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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CONTRIBUTING ZONE PLAN

FOR

HUDSON PARK – PHASE 1
PAVING, DRAINAGE, WATER
& WASTEWATER IMPROVEMENTS

APRIL 2025

PREPARED FOR

BRIGHTLAND HOMES, LTD
3815 S. CAPITAL OF TEXAS HWY, SUITE 275
AUSTIN, TEXAS 78704
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PREPARED BY

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Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

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

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Hudson Park – Phase 1					**2. Regulated Entity No.:**				
3. Customer Name: Brightland Homes, LTD					**4. Customer No.: CN601574049**				
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):**		16.42 acres	
9. Application Fee:	$6,500		**10. Permanent BMP(s):**			Batch Detention Ponds			
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.)	___	___	X
Region (1 req.)	___	___	X
County(ies)	___	___	X
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___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.
Matt Thomas Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent 4/30/25 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: Matthew Thomas, P.E.

Date: 4/30/25

Signature of Customer/Agent:

Regulated Entity Name: Hudson Park - Phase 1

Project Information

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

   Contact Person: Chris Lynch
   Entity: Brightland Homes, LTD
   Mailing Address: 3815 S. Capital of Texas Hwy, Ste. 275
   City, State: Austin, Texas Zip: 78704
   Telephone: 512-330-9366 Fax: _____
   Email Address: kbolt@brightlandhomes.com

5. Agent/Representative (If any):

   Contact Person: Matthew Thomas, P.E.
   Entity: LJA Engineering, Inc.
   Mailing Address: 7500 Rialto Blvd., Building II, Suite 100
   City, State: Austin, Texas Zip: 78735
   Telephone: 512-439-4700 Fax: _____
   Email Address: mthomas@lja.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.

   The project is located off Ronald Reagan Boulevard, between Wild Nolina Way and CR289

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

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

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

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

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

11. Existing project site conditions are noted below:

    ☐ Existing commercial site
    ☐ Existing industrial site

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

12. The type of project is:

☐ Residential: # of Lots: _____
☐ Residential: # of Living Unit Equivalents: _____
☐ Commercial
☐ Industrial
☒ Other: Roadway and infrastructure improvements for future single family subdivision

13. Total project area (size of site): 16.42 Acres

    Total disturbed area: 18.93 Acres

14. Estimated projected population: 0

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		÷ 43,560 =	
Parking		÷ 43,560 =	
Other paved surfaces	344,560	÷ 43,560 =	7.91
Total Impervious Cover	344,560	÷ 43,560 =	7.91

Total Impervious Cover 7.91 **÷ Total Acreage** 16.42 **X 100 =** 48.17**% 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

☒ 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 Williamson MUD 46 (name) Treatment Plant. The treatment facility is:

☒ Existing.

☐ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

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

☒N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

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

Total x 1.5 = _____ Gallons

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

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

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

Table 3 - Secondary Containment

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

Total: _____ Gallons

30. Piping:

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

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

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

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

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

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

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

Site Plan Requirements

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

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

    Site Plan Scale: 1" = 150'.

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 Flood Insurance Rate Map No. 48491C0275E Sep. 26, 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. ☒ A drainage plan showing all paths of drainage from the site to surface streams.

38. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.

39. ☒ Areas of soil disturbance and areas which will not be disturbed.

40. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

41. ☒ Locations where soil stabilization practices are expected to occur.

42. ☒ Surface waters (including wetlands).

    ☐ N/A

43. ☒ Locations where stormwater discharges to surface water.

    ☐ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

☒ Temporary aboveground storage tank facilities will not be located on this site.

45. ☐ Permanent aboveground storage tank facilities.

☒ Permanent aboveground storage tank facilities will not be located on this site.

46. ☒ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

Practices and measures that will be used during and after construction is completed.

47. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

☐ N/A

48. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____.

☐ N/A

49. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

☐ N/A

50. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.

☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.

☒ The site will not be used for low density single-family residential development.

51. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ **Attachment I - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.

☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

☒ The site will not be used for multi-family residential developments, schools, or small business sites.

52. ☒ **Attachment J - BMPs for Upgradient Stormwater**.

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

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

53. ☒ **Attachment K - BMPs for On-site Stormwater**.

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

☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

54. ☒ **Attachment L - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams is attached.

☐ N/A

55. ☒ **Attachment M - Construction Plans**. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and

dated. Construction plans for the proposed permanent BMPs and measures are attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

☐ N/A

56. ☒ **Attachment N - Inspection, Maintenance, Repair and Retrofit Plan**. A site and BMP specific plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan fulfills all of the following:

    ☒ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☒ Signed by the owner or responsible party
    ☒ Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit.
    ☒ Contains a discussion of record keeping procedures

    ☐ N/A

57. ☐ **Attachment O - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    ☒ N/A

58. ☒ **Attachment P - Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that result in water quality degradation.

    ☐ N/A

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

59. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

60. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a

multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

Administrative Information

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

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

63. ☒ The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.

☐ The Temporary Stormwater Section (TCEQ-0602) is included with the application.

ELECTRONICALLY RECORDED 2024088550
Williamson County, Texas Total Pages: 10

SPECIAL WARRANTY DEED

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF WILLIAMSON §

THAT, RR 122 HOLDINGS, LLC, a Delaware limited liability company ("Grantor"), for and in consideration of the sum of Ten and No/100 Dollars ($10.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, paid to Grantor by BRIGHTLAND HOMES, LTD., a Texas limited partnership, having an address at 15725 North Dallas Parkway, Ste. 300, Addison, Texas 75001 ("Grantee"), has GRANTED, BARGAINED, SOLD and CONVEYED, and by these presents does GRANT, BARGAIN, SELL and CONVEY unto Grantee, that certain land (the "Land") situated in Williamson County, Texas, more particularly described on Exhibit A attached hereto and incorporated herein by reference for all purposes, together with any and all improvements situated thereon and all rights and appurtenances pertaining or appertaining thereto, including, without limitation, any and all rights, title and interests of Grantor in and to (a) all improvements located on the Land (the "Improvements"), (b) all and singular the rights, benefits, privileges, easements, and appurtenances thereon or in anywise appertaining to or benefitting the Land, (c) all right, title, and interest of Grantor in and to all strips and gores and any land lying in the bed of any street, road or alley, open or proposed, adjoining the Land, and (d) all right, title and interest of Grantor in and to all utilities and utility availability, sewage treatment capacity and water capacity which serves or will serve the Land (the Land, improvements, appurtenances and all of the foregoing set forth in clauses (a) through (d) are hereinafter collectively referred to as the "Property").

This conveyance and the warranties of title contained herein are expressly made subject only to those certain encumbrances, easements and other matters more particularly described on Exhibit B attached hereto and incorporated herein by reference (the "Permitted Exceptions"), but only to the extent that such Permitted Exceptions are valid, subsisting and, in fact, affect the Property.

TO HAVE AND TO HOLD the Property (subject to the foregoing) unto Grantee and Grantee's successors and assigns forever, and Grantor (except with respect to the above-described property as to which Grantor has expressly provided as being conveyed without warranty) does hereby bind Grantor and Grantor's successors and assigns to WARRANT and FOREVER DEFEND, all and singular, the Property unto Grantee and Grantee's successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, by, through or under Grantor, but not otherwise.

LATITUDE TITLE
GF # 232874

Ad valorem taxes for the year 2024 have been pro rated between Grantor and Grantee and, by acceptance of this Special Warranty Deed, Grantee hereby assumes sole responsibility for the payment thereof.

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EXECUTED to be effective as of the 4th day of November, 2024.

GRANTOR:

RR 122 HOLDINGS LLC,
a Delaware limited liability company

BY: SVAG INVESTMENTS LLC,
a Texas Limited Liability Company,
Its member

BY: _____
SUDHARSHAN VEMBUTTY,
Sole member/Manager

BY: DELTA REAL ESTATE 4, L.P.,
a Texas limited Partnership,
Its member

BY: Universal Development, Inc.,
a Texas corporation,
Its General Partner

By: _____
SUDHARSHAN VEMBUTTY,
Authorized Signor

STATE OF TEXAS §
§
COUNTY OF §

This instrument was acknowledged before me on the 4th day of November, 2024 by SUDHARSHAN VEMBUTTY, sole member/manager of SVAG INVESTMENTS, LLC, a Texas limited liability company, member of RR 122 Holdings, LLC, a Delaware limited liability company on behalf of said limited liability company.

Given under my hand and seal of office this 4 day of November, 2024.

SEAL

Monica M Salinas
Notary Public In and for the State of Texas

My Commission Expires:
1-16-27

MONICA M. SALINAS
Notary Public, State of Texas
Comm. Expires 01-16-2027
Notary ID 131856892

STATE OF TEXAS §
§
COUNTY OF §

This instrument was acknowledged before me on the 4th day of November, 2024 by SUDHARSHAN VEMBUTTY, authorized signer of Universal Development, Inc., a Texas corporation, General Partner of Delta Real Estate 4, L.P., a Texas limited partnership, member of RR 122 Holdings, LLC, a Delaware limited liability company, on behalf of said limited liability company.

Given under my hand and seal of office this 4th day of November, 2024.

SEAL

Monica M Salinas
Notary Public In and for the State of Texas

My Commission Expires:
1/16/27

MONICA M. SALINAS
Notary Public, State of Texas
Comm. Expires 01-16-2027
Notary ID 131856892

GRANTEE'S ADDRESS:
15725 N. Dallas Parkway, Suite 300
Addison, Texas 75001

Exhibit A – Legal Description of the Land
Exhibit B – Permitted Exceptions

EXHIBIT A

LEGAL DESCRIPTION OF THE LAND

BEING A 89.71 ACRE TRACT OF LAND SITUATED IN THE J. NORTHCROSS SURVEY, ABSTRACT NO. 478, THE A.J. HAYHURST SURVEY, ABSTRACT NO. 305, AND THE D. CASANOVA SURVEY, ABSTRACT NO. 128, WILLIAMSON COUNTY, TEXAS, OUT OF A CALLED 122.635 ACRE TRACT DESCRIBED IN DOCUMENT NO. 2022022743, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.TX.) AND CONVEYED TO RR 122 HOLDINGS, LLC; SAID 89.71 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A 3/4-INCH METAL PIPE FOUND (GRID NORTHING: 10,239,768.19, GRID EASTING: 3,081,830.45) ON THE NORTHWEST LINE OF SAID 122.635 ACRE TRACT AND THE SOUTHEAST LINE OF A CALLED 129.95 ACRE TRACT, RECORDED IN DOCUMENT NO. 2021191090, O.P.R.W.C.TX., FOR THE NORTHWEST CORNER OF SAID 89.71 ACRE TRACT AND THE NORTHEAST CORNER OF A CALLED 32.28 ACRE TRACT, RECORDED IN DOCUMENT NO. 2018011295, O.P.R.W.C.TX.;

THENCE NORTH 67 DEGREES 51 MINUTES 51 SECONDS EAST, WITH THE COMMON LINE OF SAID 122.635 ACRE TRACT AND SAID 129.95 ACRE TRACT, FOR A DISTANCE OF 1,163.80 FEET TO A CALCULATED POINT ON THE WEST LINE OF A CALLED 413.839 ACRE TRACT, RECORDED IN DOCUMENT NO. 2021072442, O.P.R.W.C.TX., FOR THE COMMON CORNER OF SAID 89.71 ACRE TRACT AND SAID 129.95 ACRE TRACT;

THENCE WITH THE COMMON LINE OF SAID 122.635 ACRE TRACT AND SAID 413.839 ACRE TRACT THE FOLLOWING THREE (3) COURSES AND DISTANCES:

1) SOUTH 20 DEGREES 30 MINUTES 48 SECONDS EAST, A DISTANCE OF 257.86 FEET TO A 1/2-INCH IRON ROD FOUND,

2) SOUTH 11 DEGREES 22 MINUTES 15 SECONDS EAST, A DISTANCE OF 322.10 FEET TO A 1/2-INCH IRON ROD FOUND, AND

3) SOUTH 78 DEGREES 37 MINUTES 45 SECONDS WEST, A DISTANCE OF 41.54 FEET TO A CALCULATED POINT FOR A SOUTHEAST CORNER OF SAID 89.71 ACRE;

THENCE OVER AND ACROSS SAID 122.635 ACRE TRACT THE FOLLOWING TWENTY FOUR (24) COURSES AND DISTANCES:

1) SOUTH 18 DEGREES 35 MINUTES 43 SECONDS WEST, A DISTANCE OF 88.55 FEET TO A CALCULATED POINT,

2) SOUTH 27 DEGREES 59 MINUTES 24 SECONDS WEST, A DISTANCE OF 70.37 FEET TO A CALCULATED POINT,

3) SOUTH 38 DEGREES 01 MINUTES 21 SECONDS WEST, A DISTANCE OF 98.92 FEET TO A CALCULATED POINT,

4) SOUTH 43 DEGREES 56 MINUTES 44 SECONDS WEST, A DISTANCE OF 106.56 FEET TO A CALCULATED POINT,

5) SOUTH 39 DEGREES 18 MINUTES 12 SECONDS WEST, A DISTANCE OF 101.46 FEET TO A CALCULATED POINT,

6) SOUTH 27 DEGREES 23 MINUTES 30 SECONDS WEST, A DISTANCE OF 52.35 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,

7) WITH SAID CURVE TO THE RIGHT, WITH AN ARC LENGTH OF 164.24 FEET, A RADIUS OF 50.01 FEET, A DELTA ANGLE OF 188 DEGREES 10 MINUTES 56 SECONDS, AND A CHORD THAT BEARS SOUTH 26 DEGREES 23 MINUTES 54 SECONDS EAST, A DISTANCE OF 99.76 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE LEFT,

8) WITH SAID CURVE TO THE LEFT, WITH AN ARC LENGTH OF 14.44 FEET, A RADIUS OF 15.00 FEET, A DELTA ANGLE OF 55 DEGREES 08 MINUTES 45 SECONDS, AND A CHORD THAT BEARS SOUTH 40 DEGREES 07 MINUTES 11 SECONDS WEST, A DISTANCE OF 13.89 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE LEFT,

9) WITH SAID CURVE TO THE LEFT, WITH AN ARC LENGTH OF 269.61 FEET, A RADIUS OF 475.06 FEET, A DELTA ANGLE OF 32 DEGREES 31 MINUTES 02 SECONDS, AND A CHORD THAT BEARS SOUTH 03 DEGREES 42 MINUTES 42 SECONDS EAST, A DISTANCE OF 266.01 FEET TO A CALCULATED POINT,

10) SOUTH 19 DEGREES 58 MINUTES 13 SECONDS EAST, A DISTANCE OF 168.05 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,

11) WITH SAID CURVE TO THE RIGHT, WITH AN ARC LENGTH OF 285.40 FEET, A RADIUS OF 375.05 FEET, A DELTA ANGLE OF 43 DEGREES 35 MINUTES 59 SECONDS, AND A CHORD THAT BEARS SOUTH 01 DEGREES 49 MINUTES 47 SECONDS WEST, A DISTANCE OF 278.56 FEET TO A CALCULATED POINT,

12) SOUTH 23 DEGREES 37 MINUTES 46 SECONDS WEST, A DISTANCE OF 37.88 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE LEFT,

13) WITH SAID CURVE TO THE LEFT, WITH AN ARC LENGTH OF 21.33 FEET, A RADIUS OF 15.00 FEET, A DELTA ANGLE OF 81 DEGREES 27 MINUTES 19 SECONDS, AND A CHORD THAT BEARS SOUTH 17 DEGREES 05 MINUTES 53 SECONDS EAST, A DISTANCE OF 19.58 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,

14) WITH SAID CURVE TO THE RIGHT, WITH AN ARC LENGTH OF 680.59 FEET, A RADIUS OF 897.12 FEET, A DELTA ANGLE OF 43 DEGREES 28 MINUTES 01 SECONDS, AND A CHORD THAT BEARS SOUTH 36 DEGREES 05 MINUTES 32 SECONDS EAST, A DISTANCE OF 664.39 FEET TO A CALCULATED POINT,

15) SOUTH 14 DEGREES 21 MINUTES 32 SECONDS EAST, A DISTANCE OF 118.40 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE LEFT,

16) WITH SAID CURVE TO THE LEFT, WITH AN ARC LENGTH OF 312.43 FEET, A RADIUS OF 1,053.00 FEET, A DELTA ANGLE OF 16 DEGREES 59 MINUTES 52 SECONDS, AND A CHORD THAT BEARS SOUTH 22 DEGREES 51 MINUTES 28 SECONDS EAST, A DISTANCE OF 311.29 FEET TO A CALCULATED POINT,

17) SOUTH 31 DEGREES 21 MINUTES 07 SECONDS EAST, A DISTANCE OF 242.19 FEET TO A CALCULATED POINT,

18) SOUTH 58 DEGREES 40 MINUTES 10 SECONDS WEST, A DISTANCE OF 93.99 FEET TO A CALCULATED POINT,

19) NORTH 31 DEGREES 21 MINUTES 24 SECONDS WEST, A DISTANCE OF 242.15 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,

20) WITH SAID CURVE TO THE RIGHT, WITH AN ARC LENGTH OF 161.92 FEET, A RADIUS OF 1,147.00 FEET, A DELTA ANGLE OF 08 DEGREES 05 MINUTES 15 SECONDS, AND A CHORD THAT BEARS NORTH 27 DEGREES 18 MINUTES 46 SECONDS WEST, A DISTANCE OF 161.79 FEET TO A CALCULATED POINT,

21) SOUTH 46 DEGREES 01 MINUTES 03 SECONDS WEST, A DISTANCE OF 169.02 FEET TO A CALCULATED POINT,

22) SOUTH 22 DEGREES 00 MINUTES 32 SECONDS EAST, A DISTANCE OF 83.70 FEET TO A CALCULATED POINT,

23) SOUTH 08 DEGREES 07 MINUTES 35 SECONDS EAST, A DISTANCE OF 99.51 FEET TO A CALCULATED POINT, AND

24) SOUTH 32 DEGREES 41 MINUTES 17 SECONDS EAST, A DISTANCE OF 132.72 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "PBS&J" FOUND FOR A COMMON CORNER OF SAID 122.635 ACRE TRACT AND THE RIGHT-OF-WAY OF RONALD REAGAN BLVD. (VARIABLE WIDTH RIGHT-OF-WAY);

THENCE SOUTH 58 DEGREES 34 MINUTES 45 SECONDS WEST, WITH THE COMMON LINE OF SAID 122.635 ACRE TRACT AND THE NORTHWEST RIGHT-OF-WAY OF SAID RONALD REAGAN BLVD., A DISTANCE OF 199.49 FEET TO A 1/2-INCH IRON ROD FOUND FOR A COMMON CORNER OF SAID 122.635 ACRE TRACT AND THE RIGHT-OF-WAY OF RONALD REAGAN BLVD.;

THENCE OVER AND ACROSS SAID 122.635 ACRE TRACT THE FOLLOWING NINE (9) COURSES AND DISTANCES:

1) SOUTH 63 DEGREES 25 MINUTES 54 SECONDS WEST, A DISTANCE OF 13.38 FEET TO A CALCULATED POINT,

2) NORTH 21 DEGREES 36 MINUTES 47 SECONDS WEST, A DISTANCE OF 39.18 FEET TO A CALCULATED POINT,

3) NORTH 03 DEGREES 27 MINUTES 27 SECONDS WEST, A DISTANCE OF 239.70 FEET TO A CALCULATED POINT,

4) SOUTH 71 DEGREES 04 MINUTES 54 SECONDS WEST, A DISTANCE OF 307.91 FEET TO A CALCULATED POINT,

5) NORTH 19 DEGREES 47 MINUTES 33 SECONDS WEST, A DISTANCE OF 133.25 FEET TO A CALCULATED POINT,

6) SOUTH 67 DEGREES 24 MINUTES 37 SECONDS WEST, A DISTANCE OF 160.23 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,

7) WITH SAID CURVE TO THE RIGHT, WITH AN ARC LENGTH OF 62.29 FEET, A RADIUS OF 455.06 FEET, A DELTA ANGLE OF 07 DEGREES 50 MINUTES 32 SECONDS, AND A CHORD THAT BEARS SOUTH 71 DEGREES 19 MINUTES 54 SECONDS WEST, A DISTANCE OF 62.24 FEET TO A CALCULATED POINT,

8) SOUTH 75 DEGREES 15 MINUTES 10 SECONDS WEST, A DISTANCE OF 484.41 FEET TO A CALCULATED POINT, AND

9) SOUTH 15 DEGREES 11 MINUTES 40 SECONDS EAST, A DISTANCE OF 41.00 FEET TO A CALCULATED POINT FOR THE COMMON CORNER OF SAID 122.635 ACRE TRACT AND SAID 89.71 ACRE TRACT;

THENCE WITH THE COMMON LINE OF SAID 122.635 ACRE TRACT AND SAID 89.71 ACRE TRACT THE FOLLOWING EIGHTEEN (18) COURSES AND DISTANCES:

1) SOUTH 75 DEGREES 25 MINUTES 51 SECONDS WEST, A DISTANCE OF 19.59 FEET TO A CALCULATED POINT,

2) SOUTH 73 DEGREES 56 MINUTES 52 SECONDS WEST, A DISTANCE OF 87.07 FEET TO A CALCULATED POINT,

3) SOUTH 74 DEGREES 39 MINUTES 34 SECONDS WEST, A DISTANCE OF 76.38 FEET TO A CALCULATED POINT,

4) SOUTH 74 DEGREES 42 MINUTES 44 SECONDS WEST, A DISTANCE OF 295.26 FEET TO A CALCULATED POINT,

5) NORTH 54 DEGREES 48 MINUTES 59 SECONDS WEST, A DISTANCE OF 82.61 FEET TO A CALCULATED POINT,

6) NORTH 23 DEGREES 21 MINUTES 55 SECONDS WEST, A DISTANCE OF 252.74 FEET TO A CALCULATED POINT,

7) NORTH 20 DEGREES 04 MINUTES 00 SECONDS WEST, A DISTANCE OF 216.04 FEET TO A CALCULATED POINT,

8) NORTH 20 DEGREES 10 MINUTES 11 SECONDS WEST, A DISTANCE OF 113.50 FEET TO A CALCULATED POINT,

9) NORTH 34 DEGREES 58 MINUTES 47 SECONDS WEST, A DISTANCE OF 178.70 FEET TO A CALCULATED POINT, 1

10) NORTH 52 DEGREES 27 MINUTES 43 SECONDS WEST, A DISTANCE OF 106.30 FEET TO A CALCULATED POINT,

11) SOUTH 78 DEGREES 42 MINUTES 39 SECONDS WEST, A DISTANCE OF 99.65 FEET TO A CALCULATED POINT,

12) SOUTH 61 DEGREES 47 MINUTES 42 SECONDS WEST, A DISTANCE OF 47.03 FEET TO A CALCULATED POINT,

13) NORTH 02 DEGREES 25 MINUTES 28 SECONDS WEST, A DISTANCE OF 170.18 FEET TO A CALCULATED POINT,

14) NORTH 20 DEGREES 59 MINUTES 42 SECONDS EAST, A DISTANCE OF 190.31 FEET TO A CALCULATED POINT,

15) NORTH 37 DEGREES 19 MINUTES 00 SECONDS EAST, A DISTANCE OF 107.78 FEET TO A CALCULATED POINT,

16) SOUTH 18 DEGREES 11 MINUTES 05 SECONDS EAST, A DISTANCE OF 13.41 FEET TO A CALCULATED POINT,

17) NORTH 70 DEGREES 28 MINUTES 33 SECONDS EAST, A DISTANCE OF 1,204.35 FEET TO A CALCULATED POINT,

18) NORTH 16 DEGREES 16 MINUTES 41 SECONDS WEST, A DISTANCE OF 1,307.47 FEET TO THE POINT OF BEGINNING AND CONTAINING 89.71 ACRES, MORE OR LESS.

EXHIBIT B

PERMITTED EXCEPTIONS

1. Water pipe line easement granted to Chisholm Trail Water Supply Corp. recorded in Volume 938, Page 575, Deed Records, Williamson County, Texas.

2. Water pipe line easement granted to Chisholm Trail Water Supply Corp. recorded in Volume 944, Page 762, Deed Records, Williamson County, Texas.

3. Electric Utility Easement granted to Pedernales Electric Cooperative, Inc., recorded under Clerk's File No. 199980164, Real Property Records, Williamson County, Texas.

ELECTRONICALLY RECORDED
OFFICIAL PUBLIC RECORDS

2024088550

Pages: 10 Fee: $57.00
11/05/2024 04:01 PM
OSALINAS

Nancy E. Rister, County Clerk
Williamson County,Texas

LEGAL DESCRIPTION

BEING A 16.42 ACRE TRACT OF LAND SITUATED IN THE J. NORTHCROSS SURVEY, ABSTRACT NO. 478, THE A.J. HAYHURST SURVEY, ABSTRACT NO. 305, AND THE D. CASANOVA SURVEY, ABSTRACT NO. 128, WILLIAMSON COUNTY, TEXAS, OUT OF A CALLED 122.635 ACRE TRACT DESCRIBED IN DOCUMENT NO. 2022022743, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.TX.) AND CONVEYED TO RR 122 HOLDINGS, LLC; SAID 16.42 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A CALCULATED POINT (GRID NORTHING: 10,238,294.44, GRID EASTING: 3,081,946.33) IN THE INTERIOR OF SAID 122.635 ACRE TRACT, FOR THE NORTHWEST CORNER OF THE HEREIN DESCRIBED TRACT, FROM WHICH A 1/2-INCH ROD (BENT) FOUND FOR A COMMON CORNER OF SAID 122.635 ACRE TRCT AND A CALLED 32.28 ACRE TRACT CONVEYED TO JOHN BEN ATKINSON AND PAMELA ATKINSON, RECORDED IN DOCUMENT NO. 2018011295, O.P.R.W.C.TX. BEARS NORTH 48 DEGREES 51 MINUTES 49 SECONDS EAST, A DISTANCE OF 332.69 FEET;

THENCE OVER AND ACROSS SAID 122.635 ACRE TRACT THE FOLLOWING FORTY-SIX (46) COURSES AND DISTANCES:

1) NORTH 71 DEGREES 03 MINUTES 57 SECONDS EAST, A DISTANCE OF 50.00 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,
2) WITH SAID CURVE TO THE RIGHT, HAVING AN ARC LENGTH OF 23.56 FEET, A RADIUS OF 15.00 FEET, A DELTA ANGLE OF 90 DEGREES 00 MINUTES 00 SECONDS, AND A CHORD THAT BEARS NORTH 25 DEGREES 31 MINUTES 02 SECONDS EAST, A DISTANCE OF 21.21 FEET TO A CALCULATED POINT,
3) NORTH 70 DEGREES 31 MINUTES 02 SECONDS EAST, A DISTANCE OF 85.35 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,
4) WITH SAID CURVE TO THE RIGHT, HAVING AN ARC LENGTH OF 256.46 FEET, A RADIUS OF 803.00 FEET, A DELTA ANGLE OF 18 DEGREES 17 MINUTES 55 SECONDS, AND A CHORD THAT BEARS NORTH 79 DEGREES 40 MINUTES 00 SECONDS EAST, A DISTANCE OF 255.37 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,
5) WITH SAID CURVE TO THE RIGHT, HAVING AN ARC LENGTH OF 24.32 FEET, A RADIUS OF 15.00 FEET, A DELTA ANGLE OF 92 DEGREES 54 MINUTES 15 SECONDS, AND A CHORD THAT BEARS SOUTH 44 DEGREES 43 MINUTES 55 SECONDS EAST, A DISTANCE OF 21.74 FEET TO A CALCULATED POINT,
6) SOUTH 88 DEGREES 16 MINUTES 16 SECONDS EAST, A DISTANCE OF 50.00 FEET TO A CALCULATED POINT,
7) SOUTH 01 DEGREES 43 MINUTES 13 SECONDS WEST, A DISTANCE OF 118.45 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE LEFT,
8) WITH SAID CURVE TO THE LEFT, HAVING AN ARC LENGTH OF 19.74 FEET, A RADIUS OF 15.00 FEET, A DELTA ANGLE OF 75 DEGREES 24 MINUTES 34 SECONDS, AND A CHORD THAT BEARS SOUTH 35 DEGREES 59 MINUTES 04 SECONDS EAST, A DISTANCE OF 18.35 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE LEFT,
9) WITH SAID CURVE TO THE LEFT, HAVING AN ARC LENGTH OF 1.75 FEET, A RADIUS OF 325.00 FEET, A DELTA ANGLE OF 00 DEGREES 18 MINUTES 34 SECONDS, AND A CHORD THAT BEARS SOUTH 73 DEGREES 32 MINUTES 04 SECONDS EAST, A DISTANCE OF 1.75 FEET TO A CALCULATED POINT,

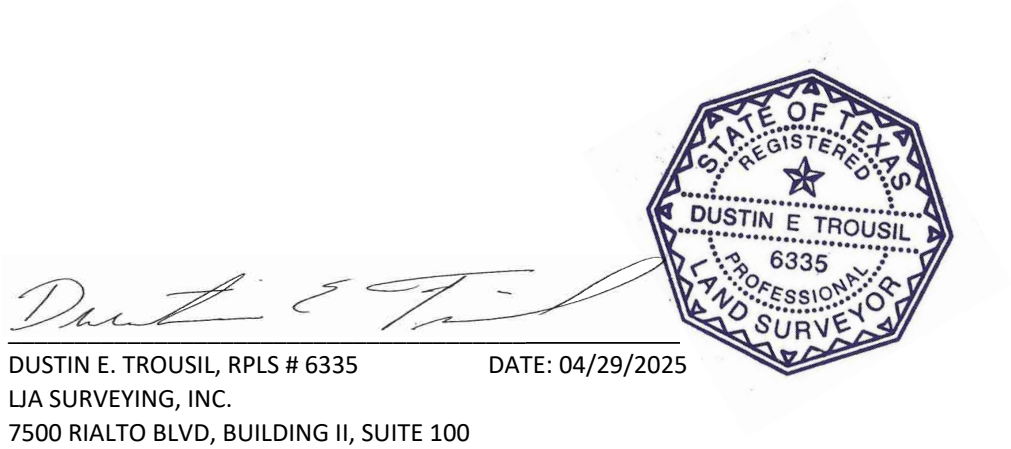
10) NORTH 16 DEGREES 49 MINUTES 01 SECONDS EAST, A DISTANCE OF 122.18 FEET TO A CALCULATED POINT,
11) SOUTH 72 DEGREES 01 MINUTES 49 SECONDS EAST, A DISTANCE OF 50.00 FEET TO A CALCULATED POINT,
12) SOUTH 67 DEGREES 12 MINUTES 35 SECONDS EAST, A DISTANCE OF 59.99 FEET TO A CALCULATED POINT,
13) SOUTH 54 DEGREES 57 MINUTES 24 SECONDS EAST, A DISTANCE OF 108.48 FEET TO A CALCULATED POINT,
14) SOUTH 44 DEGREES 59 MINUTES 48 SECONDS EAST, A DISTANCE OF 111.29 FEET TO A CALCULATED POINT,
15) SOUTH 08 DEGREES 04 MINUTES 05 SECONDS EAST, A DISTANCE OF 38.49 FEET TO A CALCULATED POINT,
16) SOUTH 19 DEGREES 56 MINUTES 56 SECONDS EAST, A DISTANCE OF 161.92 FEET TO A CALCULATED POINT,
17) SOUTH 09 DEGREES 24 MINUTES 50 SECONDS EAST, A DISTANCE OF 62.64 FEET TO A CALCULATED POINT,
18) SOUTH 34 DEGREES 16 MINUTES 48 SECONDS WEST, A DISTANCE OF 14.46 FEET TO A CALCULATED POINT,
19) SOUTH 77 DEGREES 58 MINUTES 26 SECONDS WEST, A DISTANCE OF 113.67 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,
20) WITH SAID CURVE TO THE RIGHT, HAVING AN ARC LENGTH OF 25.00 FEET, A RADIUS OF 975.00 FEET, A DELTA ANGLE OF 01 DEGREES 28 MINUTES 09 SECONDS, AND A CHORD THAT BEARS SOUTH 13 DEGREES 07 MINUTES 04 SECONDS EAST, A DISTANCE OF 25.00 FEET TO A CALCULATED POINT,
21) NORTH 78 DEGREES 54 MINUTES 24 SECONDS EAST, A DISTANCE OF 111.98 FEET TO A CALCULATED POINT,
22) SOUTH 55 DEGREES 08 MINUTES 49 SECONDS EAST, A DISTANCE OF 13.96 FEET TO A CALCULATED POINT,
23) SOUTH 09 DEGREES 24 MINUTES 50 SECONDS EAST, A DISTANCE OF 90.23 FEET TO A CALCULATED POINT,
24) SOUTH 04 DEGREES 25 MINUTES 05 SECONDS EAST, A DISTANCE OF 135.64 FEET TO A CALCULATED POINT,
25) SOUTH 01 DEGREES 24 MINUTES 36 SECONDS WEST, A DISTANCE OF 93.99 FEET TO A CALCULATED POINT,
26) SOUTH 06 DEGREES 59 MINUTES 13 SECONDS WEST, A DISTANCE OF 78.66 FEET TO A CALCULATED POINT,
27) SOUTH 41 DEGREES 37 MINUTES 07 SECONDS EAST, A DISTANCE OF 292.00 FEET TO A CALCULATED POINT, FROM WHICH A 1/2-INCH ROD WITH CAP STAMPED “PBS&J” FOUND BEARS SOUTH 51 DEGREES 51 MINUTES 58 SECONDS EAST, A DISTANCE OF 268.33 FEET,
28) SOUTH 71 DEGREES 04 MINUTES 54 SECONDS WEST, A DISTANCE OF 307.87 FEET TO A CALCULATED POINT, FROM WHICH A 1/2-INCH ROD FOUND BEARS SOUTH 62 DEGREES 54 MINUTES 37 SECONDS EAST, A DISTANCE OF 373.00 FEET,
29) NORTH 19 DEGREES 47 MINUTES 33 SECONDS WEST, A DISTANCE OF 133.24 FEET TO A CALCULATED POINT,
30) SOUTH 67 DEGREES 24 MINUTES 37 SECONDS WEST, A DISTANCE OF 160.21 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,

31) WITH SAID CURVE TO THE RIGHT, HAVING AN ARC LENGTH OF 62.28 FEET, A RADIUS OF 455.00 FEET, A DELTA ANGLE OF 07 DEGREES 50 MINUTES 32 SECONDS, AND A CHORD THAT BEARS SOUTH 71 DEGREES 19 MINUTES 54 SECONDS WEST, A DISTANCE OF 62.23 FEET TO A CALCULATED POINT,
32) SOUTH 75 DEGREES 15 MINUTES 10 SECONDS WEST, A DISTANCE OF 89.34 FEET TO A CALCULATED POINT,
33) NORTH 14 DEGREES 44 MINUTES 50 SECONDS WEST, A DISTANCE OF 180.00 FEET TO A CALCULATED POINT,
34) NORTH 75 DEGREES 15 MINUTES 10 SECONDS EAST, A DISTANCE OF 7.09 FEET TO A CALCULATED POINT,
35) NORTH 14 DEGREES 44 MINUTES 50 SECONDS WEST, A DISTANCE OF 120.00 FEET TO A CALCULATED POINT,
36) NORTH 75 DEGREES 15 MINUTES 10 SECONDS EAST, A DISTANCE OF 6.37 FEET TO A CALCULATED POINT,
37) NORTH 08 DEGREES 26 MINUTES 08 SECONDS WEST, A DISTANCE OF 92.28 TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,
38) WITH SAID CURVE TO THE RIGHT, HAVING AN ARC LENGTH OF 118.98 FEET, A RADIUS OF 50.00 FEET, A DELTA ANGLE OF 136 DEGREES 20 MINUTES 18 SECONDS, AND A CHORD THAT BEARS NORTH 43 DEGREES 42 MINUTES 58 SECONDS WEST, A DISTANCE OF 92.83 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE LEFT,
39) WITH SAID CURVE TO THE LEFT, HAVING AN ARC LENGTH OF 13.62 FEET, A RADIUS OF 15.00 FEET, A DELTA ANGLE OF 52 DEGREES 01 MINUTES 12 SECONDS, AND A CHORD THAT BEARS NORTH 01 DEGREES 33 MINUTES 25 SECONDS WEST, A DISTANCE OF 13.16 FEET TO A CALCULATED POINT,
40) NORTH 27 DEGREES 34 MINUTES 01 SECONDS WEST, A DISTANCE OF 328.69 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE RIGHT,
41) WITH SAID CURVE TO THE RIGHT, HAVING AN ARC LENGTH OF 144.62 FEET, A RADIUS OF 1,025.00 FEET, A DELTA ANGLE OF 08 DEGREES 05 MINUTES 03 SECONDS, AND A CHORD THAT BEARS NORTH 23 DEGREES 31 MINUTES 30 SECONDS WEST, A DISTANCE OF 144.50 FEET TO A CALCULATED POINT,
42) NORTH 19 DEGREES 28 MINUTES 58 SECONDS WEST, A DISTANCE OF 23.63 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE LEFT,
43) WITH SAID CURVE TO THE LEFT, HAVING AN ARC LENGTH OF 23.56 FEET, A RADIUS OF 15.00 FEET, A DELTA ANGLE OF 90 DEGREES 00 MINUTES 00 SECONDS, AND A CHORD THAT BEARS NORTH 64 DEGREES 28 MINUTES 58 SECONDS WEST, A DISTANCE OF 21.21 FEET TO A CALCULATED POINT,
44) NORTH 19 DEGREES 28 MINUTES 58 SECONDS WEST, A DISTANCE OF 50.00 FEET TO A CALCULATED POINT AT THE BEGINNING OF A CURVE TO THE LEFT,
45) WITH SAID CURVE TO THE LEFT, HAVING AN ARC LENGTH OF 23.56 FEET, A RADIUS OF 15.00 FEET, A DELTA ANGLE OF 90 DEGREES 00 MINUTES 00 SECONDS, AND A CHORD THAT BEARS NORTH 25 DEGREES 31 MINUTES 02 SECONDS EAST, A DISTANCE OF 21.21 FEET TO A CALCULATED POINT, AND

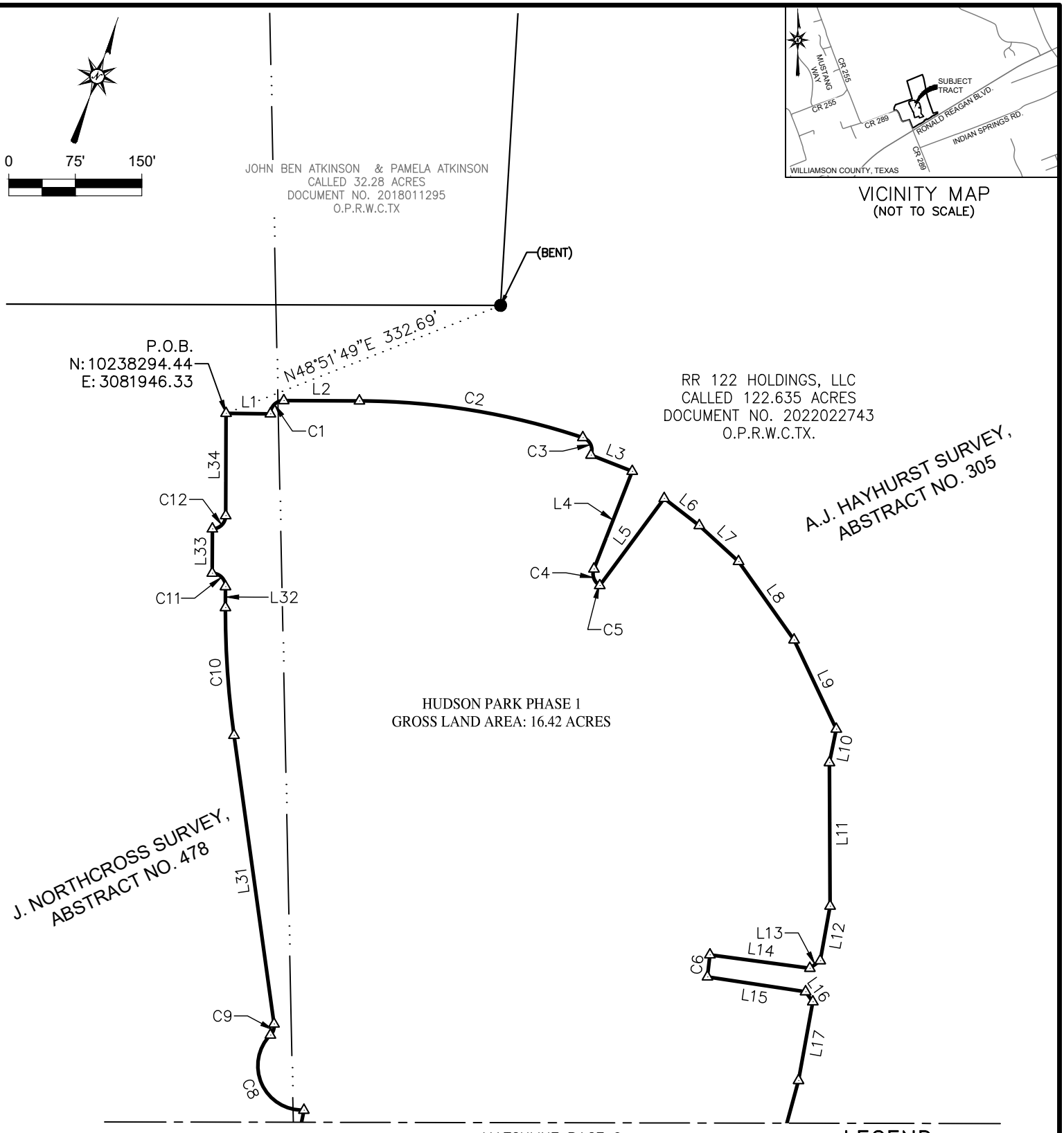
46) NORTH 19 DEGREES 28 MINUTES 58 SECONDS WEST, A DISTANCE OF 115.48 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 16.42 ACRES OF LAND, MORE OR LESS.

