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.

<table>
<tr><td colspan="5">1. Regulated Entity Name: Liberty Hill MF Development</td><td colspan="4">2. Regulated Entity No.:</td></tr>
<tr><td colspan="5">3. Customer Name: OP III ATX LIBERTY HILL 183 LP</td><td colspan="4">4. Customer No.:</td></tr>
<tr><td>5. Project Type:
(Please circle/check one)</td><td colspan="2">New</td><td colspan="2">Modification</td><td>Extension</td><td>Exception</td><td colspan="2"></td></tr>
<tr><td>6. Plan Type:
(Please circle/check one)</td><td>WPAP</td><td>CZP</td><td>SCS</td><td>UST</td><td>AST</td><td>EXP</td><td>EXT</td><td>Technical Clarification</td><td>Optional Enhanced Measures</td></tr>
<tr><td>7. Land Use:
(Please circle/check one)</td><td colspan="2">Residential</td><td colspan="3">Non-residential</td><td colspan="2">8. Site (acres):</td><td>12.638</td></tr>
<tr><td>9. Application Fee:</td><td colspan="2">$6,500</td><td colspan="3">10. Permanent BMP(s):</td><td colspan="3">Batch Detention Pond</td></tr>
<tr><td>11. SCS (Linear Ft.):</td><td colspan="2"></td><td colspan="3">12. AST/UST (No. Tanks):</td><td colspan="3"></td></tr>
<tr><td>13. County:</td><td colspan="2">Williamson</td><td colspan="3">14. Watershed:</td><td colspan="3">South Fork San Gabriel River</td></tr>
</table>

Application Distribution

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

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

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

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

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Bilal Alizai, P.E.
Print Name of Customer/Authorized Agent 05-07-2024
Signature of Customer/Authorized Agent Date

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

Contributing Zone Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Contributing Zone Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: Bilal Alizai, P.E.

Date: 05-07-2024

Signature of Customer/Agent: 

Regulated Entity Name: Liberty Hill MF Development

Project Information

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

   Contact Person: Collin Aufhammer
   Entity: OP III ATX LIBERTY HILL 183 LP
   Mailing Address: 500 W 5TH St, Ste 700
   City, State: Austin, TX Zip: 78701
   Telephone: 512-761-1848 Fax: _____
   Email Address: caufhammer@endeavor-re.com

5. Agent/Representative (If any):

Contact Person: Bilal Alizai
Entity: GarzaEMC
Mailing Address: 9106 Wheat Cross Dr
City, State: Houston, TX Zip: 77095
Telephone: 713-491-6039 Fax: _____
Email Address: balizai@garzaemc.com

6. Project Location:

[X] The project site is located inside the city limits of Liberty Hill
[ ] The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
[ ] The project site is not located within any city's limits or ETJ.

7. [X] 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.

250 Gracie Ln, Liberty Hill, TX 78642
S13297 - GUNNER NE MULTI-FAMILY SUB, BLOCK A, Lot 1B, ACRES 12.638

8. [X] **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. [X] **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:

[X] Project site boundaries.
[X] USGS Quadrangle Name(s).

10. [X] **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:

[X] Area of the site
[X] Offsite areas
[X] Impervious cover
[X] Permanent BMP(s)
[X] Proposed site use
[X] Site history
[X] Previous development
[X] 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: 224
☐ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): 12.638 Acres

Total disturbed area: 12.638 Acres

14. Estimated projected population: 456

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	101,770	÷ 43,560 =	2.336
Parking	77,598	÷ 43,560 =	1.781
Other paved surfaces	121,756	÷ 43,560 =	2.795
Total Impervious Cover	301,124	÷ 43,560 =	6.913

Total Impervious Cover 6.913 **÷ Total Acreage** 12.638 **X 100 =** 54.7 **% Impervious Cover**

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

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

For Road Projects Only

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

☐ N/A

18. Type of project:

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

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

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

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

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

21. Pavement Area:

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

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

☐ N/A

26. Wastewater will be disposed of by:

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

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

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

☒ Sewage Collection System (Sewer Lines): Liberty Hill Wastewater Treatment Plant
The sewage collection system will convey the wastewater to the _____ (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" = 40 '.

35. 100-year floodplain boundaries:

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

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

    The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM 48491C0275E eff. 9/25/2008.

36. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.

    ☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot contour intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.

37. ☒ A drainage plan showing all paths of drainage from the site to surface streams.

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

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

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

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

42. ☐ Surface waters (including wetlands).

    ☒ N/A

43. ☐ Locations where stormwater discharges to surface water.

    ☒ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

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

45. ☐ Permanent aboveground storage tank facilities.

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

46. ☒ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

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

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

☐ N/A

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

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

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

☐ N/A

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

☐ N/A

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

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

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

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

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

- ☐ **Attachment I - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
- ☒ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
- ☐ The site will not be used for multi-family residential developments, schools, or small business sites.

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

- ☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
- ☒ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
- ☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

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

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

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

- ☒ N/A

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

attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

☐ N/A

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

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

    ☐ N/A

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

    ☒ N/A

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

    ☐ N/A

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

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

60. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development,

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

Administrative Information

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

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

63. [ ] 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.

[X] The Temporary Stormwater Section (TCEQ-0602) is included with the application.

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Bilal Alizai, P.E.

Date: 05-07-2024

Signature of Customer/Agent: Bilal Alizai

Regulated Entity Name: Liberty Hill MF Development

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

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

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

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

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

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

Sequence of Construction

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

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

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

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

Temporary Best Management Practices (TBMPs)

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

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

- [X] A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
- [X] A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
- [X] A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
- [X] A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

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

   - [ ] **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
   - [X] There will be no temporary sealing of naturally-occurring sensitive features on the site.

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

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

    - [X] For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
    - [ ] For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
    - [ ] For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
    - [ ] There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

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

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

☒ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

Liberty Hill MF Development

250 Gracie Ln
Liberty Hill, TX, Williamson County

Contributing Zone Plan

Prepared by:

GARZA EMC, LLC.
7708 Rialto Blvd., Suite 125
Austin, Texas 78735
TBPE Registration No. F-14629

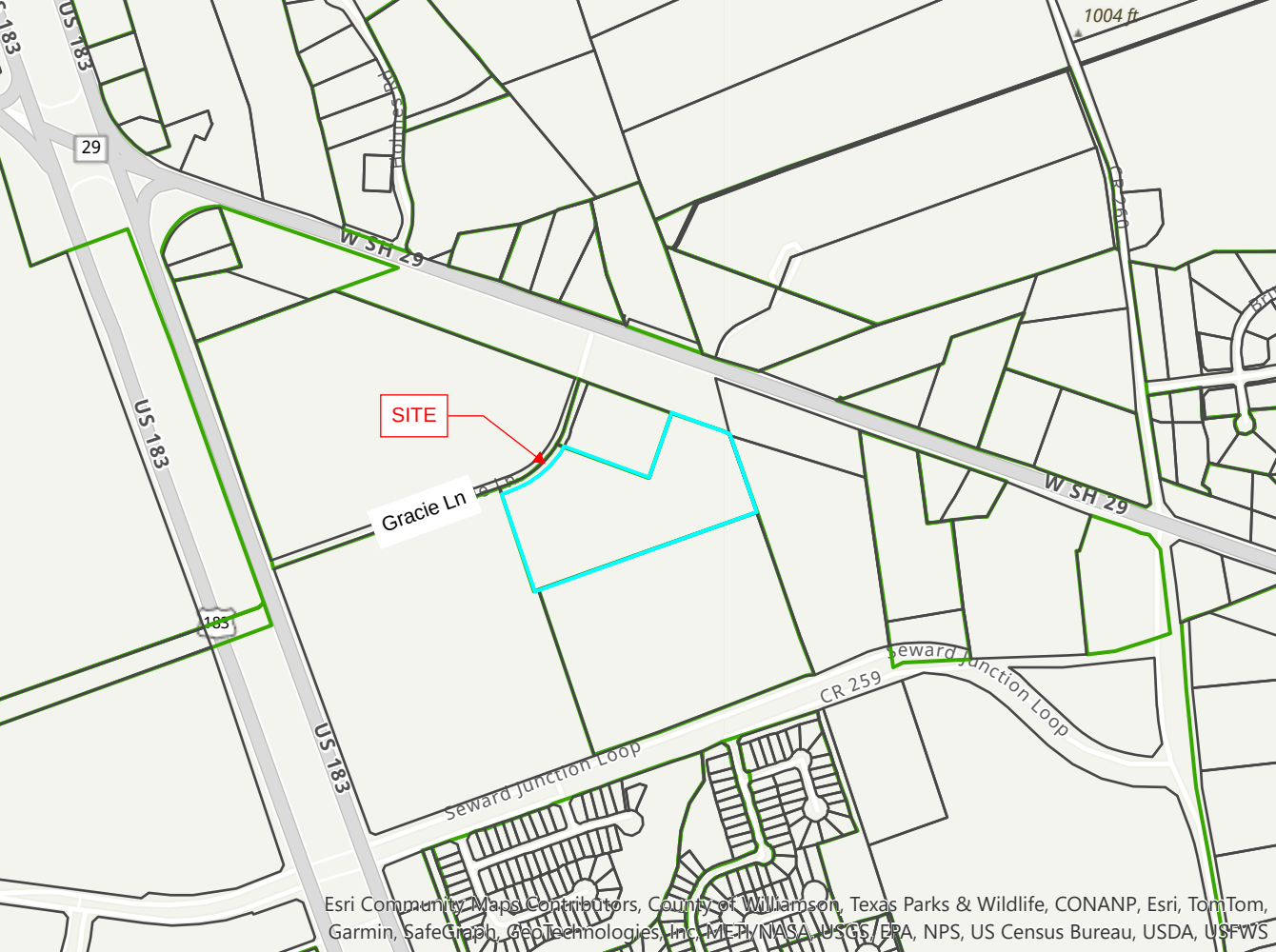
STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED
PROFESSIONAL ENGINEER

05-07-2024

April 2024

ATTACHMENTS FOR CONTRIBUTING ZONE APPLICATION

ATTACHMENT A: ROAD & SITE LOCATION MAP

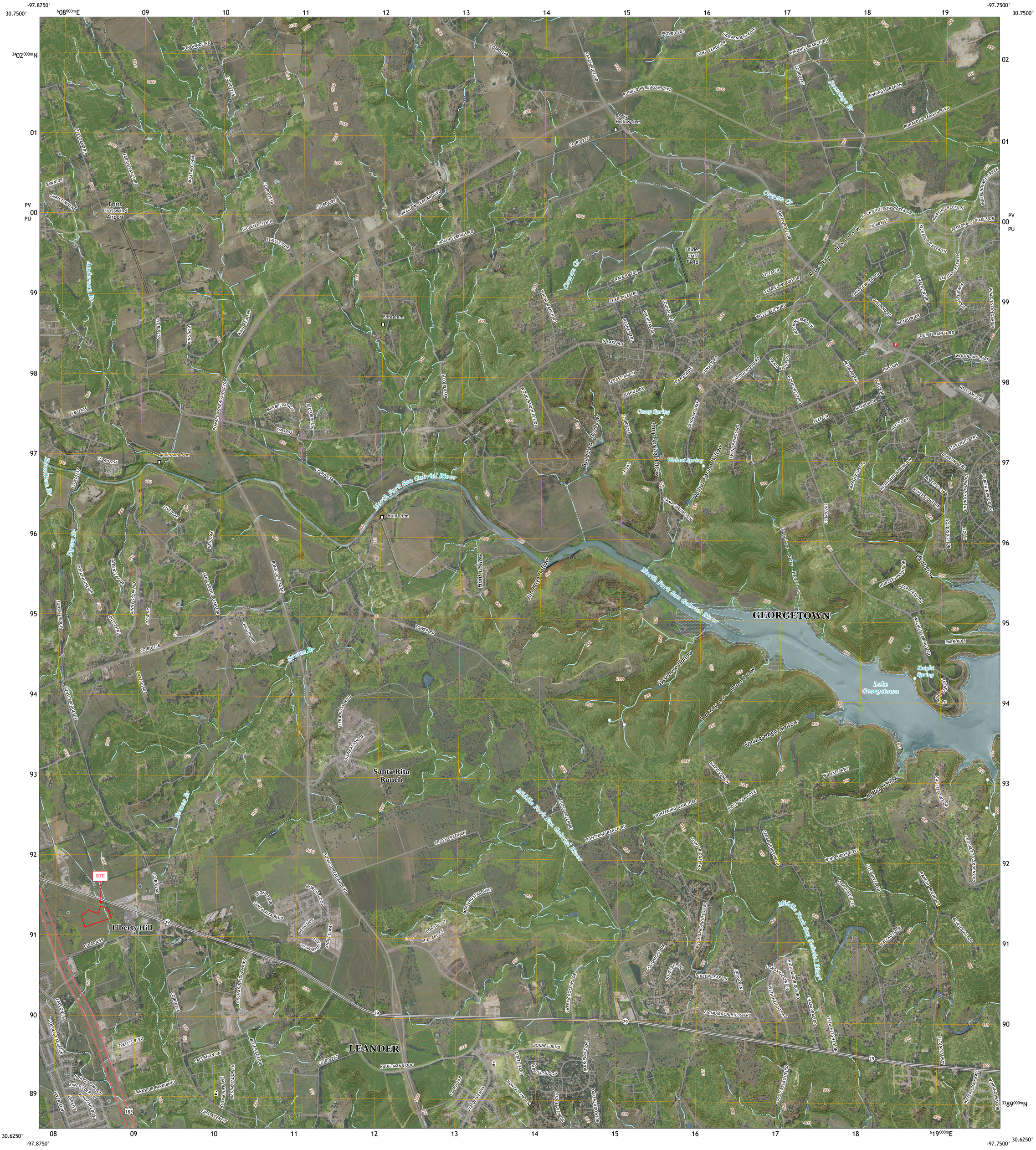

SITE
Gracie Ln
W SH 29
US 183
29
183
CR 259
Seward Junction Loop
1004 ft
Esri Community Maps Contributors, County of Williamson, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

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

U.S. National Grid
100,000 - m Square ID
PV
00
PU
Grid Zone Designation
14R

SCALE 1:24 000

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

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

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

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

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

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

LEANDER NE, TX
2022

NSN 7643016396982
NGA REF NO. USGSX24K22239

ATTACHMENT C: PROJECT NARRATIVE

The proposed site is 12.638 acres, located at 250 Gracie Ln, Liberty Hill, Williamson County, Texas. The entire limits of the site are within the Edwards Aquifer Contributing Zone. The existing site has no impervious cover while 55% impervious cover is proposed. The proposed development consists of five garden style multi-family apartment buildings with an amenity center. Each building will be four floors. In total, there will be 320 units.

The existing site consists of undeveloped property. Proposed construction consists of earthwork, storm water management controls (a batch detention pond), and related construction. The site erosion control measures will be in effect accordingly and are described in more detail elsewhere in the construction plans.

The majority of the site will be disturbed for the construction of the buildings, parking lot, and associated stormwater facilities.

The project will not involve rerouting, filling, or crossing a waterway of any kind. Onsite stormwater will be conveyed through a stormsewer system to the batch detention pond. Storm water will be discharged into the water quality basin of the pond where it will sit for 12 hours until the controller valve releases it to the outfall junction box which then conveys it to the neighboring drainage channel. An overflow weir at the water quality elevation will allow water to spill into the detention basin during large storm events once the full water quality volume of the water quality basin has been fulfilled. The detention volume will be discharged through an outlet structure designed to keep developed releases equal to existing flow. Pond effluent will be released toward the southeast corner of the site into the neighboring drainage channel. The detention pond has been sized to provide 1.60 feet of freeboard during the 100-year storm event.

The subject property is located at the top of the watershed, with Gracie Ln along the entire upstream segment of the site. The natural drainage pattern is from the West (Gracie Ln) to the East. The property to the north is an undeveloped lot whose drainage will be routed around the subject parcel through the use of a temporary swale until the lot is developed. The lot to the south is an undeveloped lot planned to be a multi-family development in the future. Gracie Ln borders the site on the west. The eastern boundary of the property is an open drainage channel routing drainage south toward the South Fork San Gabriel River.

ATTACHMENT D: FACTORS AFFECTING SURFACE WATER QUALITY

Potential sources of sediment to stormwater runoff include:

• Clearing, grading, and excavating activities, primarily un-stabilized areas; paving operations, demolition and debris disposal; dewatering operations, drilling, material delivery, storage and use and landscaping operations.

Potential pollutants other than sediment include the following materials and substances that could be expected to be present
on-site:

- Heavy Metals – from material delivery, storage and use, and hazardous substance/waste spills
- Trash, Debris and Solids – from clearing and grading, paving, concrete wash waste, construction painting and cleaning, demolition, drilling and blasting, material delivery storage and use, landscaping, and general construction
- Petroleum Based Products – vehicle and equipment use on site.
- Pesticides/Herbicides – from material delivery, storage and use, hazardous waste spills, vehicle use, storage, service and maintenance
- Fertilizers/Nutrients – from painting, cleaning products, dewatering, material delivery and storage, spills during landscaping operation

Potential sources of post construction stormwater runoff include:

- Sediment – coarse and fine from vehicle and equipment use on site.
- Heavy Metals – dissolved and particulate from vehicle washing activities
- Petroleum Based Products – from hazardous material spills, vehicle and equipment use on site.

ATTACHMENT E: VOLUME AND CHARACTER OF STORMWATER

The existing site consists of undeveloped land. Proposed construction consists of earthwork, storm water management controls, and related construction to build the permanent BMP (batch detention pond). The site erosion control measures will be in effect accordingly and are described in more detail elsewhere in the construction plans.

The surface soils, according to the USDA/Natural Resources Conservation Service's Soil Survey for Williamson County, in the local area are mapped as belonging mainly of Denton silty clay and Doss silty clay; both within soil hydrologic group 'D'. These are consistent with a visual inspection of the site.

The proposed impervious cover will be treated by an engineered batch detention pond designed to fulfill the water quality requirements of the Edward Aquifer Protection plan. The TCEQ Technical Guidance Manual RG-348 and "TSS Removal Calculations 04-20-2009" worksheet was utilized to design the water quality feature. These practices and measures have been designed, and will be

constructed, operated, and maintained to ensure 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. The pond has been designed to treat 55% impervious cover in order to accommodate for the full buildout. Following is a summary of the TCEQ worksheet calculations for this site:

BATCH DETENTION POND WORKSHEET:

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Liberty Hill MF Development
Date Prepared: 04.26.2024

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

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

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 * =	12.64	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	6.91	acres
Total post-development impervious cover fraction * =	0.55	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	6014	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	12.64	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	6.91	acres
Post-development impervious fraction within drainage basin/outfall area =	0.55	
$L_{M\ THIS\ BASIN}$ =	6014	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Extended Detention/Batch Detention
Removal efficiency = 91 percent

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

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

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:

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

A_C =	12.64	acres
A_I =	6.91	acres
A_P =	5.73	acres
L_R =	7052	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**6014**	lbs.
F =	**0.85**	

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

Rainfall Depth =	**1.32**	inches
Post Development Runoff Coefficient =	**0.38**	
On-site Water Quality Volume =	**23298**	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 =	**4660**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**27958**	cubic feet

SEE INCLUDED PLANS FOR MORE DETAILS OF THE BMP.

ATTACHMENT J: BMP FOR UPGRADIENT STORMWATER

No upgradient stormwater is routed through the proposed development. There is an existing open channel along the east boundary of the property that routes all upgradient stormwater south, never mixing with onsite stormwater.

ATTACHMENT K: BMPS FOR ON-SITE STORMWATER

1. Stabilization Practices

A. Installation of temporary onsite controls; silt fence and stabilized construction entrance.
B. Excavation and construction of the batch detention pond to collect and treat on-site storm water runoff before conveyed back to natural drainage patterns.
C. Permanent seeding and planting of all unpaved areas using a manual broadcasting or hydro mulching grass seeding technique. Permanent vegetation controls erosion by physically protecting a bare soil surface from raindrop impact, flowing water and wind. Vegetation binds soil particles together with a dense root system and reduces the velocity of runoff.
D. Mulching exposed areas. Surface mulch is the most effective, practical means of controlling erosion on disturbed areas before establishing vegetation. Mulch protects the soil surface, reduces runoff velocity, increases infiltration, slows soil moisture loss, helps prevent soil crusting and sealing, moderates soil temperatures, and improves the microclimate for seed germination.
E. Sodding/Landscape Planting Trees, Shrubs, vines, and ground covers can provide superior, low-maintenance, long-term erosion protection. Woody plants and ground covers are particularly adapted for use on steep or rocky slopes where maintenance is difficult, in shaded areas, for wildlife habitat improvements, as windbreaks or screens.

2. Structural Practices

A. A storm sewer system and minor site grading will be used to direct the flow of stormwater to the designed on-site water quality BMP.
B. A batch detention pond will be utilized as the primary water quality control for the project.

ATTACHMENT M: CONSTRUCTION PLANS

The batch detention BMP has been designed in accordance with RG—348. Construction plans and design calculations for the proposed permanent BMP and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer and are attached with this report. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. See plans by GarzaEMC for technical calculations and construction details.

ATTACHMENT N: INSPECTION, MAINTENANCE, REPAIR, AND RETROFIT PLANS

The following inspection and maintenance practices will be used to maintain permanent erosion and sediment controls.

BATCH DETENTION BASIN

1. Inspections. Inspections should take place a minimum of twice a year. One inspection should take place during wet weather to determine if the pond is meeting the target detention time of 12 hours and a drawdown time of no more than 48 hours. The remaining inspections should occur between storm events so that manual operation of the valve and controller can be verified. The level sensor in the basin should be inspected for signs of clogging. Debris and sediment should be removed from the orifice and outlet(s) as described in the previous section. Debris obstructing the valve should be removed. During each inspection, erosion areas inside and downstream of this BMP should be identified and repaired/revegetated immediately. The owner will provide routine inspection and maintenance for this pond, generally following these practices:

A. Mowing. The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.
B. Litter and Debris Removal. Litter and debris removal should take place at least twice a year, as part of the periodic mowing operations and inspections. Debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed.
C. Complete inspection log and note any actions taken.

2. Maintenance:

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

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

C. Structural Repairs and Replacement. With each inspection, any damage to structural elements of the basin (pipes, concrete drainage structures, etc.) should be identified and repaired immediately. An example of this type of repair can include patching of cracked concrete, sealing of voids, removal of vegetation from cracks and joints. The various inlet/outlet structures in a basin will eventually deteriorate and must be replaced.

D. Sediment Removal. A properly designed batch detention basin will accumulate quantities of sediment over time. The accumulated sediment can detract from the appearance of the facility and reduce the pollutant removal performance of the facility. The sediment also tends to accumulate near the outlet structure and can interfere with the level sensor operation. Sediment shall be removed from the basin at least every 5 years, when sediment depth exceeds 6 inches or when the basin does not drain within 48 hours. Care should be taken not to compromise the basin lining during maintenance.

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

MODIFICATIONS/REPAIRS & RETROFIT PLAN

The required inspections should also identify if any revisions to the permanent BMP are warranted due to unexpected conditions. This is meant to be a dynamic working guide that is to be kept current and amended whenever necessary:

(a) There is a change in design, construction, operation, or maintenance at the site that has or could have significant effect on the discharge of pollutants to the Waters of the United States that has not been previously addressed.

(b) Inspections or investigations by site staff, or by local, state, or federal officials, determine that the discharges from the permanent BMP are ineffective in eliminating or significantly minimizing pollutants in storm water discharges from the construction site.

(c) Based on the results of an inspection, it must be modified as necessary to include additional or modified BMPs designed to correct problems identified.

OWNER ACKNOWLEDGEMENT OF INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

RESPONSIBLE PARTY
FOR OP III ATX LIBERTY HILL 183, LP

SIGNATURE: _____ CLA

PRINT NAME: Luke Phillippi

TITLE: Executive Vice President

ATTACHMENT P: MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

The project will not involve rerouting, filling, or crossing a waterway of any kind. This drain to a batch detention pond through an underground storm system; refer to the construction plan sheets for more detail.

The proposed site plan and improvements will have minimal impact on the existing site condition and surrounding property. The design, analysis, and their applicability as presented herein is based on and by the most current weather data available for this area. This development, with recommended improvements if constructed per the site development plans prepared by GarzaEMC, is deemed not to increase existing endangerment to life or property in the surrounding area and no adverse impacts to existing drainage patterns.

ATTACHMENTS FOR TEMPORARY STORMWATER SECTION (TCEQ-0602)

ATTACHMENT A: SPILL RESPONSE ACTIONS

1. Report to TCEQ within 24 hours any noncompliance with this CZP that will endanger public health or the environment. Follow up with a written report within 5 days of the noncompliance event. The following events require 24 hour reporting: a) any unanticipated bypass which exceeds any effluent limitation in the permit, b) any upset which exceeds any effluent limitation in the permit, and c) a violation of a maximum daily discharge limitation for any of the pollutants listed by the TPDES General Permit TXR150000 are to be reported within 24 hours. The written submission must contain a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance.

2. Spills or Releases of Hazardous Substances or Oil in excess of reportable quantities (as established under 40 CFR Part 110, 40 CFR Part 117 or 40 CFR Part 302) must be reported immediately, and in no case any longer than 24 hours subsequent from the occurrence of the spill or release. Contact Info Track at 1-888-429-6281 (1-888-HAZMAT 1) to determine whether the spill is reportable. Reports shall be made to the US EPA National Response Center (1-800-424-8802). The permitee must also report any spills or releases to the Environmental Emergency Response at TCEQ.

3. INSTRUCTIONS FOR CLEAN-UP/SPILL REMEDIATION:
- Avoid direct contact with the spilled material.
- Avoid inhalation of any gases, fumes, vapors, or smoke. All personnel should stay upwind (some gases inhibit the sense of smell or may be dangerous at undetectable concentrations).
- Move and keep people away from the incident scene. Contact the nearest law-enforcement authority for assistance, if necessary.
- Find and, if possible, safely remove all ignition sources.
- Assess the situation with regard to injuries.
- Contact the appropriate authorities and responsible parties and allow them to handle the response.

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

Education

1. Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.

2. Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

3. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

4. Establish a continuing education program to indoctrinate new employees.

5. Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

1. To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

2. Store hazardous materials and wastes in covered containers and protect from vandalism.

3. Place a stockpile of spill cleanup materials where it will be readily accessible.

4. Train employees in spill prevention and cleanup.

5. Designate responsible individuals to oversee and enforce control measures.

6. Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean-up activities.

7. Do not bury or wash spills with water.

8. Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

9. Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

10. Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

11. Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

12. Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

1. Clean up leaks and spills immediately.

2. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

3. Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

2. Use absorbent materials on small spills rather than hosing down or burying the spill.

3. Absorbent materials should be promptly removed and disposed of properly.

4. Follow the practice below for a minor spill:
    a. Contain the spread of the spill.
    b. Recover spilled materials.
    c. Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills
Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.
Spills should be cleaned up immediately:
1. Contain spread of the spill.

2. Notify the project foreman immediately.

3. If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

4. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

5. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills
For significant or hazardous spills that are in reportable quantities:
1. Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224.It is

2. the contractor's responsibility to have all emergency phone numbers at the construction site.

3. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

4. Notification should first be made by telephone and followed up with a written report.

5. The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.

6. Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc. More

information on spill rules and appropriate responses is on the TCEQ website at: Spills, Discharges, and Releases - Texas Commission on Environmental Quality - www.tceq.texas.gov

Vehicle and Equipment Maintenance

1. If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

2. Regularly inspect onsite vehicles and equipment for leaks and repair immediately

3. Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

4. Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.

5. Place drip pans or absorbent materials under paving equipment when not in use.

6. Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.

7. Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

8. Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.

9. Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

1. If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

2. Discourage "topping off" of fuel tanks.
3. Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

ATTACHMENT B: POTENTIAL SOURCES OF CONTAMINATION

Potential pollutants other than sediment include the following materials and substances that could be expected to be present on-site during construction:

- Heavy Metals – from concrete additives, concrete washout, material delivery, storage and use, and hazardous substance/waste spills
- pH (Acids and Bases) – from concrete washout, painting and cleaning, drilling, material delivery, storage and use, hazardous waste spills, and sanitary/septic waste.
- Paints and Solvents – from concrete washout and waste, painting, concrete polishing, cleaning products, material delivery and use, hazardous waste spills, and sanitary/septic waste
- Trash, Debris and Solids – from clearing and grading, paving, concrete wash waste, construction painting and cleaning, demolition, drilling and blasting, material delivery storage and use, landscaping, and general construction
- Petroleum Based Products – from material delivery storage and use, hazardous waste spills, vehicle and equipment use on site, and vehicle and equipment fueling and maintenance and storage
- Pesticides/Herbicides – from material delivery, storage and use, hazardous waste spills, vehicle use, storage, service and maintenance
- Fertilizers/Nutrients – from painting, cleaning products, dewatering, material
- Delivery and storage, spills during landscaping operation, sanitary/septic waste.

Potential sources of post construction stormwater runoff include:

- Sediment – coarse and fine from vehicle and equipment use on site.
- Heavy Metals – dissolved and particulate from vehicle washing activities
- Petroleum Based Products – from hazardous material spills, vehicle and equipment use on site.

ATTACHMENT C: SEQUENCE OF MAJOR ACTIVITIES

1. Pre-construction meeting shall be held by the project manager and the operator's engineer prior to land disturbing activities.
2. Install perimeter sediment fences in the locations shown. ~ 3.0 acres of disturbance.
3. Commence construction of the temporary sedimentation basin (site of the batch detention pond) and associated facilities. ~ 1 acre of disturbance.

4. Commence with site grading~ 11 acres
5. Disturbed areas of the site where construction activity has ceased for more than 14 days shall be temporarily seeded and watered.
6. Finish grading once pond is complete and site is stabilized. ~ 11 acres of disturbance.
7. Remove sediment fencing only after all pond work is complete and exposed surfaces are stabilized; 75% cover on all pervious surfaces. ~ 0.50 acres of disturbance.
8. Maintain erosion and sediment control devices along perimeter of site as needed for ongoing mulching and soil mixing operations.

ATTACHMENT D: TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

- Temporary seeding and planting of all unpaved areas. Temporary seeding is used to protect earthen sediment control practices and to stabilize denuded areas that will not be brought to final grade for several weeks or months. Temporary seeding can provide a nurse crop for permanent vegetation, provide residue for soil protection and seedbed preparation, and help prevent dust production during construction.
- Mulching exposed areas. Surface mulch is the most effective, practical means of controlling erosion on disturbed areas before establishing vegetation. Mulch protects the soil surface, reduces runoff velocity, increases infiltration, slows soil moisture loss, helps prevent soil crusting and sealing, moderates soil temperatures, and improves the microclimate for seed germination.
- Soil Roughening by normal tilling, disking, harrowing, or use of a cultipacker-seeder. Roughening a sloping bare soil surface with horizontal depressions helps control erosion by aiding the establishment of vegetable cover with seed, reducing runoff velocity, and increasing infiltration. The depressions also trap sediment on the face of the slope.
- Dust Control (frequent watering to minimize wind erosion during construction). To minimize dust on construction sites, it is important to schedule construction activities so the least amount of soil is disturbed at any one time.

ATTACHMENT F: STRUCTURAL PRACTICES

- The area disturbed with a common drainage area is approximately 12 acres. A rough cut of the proposed pond will be used as a temporary sediment basin in addition to erosion and sediment controls other than sediment basins or sediment traps.

- **Perimeter protection using reinforced silt fencing.** A silt fence is a permeable barrier erected on small disturbed areas to capture sediment form sheet flow. It is made of a filter fabric buried at the bottom, the fabric restricts flow rate, forming a sedimentation pool at the approach to the inlet or downstream conveyance.
- **Stabilized construction entrance/exit points.** During wet weather, unstabilized staging/laydown areas become muddy and are virtually unusable. These areas generate sediment and cause work disruption. Proper grading and stabilization of construction routes often saves money for the Contractor by improving the overall efficiency of the construction operation while reducing potential erosion problems.
- **Concrete washout** area is to prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting onsite washout in a designated area as shown on the plans per the included detail.

ATTACHMENT G: DRAINAGE AREA MAP

See Sheet 05 EXISTING DRAINAGE AREA MAP in the GarzaEMC plan set attached at the end of this application package.

ATTACHMENT H: TEMPORARY SEDIMENT POND PLANS AND CALCULATIONS

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. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. See plans by GarzaEMC for temporary sediment controls and details.

ATTACHMENT I: INSPECTION AND MAINTENANCE FOR BMPS

The following inspection and maintenance practices will be used to maintain erosion and sediment controls and stabilization measures:

1. Inspection of all erosion controls and other SWPPP requirements shall be performed during permit coverage using a copy of the form provided in the Construction Forms Package (included with this SWPPP), and inspections shall be performed:
    a. at least weekly for a minimum of four inspections per month; and within 24 hr of any rainfall event, and
    b. as often as is necessary to ensure that appropriate erosion and sediment controls have been properly constructed and maintained and determine if additional or alternative control measures are required.

2. All measures will be maintained in good working order; if repairs or other measures are found to be necessary, they will be completed within 24 hours of report.
3. Built up sediment will be removed from silt fence before it has reached 6 inches in height.
4. Silt fences will be inspected for depth of sediment, tears, etc., to see if the fabric is securely attached to the fence posts, and to see that the fence posts are securely in the ground.
5. Temporary and permanent seeding and all other stabilization measures will be inspected for bare spots, washouts, and healthy growth.
6. An Inspection Report will be completed after each inspection.
7. The Contractor's Superintendent will be responsible for selecting and training the individuals who will be responsible for these inspections, maintenance and repair activities, and filling out the Inspection Report and Certification Forms.
8. Disturbed areas and materials storage areas will be inspected for evidence of or potential for pollutants entering storm water systems.

ATTACHMENT J: SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

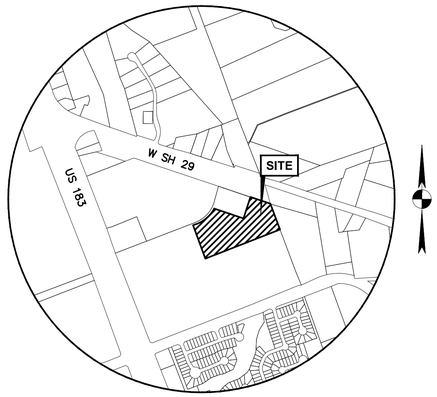
DAY 1 - Install perimeter silt fences in the locations shown on this sheet.
DAY 2 - Begin clearing and grubbing operations; clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where building is planned to commence within 14 days after clearing and grubbing.
DAY 2 - Install remaining erosion control measures and structures.
DAY 5 - Install permanent stormwater controls.
DAY 70 - Disturbed areas of the site where construction activity has ceased for more than 14 days shall be temporarily seeded and watered.
DAY 71 - Carry out final grading, seeding and planting; fine grade and install permanent seeding and plantings.
DAY 75 - Submit notice of termination for permit termination.
DAY 76 - Maintain erosion and sediment control devices along perimeter of site as needed for ongoing mulching and soil mixing operation

7708 Rialto Blvd. | Suite 125
Austin, TX. 78735

p: (512) 298-3284 | e: info@garzaemc.com

Presented by:

garza
emc



VICINITY MAP
N.T.S.

SITE DEVELOPMENT PERMIT PLANS

FOR

LIBERTY HILL MF DEVELOPMENT 2024-4-SDP

OWNER OP III ATX LIBERTY HILL 183, LP
500 WEST 5TH STREET, SUITE 700
AUSTIN, TX 78701
(512) 761-1848

DEVELOPER: ENDEAVOR REAL ESTATE GROUP
500 WEST 5TH STREET, SUITE 700
AUSTIN, TX 78735
(512) 682-5500

ARCHITECT: STEINBERG DICKEY COLLABORATIVE, LLP
8100 WASHINGTON AVENUE, SUITE 250
HOUSTON, TX 77007
(713) 552-1777

ENGINEER: GARZAEMC, LLC.
9106 WHEAT CROSS DR
HOUSTON, TEXAS 77095
(713) 491-6039

SURVEYOR 4WARD LAND SURVEYING
4120 FREIDRICH LANE, SUITE 200
AUSTIN, TX 78744
(512) 537-2384

FLOODPLAIN INFORMATION:

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FIRM COMMUNITY PANEL NUMBER 48453C0585H WITH AN EFFECTIVE DATE OF SEPTEMBER 26, 2009 INDICATES THAT THE ABOVE DESCRIBED PROPERTY LIES WITHIN AREAS DESIGNATED AS ZONE "X". ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER THE FLOOD INSURANCE RATE MAPS. THIS MAP DOES NOT NECESSARILY SHOW ALL AREAS SUBJECT TO FLOODING IN THE COMMUNITY OR ALL PLANIMETRIC FEATURES OUTSIDE SPECIAL FLOOD HAZARD AREAS. THIS DOES NOT GUARANTEE THAT THE SURVEYED PROPERTY WILL OR WILL NOT FLOOD. APPROXIMATE LOCATIONS OF FLOOD ZONES HAVE BEEN SHOWN HEREON BASED ON THE CURRENT FLOOD INSURANCE RATE MAPS.

LEGAL DESCRIPTION:

GUNNER NE MULTI–FAMILY SUBDIVISION LOT 1B BLOCK A 12.638 ACRES

BENCHMARK NOTE:

TBM #1 - SQUARE CUT FOUND IN CONCRETE IN THE EAST MARGIN OF HIGHWAY US-183 AND NORTH MARGIN OF COUNTY ROAD 259.
ELEVATION = 960.40'
TBM #2 - SQUARE CUT FOUND IN CONCRETE IN THE NORTH MARGIN OF COUNTY ROAD 259, EAST OF HIGHWAY US-183.
ELEVATION = 965.62'

SUBDIVISION No: S13297
ZONING ORDINANCE No.: 15-O-55

garza emc
9106 Wheat Cross Drive
Houston, Texas 77095
Tel. (713) 491-6039 Fax (512) 298-2592
TBPE # F-14629

LAND USE SUMMARY

ZONING: PUD 1 PER ORDINANCE 15-0-55
PROPOSED USE: MULTI-FAMILY
ACREAGE: 550,492 SF/ 12.638 AC
TOTAL IMPERVIOUS COVER: 301,124 SF/ 6.91 AC
BUILDING IMPERVIOUS COVER: 101,770 SF/ 2.34 AC
MULTI-FAMILY UNITS: 320
TOTAL PUD AREA: 82.28 AC
PERCENTAGE OF PUD AREA: 16.6%
FUTURE LAND USE: NEW URBAN VILLAGE

FILE NO. : 2024-4-SDP

ADDRESS : 250 GRACIE LANE
LIBERTY HILL, TX 78642

SUBMITTAL DATE : FEBRUARY 7, 2024

SUBMITTED BY : 05-07-2024
DATE

BILAL ALIZAI, P.E.
GarzaEMC, LLC.
9106 WHEAT CROSS DRIVE
HOUSTON, TEXAS 77095
(713) 491-6039

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED
PROFESSIONAL ENGINEER

PLAN SUBMITTALS:

NO.	DATE	COMMENTS

I, BILAL ALIZAI, P.E., CERTIFY THAT THESE ENGINEERING DOCUMENTS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THE INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY APPROVAL.

SHEET INDEX

NO.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	TOTAL # SHEETS IN PLAN SET	NET CHANGE IMP. COVER (sq. ft.)	TOTAL SITE IMP. COVER (sq. ft.) [%]	CITY OF GEORGETOWN APPROVAL/DATE	DATE IMAGED

APPROVED FOR ACCEPTANCE:

LIZ BRANIGAN, MAYOR — DATE

PAUL BRANDENBURG, CITY MANAGER — DATE

TEXAS DEPARTMENT OF TRANSPORTATION — DATE

WILLIAMSON COUNTY ESD NO. 4 — DATE

GEORGETOWN WATER UTILITY DEPARTMENT — DATE

ELAINE SIMPSON, CITY SECRETARY — DATE

CURTIS STEGER, P.E., CITY ENGINEER — DATE

BASED ON THE DESIGN ENGINEER'S CERTIFICATION OF COMPLIANCE WITH ALL APPLICABLE CITY, STATE AND FEDERAL REGULATIONS, THE PLANS AND SPECIFICATIONS CONTAINED HEREIN HAVE BEEN REVIEWED AND ARE FOUND TO BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE CITY OF LIBERTY HILL.

GENERAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER, AND SUCCESSORS TO THE CURRENT PROPERTY OWNER, TO ENSURE THE SUBJECT PROPERTY AND ANY IMPROVEMENTS ARE MAINTAINED IN CONFORMANCE WITH THIS SITE DEVELOPMENT PLAN.
2. THIS DEVELOPMENT SHALL COMPLY WITH ALL STANDARDS OF THE UNIFIED DEVELOPMENT CODE (UDC), THE CITY OF ROUND ROCK DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL, THE DEVELOPMENT MANUAL AND ALL OTHER APPLICABLE CITY STANDARDS.
3. THIS SITE DEVELOPMENT PLAN SHALL MEET THE UDC STORMWATER REQUIREMENTS.
4. ALL SIGNAGE REQUIRES A SEPARATE APPLICATION AND APPROVAL FROM THE INSPECTION SERVICES DEPARTMENT. NO SIGNAGE IS APPROVED WITH THE SITE DEVELOPMENT PLAN.
5. SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH THE UDC.
6. DRIVEWAYS WILL REQUIRE APPROVAL BY THE DEVELOPMENT ENGINEER OF THE CITY OF LIBERTY HILL.
7. OUTDOOR LIGHTING SHALL COMPLY WITH SECTION 7.04 OF THE UDC.
8. SCREENING OF MECHANICAL EQUIPMENT, DUMPSTERS AND PARKING SHALL COMPLY WITH CHAPTER 6 OF THE UDC. THE SCREENING IS SHOWN ON THE LANDSCAPE AND ARCHITECTURAL PLANS, AS APPLICABLE.
9. THE COMPANION LANDSCAPE PLAN HAS BEEN DESIGNED AND PLANT MATERIALS SHALL BE INSTALLED TO MEET ALL REQUIREMENTS OF THE UDC.
10. ALL MAINTENANCE OF REQUIRED LANDSCAPE SHALL COMPLY WITH THE MAINTENANCE STANDARDS OF CHAPTER 6 OF THE UDC.
11. A SEPARATE IRRIGATION PLAN SHALL BE REQUIRED AT THE TIME OF BUILDING PERMIT APPLICATION.
12. FIRE FLOW REQUIREMENTS OF 1500 GALLONS PER MINUTE (INCLUDE AMOUNT) ARE BEING MET BY THIS PLAN.
13. ANY HERITAGE TREE NOTED ON THIS SITE DEVELOPMENT PLAN IS SUBJECT, IN PERPETUITY, TO THE MAINTENANCE, CARE, PRUNING AND REMOVAL REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE.
14. THE CONSTRUCTION PORTION OF THESE PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS AND CODES.
15. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
16. WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE LOCATED ALONG THE STREET AND WITHIN THE SITE. WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BE RELOCATED, IT SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER.
17. ALL ELECTRIC AND COMMUNICATION INFRASTRUCTURE SHALL COMPLY WITH UDC SECTION 5.04.A.6.
18. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK STANDARD SPECIFICATIONS MANUAL.
19. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT OWNER'S EXPENSE.
20. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS ARE APPROPRIATE.
21. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
22. THE CONTRACTOR SHALL GIVE THE CITY OF LIBERTY HILL 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE (512) 548-5519 (PLANNING AND DEVELOPMENT DEPARTMENT).
23. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.
24. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF LIBERTY HILL, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OF LIBERTY HILL OR ENGINEER MAY REQUIRE.
25. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF ROUND ROCK ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "ASBUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE PLANNING AND DEVELOPMENT DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
26. THE CITY OF LIBERTY HILL COUNCIL SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.
27. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.
28. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.
29. AVAILABLE BENCHMARKS (CITY OF LIBERTY HILL DATUM) THAT MAY BE UTILIZED FOR THE CONSTRUCTION OF THIS PROJECT ARE DESCRIBED AS FOLLOWS.

