



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CONTRIBUTING ZONE PLAN

LEDGESTONE TERRACES

LJA Project #A116-1009

March 27, 2024

PREPARED FOR:

OP III ATX LEDGESTONE I, LP

c/o Endeavor Real Estate Group
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Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

Technical Review

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

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Ledgestone Terraces					2. Regulated Entity No.:				
3. Customer Name: OP III ATX LEDGESTONE I, LP					4. Customer No.:				
5. Project Type: (Please circle/check one)	<input checked="" type="radio"/> New	Modification			Extension		Exception		
6. Plan Type: (Please circle/check one)	WPAP	<input checked="" type="radio"/> CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential		<input checked="" type="radio"/> Non-residential			8. Site (acres):		76.49	
9. Application Fee:	\$8,000.00		10. Permanent BMP(s):			Sed/Fil/Irrigation System			
11. SCS (Linear Ft.):	N/A		12. AST/UST (No. Tanks):			N/A			
13. County:	Travis		14. Watershed:			Slaughter Creek			

Application Distribution

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

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

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

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

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

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

CHARLES R. HAGER V, P.E.

Print Name of Customer/Authorized Agent

CR Hager

3/4/2024

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: Charles R. Hager V

Date: 3/4/2024

Signature of Customer/Agent:



Regulated Entity Name: Ledgestone Terraces

Project Information

1. County: Travis
2. Stream Basin: Slaughter Creek
3. Groundwater Conservation District (if applicable): Barton Springs Zone
4. Customer (Applicant):

Contact Person: Vito Trupiano, P.E.

Entity: Endeavor Real Estate Group

Mailing Address: 500 West 5th Street, Suite 700

City, State: Austin, TX

Telephone: (512) 532-2194

Email Address: vtrupiano@endeavor-re.com

Zip: 78701

Fax: _____

5. Agent/Representative (If any):

Contact Person: Charles R. Hager V, P.E.

Entity: LJA Engineering, Inc.

Mailing Address: 7500 Rialto Boulevard, Building 2, Suite 100

City, State: Austin, TX

Zip: 78735

Telephone: (512) 439-4700

Fax: _____

Email Address: chager@LJA.com

6. Project Location:

- The project site is located inside the city limits of _____.
- The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of City of Austin.
- The project site is not located within any city's limits or ETJ.

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

9209 and 9401 Ledgestone Terrace, Austin, TX 78737

southeast corner of the intersection of Ledgestone Terrace at US Hwy 290 West

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

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

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

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

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

11. Existing project site conditions are noted below:

- Existing commercial site
- Existing industrial site

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

12. The type of project is:

- Residential: # of Lots: _____
- Residential: # of Living Unit Equivalents: 360 units x 0.5 + 140 units x 0.7 = 278 LUEs
- Commercial
- Industrial
- Other: _____

13. Total project area (size of site): 77.749 Acres

Total disturbed area: 57.3 Acres

14. Estimated projected population: 278 LUEs x 3.5 People/LUE = 973

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

Table 1 - Impervious Cover

<i>Impervious Cover of Proposed Project</i>	<i>Sq. Ft.</i>	<i>Sq. Ft./Acre</i>	<i>Acres</i>
Structures/Rooftops	237,606	÷ 43,560 =	5.45
Parking		÷ 43,560 =	
Other paved surfaces	481,774	÷ 43,560 =	11.06
Total Impervious Cover	719,376	÷ 43,560 =	16.51

Total Impervious Cover 16.51 ÷ Total Acreage 77.749 X 100 = 21.2% Impervious Cover

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

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

For Road Projects Only

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

N/A

18. Type of project:

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

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

- Concrete
- Asphaltic concrete pavement
- Other: _____

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

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

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

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

21. Pavement Area:

Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

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

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

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

A rest stop will not be included in this project.

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

N/A

26. Wastewater will be disposed of by:

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

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

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

Sewage Collection System (Sewer Lines):

The sewage collection system will convey the wastewater to the South Austin Regional WWTP (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

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

Total x 1.5 = _____ Gallons

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

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

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

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

Table 3 - Secondary Containment

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

Total: _____ Gallons

30. Piping:

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

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

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

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

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

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

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

Site Plan Requirements

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

34. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = 150'.
35. 100-year floodplain boundaries:
- Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
- No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM Panel 48453C0560J (effective date of January 22, 2020) for Travis County, Texas.
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: The City of Austin Environmental Criteria Manual.
 N/A
49. Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.
 N/A
50. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.
 The site will be used for low density single-family residential development and has 20% or less impervious cover.
 The site will be used for low density single-family residential development but has more than 20% impervious cover.
 The site will not be used for low density single-family residential development.

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

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

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

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

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

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

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

N/A

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

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

N/A

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

Prepared and certified by the engineer designing the permanent BMPs and measures

Signed by the owner or responsible party

Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit.

Contains a discussion of record keeping procedures

N/A

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

N/A

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

N/A

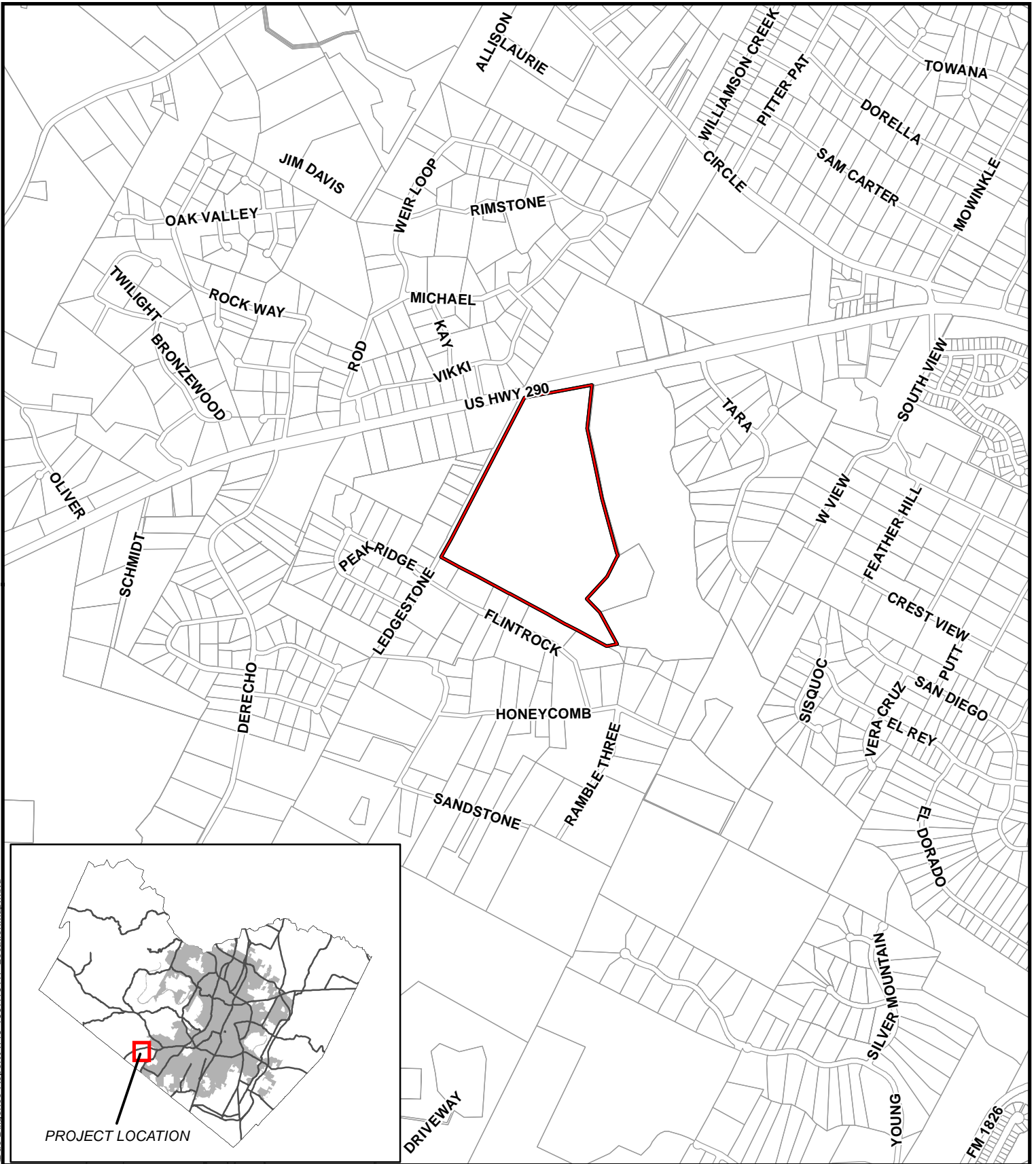
Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.

59. The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
60. A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development,

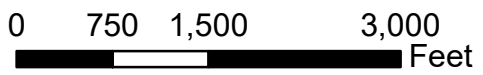
or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

Administrative Information

61. Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.
62. Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.
63. The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.
 The Temporary Stormwater Section (TCEQ-0602) is included with the application.

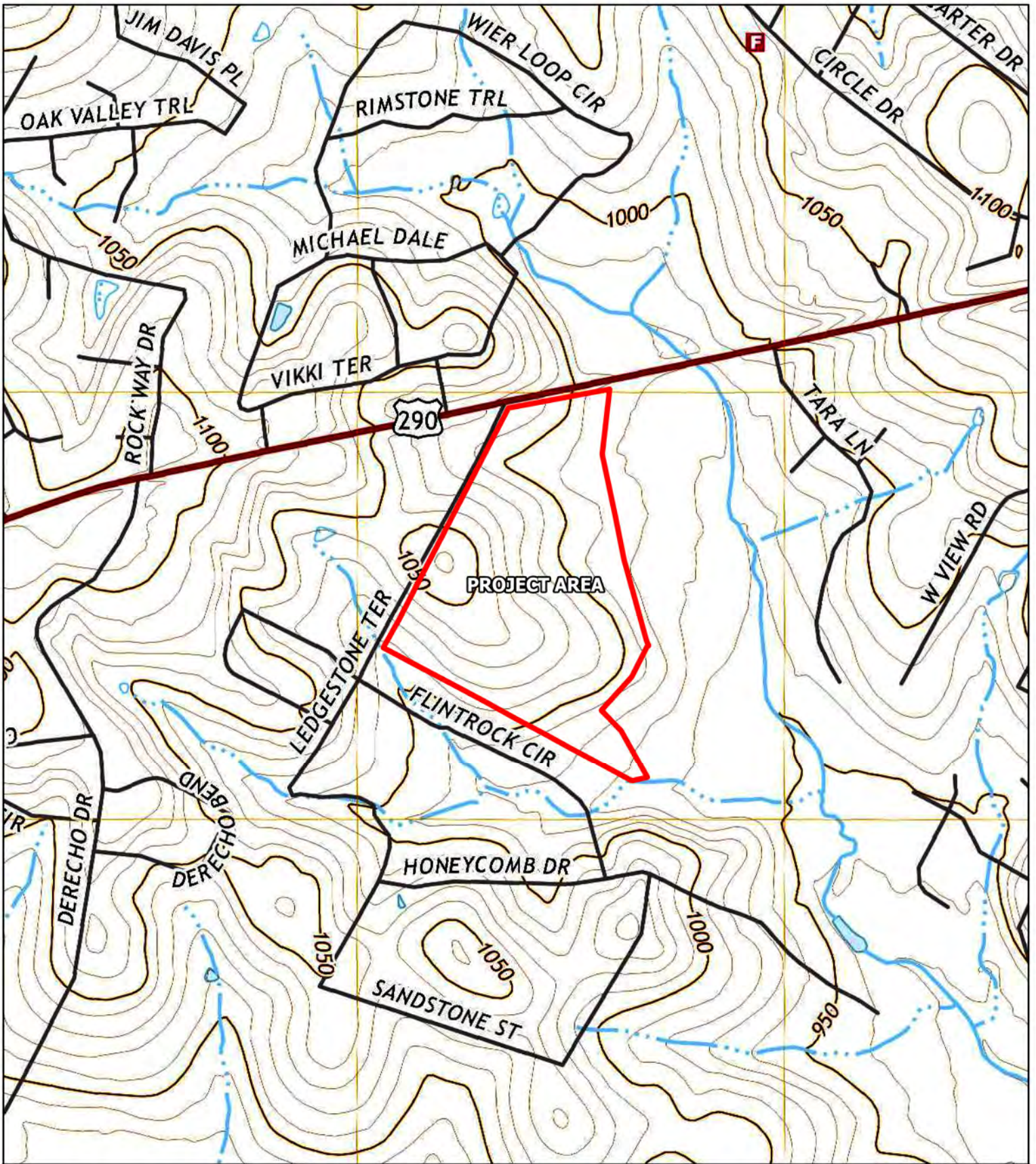


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	7500 Rialto Boulevard, Building 2, Suite 100 Austin, Texas 78735 Phone: 512.439.4732 LJA.com TDFE: F-1386 TDFLS: 101994382
	<p style="text-align: center;">9021 W. US HWY 290 AUSTIN, TX 78737 DUE DILIGENCE REPORT</p>

LOCATION MAP EXHIBIT 1	Created By: MGENZER Date: 9/27/2021
1 OF 14	



0 500 1,000 2,000
FEET

 PROJECT BOUNDARY



7500 Rialto Boulevard Building II, Suite 100
Austin, Texas 78735
Phone 512.539.4700
LJA.com

9021 W. US HWY 290
AUSTIN, TX 78737
SIGNAL HILL QUADRANT

USGS BASEMAP
EXHIBIT

CREATED BY:
MGENZER - LJA
DATE: 2/14/2024

ATTACHMENT B

ATTACHMENT C – PROJECT NARRATIVE

Area of the Site

The *Ledgestone Terraces* project is located at 9209 and 9401 Ledgestone Terrace on the south side of US Highway 290 West, bounded by the access drive to Bobbi Colorado's Canine Camp to the east and Ledgestone Terrace to the west. The project is in the City of Austin's 2-mile extraterritorial jurisdiction (ETJ) and in the Slaughter Creek watershed, which is part of the Barton Springs Zone. The site is located in the Edwards Aquifer Contributing Zone. A portion of the site is located within the 100-year floodplain [FEMA Flood Insurance Rate Map (FIRM) Panel 48453C0560J (effective date of January 22, 2020) for Travis County, Texas] and associated waterway setbacks, but no portion of the proposed improvements are located within the floodplain or waterway setbacks. The on-site 100-year floodplain was calculated based on the City of Austin Atlas 14 rain fall amounts. There is one critical environmental feature (wetland) near the development.

Site History

The property contained a single-family residence in the 1970s. The site was cleared by the previous landowner. The site is currently undeveloped, and there are no existing improvements to demolish.

Proposed Site Use

The project proposes to construct an apartment complex in the middle of the property and a townhomes complex on the south side of the property. Improvements for both developments include associated access, parking, grading, drainage, and utilities. The proposed apartment complex will contain a total of 360 units, and the townhomes will contain a total of 140 units. The apartment complex will be constructed on approximately 14 acres, and the townhomes will be constructed on approximately 12 acres. The remainder of the 77.78-acre property will be detention and water quality improvements and undeveloped land within waterway setbacks and floodplain. Project wastewater will be disposed of by conveyance to the existing South Austin Regional Wastewater Treatment Plant.

Off-site Areas

The site receives offsite drainage from the adjacent properties to the west via overland flow. There are no proposed changes to the offsite drainage and conveyance via naturally channelized flow through the property.

Impervious Cover

A total of 16.51 acres of impervious cover is proposed, which is 63.5% of the developed drainage area, but only 21.2% of the overall site area.

Permanent BMPs

Proposed on-site drainage for the development areas shall be conveyed through surface flow and private storm sewer inlets and pipes to the proposed water quality ponds and the detention ponds. There will be sed/fil/irrigation system and detention pond to treat and detain runoff from the apartment development, and there will be a separate sed/fil/irrigation system and detention pond for the townhome development. Both proposed detention ponds will be designed to detain the 2-

year, 10-year, 25-year, and 100-year storm events at or below existing runoff rates. Discharge from the ponds will be at grade and surface flow via natural topography to match existing conditions. The apartment development pond will discharge towards the east, across the Bobbi Colorado driveway and into adjacent property. The townhome development pond will discharge southeast towards the Devil's Pen Creek tributary. The project discharges to the adjacent property to the east at or below the existing discharge rates (the adjacent property has drainage easements for this). Some of the project drains south to a tributary of Devil's Pen Creek at or below existing discharge rates.

The sed/fil/irrigation system shall be designed to treat the added pollutant loading from the proposed impervious cover in accordance with the Save Our Springs (SOS) Ordinance. The on-site water quality and detention facilities shall treat and detain the storm water runoff such that there is no adverse impact to the creek and appropriate erosion control measures shall be installed to prevent erosion and sedimentation.

Temporary erosion controls consisting of silt fence, mulch sock, stabilized construction entrance, and tree protection/limits of construction fencing will be installed per the site plan's Erosion and Sedimentation Control Plan prior to commencement of ground disturbance. Permanent erosion controls will include seeding/hydro mulch on all unpaved areas and rock riprap at storm sewer and detention pond outlets.

ATTACHMENT D – FACTORS AFFECTING SURFACE WATER QUALITY

The following factors could have an impact on surface and groundwater quality during construction:

1. Non-Stormwater Discharges: It is expected that the following non-stormwater discharges will occur from the site during the construction period:
 - Water from water line flushing
 - Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred)
 - Uncontaminated groundwater (from dewatering of excavation)
 - All non-storm water discharges will be directed towards erosion control structures prior to discharge

2. Material Inventory: The materials or substances listed below are expected to be present onsite during construction:
 - Concrete and concrete products
 - Metal reinforcing materials - rebar, welded wire fabric
 - Fertilizers
 - Petroleum-based products
 - Wood
 - Plastic (PVC) and metal pipe and fittings
 - Paints
 - Rock, gravel, sand, and soil

The following factors could have an impact on surface and groundwater quality after construction:

1. Increased Impervious Cover: The total area of the site is 77.78 acres and was previously undeveloped with an impervious cover percentage of 0.0%. The proposed improvements for this application will increase the impervious cover to 21.2% of the total lot area.

2. Revegetation / Water Quality Treatment of Stormwater: Permanent erosion controls will include seeding/hydro mulch on all unpaved areas and rock riprap at storm sewer and detention pond outlets. Runoff from the completed project will be routed to the proposed sed/fil/irrigation system.

ATTACHMENT E – VOLUME AND CHARACTER OF STORMWATER

Storm water from all proposed impervious cover on *Ledgestone Terraces* will be collected within curbs, gutters, and inlets and discharged through a storm sewer line to the proposed sed/fil/irrigation system. At such time that the water quality volume is met in the sedimentation and filtration basins, excess stormwater will bypass the sed/fil pond via the splitter structure and flow directly into the proposed detention pond that is located immediately to the east of the sed/fil pond.

The character of the stormwater runoff pollution will consist primarily of suspended solids, oil and grease, and phosphorus and nitrogen that will occur due to fertilization of landscaping and parking cars.

ATTACHMENT F – SUITABILITY LETTER FROM AUTHORIZED AGENT

NOT APPLICABLE

ATTACHMENT G – ALTERNATIVE SECONDARY CONTAINMENT METHODS

NOT APPLICABLE

ATTACHMENT H – AST CONTAINMENT STRUCTURE DRAWINGS

NOT APPLICABLE

ATTACHMENT I – 20% OR LESS IMPERVIOUS COVER WAIVER

NOT APPLICABLE

ATTACHMENT J – BMPS FOR UPGRADIENT STORMWATER

The proposed development receives roughly 21.63-acres of upgradient stormwater. There is about 7.22-acres of developed land that is assumed to have their own BMPs for their on-site storm water before it continues ground flow towards the *Ledgestone Terraces* project site. All off-site flows will be redirected through the proposed developed site using natural channels towards the eastern boundary of the property, which will deposit the storm water in proposed channels in the adjacent property which leads to natural channel flow areas closest to existing conditions.

ATTACHMENT K – BMPS FOR ON-SITE STORMWATER

The on-site storm water flows will be collected within storm drains and will be conveyed to the proposed sed/fil ponds. The proposed ponds shall be designed in accordance with the City of Austin's Environmental Criteria Manual (ECM) Sections 1.6.7 and 1.6.9 and the Save Our Springs Ordinance and amended Composite Ordinance. The water quality volume from the apartment pond will drain to a wet well that will pump the volume of water to the proposed 4.35-acre irrigation field to the east of the development. The water quality volume from the townhome pond will drain to a wet well that will pump the volume of water to the proposed 3.67-acre irrigation field to the southeast of the development. Excess storm water past the water quality volume will go into the proposed detention ponds before being released to surface streams.

The TCEQ TSS Calculations are included herein [see Attachment M, Plan Set, Sheets 40 (WQ04) and 46 (WQ10)] to demonstrate that the proposed sed/fil/irrigation pond is sufficiently sized to treat the impervious cover. The required load removal is 14,570 lbs (165.4 cf), and the provided load removal is 16, 654 lbs (171.0 cf).

ATTACHMENT L – BMPS FOR SURFACE STREAMS

The BMPs described in *Attachment K – BMPs for On-Site Stormwater* provides treatment for storm water discharges prior to release to surface streams.

ATTACHMENT M – CONSTRUCTION PLANS

The *Ledgestone Terraces* construction site plans are included herein.

GENERAL CONSTRUCTION NOTES

- 1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF AUSTIN MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. CONTRACTOR SHALL CALL TEXAS 811 (811 OR 1-800-344-8377) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W.
3. CONTRACTOR SHALL NOTIFY THE CITY OF AUSTIN - SITE & SUBDIVISION DIVISION TO SUBMIT REQUIRED DOCUMENTATION, PAY CONSTRUCTION INSPECTION FEES, AND TO SCHEDULE THE REQUIRED SITE & SUBDIVISION PRE-CONSTRUCTION MEETING. THIS MEETING MUST BE HELD PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN THE R.O.W. OR PUBLIC EASEMENTS. PLEASE VISIT http://austintexas.gov/page/commercial-site-and-subdivision-inspections FOR A LIST OF SUBMITTAL REQUIREMENTS, INFORMATION CONCERNING FEES, AND CONTACT INFORMATION.
4. FOR SLOPES OR TRENCHES GREATER THAN FIVE FEET IN DEPTH, A NOTE MUST BE ADDED STATING: "ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION." (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 811 EAST 6TH STREET, AUSTIN, TEXAS.)
5. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.
6. UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS AND PRIOR TO THE FOLLOWING, THE ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DRAINAGE, FILTRATION AND DETENTION FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.
[] RELEASE OF THE CERTIFICATE OF OCCUPANCY BY THE DEVELOPMENT SERVICES DEPARTMENT (INSIDE THE CITY LIMITS); OR
[] INSTALLATION OF AN ELECTRIC OR WATER METER (IN THE FIVE-MILE ETJ)

DEVELOPER INFORMATION

MICHAEL Y WONG 1991 TRUST, et al OWNER (512) 354-2542 PHONE #

1700 STONERIDGE TERRACE, AUSTIN, TEXAS 78746 OWNER ADDRESS

LJA ENGINEERING, INC. CONTACT PERSON: S. DANNY MILLER, P.E. OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS (512) 439-4700 PHONE #

CONTRACTOR TBD PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE PHONE #

CONTRACTOR TBD PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE PHONE #

AMERICANS WITH DISABILITIES ACT THE CITY OF AUSTIN HAS REVIEWED THIS PLAN FOR COMPLIANCE WITH CITY DEVELOPMENT REGULATIONS ONLY. THE APPLICANT, PROPERTY OWNER, AND OCCUPANT OF THE PREMISES ARE RESPONSIBLE FOR DETERMINING WHETHER THE PLAN COMPLIES WITH ALL OTHER LAWS, REGULATIONS, AND RESTRICTIONS WHICH MAY BE APPLICABLE TO THE PROPERTY AND ITS USE.

ORDINANCE REQUIREMENTS

- 1. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE RELEASED SITE PLAN. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE A SITE PLAN AMENDMENT AND APPROVAL FROM THE DEVELOPMENT SERVICES DEPARTMENT.
2. APPROVAL OF THIS SITE PLAN DOES NOT INCLUDE BUILDING CODE APPROVAL, FIRE CODE APPROVAL, OR BUILDING, DEMOLITION, OR RELOCATION PERMITS APPROVAL. A CITY DEMOLITION OR RELOCATION PERMIT CAN ONLY BE ISSUED ONCE THE HISTORIC REVIEW PROCESS IS COMPLETED.
3. ALL SIGNS MUST COMPLY WITH THE REQUIREMENTS OF THE CITY OF AUSTIN LAND DEVELOPMENT CODE.
4. THE OWNER IS RESPONSIBLE FOR ALL COSTS OF RELOCATION OF, OR DAMAGE TO, UTILITIES.
5. ADDITIONAL ELECTRIC EASEMENTS MAY BE REQUIRED AT A LATER DATE.
6. A SITE DEVELOPMENT PERMIT MUST BE ISSUED PRIOR TO AN APPLICATION FOR BUILDING PERMIT FOR NON-CONSOLIDATED OR LAND USE COMMISSION APPROVED SITE PLANS.
7. WATER AND WASTEWATER SERVICE WILL BE PROVIDED BY THE CITY OF AUSTIN.
8. NO CERTIFICATE OF OCCUPANCY MAY BE ISSUED FOR THE PROPOSED RESIDENTIAL CONDOMINIUM UNTIL THE OWNER OR OWNERS OF THE PROPERTY HAVE COMPLIED WITH CHAPTER 81 AND 82 OF THE PROPERTY CODE OF THE STATE OF TEXAS OR ANY OTHER STATUTES ENACTED BY THE STATE CONCERNING CONDOMINIUMS.
9. FOR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, A R.O.W. EXCAVATION PERMIT IS REQUIRED

COMPATIBILITY

- 1. HIGHLY REFLECTIVE MATERIALS WILL NOT BE USED. MATERIALS MAY NOT EXCEED 20% REFLECTIVITY. THIS REQUIREMENT SHALL NOT APPLY TO SOLAR PANELS OR TO COPPER OR PAINTED METAL ROOFS.
2. THE NOISE LEVEL OF MECHANICAL EQUIPMENT WILL NOT EXCEED 70 DBA AT THE PROPERTY LINE ADJACENT TO RESIDENTIAL USES.
3. ALL EXTERIOR LIGHTING SHALL BE HOODED OR SHIELDED FROM THE VIEW OF ADJACENT RESIDENTIAL USES, OR PROPERTY ZONED RESIDENTIAL.
4. EXTERIOR LIGHTING ABOVE THE SECOND FLOOR IS PROHIBITED WHEN ADJACENT TO RESIDENTIAL PROPERTY.
5. ALL DUMPSTERS AND ANY PERMANENTLY PLACED REFUSE RECEPTACLES WILL BE LOCATED AT A MINIMUM OF TWENTY (20) FEET FROM A PROPERTY USED OR ZONED AS SF-5 OR MORE RESTRICTIVE.

FIRE DEPARTMENT NOTES

- 1. THE AUSTIN FIRE DEPARTMENT REQUIRES ASPHALT OR CONCRETE PAVEMENT PRIOR TO CONSTRUCTION AS AN ALL-WEATHER DRIVING SURFACE.
2. HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FOUR-INCH OPENING AT LEAST 18 INCHES ABOVE FINISH GRADE. THE FOUR-INCH OPENING MUST BE LOCATED ON A STREET WITH THREE-TO-SIX-FOOT SETBACKS FROM THE CURBLINE(S). NO OBSTRUCTION IS ALLOWED WITHIN THREE FEET OF ANY HYDRANT AND THE FOUR-INCH OPENING MUST BE TOTALLY UNOBSTRUCTED FROM THE STREET.
3. TIMING OF INSTALLATION: WHEN FIRE PROTECTION FACILITIES ARE INSTALLED BY THE DEVELOPER, SUCH FACILITIES SHALL INCLUDE ALL SURFACE ACCESS ROADS WHICH SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION WHERE ALTERNATIVE METHODS OF PROTECTION, AS PROVIDED BY THE FIRE CHIEF, ARE PROVIDED, THE ABOVE MAY BE MODIFIED OR WAIVED.
4. ALL PEROUS/DECORATIVE PAVING SHALL BE ENGINEERED AND INSTALLED FOR 80,000 LB. LIVE VEHICLE LOADS. ANY PEROUS/DECORATIVE PAVING WITHIN 100 FEET OF ANY BUILDING MUST BE APPROVED BY THE FIRE DEPARTMENT.
5. COMMERCIAL DUMPSTERS AND CONTAINERS WITH AN INDIVIDUAL CAPACITY OF 1.5 CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN TEN FEET OF OPENINGS, COMBUSTIBLE WALLS, OR COMBUSTIBLE EAVE LINES.
6. FIRE LANES DESIGNATED ON SITE PLAN SHALL BE REGISTERED WITH CITY OF AUSTIN FIRE MARSHAL'S OFFICE AND INSPECTED FOR FINAL APPROVAL.
7. VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS 14 FEET FOR FULL WIDTH OF ACCESS DRIVE.

AUSTIN WATER GENERAL CONSTRUCTION NOTES

June 07, 2016

- 1. THE CITY STANDARD CONSTRUCTION SPECIFICATIONS CURRENT AT THE TIME OF BIDDING SHALL COVER MATERIAL AND METHODS USED TO DO THIS WORK.
2. CONTRACTOR MUST OBTAIN A STREET CUD PERMIT FROM AUSTIN TRANSPORTATION DEPARTMENT, RIGHT OF WAY MANAGEMENT DIVISION BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR ALLEY.
3. AT LEAST 48 HOURS BEFORE BEGINNING ANY WATER AND WASTEWATER CONSTRUCTION IN PUBLIC R.O.W. OR PUBLIC EASEMENT, THE CONTRACTOR SHALL NOTIFY AUSTIN TRANSPORTATION INSPECTION OR DEVELOPMENT SERVICES DEPARTMENT, SITES AND SUBDIVISION INSPECTION, AT THE NUMBER INDICATED ON THE PLANS BY THE AW PLAN REVIEWER.
4. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS. THE AUSTIN WATER MAINTENANCE RESPONSIBILITY ENDS AT R.O.W. EASEMENT LINES.
5. NO OTHER UTILITY SERVICE/APURTENANCES SHALL BE PLACED NEAR THE PROPERTY LINE, OR OTHER ASSIGNED LOCATION DESIGNATED FOR WATER, RECLAIMED WATER AND WASTEWATER UTILITY SERVICE THAT WOULD INTERFERE WITH THE WATER, RECLAIMED WATER AND WASTEWATER SERVICES.
6. THE CITY SPECIFICATION ITEM 509S WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY MEASURE.
7. ALL MATERIALS TESTS, INCLUDING SOIL DENSITY TESTS AND DETAILED SOIL ANALYSES, SHALL BE CONDUCTED BY AN INDEPENDENT LABORATORY AND FUNDED BY THE OWNER IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 180AS.04.
8. PRESSURE TAPS SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 510.3(24). THE CONTRACTOR SHALL PERFORM EXCAVATION ETC., AND SHALL FURNISH, INSTALL AND AIR TEST THE BLEEDER VALVE AND CONTROL VALVE. THE TAP A CITY INSPECTOR MUST BE PRESENT AND 2 WORKING DAYS (MIN.) NOTICE MUST BE GIVEN. "SIZE ON SIZE" TAPS WILL NOT BE PERMITTED, UNLESS, IT HAS BEEN DEMONSTRATED THAT A MORE ACCEPTABLE CONNECTION WOULD INVOLVE CONSIDERABLE HARDWARE TO THE UTILITY SYSTEM. ALL TAPS SHALL BE MADE BY USE OF AN APPROVED FULL CIRCLE-GASKETED CAST IRON OR DUCTILE IRON TAPPING SLEEVE. CONCRETE BLOCKING SHALL BE PLACED UNDER ALL TAP SLEEVES PRIOR TO MAKING THE PRESSURE TAP AND THE USE OF PRECAST BLOCKS MAY BE USED TO HOLD THE TAP IN ITS CORRECT POSITION PRIOR TO BLOCKING. THE BLOCKING BEHIND AND UNDER THE TAP SHALL HAVE A MINIMUM OF 24 HOURS CURING TIME BEFORE THE VALVE CAN BE RE-OPENED FOR SERVICE FROM THAT TAP.
9. THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 510.3 (22).
10. ALL BRANCH CONNECTIONS SHALL HAVE THE VALVE BOLTED TO THE MAIN BY METHODS OF FLANGE OR SWIVEL TEES. FOSTER ADAPTORS MAY BE USED IN LIEU OF FLANGE OR SWIVEL TEES WHEN CALLED OUT ON THE PLANS BY THE DESIGN ENGINEER.
11. A) FIRE HYDRANTS SHALL BE SET IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 511S.4 B) FIRE HYDRANTS SHALL BE PAINTED FLYNT ALUMINUM OR EQUAL.
12. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEMS 510.3 (20). FOR MAIN PRESSURE TESTING SHALL BE CONDUCTED AND FALL UNDER THE SPECIFICATIONS AS WATER LINES (PRESSURE PIPE) OR AT THE PRESSURES SHOWN ON THE APPROVED PLANS.
13. ALL MATERIAL USED ON THIS PROJECT MUST BE LISTED ON THE STANDARD PRODUCTS LISTING. ANY MATERIAL NOT LISTED HAS TO GO THROUGH THE REVIEW OF THE STANDARDS COMMITTEE PRIOR TO REVIEW AND APPROVAL. THE CONTRACTOR SHALL TEST AND EVALUATION OF PRODUCTS ARE REQUIRED BEFORE APPROVAL WILL BE GIVEN ANY CONSIDERATION.
14. WHEN WATER SERVICES ARE DAMAGED AND THE SERVICE MATERIAL IS PE, THE LINE SHALL BE REPAIRED ONLY BY HEAT FUSION WELD OR REPLACED THE FULL LENGTH WITH TYPE K COPPER MATERIAL. ANY TIME PE IS DAMAGED OR TAMPERED WITH IN ANY WAY, THE SERVICE LINE SHALL BE REPLACED FULL LENGTH WITH TYPE K COPPER MATERIAL. NOTE: FULL LENGTH IS FROM CORPORATION STOP TO METER.
15. WHEN AN EXISTING WATERLINE SHUT OUT IS NECESSARY AND POSSIBLE, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR AND THE CITY ENGINEER, THE CITY DISPATCH AND THE AFFECTED CUSTOMERS A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE.
16. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR SO THAT HE CAN NOTIFY THE AUSTIN WATER AT 972-0000 AT A MINIMUM OF 72 HOURS PRIOR TO RELOCATING ANY DOMESTIC OR FIRE DEMAND WATER METERS. THE CONTRACTOR SHALL REMOVE, REMOVE ALL METERS AND METERS BOXES THAT ARE INDICATED TO BE RELOCATED OR SALVAGED. THE CONTRACTOR SHALL INSTALL THE REMOVED METER OR CITY PROVIDED METER AT THE NEW LOCATION INDICATED ON THE CONSTRUCTION PLANS.
17. ALL MANHOLES IN UNPAVED AREAS PROVIDING DIRECT ACCESS TO A WASTEWATER LINE SHALL BE WATERIGHT AND BEAR THE WORKING AND INSIGNIA FOR THE CITY OF AUSTIN.
18. THE CONTRACTOR SHALL VERIFY ALL VERTICAL AND HORIZONTAL LOCATIONS OF EXISTING UTILITIES PRIOR TO STARTING ON-SITE UTILITY WORK.
19. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. APPROVAL OF THESE PLANS BY THE CITY OF AUSTIN DOES NOT REMOVE THESE RESPONSIBILITIES.
20. REVIEW BY AUSTIN WATER APPLIES ONLY TO FACILITIES WITHIN PUBLIC STREETS OR PUBLIC UTILITY EASEMENTS. ALL OTHER WATER, RECLAIMED WATER AND WASTEWATER FACILITIES INSIDE PRIVATE PROPERTY ARE UNDER THE JURISDICTION OF BUILDING INSPECTION.
21. ALL WATER, RECLAIMED WATER AND WASTEWATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE SEPARATION DISTANCES INDICATED IN CHAPTER 200 - DRINKING WATER STANDARDS, CHAPTER 210 - USE OF RECLAIMED WATER AND CHAPTER 217 - DESIGN CRITERIA FOR SEWERAGE SYSTEMS, OF TCED RULES.
22. CONTRACTOR'S PERSONNEL THAT PERFORM BUTT FUSION AND ELECTROFUSION ON OR TO HDPE PIPE AND FITTINGS MUST HAVE CURRENT QUALIFICATION TRAINING CERTIFICATE ISSUED BY MCELROY OR COMPARABLE TRAINING PROGRAM.
23. SHOP DRAWINGS SHALL BE SUBMITTED FOR AW APPROVAL. FOR LARGE DIAMETER PRE-CAST MANHOLES, JOINT BOXES, AND SIMILAR STRUCTURES, THE SHOP DRAWINGS SHALL INCLUDE FLOWLINE ELEVATIONS OF ALL INCOMING AND OUTGOING PIPES, ELEVATION OF TRANSITION FROM LARGE DIAMETER SECTIONS TO 48" ID SECTION, TOP OF MANHOLE ELEVATION, SURROUNDING GROUND ELEVATION, AS WELL AS SPECIAL CONSTRUCTION CONSIDERATIONS THAT ARE SPECIFIED IN THE CONTRACT DRAWINGS.
24. VALVE STEM EXTENSIONS SHALL CONSIST OF A SINGLE PIECE OF IRON ROD OF THE REQUIRED LENGTH WITH A SOCKET ON ONE END AND NUT ON THE OTHER.
25. ASBESTOS CONCRETE PIPE (AC PIPE) HAS BEEN INSTALLED IN THE PAST AS PART OF AUSTIN WATER'S WATER DISTRIBUTION AND WASTEWATER COLLECTION SYSTEMS. AUSTIN WATER'S INFRASTRUCTURE INCLUDES AC PIPE THAT IS CURRENTLY IN SERVICE AS WELL AS AC PIPE THAT HAS BEEN ABANDONED AND IS NO LONGER IN SERVICE. RECORD INFORMATION MAY NOT BE COMPLETE FOR THE PROJECT. CONTRACTORS AND SUBCONTRACTORS MUST BE ALERT TO THE POSSIBLE PRESENCE OF AC PIPE WITHIN THE LIMITS OF THE PROJECT AND BE KNOWLEDGEABLE OF HOW TO IDENTIFY IT, DISTURBANCE, REMOVAL OR CUTTING OF ASBESTOS CONTAINING PIPE IS TO BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF TEXAS ADMINISTRATIVE CODE 25, SECTION 15, ARTICLE 4477-3A AND 29 CFR 1926.1101. CONTACT THE CITY OF AUSTIN ASBESTOS MANAGER AT 512-974-7154 THIRTY (30) DAYS PRIOR TO THE PLANNED DISTURBANCE OF THE AC PIPE. ONLY STATE LICENSED PERSONNEL ARE PERMITTED TO DISTURB, REMOVE, TRANSPORT AND DISPOSE OF AC PIPE.

APPENDIX P-3: ADDITIONAL EROSION CONTROL NOTES FOR BARTON SPRINGS CONTRIBUTING ZONE

- 1. DESIGNATION OF AN ENVIRONMENTAL PROJECT MANAGER WHO IS ON SITE >90% OF THE TIME, WHO IS REQUIRED TO BE AT THE PRECONSTRUCTION AND MID-CONSTRUCTION MEETINGS, AND IS RESPONSIBLE FOR COMPLIANCE ON SITE OF THE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES. THE ENVIRONMENTAL PROJECT MANAGER IS RESPONSIBLE FOR ENSURING COMPLIANCE OF THE CONTROLS DURING THE CONSTRUCTION PERIOD. SHOULD THE PROJECT MANAGER NEED TO BE ABSENT FROM THE SITE FOR AN EXTENDED PERIOD (IN EXCESS OF ONE WEEK), THE ENVIRONMENTAL PROJECT MANAGER WITH THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT SHOULD BE INFORMED OF THE NAME OF A DESIGNATED REPLACEMENT.
2. THE MAXIMUM LENGTH OF TIME BETWEEN CLEARING AND FINAL REVEGETATION OF A PROJECT SHALL NOT EXCEED 18 MONTHS, UNLESS EXTENDED BY THE DIRECTOR OF THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT (THIS DOES NOT AFFECT THE EXPIRATION OF THE SITE PLAN OR BUILDING PERMIT. THIS REQUIREMENT APPLIES TO SITES THAT HAVE SUSPENDED WORK AND ARE EXPERIENCING EROSION CONTROL PROBLEMS DUE TO DISTURBED SOIL CONDITIONS. DISTURBED AREAS MUST BE MAINTAINED TO PREVENT EROSION AND SEDIMENT LOADING OF ANY WATERWAYS OR DRAINAGE FACILITIES.
3. IT IS A VIOLATION OF THE CODE AND THIS DEVELOPMENT PERMIT TO ALLOW SEDIMENT FROM A CONSTRUCTION SITE TO ENTER A CLASSIFIED WATERWAY DUE TO A FAILURE TO MAINTAIN THE REQUIRED EROSION AND SEDIMENTATION CONTROLS OR TO FOLLOW THE APPROVED CONSTRUCTION SEQUENCE.

C.O.A. SPECIAL NOTES

- 1. PAVEMENT CONSTRUCTION SPECIFICATIONS
PAVEMENT SHOULD BE CONSTRUCTED AND TESTED TO MEET THE FOLLOWING REQUIREMENTS:
A. HOT MIX ASPHALTIC CONCRETE SURFACE - ALL MATERIALS AND PLACEMENT OF ASPHALT SHALL CONFORM TO ALL SPECIFICATIONS AND TEST METHODS OUTLINED IN AUSTIN STANDARD SPECIFICATIONS ITEMS NO. 301, NO. 302S, AND NO. 340S. ASPHALT SHALL BE COMPACTED TO A MINIMUM OF 91% AND A MAXIMUM OF 96% IN ACCORDANCE WITH TxDOT TEST METHOD TEX-207-FITE4-227-F.
B. CRUSHED LIMESTONE BASE - THE CRUSHED LIMESTONE BASE SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS ITEM 210S AND SHALL BE OBTAINED FROM AN APPROVED SOURCE AND SHALL BE FREE OF ALL DELETERIOUS MATERIALS. THE CRUSHED STONE BASE SHALL BE COMPACTED TO A DENSITY TO AT LEAST 100% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY TxDOT TEST METHOD TEX-113-E. SOIL MOISTURE SHOULD BE WITHIN 3% OF OPTIMUM. THE BASE MATERIAL SHOULD EXTEND AT LEAST 18 INCHES BEHIND THE CURB LINE.
C. COMPACTED SUBGRADE - THE EXPOSED SUBGRADE SHOULD BE PREPARED BY REMOVING ALL FILL MATERIAL AND THE TOP 8 INCHES OF BROWN SILTY CLAY, ROOTS, AND ORGANIC MATERIALS. IN THE AREA OF BORINGS B-7, B-12, AND B-13, A MINIMUM OF THE TOP 12 INCHES OF BROWN SILTY CLAY SHOULD BE REMOVED AND REPLACED WITH ADDITIONAL BASE. IN THESE AREAS THERE SHOULD BE A MINIMUM OF 6 INCHES OF ADDITIONAL BASE. THE EXPOSED SUBGRADE SHOULD BE PREPARED BY COMPACTING THE UPPER 8 INCHES TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY TxDOT TEST METHOD TEX-113-E OR 114-E. SOIL MOISTURE SHOULD BE WITHIN 3% OPTIMUM. FILL MATERIAL, IF NEEDED TO CONSTRUCT THE SUBGRADE, SHOULD BE A CLEAN SOIL, FREE OF ORGANIC MATERIALS, DEBRIS, AND ROCK GREATER THAN 4 INCHES.
D. DRAINAGE - THE STREET PAVEMENT SHALL BE SLOPED OR CROWNED FOR GOOD DRAINAGE.
E. TESTING - ALL SUBGRADE PREPARATION AND BASE COMPACTION SHOULD BE INSPECTED AND TESTED BY AN ENGINEERING/TESTING LABORATORY. THE MINIMUM TESTING FREQUENCY IS ONE TEST PER 500 LINEAR FEET OR MINIMUM OF THREE TESTS PER SITE VISIT. THE STREET SUBGRADE EXCAVATION SHOULD BE INSPECTED BY THE ENGINEER TO VERIFY EXTENT AND DEPTH OF REMOVAL OF THE EXPANSIVE CLAY SOILS.
F. STREET EMBANKMENTS - STREET EMBANKMENTS SHOULD BE SLOPED AWAY FROM THE STREET WHERE POSSIBLE AND NO STEEPER THAN 4 (HORIZONTAL) TO 1 (VERTICAL). EMBANKMENTS SHOULD BE COMPACTED TO 95% OF THE OPTIMUM DRY DENSITY IN ACCORDANCE WITH TxDOT TEST METHOD TEX 114-E AND MOISTURE SHOULD BE WITHIN 3% OPTIMUM.
2. PAVEMENT CONSTRUCTION
CONSTRUCTION OF ROADWAYS SHOULD PROCEED IN ACCORDANCE WITH THE CITY OF AUSTIN SPECIFICATIONS:
ITEM NO. 105S, CLEARING AND GRUBBING;
ITEM NO. 132S, EMBANKMENT (EARTH EMBANKMENT SECTION);
ITEM NO. 210S, FLEXIBLE BASE
ITEM NO. 236S, PROFFROOLING, AND
ITEM NO. 340, HOT MIX CONCRETE PAVEMENT
DURING SITE GRADING AND EXCAVATING ACTIVITIES, THE CONTRACTOR SHOULD WORK CLOSELY WITH THE GEOTECHNICAL ENGINEER TO PROMPTLY ASCERTAIN ACTUAL SUBGRADE CONDITIONS IN THE FIELD. ONCE IT HAS BEEN DETERMINED THAT WEATHERED LIMESTONE IS THE SUBGRADE, THE DEPTH OF EXCAVATION MAY BE LIMITED TO PROVIDE THE MINIMUM REQUIRED THICKNESS OF CLM.
ALL SOFT AND/OR PUMPING SOILS (IN AREAS OF EXISTING PONDS, STREAMS, WETLANDS, ETC.) AND ANY UNCONTROLLED FILL FROM OTHER ON - SITE CONSTRUCTION OR STOCKPILING OF MATERIAL WITHIN THE ROADWAYS SHOULD BE REMOVED PRIOR TO PLACING ROADWAY MATERIALS.
3. MANHOLE FRAMES, COVERS, AND WATER VALVE COVERS WILL BE RAISED TO FINISHED SURFACE GRADE BY A QUALIFIED CONTRACTOR. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO PLACING ROADWAY MATERIALS.
4. ALL COLLECTOR AND ARTERIAL STREETS SHALL HAVE AUTOMATIC SCREED CONTROL ON ASPHALTIC CONCRETE PAVEMENT CONSTRUCTION, PLACED AS PER ITEM 340 OF THE CITY OF AUSTIN STANDARDS SPECIFICATIONS.
5. AT INTERSECTIONS WHICH HAVE VALLEY DRAINAGE, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40' FROM THE INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. INLETS ON THE INTERSECTING STREET SHALL NOT BE CONSTRUCTED WITHIN 40 FEET OF THE VALLEY GUTTER.
6. AT THE INTERSECTIONS OF TWO 44' STREETS OR LARGER, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40 FEET FROM INTERSECTING CURB LINE UNLESS OTHERWISE NOTED.
7. PRIOR TO FINAL ACCEPTANCE OF A STREET OUTSIDE THE CITY LIMITS, STREET NAME SIGNS CONFORMING TO COUNTY STANDARDS SHALL BE INSTALLED BY DEVELOPER.
8. WHEN USING LINE STABILIZATION OF SUBGRADE, IT SHALL BE PLACED IN SLURRY FORM.
9. INSIDE THE AUSTIN CITY LIMITS, SIDEWALKS SHALL BE COMPLETED PRIOR TO ACCEPTANCE OF ANY TYPE I OR TYPE II DRIVE WAY APPROACHES AND/OR ISSUANCE OF A CERTIFICATE OF OCCUPANCY. WHEN OUTSIDE THE AUSTIN CITY LIMITS, LETTERS OF CREDIT MAY BE POSTED OR OTHER SUITABLE FINANCIAL ARRANGEMENTS MAY BE MADE TO INSURE CONSTRUCTION OF THE SIDEWALKS. IN EITHER CASE, SIDEWALKS ADJACENT TO "COMMON AREAS", PARKWAYS, OR OTHER LOCATIONS ON WHICH NO BUILDING CONSTRUCTIONS WILL TAKE PLACE, MUST BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE OF SUBDIVISION.

AUSTIN ENERGY NOTES

- 1. THE OWNER OF THE PROPERTY IS RESPONSIBLE FOR MAINTAINING CLEARANCES REQUIRED BY THE NATIONAL ELECTRIC SAFETY CODE, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS, CITY OF AUSTIN RULES AND REGULATIONS AND TEXAS STATE LAWS PERTAINING TO CLEARANCES WHEN WORKING IN CLOSE PROXIMITY TO OVERHEAD POWER LINES AND EQUIPMENT. AUSTIN ENERGY WILL NOT PROVIDE ELECTRIC SERVICE UNLESS REQUIRED CLEARANCES ARE MAINTAINED. ALL COSTS INCURRED BECAUSE OF FAILURE TO COMPLY WITH THE REQUIRED CLEARANCES WILL BE CHARGED TO THE OWNER.
2. AUSTIN ENERGY HAS THE RIGHT TO PRUNE AND/OR REMOVE TREES, SHRUBBERY AND OTHER OBSTRUCTIONS TO THE EXTENT NECESSARY TO KEEP EASEMENTS CLEAR. AUSTIN ENERGY WILL PERFORM ALL TREE WORK IN COMPLIANCE WITH CHAPTER 25-8, SUBCHAPTER B OF THE CITY OF AUSTIN LAND DEVELOPMENT CODE.
3. THE OWNER/DEVELOPER OF THIS SUBDIVISION/LOT SHALL PROVIDE AUSTIN ENERGY WITH ANY EASEMENT AND/OR ACCESS REQUIRED, IN ADDITION TO THOSE INDICATED, FOR THE INSTALLATION AND ONGOING MAINTENANCE OF OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES. THESE EASEMENTS AND/OR ACCESS ARE REQUIRED TO PROVIDE ELECTRIC SERVICE TO THE BUILDING AND WILL NOT BE LOCATED SO AS TO CAUSE THE SITE TO BE OUT OF COMPLIANCE WITH CHAPTER 25-8 OF THE CITY OF AUSTIN LAND DEVELOPMENT CODE.
4. THE OWNER SHALL BE RESPONSIBLE FOR INSTALLING TEMPORARY EROSION CONTROL, REVEGETATION AND TREE PROTECTION. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR ANY INITIAL TREE PRUNING AND TREE REMOVAL THAT IS IN WITHIN TEN FEET OF THE CENTER LINE OF THE PROPOSED OVERHEAD ELECTRICAL FACILITIES DESIGNED TO PROVIDE ELECTRIC SERVICE TO THIS PROJECT. THE OWNER SHALL INCLUDE AUSTIN ENERGY'S WORK WITHIN THE LIMITS OF CONSTRUCTION FOR THIS PROJECT.

APPENDIX P-4: STANDARD SEQUENCE OF CONSTRUCTION

- THE FOLLOWING SEQUENCE OF CONSTRUCTION SHALL BE USED FOR ALL DEVELOPMENT. THE APPLICANT IS ENCOURAGED TO PROVIDE ANY ADDITIONAL DETAILS APPROPRIATE FOR THE PARTICULAR DEVELOPMENT.
1. TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ES&S) AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION, INITIATE TREE MITIGATION MEASURES AND CONDUCT "PRE - CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE).
2. THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR MUST CONTACT THE DEVELOPMENT SERVICES DEPARTMENT, ENVIRONMENTAL INSPECTION, AT 512-974-2278, 72 HOURS PRIOR TO THE SCHEDULED DATE OF THE REQUIRED ON-SITE PRECONSTRUCTION MEETING.
3. THE ENVIRONMENTAL PROJECT MANAGER, AND/OR SITE SUPERVISOR, AND/OR DESIGNATED RESPONSIBLE PARTY AND THE GENERAL CONTRACTOR WILL FOLLOW THE EROSION SEDIMENTATION CONTROL PLAN (ES&S) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.
4. ROUGH GRADE THE POND(S) AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENTS OR INSIDE SHOULDER CONDITIONS. THE OUTLET SYSTEM DESIGN MUST CONSIST OF A SLUMP PIT OUTLET AND AN EMERGENCY SPILLWAY MEETING THE REQUIREMENTS OF THE DRAINAGE CRITERIA MANUAL AND/OR THE ENVIRONMENTAL CRITERIA MANUAL, AS REQUIRED. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT WATER QUALITY POND(S).
5. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ES&S) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.
6. BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.
7. ENSURE THAT ALL STORM DRAINS AND ASSOCIATED DRAINAGE INFRASTRUCTURE IS OPERATIONAL.
8. IN THE BARTON SPRINGS ZONE, THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR SHALL SCHEDULE A MID-CONSTRUCTION CONFERENCE TO COORDINATE CHANGES IN THE CONSTRUCTION SCHEDULE AND EVALUATE EFFECTIVENESS OF THE EROSION CONTROL PLAN AFTER POSSIBLE CONSTRUCTION ALTERATIONS TO THE SITE. PARTICIPANTS SHALL INCLUDE THE CITY INSPECTOR, PROJECT ENGINEER, GENERAL CONTRACTOR AND ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR. THE ANTICIPATED COMPLETION DATE AND FINAL CONSTRUCTION SEQUENCE AND INSPECTION SCHEDULE WILL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR.
9. PERMANENT WATER QUALITY POND(S) OR CONTROL STRUCTURE AND FILTER MEDIA WILL BE INSTALLED PRIOR TO CONCURRENTLY WITH REVEGETATION OF SITE.
10. COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.
11. UPON COMPLETION OF THE SITE CONSTRUCTION AND REVEGETATION OF A PROJECT SITE, THE DESIGN ENGINEER SHALL SUBMIT AN ENGINEER'S LETTER OF CONCURRENCE BEARING THE ENGINEER'S SEAL, SIGNATURE, AND DATE TO THE DEVELOPMENT SERVICES DEPARTMENT INDICATING THAT THE REQUIRED LANDSCAPING IS COMPLETE AND IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.
12. UPON COMPLETION OF LANDSCAPE INSTALLATION OF A PROJECT SITE, THE LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER OF CONCURRENCE TO THE DEVELOPMENT SERVICES DEPARTMENT INDICATING THAT CONSTRUCTION, INCLUDING REVEGETATION, IS COMPLETE AND IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.
13. AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS.
SOURCE: RULE NO. R161-17.03, 3-2-2017.

TCEQ NOTES

- 1. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
2. ALL PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST ALSO BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS.
3. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY.
4. WATER TRANSMISSION AND DISTRIBUTION LINES MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATERLINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE.
5. THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY AWWA FORMULAS.
6. ALL WATERLINES SHALL BE HYDROSTATIC LEAK TESTED IN CONFORMANCE WITH AWWA C500-93 FOR DUCTILE IRON PIPE AND AWWA C505-94 FOR PVC PIPE.
7. ALL WATERLINES SHALL BE DISINFECTED IN CONFORMANCE WITH AWWA C651-92.

TCEQ 217.53(d) SEPARATION DISTANCES

- (d) SEPARATION DISTANCES BETWEEN PUBLIC WATER SUPPLY PIPES AND WASTEWATER COLLECTION PIPES OR MANHOLES.
(1) COLLECTION SYSTEM PIPES MUST BE INSTALLED IN TRENCHES SEPARATE FROM PUBLIC WATER SUPPLY TRENCHES.
(2) COLLECTION SYSTEM PIPES MUST BE NO CLOSER THAN NINE FEET IN ANY DIRECTION TO A PUBLIC WATER SUPPLY LINE.
(3) IF A NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING GUIDELINES WILL APPLY.
(A) IF A COLLECTION SYSTEM PARALLELS A PUBLIC WATER SUPPLY PIPE THE FOLLOWING REQUIREMENTS APPLY.
(i) A COLLECTION SYSTEM PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC MEETING ASTM SPECIFICATIONS WITH AT LEAST 150 POUNDS PER SQUARE INCH (PSI) PRESSURE RATING FOR BOTH THE PIPE AND JOINTS.
(ii) A VERTICAL SEPARATION MUST BE AT LEAST TWO FEET BETWEEN THE OUTSIDE DIAMETERS OF THE PIPES.
(iii) A HORIZONTAL SEPARATION MUST BE AT LEAST FOUR FEET BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
(iv) A COLLECTION SYSTEM PIPE MUST BE BELOW A PUBLIC WATER SUPPLY PIPE.
(B) IF A COLLECTION SYSTEM PIPE CROSSES A PUBLIC WATER SUPPLY PIPE, THE FOLLOWING REQUIREMENTS APPLY.
(i) IF A COLLECTION SYSTEM IS CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, THE FOLLOWING REQUIREMENTS APPLY:
(i) A MINIMUM SEPARATION DISTANCE IS SIX INCHES BETWEEN OUTSIDE DIAMETERS OF PIPES.
(ii) A COLLECTION SYSTEM PIPE MUST BE BELOW A PUBLIC WATER SUPPLY PIPE.
(iii) COLLECTION SYSTEM PIPE JOINTS MUST BE LOCATED AS FAR AS POSSIBLE FROM AN INTERSECTION WITH A PUBLIC WATER SUPPLY LINE.
(i) IF A COLLECTION SYSTEM PIPE CROSSES UNDER A PUBLIC WATER SUPPLY PIPE AND THE COLLECTION SYSTEM PIPE IS CONSTRUCTED OF ACRYLONITRILE BUTADIENE STYRENE (ABS) TRUSS PIPE, SIMILAR SEWER PIPE, PLASTIC COMPOSITE PIPE, CLAY PIPE, OR CONCRETE PIPE WITH GASKETED JOINTS, THE FOLLOWING REQUIREMENTS APPLY:
(i) A MINIMUM SEPARATION DISTANCE IS TWO FEET.

TCEQ WPAP GENERAL CONSTRUCTION NOTES

- 1. WRITTEN CONSTRUCTION NOTIFICATION MUST BE GIVEN TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION MUST INCLUDE THE DATE WHEN THE REGULATED ACTIVITY WILL COMMENCE, THE LOCATION OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR AND THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
3. IF ANY SENSITIVE FEATURE IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
4. NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM IS INSTALLED WITHIN 150 FEET OF A DOMESTIC, INDUSTRIAL, OR PUBLIC WATER SUPPLY WELL, OR OTHER SENSITIVE FEATURE.
5. PRIOR TO COMMENCEMENT OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE TEMPORARY STORM WATER SECTION OF THE APPROVED EDWARDS AQUIFER PROTECTION PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BEEN PERMANENTLY STABILIZED.
6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS TO WATER QUALITY (E.G. FUGITIVE SEDIMENT IN STREET BEING WASHED INTO SURFACE STREAMS OR SENSITIVE FEATURES BY THE NEXT RAIN).
7. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS NOT LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME.
8. 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).
9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
10. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS. TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE, IN AREAS EXPERIENCING DROUGHTS WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SEASONAL ARID CONDITIONS. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
12. THE HOLDER OF ANY APPROVED EDWARDS AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURES, INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES.
B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER.
C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS. TCEQ 0992 (REV. 3/18/07)

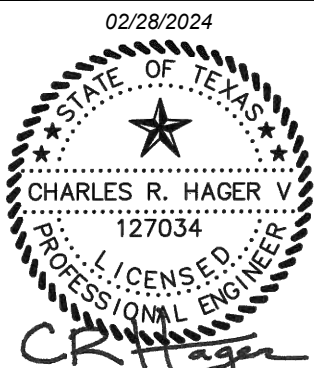
LEDGESTONE TERRACES SITE CONSTRUCTION PLANS

GENERAL NOTES

9208 LEDGESTONE TERRACE, AUSTIN, TX 78737

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

DESIGNED BY: DRAWN BY: CHECKED BY: DATE: 02/28/2024



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

JOB NUMBER: A116-1007 SHEET NO. GN01 OF 107 SHEETS



LOCATION OF EXISTING UNDERGROUND OR OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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**TRAVIS COUNTY EXHIBIT 482.301B
STANDARD CONSTRUCTION NOTES
FOR SITE PLAN**

- EACH DRIVEWAY MUST BE CONSTRUCTED IN ACCORDANCE WITH TRAVIS COUNTY CODE SECTION 482.309G, AND EACH DRAINAGE STRUCTURE OR SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL, UNLESS OTHER DESIGN CRITERIA ARE APPROVED BY TRAVIS COUNTY.
- BEFORE BEGINNING ANY CONSTRUCTION, THE OWNER MUST OBTAIN A TRAVIS COUNTY DEVELOPMENT PERMIT AND POST THE DEVELOPMENT PERMIT, THE TCEQ SITE NOTICE, AND ANY OTHER REQUIRED PERMITS AT THE JOB SITE.
- CONSTRUCTION MAY NOT TAKE PLACE WITHIN TRAVIS COUNTY RIGHT-OF-WAY UNTIL AFTER THE OWNER HAS SUBMITTED A TRAFFIC CONTROL PLAN TO TRAVIS COUNTY AND OBTAINED WRITTEN APPROVAL OF THE TRAFFIC CONTROL PLAN FROM TRAVIS COUNTY.
- THE CONTRACTOR AND PRIMARY OPERATOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION AND THE SWP3 IN THESE APPROVED PLANS. THE CONTRACTOR AND PRIMARY OPERATOR SHALL REQUEST TRAVIS COUNTY INSPECTION AT SPECIFIC MILESTONES IN THE SEQUENCE OF THE CONSTRUCTION OF THE SITE DEVELOPMENT CORRESPONDING TO THE PRIORITY INSPECTIONS SPECIFIED IN CONSTRUCTION SEQUENCING NOTES IN THESE APPROVED PLANS. DEVELOPMENT OUTSIDE THE LIMITS OF CONSTRUCTION SPECIFIED IN THE APPROVED PERMIT AND CONSTRUCTION PLANS IS PROHIBITED.
- BEFORE BEGINNING ANY CONSTRUCTION, ALL STORM WATER POLLUTION PREVENTION PLAN (SWP3) REQUIREMENTS SHALL BE MET, AND THE FIRST PHASE OF THE TEMPORARY EROSION CONTROL (ESC) PLAN INSTALLED WITH A SWP3 INSPECTION REPORT UPLOADED TO MYPERMITNOW.ORG. ALL SWP3 AND ESC PLAN MEASURES AND PRIMARY OPERATOR SWP3 INSPECTIONS MUST BE PERFORMED BY THE PRIMARY OPERATOR IN ACCORDANCE WITH THE APPROVED PLANS AND SWP3 AND ESC PLAN NOTES THROUGHOUT THE CONSTRUCTION PROCESS.
- BEFORE STARTING CONSTRUCTION, THE OWNER OR CONTRACTOR OR THEIR DESIGNATED REPRESENTATIVES SHALL SUBMIT A REQUEST VIA THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY TO REQUEST AND SCHEDULE A MANDATORY PRE-CONSTRUCTION CONFERENCE AND ESC INSPECTION. IF FURTHER ASSISTANCE IS NEEDED, THE TNR PLANNING AND ENGINEERING DIVISION STAFF OR TNR STORM WATER MANAGEMENT PROGRAM STAFF CAN BE CONTACTED BY TELEPHONE AT 512-854-9383.
- THE CONTRACTOR SHALL KEEP TRAVIS COUNTY TNR ASSIGNED INSPECTION STAFF CURRENT ON THE STATUS OF SITE DEVELOPMENT AND UTILITY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY TRAVIS COUNTY AND REQUEST PRIORITY INSPECTIONS THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY IN ACCORDANCE WITH THE SPECIFIC MILESTONES IN THE CONSTRUCTION SEQUENCING NOTES IN THESE APPROVED PLANS.
- CONTOUR DATA SOURCE: ONSITE CONTOUR DATA IS PER AN ON THE GROUND SURVEY BY LJA SURVEYING, INC. DATED DECEMBER 9, 2021. OFFSITE CONTOUR DATA IS PER CITY OF AUSTIN GIS DATA, 2' CONTOURS, DATED 2017.
- FILL MATERIAL MUST BE MANAGED AND DISPOSED OF IN ACCORDANCE WITH ALL REQUIREMENTS SPECIFIED IN THE APPROVED PLANS, SWP3, AND THE TRAVIS COUNTY CODE. THE CONTRACTOR SHALL STOCKPILE FILL AND CONSTRUCTION MATERIALS ONLY IN THE AREAS DESIGNATED ON THE APPROVED PLANS AND NOT WITHIN THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN OR THE 1 PERCENT ANNUAL CHANCE FLOODPLAIN WATERWAY SETBACK, CRITICAL ENVIRONMENTAL FEATURE SETBACK, OR OUTSIDE THE LIMITS OF CONSTRUCTION. DISPOSAL OF SOLID WASTE MATERIALS, AS DEFINED BY STATE LAW (e.g., LITTER, TIRES, DECOMPOSABLE WASTES, ETC.) IS PROHIBITED IN PERMANENT FILL SITES.
- BEFORE DISPOSING ANY EXCESS FILL MATERIAL OFF-SITE, THE CONTRACTOR OR PRIMARY OPERATOR MUST PROVIDE THE COUNTY INSPECTOR DOCUMENTATION THAT DEMONSTRATES THAT ALL REQUIRED PERMITS FOR THE PROPOSED DISPOSAL SITE LOCATION, INCLUDING TRAVIS COUNTY TCEQ NOTICE, AND OTHER APPLICABLE DEVELOPMENT PERMITS, HAVE BEEN OBTAINED. THE OWNER OR PRIMARY OPERATOR MUST REVISE THE SWP3 AND ESC PLAN IF HANDLING OR PLACEMENT OF EXCESS FILL ON THE CONSTRUCTION SITE IS REVISED FROM THE EXISTING SWP3. IF THE FILL DISPOSAL LOCATION IS OUTSIDE TRAVIS COUNTY OR DOES NOT REQUIRE A DEVELOPMENT PERMIT, THE CONTRACTOR OR PRIMARY OPERATOR MUST PROVIDE THE COUNTY INSPECTOR THE SITE ADDRESS, CONTACT INFORMATION FOR THE PROPERTY OWNER OF THE FILL.
- THE DESIGN ENGINEER IS RESPONSIBLE FOR THE ADEQUACY OF THE CONSTRUCTION PLANS. IN REVIEWING THE CONSTRUCTION PLANS, TRAVIS COUNTY WILL RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
- IN THE EVENT OF ANY CONFLICTS BETWEEN THE CONTENT IN THE SWP3 SITE NOTEBOOK AND THE CONTENT IN THE CONSTRUCTION PLANS APPROVED BY TRAVIS COUNTY, THE CONSTRUCTION PLANS SHALL TAKE PRECEDENCE.
- A MINIMUM OF TWO SURVEY BENCHMARKS SHALL BE SET, INCLUDING DESCRIPTION, LOCATION, AND ELEVATION; THE BENCHMARKS SHOULD BE TIED TO A TRAVIS COUNTY CONTROL BENCHMARK WHEN POSSIBLE.
- ANY EXISTING PAVEMENT, CURBS, SIDEWALKS, OR DRAINAGE STRUCTURES WITHIN COUNTY RIGHT-OF-WAY WHICH ARE DAMAGED, REMOVED, OR SILTED, WILL BE REPAIRED BY THE CONTRACTOR AT OWNER OR CONTRACTOR'S EXPENSE BEFORE APPROVAL AND ACCEPTANCE OF THE CONSTRUCTION BY TRAVIS COUNTY.
- CALL THE TEXAS EXCAVATION SAFETY SYSTEM AT 8-1-1 AT LEAST 2 BUSINESS DAYS BEFORE BEGINNING EXCAVATION ACTIVITIES.
- ALL STORM SEWER PIPES SHALL BE CLASS III RCP, UNLESS OTHERWISE NOTED.
- CONTRACTOR IS REQUIRED TO OBTAIN A UTILITY INSTALLATION PERMIT IN ACCORDANCE WITH TRAVIS COUNTY CODE SECTION 482.901(A)(3) BEFORE ANY CONSTRUCTION OF UTILITIES WITHIN ANY TRAVIS COUNTY RIGHT-OF-WAY.
- THIS PROJECT IS LOCATED ON FLOOD INSURANCE RATE MAP 48453C0566J
- TEMPORARY STABILIZATION MUST BE PERFORMED IN ALL DISTURBED AREAS THAT HAVE CEASED CONSTRUCTION ACTIVITIES FOR 14 DAYS OR LONGER, IN ACCORDANCE WITH THE STANDARDS DESCRIBED IN THE SWP3 AND ESC PLAN SHEET NOTES.
- PERMANENT SITE STABILIZATION/RE-VEGETATION MUST BE PERFORMED IMMEDIATELY IN ALL SITE AREAS WHICH ARE AT FINAL PLAN GRADE AND IN ALL SITE AREAS SPECIFIED IN THE APPROVED PLANS FOR PHASED RE-VEGETATION, IN ACCORDANCE WITH THE STANDARDS DESCRIBED IN THE SWP3 AND ESC PLAN SHEET NOTES.
- ALL TREES WITHIN THE RIGHT-OF-WAY AND DRAINAGE EASEMENTS SHALL BE SAVED OR REMOVED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS. TRAVIS COUNTY TREE PRESERVATION STANDARDS IN TRAVIS COUNTY CODE SECTION 482.973, INCLUDING INSTALLATION AND MAINTENANCE OF ALL SPECIFIED TREE PROTECTION MEASURES, MUST BE FOLLOWED DURING CONSTRUCTION.
- AN ENGINEER'S CONCURRENCE LETTER IN ACCORDANCE WITH TRAVIS COUNTY CODE SECTION 482.953 MUST BE SUBMITTED VIA THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY WHEN CONSTRUCTION IS SUBSTANTIALLY COMPLETE. THE ENGINEER'S CONCURRENCE LETTER MUST BE SUBMITTED BEFORE THE CONTRACTOR OR PRIMARY OPERATOR REQUESTS A FINAL INSPECTION BY TRAVIS COUNTY.
- SITE IMPROVEMENTS MUST BE CONSTRUCTED IN CONFORMANCE WITH THE ENGINEER'S CONSTRUCTION PLANS APPROVED BY TRAVIS COUNTY. NON-CONFORMANCE WITH THE APPROVED PLANS WILL DELAY FINAL INSPECTION APPROVAL BY THE COUNTY UNTIL PLAN CONFORMANCE IS ACHIEVED OR ANY REQUIRED PLAN REVISIONS ARE APPROVED.
- FINAL SITE STABILIZATION. ALL AREAS DISTURBED BY THE CONSTRUCTION MUST BE PERMANENTLY RE-VEGETATED AND ALL TEMPORARY SEDIMENT CONTROLS AND ACCUMULATED SEDIMENTATION MUST BE REMOVED BEFORE THE COUNTY WILL ISSUE A CERTIFICATE OF COMPLIANCE FOR FINAL SITE STABILIZATION AS PART OF FINAL INSPECTION AND PROJECT COMPLETION. A DEVELOPER'S CONTRACT, AS DESCRIBED IN THE SWP3 AND ESC NOTES SHEET MAY BE EXECUTED WITH TRAVIS COUNTY FOR CONDITIONAL ACCEPTANCE OF A PROJECT FOR WHICH HAS ESC FISCAL SECURITY POSTED AND FOR WHICH ALL ITEMS ARE COMPLETE.

EFFECTIVE ON: 9/1/2019

**TRAVIS COUNTY EXHIBIT 482.301G SEQUENCE OF
CONSTRUCTION AND PRIORITY INSPECTIONS -
SITE DEVELOPMENT**

THE OWNER AND PRIMARY OPERATOR MUST FOLLOW THIS BASIC SEQUENCE OF CONSTRUCTION FOR EACH SITE DEVELOPMENT, INCLUSIVE OF ALL NON-RESIDENTIAL SITE DEVELOPMENT PROJECTS, WITHIN THE FOLLOWING SEQUENCE OF CONSTRUCTION ARE LISTED PRIORITY INSPECTIONS THAT THE OWNER AND PRIMARY OPERATOR MUST REQUEST FROM A REPRESENTATIVE OF TRAVIS COUNTY'S STORM WATER MANAGEMENT PROGRAM INSPECTION TEAM. EACH PRIORITY INSPECTION MUST BE REQUESTED ONLINE THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR THE PROJECT. FOR ASSURANCE PURPOSES, A SECOND REQUEST TO TRAVIS COUNTY IS STRONGLY ENCOURAGED BY ADDITIONALLY SENDING AN E-MAIL TO ENV-INSPECT@TRAVISCOUNTYTX.GOV.

THE SEQUENCE FOR ITEMS 1-4 AND ITEMS 9-12 MUST NOT BE ALTERED, BUT THE SEQUENCE FOR ITEMS 5-8 MAY BE MODIFIED WITH THE WRITTEN APPROVAL OF THE COUNTY.

- ESC INSTALLATION. INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROLS (ESC) AND TREE PROTECTION MEASURES IN ACCORDANCE WITH THE APPROVED ESC PLAN SHEETS AND THE SWP3.
 - HAVE A QUALIFIED INSPECTOR (AS SPECIFIED IN SECTION 482.934(C)(3) OF THE TRAVIS COUNTY CODE) INSPECT THE TEMPORARY EROSION AND SEDIMENT CONTROLS AND PREPARE A CERTIFIED SWP3 INSPECTION REPORT REGARDING WHETHER THE TEMPORARY EROSION AND SEDIMENT CONTROLS WERE INSTALLED IN CONFORMANCE WITH THE APPROVED PLANS;
 - UPLOAD THE QUALIFIED INSPECTOR'S CERTIFIED SWP3 INSPECTION REPORT TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY; AND
 - REQUEST A MANDATORY PRE-CONSTRUCTION MEETING WITH TRAVIS COUNTY THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY GIVING AT LEAST 3 BUSINESS DAYS NOTIFICATION.
- PRE-CONSTRUCTION MEETING AND ESC INSPECTION. HOLD A MANDATORY PRE-CONSTRUCTION MEETING THAT ADDRESSES THE ITEMS IN EXHIBIT 482.950 AND THE ESC PRE-CONSTRUCTION INSPECTION BY THE COUNTY AND OBTAIN COUNTY'S APPROVAL TO START CONSTRUCTION. (PRIORITY INSPECTION)
- INSPECT FOR COMPLIANCE WITH SWP3 AND ESC PLAN. MAINTAIN AND INSPECT THE SWP3 CONTROLS AND PREPARE AND UPLOAD A WEEKLY CERTIFIED SWP3 INSPECTION REPORT THAT INCLUDES THE CONTENTS LISTED IN EXHIBIT 482.951 TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY.
- CONSTRUCT SEDIMENT BASIN(S). CONSTRUCT ANY STORM WATER POND(S) FIRST, WHENEVER APPLICABLE, TO BE FUNCTIONAL AS CONSTRUCTION SEDIMENT BASIN(S) BEFORE GRADING AND EXCAVATING THE ENTIRE SITE, AS FOLLOWS:
 - CLEAR, GRUB AND EXCAVATE ONLY THE SITE AREAS AND CUT AND FILL QUANTITIES NECESSARY TO CONSTRUCT THE POND(S) IN ACCORDANCE WITH THESE APPROVED PLANS AND THE MINIMUM STANDARDS DESCRIBED IN THE SWP3 AND ESC PLAN SHEET NOTES FOR THE TEMPORARY SEDIMENT BASIN EMBANKMENTS, WALLS, INFLOWS, OUTFALLS, DRAINAGE CONVEYANCE MEASURES, SEDIMENT CONTROLS AND STABILIZATION.
 - REQUEST COUNTY INSPECTION AND OBTAIN COUNTY'S WRITTEN APPROVAL OF THE TEMPORARY SEDIMENT BASIN(S) BEFORE PROCEEDING FURTHER IN THE SEQUENCE OF CONSTRUCTION. (PRIORITY INSPECTION)
- CONSTRUCT THE SITE IMPROVEMENTS. BEGIN THE PRIMARY SITE CLEARING, EXCAVATION AND CONSTRUCTION ACTIVITIES AND CONTINUE THE SWP3 AND ESC PLAN IMPLEMENTATION AND MAINTENANCE PER THE APPROVED PLANS.
- CONSTRUCT DRIVEWAY APPROACH AND RIGHT-OF-WAY IMPROVEMENTS. INSTALL DRIVEWAY APPROACH AND DRAINAGE AND ROAD IMPROVEMENTS IN THE COUNTY RIGHT-OF-WAY PER APPROVED PLANS, WHEN APPLICABLE. REQUEST A COUNTY PRE-FOUR INSPECTION OF THE DRIVEWAY THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY GIVING AT LEAST 3 BUSINESS DAYS NOTIFICATION. (PRIORITY INSPECTION)
- PERFORM TEMPORARY STABILIZATION IN ALL DISTURBED AREAS THAT HAVE CEASED CONSTRUCTION ACTIVITIES FOR 14 DAYS OR LONGER.
- PERFORM PERMANENT SITE STABILIZATION/RE-VEGETATION IMMEDIATELY IN ALL SITE AREAS AT FINAL PLAN GRADE AND IN ALL SITE AREAS SPECIFIED FOR PHASED RE-VEGETATION.
- COMPLETE PERMANENT WATER QUALITY CONTROLS. BEGIN COMPLETION OF PERMANENT WATER QUALITY CONTROL(S) AND INSTALL THE UNDERDRAIN PER APPROVED PLANS, WHEN APPLICABLE.
 - REMOVE CONSTRUCTION SEDIMENT, RE-ESTABLISH THE BASIN SUBGRADE AND INSTALL UNDERDRAIN PIPING.
 - REQUEST COUNTY INSPECTION AND OBTAIN COUNTY'S WRITTEN APPROVAL OF THE UNDERDRAIN PIPING INSTALLATION AND ASSOCIATED CONSTRUCTION MATERIALS (AGGREGATE, FILTER MEDIA, ETC.) BEFORE COVERING THE UNDERDRAIN AND PROCEEDING WITH CONSTRUCTION OF THE CONTROL. (PRIORITY INSPECTION)
- COMPLETE CONSTRUCTION SITE IMPROVEMENTS AND FINAL STABILIZATION PER THE APPROVED PLANS.
- PROVIDE ENGINEER'S CONCURRENCE LETTER THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY WHEN CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND REQUEST A FINAL INSPECTION BY TRAVIS COUNTY. (PRIORITY INSPECTION)
- OBTAIN A CERTIFICATE OF COMPLIANCE WHEN ALL FINAL INSPECTION PUNCH LIST ITEMS, INCLUDING FINAL SITE STABILIZATION AND REMOVAL OF TEMPORARY SEDIMENT CONTROLS, IF NECESSARY, PROVIDE A DEVELOPER'S CONTRACT TO THE COUNTY TO REQUEST CONDITIONAL ACCEPTANCE FOR USE OR OCCUPANCY OF THE SITE WITH ALL ITEMS COMPLETED EXCEPT RE-VEGETATION GROWTH COVERAGE. REQUEST A RE-INSPECTION WHEN RE-VEGETATION COVERAGE IS COMPLETE. (PRIORITY INSPECTION)

EFFECTIVE ON: 9/1/2019

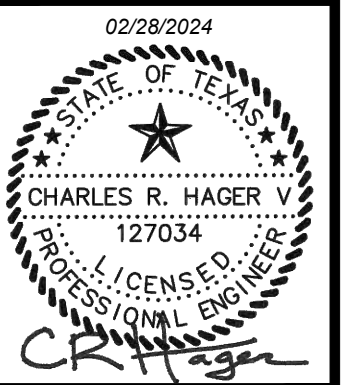
**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

TRAVIS COUNTY GENERAL NOTES

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	DESCRIPTION

DATE:	02/28/2024
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DRAWING NAME:	A:116-1007-GN02.DWG



LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78735

Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386

JOB NUMBER:	A116-1007
GN02	
SHEET NO.	03
OF 107 SHEETS	

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



C:\Users\jdoyle\OneDrive\Documents\2023\Design\Construction\482\482\482-1007-FR-GN02.dwg
User: jdoyle
Last Modified: Feb 29, 24 - 10:31
Plot Date/Time: Mar 01, 24 - 13:31:48

WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY
GENERAL CONSTRUCTION NOTES

CONTACT INFORMATION

Facilities Owner: (name/address/phone)
West Travis County PUA
13215 Bee Cave Parkway Building B, Suite 110
Bee Cave, Texas 78738
512/263-0100
jhechers@wtcpua.org

Land Owner:

OP III ATX I EDGESTONE LP (1989205)
500 W/ 15TH STREET, SUITE 700
AUSTIN, TEXAS 78701-3833
737/999-0255 (ext 1020)

Owner's representative responsible for plan alterations:
LJA ENGINEERING, INC. CONTACT PERSON: CHARLES R. HAGER, P.E.
512.439.4700

Maintenance: Person or firm responsible for erosion/sedimentation control

Contractor:
name: _____
address: _____
phone: _____

Person or firm responsible for tree/natural area protection:
name: _____
address: _____
phone: _____

Contractor:
name: _____
address: _____
phone: _____

SPOILS MANAGEMENT AND DISPOSAL NOTES

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

WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY (WTCPUA) NOTES

HOURS OF CONSTRUCTION

- 1. NO WORK SHALL BE DONE BETWEEN THE HOURS OF 8:00 P.M. AND 6:00 A.M. NOR ON SUNDAYS OR LEGAL HOLIDAYS WITHOUT THE WRITTEN PERMISSION OF THE WTCPUA IN EACH CASE, EXCEPT SUCH WORK AS MAY BE NECESSARY FOR THE PROPER CARE, MAINTENANCE AND PROTECTION OF THE WORK ALREADY DONE OR IN THE CASE OF AN EMERGENCY.

LIMITS OF CONSTRUCTION

- 1. THE LIMITS OF CONSTRUCTION SHALL BE BOUNDED BY THE RIGHT OF WAY LINE OR PERMANENT / TEMPORARY CASEMENT LIMITS SHOWN ON THE PLANS. LIMITS OF CONSTRUCTION MAY BE FURTHER RESTRICTED BY PLACEMENT OF SILT FENCE, TREE PROTECTION FENCING, OR OTHER APPURTENANCES AS SHOWN ON THE PLANS.
- 2. LIMITS OF CONSTRUCTION SHALL BE CLEARLY DELINEATED BY THE CONTRACTOR BY INSTALLING SILT FENCE, ORANGE TENSAR FENCING (4' - FOOT ROLL, TIED TO 6-FOOT POSTS SET AT 10-FOOT INTERVALS) OR OTHER BARRIERS AS APPROVED BY THE ENGINEER. ALL TEMPORARY BARRIERS SHALL BE REMOVED AT THE END OF THE PROJECT.
- 3. ANY AREAS OUTSIDE THE LIMITS OF CONSTRUCTION DISTURBED BY THE CONTRACTOR SHALL IMMEDIATELY BE RESTORED TO PRECONSTRUCTION CONDITION.

SANITARY FACILITIES

- 1. PROVISIONS SHALL BE MADE FOR NECESSARY SANITARY CONVENIENCES FOR THE USE OF LABORERS ON THE WORK. THE FACILITIES MUST BE PROPERLY SECLUDED FROM PUBLIC OBSERVATION AND SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.