BEARING BASIS:

ALL BEARINGS SHOWN ARE BASED ON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE, NAD83/(2011). ALL DISTANCES SHOWN ARE GRID DISTANCES. UNITS: U.S. SURVEY FEET.



DUSTIN E. TROUSIL, RPLS # 6335 DATE: 04/29/2025
LJA SURVEYING, INC.
7500 RIALTO BLVD, BUILDING II, SUITE 100
AUSTIN, TEXAS 78735
TEXAS FIRM NO. 10194382



VICINITY MAP
(NOT TO SCALE)

LEGEND

- CALCULATED POINT
- 1/2" IRON ROD FOUND (AS NOTED)
- 1/2" IRON ROD W/ CAP "PBS&J" FOUND
- BOUNDARY LINE
- ADJOINER LINE
- APPROXIMATE SURVEY LINE
- SUBJECT TRACT
- P.O.B. — POINT OF BEGINNING
- O.P.R.W.C.TX. — OFFICIAL PUBLIC RECORDS WILLIAMSON COUNTY, TEXAS

GENERAL NOTES:

1. ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, GRID NORTH, CENTRAL ZONE (4203), NAD83(2011), ALL DISTANCES ARE GRID VALUES, U.S. SURVEY FEET.
2. LINE AND CURVE TABLES ON PAGE 7 OF 7

PAGE 5 OF 7

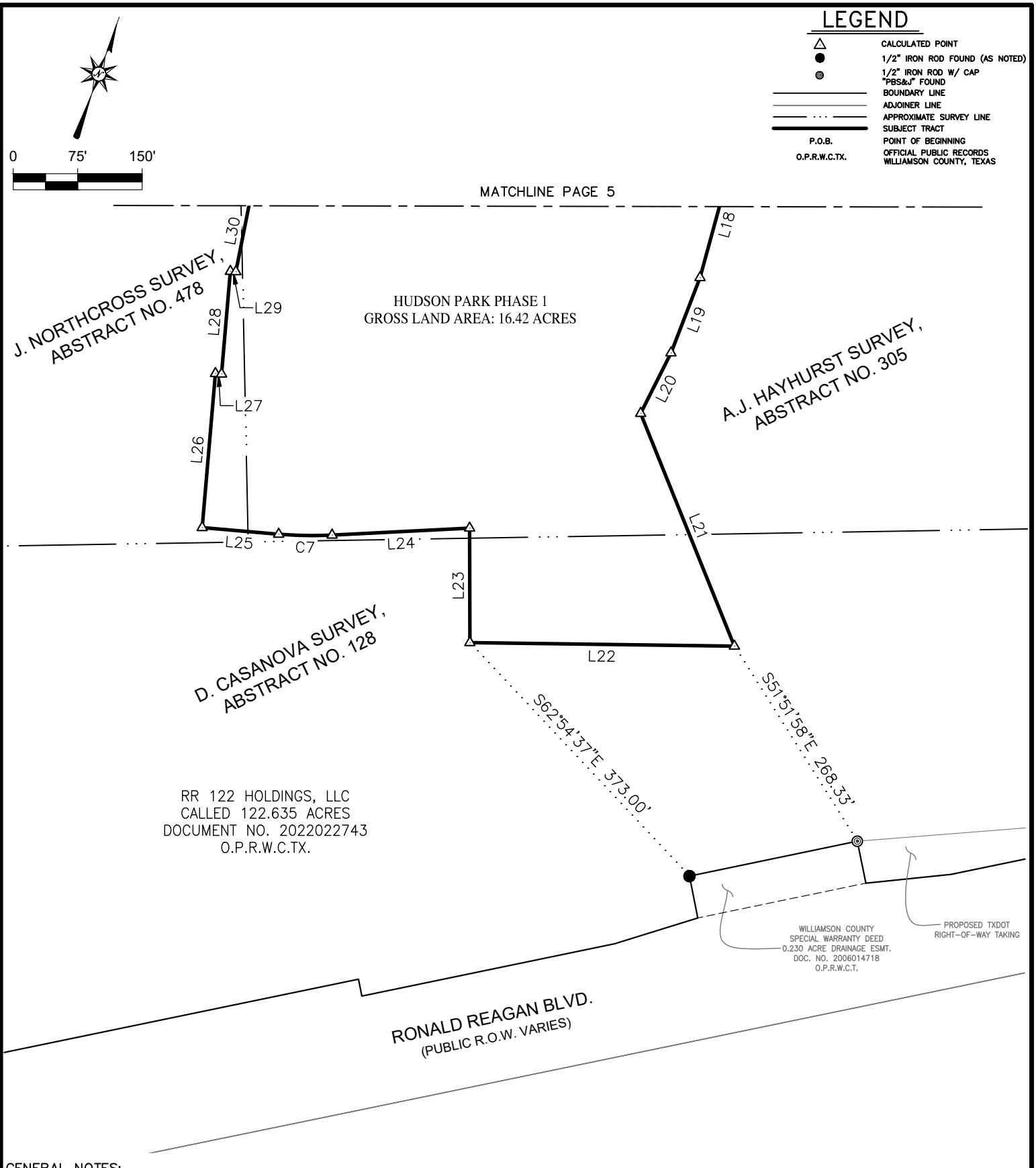
DATE:	04/29/25
DRWN BY:	EMC
CHKD BY:	DET
PROJ NO.	A474-0411

EXHIBIT "A"

16.42 ACRE TRACT
IN THE
J. NORTHCROSS SURVEY, ABSTRACT NO. 478,
A.J. HAYHURST SURVEY, ABSTRACT NO. 305, AND
D. CASANOVA SURVEY, ABSTRACT NO. 128
WILLIAMSON COUNTY, TEXAS

LJA Surveying, Inc.
7500 Rialto Blvd., Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
T.B.P.E.L.S. Firm No. 10194382

S:\Sectors\Survey\Projects\LJAS001\A474\(0411)_122.89 Acre Parcel Williamson County\06-CAD\Civil 3D\Plats\Hudson Park Phase 1 Metes and Bounds\A474-0411_Hudson Park Phase 1_Sketch.dwg 4/29/2025



GENERAL NOTES:

1. ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, GRID NORTH, CENTRAL ZONE (4203), NAD83(2011), ALL DISTANCES ARE GRID VALUES, U.S. SURVEY FEET.
2. LINE AND CURVE TABLES ON PAGE 7 OF 7

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CHKD BY:	DET
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S:\Sectors\Survey\Projects\LJAS001\A474\(0411)_122.89 Acre Parcel Williamson County\06-CAD\Civil 3D\Plats\Hudson Park Phase 1 Metes and Bounds\A474-0411_Hudson Park Phase 1_Sketch.dwg 4/29/2025

Line Table		
Line #	Direction	Length
L1	N71° 03' 57"E	50.00'
L2	N70° 31' 02"E	85.35'
L3	S88° 16' 16"E	50.00'
L4	S01° 43' 13"W	118.45'
L5	N16° 49' 01"E	122.18'
L6	S72° 01' 49"E	50.00'
L7	S67° 12' 35"E	59.99'
L8	S54° 57' 24"E	108.48'
L9	S44° 59' 48"E	111.29'
L10	S08° 04' 05"E	38.49'
L11	S19° 56' 56"E	161.92'
L12	S09° 24' 50"E	62.64'
L13	S34° 16' 48"W	14.46'
L14	S77° 58' 26"W	113.67'
L15	N78° 54' 24"E	111.98'
L16	S55° 08' 49"E	13.96'
L17	S09° 24' 50"E	90.23'

Line Table		
Line #	Direction	Length
L18	S04° 25' 05"E	135.64'
L19	S01° 24' 36"W	93.99'
L20	S06° 59' 13"W	78.66'
L21	S41° 37' 07"E	292.00'
L22	S71° 04' 54"W	307.87'
L23	N19° 47' 33"W	133.24'
L24	S67° 24' 37"W	160.21'
L25	S75° 15' 10"W	89.34'
L26	N14° 44' 50"W	180.00'
L27	N75° 15' 10"E	7.09'
L28	N14° 44' 50"W	120.00'
L29	N75° 15' 10"E	6.37'
L30	N08° 26' 08"W	92.28'
L31	N27° 34' 01"W	328.69'
L32	N19° 28' 58"W	23.63'
L33	N19° 28' 58"W	50.00'
L34	N19° 28' 58"W	115.48'

Curve Table					
Curve #	Arc Length	Radius	Delta	Chord Bearing	Chord Distance
C1	23.56'	15.00	90°00'00"	N25° 31' 02"E	21.21'
C2	256.46'	803.00	18°17'55"	N79° 40' 00"E	255.37'
C3	24.32'	15.00	92°54'15"	S44° 43' 55"E	21.74'
C4	19.74'	15.00	75°24'34"	S35° 59' 04"E	18.35'
C5	1.75'	325.00	0°18'34"	S73° 32' 04"E	1.75'
C6	25.00'	975.00	1°28'09"	S13° 07' 04"E	25.00'
C7	62.28'	455.00	7°50'32"	S71° 19' 54"W	62.23'
C8	118.98'	50.00	136°20'18"	N43° 42' 58"W	92.83'
C9	13.62'	15.00	52°01'12"	N01° 33' 25"W	13.16'
C10	144.62'	1,025.00	8°05'03"	N23° 31' 30"W	144.50'
C11	23.56'	15.00	90°00'00"	N64° 28' 58"W	21.21'
C12	23.56'	15.00	90°00'00"	N25° 31' 02"E	21.21'

GENERAL NOTES:

1. ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, GRID NORTH, CENTRAL ZONE (4203), NAD83(2011), ALL DISTANCES ARE GRID VALUES, U.S. SURVEY FEET.

DUSTIN TROUSIL
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6335
DATE OF SURVEY: 4/29/2025

DATE:	04/29/25
DRWN BY:	EMC
CHKD BY:	DET
PROJ NO.	A474-0411

EXHIBIT "A"

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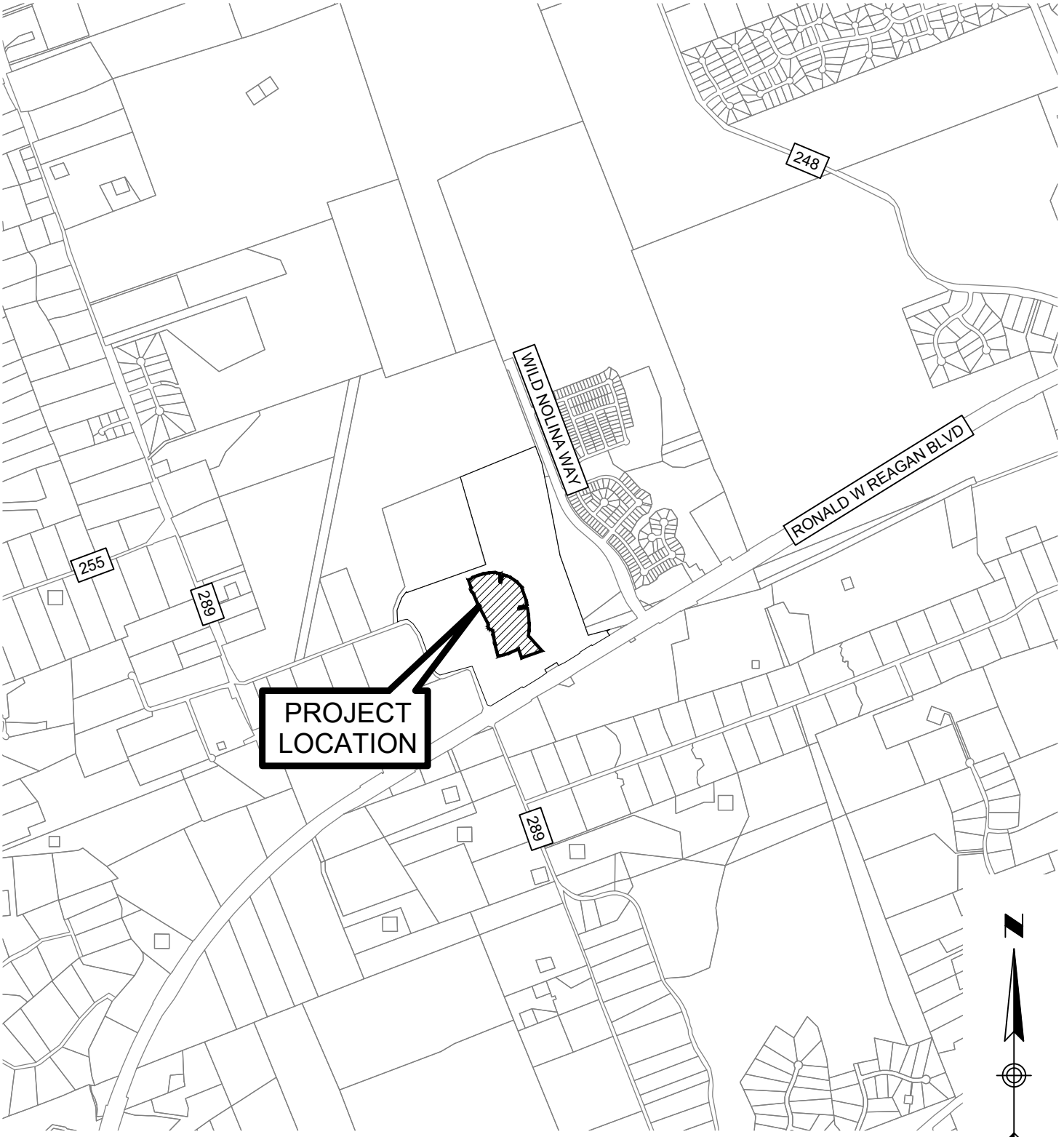
Austin, Texas 78735
Phone 512.439.4700
T.B.P.E.L.S. Firm No. 10194382

ATTACHMENT A – Road Map



LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716

HUDSON PARK
PHASE 1

ATTACHMENT A - ROAD MAP

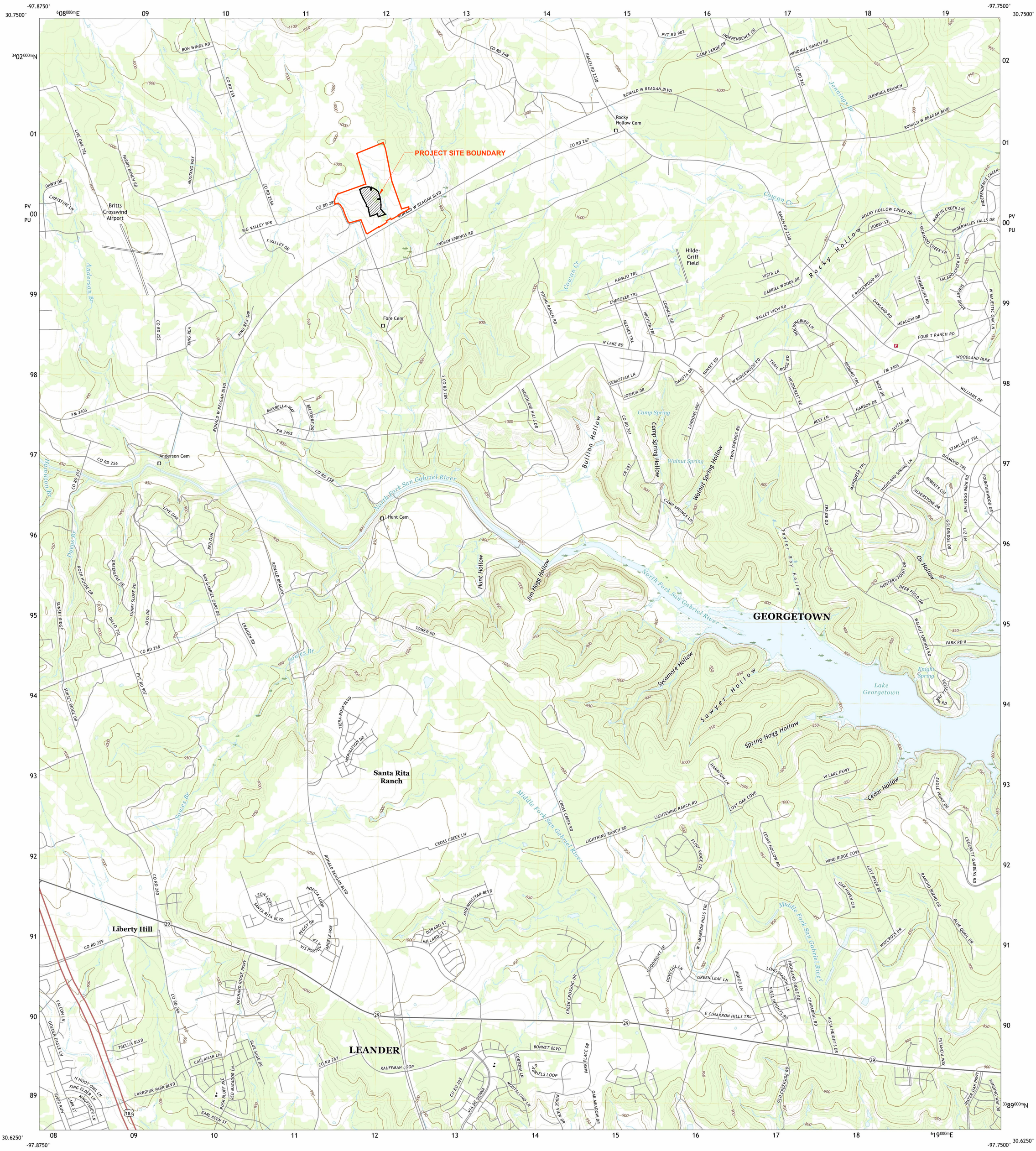
CONTRIBUTING ZONE PLAN APPLICATION

ATTACHMENT B – USGS Quadrangle Map

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



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, August 2016 - November 2016
Roads..... U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2021
Hydrography.....National Hydrography Dataset, 2002 - 2021
Contours.....National Elevation Dataset, 2004
Boundaries.....Multiple sources; see metadata file 2019 - 2021

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

MN
GN
3°46' 67 MILS
0°36' 11 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

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

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

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

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Mahomet
2 Florence
3 Cobbs Cavern
4 Liberty Hill
5 Georgetown
6 Nameless
7 Leander
8 Round Rock
ADJOINING QUADRANGLES

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

LEANDER NE, TX
2022

FOR PLANNING PURPOSES ONLY

SHEET NO. 1 OF 1 SHEETS

JOB NUMBER: A3336

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME: USGS QUAD.dwg

REVISIONS			
NO.	DESCRIPTION	BY	DATE

HUDSON PARK PHASE 1
CONTRIBUTING ZONE PLAN
ATTACHMENT B - LEANDER NE QUADRANGLE

ATTACHMENT C – Project Narrative

Hudson Park – Phase 1 is a proposed 16.42 acre development that will consist of right-of-way, 1 utility lot, 2 open space/landscape lots, and 79 single-family lots. The development will include paved roads, concrete sidewalks, utilities that will include water, wastewater, and drainage. The limits of construction consists of 18.93 acres, which includes some off-site drainage and water improvements. The proposed impervious cover equals 7.91 acres or 48.17 percent of the site area.

The site is located approximately 2 miles west of the intersection of RM 2338 and Ronald W Reagan Boulevard. The site is located in the North Fork San Gabriel River Watershed. The property generally drains south.

Water quality will be provided by 2 batch detention ponds. The ponds will be located on-line with the creek running through the project. Pond 31 will be north of the project to serve future developments and will treat 103.45 acres, pond 32 will be on the south end near Ronald Reagan Boulevard and will treat 65.61 acres.

The ponds will be located within an easement dedicated to Williamson County MUD No. 46 and maintained by the District once they are accepted.

ATTACHMENT D – Factors Affecting Surface Water Quality

Potential sources of sediment to stormwater runoff:

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

Potential sources other than sediment:

- small fueling activities
- minor equipment maintenance
- sanitary facilities
- solvents, adhesives, paints, etc.
- paving materials, concrete, mortar

ATTACHMENT E – Volume and Character of Stormwater

The property drains toward the south with overland conditions. The proposed development will cause an increase in runoff due to impervious cover and reduced time of concentration; however, the increase will be offset through the use of water quality ponds. The water quality calculations demonstrate the removal of the minimum eighty percent (80%) pollutant load for the developed site are provided following these attachments.

As a result of these measures, the volume and character of the stormwater runoff from the site will be effectively unchanged from predevelopment levels.

ATTACHMENT F – Suitability Letter from Authorized Agent (if OSSF is proposed)

Not Applicable.

ATTACHMENT G – Alternative Secondary Containment Methods (if AST with an alternative method of secondary containment is proposed)

Not Applicable.

ATTACHMENT H – AST Containment Structure Drawings (if AST is proposed)

Not Applicable.

ATTACHMENT I – 20% or Less Impervious Cover Waiver

Not Applicable.

ATTACHMENT J – BMPs for Upgradient Stormwater

The proposed development is located in the North Fork San Gabriel River Watershed. The property drains toward the south with overland conditions. Water quality will be provided by 2 batch detention ponds. The ponds will be located on-line with the creek running through the project. Pond 31 will be north of the project to serve future developments and will treat 103.45 acres, pond 32 will be on the south end near Ronald Reagan Boulevard and will treat 65.61 acres.

The ponds will be located within an easement dedicated to Williamson County MUD No. 46 and maintained by the District once they are accepted.

ATTACHMENT K – BMPs for On-Site Stormwater

Temporary Controls: Prior to site clearing, grading and excavation, the stabilized construction entrance will be installed, tree protection/limit of construction fencing will be installed, and silt fencing and rock berms will be installed at the downstream edge of disturbed areas where shallow sheet runoff occurs. Rock berms will be placed where more concentrated flow occurs. The water quality ponds will act as a sediment trap for the project. During all aspects of construction, the contractor shall maintain these controls. The contractor will be responsible for stabilization practices (revegetation). The contractor will be responsible for removing the temporary controls once the revegetation is established.

Permanent Controls: After construction there will be runoff from building surfaces, paved areas and managed lawn/landscape areas. These areas will be mitigated by permanent revegetation of disturbed areas and through use of 2 batch detention ponds. The storm water runoff from Water Quality Area 310 (103.45 acres), and 320 (65.61 acres) will be collected in storm drain inlets, storm drain pipes and overland flow and conveyed to the proposed Ponds 31 and 32. Water Quality Areas 100 (61.26 acres) and 330 (5.42 acres) will be left untreated.

ATTACHMENT L – BMPs for Surface Streams

Temporary Controls: Prior to site clearing, grading and excavation, the stabilized construction entrance will be installed, tree protection/limit of construction fencing will be installed, and silt fencing and rock berms will be installed at the downstream edge of disturbed areas where shallow sheet runoff occurs. Rock berms will be placed where more concentrated flow occurs. The water quality ponds will act as a sediment trap for the project. During all aspects of construction, the contractor shall maintain these controls. The contractor will be responsible for stabilization practices (revegetation). The contractor will be responsible for removing the temporary controls once the revegetation is established.

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ATTACHMENT M – Construction Plans

Copies of the construction plans are included with this submittal.

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

See attached document labeled “Maintenance Plan for Permanent Best Management Practices for Hudson Park – Phase 1”.

ATTACHMENT O – Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs

Not Applicable

ATTACHMENT P – Measures for Minimizing Surface Stream Contamination

Temporary Controls: Prior to site clearing, grading and excavation, the stabilized construction entrance will be installed, tree protection/limit of construction fencing will be installed, and silt fencing and rock berms will be installed at the downstream edge of disturbed areas where shallow sheet runoff occurs. Rock berms will be placed where more concentrated flow occurs. The water quality ponds will act as a sediment trap for the project. During all aspects of construction, the contractor shall maintain these controls. The contractor will be responsible for stabilization practices (revegetation). The contractor will be responsible for removing the temporary controls once the revegetation is established.

Permanent Controls: After construction there will be runoff from building surfaces, paved areas and managed lawn/landscape areas. These areas will be mitigated by permanent revegetation of disturbed areas and through use of 2 batch detention ponds. The storm water runoff from Water Quality Area 310 (103.45 acres), and 320 (65.61 acres) will be collected in storm drain inlets, storm drain pipes and overland flow and conveyed to the proposed Ponds 31 and 32. Water Quality Areas 100 (61.26 acres) and 330 (5.42 acres) will be left untreated.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: HUDSON PARK - PHASE 1
Date Prepared: 3/4/2025

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

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

where:

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

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

County =	Williamson	
Total project area included in plan * =	235.74	acres
Predevelopment impervious area within the limits of the plan * =	1.49	acres
Total post-development impervious area within the limits of the plan* =	13.62	acres
Total post-development impervious cover fraction * =	0.06	
P =	32	inches

$L_{M\ TOTAL\ PROJECT}$ = 10779 lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 4

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER

4/30/25

WATER QUALITY SUMMARY TABLE						
WATER QUALITY DRAINAGE AREA	DRAINAGE AREA (acre)	I.C. (acre)	L_m REQ. (lbs.)	L_m DES. (lbs.)	WQV REQ. (c.f.)	WQV DES. (c.f.)
100 - UNTREATED	61.26	2.60	1303			
310 - DETENTION	103.45	0.33	0	745	61861	94915
320 - DETENTION	65.61	10.69	9476	10500	91580	154550
330 - UNTREATED	5.42	0.00	0			
TOTAL	**235.74**	**13.62**	**10779**	**11245**	**153441**	**249465**

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: HUDSON PARK - PHASE 1
Date Prepared: 3/4/2025

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

County =	Williamson	
Total project area included in plan * =	245.47	acres
Predevelopment impervious area within the limits of the plan * =	1.49	acres
Total post-development impervious area within the limits of the plan* =	49.70	acres
Total post-development impervious cover fraction * =	0.20	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	42733	lbs.

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

Drainage Basin/Outfall Area No. =	100	
Total drainage basin/outfall area =	61.26	acres
Predevelopment impervious area within drainage basin/outfall area =	1.13	acres
Post-development impervious area within drainage basin/outfall area =	2.60	acres
Post-development impervious fraction within drainage basin/outfall area =	0.04	
$L_{M\ THIS\ BASIN}$ =	1303	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	Untreated	
Removal efficiency =	0	percent

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: HUDSON PARK - PHASE 1
Date Prepared: 3/4/2025

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

County =	Williamson	
Total project area included in plan * =	245.47	acres
Predevelopment impervious area within the limits of the plan* =	1.49	acres
Total post-development impervious area within the limits of the pla* =	49.70	acres
Total post-development impervious cover fraction* =	0.20	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	42733	lbs.

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

Drainage Basin/Outfall Area No. =	310	
Total drainage basin/outfall area=	103.45	acres
Predevelopment impervious area within drainage basin/outfall are =	0.33	acres
Post-development impervious area within drainage basin/outfall are =	0.33	acres
Post-development impervious fraction within drainage basin/outfall are =	0.00	
$L_{M\ THIS\ BASIN}$ =	0	lbs.

3. Indicate the proposed BMP Code for this basin

Proposed BMP =	Batch Detention	
Removal efficiency =	91	percent

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

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

where:

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

A_C =	26.59	acres
A_I =	0.33	acres
A_P =	26.26	acres
L_R =	745	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	745	lbs.
F =	1.00	

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

Rainfall Depth =	4.00	inches
Post Development Runoff Coefficient =	0.06	
On-site Water Quality Volume =	23377	cubic feet

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

Off-site area draining to BMP =	76.86	acres
Off-site Impervious cover draining to BMP =	0.33	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.03	
Off-site Water Quality Volume =	28173	cubic feet
Storage for Sediment =	10310	
Total Capture Volume (required water quality volume(s) x 1.20) =	61861	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: HUDSON PARK - PHASE 1
Date Prepared: 3/4/2025

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

County =	Williamson	
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Predevelopment impervious area within the limits of the plan* =	1.49	acres
Total post-development impervious area within the limits of the pla* =	49.70	acres
Total post-development impervious cover fraction* =	0.20	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	42733	lbs.

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

Drainage Basin/Outfall Area No. =	320	
Total drainage basin/outfall area=	65.61	acres
Predevelopment impervious area within drainage basin/outfall are =	0.00	acres
Post-development impervious area within drainage basin/outfall are =	10.69	acres
Post-development impervious fraction within drainage basin/outfall are =	0.16	
$L_{M\ THIS\ BASIN}$ =	9476	lbs.

3. Indicate the proposed BMP Code for this basin

Proposed BMP =	Batch Detention	
Removal efficiency =	91	percent

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

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

where:

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

A_C =	65.61	acres
A_I =	10.69	acres
A_P =	54.92	acres
L_R =	11634	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	10500	lbs.
F =	0.90	

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.19	
On-site Water Quality Volume =	76317	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	15263	
Total Capture Volume (required water quality volume(s) x 1.20) =	91580	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: HUDSON PARK - PHASE 1
Date Prepared: 3/4/2025

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

County =	Williamson	
Total project area included in plan * =	245.47	acres
Predevelopment impervious area within the limits of the plan * =	1.49	acres
Total post-development impervious area within the limits of the plan* =	49.70	acres
Total post-development impervious cover fraction * =	0.20	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	42733	lbs.

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

Drainage Basin/Outfall Area No. =	330	
Total drainage basin/outfall area =	5.42	acres
Predevelopment impervious area within drainage basin/outfall area=	0.00	acres
Post-development impervious area within drainage basin/outfall area=	0.00	acres
Post-development impervious fraction within drainage basin/outfall area=	0.00	
$L_{M\ THIS\ BASIN}$ =	0	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	Untreated	
Removal efficiency =	0	percent

Maintenance Plan
For Permanent Best Management Practices
Hudson Park – Phase 1

PROJECT NAME *Hudson Park – Phase 1*

ADDRESS: *The project is located approximately 2 miles west of the intersection of RM 2338 and Ronald W Reagan Boulevard in Williamson County, Texas.*

CITY, STATE, ZIP *Georgetown, Texas 78633*

The Best Management Practices associated with Water Quality for this project includes the use of vegetative filter strips and batch detention ponds.

MAINTENANCE FOR VEGETATED BMPS

Routine Maintenance for All Vegetated BMPs

Once a vegetated area is well established, little additional maintenance is generally necessary. The key to establishing a viable vegetated feature is the care and maintenance it receives in the first few months after it is planted. Once established, all vegetated BMPs require some basic maintenance to ensure the health of the plants including:

All vegetated BMPs shall be inspected twice annually for erosion or damage to vegetation. Additional inspections after periods of heavy runoff is most desirable.

Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored. Construction of a level spreader device may be necessary to re-establish shallow overland flow.

Sediment built up in vegetated BMPs, especially along the upstream boundary and in the level spreader, must be removed during semi-annual inspections.

If level spreaders are needed, they shall be inspected at least semi-annually and repairs made as necessary.

Irrigation system shall be inspected at least semi-annually during operation. Maintenance and spray adjustments shall occur to maintain proper operation.

MAINTENANCE FOR SENSITIVE FEATURES AND BUFFER AREAS

Routine Maintenance for All Sensitive Features and Buffer Areas

All sensitive features and buffer areas shall be inspected twice annually for erosion or damage to vegetation or the feature itself. Additional inspections after periods of heavy runoff is most desirable.

Bare spots and areas of erosion or damage to the feature identified during semi-annual inspections must be replanted and restored to natural conditions. Excessive sediment build up must also be removed during semi-annual inspections. Debris and litter accumulated must also be removed.

Protective fences around buffer areas shall be inspected during semi-annual inspections to ensure damage has not occurred.

MAINTENANCE FOR STRUCTURAL (STORMWATER CAPTURE) SYSTEMS

Routine Maintenance for All Structural Systems

Water quality ponds of all types have similar routine maintenance requirements, although most ponds have some unique maintenance needs, as detailed in this section. The following general maintenance requirements apply to all pond BMPs.

BMP facilities must be inspected at least six times per year (twice during or immediately following wet weather) to evaluate facility operation.

During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or revegetated immediately.

Grass areas in and around earthen ponds must be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing of grass is performed, a mulching mower must be used, or grass clippings must be caught and removed, as with all water quality BMPs.

Debris and litter accumulated in the facility must be removed during each inspection.

Excessive sediment must be removed and properly disposed of in an approved off-site disposal area. Remove excessive sediment at least two times per year or when accumulations reach 3 inches in depth.

Design drawdown times must not be exceeded by more than 24 hours. The design drawdown time is 72 hours from the first accumulation of stormwater or when the pond reaches full capacity. If drawdown times are excessive, repairs should occur immediately.

With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, gabions, retaining walls, etc.) must be identified and repaired immediately.

A maintenance access route shall extend to the pond from a public or private road. The maintenance access shall have a slope of no greater than 15 percent.

Inlet and outlet structures should be inspected and cleaned out of any debris or sediment. If there are major damage to either the inlet or outlet controls, the damaged areas should be repaired.

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

RECORD KEEPING OF INSPECTIONS, MAINTENANCE AND REPAIRS SHALL BE MAINTAINED BY THE RESPONSIBLE PARTY.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

Responsible Party for Maintenance: Brightland Homes, LTD

Address: 3815 S. Capital of Texas Hwy, Ste. 275

City, State Zip: Austin, Texas 78704

Telephone Number: (512) 330-9366

Signature of Responsible Party KB

04/30/2025
Date

Texas Commission on Environmental Quality
Contributing Zone Plan
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following/listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director (ED), nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code (TAC), Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following/listed "construction notes" restricts the powers of the ED, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, TAC, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the ED's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, TAC § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following/listed "construction notes" in no way represent an approved exception by the ED to any part of Title 30 TAC, Chapters 213 and 217, or any other TCEQ applicable regulation

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any ground disturbance or construction activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

2. All contractors conducting regulated activities associated with this project should be provided with complete copies of the approved Contributing Zone Plan (CZP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractor(s) should keep copies of the approved plan and approval letter on-site.

3. No hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.

4. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

5. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.

6. Sediment must be removed from the sediment traps or sedimentation basins when it occupies 50% of the basin's design capacity.

7. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.

8. All excavated material that will be stored on-site must have proper E&S controls.

9. If portions of the site will have a cease in construction activity lasting longer than 14 days, soil

stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.

10. The following records should be maintained and made available to the TCEQ upon request:
    - the dates when major grading activities occur;
    - the dates when construction activities temporarily or permanently cease on a portion of the site; and
    - the dates when stabilization measures are initiated.

11. The holder of any approved CZP must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

    A. any physical or operational modification of any best management practices (BMPs) or structure(s), including but not limited to temporary or permanent ponds, dams, berms, silt fences, and diversionary structures;

    B. any change in the nature or character of the regulated activity from that which was originally approved;

    C. any change that would significantly impact the ability to prevent pollution of the Edwards Aquifer; or

    D. any development of land previously identified as undeveloped in the approved contributing zone plan.

Austin Regional Office 12100 Park 35 Circle, Building A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795	San Antonio Regional Office 14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

HUDSON PARK – PHASE 1

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

STORMWATER POLLUTION PREVENTION PLAN

APRIL 2025

PREPARED FOR:

BRIGHTLAND HOMES, LTD.
3815 S. CAPITAL OF TEXAS HWY, SUITE 275
Austin, TX, 78704
(512) 330-9366

PREPARED BY:

LJA ENGINEERING, INC.
7500 RIALTO BLVD
BUILDING II, SUITE 150
AUSTIN, TEXAS 78735
(512) 439-4700
FRN-F-1386

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PARTEN RANCH PHASE 8

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

STORMWATER POLLUTION PREVENTION PLAN

A. SITE DESCRIPTION

1. Project Name: Hudson Park – Phase 1

2. Location: The project is located 2 miles west of the intersection of RM 2338 and Ronald W Reagan Boulevard in Georgetown, Williamson County, Texas (see *Exhibit 1*)

3. Facility Operators: Brightland Homes, LTD. *(Plans and Specifications)*
   3815 S. Capital of Texas Hwy, Ste. 275
   Austin, Texas 78704
   512-330-9366
   Date N.O.I. submitted:
   General Permit Authorization No.:

   _____ *(Contractor)*

   Date N.O.I. submitted:
   General Permit Authorization No.:

4. Property Owner: Brightland Homes, LTD. *(Plans and Specifications)*
   3815 S. Capital of Texas Hwy, Ste. 275
   Austin, Texas 78704
   512-330-9366

Project Description: The Hudson Park – Phase 1 project is a 16.42 acre infrastructure improvements project located in the unincorporated area of Williamson County. More specifically, it is located 2 miles west of the intersection of RM 2338 and Ronald W Reagan Boulevard. The proposed project consists of the construction of infrastructure for future subdivision phases, including streets, drainage, water, and wastewater. Water quality will be provided by 2 batch detention ponds.

5. Site Area: The construction limits and disturbance caused by construction will include approximately 18.93 acres, which includes some off-site water and drainage improvements.

6. Runoff Coefficient: Currently, the site area for the Hudson Park – Phase 1 property is represented by a composite 25-year and 100-year runoff coefficient of 0.39 and 0.46, respectively. After construction is completed, the composite 25-year and 100-year runoff coefficient will be 0.47 and 0.55, respectively.

7. Existing Soils: According to the USDA Soil Survey of Williamson County, the soil classifications within the proposed project are Eckrant Cobbly Clay (EaD), Denton Silty Clay (DnB), and Fairlie Clay (FaB).

   Eckrant Cobbly Clay (EaD): The Eckrant series consists of well drained, moderately slowly permeable soils that are very shallow to shallow over indurated limestone bedrock. These nearly level to very steep soils soils formed in residuum derived from limestone and occur on summits, shoulders, and backslopes of ridges on dissected plateaus.

   Denton Silty Clay (DnB): The Denton series consist of deep, well drained, slowly permeable soils that formed in clayey materials over residuum weathered from limestone bedrock of lower Cretaceous age. These nearly level or gently sloping soils are on backslopes and footslopes of ridges.

   Fairlie Clay (FaB): The Fairlie series consists of deep, moderately well drained, very slowly permeable soils. These soils are on nearly level to gently sloping uplands. The slope is typically 1 to 3 percent but ranges from 0 to 5 percent.

9. Factors Affecting Surface Water Quality:

   Potential sources of sediment to stormwater runoff:
   - Clearing and grubbing operations
   - Grading and site excavation operations
   - Vehicle tracking
   - Topsoil stripping and stockpiling
   - Landscaping operations

   Potential sources other than sediment:
   - Small fueling activities
   - Minor equipment maintenance
   - Sanitary facilities
   - Solvents, adhesives, paints, etc.
   - Paving materials, concrete, mortar

10. Location of Receiving Waters: The Hudson Park – Phase 1 project is located within the North Fork San Gabriel River Watershed. Based on boundary maps prepared by the Texas Commission on Environmental Quality, the property is not located in the Edward's Aquifer Recharge Zone, but it is located in the Edwards Aquifer Contributing Zone. There are no wetlands associated with this project.