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT (WILL BE PROVIDED BY THE CONTRACTOR; ARE ON SHEET 30, ETC.).
2. IN ACCORDANCE WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4-FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY OF LIBERTY HILL.

STREET AND DRAINAGE NOTES:

1. ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY OF LIBERTY HILL INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY OF LIBERTY HILL INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING. TELEPHONE 512-548-5510 KATHERYN MITCHELL (INSPECTIONS).
2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.
3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.
4. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF ROUND ROCK ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT.
5. BARRICADES BUILT TO CITY OF ROUND ROCK STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.
6. ALL R.C.P. SHALL BE MINIMUM CLASS III.
7. THE SUBGRADE MATERIAL FOR THE STREETS SHOWN HEREIN WAS TESTED BY ______________________________ AND THE PAVING SECTIONS DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF ROUND ROCK DESIGN CRITERIA. THE PAVING SECTIONS ARE TO BE CONSTRUCTED AS FOLLOWS:

STREET	STATION	FLEX. BASE THICKNESS	HMAC THICKNESS	LIME STAB. THICKNESS

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

8. WHERE PI'S ARE OVER 20, SUBGRADES MUST BE STABILIZED UTILIZING A METHOD ACCEPTABLE TO THE CITY OF ROUND ROCK ENGINEER. THE GEOTECHNICAL ENGINEER SHALL RECOMMEND AN APPROPRIATE SUBGRADE STABILIZATION IF SULFATES ARE DETERMINED TO BE PRESENT.
9. THE MAINTENANCE OF THE DRAINAGE AND DETENTION FACILITIES IS THE RESPONSIBILITY OF THE PROPERTY OWNER. THE HOMEOWNER'S ASSOCIATION (HOA)/ PROPERTY OWNER'S ASSOCIATION (POA)/ ETC. WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THESE FACILITIES.

WATER AND WASTEWATER NOTES:

1. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 200), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9).
2. PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 150), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241 OR D3034, MAX. DR-26), DUCTILE IRON (AWWA C-100, MIN. CLASS 200).
3. UNLESS OTHERWISE ACCEPTED BY THE CITY OF ROUND ROCK ENGINEER, DEPTH OF COVER FOR ALL LINES OUT OF THE PAVEMENT SHALL BE 42" MIN., AND DEPTH OF COVER FOR ALL LINES UNDER PAVEMENT SHALL BE A MIN. OF 30" BELOW SUBGRADE.
4. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200).
5. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE AND SEALED WITH DUCT TAPE OR EQUAL ACCEPTED BY THE CITY OF ROUND ROCK ENGINEER.
6. THE CONTRACTOR SHALL CONTACT THE CITY OF LIBERTY HILL INSPECTOR AT 512-548-5510 KATHERYN MITCHELL TO COORDINATE UTILITY TIE-INS AND NOTIFY HIM AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING LINES.
7. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF THE PAVEMENT SHALL HAVE BOLTED COVERS. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE ALLOWED.
8. THE CONTRACTOR MUST OBTAIN A BULK WATER PERMIT OR PURCHASE AND INSTALL A WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO USE WATER.
9. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE SCHEDULED WITH THE WATER & WASTEWATER SUPERINTENDENT, TELEPHONE 218-5555.
10. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM STERILIZATION OF ALL POTABLE WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING TEST GAUGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTING MATERIAL), AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY CITY OF ROUND ROCK PERSONNEL. WATER SAMPLES WILL BE COLLECTED BY THE CITY OF ROUND ROCK TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM. WHERE MEANS OF FLUSHING IS NECESSARY, THE CONTRACTOR, AT HIS EXPENSE, SHALL PROVIDE FLUSHING DEVICES AND REMOVE SAID DEVICES PRIOR TO FINAL ACCEPTANCE BY THE CITY OF ROUND ROCK.
11. SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY OF ROUND ROCK PERSONNEL. AT THE CONTRACTOR'S REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF ROUND ROCK NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE CITY. THE CONTRACTOR SHALL SUPPLY A CHECK OR MONEY ORDER, PAYABLE TO THE CITY OF ROUND ROCK, TO COVER THE FEE CHARGED FOR TESTING EACH WATER SAMPLE. CITY OF LIBERTY HILL FEE AMOUNTS MAY BE OBTAINED BY CALLING THE PLANNING AND DEVELOPMENT DEPARTMENT (512) 548-5519.
12. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY CITY OF LIBERTY HILL PERSONNEL.
13. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY OF LIBERTY HILL INSPECTOR AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.
14. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF LIBERTY HILL.
15. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
16. ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:

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

TOOLS FOR MARKING THE CURB SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF MARKING SHALL BE AS SPECIFIED BY THE ENGINEER AND ACCEPTED BY THE CITY OF LIBERTY HILL.

17. CONTACT CITY OF LIBERTY HILL PLANNING AND DEVELOPMENT DEPARTMENT (512) 548-5519 FOR ASSISTANCE IN OBTAINING EXISTING WATER AND WASTEWATER LOCATIONS.
18. THE CITY OF LIBERTY HILL FIRE DEPARTMENT SHALL BE NOTIFIED 48 HOURS PRIOR TO TESTING OF ANY BUILDING SPRINKLER PIPING IN ORDER THAT THE FIRE DEPARTMENT MAY MONITOR SUCH TESTING.
19. SAND, AS DESCRIBED IN SPECIFICATION ITEM 510 PIPE, SHALL NOT BE USED AS BEDDING FOR WATER AND WASTEWATER LINES. ACCEPTABLE BEDDING MATERIALS ARE PIPE BEDDING STONE, PEA GRAVEL AND IN LIEU OF SAND, A NATURALLY OCCURRING OR MANUFACTURED STONE MATERIAL CONFORMING TO ASTM C33 FOR STONE QUALITY AND MEETING THE FOLLOWING GRADATION SPECIFICATION:

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

20. THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING UTILITY LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 A.M. AND 6 A.M.
21. ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 317, AS APPLICABLE. WHENEVER TCEQ AND CITY OF ROUND ROCK SPECIFICATIONS CONFLICT, THE MORE STRINGENT SHALL APPLY.

TRAFFIC MARKING NOTES:

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
2. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL COMPLY WITH CHAPTER 5 OF THE UDC.
2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.
3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF LIBERTY HILL FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.
4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.
5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

REVISION	NO.	DATE

garza
7708 Rialto Blvd., Suite 125
Austin, Texas 78735
Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED PROFESSIONAL ENGINEER

GENERAL NOTES

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P. GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

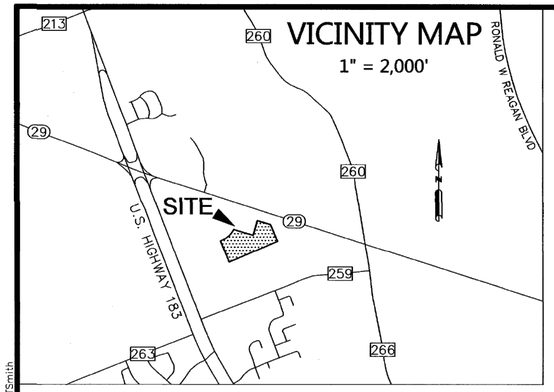
SHEET
02
OF 33

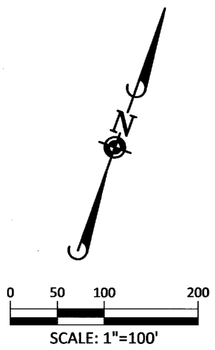
Doc # 2023061640

GUNNER NE MULTI-FAMILY SUBDIVISION

12.934 ACRES OUT OF THE JOHN B. ROBINSON SURVEY,
ABSTRACT NO. 521, IN WILLIAMSON COUNTY, TEXAS

OWNER: 212 GUNNER, LTD.
ACREAGE: 12.934
PATENT SURVEY: JOHN B. ROBINSON, ABS. 521
SURVEYOR: ABRAM DASHNER, RPLS
ENGINEER: ANTHONY GOODE
NUMBER OF BLOCKS: 1
SUBMITTAL DATE: 3/7/2022
ACREAGE BY LOT TYPE: MULTI-FAMILY DEVELOPMENT: 12.638
R.O.W. RESERVE: 0.296
NUMBER OF LOTS BY TYPE: MULTI-FAMILY DEVELOPMENT – 1
R.O.W. RESERVE – 1





SHEET INDEX

LEGEND

- ● = FOUND 1/2-INCH IRON ROD
- ○ = SET 1/2-INCH IRON ROD WITH "MANHARD CONSULTING" CAP
- △ = CALCULATED POINT
- ——— = PROPERTY LINE
- — — — = EASEMENT LINE
- ——— ——— = ADJOINING PROPERTY LINE
- ..... = PROPOSED SIDEWALK
- P.O.B. = POINT OF BEGINNING

LINE TABLE		
LINE	BEARING	LENGTH
L1	N68°57'29"E	52.46'
L2	S68°57'29"W	53.00'

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD BEARING	CHORD
C1	435.00'	39°34'04"	300.41'	N49°09'56"E	294.47'
C2	470.00'	40°23'45"	331.37'	S48°45'08"W	324.55'

BASIS OF BEARINGS

COORDINATES AND BEARINGS ARE BASED UPON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE (NAD 83), UTILIZING THE ALTERRA CENTRAL RTKNET VIRTUAL REFERENCE NETWORK. COORDINATES ARE GRID VALUES. TO CONVERT TO GROUND COORDINATES, APPLY A COMBINED SCALE FACTOR OF 1.00010

Manhard CONSULTING
6448 E. Highway 290, Ste. B-105 Austin, TX 78723 ph:512.244.3395 manhard.com
Civil Engineers | Surveyors | Water Resource Engineers | Water & Waste Water Engineers
Construction Managers | Environmental Scientists | Landscape Architects | Planners
Texas Board of Professional Engineers & Land Surveyors Reg. No. F-10194754 (Surv), F-21732 (Eng)

GUNNER NE MULTI-FAMILY SUBDIVISION
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS
FINAL PLAT

REVISED:	6/16/23
PROJ. MGR.:	AD
DRAWN BY:	TRS
SURVEY DATE:	3/13/23
ISSUE DATE:	2/10/23
SCALE:	1"=100'

SHEET 1 OF 2

23-003FPL GUNNER, LTD. NE

Doc #2023040410

GUNNER NE MULTI-FAMILY SUBDIVISION

12.934 ACRES OUT OF THE JOHN B. ROBINSON SURVEY,
ABSTRACT NO. 521, IN WILLIAMSON COUNTY, TEXAS

OWNER: 212 GUNNER, LTD.
ACREAGE: 12.934
PATENT SURVEY: JOHN B. ROBINSON, ABS. 521
SURVEYOR: ABRAM DASHNER, RPLS
ENGINEER: ANTHONY GOODE
NUMBER OF BLOCKS: 1
SUBMITTAL DATE: 3/7/2022
ACREAGE BY LOT TYPE: MULTI-FAMILY DEVELOPMENT: 12.638
R.O.W. RESERVE: 0.296
NUMBER OF LOTS BY TYPE: MULTI-FAMILY DEVELOPMENT – 1
R.O.W. RESERVE – 1

STATE OF TEXAS §
COUNTY OF WILLIAMSON §

THAT, 212 GUNNER, LTD., AS THE OWNER OF THE CERTAIN 12.934 ACRE TRACT SHOWN HEREON, BEING A PORTION OF THAT CERTAIN 73.5850 ACRE TRACT OF LAND RECORDED IN DOCUMENT NO. 2020007536, OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS DO HEREBY CERTIFY THAT THERE ARE NO LIEN HOLDERS AND DEDICATE TO THE PUBLIC FOREVER USE OF THE STREETS, ALLEYS, EASEMENTS AND ALL OTHER LANDS INTENDED FOR PUBLIC DEDICATION AS SHOWN HEREON TO BE KNOWN AS

GUNNER NE MULTI-FAMILY SUBDIVISION

BY: WILLIAM B. POHL

212 GUNNER, LTD.
10800 PECAN PARK BLVD., SUITE 125
AUSTIN, TEXAS 78750

THE STATE OF TEXAS §
COUNTY OF WILLIAMSON §

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THE 20th DAY OF June 2023 ~~2022~~, BY WILLIAM B. POHL.

HONEY R. CROWLEY
Notary Public, State of Texas
Comm. Expires 01-11-2026
Notary ID 133528342

NOTARY PUBLIC, STATE OF TEXAS
PRINTED NAME: Honey R Crowley
MY COMMISSION EXPIRES: 1-11-2026

ENGINEER'S CERTIFICATION:

THE STATE OF TEXAS §
COUNTY OF WILLIAMSON §

THAT I, ANTHONY GOODE, DO HEREBY CERTIFY THAT THE INFORMATION CONTAINED ON THIS PLAT COMPLIES WITH CHAPTER 5, SUBDIVISIONS, PUBLIC IMPROVEMENTS CITY OF LIBERTY HILL UNIFIED DEVELOPMENT CODE, AND THE DESIGN AND CONSTRUCTION STANDARDS ADOPTED BY THE CITY OF LIBERTY HILL, TEXAS.

ANTHONY GOODE, P.E. NO. 97263
GOODE FAITH ENGINEERING, LLC
TBPE FIRM NO. F-22664
1620 LA JAITA DR. SUITE 300,
CEDAR PARK, TEXAS, 78613
(972) 822-1682

STATE OF TEXAS
ANTHONY H. GOODE
97263
LICENSED
PROFESSIONAL ENGINEER
6-22-2023

CITY CERTIFICATION

I, JERRY L. MILLARD, JR. INTERIM DIRECTOR OF PLANNING, DESIGNEE, OF THE CITY OF LIBERTY HILL, TEXAS, UNDER THE AUTHORITY GRANTED ME IN SECTION 3.09.02 OF THE UNIFIED DEVELOPMENT CODE, AND IN ACCORDANCE WITH CHAPTER 212 OF THE TEXAS LOCAL GOV'T CODE, DO HEREBY CERTIFY THIS PLAT AS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

DIRECTOR OF PLANNING — DATE 6-22-23

Jerry L. Millard, Jr.

GENERAL NOTES:

1. THIS SUBDIVISION IS WHOLLY CONTAINED WITHIN THE CURRENT CORPORATE LIMITS OF THE CITY OF LIBERTY HILL, TEXAS.
(INSIDE CITY ONLY)

2. NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO PERMITTED WATER DISTRIBUTION AND WASTEWATER COLLECTION FACILITIES.

3. A BUILDING PERMIT IS REQUIRED FROM THE CITY OF LIBERTY HILL PRIOR TO CONSTRUCTION OF ANY BUILDING OR SITE IMPROVEMENTS ON ANY LOT IN THIS SUBDIVISION.

4. NO BUILDINGS, FENCES, LANDSCAPING OR OTHER STRUCTURES ARE PERMITTED WITHIN DRAINAGE EASEMENTS SHOWN EXCEPT AS APPROVED BY THE CITY OF LIBERTY HILL PUBLIC WORKS DEPARTMENT.

5. PROPERTY OWNER SHALL PROVIDE FOR ACCESS TO DRAINAGE EASEMENTS AS MAY BE NECESSARY AND SHALL NOT PROHIBIT ACCESS BY THE CITY OF LIBERTY HILL.

6. ALL EASEMENTS ON PRIVATE PROPERTY THAT ARE GRANTED HEREIN, IF ANY, SHALL BE MAINTAINED BY THE PROPERTY OWNER OR HIS OR HER ASSIGNS, EXCEPT THAT ANY UTILITY LINES OR FACILITIES INSTALLED IN ANY PUBLIC UTILITY EASEMENT SHALL BE MAINTAINED BY THE PUBLIC UTILITY THAT INSTALLED SUCH UTILITY LINES OF FACILITIES..

7. IN ADDITION TO THE EASEMENT SHOWN HEREON, A TEN (10') FOOT WIDE PUBLIC UTILITY EASEMENT IS DEDICATED ALONG AND ADJACENT TO ALL RIGHT-OF-WAY AND A TWO AND A HALF (2.5') FOOT WIDE PUBLIC UTILITY EASEMENT IS DEDICATED ALONG ALL SIDE LOT LINES.

8. NO PORTION OF THIS TRACT IS WITHIN A FLOOD HAZARD AREA AS SHOWN ON THE FLOOD INSURANCE RATE MAP PANEL #48491C0275E FOR WILLIAMSON CO., EFFECTIVE SEPTEMBER 26, 2008.

9. BUILDING SETBACKS NOT SHOWN HEREON SHALL COMPLY WITH THE MOST CURRENT ZONING ORDINANCE OF THE CITY OF LIBERTY HILL.

10. SIDEWALKS SHALL BE INSTALLED ON THE SUBDIVISION SIDE OF GRACIE LANE AND S.H. 29 (INCLUDING SIDEWALKS ALONG STREET FRONTAGES OF LOTS PROPOSED FOR SCHOOLS, CHURCHES, PARK LOTS, DETENTION LOTS, DRAINAGE LOTS, LANDSCAPE LOTS, OR SIMILAR LOTS), SIDEWALKS ON ARTERIAL STREETS TO WHICH ACCESS IS PROHIBITED, SIDEWALKS ON DOUBLE FRONTAGE LOTS ON THE SIDE TO WHICH ACCESS IS PROHIBITED, AND ALL SIDEWALKS ON SAFE SCHOOL ROUTES SHALL BE INSTALLED WHEN THE ADJOINING STREET IS CONSTRUCTED.

11. ALL UTILITY LINES MUST BE LOCATED UNDERGROUND.

12. ALL DRIVE LANES, FIRE LANES, AND DRIVEWAYS WITHIN THIS SUBDIVISION SHALL PROVIDE FOR RECIPROCAL ACCESS FOR INGRESS AND EGRESS TO ALL OTHER LOTS WITHIN THE SUBDIVISION.

SURVEYOR'S CERTIFICATION:

THE STATE OF TEXAS §
COUNTY OF TRAVIS §

THAT I, ABRAM C. DASHNER, DO HEREBY CERTIFY THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ACCURATE ON-THE-GROUND SURVEY OF THE LAND AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH CHAPTER 5, SUBDIVISIONS, PUBLIC IMPROVEMENTS, CITY OF LIBERTY HILL UNIFIED DEVELOPMENT CODE, THAT ALL EASEMENTS OF RECORD (AS FOUND ON THE MOST RECENT TITLE POLICY ISSUED FOR THE SUBJECT PROPERTY) ARE PLOTTED OR NOTED HEREON, AND THIS PLAT IS IN CONFORMANCE WITH THE LIBERTY HILL SUBDIVISION ORDINANCE.

ABRAM C. DASHNER
RPLS NO. 5901
6448 E HWY 290, STE. B-105
AUSTIN, TX 78723

REGISTERED
ABRAM C. DASHNER
5901
PROFESSIONAL
LAND SURVEYOR
6/16/23

LEGAL DESCRIPTION:

12.934 ACRES OUT OF THE JOHN B. ROBINSON SURVEY, ABSTRACT NO. 521, IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF THAT CERTAIN 73.5850 ACRE TRACT CONVEYED TO 212 GUNNER LTD, BY DEED OF RECORD IN DOCUMENT NO. 2020007536, OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 12.934 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING, AT A 1/2-INCH IRON ROD FOUND IN THE WEST LINE OF THAT CERTAIN 14.200 ACRE TRACT CONVEYED TO PEDERNALES ELECTRIC COOPERATIVE, INC., BY DEED OF RECORD IN DOCUMENT NO. 2020062257, OF SAID OFFICIAL PUBLIC RECORDS, BEING AN ANGLE POINT IN THE SOUTH RIGHT-OF-WAY LINE OF SH 29 (R.O.W. VARIES), ALSO BEING THE NORTHEAST CORNER OF SAID 73.5850 ACRE TRACT, FOR THE NORTHEASTERLY CORNER HEREOF;

THENCE, S20°30'56"E, LEAVING SAID SOUTH RIGHT-OF-WAY LINE OF SH 29, ALONG THE WEST LINE OF SAID 14.200 ACRE TRACT, BEING THE EAST LINE OF SAID 73.5850 ACRE TRACT, A DISTANCE OF 395.74 FEET TO A 1/2-INCH IRON ROD WITH "MANHARD CONSULTING" CAP SET, FOR THE SOUTHEASTERLY CORNER HEREOF;

THENCE, LEAVING THE WEST LINE OF SAID 14.200 ACRE TRACT, OVER AND ACROSS SAID 73.5850 ACRE TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. S68°45'42"W, A DISTANCE OF 1128.04 FEET TO A 1/2-INCH IRON ROD WITH "MANHARD CONSULTING" CAP SET, FOR THE SOUTHWESTERLY CORNER HEREOF;
2. N20°09'39"W, A DISTANCE OF 530.86 FEET TO A CALCULATED POINT IN THE NORTH LINE OF SAID 73.5850 ACRE TRACT, BEING THE SOUTH LINE OF THAT CERTAIN 33.9575 ACRE TRACT CONVEYED TO HENRIETTA 212 LLC, BY DEED OF RECORD IN DOCUMENT NO. 2019003562, OF SAID OFFICIAL PUBLIC RECORDS, FOR THE NORTHWESTERLY CORNER HEREOF;

THENCE, ALONG THE SOUTH LINE OF SAID 33.9575 ACRE TRACT, BEING THE NORTH LINE OF SAID 73.5850 ACRE TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. N68°57'29"E, A DISTANCE OF 52.46 FEET TO A 1/2-INCH IRON ROD FOUND AT THE POINT OF CURVATURE OF A CURVE TO THE LEFT;
2. ALONG SAID CURVE, HAVING A RADIUS OF 435.00 FEET, A CENTRAL ANGLE OF 39°34'04", AN ARC LENGTH OF 300.41 FEET, AND A CHORD WHICH BEARS N49°09'56"E, A DISTANCE OF 294.47 FEET TO A CALCULATED POINT AT THE END OF SAID CURVE;

THENCE, LEAVING THE SOUTH LINE OF SAID 33.9575 ACRE TRACT, OVER AND ACROSS SAID 73.5850 ACRE TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. S71°36'22"E, A DISTANCE OF 468.92 FEET TO A 1/2-INCH IRON ROD WITH "MANHARD CONSULTING" CAP SET, FOR AN ANGLE POINT;
2. N17°46'28"E, A DISTANCE OF 325.87 FEET TO A 1/2-INCH IRON ROD WITH "MANHARD CONSULTING" CAP SET IN THE NORTH LINE OF SAID 73.5850 ACRE TRACT, BEING SAID SOUTH RIGHT-OF-WAY LINE OF SH 29, FOR AN ANGLE POINT;

THENCE, S71°38'05"E, ALONG SAID SOUTH RIGHT-OF-WAY LINE, BEING THE NORTH LINE OF SAID 73.5850 ACRE TRACT, A DISTANCE OF 294.49 FEET TO THE **POINT OF BEGINNING**, AND CONTAINING 12.934 ACRES (563,392 SQUARE FEET) OF LAND, MORE OR LESS.

WILLIAMSON COUNTY CLERK RECORDATION CERTIFICATION:

THE STATE OF TEXAS §
COUNTY OF WILLIAMSON §

THAT I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATION OF AUTHENTICATION, WAS FILED FOR RECORD IN MY OFFICE ON THE 24th DAY OF July A.D., 2023 AT 10:30 O'CLOCK A M. AND DULY RECORDED ON THE 24th DAY OF July A.D., 2023 AT 10:40 O'CLOCK A M. IN THE PLAT RECORDS OF SAID COUNTY, IN DOCUMENT NO. 2023040410 WITNESS MY HAND AND SEAL OF THE COUNTY COURT OF SAID COUNTY, AT OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST ABOVE WRITTEN.

NANCY RISTER, CLERK, COUNTY COURT
WILLIAMSON COUNTY, TEXAS
BY: DEPUTY

COUNTY COURT
WILLIAMSON COUNTY, TEXAS

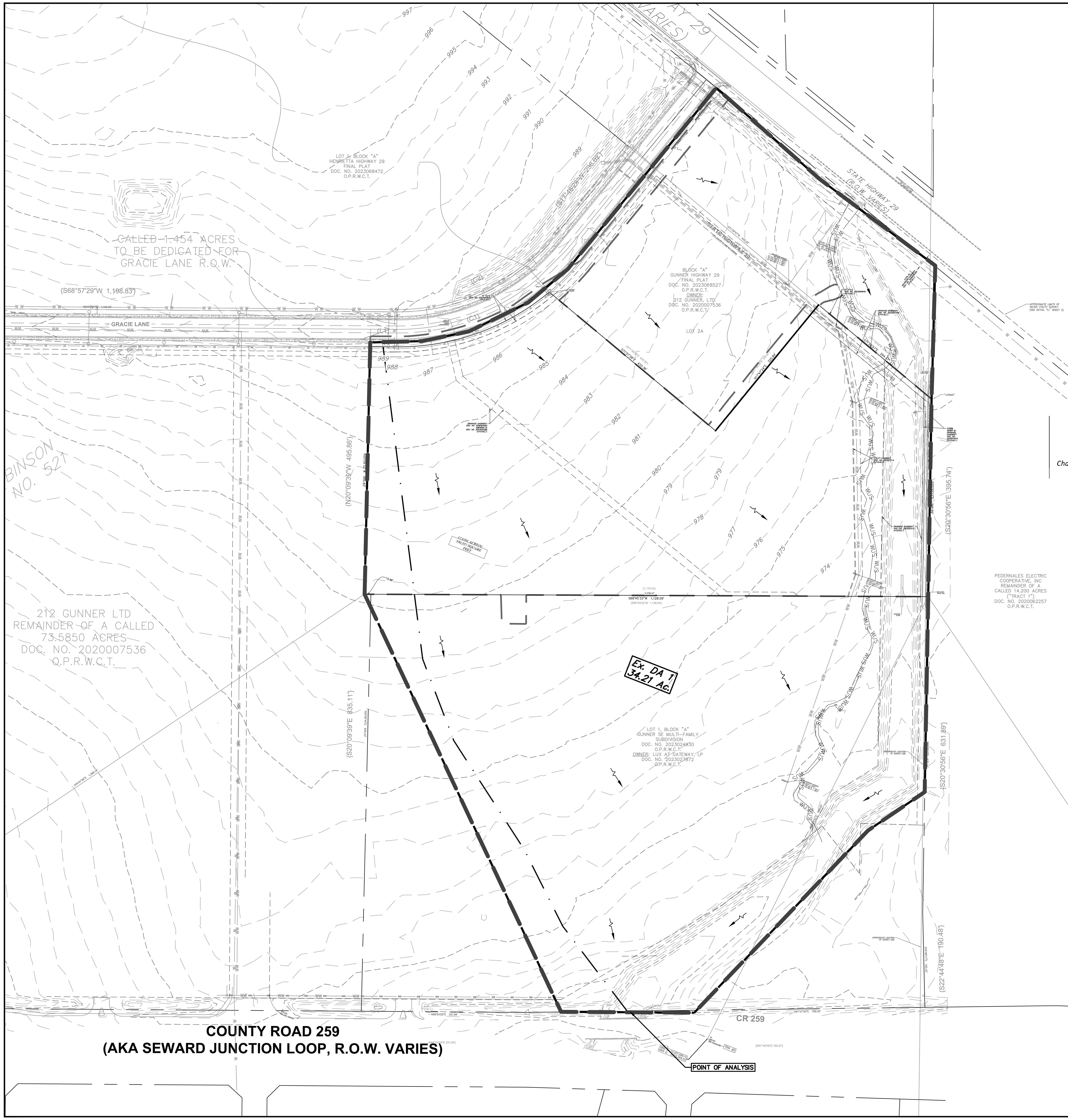
Manhard CONSULTING
6448 E Highway 290, Ste B-105 Austin, TX 78723 ph:512.244.3395 manhard.com
Civil Engineers | Surveyors | Water Resource Engineers | Water & Waste Water Engineers
Construction Managers | Environmental Scientists | Landscape Architects | Planners
Texas Board of Professional Engineers & Land Surveyors Reg. No. F-10194754 (Surv), F-21732 (Eng)

GUNNER NE MULTI-FAMILY SUBDIVISION
LIBERTY HILL, WILLIAMSON COUNTY, TEXAS
FINAL PLAT

REVISED:	6/16/23
PROJ. MGR.:	AD
DRAWN BY:	TRS
SURVEY DATE:	3/13/23
ISSUE DATE:	2/10/23
SCALE:	1"=100'

SHEET 2 OF 2

23-003FPL GUNNER, LTD. NE



1" = 100'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
— — —		PROPERTY (R.O.W.) LINE
— — 678 — —	—— 678 ——	CONTOUR
		TIME OF CONCENTRATION
		DRAINAGE DIVIDE
		DIRECTION OF FLOW
	P1 1.03 AC.	DRAINAGE AREA NUMBER AND ACREAGE

Area:						DA-1			
Event	2-yr	10-yr	25-yr	100-yr	500-yr	Surface	Acres	SF	%
Acres	34.21	34.21	34.21	34.21	34.21	*Grass, Fair, 0-2%*	34.21	1,490,188	100.00
C	0.25	0.30	0.34	0.41	0.53				
Tc	15.12	15.12	15.12	15.12	15.12				
I	4.22	6.29	7.74	10.19	13.27				
Q	**36.1**	**64.6**	**90.0**	**142.9**	**240.5**	**Total**	**34.21**	**1,490,188**	**100**

	Sheet Flows		Shallow Concentrated Flow		Channel Flow		Sum
			Unpaved	Paved	Pipe Flow	Open Channel	
Length (L)	100		1350				
Select Surface Type:	Range (natural)		N/A	N/A			
Manning's (n)	0.130						
Change in Elevation (ΔE)	3.50		33.00				
Slope=ΔE/L	0.0350		0.0244				
Tc	6.20		8.92				15.12

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BILAL A. ALIZAI 92792

REVISION | NO. | DATE

EXISTING DRAINAGE AREA MAP

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET 05 OF 33

2024-4-SDP

100 0 50 100 200

1" = 100'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY (R.O.W.) LINE
678	678	CONTOUR
		TIME OF CONCENTRATION
		DRAINAGE DIVIDE
		DIRECTION OF FLOW
	P1 1.03 AC.	DRAINAGE AREA NUMBER AND ACREAGE

Area:						DA-1			
Event	2-yr	10-yr	25-yr	100-yr	500-yr	Surface	Acres	SF	%
Acres	10.37	10.37	10.37	10.37	10.37	*Concrete*	6.91	301,124	66.66
C	0.58	0.65	0.70	0.78	0.84	*Grass, Fair, 0-2%*	3.46	150,593	33.34
Tc	5.00	5.00	5.00	5.00	5.00				
I	6.27	9.43	11.62	15.32	20.02				
Q	**37.9**	**63.9**	**84.4**	**124.4**	**175.1**	**Total**	**10.37**	**451,717**	**100**

Area:						DA-2			
Event	2-yr	10-yr	25-yr	100-yr	500-yr	Surface	Acres	SF	%
Acres	23.84	23.84	23.84	23.84	23.84	*Grass, Fair, 0-2%*	23.84	1,038,470	100.00
C	0.25	0.30	0.34	0.41	0.53				
Tc	19.17	19.17	19.17	19.17	19.17				
I	3.76	5.61	6.91	9.11	11.90				
Q	**22.4**	**40.1**	**56.0**	**89.1**	**150.4**	**Total**	**23.84**	**1,038,470**	**100**

	Sheet Flows		Shallow Concentrated Flow		Channel Flow		Sum
			Unpaved	Paved	Pipe Flow	Open Channel	
Length (L)	100		688			1754	
Select Surface Type:	Short-grass prairie		N/A	N/A		Native Grass/Vegetation	
Manning's (n)	0.150					0.060	
Change in Elevation (ΔE)	2.00		13.00			14.00	
Slope=ΔE/L	0.0200		0.0189			0.0080	
Tc	8.70		5.17			5.30	19.17

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REVISION | NO. | DATE

BILAL A. ALIZAI 92792

PROPOSED DRAINAGE AREA MAP

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET 06 OF 33

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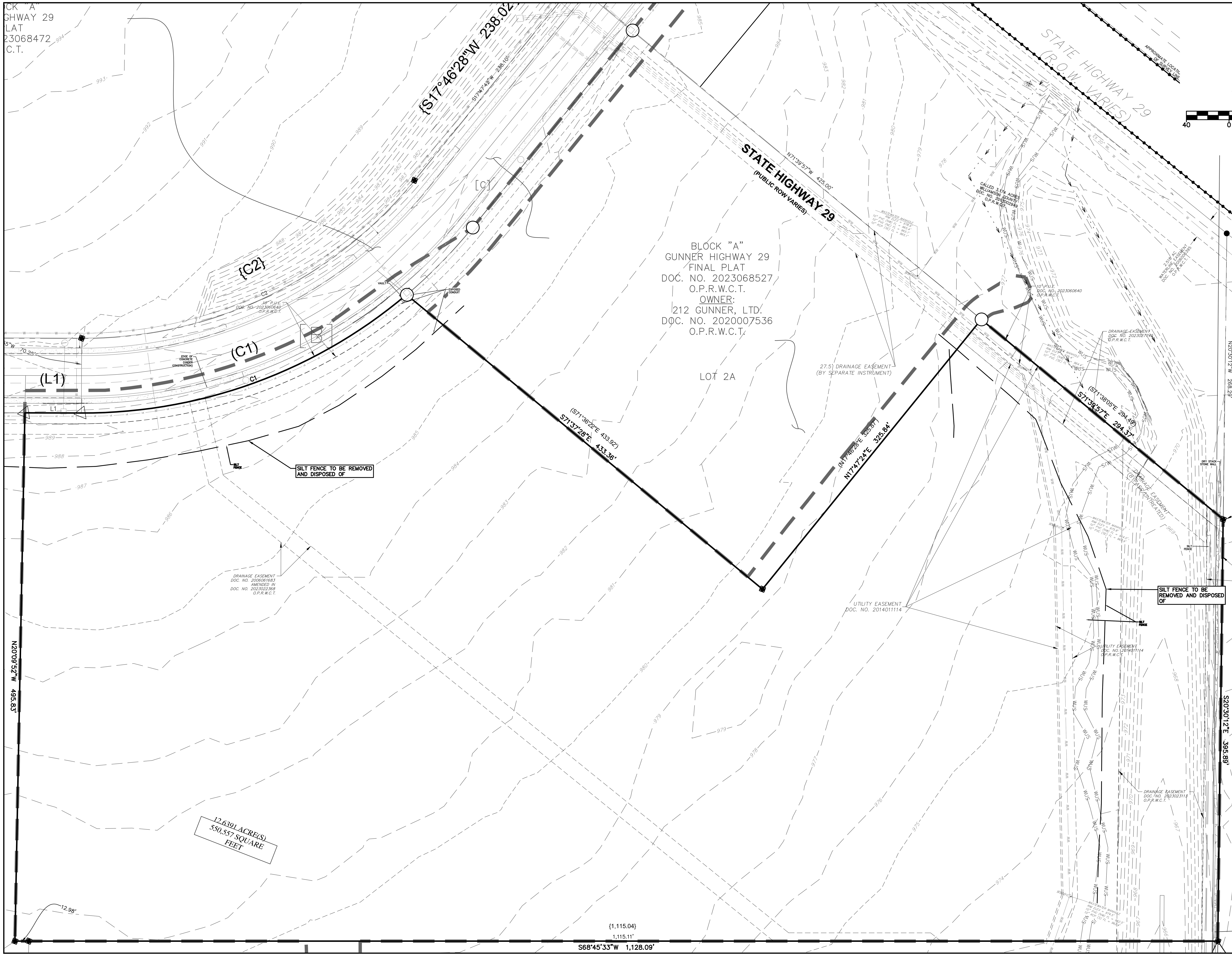
2024-4-SDP



EXISTING CONDITIONS & DEMOLITION

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

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BILAL A. ALIZAI
92792

DATE	NO.	REVISION

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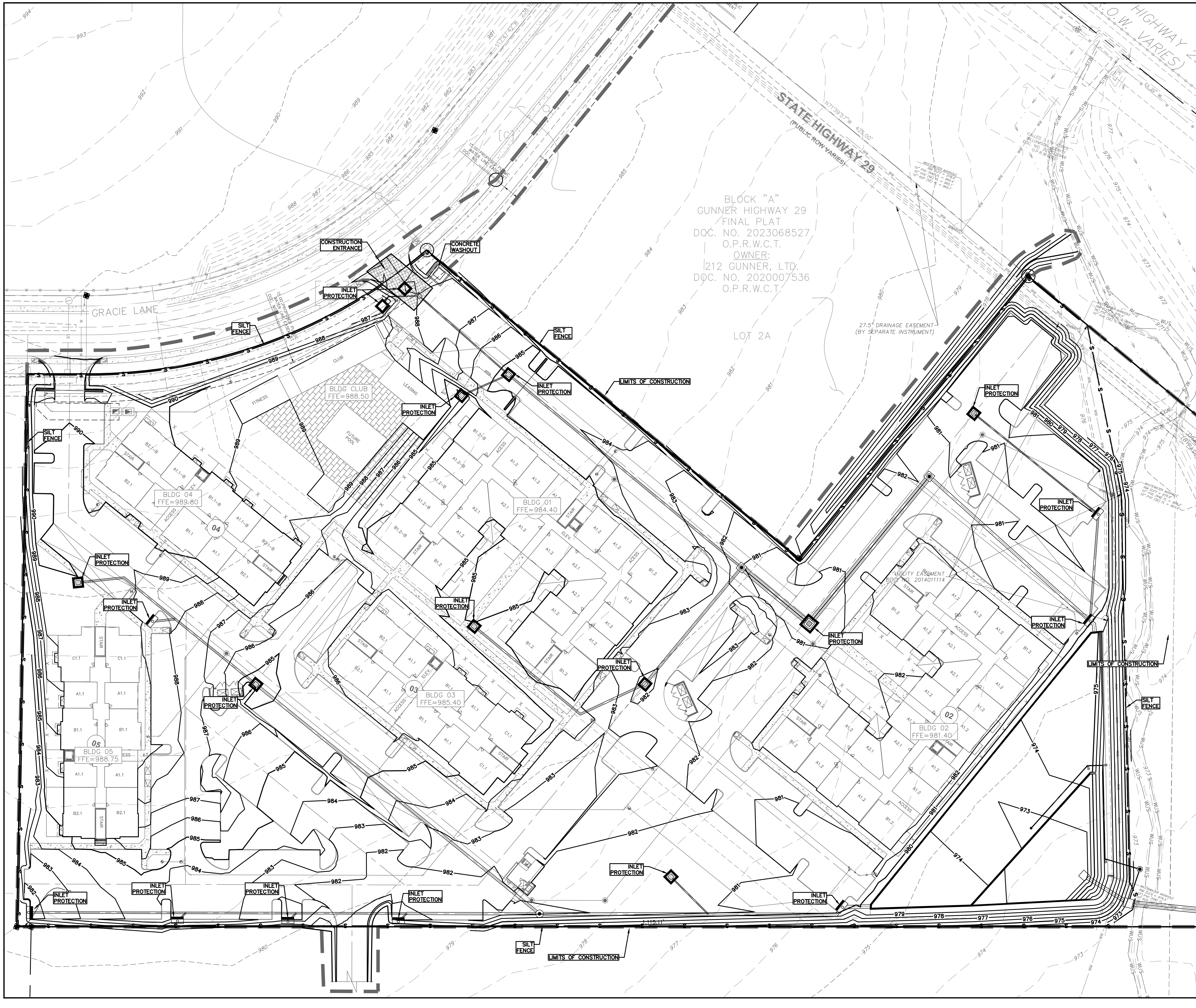
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET
07
OF 33

2024-4-SDP



LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
		WATER MANHOLE
		WATER LINE MARKER
		UNDERGROUND CABLE MARKER
		UNDERGROUND GAS LINE MARKER
		UNDERGROUND TELEPHONE MARKER
		GAS RISER
		TELEPHONE RISER
		SPRINKLER CONTROL BOX
		SWITCH GEAR & PAD
		TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
		CABLE TV RISER
		ELECTRIC BOX
		ELECTRIC METER
		GAS METER
		GAS VALVE
		TRAFFIC CONTROL BOX
		TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
		ELECTRIC MANHOLE (SIZE VARIES)
		WASTEWATER MANHOLE (SIZE VARIES)
		STORMSEWER MANHOLE (SIZE VARIES)
		TELEPHONE MANHOLE (SIZE VARIES)
		WASTEWATER CLEANOUT
		WIRE FENCE
		WOOD FENCE
		CHAIN LINK FENCE
		CURB & GUTTER
		EDGE OF PAVEMENT
		CONCRETE SIDEWALKS
		WALL
		LIMITS OF CONSTRUCTION
678	678	CONTOUR
		STORMSEWER LINE
		WATER LINE
		FIRE LINE
		WASTEWATER LINE
		GAS LINE
		UNDERGROUND ELECTRIC LINE
		OVERHEAD ELECTRIC LINE
		UNDERGROUND TELEPHONE LINE
		UNDERGROUND CABLE AND INTERNET
		UNDERGROUND TELECOMMUNICATIONS
	TP	TREE PROTECTION
	S	SILT FENCE
	S	SILT FENCE WITH J-HOOKS
	S	LIMITS OF CONSTRUCTION & SILT FENCE
		SWALE
	TFD	TRIANGULAR FILTER DIKE
		ROCK BERM
		INLET PROTECTION
		STABILIZED CONSTRUCTION ENTRANCE/ TEMPORARY SPOILS/STAGING AREA
		MULCH SOCK
		MULCH LOG
		DIRECTION OF FLOW
		TREE TO BE REMOVED
		TREE TO BE SAVED
		HERITAGE / MATURE TREE

NOTES:

1. IF DISTURBED ARE IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY RE-VEGETATION, MULCH, TARP OR RE-VEGETATION MATTING.
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH CITY RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING OR AS DIRECTED BY ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY.
5. CONTRACTOR TO HYDRO-MULCH AND SEED SIDE SLOPES OF DETENTION POND AFTER DIRT EXCAVATION WORK IS COMPLETE IN ORDER TO ESTABLISH GRASS FOR EROSION PROTECTION.
6. CONTRACTOR TO IRRIGATE/WATER SIDE SLOPES OF DETENTION POND ON SET SCHEDULE TO ESTABLISH GRASS GROWTH AND MAINTAIN GRASS THROUGH CONSTRUCTION PHASE OF THE ENTIRE PROJECT.
7. CONTRACTOR TO ENSURE POND BOTTOM AND OUTFALL PIPE STRUCTURE IS MAINTAINED IN CLEAN STATE THROUGH CONSTRUCTION PHASE, TO PREVENT CONSTRUCTION DEBRIS FROM LEAVING PROPERTY AT STORM DISCHARGE LOCATION.