PROTECTION OF BORE PITS

- 1. INSTALL BARRIER FENCING (TENSAR ORANGE FENCING OR CHAIN LINK FENCING) TO SURROUND THE BORE PITS. BARRIER FENCING SHALL REMAIN IN PLACE AT ALL TIMES WHILE THE BORE PIT IS OPEN. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY AND SAFETY AT THE BORE PITS.

HORIZONTAL CONTROLS

- 1. ALL LINEWORK SHALL BE STAKED PRIOR TO CONSTRUCTION WITH SEALED CUT SHEETS PROVIDED TO THE WTCPUA INSPECTOR PRIOR TO CONSTRUCTION.

CONSTRUCTION SEQUENCING

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

TRAFFIC CONTROL NOTES (INCLUDE IF APPLICABLE)

- 1. PLANS SHALL INDICATE RESPONSIBLE AGENT FOR TRAFFIC CONTROL (ENGINEER OR CONTRACTOR).
- 2. CONTRACTOR SHALL MAINTAIN REASONABLE LOCAL VEHICULAR TRAFFIC THROUGHOUT CONSTRUCTION OPERATIONS.
- 3. CONTRACTOR SHALL PROVIDE SIGNS, BARRICADES, FLAGGERS, AND OTHER MEASURES AS REQUIRED TO ALLOW FOR VEHICULAR AND PEDESTRIAN TRAFFIC TO PROCEED SAFELY WITH MINIMUM INCONVENIENCE.
- 4. SIGNS, BARRICADES, FLAGGERS, AND RELATED WORK SHALL BE IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND WITH THE REQUIREMENTS OF THE GOVERNING CITY/COUNTY.
- 5. FOR ANY ACTIVITY WITHIN TXDOT RIGHT-OF-WAY, PROJECT MUST HAVE A TXDOT PERMIT. A COPY OF THE TXDOT PERMIT SHALL BE PROVIDED TO THE WTCPUA PRIOR TO CONSTRUCTION.

SWPPP NOTES

- THIS PROJECT IS SUBJECT TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) TEXAS POLLUTION DISCHARGE ELIMINATION SYSTEM (TPDES) GENERAL PERMIT TXR150000 FOR CONSTRUCTION ACTIVITIES. THE GENERAL PERMIT REQUIRES THE PREPARATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH HAS BEEN PROVIDED BY THE OWNER FOR USE BY THE CONTRACTOR. THE OWNER SHALL PROVIDE THE OWNER'S NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT) TO THE TCEQ. THE CONTRACTOR'S RESPONSIBILITIES ARE AS FOLLOWS:
- 1. MAINTAIN A COPY OF THE SWPPP AND A SET OF CONSTRUCTION PLANS WITH THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN AT THE WORK SITE AT ALL TIMES.
- 2. FILE A NOTICE OF INTENT (NOI) AND APPLICABLE PAYMENT TO THE TCEQ AT LEAST 2 DAYS PRIOR TO SITE DISTURBANCE.
- 3. POST A COPY OF THE OWNER'S AND CONTRACTOR'S NOI FORMS AT THE WORK SITE.
- 4. SIGN THE CERTIFICATION AND OBTAIN A SIGNED CERTIFICATION STATEMENT FROM ALL SUBCONTRACTORS RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL MEASURES WHICH INDICATES THAT THE CONTRACTOR AND SUBCONTRACTOR UNDERSTANDS THE PERMIT REQUIREMENTS (FORMS ARE IN THE SWPPP).
- 5. FOLLOW AND COMPLY WITH ALL ASPECTS OF THE TPDES GENERAL PERMIT NO. TXR150000. THIS INCLUDES BUT IS NOT LIMITED TO FIELD INSPECTIONS AND REPORT, MAINTAINING AND REPAIRING EROSION CONTROLS AND UPDATING EROSION CONTROLS AND UPDATING EROSION CONTROL PLAN SHEETS BASED ON FIELD CHANGES AND MODIFICATIONS.
- 6. FILE A COPY OF THE CONTRACTOR'S NOTICE OF TERMINATION (NOT) WITH THE TCEQ ONCE THE WORK IS COMPLETED IN ACCORDANCE WITH THE TPDES GENERAL PERMIT NO. TXR-150000 AND HAS BEEN ACCEPTED BY THE OWNER.

WTCPUA WATER & WASTEWATER GENERAL CONSTRUCTION NOTES

- 1. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE STATE STATUTES AND U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS (O.S.H.A.). COPIES OF O.S.H.A. STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE. INFORMATION AND RELATED REFERENCE MATERIALS MAY BE OBTAINED FROM O.S.H.A. AUSTIN AREA OFFICE - LA COSTA GREEN BLDG 16333, LA POSADA DR., SUITE 375, AUSTIN, TEXAS 78752-3832, 512-374-0271.
- 2. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND TO THE STATE LAW, (VERNON'S ANNOTATED TEXAS STATUTES, ARTICLE 1436 (6)) AND THE NEED FOR EFFECTIVE PRECAUTIONARY MEASURES WHEN OPERATING IN THE VICINITY OF ELECTRICAL LINES. THE CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY REQUIREMENTS, AND FOR COORDINATION OF ALL WORK WITH THE APPROPRIATE ELECTRIC UTILITY COMPANY.
- 3. THE CONTRACTOR SHALL CONTACT THE ONE-CALL BOARD OF TEXAS AT 811 OR 1-800-545-6005 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION. THE LOCATION AND TYPE OF UTILITIES AND UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. IN ADDITIONAL TO NORMAL PRECAUTIONS WHEN EXCAVATING, USE EXTRA CAUTION WHEN EXCAVATING WITHIN 25 FEET OF ANY UTILITIES SHOWN ON THE PLANS.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION BETWEEN HIMSELF AND OTHER CONTRACTORS AND UTILITIES IN THE VICINITY OF THE PROJECT. THIS INCLUDES ALL WATER, WASTEWATER, GAS, ELECTRICAL, TELEPHONE, CABLE TELEVISION, AND STREET AND UTILITY UTILITIES. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER AND WTCPUA INSPECTOR WITHIN TWENTY-FOUR (24) HOURS.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL SPOIL MATERIAL FROM THE CONSTRUCTION SITE. ALL SPOILS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED SPOIL SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SECURING A PERMIT FOR THE SITE. THE CONTRACTOR SHALL NOTIFY THE WTCPUA INSPECTOR AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO DISPOSAL OF THE MATERIAL. NO SPOILS ARE TO REMAIN OVERNIGHT IN THE FLOODPLAIN.
- 6. NO BLASTING OR BURNING WILL BE ALLOWED.
- 7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AT HIS EXPENSE, ALL UTILITIES, PAVEMENT, CURB, FENCES OR ANY OTHER ITEMS DAMAGED DURING CONSTRUCTION REGARDLESS OF WHETHER THESE ITEMS ARE SHOWN ON THE CONSTRUCTION PLANS.
- 8. WHENEVER EXISTING UTILITIES, INDICATED OR NOT ON PLANS, PRESENT OBSTRUCTIONS TO GRADE AND/OR ALIGNMENT OF PROPOSED PIPE, CONTRACTOR IS TO IMMEDIATELY NOTIFY THE ENGINEER WHO WILL DETERMINE IF EXISTING IMPROVEMENTS ARE TO BE RELOCATED OR IF THE GRADE AND/OR ALIGNMENT OF PROPOSED PIPE IS TO BE CHANGED.
- 9. DUST PREVENTION SHALL BE PROVIDED BY THE CONTRACTOR AT HIS OWN EXPENSE. DUST CONTROL SHALL INCLUDE SPRAYING OF WATER ON ALL DISTURBED AREAS, SPOIL PILES, OR HAUL MATERIALS ASSOCIATED WITH THE PROJECT OR OTHER METHODS APPROVED BY THE WTCPUA.
- 10. CLEANUP - UPON COMPLETION AND BEFORE MAKING APPLICATION FOR ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL CLEAN ALL STREETS AND ALL GROUND OCCUPIED BY HIM IN CONNECTION WITH THE WORK OF ALL RUBBISH, EXCESS MATERIALS, EXCESS EXCAVATED MATERIALS, TEMPORARY STRUCTURES AND EQUIPMENT. ALL PARTS OF THE WORK SHALL BE LEFT IN A NEAT AND PRESENTABLE CONDITION SATISFACTORY TO THE WTCPUA AND OTHER GOVERNMENTAL BODIES HAVING JURISDICTION PRIOR TO SUBMITTAL OF THE FINAL PAYMENT.
- 11. THE CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESSES AND RESIDENCES AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS TO MINIMIZE DISRUPTION OF DELIVERIES, PARKING, AND OTHER ACTIVITIES.
- 12. DEWATERING, IF NECESSARY, SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT CONSTITUTE A BASIS FOR ADDITIONAL PAYMENT.
- 13. THE MINIMUM DEPTH OF COVER FROM TOP OF PIPE TO FINISHED GRADE FOR ALL WATER LINES SHALL BE FOUR FEET. INSTALL LINES TO AVOID HIGH POINTS.
- 14. CONCRETE SHALL BE CLASS 'A' WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI, UNLESS OTHERWISE NOTED.
- 15. REINFORCING STEEL SHALL BE ASTM A 615M, GRADE 60 UNLESS OTHERWISE NOTED.
- 16. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE WTCPUA MUST RELY ON THE ADEQUACY OF THE DESIGN ENGINEER. APPROVAL OF THESE PLANS BY THE WTCPUA DOES NOT RELEASE THE DESIGN ENGINEER OF THESE RESPONSIBILITIES.

WEST TRAVIS COUNTY PUA WATER AND WASTEWATER UTILITY NOTES

- 1. WEST TRAVIS COUNTY PUA IS THE WATER AND / OR WASTEWATER SERVICE PROVIDER FOR THIS PROJECT. A PRE-CONSTRUCTION MEETING WITH THE WTCPUA SHALL BE HELD PRIOR TO COMMENCEMENT OF CONSTRUCTION TO SCHEDULE INSPECTION OF INSTALLATION OF WATER/WASTEWATER FACILITIES. WATER FACILITIES WILL BE INSPECTED UP TO, AND INCLUDING, THE WATER METER AND/OR FIRE HYDRANTS. THE CONTACT NUMBER FOR WTCPUA IS (512) 263-0100.
- 2. THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND STANDARD DETAILS CURRENT AT THE TIME OF CONSTRUCTION SHALL GIVE MATERIALS AND METHODS USED TO PERFORM THIS WORK. CITY OF AUSTIN SPECIFICATIONS AND STANDARD DETAILS ARE AVAILABLE AT [HTTPS://LIBRARY.MUNICIPLE.CODING/CENTRAL/CODING/EQUIVALENT/STANDARD/61](https://library.municode.com/tx/austin/codes) AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI [§290.44(A)(1)].
- 3. CONTRACTOR SHALL OBTAIN ALL APPROVALS AND PERMITS, INCLUDING BUT NOT LIMITED TO STREET/DRIVEWAY CUT AND UTILITY CUT PERMITS FROM THE APPROPRIATE GOVERNMENTAL AGENCY BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR ALLEY.
- 4. THE WTCPUA SHALL BE CONTACTED AT (512) 263-0100 AT LEAST 48 HOURS BEFORE CONNECTING TO THEIR EXISTING WATER AND/OR WASTEWATER FACILITIES.
- 5. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM AT 811 OR 1-800-545-6005 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION. IN ADVANCE OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS.
- 6. NO OTHER UTILITY SERVICE/APURTENANCES SHALL BE PLACED NEAR THE PROPERTY LINE, OR OTHER ASSIGNED LOCATION DESIGNATED FOR WATER AND WASTEWATER UTILITY SERVICE THAT WOULD INTERFERE WITH WATER AND/OR WASTEWATER SERVICES.
- 8. WHERE WATER LINES AND SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §20.17 (5)(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION). ANY DEVIATION THESE STANDARDS SHALL REQUIRE A VARIANCE APPROVED BY TCEQ BEFORE SUBMITTING PIPING ASSIGNMENTS TO THE WTCPUA.
- 9. THE CITY OF AUSTIN SPECIFICATION ITEM 509S WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY MEASURE. CONTRACT DOCUMENTS, WHICH INCLUDE A TRENCH SAFETY PLAN SIGNED AND SEALED BY A TEXAS PROFESSIONAL ENGINEER AND A PAY ITEM FOR TRENCH SAFETY MEASURES, IN COMPLIANCE WITH OSHA, STATE, COUNTY, AND CITY REQUIREMENTS BEFORE BEGINNING WORK ON THE PROJECT.
- 10. ALL MATERIAL TESTS, INCLUDING SOIL DENSITY TESTS AND RELATED SOIL ANALYSIS, SHALL BE ACCOMPLISHED BY AN INDEPENDENT LABORATORY FUNDED BY THE OWNER IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 1804S.4.
- 11. CONNECTIONS TO EXISTING WTCPUA WATER LINES SHALL BE MADE BY CUT-IN TEES IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(24). ISOLATION VALVES SHALL BE INSTALLED ON THE ENDS OF THE CUT-IN TEE, AS NECESSARY. A SHUT-OFF VALVE PLAN SHALL BE PROVIDED SHOWING THE LOCATION OF EXISTING GATE VALVES IN THE VICINITY OF THE CONNECTION. THE SHUT-OFF PLAN SHALL IDENTIFY ALL AFFECTED PROPERTY OWNERS. CONTRACTOR SHALL PERFORM ALL WORK AND SHALL FURNISH ALL MATERIALS, INCLUDING DRAINING AND CUTTING INTO EXISTING PIPING AND CONNECTING A NEW PIPELINE OR OTHER EXTENSION INTO THE EXISTING PRESSURE PIPING, FORMING IN ADDITION TO THE POTABLE WATER TRANSMISSION AND DISTRIBUTION NETWORK AND PERFORMING NECESSARY SHUTOFFS. CONTRACTOR SHALL SCHEDULE ALL SUCH CONNECTIONS IN ADVANCE AND SUCH SCHEDULE SHALL BE APPROVED BY THE WTCPUA BEFORE BEGINNING THE WORK. AT LEAST 48 HOURS NOTICE SHALL BE GIVEN TO WTCPUA PRIOR TO MAKING THE CONNECTION, AND A REPRESENTATIVE FROM THE WTCPUA SHALL BE PRESENT WHEN THE CONNECTION IS MADE. PRESSURE TAPS MAY BE APPROVED ON A CASE-BY-CASE "SIZE ON SIZE" TAPS WILL NOT BE PERMITTED. WHEN APPROVED, ANY TAPS SHALL BE MADE BY USE OF AN APPROVED FULL CIRCLE, GASKETED CAST IRON OR DUCTILE IRON TAPPING SLEEVE. CONCRETE BLOCKING SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES PRIOR TO MAKING THE PRESSURE TAP AND THE USE OF PRECAST BLOCKS MAY BE USED TO HOLD THE TAP IN ITS CORRECTION POSITION PRIOR TO BLOCKING. THE BLOCKING BEHIND AND UNDER THE TAP SHALL HAVE A MINIMUM OF 24 HOURS CURING TIME BEFORE THE VALVE CAN BE REOPENED FOR SERVICE FROM THAT TAP. CONTRACTOR SHALL NOTIFY THE WTCPUA INSPECTOR A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE FOR THE WTCPUA TO NOTIFY THE AFFECTED CUSTOMERS. THE WTCPUA SHALL BE PRESENT WHILE ALL WORK IS PERFORMED TO MAKE THE CONNECTION.
- 12. THRUST RESTRAINT SHALL BE PROVIDED BY METAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(22).
- 13. FIRE HYDRANTS SHALL BE SET IN ACCORDANCE WITH CITY OF STANDARD SPECIFICATION ITEM 511S.3 E AND SHALL BE APPROVED FIRE DEPARTMENT OR OTHER APPROPRIATE PARTY PRIOR TO INSTALLATION. FIRE HYDRANTS ON MAINS UNDER CONSTRUCTION SHALL BE SECURELY WRAPPED WITH A POLY WRAP BAG AND TAPED INTO PLACE. THE POLY WRAP WILL BE REMOVED WHEN THE MAINS ARE ACCEPTED AND PLACED IN SERVICE. FIRE HYDRANTS THAT ARE TO BE USED AS DRAIN HYDRANTS SHALL BE PAINTED SILVER W/ BLUE CAPS PRIOR TO ACCEPTANCE. WHERE STORZ ADAPTORS ARE REQUIRED (HAY'S COUNTY), FIRE HYDRANTS SHALL BE MANUFACTURED WITH INTEGRAL STORZ ADAPTORS.
- 14. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(29) AND/OR TCEQ RULES.
- 15. TEST PRESSURE FOR 2-HOUR TEST SHALL BE AT 175 PSI AT THE LOWEST POINT IN THE LINE.

NOTE:
PRIOR TO PRESSURE TESTING, CONTRACTOR SHALL VERIFY THAT THRUST BLOCKING AND/OR THRUST RESTRAINT BACK TO AND INCLUDING THE VALVE AGAINST WHICH THE PRESSURE TEST SHALL BE PERFORMED, HAS BEEN INSTALLED TO AT LEAST THE SPECIFICATIONS OF THIS PROJECT. FAILURE TO VERIFY THAT THRUST BLOCKING AND/OR THRUST RESTRAINT IN THE EXISTING LINE MEETS OR EXCEEDS THE SPECIFICATIONS OF THIS PROJECT MAY RESULT IN SERIOUS DAMAGE TO THE EXISTING WATERLINE.

- 16. WATER LINES SHALL BE FILLED WITH WATER AND ALL AIR EXPELLED AT LEAST 24 HOURS BEFORE TESTING. ALL GASKETED LATERAL AND DRAIN VALVE LEADS, WITH THE HYDRANT VALVES CLOSED AND NOZZLE CAPS OPEN SHALL BE INCLUDED IN THE TESTS.
- 17. CONTRACTOR SHALL SUBMIT A DISINFECTION AND FLUSHING PLAN IN ACCORDANCE WITH AWWA STANDARDS TO THE WTCPUA FOR APPROVAL. REQUIRED FLUSHING VOLUMES, FLUSHING SCHEDULE, AND METHOD OF DISPOSAL OF FLUSH WATER SHALL BE IN ACCORDANCE WITH THE APPROVED PLAN.
- 18. GATE VALVES SHALL BE RESILIENT SEATED GATE VALVES CONFORMING TO AWWA C509, WITH A MINIMUM RATED WORKING PRESSURE OF 250 PSIG.
- 19. FORCE MAIN TESTINGS SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(27) AND/OR TCEQ RULES.
- 20. GRAVITY SANITARY SEWER MAIN TESTINGS SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATION ITEMS 510.3(26) AND/OR TCEQ RULES. IN ADDITION, ALL GRAVITY SANITARY SEWER MAINS SHALL BE FOLLOWED PRIOR TO ACCEPTANCE BY WTCPUA. DIGITAL FILES (via CD-ROM) CLEARLY SHOWING TEST LOGS/RECORDING SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOLLOWING INSPECTION.
- 21. LOCATOR 'FINDER' WIRE - ALL NON-METALLIC WATER LINES SHALL HAVE A FINDER WIRE LOCATED ABOVE THE PIPE. THE WIRE SHALL BE POLY-INSULATED NO. 10 SOLID COPPER AND WILL TERMINATE AT EACH ISOLATION VALVE SUCH THAT IT IS ACCESSIBLE FROM THE VALVE BOX.
- 22. LOCATOR 'FINDER' WIRE - ALL NON-METALLIC WASTEWATER LINES SHALL HAVE A FINDER WIRE LOCATED ABOVE THE PIPE. THE WIRE SHALL BE POLY-INSULATED NO. 10 SOLID COPPER AND WILL TERMINATE AT READILY ACCESSIBLE LOCATIONS THROUGHOUT THE COLLECTION SYSTEM.
- 23. ALL VALVE RISERS SHALL HAVE A 1'-6" SQUARE CONCRETE BOX POURED AROUND THEM AT FINISHED GRADE.
- 24. ALL MANHOLES SHALL BE LINED WITH A CORROSION RESISTANT LINING APPROVED BY THE WTCPUA.
- 25. BOLTED AND GASKETED COVERS SHALL BE USED FOR ALL MANHOLES LOCATED IN THE 100-YEAR FLOODPLAIN, WHERE THERE ARE MORE THAN THREE GASKETED MANHOLES IN A ROW. VENTS SHALL BE PROVIDED ON EVERY THIRD MANHOLE.
- 26. THE DOWNSTREAM END OF ANY FORCE MAIN SHALL BE TERMINATED IN A SANITARY SEWER MANHOLE IN A MANNER TO MINIMIZE TURBULENCE.
- 27. CONTRACTOR SHALL HAVE NECESSARY EROSION AND SEDIMENTATION CONTROLS IN PLACE PRIOR TO COMMENCING WATER/WASTEWATER FACILITY CONSTRUCTION.
- 28. RECORD DRAWINGS, AS STIPULATED BY THE WTCPUA, SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR VERIFICATION AND FURNISHED TO THE WTCPUA UPON COMPLETION OF THE PROJECT.
- 29. THE WTCPUA WILL OWN AND OPERATE ALL WATER LINES AND APPURTENANCES UP TO AND INCLUDING THE WATER METER. THESE IMPROVEMENTS WILL BE DEFINED BY A RECORDED EASEMENT OR IN PUBLIC RIGHT-OF-WAY.
- 30. ANY PORTIONS OF WASTEWATER LINES INCLUDING SERVICES THAT ARE LOCATED OUTSIDE OF A RECORDED EASEMENT OR PUBLIC RIGHT-OF-WAY WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER, OR HIS/HER ASSIGNS.
- 31. WHERE EXISTING WATER AND/OR WASTEWATER INFRASTRUCTURE IS TO BE ABANDONED, THE ENGINEER SHALL SUBMIT AN ABANDONMENT PLAN FOR APPROVAL BY THE WTCPUA.
- 32. WATER SERVICE LINES SHALL BE INSTALLED USING HDPE PIPE. COPPER IS NOT ALLOWED.
- 33. FOR ANY STORM SEWER LINE CROSSING A WATER OR WASTEWATER LINE CLOSER THAN 18", THE STORM SEWER PIPE SHALL BE LAID SUCH THAT NO STORM SEWER JOINTS WILL BE OVER THE WATER PIPE CROSSING.

OTHER NOTES - ENGINEER IS RESPONSIBLE FOR INCLUDING ALL APPLICABLE NOTES, INCLUDING BUT NOT LIMITED TO COUNTY, CITY, TXDOT, STATE, FIRE DEPARTMENT, TCEQ (CZP, WPA), ORGANIZED SEWAGE COLLECTION SYSTEM NOTES, GENERAL CONSTRUCTION NOTES). ENGINEER IS RESPONSIBLE FOR ENSURING THE CURRENT ADOPTED VERSION OF ALL NOTES IS INCLUDED IN THE CONSTRUCTION PLANS.

TCEQ WATER DISTRIBUTION SYSTEM

GENERAL CONSTRUCTION NOTES

- (REVISIONS FEBRUARY 2019 OR LATEST VERSION)
- 1. THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. AT A MINIMUM, CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS MEET TCEQ'S RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS.
- 2. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/NSF INTERNATIONAL STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI [§290.44(A)(1)].
- 3. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS [§290.44(A)(2)].
- 4. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY [§290.44(A)(3)].
- 5. ALL WATER LINE CROSSINGS OF WASTEWATER MAINS SHALL BE PERPENDICULAR [§290.44(E)(4)(B)].
- 6. WATER TRANSMISSION AND DISTRIBUTION LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE [§290.44(A)(4)].
- 7. THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25 PERCENT [§290.44(B)].
- 8. THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES WITH VENT OPENINGS TO THE ATMOSPHERE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN EQUIVALENT [§290.44(D)(1)].
- 9. THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION [§290.44(F)(1)].
- 10. WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATERLINE SHALL BE INSTALLED IN A SEPARATE WATERIGHT PIPE ENCASEMENT. VALVES MUST BE PROVIDED ON EACH SIDE OF THE CROSSING WITH FACILITIES TO ALLOW THE UNDERWATER PORTION OF THE SYSTEM TO BE ISOLATED AND TESTED [§290.44(F)(2)].
- 11. PURSUANT TO 30 TAC §290.44(A)(5), THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE. INCLUDE THE FORMULAS IN THE NOTES ON THE PLANS.
 - THE HYDROSTATIC LEAKAGE RATE FOR POLY(VINYL CHLORIDE) (PVC) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICAN WATER WORKS ASSOCIATION (AWWA) C-605 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE.

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

WHERE:

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

○ THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-600 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE.

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

WHERE:

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

- 12. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET §290.44(E)(1)-(4).
- 13. THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT [§290.44(E)(5)].
- 14. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION [§290.44(E)(9)].
- 15. SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE [§290.44(E)(7)].
- 16. THE METHOD OF DISPOSAL OF FLUSH WATER SHALL BE IN ACCORDANCE WITH TCEQ DRAINFIELDS [§290.44(E)(8)].
- 17. THE CONTRACTOR SHALL DISINFECT THE NEW WATERLINES IN ACCORDANCE WITH AWWA STANDARD C-651-14 OR MOST RECENT, THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATERLINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER [§290.44(F)(3)].
- 18. DE-CHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C655-09 OR MOST RECENT.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



Know what's below. Call before you dig.

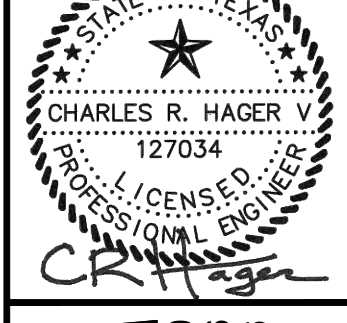
LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS

REVISIONS

NO.	DESCRIPTION	DATE

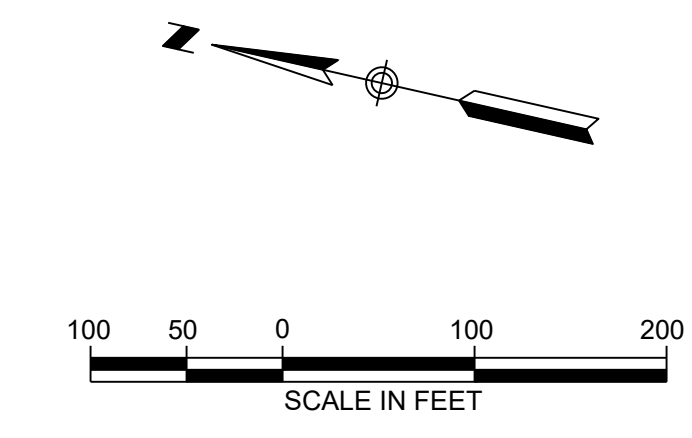
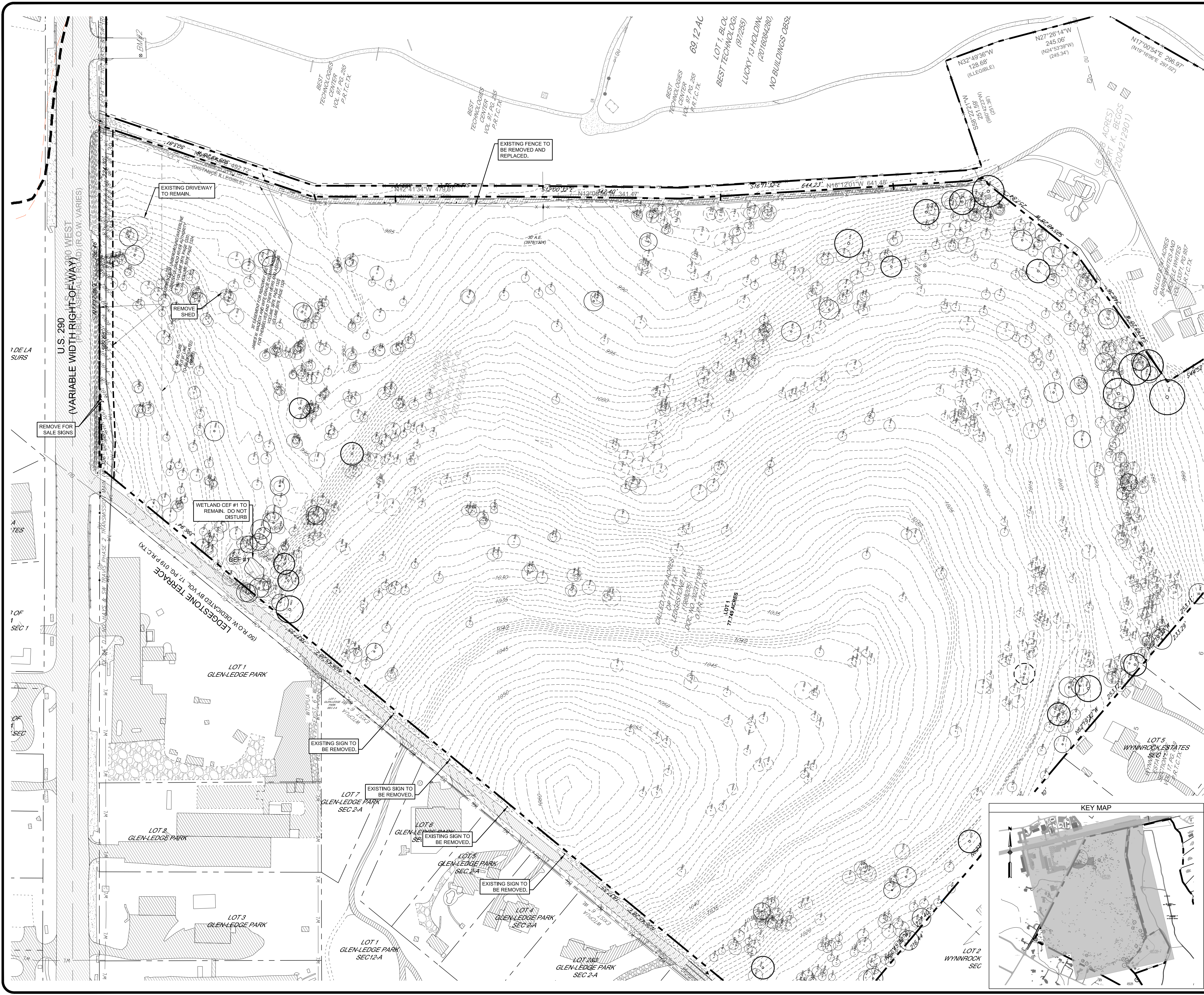
DATE: 8/28/2024	DESIGNED BY: _____
DRAWN BY: _____	CHECKED BY: _____

02/28/2024



LJA Engineering, Inc.
7500 Rialto Boulevard
Building II, Suite 100
Austin, Texas 78738
Phone 512.439.4700
Fax 512.439.4716
FRN-F-1586

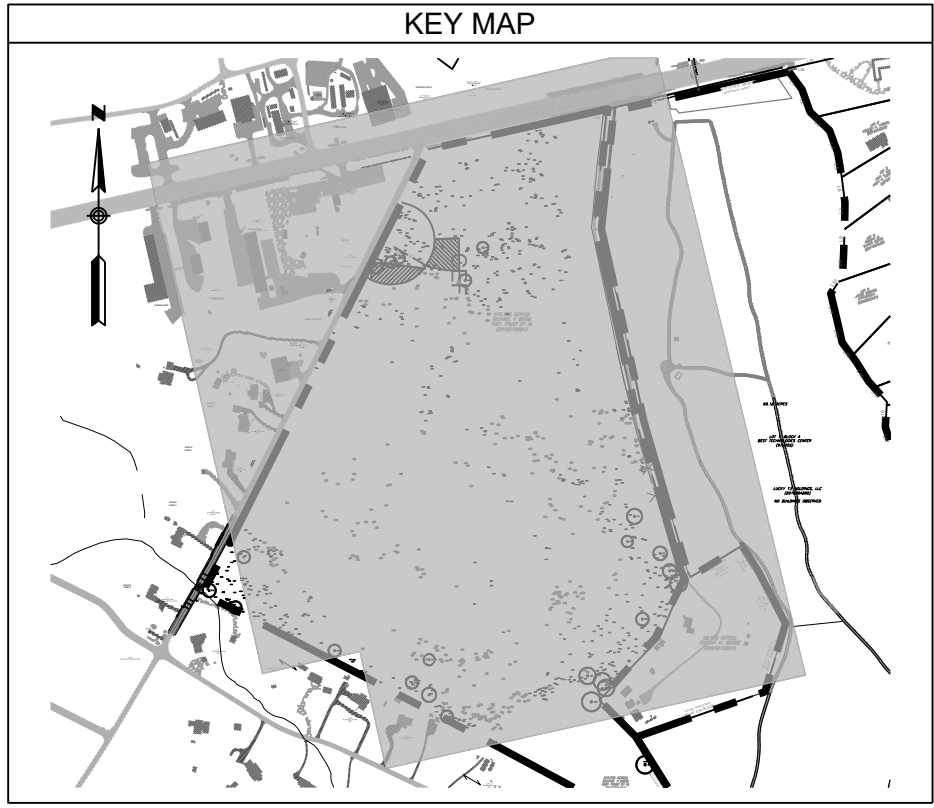
JOB NUMBER: A116-1007
GN03
SHEET NO. 04 OF 107 SHEETS



LEGEND

EXISTING	
— ST —	STORM SEWER LINE
— WW —	WASTEWATER LINE
— WL —	WATER LINE
⊗	WATER VALVE
⊕	FIRE HYDRANT
⊙	WASTEWATER MANHOLE
⊙	STORMSEWER MANHOLE
⊙	12" REBAR FOUND (OR AS NOTED)
⊙	12" REBAR WITH CAP FOUND
⊙	12" REBAR WITH CHAPARRAL CAP SET
⊙	WATER METER
⊙	UTILITY POLE
⊙	OVERHEAD UTILITIES
⊙	ELEC. UTILITY
⊙	ELEC. MANHOLE
⊙	LIGHT POLE
⊙	TELEPHONE UTILITY
⊙	UNDERGROUND FIBER OPTIC MARKER
⊙	TELEPHONE MANHOLE
⊙	UNDERGROUND GAS MARKER
⊙	CHAIN LINK FENCE
---	PROPERTY BOUNDARY
---	ADJACENT PROPERTY BOUNDARY
---	EASEMENT LINE
---	FEMA FLOODPLAIN LINE
---	ATLAS 14 100-YEAR FLOODPLAIN LINE
---	SETBACK LINE
---	50' CEF SETBACK
---	150' CEF SETBACK
---	TREE PROTECTION
○	TREE TO REMAIN
○	TREE TO BE REMOVED

- NOTES:**
1. ONSITE TREE AND TOPO SURVEY BY LJA SURVEYING, INC FIRM #10194382 DATED DECEMBER 9, 2021.
 2. OFFSITE TOPO PER CITY OF AUSTIN GIS DATA 2' CONTOURS 2017
 3. SEE SHEETS TR01 - TR04 FOR TREE LIST.
 4. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.



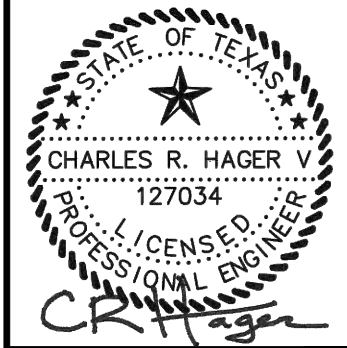
LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

DEMOLITION PLAN

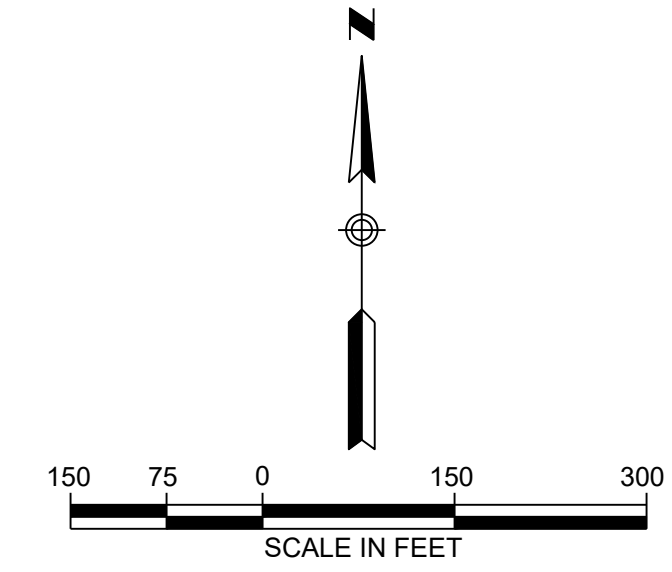
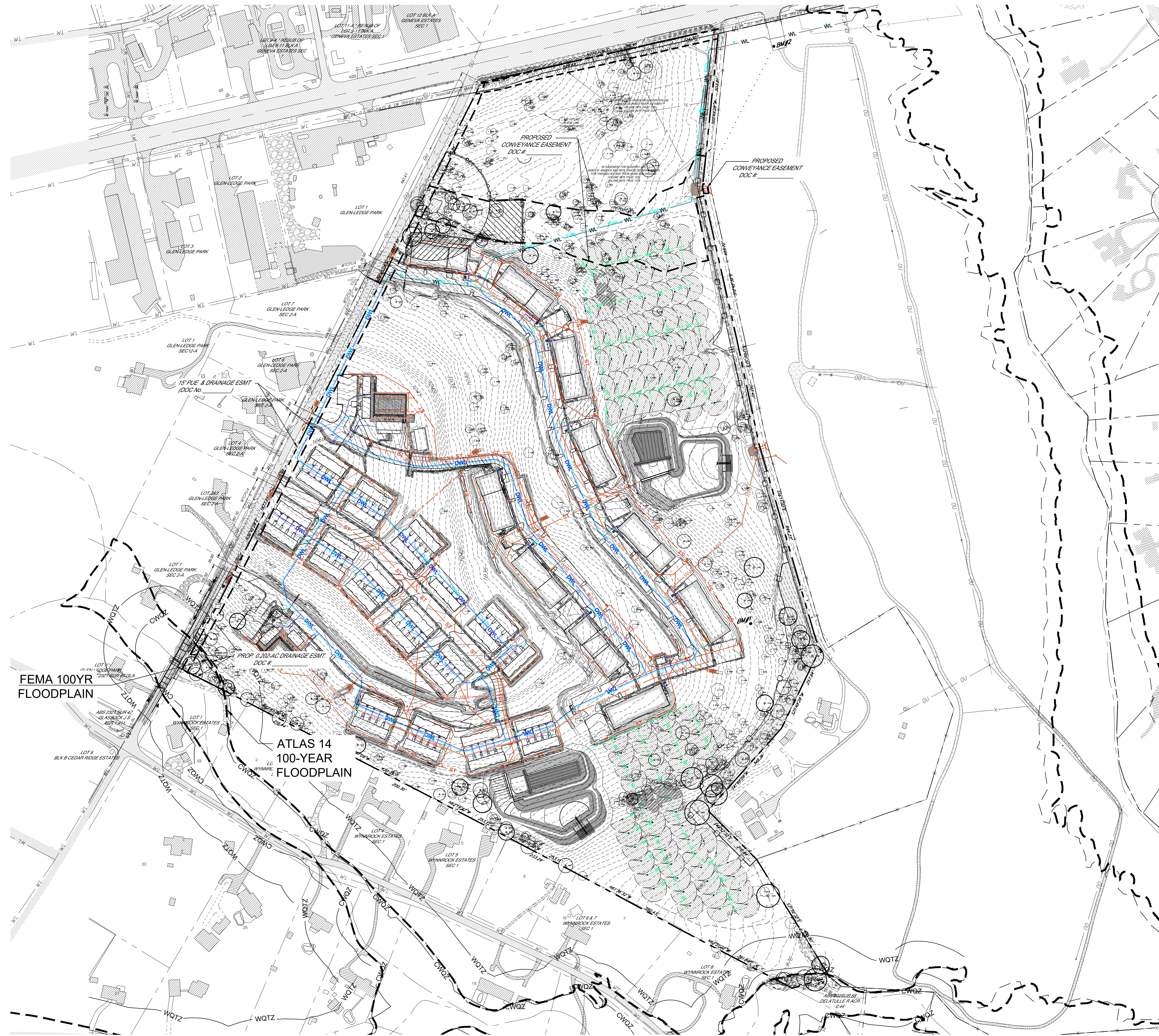
NO.	REVISIONS	DATE



LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 FRN-F-1386

DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
 DATE: 02/28/2024

JOB NUMBER: A116-1007
DEMO01
 SHEET NO. **07**
 OF 107 SHEETS



LEGEND		
PROPOSED	EXISTING	
---872---	---872---	CONTOUR LINE
▨	▨	CONCRETE SIDEWALK
▨	▨	PERVIOUS SIDEWALK
▨	▨	SIDEWALK RAMP
▨	▨	HANDICAPPED PARKING SPACE & SIDEWALK RAMP
▨	▨	CROSSWALK
ST	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
WL	WL	WASTEWATER SERVICE
WL	WL	WATER LINE
WL	WL	WATER SERVICE
FWL	FWL	FIRE LINE
IR	IR	IRRIGATION LINE
⊕	⊕	WATER VALVE
⊕	⊕	FIRE HYDRANT
⊕	⊕	WASTEWATER MANHOLE
⊕	⊕	STORMSEWER MANHOLE
⊕	⊕	CURB INLET
⊕	⊕	GRATE INLET
⊕	⊕	1/2" REBAR FOUND (OR AS NOTED)
⊕	⊕	1/2" REBAR WITH CAP FOUND
⊕	⊕	1/2" REBAR WITH CHAPARRAL CAP SET
⊕	⊕	WATER METER
⊕	⊕	UTILITY POLE
⊕	⊕	OVERHEAD UTILITIES
⊕	⊕	ELEC. UTILITY
⊕	⊕	ELEC. MANHOLE
⊕	⊕	LIGHT POLE
⊕	⊕	TELEPHONE UTILITY
⊕	⊕	UNDERGROUND FIBER OPTIC MARKER
⊕	⊕	TELEPHONE MANHOLE
⊕	⊕	UNDERGROUND GAS MARKER
⊕	⊕	CHAIN LINK FENCE

B.M. #1
5/8-INCH IR W / CAP STAMPED "LJA SURVEY"
N.E. = 10054574.61, 3057649.53
ELEV. = 1002.54

B.M. #2
MAGNAIL W / SHINER
N.E. = 10056393.72, 3057722.58
ELEV. = 981.82

BEARING BASIS:
ALL BEARINGS BASED ON THE TEXAS STATE PLANE
COORDINATGE SYSTEM, GRID NORTH, CENTRAL ZONE (4203)
NAD83.

LOCATION OF EXISTING
UNDERGROUND AND OVERHEAD
UTILITIES ARE APPROXIMATE
LOCATIONS ONLY. THE
CONTRACTOR SHALL DETERMINE
THE EXACT LOCATION OF ALL
EXISTING UTILITIES PRIOR TO
BEGINNING WORK AND SHALL BE
FULLY RESPONSIBLE FOR ANY AND
ALL DAMAGES WHICH MIGHT OCCUR.

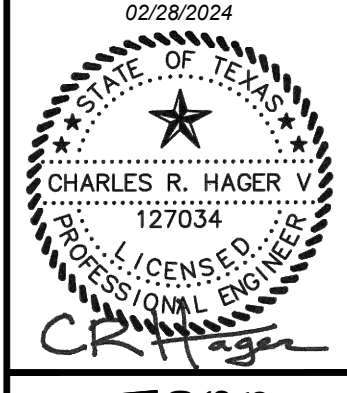


**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

OVERALL PROJECT LAYOUT

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

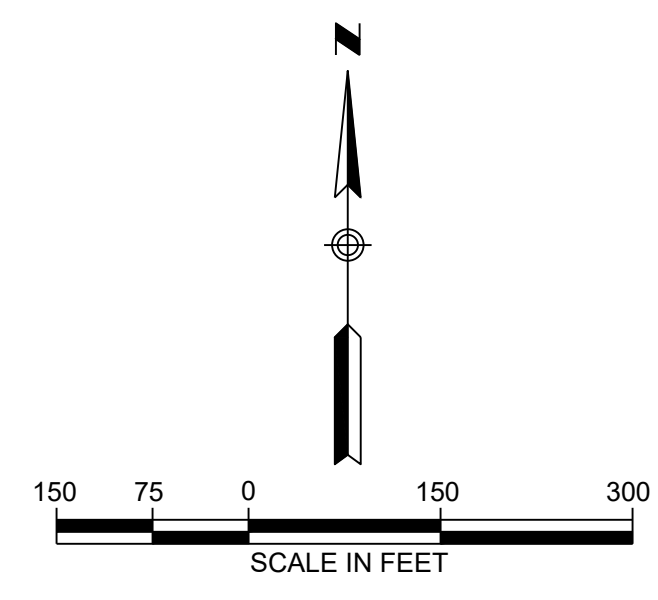
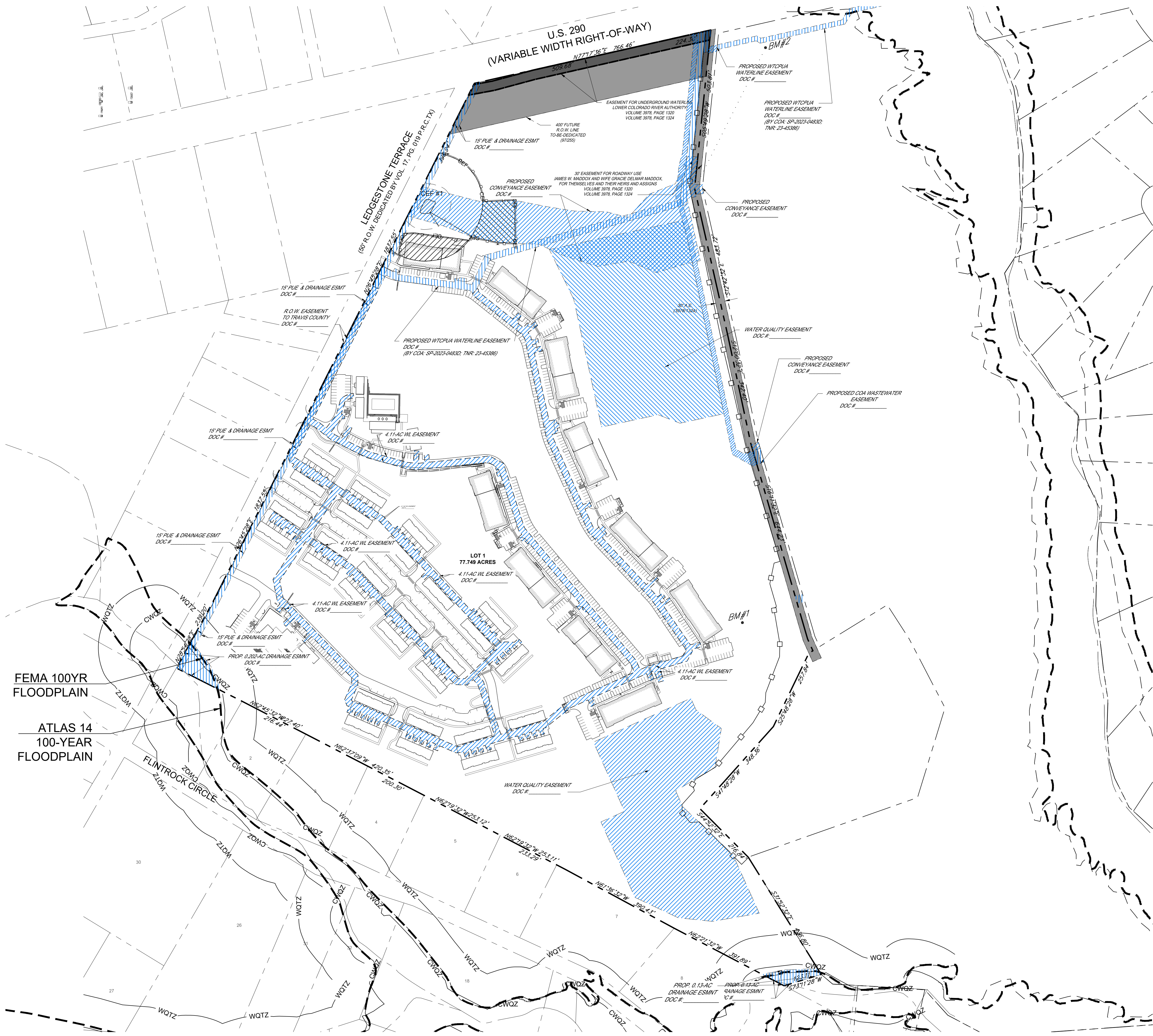
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02/28/2024 <td>DESIGNED BY: DRAWN BY: CHECKED BY:</td> <td></td> <td></td>	DESIGNED BY: DRAWN BY: CHECKED BY:		



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

JOB NUMBER: A116-1007
OPL01
SHEET NO. 08
OF 107 SHEETS

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User: amcbride
Last Modified: Feb. 23, 24 - 13:48
Plot Date/Time: Mar. 01, 24 - 13:40:16



LEGEND

PROPOSED	EXISTING	DESCRIPTION
---	---	CONTOUR LINE
---	---	CONCRETE SIDEWALK
---	---	PERVIOUS SIDEWALK
---	---	SIDEWALK RAMP
---	---	HANDICAPPED PARKING SPACE & SIDEWALK RAMP
---	---	CROSSWALK
ST	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
WL	WL	WASTEWATER SERVICE
WL	WL	WATER LINE
RWL	RWL	WATER SERVICE
IR	IR	CONDENSATE RECOVERY IRRIGATION LINE
●	●	WATER VALVE
●	●	FIRE HYDRANT
●	●	WASTEWATER MANHOLE
●	●	STORMSEWER MANHOLE
●	●	CURB INLET
●	●	GRATE INLET
●	●	1/2" REBAR FOUND (OR AS NOTED)
●	●	1/2" REBAR WITH CAP FOUND
●	●	1/2" REBAR WITH CHAPARRAL CAP SET
●	●	WATER METER
●	●	UTILITY POLE
●	●	OVERHEAD UTILITIES
●	●	ELEC. UTILITY
●	●	MANHOLE
●	●	LIGHT POLE
●	●	TELEPHONE UTILITY
●	●	UNDERGROUND FIBER OPTIC MARKER
●	●	TELEPHONE MANHOLE
●	●	UNDERGROUND GAS MARKER
●	●	CHAIN LINK FENCE
---	---	PROPERTY BOUNDARY
---	---	ADJACENT PROPERTY BOUNDARY
---	---	EXISTING EASEMENT LINE
---	---	PROPOSED EASEMENT LINE
---	---	ATLAS 14 100-YEAR FLOODPLAIN LINE
---	---	EXISTING EASEMENT
---	---	TO-BE-VACATED EASEMENT
---	---	PROPOSED EASEMENT

B.M. #1
5/8-INCH IR W / CAP STAMPED "LJA SURVEY"
N.E. = 10054574.61, 3057649.53
ELEV. = 1002.54

B.M. #2
MAGNAIL W / SHINER
N.E. = 10056393.72, 3057722.58
ELEV. = 981.82

BEARING BASIS:
ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, GRID NORTH, CENTRAL ZONE (4203) NAD83.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

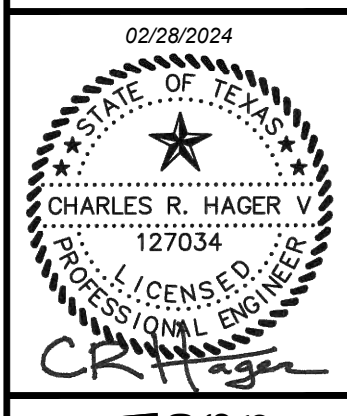


**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

OVERALL EASEMENT LAYOUT

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

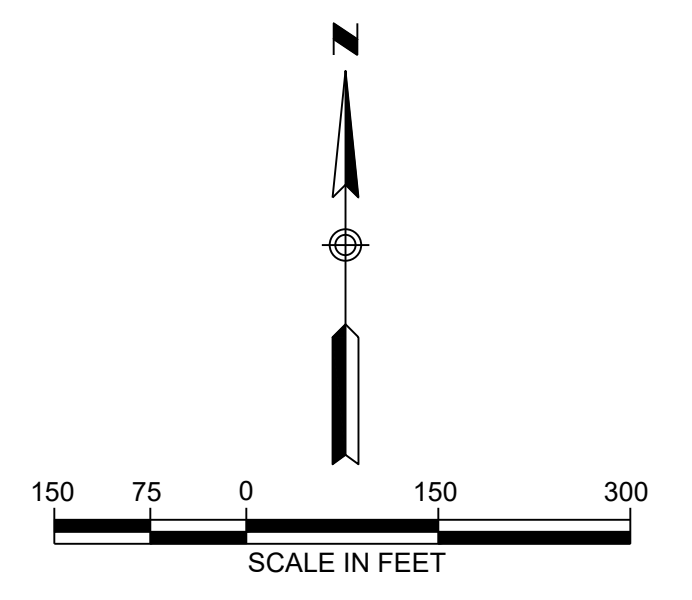
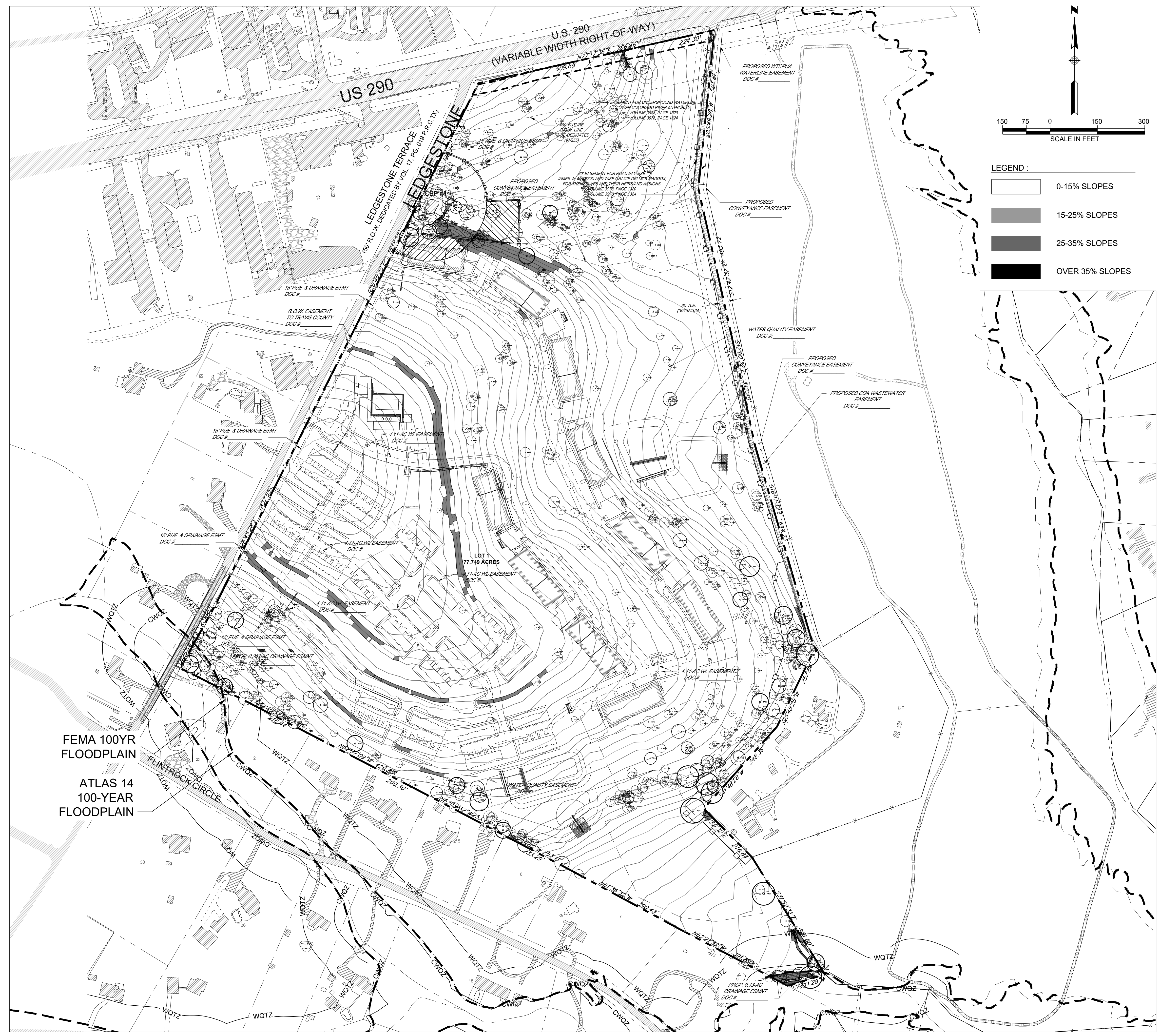
NO.	REVISIONS DESCRIPTION	DATE	BY
02/28/2024 <td>DESIGNED BY: [Signature] <td></td> <td></td> </td>	DESIGNED BY: [Signature] <td></td> <td></td>		
	DRAWN BY: [Signature] <td></td> <td></td>		
	CHECKED BY: [Signature] <td></td> <td></td>		



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JOB NUMBER: A116-1007
ESMT01
SHEET NO. 09
OF 107 SHEETS

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User: amcbride
Last Modified: Feb 28, 24 - 10:04
Plot Date/Time: Mar 01, 24 - 13:40:37



LEGEND :

	0-15% SLOPES
	15-25% SLOPES
	25-35% SLOPES
	OVER 35% SLOPES

**APPENDIX Q-1
NET SITE AREA**

NOTE: NET SITE AREA IS ONLY APPLICABLE TO WATER SHEDS CLASSIFIED AS WATER SUPPLY SUBURBAN / WATER SUPPLY RURAL / BARTON SPRINGS ZONE.

Total gross site area =	77.75 Acres
Site Deductions:	
Critical water quality zone (CWQZ) =	0.36 Acres
Water quality transition zone (WQTZ) =	1.11 Acres
Wastewater irrigation areas =	0.00 Acres
Deduction subtotal =	1.46 Acres
Upland area (Gross area minus total deductions) =	76.29 Acres
Net Site Area Calculations:	
Area of Uplands with Slopes 0-15% =	74.78 x 100% = 74.78 Acres
Area of Uplands with Slopes 15-25% =	1.47 x 40% = 0.59 Acres
Area of Uplands with Slopes 25-35% =	0.02 x 20% = 0.00 Acres
Area of Uplands with Slopes >35% =	0.01 x 0% = 0.00 Acres
Net Site Area (subtotal) =	75.37 Acres

**APPENDIX Q-2
IMPERVIOUS COVER**

WATER SUPPLY SUBURBAN / WATER SUPPLY RURAL / BARTON SPRINGS ZONE

WATER QUALITY TRANSITION ZONE

Water quality transition zone outside of 100-year floodplain (NON-FP WQTZ) = 0.84 ACRES

Allowable Impervious Cover

Impervious cover allowed at 18 % X NON-FP WQTZ =	0.15 Acres
Impervious cover allowed at 25 % X NET SITE AREA =	18.84 Acres
Total Impervious cover allowed =	18.99 Acres

ALLOWABLE IMPERVIOUS COVER BREAKDOWN BY SLOPE CATEGORY

Total acreage 15-25% =	1.47 Acres x 10% =	0.15
------------------------	--------------------	------

PROPOSED TOTAL IMPERVIOUS COVER

Impervious cover in NON-FP WQTZ =	0.00 Acres =	0.00%
Impervious cover in Uplands Zone =	16.51 Acres =	21.90%
Total proposed impervious cover =	16.51 Acres	

PROPOSED IMPERVIOUS COVER ON SLOPES

SLOPE CATEGORIES	ACRES	IMPERVIOUS COVER		DRIVEWAYS ROADWAYS AC.
		BUILDING/AND OTHER IMPERVIOUS COVER AC.	% OF CATEGORY	
0-15%	76.13	7.23	9.50%	9.03
15-25%	1.49	0.09	6.04%	0.16
25-35%	0.05	0.00	0.00%	0.00
Over 35%	0.08	0.00	0.00%	0.00
Total Site Area	77.75			

NOTES:
1. ALL SLOPES SHOWN ON THIS MAP ARE BASED ON EXISTING SURVEYED GROUND.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
SLOPE MAP**

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	REVISIONS DESCRIPTION	DATE

DATE: 02/28/2024
DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DRAWING NAME: A116-1007-SLOPE.DWG

02/28/2024
STATE OF TEXAS
CHARLES R. HAGER
127034
PROFESSIONAL ENGINEER

LJA Engineering, Inc.
7500 Riata Boulevard
Building II, Suite 100
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Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386

JOB NUMBER: A116-1007
SL01
SHEET NO. 10 OF 107 SHEETS

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User: ljohnson
Last Modified: Feb 28, 24 - 10:15
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Mitigation Area

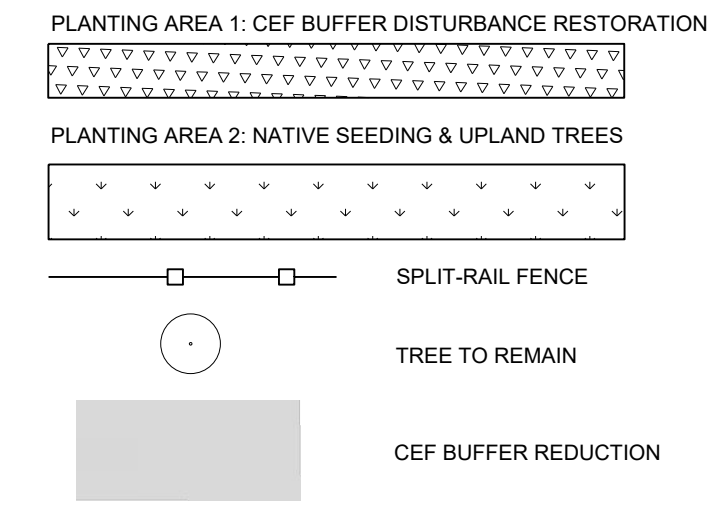
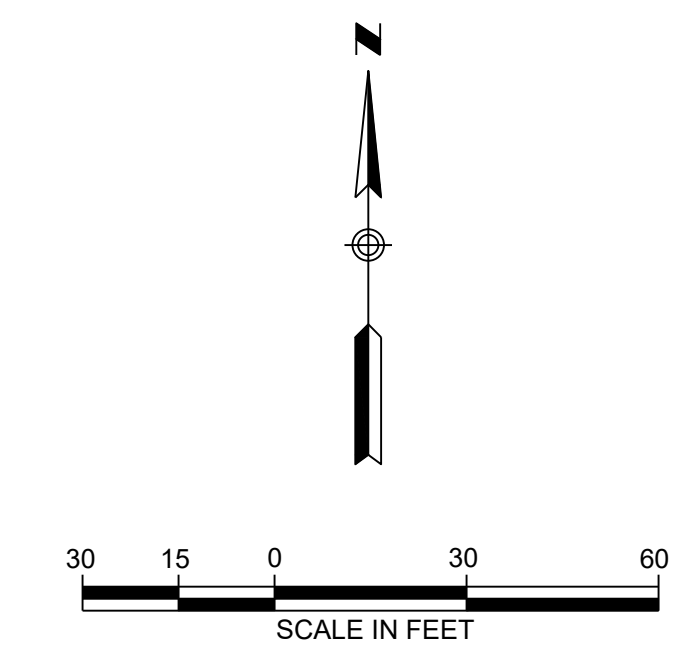
Common Name	Scientific Name	Seeding Rate (lb/ac)	Total Quantity of seed in mix (lb/ac)
Grass 1-Green Sprangletop	<i>Leptochloa dubia</i>	2.0	0.666
Grass 2-Sand Dropseed	<i>Sporobolus cryptandrus</i>	1.0	0.333
Grass 3-Purple Threeawn	<i>Aristida purpurea</i>	4.0	1.332
Grass 4-Sideoats Grama	<i>Bouteloua curtipendula</i>	7.0	2.330
Grass 5-Blue Grama	<i>Bouteloua gracilis</i>	10.0	3.329
Totals		24.0	7.990

Common Name	Scientific Name	Seeding Rate (lb/ac)	Total Quantity of seed in mix (lb/ac)
Forb 1-Plains Coreopsis	<i>Coreopsis tinctoria</i>	2.0	0.652
Forb 2-Purple Prairie Clover	<i>Dalea purpurea</i>	4.0	1.303
Forb 3-Pink Evening Primrose	<i>Oenothera speciosa</i>	1.0	0.326
Forb 4-Mexican Hat	<i>Ratibida columnaris</i>	2.0	0.652
Forb 5-Lemon Mint	<i>Monarda citrodora</i>	3.0	0.978
Totals		12.0	3.910

Woody Vegetation Seeding Plants

Common Name	Scientific Name	Ratio	Total Quantity of seedlings
Canopy 1-Hackberry	<i>Celtis occidentalis</i>	0.1	165
Canopy 2-Bur oak	<i>Quercus macrocarpa</i>	0.1	165
Canopy 3-Honey locust	<i>Gleditsia triacanthos</i>	0.1	165
Canopy 4-Live oak	<i>Quercus fusiformis</i>	0.1	165
Canopy 5-Cedar elm	<i>Celtis occidentalis</i>	0.1	165
Understory 1-Evergreen sumac	<i>Rhus virens</i>	0.1	165
Understory 2-Texas redbud	<i>Cercis canadensis var texensis</i>	0.1	165
Understory 3-Mexican buckeye	<i>Ungnadia speciosa</i>	0.1	165
Understory 4-Red mulberry	<i>Morus rubra</i>	0.1	165
Understory 5-Yaupon holly	<i>Ilex vomitoria</i>	0.1	165
Totals		100%	1646

CEF MITIGATION SUMMARY	
Description	Area (AC)
Existing CEF Buffer (150' Standard Buffer)	1.43
Proposed CEF Buffer Reduction	-0.34
Proposed CEF Buffer Addition	0.34
Proposed CEF Buffer	1.43
Proposed for CEF Enhancement w/in CEF Buffer	1.43
Restored area within EX. CEF Buffer (Area 1)	0.13
Wetland and Riparian Plantings (Area 2)	0.33
Difference in Enhancement Area v Reduction Area	0.00



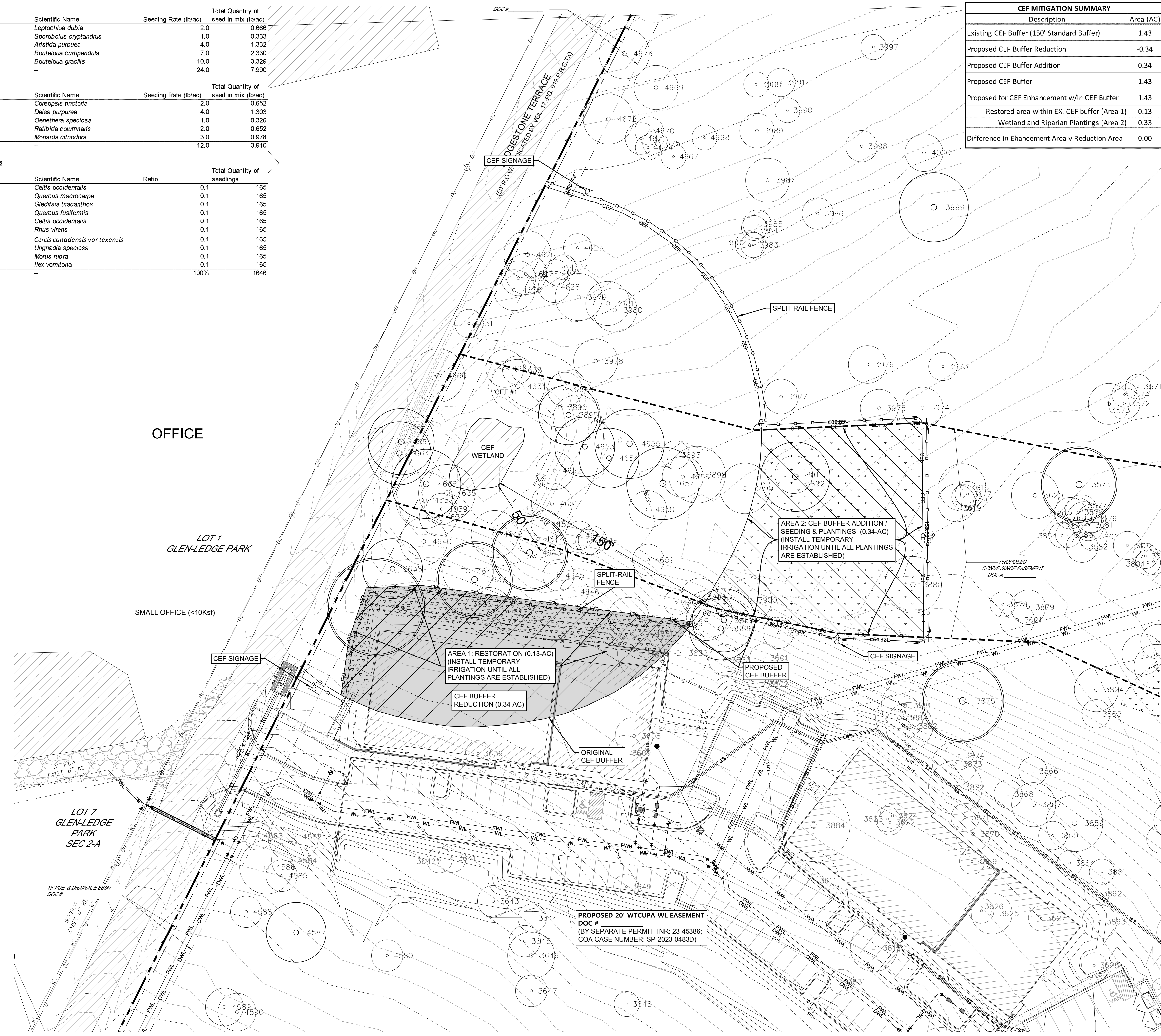
- PROPOSED CEF MITIGATION STRATEGY**
1. PROVIDE WETLAND RESTORATION BY REMOVING NON-NATIVE SPECIES.
 2. PROVIDE WETLAND RESTORATION BY REMOVING TRASH AND DEBRIS.
 3. PROVIDE WETLAND RESTORATION BY PLANTING NATIVE VEGETATION PER 609S PLANTINGS (SEE INFORMATION ON THIS SHEET).
 4. PROVIDE SIGNAGE AROUND CEF BUFFER.
 5. PROVIDE 609S SEEDING AND WETLAND TREES WITHIN EXPANDED CEF BUFFER

ALL ACTIVITIES WITHIN THE CRITICAL ENVIRONMENTAL FEATURE BUFFER MUST COMPLY WITH THE CITY OF AUSTIN LAND DEVELOPMENT CODE. THE NATURAL VEGETATIVE COVER MUST BE RETAINED TO THE MAXIMUM EXTENT PRACTICABLE. CONSTRUCTION IS PROHIBITED UNLESS SPECIFICALLY AUTHORIZED IN THIS SITE PLAN, AND WASTEWATER DISPOSAL OR IRRIGATION IS PROHIBITED.

REFERENCE ENVIRONMENTAL CRITERIA MANUAL (ECM) 1.10.4.D.3.A-E & 1.10.5.2.

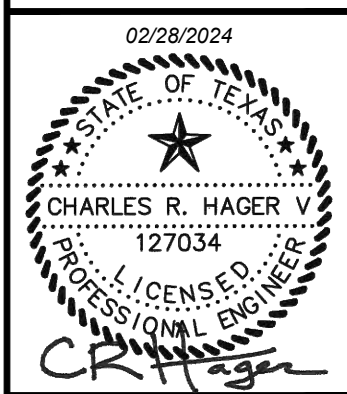


- SIGN DETAIL TAKEN FROM
[HTTP://WWW.AUSTINTEXAS.GOV/BLOG/GROW-ZONES](http://www.austintexas.gov/blog/grow-zones)
 - INSTALL 18"X12" REFLECTIVE ALUMINUM SIGNS 4' HIGH IN LOCATIONS INDICATED ON THIS SHEET



**LEDGESTONE TERRACES
 SITE CONSTRUCTION PLANS
 CEF MITIGATION SHEET**

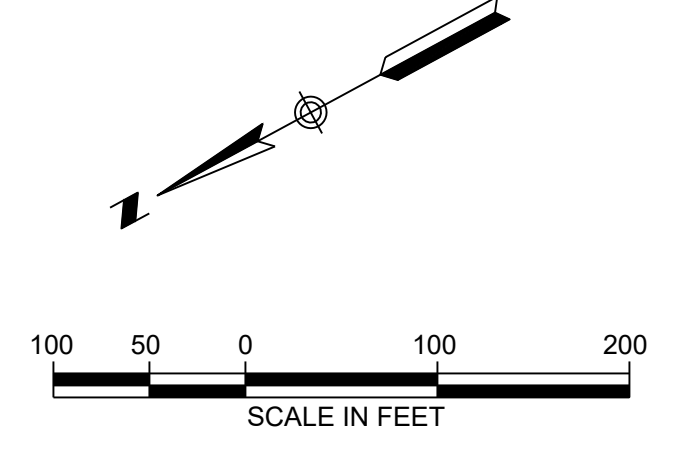
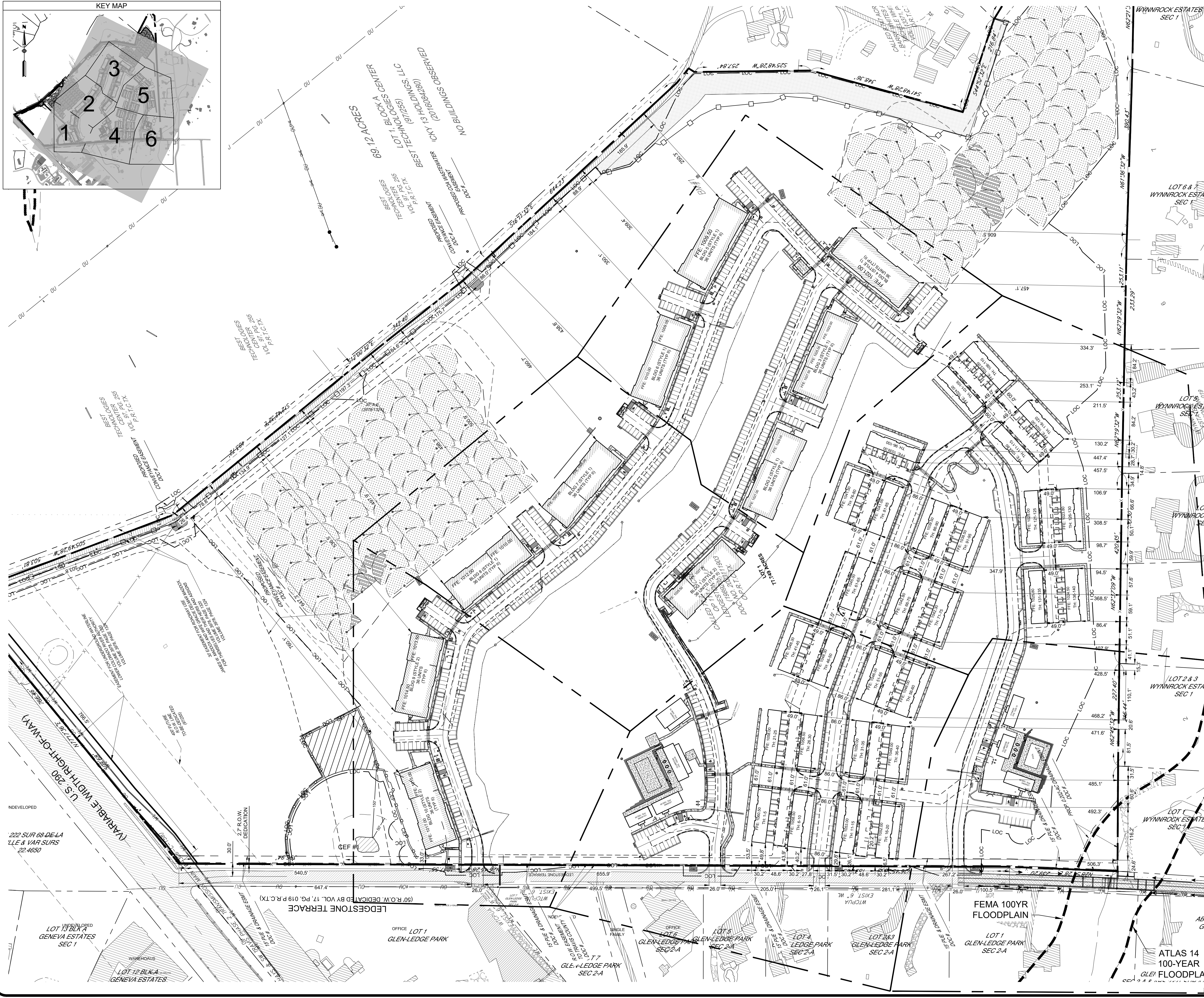
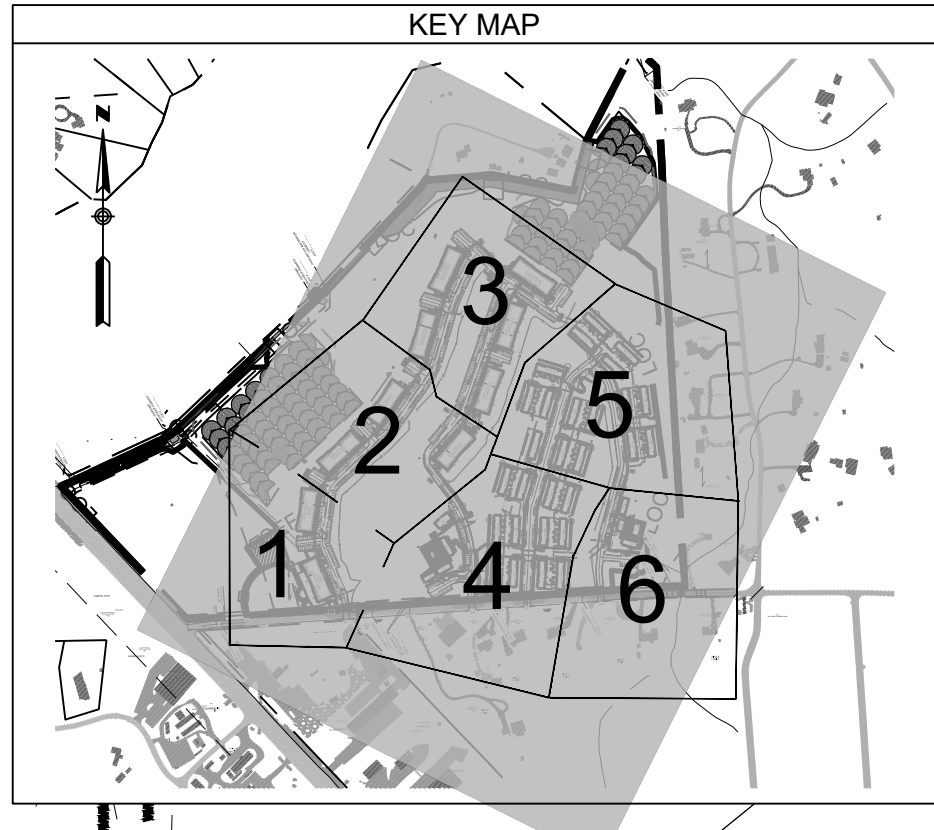
NO.	DATE	DESCRIPTION	BY



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JOB NUMBER:	A116-1007
CEFO1	
SHEET NO.	11
OF 107 SHEETS	

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 Date Modified: Feb 23, 2024 12:45
 Plot Date/Time: Mar 01, 2024 13:42:35



LEGEND

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[Symbol]	[Symbol]	LIMITS OF CONSTRUCTION
[Symbol]	[Symbol]	PROPERTY BOUNDARY
[Symbol]	[Symbol]	FIRE LANE
[Symbol]	[Symbol]	ACCESSIBLE ROUTE
[Symbol]	[Symbol]	SIDEWALK RAMP
[Symbol]	[Symbol]	HANDICAPPED PARKING SPACE & SIDEWALK RAMP
[Symbol]	[Symbol]	CROSSWALK
[Symbol]	[Symbol]	STORM SEWER LINE
[Symbol]	[Symbol]	WASTEWATER LINE
[Symbol]	[Symbol]	WATER LINE
[Symbol]	[Symbol]	WATER VALVE
[Symbol]	[Symbol]	FIRE HYDRANT
[Symbol]	[Symbol]	WASTEWATER MANHOLE
[Symbol]	[Symbol]	STORMSEWER MANHOLE
[Symbol]	[Symbol]	1/2" REBAR FOUND (OR AS NOTED)
[Symbol]	[Symbol]	1/2" REBAR WITH CAP FOUND
[Symbol]	[Symbol]	WATER METER
[Symbol]	[Symbol]	UTILITY POLE
[Symbol]	[Symbol]	OVERHEAD UTILITIES
[Symbol]	[Symbol]	ELEC. UTILITY
[Symbol]	[Symbol]	ELEC. MANHOLE
[Symbol]	[Symbol]	LIGHT POLE
[Symbol]	[Symbol]	TELEPHONE UTILITY
[Symbol]	[Symbol]	UNDERGROUND FIBER OPTIC MARKER
[Symbol]	[Symbol]	TELEPHONE MANHOLE
[Symbol]	[Symbol]	UNDERGROUND GAS MARKER
[Symbol]	[Symbol]	CHAIN LINK FENCE

- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. ALL RADII ARE 3' UNLESS OTHERWISE NOTED.
 3. ALL SIDEWALKS ADJACENT TO BACK OF CURB SHALL BE 5' WIDE. ALL OTHER SIDEWALKS SHALL BE 4' WIDE UNLESS OTHERWISE NOTED.
 4. ALL PAVEMENT SHALL BE CONCRETE WITH CURB AND GUTTER.
 5. RESTRAIN ALL FIRE HYDRANT SERVICE LINE JOINTS PER COA DETAIL 511-AW-02.