11. Off-Site Operations: Disposal of spoil material will be the responsibility of the Contractors. Spoil shall be temporarily disposed of at the designated onsite temporary disposal area and permanently removed to a permitted off-site spoil disposal area. The Contractors shall be independently responsible as Operators for obtaining necessary permits in conjunction with the off-site disposal of spoil material or acquisition of borrow material.

12. Endangered Species: There are no known endangered species within the boundaries of the project.

B. POLLUTION PREVENTION CONTROLS

1. Sequence of Construction:

   a. Install tree protection. (1 week) (0.9 acres)

   b. Install temporary erosion and sedimentation controls. (1 week) (10.7 acres)

   c. Clear and grub for roadways, underground utilities, and pond. (1 week) (5.7 acres)

   d. Excavate and place embankment to roadway subgrade. (4 weeks) (4.7 acres)

   e. Construct all underground utilities. (2 months) (4.7 acres)

   f. Test utilities. (2 weeks)

   g. Assure all utilities have been placed within roadway. (1 week) (4.7 acres)

   h. Once all utilities below subgrade have been tested, finish subgrade and test. (1 Month) (4.7 acres)

   i. Lay first coarse of base (2 weeks) (3.7 acres)

   j. Lay curb and gutter and sidewalk ramp turn downs. (4 weeks) (3.7 acres)

   k. Dress up behind back of curb. (2 weeks) (1.0 acres)

   l. Lay second coarse base. (2 weeks) (3.7 acres)

   m. After base has been tested and passed, lay asphalt. (2 weeks) (3.7 acres)

   n. Complete sidewalk ramps. (2 weeks) (0.5 acres)

   o. Finish grading behind curb and revegetate. (2 weeks) (1.0 acres)

   p. After vegetation is established, remove temporary erosion controls. (1 week)

2. Erosion and Sedimentation Controls:

Temporary vegetative stabilization:

1. From September 15 to March 1, seeding shall be with cool season cover crops (Wheat at 0.5 pounds per 1000 SF, Oats at 0.5 pounds per 1000 SF, Cereal Rye Grain at 0.5 pounds per 1000 SF) with a total rate of 1.5 pounds per 1000 SF. Cool season cover crops are not permanent erosion control.

2. From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 1 pound per 1000 SF.
   a. Fertilizer shall be water soluble with an analysis of 15-15-15 to be applied once at planting and once during the period of establishment at a rate of ½ pound per 1000 SF.
   b. Hydromulch shall comply with Table 1, below.

c. Temporary erosion control shall be acceptable when the grass has grown at least 1 ½ inches high with 95% coverage, provided no bare spots larger than 16 square feet exist.
d. When required, native grass seeding shall comply with requirements of the City of Austin Environmental Criteria Manual.

Table 1 Hydromulching for Temporary Vegetative Stabilization

Material	Description	Longevity	Typical Applications	Applications Rates
100% or any blend of wood, cellulose, straw, and/or cotton plant material (except no mulch shall exceed 30% paper)	70% or greater wood/straw 30% or less paper or natural fibers	0-3 Months	Moderate slopes From flat to 3:1	1500 to 2000 lbs per acre

Permanent vegetative stabilization:

1. From September 15 to March 1, seeding is considered to be temporary stabilization only. If cool season cover crops exist where permanent vegetation stabilization is desired, the grasses shall be mowed to a height of less than one half (1/2) inch and the area shall be re-seeded in accordance with 2. below.

2. From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 1 pound per 1000 SF with a purity of 95% with 85% germination. Bermuda grass is a warm season grass and is considered permanent erosion control.
   a. Fertilizer shall be water soluble with an analysis of 15-15-15 to be applied once at planting and once during the period of establishment at a rate of ½ pound per 1000 SF.
   b. Hydromulch shall comply with table 2, below.
   c. The planted area shall be irrigated or sprinkled in a manner that will not erode the topsoil but will sufficiently soak the soil to a depth of six inches. The irrigation shall occur at daily intervals (minimum) during the first two months. Rainfall occurrences of ½ inch or more shall postpone the watering schedule for one week.
   d. Permanent erosion control shall be acceptable when the grass has grown at least 1 ½ inches high with 95% coverage, provided no bare spots larger than 16 square feet exist.
   e. When required, native grass seeding shall comply with requirements of the City of Austin Environmental Criteria Manual.

Table 2 Hydromulching for Permanent Vegetation Stabilization

Material	Description	Longevity	Typical Applications	Applications Rates
Bonded Fiber Matrix (BFM)	80% Organic Defibrated Fibers 10% Tackifier	6 Months	On slopes up to 2:1 and erosive soil conditions	2500 to 4000 lbs per acre (see manufacturers recommendations)

Fiber Reinforced Matrix (FRM)	65% Organic Defibrated Fibers 25% Reinforcing Fibers or less 10% Tackifier	Up to 12 Months	On slopes up to 1:1 and erosive soil conditions	3000 to 4500 lbs per acre (see manufacturers recommendations)

b. Structural Controls:

(i) Erosion and sediment structural controls have been designed to retain sediment on-site to the extent practicable with consideration for local topography, soil type, and rainfall.

(ii) Control measures must be properly selected, installed, and maintained according to the manufacturer's or designer's specifications.

(iii) Brightland Homes, LTD. will be the facility operator with control over the construction plans and specifications, including the ability to make modifications in the plans and specifications. Prior to site clearing, grading and excavation, stabilized construction entrances will be installed, tree protection/limit of construction fencing will be installed, and silt fences will be installed at the downstream edge of disturbed areas where shallow sheet runoff occurs. Rock berms will be placed downstream of the areas where concentrated runoff occurs. To insure that no additional areas are disturbed other than those included in the limits of construction, orange mesh fences will be placed on the upstream side of the limits of construction to keep construction activity out of areas not designated for construction. The Contractor will install the stabilized construction entrance and silt fence prior to the start of any construction and be responsible for maintenance of those facilities throughout construction. The Contractor will be responsible for stabilization (revegetation). The Contractor will also be responsible for removing the temporary controls once the revegetation is established.

3. Stormwater Management Controls:

a. Temporary Sediment Controls: A stabilized construction entrance will be place as shown on the *Erosion/Sedimentation Control & Tree Protection Plan* and silt fences will be constructed at the downstream edge of the disturbed areas. Silt fence will also be used at selected locations of significant fill, around material stockpile sites, and around any other area that would be a pollutant source during storm events. The rock berms will be placed immediately downstream of areas where concentrated runoff occurs, and within defined channels downstream from development, as appropriate. Additionally, silt fence will typically be utilized on the downstream side of rock berms to supplement sediment removal. The batch detention pond will be rough graded at the beginning of construction so it can be used as a sediment trap during construction. The utility trenches will also be utilized as temporary sediment traps to the extent feasible during construction.

The contractor will install the erosion/sedimentation controls prior to the start of any construction. The contractor will be responsible for maintaining the erosion control measures and removing the controls once the revegetation is established. The locations of such controls are shown in *the Erosion/Sedimentation Control & Tree Protection Plan*.

b. Permanent Stormwater Controls: Once construction associated with this project is completed, the site will be revegetated in accordance with the stabilization practices identified in this plan. A batch detention pond and vegetative filter strips will provide water quality control and treatment for stormwater runoff from the developed areas being conveyed to the creeks.

4. Other Controls:

a. Waste Disposal: All construction-related waste materials will be collected and stored at a temporary onsite spoil disposal site. The Contractors will be independently responsible as Operators for controlling and preventing offsite migration of litter, construction debris, and construction materials.

b. Sanitary Waste: The Contractors will be responsible for placing portable units onsite during construction, and waste will be collected and disposed of in accordance with state and local regulations.

c. Off-site Vehicle Tracking: Stabilized construction entrances will be provided at the entry location to the construction project. The Contractors will be responsible for maintaining the entrances, and removing any sediment deposited onto adjacent streets. Vehicles leaving the site will be washed, as required.

d. Dust Control: Contractors will spray water on disturbed areas and spoils areas, and apply mulch, as required, to control dust.

e. Dewatering: When it becomes necessary to pump standing water from the site, the Contractors shall utilize the methods depicted in the Dewatering Detail included with this plan. Standing water removed via open channel will be routed through silt fence and/or rock berm before leaving the site.

5. Timing of Controls and Measures: Erosion and sediment structural control measures will be in place prior to clearing, grading or construction of any portion of the site. Construction phasing may occur, but in all instances erosion and sedimentation control measures will be in place in those areas prior to start of construction. Disturbed areas will be restored as described under Stabilization Practices. Temporary erosion and sediment controls will be removed only after all disturbed areas have been restored.

C. STATE AND LOCAL REQUIREMENTS

The stormwater pollution prevention plan complies with the requirements of Williamson County and the Texas Commission on Environmental Quality (TCEQ) in effect at the time of permitting.

D. INSPECTION AND MAINTENANCE PROCEDURES

Brightland Homes, LTD. (and/or their qualified agents) and Contractors, as Operators, shall be independently responsible for inspection of the controls, and for required record keeping (reference Appendix A). All Operators will be responsible for revisions to the controls, as necessary, based on inspections. The Contractors will be responsible for maintenance of the controls.

1. Inspection of Controls:

   a. Personnel provided by the Operators shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, discharge locations, and structural controls for evidence of, or the potential for, pollutants entering the drainage system. Personnel conducting these inspections must be knowledgeable of TPDES General Permit No. TXR150000, familiar with the construction site, and knowledgeable of this plan. Sediment and erosion control measures identified in this plan shall be inspected to ensure that they are operating correctly. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking. Inspections must be conducted at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

   b. Where sites have been finally or temporarily stabilized, inspections shall be conducted at least once every month.

   c. In the event of flooding or other uncontrollable situations which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable.

   d. This plan must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions to the plan must be completed within seven (7) calendar days following the inspection. If existing controls are modified or if additional controls are necessary, an implementation schedule must be described in this plan and/or Inspection and Maintenance Report, and wherever possible those changes implemented before the next storm event. If implementation before the next anticipated storm event is impracticable, these changes must be implemented as soon as practicable.

   e. An Inspection and Maintenance Report summarizing the scope of the inspection, the dates of the inspection, and major observations relating to the implementation and/or revision of this plan must be made and retained as part of the plan. Major observations should include: The locations of discharges of sediment or other pollutants from the site; locations of controls that need to be maintained; locations of controls that failed to operate as designed or proved inadequate for a particular location; and locations where additional controls are needed. Reports must identify any incidents of non-compliance.

2. Maintenance of Controls:

   a. All protective measures and controls identified in this plan shall be maintained in effective operating condition. If, through inspections or other means, it is determined that controls are not operating effectively, then the Contractors, as Operators, shall perform maintenance as necessary to maintain the continued effectiveness of stormwater controls, and prior to the next rain event if feasible. If maintenance prior to the next anticipated storm event is impracticable, the reason shall be documented in the plan and maintenance must be scheduled and accomplished as soon as practicable. Erosion and sediment controls that have been intentionally disabled, run-

over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery.

b. If periodic inspections or other information indicates a control has been used incorrectly, is performing inadequately, or is damaged, then the Operators shall replace or modify the control as soon as practicable after making the discovery.

c. Sediment must be removed from sediment traps and sedimentation ponds no later than the time that design capacity has been reduced by 50%.

d. For perimeter controls such as silt fences, berms, etc., the trapped sediment must be removed before it reaches 50% of the above-ground height.

e. If sediment escapes the site, accumulations must be removed at a frequency that minimizes off-site impacts, and prior to the next rain event if feasible. If the Operators do not own or operate the off-site conveyance, then the Operators must work with the owner or operator of the property to remove the sediment.

E. POLLUTION PREVENTION MEASURES

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

   a. discharges from fire fighting activities;

   b. uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life), which include flushings from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushings do not include systems utilizing reclaimed wastewater as a source water);

   c. 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;

   d. uncontaminated water used to control dust;

   e. potable water sources including waterline flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);

   f. uncontaminated air conditioning condensate;

   g. uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and

   h. lawn watering and similar irrigation drainage.

2. Material Inventory: The materials or substances listed below are expected to be present onsite during construction:

    - Concrete and concrete products
    - Asphalt and asphalt products
    - Metal reinforcing materials - rebar, welded wire fabric
    - Fertilizers
    - Petroleum based products
    - Wood
    - Plastic (PVC) and metal pipe and fittings
    - Rock, gravel, sand, and soil
    - Paint

3. Material Management Practices: 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:

    a. Good Housekeeping: The following good housekeeping practices will be followed onsite during the construction project:

        - An effort will be made to store only enough product required to do the job.
        - All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers.
        - Materials will be stored in the temporary spoils disposal area as shown on erosion/sedimentation control plan, or an area as may otherwise be approved by HM Parten Ranch Development, Inc. and Engineer.
        - Products will be kept in their original containers with the original manufacturers' labels.
        - Whenever possible, all of a product will be used before disposing of the container.
        - Manufacturers' recommendations for proper use and disposal will be followed.
        - The Contractor will inspect daily to ensure proper use and disposal of materials onsite.

    b. Hazardous Products: These practices are used to reduce the risks associated with hazardous materials (if applicable):

- Products will be kept in original containers unless they are not resealable.

- Original labels and material safety data will be retained, as they contain important product information.

- If surplus product must be disposed of, manufacturers' and/or local and state recommended methods for proper disposal will be followed.

c. The following product specific practices will be followed onsite:

- Petroleum Products: All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Any asphaltic substances used onsite will be applied according to the manufacturers' recommendations.

- Fertilizers: Fertilizers will be applied only in the minimum amounts recommended by the manufacturer or as otherwise indicated on the plans. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. The contents of any partially used bags of fertilizer will be stored in a manner so as to avoid spills.

- Concrete: Onsite concrete truck wash out is allowed but is restricted as noted below. Excess dried concrete will be removed from the site and transported to a permitted off-site spoil disposal area.

  - Direct discharge of concrete truck wash out water to surface water in the state, including discharge to storm sewers, is prohibited.

  - Concrete truck wash out water shall be discharged to areas at the construction site where structural controls have been established to prevent direct discharge to surface waters, or to areas that have minimal slope that allow infiltration and filtering of wash out water to prevent direct discharge to surface waters. Structural controls may consist of temporary berms, temporary shallow pits, temporary storage tanks with slow rate release, or other reasonable measure to prevent runoff from the construction site.

  - Wash out of concrete trucks during rainfall events shall be minimized. The direct discharge of concrete truck washout water is prohibited at all times, and the Operators shall insure that controls are sufficient to prevent the discharge of concrete truck wash out as the result of rain.
  - The discharge of wash out water shall not cause or contribute to groundwater contamination.

4. <u>Spill Control Practices:</u> In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

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

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

- All spills will be cleaned up immediately upon discovery.

5. Releases of Reportable Quantities (RQ): The EPA has issued regulations that define what reportable quantity levels are for oil and hazardous substances. These regulations can be found at 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302. The TCEQ has issued similar regulations under 30 TAC Chapter 327. If there is an RQ release during the construction period, then the following steps must be taken:

    - For quantities less than the reportable quantity* – The contractor will contain and isolate the spilled substance. The remaining spilled substance and contaminated soil will be removed and disposed of properly.

    - For quantities more than the reportable quantity* – The contractor will contain and isolate the spilled substance in accordance with 30 TAC Chapter 327. The contractor will then contact the appropriate spill response team and the TCEQ Austin Regional Office (512)339-2929 or the State Emergency Response Center at 1 (800)832-8224 and the National Response Center immediately at (800) 424-8802. The remaining spilled substance and contaminated soil will be removed and disposed of in an using approved emergency response methods. The proper authorities shall be kept informed during the cleanup process. Within 14 days, modify the SWPPP with a written description of the release providing the date and circumstances of the release and the steps to be taken to prevent another release.

    * Reportable quantity (RQ) is defined in 30 TAC Chapter 327. The RQ for petroleum products, oil, and industrial solid waste are shown below. For hazardous substances see 30 TAC Chapter 327.4 and 40 CFR Chapter 302.4.

    The RQ for *oil, petroleum product and used oil* is as follows:

    (1) The RQ for crude oil and oil other than that defined as petroleum product or used oil shall be:
        (A) for spills or discharges onto land – 210 gallons (five barrels); or
        (B) for spills or discharges directly into water in the state – quantity sufficient to create a sheen.

    (2) The RQ for petroleum product or used oil shall be:
        (A) except as noted under (B) below, for spills or discharges onto land – 25 gallons;
        (B) for spills or discharges to land from PST exempted facilities – 210 gallons (five barrels); or
        (C) for spills or discharges directly into water in the state – quantity sufficient to create a sheen.

    The RQ for spills or discharges into water in the state for *industrial solid waste or other substances* shall be 100 pounds.

6. Spill Response Handbook: The TCEQ Small-Business Handbook for Spill Response (RG-285) is provided as a supplementary resource and can be found in *Appendix D*.

F. POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that this document was 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.

Facility Operator *(Plans and Specifications)*:

By:_____ _____
Name Title Date

Printed Name: _____
Company: Brightland Homes, LTD.
Address: 3815 S. Capital of Texas Hwy, Ste. 275
Austin, TX 78704

F. POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that this document was 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.

Facility Operator *(Contractor)*:

By: _____ _____

Name Title Date

Printed Name: _____

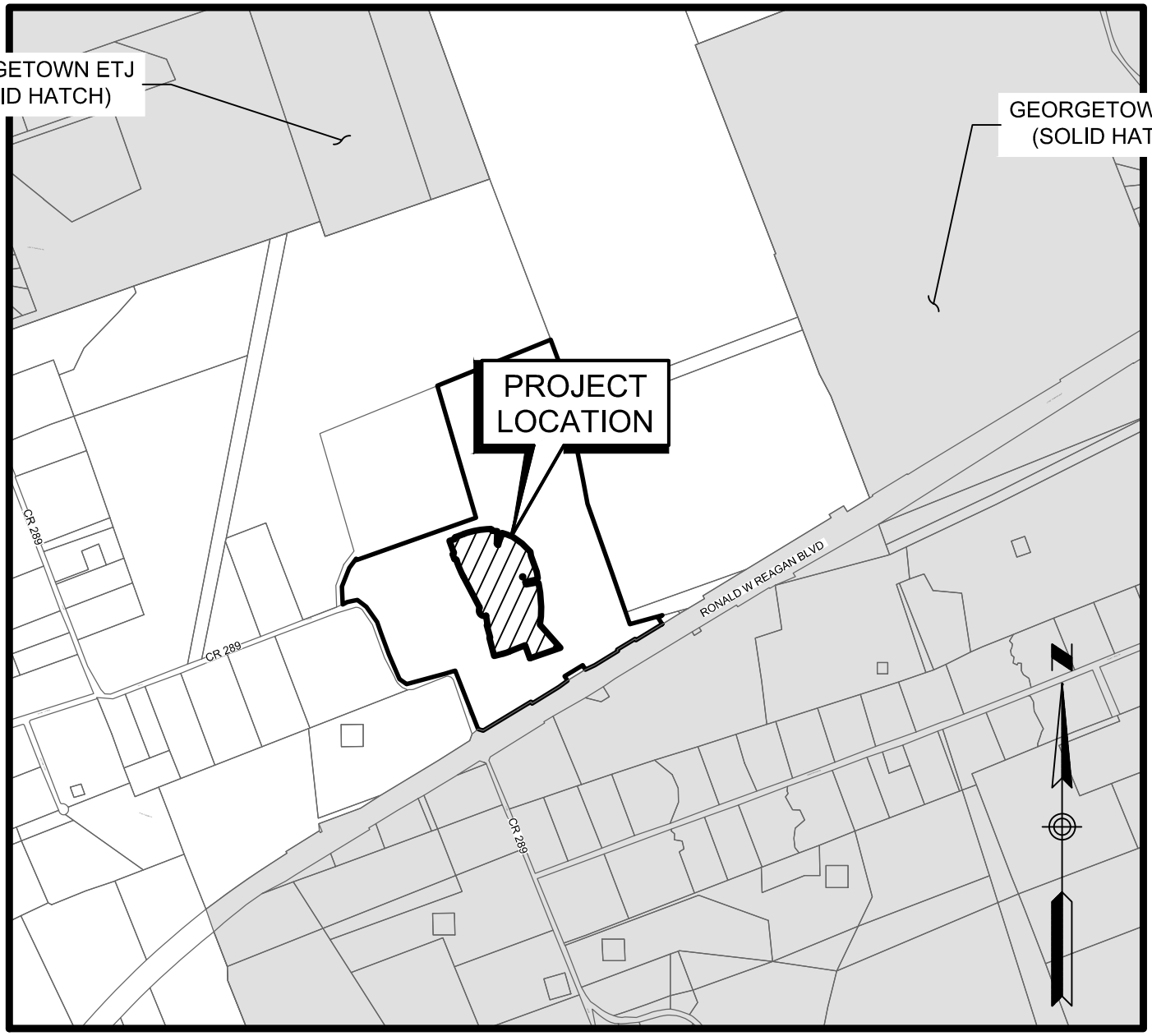
Company: _____

Address: _____

_____

EXHIBIT 1

PROJECT LOCATION MAP

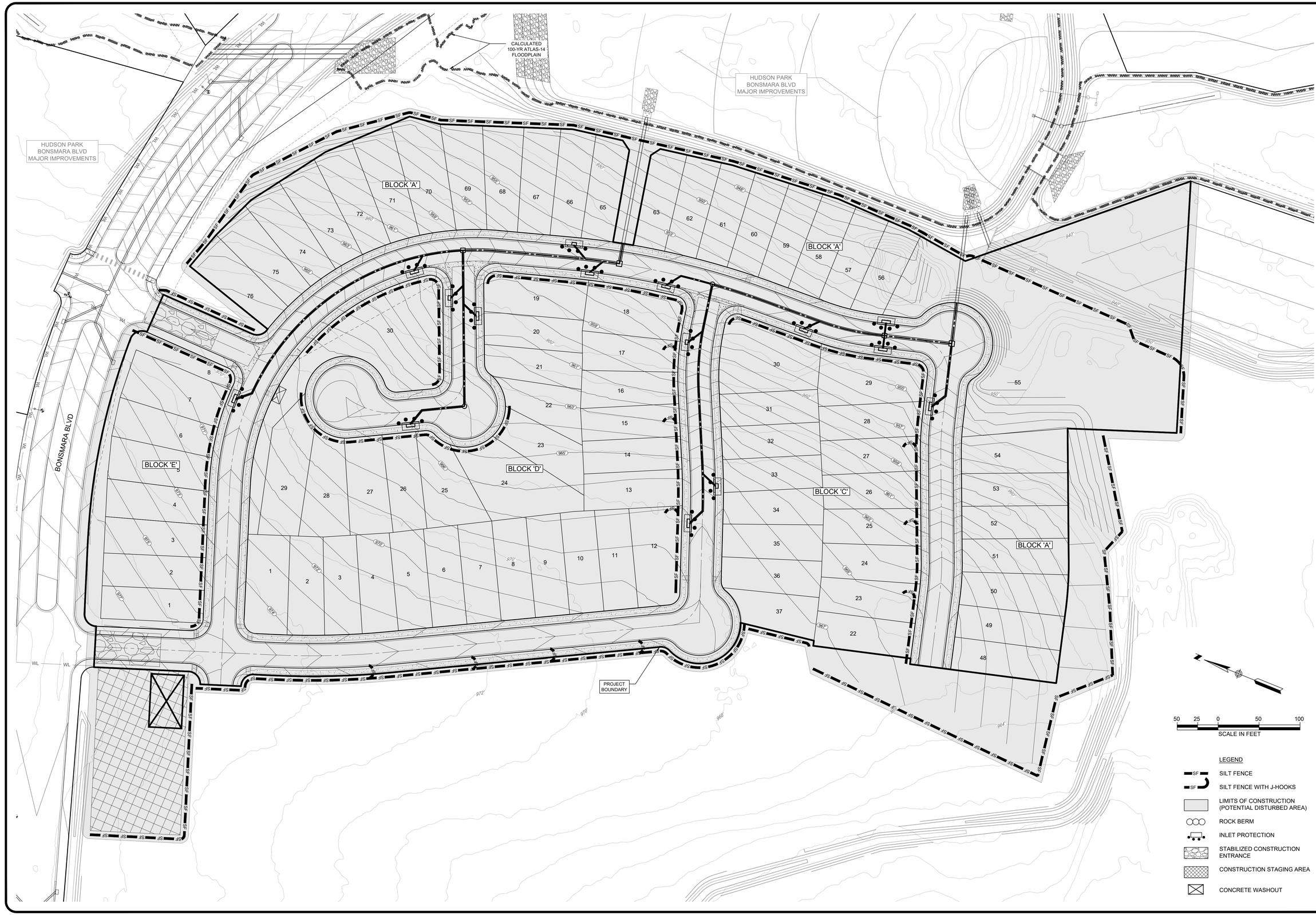


LOCATION MAP

SCALE: 1" = 1500'

EXHIBIT 2

SITE MAP / TEMPORARY EROSION/SEDIMENTATION CONTROL & TREE PROTECTION PLAN



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
EROSION / SEDIMENTATION CONTROL PLAN

NO.	DESCRIPTION	BY	DATE

REVISIONS

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-EROS.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 4 OF 48 SHEETS

GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS

TYPE OF STRUCTURE	REACH LENGTH	MAXIMUM DRAINAGE AREA	SLOPE
SILT FENCE	N/A	2 ACRES	0 – 10%
	200 FEET	2 ACRES	10 – 20%
	100 FEET	1 ACRE	20 – 30%
	50 FEET	1/2 ACRE	> 30%
TRIANGLE FILTER DIKE	100 FEET	1/2 ACRE	< 30% SLOPE
	50 FEET	1/4 ACRE	> 30% SLOPE
ROCK BERM *, **	500 FEET	< 5 ACRES	0 – 10%

* FOR ROCK BERM DESIGN WHERE PARAMETERS ARE OTHER THAN STATED, DRAINAGE AREA CALCULATIONS AND ROCK BERM DESIGN MUST BE SUBMITTED FOR REVIEW.

** HIGH SERVICE ROCK BERMS MAY BE REQUIRED IN AREAS OF ENVIRONMENTAL SIGNIFICANCE AS DETERMINED BY THE CITY OF GEORGETOWN.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TEMPORARY EROSION AND SEDIMENTATION CONTROL GUIDELINES

DRAWING NAME: EC01 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

NOTE: THIS SECTION IS INTENDED TO ASSIST THOSE PERSONS PREPARING WATER POLLUTION ABATEMENT PLANS (WPAP) OR STORM WATER POLLUTION PREVENTION PLANS (SW3P) THAT COMPLY WITH FEDERAL, STATE AND/OR LOCAL STORM WATER REGULATIONS.

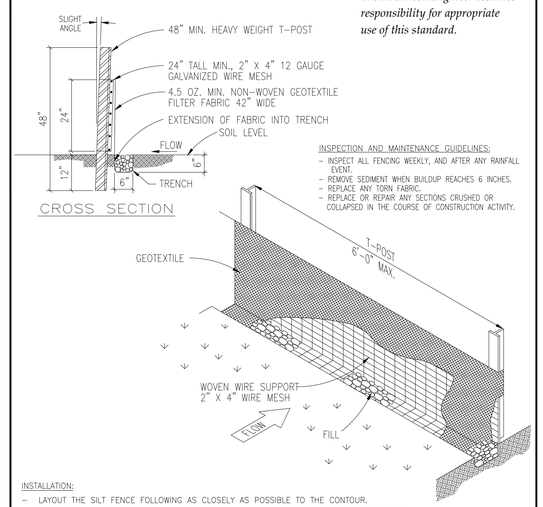
1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
4. ALL PLANTING SHALL BE DONE BETWEEN MAY 1 AND SEPTEMBER 15 EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING. IF PLANTING IS AUTHORIZED TO BE DONE OUTSIDE THE DATES SPECIFIED, THE SEED SHALL BE PLANTED WITH THE ADDITION OF WINTER FESCUE (KENTUCKY 31) AT A RATE OF 1000#/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE "A" RECENT CROP, RECLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
5. ALL DISTURBED AREAS TO BE RESTORED AS NOTED IN THE WATER POLLUTION ABATEMENT PLAN.
6. THE PLANTED AREA TO BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF FOUR (4) INCHES. THE IRRIGATION TO OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS . RAINFALL OCCURRENCES OF 1/2 INCH OR GREATER TO POSTPONE THE WATERING SCHEDULE ONE WEEK.
7. RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 95% *COVERAGE*, PROVIDED NO BARE SPOTS LARGER THAN 25 SQUARE FEET EXIST.
8. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL TO BE PLACED IN ALL AREAS DISTURBED BY CONSTRUCTION.
9. THE CONTRACTOR TO HYDROMULCH OR SOD (AS SHOWN ON PLANS) ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION.
10. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINE.
11. TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIPLINE AREAS.
12. WHERE A FENCE IS CLOSER THAN FOUR (4) FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT (8) FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE FENCING.
13. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
14. ANY ROOT EXPOSED BY CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
15. CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES").
16. THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/4 INCH TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL SITE. THE CONTRACTOR TO CONDUCT PERIODIC INSPECTIONS OF ALL EROSION/SEDIMENTATION CONTROLS AND TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
17. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR FEET (2'-4') BEHIND THE AREA IN QUESTION.
18. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES TO BE STORED ON THE PROJECT SITE.
19. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVE AND THE CONTRACTOR TO EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONSTRUCTION. ANY DAMAGE TO PREEXISTING EROSION AND SEDIMENTATION CONTROLS NOTED TO BE REPAIRED AT OWNERS EXPENSE.
20. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES

DRAWING NAME: EC01A | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



The Architect/Engineer assumes responsibility for appropriate use of this standard.

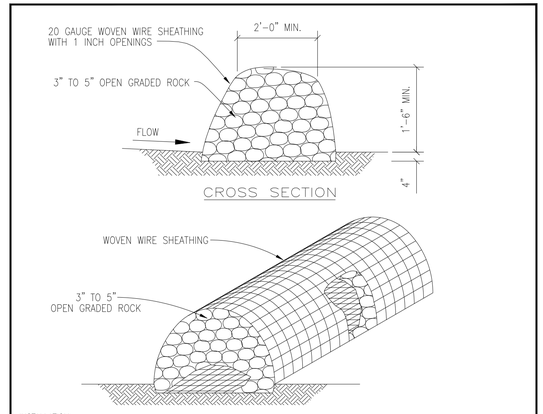
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
- REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
- REPLACE ANY TORN FABRIC.
- REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

INSTALLATION:
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY T-POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW.
- ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T-POST WITH 11 1/2 GAUGE GALVANIZED T-POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SILT FENCE DETAIL

DRAWING NAME: EC02 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



INSTALLATION:
- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE TO THE DESIGNATED HEIGHT.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE.
- SECURE WITH TIE WIRE.
- THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROX. 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

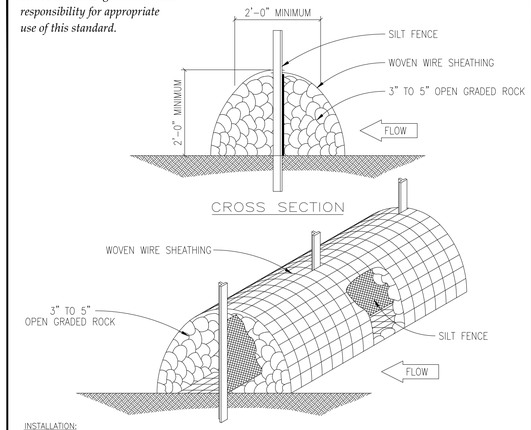
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
ROCK BERM DETAIL

DRAWING NAME: EC03 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.



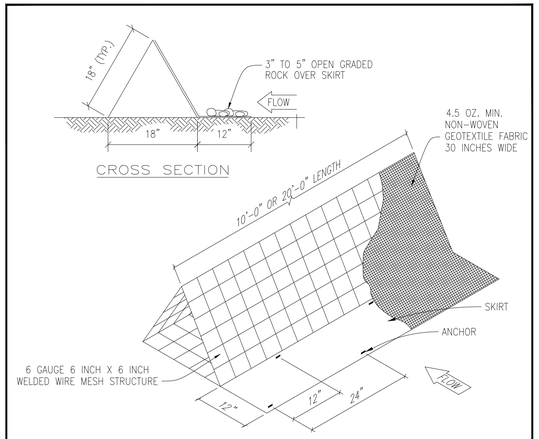
INSTALLATION:
- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
- INSTALL THE SILT FENCE ALONG THE CENTER OF THE PROPOSED BERM PLACEMENT. INSTALLATION SHOULD BE AS DESCRIBED IN DRAWING NO. EC-02 "SILT FENCE DETAIL".
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE AND ON BOTH SIDES OF THE SILT FENCE TO THE DESIGNATED HEIGHT.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE.
- SECURE WITH TIE WIRE.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE CONTRACTOR. FOR THE INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE ON ROCK BERM.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACES WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
HIGH SERVICE ROCK BERM DETAIL

DRAWING NAME: EC04 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



INSTALLATION:
- LAYOUT THE FILTER DIKE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE THE FILTER DIKE SECTIONS ONE AT A TIME, WITH THE SKIRT ON THE UPHILL SIDE TOWARDS THE DIRECTION OF FLOW, ANCHORING EACH SECTION TO THE GROUND BEFORE THE NEXT SECTION IS PLACED.
- ANCHORS SHOULD BE PLACED ON 2'-0" CENTERS ALTERNATING FROM FRONT TO BACK SO THAT THERE IS ACTUALLY ONLY 1'-0" IN BETWEEN ANCHORS.
- SECURELY FASTEN THE SKIRT FROM ONE SECTION OF FILTER DIKE TO THE NEXT.
- FILTER DIKES MUST MAINTAIN CONTINUOUS CONTACT WITH THE GROUND.
- AFTER THE SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHOULD BE REMOVED. SILT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

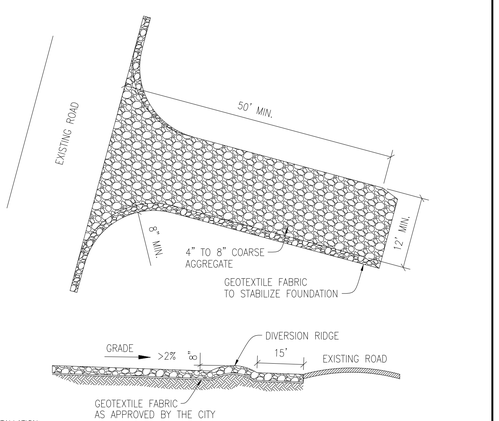
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- INSPECT AND REALIGN BERMS AS NEEDED TO PREVENT GAPS BETWEEN THE SECTIONS.
- ACCUMULATED SILT SHOULD BE REMOVED AFTER EACH RAINFALL EVENT, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRIANGULAR FILTER DIKE

DRAWING NAME: EC05 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



INSTALLATION:
- CLEAR THE AREA OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- GRADE THE AREA FOR THE ENTRANCE TO FLOW BACK ON TO THE CONSTRUCTION SITE. RUNOFF FROM THE STABILIZED CONSTRUCTION
- PLACE GEOTEXTILE FABRIC AS APPROVED BY THE CITY.
- PLACE ROCK AS APPROVED BY THE CITY.

INSPECTIONS AND MAINTENANCE GUIDELINES:
- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
- WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STABILIZED CONSTRUCTION ENTRANCE

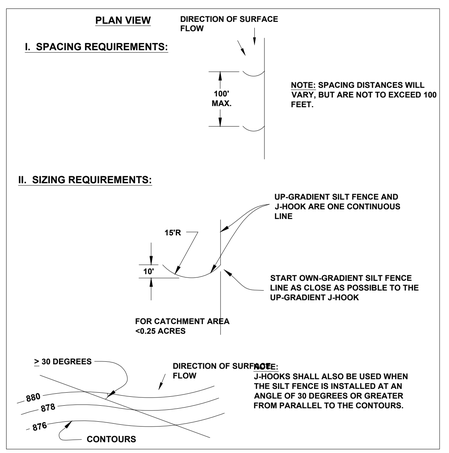
DRAWING NAME: EC06 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

SPOILS MANAGEMENT AND DISPOSAL NOTES

1. TEMPORARY HOLDING SITES AS NECESSARY TO STOCKPILE EXCAVATED SOILS, EMBEDMENT MATERIAL, AND/OR PIPING AND APPURTENANCES MAY BE LOCATED WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS.
2. NO PERMANENT SPOILS DISPOSAL SHALL BE ALLOWED ON-SITE, UNLESS APPROVED BY THE OWNER AND GOVERNING AUTHORITY.
3. ALL SPOILS MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED SPOIL DISPOSAL SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SECURING A PERMIT FOR THE SITE; AND SHALL NOTIFY THE OWNER AND/OR ENGINEER AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO DISPOSAL OF ANY SPOILS MATERIAL.

SILT FENCE 'J' HOOK DETAIL

N.T.S.



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
EROSION / SEDIMENTATION CONTROL PLAN
NOTES AND DETAILS (SHEET 1 OF 2)

NO.	DESCRIPTION	BY	DATE

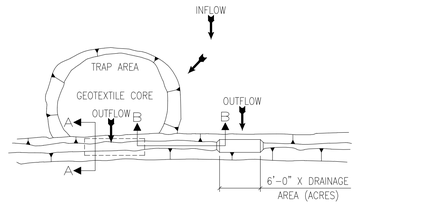
DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-EROS.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

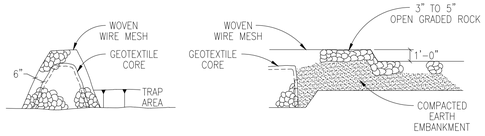
LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 5 OF 48 SHEETS



PLAN VIEW



SECTION A–A SECTION B–B

INSTALLATION:

- LOCATE THE SEDIMENT TRAP SO AS TO DISTURB AS FEW TREES AS POSSIBLE.
- CLEAR AND GRUB THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MATS.
- LAYOUT THE WIRE MESH AND THEN THE GEOTEXTILE FABRIC.
- CONSTRUCT THE GEOTEXTILE CORE AND CORRESPONDING ROCK EMBANKMENT TO THE DESIGNATED HEIGHT AND CONFIGURATION.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE. SECURE WITH TIE WIRE.
- PLACE THE EMBANKMENT MATERIAL IN 8 TO 12 INCH LIFTS AND MACHINE COMPACT.

INSPECTION AND MAINTENANCE GUIDELINES:

- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- TRASH AND OTHER DEBRIS SHOULD BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF OF THE DESIGN DEPTH OF THE TRAP.
- SEDIMENT REMOVED FROM THE TRAP SHOULD BE DEPOSITED IN AN APPROVED SPOILS AREA AND IN SUCH A MANNER THAT IT WILL NOT CAUSE ADDITIONAL SILTATION.

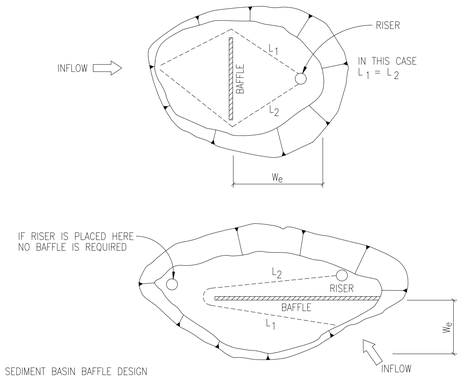
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEDIMENT TRAP DETAIL

DRAWING NAME: EC07

SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



SEDIMENT BASIN BAFFLE DESIGN

$W_e = A / (L_1 + L_2)$

W_e = EFFECTIVE WIDTH OF BASIN

A = SURFACE AREA OF BASIN WHEN FILLED TO RISER CREST

L_1, L_2 = SHORTEST TRAVEL DISTANCE AROUND THE BAFFLE FROM INLET TO OUTLET

INSPECTION AND MAINTENANCE GUIDELINES:

- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- TRASH AND OTHER DEBRIS SHOULD BE REMOVED AFTER EACH RAINFALL TO PREVENT CLOGGING OF THE OUTLET STRUCTURE.
- ACCUMULATED SILT SHOULD BE REMOVED AND THE BASIN SHOULD BE RE-GRADED TO ITS ORIGINAL DIMENSIONS AT SUCH POINT THAT THE CAPACITY OF THE IMPOUNDMENT HAS BEEN REDUCED TO 1/2 OF ITS ORIGINAL STORAGE CAPACITY.
- THE REMOVED SEDIMENT SHOULD BE STOCKPILED OR REDISTRIBUTED IN AREAS THAT ARE PROTECTED FROM EROSION.

