026

NOTARY PUBLIC

Dane Rymer
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 8/24/26

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Avilla Nolina

Regulated Entity Location: 205 Wild Nolina Way, Georgetown, TX 78633

Name of Customer: Avilla Nolina

Contact Person: Mark Ewing Phone: 972-422-0077

Customer Reference Number (if issued):CN _____

Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde

☐ Comal ☐ Kinney

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

☒ Austin Regional Office

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

☐ San Antonio Regional Office

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$ 6,500
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: 01/22/2025

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

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

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

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	1/24/2025

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership

☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)*	*If new Customer, enter previous Customer below:*
NexMetro Nolina, LP	

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
0805348813	32092952434	99-0386290	075866429

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

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

12. Number of Employees ☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated? ☐ Yes ☒ No

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

☒ Owner ☐ Operator ☐ Owner & Operator ☐ Other: Engineer

☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address:	2355 East Camelback Road, Suite 805						
	City	Phoenix	State	AZ	ZIP	85016	ZIP + 4

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

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(602) 559-9388		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Avilla Nolina

23. Street Address of the Regulated Entity: *(No PO Boxes)*	205 Wild Nolina Way							
	City	Georgetown	**State**	TX	**ZIP**	78633	**ZIP + 4**	
24. County	Williamson							

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

25. Description to Physical Location:	North of Ronald Reagan Blvd and west of Wild Nolina Way				
26. Nearest City			**State**	**Nearest ZIP Code**	
Georgetown			TX	78633	
Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).					
27. Latitude (N) In Decimal:	30.730994		**28. Longitude (W) In Decimal:**	-97.827991	
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)

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

Multi-family residential

34. Mailing Address:								
	City		**State**		**ZIP**		**ZIP + 4**	
35. E-Mail Address:								

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

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

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Mark Ewing	**41. Title:**	P.E.

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(972) 422-0077		( ) -	mark.ewing@spiarsengineering.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:	NexMetro Nolina, LP	**Job Title:**	Managing Director of NexMetro Development, LLC, manager of NexMetro Nolina Holding, LLC, manager of NMD Nolina GP, LLC, general partner of NexMetro Nolina, LP		
Name *(In Print):*	Jason Flory			**Phone:**	(972) 795-6039
Signature:				**Date:**	01/27/25