**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

OVERALL SITE PLAN SHEET

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	DESCRIPTION

DATE: 02/28/2024
 DESIGNED BY: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DRAWING NAME: A116-1007-FR-SP02.DWG

02/28/2024
 CHARLES R. HAGER
 127034
 LICENSED PROFESSIONAL ENGINEER

LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 FRN-F-1386

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 Austin, Texas 78735

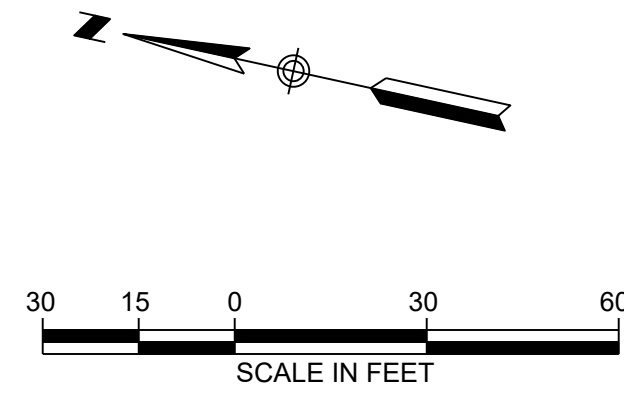
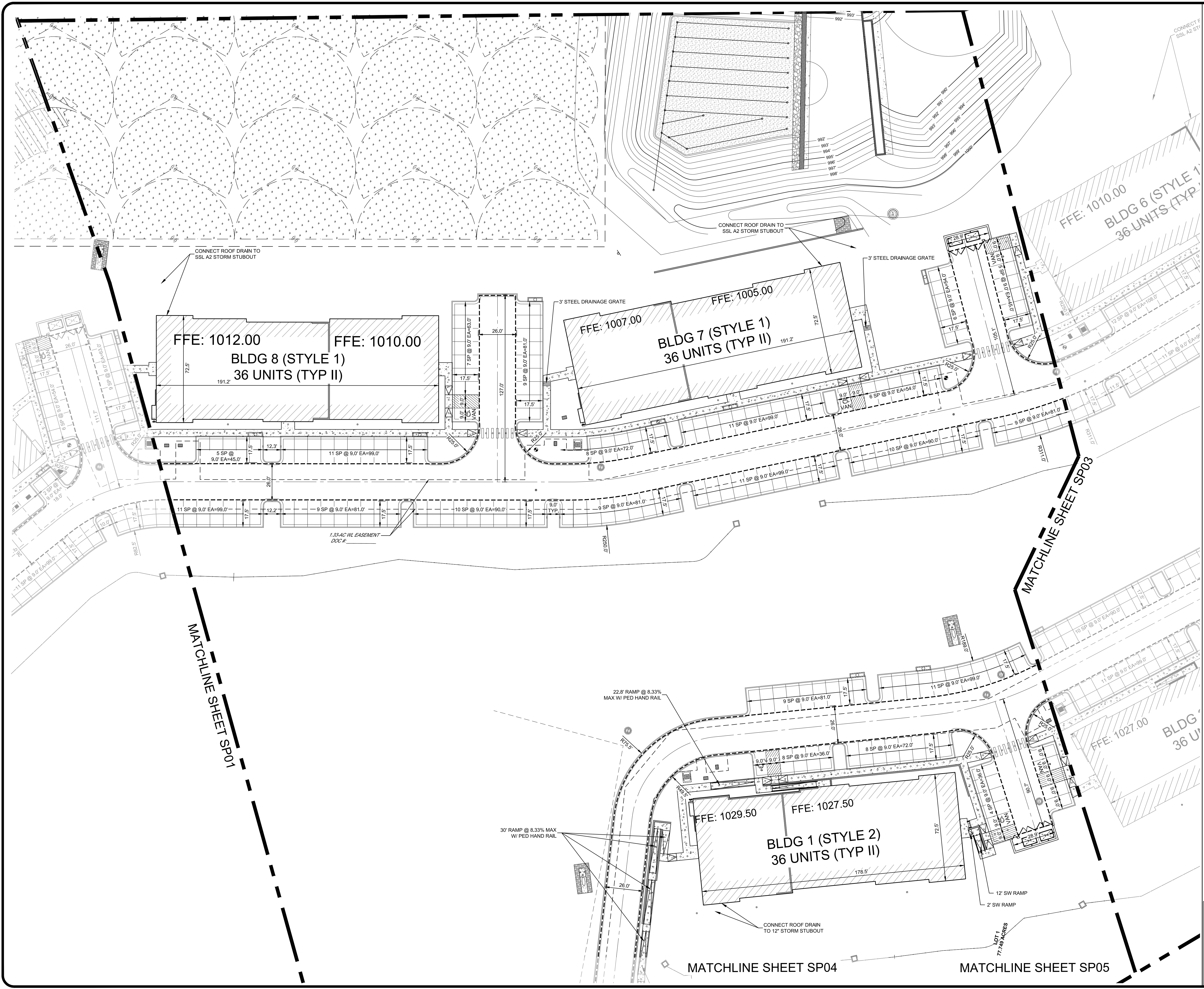
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 SHEET NO. **12** OF 107 SHEETS
 SP00

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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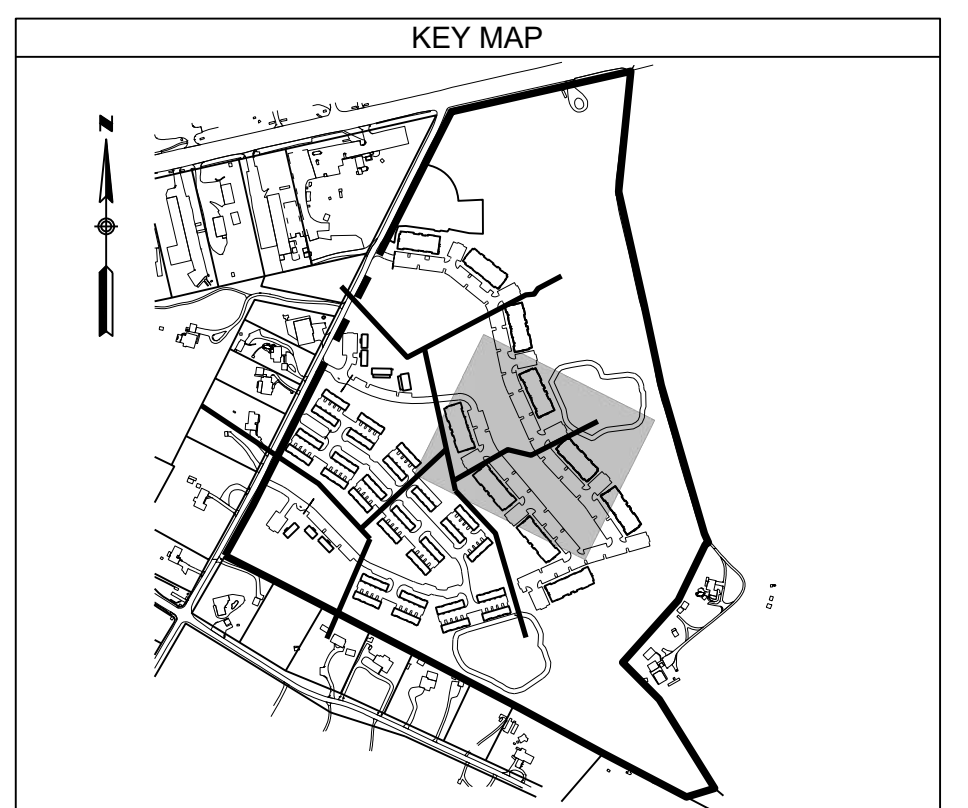
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LEGEND

PROPOSED	EXISTING	DESCRIPTION
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		LIMITS OF CONSTRUCTION
		PROPERTY BOUNDARY
		FIRE LANE
		ACCESSIBLE ROUTE
		SIDEWALK RAMP
		HANDICAPPED PARKING SPACE & SIDEWALK RAMP
		CROSSWALK
		STORM SEWER LINE
		WASTEWATER LINE
		WATER LINE
		WATER VALVE
		FIRE HYDRANT
		WASTEWATER MANHOLE
		STORMSEWER MANHOLE
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		1/2" REBAR WITH CAP FOUND
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		WATER METER
		UTILITY POLE
		OVERHEAD UTILITIES
		ELEC. UTILITY
		ELEC. MANHOLE
		LIGHT POLE
		TELEPHONE UTILITY
		UNDERGROUND FIBER OPTIC MARKER
		TELEPHONE MANHOLE
		UNDERGROUND GAS MARKER
		CHAIN LINK FENCE

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 4. ALL PAVEMENT SHALL BE CONCRETE WITH CURB AND GUTTER.
 5. RESTRAIN ALL FIRE HYDRANT SERVICE LINE JOINTS PER COA DETAIL 511-AW-02.



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**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

SITE PLAN SHEET 2
9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	REVISIONS DESCRIPTION	DATE	BY

DATE: 02/28/2024
 DESIGNED BY: [Signature]
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 CHECKED BY: [Signature]
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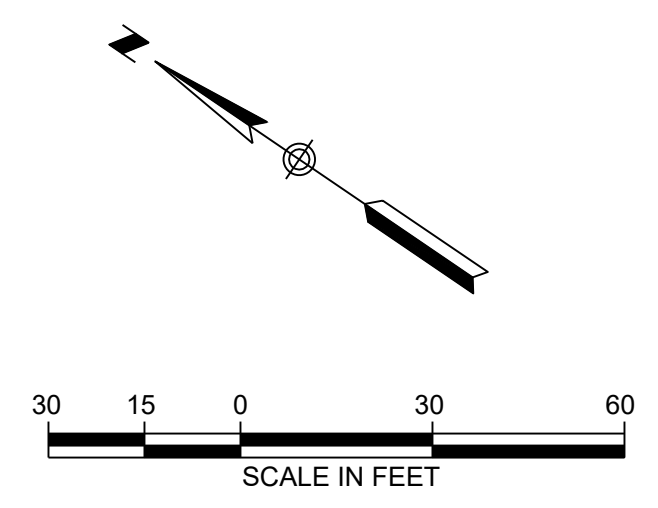
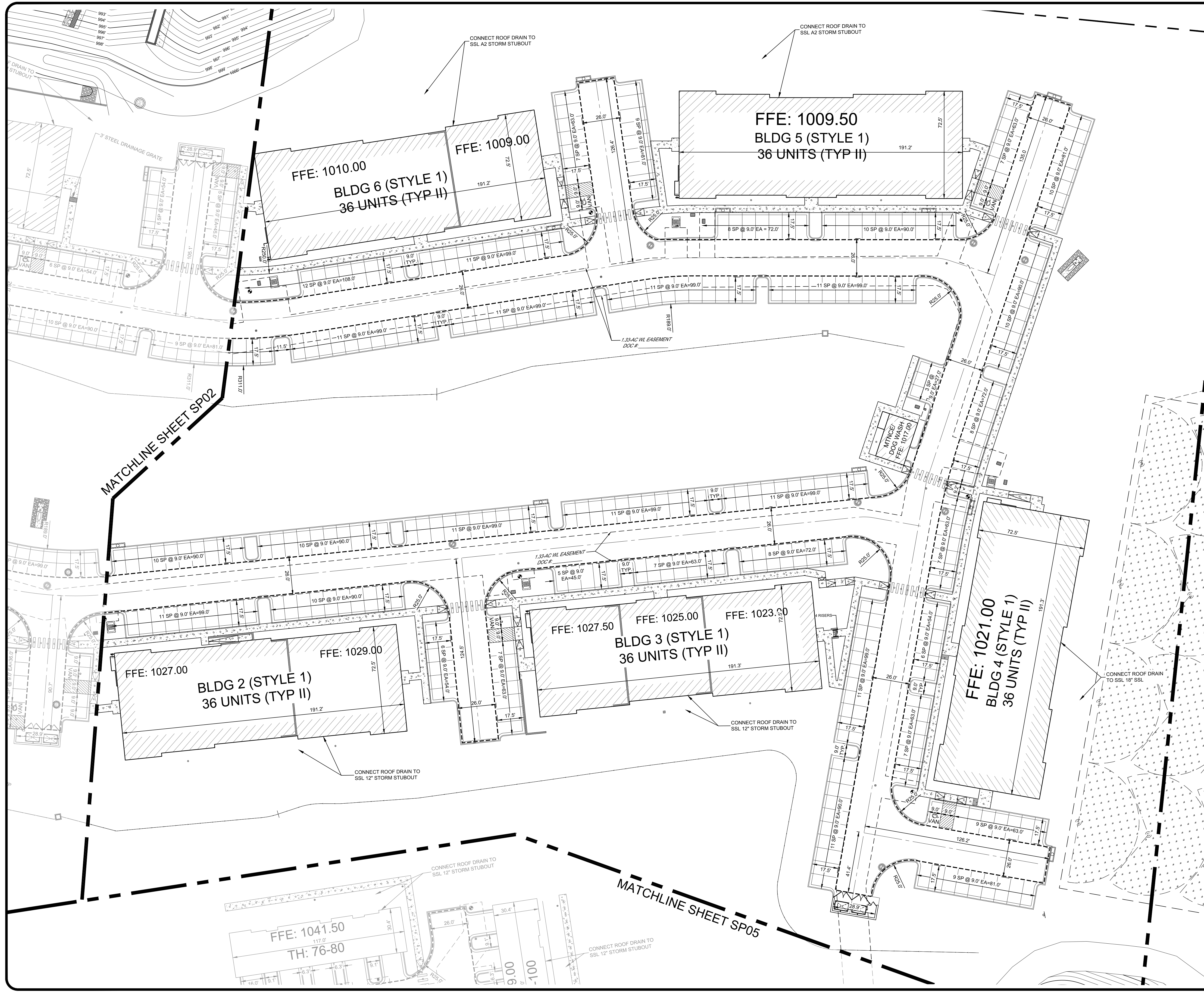
Charles R. Hager
Professional Engineer
License No. 127034
State of Texas

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7500 Riata Boulevard
 Building II, Suite 100
 Austin, Texas 78735

JOB NUMBER: A116-1007
 SHEET NO. **SP02**
14 OF 107 SHEETS

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 Date Modified: Feb 28, 2024 14:52
 Plot Date/Time: Mar 01, 2024 13:44:11



LEGEND

PROPOSED	EXISTING	DESCRIPTION
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		LIMITS OF CONSTRUCTION
		PROPERTY BOUNDARY
		FIRE LANE
		ACCESSIBLE ROUTE
		SIDEWALK RAMP
		HANDICAPPED PARKING SPACE & SIDEWALK RAMP
		CROSSWALK
		STORM SEWER LINE
		WASTEWATER LINE
		WATER LINE
		WATER VALVE
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		UNDERGROUND FIBER OPTIC MARKER
		TELEPHONE MANHOLE
		UNDERGROUND GAS MARKER
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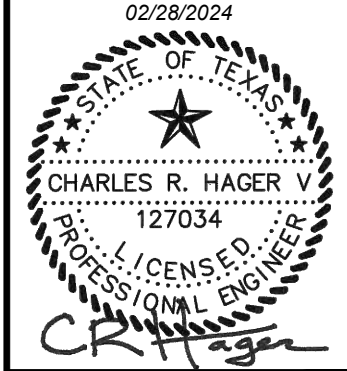
- NOTES:**
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 - ALL RADII ARE 3' UNLESS OTHERWISE NOTED.
 - ALL SIDEWALKS ADJACENT TO BACK OF CURB SHALL BE 5' WIDE. ALL OTHER SIDEWALKS SHALL BE 4' WIDE UNLESS OTHERWISE NOTED. ALL SIDEWALK RAMP SHALL BE 6' IN LENGTH UNLESS OTHERWISE NOTED.
 - ALL PAVEMENT SHALL BE CONCRETE WITH CURB AND GUTTER.
 - RESTRAIN ALL FIRE HYDRANT SERVICE LINE JOINTS PER COA DETAIL 511-AW-02.

**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

SITE PLAN SHEET 3

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	BY	REVISIONS DESCRIPTION



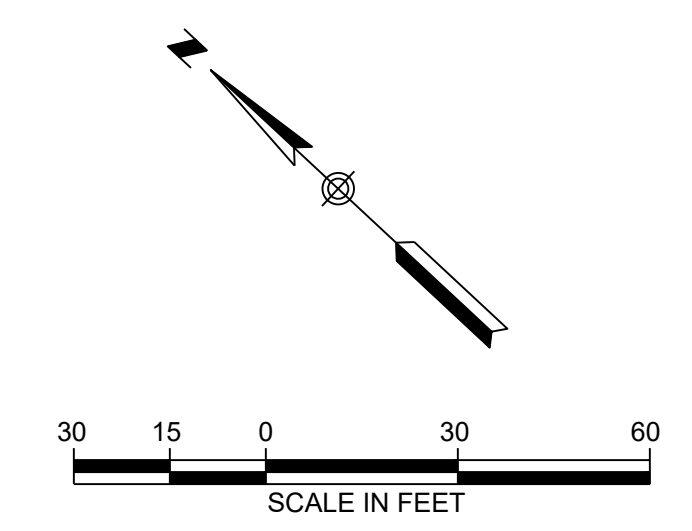
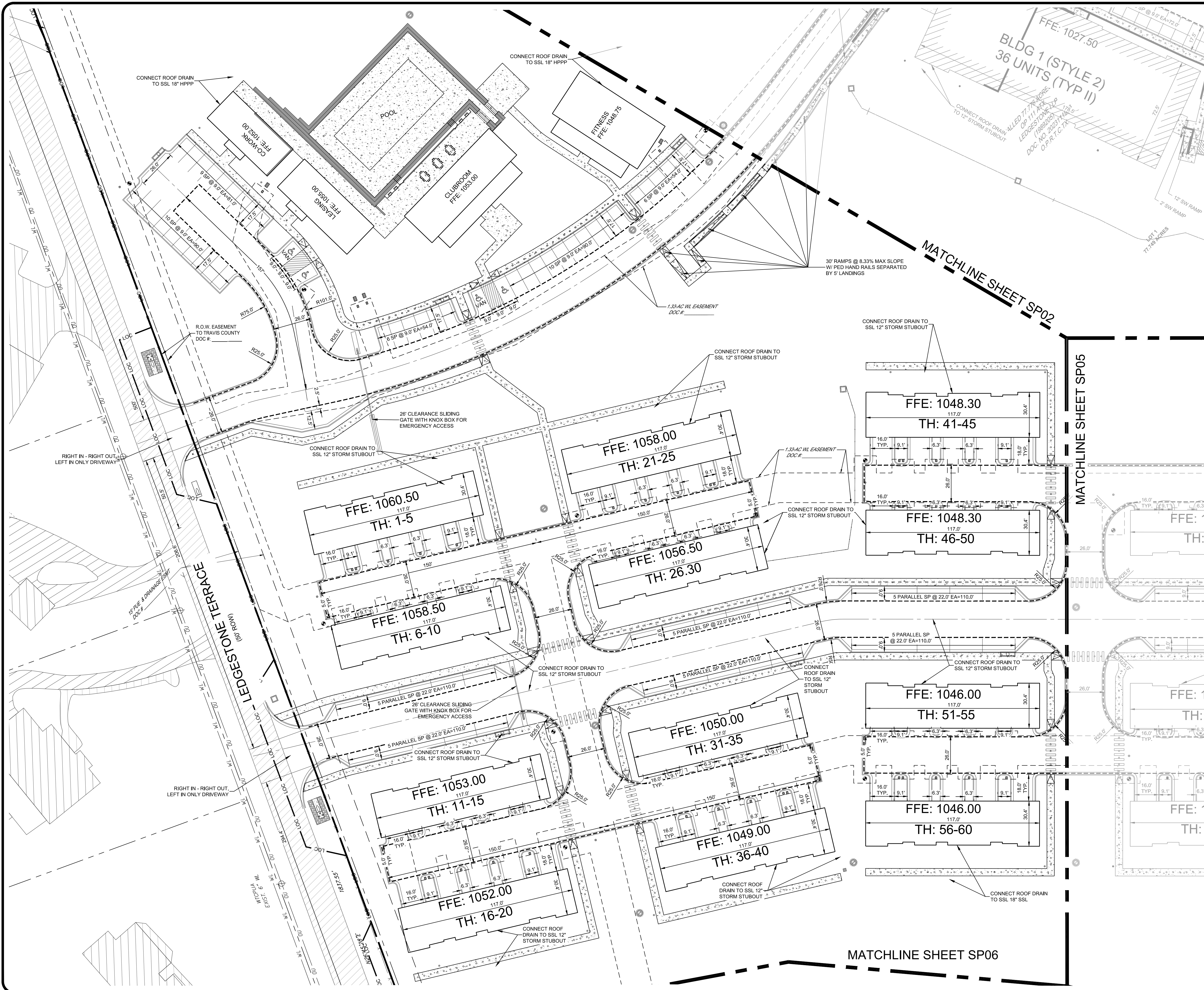
LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 7500 Riata Boulevard
 Building II, Suite 100
 Austin, Texas 78735
 FRN-F-1386

JOB NUMBER: A116-1007
SP03
SHEET NO. 15
OF 107 SHEETS

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



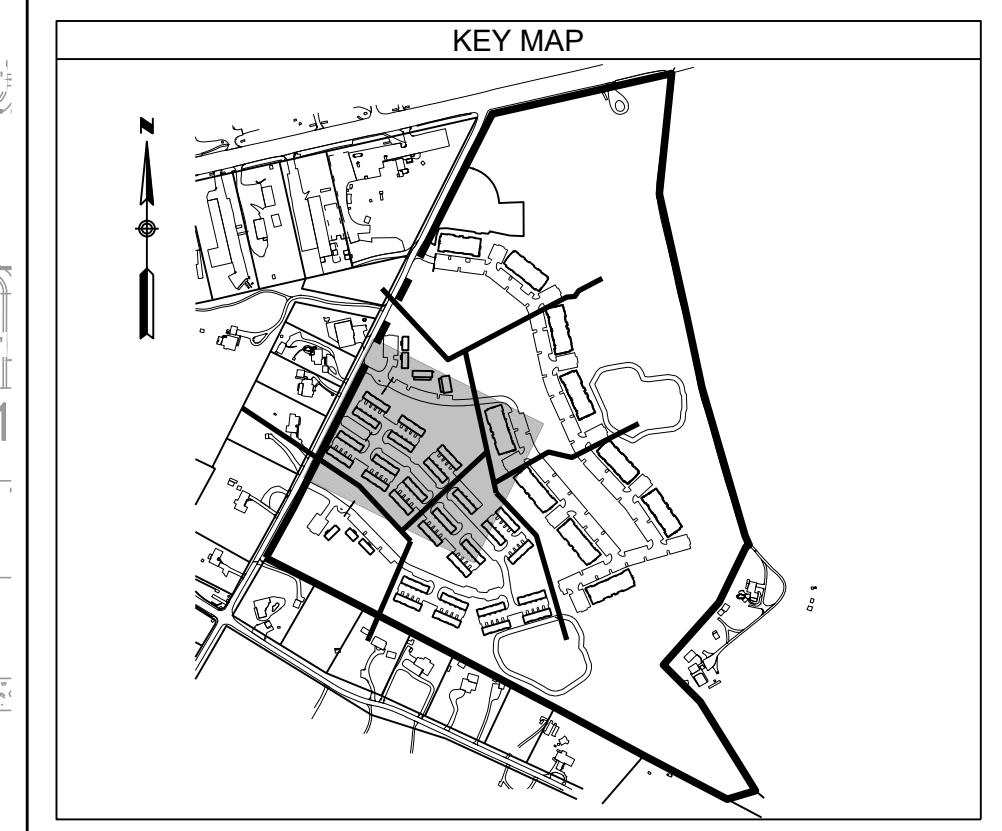
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 Plot Date/Time: Mar 01, 24 - 13:44:35



LEGEND

PROPOSED	EXISTING	DESCRIPTION
[Symbol]	[Symbol]	CONCRETE SIDEWALK
[Symbol]	[Symbol]	LIMITS OF CONSTRUCTION
[Symbol]	[Symbol]	PROPERTY BOUNDARY
[Symbol]	[Symbol]	FIRE LANE
[Symbol]	[Symbol]	ACCESSIBLE ROUTE
[Symbol]	[Symbol]	SIDEWALK RAMP
[Symbol]	[Symbol]	HANDICAPPED PARKING SPACE & SIDEWALK RAMP
[Symbol]	[Symbol]	CROSSWALK
[Symbol]	[Symbol]	STORM SEWER LINE
[Symbol]	[Symbol]	WASTEWATER LINE
[Symbol]	[Symbol]	WATER LINE
[Symbol]	[Symbol]	WATER VALVE
[Symbol]	[Symbol]	FIRE HYDRANT
[Symbol]	[Symbol]	WASTEWATER MANHOLE
[Symbol]	[Symbol]	STORMSEWER MANHOLE
[Symbol]	[Symbol]	1/2" REBAR FOUND (OR AS NOTED)
[Symbol]	[Symbol]	1/2" REBAR WITH CAP FOUND
[Symbol]	[Symbol]	WATER METER
[Symbol]	[Symbol]	UTILITY POLE
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[Symbol]	[Symbol]	LIGHT POLE
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[Symbol]	[Symbol]	UNDERGROUND FIBER OPTIC MARKER
[Symbol]	[Symbol]	TELEPHONE MANHOLE
[Symbol]	[Symbol]	UNDERGROUND GAS MARKER
[Symbol]	[Symbol]	CHAIN LINK FENCE

- NOTES:**
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 - ALL RADII ARE 3' UNLESS OTHERWISE NOTED.
 - ALL SIDEWALKS ADJACENT TO BACK OF CURB SHALL BE 5' WIDE. ALL OTHER SIDEWALKS SHALL BE 4' WIDE UNLESS OTHERWISE NOTED. ALL SIDEWALK RAMP SHALL BE 6' IN LENGTH UNLESS OTHERWISE NOTED.
 - ALL PAVEMENT SHALL BE CONCRETE WITH CURB AND GUTTER.
 - RESTRAIN ALL FIRE HYDRANT SERVICE LINE JOINTS PER COA DETAIL 511-AW-02.



LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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

**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

SITE PLAN SHEET 4
9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

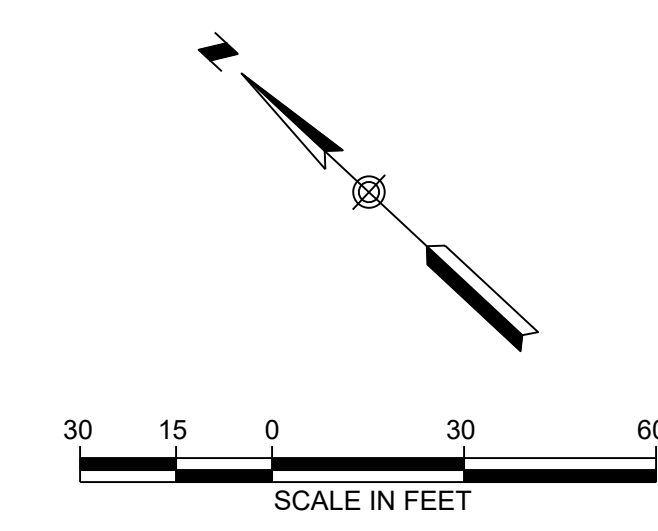
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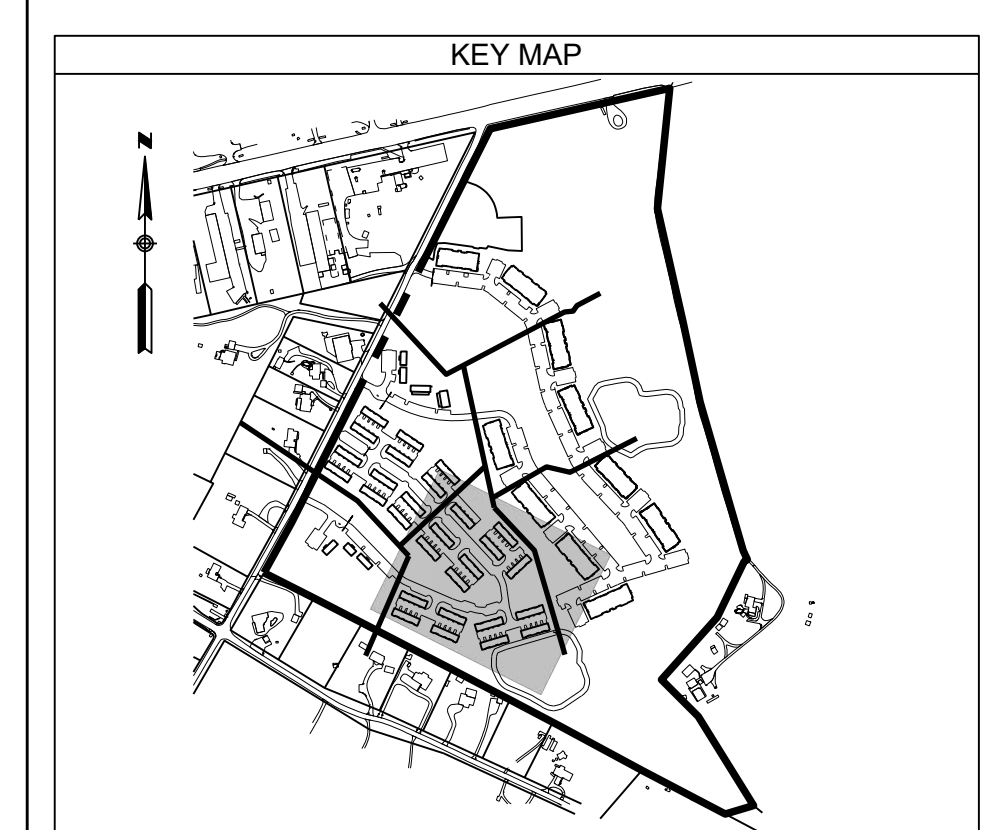
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SP04
SHEET NO. **16** OF 107 SHEETS

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LEGEND		
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		LIMITS OF CONSTRUCTION
		PROPERTY BOUNDARY
		FIRE LANE
		ACCESSIBLE ROUTE
		SIDEWALK RAMP
		HANDICAPPED PARKING SPACE & SIDEWALK RAMP
		CROSSWALK
		STORM SEWER LINE
		WASTEWATER LINE
		WATER LINE
		WATER VALVE
		FIRE HYDRANT
		WASTEWATER MANHOLE
		STORMSEWER MANHOLE
		1/2" REBAR FOUND (OR AS NOTED)
		1/2" REBAR WITH CAP FOUND
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		OVERHEAD UTILITIES
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		ELEC. MANHOLE
		LIGHT POLE
		TELEPHONE UTILITY
		UNDERGROUND FIBER OPTIC MARKER
		TELEPHONE MANHOLE
		UNDERGROUND GAS MARKER
		CHAIN LINK FENCE

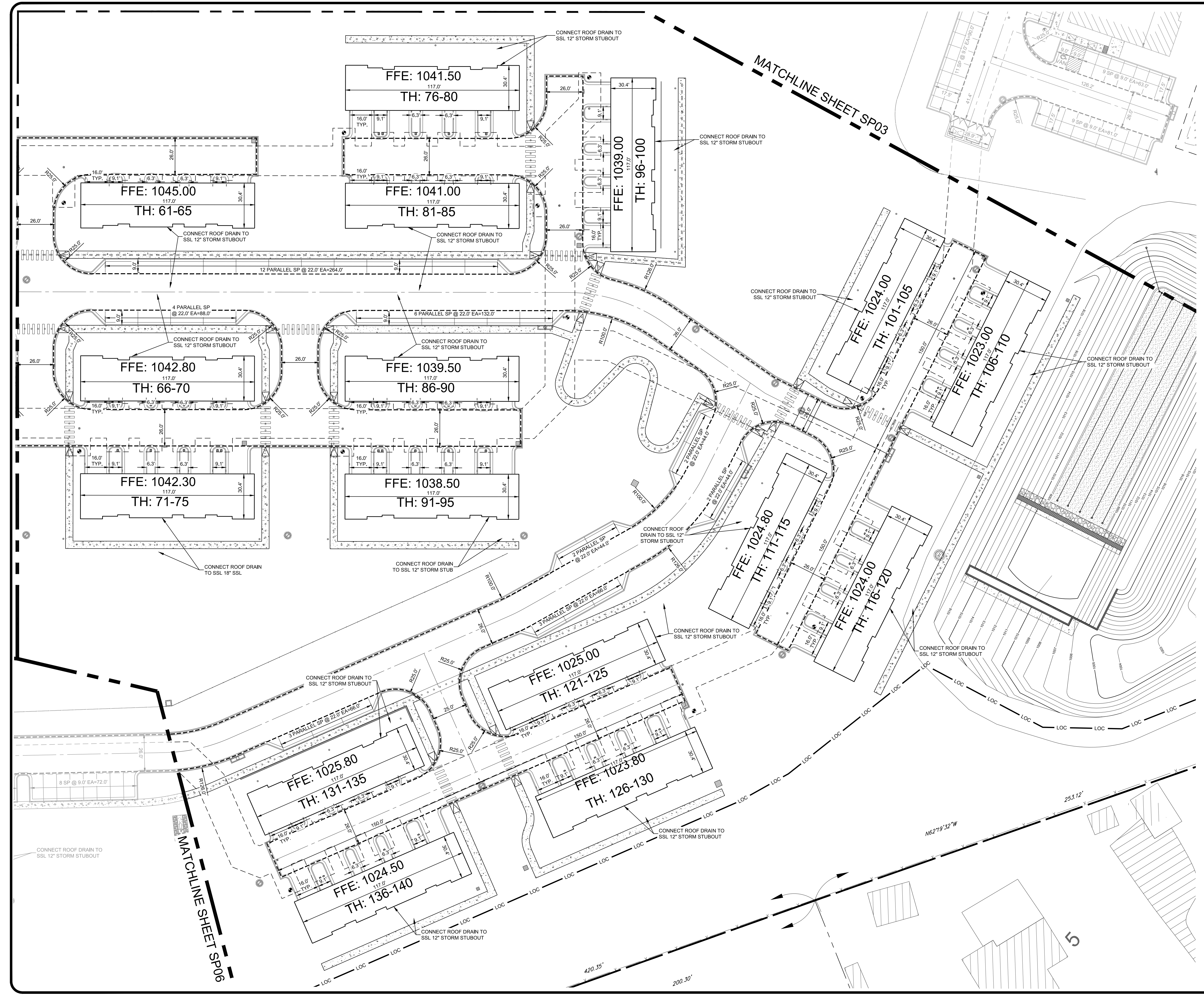
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OF 107 SHEETS

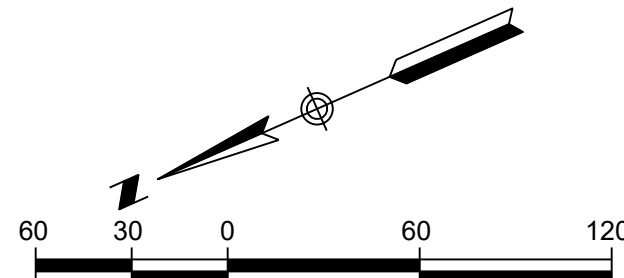


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LEGEND

PROPOSED	EXISTING	
LOC		LIMITS OF CONSTRUCTION
SF		SILT FENCE
LOC/SF		LIMITS OF CONST./SILT FENCE
TP		TREE PROTECTION
IP		INLET PROTECTION
RB		ROCK BERM
SCE		STABILIZED CONSTRUCTION ENTRANCE
		CONSTRUCTION STAGING / SPOILS / VEHICLE USE LOCATION
		TREE TO REMAIN
		TREE TO BE REMOVED
800	800	CONTOURS
ST	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
WL	WL	WATER LINE



- NOTES:**
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 - ALL VEGETATION WITHIN LIMITS OF CONSTRUCTION AND NOT LOCATED WITHIN AREAS OF CUT/FILL SHALL BE PROTECTED TO THE EXTENT FEASIBLE.
 - TREES TO REMAIN THAT ARE LOCATED INSIDE THE SILT FENCE AND/OR ORANGE MESH FENCE SHALL HAVE TREE PROTECTION FENCING.
 - TEMPORARY STORAGE AND STOCKPILE AREAS SHALL BE USED DURING TIME OF CONSTRUCTION BUT SHALL BE RESTORED AND REVEGETATED.
 - ALL STORM DRAIN LINES ARE TO BE AT A MINIMUM OF FIVE FEET FROM CENTERLINE OF PIPE TO FACE OF TREE. ANY STORM DRAIN LINES TO BE PLACED WITHIN A TREE'S DRIP LINE MUST BE SAWCUT PRIOR TO TRENCHING.
 - PRIOR TO EXCAVATION WITHIN TREE DRIP LINES, OR THE REMOVAL OF TREES ADJACENT TO OTHER TREES THAT ARE TO REMAIN, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE ROOT DAMAGE.
 - IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION WITH FENCING, AND WHERE HEAVY VEHICULAR TRAFFIC IS ANTICIPATED, COVER THOSE AREAS WITH FOUR (4) INCHES OF ORGANIC MULCH TO BE PRODUCED ON SITE, TO MINIMIZE SOIL COMPACTION.
 - PERFORM ALL GRADING WITHIN CRITICAL ROOT ZONE AREAS WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE.
 - WATER ALL TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES DEEPLY AS NECESSARY DURING PERIODS OF HOT, DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
 - WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.
 - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE SITE EROSION CONTROL, SEDIMENT REMOVAL SHALL BE PROVIDED AS NOTED ON THE PLANS. REPAIR TO SILT FENCE AND ORANGE MESH FENCING/CHAINLINK FENCING SHALL BE PROVIDED TO INSURE: 1) ORANGE MESH FENCE / SILT FENCE REMAINS IN PLACE AND STANDING AT ALL TIMES, 2) SILT FENCING TO BE REPLACED / REPAIRED DUE TO CONTRACTOR DAMAGE OR ANY DAMAGE DUE TO STORM WATER DURING RAIN EVENTS.
 - IF DISTURBED AREA IS NOT TO BE WORKED FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR OMENTO MATINGS. (ECM 1.4.4.B.3 SECTION 5.3), THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE AROUND THE ROADS A MINIMUM OF ONCE DAILY. (ECM 1.4.4.4.F)
 - ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT, OR IF SPOILS PILES ARE TO REMAIN OVERNIGHT, SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
 - DEWATERING OF THE TEMPORARY POND WILL BE PROVIDED TO ENSURE THERE IS ADEQUATE STORAGE FOR THE FOLLOWING RAIN EVENT. CONTRACTOR SHALL PROVIDE ADEQUATE FILTRATION DURING PUMPING TO ENSURE SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
 - THE ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS.
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 - SILT FENCE TYPE AND INSTALLATION SHALL COMPLY WITH ECM 1.4.2.(G).
 - PER LDC 25-8-32(C), FOR AREAS ON THE SITE THAT ARE TO REMAIN PERVIOUS AFTER DEVELOPMENT, ANY SOILS THAT ARE COMPACTED DURING SITE GRADING AND CONSTRUCTION OPERATIONS MUST BE DECOMPACTED IN COMPLIANCE WITH THE ECM AND IN COMPLIANCE WITH 55M 618.
 - FINISHED ELEVATION FOR PARKING LOT ISLANDS, MEDIANS, PENINSULAS, AND SIMILAR LANDSCAPE AREAS MUST BE AT LEAST SIX (6) INCHES BELOW THE FINISHED CURB ELEVATION TO ALLOW FOR PLACEMENT OF SIX (6) INCHES OF TOPSOIL. (ECM 1.4.7)

REVEGETATION NOTE:
 ONCE GRADING ACTIVITIES ARE COMPLETE, SCARIFY THE SITE AND BEGIN A PROGRAM OF REVEGETATION AND STABILIZATION IMMEDIATELY ACCORDING TO THE REQUIREMENTS FOUND IN THE ECM APPENDIX P-1 NOTES, TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION. (SEE SHEET EC04)

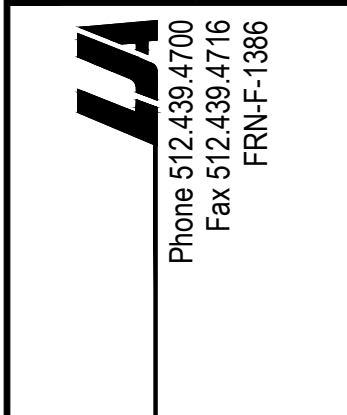
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**LEDGESTONE TERRACES
 SITE CONSTRUCTION PLANS
 EROSION CONTROL & TREE PROTECTION PLAN
 SHEET 1 OF 3**

NO.	REVISIONS	DESCRIPTION	DATE

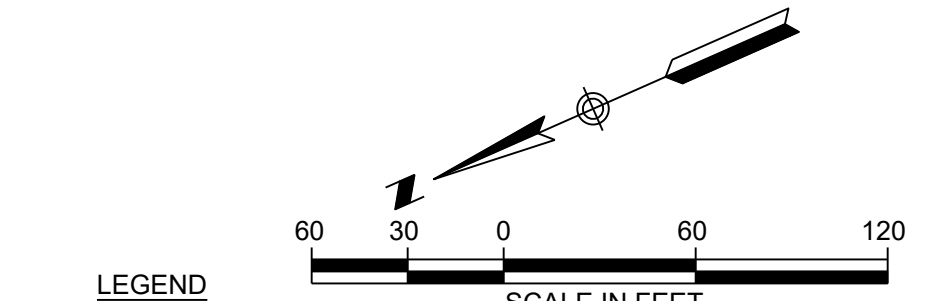
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 DRAWN BY:
 CHECKED BY:
 DRAWING NAME: A116-1007-FR-EC01.DWG



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JOB NUMBER: A116-1007
EC01
 SHEET NO. **20**
 OF 107 SHEETS

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LEGEND		
PROPOSED	EXISTING	
LOC	LOC	LIMITS OF CONSTRUCTION
SF	SF	SILT FENCE
LOC/SF	LOC/SF	LIMITS OF CONST./SILT FENCE
TP	TP	TREE PROTECTION
IP	IP	INLET PROTECTION
RB	RB	ROCK BERM
SCE	SCE	STABILIZED CONSTRUCTION ENTRANCE
		CONSTRUCTION STAGING / SPOILS / VEHICLE USE LOCATION
	○	TREE TO REMAIN
	○	TREE TO BE REMOVED
800	- 800	CONTOURS
ST	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
WL	WL	WATER LINE

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- DEWATERING SKIMMER KEYED NOTES**
- FLOATING INTAKE / DEWATERING SKIMMER. SEE DETAIL ON SHEET EC04.
 - TEMPORARY PUMP TO DISCHARGE TO 3'X3' DESIGNATED ENCLOSED SILT FENCE AREA FOR DEWATERING DURING CONSTRUCTION FOLLOWED BY DOWNSTREAM SILT FENCE.
 - ENCLOSED SILT FENCE AREA, 5'X5' MINIMUM, FOR PUMP DISCHARGE.
 - DOWNSTREAM SILT FENCE

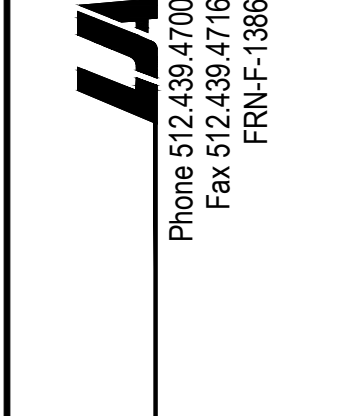
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**LEDGESTONE TERRACES
 SITE CONSTRUCTION PLANS
 EROSION CONTROL & TREE PROTECTION PLAN
 SHEET 2 OF 3**

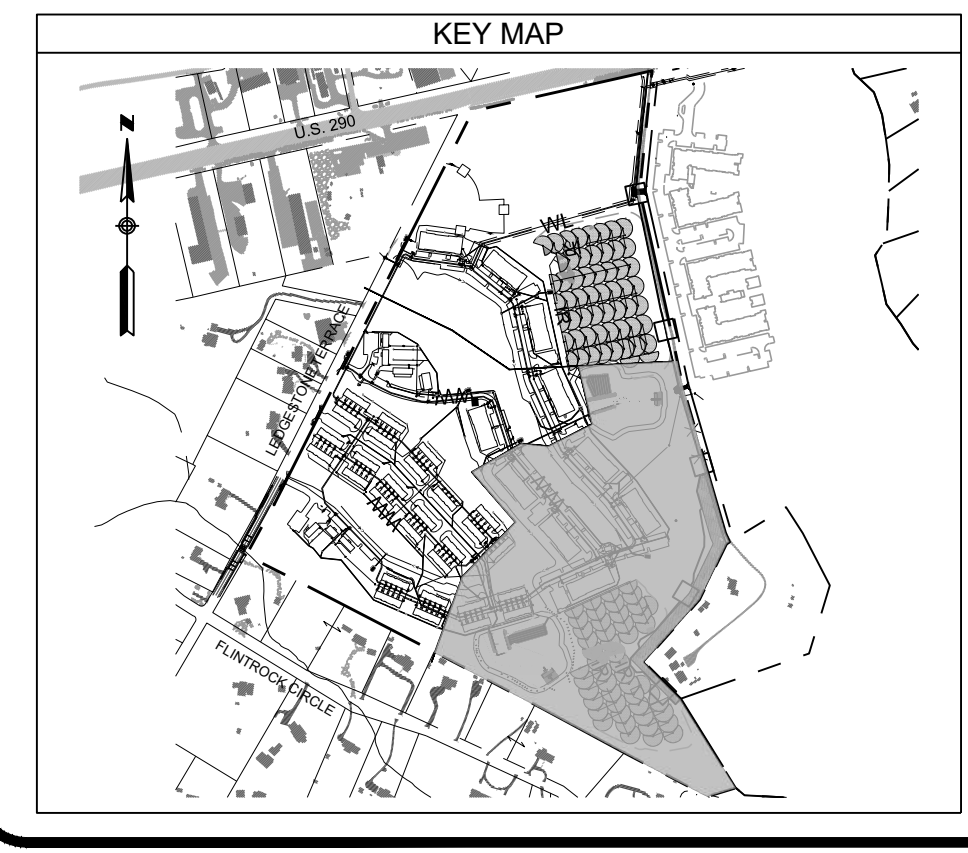
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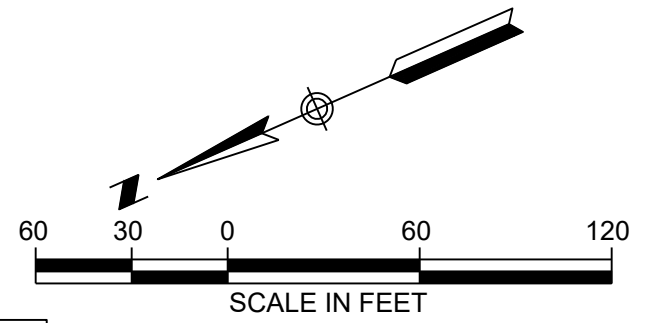


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 Fax 512.439.4716
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JOB NUMBER: A116-1007
EC02
 SHEET NO. **21**
 OF 107 SHEETS



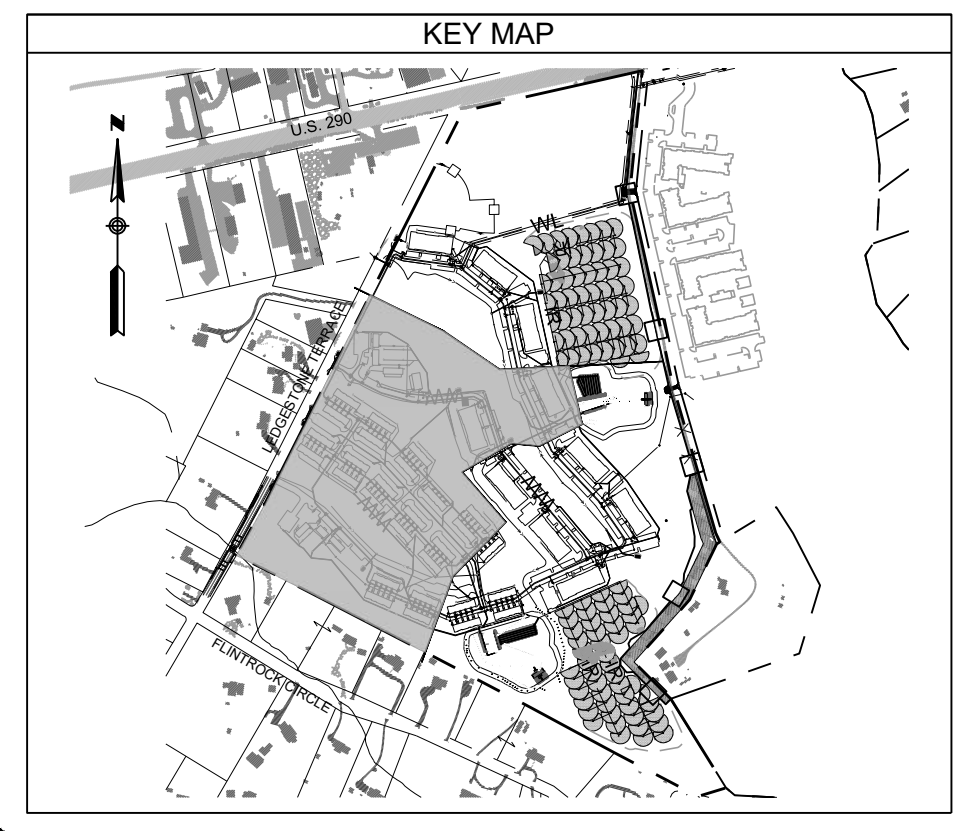
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LEGEND		
PROPOSED	EXISTING	
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SF	SF	SILT FENCE
LOC/SF	LOC/SF	LIMITS OF CONST./SILT FENCE
TP	TP	TREE PROTECTION
IP	IP	INLET PROTECTION
RB	RB	ROCK BERM
SCE	SCE	STABILIZED CONSTRUCTION ENTRANCE
		CONSTRUCTION STAGING / SPOILS / VEHICLE USE LOCATION
		TREE TO REMAIN
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800	800	CONTOURS
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 - IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION WITH FENCING AND WHERE HEAVY VEHICULAR TRAFFIC IS ANTICIPATED, COVER THOSE AREAS WITH FOUR (4) INCHES OF ORGANIC MULCH TO BE PRODUCED ON SITE, TO MINIMIZE SOIL COMPACTION.
 - PERFORM ALL GRADING WITHIN CRITICAL ROOT ZONE AREAS WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE.
 - WATER ALL TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES DEEPLY AS NECESSARY DURING PERIODS OF HOT, DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
 - WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.
 - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE SITE EIS CONTROLS. SEDIMENT REMOVAL SHALL BE PROVIDED AS NOTED ON THE PLANS. REPAIR TO SILT FENCE AND ORANGE MESH FENCING/CHAINLINK FENCING SHALL BE PROVIDED TO INSURE: 1) ORANGE MESH FENCE / SILT FENCE REMAINS IN PLACE AND STANDING AT ALL TIMES. 2) SILT FENCING TO BE REPLACED / REPAIRED DUE TO CONTRACTOR DAMAGE OR ANY DAMAGE DUE TO STORM WATER DURING RAIN EVENTS.
 - IF DISTURBED AREA IS NOT TO BE WORKED FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR OVERLAY MATINGS. (ECM 1.4.4 B.3. SECTION 5.3). THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY. (ECM 1.4.4.0.47)
 - ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT, OR IF SPOILS PILES ARE TO REMAIN OVERNIGHT, SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
 - DEWATERING OF THE TEMPORARY POND WILL BE PROVIDED TO ENSURE THERE IS ADEQUATE STORAGE FOR THE FOLLOWING RAIN EVENT. CONTRACTOR SHALL PROVIDE ADEQUATE FILTRATION DURING PUMPING TO ENSURE SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
 - THE ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD OR MODIFY EROSION / SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS.
 - CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER ECM 1.4.5(0), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
 - SILT FENCE TYPE AND INSTALLATION SHALL COMPLY WITH ECM 1.4.2.(G).
 - PER LDC 25-8-323(C), FOR AREAS ON THE SITE THAT ARE TO REMAIN PERVIOUS AFTER DEVELOPMENT, ANY SPOILS THAT ARE COMPACTED DURING SITE GRADING AND CONSTRUCTION OPERATIONS MUST BE DECOMPACTED IN COMPLIANCE WITH THE ECM AND IN COMPLIANCE WITH 55M 619.
 - FINISHED ELEVATION FOR PARKING LOT ISLANDS, MEDIANS, PENINSULAS, AND SIMILAR LANDSCAPE AREAS MUST BE AT LEAST SIX (6) INCHES BELOW THE FINISHED CURB ELEVATION TO ALLOW FOR PLACEMENT OF SIX (6) INCHES OF TOPSOIL. (ECM 1.4.7).

REVEGETATION NOTE:
ONCE GRADING ACTIVITIES ARE COMPLETE, SCARIFY THE SITE AND BEGIN A PROGRAM OF REVEGETATION AND STABILIZATION IMMEDIATELY ACCORDING TO THE REQUIREMENTS FOUND IN THE ECM APPENDIX P-1 NOTES, TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION. (SEE SHEET ECM)



**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
EROSION CONTROL & TREE PROTECTION PLAN
SHEET 3 OF 3**

NO.	REVISIONS	DESCRIPTION	DATE

DATE: 02/28/2024
 DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
 DRAWING NAME: A116-1007-FR-EC03.DWG

LJA Engineering, Inc.
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JOB NUMBER: A116-1007

EC03

SHEET NO. **22** OF 107 SHEETS



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 User: ljohn
 Date Modified: Feb 29, 2024 12:42
 Plot Date/Time: Mar 01, 2024 13:48:21

APPENDIX P-1 - EROSION CONTROL NOTES

- THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
- THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE COA ESC PLAN SHALL BE CONSULTED AND USED AS THE BASIS FOR A TYPES REQUIRED SWPPP. IF A SWPPP IS REQUIRED, IT SHALL BE AVAILABLE FOR REVIEW BY THE CITY OF AUSTIN ENVIRONMENTAL INSPECTOR AT ALL TIMES DURING CONSTRUCTION, INCLUDING AT THE PRE-CONSTRUCTION MEETING. THE CHECKLIST BELOW CONTAINS THE BASIC ELEMENTS THAT SHALL BE REVIEWED FOR PERMIT APPROVAL. COA EROSION CONTROL PLAN REVIEWERS AS WELL AS COA E.V. INSPECTORS - PLAN SHEETS SUBMITTED TO THE CITY OF AUSTIN MUST SHOW THE FOLLOWING:
 - ✓ DIRECTION OF FLOW DURING GRADING OPERATIONS.
 - ✓ LOCATION, DESCRIPTION, AND CALCULATIONS FOR OFF-SITE FLOW DIVERSION STRUCTURES.
 - ✓ AREAS THAT WILL NOT BE DISTURBED; NATURAL FEATURES TO BE PRESERVED.
 - ✓ DELINEATION OF CONTRIBUTING DRAINAGE AREA TO EACH PROPOSED BMP (E.G., SILT FENCE, SEDIMENT BASIN, ETC.).
 - ✓ LOCATION AND TYPE OF E&S BMPs FOR EACH PHASE OF DISTURBANCE.
 - ✓ CALCULATIONS FOR BMPs AS REQUIRED.
 - ✓ LOCATION AND DESCRIPTION OF TEMPORARY STABILIZATION MEASURES.

✓ LOCATION OF ON-SITE SPOILS, DESCRIPTION OF HANDLING AND DISPOSAL OF BORROW MATERIALS, AND DESCRIPTION OF ON-SITE PERMANENT SPOILS DISPOSAL AREAS, INCLUDING SIZE, DEPTH OF FILL AND REVEGETATION PROCEDURES.

- ✓ DESCRIBE SEQUENCE OF CONSTRUCTION AS IT PERTAINS TO ESC INCLUDING THE FOLLOWING ELEMENTS:
 - INSTALLATION SEQUENCE OF CONTROLS (E.G. PERMITTER CONTROLS, THEN SEDIMENT BASINS, THEN TEMPORARY STABILIZATION, THEN PERMANENT, ETC.)
 - PROJECT PHASING IF REQUIRED (LOC GREATER THAN 25 ACRES)
 - SEQUENCE OF GRADING OPERATIONS AND NOTATION OF TEMPORARY STABILIZATION MEASURES TO BE USED

- SCHEDULE FOR CONVERTING TEMPORARY BASINS TO PERMANENT W/ CONTROLS
- SCHEDULE FOR REMOVAL OF TEMPORARY CONTROLS
- ANTICIPATED MAINTENANCE SCHEDULE FOR TEMPORARY CONTROLS
 - CATEGORIZE EACH BMP UNDER ONE OF THE FOLLOWING AREAS OF BMP ACTIVITY AS DESCRIBED BELOW:
 - MINIMIZE DISTURBED AREA AND PROTECT NATURAL FEATURES AND SOIL
 - CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT
 - STABILIZE SOILS
 - PROTECT SLOPES
 - PROTECT STORM DRAIN INLETS
 - ESTABLISH PERMANENT CONTROLS AND SEDIMENT BARRIERS
 - RETAIN SEDIMENT ON-SITE AND CONTROL DEWATERING PRACTICES
 - ESTABLISH STABILIZED CONSTRUCTION EXITS
 - ANY ADDITIONAL BMPs
 - NOTE THE LOCATION OF EACH BMP ON YOUR SITE MAP(S).

- FOR ANY STRUCTURAL BMPs, YOU SHOULD PROVIDE DESIGN SPECIFICATIONS AND DETAILS AND REFER TO THEM.
 - FOR MORE INFORMATION, SEE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL 1.4.
- THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE OWNER OR OWNER'S REPRESENTATIVE SHALL NOTIFY THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT, 974-2278, AT LEAST THREE DAYS PRIOR TO THE MEETING. COA APPROVED ESC PLAN AND TYPES SWPPP (IF REQUIRED) SHOULD BE REVIEWED BY COA E.V. INSPECTOR AT THIS TIME.

- ANY MAJOR VIOLATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER. ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY AUTHORIZED COA STAFF. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
- THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED INSPECTOR WITH EITHER A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), CERTIFIED EROSION, SEDIMENT AND STORMWATER INSPECTOR (CESSWI) OR CERTIFIED INSPECTOR OF SEDIMENTATION AND EROSION CONTROLS (CISEC) CERTIFICATION TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT TOPOGRAPHIC CHANGES THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.

- PRIOR TO FINAL ACCEPTANCE BY THE CITY, HALL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONSTRUCTION ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
- ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS ONE SQUARE FOOT IN TOTAL AREA, BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY REQUIRES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A CITY OF AUSTIN ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION.
- TEMPORARY AND PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW.
 - ALL DISTURBED AREAS TO BE REVEGETATED ARE REQUIRED TO PLACE A MINIMUM OF SIX (6) INCHES OF TOPSOIL (SEE STANDARD SPECIFICATION ITEM NO. 6015.3(A)). DO NOT ADD TOPSOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES.
 - TOPSOIL SALVAGED FROM THE EXISTING SITE IS ENCOURAGED FOR USE, BUT IT SHOULD MEET THE STANDARDS SET FORTH IN 6015.
 - AN OWNER/ENGINEER MAY PROPOSE USE OF ON-SITE SALVAGED TOPSOIL WHICH DOES NOT MEET THE CRITERIA OF STANDARD SPECIFICATION 6015 BY PROVIDING A SOIL ANALYSIS AND A WRITTEN STATEMENT FROM A QUALIFIED PROFESSIONAL IN SOILS, LANDSCAPE ARCHITECTURE, OR AGRONOMY INDICATING THE ON-SITE TOPSOIL WILL PROVIDE AN EQUIVALENT GROWTH MEDIA AND SPECIFYING WHAT, IF ANY, SOIL AMENDMENTS ARE REQUIRED.
 - SOIL AMENDMENTS SHALL BE WORKED INTO THE EXISTING SITE TOPSOIL WITH A DISC OR TILLER TO CREATE A WELL-BLENDED MATERIAL.

- THE VEGETATIVE STABILIZATION OF AREAS DISTURBED BY CONSTRUCTION SHALL BE AS FOLLOWS:

TEMPORARY VEGETATIVE STABILIZATION:

 - FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH OR INCLUDE A COOL SEASON COVER CROP: (WESTERN WHEATGRASS (PASCOPYRUM SMITHII) AT 50 POUNDS PER ACRE, OATS (AVENA SATIVA) AT 40 POUNDS PER ACRE, CEREAL RYE GRASS (SECALE CEREALE) AT 45 POUNDS PER ACRE. CONTRACTOR MUST ENSURE THAT ANY SEED APPLICATION REQUIRING A COOL SEASON COVER CROP DOES NOT UTILIZE ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) OR PERENNIAL RYEGRASS (LOLIUM PERENNE). COOL SEASON COVER CROPS ARE NOT PERMANENT EROSION CONTROL.
 - FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HILLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE OR NATIVE PLANT SEED MIX CONFORMING TO ITEMS 6045 OR 6095.

A FERTILIZER SHALL BE APPLIED ONLY IF WARRANTED BY A SOIL TEST AND SHALL CONFORM TO ITEM NO. 6065. FERTILIZER, FERTILIZATION SHOULD NOT OCCUR WHEN RAINFALL IS EXPECTED OR DURING SLOW PLANT GROWTH OR DORMANCY. CHEMICAL FERTILIZER MAY NOT BE APPLIED IN THE CRITICAL WATER QUALITY ZONE.
- HYDROMULCH SHALL COMPLY WITH TABLE 1, BELOW.
- TEMPORARY EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1 1/2 INCHES HIGH WITH A MINIMUM OF 95% TOTAL COVERAGE SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR EROSION CONTROL ARE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
- WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, AND STANDARD SPECIFICATIONS 6045 OR 6095.

TABLE 1: HYDROMULCHING FOR TEMPORARY VEGETATIVE STABILIZATION

Material	Description	Longevity	Typical Applications	Application Rates
100% or any blend of wood/straw	70% or greater Wood/Straw and/or cotton plant material (except sis) mulch shall exceed 30% paper)	3-6 months	Moderate slopes: from 1:1 to 3:1	1500 to 2000 lbs per acre

- PERMANENT VEGETATIVE STABILIZATION:**
- FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOWED TO A HEIGHT OF LESS THAN ONE-HALF (1/2) INCH AND THE AREA SHALL BE RE-SEED IN ACCORDANCE WITH TABLE 2 BELOW. ALTERNATIVELY, THE COOL SEASON COVER CROP CAN BE MIXED WITH BERMUDAGRASS OR NATIVE SEED AND INSTALLED TOGETHER, UNDERSTANDING THAT GERMINATION OF WARM-SEASON SEED TYPICALLY REQUIRES SOIL TEMPERATURES OF 60 TO 70 DEGREES.
 - FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HILLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE WITH A PURITY OF 95% AND A MINIMUM PURE LIVE SEED (PLS) OF 0.83. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL. PERMANENT VEGETATIVE STABILIZATION CAN ALSO BE ACCOMPLISHED WITH A NATIVE PLANT SEED MIX CONFORMING TO ITEMS 6045 OR 6095.

- FERTILIZER USE SHALL FOLLOW THE RECOMMENDATION OF A SOIL TEST. SEE ITEM 6065. FERTILIZER APPLICATIONS OF FERTILIZER (AND PESTICIDE) ON CITY-OWNED AND MANAGED PROPERTY REQUIRES THE YEARLY SUBMITTAL OF A PESTICIDE AND FERTILIZER APPLICATION RECORD, ALONG WITH A CURRENT COPY OF THE APPLICATOR'S LICENSE. FOR CURRENT COPY OF THE RECORD TEMPLATE CONTACT THE CITY OF AUSTIN'S IPM COORDINATOR.
- HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.
- WATER THE SEEDED AREAS IMMEDIATELY AFTER INSTALLATION TO ACHIEVE GERMINATION AND A HEALTHY STAND OF PLANTS THAT CAN ULTIMATELY SURVIVE WITHOUT SUPPLEMENTAL WATER. APPLY THE WATER UNIFORMLY TO THE PLANTED AREAS WITHOUT CAUSING DISPLACEMENT OR EROSION OF THE MATERIALS OR SOIL. MAINTAIN THE SEEDBED IN A MOST CONDITION FAVORABLE FOR PLANT GROWTH. ALL WATERING SHALL COMPLY WITH CITY CODE CHAPTER 6.4 (WATER CONSERVATION), AT RATES AND FREQUENCIES DETERMINED BY A LICENSED IRRIGATOR OR OTHER QUALIFIED PROFESSIONAL, AND AS ALLOWED BY THE AUSTIN WATER UTILITY AND CURRENT WATER RESTRICTIONS AND WATER CONSERVATION INITIATIVES.
- PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1 1/2 INCHES HIGH WITH A MINIMUM OF 95 PERCENT FOR THE NON-NATIVE MIX, AND 95 PERCENT COVERAGE FOR THE NATIVE MIX SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR STABILITY MUST BE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 16 SQUARE FEET.
- WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, ITEMS 6045 AND 6095.

TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION

Material	Description	Longevity	Typical Applications	Application Rates
80% Organic dehydrated fibers	80% Organic dehydrated fibers	12-18 months	On slopes greater than 1:1 and erodible soil conditions	2,000 to 4,000 lbs per acre (see manufacturers' recommendations)
10% Tackifier	10% Tackifier	6 months	On slopes greater than 1:1 and erodible soil conditions	200 to 300 lbs per acre (see manufacturers' recommendations)

- DEVELOPER INFORMATION:
 - ENDEAVOR REAL ESTATE GROUP
 - 500 WEST 5th STREET, SUITE 700
 - AUSTIN, TEXAS 78701
 - PHONE #: (512) 532-2194
- OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:
 - LJA ENGINEERING, INC.
 - 7500 RIALTO BOULEVARD, BUILDING II, SUITE 100
 - AUSTIN, TEXAS 78735
 - PH: (512) 439-4700 FAX: (512) 439-4716

PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:
 PHONE # _____
 PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:
 PHONE # _____

- THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT AT 974-2278 AT LEAST 48 HOURS PRIOR WITH THE LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

SOURCE: RULE NO. R161-15.13, 1.4-2016.

CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION

- ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
- PROTECTIVE FENCES SHALL BE ERECTED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
- PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
- EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIP LINES.
- PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE). FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
 - SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
 - ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL), OR TREENING NOT REVIEWED AND AUTHORIZED BY THE CITY ARBORIST;
 - WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
 - OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
- EXCEPTIONS TO INSTALLING FENCES AT TREE DRIP LINES MAY BE PERMITTED IN THE FOLLOWING CASES:
 - WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 TO 4 FEET BEYOND THE AREA DISTURBED;
 - WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIP LINE, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZE ROOT DAMAGE);
 - WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF TREE SPACE BETWEEN THE FENCE AND THE BUILDINGS;
 - WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE CITY ARBORIST AT 974-1876 TO DISCUSS ALTERNATIVES.
- SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.
- WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 4 FT (OR TO THE LIMITS OF LOWER BRANCHES) IN ADDITION TO THE REQUIRED FENCING PROVIDED.
 - TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
 - ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 7 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
 - ANY TREENING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
 - NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SILT IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
 - PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.).
 - ALL FINISHED PRUNING SHALL BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE CITY ARBORIST).
 - DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NON-COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

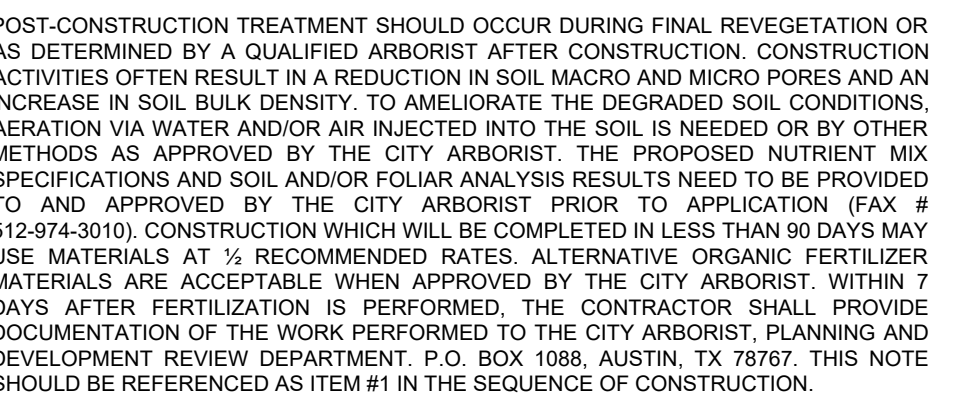
- SPECIAL CONSTRUCTION TECHNIQUES**
- PRIOR TO EXCAVATION WITHIN TREE DRIP LINES OR THE REMOVAL OF TREES ADJACENT TO OTHER TREES THAT ARE TO REMAIN, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE ROOT DAMAGE.
- IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION WITH FENCING AND WHERE HEAVY VEHICULAR TRAFFIC IS ANTICIPATED, COVER THOSE AREAS WITH A MINIMUM OF 12 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION. IN AREAS WITH HIGH SOIL PLASTICITY GEOTEXTILE FABRIC PER STANDARD SPECIFICATION 6205, SHOULD BE PLACED UNDER THE MULCH TO PREVENT EXCESSIVE MIXING OF THE SOIL AND MULCH. ADDITIONALLY, MATERIAL SUCH AS PLYWOOD AND METAL SHEETS, COULD BE REQUIRED BY THE CITY ARBORIST TO MINIMIZE ROOT IMPACTS FROM HEAVY EQUIPMENT. ONCE THE PROJECT IS COMPLETED, ALL MATERIALS SHOULD BE REMOVED, AND THE MULCH SHOULD BE REDUCED TO A DEPTH OF 3 INCHES.
- PERFORM ALL GRADING WITHIN CRITICAL ROOT ZONE AREAS BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE.
- WATER ALL TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
- WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BETWEEN THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.

APPENDIX P-6 REMEDIAL TREE CARE NOTES

AS A COMPONENT OF AN EFFECTIVE REMEDIAL TREE CARE PROGRAM PER ENVIRONMENTAL CRITERIA MANUAL SECTION 3.5.4 PRESERVED TREES (H) THE LIMITS OF CONSTRUCTION MAY REQUIRE SOIL AERATION AND SUPPLEMENTAL NUTRIENTS. SOIL AND/OR FOLIAR ANALYSIS SHOULD BE USED TO DETERMINE THE NEED FOR SUPPLEMENTAL NUTRIENTS. THE CITY ARBORIST MAY REQUIRE THESE ANALYSES AS PART OF A COMPREHENSIVE TREE CARE PLAN. SOIL PH SHALL BE CONSIDERED WHEN DETERMINING THE FERTILIZATION COMPOSITION AS SOIL PH INFLUENCES THE TREE'S ABILITY TO UPTAKE NUTRIENTS FROM THE SOIL. IF ANALYSES INDICATE THE NEED FOR SUPPLEMENTAL NUTRIENTS, THEN HUMATE-BASED SOLUTIONS WITH MYCORRHIZAL COMPONENTS ARE HIGHLY RECOMMENDED. IN ADDITION, SOIL ANALYSIS MAY BE NEEDED TO DETERMINE IF ORGANIC MATERIAL OR BENEFICIAL MICROORGANISMS ARE NEEDED TO IMPROVE SOIL HEALTH. MATERIALS AND METHODS ARE TO BE APPROVED BY THE CITY ARBORIST (512-974-1876) PRIOR TO APPLICATION. THE OWNER OR GENERAL CONTRACTOR SHALL SELECT A FERTILIZATION CONTRACTOR AND ENSURE COORDINATION WITH THE CITY ARBORIST.

PRE-CONSTRUCTION TREATMENT SHOULD BE APPLIED IN THE APPROPRIATE SEASON, IDEALLY THE SEASON PRECEDING THE PROPOSED CONSTRUCTION. MINIMALLY AREAS TO BE TREATED INCLUDE THE ENTIRE CRITICAL ROOT ZONE OF TREES AS DEPICTED ON THE CITY APPROVED PLANS. TREATMENT SHOULD INCLUDE, BUT NOT LIMITED TO, FERTILIZATION, SOIL TREATMENT, MULCHING, AND PROPER PRUNING.

POST-CONSTRUCTION TREATMENT SHOULD OCCUR DURING FINAL REVEGETATION OR AS DETERMINED BY A QUALIFIED ARBORIST AFTER CONSTRUCTION. CONSTRUCTION ACTIVITIES OFTEN RESULT IN A REDUCTION IN SOIL MACRO AND MICRO PORES AND AN INCREASE IN SOIL BULK DENSITY. TO AMELIORATE THE DEGRADED SOIL CONDITIONS, AERATION VIA WATER AND/OR AIR INJECTED INTO THE SOIL IS NEEDED OR BY OTHER METHODS AS APPROVED BY THE CITY ARBORIST. THE PROPOSED NUTRIENT MIX SPECIFICATIONS AND SOIL AND/OR FOLIAR ANALYSIS RESULTS NEED TO BE PROVIDED TO AND APPROVED BY THE CITY ARBORIST PRIOR TO APPLICATION (FAX: # 512-974-3010). CONSTRUCTION WHICH WILL BE COMPLETED IN LESS THAN 90 DAYS MAY USE MATERIALS AT 1/2 RECOMMENDED RATES. ALTERNATIVE ORGANIC FERTILIZER MATERIALS ARE ACCEPTABLE WHEN APPROVED BY THE CITY ARBORIST. WITHIN 7 DAYS AFTER FERTILIZATION IS PERFORMED, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF THE WORK PERFORMED TO THE CITY ARBORIST, PLANNING AND DEVELOPMENT REVIEW DEPARTMENT, P.O. BOX 1088, AUSTIN, TX 78767. THIS NOTE SHOULD BE REFERENCED AS ITEM #11 IN THE SEQUENCE OF CONSTRUCTION.