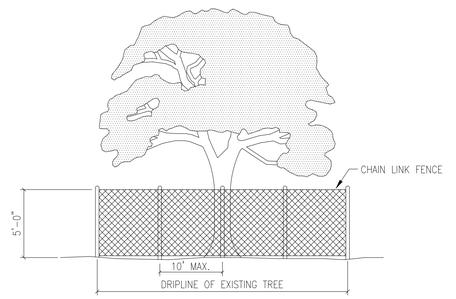
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEDIMENT BASIN BAFFLE DESIGN

DRAWING NAME: EC08

SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; WILL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
   C. WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
3. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   B. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.

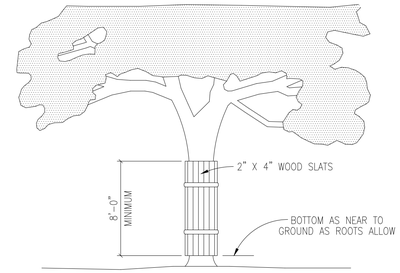
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TREE PROTECTION – CHAIN LINK FENCE

DRAWING NAME: EC09

SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. WHERE ANY EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN FOUR FEET (4'-0") TO A TREE TRUNK; PROTECT THE TRUNK WITH STRAPPED-ON-PLANKING TO A HEIGHT OF EIGHT FEET (8'-0"), OR TO THE LIMITS OF LOWER BRANCHING IN ADDITION TO THE REDUCED FENCING PROVIDED.
2. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO (2) DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE, AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
3. PRIOR EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINE, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
4. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
5. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
6. NO LANDSCAPE TOPSOIL DRESSING GREATER THE FOUR INCHES (4") SHALL BE PERMITTED WITHIN THE DRIPLINE OF A TREE. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
7. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.

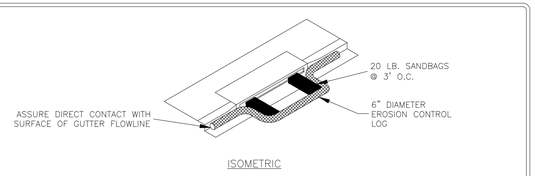
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

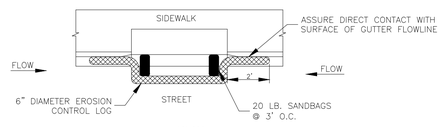
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TREE PROTECTION – WOOD SLATS

DRAWING NAME: EC10

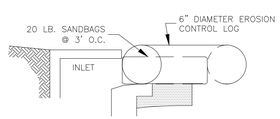
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



ISOMETRIC



PLAN

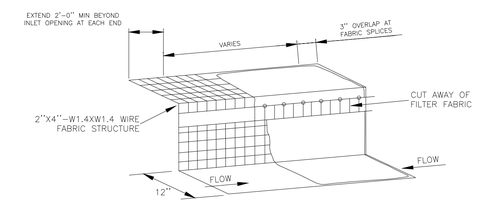


CROSS SECTION

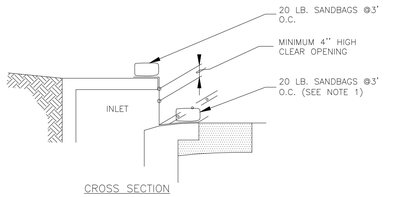
NOTES:

1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM WATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	CURB INLET PROTECTION WITH EROSION CONTROL LOG DETAIL	EC-13
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY



ISOMETRIC

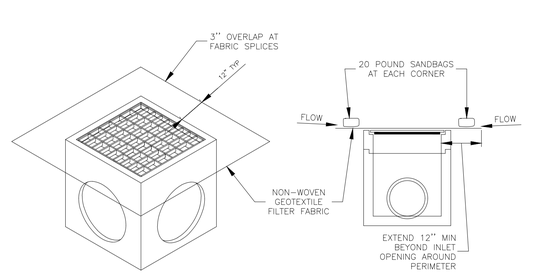


CROSS SECTION

NOTES:

1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1" X 4" BOARD SECURED WITH CONCRETE NAILS 3' O.C. NAILED INTO THE GUTTER IN LIEU OF SANDBAGS TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, CLEAN ANY DIRT/DEBRIS FROM NAILING LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH SURFACE OF GUTTER.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	CURB INLET PROTECTION DETAIL	EC-14
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY

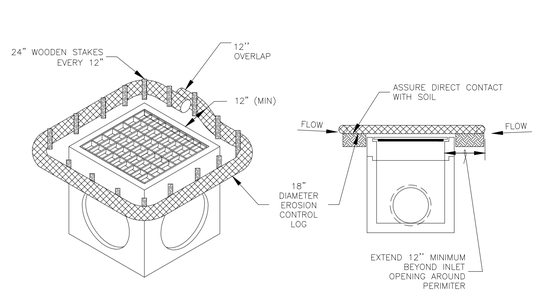


ISOMETRIC CROSS SECTION

NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
3. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	AREA INLET PROTECTION DETAIL	EC-15
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY



ISOMETRIC CROSS SECTION

NOTES:

1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	AREA INLET PROTECTION WITH EROSION CONTROL LOG DETAIL	EC-16
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
EROSION / SEDIMENTATION CONTROL PLAN
NOTES AND DETAILS (SHEET 2 OF 2)

NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-EROS.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

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7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

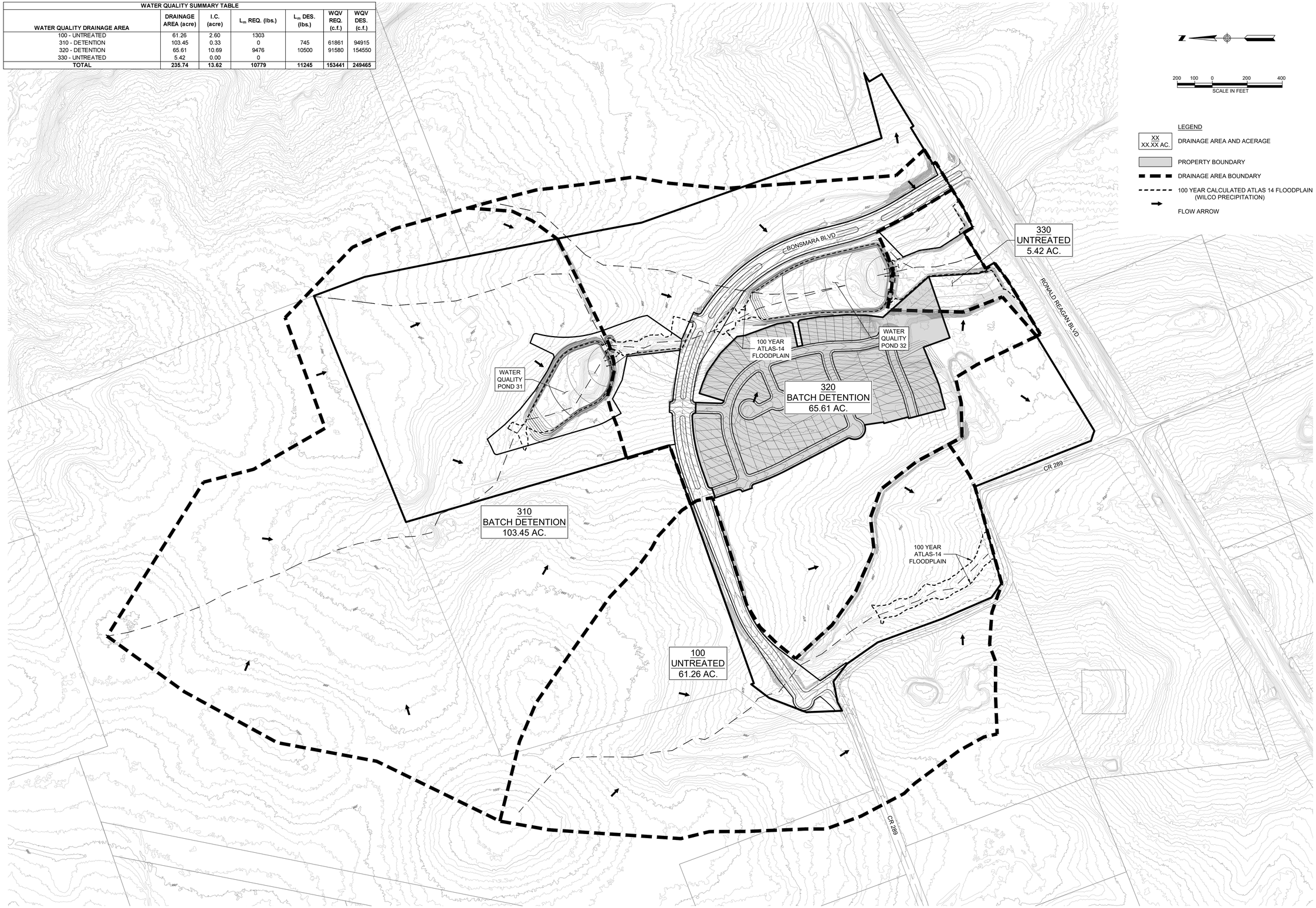
JOB NUMBER: A3336-2401

SHEET NO. 6 OF 48 SHEETS

EXHIBIT 3

WATER QUALITY PLAN / PERMANENT CONTROLS

WATER QUALITY SUMMARY TABLE						
WATER QUALITY DRAINAGE AREA	DRAINAGE AREA (acre)	I.C. (acre)	L_m REQ. (lbs.)	L_m DES. (lbs.)	WQV REQ. (c.f.)	WQV DES. (c.f.)
100 - UNTREATED	61.26	2.60	1303			
310 - DETENTION	103.45	0.33	0	745	61861	94915
320 - DETENTION	65.61	10.69	9476	10500	91580	154550
330 - UNTREATED	5.42	0.00	0			
TOTAL	235.74	13.62	10779	11245	153441	249465



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
WATER QUALITY MAP

NO.	DESCRIPTION	BY	DATE
	REVISIONS		

DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME: KONLE-PH1-WQ.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
4/23/2025

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 1 OF 1 SHEETS

APPENDIX A

SAMPLE INSPECTION AND MAINTENANCE REPORT FORM

TPDES Construction Inspection and Maintenance Report Form

Project Name: Hudson Park - Phase 1

Permit Number: _____

Facility Operators: _____

_____

_____

Inspector's Name: _____
(attach qualifications summary for each inspector) _____

Date of Last Rainfall: _____
Amount of Last Rainfall: _____
Date of Inspection: _____

Inspection Notes

Condition Code*	Area Inspected	Changes Required (if any)
☐	Stabilized Construction Entrance(s)	
☐	Silt fencing and rock berms downstream of improvements	
☐	Severe service rock berm and silt fencing downstream of detention pond	
☐	Severe service rock berm and silt fencing inside Vega Avenue right-of-way	
☐	Sediment Trap (Water Quality Pond)	
☐	Silt fencing downstream of Temporary Spoils/ Construction Staging Areas	
☐	Areas temporarily and/or finally stabilized (inspect at least once every month)	
☐		

*Condition Codes
01 - In compliance with the storm water pollution prevention plan and permit
02 - To be repaired or replaced within 24 hours.
03 - To be repaired or replaced within 48 hours.
04 - To be repaired or replaced within 7 days.

Please note major construction activities taking place. Include dates when major grading activities and/or disturbances occur, dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated. Major observations should include: The locations of discharges of sediment or other pollutants from the site; locations of controls that need to be maintained; locations of controls that failed to operate as designed or proved inadequate for a particular location; and locations where additional controls are needed. (Attach additional pages as required and/or attach daily construction reports.)

_____

_____

_____

_____

_____

_____

I certify under penalty of law that this document was 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.

Signature: _____ Date: _____.

Signature: _____ Date: _____.

APPENDIX B

NAMES AND QUALIFICATIONS OF PERSONNEL MAKING INSPECTIONS

APPENDIX C

CERTIFIED NOTICES OF INTENT AND ACKNOWLEDGEMENT CERTIFICATES

TCEQ Office Use Only
Permit No:
CN:
RN:

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

IMPORTANT INFORMATION

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

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

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

ePERMITS

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

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

APPLICATION FEE AND PAYMENT

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

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

Provide your payment information for verification of payment:

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

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

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

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

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

SECTION 1. OPERATOR (APPLICANT)

a) If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? CN 601574049

(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.)

Brightland Homes, LTD

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

Prefix (Mr. Ms. Miss): Mr.

First and Last Name: Chris Lynch Suffix: Click here to enter text.

Title: President of Land Credentials: Click here to enter text.

Phone Number: 512-330-9366 Fax Number: Click here to enter text.

E-mail: kbolt@brightlandhomes.com

Mailing Address: 3815 S. Capital of Texas Hwy, Ste. 275

City, State, and Zip Code: Austin, TX 78704

Mailing Information if outside USA:

Territory: Click here to enter text.

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

d) Indicate the type of customer:

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

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

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

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

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

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

State Franchise Tax ID Number: 17525519892

Federal Tax ID: Click here to enter text.

Texas Secretary of State Charter (filing) Number: 0007423210

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): Mr.

First and Last Name: Matthew Thomas Suffix: Click here to enter text.

Title: Sr. Project Manager Credential: P.E.

Organization Name: LJA Engineering, Inc.

Phone Number: 512-439-4700 Fax Number: Click here to enter text.

E-mail: mthomas@lja.com

Mailing Address: 7500 Rialto Blvd, Bldg II, Suite 100

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

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

Mailing information if outside USA:

Territory: Click here to enter text.

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

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

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

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

b) Name of project or site (the name known by the community where it's located): Hudson Park – Phase 1

c) In your own words, briefly describe the type of construction occurring at the regulated site (residential, industrial, commercial, or other): Construction of roads and associated utilities

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

e) Latitude: 30.727063 Longitude: -97.831603

f) Site Address/Location

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

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

Section A:

Street Number and Name: Click here to enter text

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

Section B:

Location Description: Located 2 miles west of the intersection of RM 2338 and Ronald W Reagan Boulevard in Williamson County

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

Zip Code where the site is located: 78633

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? **1611**

d) What is the Secondary SIC Code(s), if applicable? 1623

e) What is the total number of acres to be disturbed? 18.93

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

☒ Yes

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

g) What is the estimated start date of the project? 2024

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

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

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

k) What is the segment number(s) of the classified water body(ies) that the discharge will eventually reach? Click here to enter text.

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

☐ Yes ☒ No

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

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

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

☒ Yes, complete the certification below.

☐ No, go to Section 5

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

SECTION 5. NOI CERTIFICATION

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

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

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

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

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

SECTION 6. APPLICANT CERTIFICATION SIGNATURE

Operator Signatory Name: 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: _____

APPENDIX D

SPILL NOTIFICATION PROCEDURE

APPENDIX D – SPILL NOTIFICATION PROCEDURE

To report an environmental emergency, discharge, spill or air release, contact:

STATE

- State of Texas Spill-Reporting Hotline and the SERC: 1-800-832-8224 (24 hours)
- TCEQ Regional Office – Austin Region 512-339-2929 (M-F 8:00 am – 5:00 pm)

FEDERAL

- National Response Center: 1-800-424-8802 (notifying NRC does not constitute notice to the state.)

When making a report of a spill or pollution complain, please have the following information at hand:

- The date and time of the spill or release.
- The identity of chemical name of any material released or spilled, as well as whether the substance is extremely hazardous.
- The 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 receiving waters. Receiving waters for this project include Barton Creek.
- The extent of actual and potential water pollution.
- The source of the release or spill.
- The name, address, and phone number of the party in charge of, or responsible for, the facility, vessel, or activity associated with the release or spill.
- The name and phone number of the party at the site who is in charge of operations.
- 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 any injuries.
- Any known or anticipated health risks associated with the incident and where appropriate, advice regarding medical attention necessary for persons exposed.
- 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. The TCEQ may request estimated or measured concentrations of contaminant for the state's hazard assessment.
- The identities of any government or private sector representative responding at the scene.

IMPORTANT WEBSITES:

Emergency Response Home (https://www.tceq.texas.gov/response/index.html)
Spills, Discharges, and Releases (https://www.tceq.texas.gov/response/spills/spills.html)

APPENDIX E

GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

Texas Commission on Environmental Quality

P.O. Box 13087 Austin, Texas 78711-3087

GENERAL PERMIT TO DISCHARGE WASTES

under provisions of Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

This permit supersedes and replaces
TPDES General Permit No. TXG340000, issued October 24, 2012.

Facility wastewater, contact stormwater, and stormwater associated with industrial activities may be discharged from petroleum bulk stations and terminals, located in the State of Texas,

into or adjacent to water in the state, including exceptional, high, intermediate, limited, or minimal aquatic life use receiving waters as designated in the *Texas Surface Water Quality Standards*,

only according to effluent limitations, monitoring requirements and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ or commission), the laws of the State of Texas, and other orders of the commission. The issuance of this general permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route. This includes property belonging to, but not limited to, any individual, partnership, corporation or other entity. Neither does this general permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This general permit and the authorization contained herein will expire at midnight on October 24, 2022.

EFFECTIVE DATE: October 24, 2017

DATE SIGNED: October 10, 2017

Signed by Bryan W. Shaw

For the Commission

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

I Chris Lynch,
Print Name

President of Land,
Title - Owner/President/Other

of Brightland Homes, LTD,
Corporation/Partnership/Entity Name

have authorized Matthew Thomas, P.E.
Print Name of Agent/Engineer

of LJA Engineering, Inc.
Print Name of Firm

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

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature — Date: 01/07/2025

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Chris Lynch 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 7 day of January, 2025

NOTARY PUBLIC

Laura Mei Dillon
My Commission Expires
1/5/2026
Notary ID
133518031

Laura Dillon
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 1/7/2025

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 601574049		**RN**

SECTION II: Customer Information

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

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name (*If an individual, print last name first: eg: Doe, John*) *If new Customer, enter previous Customer below:*

Brightland Homes, LTD

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** (*if applicable*)
0007423210	17525519892		

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:
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant

15. Mailing Address: 3815 S. Capital of Texas Hwy, Ste. 275

City	Austin	**State**	TX	**ZIP**	78704	**ZIP + 4**	

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

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 330-9366		( ) -

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.)*

Hudson Park - Phase 1

23. Street Address of the Regulated Entity: ***(No PO Boxes)***							
	City		**State**		**ZIP**		**ZIP + 4**
24. County	Williamson						

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

25. Description to Physical Location:	2 miles west of the intersection of RM 2338 and Ronald W Reagan Boulevard				
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:	30.727063		**28. Longitude (W) In Decimal:**	-97.831603	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	43	37.43	-97	49	53.77

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)
1611	1623	23411	23491

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

Construction of roads and utilities

34. Mailing Address:	**3815 S. Capital of Texas Hwy, Ste. 275**						
	City	**Austin**	**State**	**TX**	**ZIP**	**78704**	**ZIP + 4**
35. E-Mail Address:	**kbolt@brightlandhomes.com**						

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 330-9366		( ) -

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:	Matthew Thomas, P.E.	**41. Title:**	SR. Project Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 439-4700		( ) -	mthomas@lja.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Brightland Homes, LTD.	**Job Title:**	President of Land
Name *(In Print):*	Chris Lynch	**Phone:**	(512) 330- **9366**
Signature:		**Date:**	

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Hudson Park - Phase 1

Regulated Entity Location: 2 miles west of the intersection of RM 2338 and Ronald W Reagan Boulevard in Williamson County, Texas

Name of Customer: Brightland Homes, LTD

Contact Person: Chris Lynch Phone: 512-330-9366

Customer Reference Number (if issued):CN 601574049

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	16.42 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: 4/30/25

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

CONSTRUCTION PLANS

HUDSON PARK
PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS

NO PORTION OF THIS TRACT IS WITHIN THE DESIGNATED FLOOD HAZARD AREA AS SHOWN ON THE FEDERAL FLOOD INSURANCE ADMINISTRATION RATE MAP (FEMA) No. 48491C0275E, WILLIAMSON COUNTY, TEXAS, DATED SEPTEMBER 26, 2008.

THIS PROJECT LIES WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE.

I AM AUTHORIZED TO PRACTICE THE PROFESSION OF ENGINEERING IN THE STATE OF TEXAS. I AM RESPONSIBLE FOR THE PREPARATION OF THE ENGINEERING PORTIONS OF THIS PLAN. ALL ENGINEERING INFORMATION SHOWN ON THE PLAN IS ACCURATE AND CORRECT WITH REGARD TO THE ENGINEERING PORTIONS THEREOF, THE PLAN COMPLIES ALL APPLICABLE CITY AND WILLIAMSON COUNTY CODES, ORDINANCES AND RULES.

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER

LICENSED PROFESSIONAL ENGINEER — DATE: 4/17/2025

REVIEWED FOR COMPLIANCE WITH COUNTY REQUIREMENTS (WCSR 2021B):

WILLIAMSON COUNTY — DATE

WILLIAMSON COUNTY M.U.D. NO. 46 — DATE

CITY OF GEORGETOWN WATER — DATE

CONSTRUCTION SEQUENCING

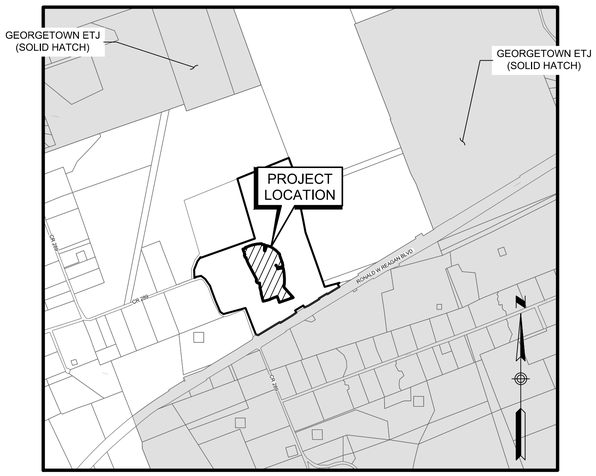
1. 48 HOURS PRIOR TO BEGINNING ANY WORK, CALL THE ONE-CALL BOARD OF TEXAS AT 811 OR 1-800-545-6005 FOR UTILITY LOCATIONS AND OBTAIN STREET CUT PERMIT FOR ANY WORK WITHIN CITY, COUNTY AND/OR STATE RIGHT-OF-WAY.
2. INSTALL TEMPORARY EROSION CONTROLS AND TREE/NATURAL AREA PROTECTION FENCING PRIOR TO PRE-CONSTRUCTION MEETING AND PRIOR TO ANY SITE CLEARING, GRUBBING, EXCAVATION, MATERIAL STOCKPILING, OR OTHER CONSTRUCTION OPERATIONS.
3. SCHEDULE AND CONVENE A PRECONSTRUCTION MEETING INCLUDING BUT NOT LIMITED TO THE OWNER'S REPRESENTATIVE, ENGINEER, UTILITY REPRESENTATIVE, FIRE DEPARTMENT, CITY, COUNTY, TXDOT REPRESENTATIVE AND TCEQ REPRESENTATIVE, AS APPLICABLE.
4. INSTALL TRAFFIC CONTROL MEASURES.
5. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO INITIATING CONSTRUCTION.
6. ROUGH CUT WATER QUALITY PONDS AND DIRECT RUNOFF TO PONDS TO ACT AS A SEDIMENT TRAP.
7. REMOVE AND STOCKPILE TOPSOIL IN AREAS AS REQUIRED.
8. ROUGH CUT ROADS/SITE, AS NECESSARY.
9. INSTALL ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE UTILITY PROVIDER WHEN SWITCHING SERVICE TO THEIR SYSTEM. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS/FACILITIES TO ENSURE SERVICE IS MAINTAINED DURING SWITCHOVER.
10. COMPLETE ALL UNDERGROUND INSTALLATIONS, INCLUDING INSTALLATION OF SLEEVES.
11. COMPLETE SUBGRADE.
12. COMPLETE 1ST COURSE BASE,
13. COMPLETE CURB AND GUTTER.
14. COMPLETE FINAL COURSE BASE.
15. LAY PAVEMENT AND/OR COMPLETE ANY PAVEMENT REPAIR.
16. COMPLETE WATER QUALITY PONDS.
17. COMPLETE PERMANENT EROSION CONTROL AND SITE RESTORATION.
18. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROLS.
19. COMPLETE ANY NECESSARY FINAL DRESS UP OF AREAS DISTURBED BY CONSTRUCTION OPERATIONS.

GENERAL NOTES:

1. THE CONTRACTOR SHALL OBTAIN A "NOTICE OF PROPOSED INSTALLATION OF UTILITY LINE" PERMIT FROM WILLIAMSON COUNTY FOR ANY WORK PERFORMED IN THE EXISTING COUNTY RIGHT-OF-WAY (DRIVEWAY APRON, WATER MAIN TIE-IN, ETC). THIS PERMIT APPLICATION WILL REQUIRE A LIABILITY AGREEMENT, A CONSTRUCTION COST ESTIMATE FOR WORK WITHIN THE RIGHT-OF-WAY INCLUDING PAVEMENT REPAIR (IF NEEDED), A PERFORMANCE BOND, CONSTRUCTION PLANS AND, IF NECESSARY, A TRAFFIC CONTROL PLAN. AN INSPECTION FEE, AND A PRE-CONSTRUCTION MEETING MAY ALSO BE REQUIRED. DEPENDING ON THE SCOPE OF WORK, THE PERMIT WILL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER, AND MUST ALSO BE APPROVED BY THE WILLIAMSON COUNTY COMMISSIONERS COURT IF ANY ROAD CLOSURE IS INVOLVED.

REVISIONS / CORRECTIONS

Number	Description	Revise (R) Add (A) Void (V) Sheet No.'s	Total # Sheets in Plan Set	W.C. Approval-Date	Date Imaged



LOCATION MAP
SCALE: 1" = 1500'

SUBMITTAL DATE:_____

LEGAL DESCRIPTION

A 16.42-ACRE PORTION, MORE OR LESS, OUT OF THE 122.66-ACRE TRACT OF LAND OUT OF THE D. CASANOVA SURVEY, ABSTRACT NO. 126, THE A.J. HAYHURST SURVEY, ABSTRACT NO. 305, AND THE J. NORTHCROSS SURVEY, ABSTRACT NO. 478, RECORDED IN DOCUMENT NO. 2022022743, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.

DEVELOPER/OWNER: BRIGHTLAND HOMES, LTD
3815 S CAPITAL OF TEXAS HIGHWAY, SUITE 275
AUSTIN, TEXAS 78704

ENGINEER: LJA ENGINEERING, INC.
7500 RIALTO BOULEVARD, BUILDING II, SUITE 100
AUSTIN, TEXAS 78735
CONTACT PERSON: LAUREN CRONE, P.E.
PHONE # (512) 439-4700
FAX # (512) 439-4716

SURVEYOR: LJA SURVEYING, INC.
7500 RIALTO BOULEVARD, BUILDING II, SUITE 100
AUSTIN, TEXAS 78735
CONTACT PERSON: MATT OVERALL, R.P.L.S.
PHONE # (512) 439-4700

STREET NAME	ACCESS STATUS	RIGHT OF WAY	PAVEMENT & CURB TYPE	CUL-DE-SAC / ROW	CLASSIFICATION (DES. SPD.)	LENGTH	URBAN / RURAL
WATUSI LOOP	PUBLIC	50	30' FOC-FOC	40'R / 50'R	LOCAL STREET (25 mph)	1,695'	URBAN
JERSEY BEND	PUBLIC	50	30' FOC-FOC	40'R / 50'R	LOCAL STREET (25 mph)	1,155'	URBAN
RED POLL CIRCLE	PUBLIC	50	30' FOC-FOC	40'R / 50'R	LOCAL STREET (25 mph)	358'	URBAN
RED DEVON BEND	PUBLIC	50	30' FOC-FOC	40'R / 50'R	LOCAL STREET (25 mph)	151'	URBAN

SHEET — DESCRIPTION

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

Date/Time : Thu, 17 Apr 2025 - 10:49am
Path/Name : I:\A3369\Hudson Park (Korle)\Phase 1\Submittal Drawings\KONLEPH1-CVR.dwg
User Name : cgaines

WILLIAMSON COUNTY CONSTRUCTION NOTES

B4 - CONSTRUCTION – GENERAL

B4.1 A PRECONSTRUCTION MEETING SHALL BE SCHEDULED PRIOR TO THE START OF CONSTRUCTION. THE DESIGN ENGINEER, OWNER, CONTRACTOR, SUBCONTRACTORS, AND COUNTY ENGINEER SHALL ATTEND THIS MEETING. ALL ROADS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AS APPROVED BY THE COUNTY ENGINEER AND IN ACCORDANCE WITH THE SPECIFICATIONS FOUND IN THE CURRENT VERSION OF THE "TEXAS DEPARTMENT OF TRANSPORTATION MANUAL STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES" UNLESS OTHERWISE STATED ON THE CONSTRUCTION DOCUMENTS APPROVED BY THE COUNTY ENGINEER.

B4.2 ALL MATERIALS SHALL BE SAMPLED AND TESTED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE COUNTY ENGINEER. THE OWNER SHALL PAY FOR ALL TESTING SERVICES AND SHALL FURNISH THE COUNTY ENGINEER WITH CERTIFIED COPIES OF THESE TEST RESULTS. THE COUNTY ENGINEER MUST APPROVE THE TEST RESULTS PRIOR TO CONSTRUCTING THE NEXT COURSE OF THE ROADWAY STRUCTURE. ANY MATERIAL WHICH DOES NOT MEET THE MINIMUM REQUIRED TEST SPECIFICATIONS SHALL BE REMOVED AND RECOMPACTED OR REPLACED UNLESS ALTERNATIVE REMEDIAL ACTION IS APPROVED IN WRITING FROM THE COUNTY ENGINEER.

B4.3 EXCEPT FOR ELECTRICAL LINES, ALL UNDERGROUND NONFERROUS UTILITIES WITHIN A RIGHT-OF-WAY OR EASEMENT MUST BE ACCOMPANIED BY FERROUS METAL LINES TO AID IN TRACING THE LOCATION OF SAID UTILITIES THROUGH THE USE OF A METAL DETECTOR.

B4.4 ALL PROPOSED PAVEMENTS (FLEXIBLE AND RIGID) ARE TO BE SPECIFIED IN THE GEOTECH REPORT. THE GEOTECH REPORT IS TO BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. PAVEMENT DESIGNS SHALL FOLLOW THE BELOW COUNTY REQUIREMENTS BASED UPON SOIL CONDITIONS FROM SAMPLES TAKEN ALONG THE PROPOSED ROADWAYS. TEST BORINGS SHALL BE PLACED AT A MAXIMUM SPACING OF 500 FEET OR OTHER SAMPLING FREQUENCY APPROVED BY THE COUNTY ENGINEER BASED ON RECOMMENDATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER. BORINGS SHALL BE TO A DEPTH OF TEN FT OR, IF SOLID ROCK IS ENCOUNTERED, ONE FT WILLIAMSON COUNTY, TEXAS - SUBDIVISION REGULATIONS PAGE 38 BELOW NON-FRACTURED ROCK OR 3 FT BELOW FRACTURED ROCK. THE PAVEMENT DESIGN MUST MEET AT LEAST THE MINIMUM OF ONE OF THE APPROVED COUNTY DESIGNS AND PROVIDED IN THE GEOTECHNICAL REPORT FOR REVIEW AND APPROVAL PRIOR TO THE REVIEW AND APPROVAL OF THE CONSTRUCTION PLANS. IN ADDITION TO THE BASIS OF THE PAVEMENT DESIGN, THE SOILS REPORT SHALL CONTAIN THE RESULTS OF SAMPLED AND TESTED SUBGRADE FOR PLASTICITY INDEX.

B4.5 FLEXIBLE PAVEMENT DESIGNS BASED ON ROADWAY CLASSIFICATION

MINIMUM LOCAL ROADWAY (URBAN) FLEXIBLE PAVEMENT DESIGN

PLASTICITY INDEX	PI<20	PI 20-35	PI 35-55	MATERIAL REQUIREMENTS
SOIL CLASSIFICATION	CLAYEY SAND	LEAN CLAY	FAT CLAY	
HMA SURFACE	2"	2"	2"	TxDOT ITEM 340 D- GR HMA PG 70-22 SAC B (1)
PRIME COAT OR ONE COURSE UNDERSEAL				AEP OR TxDOT ITEM 316 (4)
FLEXIBLE BASE	12"	12"	14"	TxDOT ITEM 247 FLBS TY A GR 5(2)
LIME TREATED SUBGRADE		8"	8"	TxDOT ITEM 260 (3)
NOTES:	1) SEE APPENDIX B7 FOR MATERIAL REQUIREMENTS FOR HMA. 2) SEE APPENDIX B6 FOR ADDITIONAL FLEXIBLE BASE SPECIFICATIONS. 3) PELLITIZED LIME IS NOT ALLOWED. USE HYDRATED LIME OR LIME SLURRY. CONFIRM SULFATES ARE NOT PRESENT IN SOIL. 4) FOR PI>55 ADDITIONAL PAVEMENT STRUCTURE IS NECESSARY AND SHALL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER.			

MINIMUM COLLECTOR ROADWAY (URBAN) FLEXIBLE PAVEMENT DESIGN

PLASTICITY INDEX	PI<20	PI 20-35	PI 35-55	MATERIAL REQUIREMENTS
SOIL CLASSIFICATION	CLAYEY SAND	LEAN CLAY	FAT CLAY	
HMA SURFACE	2"	2"	2"	TxDOT ITEM 340 D- GR HMA PG 70-22 SAC B (1)
PRIME COAT OR ONE COURSE UNDERSEAL				AEP OR TxDOT ITEM 316 (4)
FLEXIBLE BASE	14"	14"	16"	TxDOT ITEM 247 FLBS TY A GR 5(2)
LIME TREATED SUBGRADE		8"	8"	TxDOT ITEM 260 (3)
NOTES:	1) SEE APPENDIX B7 FOR MATERIAL REQUIREMENTS FOR HMA. 2) SEE APPENDIX B6 FOR ADDITIONAL FLEXIBLE BASE SPECIFICATIONS. 3) PELLITIZED LIME IS NOT ALLOWED. USE HYDRATED LIME OR LIME SLURRY. CONFIRM SULFATES ARE NOT PRESENT IN SOIL. 4) FOR PI>55 ADDITIONAL PAVEMENT STRUCTURE IS NECESSARY AND SHALL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER.			

MINIMUM ARTERIAL ROADWAY (URBAN) FLEXIBLE PAVEMENT DESIGN

PLASTICITY INDEX	PI<20	PI 20-35	PI 35-55	MATERIAL REQUIREMENTS
SOIL CLASSIFICATION	CLAYEY SAND	LEAN CLAY	FAT CLAY	
HMA SURFACE	2"	2"	2"	TxDOT ITEM 340 D- GR HMA PG 70-22 SAC B (1)
PRIME COAT OR ONE COURSE UNDERSEAL				AEP OR TxDOT ITEM 316 (4)
FLEXIBLE BASE	20"	20"	22"	TxDOT ITEM 247 FLBS TY A GR 5(2)
LIME TREATED SUBGRADE		8"	10"	TxDOT ITEM 260 (3)
NOTES:	1) SEE APPENDIX B7 FOR MATERIAL REQUIREMENTS FOR HMA. 2) SEE APPENDIX B6 FOR ADDITIONAL FLEXIBLE BASE SPECIFICATIONS. 3) PELLITIZED LIME IS NOT ALLOWED. USE HYDRATED LIME OR LIME SLURRY. CONFIRM SULFATES ARE NOT PRESENT IN SOIL. 4) FOR PI>55 ADDITIONAL PAVEMENT STRUCTURE IS NECESSARY AND SHALL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER.			

B4.6 RIGID PAVEMENT DESIGNS BASED ON ROADWAY CLASSIFICATION

LOCAL ROADWAY (URBAN/RURAL) RIGID PAVEMENT DESIGN

PLASTICITY INDEX	PI<20	PI 20-35	PI 35-55	MATERIAL REQUIREMENTS
SOIL CLASSIFICATION	CLAYEY SAND	LEAN CLAY	FAT CLAY	
CRCP	6"	6"	8"	TxDOT ITEM 421 - CLASS P CONCRETE CRCP (1) - 13, CONTINUOUSLY REINFORCED CONCRETE PAVEMENT, ONE-LAYER STEEL BAR PLACEMENT
HMA BOND BREAKER	1"	1"	1"	TxDOT ITEM D- GR HMA TY D OR TY F PG 64-22
FLEXIBLE BASE	6"	8"	8"	TxDOT ITEM 247 FLBS TY A GR 4(2)
LIME TREATED SUBGRADE			8"	TxDOT ITEM 260 (3)
NOTES:	1) SEE APPENDIX B7 FOR MATERIAL REQUIREMENTS FOR CRCP. 2) SEE APPENDIX B6 FOR ADDITIONAL CEMENT TREATED BASE SPECIFICATIONS. 3) PELLITIZED LIME IS NOT ALLOWED. USE HYDRATED LIME OR LIME SLURRY. CONFIRM SULFATES ARE NOT PRESENT IN SOIL. 4) FOR PI>55 ADDITIONAL PAVEMENT STRUCTURE IS NECESSARY AND SHALL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER.			

COLLECTOR ROADWAY (URBAN/RURAL) RIGID PAVEMENT DESIGN

PLASTICITY INDEX	PI<20	PI 20-35	PI 35-55	MATERIAL REQUIREMENTS
SOIL CLASSIFICATION	CLAYEY SAND	LEAN CLAY	FAT CLAY	
CRCP	6"	6"	8"	TxDOT ITEM 421 - CLASS P CONCRETE CRCP (1) - 13, CONTINUOUSLY REINFORCED CONCRETE PAVEMENT, ONE-LAYER STEEL BAR PLACEMENT
HMA BOND BREAKER	1"	1"	1"	TxDOT ITEM D- GR HMA TY D OR TY F PG 64-22
FLEXIBLE BASE	8"	10"	10"	TxDOT ITEM 247 FLBS TY A GR 4(2)
LIME TREATED SUBGRADE			8"	TxDOT ITEM 260 (3)
NOTES:	1) SEE APPENDIX B7 FOR MATERIAL REQUIREMENTS FOR CRCP. 2) SEE APPENDIX B6 FOR ADDITIONAL CEMENT TREATED BASE SPECIFICATIONS. 3) PELLITIZED LIME IS NOT ALLOWED. USE HYDRATED LIME OR LIME SLURRY. CONFIRM SULFATES ARE NOT PRESENT IN SOIL. 4) FOR PI>55 ADDITIONAL PAVEMENT STRUCTURE IS NECESSARY AND SHALL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER.			

ARTERIAL ROADWAY (URBAN/RURAL) RIGID PAVEMENT DESIGN

PLASTICITY INDEX	PI<20	PI 20-35	PI 35-55	MATERIAL REQUIREMENTS
SOIL CLASSIFICATION	CLAYEY SAND	LEAN CLAY	FAT CLAY	
CRCP	11"	11"	11"	TxDOT ITEM 421 - CLASS P CONCRETE CRCP (1) - 13, CONTINUOUSLY REINFORCED CONCRETE PAVEMENT, ONE-LAYER STEEL BAR PLACEMENT
HMA BOND BREAKER	1"	1"	1"	TxDOT ITEM D- GR HMA TY D OR TY F PG 64-22
FLEXIBLE BASE	12"	12"	12"	TxDOT ITEM 247 FLBS TY A GR 4(2)
LIME TREATED SUBGRADE		6"	10"	TxDOT ITEM 260 (3)
NOTES:	1) SEE APPENDIX B7 FOR MATERIAL REQUIREMENTS FOR CRCP. 2) SEE APPENDIX B6 FOR ADDITIONAL CEMENT TREATED BASE SPECIFICATIONS. 3) PELLITIZED LIME IS NOT ALLOWED. USE HYDRATED LIME OR LIME SLURRY. CONFIRM SULFATES ARE NOT PRESENT IN SOIL. 4) FOR PI>55 ADDITIONAL PAVEMENT STRUCTURE IS NECESSARY AND SHALL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER.			