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BILAL A. ALIZAI
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EROSION CONTROL PLAN

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P. GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

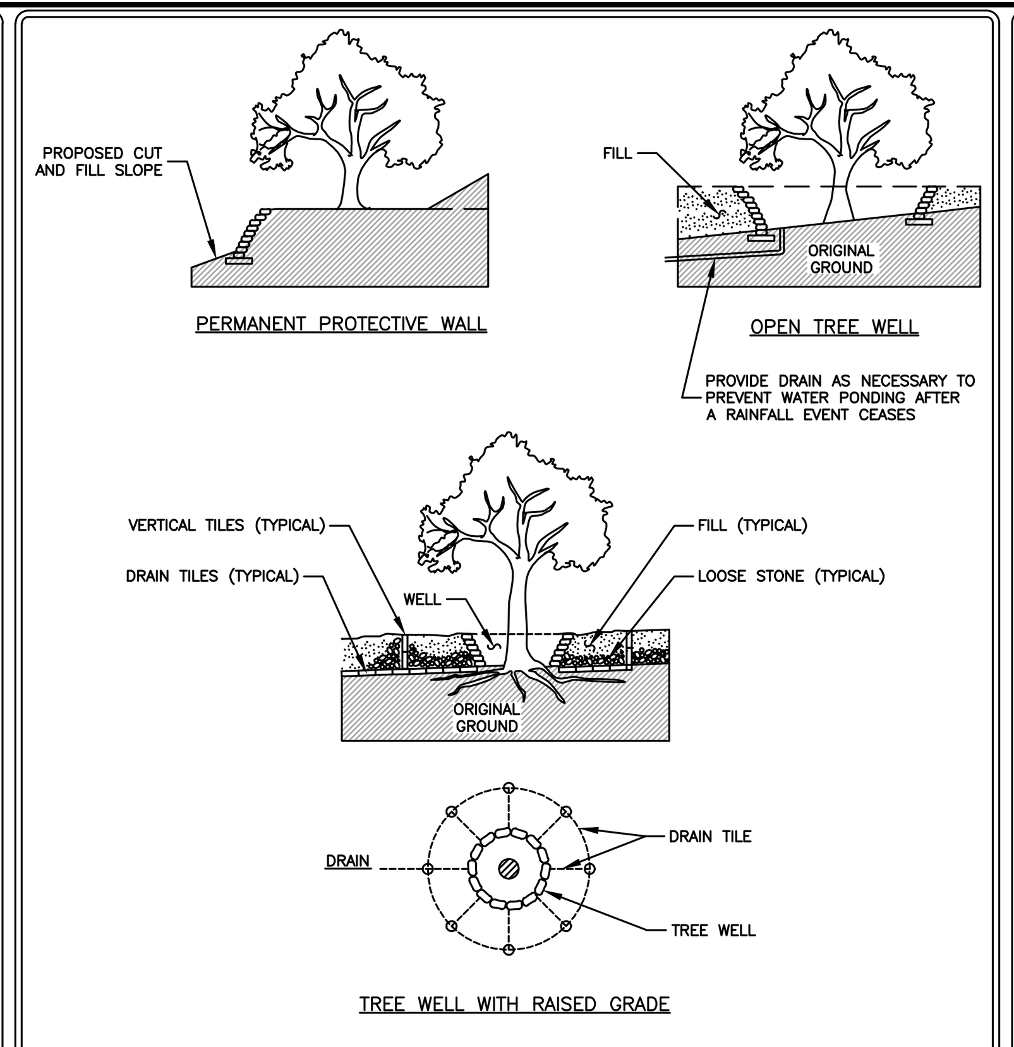
1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL TREES TO BE PRESERVED FROM HIS ACTIVITIES.
2. ALL TREES SHOWN TO BE RETAINED WITHIN THE LIMITS OF CONSTRUCTION ON THE PLANS, SHALL BE PROTECTED DURING CONSTRUCTION WITH FENCING. SEE: TREE PROTECTION TREE WELLS (EC–02), TREE PROTECTION TREE LOCATION (EC–03) AND TREE PROTECTION FENCE–CHAIN LINK (EC–04).
3. TREE PROTECTION FENCES SHALL BE ERECTED ACCORDING TO CITY STANDARDS FOR TREE PROTECTION, INCLUDING TYPES OF FENCING AND SIGNAGE.
4. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR GRADING) AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
5. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD–UP WITHIN TREE DRIPLINES.
6. FENCES SHALL COMPLETELY SURROUND THE TREE OR CLUSTERS OF TREES, LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE) OR CRITICAL ROOT ZONE (CRZ), WHICHEVER IS GREATER; AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   - 6A. SOIL COMPACTION IN CRZ AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIAL.
   - 6B. CRZ DISTURBANCES DUE TO GRADE CHANGES OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE FORESTRY MANAGER.
   - 6C. WOUNDS TO EXPOSED ROOTS, TRUNK, OR LIMBS BY MECHANICAL EQUIPMENT
   - 6D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES.
7. EXCEPTIONS TO INSTALLING TREE FENCES AT THE TREE DRIPLINES OR CRZ, WHICHEVER IS GREATER, MAY BE PERMITTED IN THE FOLLOWING CASES:
   - 7A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, OR TREE WELL;
   - 7B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   - 7C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.
   - 7D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE FORESTRY MANAGER TO DISCUSS ALTERNATIVES.
8. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE THAT IS CLOSER THAN 5 FEET TO A TREE TRUNK, THE TRUNK SHALL BE PROTECTED BY STRAPPED–ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
9. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES UNDER THE DRIPLINE OR CRZ, WHICHEVER IS GREATER, THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION.
10. ALL GRADING WITHIN CRZ AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA.
11. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL AND BACKFILLED WITH GOOD QUALITY TOP SOIL WITHIN TWO DAYS. IF EXPOSED ROOT AREAS CANNOT BE BACKFILLED WITHIN 2 DAYS, AN ORGANIC MATERIAL WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION SHALL BE PLACED TO COVER THE ROOTS UNTIL BACKFILL CAN OCCUR.
12. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE WITH A ROCK SAW OR SIMILAR EQUIPMENT, IN A LOCATION AND TO A DEPTH APPROVED BY THE FORESTRY MANAGER, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
13. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES WILL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS ARE TO BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON LEAVES.
14. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, A PLASTIC VAPOR BARRIER SHALL BE PLACED BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE CRZ.
15. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
16. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR (4) INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OR CRZ OF TREES, WHICHEVER IS GREATER. NO TOPSOIL IS PERMITTED ON ROOT FLARES OF ANY TREE.
17. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. ALL PRUNING MUST BE DONE ACCORDING TO CITY STANDARDS AND AS OUTLINED IN LITERATURE PROVIDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA PRUNING TECHNIQUES).
18. ALL OAK TREE CUTS, INTENTIONAL OR UNINTENTIONAL, SHALL BE SEALED WITH AN APPROVED PRUNING SEALER IMMEDIATELY (WITHIN 10 MINUTES). TREE PAINT MUST BE KEPT ON SITE AT ALL TIMES.
19. THE FORESTRY MANAGER HAS THE AUTHORITY TO REQUIRE ADDITIONAL TREE PROTECTION BEFORE OR DURING CONSTRUCTION.
20. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED. REFER TO THE CITY OF ROUND ROUND ROCK TREE TECHNICAL MANUAL FOR APPROPRIATE REMOVAL METHODS.
21. PRIOR TO CONSTRUCTION, ALL LOWER TREE LIMBS OVER ROADWAYS MUST BE PRUNED TO A HEIGHT OF 14 FEET USING THE TECHNIQUES DESCRIBED IN THE CITY OF ROUND ROCK TREE TECHNICAL MANUAL.
22. DEVIATIONS FROM THE ABOVE REQUIREMENTS AND NEGLIGENT DAMAGE TO TREES MAY BE CONSIDERED AS ORDINANCE VIOLATIONS.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS | APPROVED | 03–25–11 | DATE | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK — DRAWING NO: EC–01

TREE PROTECTION NOTES



NOTE:

LOCATION, TYPE, DEPTHS AND CONSTRUCTION SPECIFICATIONS OF FILL, DRAINS AND WALLS SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

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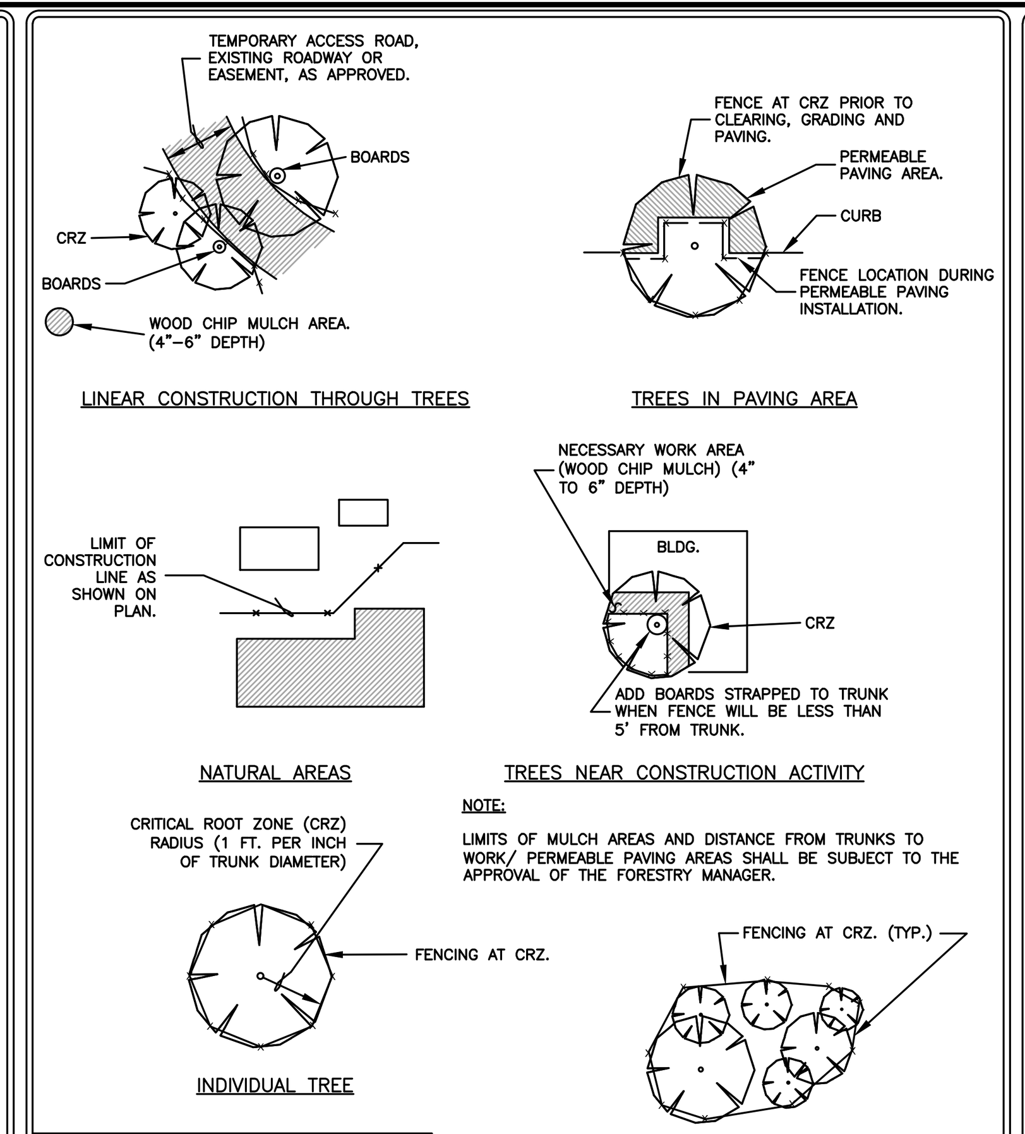
CITY OF ROUND ROCK — DRAWING NO: EC–02

TREE PROTECTION TREE WELLS



NOTE:

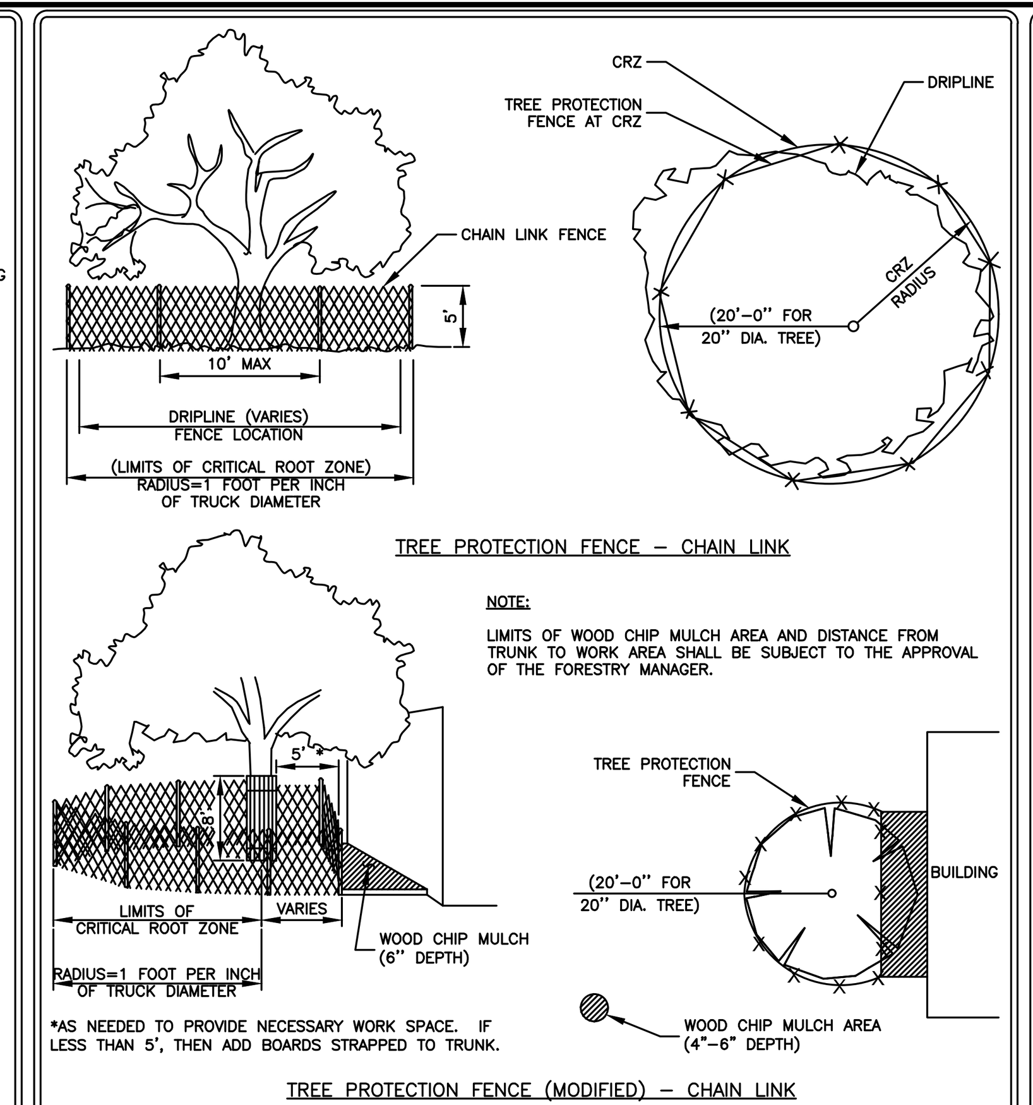
LIMITS OF MULCH AREAS AND DISTANCE FROM TRUNKS TO WORK/ PERMEABLE PAVING AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS | APPROVED | 03–25–11 | DATE | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK — DRAWING NO: EC–03

TREE PROTECTION FENCE LOCATIONS



NOTE:

LIMITS OF WOOD CHIP MULCH AREA AND DISTANCE FROM TRUNK TO WORK AREA SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

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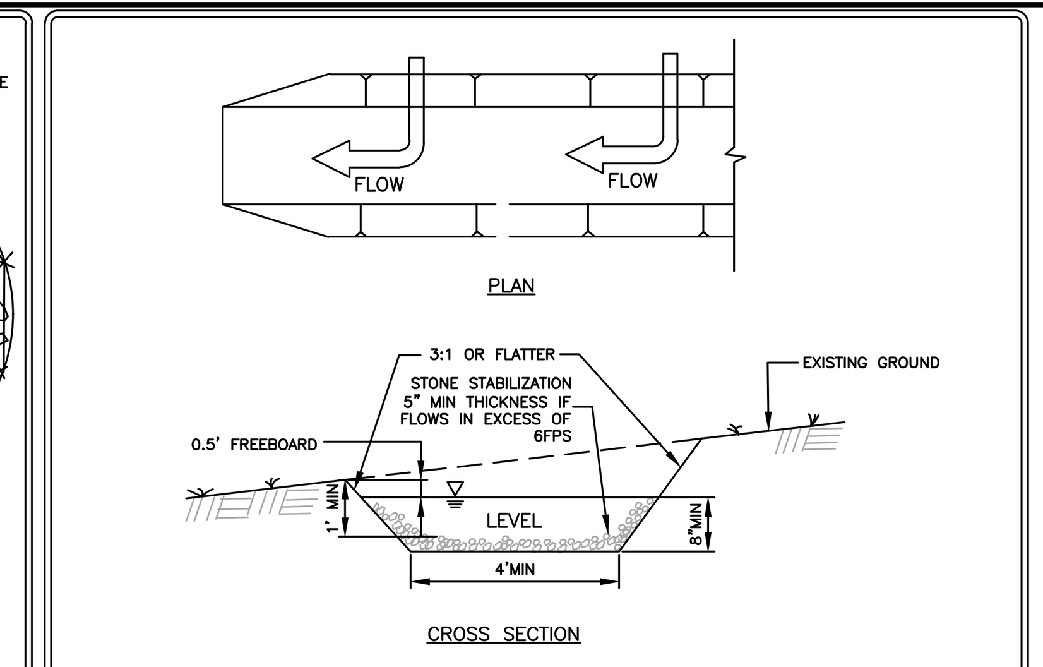
CITY OF ROUND ROCK — DRAWING NO: EC–04

TREE PROTECTION FENCE CHAIN LINK



NOTES:

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
2. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS–SECTION AS REQUIRED TO MEET CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROVED SPOILS SITE SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
4. INTERCEPTOR SWALES SHALL HAVE A MINIMUM GRADE OF 1 PERCENT AND THE BOTTOM SHALL BE LEVEL.
5. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED UPLAND AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE, SUCH AS A ROCK BERM, BRUSH BERM, STONE OUTLET STRUCTURE, SEDIMENT TRAP, OR SEDIMENT BASIN OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICES.
6. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED UPLAND AREA SHALL OUTLET DIRECTLY ONTO AN UNDISTURBED STABILIZED AREA, LEVEL SPREADER, OR INTO A GRADE STABILIZATION STRUCTURE.
7. THE ON–SITE LOCATION MAY NEED TO BE ADJUSTED TO MEET FIELD CONDITION IN ORDER TO UTILIZE THE MOST SUITABLE OUTLET.
8. STABILIZATION, WHEN REQUIRED, SHALL BE OPEN GRADE ROCK 3–5 INCH DIAMETER PLACED IN A LAYER A MINIMUM OF 5 INCH THICKNESS AND SHALL EXTEND ACROSS THE BOTTOM AND UP BOTH SIDES OF THE CHANNEL TO A HEIGHT OF AT LEAST 8 INCHES.

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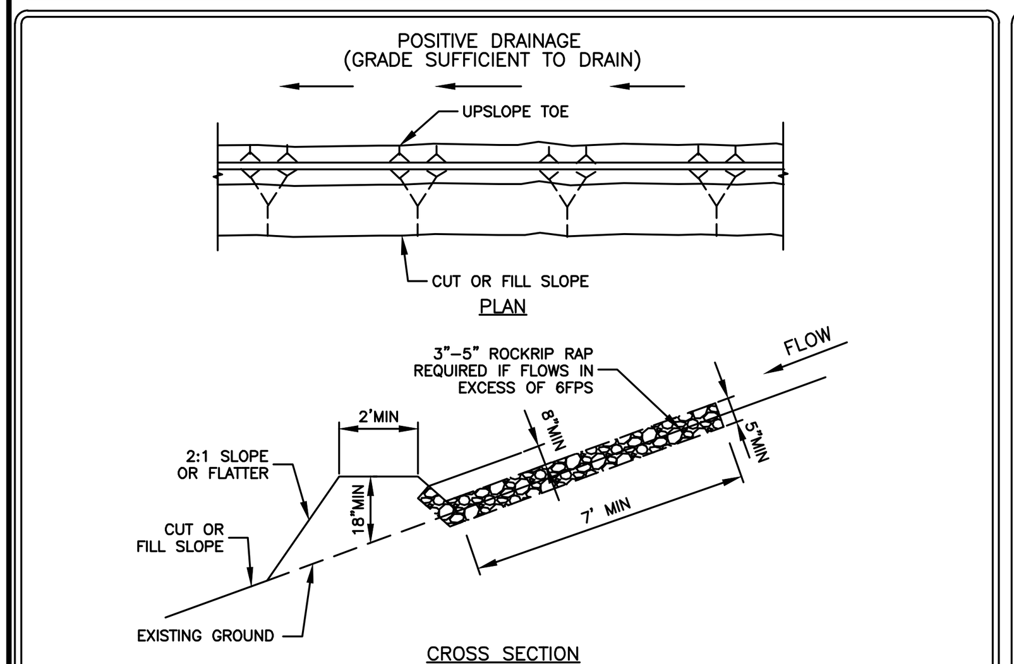
CITY OF ROUND ROCK — DRAWING NO: EC–05

INTERCEPTOR SWALE DETAIL



NOTES:

1. ALL DIKES SHALL BE MACHINE COMPACTED.
2. ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.

2A. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL HAVE ITS OUTLET FLOW DIRECTED TO AN UNDISTURBED STABILIZED AREA OR INTO A LEVEL SPREADER OR GRADE STABILIZATION STRUCTURE.

2B. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE, SUCH AS A ROCK BERM, BRUSH BERM, STONE OUTLET STRUCTURE, SEDIMENT TRAP, OR SEDIMENT BASIN OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICES.

3. UNLESS OTHERWISE SPECIFIED, EROSION STABILIZATION SHALL BE OPEN GRADED ROCK 3–5 INCHES IN DIAMETER PLACED IN A 5–INCH THICK LAYER AND EMBEDDED INTO THE SOIL.
4. INSPECTION SHALL BE CONDUCTED WEEKLY OR AFTER EACH RAINFALL EVENT.

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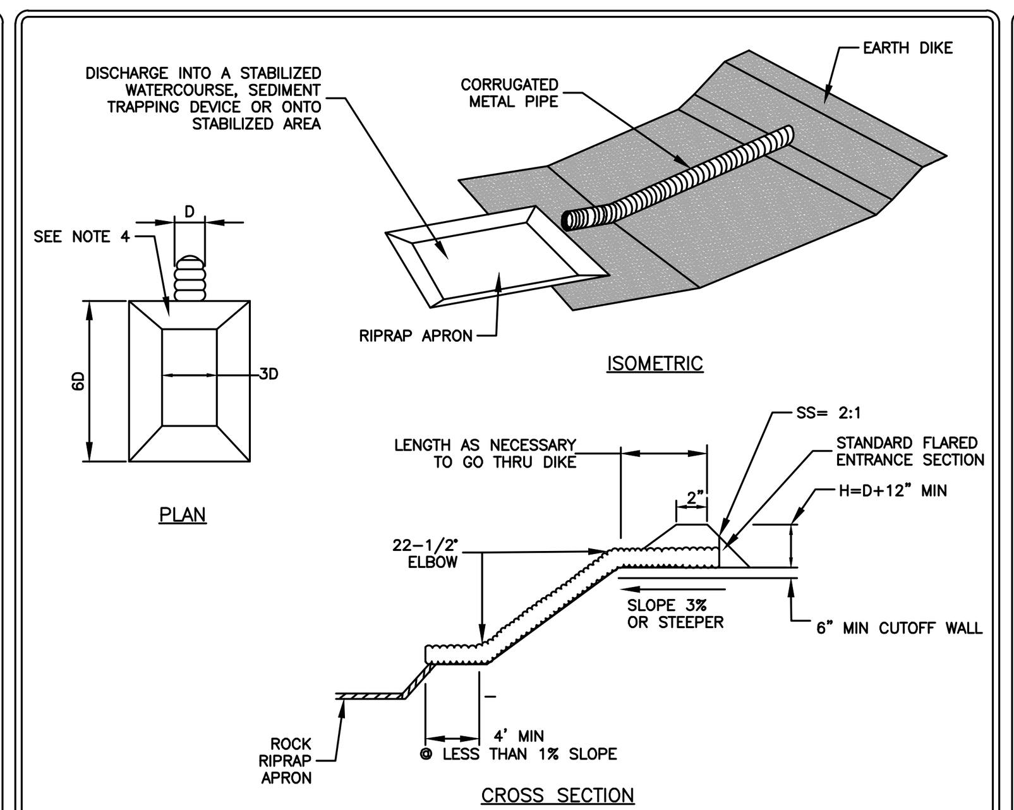
CITY OF ROUND ROCK — DRAWING NO: EC–06

DIVERSION DIKE DETAIL



NOTES:

1. THE INLET PIPE SHALL HAVE A SLOPE OF 3 PERCENT OR STEEPER.
2. THE TOP OF THE EARTH DIKE OVER THE INLET PIPE AND THOSE DIKES CARRYING WATER TO THE INLET PIPE SHALL BE AT LEAST 1 FOOT HIGHER AT ALL POINTS THAN THE TOP OF THE INLET PIPE.
3. UNLESS OTHERWISE SPECIFIED, THE PIPE SHALL BE CORRUGATED METAL PIPE WITH WATER TIGHT CONNECTING BANDS. PIN PIPE ON SLOPE AS NECESSARY TO PREVENT MOVEMENT OF PIPE.
4. A ROCK RIPRAP APRON SHALL BE PROVIDED AT THE OUTLET. THIS SHALL CONSIST OF 6–INCH DIAMETER STONE PLACED AS SHOWN. DEPTH OF APRON SHALL EQUAL THE PIPE DIAMETER AND RIPRAP SHALL BE A MINIMUM OF 12" THICKNESS.
5. INSPECTION AND ANY NEEDED MAINTENANCE SHALL BE PERFORMED AFTER EACH STORM BY CONTRACTOR.

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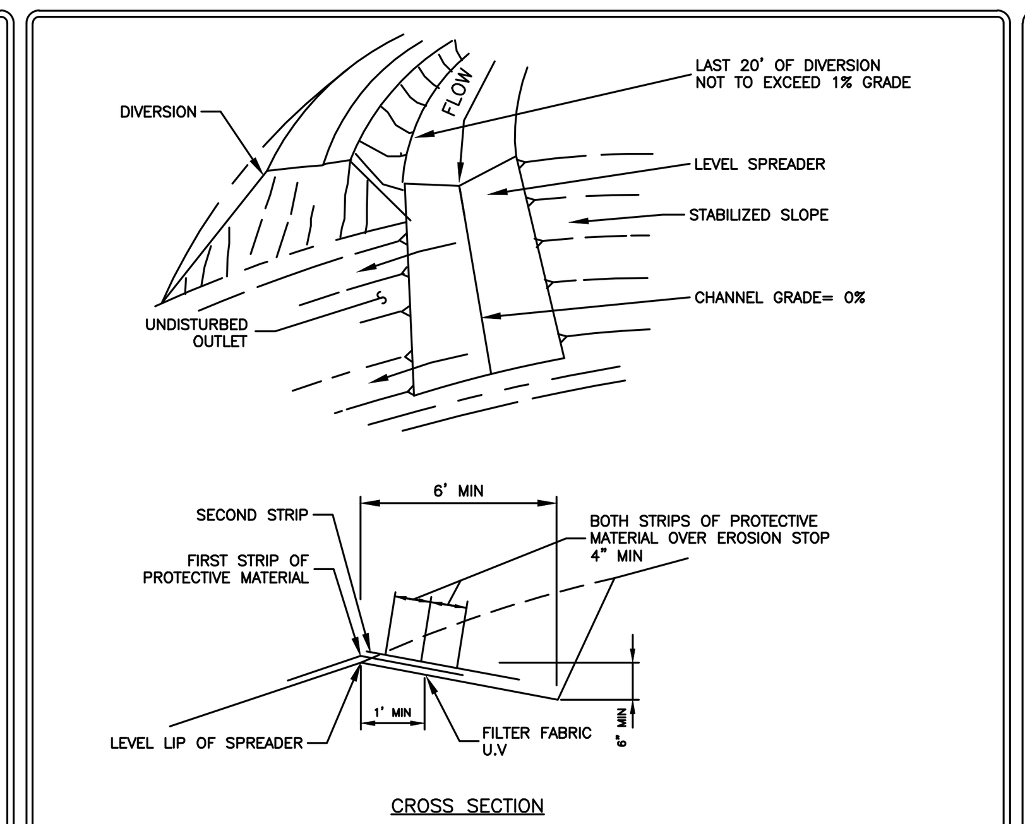
CITY OF ROUND ROCK — DRAWING NO: EC–07

PIPE SLOPE DRAIN DETAIL



NOTES:

1. LEVEL SPREADERS SHALL BE INSTALLED UNDER THE DIRECT SUPERVISION OF THE ENGINEER.
2. CONSTRUCT LEVEL LIP ON ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF SEDIMENT–FREE RUNOFF (CONVERTING CHANNEL FLOW TO SHEET FLOW)
3. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL (NOT ON FILL).
4. A MATTING EROSION STOP SHALL BE PLACED VERTICALLY AND AT LEAST 6'' DEEP IN A SILT TRENCH 1' BACK OF AND PARALLEL WITH THE LIP. THIS EROSION STOP SHALL EXTEND THE ENTIRE LENGTH OF THE LEVEL LIP AND SHALL BE TRIMMED AFTER BACK FILLING WITH TAMPED SOIL, SO THAT THE UPPER EDGE IS FLUSH WITH THE SOIL SURFACE.
5. THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING 2 STRIPS OF JUTE, EXCELSIOR, OR OTHER APPROVED PROTECTIVE MATERIAL AS SHOWN ABOVE.
6. THE ENTRANCE CHANNEL SHALL NOT EXCEED A 1% GRADE FOR AT LEAST 20 FEET BEFORE ENTERING SPREADER.
7. STORM RUNOFF CONVERTED TO SHEET FLOW SHALL OUTLET ONTO STABILIZED AREAS. WATER SHALL NOT BE RECONCENTRATED IMMEDIATELY BELOW THE POINT OF DISCHARGE.
8. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED.

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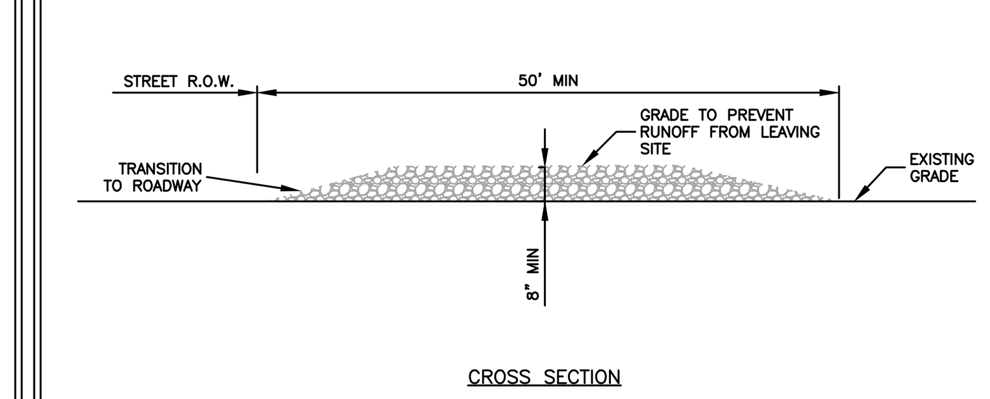
CITY OF ROUND ROCK — DRAWING NO: EC–08

LEVEL SPREADER DETAIL



NOTES:

1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

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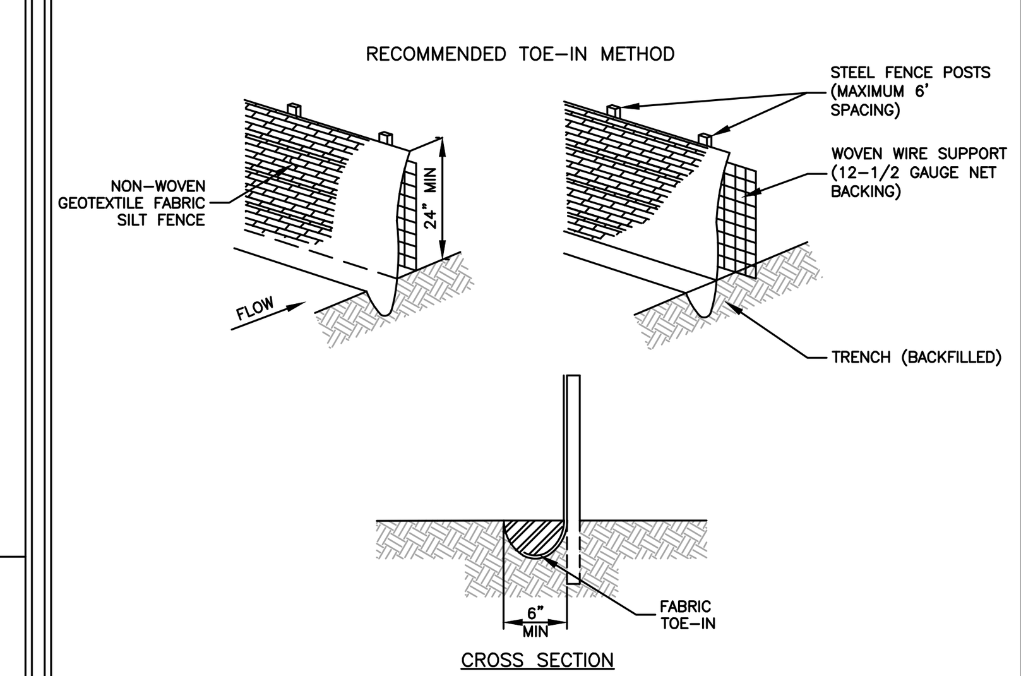
CITY OF ROUND ROCK — DRAWING NO: EC–09

STABILIZED CONSTRUCTION ENTRANCE DETAIL



NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1') FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED

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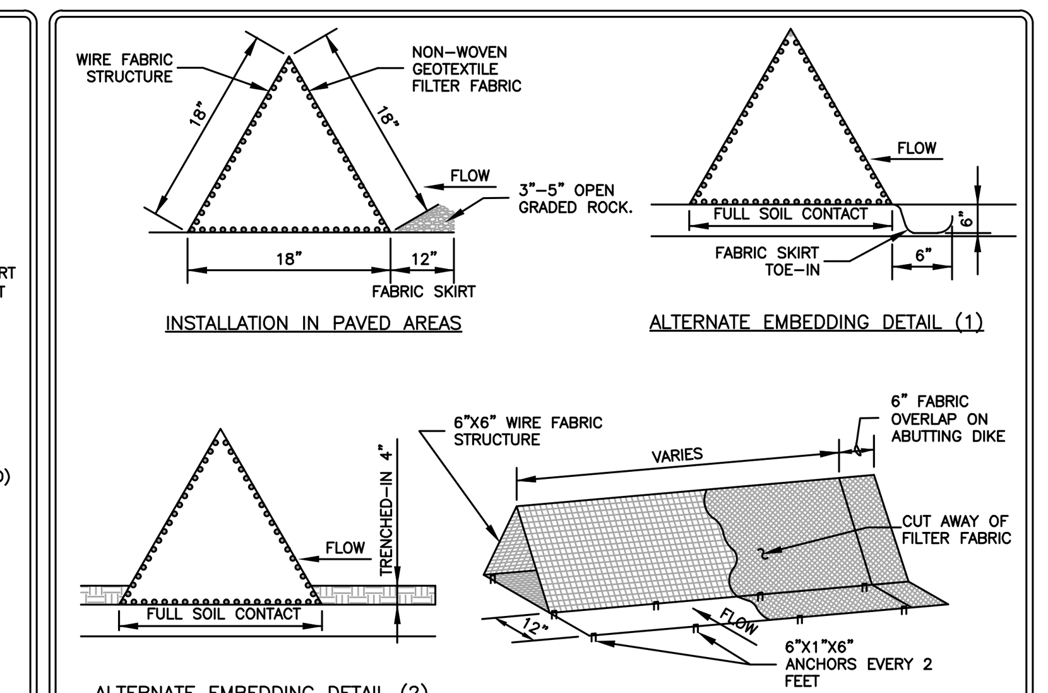
CITY OF ROUND ROCK — DRAWING NO: EC–10

SILT FENCE DETAIL



NOTES:

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING.
2. FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE UPSTREAM FACE FABRIC.
3. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE WITH WIRE STAPLES AT 2' INTERVALS ON BOTH EDGES AND SKIRT OR WITH 3/8" DIAMETER REBAR WITH TEE ENDS.
4. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6" TO COVER DIKE–TO–DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS REQUIRED.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 4" AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
7. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN NOTE #6 ABOVE.