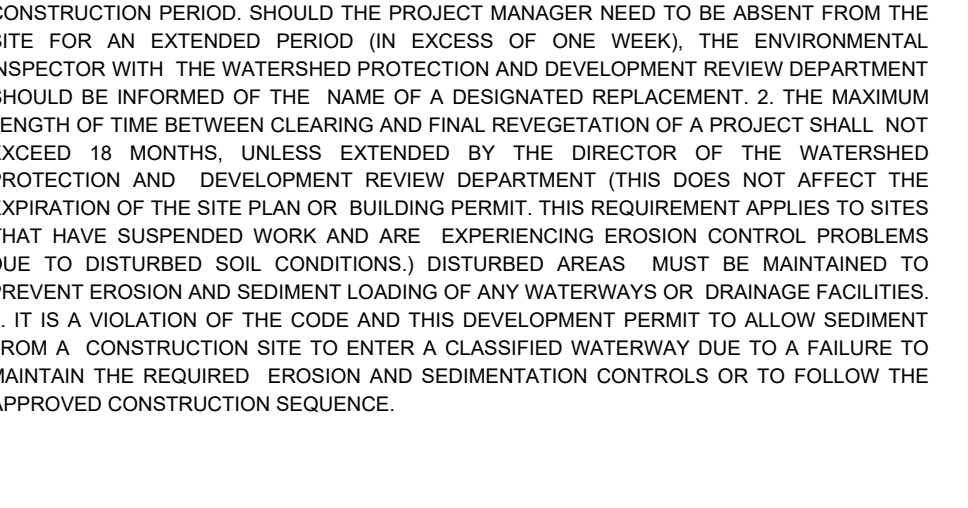


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	11/15/99	ADOPTED
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TREE PROTECTION FENCE LOCATIONS

STANDARD NO.	610S-1
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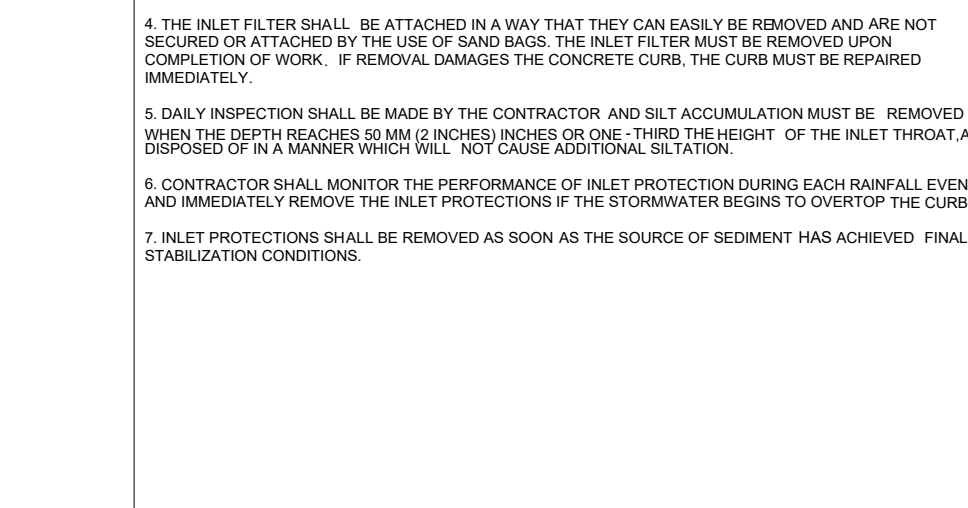


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: MORGAN VANCE	02/20/10	ADOPTED
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ROCK BERM

STANDARD NO.	639S-1
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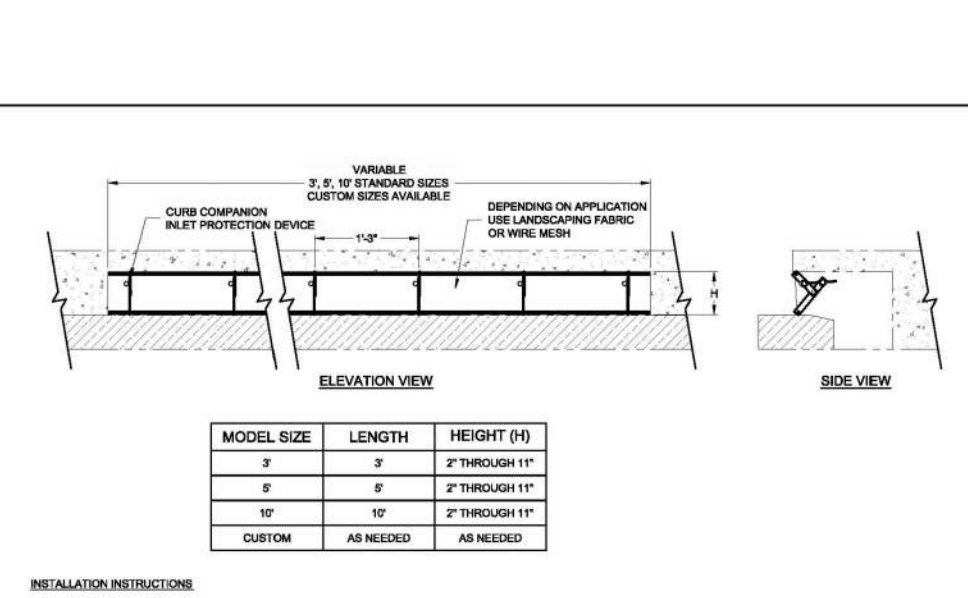


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: MARK VALE	10/30/09	ADOPTED
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FILTER DIKE CURB INLET PROTECTION

STANDARD NO.	628S-2
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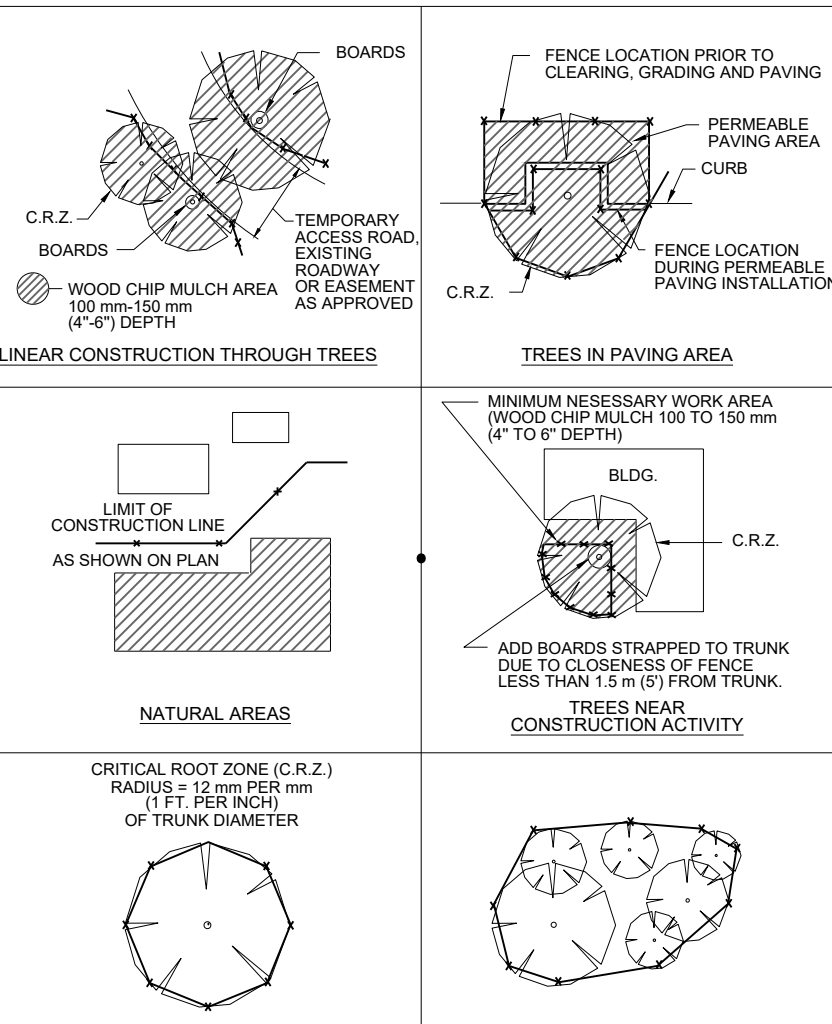


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	3/27/10	ADOPTED
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CURB COMPANION INLET PROTECTION STANDARD DETAIL

STANDARD NO.	622S-1
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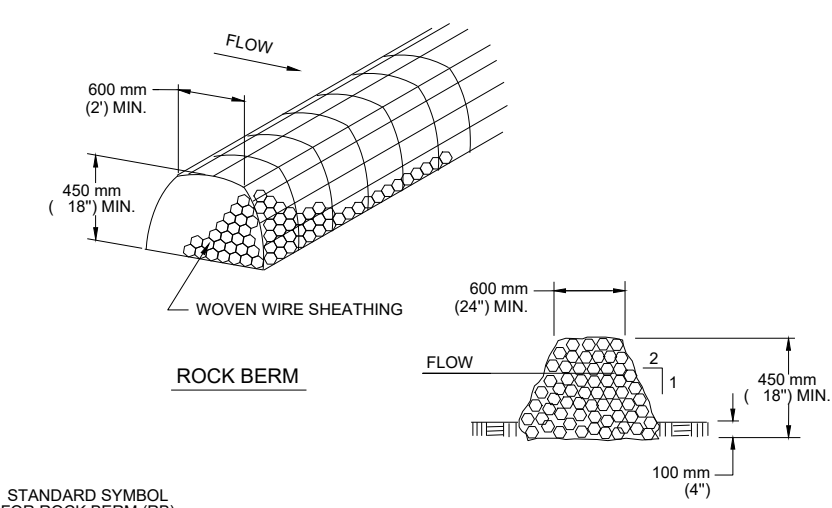


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	11/15/99	ADOPTED
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TREE PROTECTION FENCE TYPE A - CHAIN LINK

STANDARD NO.	610S-2
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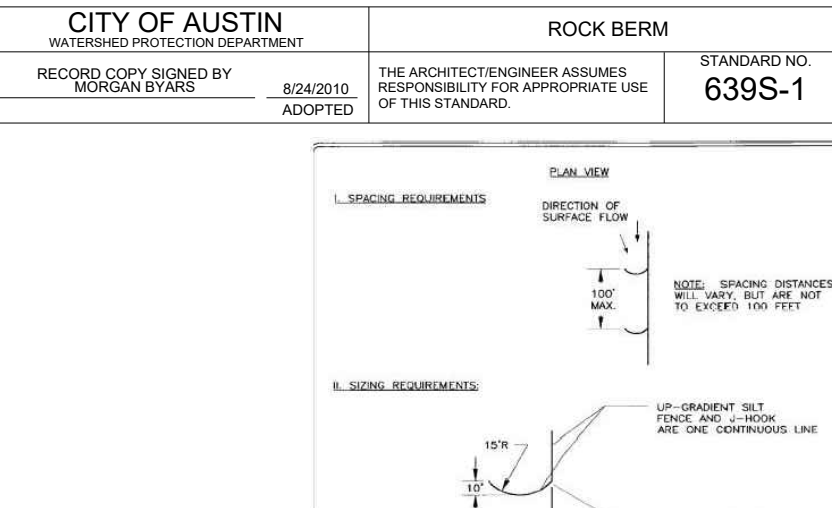


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	5/23/10	ADOPTED
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STABILIZED CONSTRUCTION ENTRANCE

STANDARD NO.	641S-1
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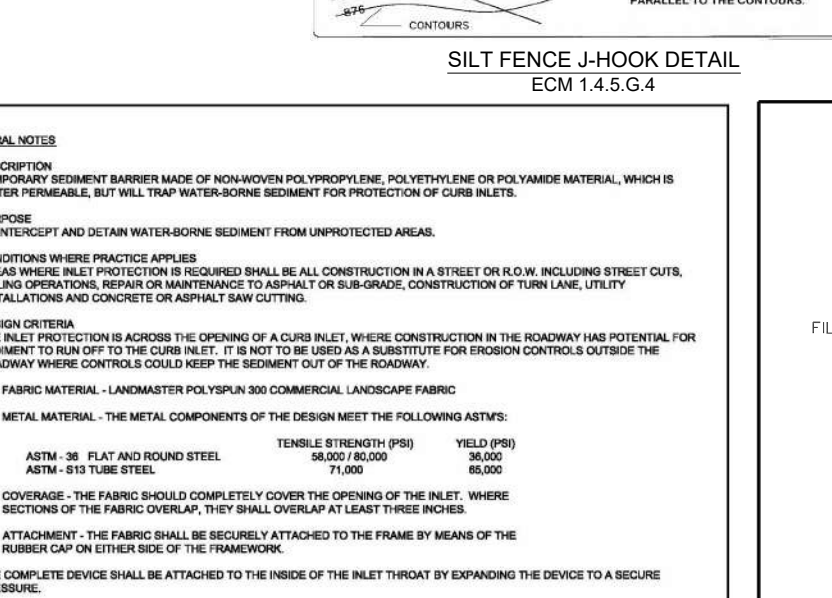


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	09/21/11	ADOPTED
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SILT FENCE

STANDARD NO.	642S-1
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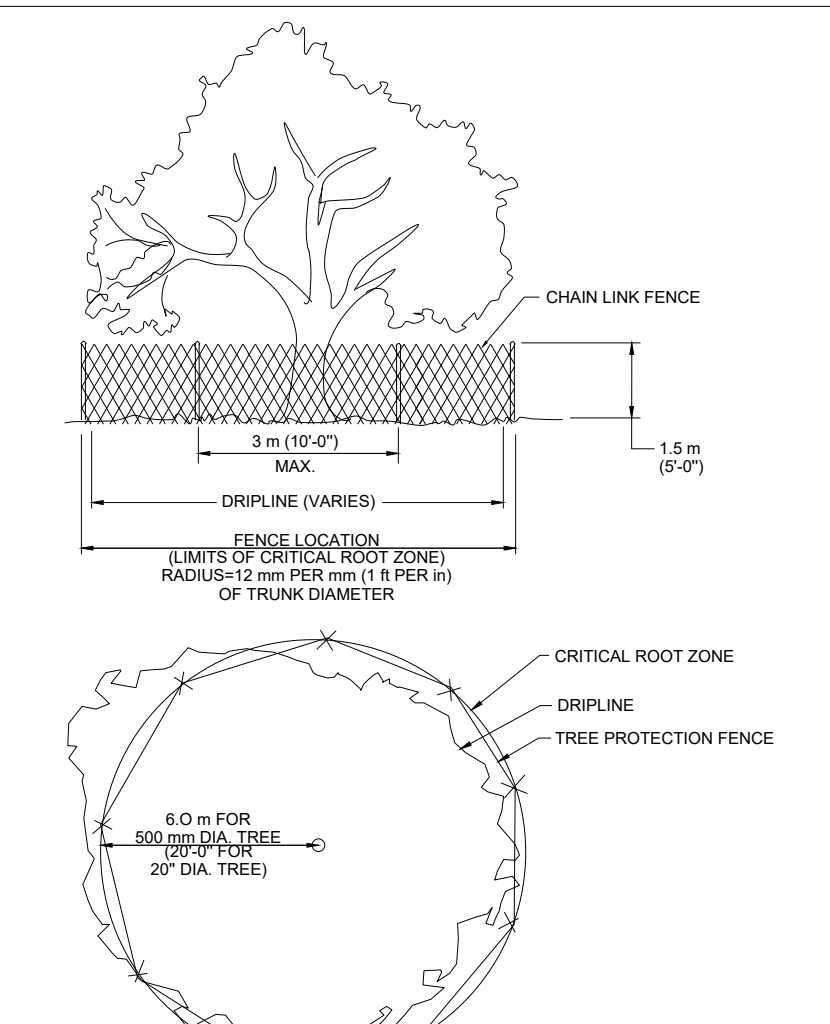


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	3/27/10	ADOPTED
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DIVERSION DIKE

STANDARD NO.	622S-1
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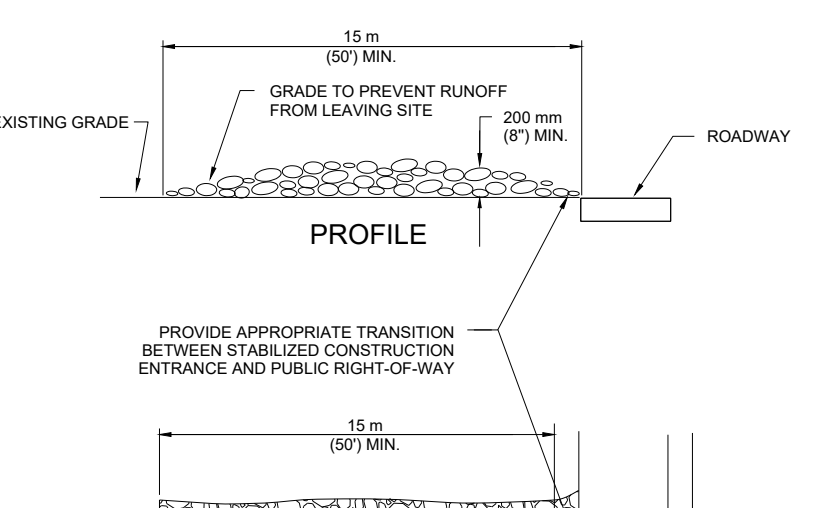


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

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TREE PROTECTION FENCE MODIFIED TYPE A - CHAIN LINK

STANDARD NO.	610S-4
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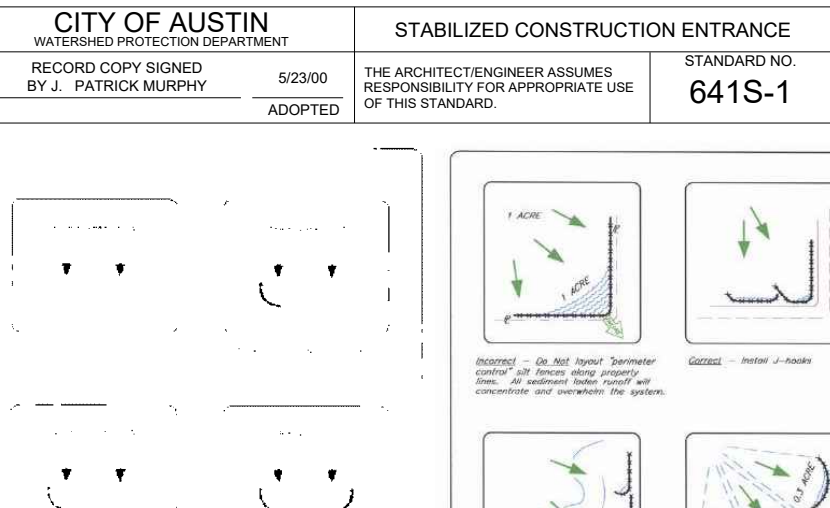


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	09/21/11	ADOPTED
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SILT FENCE FABRIC

STANDARD NO.	642S-1
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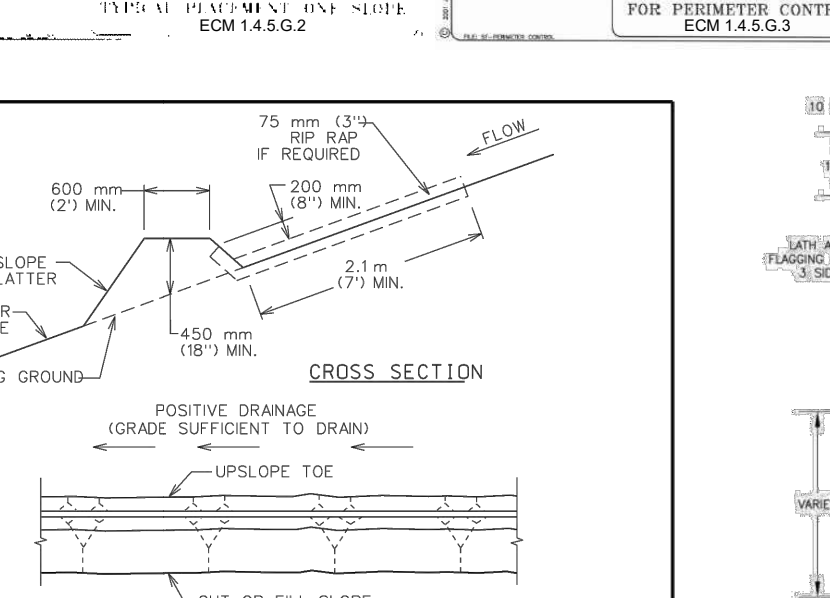


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	09/21/11	ADOPTED
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SILT FENCE FABRIC

STANDARD NO.	642S-1
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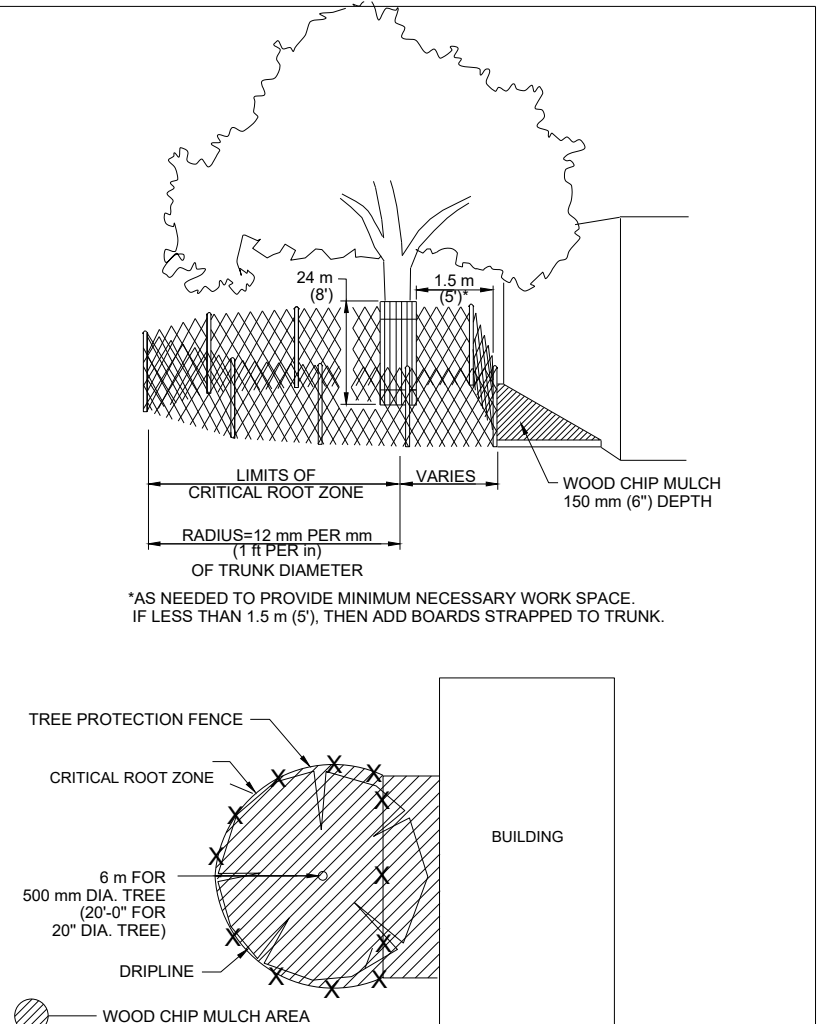


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	09/21/11	ADOPTED
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SILT FENCE FABRIC

STANDARD NO.	642S-1
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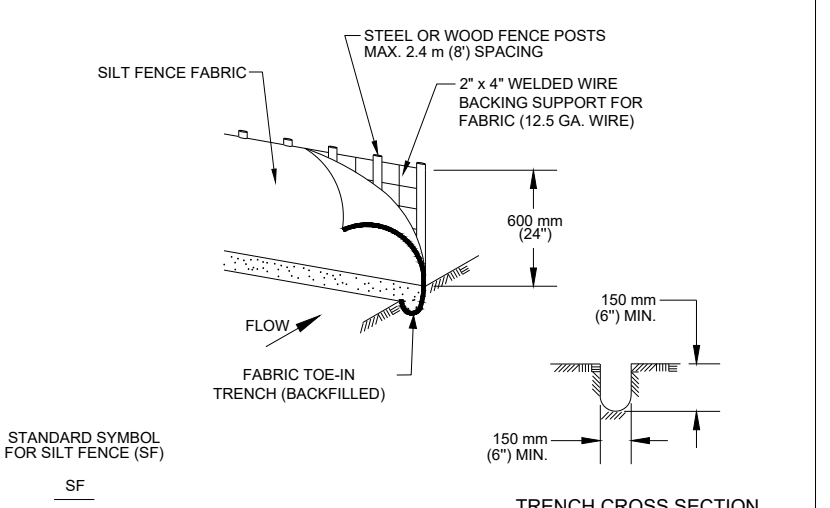


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	09/21/11	ADOPTED
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SILT FENCE FABRIC

STANDARD NO.	642S-1
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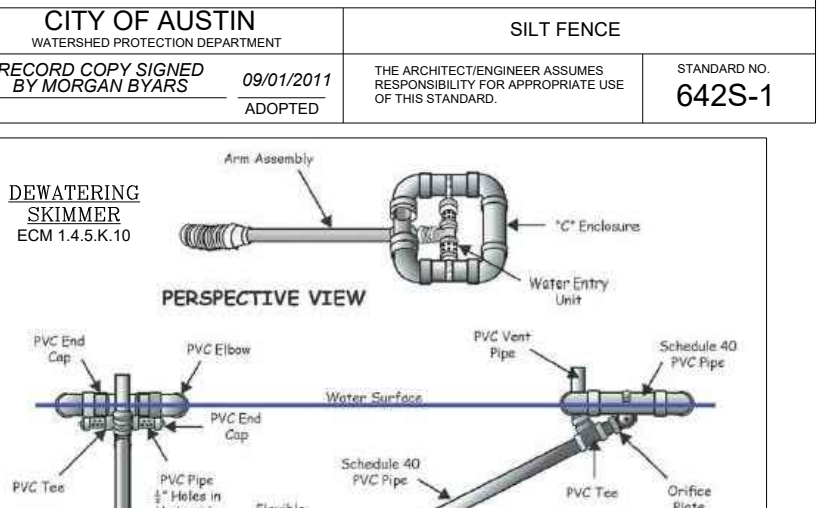


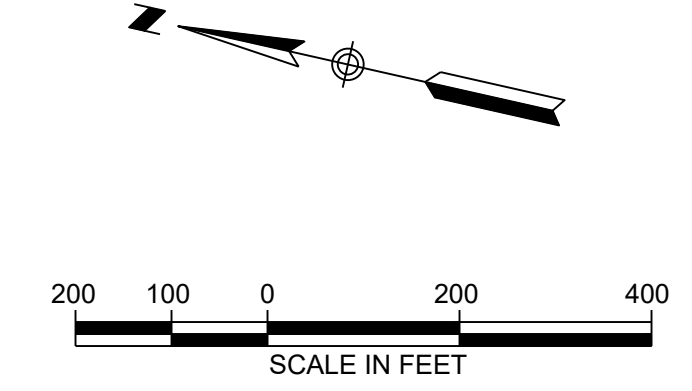
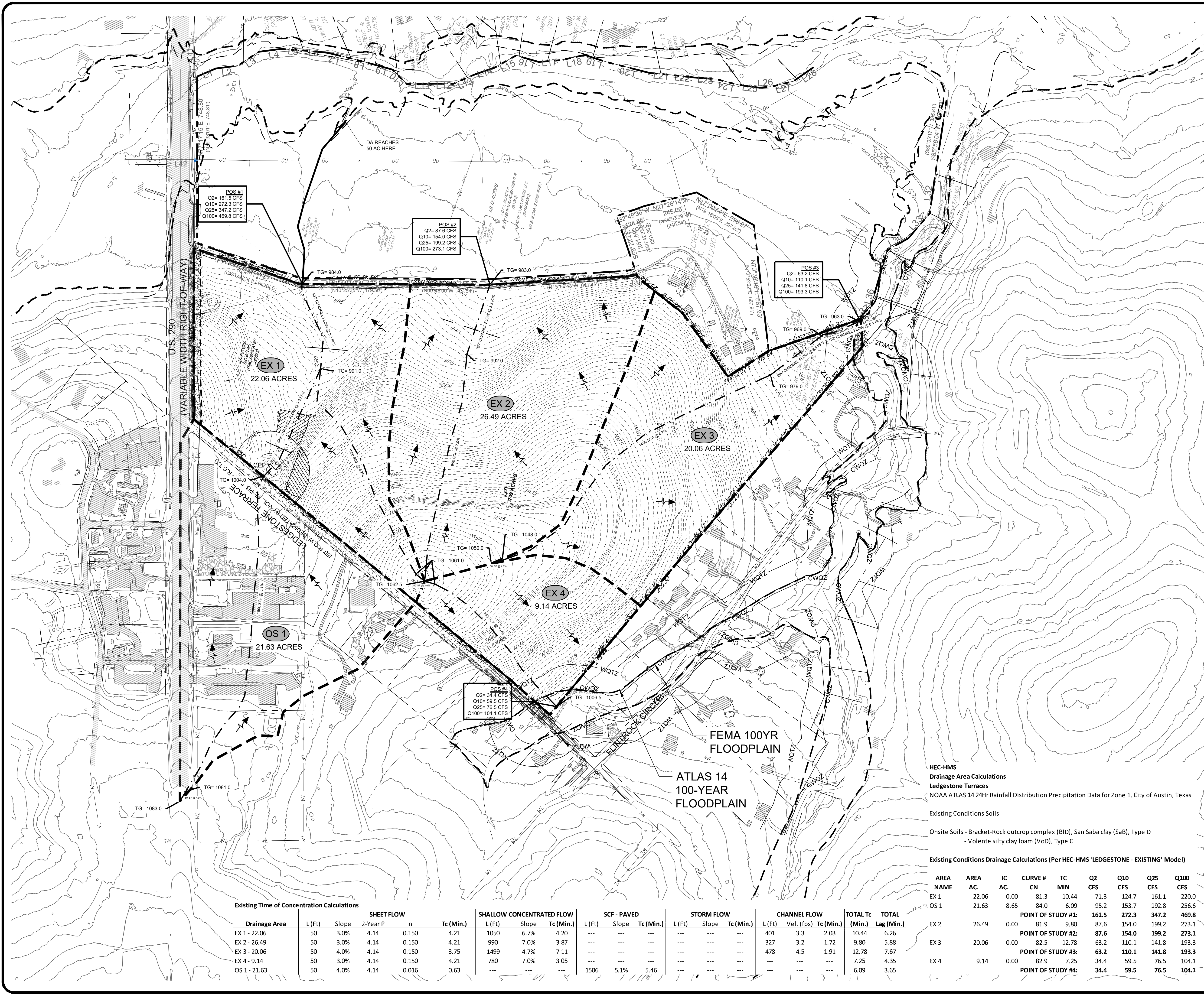
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT

RECORD COPY SIGNED BY: J. PATRICK MURPHY	09/21/11	ADOPTED
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SILT FENCE FABRIC

STANDARD NO.	642S-1
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- LEGEND**
- 10 DRAINAGE AREA NUMBER AND ACREAGE
 - 2.59 ACRES
 - DRAINAGE AREA
 - - - - - PROPERTY LINE
 - . - . - . TC PATH
 - SF SHEET FLOW
 - SCF SHALLOW CONCENTRATED FLOW
 - TG TOP OF EXISTING GRADE
 - Q₂₅ = 16.64 cfs
 - Q₁₀₀ = 23.62 cfs
 - FLOW DIRECTION ARROW

Existing Time of Concentration Calculations

Drainage Area	SHEET FLOW					SHALLOW CONCENTRATED FLOW			SCF - PAVED			STORM FLOW			CHANNEL FLOW		TOTAL Tc (Min.)	TOTAL Lag (Min.)	
	L (Ft)	Slope	2-Year P	n	Tc (Min.)	L (Ft)	Slope	Tc (Min.)	L (Ft)	Slope	Tc (Min.)	L (Ft)	Slope	Tc (Min.)	L (Ft)	Vel. (fps)			Tc (Min.)
EX 1 - 22.06	50	3.0%	4.14	0.150	4.21	1050	6.7%	4.20	---	---	---	---	---	---	401	3.3	2.03	10.44	6.26
EX 2 - 26.49	50	3.0%	4.14	0.150	4.21	990	7.0%	3.87	---	---	---	---	---	---	327	3.2	1.72	9.80	5.88
EX 3 - 20.06	50	4.0%	4.14	0.150	3.75	1499	4.7%	7.11	---	---	---	---	---	---	478	4.5	1.91	12.78	7.67
EX 4 - 9.14	50	3.0%	4.14	0.150	4.21	780	7.0%	3.05	---	---	---	---	---	---	---	---	---	7.25	4.35
OS 1 - 21.63	50	4.0%	4.14	0.016	0.63	---	---	---	1506	5.1%	5.46	---	---	---	---	---	---	6.09	3.65

HEC-HMS
 Drainage Area Calculations
 LedgeStone Terraces
 NOAA ATLAS 14 24Hr Rainfall Distribution Precipitation Data for Zone 1, City of Austin, Texas

Existing Conditions Soils
 Onsite Soils - Bracket-Rock outcrop complex (BID), San Saba clay (SaB), Type D
 - Volente silty clay loam (VoD), Type C

Existing Conditions Drainage Calculations (Per HEC-HMS 'LEDGESTONE - EXISTING' Model)

AREA NAME	AREA AC.	IC AC.	CURVE # CN	TC MIN	Q2 CFS	Q10 CFS	Q25 CFS	Q100 CFS
EX 1	22.06	0.00	81.3	10.44	71.3	124.7	161.1	220.0
OS 1	21.63	8.65	84.0	6.09	95.2	153.7	192.8	256.6
EX 2	26.49	0.00	81.9	9.80	87.6	154.0	199.2	273.1
EX 3	20.06	0.00	82.5	12.78	63.2	110.1	141.8	193.3
EX 4	9.14	0.00	82.9	7.25	34.4	59.5	76.5	104.1

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

EXISTING CONDITIONS DRAINAGE AREA MAP

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	DESCRIPTION	BY

DESIGNED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 DATE: 02/28/2024

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

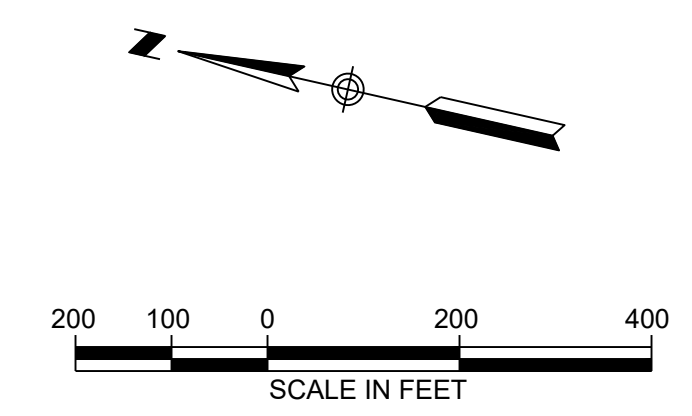
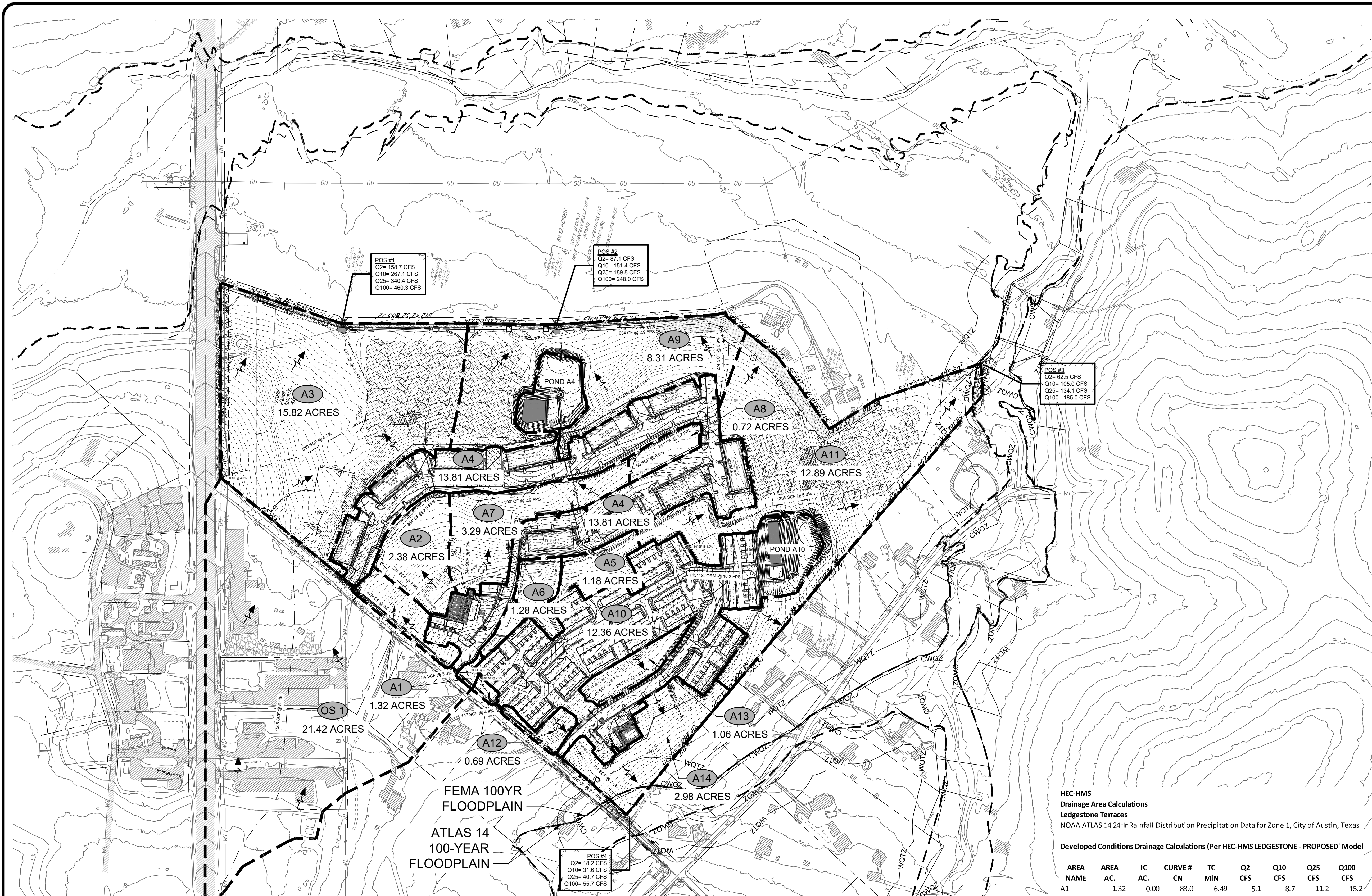
JOB NUMBER: A116-1007

DM01

SHEET NO. **28** OF 107 SHEETS

TRAVIS COUNTY TNR No. 22-38855 AUSTIN CASE No. SP-2023-0177D

C:\Users\jrc\OneDrive\Documents\Projects\2024\Design\Construction\A116-1007-FR-DM01 (EXIST).dwg
 User: jrc
 Date Modified: Feb 28, 24 - 10:33
 Plot Date/Time: Mar 01, 24 - 13:50:02



LEGEND

	10	DRAINAGE AREA NUMBER AND ACREAGE
	2.59 ACRES	DRAINAGE AREA
		PROPERTY LINE
		TC PATH
	SF	SHEET FLOW
	SCF	
	TG	TOP OF EXISTING GRADE
	Q25 = 16.64 cfs	Q ₂₅
	Q100 = 23.62 cfs	Q ₁₀₀
		FLOW DIRECTION ARROW

Developed Time of Concentration Calculations

Drainage Area	SHEET FLOW				SHALLOW CONCENTRATED FLOW			SCF - PAVED			STORM FLOW			CHANNEL FLOW			TOTAL Tc (Min.)	TOTAL Lag (Min.)
	L (Ft)	Slope	2-Year P	n	L (Ft)	Slope	Tc (Min.)	L (Ft)	Slope	Tc (Min.)	L (Ft)	Slope	Tc (Min.)	L (Ft)	Vel. (fps)	Tc (Min.)		
A1	50	4.0%	4.14	0.150	84	3.0%	0.50	---	---	---	---	---	---	---	---	---	---	
A2	50	6.0%	4.14	0.150	238	7.6%	0.89	---	---	---	---	---	---	---	---	---	---	
A3	50	4.0%	4.14	0.150	569	4.7%	2.70	---	---	---	---	---	---	---	---	---	---	
A4	50	2.0%	4.14	0.015	---	---	---	---	---	---	---	---	---	---	---	---	---	
A5	50	4.0%	4.14	0.150	86	10.5%	0.27	---	---	---	---	---	---	---	---	---	---	
A6	50	3.0%	4.14	0.150	376	6.1%	1.57	---	---	---	---	---	---	---	---	---	---	
A7	50	5.0%	4.14	0.150	344	8.0%	1.26	---	---	---	---	---	---	---	---	---	---	
A8	50	4.0%	4.14	0.150	50	6.0%	0.21	---	---	---	---	---	---	---	---	---	---	
A9	50	6.0%	4.14	0.150	274	6.9%	1.07	---	---	---	---	---	---	---	---	---	---	
A10	50	4.0%	4.14	0.015	---	---	---	---	---	---	---	---	---	---	---	---	---	
A11	50	4.0%	4.14	0.150	1388	5.0%	6.43	---	---	---	---	---	---	---	---	---	---	
A12	50	2.0%	4.14	0.150	147	4.8%	0.70	---	---	---	---	---	---	---	---	---	---	
A13	50	12.0%	4.14	0.150	242	45	6.7%	0.18	---	---	---	---	---	---	---	---	---	
A14	50	6.0%	4.14	0.016	0.53	301	7.0%	0.93	---	---	---	---	---	---	---	---	---	
OS 1 - 21.63	50	4.0%	4.14	0.016	0.63	1506	5.1%	5.46	---	---	---	---	---	---	---	---	---	

*A MINIMUM OF 5 MIN TC OR 3 MIN LAG TIME WAS USED IN HMS MODELING

HEC-HMS
Drainage Area Calculations
LedgeStone Terraces
NOAA ATLAS 14 24hr Rainfall Distribution Precipitation Data for Zone 1, City of Austin, Texas

Developed Conditions Drainage Calculations (Per HEC-HMS LEDGESTONE - PROPOSED Model)

AREA NAME	AREA AC.	IC AC.	CURVE # CN	TC MIN	Q2 CFS	Q10 CFS	Q25 CFS	Q100 CFS
A1	1.32	0.00	83.0	6.49	5.1	8.7	11.2	15.2
A2	2.38	0.00	83.0	6.10	9.2	15.8	20.3	27.5
A3	15.82	0.00	80.6	8.48	54.0	95.6	124.1	170.8
OS 1	21.42	8.65	84.0	6.09	94.3	152.3	191.0	254.1
POINT OF STUDY #1:								
A4	13.81	9.30	82.5	5.00	67.0	105.3	130.9	173.2
Proposed Det Pond A4				OUT	37.1	64.4	75.9	98.0
A5	1.18	0.00	83.0	5.00	4.7	8.1	10.4	14.2
A6	1.28	0.00	83.0	5.78	5.0	8.5	10.9	14.8
A7	3.29	0.00	83.0	6.38	12.6	21.7	27.9	37.9
A8	0.72	0.00	83.0	6.31	2.8	4.8	6.1	8.3
A9	8.31	0.00	80.3	7.98	28.7	50.9	66.1	91.1
POINT OF STUDY #2:								
A10	12.36	7.21	83.0	5.00	58.6	93.1	116.2	154.2
Proposed Det Pond A10				OUT	21.7	35.8	47.8	79.0
A11	12.89	0.00	82.1	10.18	42.5	73.9	95.2	130.5
POINT OF STUDY #3:								
A12	0.69	0.00	83.0	6.85	2.6	4.6	5.8	8.0
A13	1.06	0.00	83.0	5.00	4.2	7.2	9.3	12.7
A14	2.98	0.00	82.9	5.00	11.7	20.3	26.2	35.7
POINT OF STUDY #4:								
					18.2	31.6	40.7	55.7

OVERALL DETENTION SUMMARY:

Storm Event	EX Point of Study #1: (CFS)	DEV Point of Study #1: (CFS)
2-YR	161.5	158.7
10-YR	272.3	267.1
25-YR	347.2	340.4
100-YR	469.8	460.3

Storm Event	EX Point of Study #2: (CFS)	DEV Point of Study #2: (CFS)
2-YR	87.6	87.1
10-YR	154.0	151.4
25-YR	199.2	189.8
100-YR	273.1	248.0

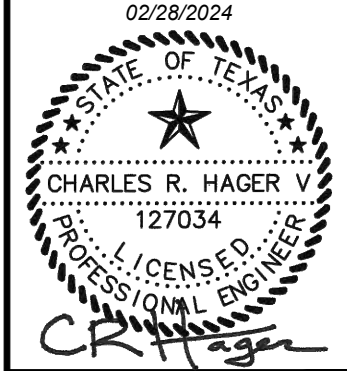
Storm Event	EX Point of Study #3: (CFS)	DEV Point of Study #3: (CFS)
2-YR	63.2	62.5
10-YR	110.1	105.0
25-YR	141.8	134.1
100-YR	193.3	185.0

Storm Event	EX Point of Study #4: (CFS)	DEV Point of Study #4: (CFS)
2-YR	34.4	18.2
10-YR	59.5	31.6
25-YR	76.5	40.7
100-YR	104.1	55.7

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

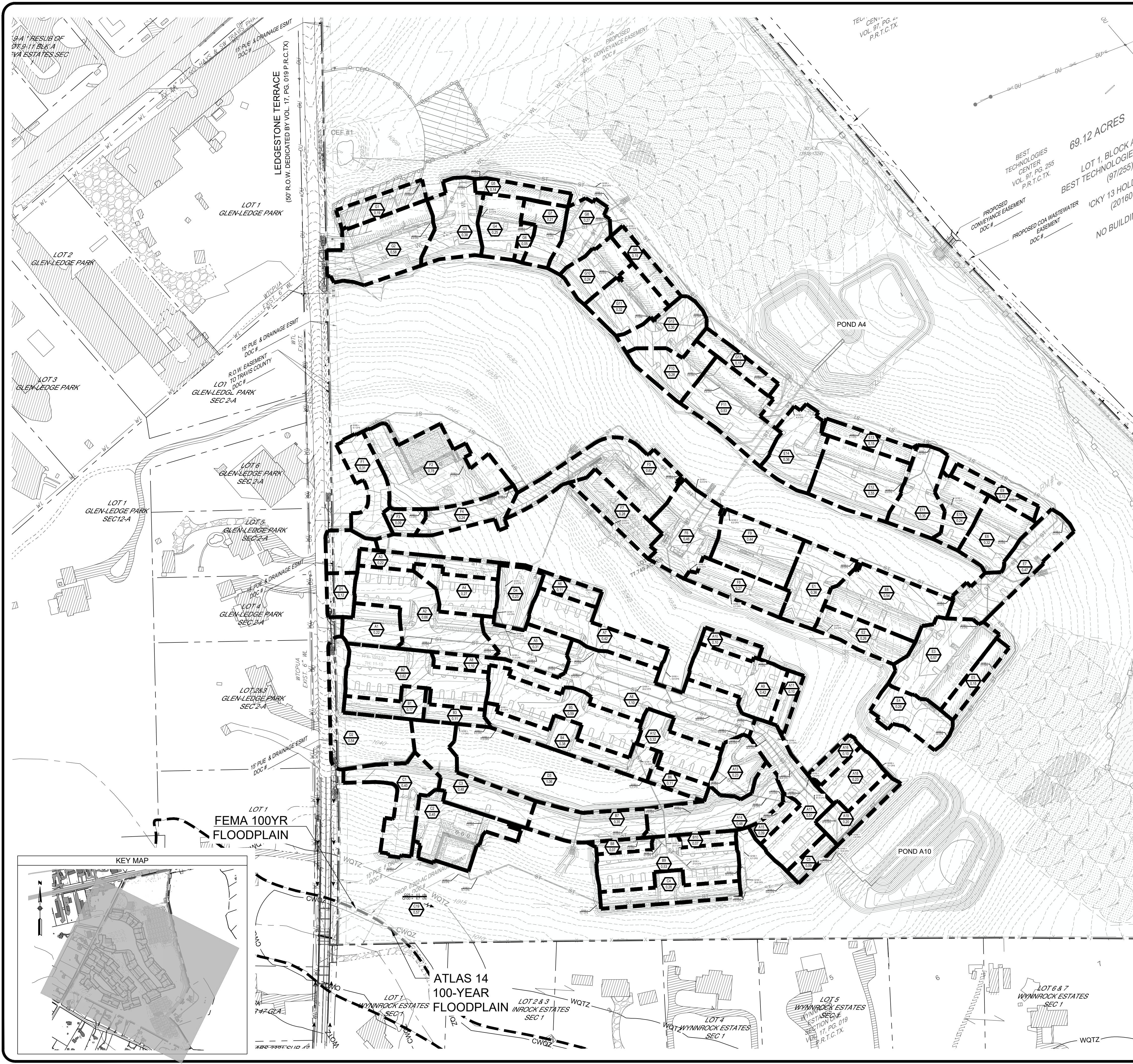


NO.	DATE	BY	REVISIONS DESCRIPTION



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

C:\Users\laura\OneDrive\Documents\Projects\116-1007\Ledgestone_Terraces\116-1007-FR-DM02 (DEVELOPED) DWG
 User: laura
 Date Modified: Feb 28, 24 - 10:31
 Plot Date/Time: Mar 01, 24 - 13:20:36



RATIONAL METHOD - City of Austin Drainage Criteria and Design Standards
Drainage Area Calculations

City of Austin ATLAS 14 Intensity-Duration-Frequency Curves (Zone 1)	City of Austin ATLAS 14 Intensity-Duration-Frequency Curves (Zone 2)			
	2 Yr	10 Yr	25 Yr	100 Yr
a	45.24	61.25	69.60	77.31
b	9.34	8.35	7.94	6.83
c	0.740	0.715	0.695	0.652

Q = CIA
 Where:
 Q = peak runoff in cubic feet per second.
 C = the coefficient of runoff
 A = the area in acres contributing runoff to the point of design.
 i = the average intensity of rainfall in inches per hour

$i = a/(t+b)^c$
 Where:
 t = Time of concentration for the entire drainage area of interest
 $T(\text{shallow flow}) = Ln(42s^{0.5})$ $T(\text{shallow concentrated flow}) = Ln(60s^{0.5})$
 where:
 L = Length of the reach in ft.
 n = Manning's n
 s = Slope of the ground in ft/ft

DEVELOPED DRAINAGE CALCULATIONS
 Character of Pervious: Grass, Good Slope: 2% Pervious Coefficient: 0.29 0.36
 Use Grass, Good for Single Family Lots; For Undeveloped Land use appropriate choice ZONE: enter 1 or 2

Developed Conditions Drainage Calculations (Site Calculations)

AREA NO.	AREA (AC)	Pervious AREA (AC)	Imp. Cov. AREA (AC)	to (MIN)	C25 COMP	C100 COMP	I25 (IN/HR)	I100 (IN/HR)	Q25 (CFS)	Q100 (CFS)
E1	0.36	0.09	0.28	5.0	0.72	0.81	11.73	15.42	3.1	4.5
E2	0.26	0.13	0.13	5.0	0.57	0.65	11.73	15.42	1.8	2.6
E3	0.57	0.11	0.47	5.0	0.75	0.84	11.73	15.42	5.1	7.4
E4	0.28	0.06	0.22	5.0	0.74	0.83	11.73	15.42	2.5	3.6
E5	0.15	0.01	0.14	5.0	0.82	0.91	11.73	15.42	1.4	2.1
E6	0.54	0.05	0.49	5.0	0.80	0.89	11.73	15.42	5.1	7.5
E7	0.47	0.06	0.41	5.0	0.78	0.87	11.73	15.42	4.3	6.3
E8	0.32	0.08	0.24	5.0	0.72	0.80	11.73	15.42	2.7	4.0
E9	0.13	0.02	0.11	5.0	0.77	0.86	11.73	15.42	1.2	1.7
E10	0.24	0.05	0.19	5.0	0.74	0.82	11.73	15.42	2.1	3.1
E11	0.35	0.09	0.25	5.0	0.71	0.79	11.73	15.42	2.9	4.2
E12	0.55	0.13	0.42	5.0	0.73	0.81	11.73	15.42	4.7	6.9
E13	0.15	0.01	0.14	5.0	0.82	0.91	11.73	15.42	1.5	2.1
E14	0.36	0.11	0.25	5.0	0.69	0.77	11.73	15.42	2.9	4.3
F1	0.31	0.04	0.27	5.0	0.79	0.87	11.73	15.42	2.8	4.1
F2	0.78	0.25	0.53	5.0	0.68	0.76	11.73	15.42	6.2	9.1
F3	0.09	0.02	0.07	5.0	0.74	0.82	11.73	15.42	0.8	1.1
F4	0.24	0.04	0.20	5.0	0.77	0.86	11.73	15.42	2.2	3.2
F5	0.62	0.10	0.51	5.0	0.76	0.85	11.73	15.42	5.5	8.1
F6	0.46	0.15	0.31	5.0	0.67	0.75	11.73	15.42	3.6	5.4
F7	0.28	0.17	0.11	5.0	0.51	0.59	11.73	15.42	1.7	2.5
F8	0.27	0.14	0.14	5.0	0.57	0.65	11.73	15.42	1.8	2.9
F9	0.44	0.03	0.41	5.0	0.82	0.91	11.73	15.42	4.2	6.3
F10	0.28	0.09	0.20	5.0	0.69	0.77	11.73	15.42	2.3	3.5
F11	0.53	0.11	0.42	5.0	0.74	0.83	11.73	15.42	4.6	6.8
G1	0.19	0.07	0.13	5.0	0.66	0.75	11.73	15.42	1.5	2.2
G2	0.58	0.18	0.40	5.0	0.69	0.77	11.73	15.42	4.7	6.9
G3	0.38	0.13	0.25	5.0	0.66	0.75	11.73	15.42	2.9	4.4
G4	0.25	0.05	0.20	5.0	0.75	0.84	11.73	15.42	2.2	3.2
G5	0.14	0.03	0.11	5.0	0.74	0.82	11.73	15.42	1.2	1.7
G6	0.05	0.01	0.04	5.0	0.76	0.85	11.73	15.42	0.4	0.6
G7	0.21	0.05	0.16	5.0	0.73	0.81	11.73	15.42	1.8	2.7
G8	0.27	0.07	0.20	5.0	0.71	0.80	11.73	15.42	2.2	3.3
G9	0.15	0.01	0.13	5.0	0.81	0.89	11.73	15.42	1.4	2.0
G10	0.24	0.07	0.17	5.0	0.70	0.78	11.73	15.42	2.0	2.9
G11	0.32	0.07	0.25	5.0	0.74	0.82	11.73	15.42	2.8	4.1
G12	0.30	0.09	0.21	5.0	0.70	0.78	11.73	15.42	2.4	3.6
G13	0.15	0.02	0.14	5.0	0.80	0.89	11.73	15.42	1.4	2.1

LEGEND

- DRAINAGE AREA NUMBER
- DRAINAGE AREA
- PROPERTY LINE
- DEVELOPED DRAINAGE AREA AND ACREAGE
- FLOW DIRECTION ARROW
- Q25 = 7.9 cfs Q100 = 10.9 cfs
- Q25 Q100

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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

LEDGESTONE TERRACES SITE CONSTRUCTION PLANS
 ONSITE DRAINAGE AREA MAP
 9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

DATE: 02/28/2024
 DESIGNED BY: CHARLES R. HAGER
 DRAWN BY: MICHELE WHITES
 CHECKED BY: MICHELE WHITES
 DRAWING NAME: DRN14003

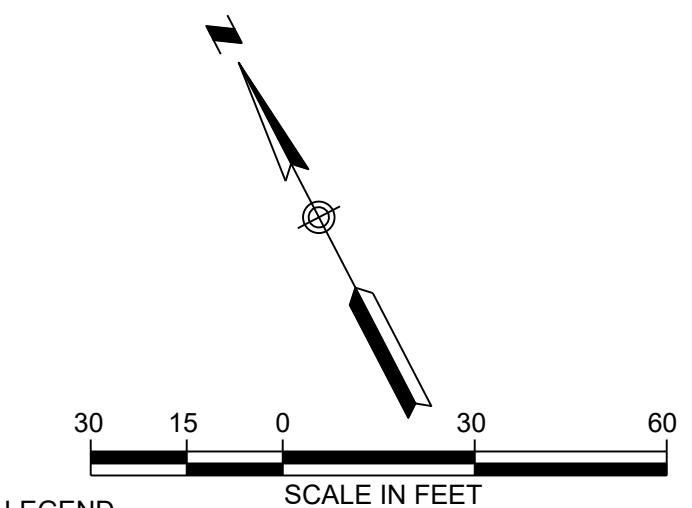
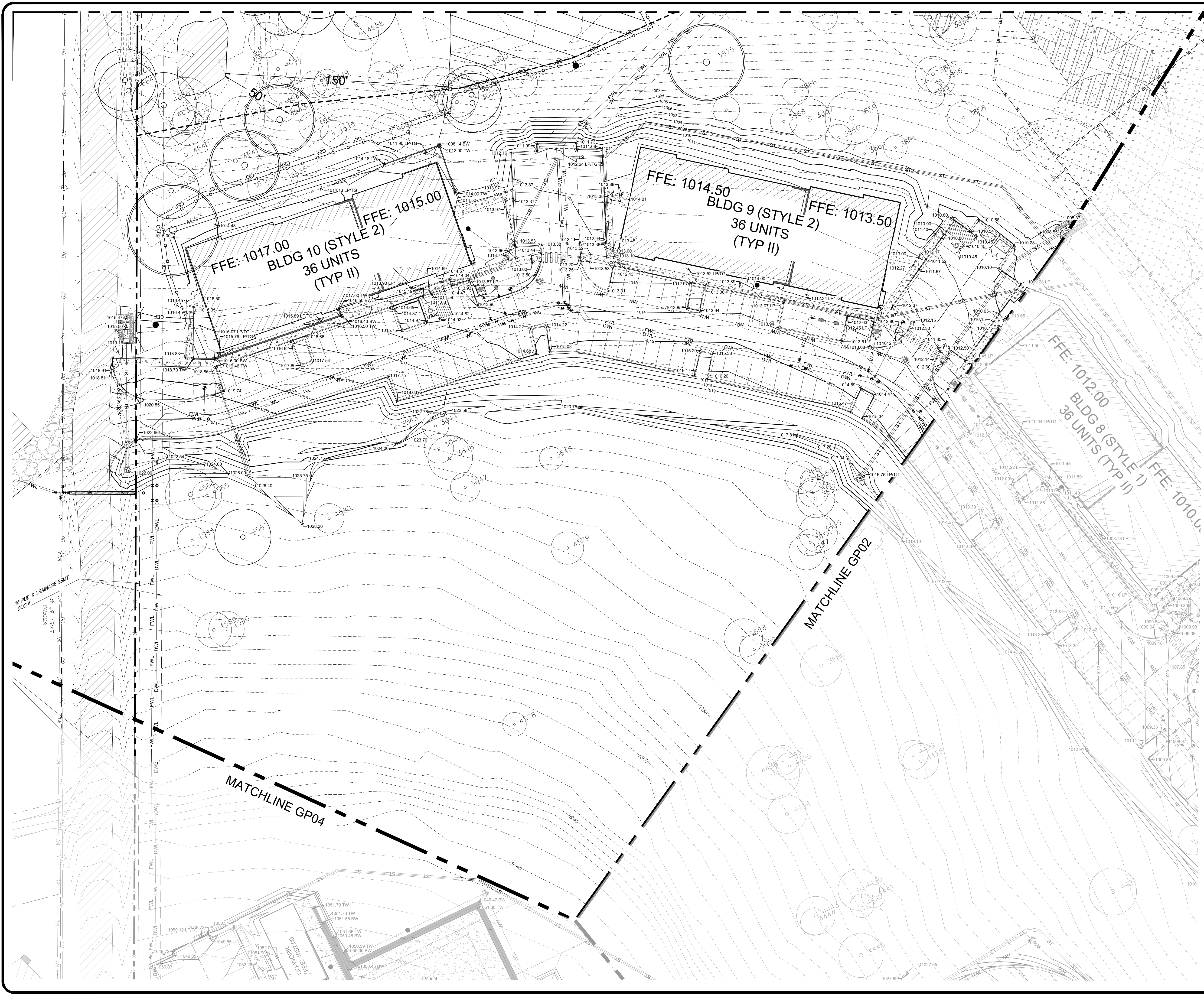
02/28/2024
 STATE OF TEXAS
 CHARLES R. HAGER
 127034
 PROFESSIONAL ENGINEER

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

JOB NUMBER: A116-1007
 DM03
 SHEET NO. 30 OF 107 SHEETS

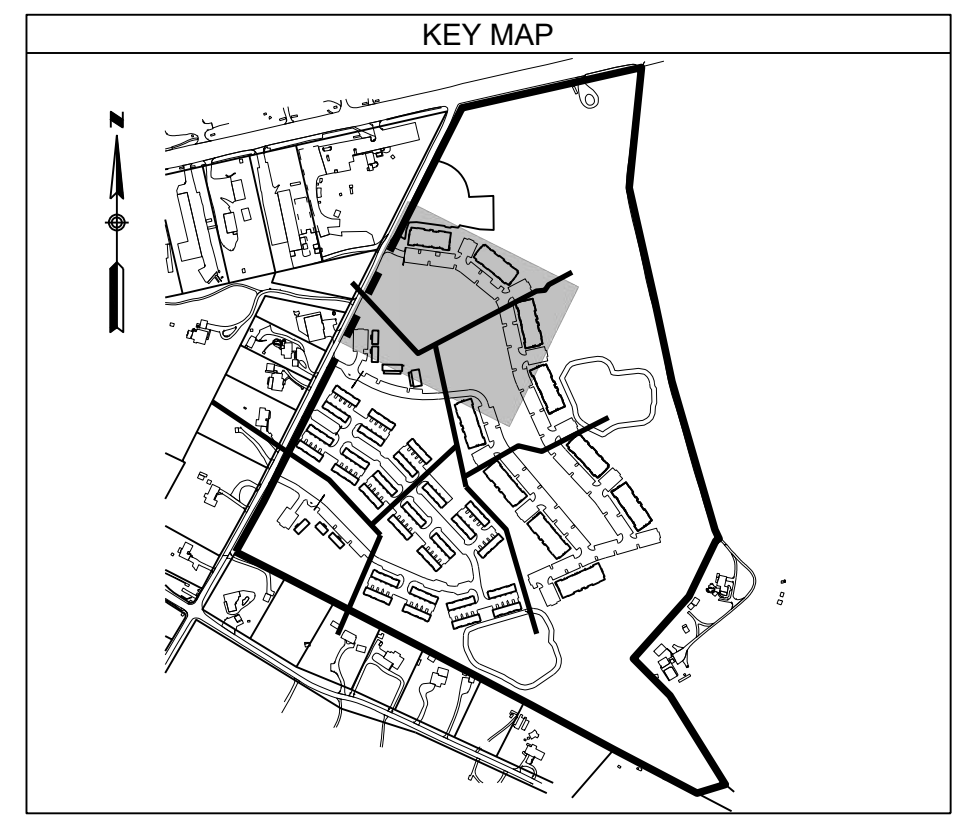
TRAVIS COUNTY TNR No. 22-38855 AUSTIN CASE No. SP-2023-0177D

© LJA Engineering, Inc. A116-1007 - Ledgestone - 200 Design Construction (A) (D) (P) (S) (G) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z) (AA) (AB) (AC) (AD) (AE) (AF) (AG) (AH) (AI) (AJ) (AK) (AL) (AM) (AN) (AO) (AP) (AQ) (AR) (AS) (AT) (AU) (AV) (AW) (AX) (AY) (AZ) (BA) (BB) (BC) (BD) (BE) (BF) (BG) (BH) (BI) (BJ) (BK) (BL) (BM) (BN) (BO) (BP) (BQ) (BR) (BS) (BT) (BU) (BV) (BW) (BX) (BY) (BZ) (CA) (CB) (CC) (CD) (CE) (CF) (CG) (CH) (CI) (CJ) (CK) (CL) (CM) (CN) (CO) (CP) (CQ) (CR) (CS) (CT) (CU) (CV) (CW) (CX) (CY) (CZ) (DA) (DB) (DC) (DD) (DE) (DF) (DG) (DH) (DI) (DJ) (DK) (DL) (DM) (DN) (DO) (DP) (DQ) (DR) (DS) (DT) (DU) (DV) (DW) (DX) (DY) (DZ) (EA) (EB) (EC) (ED) (EE) (EF) (EG) (EH) (EI) (EJ) (EK) (EL) (EM) (EN) (EO) (EP) (EQ) (ER) (ES) (ET) (EU) (EV) (EW) (EX) (EY) (EZ) (FA) (FB) (FC) (FD) (FE) (FF) (FG) (FH) (FI) (FJ) (FK) (FL) (FM) (FN) (FO) (FP) (FQ) (FR) (FS) (FT) (FU) (FV) (FW) (FX) (FY) (FZ) (GA) (GB) (GC) (GD) (GE) (GF) (GG) (GH) (GI) (GJ) (GK) (GL) (GM) (GN) (GO) (GP) (GQ) (GR) (GS) (GT) (GU) (GV) (GW) (GX) (GY) (GZ) (HA) (HB) (HC) (HD) (HE) (HF) (HG) (HH) (HI) (HJ) (HK) (HL) (HM) (HN) (HO) (HP) (HQ) (HR) (HS) (HT) (HU) (HV) (HW) (HX) (HY) (HZ) (IA) (IB) (IC) (ID) (IE) (IF) (IG) (IH) (II) (IJ) (IK) (IL) (IM) (IN) (IO) (IP) (IQ) (IR) (IS) (IT) (IU) (IV) (IW) (IX) (IY) (IZ) (JA) (JB) (JC) (JD) (JE) (JF) (JG) (JH) (JI) (JJ) (JK) (JL) (JM) (JN) (JO) (JP) (JQ) (JR) (JS) (JT) (JU) (JV) (JW) (JX) (JY) (JZ) (KA) (KB) (KC) (KD) (KE) (KF) (KG) (KH) (KI) (KJ) (KL) (KM) (KN) (KO) (KP) (KQ) (KR) (KS) (KT) (KU) (KV) (KW) (KX) (KY) (KZ) (LA) (LB) (LC) (LD) (LE) (LF) (LG) (LH) (LI) (LJ) (LK) (LL) (LM) (LN) (LO) (LP) (LQ) (LR) (LS) (LT) (LU) (LV) (LW) (LX) (LY) (LZ) (MA) (MB) (MC) (MD) (ME) (MF) (MG) (MH) (MI) (MJ) (MK) (ML) (MM) (MN) (MO) (MP) (MQ) (MR) (MS) (MT) (MU) (MV) (MW) (MX) (MY) (MZ) (NA) (NB) (NC) (ND) (NE) (NF) (NG) (NH) (NI) (NJ) (NK) (NL) (NM) (NN) (NO) (NP) (NQ) (NR) (NS) (NT) (NU) (NV) (NW) (NX) (NY) (NZ) (OA) (OB) (OC) (OD) (OE) (OF) (OG) (OH) (OI) (OJ) (OK) (OL) (OM) (ON) (OO) (OP) (OQ) (OR) (OS) (OT) (OU) (OV) (OW) (OX) (OY) (OZ) (PA) (PB) (PC) (PD) (PE) (PF) (PG) (PH) (PI) (PJ) (PK) (PL) (PM) (PN) (PO) (PP) (PQ) (PR) (PS) (PT) (PU) (PV) (PW) (PX) (PY) (PZ) (QA) (QB) (QC) (QD) (QE) (QF) (QG) (QH) (QI) (QJ) (QK) (QL) (QM) (QN) (QO) (QP) (QQ) (QR) (QS) (QT) (QU) (QV) (QW) (QX) (QY) (QZ) (RA) (RB) (RC) (RD) (RE) (RF) (RG) (RH) (RI) (RJ) (RK) (RL) (RM) (RN) (RO) (RP) (RQ) (RR) (RS) (RT) (RU) (RV) (RW) (RX) (RY) (RZ) (SA) (SB) (SC) (SD) (SE) (SF) (SG) (SH) (SI) (SJ) (SK) (SL) (SM) (SN) (SO) (SP) (SQ) (SR) (SS) (ST) (SU) (SV) (SW) (SX) (SY) (SZ) (TA) (TB) (TC) (TD) (TE) (TF) (TG) (TH) (TI) (TJ) (TK) (TL) (TM) (TN) (TO) (TP) (TQ) (TR) (TS) (TT) (TU) (TV) (TW) (TX) (TY) (TZ) (UA) (UB) (UC) (UD) (UE) (UF) (UG) (UH) (UI) (UJ) (UK) (UL) (UM) (UN) (UO) (UP) (UQ) (UR) (US) (UT) (UU) (UV) (UW) (UX) (UY) (UZ) (VA) (VB) (VC) (VD) (VE) (VF) (VG) (VH) (VI) (VJ) (VK) (VL) (VM) (VN) (VO) (VP) (VQ) (VR) (VS) (VT) (VU) (VV) (VW) (VX) (VY) (VZ) (WA) (WB) (WC) (WD) (WE) (WF) (WG) (WH) (WI) (WJ) (WK) (WL) (WM) (WN) (WO) (WP) (WQ) (WR) (WS) (WT) (WU) (WV) (WW) (WX) (WY) (WZ) (XA) (XB) (XC) (XD) (XE) (XF) (XG) (XH) (XI) (XJ) (XK) (XL) (XM) (XN) (XO) (XP) (XQ) (XR) (XS) (XT) (XU) (XV) (XW) (XX) (XY) (XZ) (YA) (YB) (YC) (YD) (YE) (YF) (YG) (YH) (YI) (YJ) (YK) (YL) (YM) (YN) (YO) (YP) (YQ) (YR) (YS) (YT) (YU) (YV) (YW) (YX) (YZ) (ZA) (ZB) (ZC) (ZD) (ZE) (ZF) (ZG) (ZH) (ZI) (ZJ) (ZK) (ZL) (ZM) (ZN) (ZO) (ZP) (ZQ) (ZR) (ZS) (ZT) (ZU) (ZV) (ZW) (ZX) (ZY) (ZZ)



PROPOSED	EXISTING	DESCRIPTION
800	800	CONTOURS
-	-	PROPOSED RETAINING WALL
X 100.00	X 100.00	TOP OF PAVEMENT
X 100.00 TC	X 100.00 TC	TOP OF CURB/CONCRETE
X 100.00 TG	X 100.00 TG	TOP OF GRATE
X 100.00 LP	X 100.00 LP	LOW POINT
X 100.00 HP	X 100.00 HP	HIGH POINT
X 100.00 FS	X 100.00 FS	FINISHED SLAB
X 100.00 TW	X 100.00 TW	TOP OF WALL
X 100.00 BW	X 100.00 BW	BOTTOM OF WALL
X 100.00 FG	X 100.00 FG	FINISHED GROUND
○	○	TREE TO REMAIN
ST	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
WL	WL	WATER LINE
⊗	⊗	WATER VALVE
⊕	⊕	FIRE HYDRANT
⊙	⊙	WASTEWATER MANHOLE
⊙	⊙	STORMSEWER MANHOLE
●	●	1/2" REBAR FOUND (OR AS NOTED)
●	●	1/2" REBAR WITH CAP FOUND
●	●	1/2" REBAR WITH CHAPARRAL CAP SET
⊠	⊠	COTTON SPINDLE WITH CHAPARRAL WASHER SET
⊠	⊠	WATER METER
○	○	UTILITY POLE
○	○	OVERHEAD UTILITIES
○	○	ELEC. UTILITY
○	○	ELEC. MANHOLE
○	○	LIGHT POLE
○	○	TELEPHONE UTILITY
○	○	UNDERGROUND FIBER OPTIC MARKER
○	○	TELEPHONE MANHOLE
○	○	UNDERGROUND GAS MARKER
○	○	CHAIN LINK FENCE

- NOTES:**
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 - ALL RADII ARE 3' UNLESS OTHERWISE NOTED.
 - ALL SIDEWALKS ADJACENT TO BACK OF CURB SHALL BE 5' WIDE. ALL OTHER SIDEWALKS SHALL BE 4' WIDE UNLESS OTHERWISE NOTED.
 - ALL SPOT ELEVATIONS ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
 - ALL SIDEWALKS SHALL HAVE A MAX. RUNNING SLOPE OF 5%.
 - ALL SIDEWALKS SHALL HAVE A MAX. CROSS SLOPE OF 2%.
 - RAMPS SHALL NOT EXCEED 8.33%. RAMPS LONGER THAN 6' REQUIRE HANDRAILS. RAMPS LONGER THAN 30' REQUIRE A LEVEL LANDING.
 - ALL PAVEMENT SHALL BE CONCRETE WITH CURB AND GUTTER.



LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

GRADING PLAN SHEET 1

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	REVISIONS DESCRIPTION	DATE

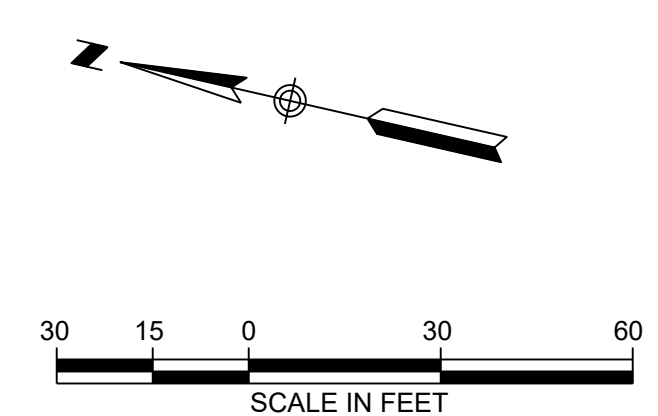
DATE: 02/28/2024
 DESIGNED BY: CHARLES R. HAGER
 DRAWN BY: 127034
 CHECKED BY: [Signature]
 DRAWING NAME: A116-1007-GP01.DWG

LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 FRN-F-1386

7500 Riata Boulevard
 Building II, Suite 100
 Austin, Texas 78735

JOB NUMBER: A116-1007
 GP01
 SHEET NO. **31** OF 107 SHEETS

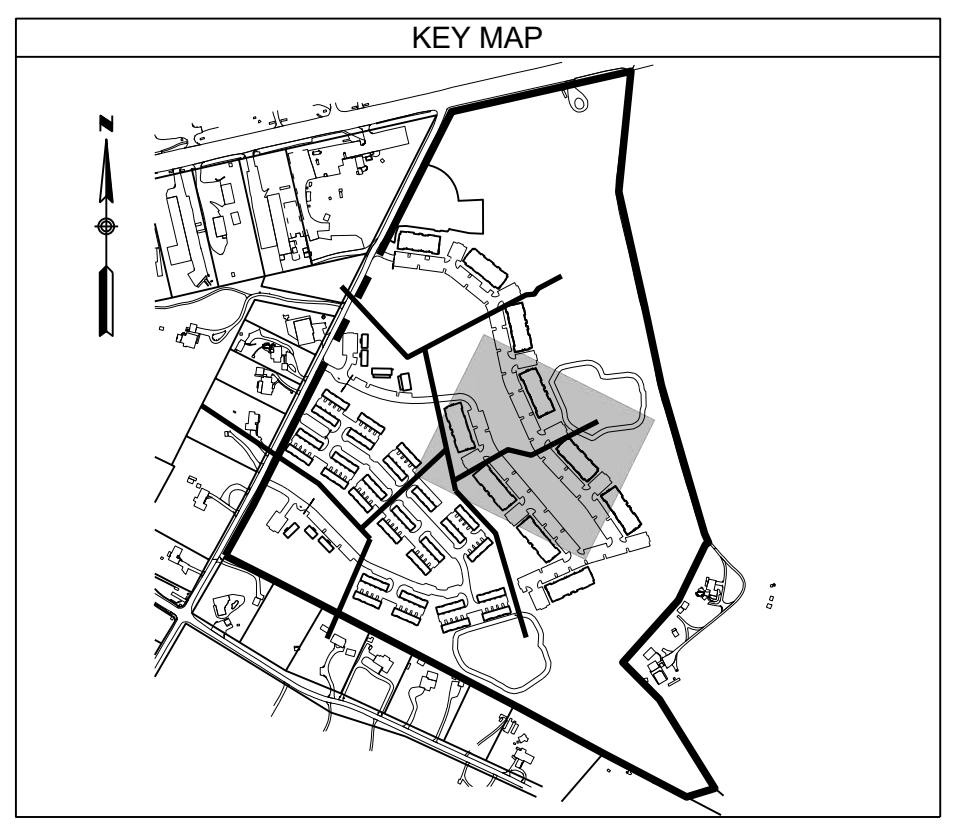
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 Plot Date/Time: Mar 01, 2024 10:53:01 AM



LEGEND

PROPOSED	EXISTING	DESCRIPTION
800	800	CONTOURS
-	-	PROPOSED RETAINING WALL
X 100.00	-	TOP OF PAVEMENT
X 100.00 TC	-	TOP OF CURB/CONCRETE
X 100.00 TG	-	TOP OF GRATE
X 100.00 LP	-	LOW POINT
X 100.00 HP	-	HIGH POINT
X 100.00 FS	-	FINISHED SLAB
X 100.00 TW	-	TOP OF WALL
X 100.00 BW	-	BOTTOM OF WALL
X 100.00 FC	-	FINISHED GROUND
○	-	TREE TO REMAIN
ST	-	STORM SEWER LINE
WW	-	WASTEWATER LINE
WL	-	WATER LINE
WV	-	WATER VALVE
⊕	-	FIRE HYDRANT
⊙	-	WASTEWATER MANHOLE
⊙	-	STORMSEWER MANHOLE
●	-	1/2" REBAR FOUND (OR AS NOTED)
●	-	1/2" REBAR WITH CAP FOUND
●	-	1/2" REBAR WITH CHAPARRAL CAP SET
●	-	COTTON SPINDLE WITH CHAPARRAL WASHER SET
⊙	-	UTILITY POLE
-OU-	-	OVERHEAD UTILITIES
⊙	-	ELEC. UTILITY
⊙	-	ELEC. MANHOLE
⊙	-	LIGHT POLE
⊙	-	TELEPHONE UTILITY
⊙	-	UNDERGROUND FIBER OPTIC MARKER
⊙	-	TELEPHONE MANHOLE
⊙	-	UNDERGROUND GAS MARKER
○	-	CHAIN LINK FENCE

- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. ALL RADII ARE 3' UNLESS OTHERWISE NOTED.
 3. ALL SIDEWALKS ADJACENT TO BACK OF CURB SHALL BE 5' WIDE. ALL OTHER SIDEWALKS SHALL BE 4' WIDE UNLESS OTHERWISE NOTED.
 4. ALL SPOT ELEVATIONS ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
 5. ALL SIDEWALKS SHALL HAVE A MAX. RUNNING SLOPE OF 5%.
 6. ALL SIDEWALKS SHALL HAVE A MAX. CROSS SLOPE OF 2%.
 7. RAMP SHALL NOT EXCEED 8.33%. RAMP LONGER THAN 6' REQUIRE HANDRAILS. RAMP LONGER THAN 30' REQUIRE A LEVEL LANDING.
 8. ALL PAVEMENT SHALL BE CONCRETE WITH CURB AND GUTTER.



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**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

GRADING PLAN SHEET 2

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	DESCRIPTION

DESIGNED BY: _____
DRAWN BY: _____
CHECKED BY: _____
DATE: 02/28/2024

CHARLES R. HAGER
127034
PROFESSIONAL ENGINEER

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

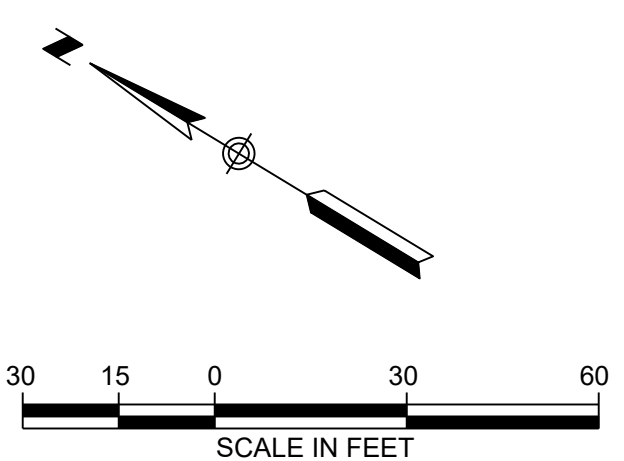
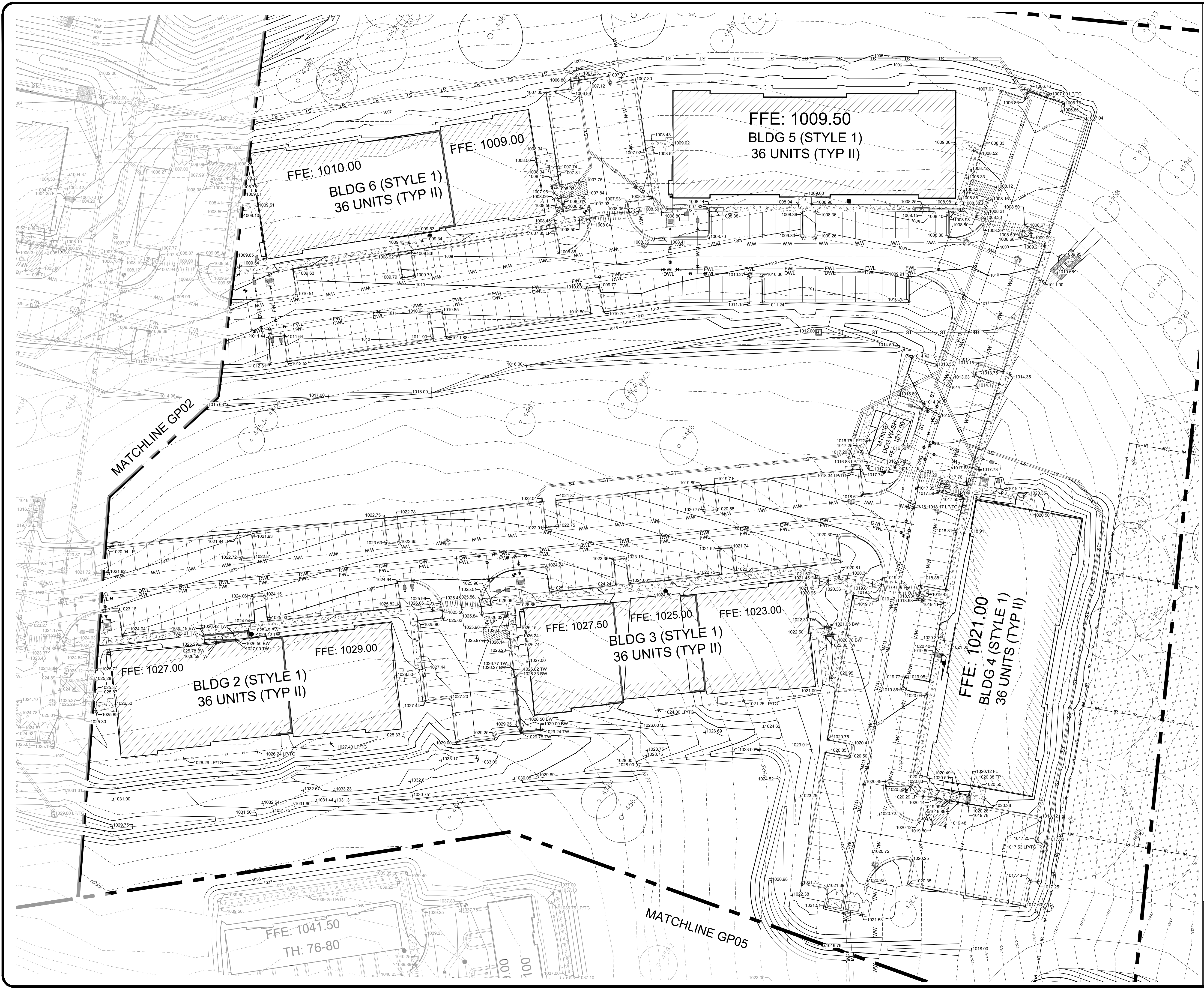
JOB NUMBER: A116-1007

GP02

SHEET NO. **32** OF 107 SHEETS

TRAVIS COUNTY TNR No. 22-38855 AUSTIN CASE No. SP-2023-0177D

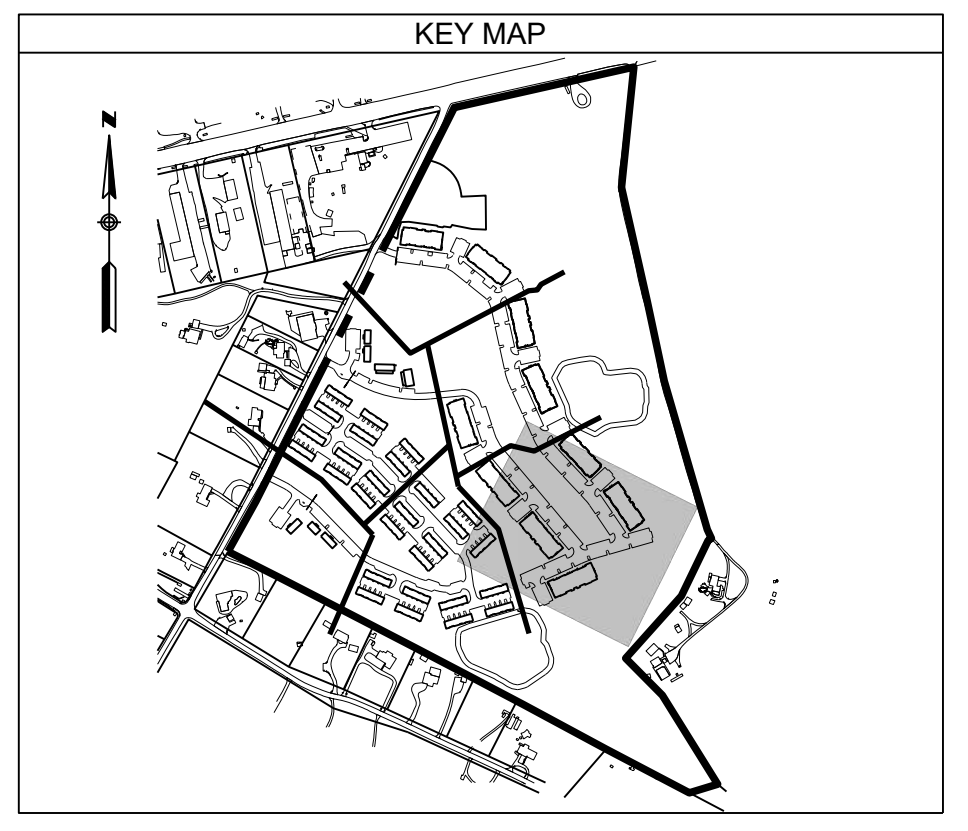
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User: laura
Date Modified: Feb 28, 2024 10:41 AM
Plot Date/Time: Mar 01, 2024 13:53:23



LEGEND

PROPOSED	EXISTING	DESCRIPTION
800	800	CONTOURS
-	-	PROPOSED RETAINING WALL
X 100.00	-	TOP OF PAVEMENT
X 100.00	-	TOP OF CURB/CONCRETE
X 100.00	-	TOP OF GRATE
X 100.00	-	LOW POINT
X 100.00	-	HIGH POINT
X 100.00	-	FINISHED SLAB
X 100.00	-	TOP OF WALL
X 100.00	-	BOTTOM OF WALL
X 100.00	-	FINISHED GROUND
○	-	TREE TO REMAIN
ST	-	STORM SEWER LINE
WW	-	WASTEWATER LINE
WL	-	WATER LINE
⊕	-	WATER VALVE
⊕	-	FIRE HYDRANT
⊕	-	WASTEWATER MANHOLE
⊕	-	STORMSEWER MANHOLE
●	-	1/2" REBAR FOUND (OR AS NOTED)
●	-	1/2" REBAR WITH CAP FOUND
●	-	1/2" REBAR WITH CHAPARRAL CAP SET
○	-	COTTON SPINDLE WITH CHAPARRAL WASHER SET
⊕	-	WATER METER
⊕	-	UTILITY POLE
⊕	-	OVERHEAD UTILITIES
⊕	-	ELEC. UTILITY
⊕	-	ELEC. MANHOLE
⊕	-	LIGHT POLE
⊕	-	TELEPHONE UTILITY
⊕	-	UNDERGROUND FIBER OPTIC MARKER
⊕	-	TELEPHONE MANHOLE
⊕	-	UNDERGROUND GAS MARKER
⊕	-	CHAIN LINK FENCE

- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. ALL RADII ARE 3' UNLESS OTHERWISE NOTED.
 3. ALL SIDEWALKS ADJACENT TO BACK OF CURB SHALL BE 5' WIDE. ALL OTHER SIDEWALKS SHALL BE 4' WIDE UNLESS OTHERWISE NOTED.
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**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

GRADING PLAN SHEET 3

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	BY	DESCRIPTION

DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]

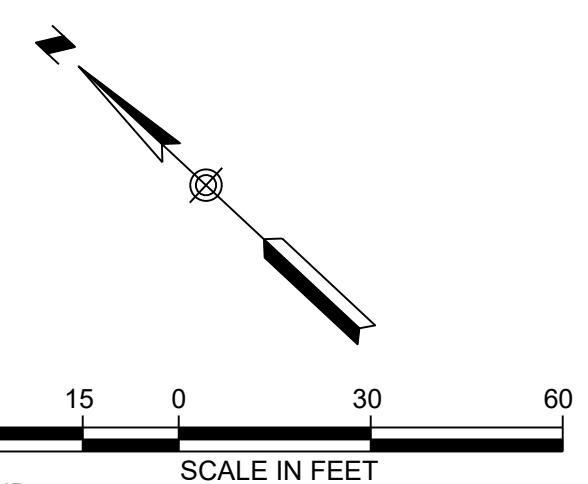
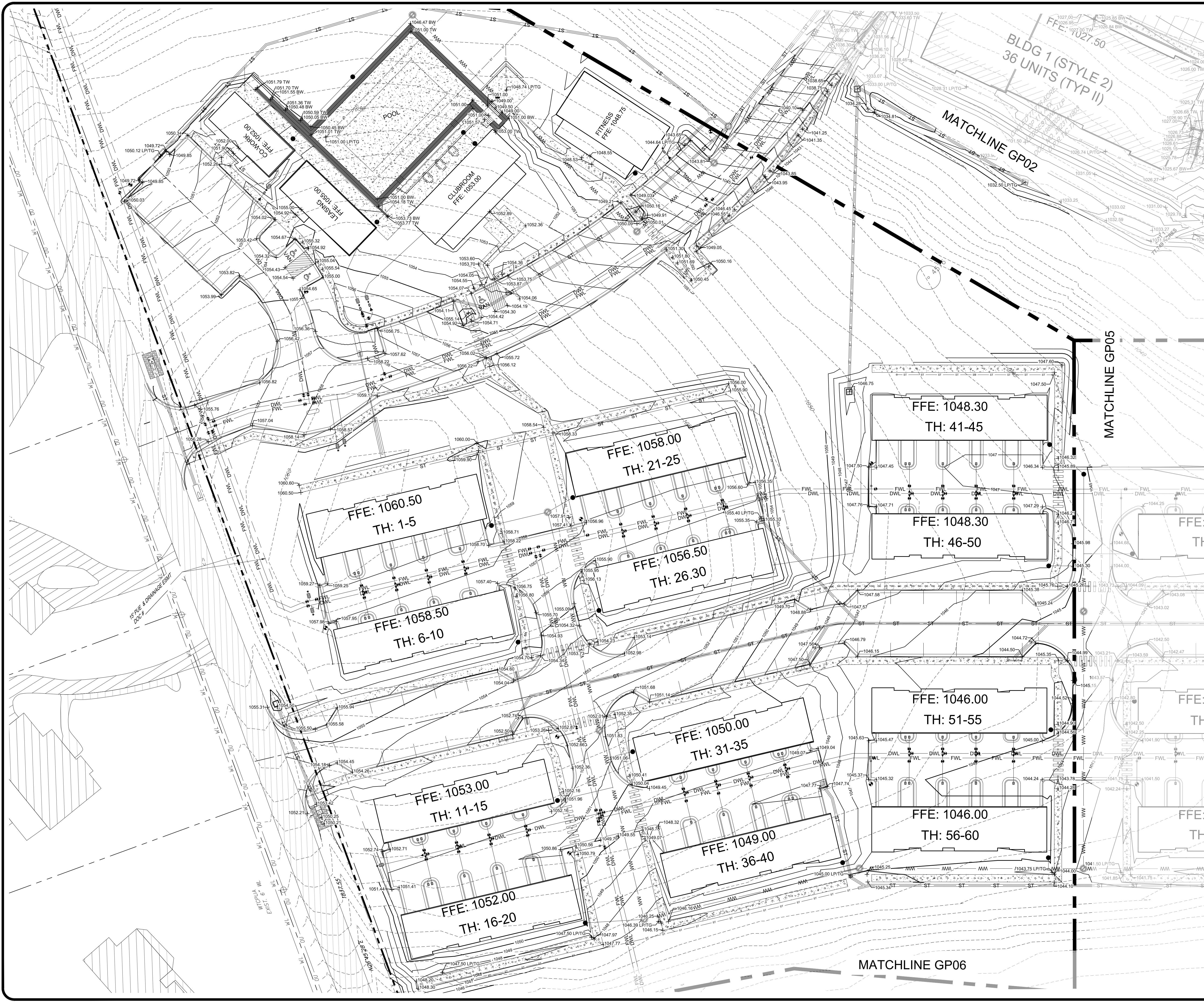
02/28/2024

STATE OF TEXAS
REGISTERED PROFESSIONAL ENGINEER
CHARLES R. HAGER
127034

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

JOB NUMBER: A116-1007
GP03
SHEET NO. **33** OF 107 SHEETS

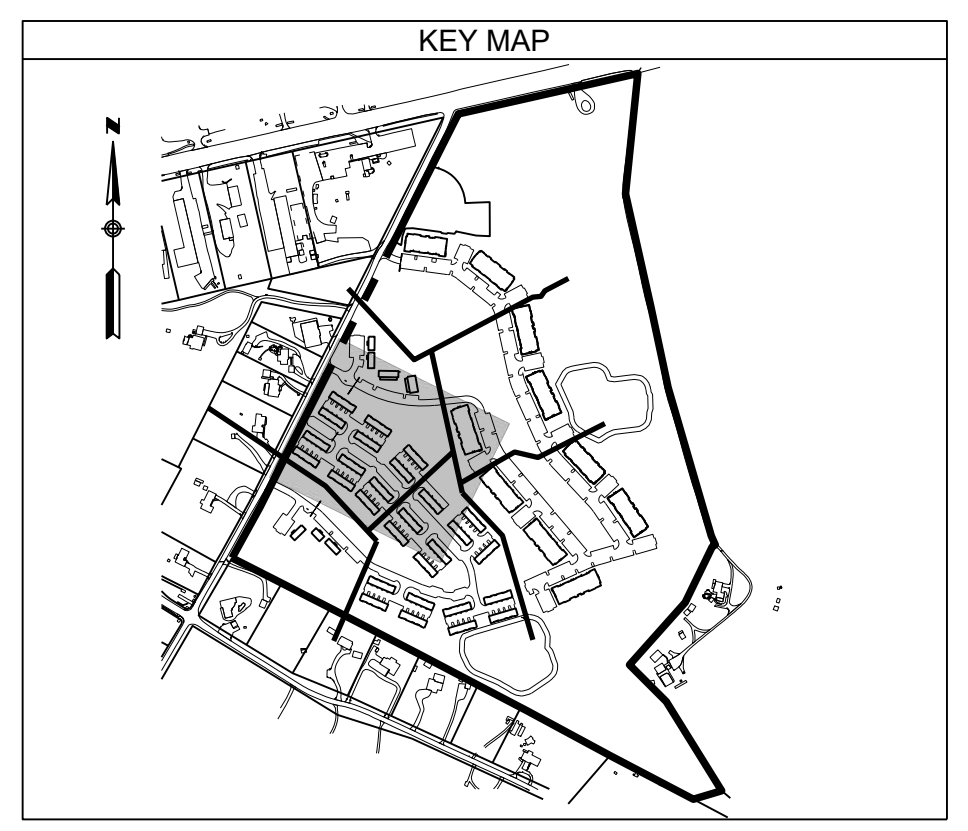
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User: laura
Last Modified: Feb 23, 24 - 16:44
Plot Date/Time: Mar 01, 24 - 13:53:52



LEGEND

PROPOSED	EXISTING	DESCRIPTION
800	800	CONTOURS
(thick line)	(dashed line)	PROPOSED RETAINING WALL
X 100.00		TOP OF PAVEMENT
X 100.00 TC		TOP OF CURB/CONCRETE
X 100.00 TG		TOP OF GRATE
X 100.00 LP		LOW POINT
X 100.00 HP		HIGH POINT
X 100.00 FS		FINISHED SLAB
X 100.00 TW		TOP OF WALL
X 100.00 BW		BOTTOM OF WALL
X 100.00 FG		FINISHED GROUND
(circle with cross)		TREE TO REMAIN
ST		STORM SEWER LINE
WW		WASTEWATER LINE
WL		WATER LINE
(circle with cross)		WATER VALVE
(circle with cross)		FIRE HYDRANT
(circle with cross)		WASTEWATER MANHOLE
(circle with cross)		STORMSEWER MANHOLE
(circle with cross)		1/2" REBAR FOUND (OR AS NOTED)
(circle with cross)		1/2" REBAR WITH CAP FOUND
(circle with cross)		COTTON SPINDLE WITH CHAPARRAL CAP SET
(circle with cross)		WATER METER
(circle with cross)		UTILITY POLE
(circle with cross)		OVERHEAD UTILITIES
(circle with cross)		ELEC. UTILITY
(circle with cross)		ELEC. MANHOLE
(circle with cross)		LIGHT POLE
(circle with cross)		TELEPHONE UTILITY
(circle with cross)		UNDERGROUND FIBER OPTIC MARKER
(circle with cross)		TELEPHONE MANHOLE
(circle with cross)		UNDERGROUND GAS MARKER
(circle with cross)		CHAIN LINK FENCE

- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. ALL RADII ARE 3' UNLESS OTHERWISE NOTED.
 3. ALL SIDEWALKS ADJACENT TO BACK OF CURB SHALL BE 5' WIDE. ALL OTHER SIDEWALKS SHALL BE 4' WIDE UNLESS OTHERWISE NOTED.
 4. ALL SPOT ELEVATIONS ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
 5. ALL SIDEWALKS SHALL HAVE A MAX. RUNNING SLOPE OF 5%.
 6. ALL SIDEWALKS SHALL HAVE A MAX. CROSS SLOPE OF 2%.
 7. RAMP SHALL NOT EXCEED 8.33%. RAMP LONGER THAN 6' REQUIRE HANDRAILS. RAMP LONGER THAN 30' REQUIRE A LEVEL LANDING.
 8. ALL PAVEMENT SHALL BE CONCRETE WITH CURB AND GUTTER.



LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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

**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

GRADING PLAN SHEET 4

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

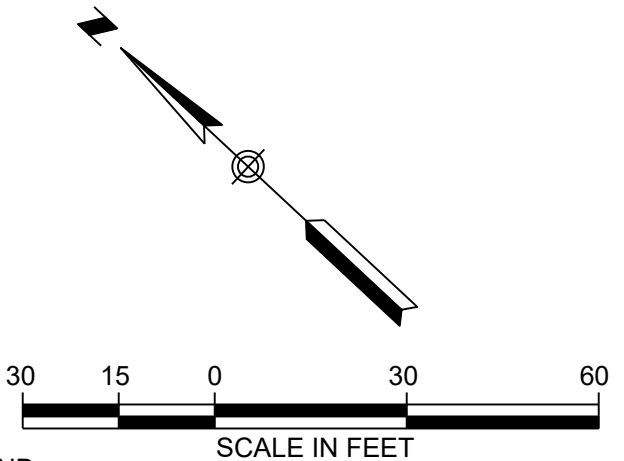
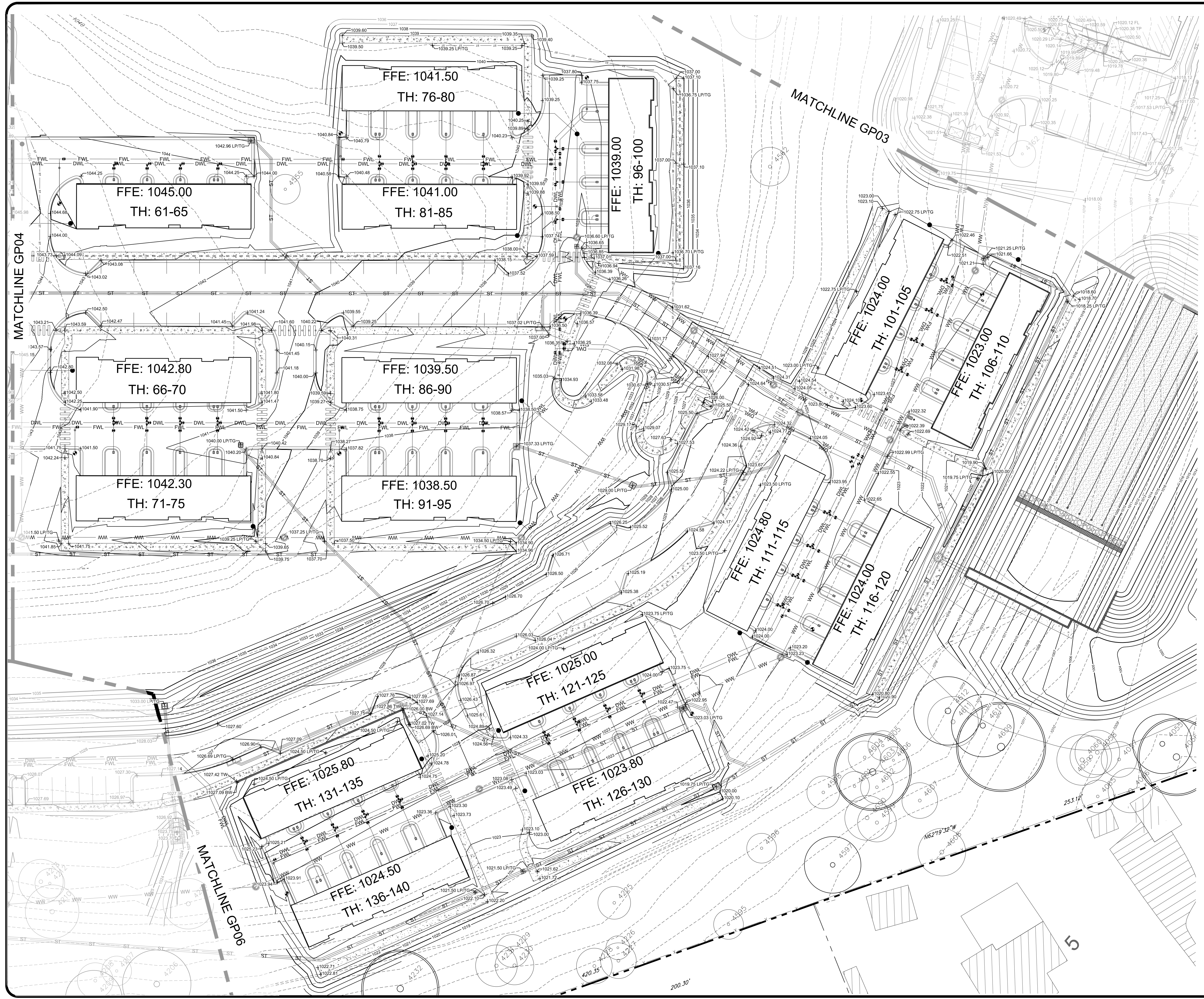
NO.	DATE	DESCRIPTION

DATE: 02/28/2024
DESIGNED BY: CHARLES R. HAGER
DRAWN BY: 127034
CHECKED BY: [Signature]
DRAWING NAME: A116-1007-GP04.DWG

LJA Engineering, Inc.
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JOB NUMBER: A116-1007
GP04
SHEET NO. **34** OF 107 SHEETS

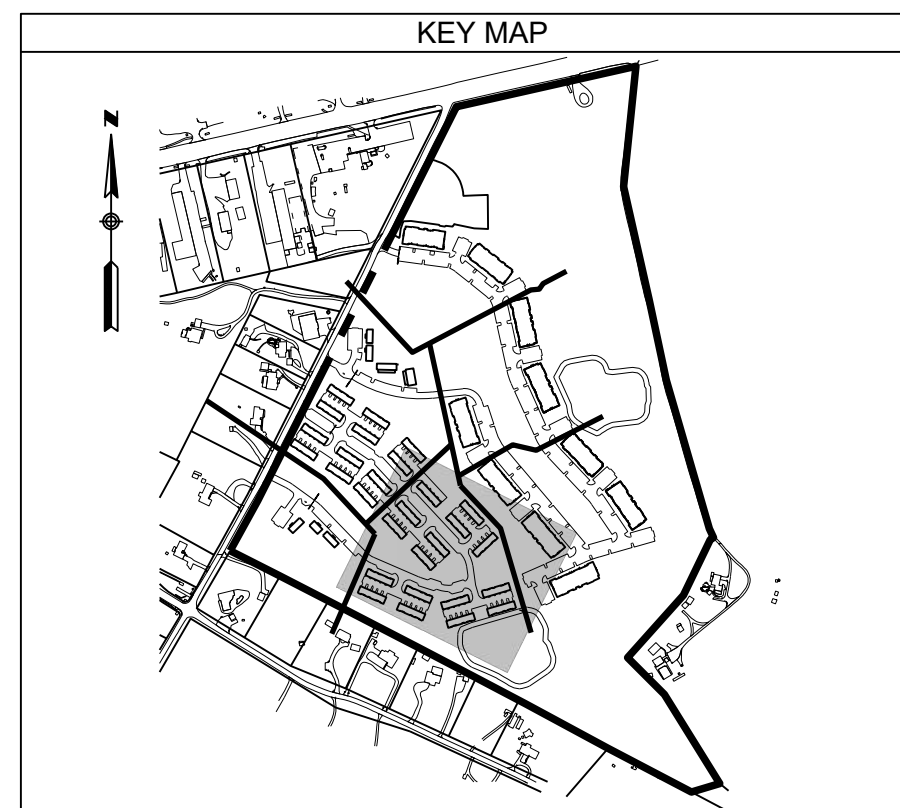
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User: lja
Last Modified: Feb 28, 2024 10:16:44
Plot Date/Time: Mar 01, 2024 13:34:17



LEGEND

PROPOSED	EXISTING	DESCRIPTION
800	800	CONTOURS
(Hatched area)	(Hatched area)	PROPOSED RETAINING WALL
X 100.00		TOP OF PAVEMENT
X 100.00		TOP OF CURB/CONCRETE
X 100.00		TOP OF GRATE
X 100.00		LOW POINT
X 100.00		HIGH POINT
X 100.00		FINISHED SLAB
X 100.00		TOP OF WALL
X 100.00		BOTTOM OF WALL
X 100.00		FINISHED GROUND
(Circle with dot)	(Circle with dot)	TREE TO REMAIN
ST	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
WL	WL	WATER LINE
(Circle with cross)	(Circle with cross)	WATER VALVE
(Circle with cross)	(Circle with cross)	FIRE HYDRANT
(Circle with cross)	(Circle with cross)	WASTEWATER MANHOLE
(Circle with cross)	(Circle with cross)	STORMSEWER MANHOLE
(Circle with cross)	(Circle with cross)	1/2" REBAR FOUND (OR AS NOTED)
(Circle with cross)	(Circle with cross)	1/2" REBAR WITH CAP FOUND
(Circle with cross)	(Circle with cross)	1/2" REBAR WITH CHAPARRAL CAP SET
(Circle with cross)	(Circle with cross)	COTTON SPINDLE WITH CHAPARRAL WASHER SET
(Circle with cross)	(Circle with cross)	WATER METER
(Circle with cross)	(Circle with cross)	UTILITY POLE
(Circle with cross)	(Circle with cross)	OVERHEAD UTILITIES
(Circle with cross)	(Circle with cross)	ELEC. UTILITY
(Circle with cross)	(Circle with cross)	ELEC. MANHOLE
(Circle with cross)	(Circle with cross)	LIGHT POLE
(Circle with cross)	(Circle with cross)	TELEPHONE UTILITY
(Circle with cross)	(Circle with cross)	UNDERGROUND FIBER OPTIC MARKER
(Circle with cross)	(Circle with cross)	TELEPHONE MANHOLE
(Circle with cross)	(Circle with cross)	UNDERGROUND GAS MARKER
(Circle with cross)	(Circle with cross)	CHAIN LINK FENCE

- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. ALL RADII ARE 3' UNLESS OTHERWISE NOTED.
 3. ALL SIDEWALKS ADJACENT TO BACK OF CURB SHALL BE 5' WIDE. ALL OTHER SIDEWALKS SHALL BE 4' WIDE UNLESS OTHERWISE NOTED.
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 5. ALL SIDEWALKS SHALL HAVE A MAX. RUNNING SLOPE OF 5%.
 6. ALL SIDEWALKS SHALL HAVE A MAX. CROSS SLOPE OF 2%.
 7. RAMPS SHALL NOT EXCEED 8.33%. RAMPS LONGER THAN 6' REQUIRE HANDRAILS. RAMPS LONGER THAN 30' REQUIRE A LEVEL LANDING.
 8. ALL PAVEMENT SHALL BE CONCRETE WITH CURB AND GUTTER.



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Call before you dig.

**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

GRADING PLAN SHEET 5

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	BY	REVISIONS DESCRIPTION

02/28/2024

DESIGNED BY: CHARLES R. HAGER
DRAWN BY: 127034
CHECKED BY: [Signature]
DRAWING NAME: A116-1007-GP05.DWG

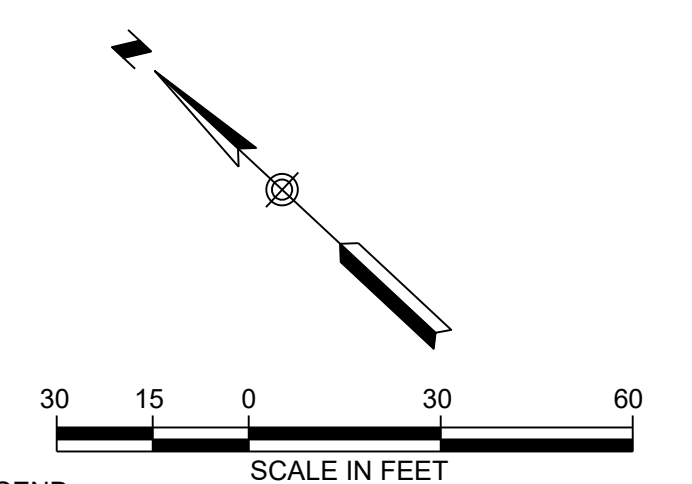
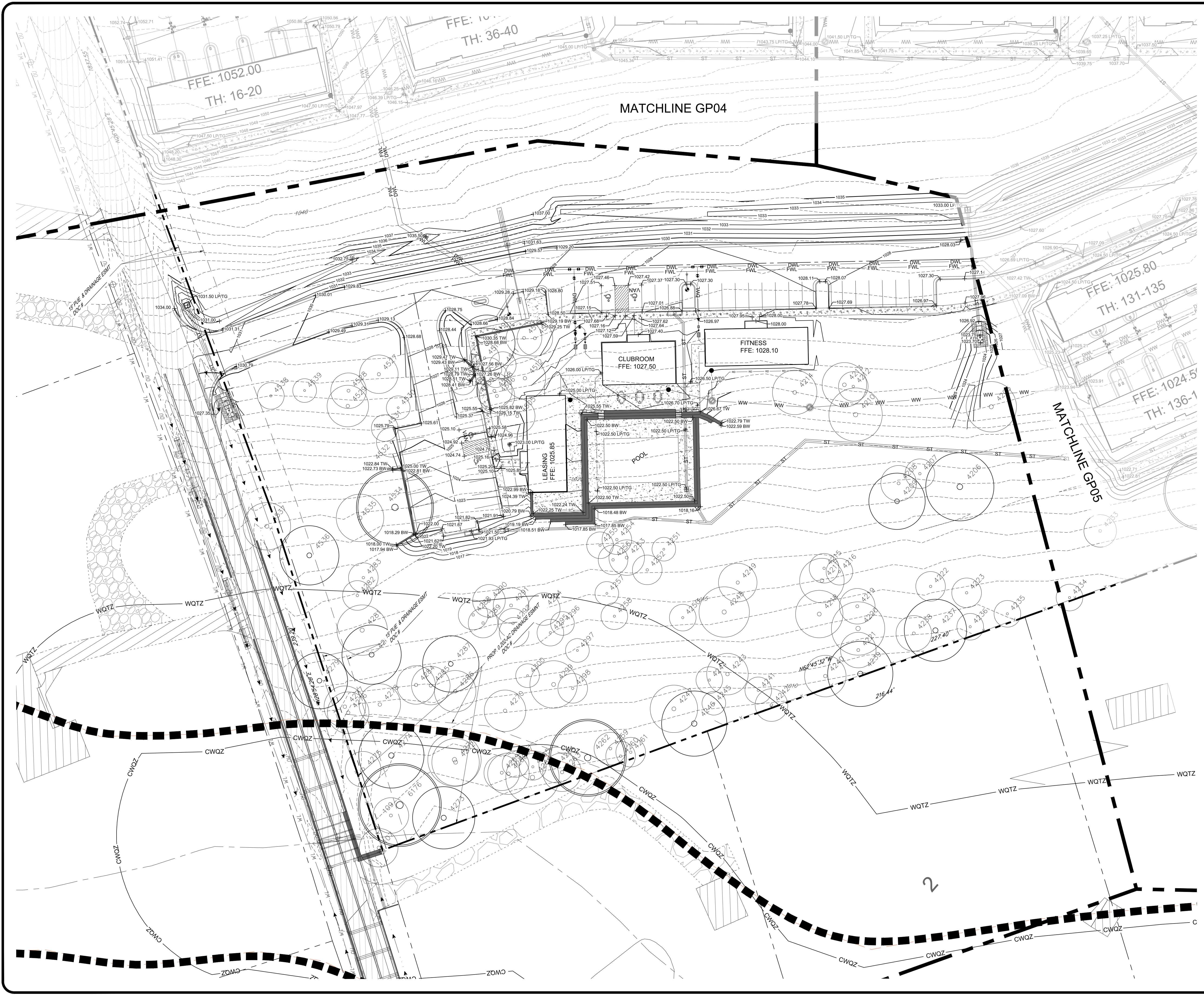
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Austin, Texas 78735

Phone 512.439.4700
Fax 512.439.4716
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JOB NUMBER: A116-1007

GP05

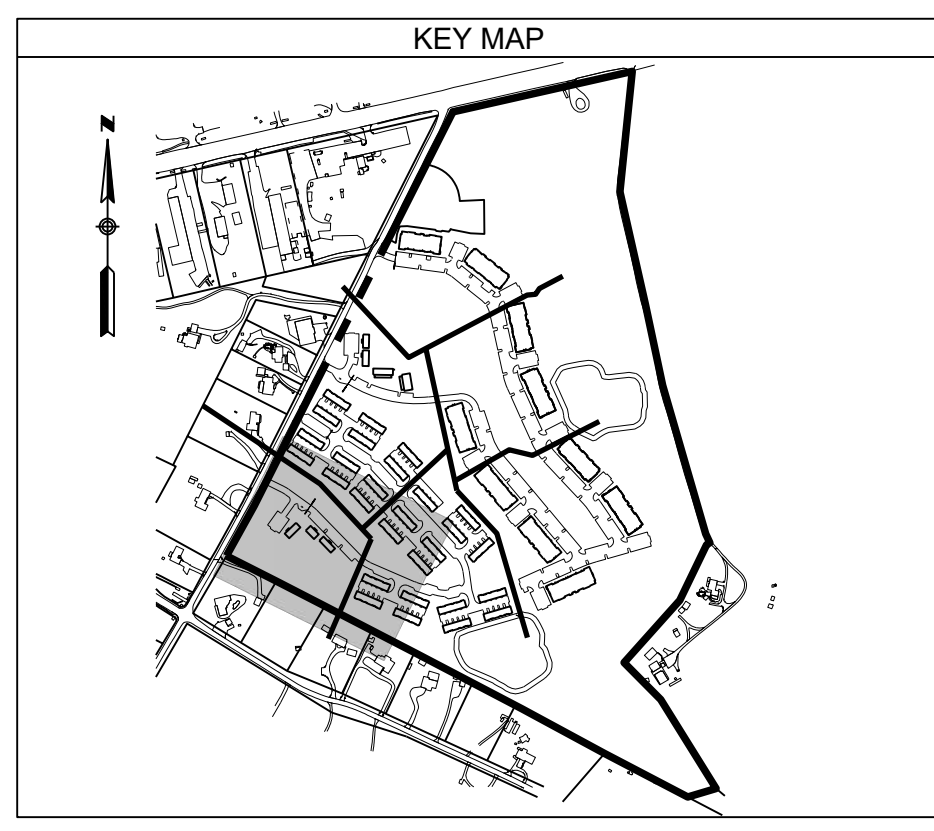
SHEET NO. **35** OF 107 SHEETS



LEGEND

PROPOSED	EXISTING	DESCRIPTION
800	800	CONTOURS
(thick dashed line)	(thin dashed line)	PROPOSED RETAINING WALL
(x100.00 TP)	(x100.00 TP)	TOP OF PAVEMENT
(x100.00 TC)	(x100.00 TC)	TOP OF CURB/CONCRETE
(x100.00 TG)	(x100.00 TG)	TOP OF GRATE
(x100.00 LP)	(x100.00 LP)	LOW POINT
(x100.00 HP)	(x100.00 HP)	HIGH POINT
(x100.00 FS)	(x100.00 FS)	FINISHED SLAB
(x100.00 TW)	(x100.00 TW)	TOP OF WALL
(x100.00 BW)	(x100.00 BW)	BOTTOM OF WALL
(x100.00 FG)	(x100.00 FG)	FINISHED GROUND
(circle with dot)	(circle with dot)	TREE TO REMAIN
(circle with cross)	(circle with cross)	STORM SEWER LINE
(circle with W)	(circle with W)	WASTEWATER LINE
(circle with WL)	(circle with WL)	WATER LINE
(circle with valve symbol)	(circle with valve symbol)	WATER VALVE
(circle with fire hydrant symbol)	(circle with fire hydrant symbol)	FIRE HYDRANT
(circle with WWH symbol)	(circle with WWH symbol)	WASTEWATER MANHOLE
(circle with SSMH symbol)	(circle with SSMH symbol)	STORMSEWER MANHOLE
(circle with dot)	(circle with dot)	1/2" REBAR FOUND (OR AS NOTED)
(circle with dot)	(circle with dot)	1/2" REBAR WITH CAP FOUND
(circle with dot)	(circle with dot)	1/2" REBAR WITH CHAPARRAL CAP SET
(circle with dot)	(circle with dot)	COTTON SPINDLE WITH CHAPARRAL WASHER SET
(circle with square)	(circle with square)	WATER METER
(circle with square)	(circle with square)	UTILITY POLE
(circle with square)	(circle with square)	OVERHEAD UTILITIES
(circle with square)	(circle with square)	ELEC. UTILITY
(circle with square)	(circle with square)	ELEC. MANHOLE
(circle with square)	(circle with square)	LIGHT POLE
(circle with square)	(circle with square)	TELEPHONE UTILITY
(circle with square)	(circle with square)	UNDERGROUND FIBER OPTIC MARKER
(circle with square)	(circle with square)	UNDERGROUND MANHOLE
(circle with square)	(circle with square)	UNDERGROUND GAS MARKER
(circle with square)	(circle with square)	CHAIN LINK FENCE

- NOTES:**
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LEDGESTONE TERRACES SITE CONSTRUCTION PLANS

GRADING PLAN SHEET 6

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	DESCRIPTION

DESIGNED BY: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DRAWING NAME: A116-1007-GP05.DWG

02/28/2024

STATE OF TEXAS
 CHARLES R. HAGER
 127034
 PROFESSIONAL ENGINEER

LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 FRN-F-1386

7500 Riata Boulevard
 Building II, Suite 100
 Austin, Texas 78735

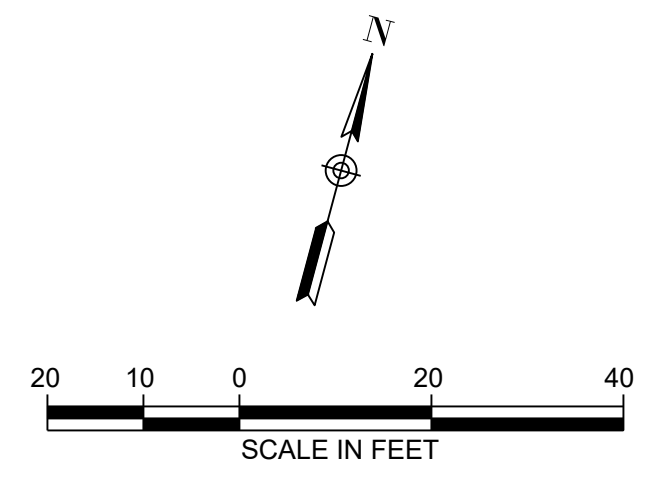
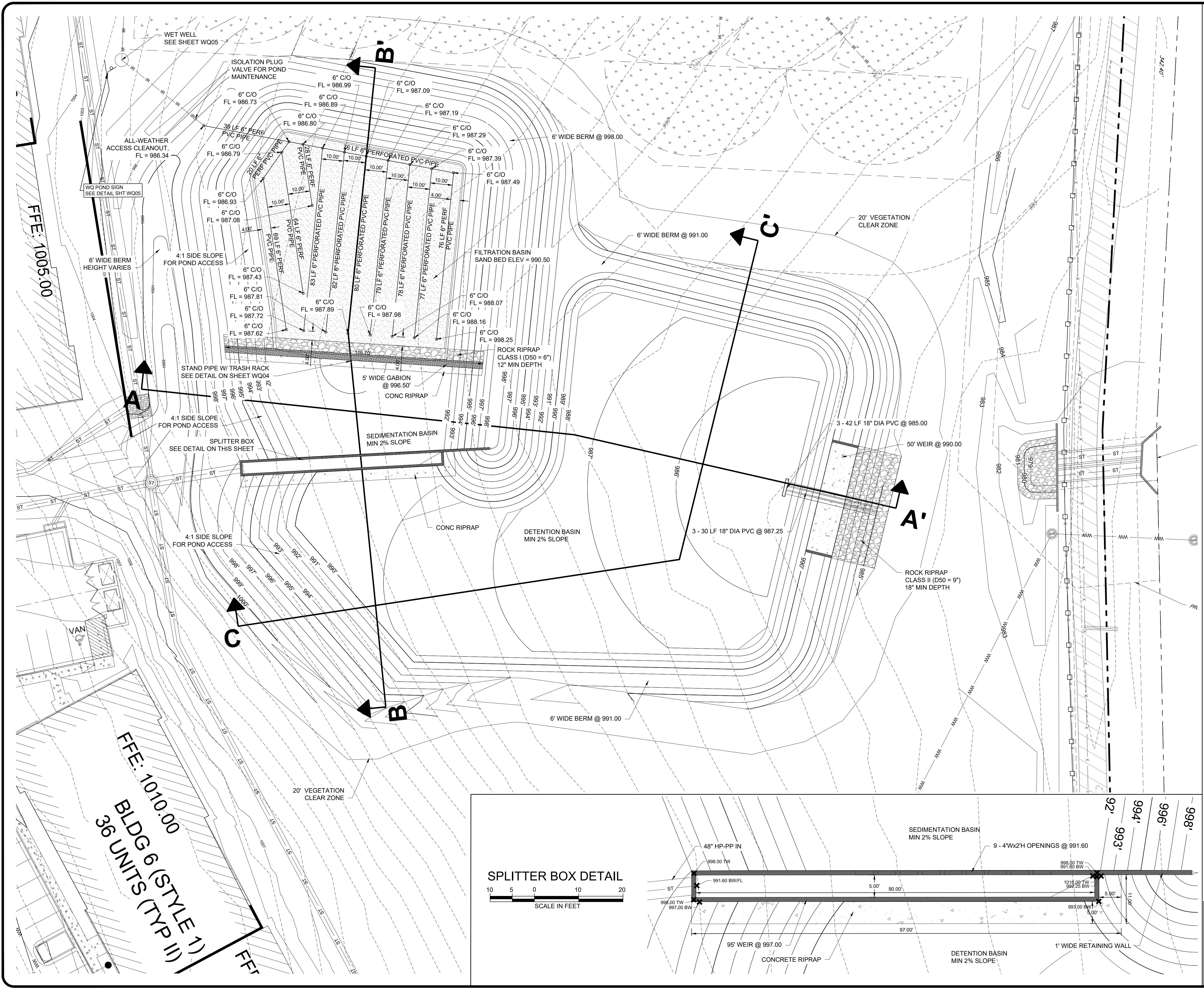
JOB NUMBER: A116-1007

GP05

SHEET NO. **36** OF 107 SHEETS

TRAVIS COUNTY TNR No. 22-38855 AUSTIN CASE No. SP-2023-0177D

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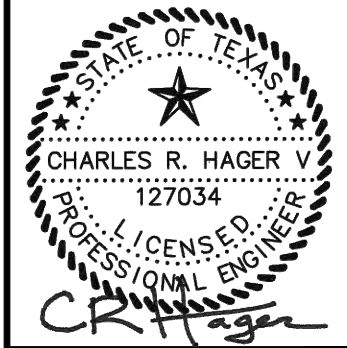


**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
WATER QUALITY & DETENTION POND A4
PLAN (APARTMENTS)**

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 02/28/2024
 DESIGNED BY: CHARLES R. HAGER
 DRAWN BY: 127034
 CHECKED BY: PROFESSIONAL ENGINEER



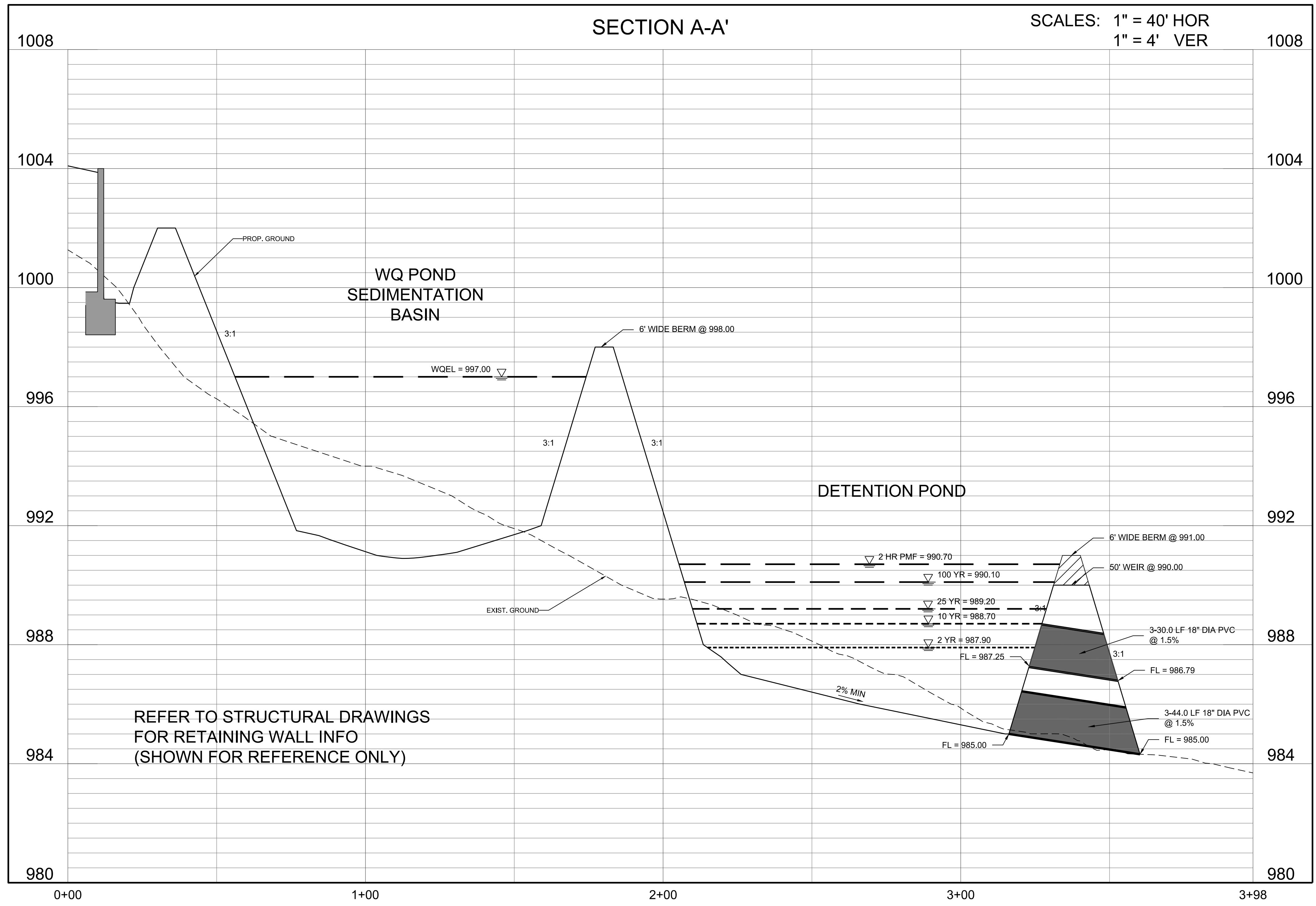
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JOB NUMBER: A116-1007
 WQ01
 SHEET NO. **37**
 OF 107 SHEETS

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



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 User: amcbride
 Last Modified: Feb 28, 24 - 19:47
 Plot Date/Time: Mar 01, 24 - 13:56:30



SCALES: 1" = 40' HOR
1" = 4' VER

MAINTENANCE NOTES:
THE FOLLOWING MAINTENANCE ACTIVITIES SHALL BE PERFORMED ON ALL SCMS, IN ADDITION TO THE REQUIREMENTS LISTED FOR THE INDIVIDUAL SCM TYPES, TO ENSURE PROPER FUNCTION:

1. ACCUMULATED PAPER, TRASH AND DEBRIS SHALL BE REMOVED EVERY SIX (6) MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
2. STRUCTURAL INTEGRITY SHALL BE MAINTAINED AT ALL TIMES. BASINS AND ALL APPURTENANCES SHALL BE INSPECTED ANNUALLY, OR MORE FREQUENTLY IF SPECIFIED, AND REPAIRS SHALL BE MADE IF NECESSARY. WHEN MAINTENANCE OR REPAIRS ARE PERFORMED, THE SCM SHALL BE RESTORED TO THE ORIGINAL LINES AND GRADES.
3. CORRECTIVE MAINTENANCE SHALL OCCUR:
 - 3.1. ANY TIME DRAWDOWN OF THE WATER QUALITY VOLUME DOES NOT OCCUR WITHIN NINETY-SIX (96) HOURS (I.E. NO STANDING WATER IS ALLOWED), UNLESS A GREATER MAXIMUM DRAWDOWN TIME IS SPECIFIED IN THE PLANS.
 - 3.2. FOR DETENTION PONDS ONLY, ANY TIME DRAWDOWN DOES NOT OCCUR WITHIN TWENTY-FOUR (24) HOURS.
4. THE INLET AND OUTLET OF SCMS SHALL BE MAINTAINED UNIMPEDED IN ORDER TO CONVEY FLOW AT ALL TIMES. OBSERVED BLOCKAGES TO THE INLET AND OUTLET, DUE TO VEGETATION, SEDIMENT, DEBRIS, OR ANY OTHER CAUSE, SHALL BE REMOVED.
5. NO UNVEGETATED AREA SHALL EXCEED TEN (10) SQUARE FEET. THIS PERFORMANCE REQUIREMENT APPLIES TO THE ENTIRE POND INCLUDING THE POND BOTTOM, SIDE SLOPES, AND AREAS ADJACENT TO THE POND, AND IS INTENDED TO LIMIT EROSION.
6. INTEGRATED PEST MANAGEMENT SHALL BE PERFORMED AND SHALL ADHERE TO SECTION 1.6.2.F, INTEGRATED PEST MANAGEMENT GUIDELINES.
7. THE MINIMUM VEGETATION HEIGHT SHALL BE FOUR (4) INCHES IN THE SCM AND ALL APPURTENANCES, INCLUDING THE TOE OF THE BERM OR WALL OUTSIDE THE SCM, WHERE APPLICABLE.
8. SEDIMENT BUILD-UP SHALL BE REMOVED:
 - 8.1. WHEN THE ACCUMULATION EXCEEDS SIX (6) INCHES IN SPLITTER BOXES, WET WELLS AND BASINS.
 - 8.2. WHEN SEDIMENT TRAPS ARE FULL.
 - 8.3. WHEN SEDIMENT, OF ANY AMOUNT, CAUSES STANDING WATER CONDITIONS OR REDUCES BASIN STORAGE BY MORE THAN 10%.
9. WHEN SEDIMENT IS REMOVED, THE FOLLOWING REQUIREMENTS APPLY:
 - 9.1. IRRIGATION SHALL BE PROVIDED, AS NEEDED, UNTIL VEGETATION IS ESTABLISHED (WELL ROOTED). SEE SECTION 1.6.3.D, IRRIGATION GUIDELINES.
 - 9.2. THE DESIGN DEPTH OF THE FILTRATION MEDIA SHALL BE VERIFIED. SEE SECTION 1.6.3.B.5.
 - 9.3. TILLING OF THE FILTRATION MEDIUM IS NOT ALLOWED. FOR SUBSURFACE PONDS MAINTENANCE PLAN REQUIREMENTS, REFER TO ECM SECTION 1.6.2(E).
10. SEDIMENTATION AND FILTRATION SCMS (SECTION 1.6.5):
 - 10.1. VEGETATION WITHIN THE SCM SHALL NOT EXCEED EIGHTEEN (18) INCHES IN HEIGHT AT ANY TIME, EXCEPT AS CALLED FOR IN THE DESIGN.
 - 10.2. VEGETATION THAT IS MOWED OR CUT SHALL BE REMOVED FROM THE SCM. DETENTION BASINS. A VEGETATION WITHIN THE BASIN SHALL NOT EXCEED EIGHTEEN (18) INCHES IN HEIGHT AT ANY TIME.
11. IRRIGATION SYSTEMS:
 - 11.1. BASINS, STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES. WOODY VEGETATION SHOULD BE CONTROLLED/REMOVED TO PREVENT BASIN LEAKAGE. THE ABILITY OF THE BASIN TO RETAIN THE WATER QUALITY VOLUME SHALL BE EVALUATED BY THE COA.
 - 11.2. IRRIGATION AREAS, TO THE GREATEST EXTENT PRACTICABLE, IRRIGATION AREAS ARE TO REMAIN IN THEIR NATURAL STATE. HOWEVER, VEGETATION MUST BE MAINTAINED IN THE IRRIGATION AREA SUCH THAT IT DOES NOT IMPEDE THE SPRAY OF WATER FROM THE IRRIGATION HEADS. TREE AND SHRUB TRIMMING AND OTHER LARGE DEBRIS MUST BE REMOVED FROM THE IRRIGATION AREA. SEE REQUIREMENTS IN SECTION 1.6.7.A.3.(G) AND (H) REGARDING REQUIREMENTS FOR SOIL AND VEGETATION IN IRRIGATION AREAS. PUMPS AND IRRIGATION SYSTEM, THE PUMPS AND IRRIGATION SYSTEM MUST BE INSPECTED OR TESTED A MINIMUM OF SIX (6) TIMES PER YEAR TO SHOW ALL COMPONENTS ARE OPERATING AS INTENDED. TWO (2) OF THESE SIX (6) INSPECTIONS SHOULD BE AFTER RAIN EVENTS TO ENSURE THAT THE IRRIGATION SYSTEM AND ALL OF ITS COMPONENTS PERFORM AS DESIGNED. THIS INCLUDES CONTROLS SUCH AS WEATHER STATIONS OR RAIN SENSORS, DELAYS, VALVES, ALARM SYSTEM, DISTRIBUTION LINES, OR OTHER COMPONENTS AS SPECIFIED IN THE SYSTEM DESIGN. SPRINKLER HEADS MUST BE CHECKED TO DETERMINE IF ANY ARE BROKEN, CLOGGED, OR NOT SPRAYING PROPERLY. ALL INSPECTION AND TESTING REPORTS MUST BE KEPT ON SITE AND ACCESSIBLE TO THE CITY OF AUSTIN.
 - 11.3. THE OVERALL SYSTEM SHALL BE INSPECTED FOR THE ABILITY TO RETAIN THE WATER QUALITY VOLUME ON SITE PER ECM SECTION 1.6.7.A.

MAINTENANCE NOTES DURING CONSTRUCTION:

THE DESIGN OF DRAINAGE FACILITIES (INCLUDING BUT NOT LIMITED TO HEADWALLS, OPEN CHANNELS, STORM SEWERS, AREA INLETS, AND DETENTION, RETENTION AND STORMWATER CONTROL MEASURES AND THEIR APPURTENANCES) SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 1.2.4.E OF THE DRAINAGE CRITERIA MANUAL. IN ADDITION, SCMS SHALL COMPLY WITH THE FOLLOWING CONSTRUCTION REQUIREMENTS:

1. SEDIMENT REMOVED DURING CONSTRUCTION OF A DETENTION, RETENTION, OR WATER QUALITY FACILITIES MAY BE DISPOSED OF ON-SITE IF PROPERLY STABILIZED ACCORDING TO THE PRACTICES OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL CRITERIA FOUND IN SECTION 1.4.0 OF THIS MANUAL. AFTER THE CITY OF AUSTIN HAS ACCEPTED A STORMWATER FACILITY DISPOSAL OF SEDIMENT MUST BE AT AN APPROVED LANDFILL.
2. DURING CONSTRUCTION OF SCMS, TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED.
3. IF RUNOFF IS TO ENTER THE SAND FILTRATION CHAMBER OF A WATER QUALITY CONTROL FACILITY PRIOR TO COMPLETION OF SITE CONSTRUCTION AND REVEGETATION, INSPECTION AND MAINTENANCE OF ALL TEMPORARY EROSION/SEDIMENTATION CONTROLS ARE REQUIRED, AS DESCRIBED IN THE ENVIRONMENTAL CRITERIA MANUAL SECTION 1.4.4, TO PREVENT HEAVY SEDIMENT LOADS CAUSED BY HOME CONSTRUCTION FROM CLOGGING THE FILTRATION MEDIA.
4. IN ALL CASES, TREES SHALL BE PRESERVED ACCORDING TO THE REQUIREMENTS OF SECTION 3 OF THE ENVIRONMENTAL CRITERIA MANUAL. THE ACCESS DRIVE AND STAGING AREA SHALL BE DESIGNED TO PRESERVE TREES 8" (INCHES) IN DIAMETER AND GREATER TO THE MAXIMUM EXTENT POSSIBLE. TREES 8" IN DIAMETER AND LARGER SHALL BE SURVEYED AND SHOWN FOR THE PROPOSED ACCESS EASEMENT AT THE TIME OF CONSTRUCTION PLAN PERMITTING.
5. FOR FILTRATION SYSTEMS THE DESIGN MEDIA DEPTH MUST BE VERIFIED. ACCOUNTING FOR CONSOLIDATION, IF INSUFFICIENT DEPTH IS PRESENT, ADDITIONAL MEDIA MUST BE ADDED AND PRE-SOAKED UNTIL THE DESIGN DEPTH IS ACHIEVED. PRE-SOAKING - APPLY 5-10 GALLONS OF WATER PER SQUARE FOOT OF MEDIA AREA WITHIN ONE HOUR.
6. RETAINING WALLS - RETAINING WALLS WITHIN SCMS REQUIRE WATER-TIGHTNESS. WATER-TIGHTNESS IN RETAINING WALLS IS ESSENTIAL TO THE FUNCTION OF THE STRUCTURE. WATERSTOPS SHALL BE PROVIDED DURING CONSTRUCTION OF EXPANSION JOINTS IN RETAINING WALLS PER STANDARD SPECIFICATION 414S, CONCRETE RETAINING WALLS.
7. GROUTED ROCK WALLS - GROUTED ROCK WALLS ARE ACCEPTABLE ONLY IF THE DESIGN INCLUDES AN IMPERMEABLE BARRIER SUCH AS AN APPROVED GEOMEMBRANE LINER OR REINFORCED CONCRETE RETAINING WALL. FREE STANDING DRY STACKED ROCK WALLS ARE NOT ACCEPTABLE IN ANY SCM.

REFER TO STRUCTURAL DRAWINGS FOR RETAINING WALL INFO (SHOWN FOR REFERENCE ONLY)

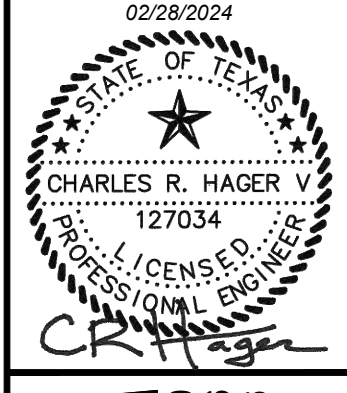
LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
WATER QUALITY & DETENTION POND A4
SECTION A (APARTMENTS)

NO.	REVISIONS	DESCRIPTION	DATE

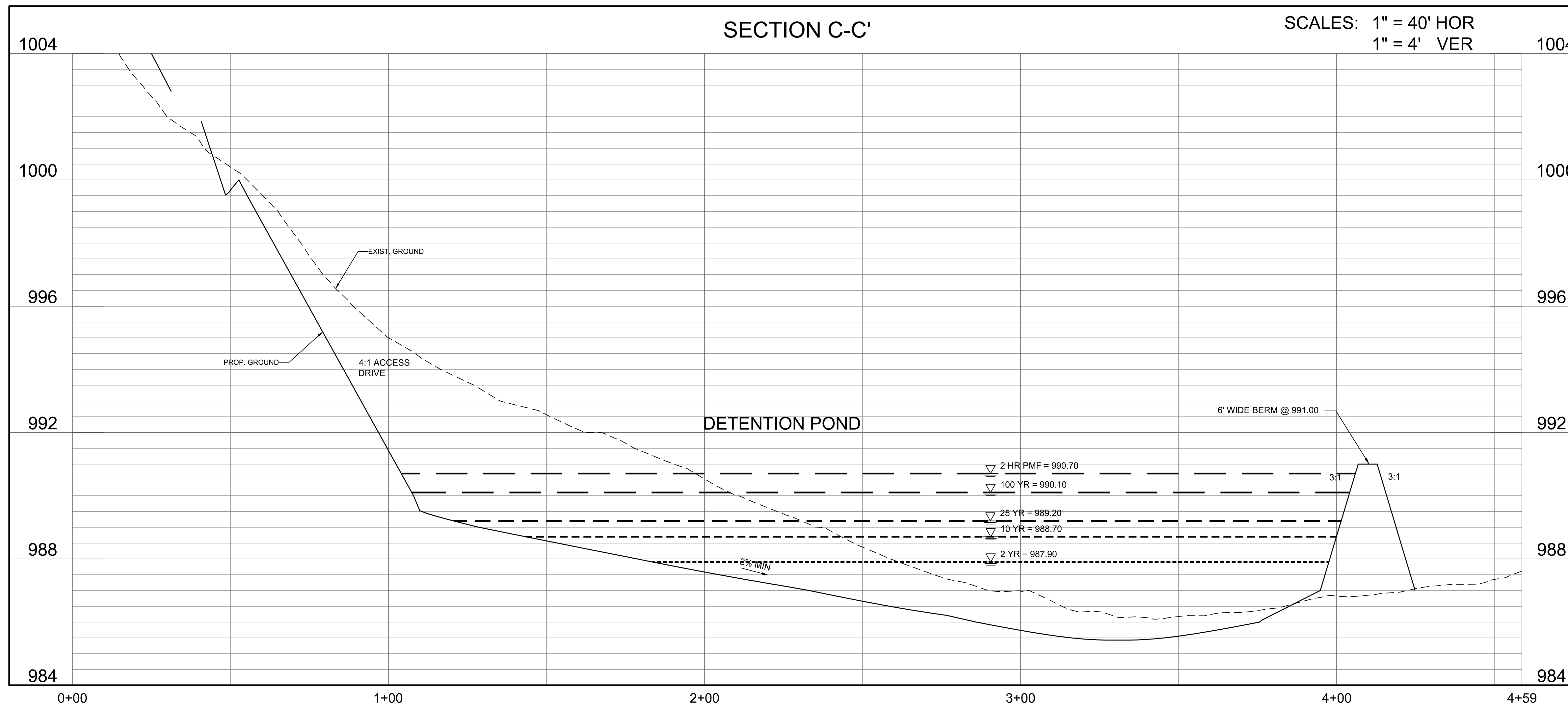
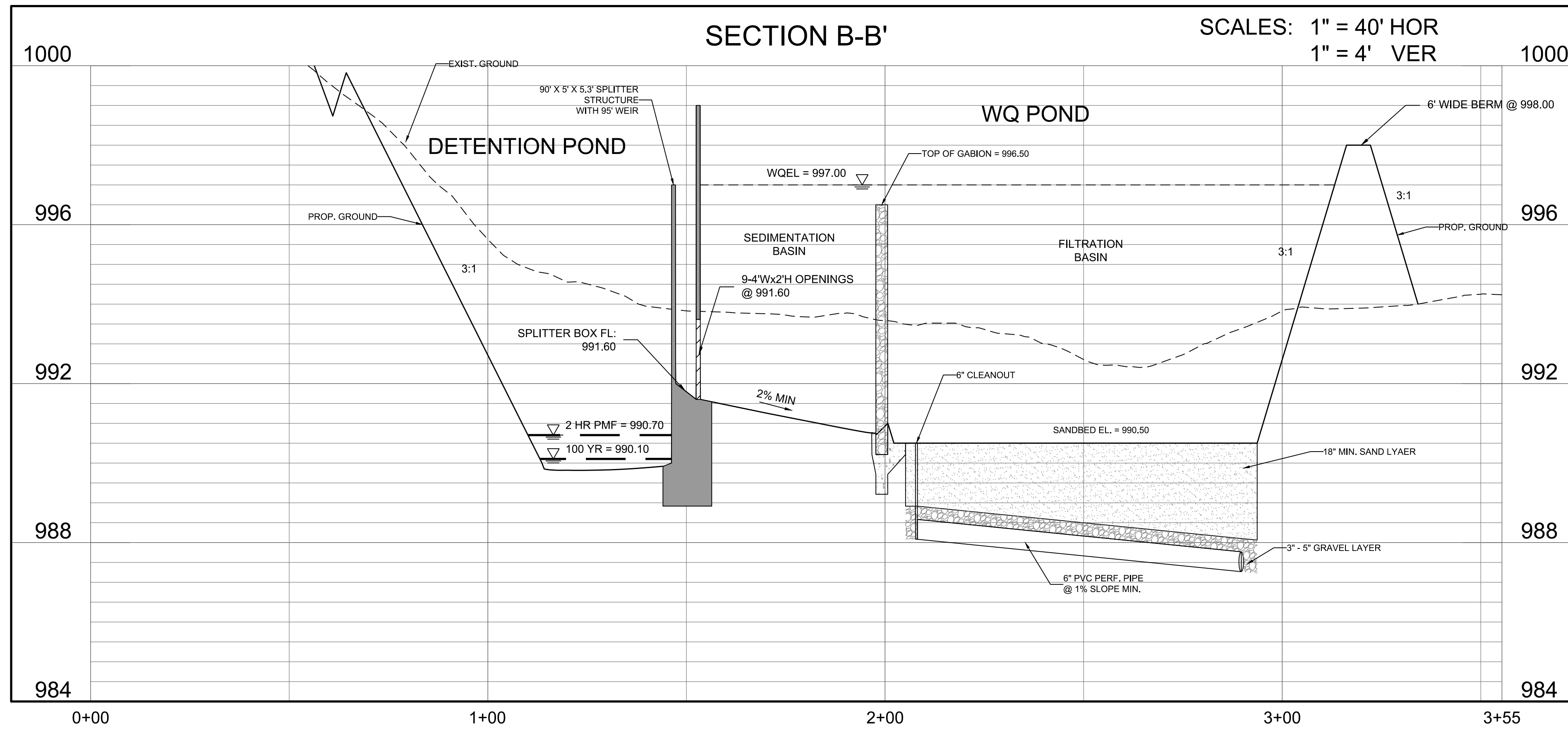
DATE: 02/28/2024
DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DRAWING NAME: A116-1007-WQ02.dwg



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Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386

JOB NUMBER: A116-1007
WQ02
SHEET NO. 38 OF 107 SHEETS

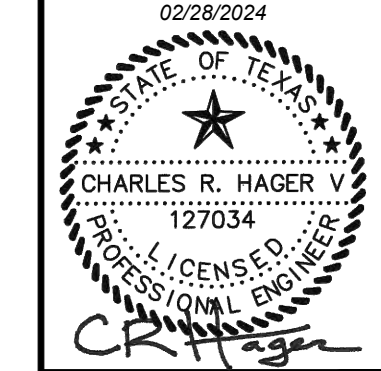
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User: amcbride
Last Modified: Feb 28, 24 - 10:47
Plot Date/Time: Mar 01, 24 - 13:56:33



LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
WATER QUALITY & DETENTION POND A4
SECTIONS B & C (APARTMENTS)

NO.	REVISIONS DESCRIPTION	DATE

DATE: 02/28/2024
 DESIGNED BY: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DRAWING NAME: A116-1007-1000.DWG



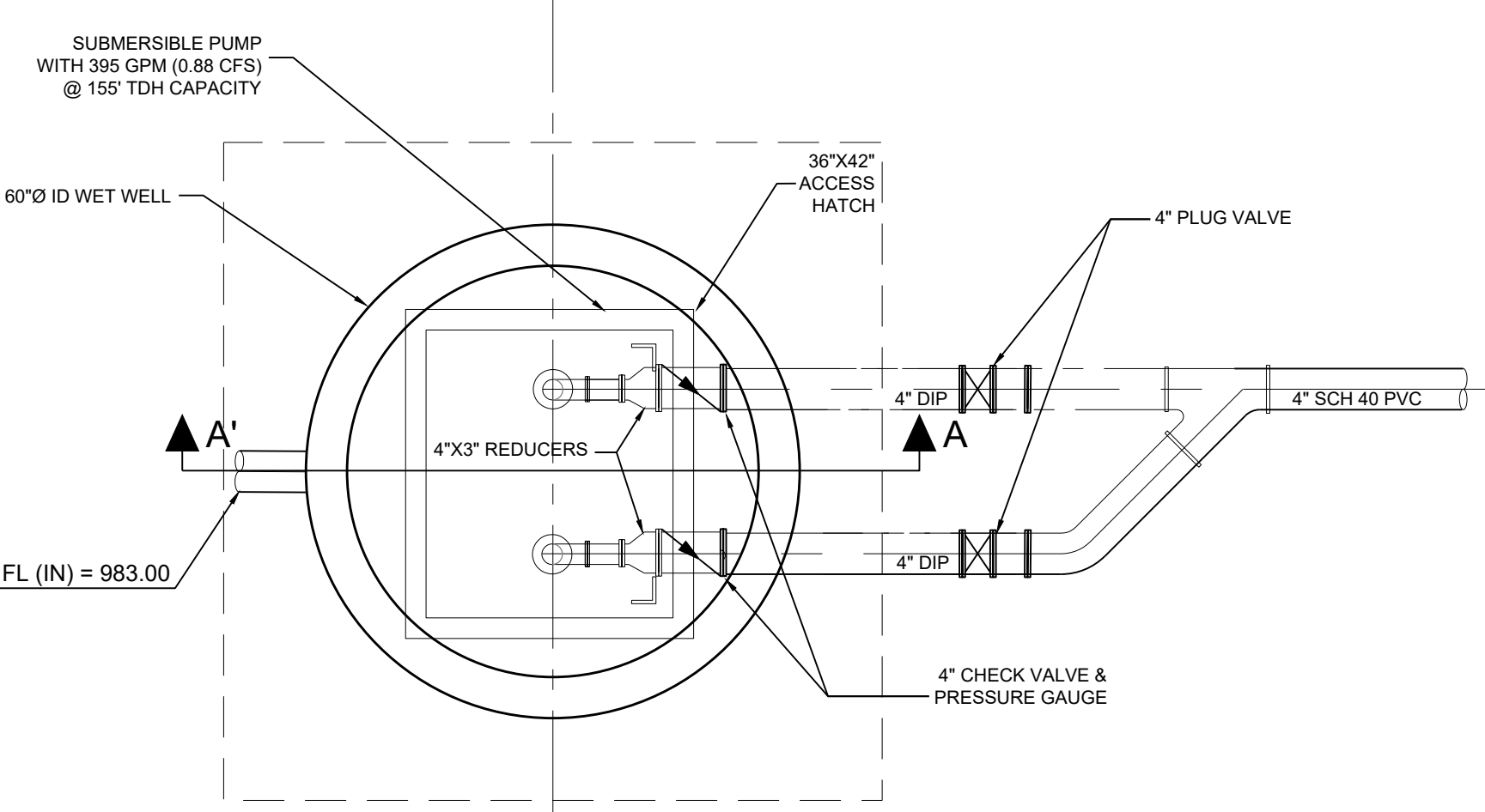
LJA Engineering, Inc.
 7500 Riata Boulevard
 Building II, Suite 100
 Austin, Texas 78735
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 FRN-F-1386

JOB NUMBER: A116-1007
WQ03
 SHEET NO. **39** OF 107 SHEETS

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



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 User: jgarcia
 Last Modified: Feb 28, 2024 10:47 AM
 Plot Date/Time: Mar 01, 2024 13:56:39



LIFT STATION PLAN
SCALE: 1/2" = 1'-0"

Buoyancy Calculations - 60" ID Implosion Well for Apartments
Completed by: Charles R. Hager, P.E.

The weight of the lift station must exceed the weight of the water displaced by the lift station to ensure the lift station does not rise as a result of buoyant forces. For this calculation it will be assumed that the lift station is dry and that the water table is at the top of the ground elevation. (See supporting sheets attached)

Volume displaced by lift station:

- Volume of well = Volume of base + Volume of shell
- $V_{well} = \pi R^2 H + \pi R^2 H_{shell}$
- Where:
 - R = outside radius of well (ft) = 2.5000' (30.00" / 12)
 - H = outside height of well (ft) = 10.0000' (120.00" / 12)
 - H_{shell} = depth of well below ground (ft) = 0.0000' (0" / 12)
 - R_{shell} = (3.14159 x 0.75' (21.00" / 12) x 0.125' (3.125" / 12)) / 2 = 0.0938' = 1.13"
- $V_{well} = 3.14159 \times 2.5^2 \times 10 + 3.14159 \times 2.5^2 \times 0.0938 = 157.08 + 0.59 = 157.67 \text{ cu ft}$
- $V_{well} = 4.41 \text{ cu yd}$

Weight of water displaced by lift station:

- $W_{water} = V_{well} \times 62.4 \text{ lb/cu ft}$
- $W_{water} = 157.67 \text{ cu ft} \times 62.4 \text{ lb/cu ft} = 9830.03 \text{ lbs}$
- $W_{water} = 220.00 \text{ kips}$

Weight of dry lift station:

- Weight of well + Weight of base + Weight of pumps and accessories + Weight of soil on base (assumed)
- $W_{station} = (157.67 \text{ cu ft} \times 150 \text{ lb/cu ft}) + (10.00 \text{ ft} \times 3.14159 \text{ ft}^2 \times 150 \text{ lb/cu ft}) + (10.00 \text{ ft} \times 3.14159 \text{ ft}^2 \times 150 \text{ lb/cu ft}) + (10.00 \text{ ft} \times 3.14159 \text{ ft}^2 \times 150 \text{ lb/cu ft})$
- $W_{station} = 23652.63 + 47124.00 + 47124.00 + 47124.00 = 164824.63 \text{ lbs}$
- $W_{station} = 3660.00 \text{ kips}$

Net weight of lift station:

- $W_{net} = W_{station} - W_{water} = 3660.00 \text{ kips} - 220.00 \text{ kips} = 3440.00 \text{ kips}$
- $W_{net} = 154.00 \text{ tons}$

* Based on weight of lift station and accessories. All electrical and mechanical components are assumed to weigh approximately 200 lbs.

The lift station and accessories with all connections weigh 15,480 pounds which is more than the 12,120 pounds of water displaced. Therefore, the lift station will not float. This calculation is conservative in that the water table was assumed to be at top of ground elevation, the friction forces of the soil were neglected, the weight of the concrete working area and the soil was not included, the weight of soil above the ground was ignored, and a dry lift station was assumed. Therefore, there is a large safety margin that may appear at first glance.

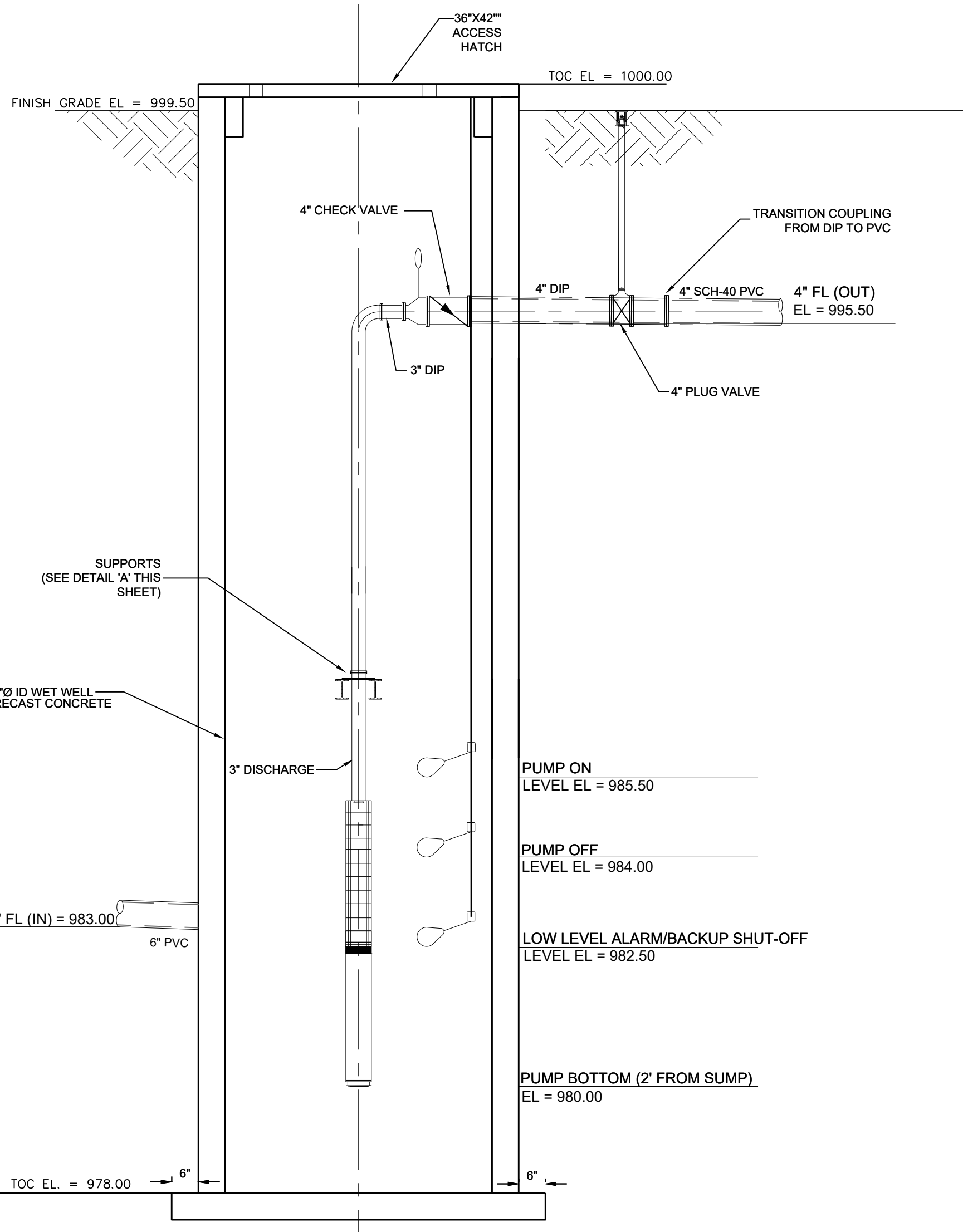
- NOTES:**
- STRUCTURAL AND ELECTRICAL DETAILS PROVIDED BY OTHERS.
 - ACCESS DOOR SHALL BE HALLIDAY PRODUCTS MODEL NO. S1R3642 (OR APPROVED EQUIVALENT). ACCESS DOOR AND FRAME SHALL BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS.
 - THE PUMP FOR THE WATER QUALITY POND SHALL BE VERTICAL DEEP-WELL SUBMERSIBLE TYPE, ENCLOSED POLISHED BRONZE IMPELLERS WITH STAINLESS STEEL SHAFTING. CONTRACTOR SHALL ALSO PROVIDE A SHROUD FOR THE PUMP AND MOTOR. THE PUMP SHALL BE NON-OVERLOADING THROUGHOUT THE ENTIRE RANGE OF OPERATION. THE PUMP SHALL RETAIN A MINIMUM SERVICE FACTOR OF 1.15. A DUAL PUMP SYSTEM MUST BE PROVIDED, WITH EACH PUMP CAPABLE OF DELIVERING 100 PERCENT OF THE DESIGN CAPACITY.
 - PUMP CABLES SHALL BE AIR AND WATER RATED AND SHALL BE INTERNALLY SPLICED IN THE MOTOR.
 - PUMP OPERATION:
 - PRIMARY LEVEL SENSING FOR PUMP OPERATION SHALL BE BY FLOATS.
 - PUMPING SEQUENCE SHALL BEGIN 12 HOURS AFTER "PUMP ON" WATER LEVEL IS REACHED IN THE WET WELLS.
 - PUMPING SHALL BE REPEATED IN CYCLES OF ONE HOUR ON, ONE HOUR OFF UNTIL "PUMP OFF" FLOAT DROPS, EXCEPT AS NOTED BELOW:
 - IF WATER LEVEL CONTINUES TO RISE TO THE FULL WATER QUALITY VOLUME, THE "PUMP ON" SENSOR IS ENERGIZED AGAIN.
 - FLASHING ALARM LIGHT SHALL BE ACTIVATED IF 1) PUMPS ARE NOT RUNNING WITHIN 36 HOURS OF "PUMP ON" SIGNAL; 2) PUMP HAS FAILED TO OPERATE; 3) LOW LEVEL PUMP DROPS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES, PERMITS, INSPECTIONS, ETC. UNTIL THE PROJECT HAS BEEN GRANTED FINAL ACCEPTANCE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE MANUFACTURER'S WARRANTY. ALL COMPONENTS TO BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.
 - ALARM LIGHT SHALL BE MOUNTED A MINIMUM OF 5 FEET ABOVE NATURAL GROUND, ALONG WITH A GREEN PUMP RUN LIGHT. ALARM SHALL INCLUDE AN A VISUAL ALARM. PUMPS SHALL ALTERNATE ON STARTUP.
 - ADJUSTABLE RAIN SENSOR MUST BE PROVIDED WHICH WILL NORMALLY BE SET TO TEMPORARILY HALT IRRIGATION DURING RAINFALLS EXCEEDING ONE-HALF INCH. THE RAIN SENSOR MUST BE ABLE TO INTERRUPT IRRIGATION IN THE EVENT OF SUBSEQUENT RAIN EVENTS PRIOR TO EMPTYING BASIN. THE 12-HOUR PUMP DELAY MAY INITIATE AFTER THE RAIN SENSOR SENSES THE RAIN EVENT HAS TERMINATED.
 - THIS SITE IS SUBJECT TO THE CITY OF AUSTIN VOID AND WATER FLOW MITIGATION RULE.
 - FOR SYSTEMS THAT ARE TO BE MAINTAINED PRIVATELY, ONE SET OF PLANS AND ONE MANUAL SHALL BE INCLUDED WITH THE OPERATION PERMIT APPLICATION AND THE SECOND SET OF PLANS AND ONE MANUAL SHALL BE RETAINED ON SITE AT ALL TIMES.

OPERATION NARRATIVE:
THE SYSTEM IS DESIGNED FOR THE PUMP TO BEGIN EMPTYING THE WET WELL 12 HOURS AFTER THE PUMP IS ACTIVATED BY WATER FILLING THE WET WELL TO THE "PUMP ON" FLOAT. THE PUMP WILL CONTINUE TO RUN IN CYCLES UNTIL THE "PUMP OFF" FLOAT DROPS.

OPERATING AND MAINTENANCE GUIDELINES FOR WATER QUALITY SYSTEM

- THE POND BOTTOM SHOULD BE MOWED AT LEAST TWICE A YEAR. VEGETATION GROWING WITHIN THE BASINS MUST NOT BE ALLOWED TO EXCEED 18 INCHES IN HEIGHT.
- SILT REMOVED FROM THE BASIN AS A RESULT OF MAINTENANCE SHOULD BE DISPOSED OF ON SITE IF PROPERLY STABILIZED ACCORDING TO PRACTICES OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL CRITERIA OF THE CITY OF AUSTIN.
- THE FLOAT BULBS, THE CONTROL STATION, THE PUMP, AND THE ELECTRONIC CONTROLS SHOULD BE INSPECTED PERIODICALLY, AT LEAST EVERY TWO MONTHS, TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY. DURING THE INITIAL CONTRACTOR ONE-YEAR WARRANTY PERIOD, THE OWNER'S DESIGNATED REPRESENTATIVE WILL BE RESPONSIBLE FOR THESE PERIODIC INSPECTIONS (MINIMUM EVERY 2 MONTHS).
- FOR SYSTEMS THAT ARE TO BE MAINTAINED PRIVATELY, ONE SET OF PLANS AND ONE MANUAL SHALL BE INCLUDED WITH THE OPERATING PERMIT APPLICATION AND THE SECOND SET OF PLANS AND ONE MANUAL SHALL BE RETAINED ON SITE AT ALL TIMES.

- INFLUENT LINE INTO WET WELL SHALL BE INSTALLED USING ADEKA P-201 WATER-SWELLING SEALANT, INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS, AND NON-SHRINK GROUT.
- ALL OTHER WET WELL PENETRATIONS SHALL BE LIPPED WALL PIPE AND GAP BETWEEN WALL PIPE & WET WELL WALL TO BE FILLED WITH NON-SHRINK EPOXY OR APPROVED EQUAL. USE BOND AGENT BETWEEN CUT-OUT & EPOXY.
- ALL D.I.P. SHALL BE CL. 350 D.I.P.



LIFT STATION SECTION A-A'
SCALE: 1/2" = 1'-0"

9 Inch Texas Turbine Submersible Turbine
MODEL: C09WAL02SA66B

Maximum Flow	Flow at Best Efficiency	Minimum Flow	Head	Efficiency	Power	Motor
300 US g.p.m.	200 US g.p.m.	100 US g.p.m.	100 ft	85%	10 HP	115V 1-Phase

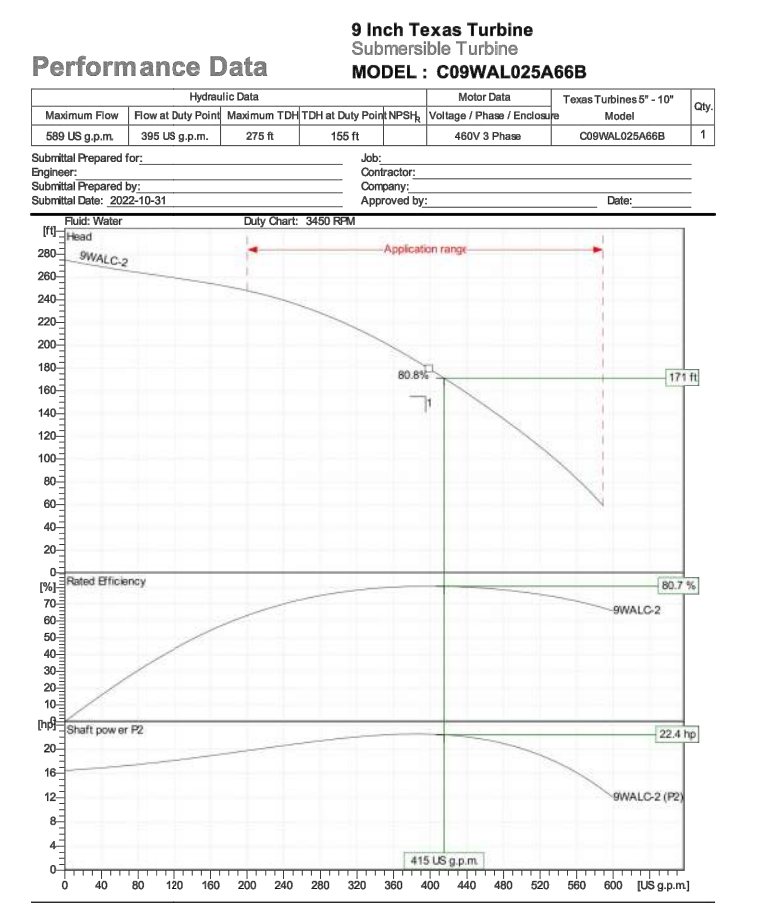
Submittal Data

Manufacturer	Model	Material	Notes
9 Inch Texas Turbine	C09WAL02SA66B	Cast Iron	See manufacturer's literature for details.