B5 - SUBGRADE

B5.1 THE PREPARATION OF THE SUBGRADE SHALL FOLLOW GOOD ENGINEERING PRACTICES AS DIRECTED BY THE COUNTY ENGINEER IN CONJUNCTION WITH RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT. WHEN THE PLASTICITY INDEX (PI) IS GREATER THAN 20, A SUFFICIENT AMOUNT OF LIME SHALL BE ADDED AS DESCRIBED IN ITEM 260 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION UNTIL THE PI IS LESS THAN 20. IF THE ADDITION OF LIME AS DESCRIBED IN ITEM 260 IS NOT FEASIBLE, AN ALTERNATE STABILIZING DESIGN SHALL BE PROPOSED AND SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL. THE SUBGRADE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A DRY DENSITY PER TXDOT ITEM 132. IN ADDITION, PROOF ROLLING MAY BE REQUIRED BY THE COUNTY ENGINEER.

B5.2 IF LIME IS NECESSARY, THEN A SUFFICIENT AMOUNT OF LIME SHALL BE ADDED, AS DESCRIBED IN ITEM 260 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION TO PROPERLY STABILIZE SUBGRADE. THE USE OF HYDRATED LIME OR LIME SLURRY IS APPROVED; HOWEVER, THE USE OF PELLETIZED LIME IS NOT APPROVED.

B5.3 PRIOR TO LIME STABILIZATION, A SULFATE TEST OF IN SITU SOILS SHALL BE PERFORMED BY DEVELOPER TO CONFIRM THE APPROPRIATE MEANS AND METHODS OF STABILIZATION. PROVIDE SULFATE TEST TO COUNTY ENGINEER PRIOR TO STABILIZATION.

B5.4 ANY VARIATION TO THE COUNTY'S STABILIZATION REQUIREMENTS MUST BE APPROVED BY THE COUNTY ENGINEER.

B5.5 THE SUBGRADE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A DRY DENSITY PER TXDOT ITEM 132. IN ADDITION, PROOF ROLLING MAY BE REQUIRED BY THE COUNTY ENGINEER.

B5.6 THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY AND A CERTIFIED COPY OF ALL INSPECTION REPORTS FURNISHED TO THE COUNTY ENGINEER. THE COUNTY ENGINEER MUST APPROVE THE REPORT PRIOR TO APPLICATION OF THE BASE MATERIAL. ALL DENSITY TEST REPORTS SHALL INCLUDE A COPY OF THE WORK SHEET SHOWING THE PERCENTAGE OF THE MAXIMUM DRY (PROCTOR) DENSITY, THE NUMBER AND LOCATION OF ALL SUBGRADE TESTS SHALL BE DETERMINED BY THE COUNTY ENGINEER.

B6 - BASE MATERIAL

B6.1 BASE MATERIAL SHALL CONFORM TO ITEM 247 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, "FLEXIBLE BASE". THE BASE MATERIAL SHALL BE TYPE A GRADE 4, OR AS APPROVED BY THE COUNTY ENGINEER. GRADE 4 MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF TABLE B6.1 BELOW:

TABLE B6.1: GRADATION SPECIFICATION FOR TY A, GRADE 4

MASTER GRADATION SIEVE SIZE	CUMULATIVE % RETAINED
2 ½"	-
1 ½"	0
7/8"	10% - 35%
3/8"	30% - 65%
#4	45% - 75%
#40	70% - 90%
#200	87% - 95%

B6.2 EACH LAYER OF BASE COURSE SHALL BE TESTED FOR IN-PLACE DRY DENSITY AND MEASURED FOR COMPACTED THICKNESS. THE NUMBER AND LOCATION OF ALL BASE TEST SAMPLES SHALL BE DETERMINED BY THE COUNTY ENGINEER.

B6.3 THE BASE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A MINIMUM OF 100% OF THE MAXIMUM (PROCTOR) DRY DENSITY OR AS APPROVED BY THE COUNTY ENGINEER UPON RECOMMENDATION BY THE TESTING LABORATORY. THE MAXIMUM LIFT SHALL NOT EXCEED SIX INCHES. THE BASE MUST BE INSPECTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY AND A CERTIFIED COPY OF THE TEST RESULTS FURNISHED TO THE COUNTY ENGINEER FOR APPROVAL. PRIOR TO THE PLACEMENT OF THE FIRST LIFT OF BASE, THE STOCKPILE SHALL BE TESTED FOR THE SPECIFICATIONS FOUND IN ITEM 247 TABLE 1 AND THE RESULT FURNISHED TO THE COUNTY ENGINEER FOR APPROVAL.

B7 - BITUMINOUS PAVEMENT

B7.1 URBAN ROADS REQUIRE A MINIMUM 2 INCH WEARING SURFACE OF HMAC TYPE D. THE MIX SHALL BE FROM A TXDOT CERTIFIED PLANT AND THE MIX DESIGN SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.

B7.2 IF PROVIDING MIXTURE TYPE C OR D, USE PERFORMANCE GRADE (PG) BINDER 70-22. PROVIDE PG BINDER THAT DOES NOT CONTAIN RECYCLED ENGINE OIL BOTTOMS (REOBS) OR POLY PHOSPHORIC ACID (PPA). RECYCLED ASPHALT PAVEMENT (RAP) IS NOT PERMITTED FOR USE AS A COMPONENT OF THE HMACP. THE CONTRACTOR IS ALSO NOT PERMITTED THE USE RECYCLED ASPHALT SHINGLES (RAS) AS A COMPONENT OF THE HMACP.

B7.3 IF PROVIDING MIXTURE TYPE B, USE PG BINDER 64-22. PROVIDE PG BINDERS THAT DO NOT CONTAIN REOBS OR PPA. FOR SUBSURFACE COURSE TYPE B, THE USE OF TWENTY PERCENT (20%) RAP IS PERMITTED IN THE MIX DESIGN. THE CONTRACTOR IS NOT PERMITTED TO USE RAS AS A COMPONENT OF THE HMACP.

B7.4 TARGET LABORATORY MOLDED DENSITY IS 96.5% FOR ALL MIXTURES WITHOUT RAP AND WHEN USING A TEXAS GYRATORY COMPACTOR (TGC) FOR DESIGNING THE MIXTURE. WHEN USING SUPERPAVE GYRATORY COMPACTOR (SGC) TO DESIGN MIXTURES, SUBMIT THE SGC MIX DESIGN TO THE ENGINEER FOR APPROVAL.

B7.5 ALL MIXTURES MUST MEET THE HAMBURG REQUIREMENT AS STATED IN THE TABLE BELOW.

HIGH-TEMPERATURE BINDER GRADE	TEST METHOD	HAMBURG WHEEL TEST REQUIREMENTS*
		MINIMUM # OF PASSES @ 0.5" RUT DEPTH, TESTED @122°F
PG 64 OR LOWER	TEX-242-F	7,000
PG 70	TEX-242-F	15,000
PG 76 OR HIGHER	TEX-242-F	20,000

*THE COUNTY ENGINEER MAY ACCEPT HAMBURG WHEEL TEST RESULTS FOR PRODUCTION AND PLACEMENT IF NO MORE THAN 1 OF THE 5 MOST RECENT TESTS IS BELOW THE SPECIFIED NUMBER OF PASSES AND THE FAILING TEST IS NO MORE THAN 2,000 PASSES BELOW THE SPECIFIED NUMBER OF PASSES.

B7.6 SUBMIT ANY PROPOSED ADJUSTMENTS OR CHANGES TO A JOB MIX FORMULA TO THE COUNTY ENGINEER BEFORE PRODUCTION OF THE NEW JOB MIX FORMULA.

B7.7 UNLESS OTHERWISE APPROVED, PROVIDE TYPE B MIXTURES THAT HAVE NO LESS THAN 4.5% ASPHALT BINDER, AND TY C AND D MIXTURES WITH NO LESS THAN 4.7% BINDER.

B7.8 FOR MIXTURE DESIGN VERIFICATION, PROVIDE THE ENGINEER WITH TWO 5-GALLON BUCKETS OF EACH AGGREGATE STOCKPILE TO BE USED ON THE PROJECT AND THREE GALLONS OF EACH PG BINDER TO BE USED ON THE PROJECT. ALSO PROVIDE SUFFICIENT QUANTITIES OF ANY OTHER ADDITIVES THAT WILL BE USED IN THE HMA MIXTURE. THIS MUST BE DONE PRIOR TO APPROVAL OF THE MIX DESIGN, UNLESS ALREADY PERFORMED WITHIN A ONE-YEAR TIME PERIOD.

B7.9 PRIOR TO ALLOWING PRODUCTION OF THE TRIAL BATCH, THE ENGINEER WILL USE THE MATERIALS PROVIDED BY THE CONTRACTOR TO PERFORM THE FOLLOWING TESTS TO VERIFY THE HMA MIXTURE DESIGN.

1. INDIRECT TENSILE TEST IN ACCORDANCE WITH TEX-226-F
2. HAMBURG WHEEL TEST IN ACCORDANCE WITH TEX-242-F
3. OVERLAY TEST IN ACCORDANCE WITH TEX-248-F
4. CANTABRO TEST IN ACCORDANCE WITH TEX-245-F

FOR MIXTURES DESIGNED WITH A TEXAS GYRATORY COMPACTOR (TGC), THE ENGINEER MAY REQUIRE THAT THE TARGET LABORATORY MOLDED DENSITY BE RAISED TO NO MORE THAN 97.5% OR MAY LOWER THE DESIGN NUMBER OF GYRATIONS TO NO LESS THAN 35 FOR MIXTURES DESIGNED WITH AN SGC IF ANY OF THE FOLLOWING CONDITIONS EXIST.

1. THE INDIRECT TENSILE TEST RESULTS IN A VALUE GREATER THAN 200 PSI
2. THE HAMBURG WHEEL TEST RESULTS IN A VALUE LESS THAN 3.0 MM
3. THE OVERLAY TEST RESULTS IN A VALUE LESS THAN 100 CYCLES
4. THE CANTABRO TEST RESULTS IN A VALUE OF MORE THAN 20% LOSS

IN LIEU OF, OR IN ADDITION TO EVALUATING THE MIXTURE DESIGN PRIOR TO ALLOWING A TRIAL BATCH TO BE PRODUCED, THE ENGINEER MAY ALSO EVALUATE THE MIXTURE PRODUCED DURING THE TRIAL BATCH FOR COMPLIANCE WITH THE 4 TESTS LISTED ABOVE.

B7.10 CONTRACTOR'S QUALITY CONTROL (CQC) TEST REPORTS SHALL BE SUBMITTED TO THE COUNTY ENGINEER ON A DAILY BASIS. AS A MINIMUM, DAILY CQC TESTING ON THE PRODUCED MIX SHALL INCLUDE: SIEVE ANALYSIS TEX-200-F, ASPHALT CONTENT TEX-236-F, HVEEM STABILITY TEX-208-F, LABORATORY COMPACTED DENSITY TEX-207-F, AND MAXIMUM SPECIFIC GRAVITY TEX-227-F. THE NUMBER AND LOCATION OF ALL HMAC TESTS SHALL BE DETERMINED BY THE COUNTY ENGINEER WITH A MINIMUM OF THREE, 6-INCH DIAMETER FIELD CORES SECURED AND TESTED BY THE CONTRACTOR FROM EACH DAY'S PAVING. EACH HMAC COURSE SHALL BE TESTED FOR IN-PLACE DENSITY, BITUMINOUS CONTENT AND AGGREGATE GRADATION, AND SHALL BE MEASURED FOR COMPACTED THICKNESS. THE NUMBER AND LOCATION OF ALL HMAC TEST SAMPLES SHALL BE DETERMINED BY THE COUNTY ENGINEER.

B7.11 RURAL ROADS MAY USE EITHER THE SPECIFICATIONS FOUND IN SECTION 87.1 OR A TWO-COURSE SURFACE IN ACCORDANCE WITH ITEM 316, TREATMENT WEARING SURFACE, OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE TYPE AND RATE OF ASPHALT AND AGGREGATE SHALL BE INDICATED ON THE PLANS AS A BASIS OF ESTIMATE AND SHALL BE DETERMINED AT THE PRECONSTRUCTION CONFERENCE. AGGREGATE USED IN THE MIX SHALL BE ON THE TXDOT QUALITY MONITORING SCHEDULE. AGGREGATE SHALL BE TYPE B GRADE 4. GRADATION TESTS SHALL BE REQUIRED FOR EACH 300 CUBIC YARDS OF MATERIAL PLACED WITH A MINIMUM OF TWO TESTS PER EACH GRADE PER EACH PROJECT. TEST RESULTS SHALL BE REVIEWED BY THE COUNTY ENGINEER PRIOR TO APPLICATION OF THE MATERIAL.

B8 - CONCRETE PAVEMENT

B8.1 IN LIEU OF BITUMINOUS PAVEMENT, PORTLAND CEMENT CONCRETE PAVEMENT MAY BE USED. IN SUCH CASES, THE PAVEMENT THICKNESS SHALL BE A MINIMUM OF 9 INCHES OF CONCRETE, AND SHALL BE JOINTED AND REINFORCED IN ACCORDANCE WITH THE DETAIL INCLUDED IN APPENDIX J. THE MIX SHALL BE FROM A TXDOT CERTIFIED PLANT. THE MIX DESIGN SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.

B9 - CONCRETE - GENERAL

B9.1 UNLESS OTHERWISE SPECIFIED, CONCRETE SHALL BE IN ACCORDANCE WITH ITEM 421 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND BE PLACED IN ACCORDANCE WITH THE APPLICABLE ITEM.

B9.2 ALL CONCRETE SHALL BE TESTED FOR COMPRESSIVE STRENGTH. ONE SET OF THREE CONCRETE TEST CYLINDERS SHALL BE MOLDED FOR EVERY 50 CUBIC YARDS OF CONCRETE PLACED FOR EACH CLASS OF CONCRETE PER DAY, OR AT ANY OTHER INTERVAL AS DETERMINED BY THE COUNTY ENGINEER. A SLUMP TEST SHALL BE REQUIRED WITH EACH SET OF TEST CYLINDERS. ONE CYLINDER SHALL BE TESTED FOR COMPRESSIVE STRENGTH AT AN AGE OF SEVEN DAYS AND THE REMAINING TWO CYLINDERS SHALL BE TESTED AT 28 DAYS OF AGE.

GEOTECHNICAL RECOMMENDATIONS

REFERENCE REPORT TITLED "GEOTECHNICAL INVESTIGATION PAVEMENT THICKNESS RECOMMENDATIONS - HUDSON PARK (KONLE) GEORGETOWN, TEXAS" DATED FEBRUARY 2025

STREET CLASSIFICATION	SUBGRADE MATERIAL	HOT MIX ASPHALTIC CONCRETE, in.	CRUSHED LIMESTONE BASE, in.	LIME STABILIZED SUBGRADE, in.	GEOGRID
RESIDENTIAL LOCAL	LIMESTONE	2.0	8	-	
	SUBGRADE PI < 20	2.0	12	-	
	SUBGRADE PI 20 TO 35	2.0	12	8	
	SUBGRADE PI > 35	3.0	14	8	
RESIDENTIAL COLLECTOR	LIMESTONE	2.0	14	-	
	SUBGRADE PI < 20	2.0	14	-	
	SUBGRADE PI 20 TO 35	2.0	14	8	
	SUBGRADE PI > 35	2.0	16	8	
MAJOR COLLECTOR	LIMESTONE	3.0	17	-	
	SUBGRADE PI < 20	3.0	17	-	
	SUBGRADE PI 20 TO 35	3.0	17	8	
	SUBGRADE PI > 35	3.0	17	8	
URBAN ARTERIAL	LIMESTONE	3.0	18	-	
	SUBGRADE PI < 20	3.0	18	-	
	SUBGRADE PI 20 TO 35	3.0	18	8	X *
	SUBGRADE PI > 35	3.0	18	10	X *

NOTES:

1. * A SINGLE LAYER OF TENSAR 130S GEOGRID OR EQUIVALENT TO BE APPROVED BY THE GEOTECHNICAL ENGINEER SHOULD BE PLACED BELOW THE CRUSHED LIMESTONE BASE LAYER.
2. THE SURFACE CLAY MUST BE TESTED DURING CONSTRUCTION FOR SULFATE REACTION AND A MIX DESIGN SHOULD BE COMPLETED TO DETERMINE TO PROPER LIME CONTENT, MIXING PROCEDURE, AND CURING CONDITIONS REQUIRED.
3. THE CONCERN HAS ARISEN THAT GROUND WATER MAY ENTER THE UTILITY TRENCHES AT THIS SITE CAUSING DETRIMENTAL SETTLEMENT OF THE UTILITY TRENCH BACKFILL. TO ADDRESS THIS CONCERN, THE WASTEWATER UTILITY TRENCHES COULD BE TURNED INTO FRENCH DRAINS. TO ACHIEVE THIS, ADDITIONAL POORLY-GRADED GRAVEL, SUCH AS THE GRAVEL ALREADY BEING USED FOR PIPE BEDDING AT THIS SITE, SHOULD BE PLACED ABOVE THE PIPE BEDDING MATERIAL TO THE ELEVATION WHERE GROUND WATER IS ENCOUNTERED. THIS EXTRA LAYER OF GRAVEL SHOULD BE COVERED WITH A GEOTEXTILE FABRIC TO PREVENT MATERIAL ABOVE THE GRAVEL FROM INFILTRATING THE GRAVEL LAYER. THEN, THE UTILITY TRENCH SHOULD BE FILLED IN COMPACTED LAYERS IN ACCORDANCE WITH THE CONSTRUCTION PLANS. THE WASTEWATER UTILITY TRENCH MUST THEN BE ALLOWED TO DAYLIGHT FROM ITS LOWEST POINT SUCH THAT WATER DOES NOT ACCUMULATE IN THE UTILITY TRENCH. ADDITIONAL GRAVEL MAY BE REQUIRED IN THE UTILITY TRENCH DEPENDING UPON THE DEPTH THAT GROUND WATER IS ENTERING THE UTILITY TRENCH DURING CONSTRUCTION. A LINE ITEM FOR FRENCH DRAINS SHOULD BE INCLUDED IN CONSTRUCTION BID DOCUMENTS.
4. THE SUBGRADE IMPROVEMENT SHOULD BE EXTENDED 18 INCHES BEYOND THE BACK OF THE CURB LINE.
5. THESE PAVEMENT THICKNESS DESIGNS ARE INTENDED TO TRANSFER THE LOAD FROM THE ANTICIPATED TRAFFIC CONDITIONS.
6. THE RESPONSIBILITY OF ASSIGNING STREET CLASSIFICATION TO THE STREETS IN THIS PROJECT IS LEFT TO THE CIVIL ENGINEER.
7. IF PAVEMENT DESIGNS OTHER THAN THOSE LISTED ABOVE ARE DESIRED, PLEASE CONTACT MLA GEOTECHNICAL.

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
GENERAL NOTES

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/3/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-MTS.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

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FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 2 OF 48 SHEETS

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
OVERALL PROJECT LAYOUT

CALCULATED 100-YR ATLAS-14 FLOODPLAIN

HUDSON PARK BONSMARA BLVD MAJOR IMPROVEMENTS

HUDSON PARK BONSMARA BLVD MAJOR IMPROVEMENTS

BONSMARA BLVD

RED DEVON BEND

RED POLL CR.

WATUSI LOOP

WATUSI LOOP

JERSEY BEND

JERSEY BEND

BLOCK 'A'

BLOCK 'A'

BLOCK 'A'

BLOCK 'C'

BLOCK 'D'

BLOCK 'E'

SIGHT CLEARANCE EASEMENT

PROJECT BOUNDARY

PROJECT BOUNDARY

FUTURE HUDSON PARK PHASE 3

50 25 0 50 100
SCALE IN FEET

LEGEND

- PROPERTY BOUNDARY
- R.O.W.
- 10' P.U.E.
- BUILDING SETBACK

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: K:\ONLE-PH1-LAYOUT.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

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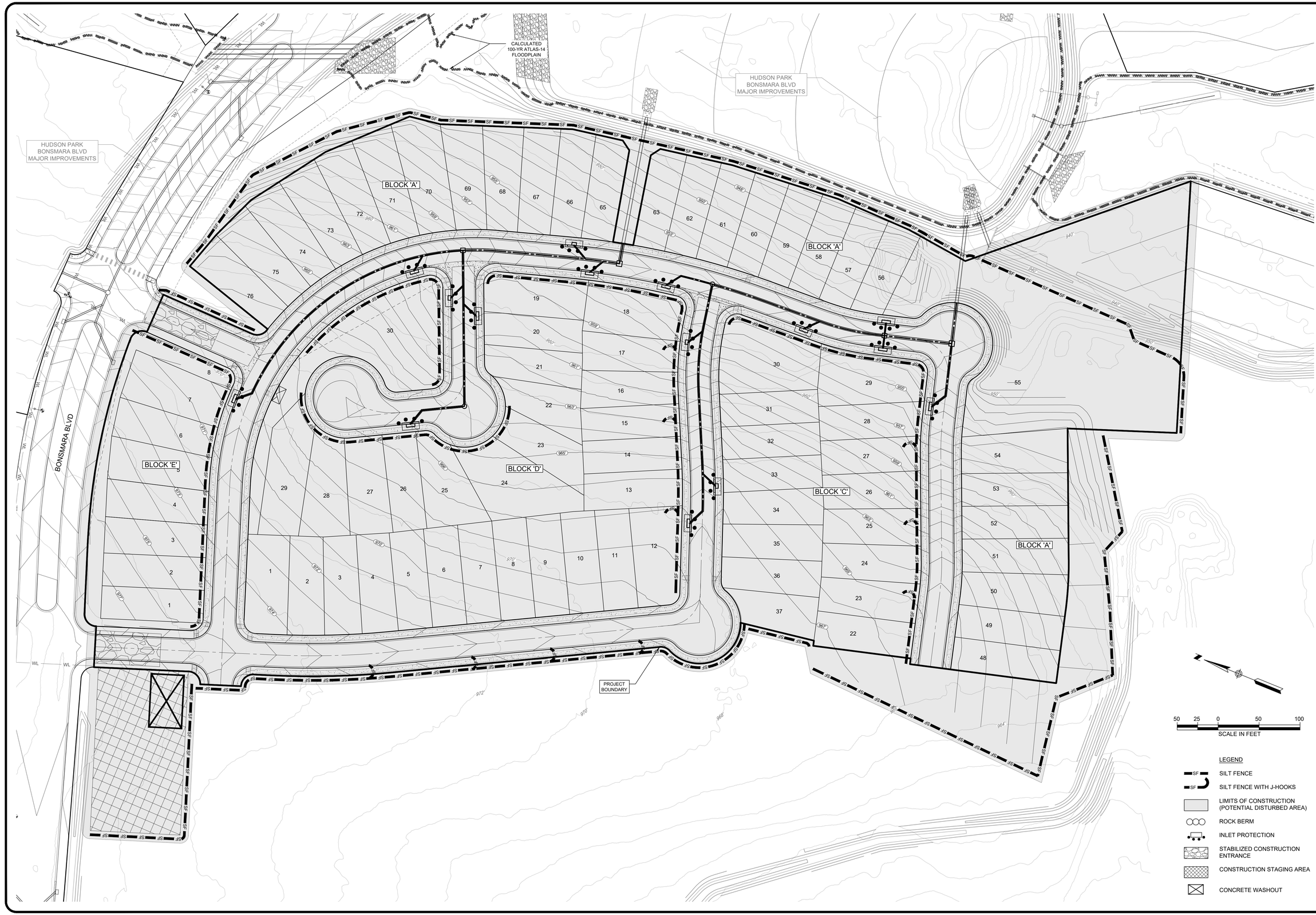
JOB NUMBER: A3336-2401

SHEET NO. 3 OF 48 SHEETS



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
EROSION / SEDIMENTATION CONTROL PLAN

NO.	DESCRIPTION	BY	DATE

REVISIONS

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-EROS.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
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JOB NUMBER: A3336-2401

SHEET NO. 4 OF 48 SHEETS

GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS

TYPE OF STRUCTURE	REACH LENGTH	MAXIMUM DRAINAGE AREA	SLOPE
SILT FENCE	N/A	2 ACRES	0 – 10%
	200 FEET	2 ACRES	10 – 20%
	100 FEET	1 ACRE	20 – 30%
	50 FEET	1/2 ACRE	> 30%
TRIANGLE FILTER DIKE	100 FEET	1/2 ACRE	< 30% SLOPE
	50 FEET	1/4 ACRE	> 30% SLOPE
ROCK BERM *, **	500 FEET	< 5 ACRES	0 – 10%

* FOR ROCK BERM DESIGN WHERE PARAMETERS ARE OTHER THAN STATED, DRAINAGE AREA CALCULATIONS AND ROCK BERM DESIGN MUST BE SUBMITTED FOR REVIEW.

** HIGH SERVICE ROCK BERMS MAY BE REQUIRED IN AREAS OF ENVIRONMENTAL SIGNIFICANCE AS DETERMINED BY THE CITY OF GEORGETOWN.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TEMPORARY EROSION AND SEDIMENTATION CONTROL GUIDELINES

DRAWING NAME: EC01 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

NOTE: THIS SECTION IS INTENDED TO ASSIST THOSE PERSONS PREPARING WATER POLLUTION ABATEMENT PLANS (WPAP) OR STORM WATER POLLUTION PREVENTION PLANS (SW3P) THAT COMPLY WITH FEDERAL, STATE AND/OR LOCAL STORM WATER REGULATIONS.

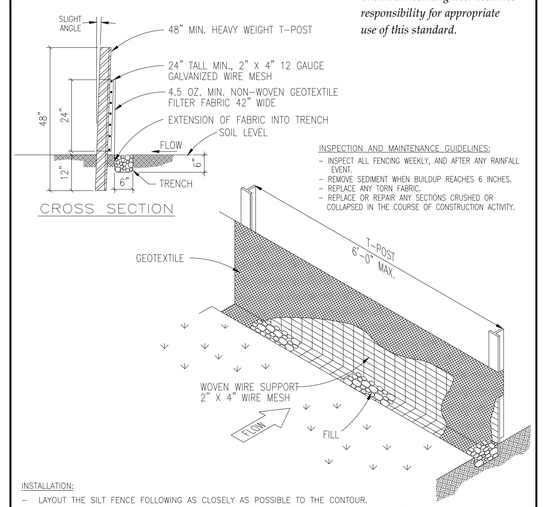
1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
4. ALL PLANTING SHALL BE DONE BETWEEN MAY 1 AND SEPTEMBER 15 EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING. IF PLANTING IS AUTHORIZED TO BE DONE OUTSIDE THE DATES SPECIFIED, THE SEED SHALL BE PLANTED WITH THE ADDITION OF WINTER FESCUE (KENTUCKY 31) AT A RATE OF 1000#/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE "A" RECENT CROP, RECLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
5. ALL DISTURBED AREAS TO BE RESTORED AS NOTED IN THE WATER POLLUTION ABATEMENT PLAN.
6. THE PLANTED AREA TO BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF FOUR (4) INCHES. THE IRRIGATION TO OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS . RAINFALL OCCURRENCES OF 1/2 INCH OR GREATER TO POSTPONE THE WATERING SCHEDULE ONE WEEK.
7. RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 95% *COVERAGE*, PROVIDED NO BARE SPOTS LARGER THAN 25 SQUARE FEET EXIST.
8. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL TO BE PLACED IN ALL AREAS DISTURBED BY CONSTRUCTION.
9. THE CONTRACTOR TO HYDROMULCH OR SOD (AS SHOWN ON PLANS) ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION.
10. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINE.
11. TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIPLINE AREAS.
12. WHERE A FENCE IS CLOSER THAN FOUR (4) FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT (8) FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE FENCING.
13. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
14. ANY ROOT EXPOSED BY CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
15. CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES").
16. THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/4 INCH TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL SITE. THE CONTRACTOR TO CONDUCT PERIODIC INSPECTIONS OF ALL EROSION/SEDIMENTATION CONTROLS AND TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
17. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR FEET (2'-4') BEHIND THE AREA IN QUESTION.
18. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES TO BE STORED ON THE PROJECT SITE.
19. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVE AND THE CONTRACTOR TO EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONSTRUCTION. ANY DAMAGE TO PREEXISTING EROSION AND SEDIMENTATION CONTROLS NOTED TO BE REPAIRED AT OWNERS EXPENSE.
20. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES

DRAWING NAME: EC01A | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



The Architect/Engineer assumes responsibility for appropriate use of this standard.

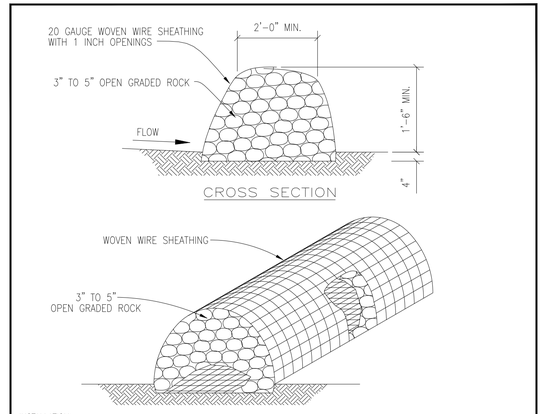
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
- REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
- REPLACE ANY TORN FABRIC.
- REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

INSTALLATION:
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY T-POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW.
- ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T-POST WITH 11 1/2 GAUGE GALVANIZED T-POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SILT FENCE DETAIL

DRAWING NAME: EC02 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



INSTALLATION:
- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE TO THE DESIGNATED HEIGHT.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE.
- SECURE WITH TIE WIRE.
- THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROX. 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

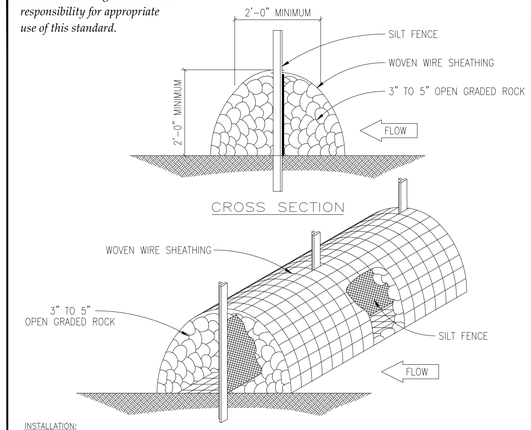
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
ROCK BERM DETAIL

DRAWING NAME: EC03 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.



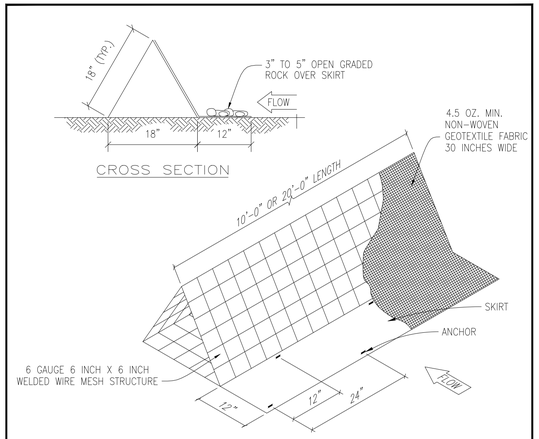
INSTALLATION:
- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
- INSTALL THE SILT FENCE ALONG THE CENTER OF THE PROPOSED BERM PLACEMENT. INSTALLATION SHOULD BE AS DESCRIBED IN DRAWING NO. EC-02 "SILT FENCE DETAIL".
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE AND ON BOTH SIDES OF THE SILT FENCE TO THE DESIGNATED HEIGHT.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE.
- SECURE WITH TIE WIRE.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE CONTRACTOR. FOR THE INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE ON ROCK BERM.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACES WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
HIGH SERVICE ROCK BERM DETAIL

DRAWING NAME: EC04 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



INSTALLATION:
- LAYOUT THE FILTER DIKE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE THE FILTER DIKE SECTIONS ONE AT A TIME, WITH THE SKIRT ON THE UPHILL SIDE TOWARDS THE DIRECTION OF FLOW, ANCHORING EACH SECTION TO THE GROUND BEFORE THE NEXT SECTION IS PLACED.
- ANCHORS SHOULD BE PLACED ON 2'-0" CENTERS ALTERNATING FROM FRONT TO BACK SO THAT THERE IS ACTUALLY ONLY 1'-0" IN BETWEEN ANCHORS.
- SECURELY FASTEN THE SKIRT FROM ONE SECTION OF FILTER DIKE TO THE NEXT.
- FILTER DIKES MUST MAINTAIN CONTINUOUS CONTACT WITH THE GROUND.
- AFTER THE SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHOULD BE REMOVED. SILT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

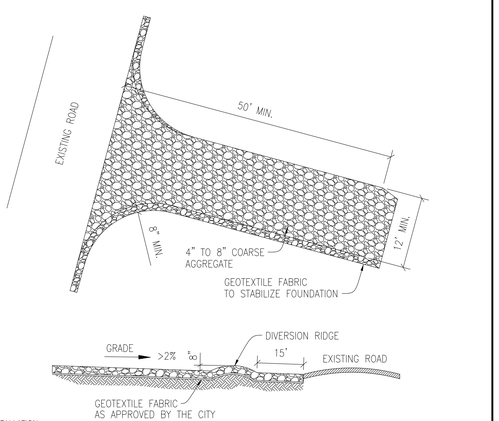
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- INSPECT AND REALIGN BERMS AS NEEDED TO PREVENT GAPS BETWEEN THE SECTIONS.
- ACCUMULATED SILT SHOULD BE REMOVED AFTER EACH RAINFALL EVENT, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRIANGULAR FILTER DIKE

DRAWING NAME: EC05 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



INSTALLATION:
- CLEAR THE AREA OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- GRADE THE AREA FOR THE ENTRANCE TO FLOW BACK ON TO THE CONSTRUCTION SITE. RUNOFF FROM THE STABILIZED CONSTRUCTION
- PLACE GEOTEXTILE FABRIC AS APPROVED BY THE CITY.
- PLACE ROCK AS APPROVED BY THE CITY.

INSPECTIONS AND MAINTENANCE GUIDELINES:
- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
- WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STABILIZED CONSTRUCTION ENTRANCE

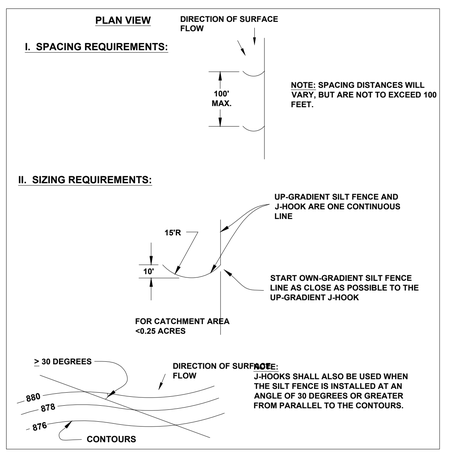
DRAWING NAME: EC06 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

SPOILS MANAGEMENT AND DISPOSAL NOTES

1. TEMPORARY HOLDING SITES AS NECESSARY TO STOCKPILE EXCAVATED SOILS, EMBEDMENT MATERIAL, AND/OR PIPING AND APPURTENANCES MAY BE LOCATED WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS.
2. NO PERMANENT SPOILS DISPOSAL SHALL BE ALLOWED ON-SITE, UNLESS APPROVED BY THE OWNER AND GOVERNING AUTHORITY.
3. ALL SPOILS MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED SPOIL DISPOSAL SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SECURING A PERMIT FOR THE SITE; AND SHALL NOTIFY THE OWNER AND/OR ENGINEER AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO DISPOSAL OF ANY SPOILS MATERIAL.

SILT FENCE 'J' HOOK DETAIL

N.T.S.



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
EROSION / SEDIMENTATION CONTROL PLAN
NOTES AND DETAILS (SHEET 1 OF 2)

NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-EROS.dwg

STATE OF TEXAS
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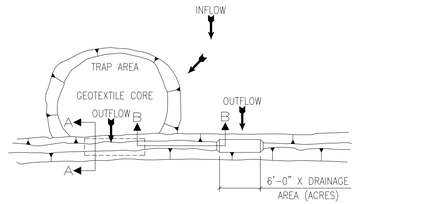
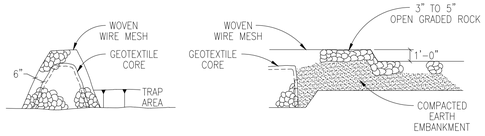
JOB NUMBER: A3336-2401

SHEET NO. 5 OF 48 SHEETS



PLAN VIEW



SECTION A–A SECTION B–B

INSTALLATION:

- LOCATE THE SEDIMENT TRAP SO AS TO DISTURB AS FEW TREES AS POSSIBLE.
- CLEAR AND GRUB THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MATS.
- LAYOUT THE WIRE MESH AND THEN THE GEOTEXTILE FABRIC.
- CONSTRUCT THE GEOTEXTILE CORE AND CORRESPONDING ROCK EMBANKMENT TO THE DESIGNATED HEIGHT AND CONFIGURATION.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE. SECURE WITH TIE WIRE.
- PLACE THE EMBANKMENT MATERIAL IN 8 TO 12 INCH LIFTS AND MACHINE COMPACT.

INSPECTION AND MAINTENANCE GUIDELINES:

- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- TRASH AND OTHER DEBRIS SHOULD BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF OF THE DESIGN DEPTH OF THE TRAP.
- SEDIMENT REMOVED FROM THE TRAP SHOULD BE DEPOSITED IN AN APPROVED SPOILS AREA AND IN SUCH A MANNER THAT IT WILL NOT CAUSE ADDITIONAL SILTATION.

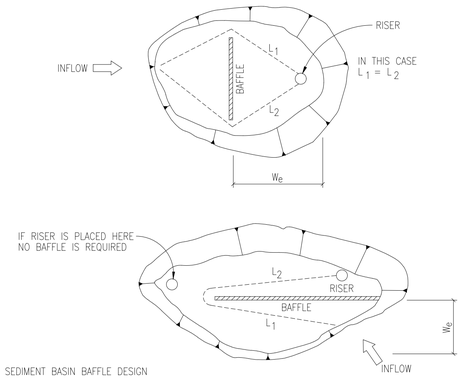
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEDIMENT TRAP DETAIL

DRAWING NAME: EC07

SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



SEDIMENT BASIN BAFFLE DESIGN

$W_e = A / (L_1 + L_2)$

W_e = EFFECTIVE WIDTH OF BASIN

A = SURFACE AREA OF BASIN WHEN FILLED TO RISER CREST

L_1, L_2 = SHORTEST TRAVEL DISTANCE AROUND THE BAFFLE FROM INLET TO OUTLET

INSPECTION AND MAINTENANCE GUIDELINES:

- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- TRASH AND OTHER DEBRIS SHOULD BE REMOVED AFTER EACH RAINFALL TO PREVENT CLOGGING OF THE OUTLET STRUCTURE.
- ACCUMULATED SILT SHOULD BE REMOVED AND THE BASIN SHOULD BE RE-GRADED TO ITS ORIGINAL DIMENSIONS AT SUCH POINT THAT THE CAPACITY OF THE IMPOUNDMENT HAS BEEN REDUCED TO 1/2 OF ITS ORIGINAL STORAGE CAPACITY.
- THE REMOVED SEDIMENT SHOULD BE STOCKPILED OR REDISTRIBUTED IN AREAS THAT ARE PROTECTED FROM EROSION.

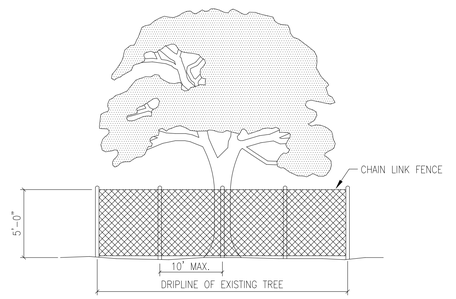
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEDIMENT BASIN BAFFLE DESIGN

DRAWING NAME: EC08

SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; WILL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
   C. WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
3. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   B. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.