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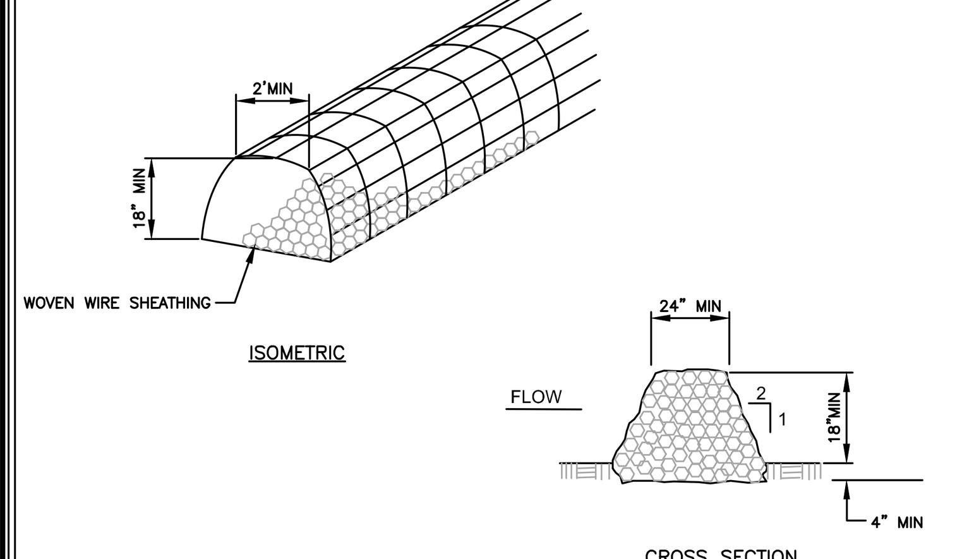
CITY OF ROUND ROCK — DRAWING NO: EC–11

TRIANGULAR SEDIMENT FILTER DIKE DETAIL



NOTES:

1. USE ONLY OPEN GRADED ROCK (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1'' OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/ OR FABRIC CORE–WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH OF 6'', THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

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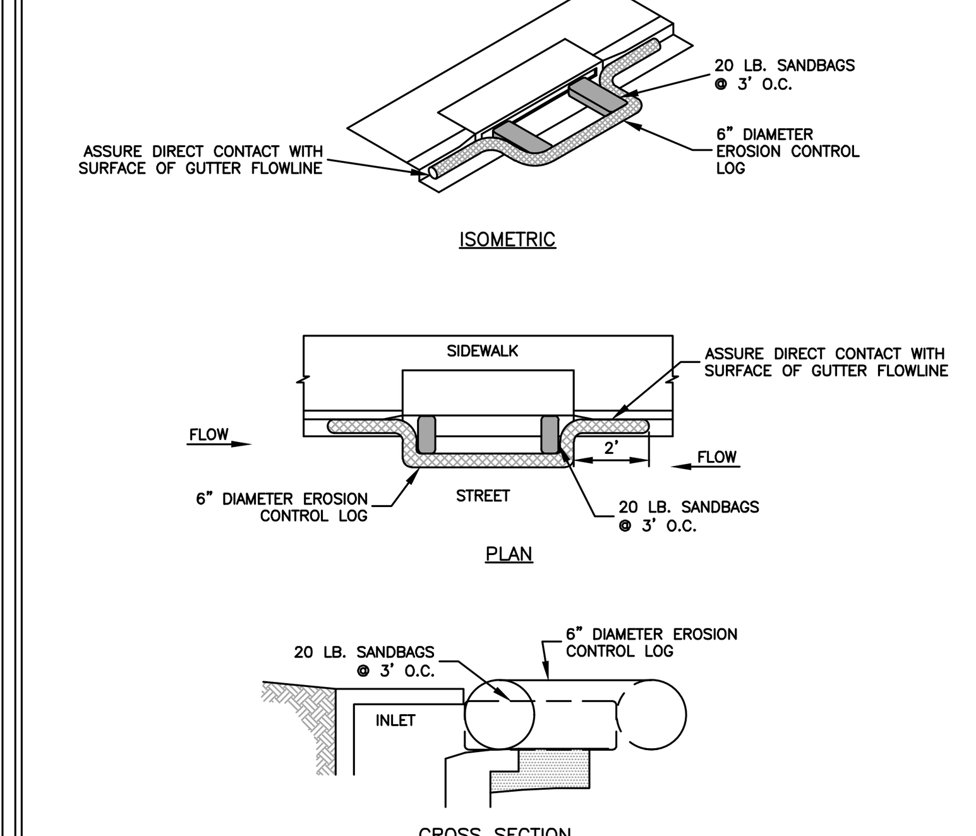
CITY OF ROUND ROCK — DRAWING NO: EC–12

ROCK BERM DETAIL



NOTES:

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

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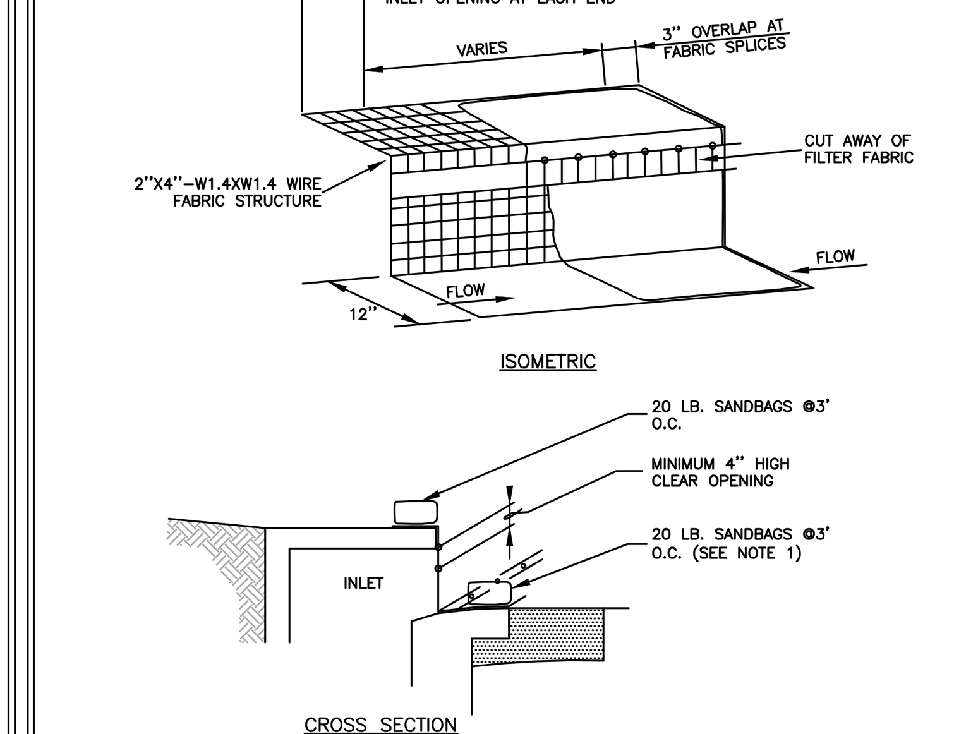
CITY OF ROUND ROCK — DRAWING NO: EC–13

CURB INLET PROTECTION WITH EROSION CONTROL LOG DETAIL



NOTES:

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

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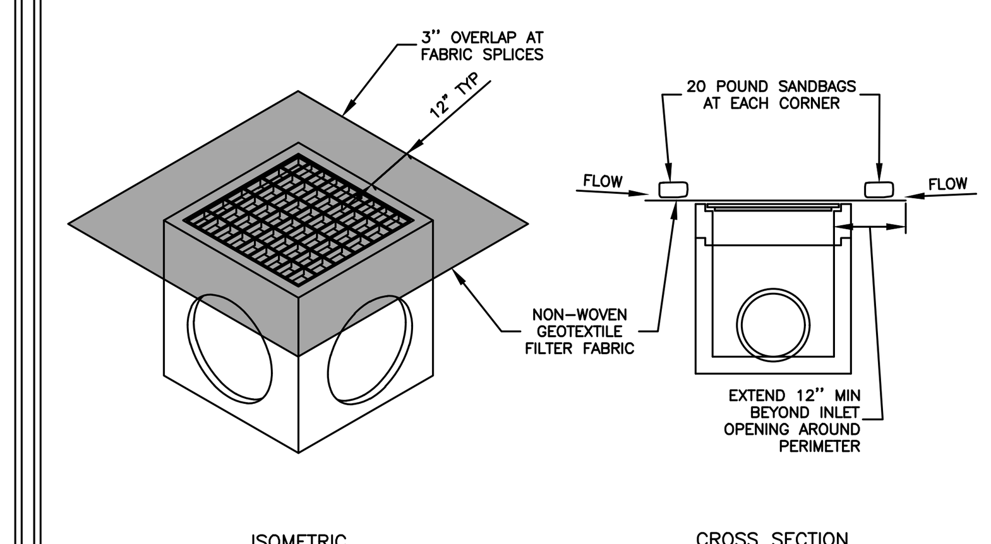
CITY OF ROUND ROCK — DRAWING NO: EC–14

CURB INLET PROTECTION DETAIL



NOTES:

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

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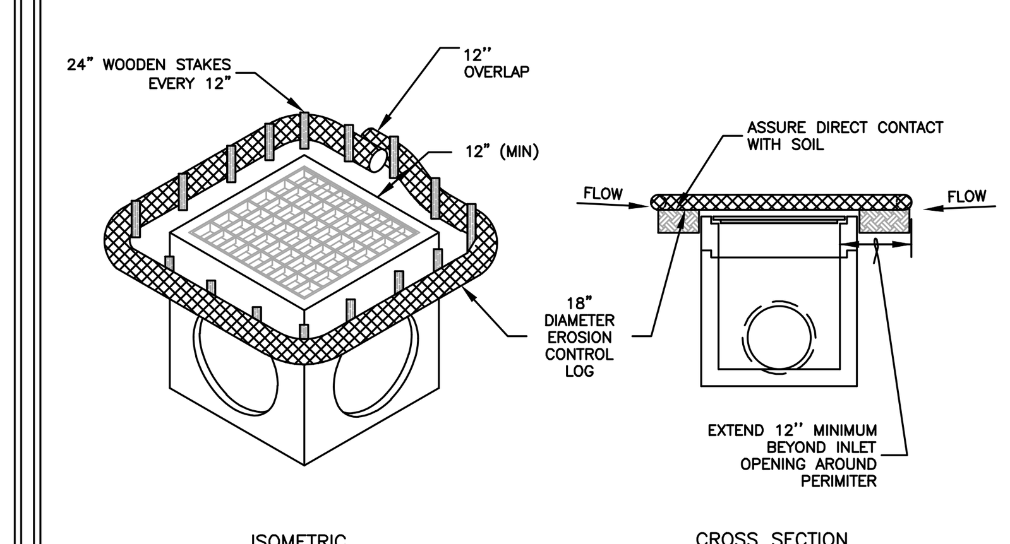
CITY OF ROUND ROCK — DRAWING NO: EC–15

AREA INLET PROTECTION DETAIL



NOTES:

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

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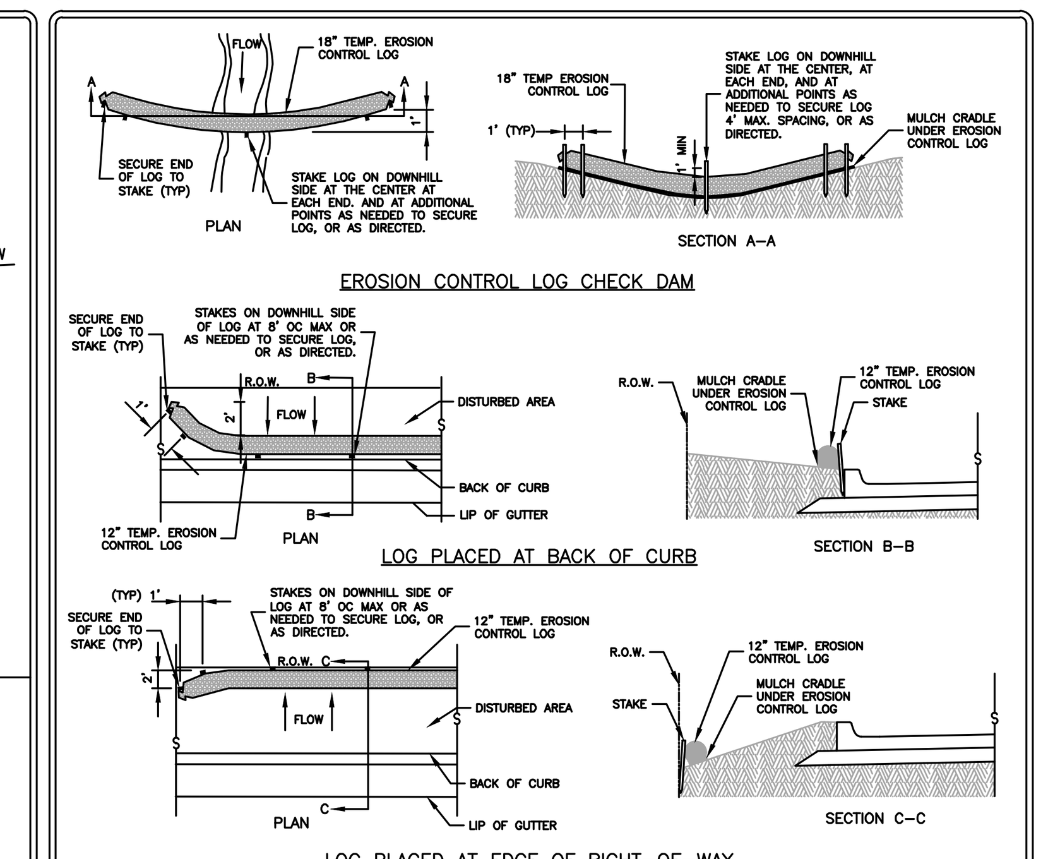
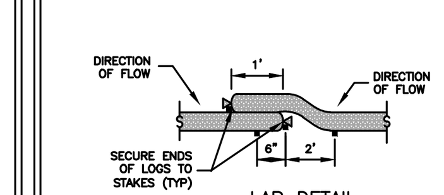
CITY OF ROUND ROCK — DRAWING NO: EC–16

AREA INLET PROTECTION WITH EROSION CONTROL LOG DETAIL





NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF LOGS DURING RAINFALL EVENT FOR PROPER PERFORMANCE.
3. LOGS SHALL CONSIST OF 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE CONTAINMENT MESH STUFFED WITH FILTER MATERIAL.
4. STUFF LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE DENSITY THAT WILL HOLD SHAPE WITHOUT EXCESSIVE DEFORMATION. FILTER MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR WOOD FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS,100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL, EXCLUDING STRAW AND HAY.
5. STAKES SHALL BE 2" X 2" WOOD, 4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED.

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CITY OF ROUND ROCK — DRAWING NO: EC–17

EROSION CONTROL LOG DETAIL

REVISION | NO. | DATE

garza emc
7708 Rialto Blvd., Suite 125
Austin, Texas 78735
Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629
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STATE OF TEXAS — BILAL A. ALIZAI — 92792 — LICENSED PROFESSIONAL ENGINEER

EROSION CONTROL DETAILS

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET 09 OF 33

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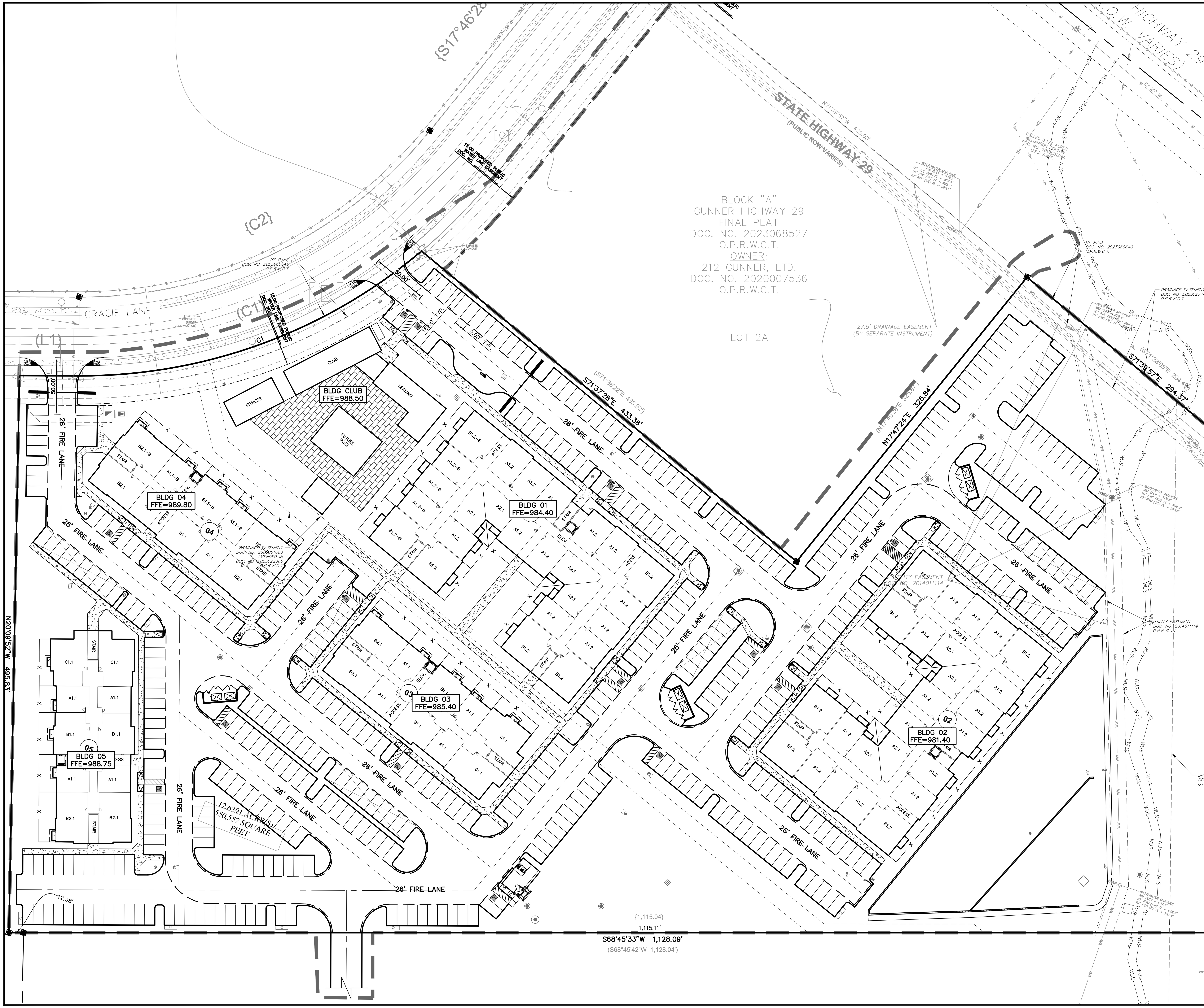

1" = 40'

PARKING TABLE	
STANDARD	465
ACCESSIBLE	9
VAN ACCESSIBLE	5
TOTAL	479

PARKING CALCULATIONS	
UNITS	320
BEDROOMS	456
REQUIRED SPACES	479

* MULTI-FAMILY: 1 SPACE PER BED PLUS ADDITIONAL 5%

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
WTRMH		WATER MANHOLE
		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR		TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
TV	TV	CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
X	X	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		FIRE LANE DESIGNATION
		ACCESSIBLE ROUTE
		CONCRETE SIDEWALKS
		WALL
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
_R @ 9.0'	_R @ 9.0'	PARKING COUNT (REGULAR SPACES)
_HC @ 9.0'	_HC @ 9.0'	PARKING COUNT (ACCESSIBLE SPACES)
_P @ 9.0'	_P @ 9.0'	PARKING COUNT (PARALLEL SPACES)
		ACCESSIBLE SPACE
		BIKE PARKING
		BARRICADE
		LIMITS OF CONSTRUCTION

NOTES:

1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
2. ALL UTILITIES SHOWN ARE APPROXIMATE ONLY, THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO STARTING CONSTRUCTION.
3. A DECORATIVE MASONRY WALL (MINIMUM SIX (6) FEET IN HEIGHT) ON THREE (3) SIDES AND A GATE ON THE FOURTH SIDE. THE GATE SHALL BE CONSTRUCTED WITH AN OPAQUE, NON-MASONRY MATERIAL. THE CONSTRUCTION MATERIALS OF THE WALL SHALL MATCH THE MATERIAL USED ON THE PRINCIPAL BUILDING LOCATED ON THE SAME LOT.
4. SMALL SHRUBS SHALL BE ARRANGED AS A FOUNDATION PLANTING AROUND THE PERIMETER OF THE PAD AREA EXCEPT THE SIDE WHERE THE GATE IS LOCATED. ONE SMALL SHRUB SHALL BE PLANTED EVERY THREE (3) LINEAR FEET IN A THREE-FOOT WIDE LANDSCAPE AREA. THE LANDSCAPE REQUIREMENTS OF THIS SUBSECTION DO NOT APPLY WHEN THE ENCLOSURE IS AN ARCHITECTURAL EXTENSION OF A PRINCIPAL BUILDING.
5. EACH REQUIRED OFF-STREET PARKING SPACE AND OFF-STREET PARKING AREA SHALL BE IDENTIFIED BY SURFACE MARKINGS AT LEAST FOUR (4) INCHES IN WIDTH. MARKINGS SHALL BE VISIBLE AT ALL TIMES. SUCH MARKINGS SHALL BE ARRANGED TO PROVIDE FOR ORDERLY AND SAFE LOADING, UNLOADING, PARKING, AND STORAGE OF VEHICLES.
6. ALL OFF-STREET PARKING AREAS, DRIVE AISLES, INTERNAL ROADWAYS, AND LOADING AREAS SHALL BE KEPT CLEAR OF DIRT, REFUSE, AND DEBRIS AT ALL TIMES.
7. ALL OFF-STREET PARKING AREAS, DRIVE AISLES, INTERNAL ROADWAYS, AND LOADING AREAS SHALL BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH THE MOST RECENTLY ADOPTED INTERNATIONAL PROPERTY MAINTENANCE CODE.

REVISION | NO. | DATE

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Austin, Texas 78735
Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED PROFESSIONAL ENGINEER

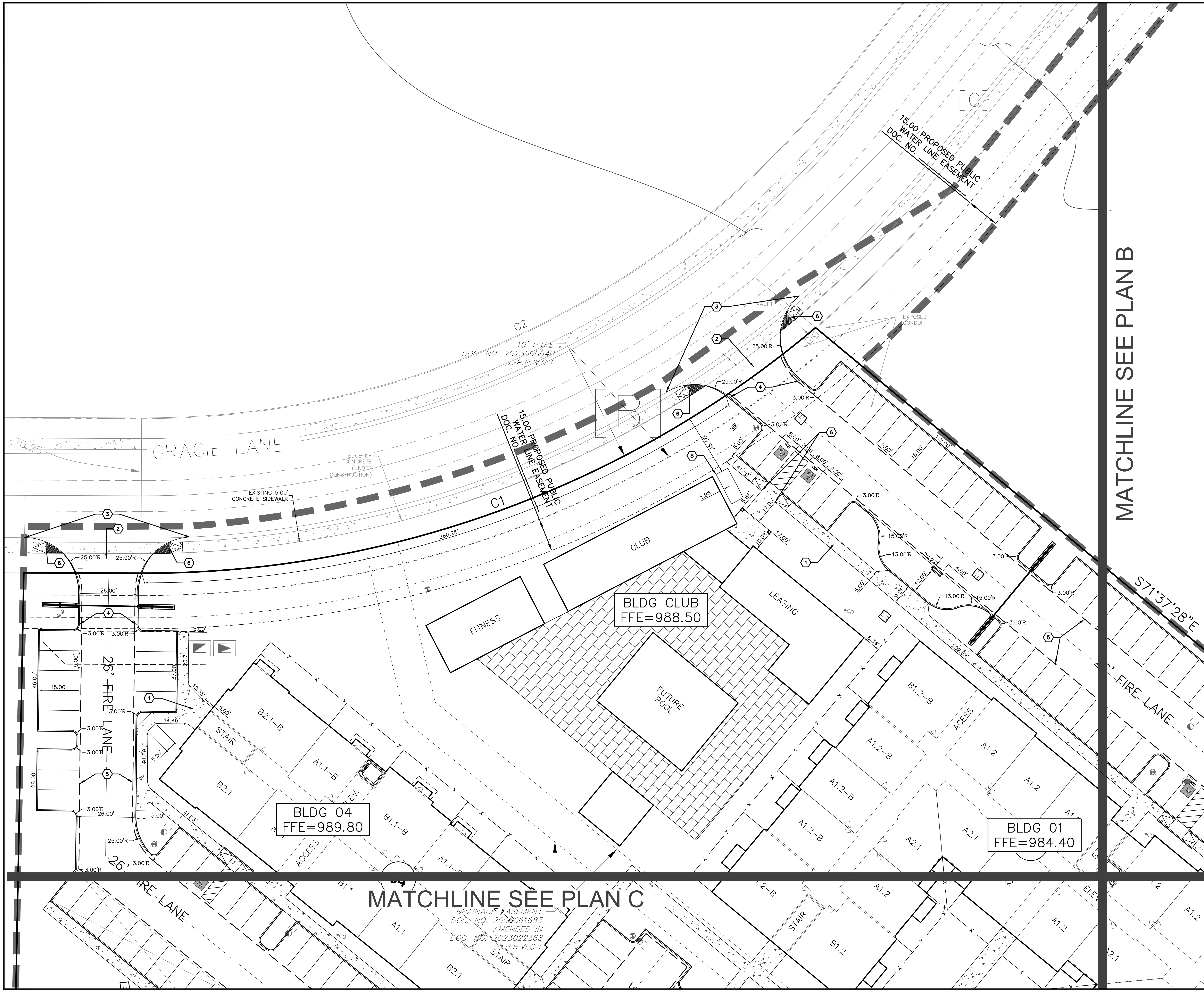
MASTER SITE PLAN

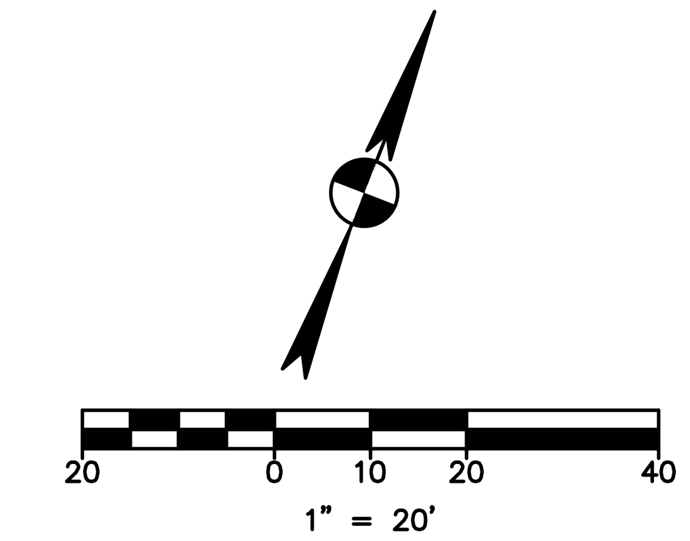
LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

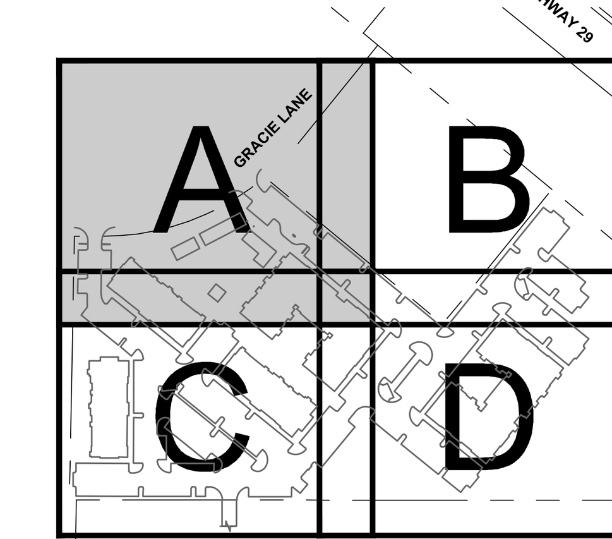
ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P. GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET 10 OF 33







LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
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		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR		TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
		CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
x	x	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		FIRE LANE DESIGNATION
		ACCESSIBLE ROUTE
		CONCRETE SIDEWALKS
		WALL
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		WHEELSTOP
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_R @ 9.0'	_R @ 9.0'	PARKING COUNT (REGULAR SPACES)
_HC @ 9.0'	_HC @ 9.0'	PARKING COUNT (ACCESSIBLE SPACES)
_P @ 9.0'	_P @ 9.0'	PARKING COUNT (PARALLEL SPACES)
		ACCESSIBLE SPACE
		BIKE PARKING
		BARRICADE
		LIMITS OF CONSTRUCTION

NOTES:

1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
2. ALL UTILITIES SHOWN ARE APPROXIMATE ONLY, THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO STARTING CONSTRUCTION.

SITE KEYNOTES

1. SIDEWALK PER CORR DETAIL ST-01
2. CONCRETE DRIVEWAY PER CORR DETAIL ST-03
3. LAYDOWN CURB PER CORR DETAIL ST-04
4. SPILL & CATCH CURB PER CORR DETAIL ST-05
5. FIRE LANE MARKING PER CORR DETAIL ST-13
6. TYPE 2 CURB RAMP PER TXDOT DETAIL PED-18
7. TYPE 7 CURB RAMP PER TXDOT DETAIL PED-18
8. MONUMENT SIGN (APPROXIMATELY 15'x'6)

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Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

REVISION | NO. | DATE

STATE OF TEXAS — BILAL A. ALIZAI — 92792 — LICENSED PROFESSIONAL ENGINEER

SITE PLAN A

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

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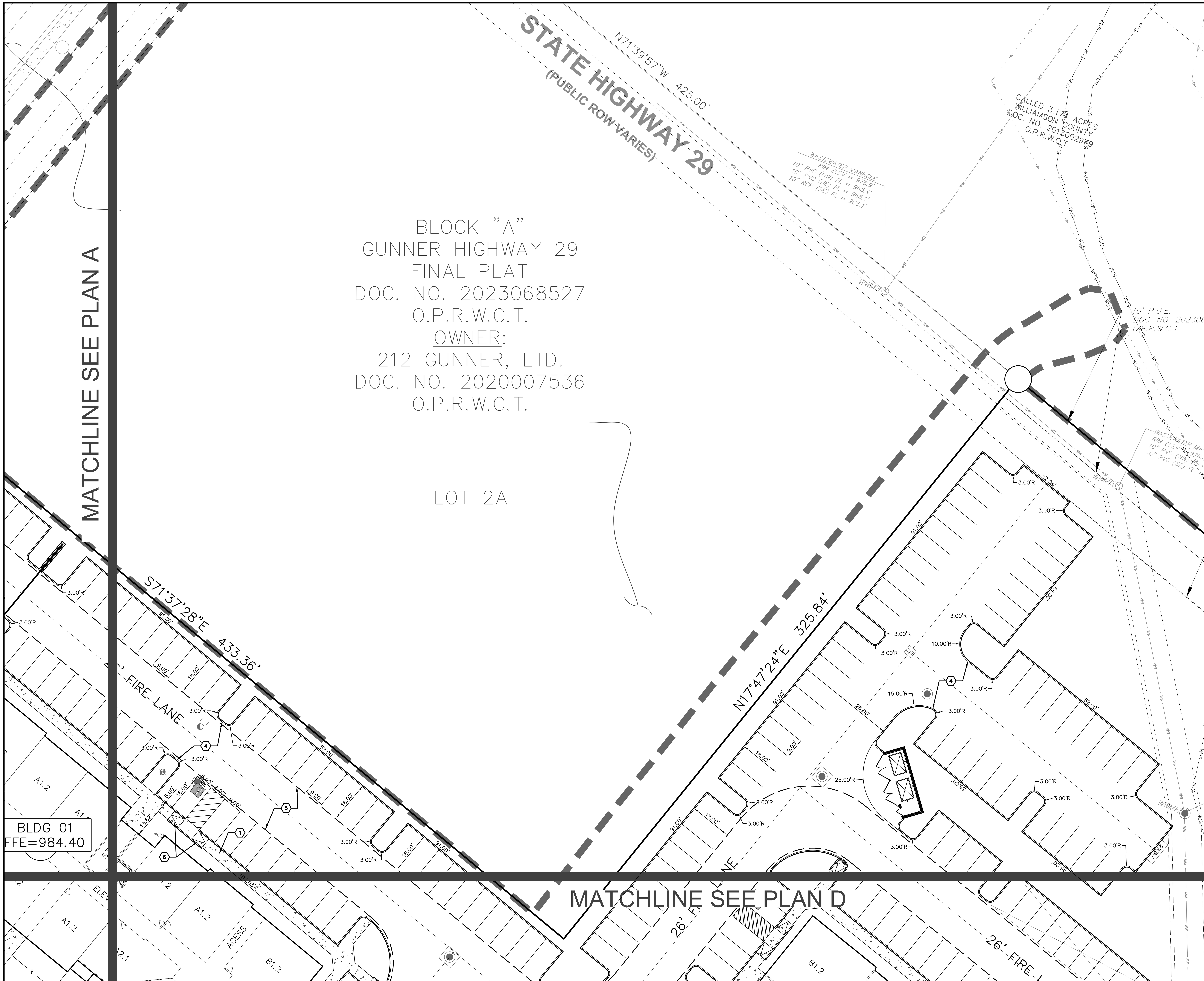

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
WTRMH		WATER MANHOLE
		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR		TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
TV	TV	CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
x	x	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		FIRE LANE DESIGNATION
		ACCESSIBLE ROUTE
		CONCRETE SIDEWALKS
		WALL
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
_R @ 9.0'	_R 9.0'	PARKING COUNT (REGULAR SPACES)
_HC @ 9.0'	_HC 9.0'	PARKING COUNT (ACCESSIBLE SPACES)
_P @ 9.0'	_P 9.0'	PARKING COUNT (PARALLEL SPACES)
		ACCESSIBLE SPACE
		BIKE PARKING
		BARRICADE
		LIMITS OF CONSTRUCTION

NOTES:

1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
2. ALL UTILITIES SHOWN ARE APPROXIMATE ONLY, THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO STARTING CONSTRUCTION.

SITE KEYNOTES

1. SIDEWALK PER CORR DETAIL ST-01
2. CONCRETE DRIVEWAY PER CORR DETAIL ST-03
3. LAYDOWN CURB PER CORR DETAIL ST-04
4. SPILL & CATCH CURB PER CORR DETAIL ST-05
5. FIRE LANE MARKING PER CORR DETAIL ST-13
6. TYPE 2 CURB RAMP PER TXDOT DETAIL PED-18
7. TYPE 7 CURB RAMP PER TXDOT DETAIL PED-18

DATE	NO.	REVISION

garza emc
7708 Rialto Blvd., Suite 125
Austin, Texas 78735
Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED
PROFESSIONAL ENGINEER

SITE PLAN B

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET 12 OF 33

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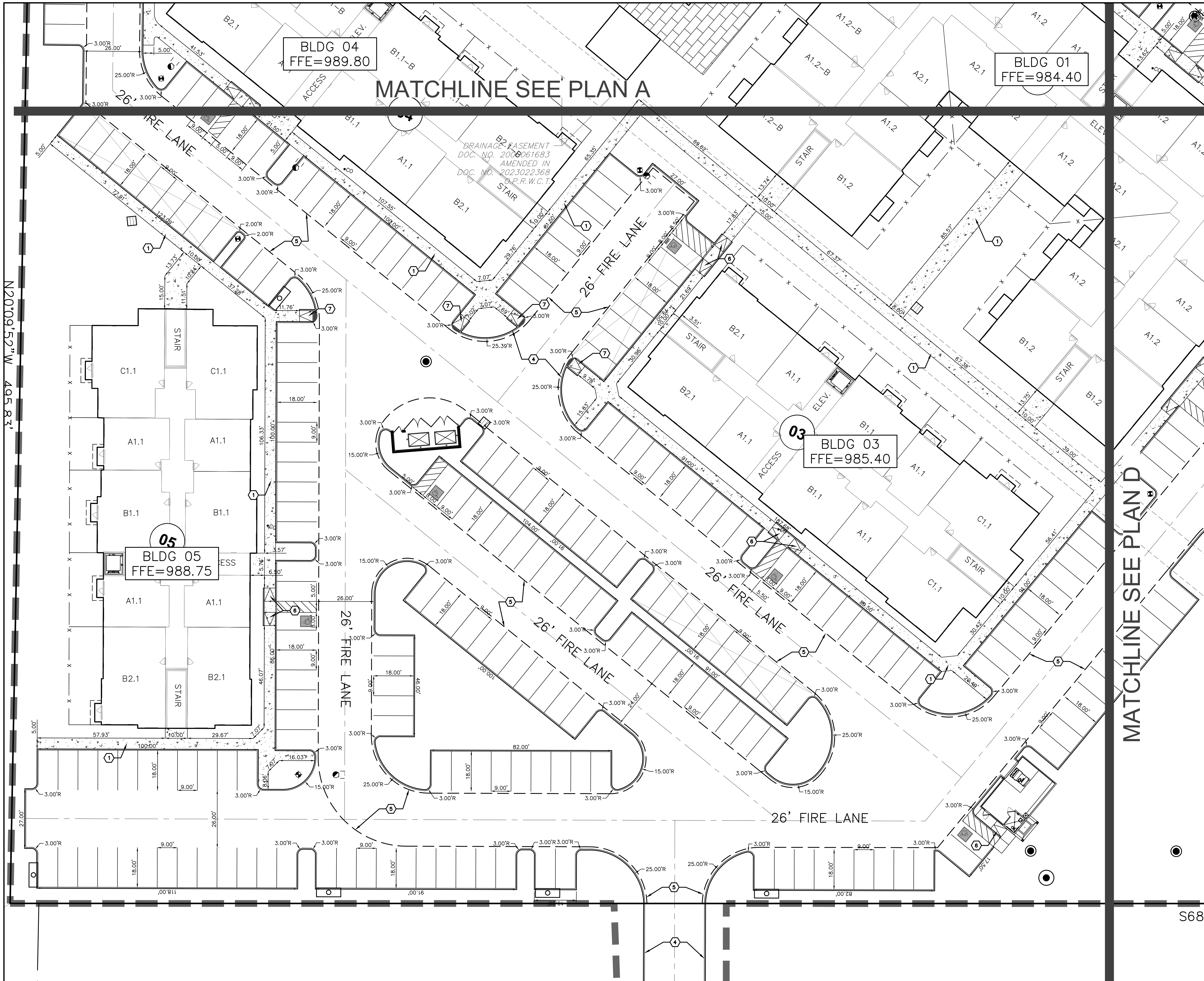

1" = 20'

A B C D

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
WTRMH		WATER MANHOLE
		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR		TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
TV	TV	CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
x	x	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		FIRE LANE DESIGNATION
		ACCESSIBLE ROUTE
		CONCRETE SIDEWALKS
		WALL
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
_R @ 9.0'	_R @ 9.0'	PARKING COUNT (REGULAR SPACES)
_HC @ 9.0'	_HC @ 9.0'	PARKING COUNT (ACCESSIBLE SPACES)
_P @ 9.0'	_P @ 9.0'	PARKING COUNT (PARALLEL SPACES)
		ACCESSIBLE SPACE
		BIKE PARKING
		BARRICADE
		LIMITS OF CONSTRUCTION

NOTES:

1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
2. ALL UTILITIES SHOWN ARE APPROXIMATE ONLY, THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO STARTING CONSTRUCTION.

SITE KEYNOTES

1. SIDEWALK PER CORR DETAIL ST-01
2. CONCRETE DRIVEWAY PER CORR DETAIL ST-03
3. LAYDOWN CURB PER CORR DETAIL ST-04
4. SPILL & CATCH CURB PER CORR DETAIL ST-05
5. FIRE LANE MARKING PER CORR DETAIL ST-13
6. TYPE 2 CURB RAMP PER TXDOT DETAIL PED-18
7. TYPE 7 CURB RAMP PER TXDOT DETAIL PED-18

REVISION | NO. | DATE

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TBPE # F-14629

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED
PROFESSIONAL ENGINEER

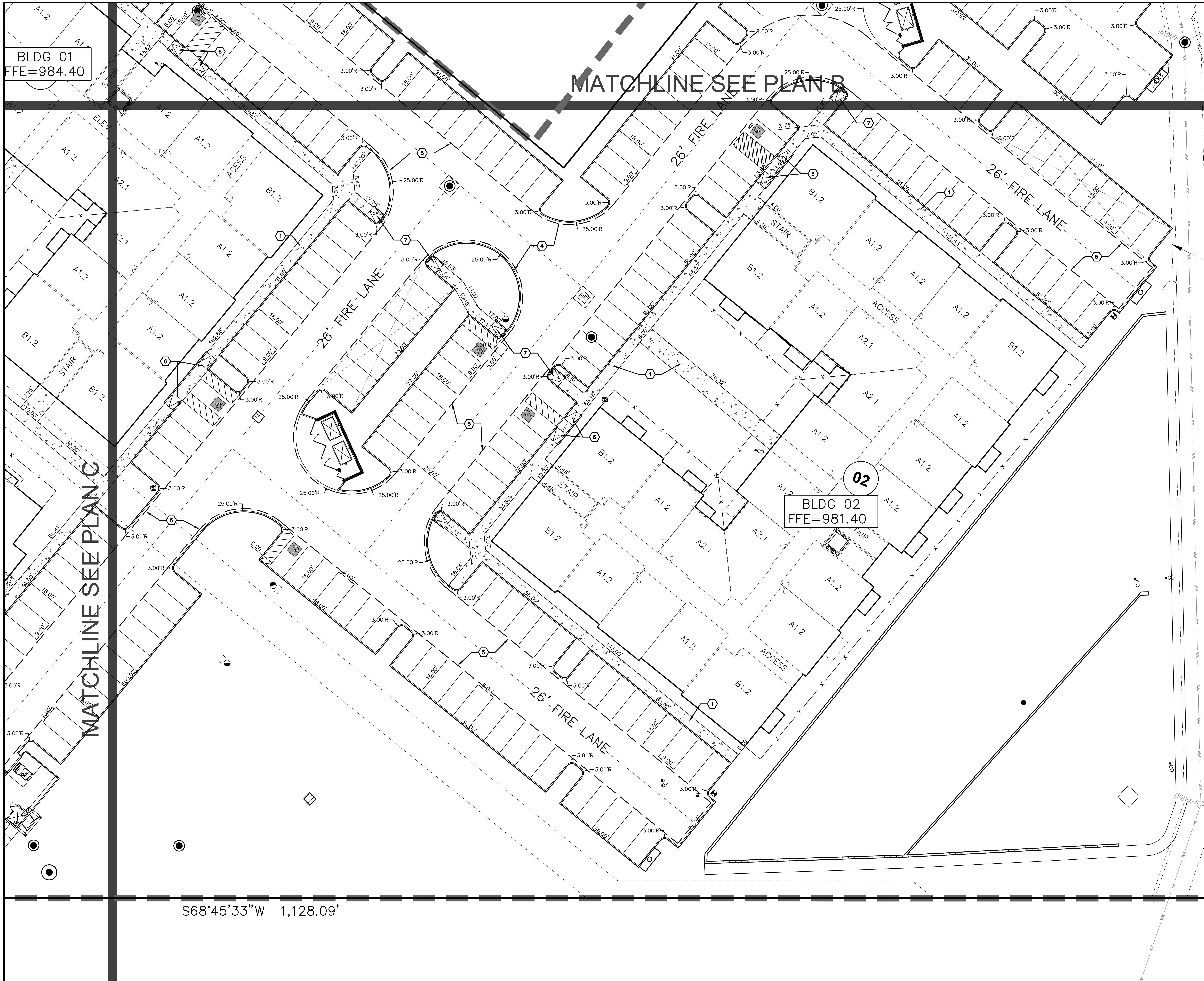
SITE PLAN C

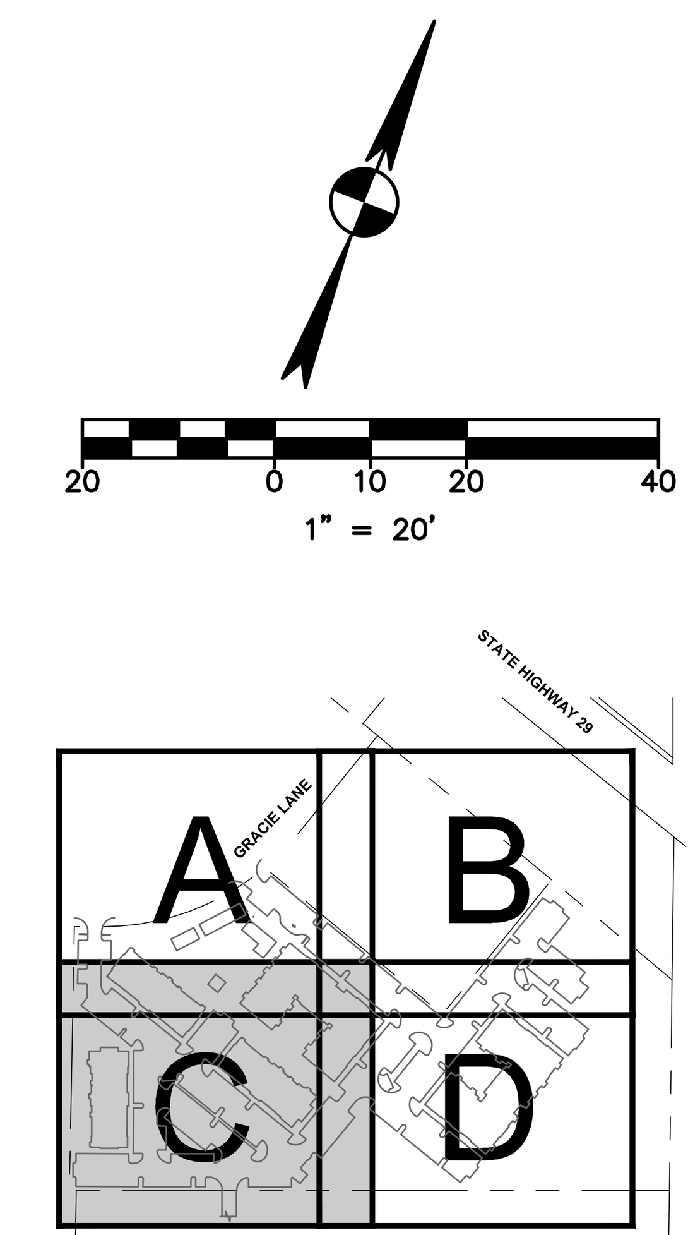
LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET 13 OF 33





LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
WTRMH		WATER MANHOLE
		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR	T	TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
TV	TV	CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
x	x	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		FIRE LANE DESIGNATION
		ACCESSIBLE ROUTE
		CONCRETE SIDEWALKS
		WALL
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
_R @ 9.0'	_R 9.0'	PARKING COUNT (REGULAR SPACES)
_HC @ 9.0'	_HC 9.0'	PARKING COUNT (ACCESSIBLE SPACES)
_P @ 9.0'	_P 9.0'	PARKING COUNT (PARALLEL SPACES)
		ACCESSIBLE SPACE
		BIKE PARKING
		BARRICADE
		LIMITS OF CONSTRUCTION

NOTES:

1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
2. ALL UTILITIES SHOWN ARE APPROXIMATE ONLY, THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO STARTING CONSTRUCTION.