Performance Data

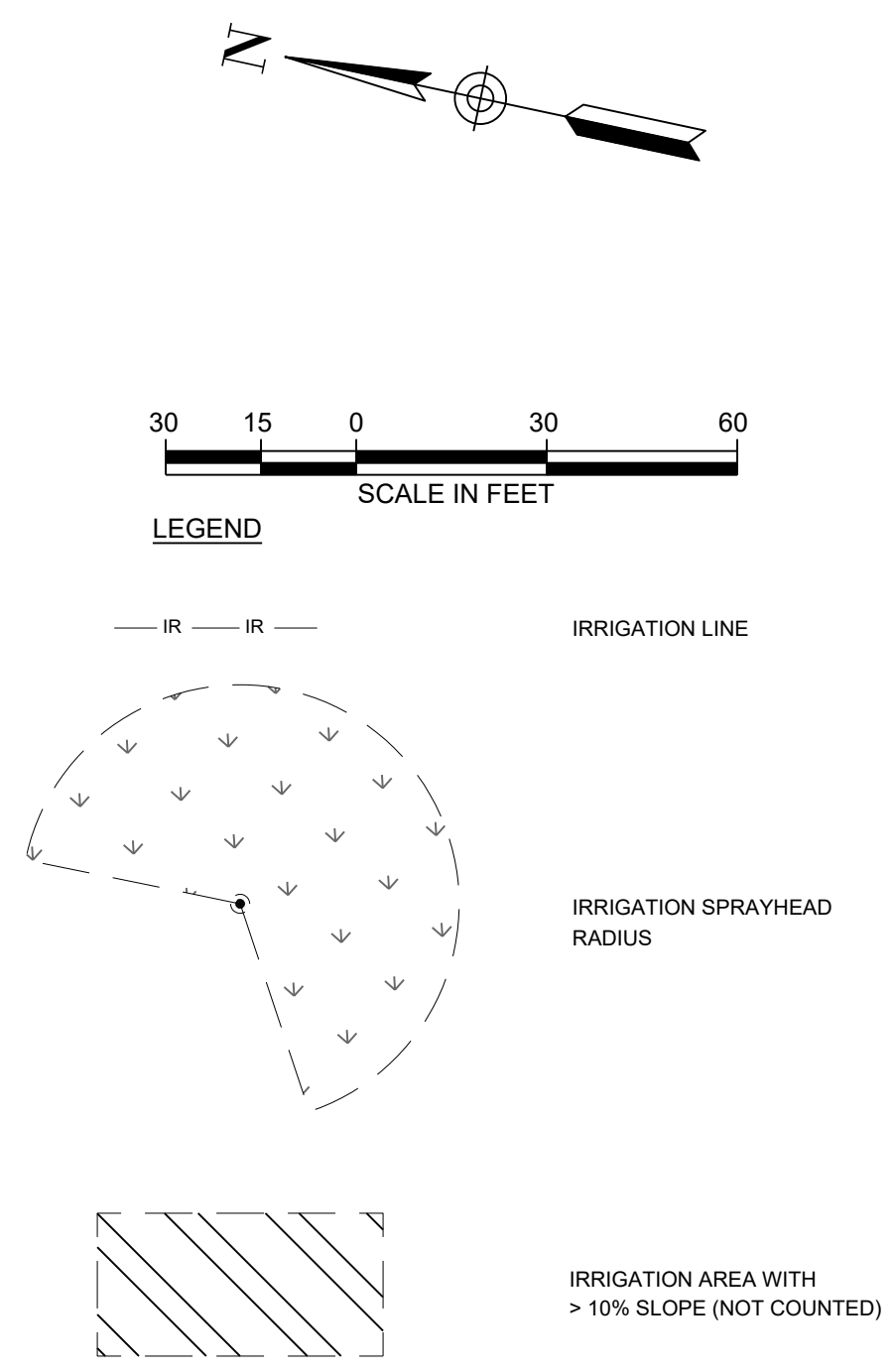
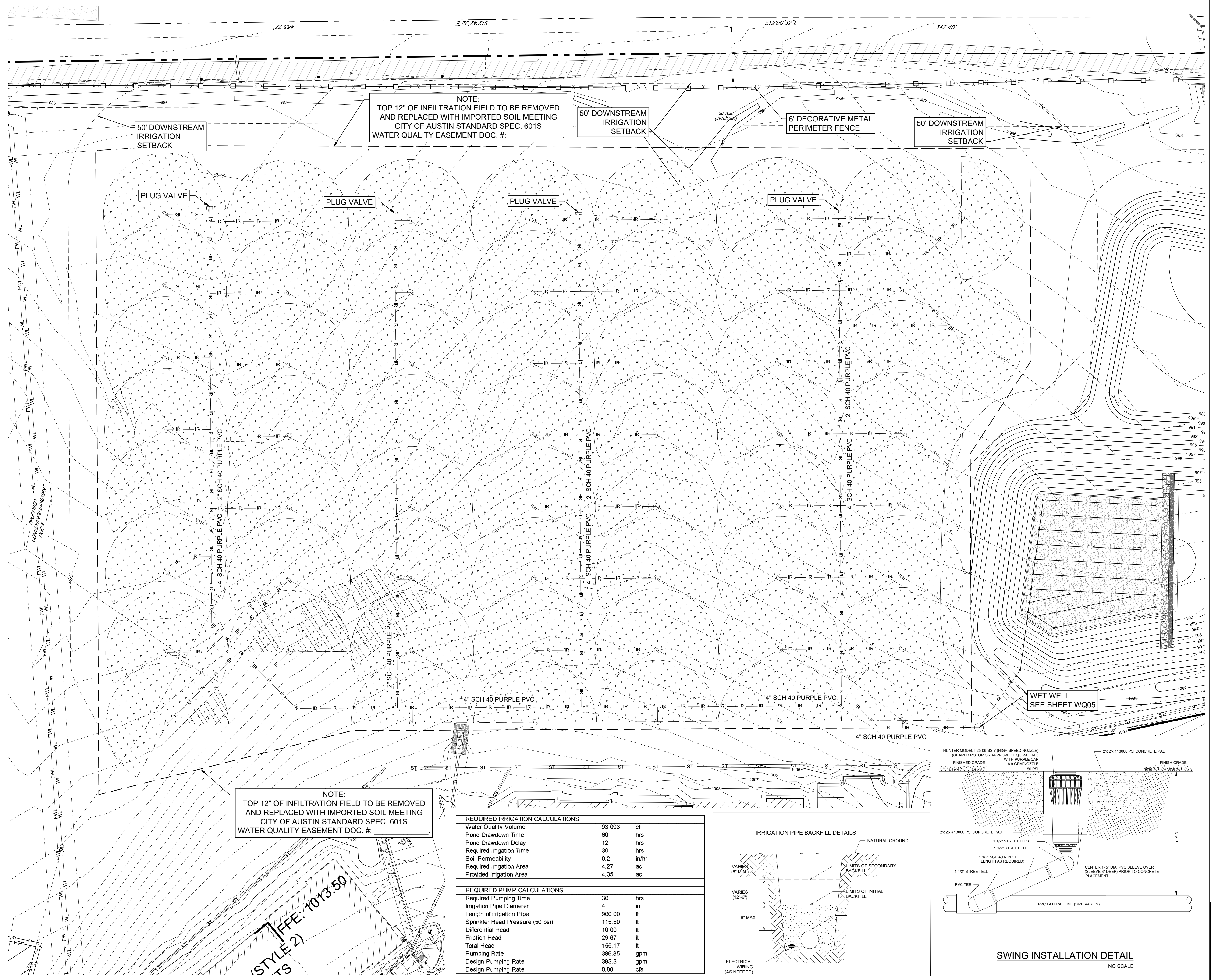
Unit Dimensions

Dimension	Value	Dimension	Value
WE	20"	WE	20"
WE	20"	WE	20"



9 Inch Texas Turbine Submersible Turbine
MODEL: C09WAL02SA66B

Motor Order No.	HP	Volts	Phase	Motor Dia. (in)	Flange Dia. (in)	Rated Input Amps	Service Factor	Locked Rotor Amps
400001	5	230	3	4.5	4.5	11.5	1.15	21.5
400002	5	230	3	4.5	4.5	11.5	1.15	21.5
400003	5	230	3	4.5	4.5	11.5	1.15	21.5
400004	5	230	3	4.5	4.5	11.5	1.15	21.5
400005	5	230	3	4.5	4.5	11.5	1.15	21.5
400006	5	230	3	4.5	4.5	11.5	1.15	21.5
400007	5	230	3	4.5	4.5	11.5	1.15	21.5
400008	5	230	3	4.5	4.5	11.5	1.15	21.5
400009	5	230	3	4.5	4.5	11.5	1.15	21.5
400010	5	230	3	4.5	4.5	11.5	1.15	21.5
400011	5	230	3	4.5	4.5	11.5	1.15	21.5
400012	5	230	3	4.5	4.5	11.5	1.15	21.5
400013	5	230	3	4.5	4.5	11.5	1.15	21.5
400014	5	230	3	4.5	4.5	11.5	1.15	21.5
400015	5	230	3	4.5	4.5	11.5	1.15	21.5
400016	5	230	3	4.5	4.5	11.5	1.15	21.5
400017	5	230	3	4.5	4.5	11.5	1.15	21.5
400018	5	230	3	4.5	4.5	11.5	1.15	21.5
400019	5	230	3	4.5	4.5	11.5	1.15	21.5
400020	5	230	3	4.5	4.5	11.5	1.15	21.5
400021	5	230	3	4.5	4.5	11.5	1.15	21.5
400022	5	230	3	4.5	4.5	11.5	1.15	21.5
400023	5	230	3	4.5	4.5	11.5	1.15	21.5
400024	5	230	3	4.5	4.5	11.5	1.15	21.5
400025	5	230	3	4.5	4.5	11.5	1.15	21.5
400026	5	230	3	4.5	4.5	11.5	1.15	21.5
400027	5	230	3	4.5	4.5	11.5	1.15	21.5
400028	5	230	3	4.5	4.5	11.5	1.15	21.5
400029	5	230	3	4.5	4.5	11.5	1.15	21.5
400030	5	230	3	4.5	4.5	11.5	1.15	21.5
400031	5	230	3	4.5	4.5	11.5	1.15	21.5
400032	5	230	3	4.5	4.5	11.5	1.15	21.5
400033	5	230	3	4.5	4.5	11.5	1.15	21.5
400034	5	230	3	4.5	4.5	11.5	1.15	21.5
400035	5	230	3	4.5	4.5	11.5	1.15	21.5
400036	5	230	3	4.5	4.5	11.5	1.15	21.5
400037	5	230	3	4.5	4.5	11.5	1.15	21.5
400038	5	230	3	4.5	4.5	11.5	1.15	21.5
400039	5	230	3	4.5	4.5	11.5	1.15	21.5
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400045	5	230	3	4.5	4.5	11.5	1.15	21.5
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400055	5	230	3	4.5	4.5	11.5	1.15	21.5
400056	5	230	3	4.5	4.5	11.5	1.15	21.5
400057	5	230	3	4.5	4.5	11.5	1.15	21.5
400058	5	230	3	4.5	4.5	11.5	1.15	21.5
400059	5	230	3	4.5	4.5	11.5	1.15	21.5
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400065	5	230	3	4.5	4.5	11.5	1.15	21.5
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400067	5	230	3	4.5	4.5	11.5	1.15	21.5
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400071	5	230	3	4.5	4.5	11.5	1.15	21.5
400072	5	230	3	4.5	4.5	11.5	1.15	21.5
400073	5	230	3	4.5	4.5	11.5	1.15	21.5
400074	5	230	3	4.5	4.5	11.5	1.15	21.5
400075	5	230	3	4.5	4.5	11.5	1.15	21.5
400076	5	230	3	4.5	4.5	11.5	1.15	21.5
400077	5	230	3	4.5	4.5	11.5	1.15	21.5
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400079	5	230	3	4.5	4.5	11.5	1.15	21.5
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400081	5	230	3	4.5	4.5	11.5	1.15	21.5
400082	5	230	3	4.5	4.5	11.5	1.15	21.5
400083	5	230	3	4.5	4.5	11.5	1.15	21.5
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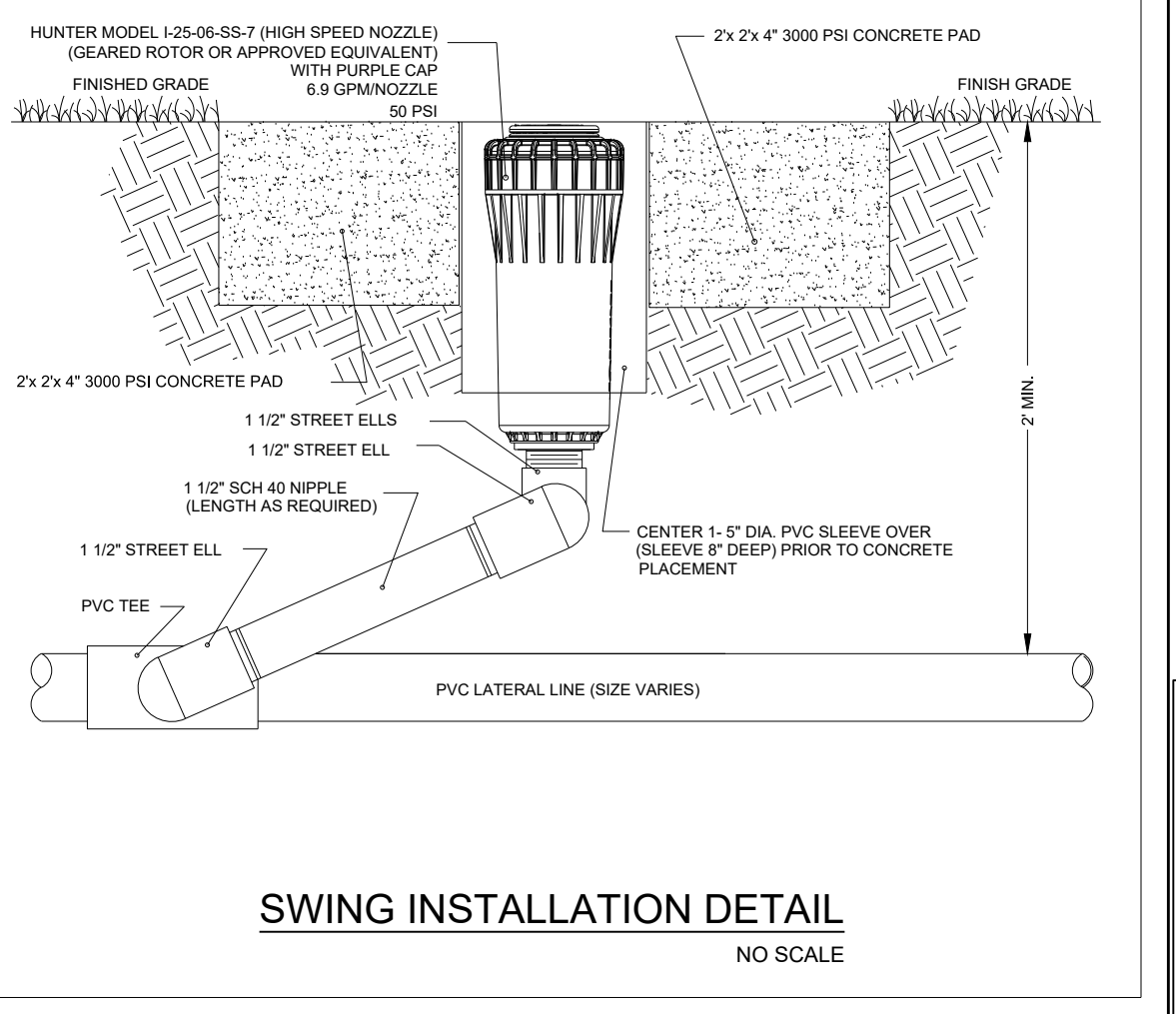
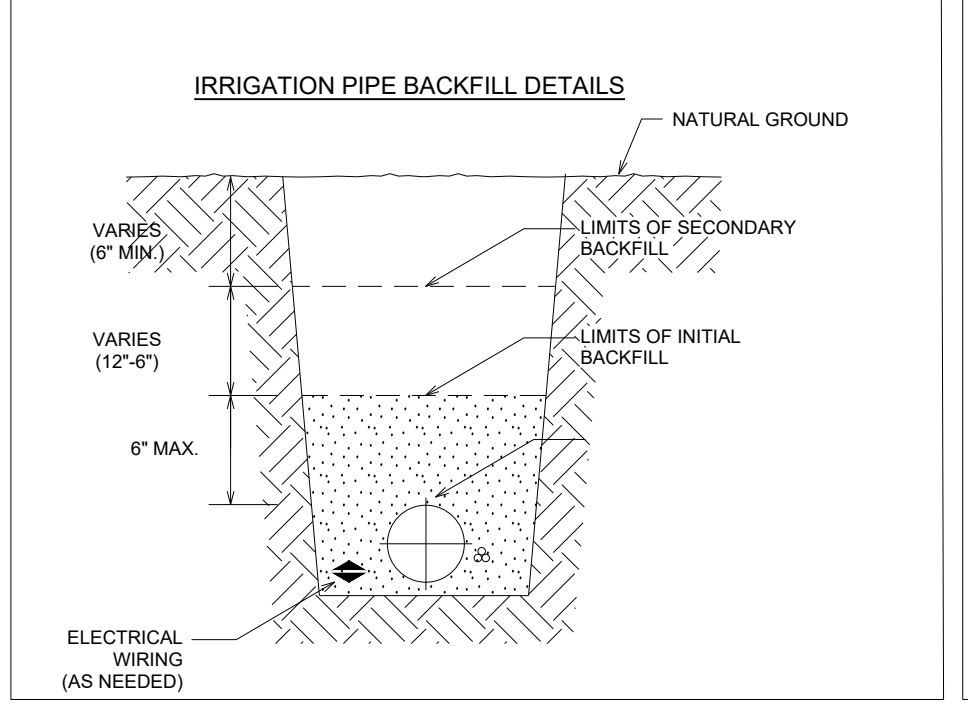
- NOTES:**
- 1) ALL IRRIGATION SYSTEM DISTRIBUTION AND LATERAL PIPING (I.E. FROM THE PUMPS TO THE SPRAY HEADS) MUST BE SCHEDULE 80 PVC. ALL PIPES AND ELECTRICAL BUNDLES PASSING BENEATH DRIVEWAYS OR PAVED AREAS MUST BE SLEEVED WITH PVC CLASS 200 PIPE WITH SOLVENT WELDED JOINTS. SLEEVE DIAMETER MUST EQUAL TWICE THAT OF THE PIPE OR ELECTRICAL BUNDLE.
 - 2) ALL VALVES MUST BE DESIGNED SPECIFICALLY FOR SEDIMENT BEARING WATER, AND BE OF APPROPRIATE DESIGN FOR THE INTENDED PURPOSE. ALL REMOTE CONTROL, GATE, AND QUICK COUPLING VALVES MUST BE LOCATED IN TEN-INCH OR LARGER PLASTIC VALVE BOXES. ALL PIPES AND VALVES MUST BE MARKED TO INDICATE THAT THEY CONTAIN NON-POTABLE WATER. ALL PIPING MUST BE BURIED TO PROTECT IT FROM WEATHER AND VANDALISM. THE DEPTH AND METHOD OF BURIAL MUST BE ADEQUATE TO PROTECT THE PIPE FROM VEHICULAR TRAFFIC SUCH AS MAINTENANCE EQUIPMENT. VELOCITIES IN ALL PIPELINES SHOULD BE SUFFICIENT TO PREVENT SETTLING OF SOLIDS. THE IRRIGATION DESIGN AND LAYOUT MUST BE INTEGRATED WITH THE TREE PROTECTION PLAN AND PRESENTED AS PART OF THE SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN.
 - 3) SYSTEMS MUST INCLUDE A PLUG VALVE TO ALLOW FLUSHING AT THE END OF EVERY LINE.
 - 4) ALL SPRINKLER HEADS MUST HAVE FULL OR PARTIAL CIRCLE ROTOR POP-UP HEADS AND MUST BE CAPABLE OF DELIVERING THE REQUIRED RATE OF IRRIGATION OVER THE DESIGNATED AREA IN A UNIFORM MANNER. SPRINKLER HEADS AND MUST BE FLUSH MOUNTED AND ENCASED WITHIN A 2' X 2' CONCRETE HOUSING CAPABLE OF PROTECTING THE HEAD FROM MOWING AND SERVICE EQUIPMENT. SEE DETAIL THIS SHEET.
- i) ALL IRRIGATION SYSTEM DISTRIBUTION AND LATERAL PIPING (I.E. FROM THE PUMPS TO THE SPRAY HEADS) MUST BE SCHEDULE 80 PVC. ALL PIPES AND ELECTRICAL BUNDLES PASSING BENEATH DRIVEWAYS OR PAVED AREAS MUST BE SLEEVED WITH PVC CLASS 200 PIPE WITH SOLVENT WELDED JOINTS. SLEEVE DIAMETER MUST EQUAL TWICE THAT OF THE PIPE OR ELECTRICAL BUNDLE.
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- iii) SYSTEMS MUST INCLUDE A PLUG VALVE TO ALLOW FLUSHING AT THE END OF EVERY LINE.

NOTE:
TOP 12" OF INFILTRATION FIELD TO BE REMOVED AND REPLACED WITH IMPORTED SOIL MEETING CITY OF AUSTIN STANDARD SPEC. 601S WATER QUALITY EASEMENT DOC. #:

NOTE:
TOP 12" OF INFILTRATION FIELD TO BE REMOVED AND REPLACED WITH IMPORTED SOIL MEETING CITY OF AUSTIN STANDARD SPEC. 601S WATER QUALITY EASEMENT DOC. #:

REQUIRED IRRIGATION CALCULATIONS		
Water Quality Volume	93,093	cf
Pond Drawdown Time	60	hrs
Pond Drawdown Delay	12	hrs
Required Irrigation Time	30	hrs
Soil Permeability	0.2	in/hr
Required Irrigation Area	4.27	ac
Provided Irrigation Area	4.35	ac

REQUIRED PUMP CALCULATIONS		
Required Pumping Time	30	hrs
Irrigation Pipe Diameter	4	in
Length of Irrigation Pipe	900.00	ft
Sprinkler Head Pressure (50 psi)	115.50	ft
Differential Head	10.00	ft
Friction Head	29.67	ft
Total Head	155.17	ft
Pumping Rate	386.85	gpm
Design Pumping Rate	393.3	gpm
Design Pumping Rate	0.88	cts

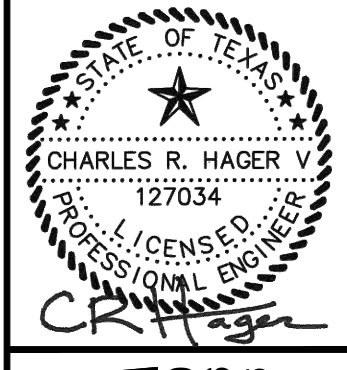


LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
WATER QUALITY IRRIGATION FIELD
(APARTMENTS)**

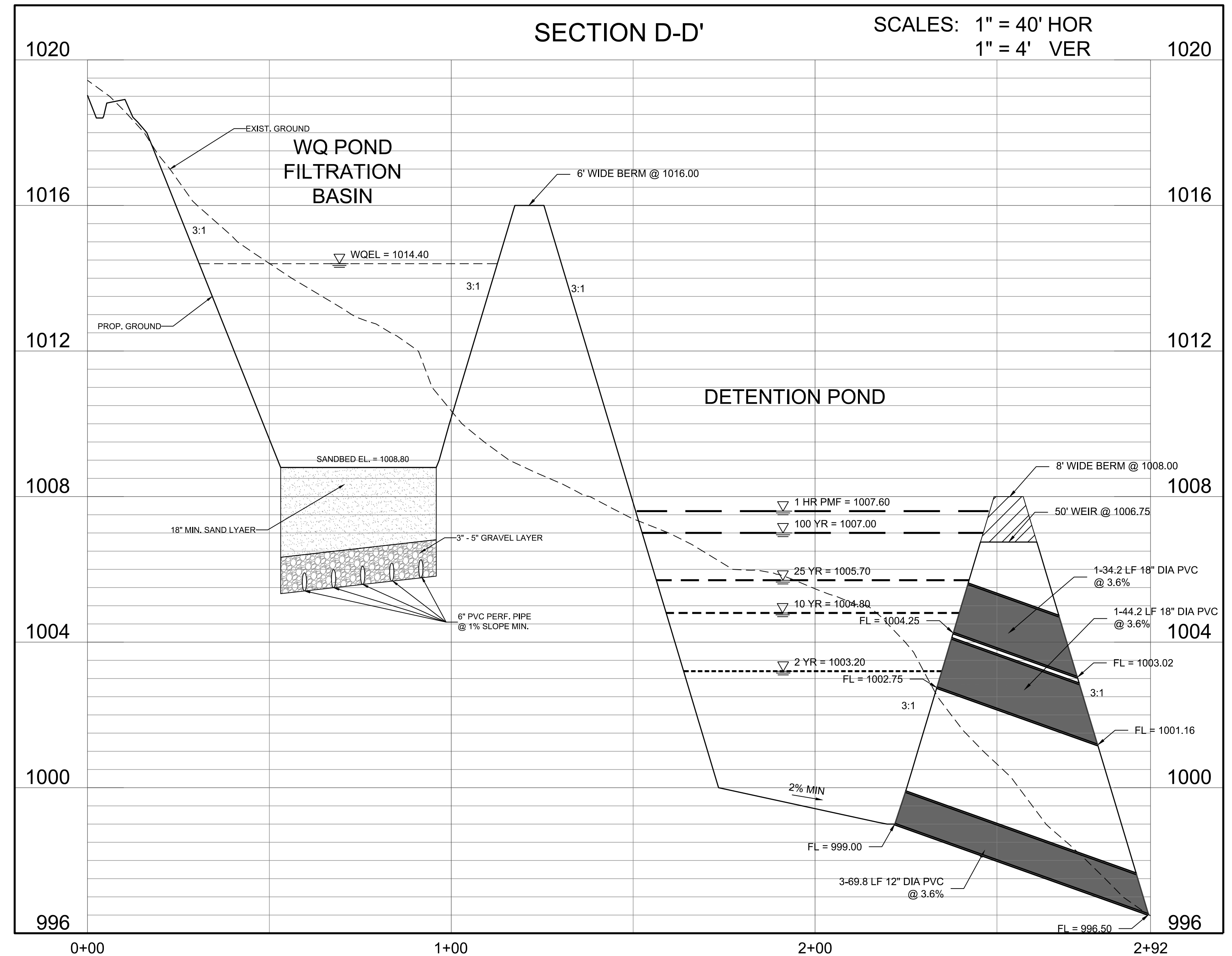
NO.	REVISIONS DESCRIPTION	DATE	BY



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FRN-F-1386

JOB NUMBER:
A116-1007
WQ06
SHEET NO.
42
OF 107 SHEETS

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User: laura
Date: Feb 28, 24 - 19:47
Plot Date/Time: Mon, 01, 24 - 13:56:55



- MAINTENANCE NOTES:**
THE FOLLOWING MAINTENANCE ACTIVITIES SHALL BE PERFORMED ON ALL SCMS, IN ADDITION TO THE REQUIREMENTS LISTED FOR THE INDIVIDUAL SCM TYPES, TO ENSURE PROPER FUNCTION:
- ACCUMULATED PAPER, TRASH AND DEBRIS SHALL BE REMOVED EVERY SIX (6) MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
 - STRUCTURAL INTEGRITY SHALL BE MAINTAINED AT ALL TIMES. BASINS AND ALL APPURTENANCES SHALL BE INSPECTED ANNUALLY, OR MORE FREQUENTLY IF SPECIFIED, AND REPAIRS SHALL BE MADE IF NECESSARY. WHEN MAINTENANCE OR REPAIRS ARE PERFORMED, THE SCM SHALL BE RESTORED TO THE ORIGINAL LINES AND GRADES.
 - CORRECTIVE MAINTENANCE SHALL OCCUR:
 - ANY TIME DRAWDOWN OF THE WATER QUALITY VOLUME DOES NOT OCCUR WITHIN NINETY-SIX (96) HOURS (I.E., NO STANDING WATER IS ALLOWED), UNLESS A GREATER MAXIMUM DRAWDOWN TIME IS SPECIFIED IN THE PLANS.
 - FOR DETENTION PONDS ONLY, ANY TIME DRAWDOWN DOES NOT OCCUR WITHIN TWENTY-FOUR (24) HOURS.
 - THE INLET AND OUTLET OF SCMS SHALL BE MAINTAINED UNIMPEDED IN ORDER TO CONVEY FLOW AT ALL TIMES. OBSERVED BLOCKAGES TO THE INLET AND OUTLET, DUE TO VEGETATION, SEDIMENT, DEBRIS, OR ANY OTHER CAUSE, SHALL BE REMOVED.
 - NO UNVEGETATED AREA SHALL EXCEED TEN (10) SQUARE FEET. THIS PERFORMANCE REQUIREMENT APPLIES TO THE ENTIRE POND INCLUDING THE POND BOTTOM, SIDE SLOPES, AND AREAS ADJACENT TO THE POND, AND IS INTENDED TO LIMIT EROSION.
 - INTEGRATED PEST MANAGEMENT SHALL BE PERFORMED AND SHALL ADHERE TO SECTION 1.6.2.F, INTEGRATED PEST MANAGEMENT GUIDELINES.
 - THE MINIMUM VEGETATION HEIGHT SHALL BE FOUR (4) INCHES IN THE SCM AND ALL APPURTENANCES, INCLUDING THE TOE OF THE BERM OR WALL OUTSIDE THE SCM, WHERE APPLICABLE.
 - SEDIMENT BUILD-UP SHALL BE REMOVED:
 - WHEN THE ACCUMULATION EXCEEDS SIX (6) INCHES IN SPLITTER BOXES, WET WELLS AND BASINS.
 - WHEN SEDIMENT TRAPS ARE FULL.
 - WHEN SEDIMENT, OF ANY AMOUNT, CAUSES STANDING WATER CONDITIONS OR REDUCES BASIN STORAGE BY MORE THAN 10%.
 - WHEN SEDIMENT IS REMOVED, THE FOLLOWING REQUIREMENTS APPLY:
 - IRRIGATION SHALL BE PROVIDED, AS NEEDED, UNTIL VEGETATION IS ESTABLISHED (WELL ROOTED). SEE SECTION 1.6.3.D, IRRIGATION GUIDELINES.
 - THE DESIGN DEPTH OF THE FILTRATION MEDIA SHALL BE VERIFIED. SEE SECTION 1.6.3.B.5.
 - TILLING OF THE FILTRATION MEDIUM IS NOT ALLOWED. FOR SUBSURFACE PONDS MAINTENANCE PLAN REQUIREMENTS, REFER TO ECM SECTION 1.6.2(E).
 - SEDIMENTATION AND FILTRATION SCMS (SECTION 1.6.5)
 - VEGETATION WITHIN THE SCM SHALL NOT EXCEED EIGHTEEN (18) INCHES IN HEIGHT AT ANY TIME, EXCEPT AS CALLED FOR IN THE DESIGN.
 - VEGETATION THAT IS MOWED OR CUT SHALL BE REMOVED FROM THE SCM. DETENTION BASINS A VEGETATION WITHIN THE BASIN SHALL NOT EXCEED EIGHTEEN (18) INCHES IN HEIGHT AT ANY TIME.
 - IRRIGATION SYSTEMS
 - BASINS, STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES. WOODY VEGETATION SHOULD BE CONTROLLED/REMOVED TO PREVENT BASIN LEAKAGE. THE ABILITY OF THE BASIN TO RETAIN THE WATER QUALITY VOLUME SHALL BE EVALUATED BY THE COA.
 - IRRIGATION AREAS, TO THE GREATEST EXTENT PRACTICABLE, IRRIGATION AREAS ARE TO REMAIN IN THEIR NATURAL STATE. HOWEVER, VEGETATION MUST BE MAINTAINED IN THE IRRIGATION AREA SUCH THAT IT DOES NOT IMPEDE THE SPRAY OF WATER FROM THE IRRIGATION HEADS. TREE AND SHRUB TRIMMINGS AND OTHER LARGE DEBRIS MUST BE REMOVED FROM THE IRRIGATION AREA. SEE REQUIREMENTS IN SECTION 1.6.7.A.3.(G) AND (H) REGARDING REQUIREMENTS FOR SOIL AND VEGETATION IN IRRIGATION AREAS. C.PUMPS AND IRRIGATION SYSTEM. THE PUMPS AND IRRIGATION SYSTEM MUST BE INSPECTED OR TESTED A MINIMUM OF SIX (6) TIMES PER YEAR TO SHOW ALL COMPONENTS ARE OPERATING AS INTENDED. TWO (2) OF THESE SIX (6) INSPECTIONS SHOULD BE AFTER RAIN EVENTS TO ENSURE THAT THE IRRIGATION SYSTEM AND ALL OF ITS COMPONENTS PERFORM AS DESIGNED. THIS INCLUDES CONTROLS SUCH AS WEATHER STATIONS OR RAIN SENSORS, DELAYS, VALVES, ALARM SYSTEM, DISTRIBUTION LINES, OR OTHER COMPONENTS AS SPECIFIED IN THE SYSTEM DESIGN. SPRINKLER HEADS MUST BE CHECKED TO DETERMINE IF ANY ARE BROKEN, CLOGGED, OR NOT SPRAYING PROPERLY. ALL INSPECTION AND TESTING REPORTS MUST BE KEPT ON SITE AND ACCESSIBLE TO THE CITY OF AUSTIN.
 - THE OVERALL SYSTEM SHALL BE INSPECTED FOR THE ABILITY TO RETAIN THE WATER QUALITY VOLUME ON SITE PER ECM SECTION 1.6.7.A.

- MAINTENANCE NOTES DURING CONSTRUCTION:**
- THE DESIGN OF DRAINAGE FACILITIES (INCLUDING BUT NOT LIMITED TO HEADWALLS, OPEN CHANNELS, STORM SEWERS, AREA INLETS, AND DETENTION, RETENTION AND STORMWATER CONTROL MEASURES AND THEIR APPURTENANCES) SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 1.2.4.E OF THE DRAINAGE CRITERIA MANUAL. IN ADDITION, SCMS SHALL COMPLY WITH THE FOLLOWING CONSTRUCTION REQUIREMENTS:
- SEDIMENT REMOVED DURING CONSTRUCTION OF A DETENTION, RETENTION, OR WATER QUALITY FACILITIES MAY BE DISPOSED OF ON-SITE IF PROPERLY STABILIZED ACCORDING TO THE PRACTICES OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL CRITERIA FOUND IN SECTION 1.4.0 OF THIS MANUAL. AFTER THE CITY OF AUSTIN HAS ACCEPTED A STORMWATER FACILITY DISPOSAL OF SEDIMENT MUST BE AT AN APPROVED LANDFILL.
 - DURING CONSTRUCTION OF SCMS, TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED.
 - IF RUNOFF IS TO ENTER THE SAND FILTRATION CHAMBER OF A WATER QUALITY CONTROL FACILITY PRIOR TO COMPLETION OF SITE CONSTRUCTION AND REVEGETATION, INSPECTION AND MAINTENANCE OF ALL TEMPORARY EROSION/SEDIMENTATION CONTROLS ARE REQUIRED, AS DESCRIBED IN THE ENVIRONMENTAL CRITERIA MANUAL SECTION 1.4.4, TO PREVENT HEAVY SEDIMENT LOADS CAUSED BY HOME CONSTRUCTION FROM CLOGGING THE FILTRATION MEDIA.
 - IN ALL CASES, TREES SHALL BE PRESERVED ACCORDING TO THE REQUIREMENTS OF SECTION 3 OF THE ENVIRONMENTAL CRITERIA MANUAL. THE ACCESS DRIVE AND STAGING AREA SHALL BE DESIGNED TO PRESERVE TREES 8" (INCHES) IN DIAMETER AND GREATER TO THE MAXIMUM EXTENT POSSIBLE. TREES 8" IN DIAMETER AND LARGER SHALL BE SURVEYED AND SHOWN FOR THE PROPOSED ACCESS EASEMENT AT THE TIME OF CONSTRUCTION PLAN PERMITTING.
 - FOR FILTRATION SYSTEMS THE DESIGN MEDIA DEPTH MUST BE VERIFIED, ACCOUNTING FOR CONSOLIDATION. IF INSUFFICIENT DEPTH IS PRESENT, ADDITIONAL MEDIA MUST BE ADDED AND PRE-SOAKED UNTIL THE DESIGN DEPTH IS ACHIEVED. PRE-SOAKING - APPLY 5-10 GALLONS OF WATER PER SQUARE FOOT OF MEDIA AREA WITHIN ONE HOUR.
 - RETAINING WALLS - RETAINING WALLS WITHIN SCMS REQUIRE WATER-TIGHTNESS. WATER-TIGHTNESS IN RETAINING WALLS IS ESSENTIAL TO THE FUNCTION OF THE STRUCTURE. WATERSTOPS SHALL BE PROVIDED DURING CONSTRUCTION OF EXPANSION JOINTS IN RETAINING WALLS PER STANDARD SPECIFICATION 414S, CONCRETE RETAINING WALLS.
 - GROUTED ROCK WALLS - GROUTED ROCK WALLS ARE ACCEPTABLE ONLY IF THE DESIGN INCLUDES AN IMPERMEABLE BARRIER SUCH AS AN APPROVED GEOMEMBRANE LINER OR REINFORCED CONCRETE RETAINING WALL. FREE STANDING DRY STACKED ROCK WALLS ARE NOT ACCEPTABLE IN ANY SCM.

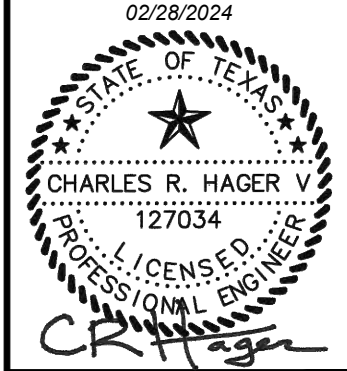
LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
WATER QUALITY & DETENTION POND A10
SECTION D (TOWNHOMES)

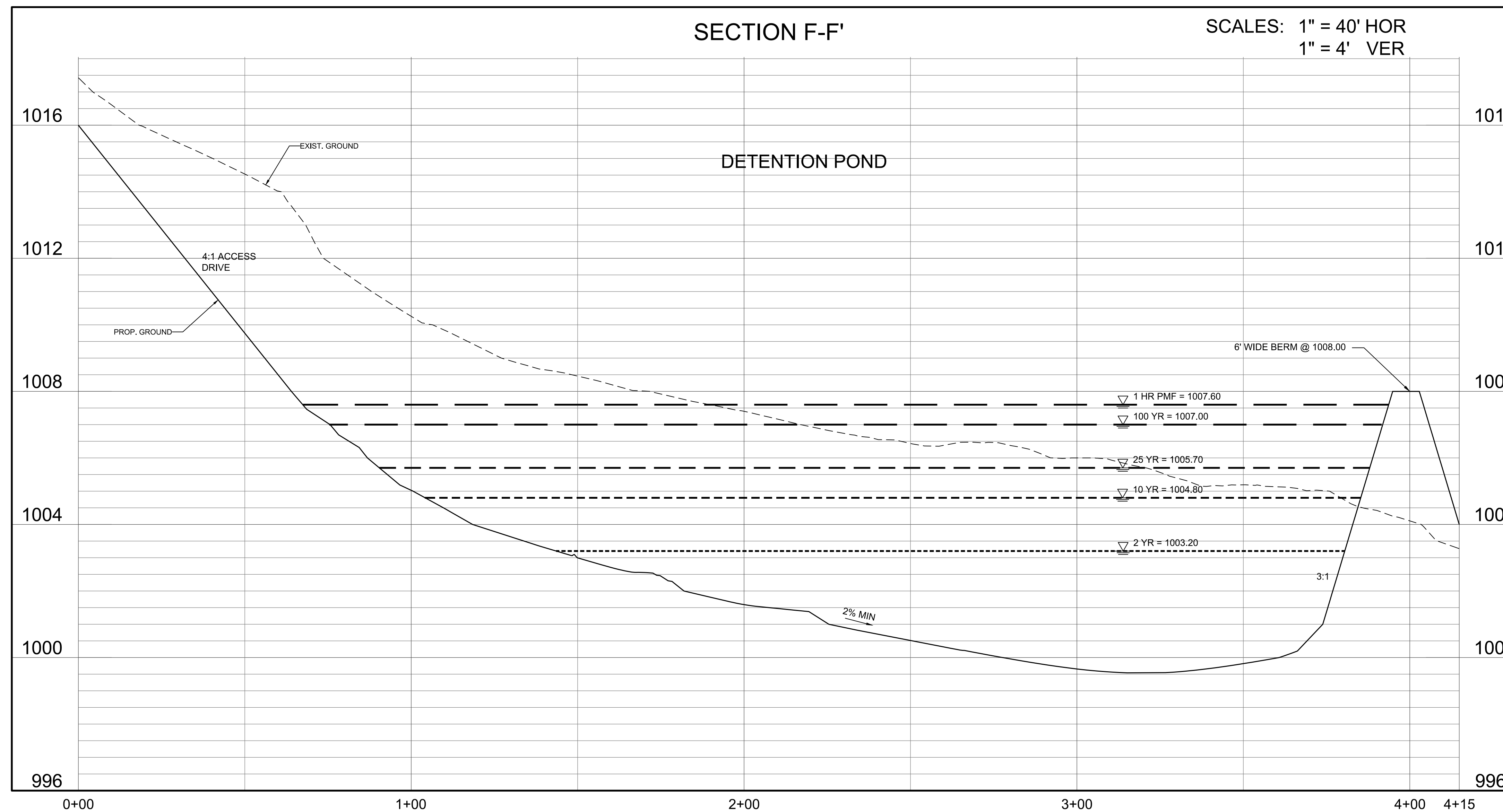
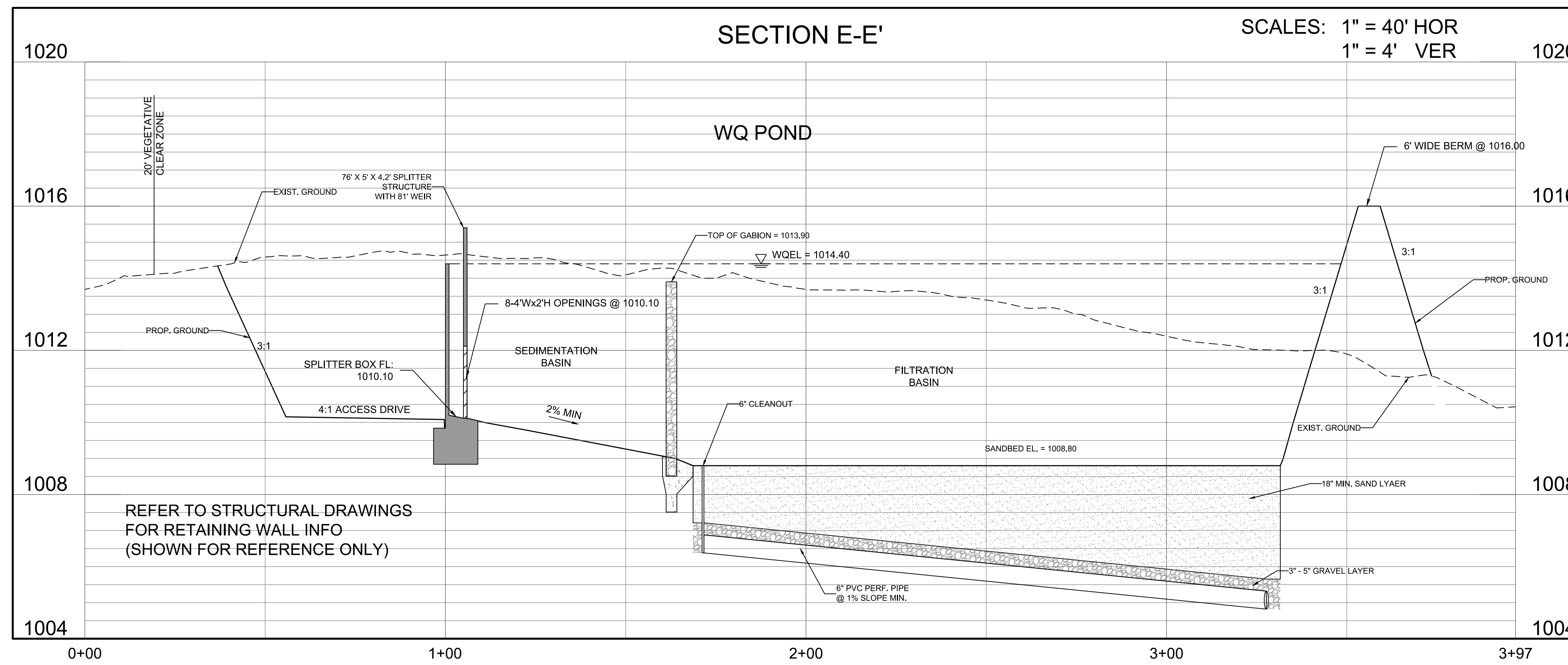
NO.	REVISIONS DESCRIPTION	DATE	BY

DATE: 02/28/2024
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME: A10-107-1001.DWG



LJA Engineering, Inc.
7500 Riata Boulevard
Building II, Suite 100
Austin, Texas 78735
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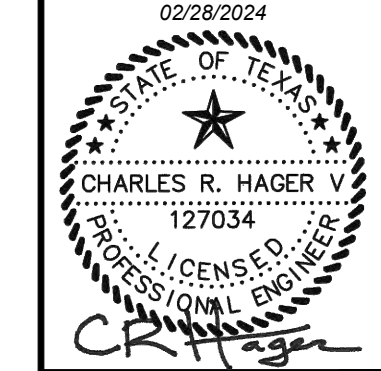
JOB NUMBER:
A116-1007
WQ08
SHEET NO.
44
OF 107 SHEETS



LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
WATER QUALITY & DETENTION POND A10
SECTIONS E & F (TOWNHOMES)

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 02/28/2024
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 CHECKED BY: [Signature]
 DRAWING NAME: A116-1007-WQ09-1000.dwg



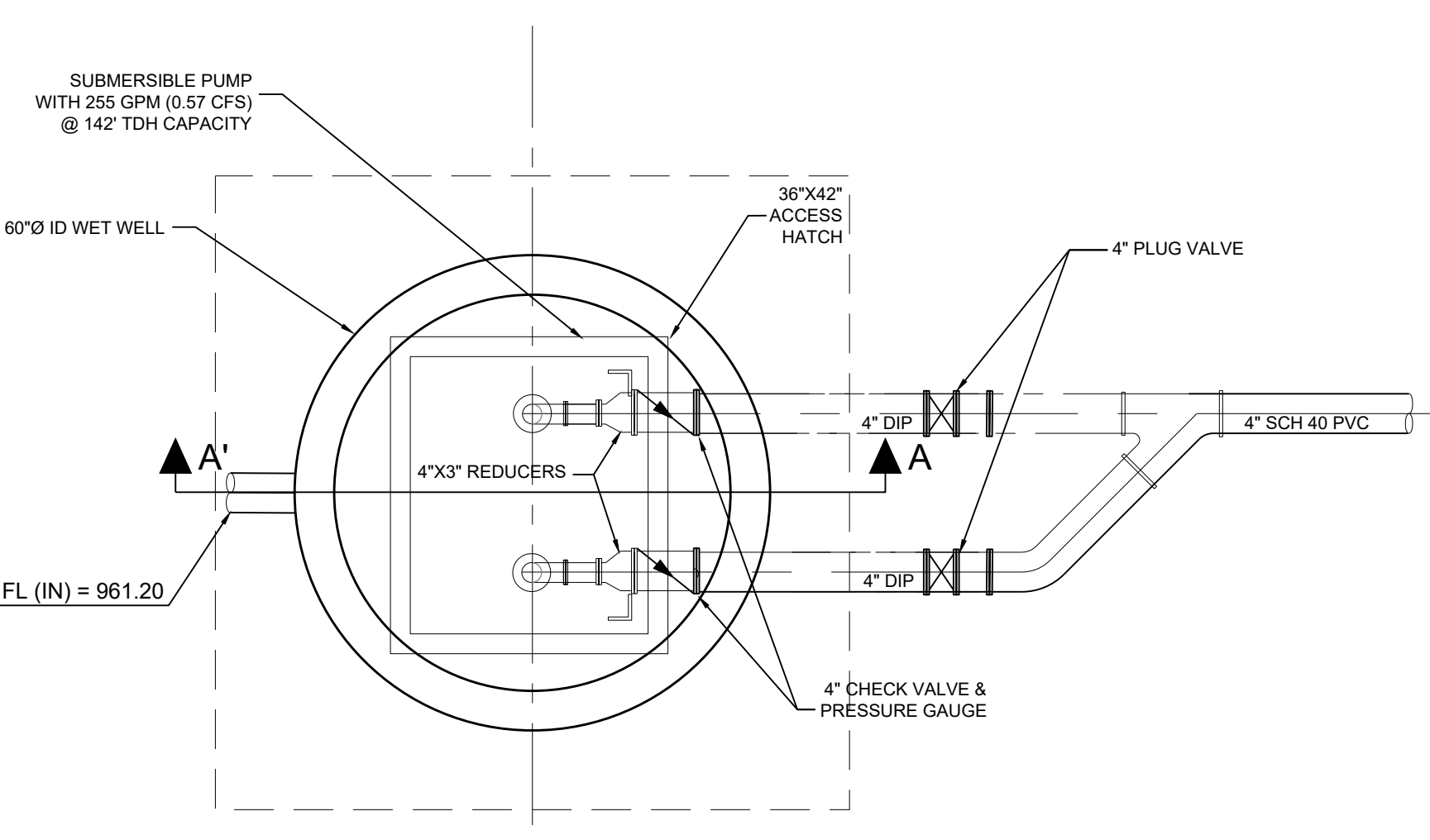
LJA Engineering, Inc.
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JOB NUMBER: A116-1007
WQ09
 SHEET NO. **45**
 OF 107 SHEETS

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



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 Last Modified: Feb 28, 2024 10:47 AM
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LIFT STATION PLAN
SCALE: 1/2" = 1'-0"

Submittal Data

9 Inch Texas Turbine
Submersible Turbine
MODEL: C9WAL1566B

Maximum Flow	Flow at Best Efficiency	Minimum Flow	Minimum Flow at Best Efficiency	Minimum Flow at 50% Efficiency	Minimum Flow at 25% Efficiency
300 g.p.m.	240 g.p.m.	120 g.p.m.	120 g.p.m.	120 g.p.m.	120 g.p.m.

Performance Data

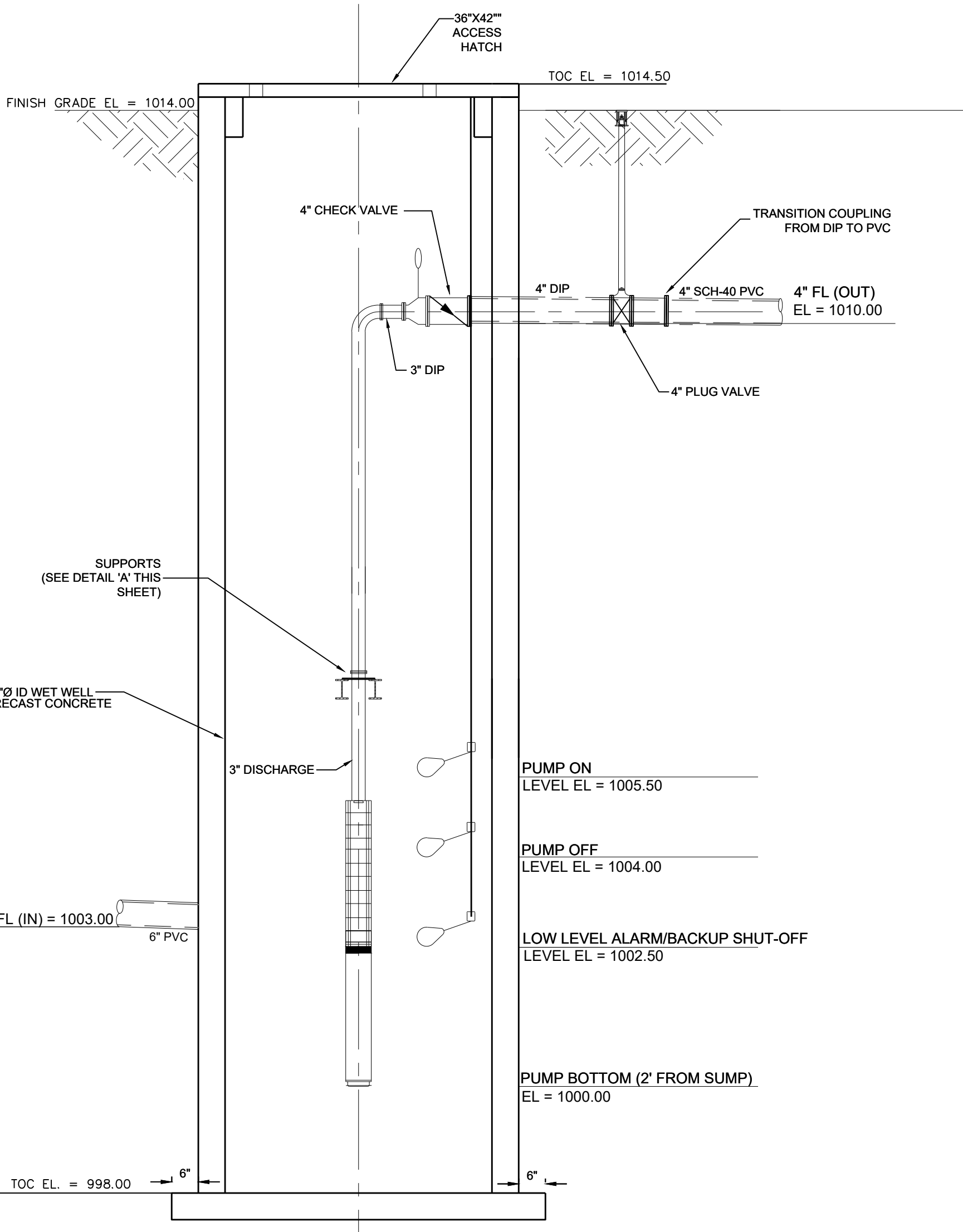
9 Inch Texas Turbine
Submersible Turbine
MODEL: C9WAL1566B

Unit Dimensions

9 Inch Texas Turbine
Submersible Turbine
MODEL: C9WAL1566B

Dimension	Value	Dimension	Value
WE	26 1/2"		

- NOTES:**
- STRUCTURAL AND ELECTRICAL DETAILS PROVIDED BY OTHERS.
 - ACCESS DOOR SHALL BE HALLIDAY PRODUCTS MODEL NO. S1R3642 (OR APPROVED EQUIVALENT). ACCESS DOOR AND FRAME SHALL BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS.
 - THE PUMP FOR THE WATER QUALITY POND SHALL BE VERTICAL DEEP-WELL SUBMERSIBLE TYPE, ENCLOSED POLISHED BRONZE IMPELLERS WITH STAINLESS STEEL SHAFTING. CONTRACTOR SHALL ALSO PROVIDE A SHROUD FOR THE PUMP AND MOTOR. THE PUMP SHALL BE NON-OVERLOADING THROUGHOUT THE ENTIRE RANGE OF OPERATION. THE PUMP SHALL RETAIN A MINIMUM SERVICE FACTOR OF 1.15. A DUAL PUMP SYSTEM MUST BE PROVIDED, WITH EACH PUMP CAPABLE OF DELIVERING 100 PERCENT OF THE DESIGN CAPACITY.
 - PUMP CABLES SHALL BE AIR AND WATER RATED AND SHALL BE INTERNALLY SPLICED IN THE MOTOR.
 - PUMP OPERATION:
 - PRIMARY LEVEL SENSING FOR PUMP OPERATION SHALL BE BY FLOATS.
 - PUMPING SEQUENCE SHALL BEGIN 12 HOURS AFTER "PUMP ON" WATER LEVEL IS REACHED IN THE WET WELLS.
 - PUMPING SHALL BE REPEATED IN CYCLES OF ONE HOUR ON, ONE HOUR OFF UNTIL "PUMP OFF" FLOAT DROPS, EXCEPT AS NOTED BELOW:
 - IF WATER LEVEL CONTINUES TO RISE TO THE FULL WATER QUALITY VOLUME, THE "PUMP ON" SENSOR IS ENERGIZED AGAIN.
 - FLASHING ALARM LIGHT SHALL BE ACTIVATED IF 1) PUMPS ARE NOT RUNNING WITHIN 36 HOURS OF "PUMP ON" SIGNAL; 2) PUMP HAS FAILED TO OPERATE; 3) LOW LEVEL PUMP DROPS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES, PERMITS, INSPECTIONS, ETC. UNTIL THE PROJECT HAS BEEN GRANTED FINAL ACCEPTANCE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE MANUFACTURER'S WARRANTY. ALL COMPONENTS TO BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.
 - ALARM LIGHT SHALL BE MOUNTED A MINIMUM OF 5 FEET ABOVE NATURAL GROUND, ALONG WITH A GREEN PUMP RUN LIGHT. ALARM SHALL INCLUDE AN A VISUAL ALARM. PUMPS SHALL ALTERNATE ON STARTUP.
 - ADJUSTABLE RAIN SENSOR MUST BE PROVIDED WHICH WILL NORMALLY BE SET TO TEMPORARILY HALT IRRIGATION DURING RAINFALLS EXCEEDING ONE-HALF INCH. THE RAIN SENSOR MUST BE ABLE TO INTERRUPT IRRIGATION IN THE EVENT OF SUBSEQUENT RAIN EVENTS PRIOR TO EMPTYING BASIN. THE 12-HR PUMP DELAY MAY INITIATE AFTER THE RAIN SENSOR SENSES THE RAIN EVENT HAS TERMINATED.
 - THIS SITE IS SUBJECT TO THE CITY OF AUSTIN VOID AND WATER FLOW MITIGATION RULE.
 - FOR SYSTEMS THAT ARE TO BE MAINTAINED PRIVATELY, ONE SET OF PLANS AND ONE MANUAL SHALL BE INCLUDED WITH THE OPERATION PERMIT APPLICATION AND THE SECOND SET OF PLANS AND ONE MANUAL SHALL BE RETAINED ON SITE AT ALL TIMES.
- OPERATION NARRATIVE:**
- THE SYSTEM IS DESIGNED FOR THE PUMP TO BEGIN EMPTYING THE WET WELL 12 HOURS AFTER THE PUMP IS ACTIVATED BY WATER FILLING THE WET WELL TO THE "PUMP ON" FLOAT. THE PUMP WILL CONTINUE TO RUN IN CYCLES UNTIL THE "PUMP OFF" FLOAT DROPS.
- OPERATING AND MAINTENANCE GUIDELINES FOR WATER QUALITY SYSTEM**
- THE POND BOTTOM SHOULD BE MOWED AT LEAST TWICE A YEAR. VEGETATION GROWING WITHIN THE BASINS MUST NOT BE ALLOWED TO EXCEED 18 INCHES IN HEIGHT.
 - SILT REMOVED FROM THE BASIN AS A RESULT OF MAINTENANCE SHOULD BE DISPOSED OF ON SITE IF PROPERLY STABILIZED ACCORDING TO PRACTICES OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL CRITERIA OF THE CITY OF AUSTIN.
 - THE FLOAT BULBS, THE CONTROL STATION, THE PUMP, AND THE ELECTRONIC CONTROLS SHOULD BE INSPECTED PERIODICALLY, AT LEAST EVERY TWO MONTHS, TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY. DURING THE INITIAL CONTRACTOR ONE-YEAR WARRANTY PERIOD, THE OWNER'S DESIGNATED REPRESENTATIVE WILL BE RESPONSIBLE FOR THESE PERIODIC INSPECTIONS (MINIMUM EVERY 2 MONTHS).
 - FOR SYSTEMS THAT ARE TO BE MAINTAINED PRIVATELY, ONE SET OF PLANS AND ONE MANUAL SHALL BE INCLUDED WITH THE OPERATING PERMIT APPLICATION AND THE SECOND SET OF PLANS AND ONE MANUAL SHALL BE RETAINED ON SITE AT ALL TIMES.
- 1. INFLUENT LINE INTO WET WELL SHALL BE INSTALLED USING ADEKA P-201 WATER-SWELLING SEALANT, INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS, AND NON-SHRINK GROUT.**
- 2. ALL OTHER WET WELL PENETRATIONS SHALL BE LIPPED WALL PIPE AND GAP BETWEEN WALL PIPE & WET WELL WALL TO BE FILLED WITH NON-SHRINK EPOXY OR APPROVED EQUAL USE BOND AGENT BETWEEN CUT-OUT & EPOXY.**
- 3. ALL D.I.P. SHALL BE CL. 350 D.I.P.**



LIFT STATION SECTION A-A'
SCALE: 1/2" = 1'-0"

Submittal Data

9 Inch Texas Turbine
Submersible Turbine
MODEL: C9WAL1566B

Maximum Flow	Flow at Best Efficiency	Minimum Flow	Minimum Flow at Best Efficiency	Minimum Flow at 50% Efficiency	Minimum Flow at 25% Efficiency
300 g.p.m.	240 g.p.m.	120 g.p.m.	120 g.p.m.	120 g.p.m.	120 g.p.m.

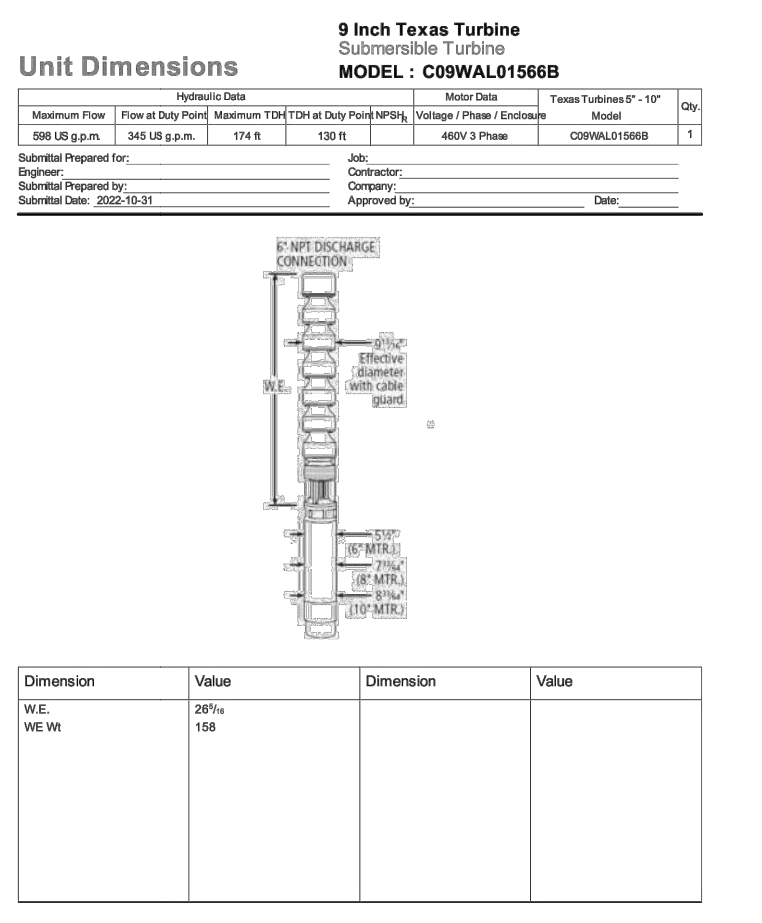
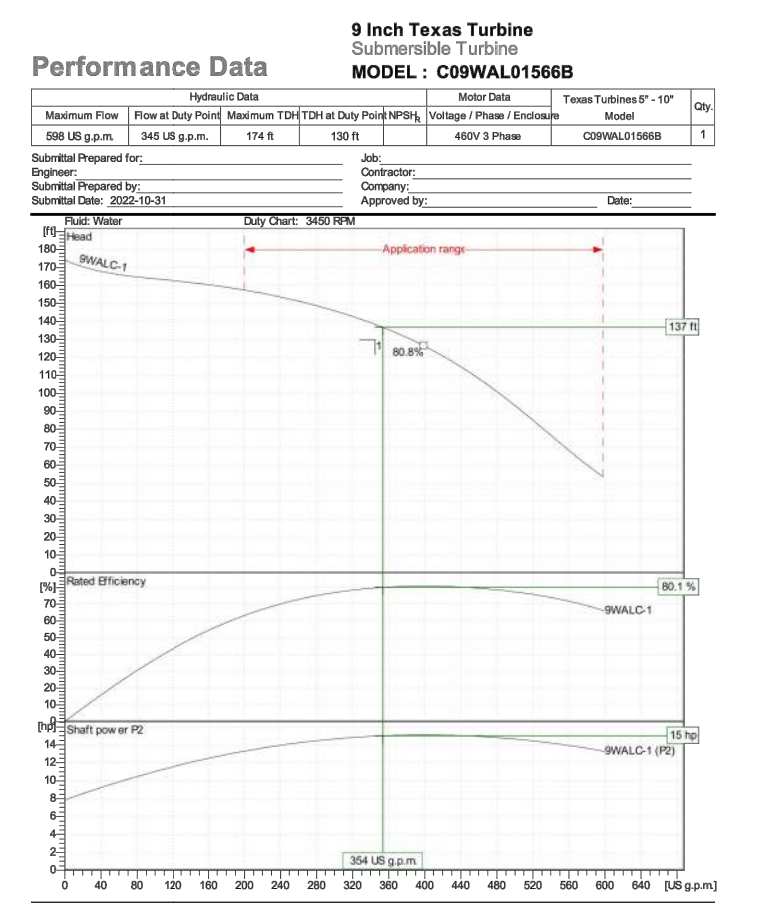
Performance Data

9 Inch Texas Turbine
Submersible Turbine
MODEL: C9WAL1566B

Unit Dimensions

9 Inch Texas Turbine
Submersible Turbine
MODEL: C9WAL1566B

Dimension	Value	Dimension	Value
WE	26 1/2"		



WATER BOND (PUMP) DATA

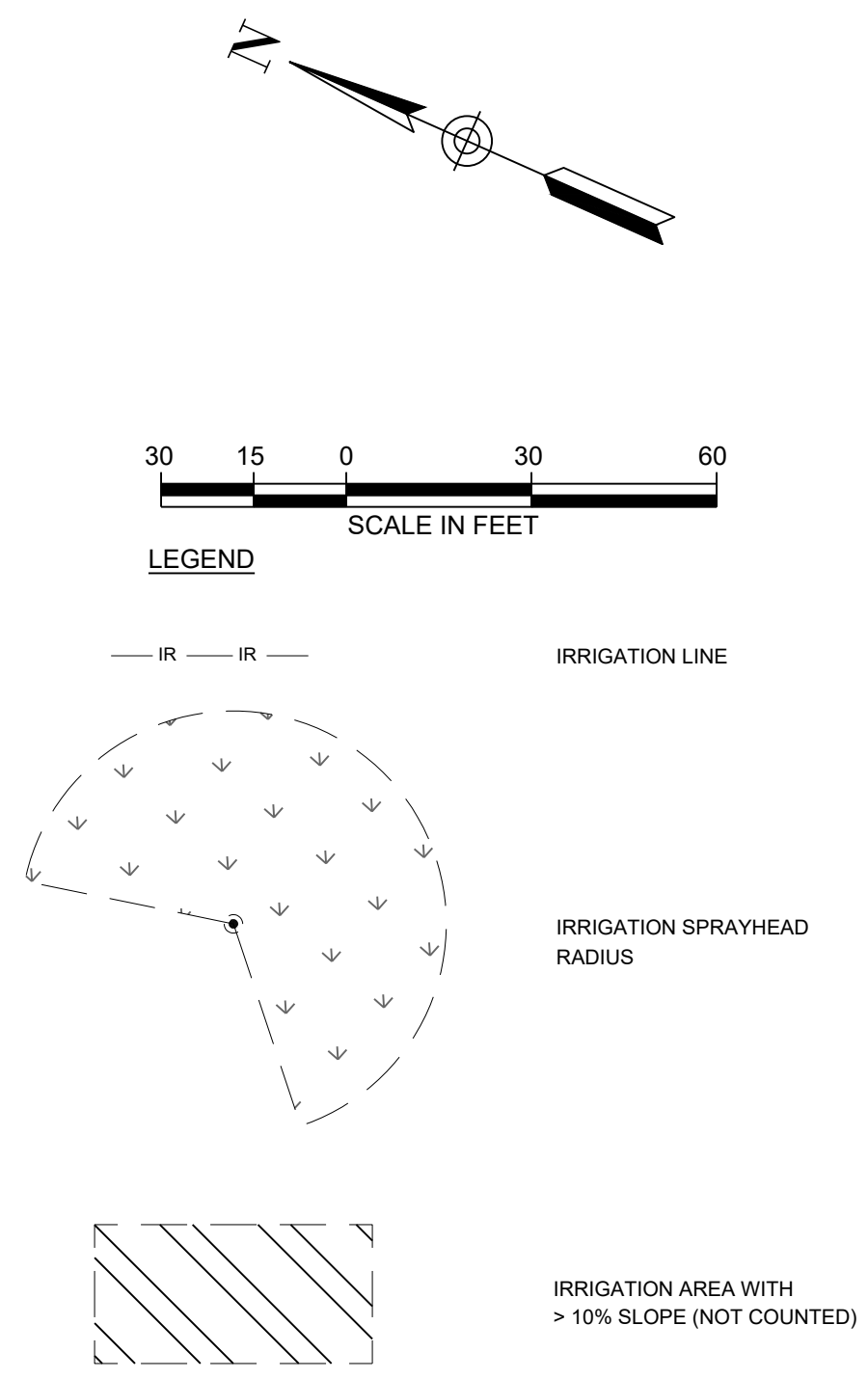
NOTE: If Diameter column is required for 2 and 1/2" - 10" Series pumps.
If Diameter column is required for 1.5" and 2" Series pumps.

Motor Order No.	HP	Volts	Phase	Motor Dia. vs. Flange Dia.	IP	Rated Amps	Service Factor	Locked Rotor Amps
AM0505	5	277	3	8"	5	11.0	1.15	21.0
AM0506	5	377	3	8"	5	11.0	1.15	21.0
AM0507	5	480	3	8"	5	11.0	1.15	21.0
AM0508	5	577	3	8"	5	11.0	1.15	21.0
AM0509	5	677	3	8"	5	11.0	1.15	21.0
AM0510	5	777	3	8"	5	11.0	1.15	21.0
AM0511	5	877	3	8"	5	11.0	1.15	21.0
AM0512	5	977	3	8"	5	11.0	1.15	21.0
AM0513	5	1077	3	8"	5	11.0	1.15	21.0
AM0514	5	1177	3	8"	5	11.0	1.15	21.0
AM0515	5	1277	3	8"	5	11.0	1.15	21.0
AM0516	5	1377	3	8"	5	11.0	1.15	21.0
AM0517	5	1477	3	8"	5	11.0	1.15	21.0
AM0518	5	1577	3	8"	5	11.0	1.15	21.0
AM0519	5	1677	3	8"	5	11.0	1.15	21.0
AM0520	5	1777	3	8"	5	11.0	1.15	21.0
AM0521	5	1877	3	8"	5	11.0	1.15	21.0
AM0522	5	1977	3	8"	5	11.0	1.15	21.0
AM0523	5	2077	3	8"	5	11.0	1.15	21.0
AM0524	5	2177	3	8"	5	11.0	1.15	21.0
AM0525	5	2277	3	8"	5	11.0	1.15	21.0
AM0526	5	2377	3	8"	5	11.0	1.15	21.0
AM0527	5	2477	3	8"	5	11.0	1.15	21.0
AM0528	5	2577	3	8"	5	11.0	1.15	21.0
AM0529	5	2677	3	8"	5	11.0	1.15	21.0
AM0530	5	2777	3	8"	5	11.0	1.15	21.0
AM0531	5	2877	3	8"	5	11.0	1.15	21.0
AM0532	5	2977	3	8"	5	11.0	1.15	21.0
AM0533	5	3077	3	8"	5	11.0	1.15	21.0
AM0534	5	3177	3	8"	5	11.0	1.15	21.0
AM0535	5	3277	3	8"	5	11.0	1.15	21.0
AM0536	5	3377	3	8"	5	11.0	1.15	21.0
AM0537	5	3477	3	8"	5	11.0	1.15	21.0
AM0538	5	3577	3	8"	5	11.0	1.15	21.0
AM0539	5	3677	3	8"	5	11.0	1.15	21.0
AM0540	5	3777	3	8"	5	11.0	1.15	21.0
AM0541	5	3877	3	8"	5	11.0	1.15	21.0
AM0542	5	3977	3	8"	5	11.0	1.15	21.0
AM0543	5	4077	3	8"	5	11.0	1.15	21.0
AM0544	5	4177	3	8"	5	11.0	1.15	21.0
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AM0572	5	6977	3	8"	5	11.0	1.15	21.0
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AM0578	5	7577	3	8"	5	11.0	1.15	21.0
AM0579	5	7677	3	8"	5	11.0	1.15	21.0
AM0580	5	7777	3	8"	5	11.0	1.15	21.0
AM0581	5	7877	3	8"	5	11.0	1.15	21.0
AM0582	5	7977	3	8"	5	11.0	1.15	21.0
AM0583	5	8077	3	8"	5	11.0	1.15	21.0
AM0584	5	8177	3	8"	5	11.0	1.15	21.0
AM0585	5	8277	3	8"	5	11.0	1.15	21.0
AM0586	5	8377	3	8"	5	11.0	1.15	21.0
AM0587	5	8477	3	8"	5	11.0	1.15	21.0
AM0588	5	8577	3	8"	5	11.0	1.15	21.0
AM0589	5	8677	3	8"	5	11.0	1.15	21.0
AM0590	5	8777	3	8"	5	11.0	1.15	21.0
AM0591	5	8877	3	8"	5	11.0	1.15	21.0
AM0592	5	8977	3	8"	5	11.0	1.15	21.0
AM0593	5	9077	3	8"	5	11.0	1.15	21.0
AM0594	5	9177	3	8"	5	11.0	1.15	21.0
AM0595	5	9277	3	8"	5	11.0	1.15	21.0
AM0596	5	9377	3	8"	5	11.0	1.15	21.0
AM0597	5	9477	3	8"	5	11.0	1.15	21.0
AM0598	5	9577	3	8"	5	11.0	1.15	21.0
AM0599	5	9677	3	8"	5	11.0	1.15	21.0
AM0600	5	9777	3	8"	5	11.0	1.15	21.0
AM0601	5	9877	3	8"	5	11.0	1.15	21.0
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AM0603	5	10077	3	8"	5	11.0	1.15	21.0

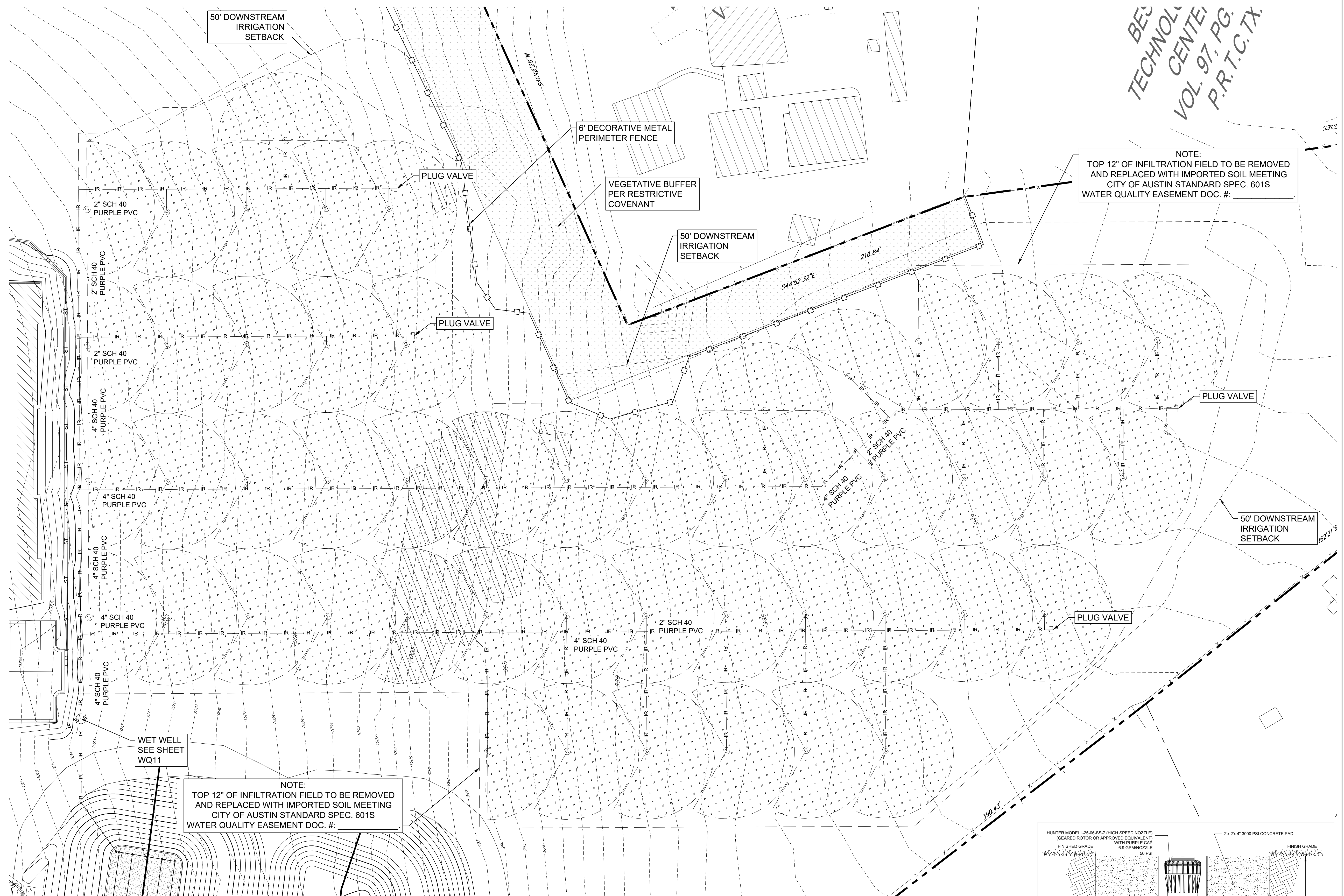
6" SINGLE PHASE MOTORS AND REQUIRED CONTROL BOXES

Motor Order No.	HP	KW	Volts	Phase	Motor Dia. vs. Flange Dia.	S.F.	Rated Amps	Service Factor	Locked Rotor Amps	UL Control Box Order No.
AM0505	5	3.7	277	3	8" x 8"	1.15	11.0	1.15	21.0	CB0505
AM0506	5	3.7	377	3	8" x 8"	1.15	11.0	1.15	21.0	CB0506
AM0507	5	3.7	480	3	8" x 8"	1.15	11.0	1.15	21.0	CB0507
AM0508	5	3.7	577	3	8" x 8"	1.15	11.0	1.15	21.0	CB0508
AM0509	5	3.7	677	3	8" x 8"					

BEY
TECHNOLOGY
CENTER,
VOL. 97, PG.
P.R.T.C.TX.



NOTE:
TOP 12" OF INFILTRATION FIELD TO BE REMOVED
AND REPLACED WITH IMPORTED SOIL MEETING
CITY OF AUSTIN STANDARD SPEC. 601S
WATER QUALITY EASEMENT DOC. #.

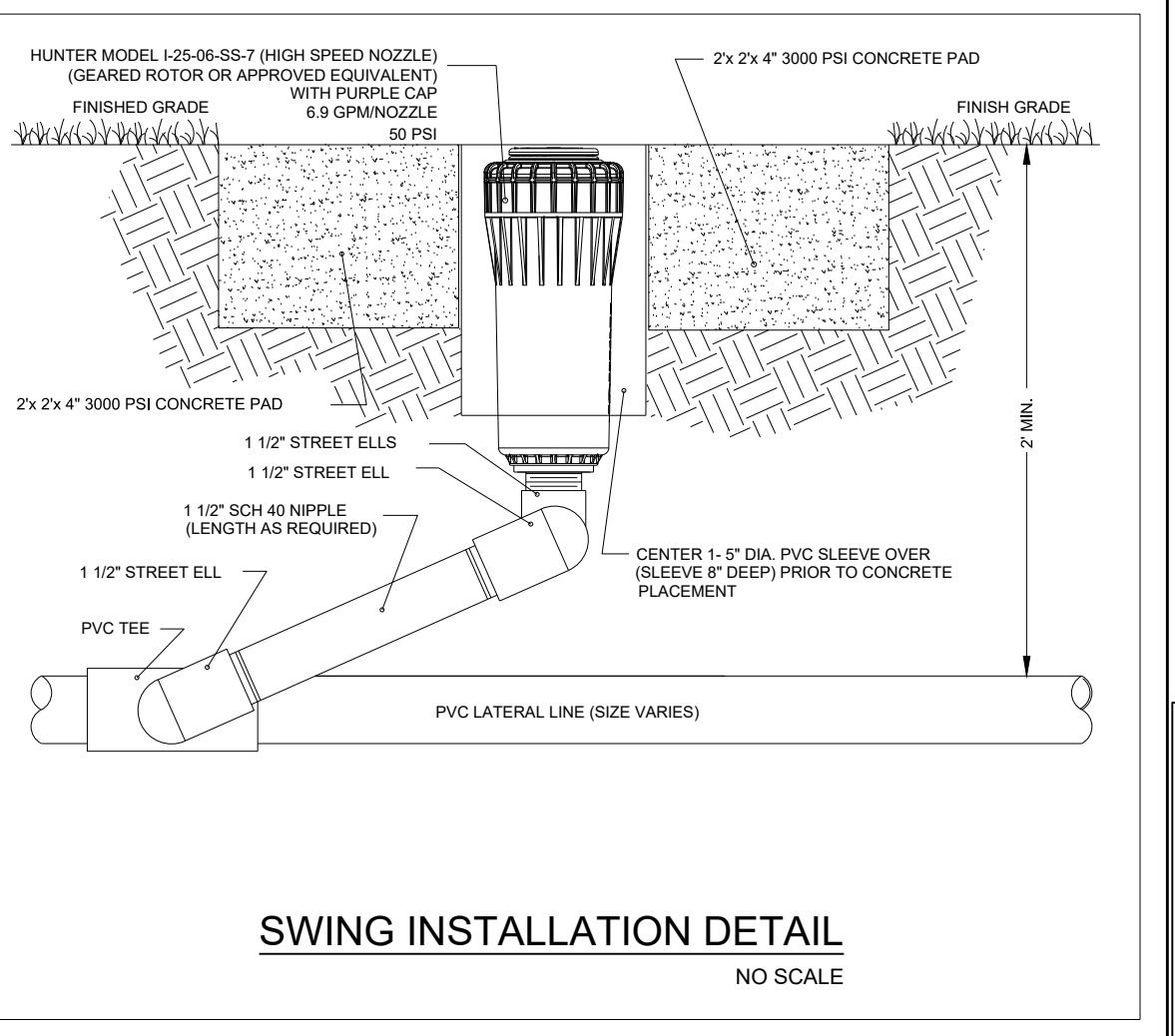
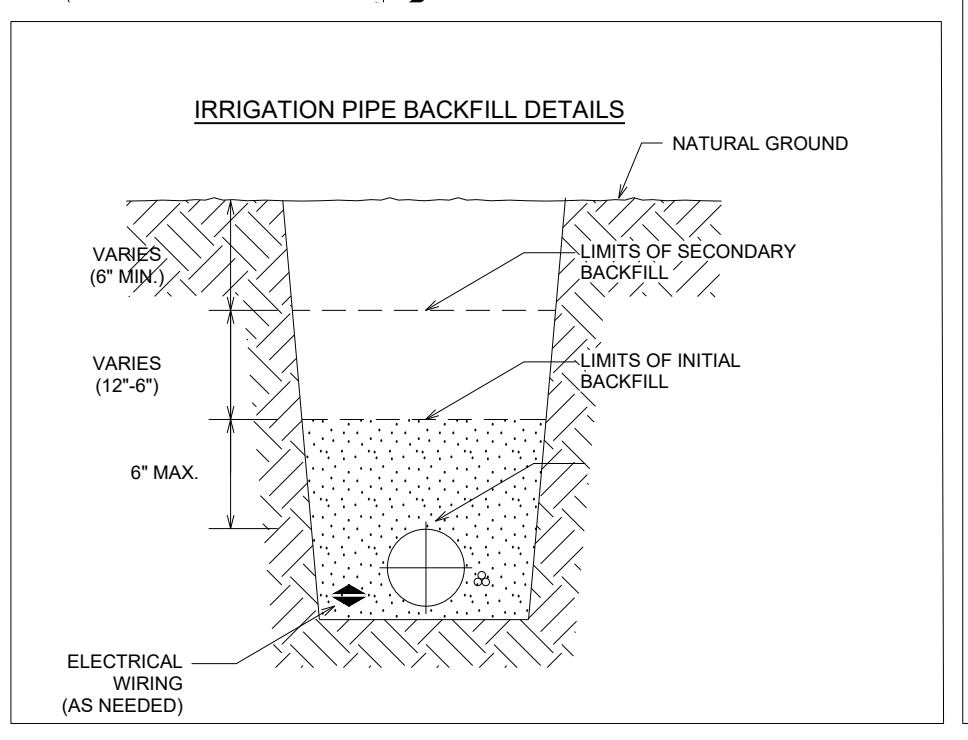


- NOTES:
- 1) ALL IRRIGATION SYSTEM DISTRIBUTION AND LATERAL PIPING (I.E. FROM THE PUMPS TO THE SPRAY HEADS) MUST BE SCHEDULE 80 PVC. ALL PIPES AND ELECTRICAL BUNDLES PASSING BENEATH DRIVEWAYS OR PAVED AREAS MUST BE SLEEVED WITH PVC CLASS 200 PIPE WITH SOLVENT WELDED JOINTS. SLEEVE DIAMETER MUST EQUAL TWICE THAT OF THE PIPE OR ELECTRICAL BUNDLE.
 - 2) ALL VALVES MUST BE DESIGNED SPECIFICALLY FOR SEDIMENT BEARING WATER, AND BE OF APPROPRIATE DESIGN FOR THE INTENDED PURPOSE. ALL REMOTE CONTROL, GATE, AND QUICK COUPLING VALVES MUST BE LOCATED IN TEN-INCH OR LARGER PLASTIC VALVE BOXES. ALL PIPES AND VALVES MUST BE MARKED TO INDICATE THAT THEY CONTAIN NON-POTABLE WATER. ALL PIPING MUST BE BURIED TO PROTECT IT FROM WEATHER AND VANDALISM. THE DEPTH AND METHOD OF BURIAL MUST BE ADEQUATE TO PROTECT THE PIPE FROM VEHICULAR TRAFFIC SUCH AS MAINTENANCE EQUIPMENT. VELOCITIES IN ALL PIPELINES SHOULD BE SUFFICIENT TO PREVENT SETTLING OF SOLIDS. THE IRRIGATION DESIGN AND LAYOUT MUST BE INTEGRATED WITH THE TREE PROTECTION PLAN AND PRESENTED AS PART OF THE SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN.
 - 3) SYSTEMS MUST INCLUDE A PLUG VALVE TO ALLOW FLUSHING AT THE END OF EVERY LINE.
 - 4) ALL SPRINKLER HEADS MUST HAVE FULL OR PARTIAL CIRCLE ROTOR POP-UP HEADS AND MUST BE CAPABLE OF DELIVERING THE REQUIRED RATE OF IRRIGATION OVER THE DESIGNATED AREA IN A UNIFORM MANNER. SPRINKLER HEADS AND MUST BE FLUSH MOUNTED AND ENCASED WITHIN A 2' X 2' CONCRETE HOUSING CAPABLE OF PROTECTING THE HEAD FROM MOWING AND SERVICE EQUIPMENT. SEE DETAIL THIS SHEET.

NOTE:
TOP 12" OF INFILTRATION FIELD TO BE REMOVED
AND REPLACED WITH IMPORTED SOIL MEETING
CITY OF AUSTIN STANDARD SPEC. 601S
WATER QUALITY EASEMENT DOC. #.