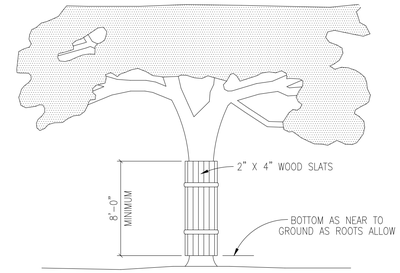
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TREE PROTECTION – CHAIN LINK FENCE

DRAWING NAME: EC09

SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. WHERE ANY EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN FOUR FEET (4'-0") TO A TREE TRUNK; PROTECT THE TRUNK WITH STRAPPED-ON-PLANKING TO A HEIGHT OF EIGHT FEET (8'-0"), OR TO THE LIMITS OF LOWER BRANCHING IN ADDITION TO THE REDUCED FENCING PROVIDED.
2. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO (2) DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE, AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
3. PRIOR EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINE, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
4. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
5. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
6. NO LANDSCAPE TOPSOIL DRESSING GREATER THE FOUR INCHES (4") SHALL BE PERMITTED WITHIN THE DRIPLINE OF A TREE. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
7. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.

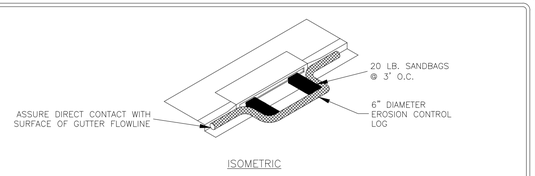
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

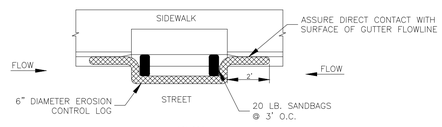
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TREE PROTECTION – WOOD SLATS

DRAWING NAME: EC10

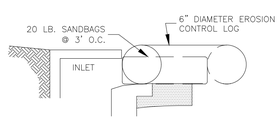
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



ISOMETRIC



PLAN

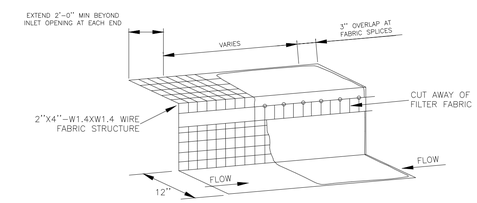


CROSS SECTION

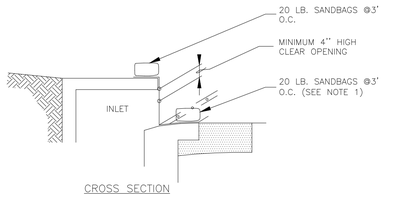
NOTES:

1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM WATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	CURB INLET PROTECTION WITH EROSION CONTROL LOG DETAIL	EC-13
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY



ISOMETRIC

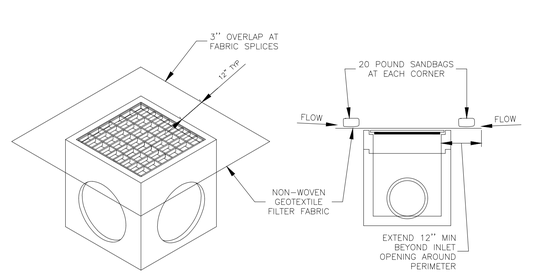


CROSS SECTION

NOTES:

1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1" X 4" BOARD SECURED WITH CONCRETE NAILS 3' O.C. NAILED INTO THE GUTTER IN LIEU OF SANDBAGS TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, CLEAN ANY DIRT/DEBRIS FROM NAILING LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH SURFACE OF GUTTER.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	CURB INLET PROTECTION DETAIL	EC-14
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY

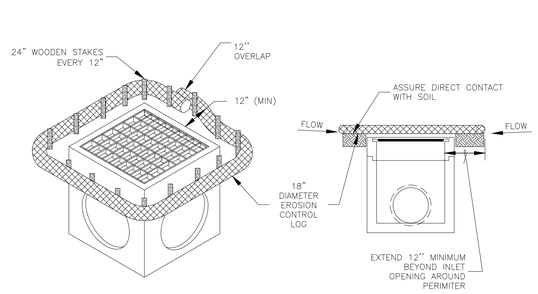


ISOMETRIC CROSS SECTION

NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
3. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	AREA INLET PROTECTION DETAIL	EC-15
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY



ISOMETRIC CROSS SECTION

NOTES:

1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	AREA INLET PROTECTION WITH EROSION CONTROL LOG DETAIL	EC-16
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PURPOSE. PASSION. PROSPERITY

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
EROSION / SEDIMENTATION CONTROL PLAN
NOTES AND DETAILS (SHEET 2 OF 2)

NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-EROS.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 6 OF 48 SHEETS

TIME OF CONCENTRATION

Reference: Chapter 3, Urban Hydrology for Small Watersheds, TR 55, USDA-SCS, June 1986

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
100	100	0.50%	Sheet	4.06	0.15	n/a	15.1
	648	2.80%	SCF (Unpaved)	n/a	n/a	2.7	4.0
	2111	n/a	Channel/SS	n/a	n/a	6	5.9
						Total:	25.0

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
300	100	0.50%	Sheet	4.06	0.15	n/a	15.1
	845	1.30%	SCF (Unpaved)	n/a	n/a	1.8	7.7
	4088	n/a	Channel/SS	n/a	n/a	6	11.4
						Total:	34.2

EXISTING

DRAINAGE AREA	AREA (AC)	AREA(MI)	CN	IC(AC)	IC(%)	Tc(MIN)
100	75.62	0.11816	80	1.13	1.5%	25.0
300	159.26	0.24884	80	0.33	0.2%	34.2

		OUTPUT FLOWS (CFS)							
		EXISTING				PROPOSED			
	DRAINAGE AREA	2-YR	10-YR	25-YR	100-YR	2-YR	10-YR	25-YR	100-YR
(100)	STUDY POINT A	146.0	275.1	363.7	507.3	146.0	271.3	357.6	496.9
(300)	STUDY POINT C	258.7	490.7	650.7	911.8	171.6	431.0	598.7	870.6

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
EXISTING CONDITIONS
DRAINAGE AREA MAP

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE:
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: I:\A3336\Hudson Park (Kemp)\Phase 1\Submittal Drawings\KONLE-PH1-DAM EXIST.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
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3/25/2025

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FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 7 OF 48 SHEETS

TIME OF CONCENTRATION

Reference: Chapter 3, Urban Hydrology for Small Watersheds, TR 55, USDA-SCS, June 1986

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
100	100	3.04%	Sheet	4.06	0.15	n/a	7.4
	548	2.66%	SCF (Unpaved)	n/a	n/a	2.6	3.5
	2068	n/a	Channel/SS	n/a	n/a	6	5.7
						Total:	**16.6**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
300A	100	0.50%	Sheet	4.06	0.15	n/a	15.1
	845	1.63%	SCF (Unpaved)	n/a	n/a	2.1	6.8
	654	n/a	Channel/SS	n/a	n/a	6	1.8
						Total:	**23.7**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
300A REACH	1187	n/a	Channel/SS	n/a	n/a	6	3.3
						Total:	**3.3**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
300B	100	1.82%	Sheet	4.06	0.15	n/a	9.0
	624	1.86%	SCF (Unpaved)	n/a	n/a	2.2	4.7
						Total:	**13.7**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
300B REACH	552	n/a	Channel/SS	n/a	n/a	6	1.5
						Total:	**1.5**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
300C	100	2.92%	Sheet	4.06	0.15	n/a	7.5
	669	1.97%	SCF (Unpaved)	n/a	n/a	2.3	4.9
						Total:	**12.4**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
300C REACH	506	2.74%	SCF (Unpaved)	n/a	n/a	2.7	3.2
	597	n/a	Channel/SS	n/a	n/a	6	1.7
						Total:	**4.9**

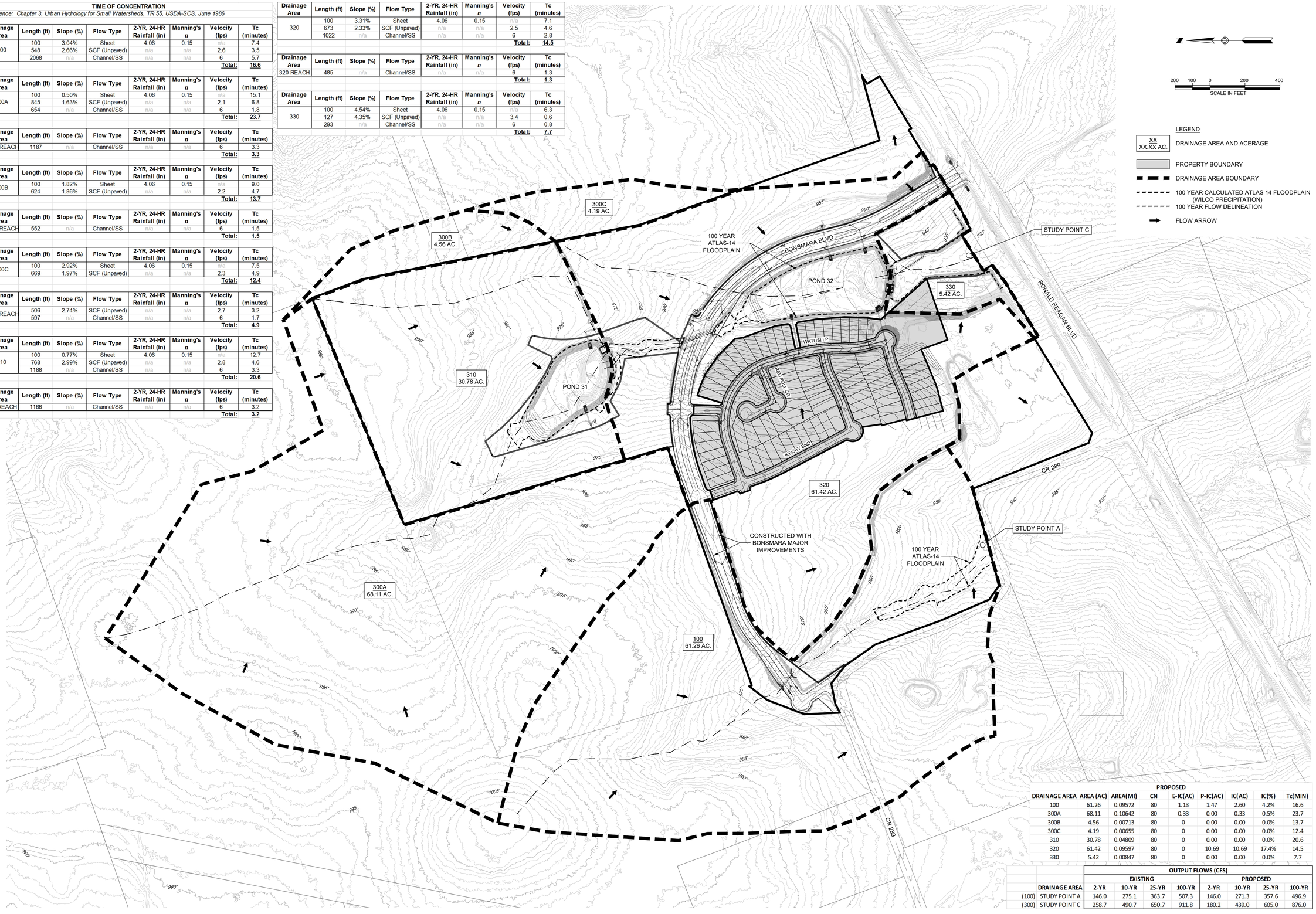
Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
310	100	0.77%	Sheet	4.06	0.15	n/a	12.7
	768	2.99%	SCF (Unpaved)	n/a	n/a	2.8	4.6
	1188	n/a	Channel/SS	n/a	n/a	6	3.3
						Total:	**20.6**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
310 REACH	1166	n/a	Channel/SS	n/a	n/a	6	3.2
						Total:	**3.2**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
320	100	3.31%	Sheet	4.06	0.15	n/a	7.1
	673	2.33%	SCF (Unpaved)	n/a	n/a	2.5	4.6
	1022	n/a	Channel/SS	n/a	n/a	6	2.8
						Total:	**14.5**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
320 REACH	485	n/a	Channel/SS	n/a	n/a	6	1.3
						Total:	**1.3**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
330	100	4.54%	Sheet	4.06	0.15	n/a	6.3
	127	4.35%	SCF (Unpaved)	n/a	n/a	3.4	0.6
	293	n/a	Channel/SS	n/a	n/a	6	0.8
						Total:	**7.7**



LEGEND

- XX / XX.XX AC. — DRAINAGE AREA AND ACREAGE
- PROPERTY BOUNDARY
- DRAINAGE AREA BOUNDARY
- 100 YEAR CALCULATED ATLAS 14 FLOODPLAIN (WILCO PRECIPITATION)
- 100 YEAR FLOW DELINEATION
- FLOW ARROW

200 100 0 200 400
SCALE IN FEET

PROPOSED								
DRAINAGE AREA	AREA (AC)	AREA(MI)	CN	E-IC(AC)	P-IC(AC)	IC(AC)	IC(%)	Tc(MIN)
100	61.26	0.09572	80	1.13	1.47	2.60	4.2%	16.6
300A	68.11	0.10642	80	0.33	0.00	0.33	0.5%	23.7
300B	4.56	0.00713	80	0	0.00	0.00	0.0%	13.7
300C	4.19	0.00655	80	0	0.00	0.00	0.0%	12.4
310	30.78	0.04809	80	0	0.00	0.00	0.0%	20.6
320	61.42	0.09597	80	0	10.69	10.69	17.4%	14.5
330	5.42	0.00847	80	0	0.00	0.00	0.0%	7.7

		OUTPUT FLOWS (CFS)							
		EXISTING				PROPOSED			
	DRAINAGE AREA	2-YR	10-YR	25-YR	100-YR	2-YR	10-YR	25-YR	100-YR
(100)	STUDY POINT A	146.0	275.1	363.7	507.3	146.0	271.3	357.6	496.9
(300)	STUDY POINT C	258.7	490.7	650.7	911.8	180.2	439.0	605.0	876.0

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
PROPOSED CONDITIONS
DRAINAGE AREA MAP

NO.	DESCRIPTION	BY	DATE

DATE:
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: I:\A3336\Hudson Park (Kendy)\Phase 1\Submittal Drawings\KONE-PH1-DAM PROP.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 8 OF 48 SHEETS

I:\A3336\Hudson Park (Kendy)\Phase 1\Submittal Drawings\KONE-PH1-DAM PROP.dwg
User: lreskmons
Last Modified: Mar. 18, 25 - 10:22
Plot Date/Time: Mar. 25, 25 - 14:42:09

TIME OF CONCENTRATION

Reference: Chapter 3, Urban Hydrology for Small Watersheds, TR 55, USDA-SCS, June 1986

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
100	100	0.50%	Sheet	4.06	0.15	n/a	15.1
	648	2.80%	SCF (Unpaved)	n/a	n/a	2.7	4.0
	2111	n/a	Channel/SS	n/a	n/a	6	5.9
						Total:	**25.0**
200	100	0.50%	Sheet	4.06	0.15	n/a	15.1
	431	2.30%	SCF (Unpaved)	n/a	n/a	2.4	2.9
						Total:	**18.0**
300	100	0.50%	Sheet	4.06	0.15	n/a	15.1
	845	1.30%	SCF (Unpaved)	n/a	n/a	1.8	7.7
	4088	n/a	Channel/SS	n/a	n/a	6	11.4
						Total:	**34.2**
400	100	1.50%	Sheet	4.06	0.15	n/a	9.8
	367	4.90%	SCF (Unpaved)	n/a	n/a	3.6	1.7
						Total:	**11.5**

EXISTING

DRAINAGE AREA	AREA (AC)	AREA(MI)	CN	IC(AC)	IC(%)	Tc(MIN)
100	75.62	0.11816	80	1.13	1.5%	25.0
200	7.76	0.01213	80	0	0.0%	18.0
300	159.26	0.24884	80	0.33	0.2%	34.2
400	2.86	0.00447	80	0.03	1.0%	11.5

SCALE IN FEET: 400 200 0 400 800

LEGEND

- XX / XX.XX AC. — DRAINAGE AREA AND ACERAGE
- PROPERTY BOUNDARY
- DRAINAGE AREA BOUNDARY
- 100 YEAR CALCULATED ATLAS 14 FLOODPLAIN (WILCO PRECIPITATION)
- FLOW ARROW

OUTPUT FLOWS (CFS)

	DRAINAGE AREA	EXISTING 2-YR	EXISTING 10-YR	EXISTING 25-YR	EXISTING 100-YR	PROPOSED 2-YR	PROPOSED 10-YR	PROPOSED 25-YR	PROPOSED 100-YR
(100)	STUDY POINT A	146.0	275.1	363.7	507.3	105.2	270.9	355.8	495.4
(200)	STUDY POINT B	17.4	32.8	43.4	60.5	17.3	26.5	32.8	42.9
(300)	STUDY POINT C	258.7	490.7	650.7	911.8	195.1	431.9	582.7	832.4
(400)	STUDY POINT D	7.7	14.5	19.2	26.7	7.2	11.0	13.5	17.7

TIME OF CONCENTRATION

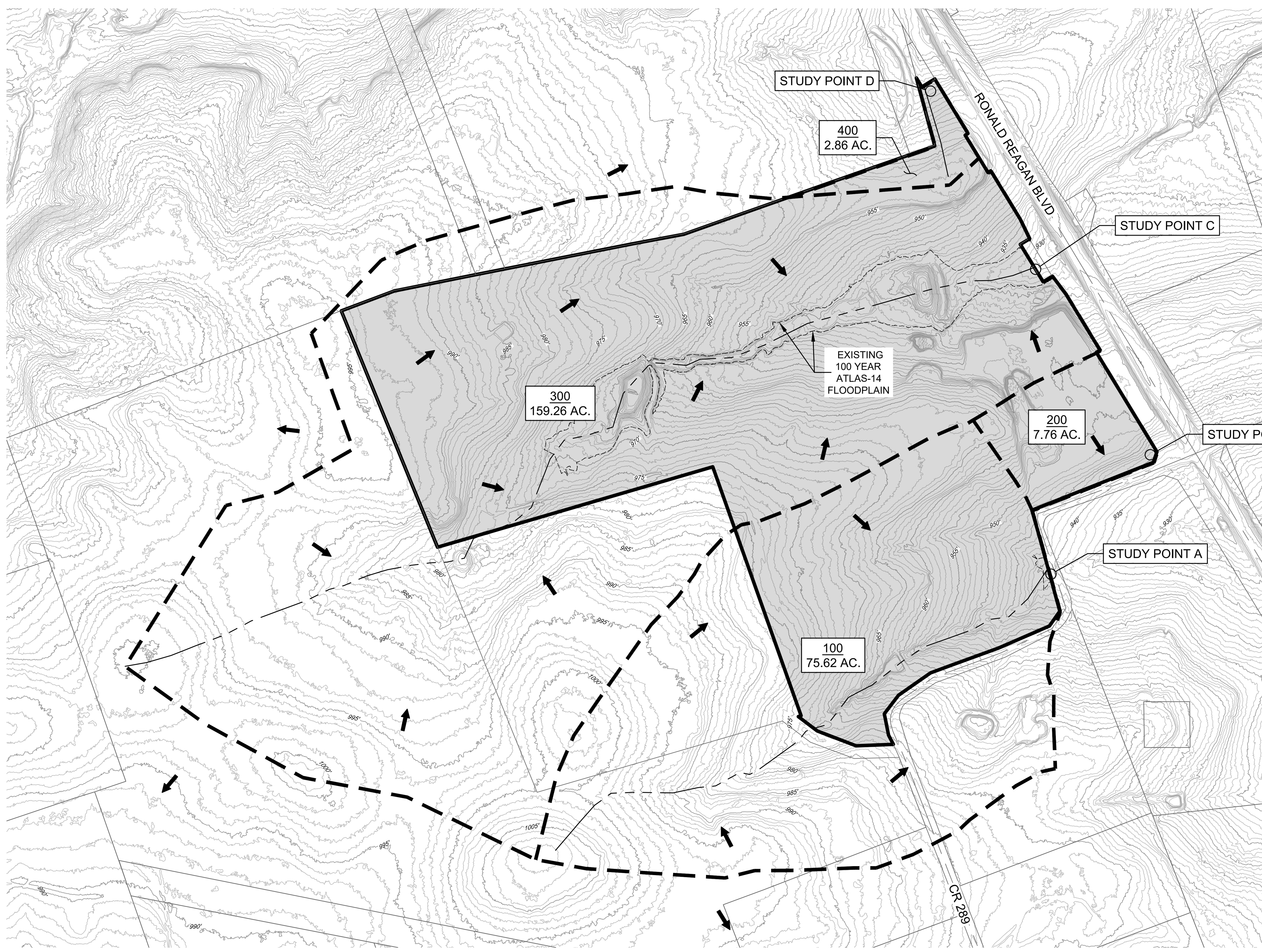
Reference: Chapter 3, Urban Hydrology for Small Watersheds, TR 55, USDA-SCS, June 1986

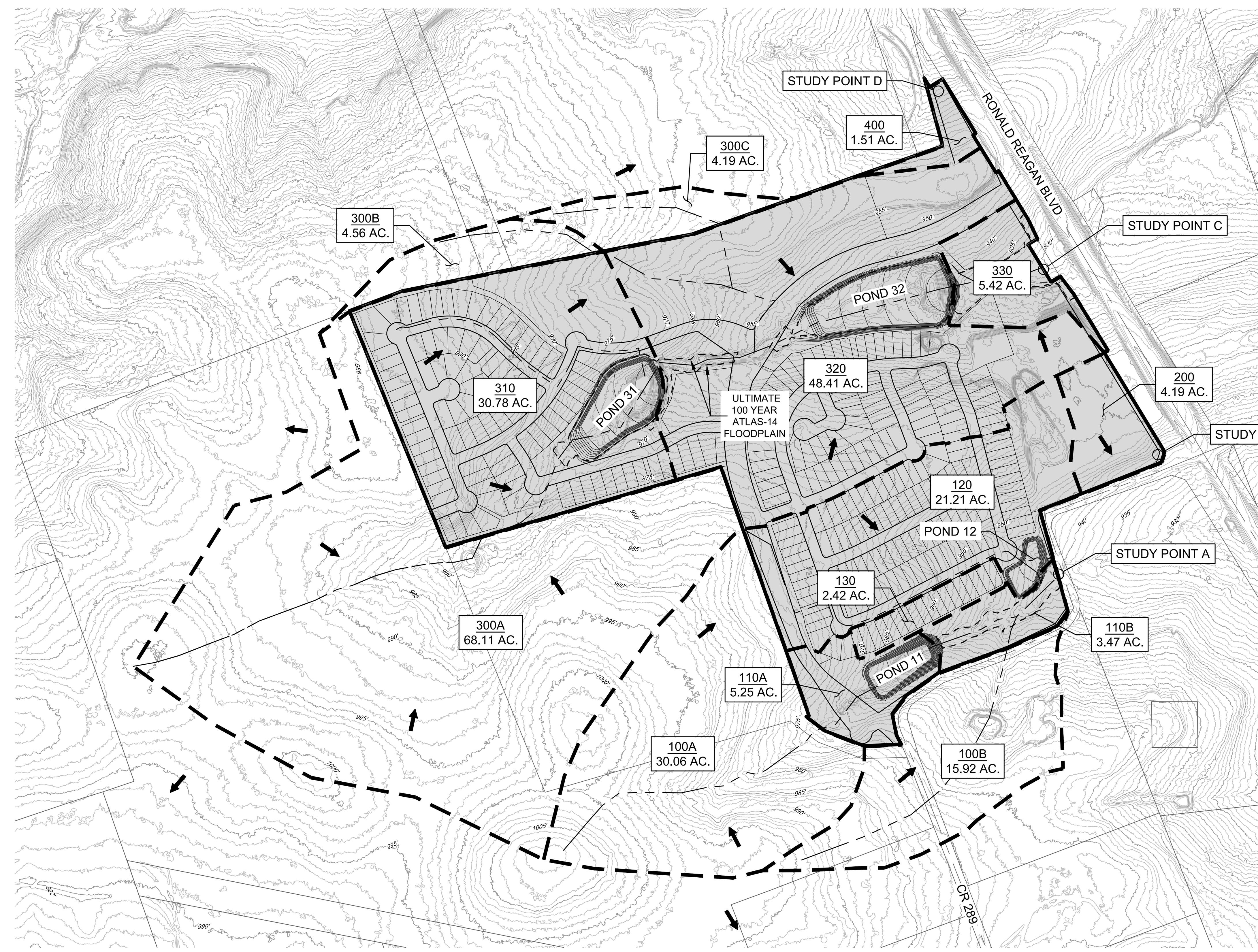
Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
100A	100	3.04%	Sheet	4.06	0.15	n/a	7.4
	548	2.66%	SCF (Unpaved)	n/a	n/a	2.6	3.5
	731	n/a	Channel/SS	n/a	n/a	6	2.0
						Total:	**12.9**
100B	100	2.54%	Sheet	4.06	0.15	n/a	7.9
	1061	3.10%	SCF (Unpaved)	n/a	n/a	2.8	6.2
	663	n/a	Channel/SS	n/a	n/a	6	1.8
						Total:	**15.9**
110A	100	4.10%	Sheet	4.06	0.15	n/a	6.5
	195	6.62%	SCF (Unpaved)	n/a	n/a	4.1	0.8
	946	n/a	Channel/SS	n/a	n/a	6	2.6
						Total:	**9.9**
110B	645	n/a	Channel/SS	n/a	n/a	6	1.8
						Total:	**1.8**
120	100	3.36%	Sheet	4.06	0.15	n/a	7.1
	46	2.57%	SCF (Unpaved)	n/a	n/a	2.6	0.3
	1675	n/a	Channel/SS	n/a	n/a	6	4.7
						Total:	**12.1**
130	100	5.00%	Sheet	4.06	0.15	n/a	6.0
						Total:	**6.0**
200	100	5.63%	Sheet	4.06	0.15	n/a	5.7
	293	0.26%	SCF (Unpaved)	n/a	n/a	0.8	5.9
						Total:	**11.6**

Drainage Area	Length (ft)	Slope (%)	Flow Type	2-YR, 24-HR Rainfall (in)	Manning's *n*	Velocity (fps)	Tc (minutes)
300A	100	0.50%	Sheet	4.06	0.15	n/a	15.1
	845	1.63%	SCF (Unpaved)	n/a	n/a	2.1	6.8
	654	n/a	Channel/SS	n/a	n/a	6	1.8
						Total:	**23.7**
300B	100	1.82%	Sheet	4.06	0.15	n/a	9.0
	624	1.86%	SCF (Unpaved)	n/a	n/a	2.2	4.7
						Total:	**13.7**
300C	100	2.92%	Sheet	4.06	0.15	n/a	7.5
	669	1.97%	SCF (Unpaved)	n/a	n/a	2.3	4.9
						Total:	**12.4**
310	100	1.48%	Sheet	4.06	0.15	n/a	9.8
	135	0.79%	SCF (Unpaved)	n/a	n/a	1.4	1.6
	1466	n/a	Channel/SS	n/a	n/a	6	4.1
						Total:	**15.5**
320	100	3.31%	Sheet	4.06	0.15	n/a	7.1
	673	2.33%	SCF (Unpaved)	n/a	n/a	2.5	4.6
	1022	n/a	Channel/SS	n/a	n/a	6	2.8
						Total:	**14.5**
330	100	4.54%	Sheet	4.06	0.15	n/a	6.3
	127	4.35%	SCF (Unpaved)	n/a	n/a	3.4	0.6
	293	n/a	Channel/SS	n/a	n/a	6	0.8
						Total:	**7.7**
400	100	4.44%	Sheet	4.06	0.15	n/a	6.3
	267	5.01%	SCF (Unpaved)	n/a	n/a	3.6	1.2
						Total:	**7.5**

PROPOSED

DRAINAGE AREA	AREA (AC)	AREA(MI)	CN	E-IC(AC)	P-IC(AC)	IC(AC)	IC(%)	Tc(MIN)
100A	30.06	0.04697	80	0.33	0.00	0.33	1.1%	12.9
100B	15.92	0.02488	80	0.8	0.00	0.80	5.0%	15.9
110A	5.25	0.00820	80	0	0.83	0.83	15.7%	9.9
110B	3.47	0.00542	80	0	0.00	0.00	0.0%	1.8
120	21.21	0.03314	80	0	10.05	10.05	47.4%	12.1
130	2.42	0.00378	80	0	1.03	1.03	42.7%	6.0
200	4.19	0.00655	80	0	3.33	3.33	79.4%	11.6
300A	68.11	0.10642	80	0.33	0.00	0.33	0.5%	23.7
300B	4.56	0.00713	80	0	0.00	0.00	0.0%	13.7
300C	4.19	0.00655	80	0	0.00	0.00	0.0%	12.4
310	30.78	0.04809	80	0	10.45	10.45	34.0%	15.5
320	48.41	0.07564	80	0	19.87	19.87	41.0%	14.5
330	5.42	0.00847	80	0	1.19	1.19	21.9%	7.7
400	1.51	0.00236	80	0.03	1.21	1.24	82.0%	7.5





HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
ULTIMATE CONDITIONS
DRAINAGE AREA MAP

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE:
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-DAM ULT.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
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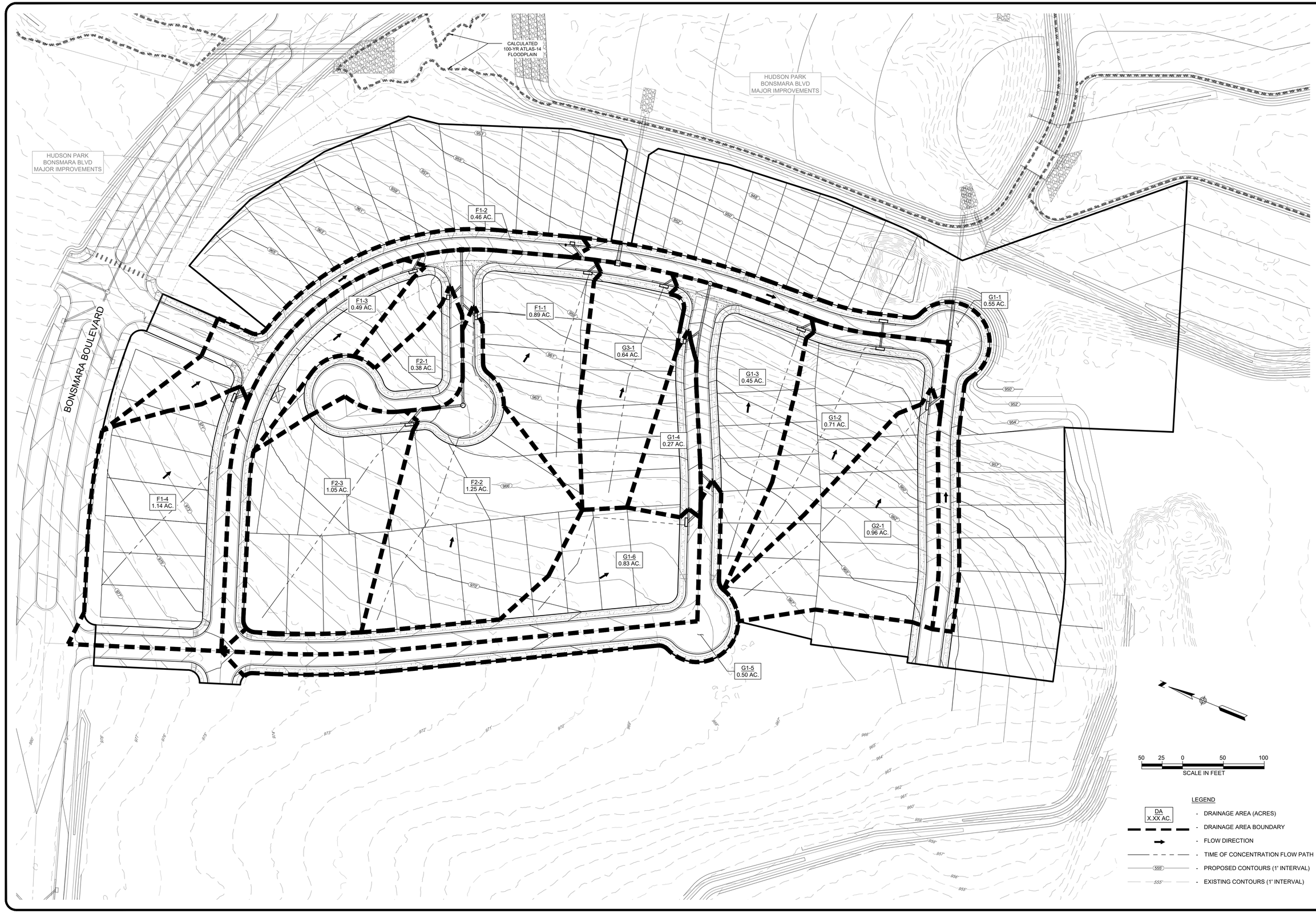
FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 9 OF 48 SHEETS



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
ON-SITE DRAINAGE AREA MAP

NO.	DESCRIPTION	BY	DATE

REVISIONS

DATE: _____
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: I:\KONLE-PH1-DAM-OS.dwg

STATE OF TEXAS
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SHEET NO. 10 OF 48 SHEETS

RATIONAL METHOD PEAK RUNOFF CALCULATIONS

DRAINAGE AREA	ACRE	T_c	I.C. (%)	$C_{DEV,2\,YR}$	$C_{DEV,10\,YR}$	$C_{DEV,25\,YR}$	$C_{DEV,100\,YR}$	$i_{2\,YR}$ (in/hr)	$i_{10\,YR}$ (in/hr)	$i_{25\,YR}$ (in/hr)	$i_{100\,YR}$ (in/hr)	$Q_{2\,YR}$ (cfs)	$Q_{10\,YR}$ (cfs)	$Q_{25\,YR}$ (cfs)	$Q_{100\,YR}$ (cfs)
F1-1	0.89	10	50%	**0.51**	**0.58**	**0.63**	**0.71**	4.91	7.26	8.78	11.23	**2.23**	**3.75**	**4.92**	**7.10**
F1-2	0.46	10	62%	**0.56**	**0.64**	**0.68**	**0.76**	4.91	7.26	8.78	11.23	**1.26**	**2.14**	**2.75**	**3.93**
F1-3	0.49	10	54%	**0.53**	**0.60**	**0.64**	**0.72**	4.91	7.26	8.78	11.23	**1.28**	**2.13**	**2.75**	**3.96**
F1-4	1.14	10	50%	**0.51**	**0.58**	**0.63**	**0.71**	4.91	7.26	8.78	11.23	**2.85**	**4.80**	**6.31**	**9.09**
F2-1	0.38	10	52%	**0.52**	**0.59**	**0.63**	**0.71**	4.91	7.26	8.78	11.23	**0.97**	**1.63**	**2.10**	**3.03**
F2-2	1.25	10	49%	**0.51**	**0.58**	**0.62**	**0.70**	4.91	7.26	8.78	11.23	**3.13**	**5.26**	**6.80**	**9.83**
F2-3	1.05	10	46%	**0.49**	**0.56**	**0.61**	**0.69**	4.91	7.26	8.78	11.23	**2.53**	**4.27**	**5.62**	**8.14**
G1-1	0.55	10	83%	**0.66**	**0.73**	**0.78**	**0.87**	4.91	7.26	8.78	11.23	**1.78**	**2.91**	**3.77**	**5.37**
G1-2	0.71	10	47%	**0.50**	**0.57**	**0.61**	**0.69**	4.91	7.26	8.78	11.23	**1.74**	**2.94**	**3.80**	**5.50**
G1-3	0.45	10	88%	**0.68**	**0.75**	**0.80**	**0.89**	4.91	7.26	8.78	11.23	**1.50**	**2.45**	**3.16**	**4.50**
G1-4	0.27	10	57%	**0.54**	**0.61**	**0.66**	**0.74**	4.91	7.26	8.78	11.23	**0.72**	**1.20**	**1.56**	**2.24**
G1-5	0.50	10	83%	**0.66**	**0.73**	**0.78**	**0.87**	4.91	7.26	8.78	11.23	**1.62**	**2.65**	**3.42**	**4.89**
G1-6	0.83	10	60%	**0.55**	**0.63**	**0.67**	**0.75**	4.91	7.26	8.78	11.23	**2.24**	**3.80**	**4.88**	**6.99**
G2-1	0.96	10	59%	**0.55**	**0.62**	**0.67**	**0.75**	4.91	7.26	8.78	11.23	**2.59**	**4.32**	**5.65**	**8.09**
G3-1	0.64	10	52%	**0.52**	**0.59**	**0.63**	**0.71**	4.91	7.26	8.78	11.23	**1.63**	**2.74**	**3.54**	**5.10**

INLET CALCULATIONS FOR 25-YR STORM (ALL INLETS ARE TYPE 1 ON-GRADE, UNLESS INDICATED AS SUMP)

DRAINAGE AREA / INLET NO.	FLOW (CFS)	CARRY OVER (CFS)	CARRY OVER TO	TOTAL RUNOFF Q_a (CFS)	STREET WIDTH (FT)	ROAD SLOPE S (%)	GUTTER DEP. A , (IN)	STREET CAPACITY (CFS)	WATER DEPTH Y_o , (FT)	PONDING WIDTH (FT)	Q_X OVER (CFS)	Q_a / L_a (CFS/FT)	L_a (FT)	L (FT)	L / L_a	A / Y_o	$Q_{CAPTURE}$ / Q_a	$Q_{CAPTURE}$ (CFS)	Q_{BYPASS} (CFS)
F1-1	4.92	0.00	G3-1	4.92	30.0	1.39	5.75	8.3	0.25	12.3	0.0	0.8	6.0	10	1.7	1.9	1.00	4.92	0.00
F1-2	2.75	0.00	G1-1	2.75	30.0	1.39	5.75	8.3	0.20	9.9	0.0	0.8	3.6	5	1.4	2.4	1.00	2.75	0.00
F1-3	2.75	0.00	F1-1	2.75	30.0	3.62	5.75	13.4	0.17	8.3	0.0	0.7	3.7	10	2.7	2.9	1.00	2.75	0.00
F1-4	6.31	0.00	F1-2	6.31	30.0	1.83	5.75	9.5	0.26	12.8	0.0	0.8	7.6	10	1.3	1.9	1.00	6.31	0.00
F2-1	2.10	0.00	F1-1	2.10	30.0	4.19	5.75	14.4	0.15	7.3	0.0	0.7	2.9	5	1.7	3.3	1.00	2.10	0.00
F2-2	6.80	0.00	F1-1	6.80	30.0	4.19	5.75	14.4	0.23	11.3	0.0	0.8	8.5	10	1.2	2.1	1.00	6.80	0.00
F2-3	5.62	0.00	F2-2	5.62	30.0	1.83	5.75	9.5	0.25	12.3	0.0	0.8	6.8	10	1.5	1.9	1.00	5.62	0.00
G1-1	3.77	0.00	SUMP	3.77	30.0	REFERENCE SUMP INLET CALCULATIONS													
G1-2	3.80	0.00	SUMP	3.80	30.0	REFERENCE SUMP INLET CALCULATIONS													
G1-3	3.16	0.00	G1-2	3.16	30.0	1.39	5.75	8.3	0.21	10.4	0.0	0.8	4.0	10	2.5	2.3	1.00	3.16	0.00
G1-4	1.56	0.00	G1-3	1.56	30.0	1.39	5.75	8.3	0.16	8.0	0.0	0.7	2.1	5	2.4	3.0	1.00	1.56	0.00
G1-5	3.42	0.00	G1-3	3.42	30.0	1.17	5.75	7.6	0.22	11.1	0.0	0.8	4.3	5	1.2	2.2	1.00	3.42	0.00
G1-6	4.88	0.00	G1-4	4.88	30.0	1.17	5.75	7.6	0.25	12.7	0.0	0.8	5.9	10	1.7	1.9	1.00	4.88	0.00
G2-1	5.65	0.00	G1-2	5.65	30.0	3.82	5.75	13.8	0.21	10.7	0.0	0.8	7.2	10	1.4	2.2	1.00	5.65	0.00
G3-1	3.54	0.00	G1-3	3.54	30.0	1.39	5.75	8.3	0.22	10.9	0.0	0.8	4.5	10	2.2	2.2	1.00	3.54	0.00