SITE KEYNOTES

1. SIDEWALK PER CORR DETAIL ST-01
2. CONCRETE DRIVEWAY PER CORR DETAIL ST-03
3. LAYDOWN CURB PER CORR DETAIL ST-04
4. SPILL & CATCH CURB PER CORR DETAIL ST-05
5. FIRE LANE MARKING PER CORR DETAIL ST-13
6. TYPE 2 CURB RAMP PER TXDOT DETAIL PED-18
7. TYPE 7 CURB RAMP PER TXDOT DETAIL PED-18

REVISION	NO.	DATE

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Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

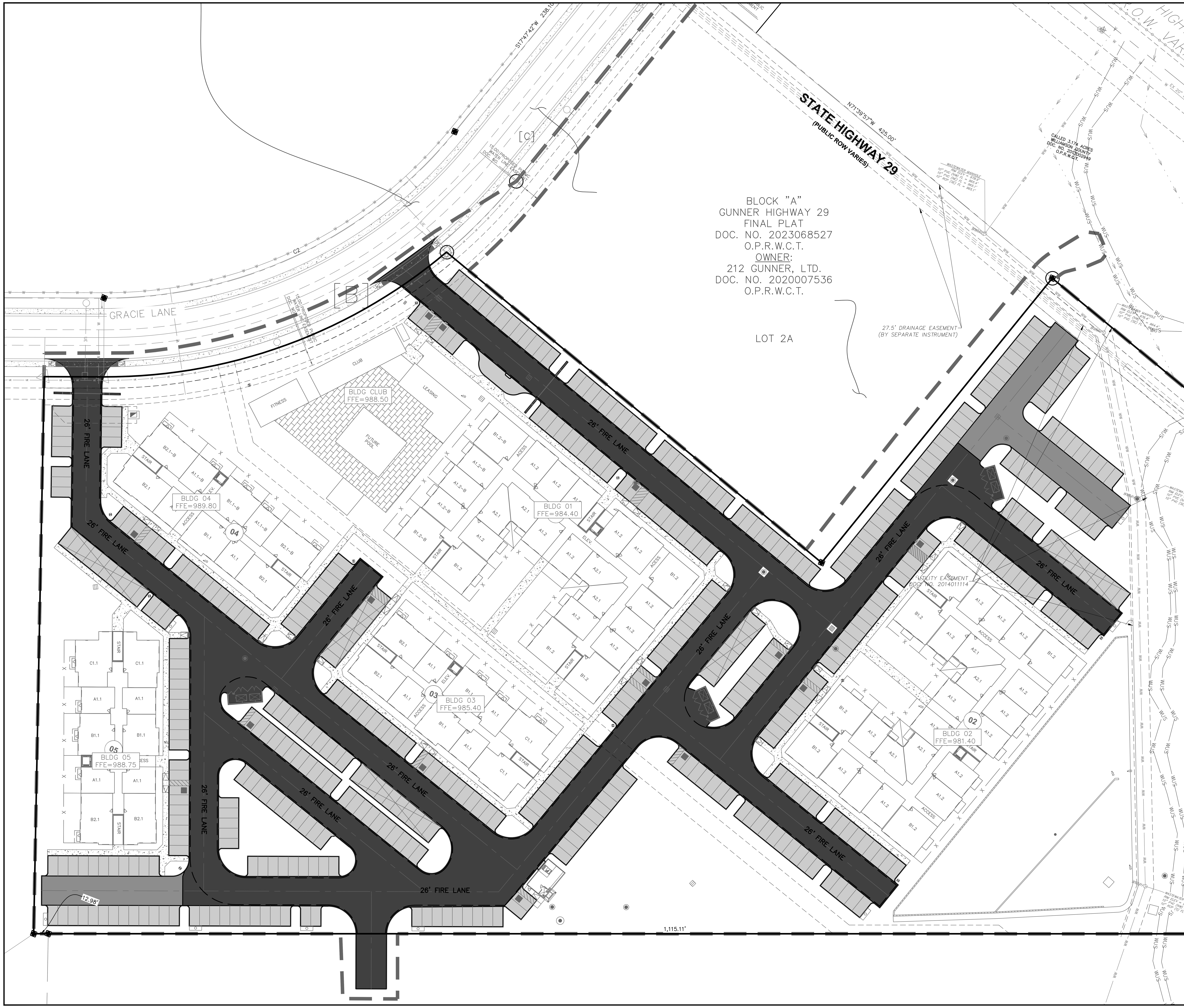
STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED
PROFESSIONAL ENGINEER

SITE PLAN D

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024



1" = 40'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
WTRMH		WATER MANHOLE
		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR		TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
TV	TV	CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
X	X	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		FIRE LANE DESIGNATION
		ACCESSIBLE ROUTE
		CONCRETE SIDEWALKS
		WALL
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
_R @ 9.0'	_R @ 9.0'	PARKING COUNT (REGULAR SPACES)
_HC @ 9.0'	_HC @ 9.0'	PARKING COUNT (ACCESSIBLE SPACES)
_P @ 9.0'	_P @ 9.0'	PARKING COUNT (PARALLEL SPACES)
		ACCESSIBLE SPACE
		BIKE PARKING
		BARRICADE
		LIMITS OF CONSTRUCTION

PAVING LEGEND

EXISTING	PROPOSED	DESCRIPTION
		HEAVY DUTY PAVEMENT
		MEDIUM DUTY PAVEMENT
		LIGHT DUTY PAVEMENT

NOTES:

1. CONTRACTOR TO COMPLY WITH GEOTECH ENGINEERS SPECIFICATIONS FOR ALL PROPOSED UTILITY AND PAVING WORK INCLUDING LIGHT DUTY, MEDIUM DUTY, HEAVY DUTY, SIDEWALKS INCLUDING SUBGRADE PREPARATION AND MOISTURE CONDITIONING. CONTRACTOR TO REFER TO GEOTECH REPORT PREPARED BY RINER ENGINEERING PROJECT NO. 23-0158 DATED APRIL 14,, 2023 INCLUDING UPDATED REPORTS AND ADDENDUMS.

LIGHT DUTY PAVEMENT

5in. REINF. CONCRETE PVMT. AT 3,500 PSI COMPRESSIVE STRENGTH.
6in LIME STABILIZED SUBGRADE WITH TYPE A HYDRATED LIME PER TXDOT ITEM 260. SUBGRADE MUST BE COMPACTED TO MIN. 95% OF MAX DRY DENSITY PER STANDARD PROCTOR ASTM D698, AT MOISTURE CONTENT 2% ABOVE OPTIMUM LEVEL. REINFORCEMENT TO BE #3 BARS SPACED AT 22in O.C.E.W.

MEDIUM DUTY PAVEMENT

6in REINF. CONCRETE PVMT. AT 3,500 PSI COMPRESSIVE STRENGTH.
6in LIME STABILIZED SUBGRADE WITH TYPE A HYDRATED LIME PER TXDOT ITEM 260. SUBGRADE MUST BE COMPACTED TO MIN. 95% OF MAX DRY DENSITY PER STANDARD PROCTOR ASTM D698, AT MOISTURE CONTENT 2% ABOVE OPTIMUM LEVEL. REINFORCEMENT TO BE #3 BARS SPACED AT 18in O.C.E.W.

HEAVY DUTY PAVEMENT

7in REINF. CONCRETE PVMT. AT 3,500 PSI COMPRESSIVE STRENGTH.
6in LIME STABILIZED SUBGRADE WITH TYPE A HYDRATED LIME PER TXDOT ITEM 260. SUBGRADE MUST BE COMPACTED TO MIN. 95% OF MAX DRY DENSITY PER STANDARD PROCTOR ASTM D698, AT MOISTURE CONTENT 2% ABOVE OPTIMUM LEVEL. REINFORCEMENT TO BE #3 BARS SPACED AT 16in O.C.E.W.

SIDEWALKS

4in REINF. CONCRETE SIDEWALKS AT 3,500 PSI COMPRESSIVE STRENGTH.
6in SUBGRADE COMPACTED AND MOISTURE CONDITIONED TO ASTM D698. REINFORCEMENT TO BE WELDED WIRE MESH.

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Austin, Texas 78735
Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

REVISION | NO. | DATE

BILAL A. ALIZAI
92792

PAVING PLAN

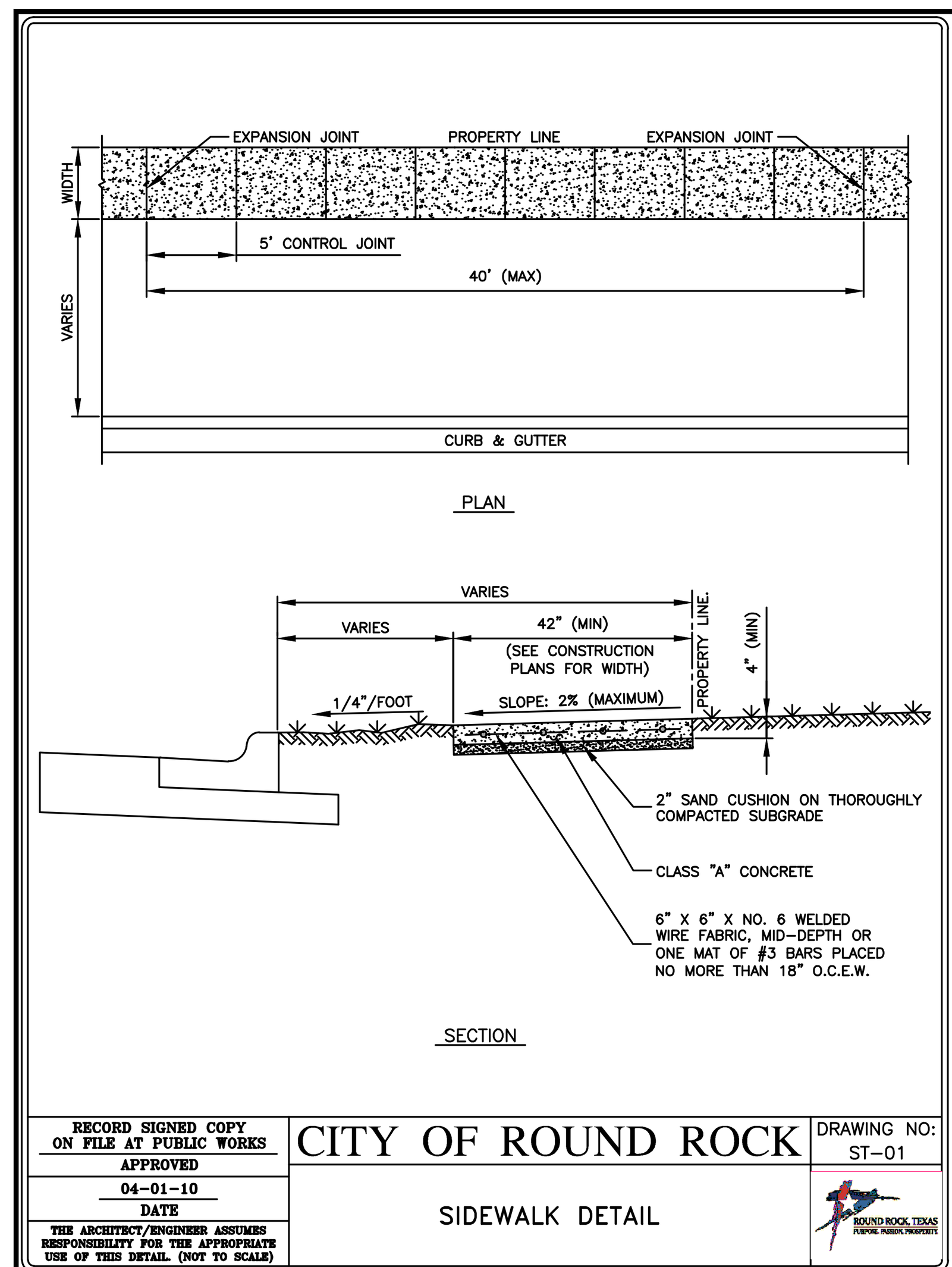
LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

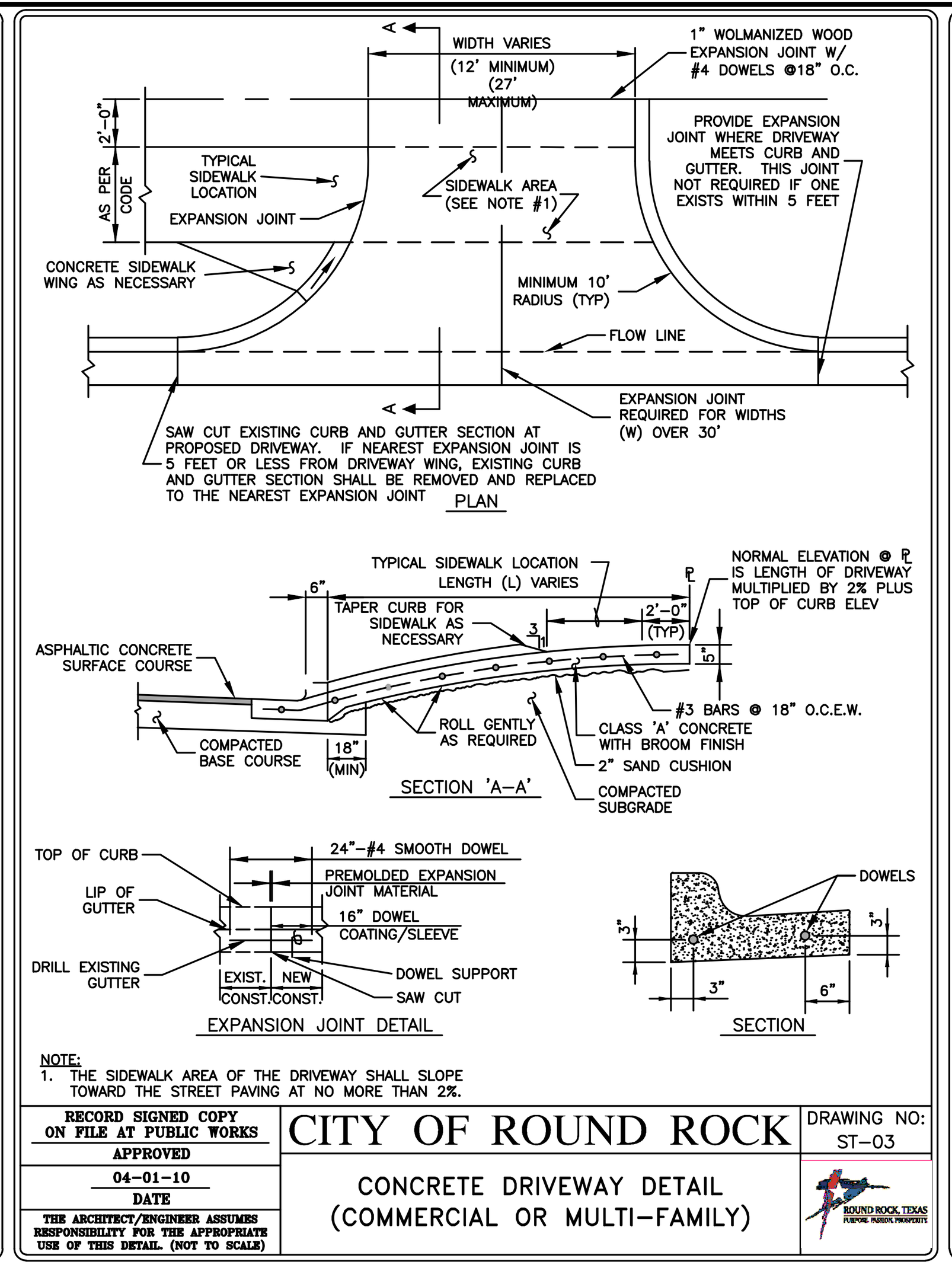
ENDEAVOR REAL ESTATE GROUP

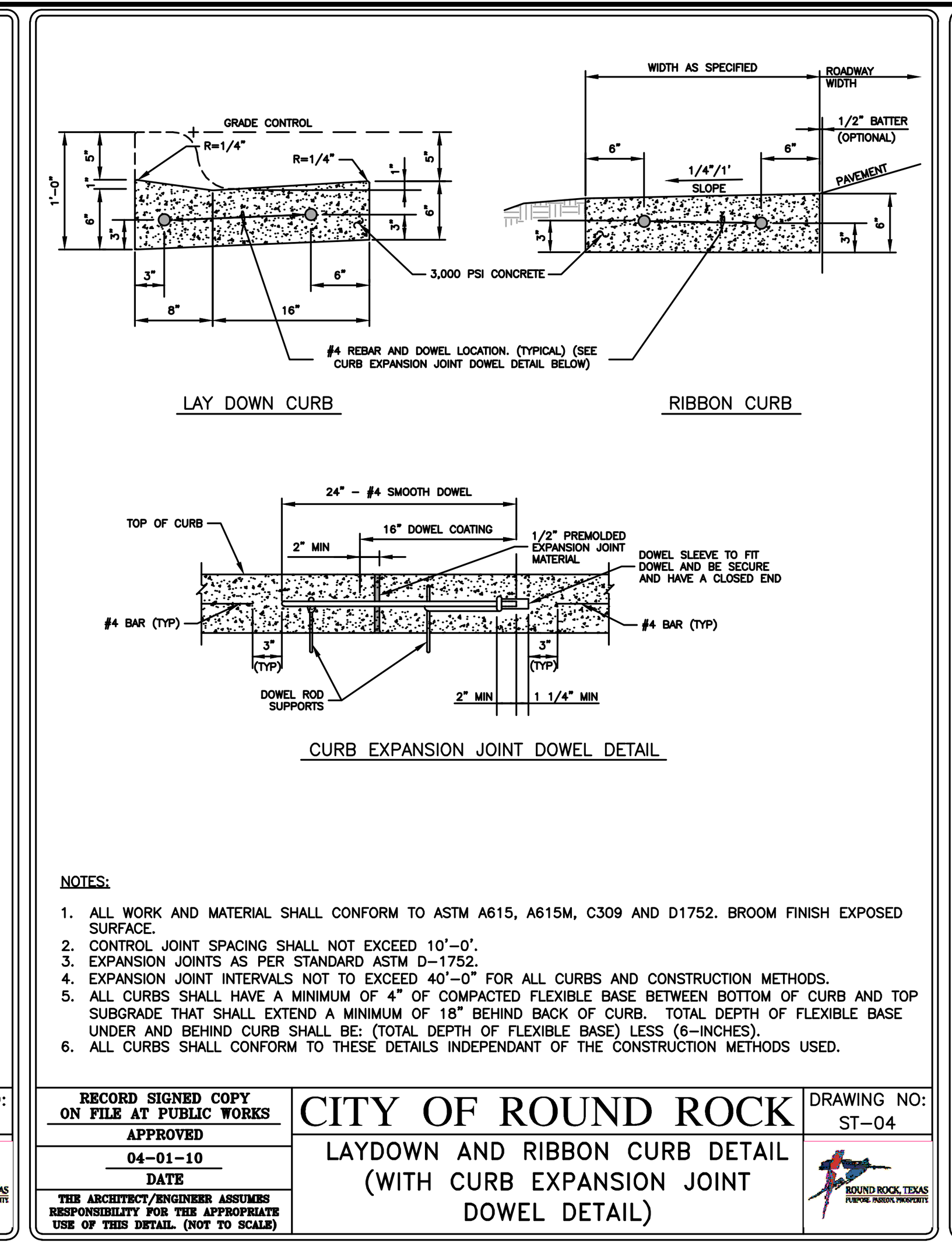
DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

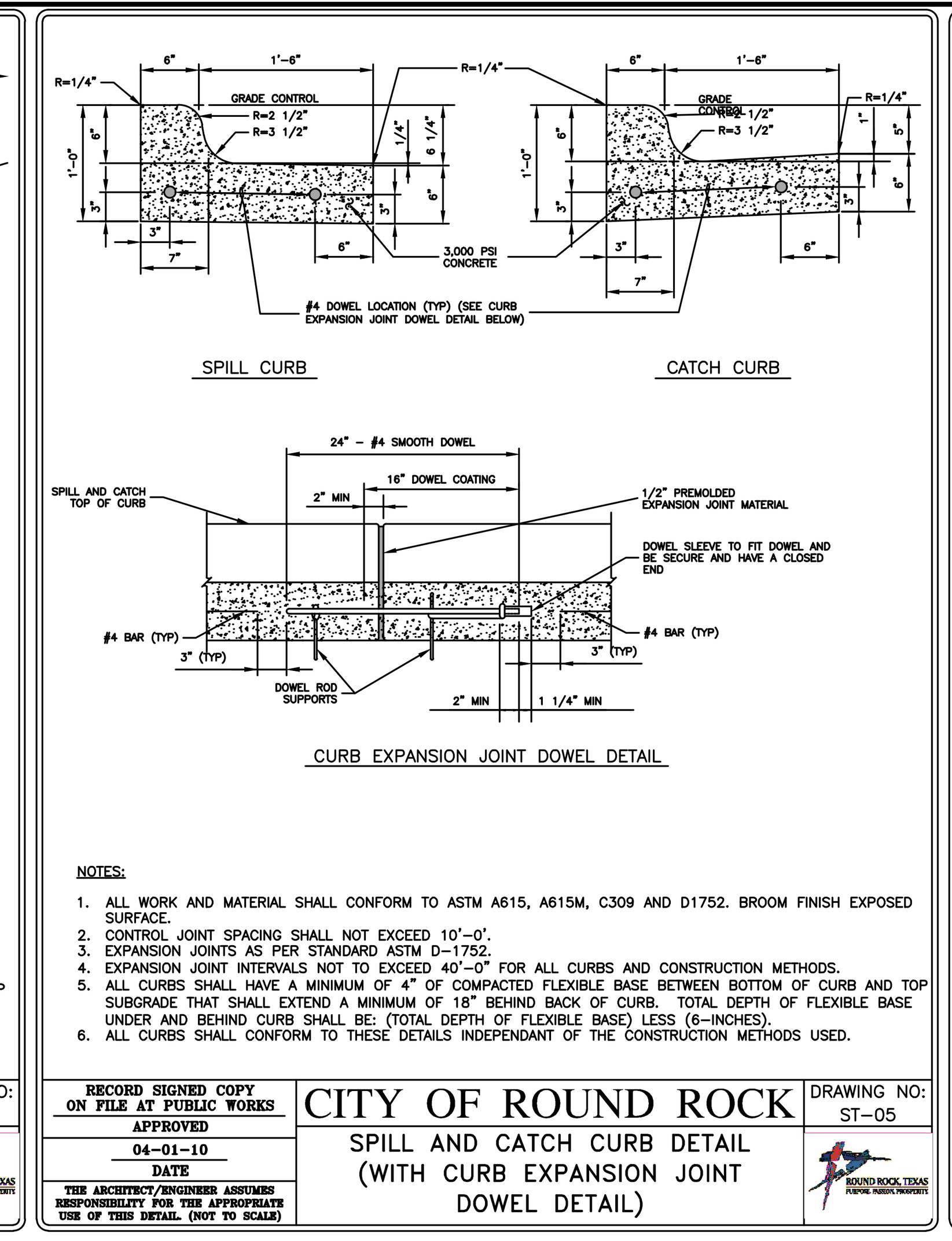
SHEET 15 OF 33

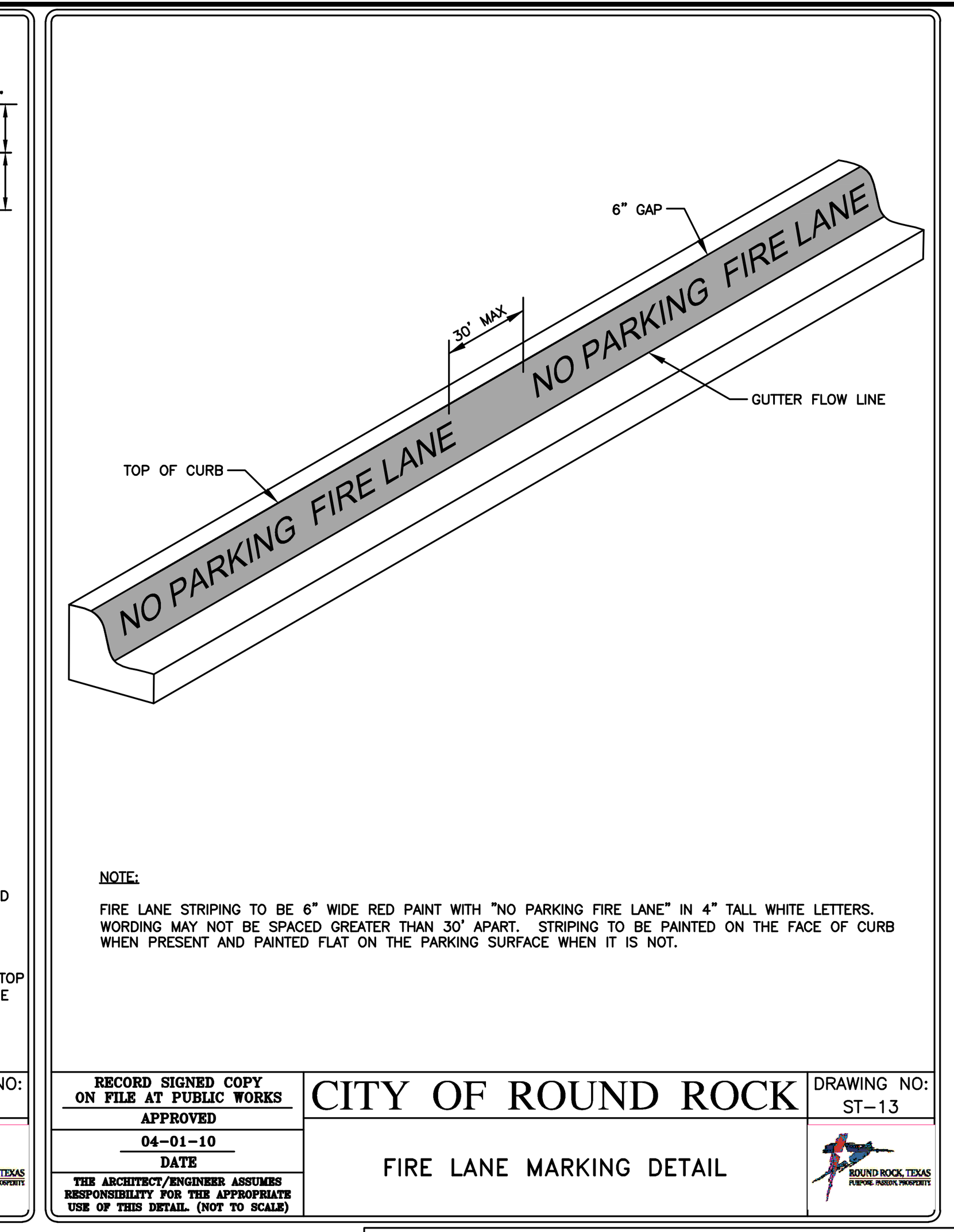
2024-4-SDP

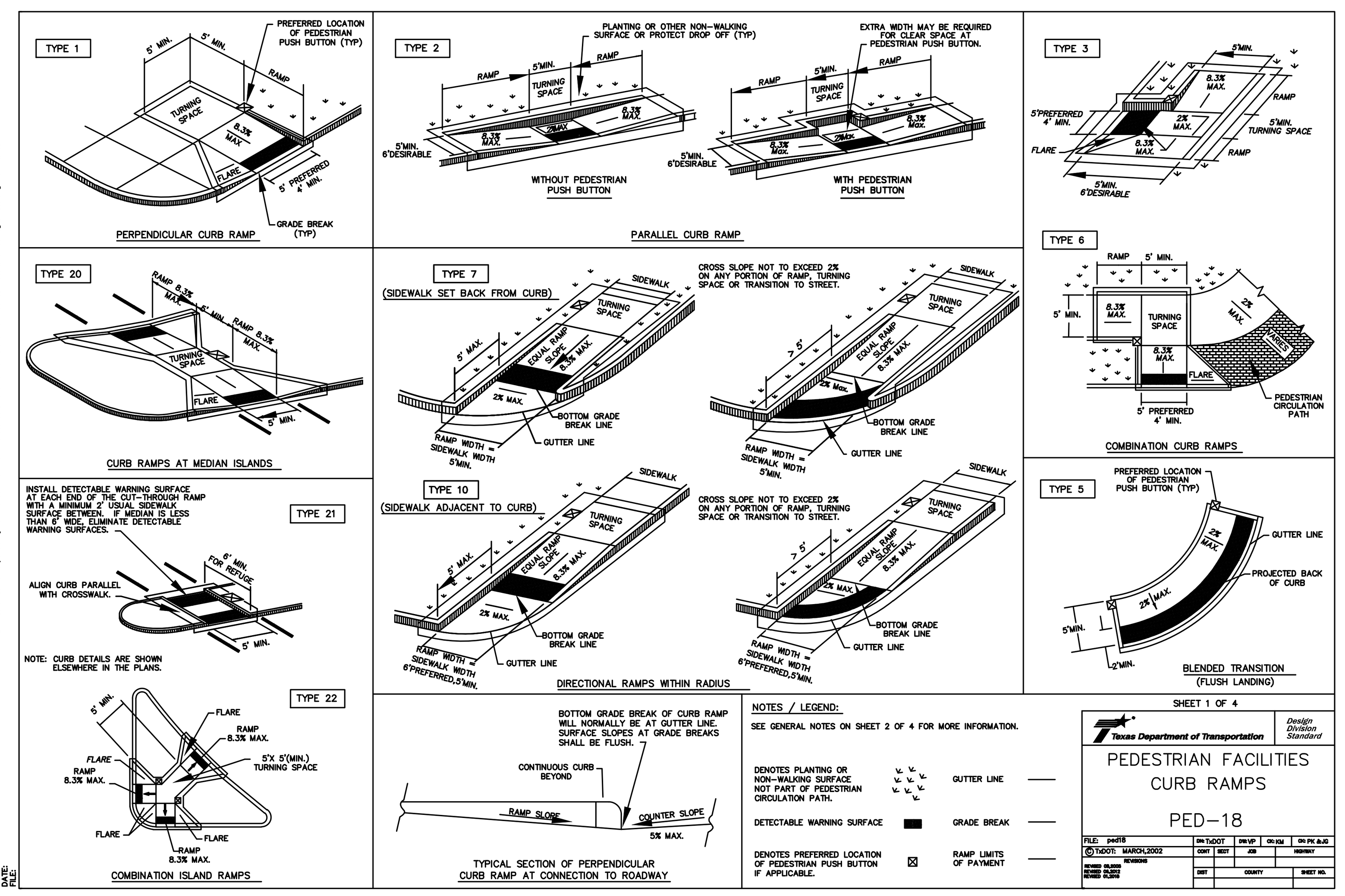


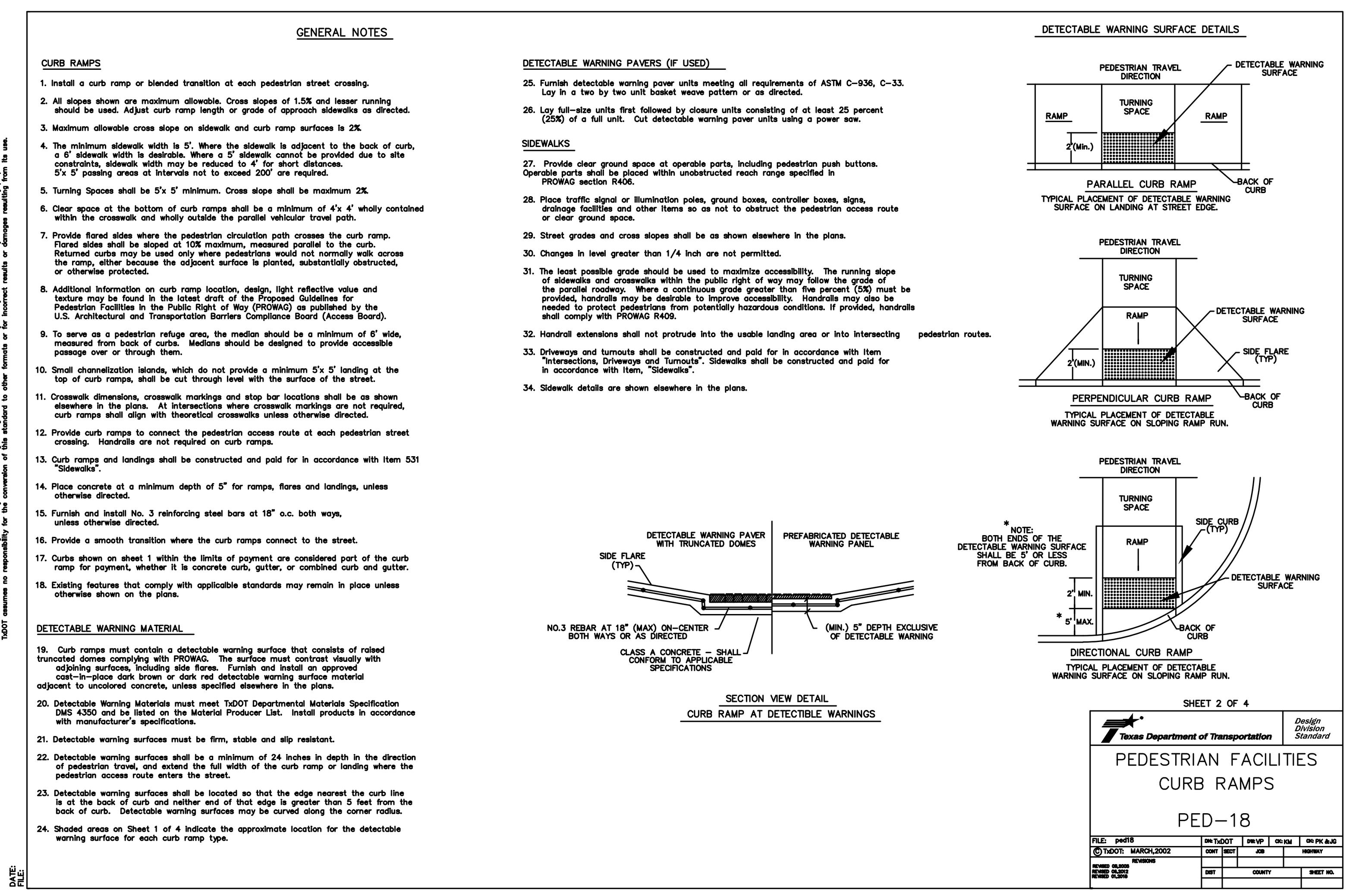


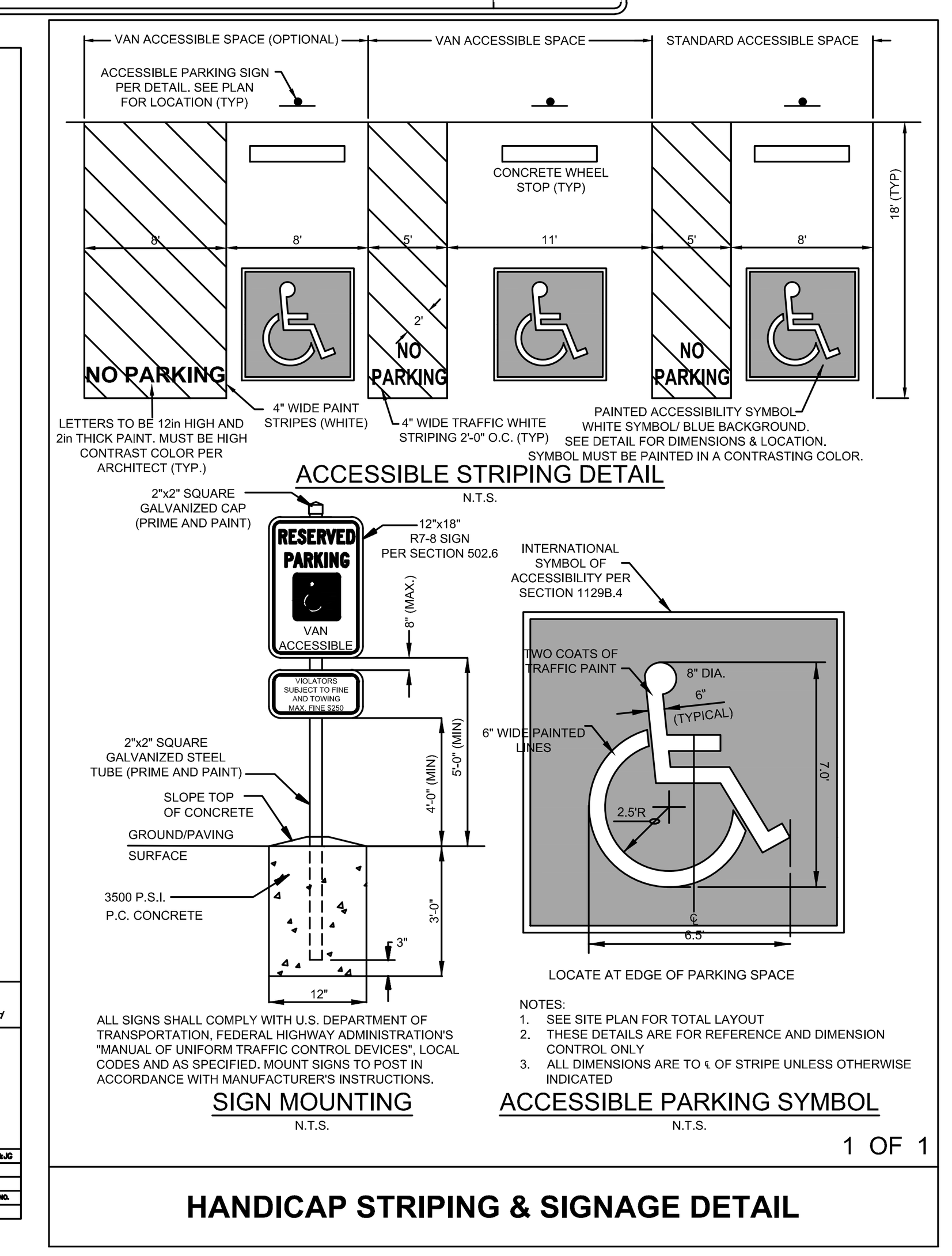


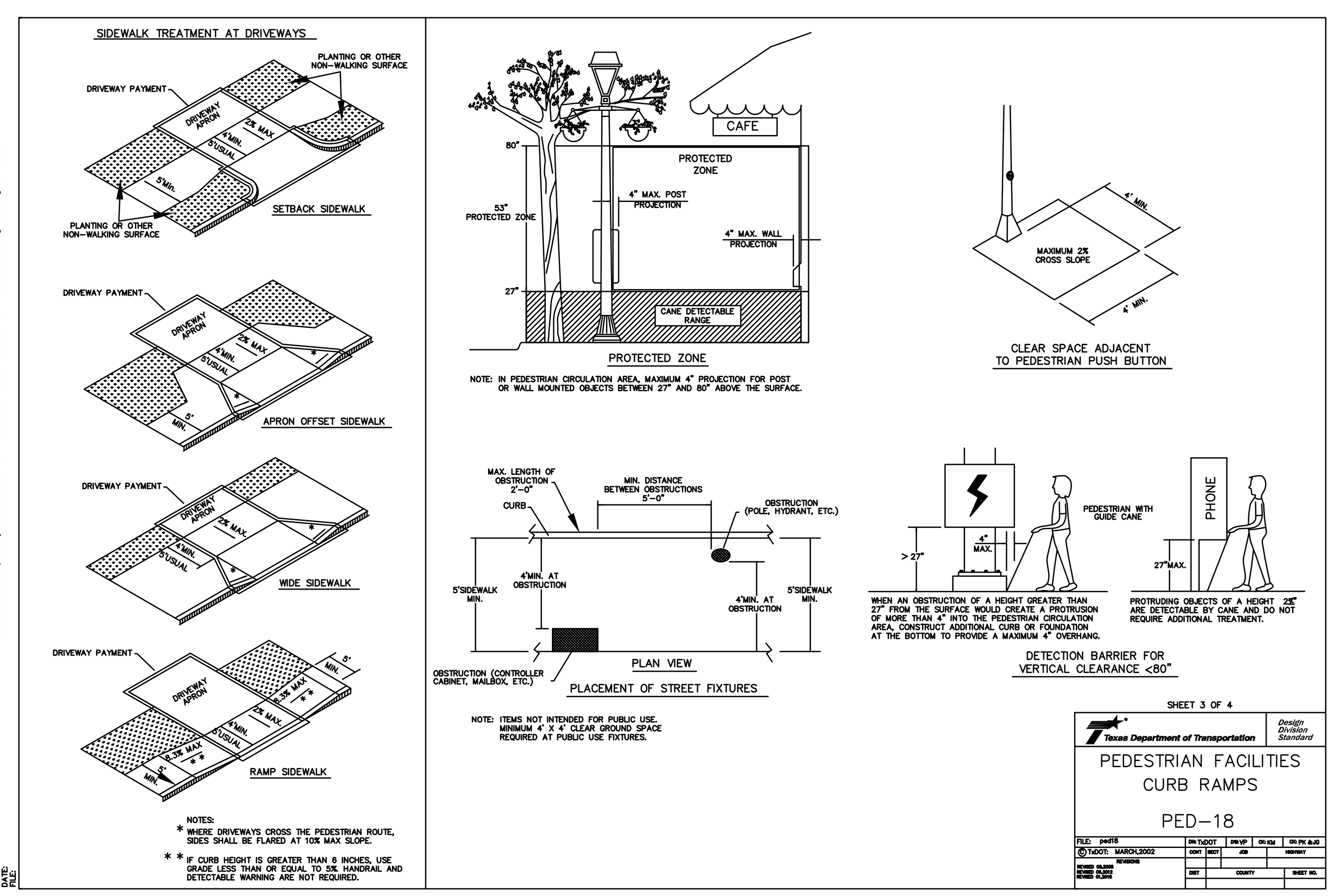


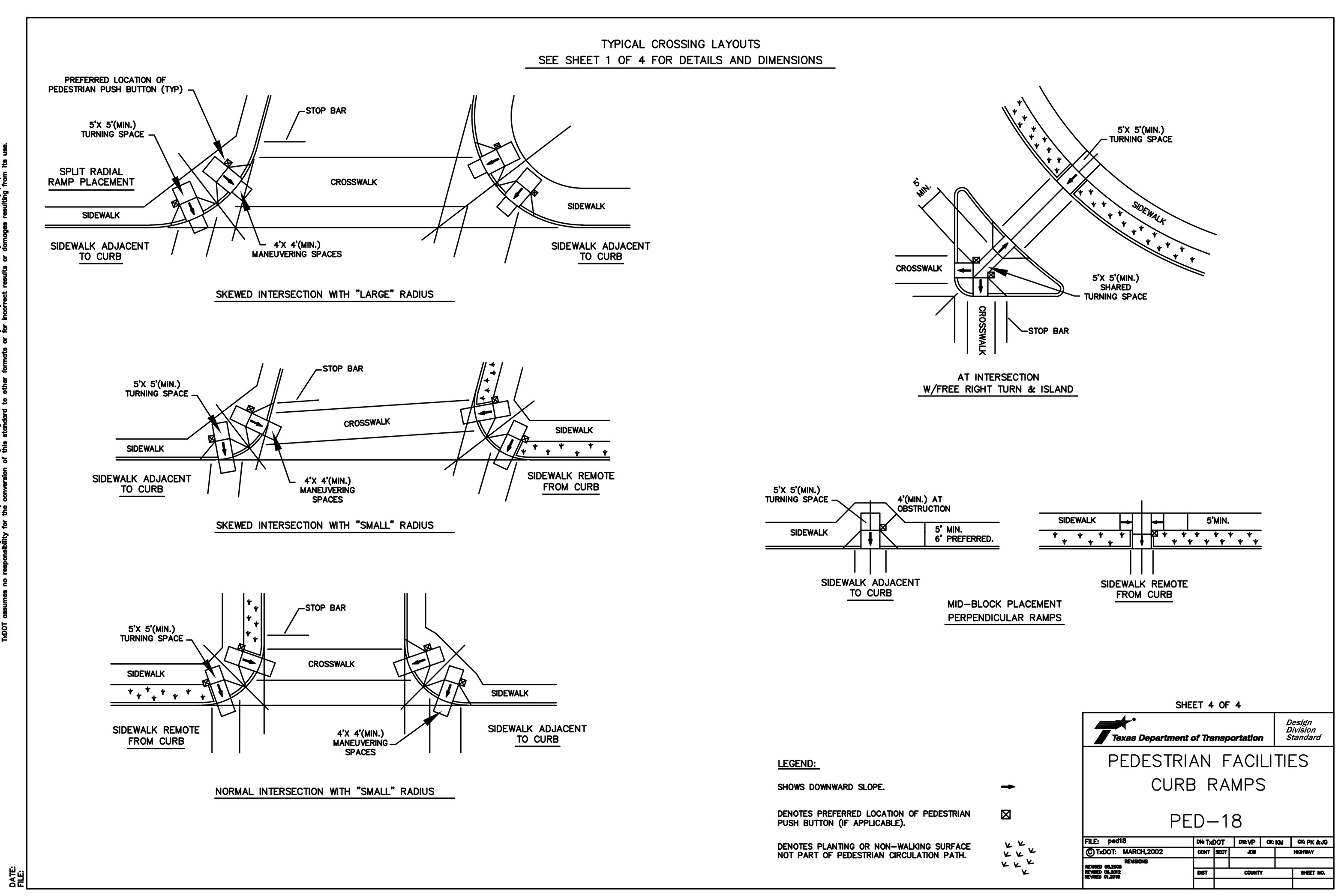












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Austin, Texas 78735
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TBPE # F-14629
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STATE OF TEXAS — BILAL A. ALIZAI — 92792 — LICENSED PROFESSIONAL ENGINEER