REQUIRED IRRIGATION CALCULATIONS		
Water Quality Volume	77,910	cf
Pond Drawdown Time	60	hrs
Pond Drawdown Delay	12	hrs
Required Irrigation Time	30	hrs
Soil Permeability	0.2	in/hr
Required Irrigation Area	3.58	ac
Provided Irrigation Area	3.67	ac

REQUIRED PUMP CALCULATIONS		
Required Pumping Time	30	hrs
Irrigation Pipe Diameter	4	in
Length of Irrigation Pipe	850.00	ft
Sprinkler Head Pressure (50 psi)	115.50	ft
Differential Head	-11.00	ft
Friction Head	21.99	ft
Total Head	126.49	ft
Pumping Rate	323.76	gpm
Design Pumping Rate	345.0	gpm
Design Pumping Rate	0.77	cfs

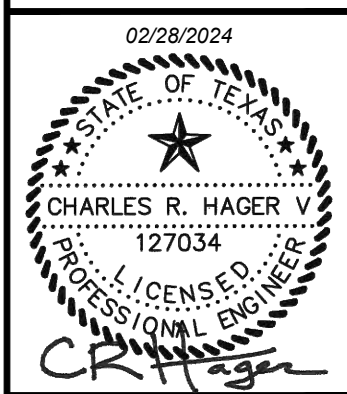


LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
WATER QUALITY IRRIGATION FIELD
(TOWNHOMES)

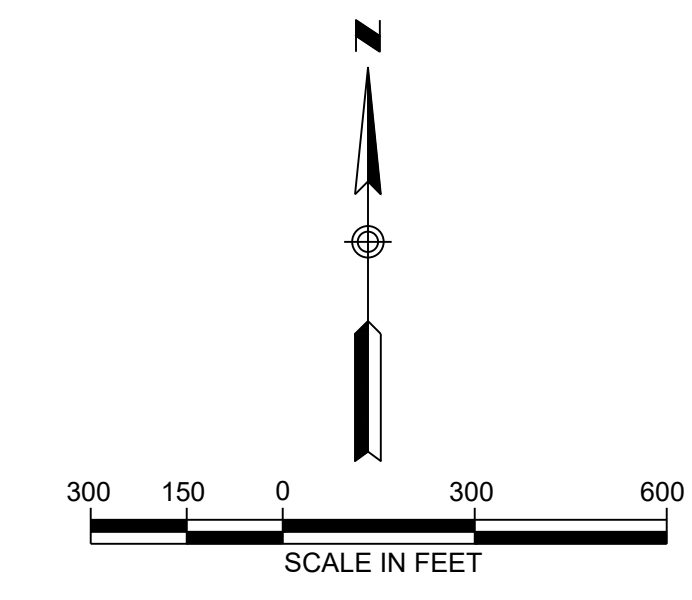
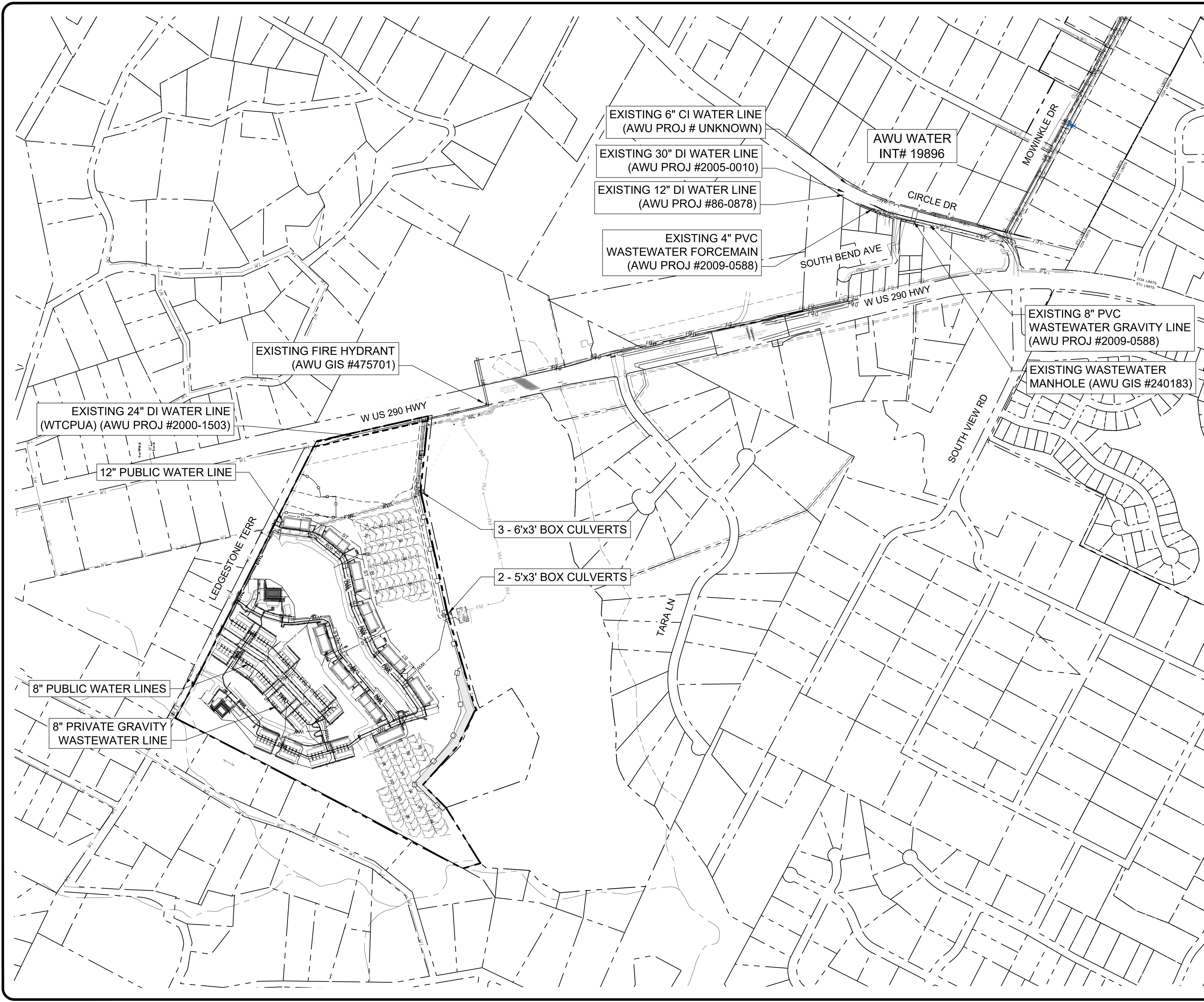
NO.	REVISIONS DESCRIPTION	DATE



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

JOB NUMBER:
A116-1007
WQ12
SHEET NO.
48
OF 107 SHEETS

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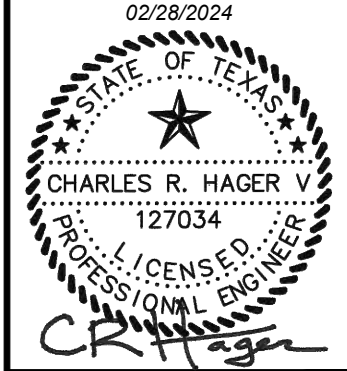
LEGEND

PROPOSED	EXISTING	DESCRIPTION
-872-	-872-	CONTOUR LINE
[Pattern]	[Pattern]	CONCRETE SIDEWALK
[Pattern]	[Pattern]	PERVIOUS SIDEWALK
[Symbol]	[Symbol]	SIDEWALK RAMP
[Symbol]	[Symbol]	HANDICAPPED PARKING SPACE & SIDEWALK RAMP
[Symbol]	[Symbol]	CROSSWALK
ST	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
WL	WL	WATER SERVICE
WL	WL	WATER LINE
RWL	RWL	CONDENSATE RECOVERY
IR	IR	IRRIGATION LINE
[Symbol]	[Symbol]	WATER VALVE
[Symbol]	[Symbol]	FIRE HYDRANT
[Symbol]	[Symbol]	WASTEWATER MANHOLE
[Symbol]	[Symbol]	STORMSEWER MANHOLE
[Symbol]	[Symbol]	CURB INLET
[Symbol]	[Symbol]	GRATE INLET
[Symbol]	[Symbol]	1/2" REBAR FOUND (OR AS NOTED)
[Symbol]	[Symbol]	1/2" REBAR WITH CAP FOUND
[Symbol]	[Symbol]	1/2" REBAR WITH CHAPARRAL CAP SET
[Symbol]	[Symbol]	WATER METER
[Symbol]	[Symbol]	UTILITY POLE
[Symbol]	[Symbol]	OVERHEAD UTILITIES
[Symbol]	[Symbol]	ELEC. UTILITY
[Symbol]	[Symbol]	ELEC. MANHOLE
[Symbol]	[Symbol]	LIGHT POLE
[Symbol]	[Symbol]	TELEPHONE UTILITY
[Symbol]	[Symbol]	UNDERGROUND FIBER OPTIC MARKER
[Symbol]	[Symbol]	TELEPHONE MANHOLE
[Symbol]	[Symbol]	UNDERGROUND GAS MARKER
[Symbol]	[Symbol]	CHAIN LINK FENCE

**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

OVERALL UTILITY LAYOUT

NO.	REVISIONS	DESCRIPTION	DATE	BY



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

JOB NUMBER:
A116-1007

UT00

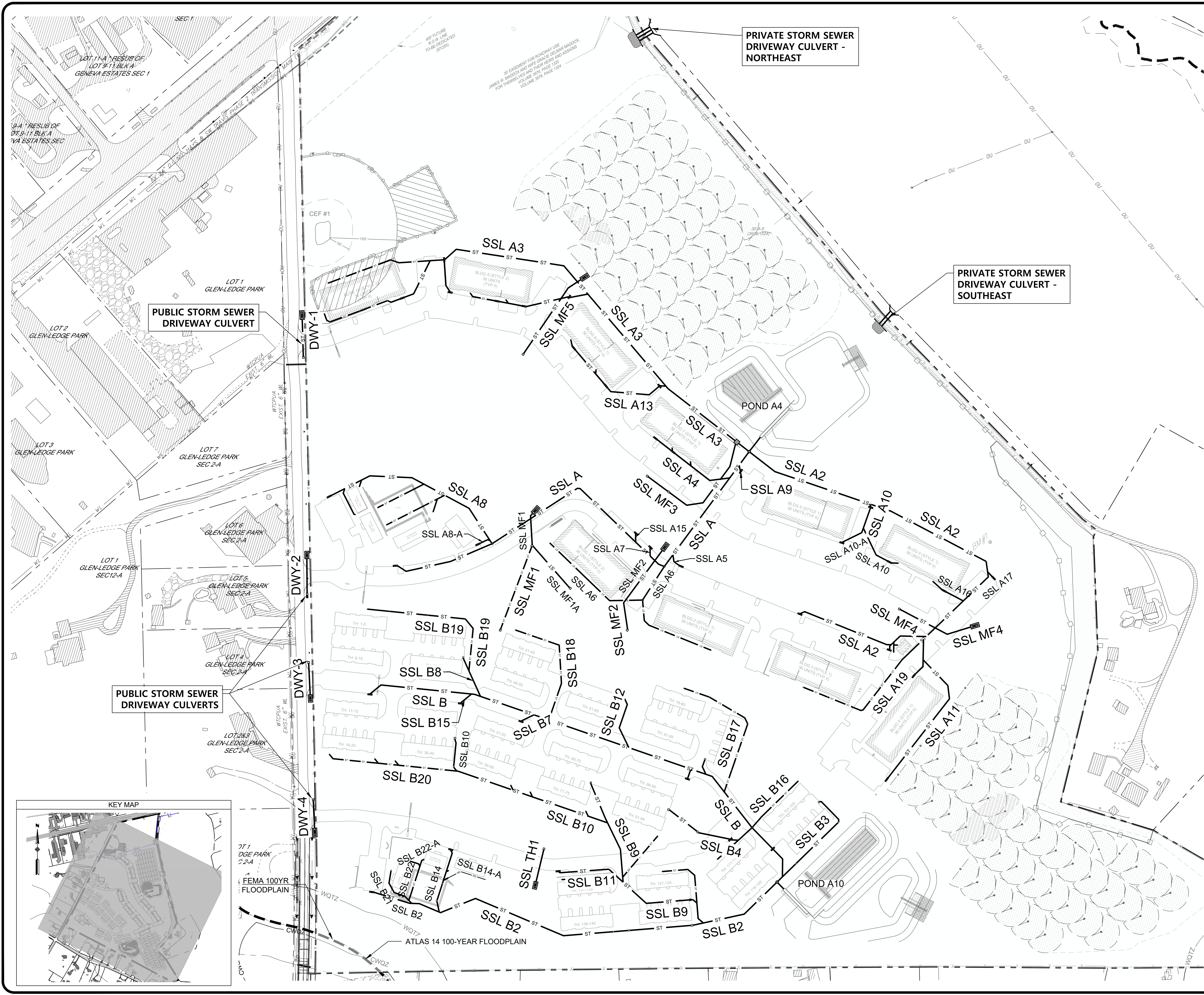
SHEET NO.
49

OF 107 SHEETS

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



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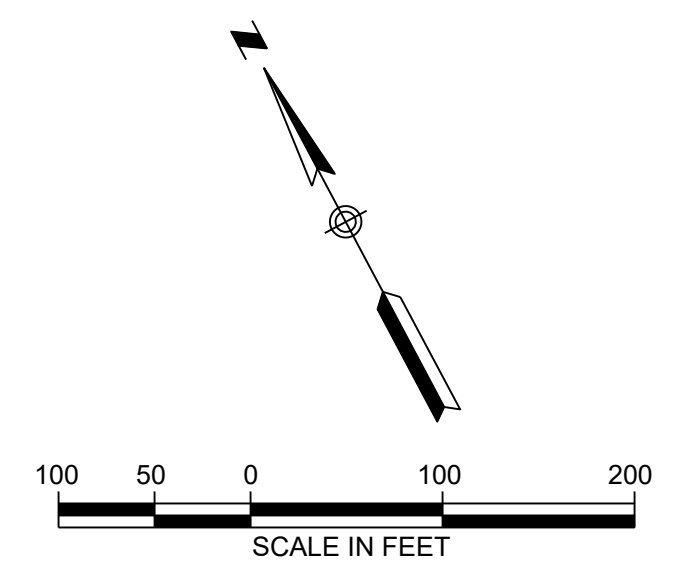


PRIVATE STORM SEWER
DRIVEWAY CULVERT -
NORTHEAST

PRIVATE STORM SEWER
DRIVEWAY CULVERT -
SOUTHEAST

PUBLIC STORM SEWER
DRIVEWAY CULVERT

PUBLIC STORM SEWER
DRIVEWAY CULVERTS



LEGEND

PROPOSED	EXISTING	DESCRIPTION
—ST—	—ST—	STORM SEWER LINE
—WW—	—WW—	WASTEWATER LINE
—WL—	—WL—	WASTEWATER SERVICE
—W—	—W—	WATER LINE
—WS—	—WS—	WATER SERVICE
—V—	—V—	WATER VALVE
—FH—	—FH—	FIRE HYDRANT
—WMH—	—WMH—	WASTEWATER MANHOLE
—SMH—	—SMH—	STORMSEWER MANHOLE
—CI—	—CI—	CURB INLET
—GI—	—GI—	GRATE INLET
●	●	1/2" REBAR FOUND (OR AS NOTED)
●	●	1/2" REBAR WITH CAP FOUND
●	●	1/2" REBAR WITH CHAPARRAL CAP SET
—M—	—M—	WATER METER
—U—	—U—	UTILITY POLE
—OU—	—OU—	OVERHEAD UTILITIES
—E—	—E—	ELEC. UTILITY
—EM—	—EM—	ELEC. MANHOLE
—LP—	—LP—	LIGHT POLE
—TU—	—TU—	TELEPHONE UTILITY
—UFOM—	—UFOM—	UNDERGROUND FIBER OPTIC MARKER
—TMH—	—TMH—	TELEPHONE MANHOLE
—UGM—	—UGM—	UNDERGROUND GAS MARKER
—CLF—	—CLF—	CHAIN LINK FENCE

- NOTES:**
- CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO FILL AND COMPACT TO 95% DENSITY IN FILL SECTIONS OVER STORM SEWER LINES.
 - ALL STORM SEWER PIPE SHALL BE HP-PP AS SHOWN ON PROFILE SHEET.
 - ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATIONS.
 - ALL BENDS AND FITTINGS SHALL BE PREFABRICATED BY MANUFACTURER. NO FIELD FABRICATION OF FITTINGS IS ALLOWED.

**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

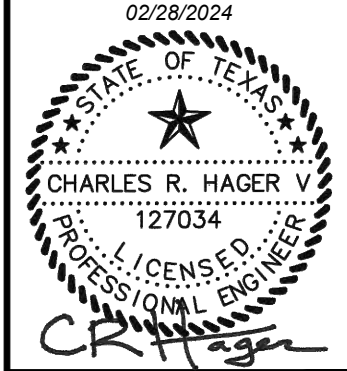
OVERALL STORM SEWER PLAN

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	02/28/2024
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DRAWING NAME:	A116-1007-01



LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 FRN-F-1386

JOB NUMBER:
A116-1007

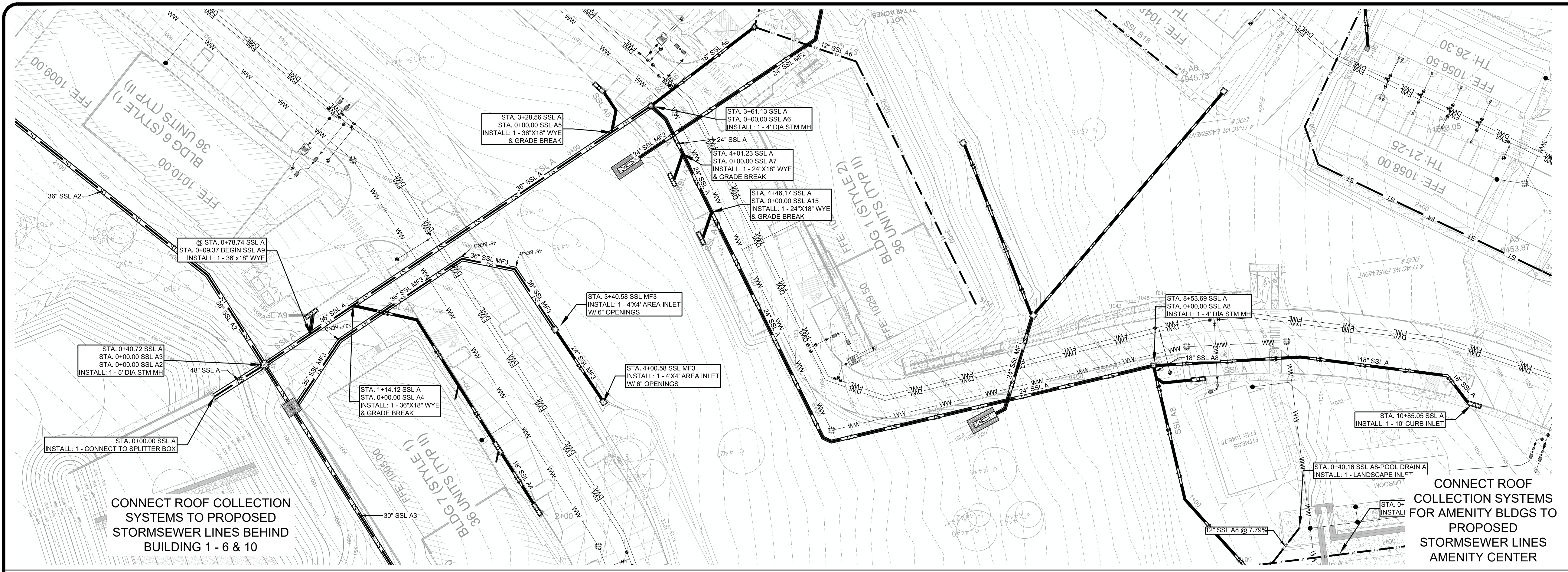
SHEET NO.
50

OF 107 SHEETS

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



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 Date Modified: Feb 28, 2024 10:45 AM
 Plot Date/Time: Mar 01, 2024 13:26:46



LEGEND

PROPOSED	EXISTING	DESCRIPTION
SS	ST	STORM SEWER LINE
WW	WW	WASTEWATER LINE
WL	WL	WATER SERVICE
	WL	WATER LINE
		WATER SERVICE
		WATER VALVE
		FIRE HYDRANT
		WASTEWATER MANHOLE
		STORMSEWER MANHOLE
		CURB INLET
		GRATE INLET
		1/2" REBAR FOUND (OR AS NOTED)
		1/2" REBAR WITH CAP FOUND
		1/2" REBAR WITH CHAPARRAL CAP SET
		WATER METER
		UTILITY POLE
		OVERHEAD UTILITIES
		ELEC. UTILITY
		ELEC. MANHOLE
		LIGHT POLE
		TELEPHONE UTILITY
		UNDERGROUND FIBER OPTIC MARKER
		TELEPHONE MANHOLE
		UNDERGROUND GAS MARKER
		CHAIN LINK FENCE

- NOTES:**
- CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO FILL AND COMPACT TO 95% DENSITY IN FILL SECTIONS OVER STORM SEWER LINES.
 - ALL STORM SEWER PIPE SHALL BE HP-PP AS SHOWN ON PROFILE SHEET.
 - ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATIONS.
 - ALL BENDS AND FITTINGS SHALL BE PREFABRICATED BY MANUFACTURER. NO FIELD FABRICATION OF FITTINGS IS ALLOWED.

CONNECT ROOF COLLECTION SYSTEMS TO PROPOSED STORMSEWER LINES BEHIND BUILDING 1 - 6 & 10

CONNECT ROOF COLLECTION SYSTEMS FOR AMENITY BLDGS TO PROPOSED STORMSEWER LINES AMENITY CENTER

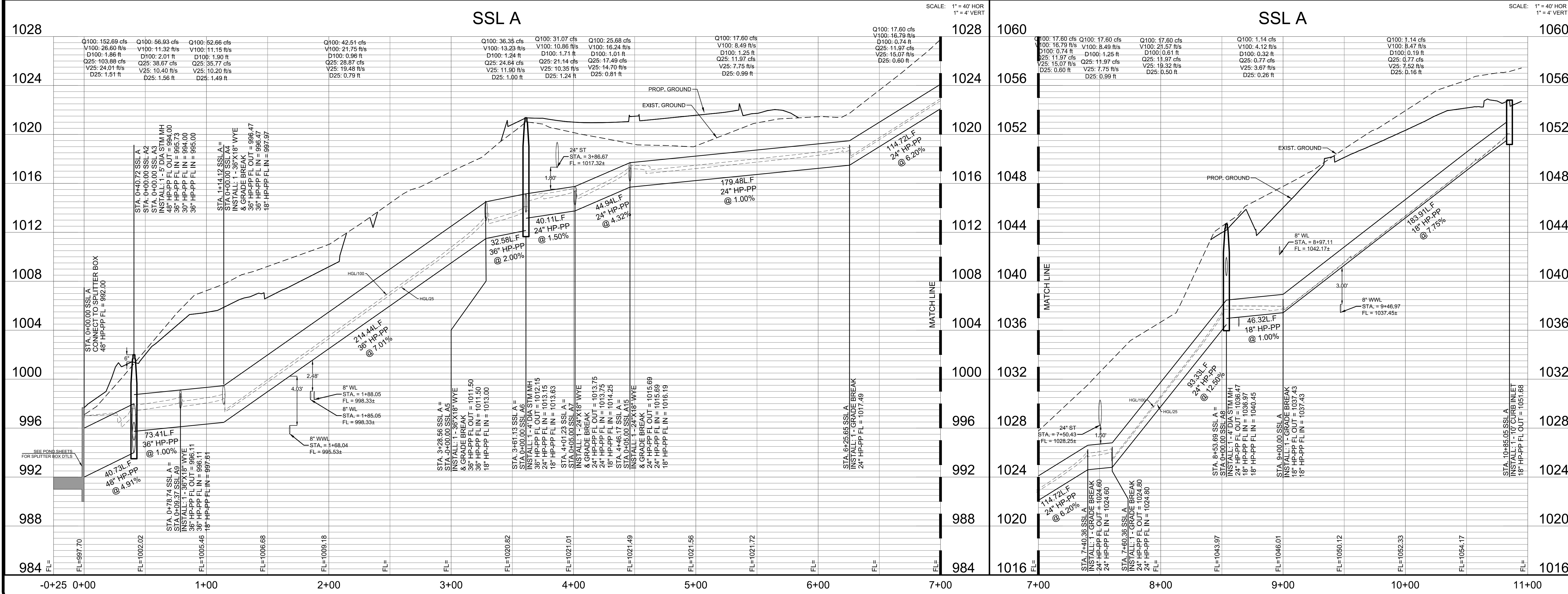


**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

STORM SEWER PLAN SHEET 1

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	DESCRIPTION



DATE	DESIGNED BY	DRAWN BY	CHECKED BY
02/28/2024			



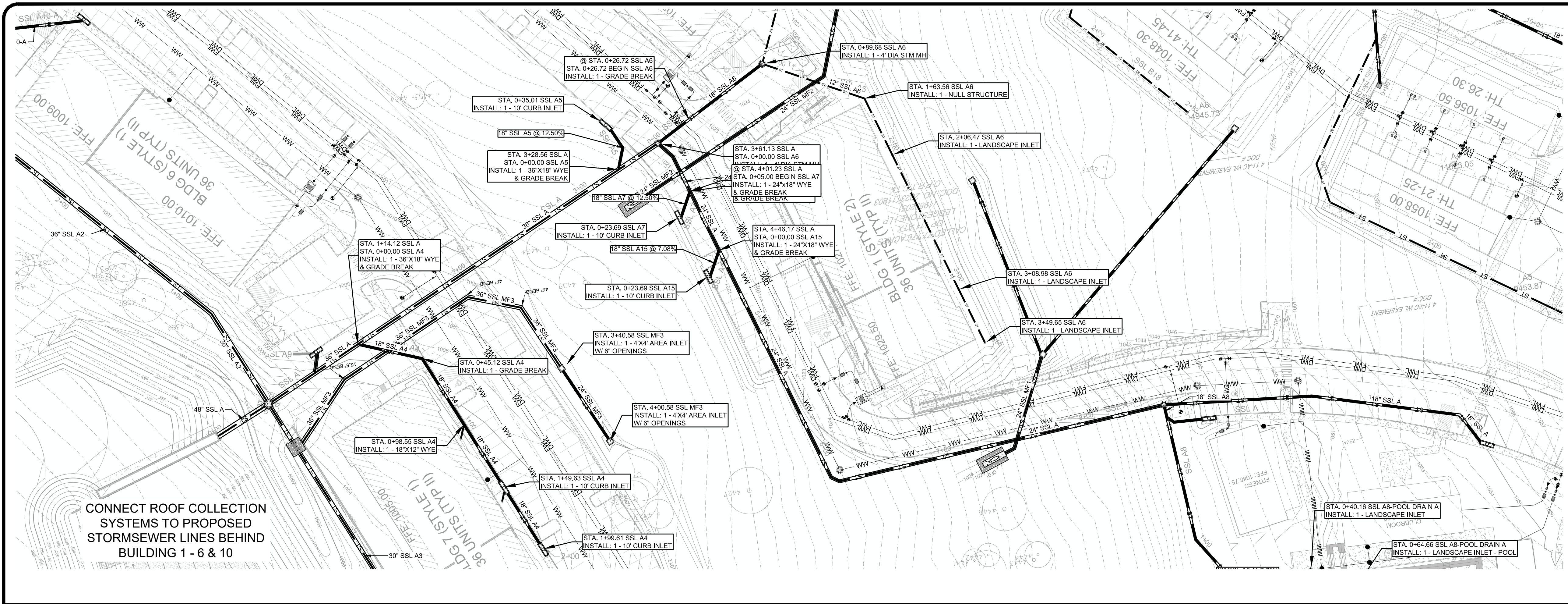
LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 Building II, Suite 100
 Austin, Texas 78735
 FRN-F-1386

JOB NUMBER:
A116-1007

ST01

SHEET NO.
51

OF 107 SHEETS



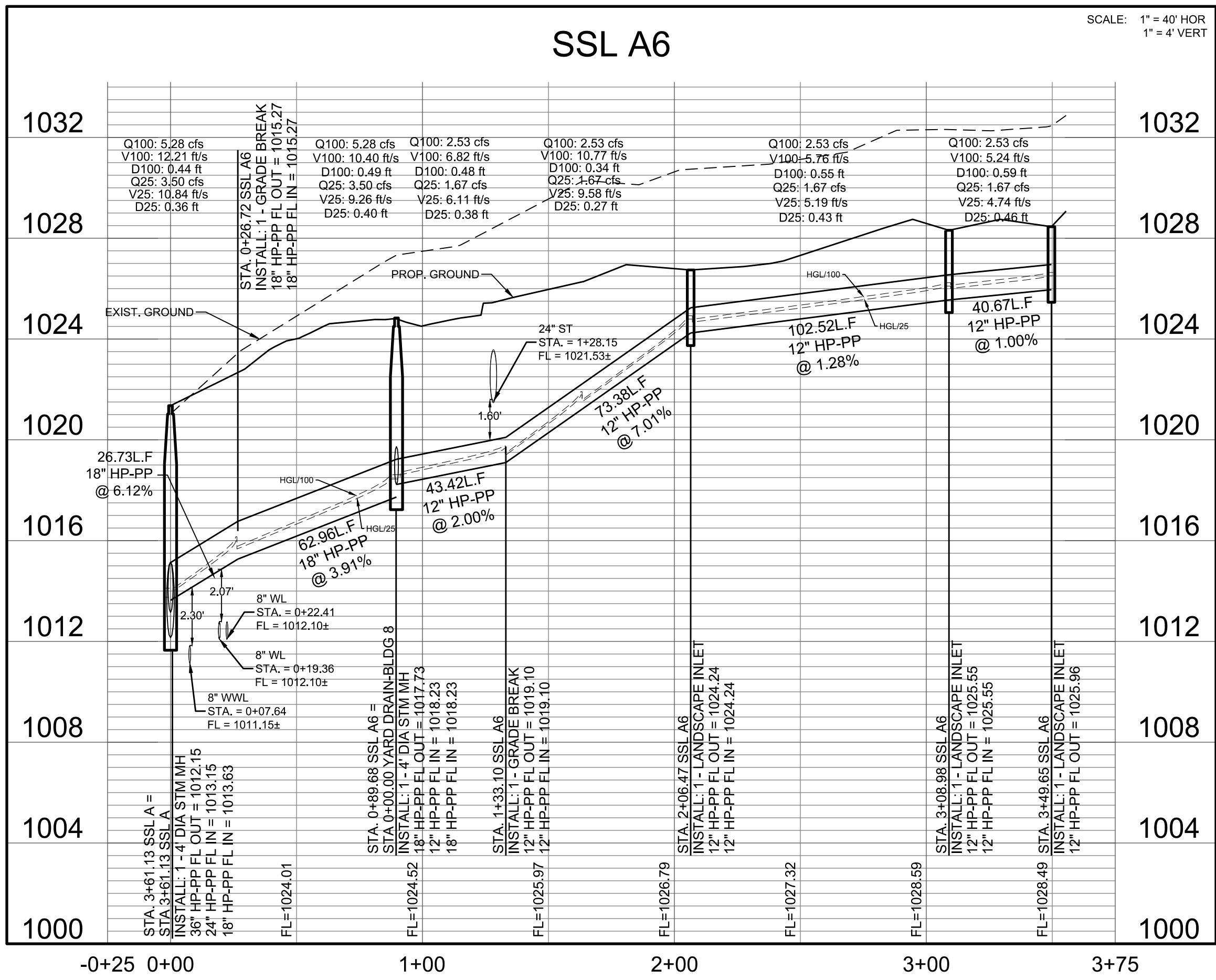
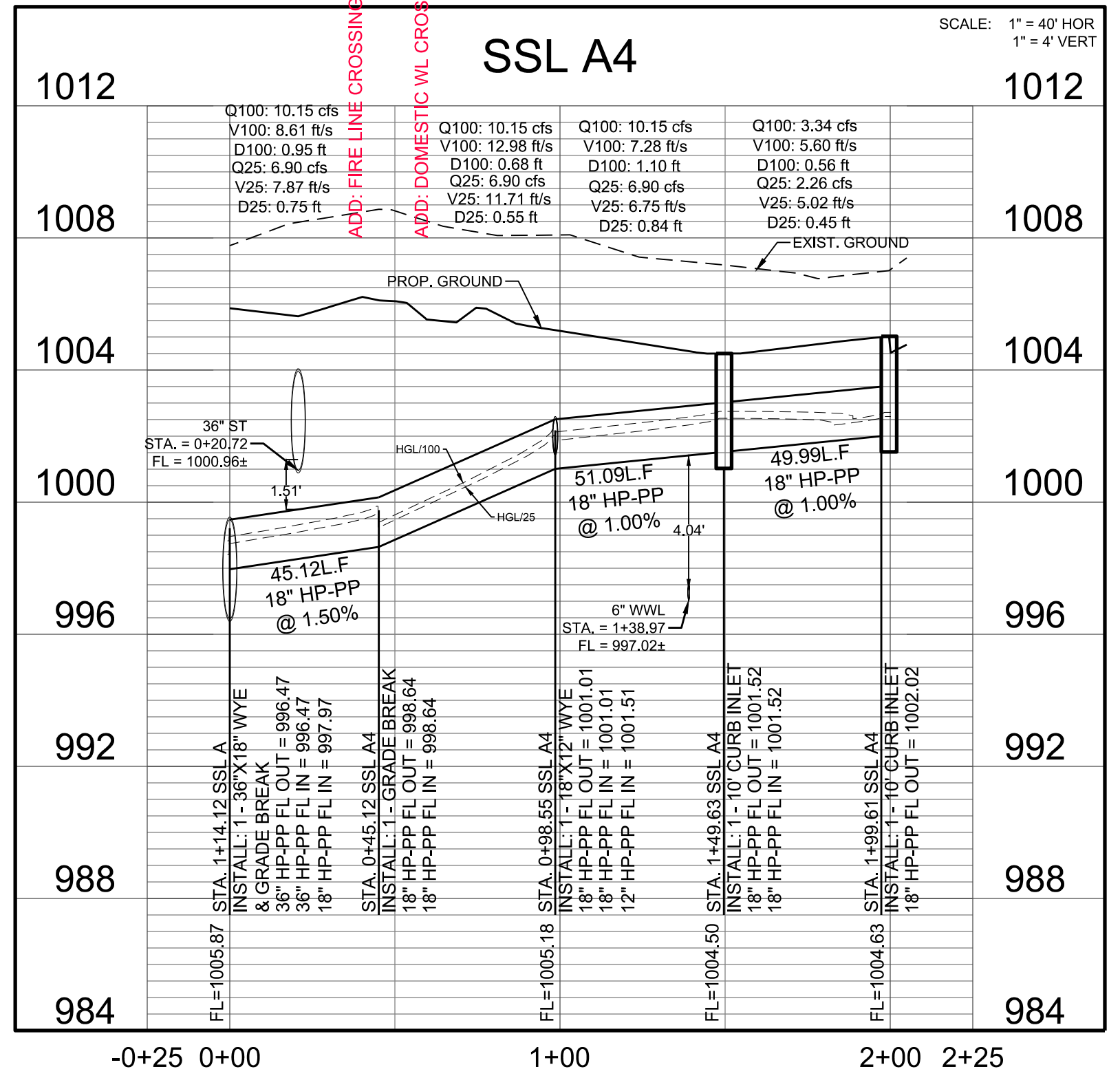
CONNECT ROOF COLLECTION SYSTEMS TO PROPOSED STORMSEWER LINES BEHIND BUILDING 1 - 6 & 10



LEGEND

PROPOSED	EXISTING	DESCRIPTION
—	—	ST STORM SEWER LINE
—	—	WW WASTEWATER LINE
—	—	WL WATER SERVICE
—	—	WL WATER LINE
—	—	WATER SERVICE
—	—	WATER VALVE
—	—	FIRE HYDRANT
—	—	WASTEWATER MANHOLE
—	—	STORMSEWER MANHOLE
—	—	CURB INLET
—	—	GRATE INLET
●	●	1/2" REBAR FOUND (OR AS NOTED)
●	●	1/2" REBAR WITH CAP FOUND
●	●	1/2" REBAR WITH CHAPARRAL CAP SET
—	—	WATER METER
—	—	UTILITY POLE
—	—	OVERHEAD UTILITIES
—	—	ELEC. UTILITY
—	—	ELEC. MANHOLE
—	—	LIGHT POLE
—	—	TELEPHONE UTILITY
—	—	UNDERGROUND FIBER OPTIC MARKER
—	—	TELEPHONE MANHOLE
—	—	UNDERGROUND GAS MARKER
—	—	CHAIN LINK FENCE

- NOTES:**
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LEDGESTONE TERRACES SITE CONSTRUCTION PLANS
SSL A4 & SSL A6 - PLAN & PROFILE
 9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

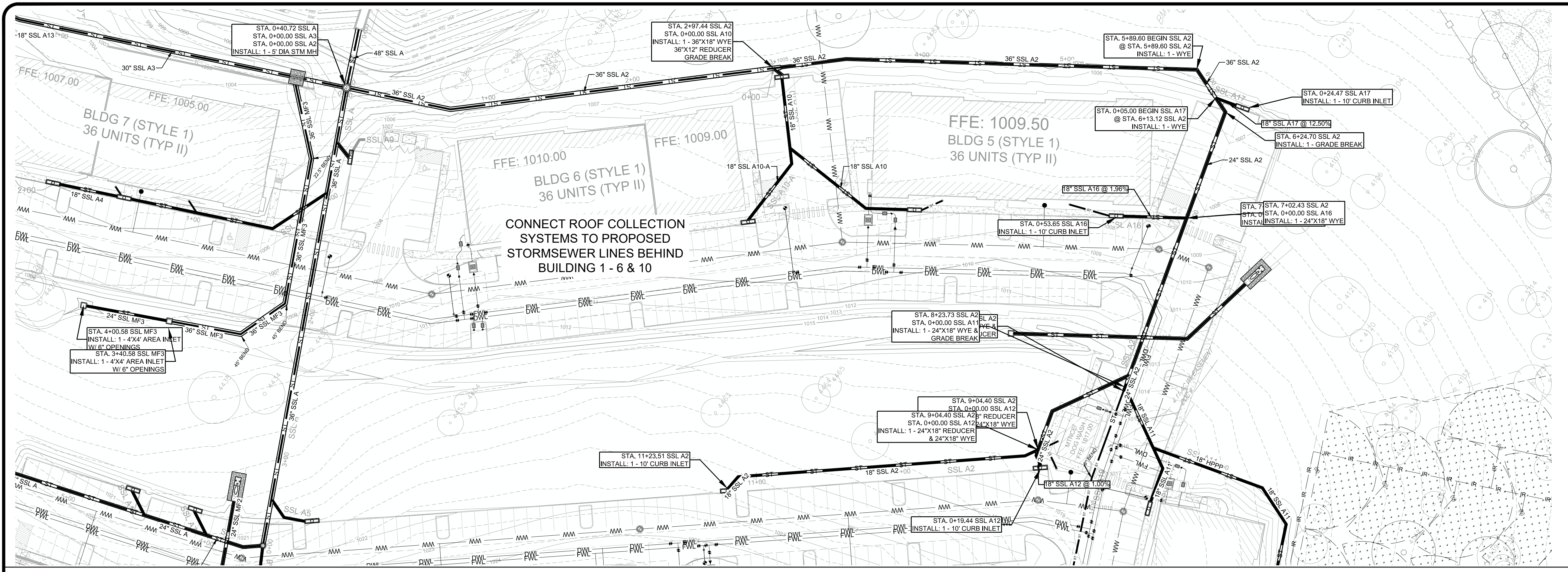
NO.	DATE	DESCRIPTION

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 DRAWN BY: _____
 CHECKED BY: _____
 DATE: 02/28/2024
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LJA Engineering, Inc.
 7500 Riata Boulevard
 Building II, Suite 100
 Austin, Texas 78735
 Phone 512.439.4700
 Fax 512.439.4716
 FRN-F-1386

JOB NUMBER: A116-1007
ST02
 SHEET NO. **52**
 OF 107 SHEETS

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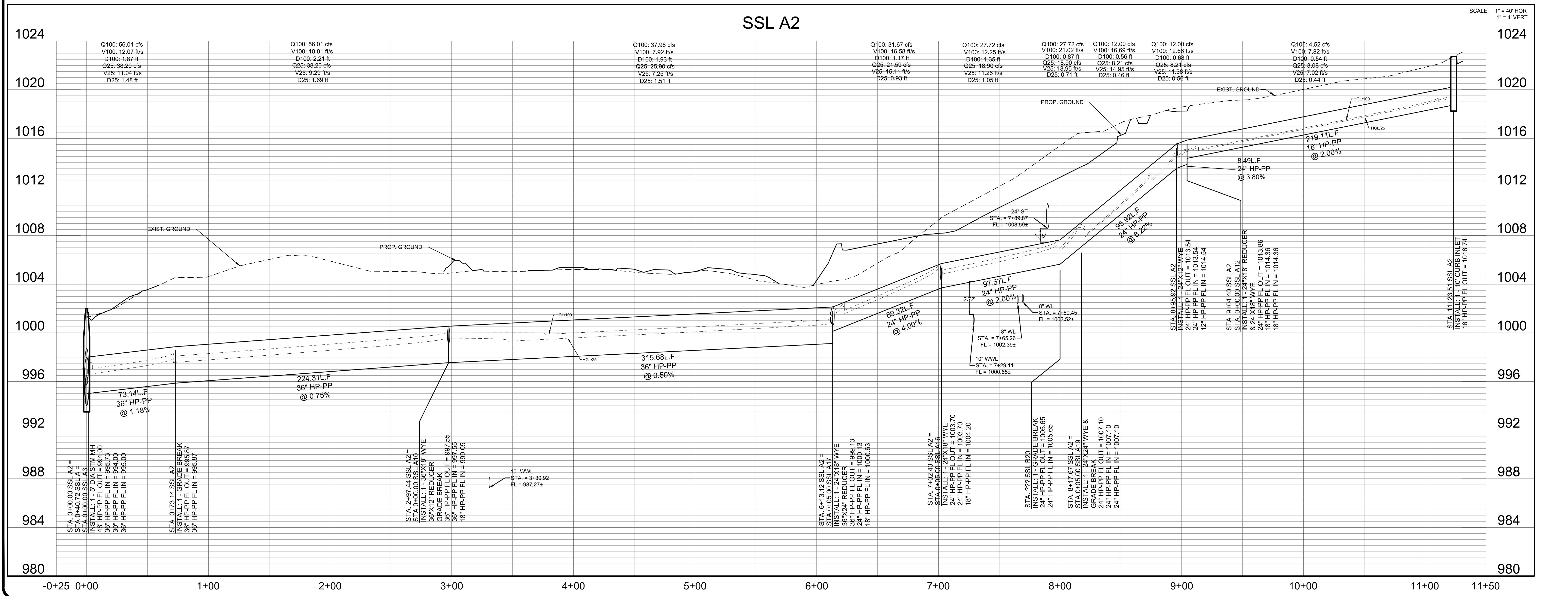
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LEGEND

PROPOSED	EXISTING	DESCRIPTION
—●—	—●—	ST STORM SEWER LINE
—●—	—●—	WW WASTEWATER SERVICE
—●—	—●—	WL WATER SERVICE
—●—	—●—	WATER VALVE
—●—	—●—	FIRE HYDRANT
—●—	—●—	WASTEWATER MANHOLE
—●—	—●—	STORMSEWER MANHOLE
—●—	—●—	CURB INLET
—●—	—●—	GRATE INLET
—●—	—●—	1/2" REBAR FOUND (OR AS NOTED)
—●—	—●—	1/2" REBAR WITH CAP FOUND
—●—	—●—	1/2" REBAR WITH CHAPARRAL CAP SET
—●—	—●—	WATER METER
—●—	—●—	UTILITY POLE
—●—	—●—	OVERHEAD UTILITIES
—●—	—●—	ELEC. UTILITY
—●—	—●—	ELEC. MANHOLE
—●—	—●—	LIGHT POLE
—●—	—●—	TELEPHONE UTILITY
—●—	—●—	UNDERGROUND FIBER OPTIC MARKER
—●—	—●—	TELEPHONE MANHOLE
—●—	—●—	UNDERGROUND GAS MARKER
—●—	—●—	CHAIN LINK FENCE

NOTES:

- CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
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**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

SSL A2 - PLAN & PROFILE STA 1+00 TO END

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	DESCRIPTION

DESIGNED BY: _____
DRAWN BY: _____
CHECKED BY: _____

DATE: 02/28/2024

02/28/2024

CHARLES R. HAGER
127034
PROFESSIONAL ENGINEER
REGISTERED PROFESSIONAL ENGINEER

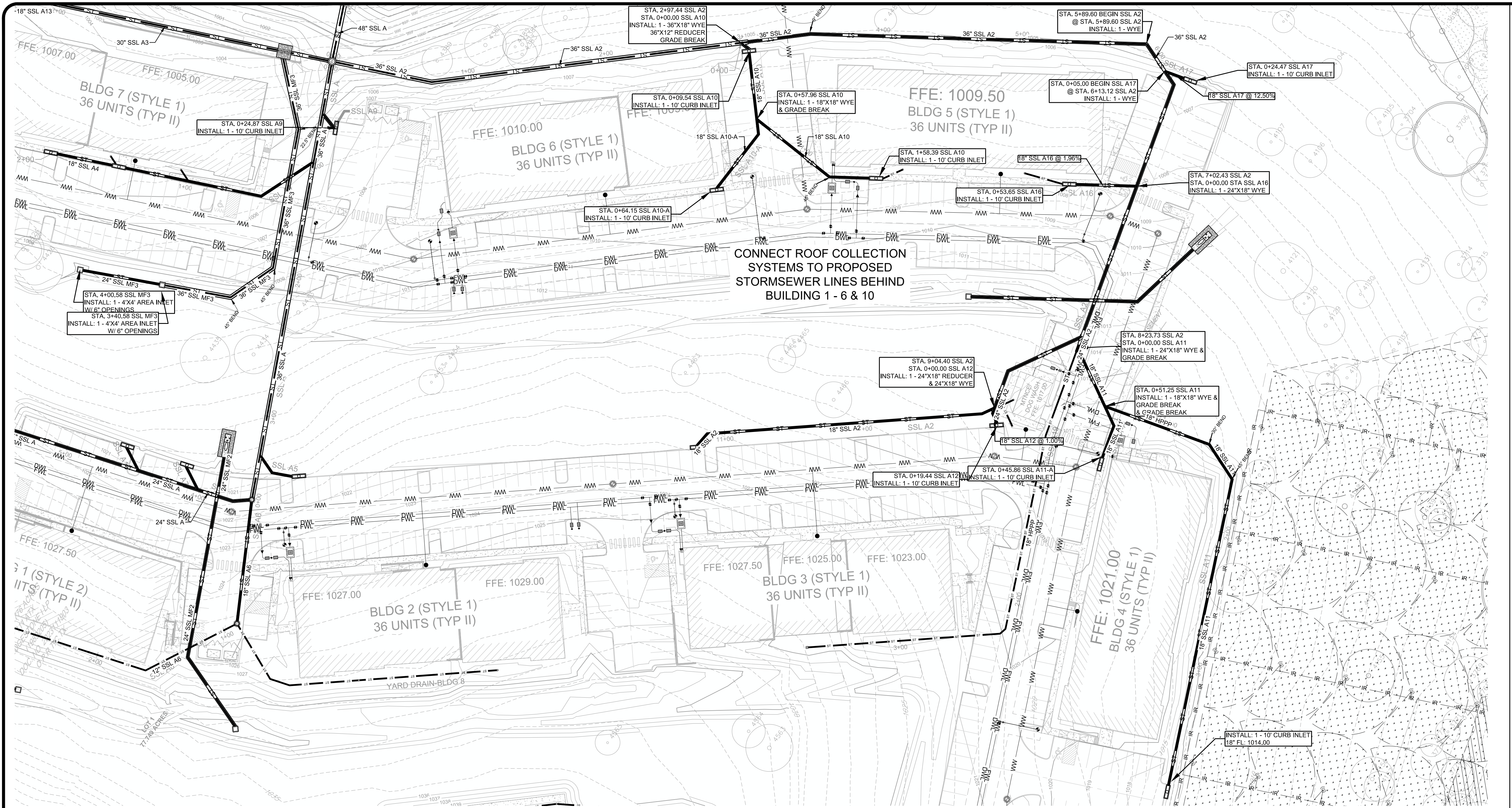
LJA Engineering, Inc.
Phone 512.439.4700
7500 Riatico Boulevard
Building II, Suite 100
Austin, Texas 78735
Fax 512.439.4716
FRN-F-1386

JOB NUMBER: A116-1007

ST04

SHEET NO. **54**

OF 107 SHEETS

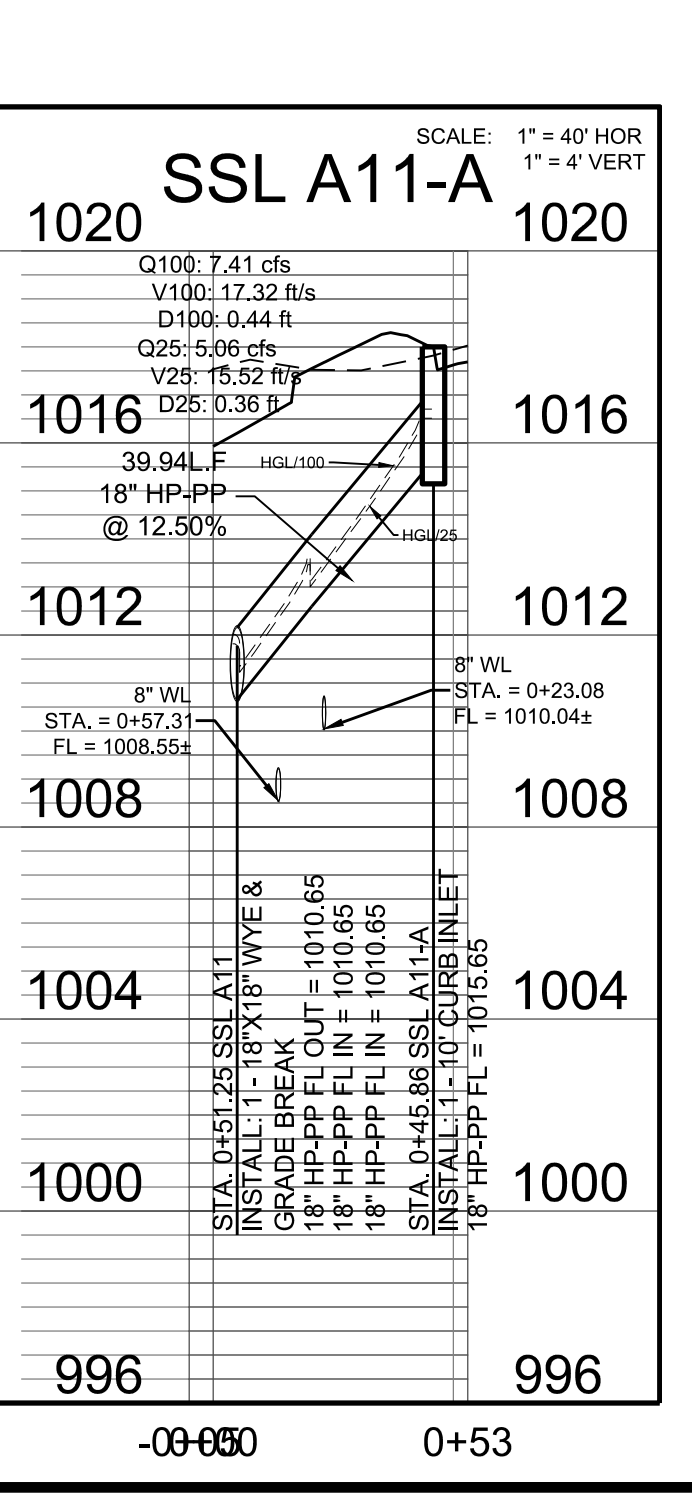
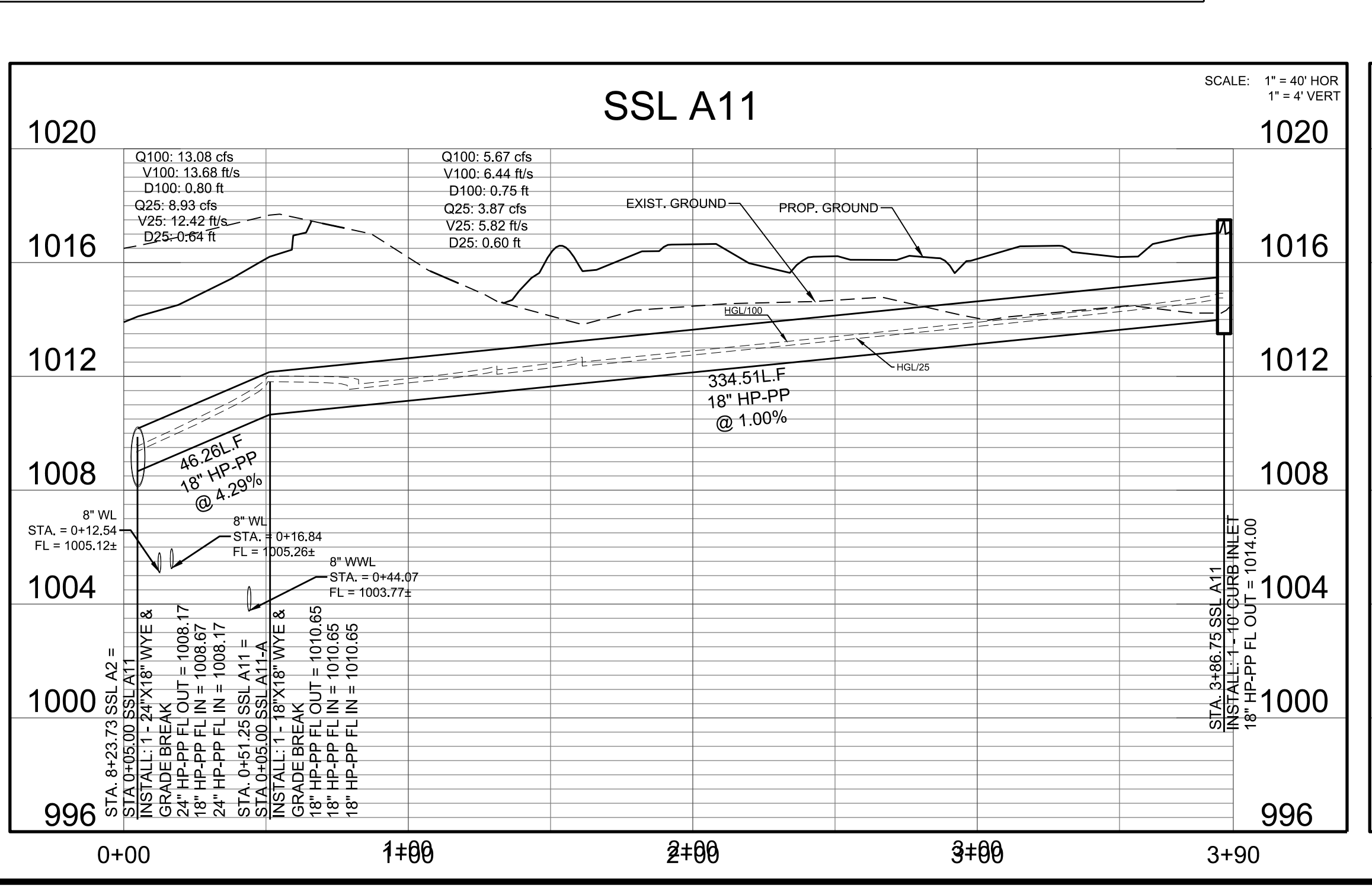
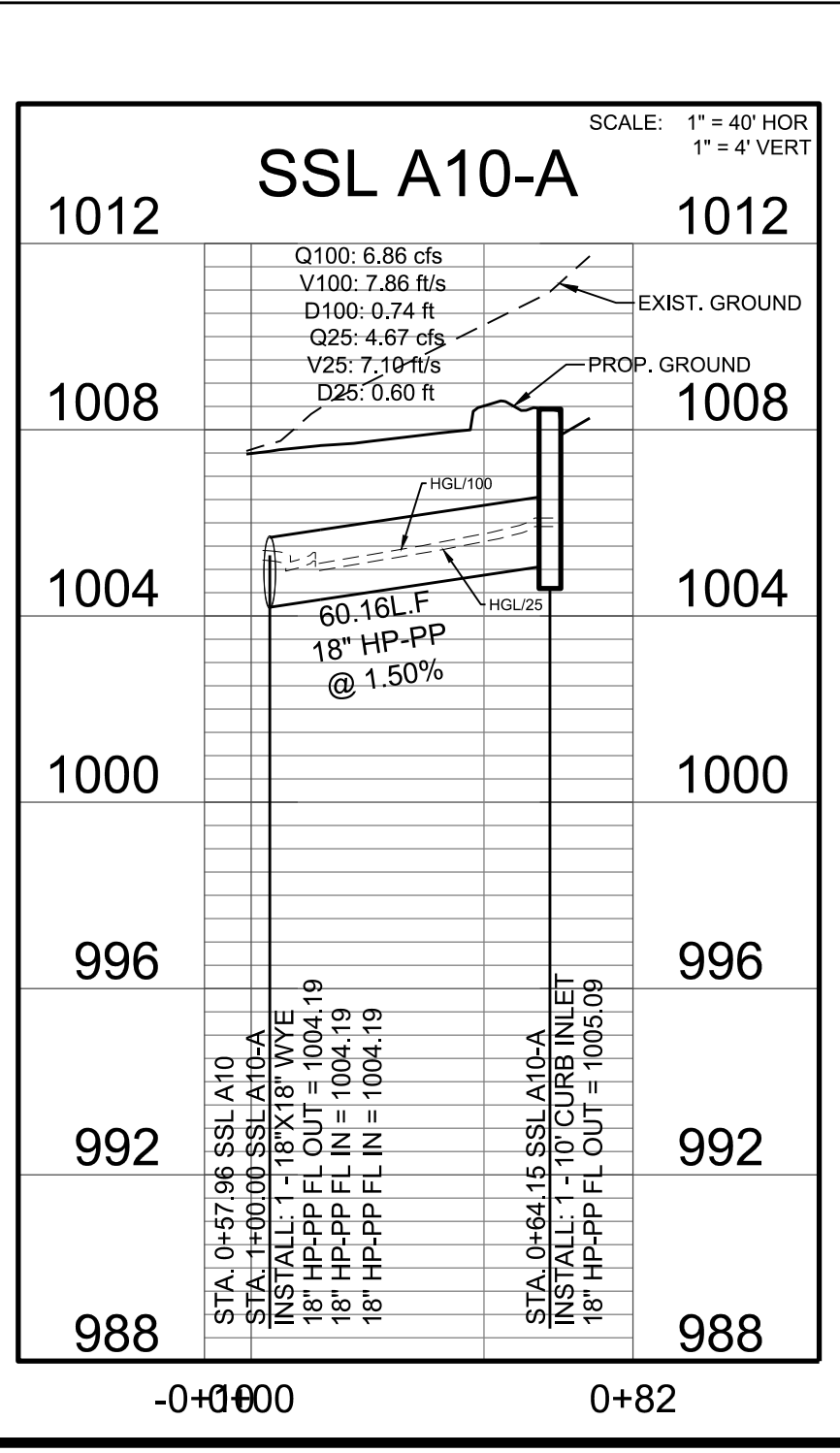
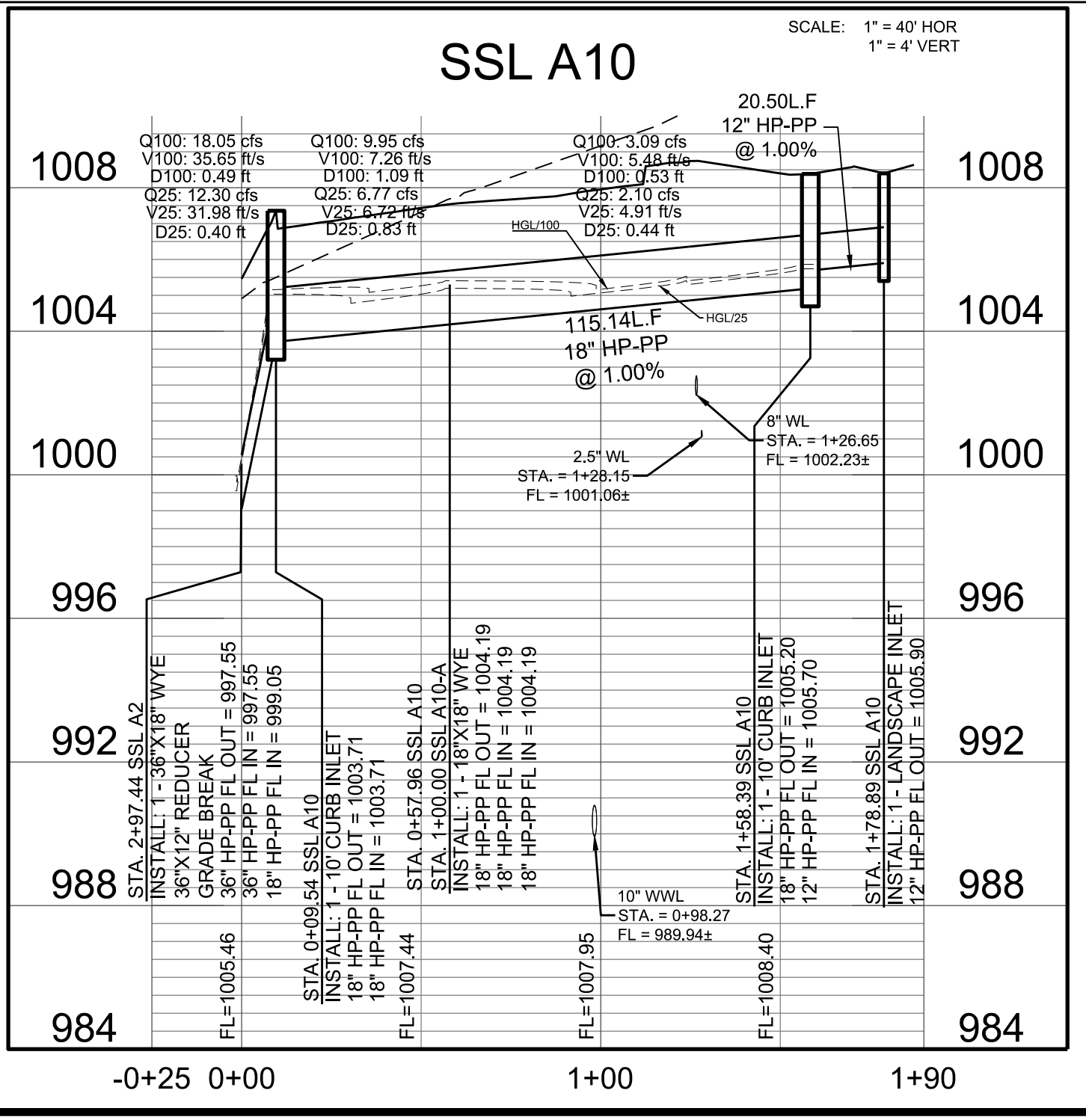
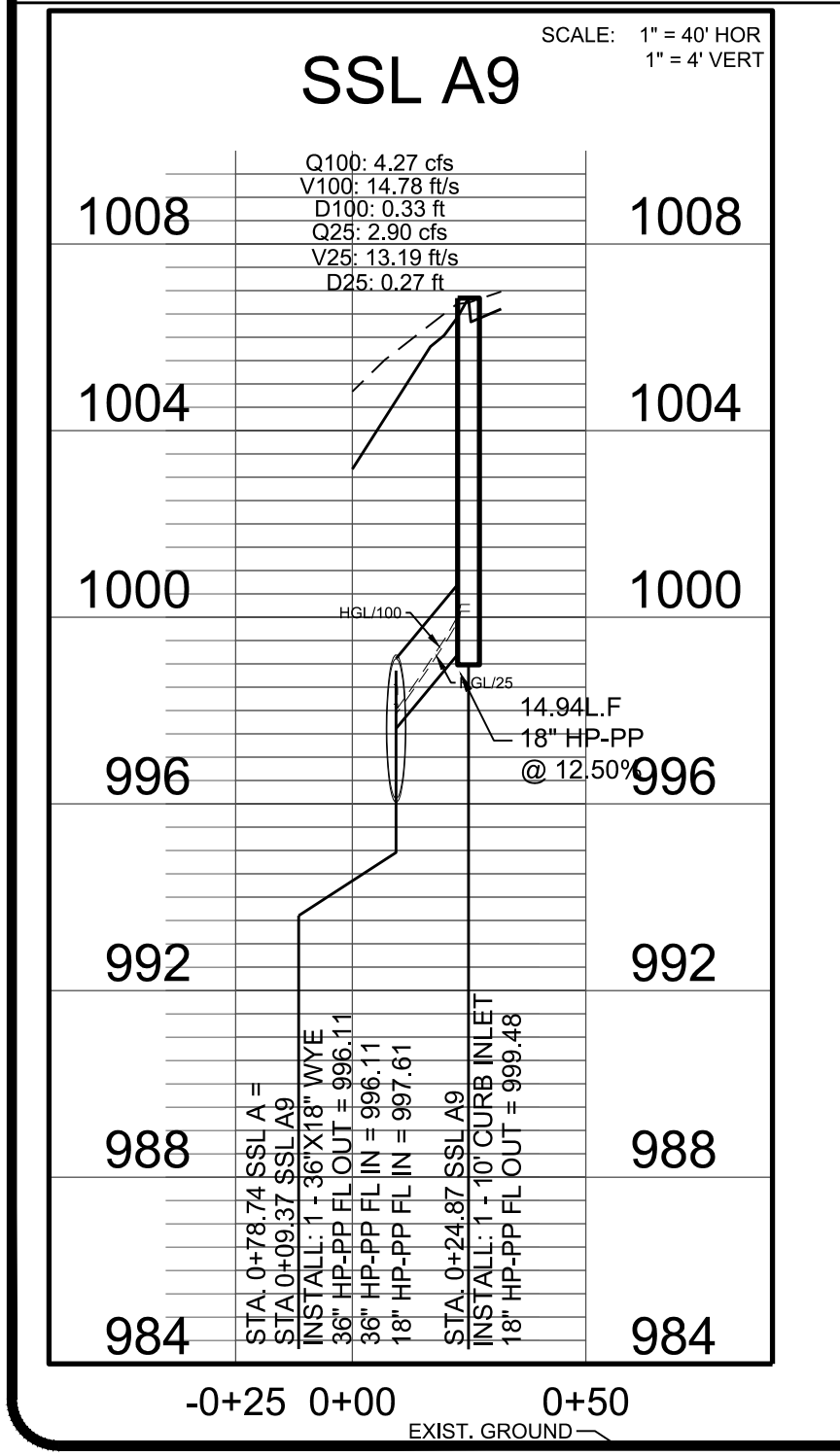


CONNECT ROOF COLLECTION SYSTEMS TO PROPOSED STORMSEWER LINES BEHIND BUILDING 1 - 6 & 10

LEGEND

PROPOSED	EXISTING	DESCRIPTION
—ST—	—ST—	STORM SEWER LINE
—WW—	—WW—	WASTEWATER LINE
—WL—	—WL—	WATER SERVICE
—WV—	—WV—	WATER VALVE
—FH—	—FH—	FIRE HYDRANT
—WWMH—	—WWMH—	WASTEWATER MANHOLE
—SSMH—	—SSMH—	STORMSEWER MANHOLE
—CI—	—CI—	CURB INLET
—GI—	—GI—	GRATE INLET
●	●	1/2" REBAR FOUND (OR AS NOTED)
●	●	1/2" REBAR WITH CAP FOUND
●	●	1/2" REBAR WITH CHAPARRAL CAP SET
—WM—	—WM—	WATER METER
—UP—	—UP—	UTILITY POLE
—OU—	—OU—	OVERHEAD UTILITIES
—E—	—E—	ELEC. UTILITY
—EM—	—EM—	ELEC. MANHOLE
—LP—	—LP—	LIGHT POLE
—TU—	—TU—	TELEPHONE UTILITY
—UF—	—UF—	UNDERGROUND FIBER OPTIC MARKER
—TM—	—TM—	TELEPHONE MANHOLE
—UG—	—UG—	UNDERGROUND GAS MARKER
—CL—	—CL—	CHAIN LINK FENCE

- NOTES:**
- CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO FILL AND COMPACT TO 95% DENSITY IN FILL SECTIONS OVER STORM SEWER LINES.
 - ALL STORM SEWER PIPE SHALL BE HP-PP AS SHOWN ON PROFILE SHEET.
 - ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATIONS.
 - ALL BENDS AND FITTINGS SHALL BE PREFABRICATED BY MANUFACTURER. NO FIELD FABRICATION OF FITTINGS IS ALLOWED.



**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
SSL A9 & SSL A10 & A10-A & SSL A11 &
SSL A11-A - PLAN & PROFILE**

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

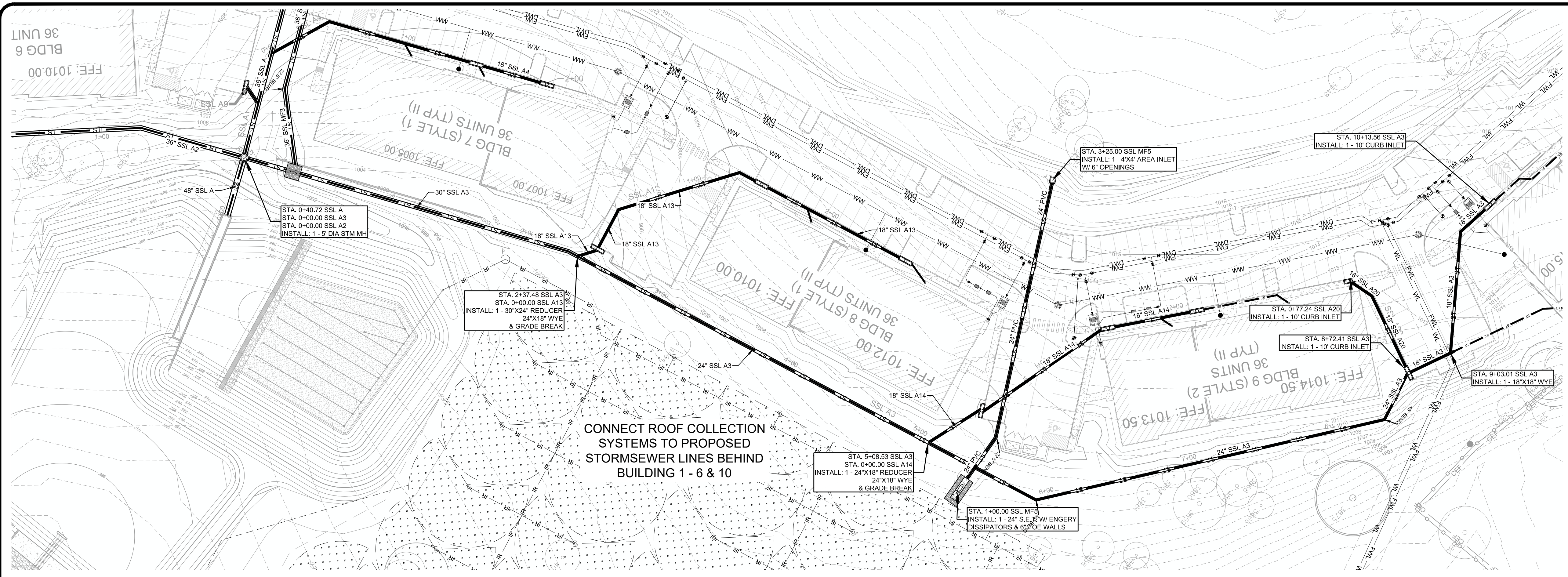
NO.	DATE	BY	REVISIONS DESCRIPTION

DATE: 02/28/2024
DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DRAWING NAME: A116-1007-SS10.DWG

02/28/2024
STATE OF TEXAS
CHARLES R. HAGER
1270334
PROFESSIONAL ENGINEER
Civil

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

JOB NUMBER: A116-1007
ST05
SHEET NO. **55**
OF 107 SHEETS



LEGEND

PROPOSED	EXISTING	DESCRIPTION
—	ST	STORM SEWER LINE
—	WW	WASTEWATER LINE
—	WL	WATER SERVICE
—	WL	WATER LINE
—	—	WATER SERVICE
—	—	WATER VALVE
—	—	FIRE HYDRANT
—	—	WASTEWATER MANHOLE
—	—	STORMSEWER MANHOLE
—	—	CURB INLET
—	—	GRATE INLET
—	—	1/2" REBAR FOUND (OR AS NOTED)
—	—	1/2" REBAR WITH CAP FOUND
—	—	1/2" REBAR WITH CHAPARRAL CAP SET
—	—	WATER METER
—	—	UTILITY POLE
—	—	OVERHEAD UTILITIES
—	—	ELEC. UTILITY
—	—	ELEC. MANHOLE
—	—	LIGHT POLE
—	—	TELEPHONE UTILITY
—	—	UNDERGROUND FIBER OPTIC MARKER
—	—	TELEPHONE MANHOLE
—	—	UNDERGROUND GAS MARKER
—	—	CHAIN LINK FENCE

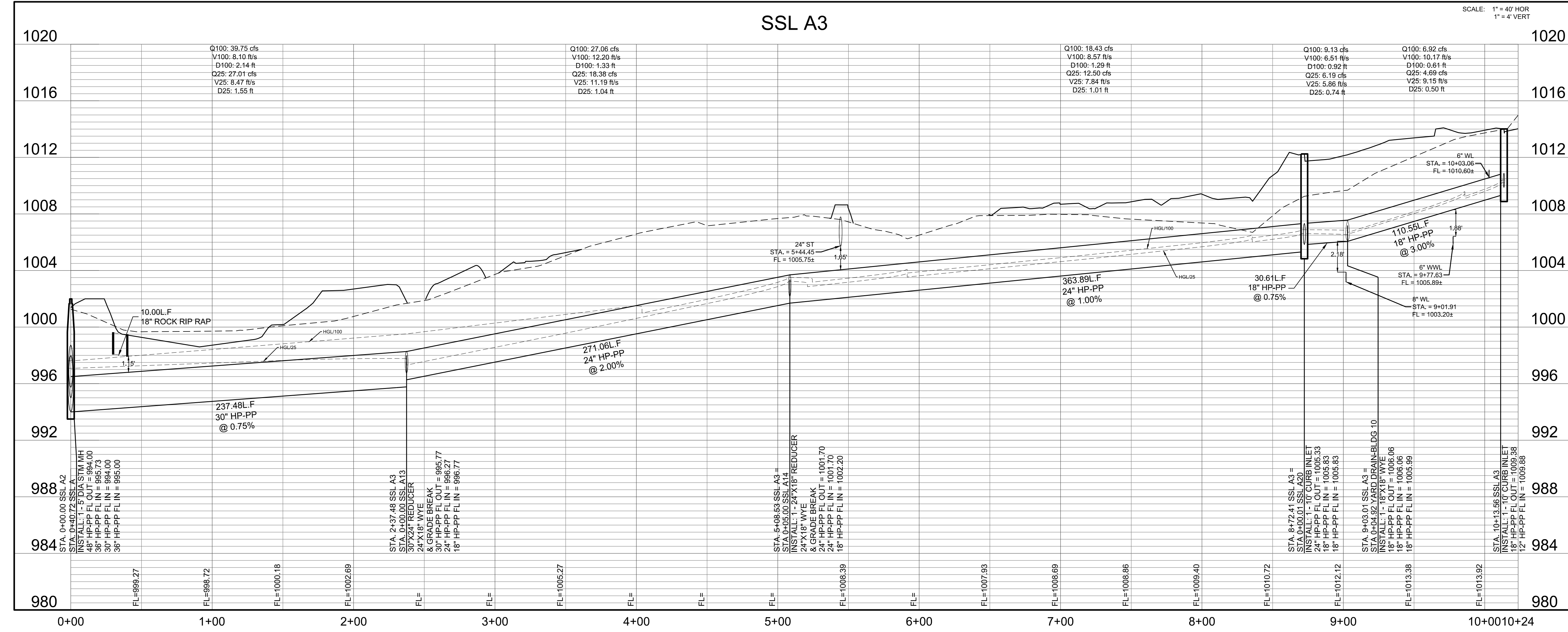
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CONNECT ROOF COLLECTION SYSTEMS TO PROPOSED STORMSEWER LINES BEHIND BUILDING 1 - 6 & 10

SSL A3

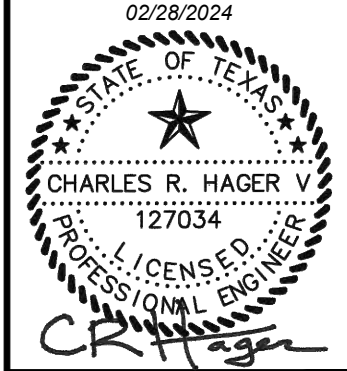
SCALE: 1" = 40' HOR
1" = 4' VERT



LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
SSL A3 - PLAN & PROFILE STA 1+00 TO END
9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

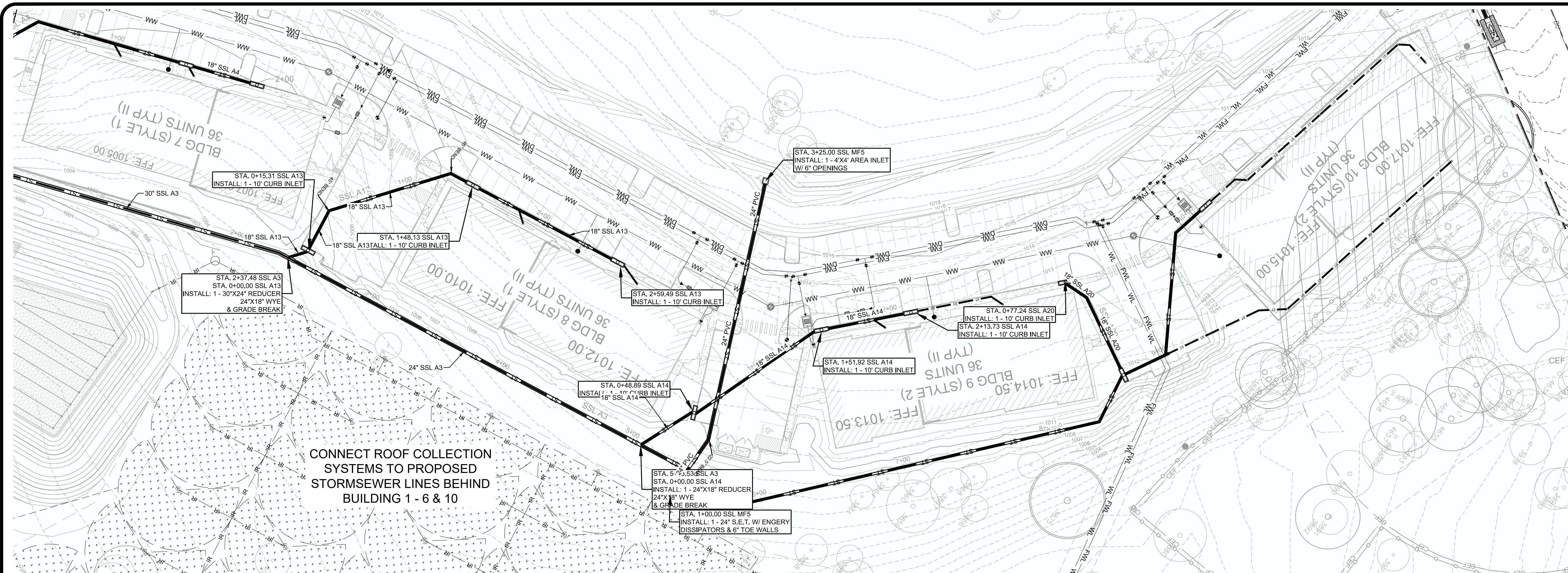
NO.	DATE	BY	REVISIONS DESCRIPTION

DATE: 02/28/2024
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME: A116-1007-5710.DWG



LJA Engineering, Inc.
Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386

JOB NUMBER:
A116-1007
ST06
SHEET NO.
56
OF 107 SHEETS



CONNECT ROOF COLLECTION SYSTEMS TO PROPOSED STORMSEWER LINES BEHIND BUILDING 1 - 6 & 10

LEGEND

PROPOSED	EXISTING	DESCRIPTION
—	ST	STORM SEWER LINE
—	WW	WASTEWATER LINE
—	WS	WATER SERVICE LINE
—	WL	WATER LINE
—	WSV	WATER SERVICE VALVE
—	WH	WATER HYDRANT
—	WMH	WASTEWATER MANHOLE
—	SMH	STORMSEWER MANHOLE
—	CI	CURB INLET
—	GI	GRATE INLET

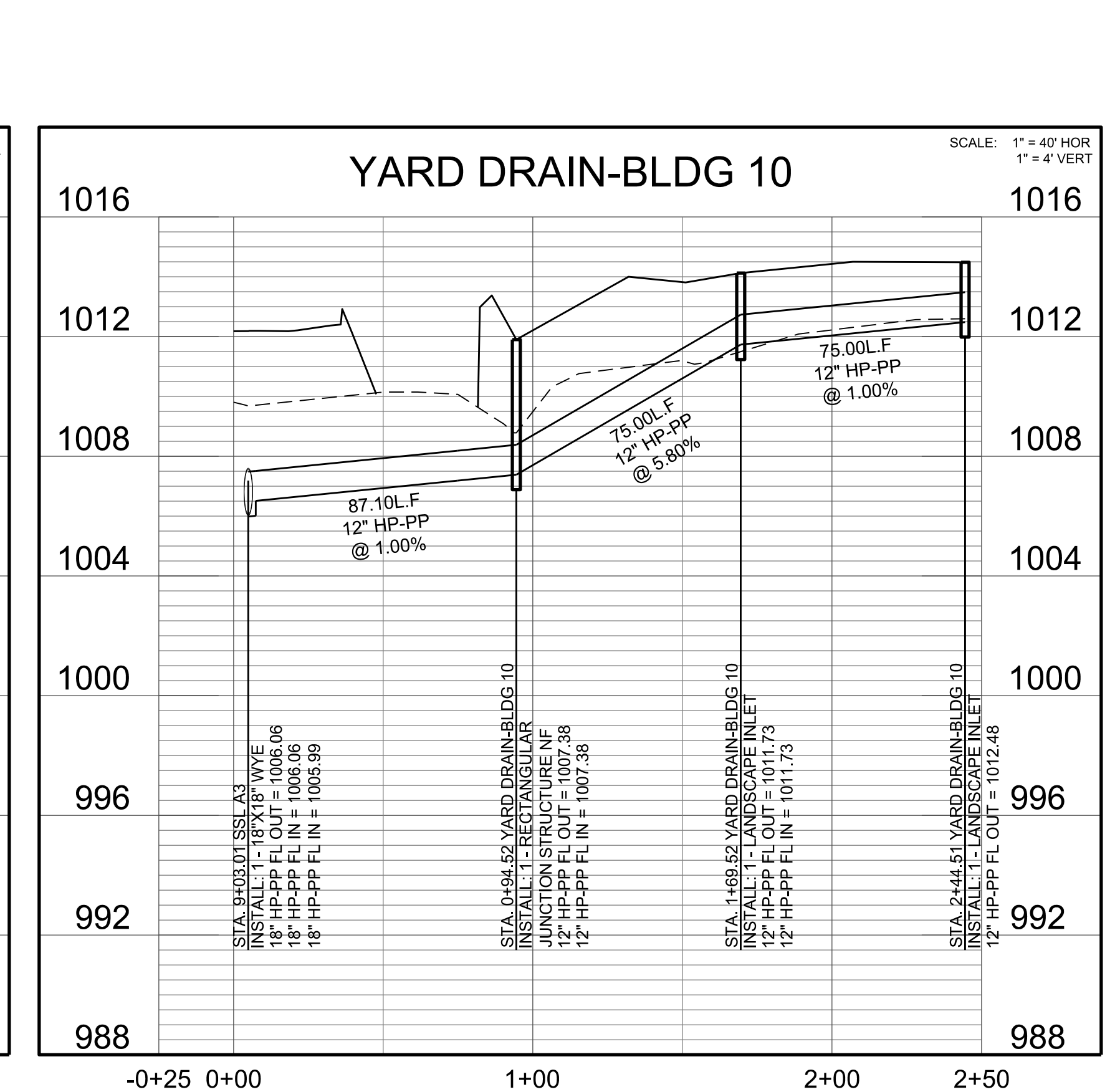
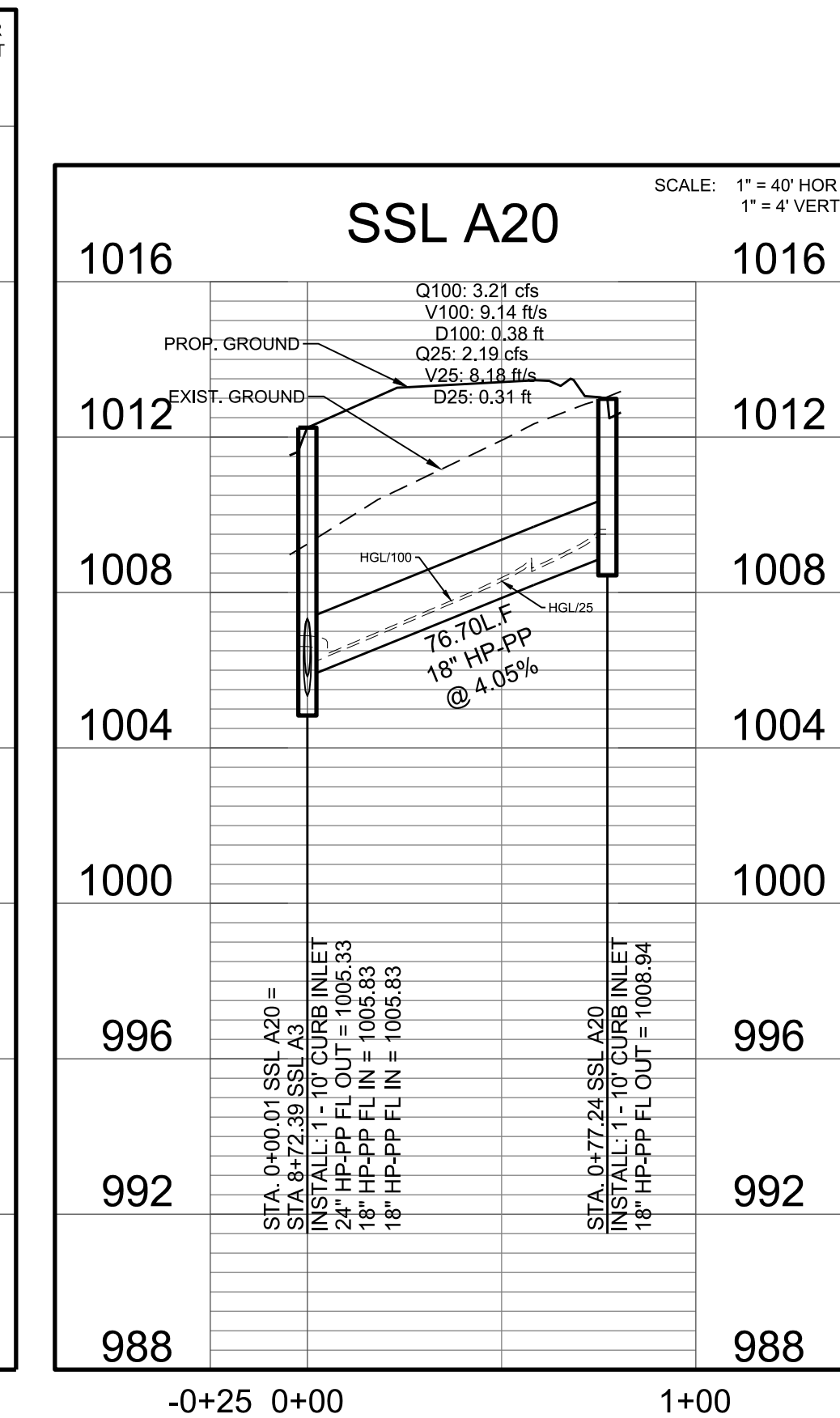
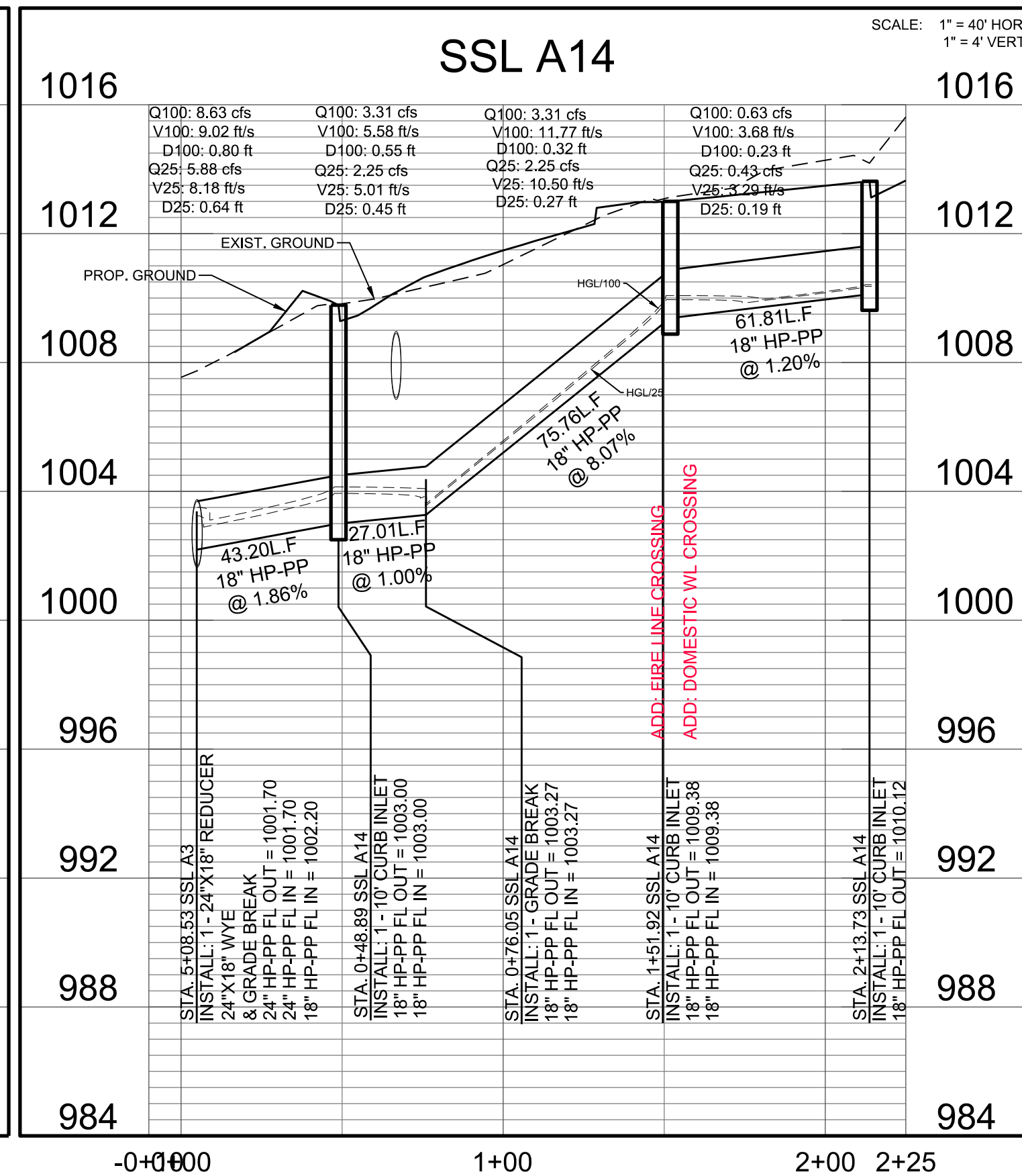
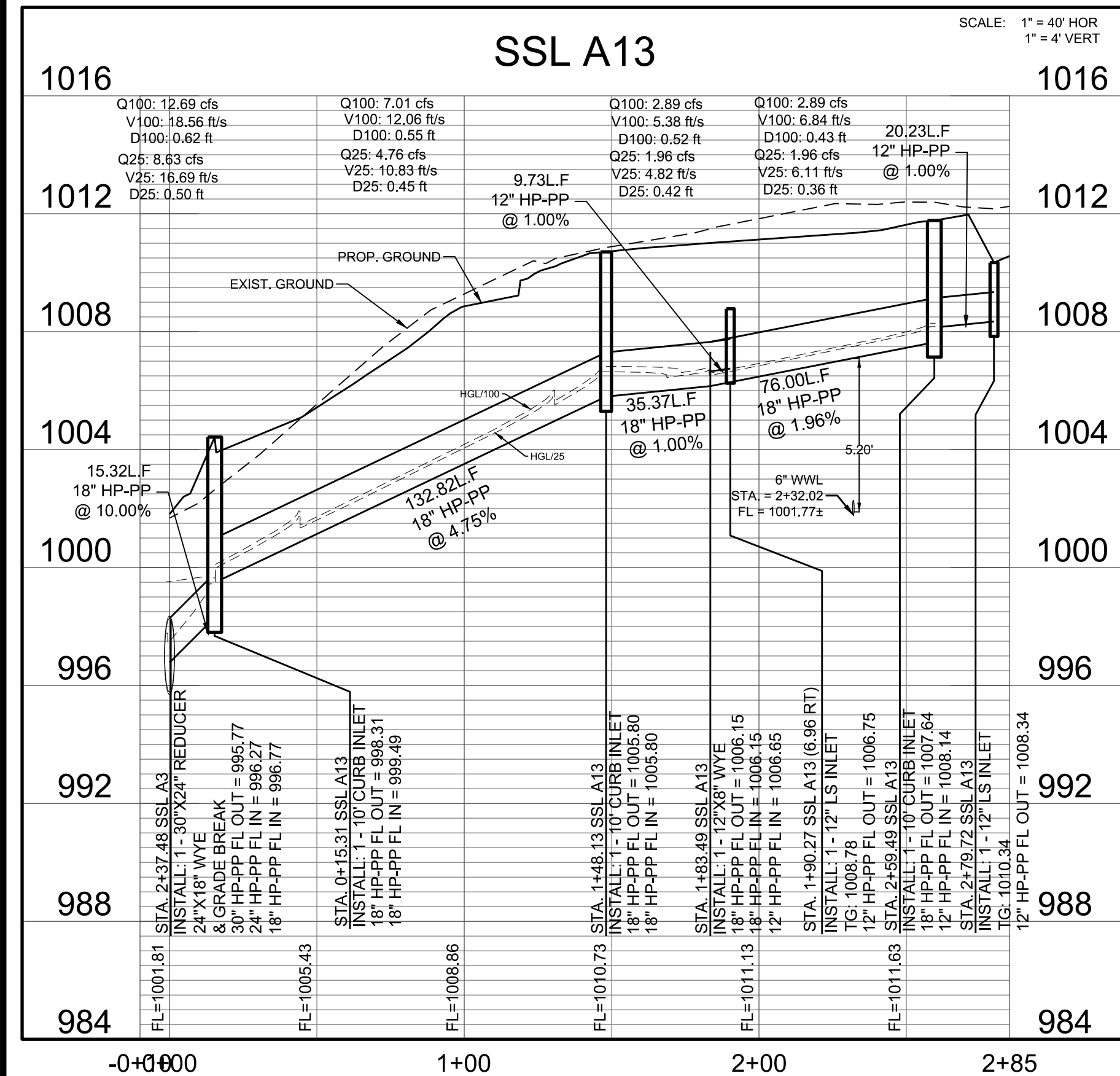
NOTES:

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- ALL BENDS AND FITTINGS SHALL BE PREFABRICATED BY MANUFACTURER. NO FIELD FABRICATION OF FITTINGS IS ALLOWED.