INLET CALCULATIONS FOR 100-YR STORM (ALL INLETS ARE TYPE 1 ON-GRADE, UNLESS INDICATED AS SUMP)

DRAINAGE AREA / INLET NO.	FLOW (CFS)	CARRY OVER (CFS)	CARRY OVER TO	TOTAL RUNOFF Q_a (CFS)	STREET WIDTH (FT)	ROAD SLOPE (%)	GUTTER DEP. A , (IN)	STREET CAPACITY (CFS)	WATER DEPTH Y_o , (FT)	PONDING WIDTH (FT)	Q_X OVER (CFS)	Q_a / L_a (CFS/FT)	L_a (FT)	L (FT)	L / L_a	A / Y_o	$Q_{CAPTURE}$ / Q_a	$Q_{CAPTURE}$ (CFS)	Q_{BYPASS} (CFS)
F1-1	7.10	1.08	G3-1	8.18	30.0	1.39	5.75	8.3	0.30	14.9	0.0	0.9	9.3	10	1.1	1.6	1.00	8.18	0.00
F1-2	3.93	0.24	G1-1	4.17	30.0	1.39	5.75	8.3	0.23	11.6	0.0	0.8	5.2	5	1.0	2.1	0.98	4.07	0.10
F1-3	3.96	0.00	F1-1	3.96	30.0	3.62	5.75	13.4	0.19	9.5	0.0	0.8	5.2	10	1.9	2.5	1.00	3.96	0.00
F1-4	9.09	0.00	F1-2	9.09	30.0	1.83	5.75	9.5	0.29	14.7	0.0	0.9	10.4	10	1.0	1.6	0.97	8.85	0.24
F2-1	3.03	0.00	F1-1	3.03	30.0	4.19	5.75	14.4	0.17	8.4	0.0	0.7	4.1	5	1.2	2.9	1.00	3.03	0.00
F2-2	9.83	0.00	F1-1	9.83	30.0	4.19	5.75	14.4	0.26	13.0	0.0	0.8	11.8	10	0.9	1.8	0.89	8.75	1.08
F2-3	8.14	0.00	F2-2	8.14	30.0	1.83	5.75	9.5	0.28	14.1	0.0	0.9	9.5	10	1.1	1.7	1.00	8.14	0.00
G1-1	5.37	0.10	SUMP	5.47	30.0	REFERENCE SUMP INLET CALCULATIONS													
G1-2	5.50	0.00	SUMP	5.50	30.0	REFERENCE SUMP INLET CALCULATIONS													
G1-3	4.50	0.55	G1-2	5.05	30.0	1.39	5.75	8.3	0.25	12.4	0.0	0.8	6.1	10	1.6	1.9	1.00	5.05	0.00
G1-4	2.24	0.00	G1-3	2.24	30.0	1.39	5.75	8.3	0.18	9.2	0.0	0.8	3.0	5	1.7	2.6	1.00	2.24	0.00
G1-5	4.89	0.00	G1-3	4.89	30.0	1.17	5.75	7.6	0.25	12.7	0.0	0.8	5.9	5	0.8	1.9	0.89	4.34	0.55
G1-6	6.99	0.00	G1-4	6.99	30.0	1.17	5.75	7.6	0.29	14.5	0.0	0.9	8.0	10	1.2	1.7	1.00	6.99	0.00
G2-1	8.09	0.00	G1-2	8.09	30.0	3.82	5.75	13.8	0.25	12.3	0.0	0.8	9.8	10	1.0	2.0	1.00	8.09	0.00
G3-1	5.10	0.00	G1-3	5.10	30.0	1.39	5.75	8.3	0.25	12.5	0.0	0.8	6.2	10	1.6	1.9	1.00	5.10	0.00

25-YR SUMP INLET CALCULATIONS $Q_{CAP} = C_w * L * h^{1.5}$

DRAINAGE AREA / INLET NO.	25 YR FLOW, Q (CFS)	INLET LENGTH, L (FT)	COEFF, C_w	ALLOWABLE HEAD, h (FT)	CAPACITY, Q_{CAP} (CFS)	$Q < Q_{CAP}$
G1-1	3.77	10	3.087	0.3	5.07	**OK**
G1-2	3.80	10	3.087	0.3	5.07	**OK**

100-YR SUMP INLET CALCULATIONS $Q_{CAP} = C_w * L * h^{1.5}$

DRAINAGE AREA / INLET NO.	100 YR FLOW, Q (CFS)	INLET LENGTH, L (FT)	COEFF, C_w	ALLOWABLE HEAD, h (FT)	CAPACITY, Q_{CAP} (CFS)	$Q < Q_{CAP}$
G1-1	5.47	10	3.087	0.7	18.08	**OK**
G1-2	5.50	10	3.087	0.7	18.08	**OK**

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
ON-SITE DRAINAGE AREA MAP CALCULATIONS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE:
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: L:\ONLE-PH1-DAM OS.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

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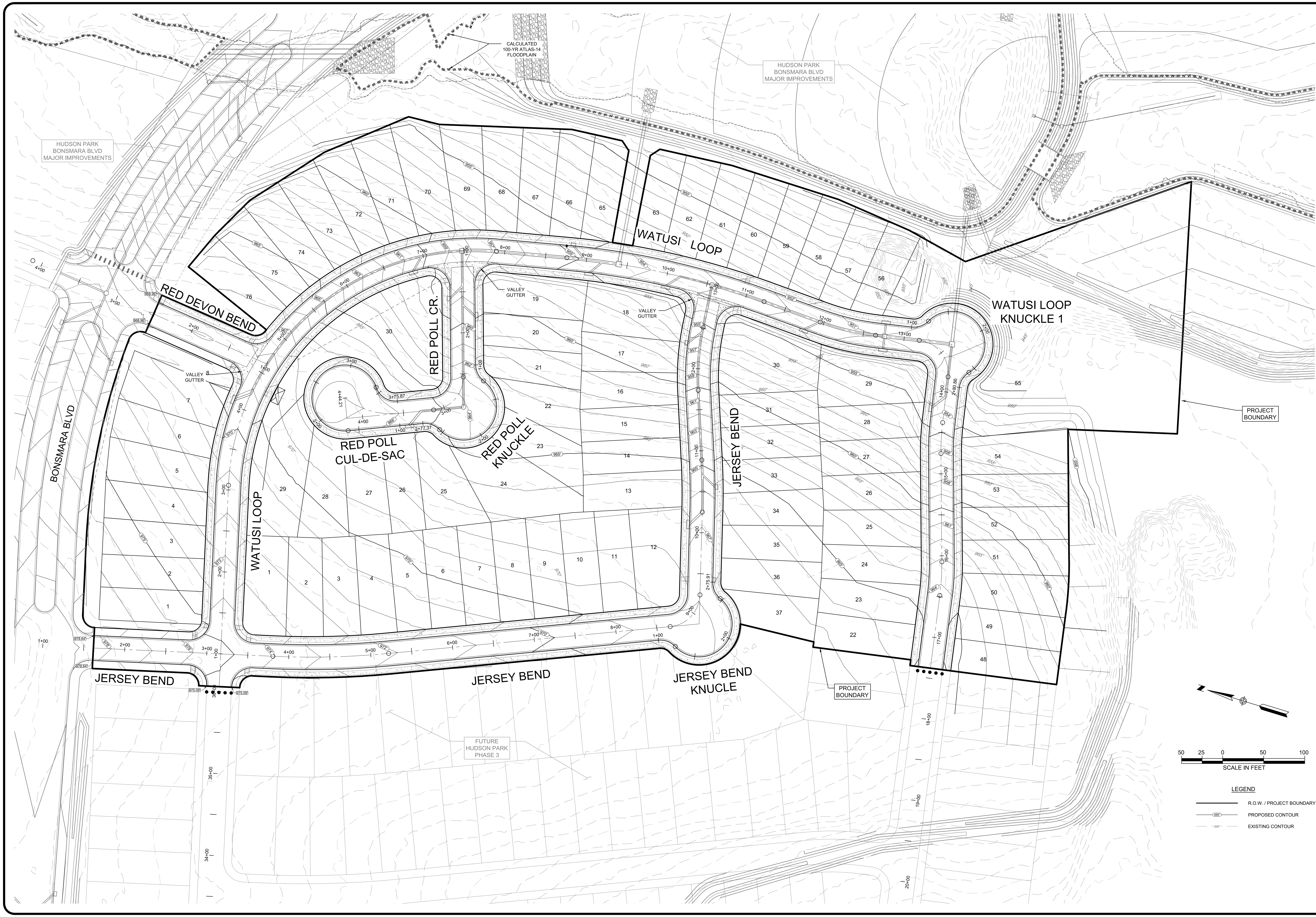
JOB NUMBER: A3336-2401

SHEET NO. 11 OF 48 SHEETS



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
OVERALL GRADING LAYOUT

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-STREETS.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

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Austin, Texas 78735
Phone 512.439.4700
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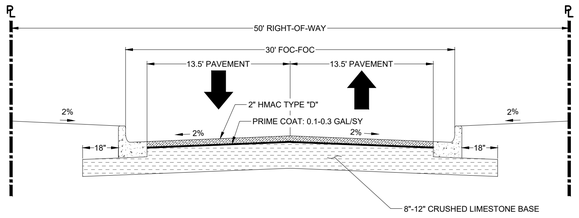
FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 12 OF 48 SHEETS



50' LOCAL STREET

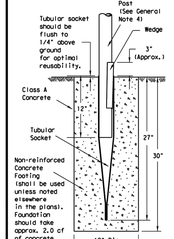
N.T.S.

PLEASE NOTE:

PAVEMENT SECTION SHALL BE BUILT IN ACCORDANCE WITH RECOMMENDATIONS MADE BY MLA GEOTECHNICAL IN THEIR REPORT "GEOTECHNICAL INVESTIGATION PAVEMENT THICKNESS RECOMMENDATIONS - HUDSON PARK (KONLE) GEORGETOWN, TEXAS".

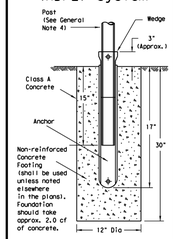
DATE:
FILE:

Wedge Anchor Steel System



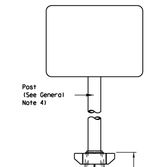
SM RD SGN ASSM TY TWT(X)WS(X)

Wedge Anchor High Density Polyethylene (HDPE) System

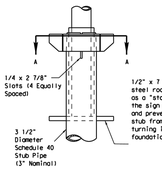


SMD RD SGN ASSM TY TWT(X)WP(X)

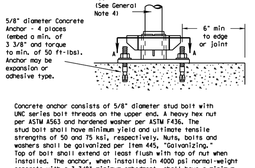
Universal Anchor System with Thin-Walled Tubing Post



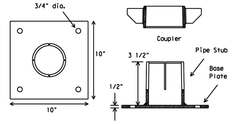
SM RD SGN ASSM TY TWT(X)UA(P)



Plastic Insert must be used when using the TWT with either the Universal Anchor System or the Bolt Down Universal Anchor System. The insert should be approx. 10" long and cover the tubing from just above the top of the stub pipe to the bottom of the sign post when using the Universal Anchor System. The insert should be cut to approx. 4 1/2" when used with the Bolt Down Universal Anchor System.



Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563 and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations.



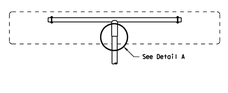
SM RD SGN ASSM TY TWT(X)UB(P)

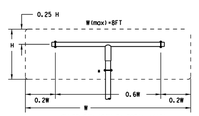
GENERAL NOTES:
1. The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
2. The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer, Method, design, and location of marking are subject to the approval of the TxDOT Traffic Standards Engineer.
3. Except for posts (13 BWG Tubing), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Producer List web page. The website address is: http://www.txdot.gov/business/producer list.htm
4. Material used as post with this system shall conform to the following specifications:
   13 BWG tubing (2.375" outside diameter) (TWT)
   0.095" nominal wall thickness
   Seamless or electric-resistance welded steel tubing
   Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   Other steels may be used if they meet the following:
   55,000 PSI minimum yield strength
   70,000 PSI minimum tensile strength
   18% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of .083" to .099"
   Outside diameter (uncoated) shall be within the range of 2.369" to 2.381"
   Galvanization per ASTM 123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
5. Sign blanks shall be the sizes and shapes shown on the plans.
6. Additional sign clamp required on the "I-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
7. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
8. See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: http://www.txdot.gov/publications/traffic.htm

WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE
1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
3. Insert tubular socket into concrete until top of socket is approximately 1/4 " above the concrete footing.
4. Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer..
5. Attach the sign to the sign post.
6. Insert the sign post into socket and align sign face with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 3 inches of the wedge exposed.

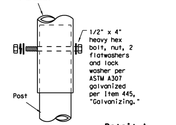
UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE
1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. Insert base post in hole to depths shown and backfill hole with concrete.
3. Level and plumb the base post using a torpedo level and allow concrete adequate time to set. The bottom of the slots provided in the stub pipe shall remain above the top of the concrete foundation.
4. Attach the sign to the sign post.
5. Install plastic insert around bottom of post.
6. Insert sign post into base post. Lower until the post comes to rest on steel rod.
7. Seat compression ring using a hammer. Typically, the top of compression ring will be approximately level with top of stub post when optimally installed.
8. Check sign post by hand to ensure it is unable to turn. If loose, increase the tightening of the compression ring.

Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post





SM RD SGN ASSM TY TWT(X)XX(T)
(* - See General Note 6)



Detail A

NOTE

The devices shall be installed per manufacturer's recommendations. Installation procedures shall be provided to the Engineer by Contractor.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	STANDARD STREET-END MARKERS	STANDARD NO. 824S-1
RECORD COPY SIGNED BY Bill Shackelford	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	
ADOPTED: 01/04/10		

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	CHANNELIZING DEVICES	STANDARD NO. 804S-5
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	1 OF 14
ADOPTED: 01/04/10		

CHANNELIZING DEVICES

1 ALL CHANNELIZING DEVICES SHALL HAVE WARNING LIGHTS OR LARGE REFLECTORS WHEN USED AT NIGHT. FLASHING WARNING LIGHTS MAY BE PLACED ON CHANNELIZING DEVICES USED SINGULARLY OR IN GROUPS TO MARK A SPOT CONDITION. WARNING LIGHTS ON CHANNELIZING DEVICES USED IN A SERIES SHALL BE STEADY BURN. CHANNELIZING DEVICES IN TAPERS AT THE TERMINAL END (THE C WARNING LIGHT).
2 THE STRIPING PATTERN EXTERNAL USED ON CHANNELIZING DEVICES SHALL HAVE A SMOOTH, SEALED OUTER SURFACE.
3 THE NAME AND TELEPHONE NUMBER OF THE AGENCY, CONTRACTOR OR SUPPLIER SHALL BE CLEARLY AND PERMANENTLY MARKED ON ALL CHANNELIZING DEVICES. THE SIZE OF LETTERS AND NUMBERS SHALL BE A NON-RETROREFLECTIVE COLOR AND NOT LESS THAN 2" (2") IN HEIGHT.
4 SPECIAL ATTENTION SHOULD BE GIVEN TO ASSURE THAT CHANNELIZING DEVICES ARE MAINTAINED AND KEPT CLEAN, VISIBLE AND PROPERLY POSITIONED AT ALL TIMES. DEVICES SHALL BE REPLACED THAT ARE DAMAGED AND HAVE LOST A SIGNIFICANT AMOUNT OF THEIR RETROREFLECTIVITY AND EFFECTIVENESS.

CONES
CONES SHALL PREDOMINANTLY BE ORANGE, FLUORESCENT RED-ORANGE, OR FLUORESCENT YELLOW-ORANGE IN COLOR, NOT LESS THAN 90 mm (3") IN HEIGHT, AND SHALL BE MADE OF A FLEXIBLE MATERIAL. CONES NOT LESS THAN 700 mm (28") IN HEIGHT SHALL BE USED FOR NIGHT USE. CONES SHALL BE RETROREFLECTIVE OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM VISIBILITY. RETROREFLECTION OF CONES SHALL BE PROVIDED BY A WHITE BAND 150 mm (6") TO 200 mm (8") WIDE PLACED JUST BELOW THE TOP CONE, AND A 100 mm (4") TO 150 mm (6") ADDITIONAL 100 mm (4") WHITE BAND A MINIMUM OF 50 mm (2") BELOW THE 150 mm (6") BAND. TRAFFIC CONES ARE NORMALLY USED FOR SHORT-TERM STATIONARY AND SHORT-DURATION OPERATIONS. CONES MAY BE USED FOR INTERMEDIATE-TERM STATIONARY WORK AT NIGHT IF THE SITE IS CONTINUOUSLY MANNED.

TUBULAR MARKERS
TUBULAR MARKERS SHALL PREDOMINANTLY BE ORANGE IN COLOR, NOT LESS THAN 700 mm (28") IN HEIGHT , A MINIMUM 10 mm (2") WIDE WHEN FACING TRAFFIC AND MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES. FOR NIGHT TIME USE, TUBULAR MARKERS SHALL BE RETROREFLECTIVE PROVIDED BY TWO (2) 75 mm (3") WIDE WHITE BANDS PLACED A MINIMUM OF 50 mm (2") APART WITH THE TOP BAND NOT LESS THAN 100 mm (4") FROM THE TOP. TUBULAR MARKERS ARE NORMALLY USED FOR SHORT-TERM STATIONARY AND SHORT-DURATION WORK. HOWEVER, TUBULAR MARKERS MAY BE USED FOR INTERMEDIATE-TERM STATIONARY WORK AT NIGHT IF THE SITE IS CONTINUOUSLY MANNED.

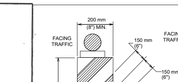
VERTICAL PANELS
VERTICAL PANELS SHALL BE 200 TO 300 mm (8 TO 12") WIDE AND AT LEAST 600 mm (24") IN HEIGHT. THEY SHALL HAVE ORANGE AND WHITE STRIPES, AND BE RETROREFLECTIVE. PANEL STRIPES SHALL BE SLOPED AT 45 DEGREES IN THE DIRECTION OF TRAFFIC FLOW. STRIPES NOT LESS THAN 100 mm (4") STRIPES MAY BE USED IF USED FOR TWO-WAY TRAFFIC, BACK-TO-BACK PANELS SHALL BE USED.

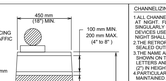
DRUMS
1. DRUMS USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE CONSTRUCTED OF LIGHT-WEIGHT FLEXIBLE AND DEFORMABLE MATERIALS AND BE A MINIMUM OF 900 mm (36") IN HEIGHT AND 560 mm (22") IN DIAMETER. DRUMS SHALL BE ORANGE IN COLOR WITH TWO (2) 100 mm (4") WIDE WHITE REFLECTORIZED STRIPES SHALL NOT BE USED. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL AND CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES 150 TO 200 mm (6 TO 8") WIDE WITH THE TOP STRIPE SLOPING DOWN AT 20 DEGREES. WHERE TWO (2) WHITE STRIPES , ANY NON-RETROREFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, SHALL NOT EXCEED 50 mm (2") WIDE. DRUMS SHALL HAVE CLOSED TOPS THAT WILL NOT ALLOW COLLECTION OF RAINWATER OR OTHER DEBRIS.
2. DRUMS SHOULD NOT BE WEIGHTED WITH SAND. WATER OR ANY MATERIAL TO AN EXTENT THAT WOULD CAUSE DAMAGE TO VEHICLES STRUCK BY DRUMS. WHEN DRUMS ARE FILLED WITH WATER AND USED IN REGIONS SUSCEPTIBLE TO FREEZING, THEY SHOULD HAVE DRAINAGE HOLES IN THE BOTTOM SO WATER WILL NOT ACCUMULATE AND FREEZE CAUSING A HAZARD IF STRUCK BY A MOTORIST. DRUMS SHALL NOT BE PLACED ON TOP OF THE DRUM.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1, 2 & 3 OBJECT MARKERS	STANDARD NO. 804S-4
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	2 OF 14
ADOPTED: 01/04/10		

LONG TERM AND INTERMEDIATE TERM STATIONARY WORK





SHORT TERM AND SHORT DURATION WORK

SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	CHANNELIZING DEVICES	STANDARD NO. 804S-5
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	3 OF 14
ADOPTED: 01/04/10		

SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TRAFFIC CONTROL SIGNS	STANDARD NO. 804S-5
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	4 OF 14
ADOPTED: 01/04/10		

SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TRAFFIC CONTROL SIGNS	STANDARD NO. 804S-5
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	5 OF 14
ADOPTED: 01/04/10		

1. WARNING SIGNS SHALL BE ORANGE, FLUORESCENT RED-ORANGE OR FLUORESCENT YELLOW-ORANGE IN COLOR. THE ORANGE VERSIONS OF ORANGE PROVIDE HIGHER CONSPICUITY THAN STANDARD ORANGE, ESPECIALLY DURING TWILIGHT. ALL SIGNS USED AT NIGHT SHALL BE EITHER RETROREFLECTIVE OR ILLUMINATED. SIGNS USED ON EXPRESSWAYS AND FREEWAYS SHALL HAVE A WHITE BACKGROUND WITH BLACK LEGEND AND COLOR BOTH DAY AND NIGHT. SIGN ILLUMINATION MAY BE EITHER INTERNAL OR EXTERNAL. ROADWAY LIGHTING DOES NOT MEET THE REQUIREMENTS FOR SIGN ILLUMINATION.
2. TYPE A FLASHING WARNING LIGHTS MAY BE USED IN CONJUNCTION WITH SIGNS AT NIGHT. STANDARD ORANGE FLAGS MAY BE USED FOR DAY TIME OPERATIONS. HOWEVER, NEITHER LIGHTS NOR FLAGS SHALL BE USED ON STOP SIGNS.
3. SIGNS SHOULD BE LOCATED ON THE RIGHT-HAND SIDE OF THE ROADWAY. WHEN SPECIAL EMPHASIS IS NEEDED, SIGNS MAY BE PLACE ON BOTH THE LEFT AND RIGHT SIDES OF ROADWAY. SIGNS SHALL BE PLACED SO THEY ARE NOT OBSCURED BY VEGETATION OR OTHER OBJECTS. SIGNS SHALL BE PLACED SO THAT THE LATERAL CLEARANCE TO THE EDGE OF THE TRAVELED WAY, MEASURED AT A HEIGHT OF AT LEAST 2.1 m (7') MEASURED FROM THE BOTTOM OF THE SIGN. THE HEIGHT TO THE BOTTOM OF A SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN MAY BE 0.3 m (1') LESS THAN THE APPROPRIATE HEIGHT ABOVE.
4. SIGNS SHALL BE MOUNTED ON ADEQUATE SUPPORTS FOR SHORT-TERM, SHORT DURATION, MOBILE OPERATIONS. SUPPORTS SHALL BE STRONG ENOUGH TO HOLD THE SIGNS, BUT SHALL BE AT A HEIGHT OF AT LEAST 0.3 m (1') MEASURED FROM THE BOTTOM OF THE SIGN.
5. SIGNS MOUNTED ON PORTABLE OR TEMPORARY MOUNTS SHALL BE OF IMPROVED BREAKAWAY CONSTRUCTION. SIGNS SHOULD BE LIGHT ENOUGH TO BE CARRIED BY HAND FOR INSTALLATION AND REMOVAL UNLESS NO OTHER OPTION IS AVAILABLE. ONLY STANDARD SIGNS SHALL BE MOUNTED ON PORTABLE SIGN MOUNTS.

TABLE VI-3 TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

Roadway Classification	Posted Speed	Spacing	Longitudinal Buffer Space		Shoulder/Lane Width		Other Warning Signs
			Between Advance Warning and Activity Area	Beyond Last Sign in Sequence			
			Conventional Roadways and Child's Sign		Shoulder Width		
			Standard	Minimum*	Standard	Minimum*	Standard
Conven.	MPH	meter (feet)	meter (feet)	meter (feet)	meter (feet)	meter (feet)	size (inches)
	30 or less	30 (100)	30 (100)	15 (50)	0.6 (2)	0.6 (2)	600 x 600 (24x24)
	35	40 (130)	40 (130)	15 (50)	0.6 (2)	0.6 (2)	600 x 600 (24x24)
	40	50 (160)	50 (160)	15 (50)	0.6 (2)	0.6 (2)	600 x 600 (24x24)
	45	60 (200)	60 (200)	15 (50)	0.6 (2)	0.6 (2)	600 x 600 (24x24)
	50	70 (230)	70 (230)	15 (50)	0.6 (2)	0.6 (2)	600 x 600 (24x24)
	55	80 (260)	80 (260)	15 (50)	Use Standard Size		1200x1200 (48x48)
	60 or more	90 (290)	90 (290)	15 (50)	Use Standard Size		1200x1200 (48x48)
Freeway	55 or more	★★	★★	★★	★★	★★	★★

★ MINIMUM DISTANCE FROM SIGNS TO TO ADVANCE WARNING SIGN AND/OR DISTANCE BETWEEN ADVANCE WARNING SIGNS
★★ FOR TYPICAL SIGN SPACING ON EXPRESSWAYS AND FREEWAYS, REFER TO THE CURRENT ADDITION OF TMUTCD.
★★★ DRILLED SIGN SIZES MAY BE USED WHERE SIGN DESIGNS HAVE NOT BEEN INCLUDED IN THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS".

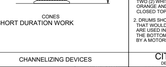
1. SPECIAL OR LARGER SIZE SIGNS MAY BE USED AS NECESSARY:
2. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE 450 m (1500') OR MORE ADVANCE WARNING.
3. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE A 0.8 km (.5 MILE) OR MORE ADVANCE WARNING.
4. FOR USE ONLY ON SECONDARY ROADS OR CITY STREETS WHERE SPEEDS ARE LOW.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TRAFFIC CONTROL SIGNS	STANDARD NO. 804S-5
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	7 OF 13
ADOPTED: 01/04/10		

NOTES:
1. OTHER REQUIRED SIGNS NOT SHOWN FOR CLARITY.
2. "X" DISTANCES SAME AS STANDARD TABLE SHOWN ON SHEET 13 OF 13.

SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL CMTA/C.I.P. SIGN LOCATIONS	STANDARD NO. 804S-5
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	8 OF 13
ADOPTED: 01/04/10		



SEE STANDARD 804S-5
SHEET 5 OF 13 FOR SKID-MOUNTED SIGN SUPPORT

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SPECIAL WORK ZONE SIGNS	STANDARD NO. 804S-5
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	9 OF 13
ADOPTED: 01/04/10		

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	GENERAL TRAFFIC CONTROL NOTES	STANDARD NO. 804S-5
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	12 OF 13
ADOPTED: 01/04/10		

11. THE CONTRACTOR SHALL DESIGNATE A COMPETENT PERSON FOR TRAFFIC CONTROL. THE COMPETENT PERSON SHALL MAKE INSPECTIONS OF THE TRAFFIC CONTROL DEVICES AT LEAST TWO (2) TIMES A DAY ONCE AT THE BEGINNING OF THE DAY AND ONCE AT THE END OF THE DAY. PLACED ON NON-WORKING DAYS, ENDURING THAT ALL DEVICES ARE IN THE CORRECT PLACE AND IN WORKING CONDITION.
12.ALL DEVICES SHALL BE MADE USING MATERIALS LISTED ON THE TXDOT APPROVED PRODUCTS LIST.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	GENERAL TRAFFIC CONTROL NOTES	STANDARD NO. 804S-5
RECORD COPY SIGNED BY SAM ANGOORI	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	13 OF 13
ADOPTED: 01/04/10		

13. ALL PERSONS WORKING WITHIN THE RIGHT-OF-WAY SHALL WEAR A BRIGHTLY COLORED SAFETY VEST. FOR NIGHTTIME WORK THE VEST SHALL BE RETROREFLECTIVE.
14. WHEN AN INTERSECTION IS CLOSED FOR CONSTRUCTION, THE CONTRACTOR SHALL PROCEED WITH CONSTRUCTION IN SUCH A MANNER THAT THE CLOSURE TIME IS MINIMIZED.
15. THE CONTRACTOR SHALL NOTIFY THE CAPITAL METRO DISPATCHER AT 385-4295 ONE (1) WEEK PRIOR TO LANE CLOSURES ADJACENT TO BUS STOPS.

DURATION OF WORK:
WORK DURATION IS A MAJOR FACTOR IN DETERMINING THE NUMBER OF TYPES OF DEVICES REQUIRED. THE ENGINEER SHALL DETERMINE THE DEGREES OF WORK WHICH THE CONTRACTOR INTENDS TO SET UP BARRICADES TO START CONSTRUCTION.
- LONG-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FOR MORE THAN 3 DAYS.
- INTERMEDIATE-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FROM OVERNIGHT TO 3 DAYS.
- SHORT-TERM STATIONARY-DAYTIME WORK THAT OCCUPIES A LOCATION FROM 1 TO 12 HOURS.
- SHORT-DURATION WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.
- MOBILE WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

Typical Transition Lengths and Suggested Maximum Spacing of Devices

Posted Speed MPH (MPH)	Formula	Minimum Desirable Taper Lengths (L) Meters (Feet)			Suggested Max. Device Spacing		Suggested Sign Spacing Meters (Feet)
		3.3(10) Offset (Feet)	3.3(11) Offset (Feet)	3.6(12) Offset (Feet)	On a taper (feet)	On a tangent (feet)	"X" Dimension
90 (30)	L=WS	45 (150)	50 (165)	55 (180)	9 (30)	15-30 (50-70)	40 (120)
55 (35)	L=WS²/ 60	80 (205)	90 (225)	100 (245)	11 (35)	25-25 (70-90)	50 (160)
65 (40)		80 (265)	90 (295)	100 (320)	12 (40)	25-30 (80-100)	75 (240)
70 (45)		105 (450)	120 (495)	135 (540)	13 (45)	25-30 (90-110)	100 (320)
80 (50)		150 (500)	165 (550)	180 (600)	15 (50)	30-35 (100-125)	120 (400)
90 (55)		150 (605)	165 (665)	180 (660)	16 (55)	35-40 (110-140)	150 (500)
100 (60)	L=WS	180 (600)	200 (660)	220 (720)	18 (60)	40-45 (120-150)	180 (600)
105 (65)		195 (650)	215 (715)	235 (780)	19 (65)	40-50 (130-165)	210 (700)
115 (70)		215 (720)	235 (770)	255 (840)	21 (70)	45-55 (140-175)	240 (800)

CALCULATED
100-YR ATLAS-14
FLOODPLAIN

HUDSON PARK
BONSMARA BLVD
MAJOR IMPROVEMENTS

EXISTING
SSL 'F1'

WATUSI LOOP

SSL 'F1'

SSL 'G3'

EXISTING
SSL 'G1'

RED DEVON BEND

SSL 'G1'

SSL 'F2'

SSL 'G2'

RED POLL CIRCLE

STA. 1+12.24
8" WWL XING

JERSEY BEND

PROJECT
BOUNDARY

FUTURE
HUDSON PARK
PHASE 3

40 20 0 40 80
SCALE IN FEET

LEGEND

- R.O.W. / PROJECT BOUNDARY
- PROPOSED STORM LINE
- PROPOSED CONTOUR
- EXISTING CONTOUR

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
OVERALL STORM LAYOUT

NO.	DESCRIPTION	BY	DATE
	REVISIONS		

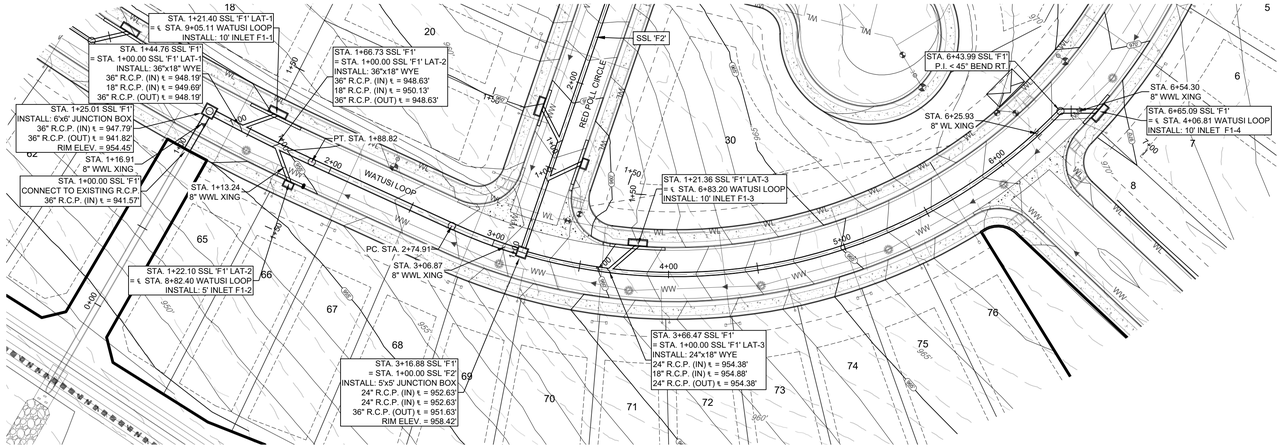
DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-SSL.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

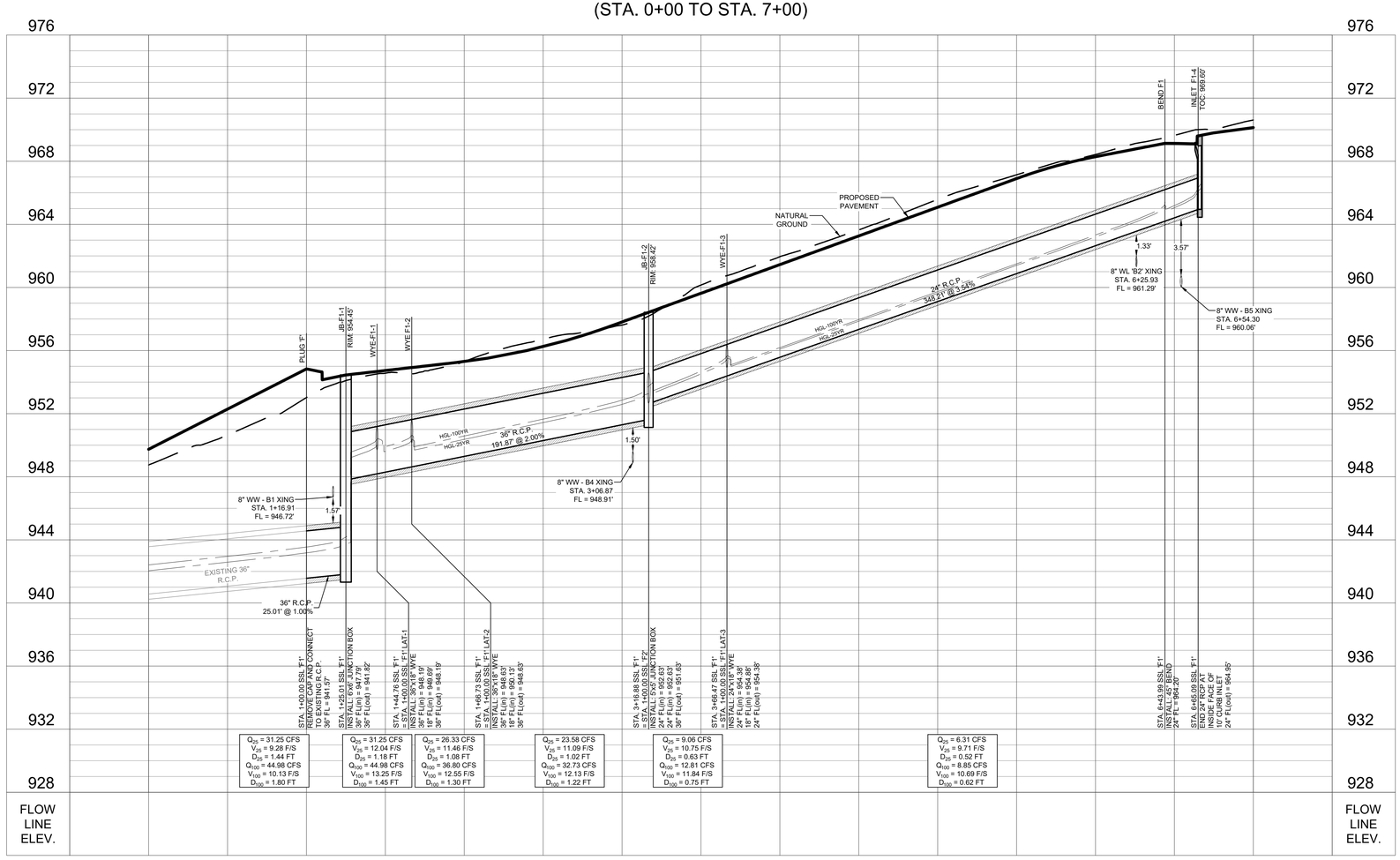
LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN - F-1386

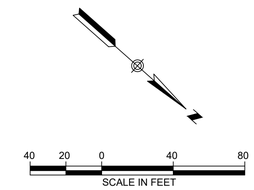
JOB NUMBER:
A3336-2401

SHEET NO.
21
OF 48 SHEETS



SSL 'F1'
(STA. 0+00 TO STA. 7+00)





LEGEND

- R.O.W. / PROJECT BOUNDARY
- PROPOSED STORM LINE
- PROPOSED CONTOUR
- EXISTING CONTOUR

NOTES:

1. ALL FITTINGS AND WYES SHALL BE PRECAST ELEMENTS AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL FROM THE COUNTY.

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
STORM LINE 'F1'
STA. 1+00 TO END

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
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CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-SSL.dwg

STATE OF TEXAS
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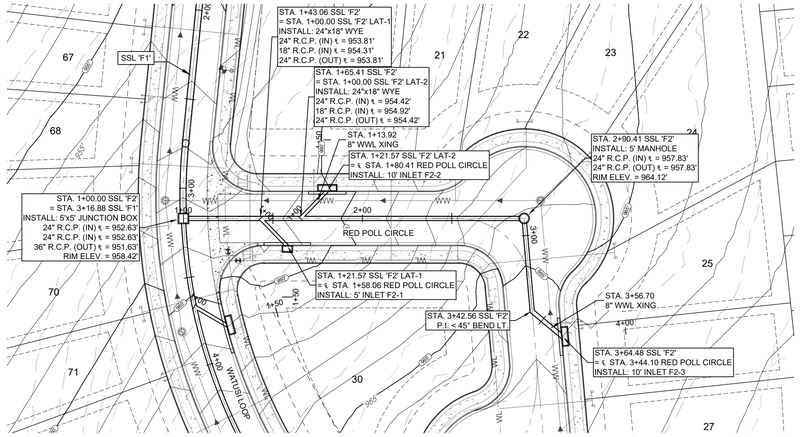
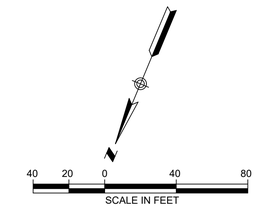
JOB NUMBER: A3336-2401

SHEET NO. 22
OF 48 SHEETS





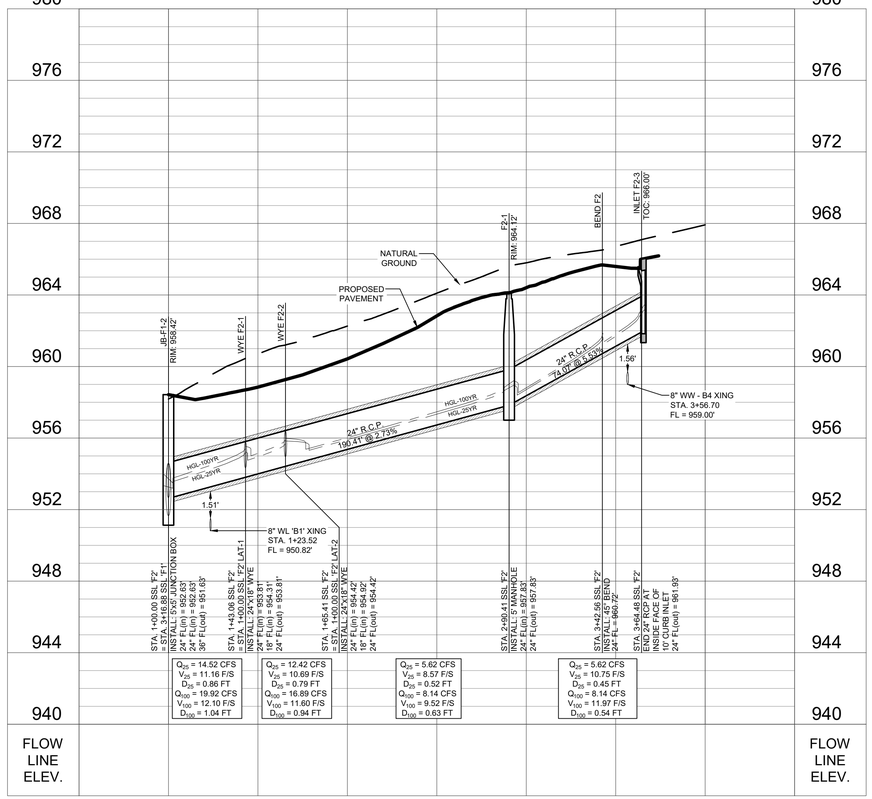
LEGEND

- R.O.W. / PROJECT BOUNDARY
- PROPOSED STORM LINE
- PROPOSED CONTOUR
- EXISTING CONTOUR

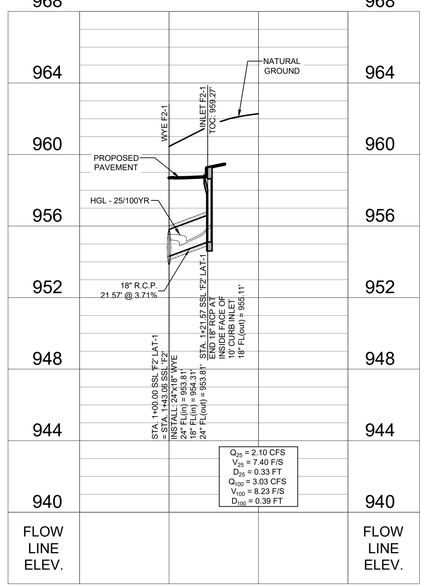
NOTES:

1. ALL FITTINGS AND WYES SHALL BE PRECAST ELEMENTS AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL FROM THE COUNTY.