SITE DETAILS

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET 16 OF 33

2024-4-SDP

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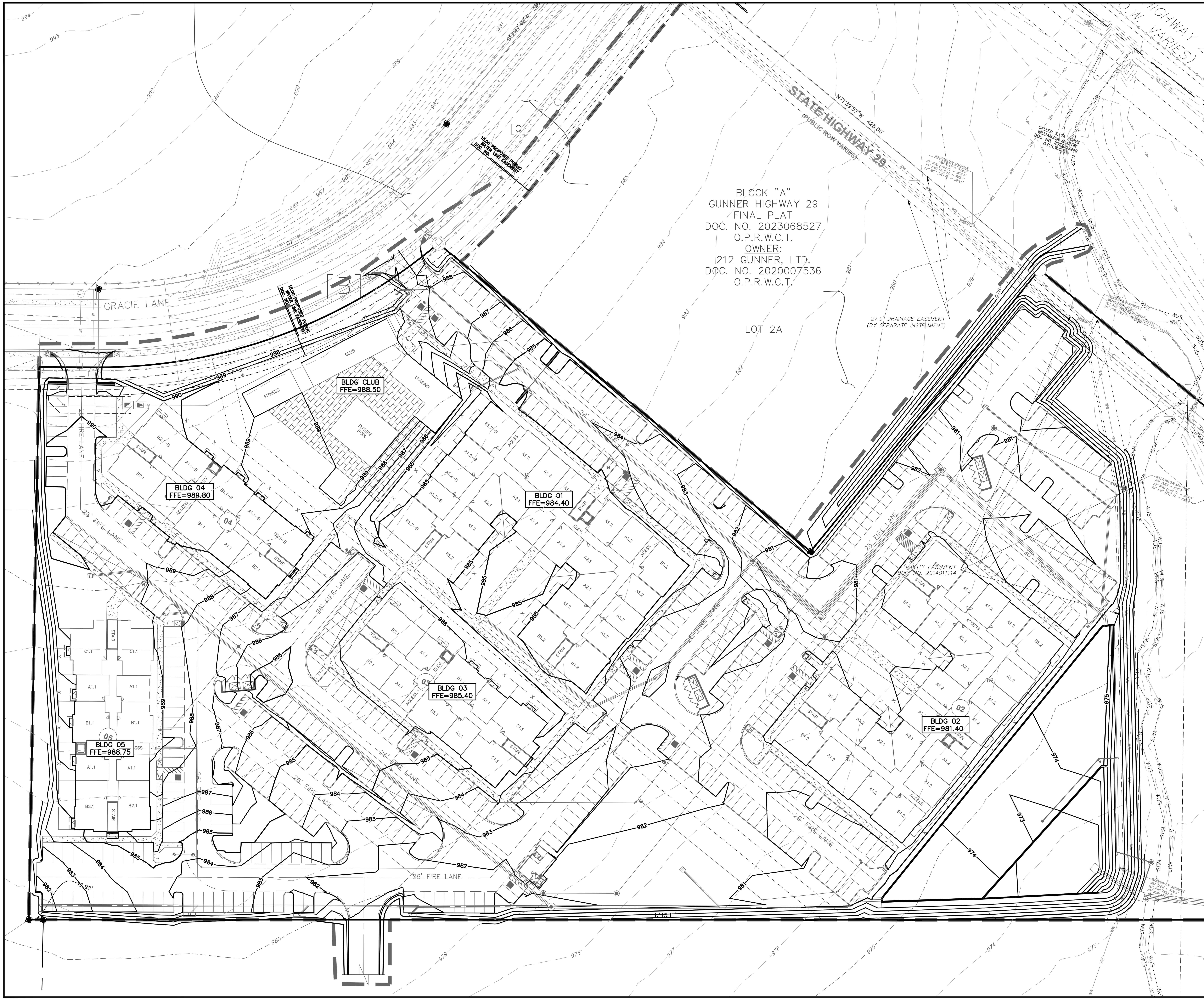

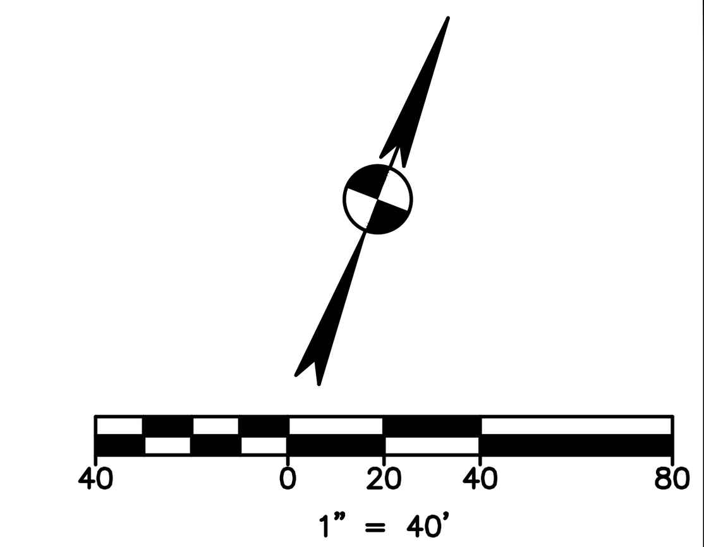

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
		WATER MANHOLE
		WATER LINE MARKER
		UNDERGROUND CABLE MARKER
		UNDERGROUND GAS LINE MARKER
		UNDERGROUND TELEPHONE MARKER
		GAS RISER
		TELEPHONE RISER
		SPRINKLER CONTROL BOX
		SWITCH GEAR & PAD
		TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
		CABLE TV RISER
		ELECTRIC BOX
		ELECTRIC METER
		GAS METER
		GAS VALVE
		TRAFFIC CONTROL BOX
		TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
		ELECTRIC MANHOLE (SIZE VARIES)
		WASTEWATER MANHOLE (SIZE VARIES)
		STORMSEWER MANHOLE (SIZE VARIES)
		TELEPHONE MANHOLE (SIZE VARIES)
		WASTEWATER CLEANOUT
		WIRE FENCE
		WOOD FENCE
		CHAIN LINK FENCE
		DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		CONCRETE SIDEWALKS
		WALL
		LIMITS OF CONSTRUCTION
678	678	CONTOUR
		STORMSEWER LINE
		WATER LINE
		FIRE LINE
		WASTEWATER LINE
		GAS LINE
		UNDERGROUND ELECTRIC LINE
		OVERHEAD ELECTRIC LINE
		UNDERGROUND TELEPHONE LINE
		UNDERGROUND CABLE AND INTERNET
		UNDERGROUND TELECOMMUNICATIONS
		ACCESSIBLE ROUTE
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
		ACCESSIBLE SPACE
		BIKE PARKING
		SWALE
		DIRECTION OF FLOW
		TREE TO BE SAVED
		HERITAGE / MATURE TREE
	HP	HIGH POINT
	TW	TOP OF WALL
	TC	TOP OF CURB
	G	GUTTER
701.33	701.33	SPOT ELEVATION

DATE	NO.	REVISION

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TBPE # F-14629
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STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED PROFESSIONAL ENGINEER

MASTER GRADING PLAN

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET
17
OF 33

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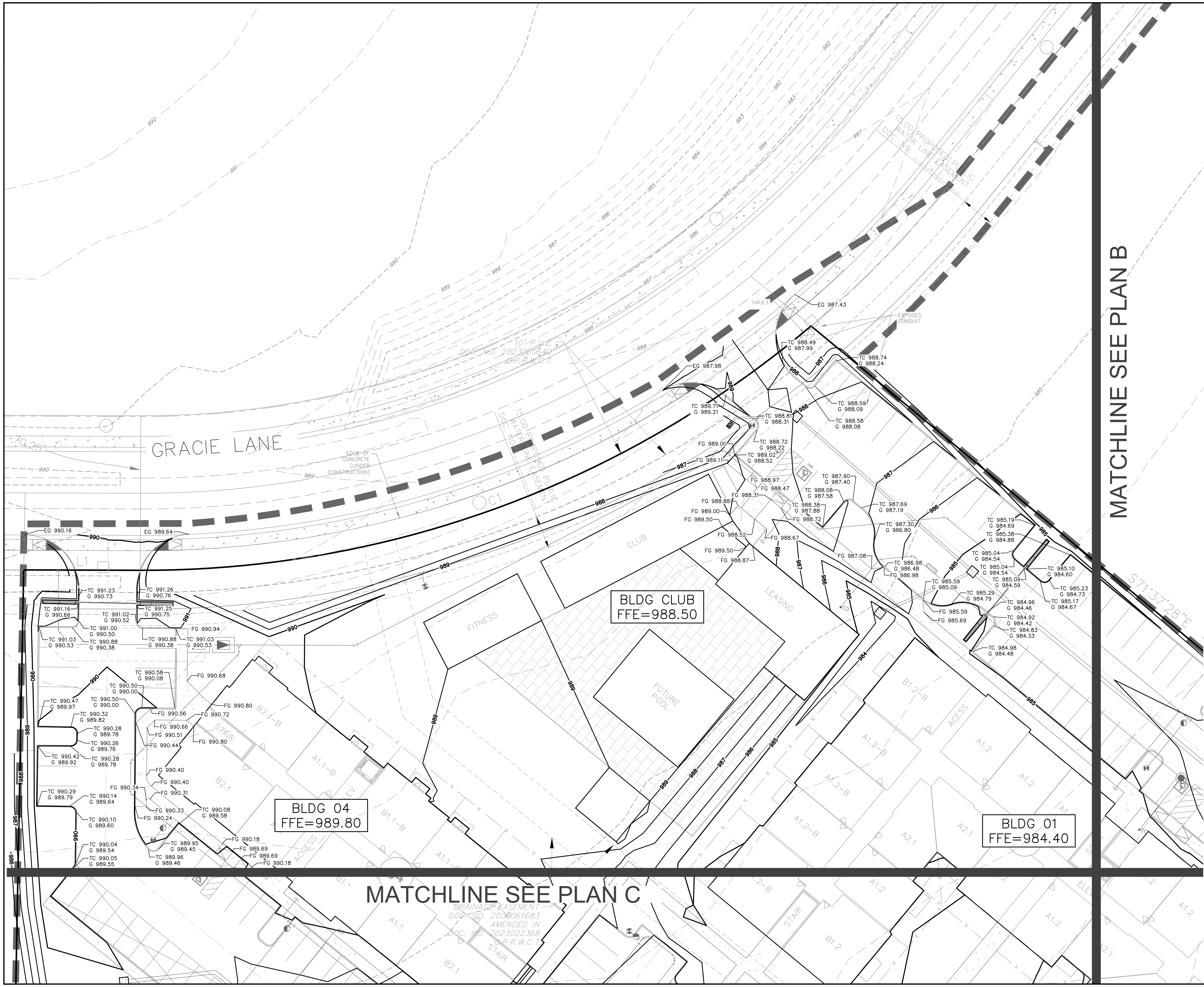
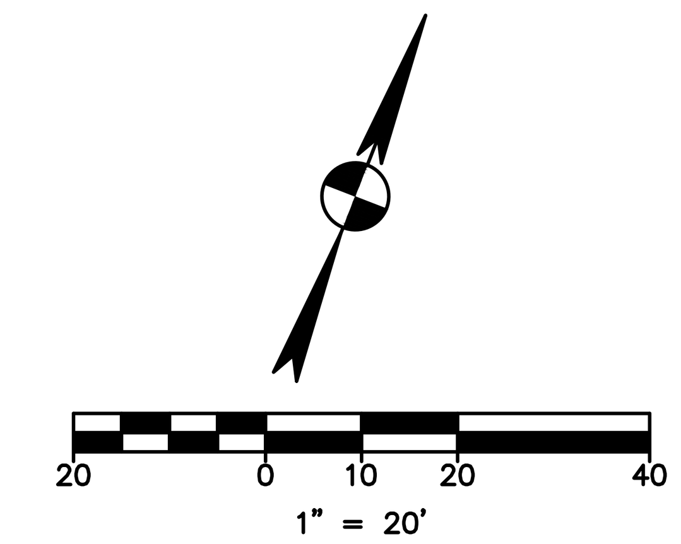
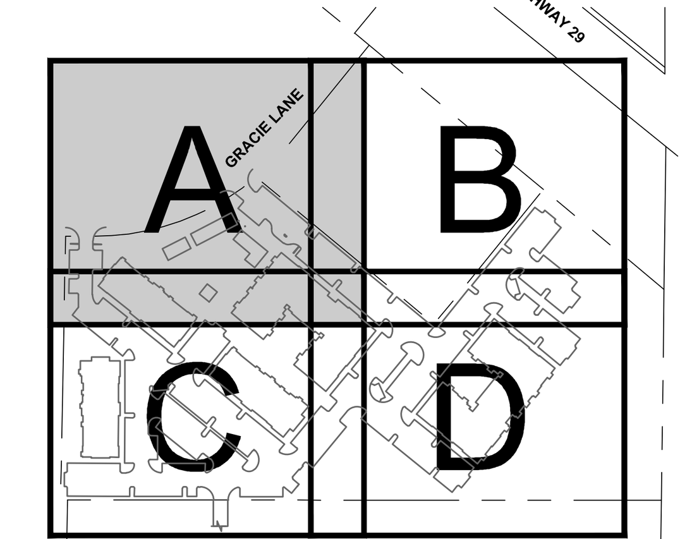
2024-4-SDP







LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
WTRMH		WATER MANHOLE
		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR	T	TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
TV	TV	CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
X	X	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		CONCRETE SIDEWALKS
		WALL
		LIMITS OF CONSTRUCTION
678	678	CONTOUR
SS		STORMSEWER LINE
W		WATER LINE
		FIRE LINE
WW		WASTEWATER LINE
G		GAS LINE
UE	UE	UNDERGROUND ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC LINE
OE	UT	UNDERGROUND TELEPHONE LINE
UC	UC	UNDERGROUND CABLE AND INTERNET
U-COMM	U-COMM	UNDERGROUND TELECOMMUNICATIONS
		ACCESSIBLE ROUTE
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
		ACCESSIBLE SPACE
		BIKE PARKING
		SWALE
		DIRECTION OF FLOW
1111		TREE TO BE SAVED
1111		HERITAGE / MATURE TREE
	HP	HIGH POINT
	TW	TOP OF WALL
	TC	TOP OF CURB
	G	GUTTER
701.33	701.33	SPOT ELEVATION

REVISION	NO.	DATE

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Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED PROFESSIONAL ENGINEER

GRADING PLAN A

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET 18 OF 33

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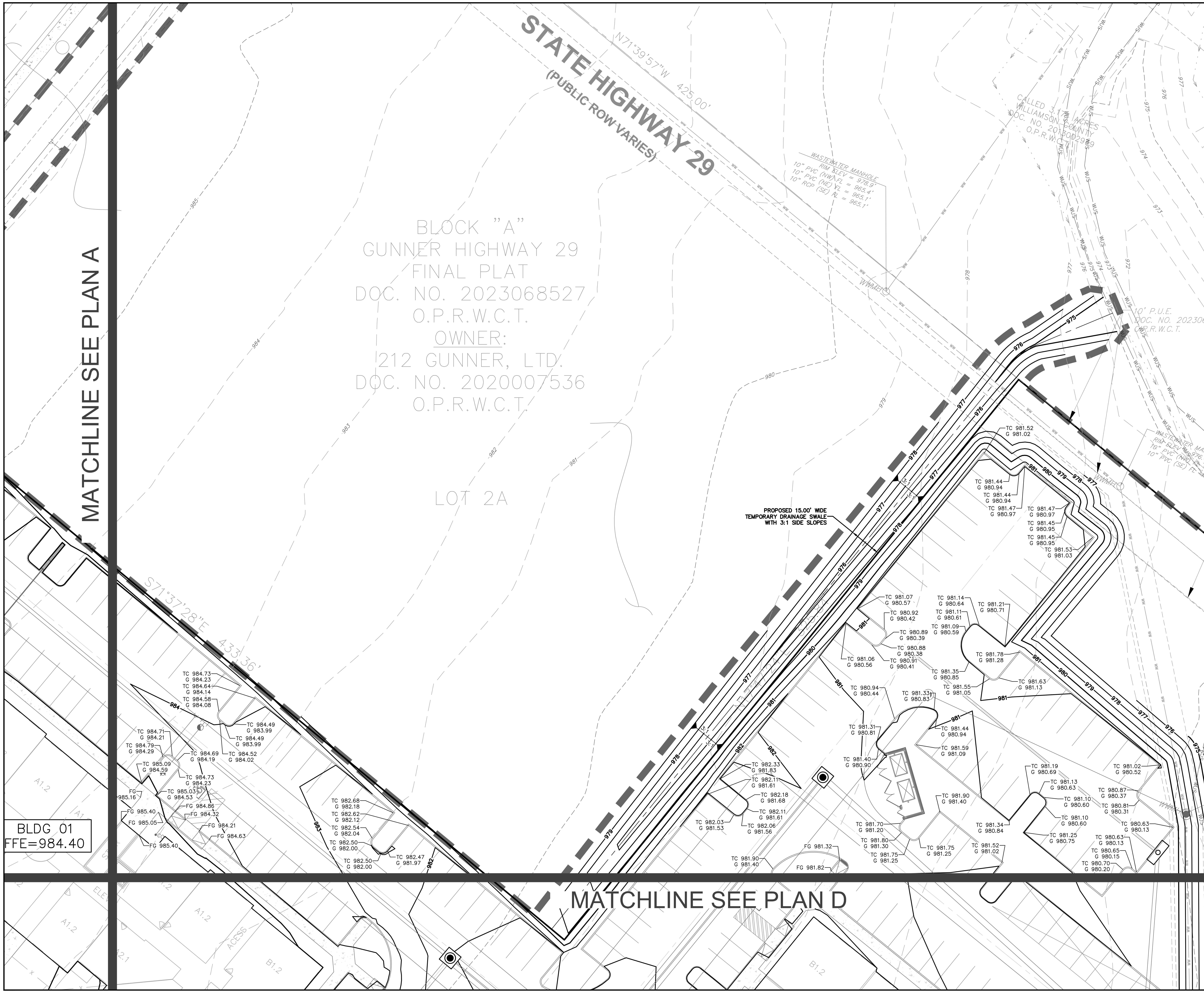

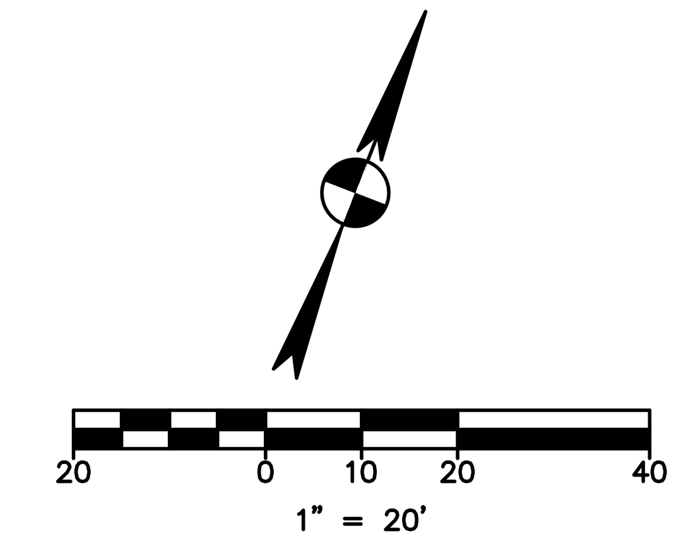

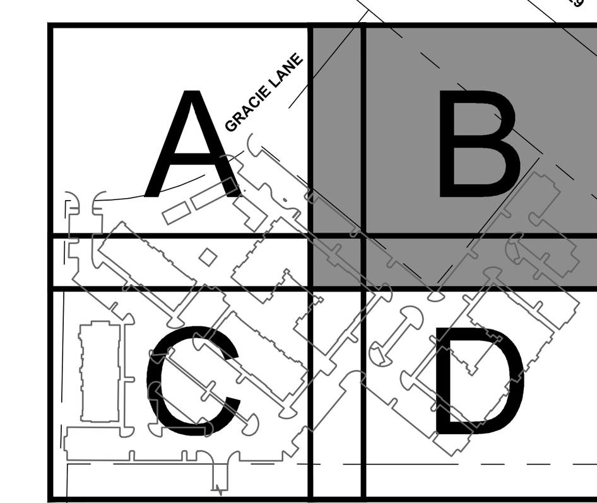

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
WTRMH		WATER MANHOLE
		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR	T	TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
TV	TV	CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
X	X	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		CONCRETE SIDEWALKS
		WALL
		LIMITS OF CONSTRUCTION
678	678	CONTOUR
SS		STORMSEWER LINE
W		WATER LINE
		FIRE LINE
WW		WASTEWATER LINE
G		GAS LINE
UE	UE	UNDERGROUND ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC LINE
OE	UT	UNDERGROUND TELEPHONE LINE
UC	UC	UNDERGROUND CABLE AND INTERNET
U-COMM	U-COMM	UNDERGROUND TELECOMMUNICATIONS
		ACCESSIBLE ROUTE
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
		ACCESSIBLE SPACE
		BIKE PARKING
		SWALE
		DIRECTION OF FLOW
1111		TREE TO BE SAVED
1111		HERITAGE / MATURE TREE
	HP	HIGH POINT
	TW	TOP OF WALL
	TC	TOP OF CURB
	G	GUTTER
701.33	701.33	SPOT ELEVATION

REVISION | NO. | DATE

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TBPE # F-14629
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STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED
PROFESSIONAL ENGINEER

GRADING PLAN B

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET
19
OF 33

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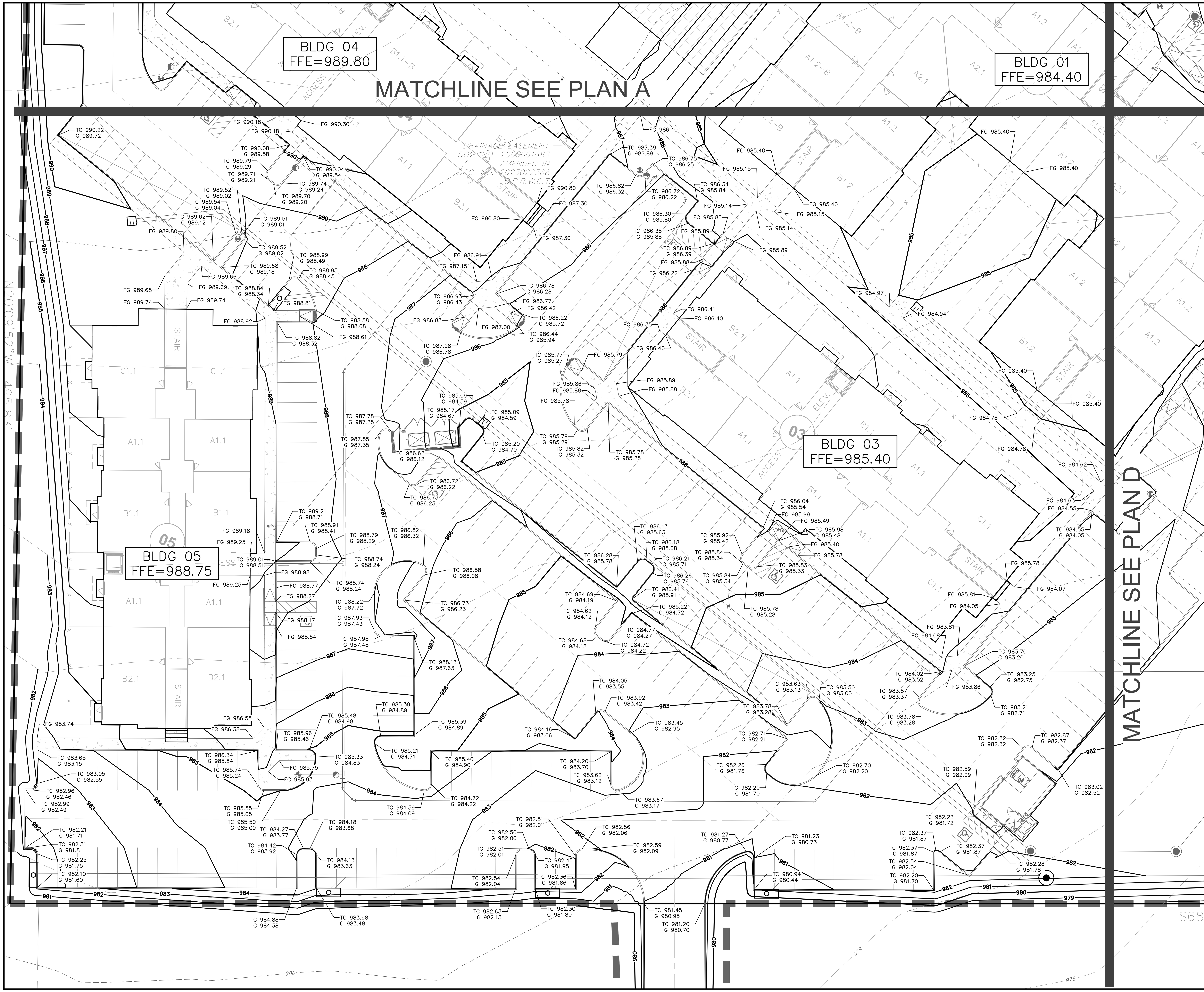

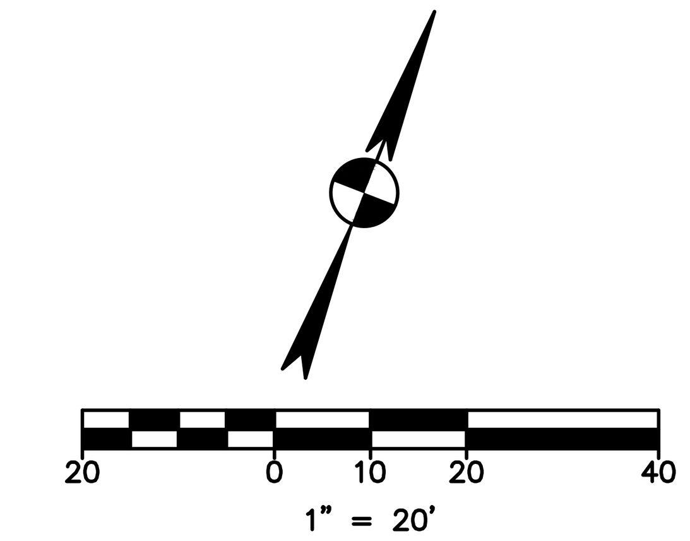

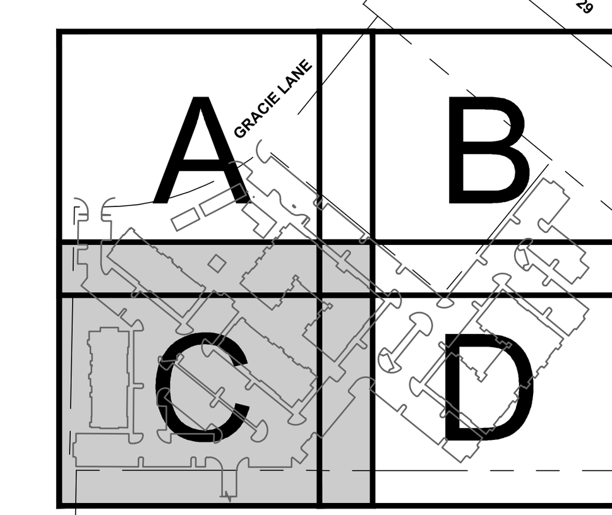

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
WTRMH		WATER MANHOLE
		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR	T	TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
TV	TV	CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
X	X	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		CONCRETE SIDEWALKS
		WALL
		LIMITS OF CONSTRUCTION
678	678	CONTOUR
SS		STORMSEWER LINE
W		WATER LINE
		FIRE LINE
WW		WASTEWATER LINE
G		GAS LINE
UE	UE	UNDERGROUND ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC LINE
OE	UT	UNDERGROUND TELEPHONE LINE
UC	UC	UNDERGROUND CABLE AND INTERNET
U-COMM	U-COMM	UNDERGROUND TELECOMMUNICATIONS
		ACCESSIBLE ROUTE
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
		ACCESSIBLE SPACE
		BIKE PARKING
		SWALE
		DIRECTION OF FLOW
1111		TREE TO BE SAVED
1111		HERITAGE / MATURE TREE
	HP	HIGH POINT
	TW	TOP OF WALL
	TC	TOP OF CURB
	G	GUTTER
701.33	701.33	SPOT ELEVATION

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TBPE # F-14629

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED PROFESSIONAL ENGINEER

REVISION | NO. | DATE

GRADING PLAN C

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P. GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET
20
OF 33

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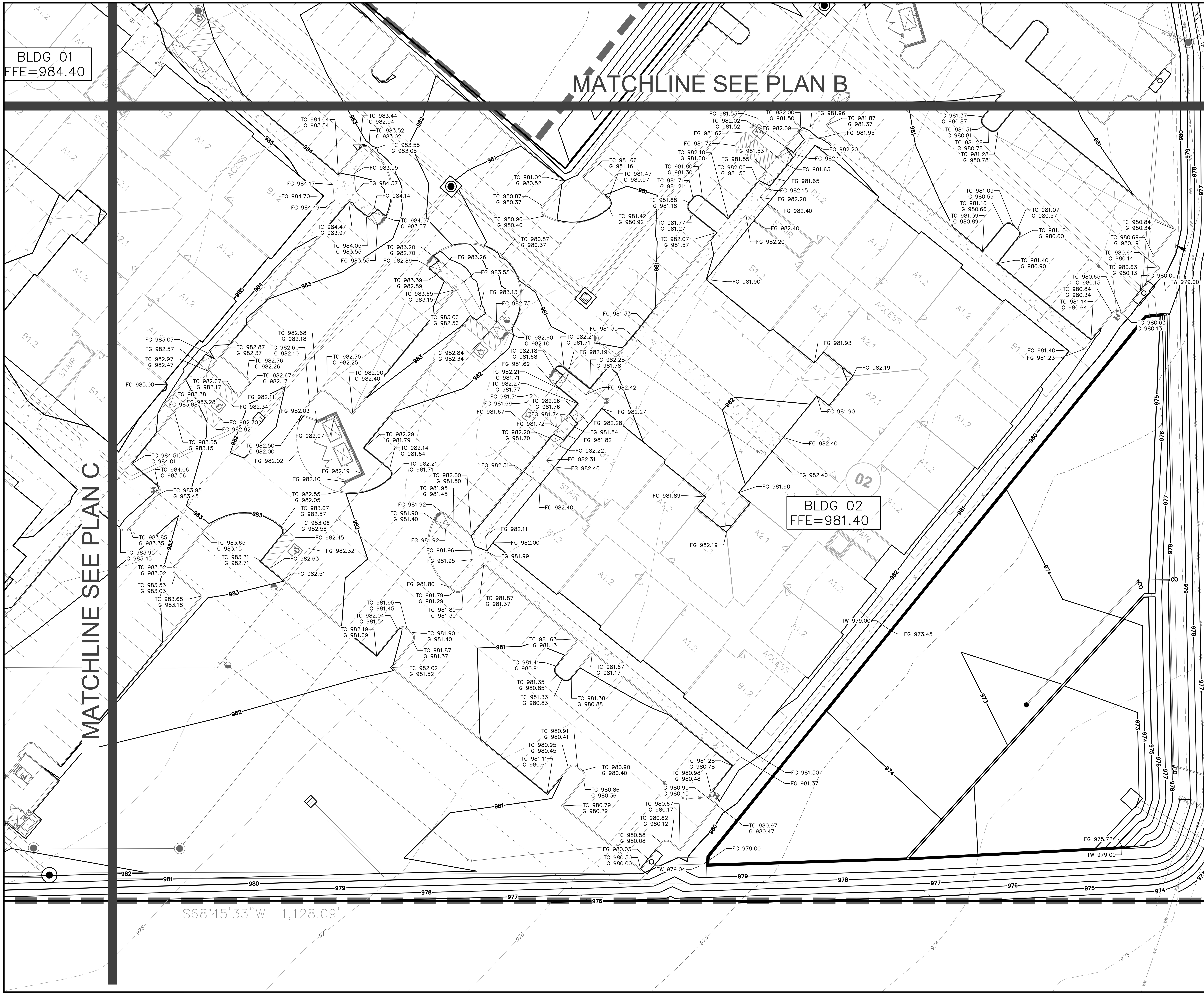
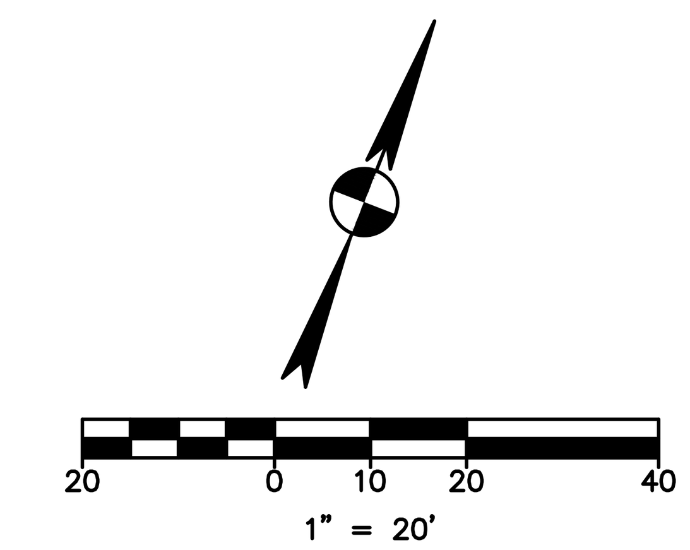
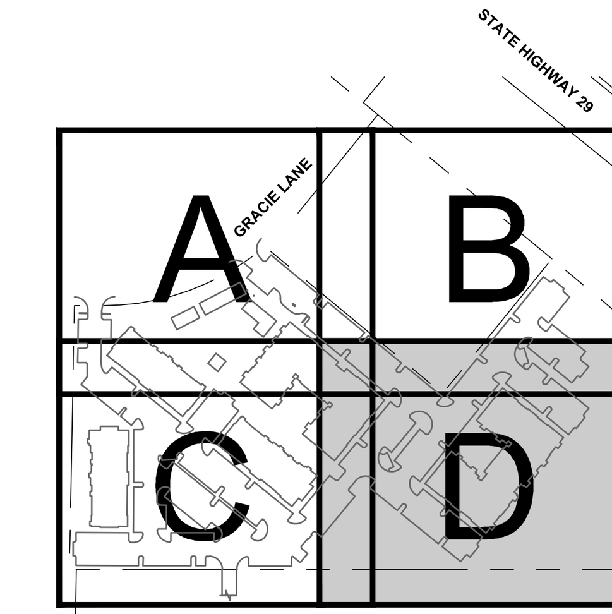
2024-4-SDP







LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
WTRMH		WATER MANHOLE
		WATER LINE MARKER
CMKR		UNDERGROUND CABLE MARKER
GMKR		UNDERGROUND GAS LINE MARKER
UGTM		UNDERGROUND TELEPHONE MARKER
GRSR		GAS RISER
TRSR		TELEPHONE RISER
SPC		SPRINKLER CONTROL BOX
	SW	SWITCH GEAR & PAD
	T	TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
TV	TV	CABLE TV RISER
E	E	ELECTRIC BOX
EM	EM	ELECTRIC METER
GM	GM	GAS METER
G	G	GAS VALVE
TCB	TCB	TRAFFIC CONTROL BOX
TSP	TSP	TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
EMH		ELECTRIC MANHOLE (SIZE VARIES)
WWMH		WASTEWATER MANHOLE (SIZE VARIES)
SSMH		STORMSEWER MANHOLE (SIZE VARIES)
TMH	TMH	TELEPHONE MANHOLE (SIZE VARIES)
CO	CO	WASTEWATER CLEANOUT
X	X	WIRE FENCE
//	//	WOOD FENCE
		CHAIN LINK FENCE
	D	DUMPSTER
		CURB & GUTTER
		EDGE OF PAVEMENT
		CONCRETE SIDEWALKS
		WALL
		LIMITS OF CONSTRUCTION
678	678	CONTOUR
SS		STORMSEWER LINE
W		WATER LINE
		FIRE LINE
WW		WASTEWATER LINE
G		GAS LINE
UE	UE	UNDERGROUND ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC LINE
OE	UT	UNDERGROUND TELEPHONE LINE
UC	UC	UNDERGROUND CABLE AND INTERNET
U-COMM	U-COMM	UNDERGROUND TELECOMMUNICATIONS
		ACCESSIBLE ROUTE
		SIGN
		WHEELSTOP
		BOLLARD
	FFE	FINISH FLOOR ELEVATION
		ACCESSIBLE SPACE
		BIKE PARKING
		SWALE
		DIRECTION OF FLOW
1111		TREE TO BE SAVED
1111		HERITAGE / MATURE TREE
	HP	HIGH POINT
	TW	TOP OF WALL
	TC	TOP OF CURB
	G	GUTTER
701.33	701.33	SPOT ELEVATION

REVISION	NO.	DATE

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TBPE # F-14629

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED PROFESSIONAL ENGINEER

GRADING PLAN D

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET 21 OF 33

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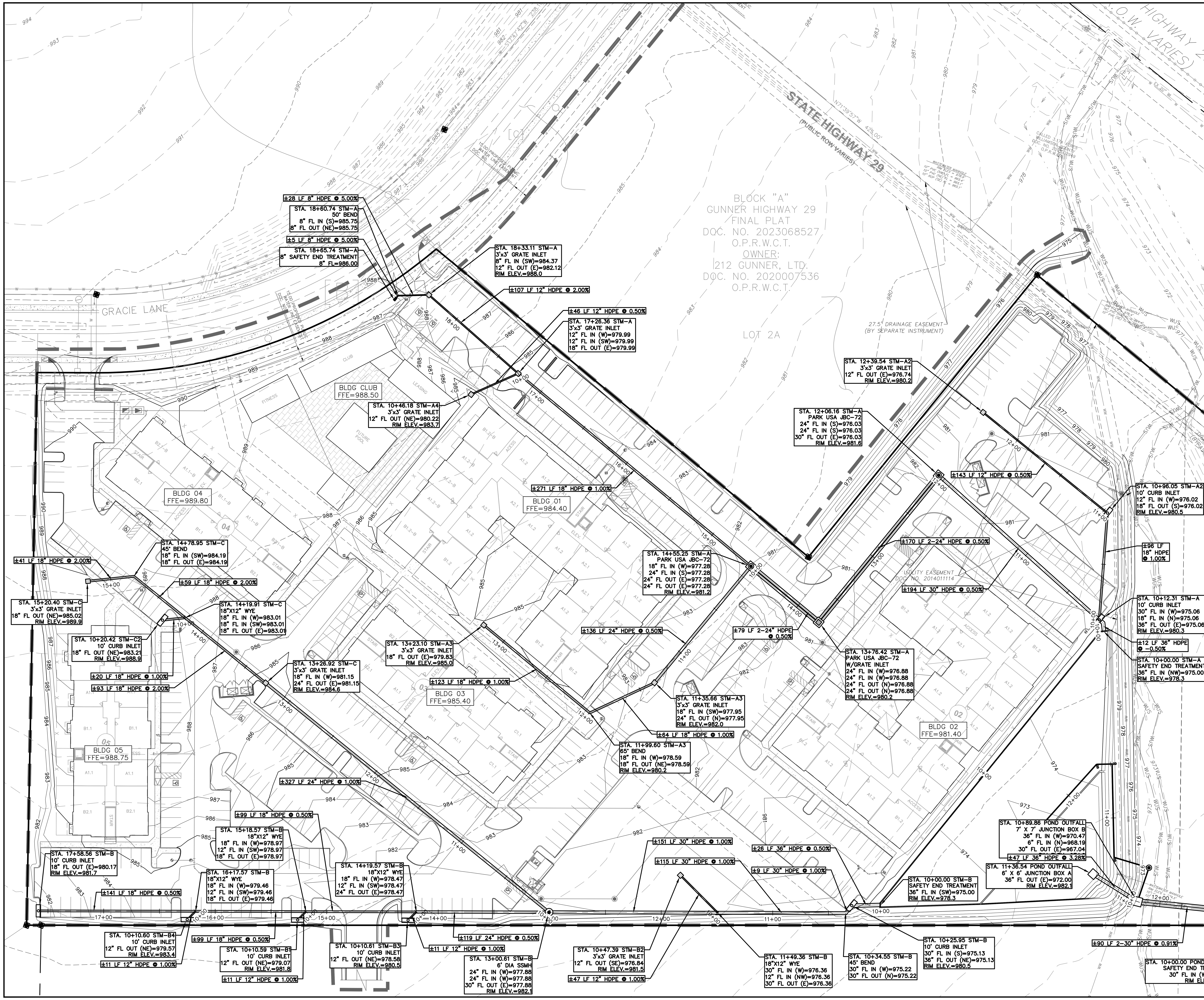