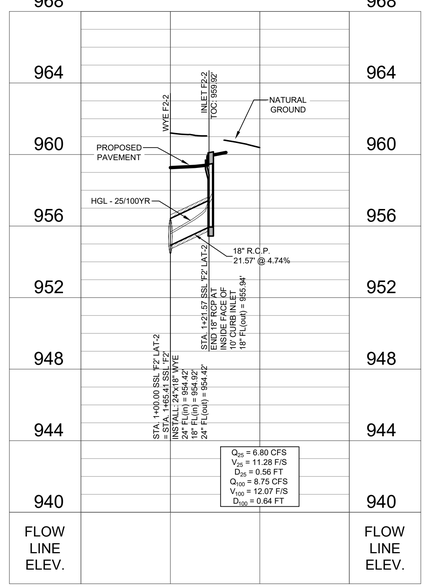
SSL 'F2'
(STA. 1+00 TO STA. 4+00)



SSL 'F2' LAT-1
(STA. 1+00 TO STA. 1+50)



SSL 'F2' LAT-2
(STA. 1+00 TO STA. 1+50)



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
STORM LINE 'F2'
STA. 1+00 TO END & LATERALS

REVISIONS			
NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-SSL.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
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3/25/2025

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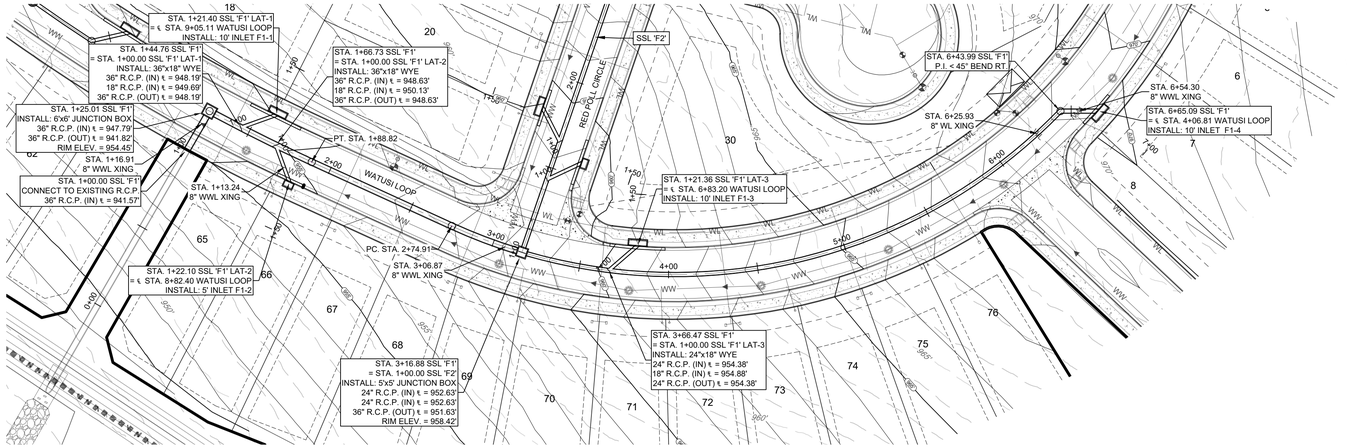
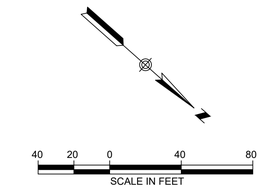
FRN - F-1386

JOB NUMBER: A3336-2401

SHEET NO. 23 OF 48 SHEETS

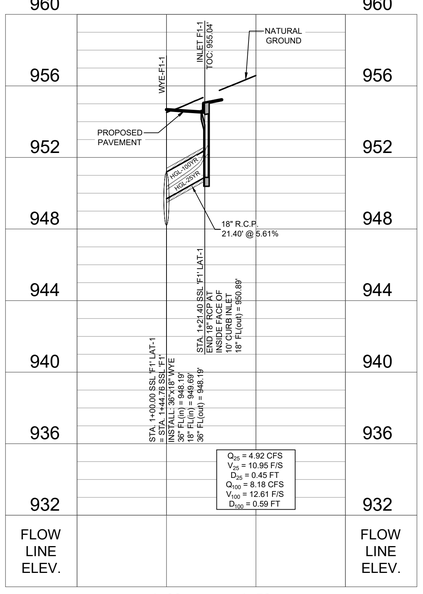




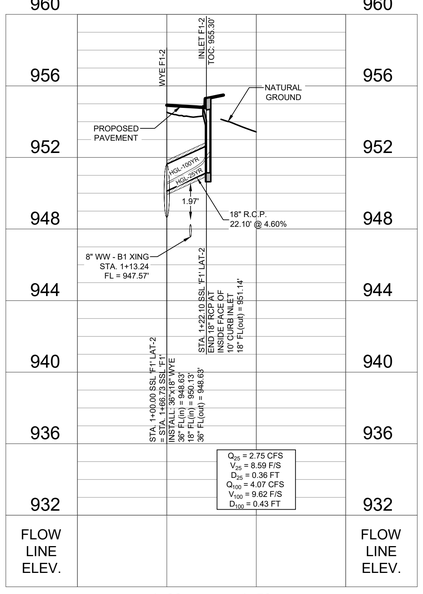
NOTES:

1. ALL FITTINGS AND WYES SHALL BE PRECAST ELEMENTS AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL FROM THE COUNTY.

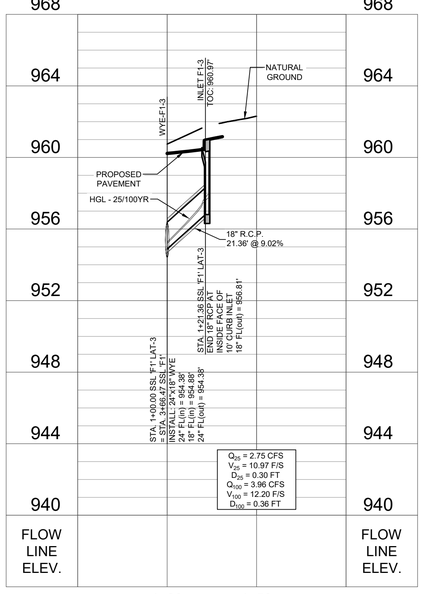
SSL 'F1' LAT-1 (STA. 1+00 TO STA. 1+50)



SSL 'F1' LAT-2 (STA. 1+00 TO STA. 1+50)



SSL 'F1' LAT-3 (STA. 1+00 TO STA. 1+50)



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
STORM LINE 'F1' LATERALS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
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CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-SSL.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
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3/25/2025

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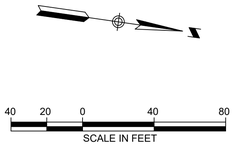
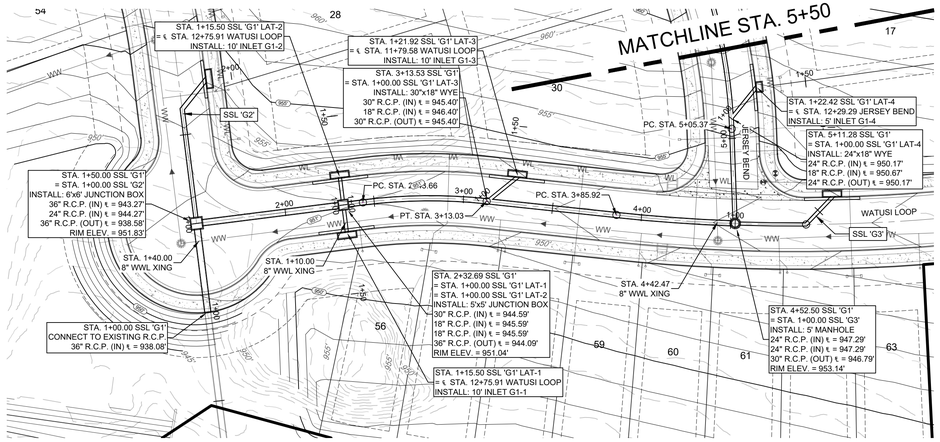
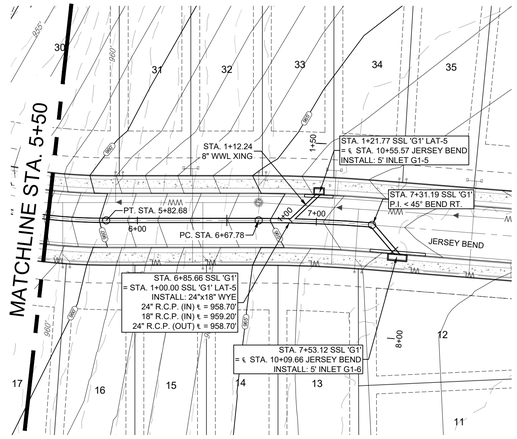
Fax 512.439.4716
FRN - F-1386

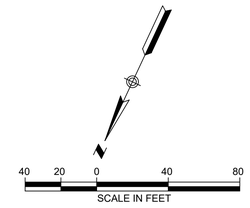
JOB NUMBER: A3336-2401

SHEET NO. 24 OF 48 SHEETS









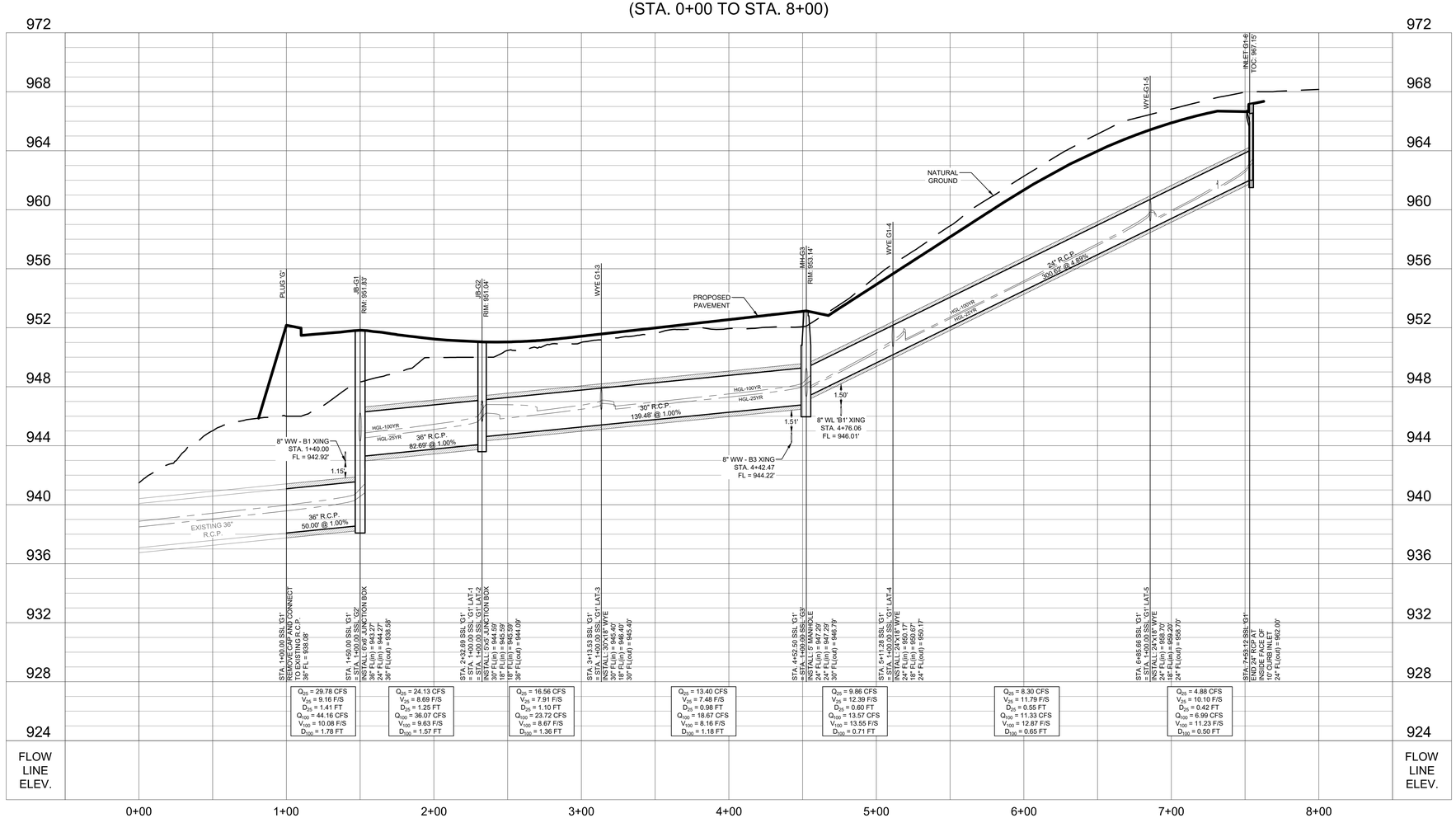
LEGEND

- R.O.W. / PROJECT BOUNDARY
- PROPOSED STORM LINE
- PROPOSED CONTOUR
- EXISTING CONTOUR

NOTES:

1. ALL FITTINGS AND WYES SHALL BE PRECAST ELEMENTS AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL FROM THE COUNTY.

SSL 'G1'
(STA. 0+00 TO STA. 8+00)



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
STORM LINE 'G1'
STA. 1+00 TO END

NO.	DESCRIPTION	BY	DATE

REVISIONS

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-SSL.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
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3/25/2025

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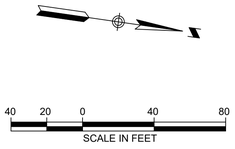
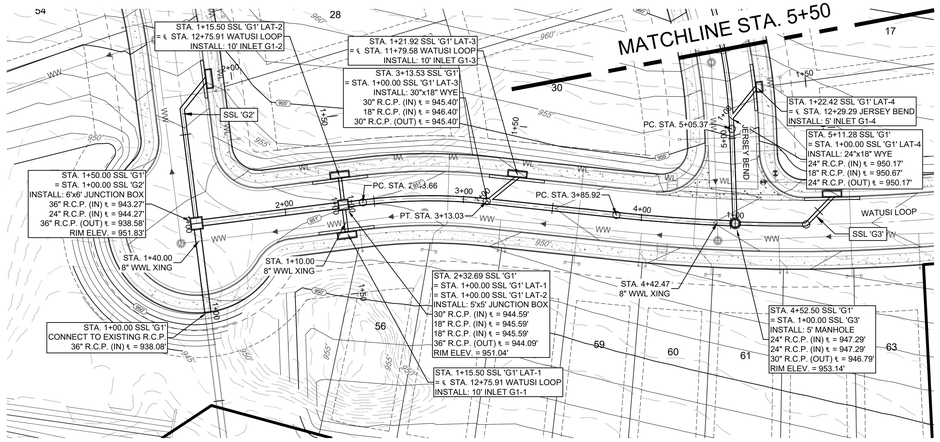
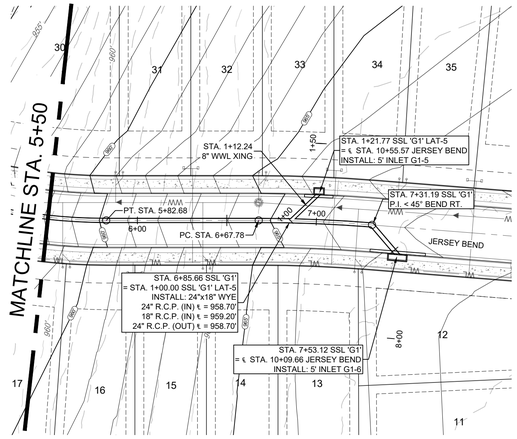
Fax 512.439.4716
FRN - F-1386

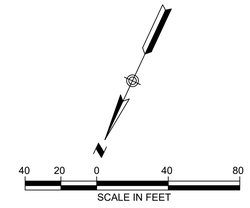
JOB NUMBER: A3336-2401

SHEET NO. 25 OF 48 SHEETS









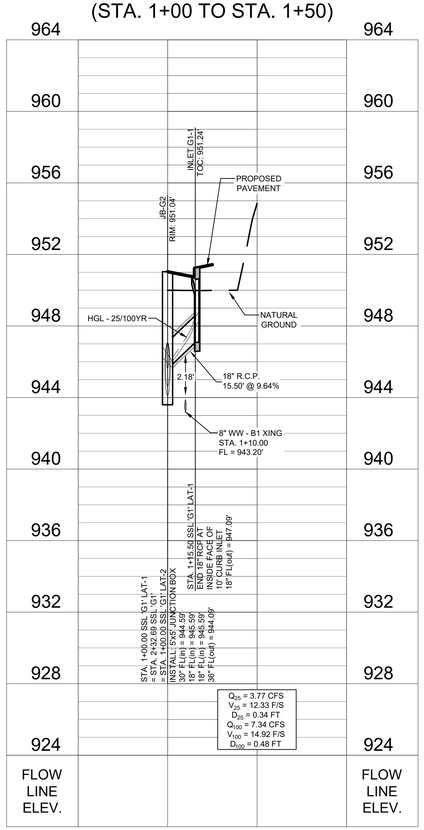
LEGEND

- R.O.W. / PROJECT BOUNDARY
- PROPOSED STORM LINE
- PROPOSED CONTOUR
- EXISTING CONTOUR

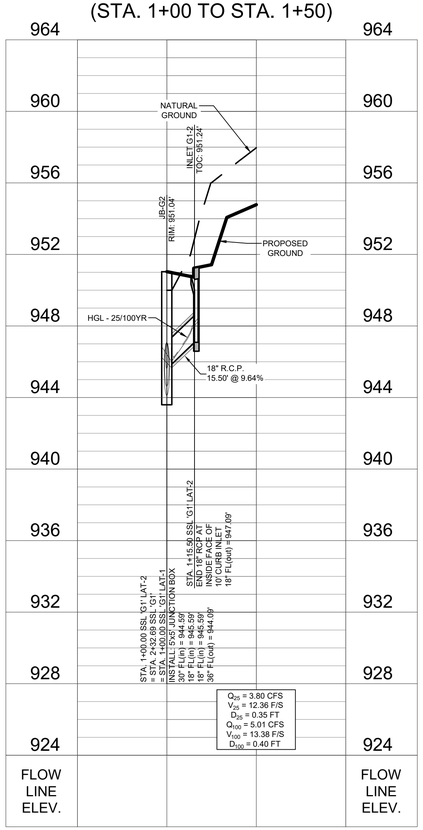
NOTES:

1. ALL FITTINGS AND WYES SHALL BE PRECAST ELEMENTS AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL FROM THE COUNTY.

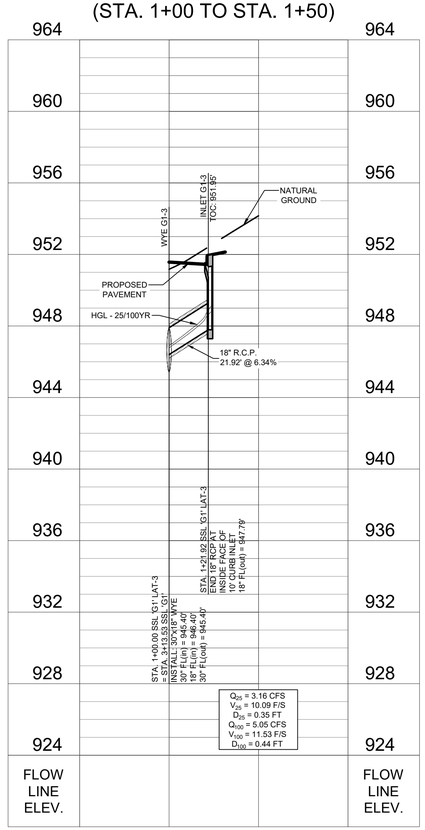
SSL 'G1' LAT-1 (STA. 1+00 TO STA. 1+50)



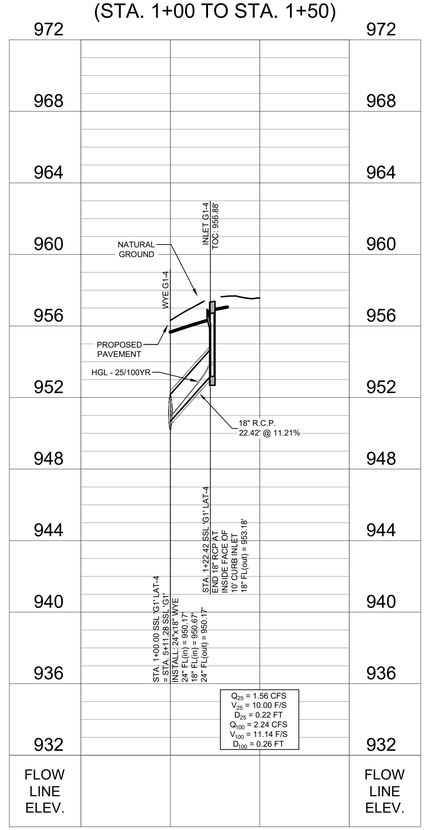
SSL 'G1' LAT-2 (STA. 1+00 TO STA. 1+50)



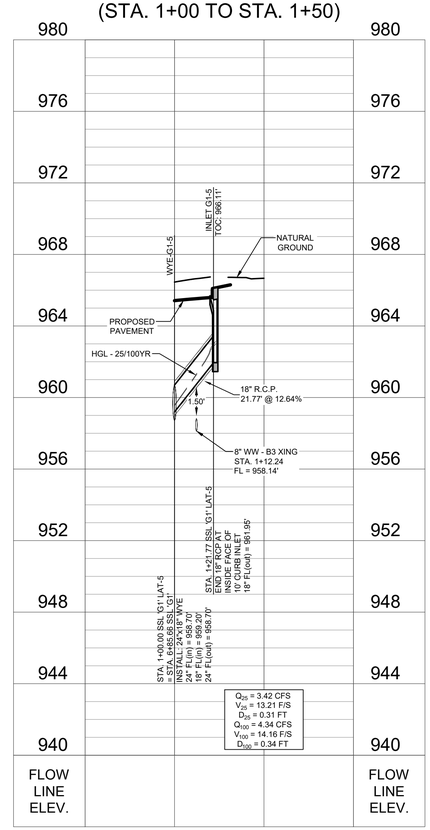
SSL 'G1' LAT-3 (STA. 1+00 TO STA. 1+50)



SSL 'G1' LAT-4 (STA. 1+00 TO STA. 1+50)



SSL 'G1' LAT-5 (STA. 1+00 TO STA. 1+50)



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
STORM LINE 'G1' LATERALS

NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: KONLE-PH1-SSL.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

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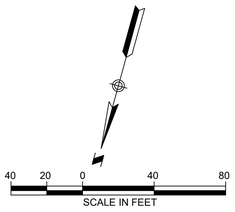
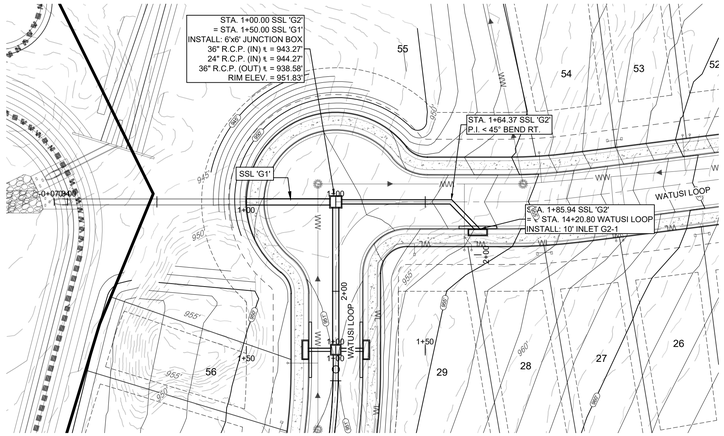
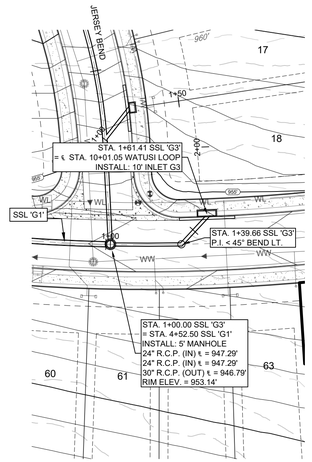
FRN - F-1386

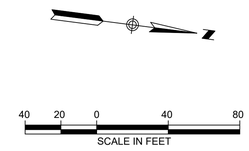
JOB NUMBER: A3336-2401

SHEET NO. 26 OF 48 SHEETS









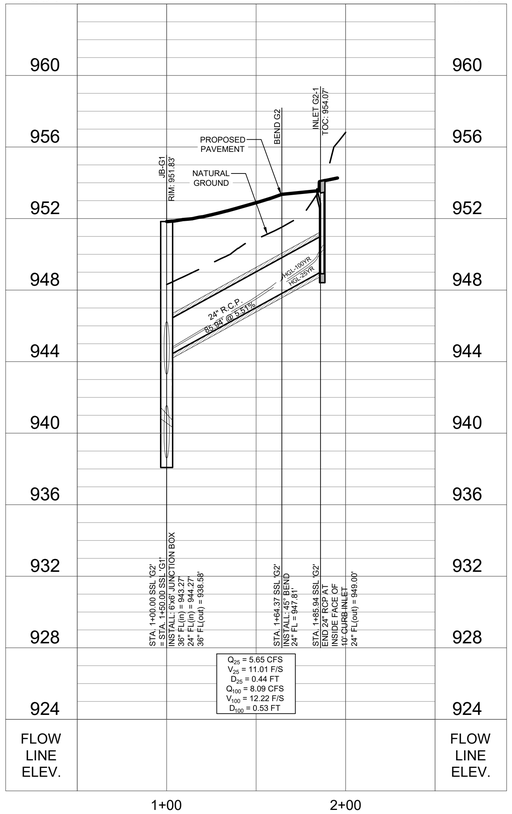
LEGEND

- R.O.W. / PROJECT BOUNDARY
- PROPOSED STORM LINE
- 955' PROPOSED CONTOUR
- 955' EXISTING CONTOUR

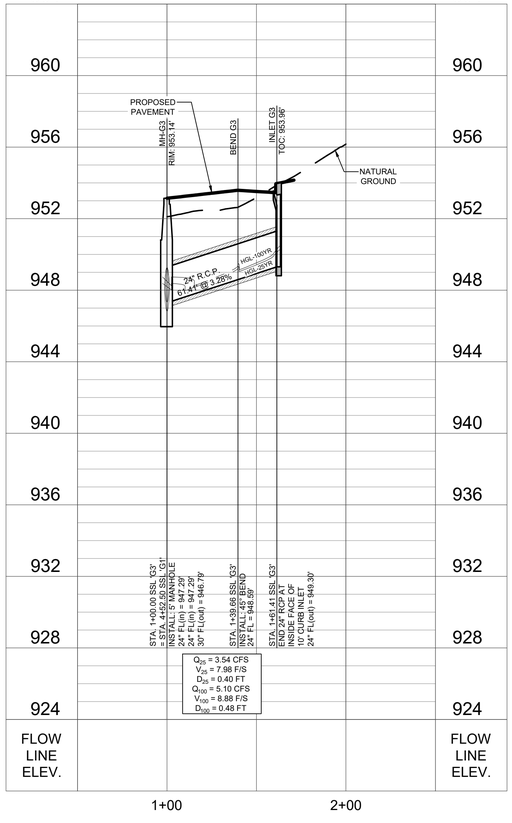
NOTES:

1. ALL FITTINGS AND WYES SHALL BE PRECAST ELEMENTS AND NOT CAST-IN-PLACE WITHOUT PRIOR APPROVAL FROM THE COUNTY.

SSL 'G2'
(STA. 1+00 TO STA. 2+00)



SSL 'G3'
(STA. 1+00 TO STA. 2+00)



HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
STORM LINE 'G1'
STA. 1+00 TO END

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 3/25/2025
DESIGNED BY: IR
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DRAWING NAME: KONLE-PH1-SSL.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
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3/25/2025

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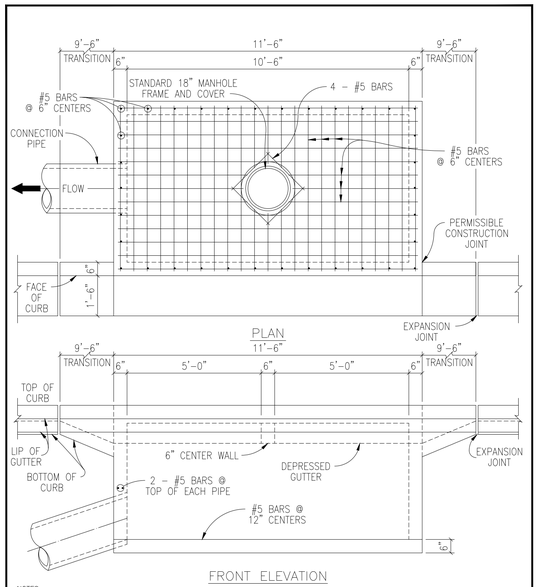
JOB NUMBER: A3336-2401

SHEET NO. 27 OF 48 SHEETS



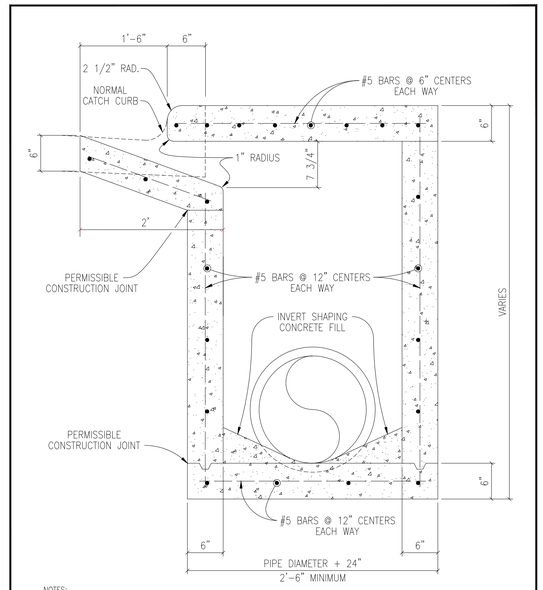
NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI CONCRETE.
2. STORM SEWER PIPE MATERIAL TO BE R.C.P. (CLASS III) UNLESS OTHERWISE APPROVED BY THE CITY OF GEORGETOWN.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CURB INLET DETAIL

DRAWING NAME: SD09
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI CONCRETE.
2. STORM SEWER PIPE MATERIAL TO BE R.C.P. (CLASS III) UNLESS OTHERWISE APPROVED BY THE CITY OF GEORGETOWN.

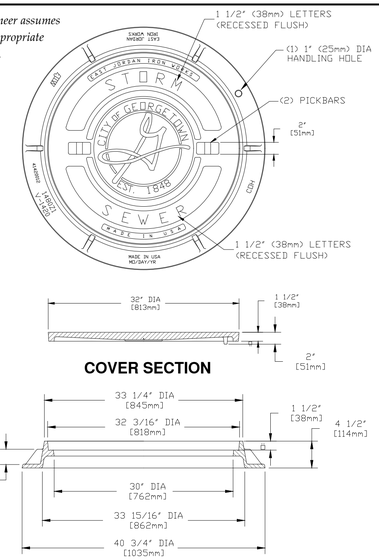
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CURB DRAIN INLET TYPICAL SECTION

DRAWING NAME: SD10
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.



The Architect/Engineer assumes responsibility for appropriate use of this standard.

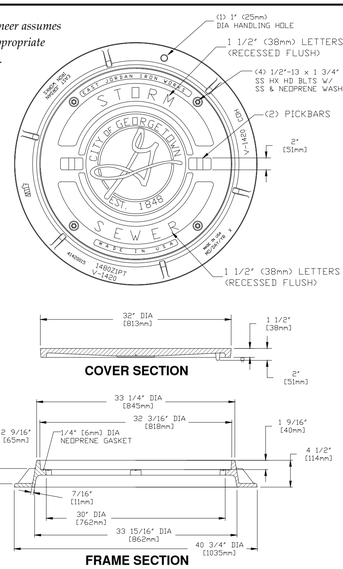
NOTES:
1. STANDARD STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420\1480Z1. COVER TO BE STAMPED WITH "STORM SEWER".
2. STANDARD STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148391.
4. FOR BOLTED STORM SEWER MANHOLE SET REFER TO DETAIL SD11A.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE SET

DRAWING NAME: SD11
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.

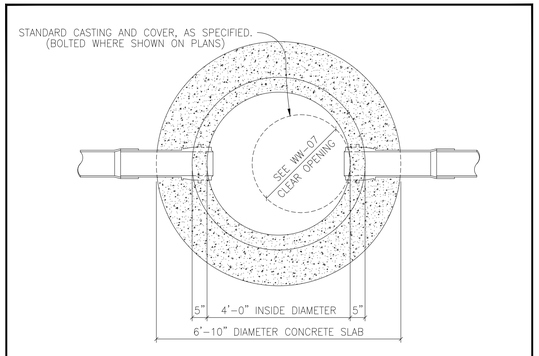


NOTES:
1. BOLTED STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480APT V-1420\1480Z1PT. COVER TO BE STAMPED WITH "STORM SEWER"
2. BOLTED STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 00148393 41420015.
4. FOR STANDARD STORM SEWER MANHOLE SET REFER TO DETAIL SD11.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
BOLTED STORM SEWER MANHOLE SET

DRAWING NAME: SD11A
SCALE: NTS | DATE: 1/2006
DRAWN BY: MRS | APPROVED BY: TRB



CITY OF GEORGETOWN NOTES:

MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

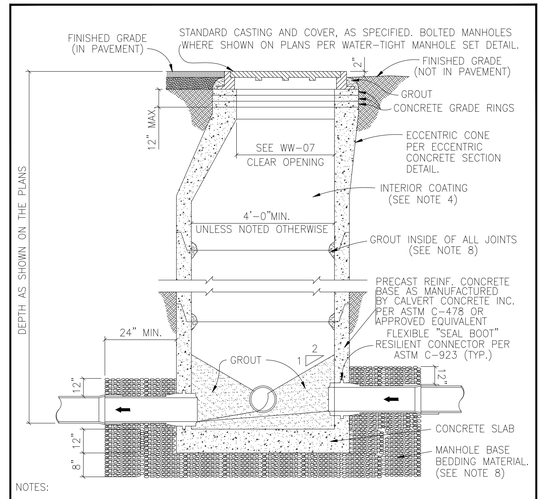
A. ALL MANHOLES SHALL BE 48" I.D., R.C.P., CLASS III, WITH RUBBER O-RING GASKET JOINTS CONFORMING TO ASTM C478, C433 AND C76.
B. ALL MANHOLES SHALL HAVE FRAME AND COVER, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL # WW-07) OR APPROVED EQUIVALENT.
C. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
D. ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE.
E. MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF GEORGETOWN, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURED BY CALVERT CONCRETE OR APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING, AND O-RING JOINT CONFORMING TO ASTM C443.
F. INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C-923, SHALL BE CAST INTO BASE SECTION.
G. MINIMUM DROP BETWEEN INVERTS SHALL BE ONE-TENTH OF A FOOT (0.1').
H. GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING WITH A MAXIMUM OF FIVE (5) GRADE RINGS ARE ALLOWED.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE PLAN

DRAWING NAME: SD12
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



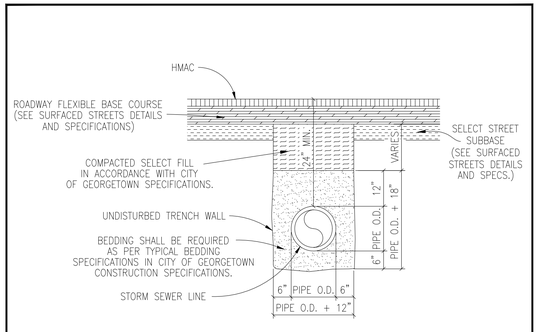
NOTES:
1. MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET - SINGLE OFF-SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH STORM SEWER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
8. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:
SIEVE SIZE 2", PERCENT (%) RETAINED 0
SIEVE SIZE 1 1/2", % RETAINED 0-10
SIEVE SIZE 1", % RETAINED 45-80
SIEVE SIZE 3/4", % RETAINED 85-100
SIEVE SIZE 3/8", % RETAINED 95-100

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE - SECTION

DRAWING NAME: SD13
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:
1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

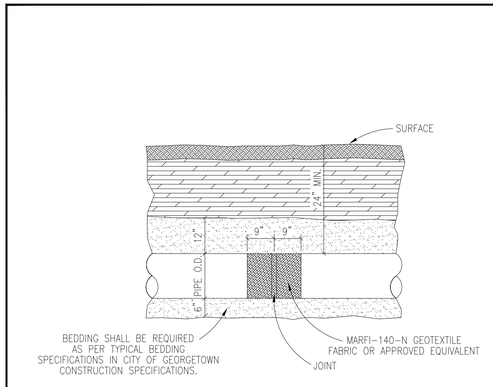
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY FOR STORM SEWER

DRAWING NAME: SD41
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES
1. PIPE SHALL BE REINFORCED CONCRETE PIPE CLASS III UNLESS THE DEPTH OF PIPE REQUIRES A STRONGER CLASS.
2. ALL FITTINGS AND WYES SHALL BE MANUFACTURED AND NOT CONSTRUCTED ON THE PROJECT WITHOUT PRIOR APPROVAL FROM THE CITY.
3. ALL JOINTS SHALL BE WRAPPED WITH MARFI-140-N GEOTEXTILE FABRIC OR APPROVED EQUIVALENT. EACH JOINT SHALL BE WRAPPED WITH 18" WIDE FABRIC CENTERED ON THE JOINT.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL (PROFILE) FOR STORM SEWER

DRAWING NAME: SD42
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

HUDSON PARK - PHASE 1
PAVING, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS
STORM DETAILS

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE:
DESIGNED BY: IR
DRAWN BY: IR
CHECKED BY: MMT
DRAWING NAME: I:\A336\PH1-SSL-DTLS.dwg

STATE OF TEXAS
MATTHEW M. THOMAS
128935
LICENSED
PROFESSIONAL ENGINEER
3/25/2025

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JOB NUMBER: A3336-2401

SHEET NO. 28
OF 48 SHEETS