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE / R.O.W. LINE
(XXX)		RECORD INFORMATION
		LIGHT POLE
		GROUND LIGHT
		POWER POLE
		DOWN GUY
		WATER MANHOLE
		WATER LINE MARKER
		UNDERGROUND CABLE MARKER
		UNDERGROUND GAS LINE MARKER
		UNDERGROUND TELEPHONE MARKER
		GAS RISER
		TELEPHONE RISER
		SPRINKLER CONTROL BOX
		SWITCH GEAR & PAD
		TRANSFORMER (SIZE VARIES)
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		WATER METER VAULT (SIZE VARIES)
		CABLE TV RISER
		ELECTRIC BOX
		ELECTRIC METER
		GAS METER
		GAS VALVE
		TRAFFIC CONTROL BOX
		TRAFFIC SIGNAL POST
		GRATE INLET
		CURB INLET (SIZE VARIES)
		GREASE TRAP (SIZE VARIES)
		ELECTRIC MANHOLE (SIZE VARIES)
		WASTEWATER MANHOLE (SIZE VARIES)
		STORMSEWER MANHOLE (SIZE VARIES)
		TELEPHONE MANHOLE (SIZE VARIES)
		WASTEWATER CLEANOUT
		WIRE FENCE
		WOOD FENCE
		CHAIN LINK FENCE
		CURB & GUTTER
		EDGE OF PAVEMENT
		CONCRETE SIDEWALKS
		WALL
		LIMITS OF CONSTRUCTION
678	678	CONTOUR
SS		STORMSEWER LINE
		WATER LINE
		FIRE LINE
		WASTEWATER LINE
		GAS LINE
UE	UE	UNDERGROUND ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC LINE
UT	UT	UNDERGROUND TELEPHONE LINE
UC	UC	UNDERGROUND CABLE AND INTERNET
U-COMM	U-COMM	UNDERGROUND TELECOMMUNICATIONS
		SWALE
	FFE	FINISH FLOOR ELEVATION
		DIRECTION OF FLOW
		TREE TO BE SAVED
		HERITAGE / MATURE TREE

REVISION	NO.	DATE

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TBPE # F-14629
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STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED
PROFESSIONAL ENGINEER

STORM SEWER PLAN

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET
22
OF 33

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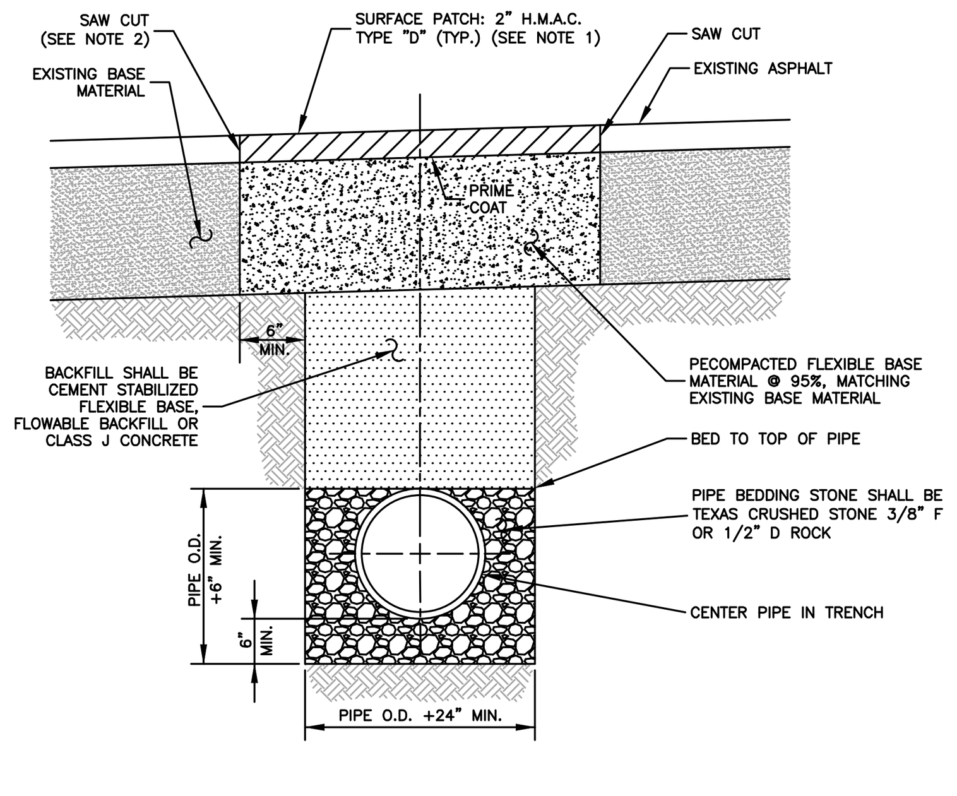
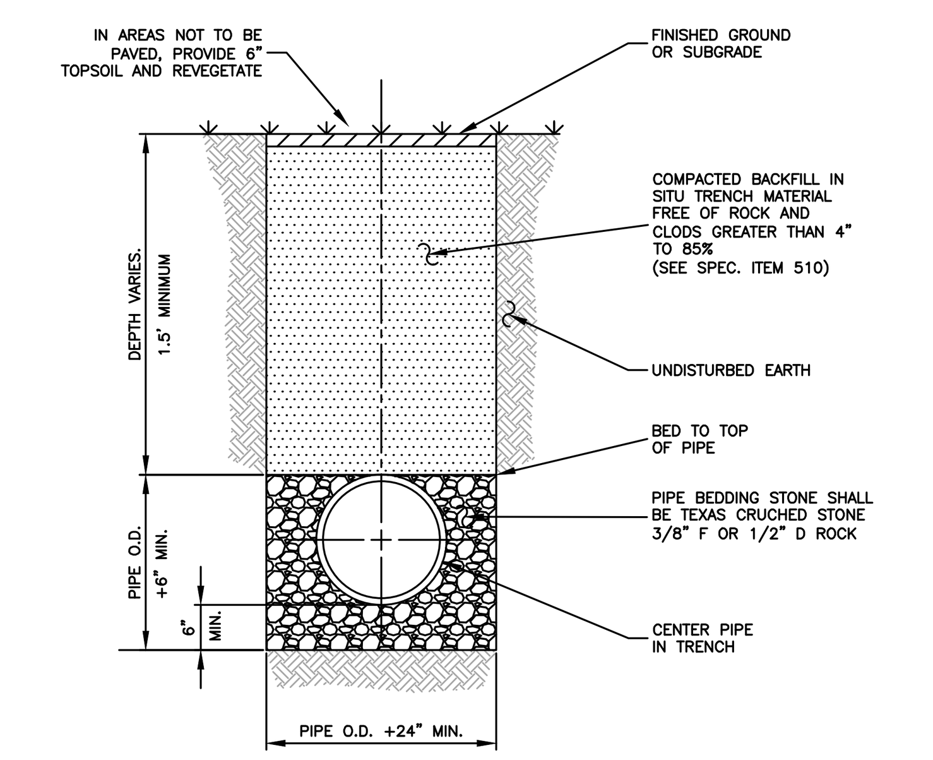


NOTES:

1. H.M.A.C. SHOWN IN THIS DETAIL IS SEPARATE FROM ANY ADDITIONAL THICKNESS CREATED BY ANY OVERLAY ITEM IN CONTRACT.
2. THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING PAVEMENT AND FLEXIBLE BASE A MINIMUM OF 6" BEYOND EITHER THE EDGE OF THE STORM SEWER TRENCH OR THE POINT WHERE EXISTING PAVEMENT IS DAMAGED DUE TO TRENCHING OPERATIONS, WHICHEVER IS GREATER.
3. INSTALLATION OF BACKFILL, SAW CUTTING AND REMOVAL OF EXISTING PAVEMENT AND SURFACE PATCH, SHALL NOT BE PAID FOR SEPARATELY. COSTS FOR THESE ITEMS SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
4. THE CONTRACTOR SHALL PROVIDE STEEL PLATES TO SPAN THE TRENCH AS NECESSARY OR TO ALLOW BACKFILL TO CURE. SUCH PLATES SHALL BE SUITABLE FOR VEHICLE PASSAGE OVER THE TRENCH AND SHALL BE SATISFACTORILY ANCHORED IN PLACE. COSTS FOR THIS ITEM SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
5. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS — APPROVED — 04-01-10 — DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK — DRAWING NO: DR-01
STORM SEWER LINE BEDDING DETAIL (EXISTING PAVED SURFACE)

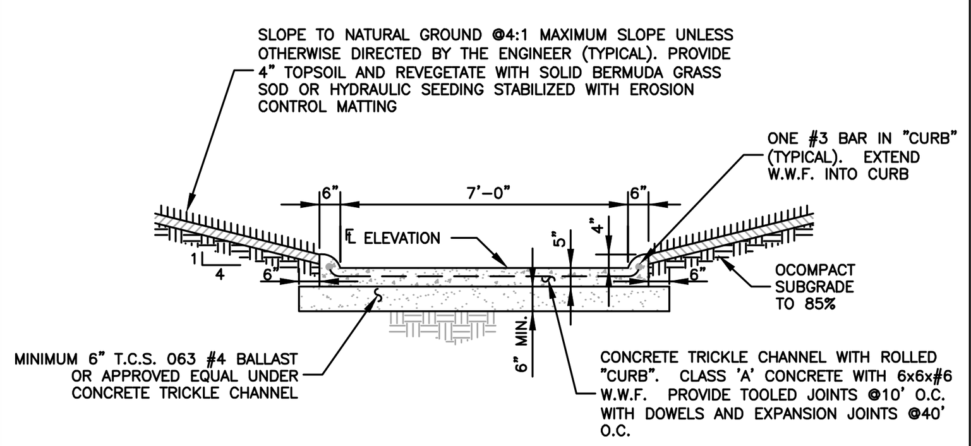


NOTE:

ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS — APPROVED — 04-01-10 — DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK — DRAWING NO: DR-02
STORM SEWER LINE BEDDING DETAIL (NON-PAVED SURFACE)



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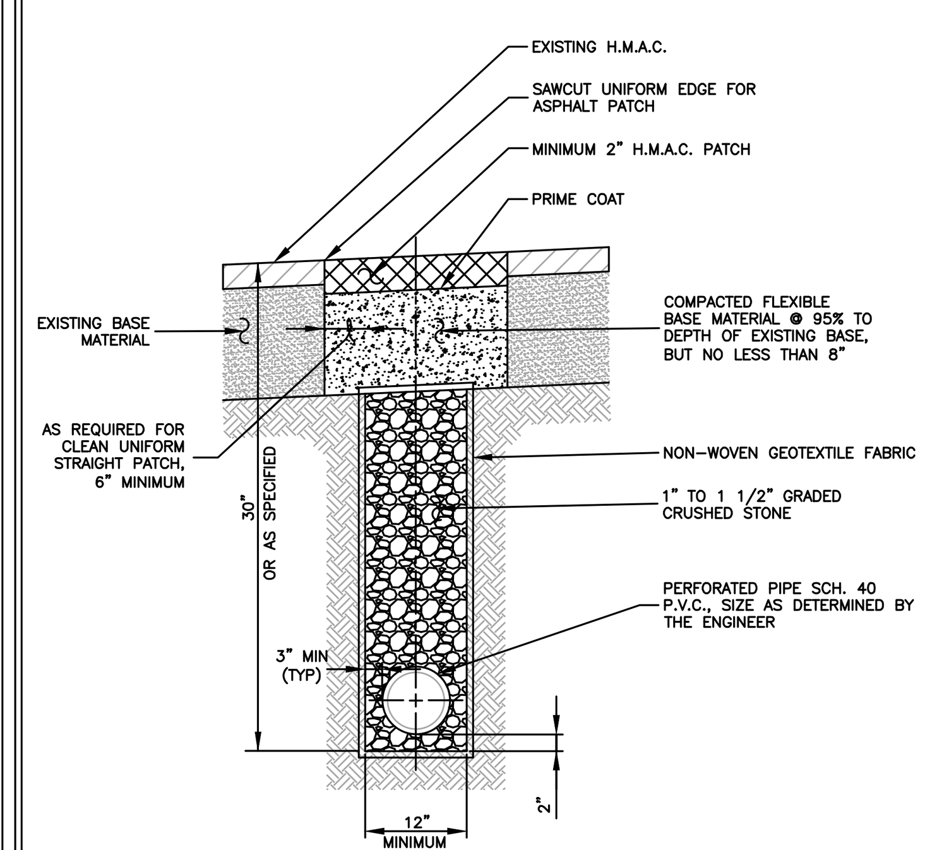
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK — DRAWING NO: DR-03
CONCRETE TRICKLE CHANNEL DETAIL



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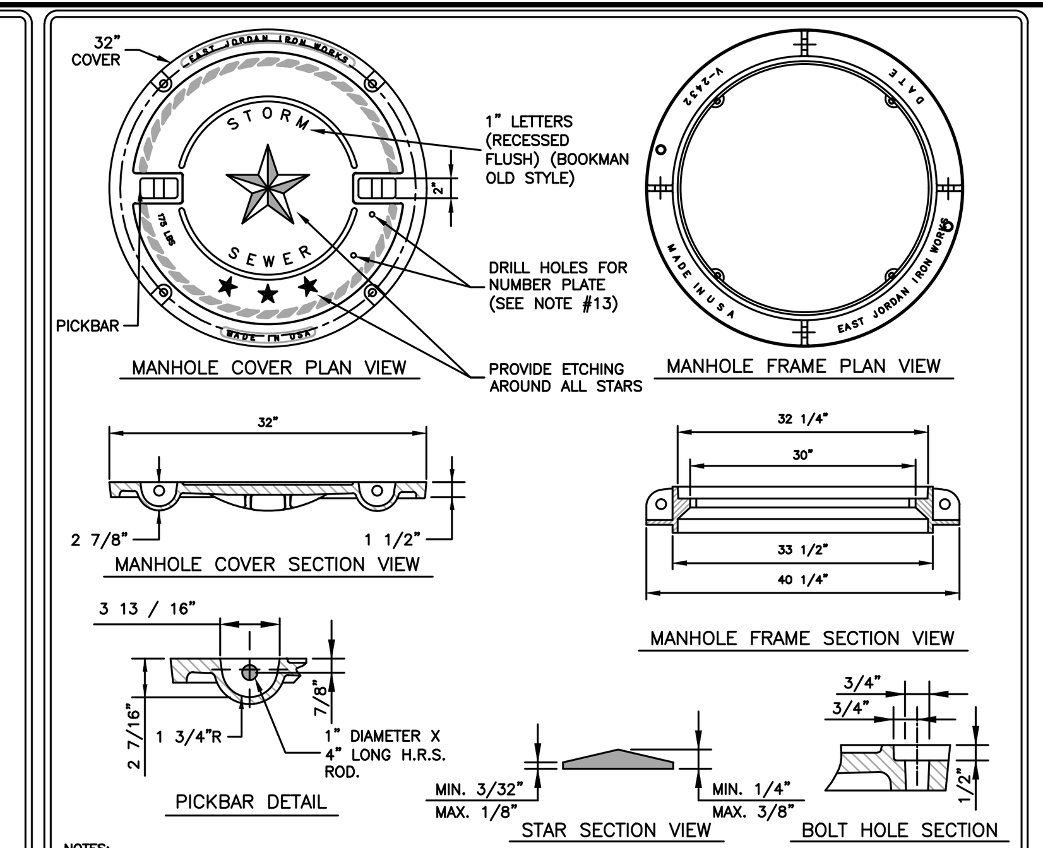
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK — DRAWING NO: DR-04
FRENCH DRAIN DETAIL (EXISTING PAVED SURFACE)

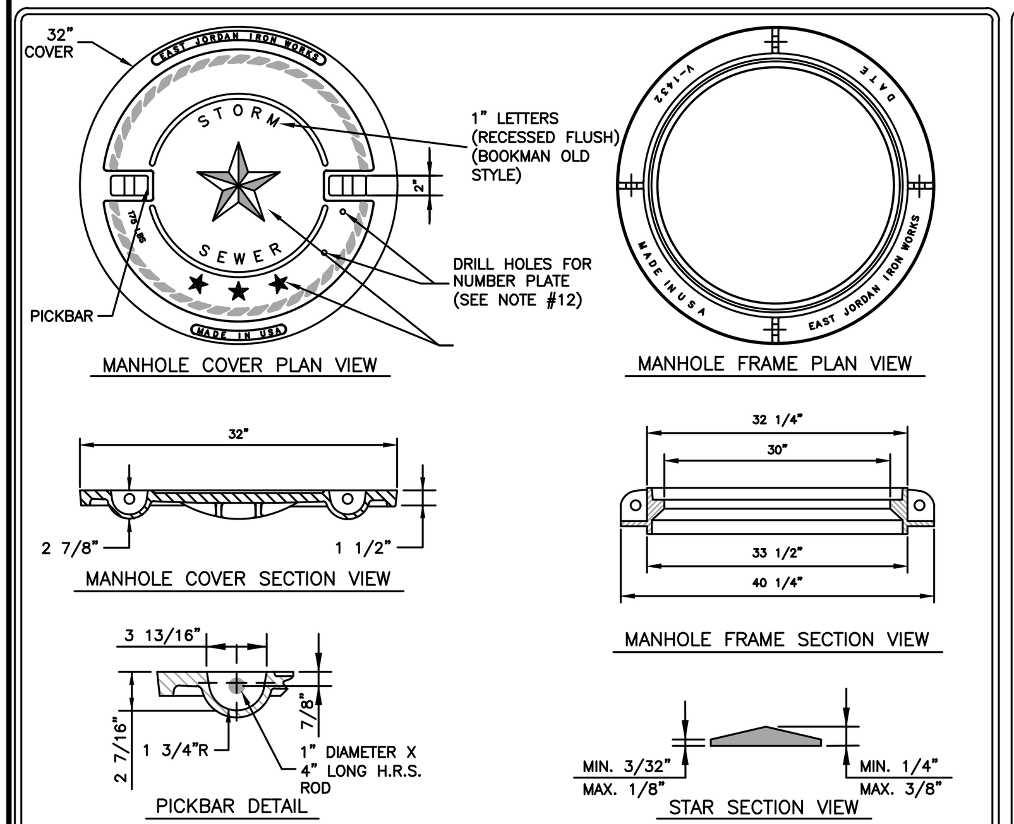


NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-2432-3 (PRODUCT NUMBER: 42432032), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432072), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. BOLTS SHALL BE 5/8"-11NC X 2" LONG HEX STAINLESS STEEL WITH WASHER.
13. MANUFACTURER SHALL DRILL 2-3/16"X1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS — APPROVED — 04-01-10 — DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK — DRAWING NO: DR-05
BOLTED STORMSEWER MANHOLE COVER AND FRAME DETAIL

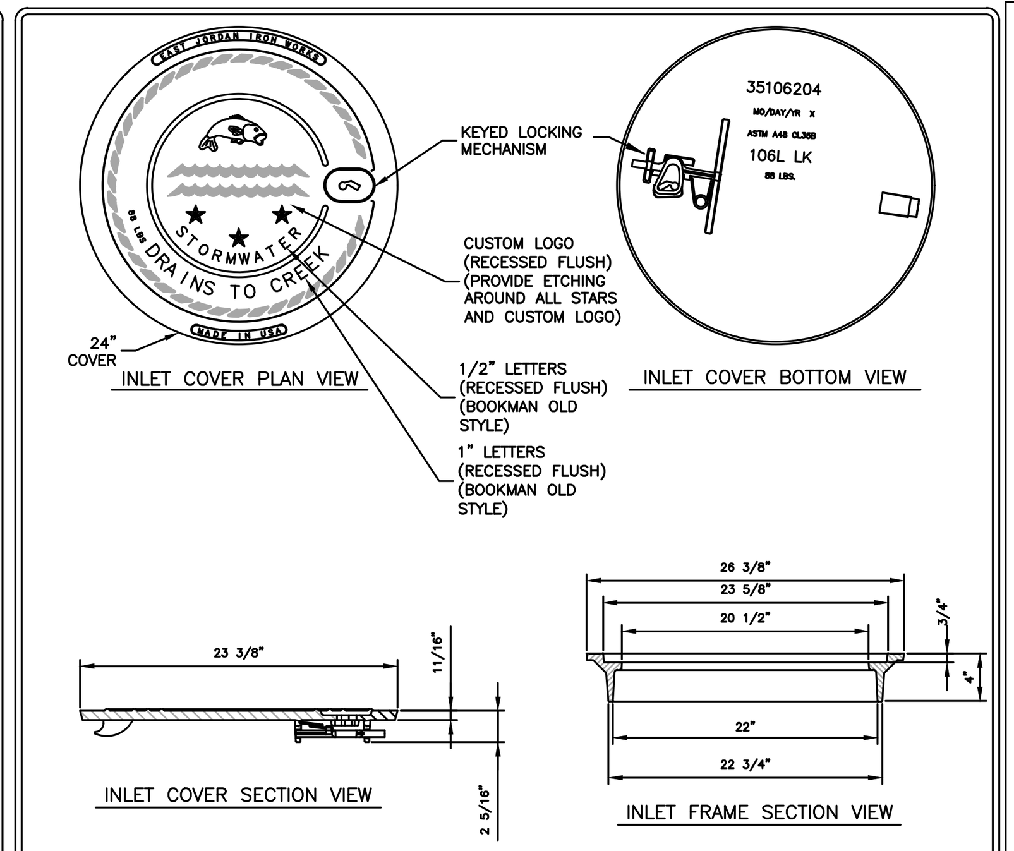


NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-1432-3 (PRODUCT NUMBER: 41432058), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432080), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. MANUFACTURER SHALL DRILL 2-3/16"X1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS — APPROVED — 04-01-10 — DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK — DRAWING NO: DR-06
NON-BOLTED STORMSEWER MANHOLE COVER AND FRAME DETAIL

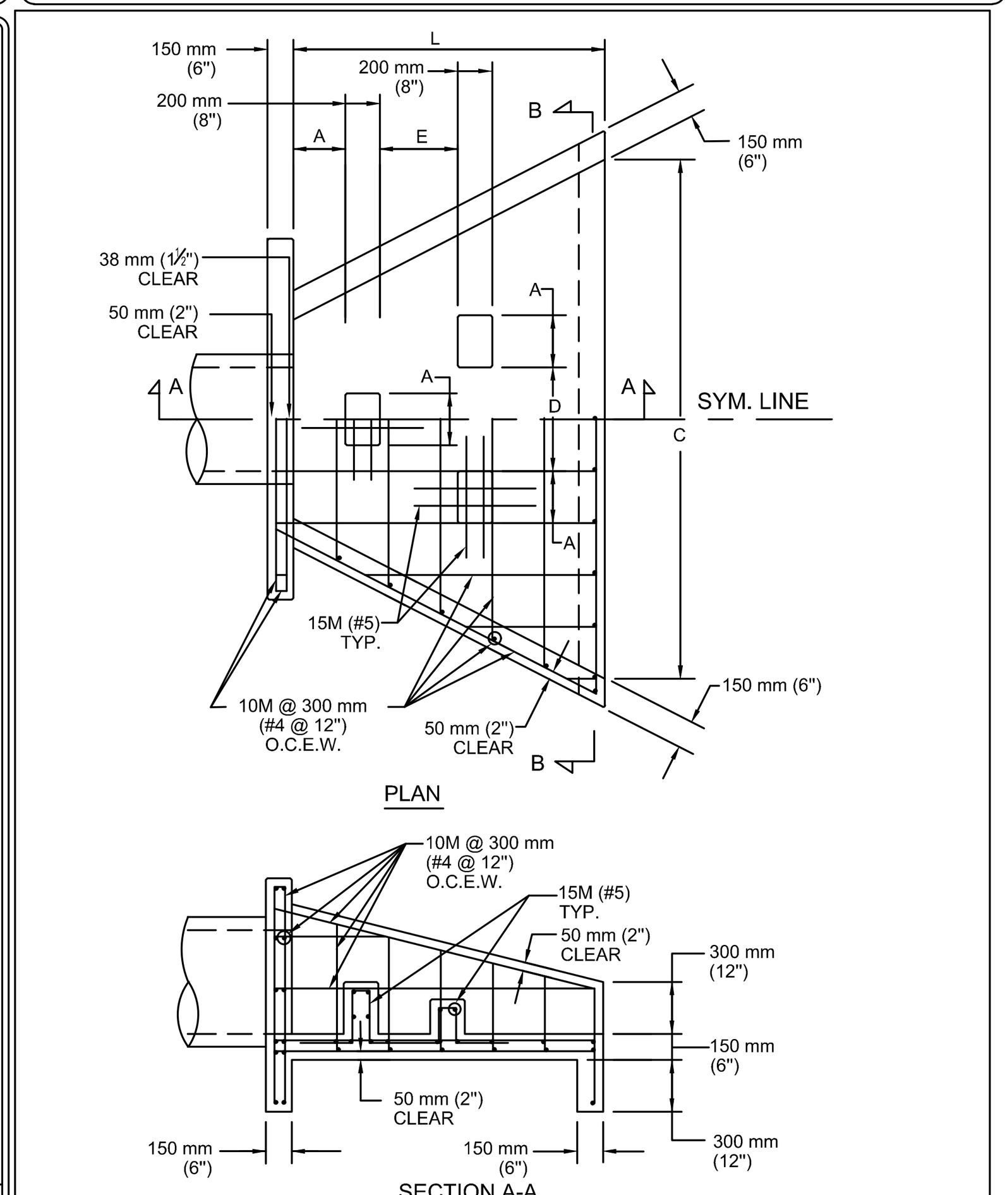


NOTES:

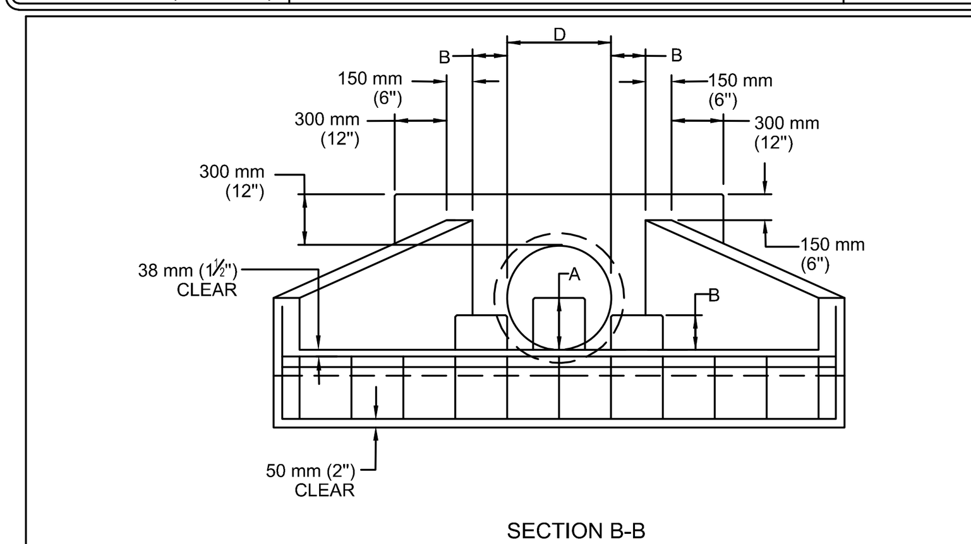
1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. INLET COVER SHALL BE MODEL NUMBER: 106L LK (PRODUCT NUMBER: 35106204), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. INLET FRAME SHALL BE MODEL NUMBER: 106L LK (PRODUCT NUMBER: 35206004), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. INLET COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: 106L-4L LK (PRODUCT NUMBER: 35506204), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. INLET COVER WEIGHT SHALL BE 88 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
7. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
8. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
9. INLET COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS — APPROVED — 04-01-10 — DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK — DRAWING NO: DR-07
STORM SEWER INLET COVER AND FRAME DETAIL



CITY OF AUSTIN — DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW
STANDARD HEADWALL AND ENERGY DISSIPATORS
RECORD COPY SIGNED BY BILL GARDNER — 08/20/07 — ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-13 (1 OF 2)



NOTES:

1. ALL CONCRETE SHALL BE TYPE "C" AS PER SPEC. 403S, CONCRETE FOR STURCTURES.
2. CHAMFER ALL EXTERNAL VISIBLE CORNERS.
3. DISSIPATOR BLOCKS REQUIRED ON DISCHARGE HEADWALLS ONLY.

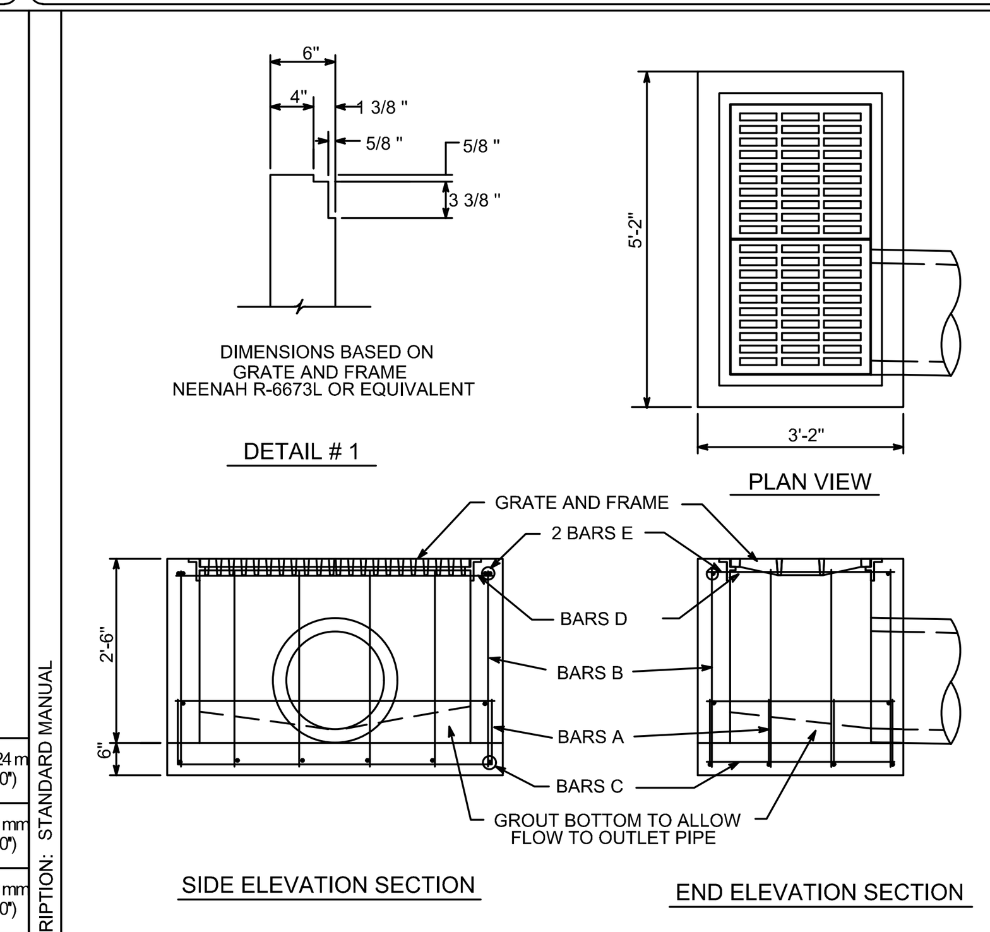
D	457 mm (18")	533 mm (21")	610 mm (24")	685 mm (27")	765 mm (30")	838 mm (33")	914 mm (36")	1.067 m (42")	1.219 m (48")	1.372 m (54")	1.524 m (60")
A	225 mm (9")	250 mm (10")	300 mm (12")	350 mm (14")	375 mm (15")	400 mm (16")	450 mm (18")	525 mm (21")	600 mm (24")	675 mm (27")	750 mm (30")
B	150 mm (6")	175 mm (7")	200 mm (8")	225 mm (9")	250 mm (10")	275 mm (11")	300 mm (12")	350 mm (14")	400 mm (16")	450 mm (18")	500 mm (20")
C	2.29 m (90")	2.67 m (105")	3.05 m (120")	343 m (135")	3.81 m (150")	4.19 m (165")	4.57 m (180")	5.33 m (210")	6.10 m (240")	6.86 m (270")	7.62 m (300")
L	1.37 m (54")	1.60 m (63")	1.83 m (72")	2.06 m (81")	2.29 m (90")	2.51 m (99")	2.74 m (108")	3.20 m (126")	3.66 m (144")	4.11 m (162")	4.57 m (180")
E	300 mm (12")	350 mm (14")	400 mm (16")	450 mm (18")	500 mm (20")	550 mm (22")	600 mm (24")	700 mm (28")	800m (32")	900 mm (36")	1000 mm (40")

DIMENSIONS IN MILLIMETERS, METERS AND (INCHES).

DISCHARGE VELOCITIES GREATER THAN 3 METERS/SECOND (10 fps) REQUIRE ROCK OUTLET PROTECTION.

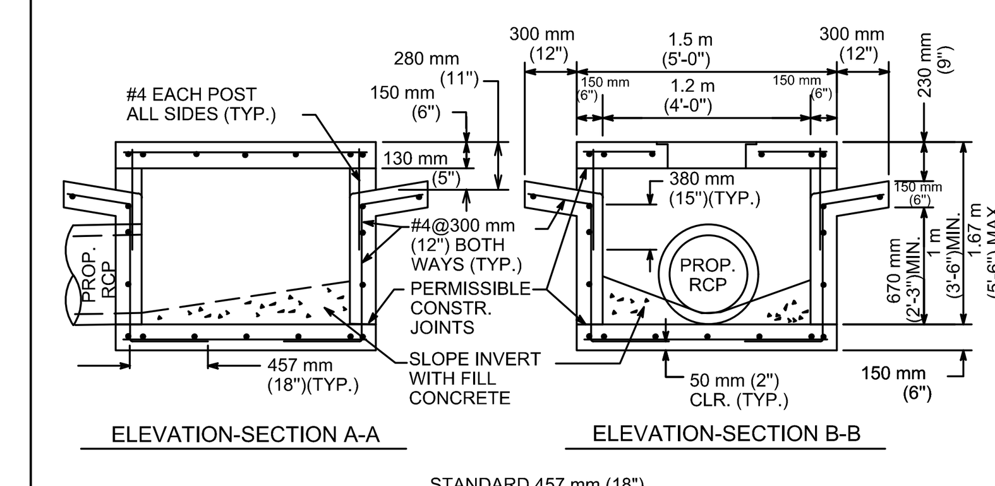
REV. DATE: 11-27-96 — DESCRIPTION: STANDARD MANUAL

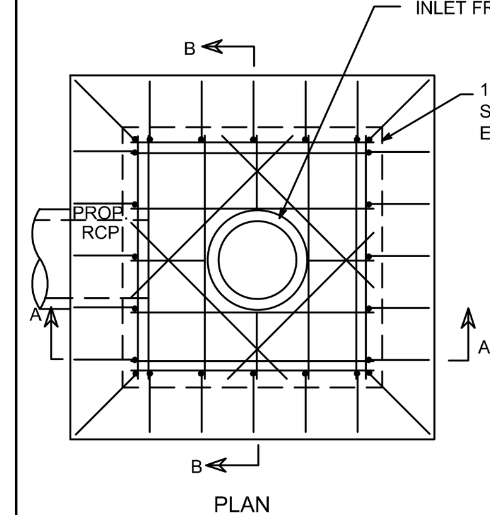
CITY OF AUSTIN — DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW
STANDARD HEADWALL AND ENERGY DISSIPATORS
RECORD COPY SIGNED BY BILL GARDNER — 08/20/07 — ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-13 (2 OF 2)



REINFORCING STEEL SCHEDULE					
BAR	QTY	SIZE	SPACING	LENGTH	WEIGHT
A	4	4	12"	6'-8"	18
B	16	4	12"	3'-0"	32
C	8	4	12"	2'-10"	15
D	4	4	12"	5'-2"	14
E	4	5	12"	2'-10"	12
TOTAL WEIGHT---91 LB.					

CITY OF AUSTIN — DRAINAGE UTILITY
STANDARD DROP INLET
RECORD COPY SIGNED BY ALLEN BRECHER — 5/24/88 — APPROVED — DATE
ADOPTED: 04-01-88 — SCALE: N.T.S. — INITIAL: B.H.
STANDARD NO. 508-11

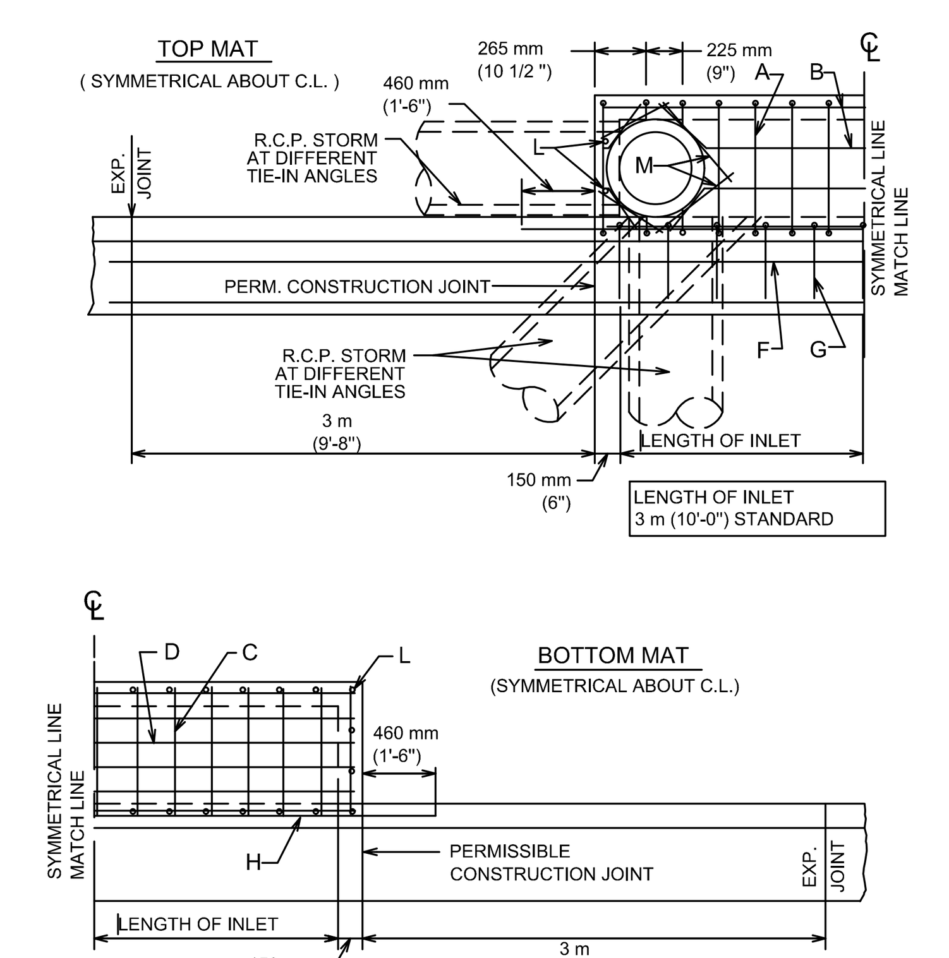




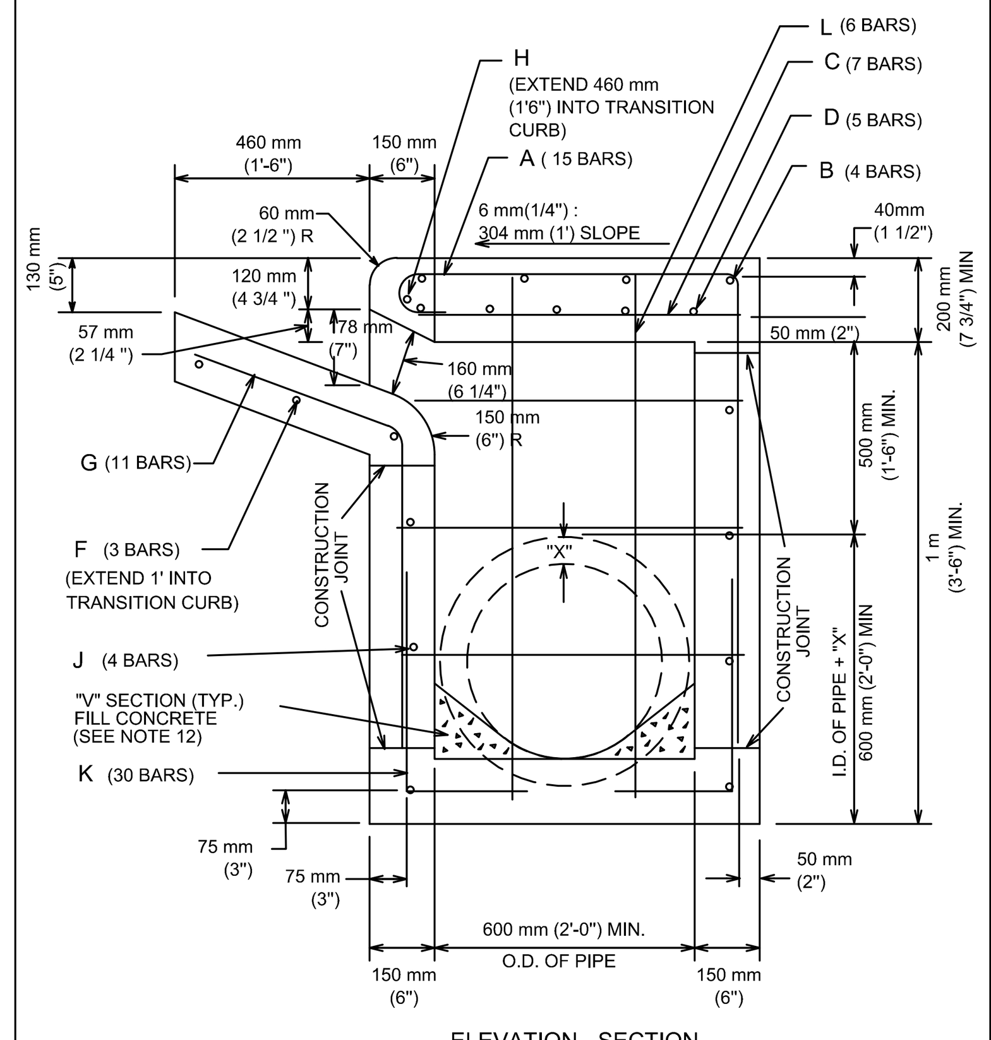
NOTES:

1. CHAMFER ALL EXPOSED EDGES 20 mm (3/4").
2. REINFORCING STEEL SHALL BE CUT OR FIELD-BENT AS REQUIRED TO CLEAR PIPE AND INLET FRAME OPENING. ALL CUT STEEL SHALL BE REPLACED WITH ADDITIONAL DIAGONAL BARS OF THE SAME DIAMETER.
3. INLET FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S-1.
4. CONCRETE COVERAGE OF STEEL SHALL BE 50 mm (2") MIN. AT ALL SURFACES.

CITY OF AUSTIN — WATERSHED PROTECTION DEPARTMENT
4-SIDED AREA INLET
RECORD COPY SIGNED BY ARTHUR C. ROMERO — 08/18/2010 — ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-9



CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS
TYPICAL DETAILS FOR CURB INLET
RECORD COPY SIGNED BY BILL GARDNER — 12/09/08 — ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-3 (1 OF 4)

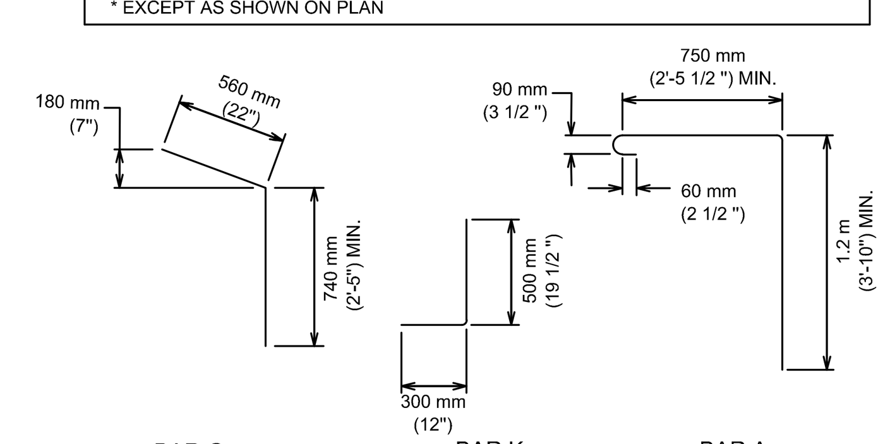


CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS
TYPICAL DETAILS FOR CURB INLET
RECORD COPY SIGNED BY BILL GARDNER — 12/09/08 — ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-3 (2 OF 4)

TABLE OF QUANTITIES FOR 18" OUTLET PIPE
REINFORCING STEEL QUANTITIES

BARS	SIZE	SPACING	NUMBER	LENGTH	WEIGHT
A	4	230mm (9")*	15	2 m (7'-0")	73
B	4	250 mm (10")	4	3.25 m (10'-8")	29
C	4	460 mm (18")	7	760 mm (2'-6")	12
D	6	150 mm (6")	5	3.25 m (10'-8")	80
E	4	300 mm (12")	6	760 mm (2'-6")	10
F	4	250 mm (10")	3	4 m (13'-0")	35
G	4	300 mm (12")	11	1.25 m (4'-3")	31
H	6	—	1	4.25 m (14'-0")	20
J	4	300 mm (12")	7	3.25 m (10'-8")	50
K	4	230 mm (9")*	30	800 mm (2'-7 1/2")	52
L	4	300 mm (12")*	6	1.3 m (4'-4")	17
M	4	-	4	500 mm (1'-8") AVG	4
TOTAL STEEL, LB.					413
TOTAL CONCRETE, C.Y.					4.06

* EXCEPT AS SHOWN ON PLAN



CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS
TYPICAL DETAILS FOR CURB INLET
RECORD COPY SIGNED BY BILL GARDNER — 12/09/08 — ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-3 (3 OF 4)

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A"
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (380 mm or 15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. QUANTITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S INFORMATION ONLY. PAYMENT WILL BE MADE FOR EACH INLET OF THE TYPE SPECIFIED, COMPLETE IN PLACE INCLUDING MANHOLE FRAME AND OVER.
7. CHAMFER ALL EXPOSED EDGES 20 mm (3/4 ").
8. MANHOLE FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S-1.
9. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION.
10. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES.
11. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
12. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE, SHAPED AS "V" SECTION
13. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED UNLESS OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.

REFERENCES:

FOR EXPANSION JOINT DOWEL AND DOWEL LOCATION DETAILS SEE STD. 430S-3, "CURB EXPANSION JOINT DOWEL DETAIL".

FOR 18" MANHOLE FRAME AND COVER DETAILS SEE STD. 503S-1, "18" COVER AND FRAME".

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS
TYPICAL DETAILS FOR CURB INLET
RECORD COPY SIGNED BY BILL GARDNER — 12/09/08 — ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-3 (4 OF 4)

REVISION — NO. — DATE

garza EMC
7708 Rialto Blvd., Suite 125
Austin, Texas 78735
Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629
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STATE OF TEXAS — BILAL A. ALIZAI — 92792 — LICENSED PROFESSIONAL ENGINEER

STORM SEWER DETAILS

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

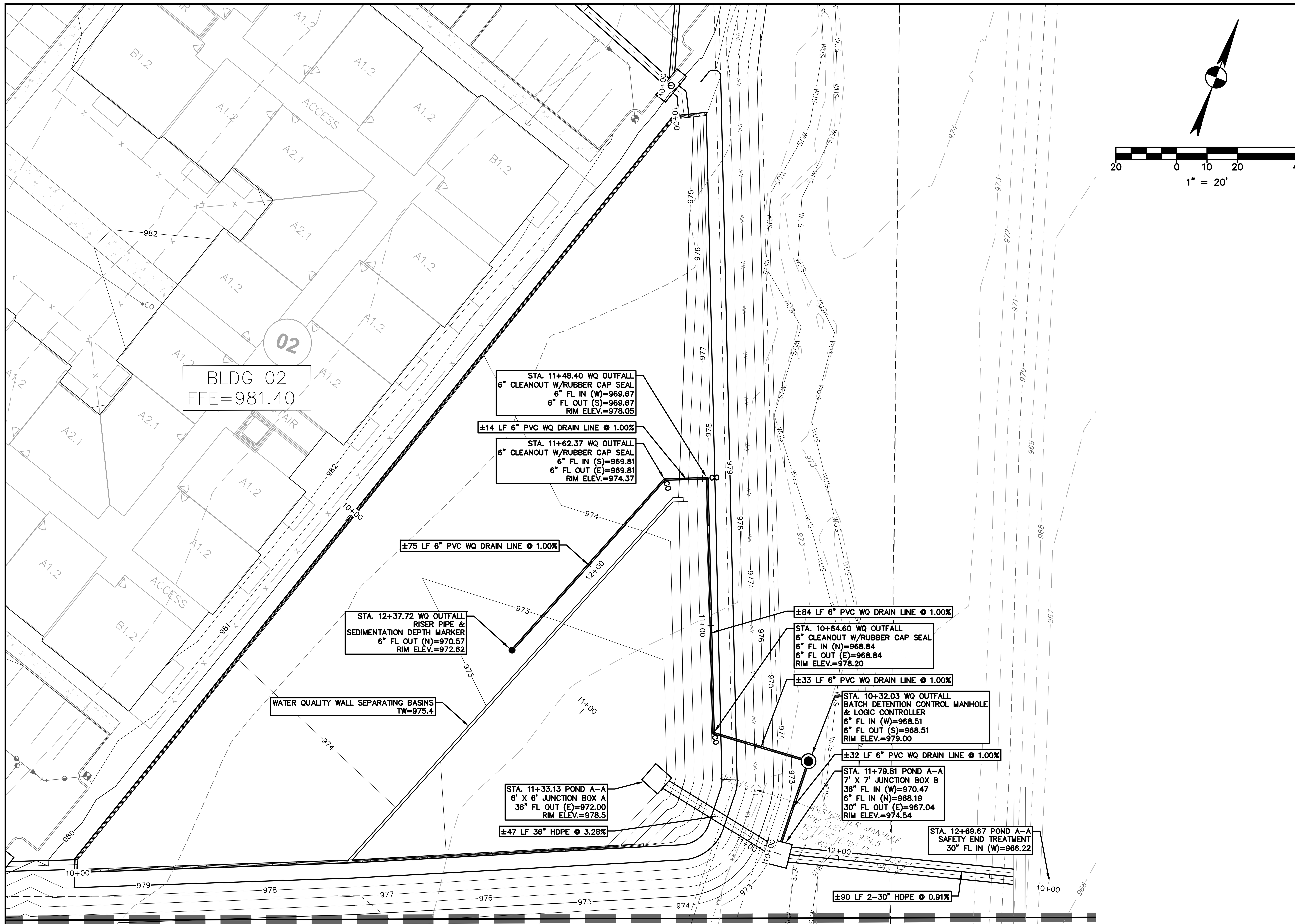
ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P. GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

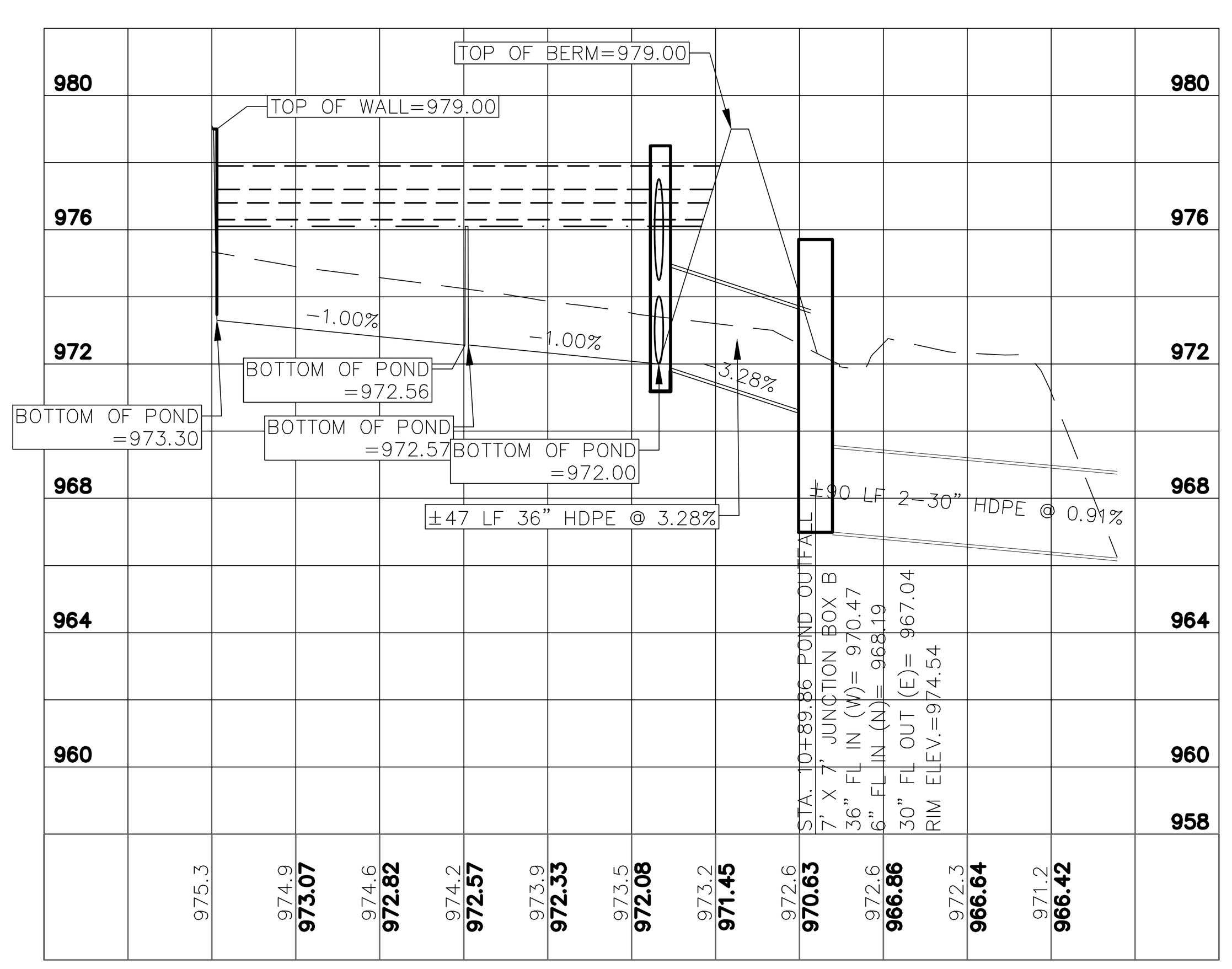
SHEET 23 OF 33

2024-4-SDP

V:\101231-00024\Civil\00-CAD\101231-00024-STM-DTL.dwg modified by richaro on Apr 19, 24 9:44 AM



POND A-A



PROFILE LEGEND		PROFILE SCALE
	EXISTING GRADE PROPOSED GRADE	1" = 40' HORIZONTAL 1" = 4' VERTICAL
	PROPOSED PIPE	
658.34	ELEVATION EXISTING GRADE / FL ELEVATION PROPOSED PIPE	

SITE GROUND COVER TABLE:

Site Area =	12.638	acres =	550,492	sq ft
	EXISTING CONDITIONS		PROPOSED CONDITIONS	
Impervious Cover	Existing (sq ft)	Impervious (%)	Proposed (sq ft)	Impervious (%)
PAVED SURFACES	0.0	0.0%	199,354	36%
BUILDINGS	0.0	0.0%	101,770	18%
Totals	**0.0**	**0.0%**	**301,124**	**55%**
Pervious Cover	Existing (sq ft)	Pervious (%)	Proposed (sq ft)	Pervious (%)
OPEN SPACE	550,492	100%	224,538	41%
DETENTION & WQ POND	0	0%	24,829	5%
Totals	**550,492**	**100%**	**249,368**	**45%**

DRAINAGE CALCULATIONS & HYDROLOGIC SUMMARY

PRE vs. POST	AREA (AC.)	I.C. %	SCS, CN	Tc	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)	NOTES
EXISTING DA 1	34.21	0.0%	84	15.1	87.7	157.0	203.4	280.9	NATURAL FLOW STATE
DEVELOPED DA 1	10.37	66.7%	84	5.0	48.9	76.4	94.8	125.7	DEVELOPED FLOW, NO DETENTION
DEVELOPED DA 2	23.84	0%	84	19.2	57.0	101.1	130.6	179.9	NATURAL FLOW STATE
				DEV. VS EXISTING =	18.20	20.50	22.00	24.70	AT POINT OF ANALYSIS

ROUTED	AREA (AC.)	I.C. %	SCS, CN	Tc	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)	NOTES
EXISTING DA 1	34.21	0.0%	84	15.1	87.7	157.0	203.4	280.9	NATURAL FLOW STATE
POND OUTLET	10.37	66.7%	84	5.0	27.6	46.1	55.5	68.3	DEVELOPED FLOW, ROUTED THROUGH POND
DEVELOPED DA 2	23.84	0%	84	19.2	57.0	101.1	130.6	179.9	NATURAL FLOW STATE
				DEV. VS EXISTING =	-3.10	-9.80	-17.30	-32.70	AT POINT OF ANALYSIS

POND SUMMARY ROUTING TABLE:

DESIGN RETURN EVENT	PREDEVELOPED PEAK FLOW (cfs)	DEVELOPED PEAK POND INFLOW (cfs)	ROUTED PEAK POND OUTFLOW (cfs)	ROUTED MAX WATER ELEVATION (ft)	MAX VOLUME STORAGE (ac-ft)	STORAGE DEPTH (ft)	FREEBOARD (ft)
2	87.70	48.90	27.60	976.10	0.300	4.10	2.90
10	157.00	76.40	46.10	976.60	0.600	4.60	2.40
25	203.40	94.80	55.50	976.90	0.800	4.90	2.10
100	280.90	125.70	68.30	977.40	1.100	5.40	1.60

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Liberty Hill MF Development
Date Prepared: 04.26.2024

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

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

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 * = 12.64 acres
Predevelopment impervious area within the limits of the plan * = 0.00 acres
Total post-development impervious area within the limits of the plan* = 6.91 acres
Total post-development impervious cover fraction * = 0.55
P = 32 inches

$L_{M\ TOTAL\ PROJECT}$ = **6014** lbs.

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area = 12.64 acres
Predevelopment impervious area within drainage basin/outfall area = 0.00 acres
Post-development impervious area within drainage basin/outfall area = 6.91 acres
Post-development impervious fraction within drainage basin/outfall area = **0.55**
$L_{M\ THIS\ BASIN}$ = **6014** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Extended Detention/Batch Detention
Removal efficiency = **91** percent

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

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP 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 = 12.64 acres
A_I = 6.91 acres
A_P = **5.73** acres
L_R = **7052** lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 6014 lbs.

F = **0.85**

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

Rainfall Depth = **1.32** inches
Post Development Runoff Coefficient = **0.38**
On-site Water Quality Volume = **23298** 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 = **4660**
Total Capture Volume (required water quality volume(s) x 1.20) = 27958 cubic feet

DETENTION STAGE–STORAGE–DISCHARGE TABLE

ELEVATION (ft.)		AREA (sq ft)	VOLUME SUM (cf)	DISCHARGE (cfs)	STORM EVENT
972		0.0	0.00	0	
973		4295.2	1431.73	3.4	
974		5329.1	6234.60	15.5	
975		5581.8	11689.59	22.1	
976		5899.3	17429.43	27.1	
976.1		5899.3	18019.36	27.6	2 YR
976.2		23588.0	19395.48	28.2	
976.6		24082.0	29028.01	44.1	10 YR
976.9		24454.0	36252.40	54.8	25 YR
977		24578.0	38660.54	57.4	
977.4		24859.6	48632.22	68.3	100 YR
978		25282.1	63589.76	N/A	
979		26015.1	89237.45	N/A	

WATER QUALITY STAGE–STORAGE–DISCHARGE TABLE

ELEVATION (ft.)		AREA (sq ft)	VOLUME SUM (cf)	DISCHARGE (cfs)	STORM EVENT
973		217.9	0.00	0	
974		5586.4	2302.53	0.98	
975		17389.5	13246.53	1.38	
976		17668.8	30775.48	1.69	
976.1		17668.8	32542.36	1.72	WQE

STORMWATER FACILITY STAGE STORAGE:

ELEVATION	POND AREA (sf)	CUMULATIVE VOLUME (cf)	CUMULATIVE VOLUME (ac-ft)
972.00	0.00	0.00	0.000
973.00	4,295.19	1,431.73	0.033
974.00	5,329.12	6,234.60	0.143
975.00	5,581.84	11,689.59	0.268
976.00	5,899.29	17,429.43	0.400
976.10	5,899.29	18,019.36	0.414
976.20	23,588.04	19,395.48	0.445
977.00	24,578.02	38,660.54	0.888
978.00	25,282.06	63,589.76	1.460
979.00	26,015.08	89,237.45	2.049

REVISION	NO.	DATE

garza emc
7708 Rialto Blvd., Suite 125
Austin, Texas 78735
Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

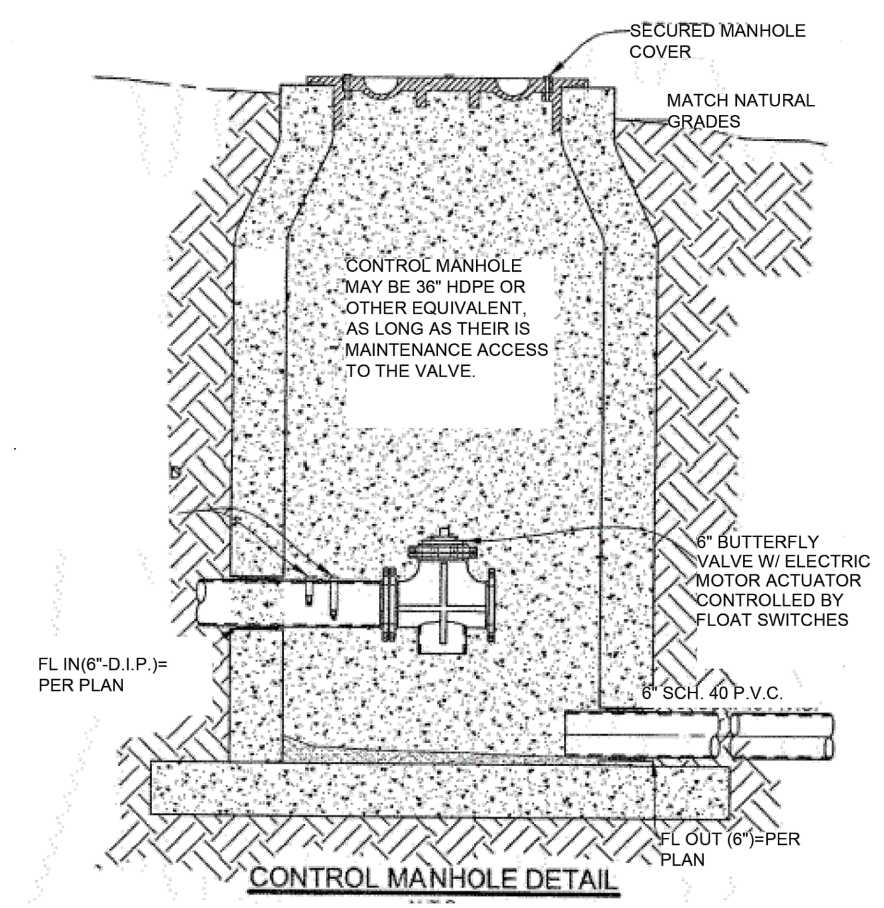
STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED
PROFESSIONAL ENGINEER

POND PLAN

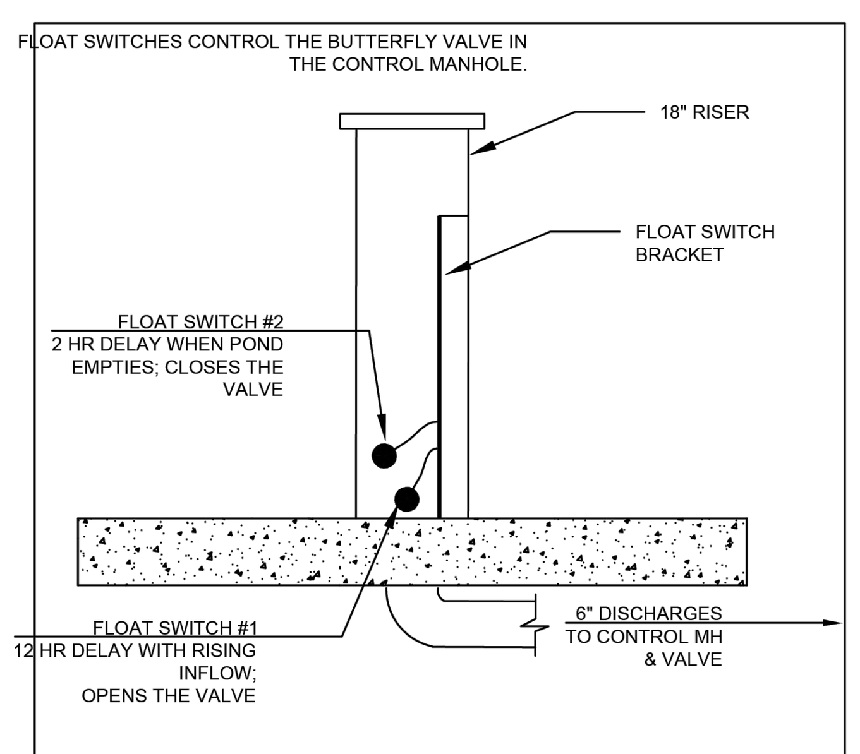
LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

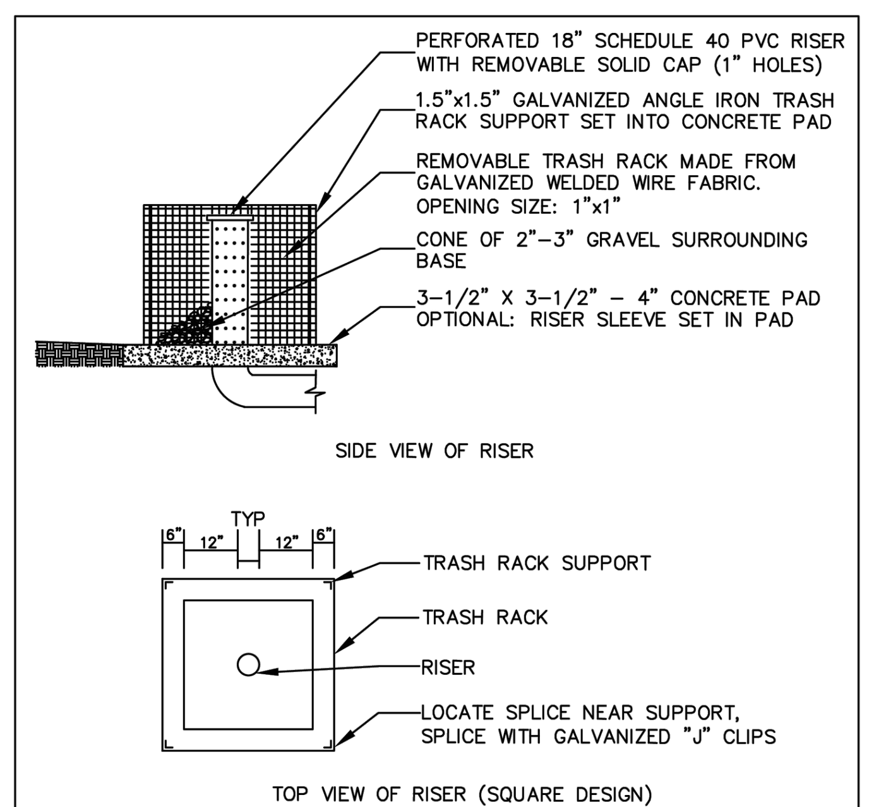
DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024



CONTROL MANHOLE DETAIL

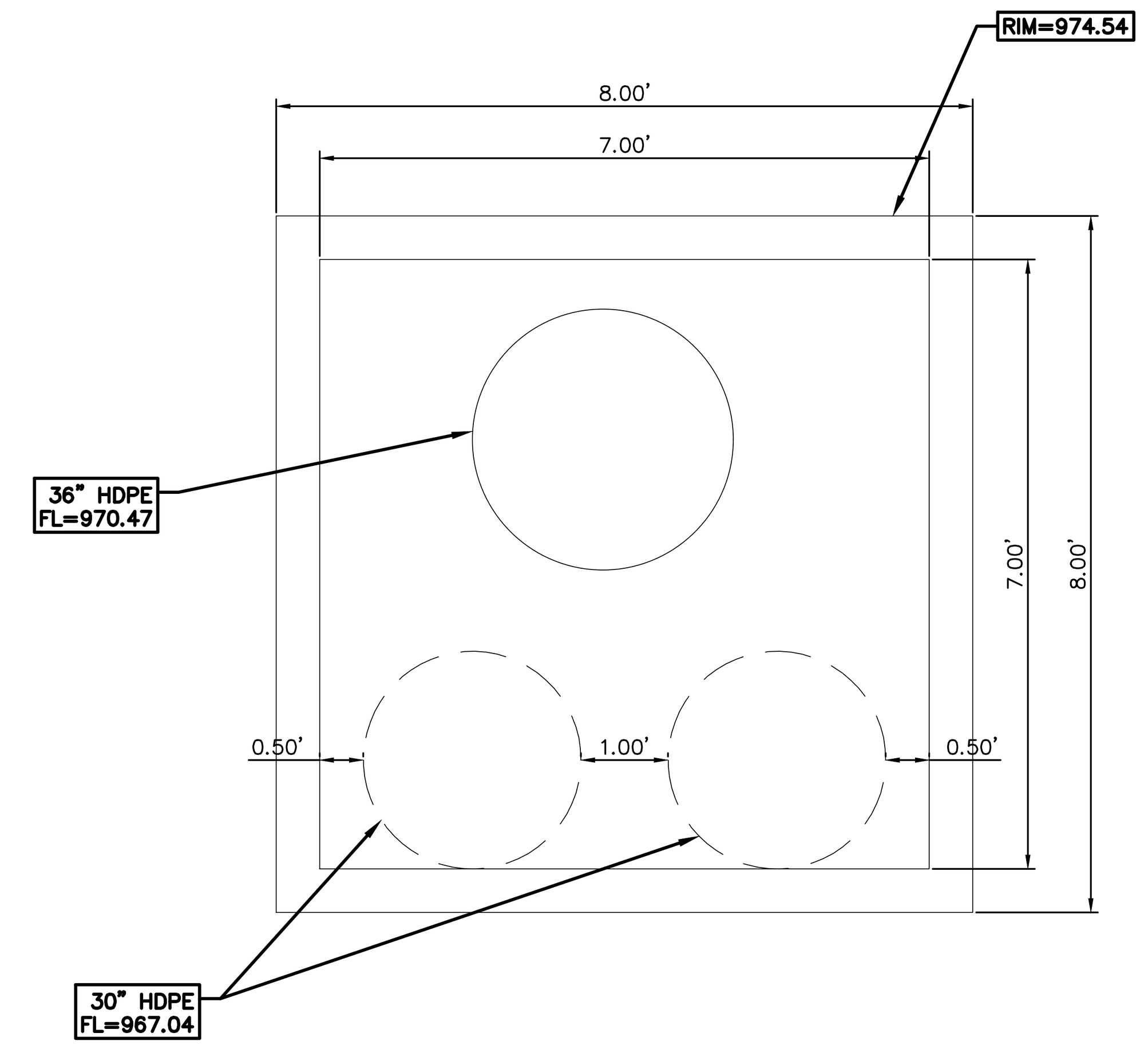


RISER INTERIOR & FLOAT SWITCH DETAIL



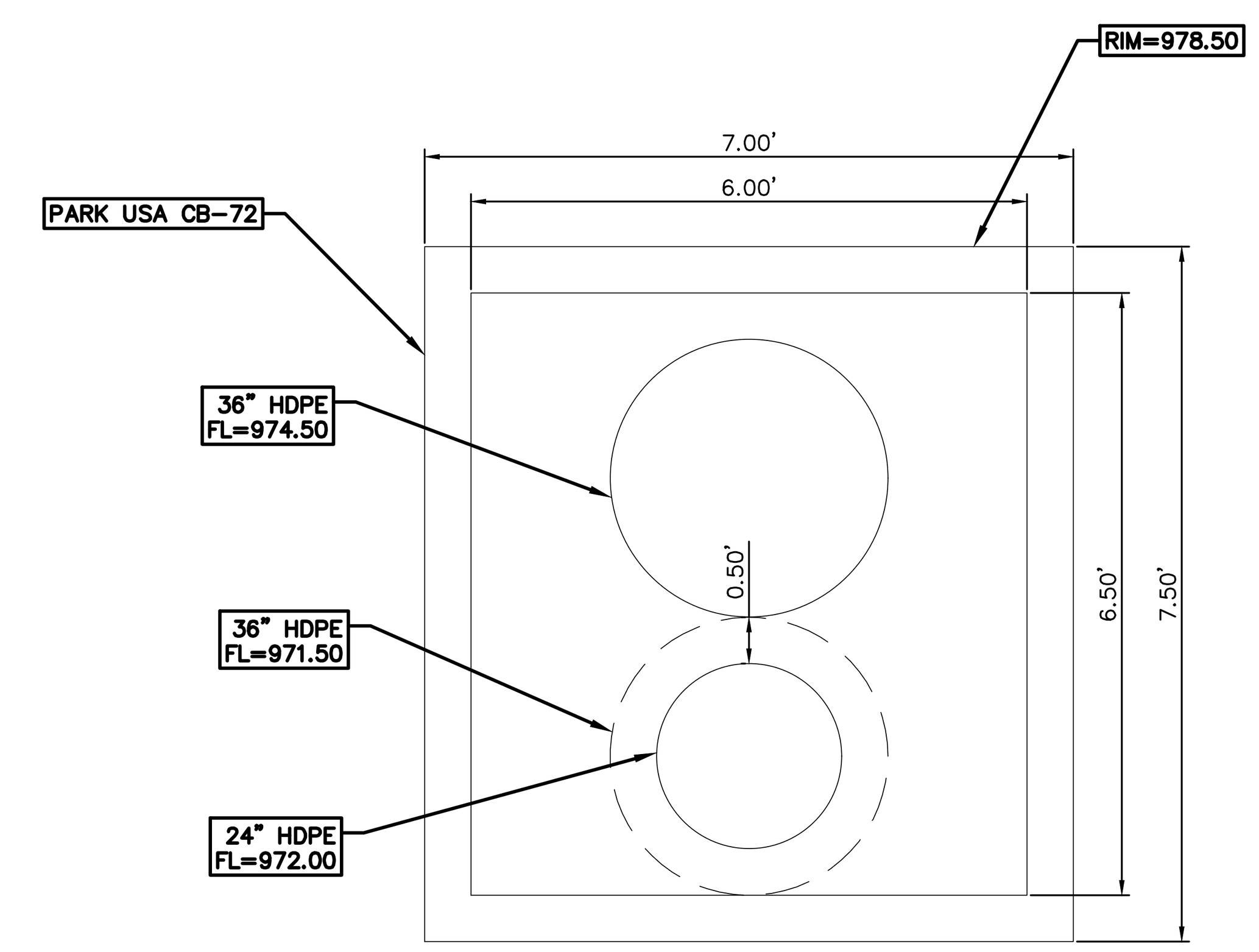
TYPICAL RISER PIPE DETAIL

SCALE : N.T.S.



JUNCTION BOX B

NTS



JUNCTION BOX A

NTS

DATE	NO.	REVISION

garza EMC
7708 Rialto Blvd., Suite 125
Austin, Texas 78735
Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED PROFESSIONAL ENGINEER

POND DETAILS

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

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OF 33

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2024-4-SDP

STORM SYSTEM DESIGN

Project Name: **Liberty Hill MF**
Project Number: **2024-4-SDP**

Entry Number	Outfall Elevation inv.(in)	Line Number	Line Size diameter (inches)	Line Length (C-C ft.)	Line Slope (ft/ft)	Manhole Number inv.(out)	Manhole Number inv.(in)	Full Flow Line Capacity n=.011 (cfs)	Full Flow Velocity (fps)	Design Flow (25 YR) (cfs)	Percent of Line Capacity (%)
A1	975.00	1	36	12.00	0.005	975.06	975.06	55.7	7.9	45.7	82.0%
A2	975.06	2	30	194	0.005	976.03	976.03	34.3	7.0	32.4	94.5%
A3	976.03	3	2-24	170	0.005	976.88	976.88	37.8	6.0	32.4	85.7%
A4	976.88	4	2-24	79	0.005	977.28	977.28	37.8	6.0	22	58.2%
A5	977.28	5	18	271	0.01	979.99	979.99	12.4	7.0	7.5	60.5%
A6	979.99	6	12	121	0.02	982.40	982.4	6.0	7.6	2.1	35.3%
A7	982.40	7	8	25	0.01	982.66		1.4	4.1	0.9	62.9%
A2-1	975.06	8	18	96	0.01	976.02	976.02	12.4	7.0	3.9	31.5%
A2-2	976.02	9	12	143	0.005	976.74		3.0	3.8	2.3	77.2%
A3-1	977.28	10	24	136	0.005	977.95	977.95	18.9	6.0	14.5	76.7%
A3-2	977.95	11	18	187	0.01	979.83		12.4	7.0	11.8	95.2%
A4-1	979.99	12	12	46	0.005	980.22		3.0	3.8	1	33.3%
B1	975	13	36	26	0.005	975.13	975.13	55.7	7.9	35.1	63.0%
B2	975.13	14	30	124	0.01	976.36	976.36	48.5	9.7	32.1	66.2%
B3	976.36	15	30	151	0.01	977.88	977.88	48.5	9.7	30.2	62.3%
B4	977.88	16	24	119	0.005	978.47	978.47	18.9	6.0	16.9	89.4%
B5	978.47	17	18	99	0.005	978.97	978.97	8.8	5.0	8.3	94.3%
B6	978.97	18	18	99	0.005	979.46	979.46	8.8	5.0	7	79.5%
B7	979.46	19	18	141	0.005	980.17		8.8	5.0	4.1	46.6%
B1-1	979.87	20	12	11	0.01	979.07		4.2	5.4	1.3	31.0%
B2-1	976.36	21	12	47	0.01	976.84		4.2	5.4	1.9	45.2%
B3-1	978.47	22	12	11	0.01	978.58		4.2	5.4	8.6	204.8%
B4-1	979.46	23	12	11	0.01	979.57		4.2	5.4	2.9	69.0%
C1	977.88	24	24	327	0.01	981.15	981.15	26.7	8.5	13.3	49.8%
C2	981.15	25	18	93	0.02	983.01	983.01	17.6	9.9	6.6	37.5%
C3	983.01	26	18	100	0.02	985.02		17.6	9.9	0.5	2.8%
C2-1	983.01	27	18	20	0.01	983.21		12.1	7.0	6.1	50.4%

WASTEWATER SYSTEM DESIGN

Project Name: **Liberty Hill MF**
Project Number: **2024-4-SDP**

Entry Number	Outfall Elevation inv.(in)	Line Number	Line Size diameter (inches)	Line Length (C-C ft.)	Line Slope (ft/ft)	Manhole Number inv.(out)	Manhole Number inv.(in)	Full Flow Line Capacity n=.013 (gpm)	Velocity (fps)	Design Flow (gpm)	Percent of Line Capacity (%)	Cross-sectional area of line (sf)	Wetted Perimeter (ft)	Hydraulic Radius (A/wp)	Qcap (cfs)
A1	964.82	1	10	140.00	0.0189	967.46	967.56	1355	5.5	738	54.4%	0.55	2.62	0.21	3.02
A2	967.56	2	10	221	0.0174	971.40	971.5	1301	5.3	738	56.7%	0.55	2.62	0.21	2.90
A3	971.5	3	8	311	0.0069	973.64	973.74	452	2.9	330	73.1%	0.35	2.09	0.17	1.01
A4	973.74	4	8	56	0.0083	974.20	974.3	495	3.2	330	66.6%	0.35	2.09	0.17	1.10
A5	974.3	5	8	175	0.006	975.34	975.34	421	2.7	330	78.3%	0.35	2.09	0.17	0.94
A6	975.34	6	8	177	0.006	976.40	978.4	421	2.7	220	52.2%	0.35	2.09	0.17	0.94
A7	978.4	7	6	78	0.0624	983.29	983.29	631	7.2	110	17.4%	0.20	1.57	0.13	1.41
A8	983.29	8	6	7	0.026	983.47	983.47	407	4.6	110	27.0%	0.20	1.57	0.13	0.91
A9	983.47	9	6	39	0.026	984.50		407	4.6	110	27.0%	0.20	1.57	0.13	0.91
B1	971.5	10	6	90	0.0499	976.00		564	6.4	195	34.6%	0.20	1.57	0.13	1.26
C1	971.5	11	6	231	0.0227	976.75	976.85	380	4.3	213	56.0%	0.20	1.57	0.13	0.85
C2	976.85	12	6	158	0.0265	981.05	981.05	411	4.7	18	4.4%	0.20	1.57	0.13	0.92
C3	981.05	13	6	16	0.0265	981.46	981.46	411	4.7	18	4.4%	0.20	1.57	0.13	0.92
C4	981.46	14	6	28	0.0265	982.20		411	4.7	18	4.4%	0.20	1.57	0.13	0.92
D1	976.85	15	6	30	0.0613	978.70		625	7.1	195	31.2%	0.20	1.57	0.13	1.39
E1	975.34	16	6	43	0.0613	978.00		625	7.1	110	17.6%	0.20	1.57	0.13	1.39
F1	976.4	17	6	107	0.0524	982.00		578	6.6	110	19.0%	0.20	1.57	0.13	1.29

REVISION | NO. | DATE

garza emc
7708 Rialto Blvd., Suite 125
Austin, Texas 78735
Tel. (512) 298-3284 Fax (512) 298-2592
TBPE # F-14629

STATE OF TEXAS
BILAL A. ALIZAI
92792
LICENSED
PROFESSIONAL ENGINEER

UTILITY CALCULATIONS

LIBERTY HILL MF DEVELOPMENT
250 GRACIE LANE LIBERTY HILL, TX 78642

ENDEAVOR REAL ESTATE GROUP

DRAWN BY: J. ADAMS
DESIGNED BY: P.GOOD
QA / QC: B. ALIZAI
PROJECT NO.: 101231-00024

SHEET
33
OF 33

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

I Jason Thumlert,
Print Name

Executive Vice President,
Title - Owner/President/Other

of OP III ATX Liberty Hill 183, LP,
Corporation/Partnership/Entity Name

have authorized Bilal Alizai
Print Name of Agent/Engineer

of Garza EMC
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

4/25/2024
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Jason Thumlert 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 25th day of April, 2024.

JESSIE RUSK
Notary ID #132903161
My Commission Expires
February 1, 2025

NOTARY PUBLIC

Jessie Rusk
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: February 1, 2025

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Liberty Hill MF Development
Regulated Entity Location: 250 Gracie Ln, Liberty Hill, TX
Name of Customer: OP III ATX LIBERTY HILL 183 LP
Contact Person: Collin Aufhammer Phone: 512-761-1814
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	12.638 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: 05-07-2024

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

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

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy) 04/25/2024

☒ 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:*

OP III ATX LIBERTY HILL 183, LP

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
805137918		92-2298493	

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☒ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☐ **Yes** ☒ **No**

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

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

15. Mailing Address:	500 W 5th ST						
	SUITE 700						
	City	AUSTIN	**State**	TX	**ZIP**	78701	**ZIP + 4**

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	CAUFHAMMER@ENDEAVOR-RE.COM

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

(512) 761-1848		( ) -

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.)*

LIBERTY HILL MF DEVELOPMENT

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	250 GRACIE LN							
	City	LIBERTY HILL	**State**	TX	**ZIP**	78642	**ZIP + 4**	
24. County	WILLIAMSON							

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

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

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:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
6513		531110	

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

MULTI-FAMILY APARTMENT RESIDENTIAL

34. Mailing Address:	**250 GRACIE LN**							
	City	**LIBERTY HILL**	**State**	**TX**	**ZIP**	**78642**	**ZIP + 4**	
35. E-Mail Address:	**CAUFHAMMER@ENDEAVOR-RE.COM**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 761-1848		( ) -

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:

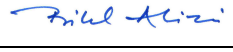
SECTION IV: Preparer Information

40. Name:	PRESLEY GOOD	**41. Title:**	PROJECT ENGINEER

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(713 **)** 491-6039		**( ) -**	PGOOD@GARZAEMC.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:	GARZA EMC	**Job Title:**	PROJECT MANAGER
Name *(In Print):*	BILAL ALIZAI	**Phone:**	**(** 713 **)** 491- **6039**
Signature:		**Date:**	05-07-2024