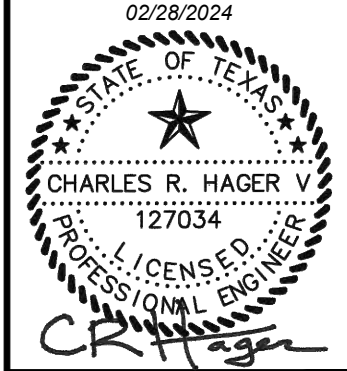


**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**
SSL A13 & SSL A14 & A21 & YARD
DRAIN-BLDG 10 - PLAN & PROFILE

NO.	DATE	DESCRIPTION



DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DRAWING NAME:	A116-1007-SSL10.DWG

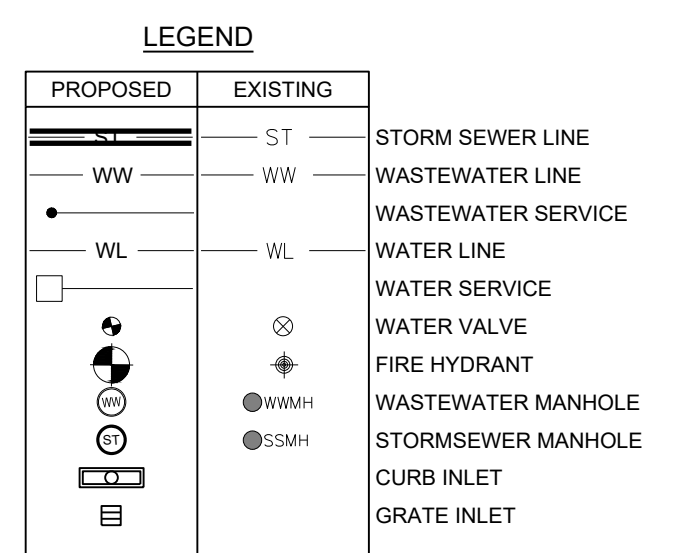
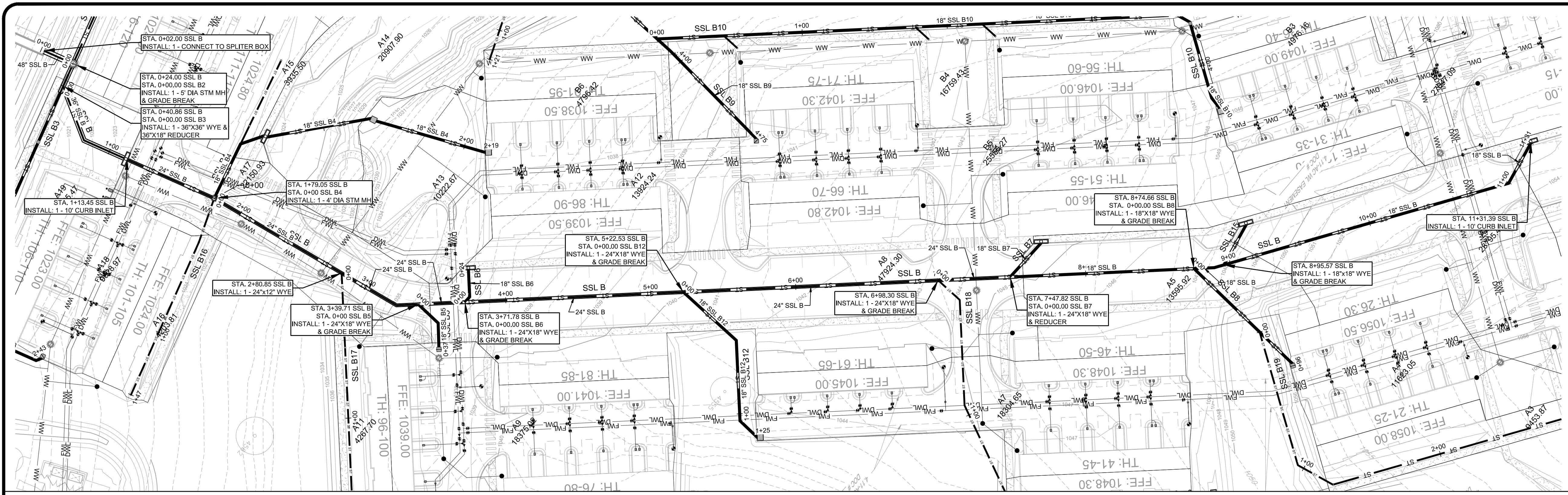


LJA Engineering, Inc.
7500 Riata Boulevard
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Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386

JOB NUMBER:
A116-1007

ST07

SHEET NO.
57
OF 107 SHEETS



- NOTES:
- CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO FILL AND COMPACT TO 95% DENSITY IN FILL SECTIONS OVER STORM SEWER LINES.
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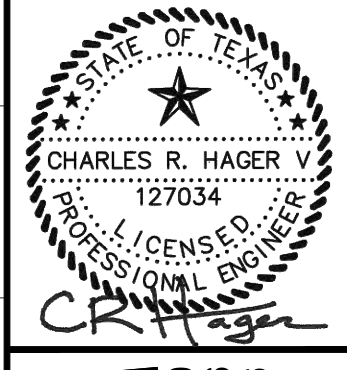
**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

SSL B - PLAN & PROFILE STA 1+00 TO END

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	DESCRIPTION

DATE: 02/28/2024
 DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
 DRAWING NAME: A116-1007-51202-000



LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 FRN-F-1386

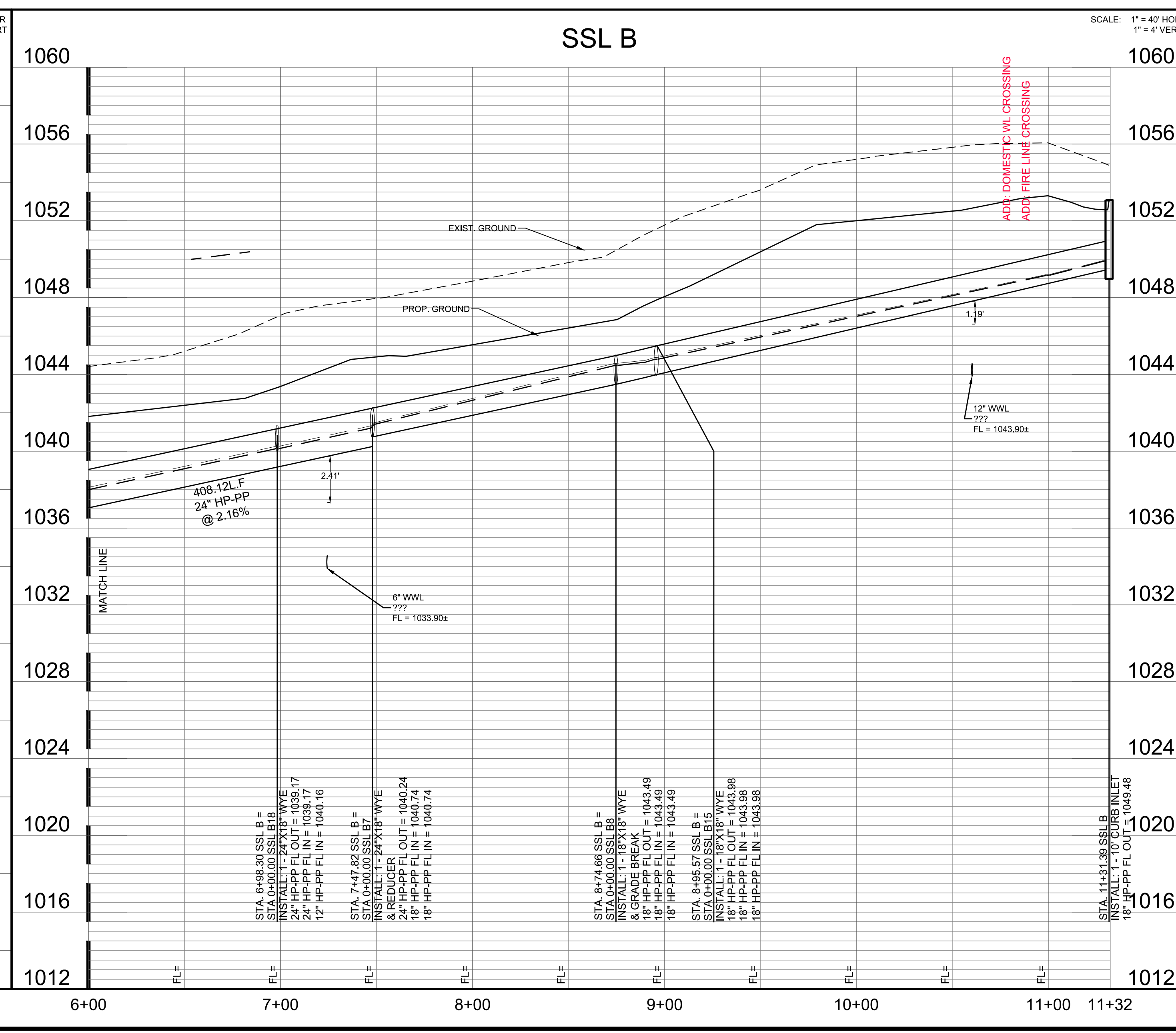
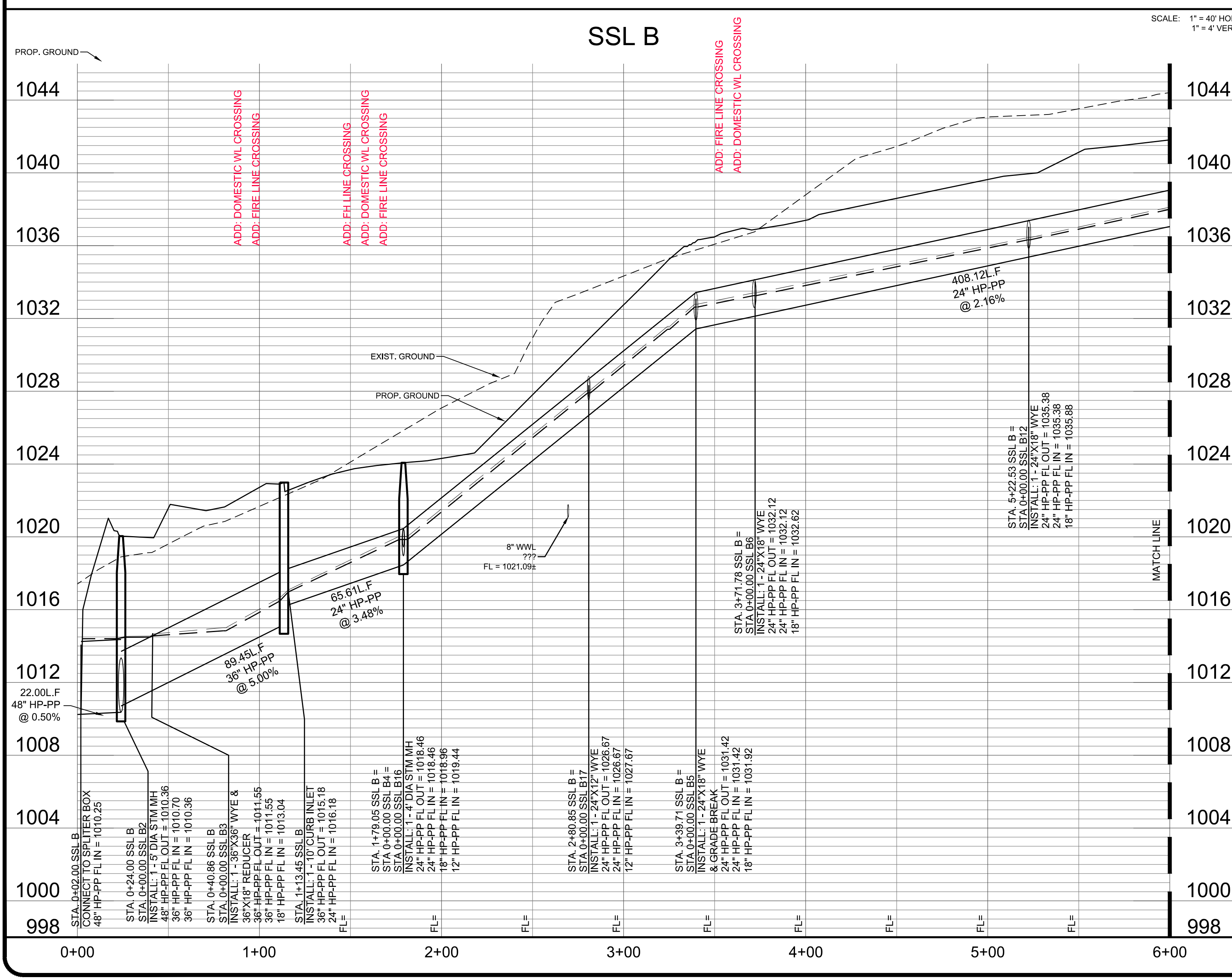
LJA Engineering, Inc.
 7500 Riatico Boulevard
 Building II, Suite 100
 Austin, Texas 78735

JOB NUMBER:
A116-1007

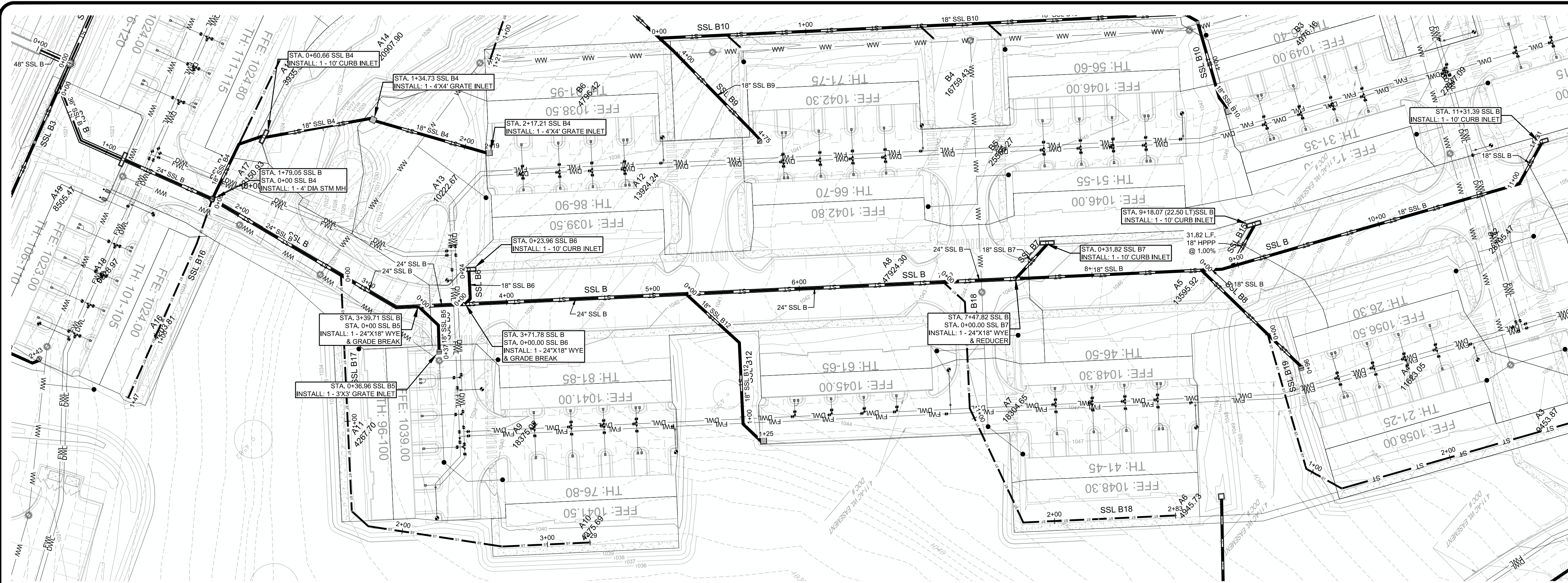
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SHEET NO.
58

OF 107 SHEETS



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 Plot Date/Time: Mar 01, 24 - 14:08:39



LEGEND

PROPOSED	EXISTING	DESCRIPTION
—●—	—●—	ST STORM SEWER LINE
—●—	—●—	WW WASTEWATER LINE
—●—	—●—	WL WASTEWATER SERVICE
—●—	—●—	WL WATER LINE
—●—	—●—	WL WATER SERVICE
—●—	—●—	WL WATER VALVE
—●—	—●—	WL FIRE HYDRANT
—●—	—●—	WM WASTEWATER MANHOLE
—●—	—●—	SM STORMSEWER MANHOLE
—●—	—●—	CI CURB INLET
—●—	—●—	GI GRATE INLET
—●—	—●—	1/2" REBAR FOUND (OR AS NOTED)
—●—	—●—	1/2" REBAR WITH CAP FOUND
—●—	—●—	1/2" REBAR WITH CHAPARRAL CAP SET
—●—	—●—	WM WATER METER
—●—	—●—	UP UTILITY POLE
—●—	—●—	OU OVERHEAD UTILITIES
—●—	—●—	ELC ELEC. UTILITY
—●—	—●—	ELC ELEC. MANHOLE
—●—	—●—	LP LIGHT POLE
—●—	—●—	TU TELEPHONE UTILITY
—●—	—●—	UF UNDERGROUND FIBER OPTIC MARKER
—●—	—●—	TM TELEPHONE MANHOLE
—●—	—●—	UG UNDERGROUND GAS MARKER
—●—	—●—	CLF CHAIN LINK FENCE

- NOTES:**
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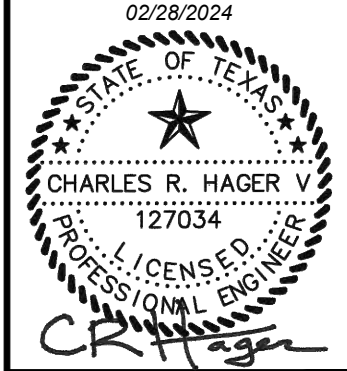


**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
SSL B4 & SSL B16 & SSL B17 -
PLAN & PROFILE**

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

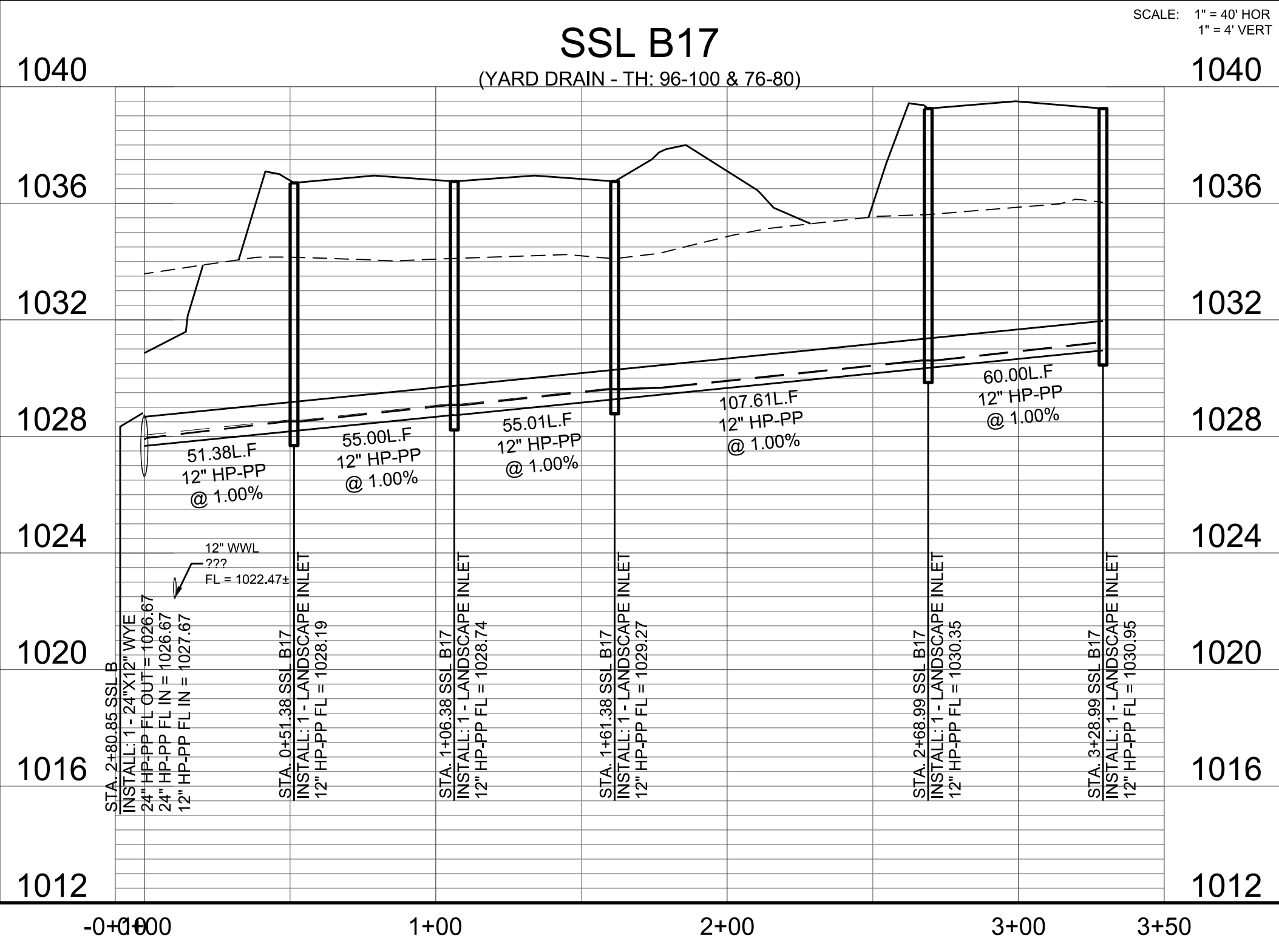
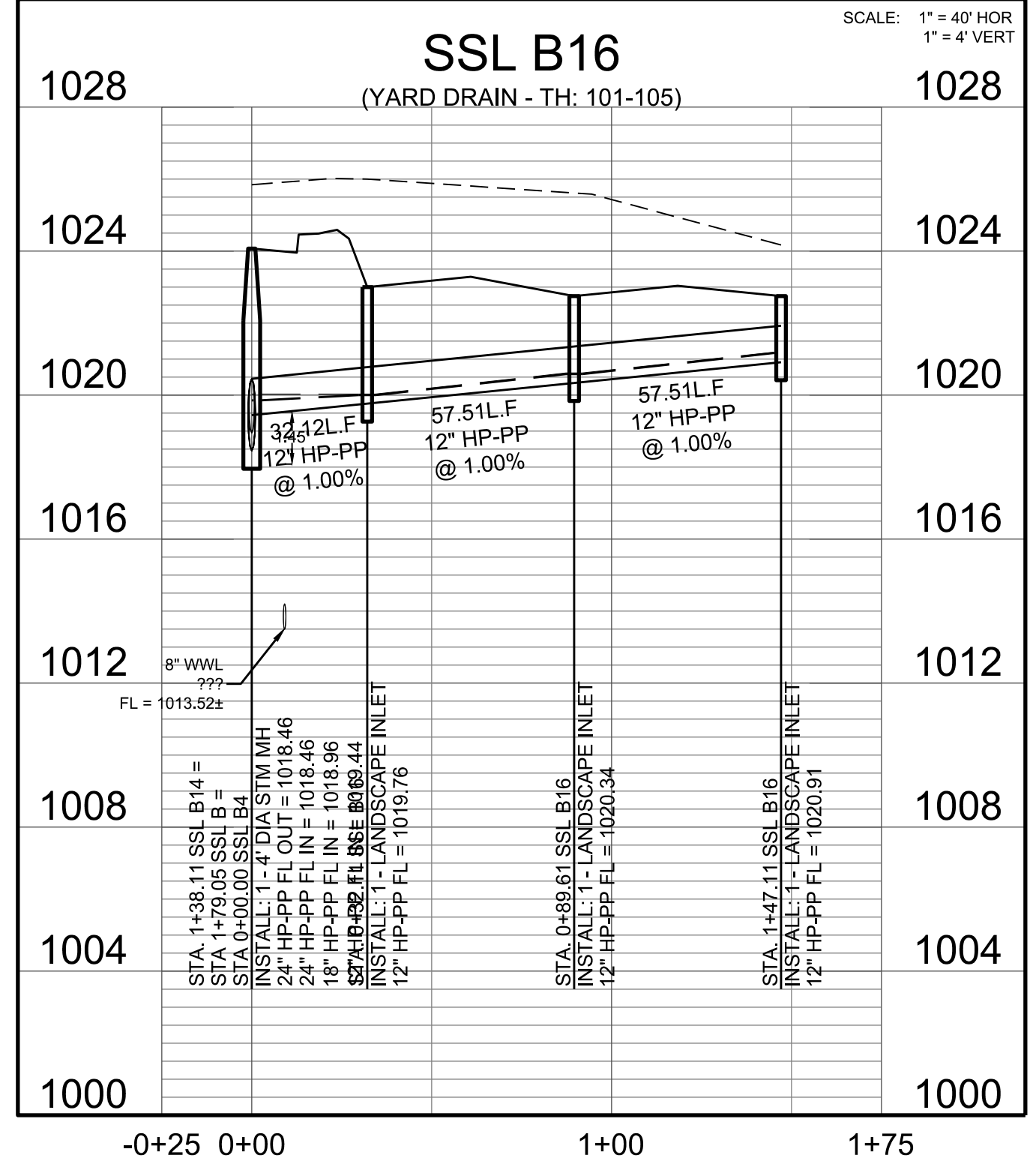
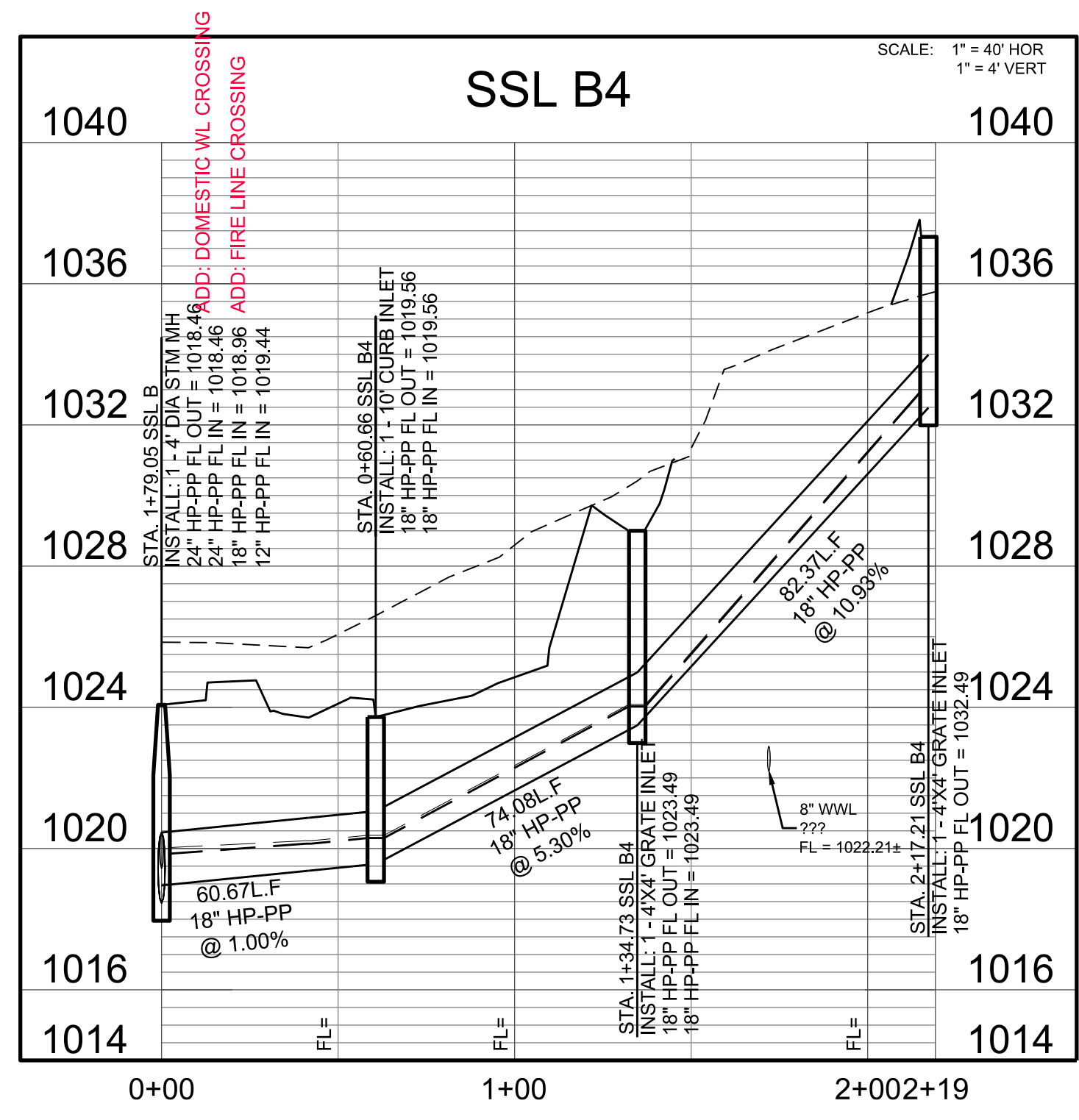
NO.	DATE	DESCRIPTION

DATE: 02/28/2024
 DESIGNED BY: CHARLES R. HAGER
 DRAWN BY: 127034
 CHECKED BY: PROFESSIONAL ENGINEER
 DRAWING NAME: A116-1007-51202-000

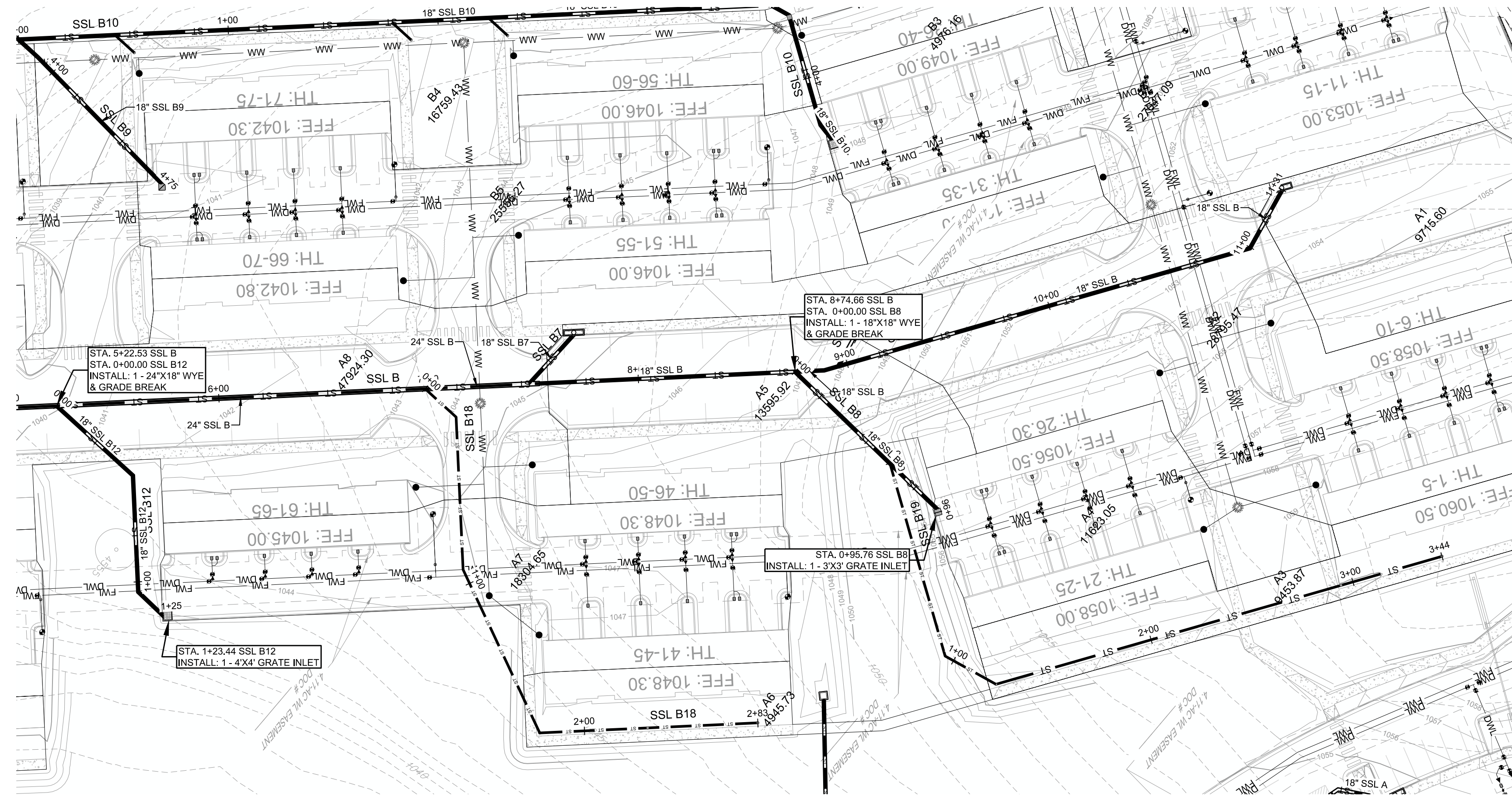


LJA Engineering, Inc.
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 FRN-F-1386

JOB NUMBER: A116-1007
ST09
 SHEET NO. **59**
 OF 107 SHEETS



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LEGEND

PROPOSED	EXISTING	DESCRIPTION
	ST	STORM SEWER LINE
	WW	WASTEWATER LINE
	WL	WATER SERVICE
	WL	WATER LINE
		WATER SERVICE
		WATER VALVE
		FIRE HYDRANT
		WASTEWATER MANHOLE
		STORMSEWER MANHOLE
		CURB INLET
		GRATE INLET
		1/2" REBAR FOUND (OR AS NOTED)
		1/2" REBAR WITH CAP FOUND
		1/2" REBAR WITH CHAPARRAL CAP SET
		WATER METER
		UTILITY POLE
		OVERHEAD UTILITIES
		ELEC. UTILITY
		ELEC. MANHOLE
		LIGHT POLE
		TELEPHONE UTILITY
		UNDERGROUND FIBER OPTIC MARKER
		TELEPHONE MANHOLE
		UNDERGROUND GAS MARKER
		CHAIN LINK FENCE

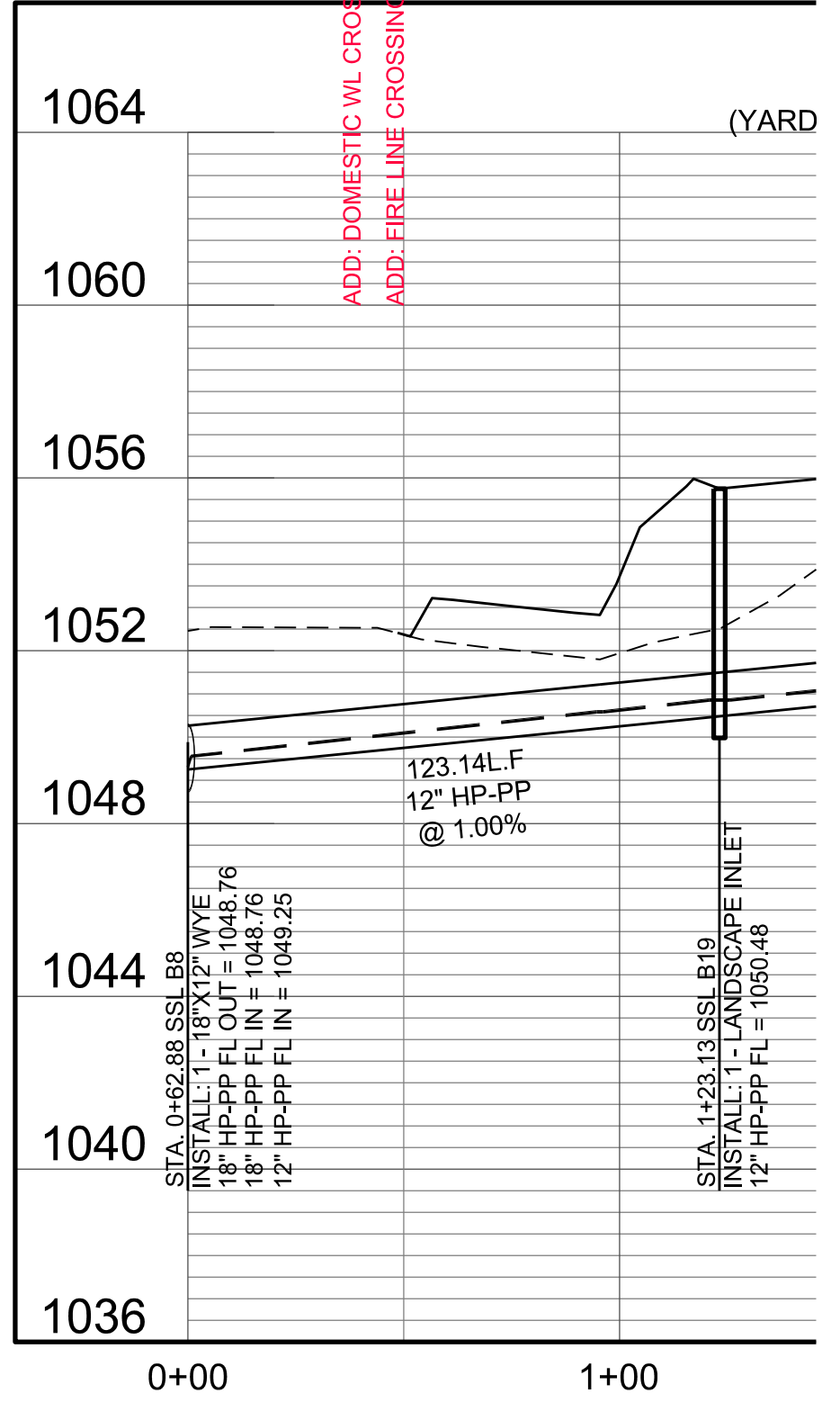
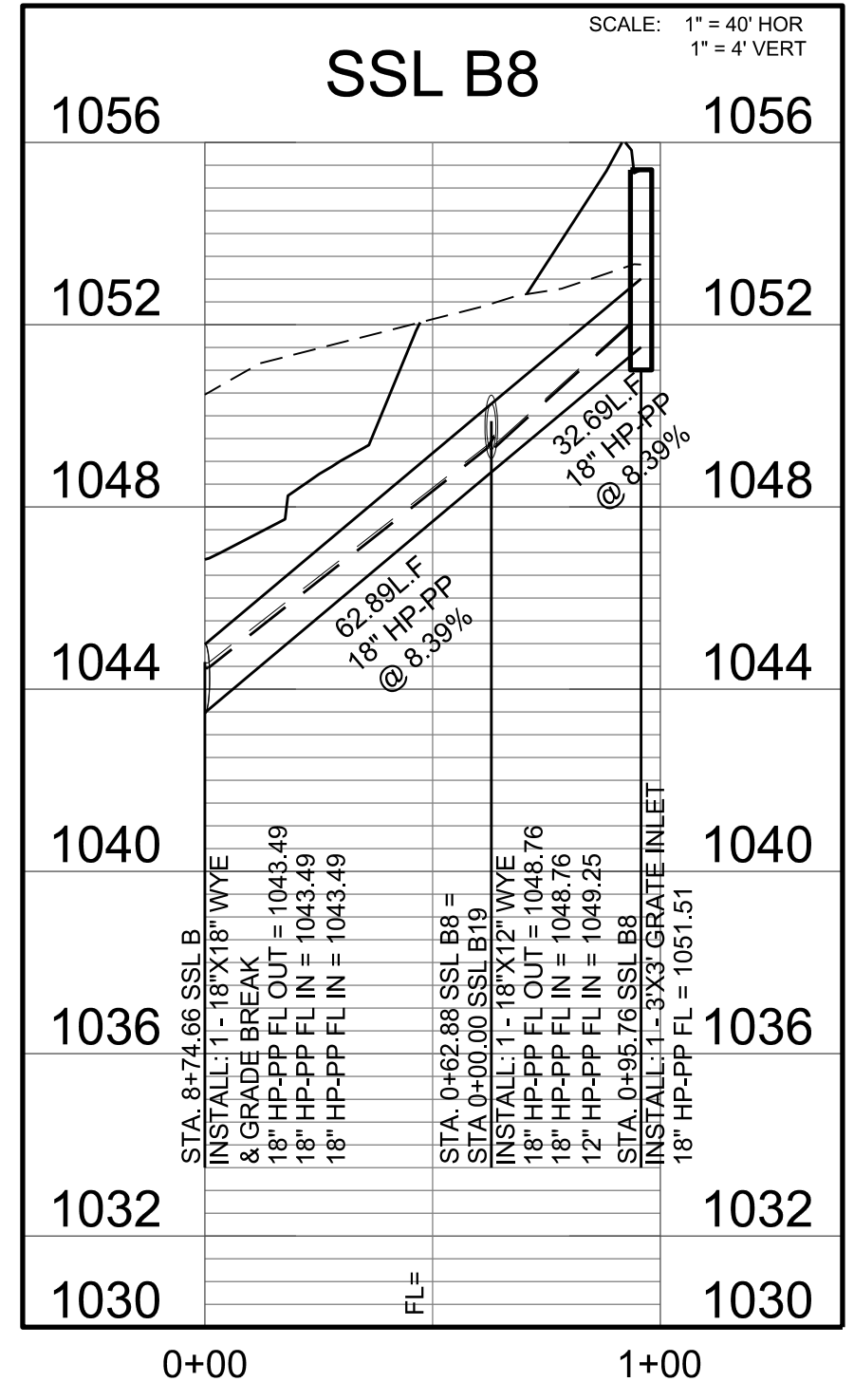
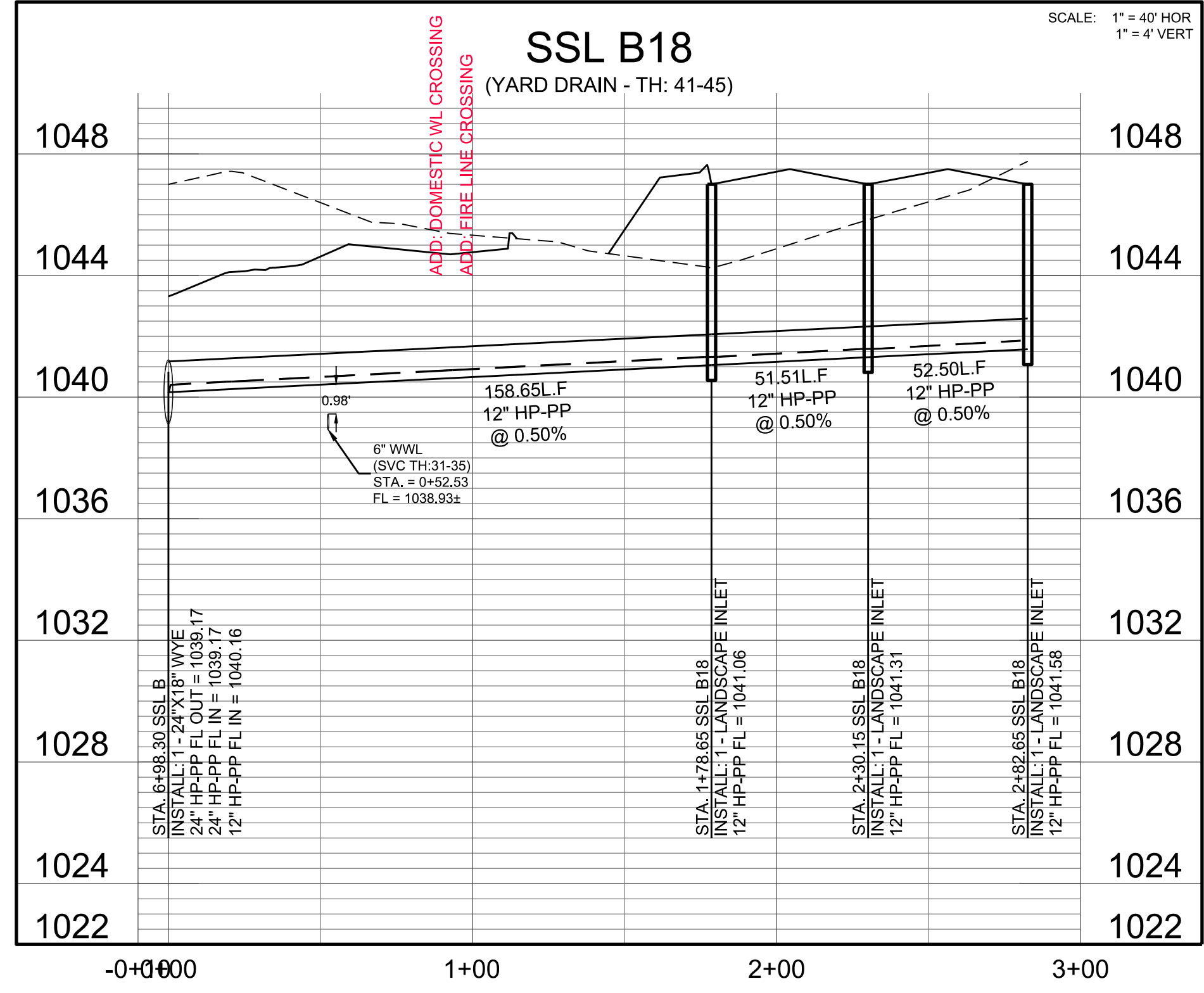
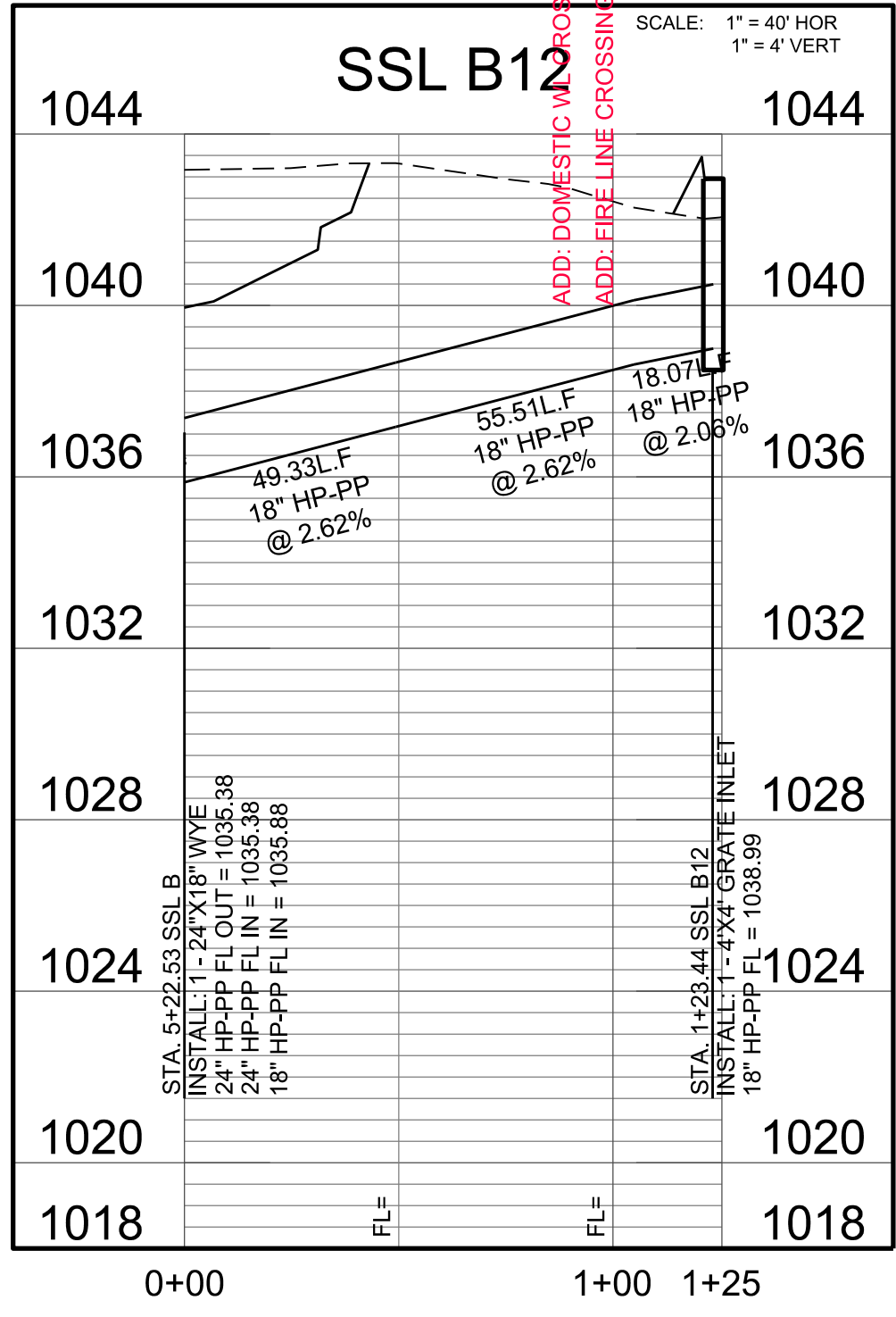
- NOTES:**
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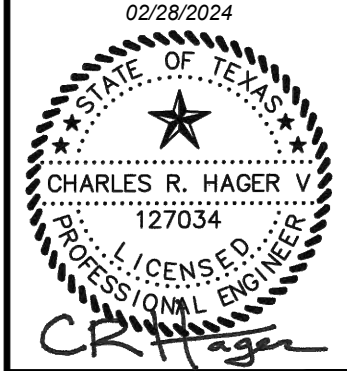
**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
SSL B12 & SSL B18 & SSL B8 -
PLAN & PROFILE**

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	REVISIONS	DESCRIPTION	DATE	BY



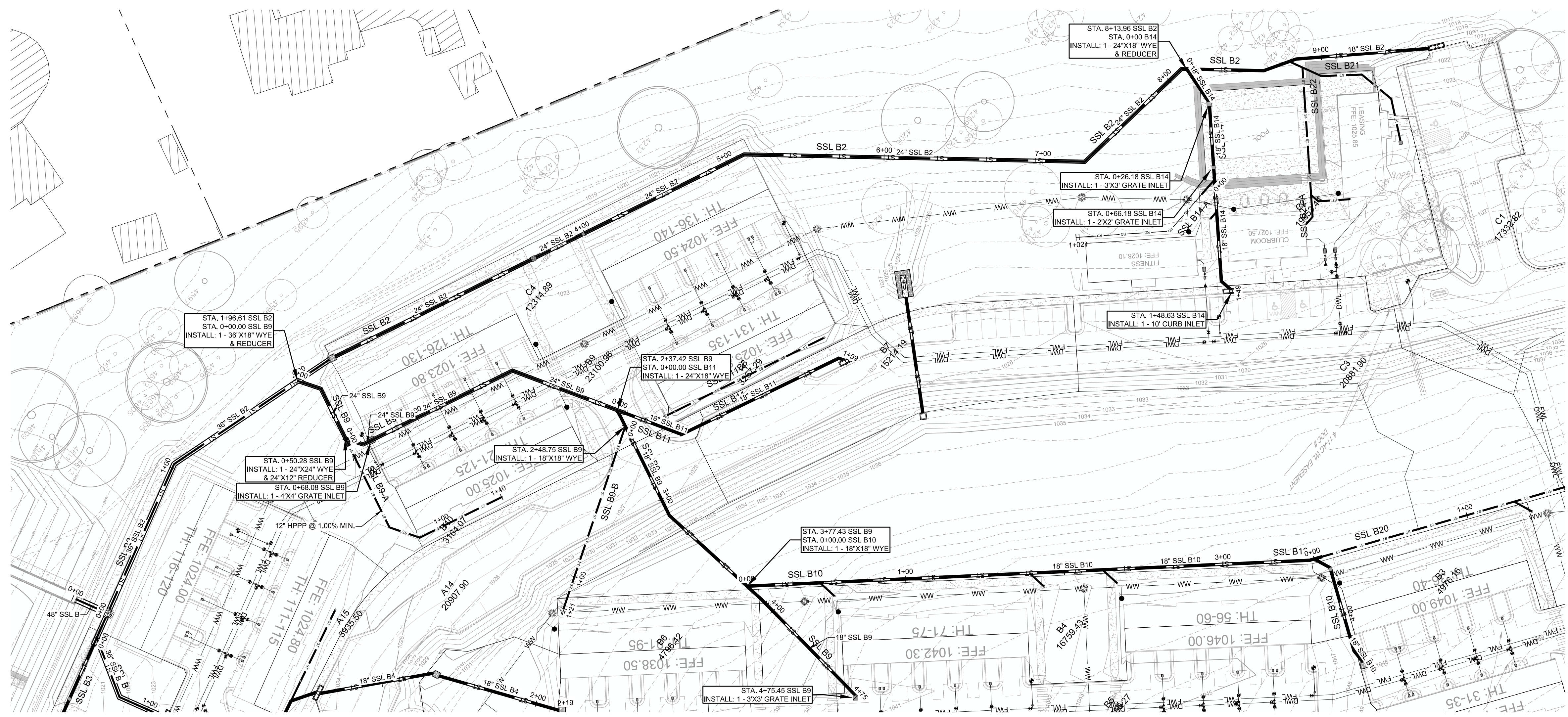
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DRAWN BY:
CHECKED BY:
DRAWING NAME: A116-1007-ST102-000



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

JOB NUMBER:
A116-1007
ST10
SHEET NO.
60
OF 107 SHEETS

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Last Modified: Feb 28, 2024 11:19 AM
Plot Date/Time: Mar 01, 2024 14:00:07



LEGEND

PROPOSED	EXISTING	DESCRIPTION
	ST	STORM SEWER LINE
	WW	WASTEWATER LINE
	WL	WATER SERVICE
	WL	WATER SERVICE
	⊗	WATER VALVE
	⊙	FIRE HYDRANT
	⊗	WASTEWATER MANHOLE
	⊙	STORMSEWER MANHOLE
	⊗	CURB INLET
	⊙	GRATE INLET
	⊗	1/2" REBAR FOUND (OR AS NOTED)
	⊙	1/2" REBAR WITH CAP FOUND
	⊗	1/2" REBAR WITH CHAPARRAL CAP SET
	⊙	WATER METER
	⊗	UTILITY POLE
	⊙	OVERHEAD UTILITIES
	⊗	ELEC. UTILITY
	⊙	ELEC. MANHOLE
	⊗	LIGHT POLE
	⊙	TELEPHONE UTILITY
	⊗	UNDERGROUND FIBER OPTIC MARKER
	⊙	TELEPHONE MANHOLE
	⊗	UNDERGROUND GAS MARKER
	⊙	CHAIN LINK FENCE

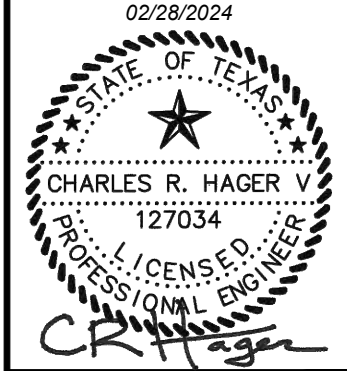
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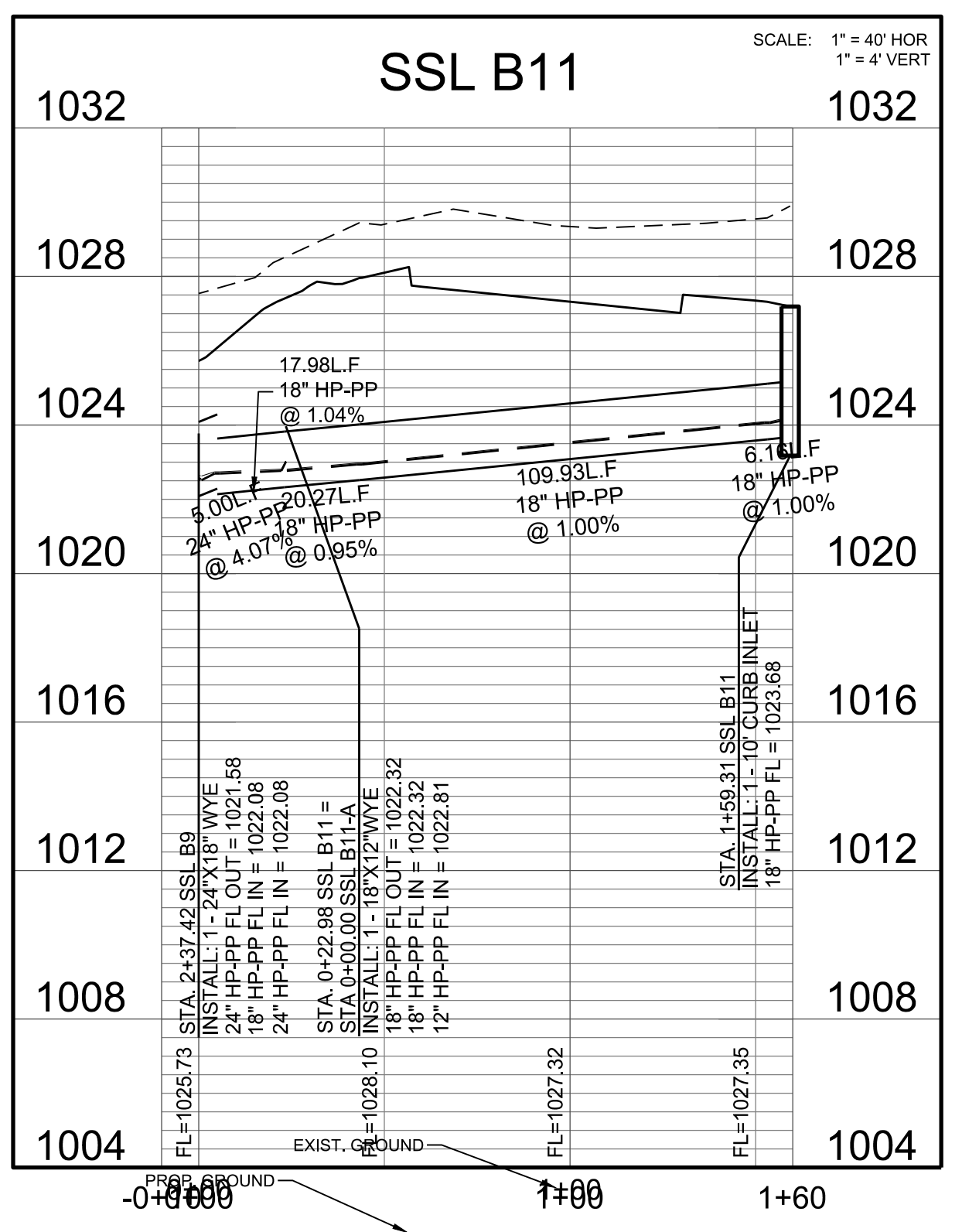
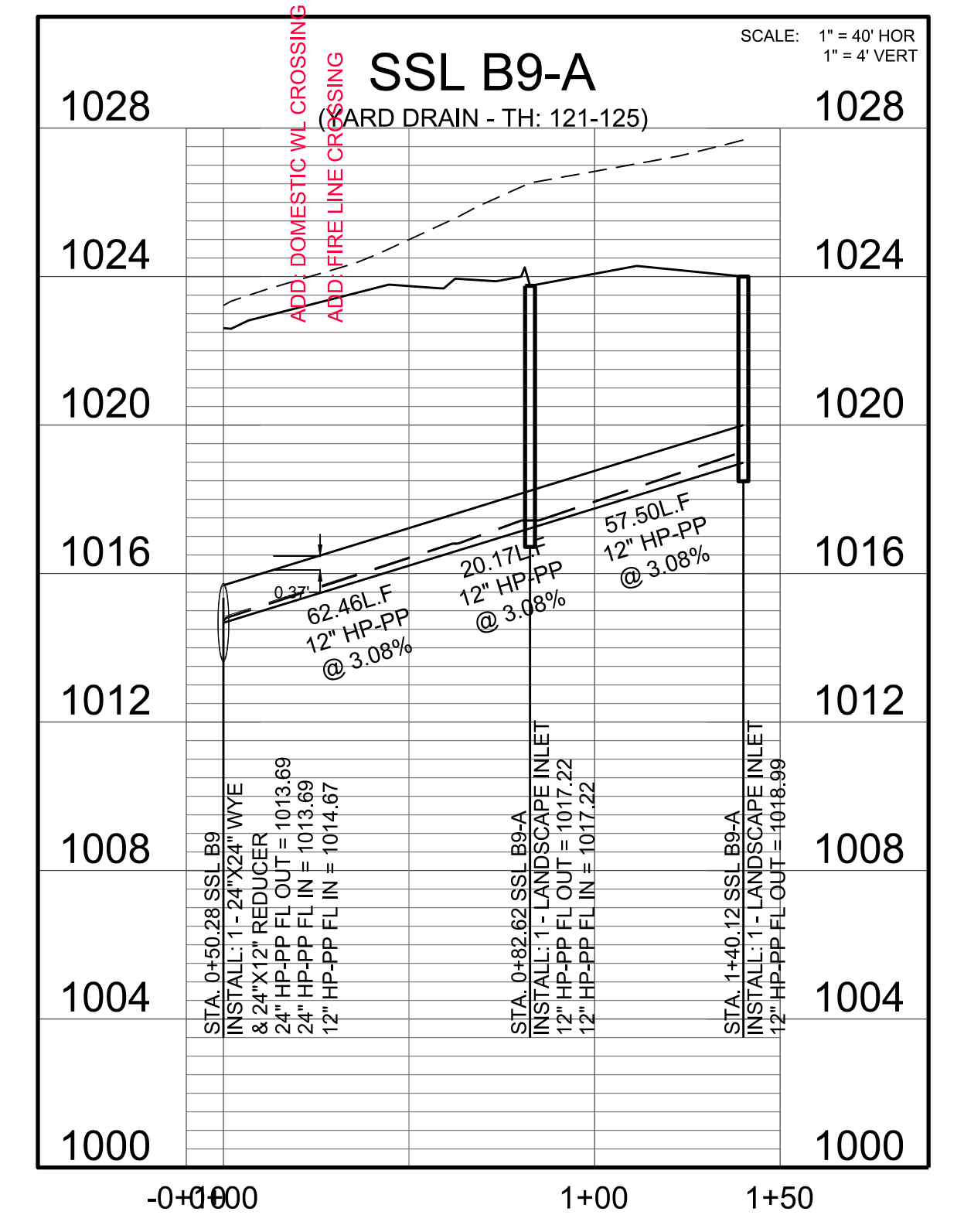
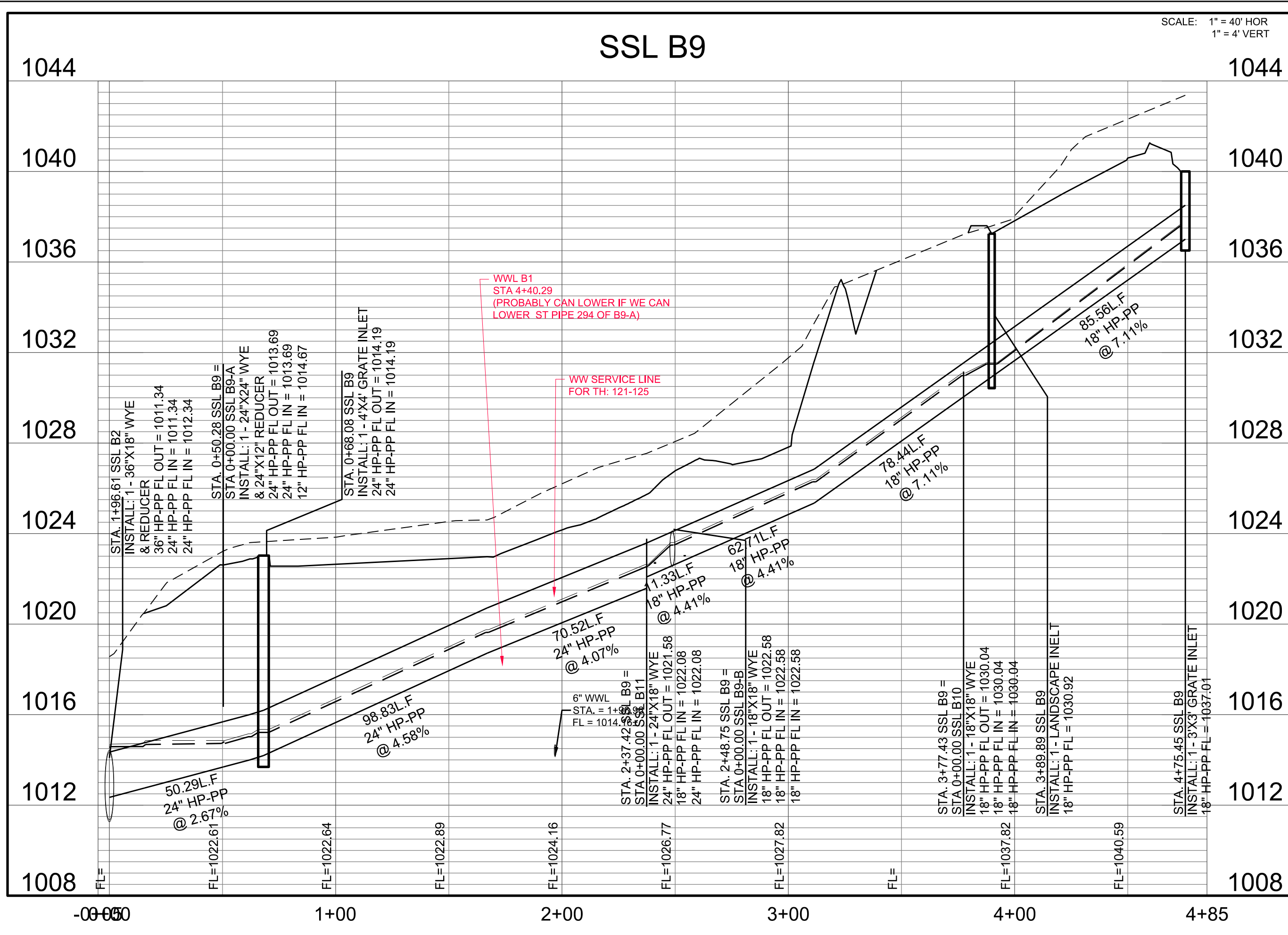
**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
SSL B9 & SSL B9-A & SSL B11 -
PLAN & PROFILE**

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	DATE	BY	DESCRIPTION



DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]



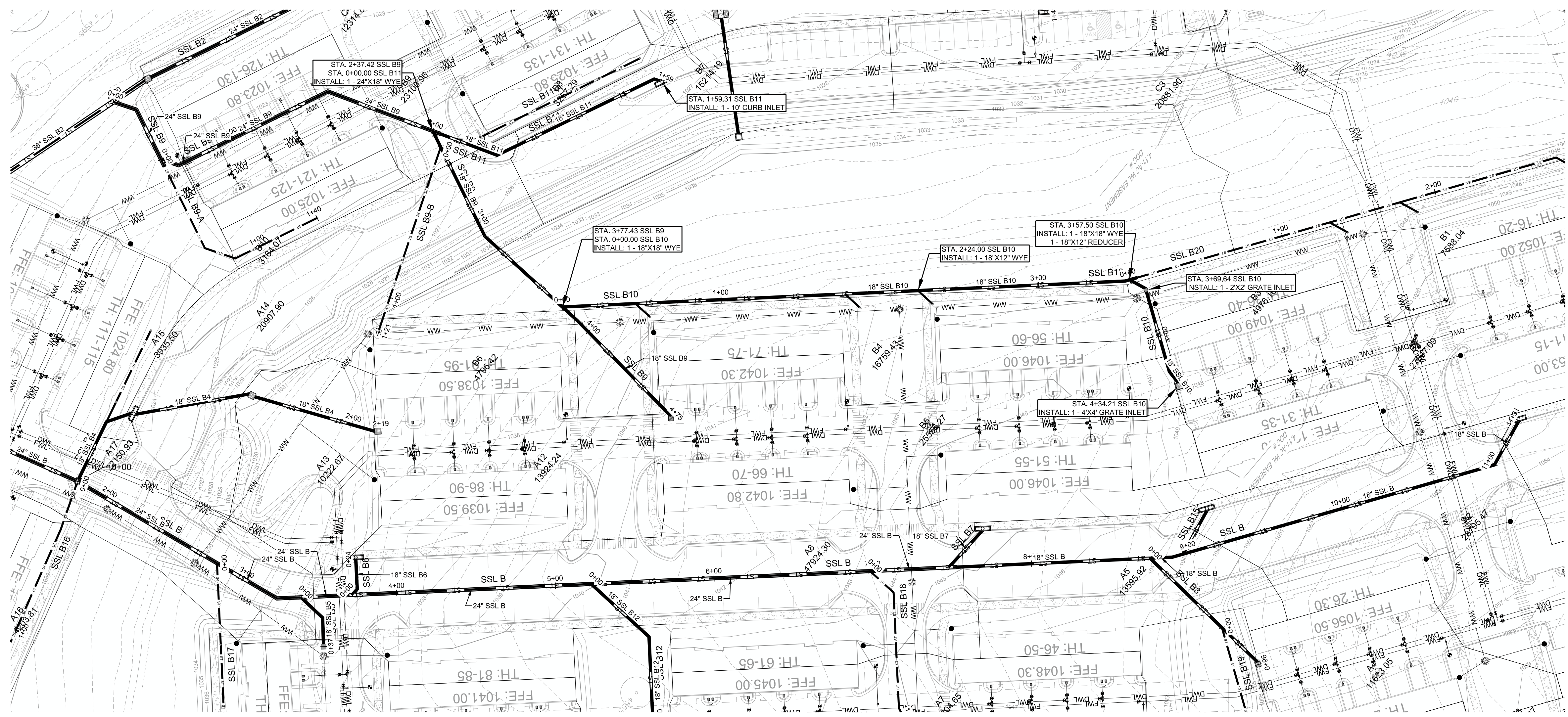
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 Plot Date/Time: Mar 01, 2024, 14:10:18

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

JOB NUMBER:
A116-1007

ST12

SHEET NO.
62
OF 107 SHEETS



LEGEND

PROPOSED	EXISTING	DESCRIPTION
—	ST	STORM SEWER LINE
—	WW	WASTEWATER LINE
—	WL	WATER SERVICE
—	—	WATER SERVICE
—	—	WATER VALVE
—	—	FIRE HYDRANT
—	—	WASTEWATER MANHOLE
—	—	STORMSEWER MANHOLE
—	—	CURB INLET
—	—	GRATE INLET
—	—	1/2" REBAR FOUND (OR AS NOTED)
—	—	1/2" REBAR WITH CAP FOUND
—	—	1/2" REBAR WITH CHAPARRAL CAP SET
—	—	WATER METER
—	—	UTILITY POLE
—	—	OVERHEAD UTILITIES
—	—	ELEC. UTILITY
—	—	ELEC. MANHOLE
—	—	LIGHT POLE
—	—	TELEPHONE UTILITY
—	—	UNDERGROUND FIBER OPTIC MARKER
—	—	TELEPHONE MANHOLE
—	—	UNDERGROUND GAS MARKER
—	—	CHAIN LINK FENCE

- NOTES:**
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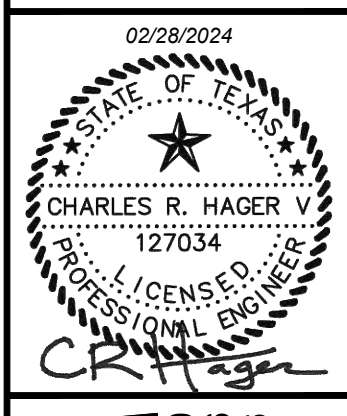


**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS**

SSL B10 & SSL B20 - PLAN & PROFILE

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	REVISIONS	DESCRIPTION	DATE



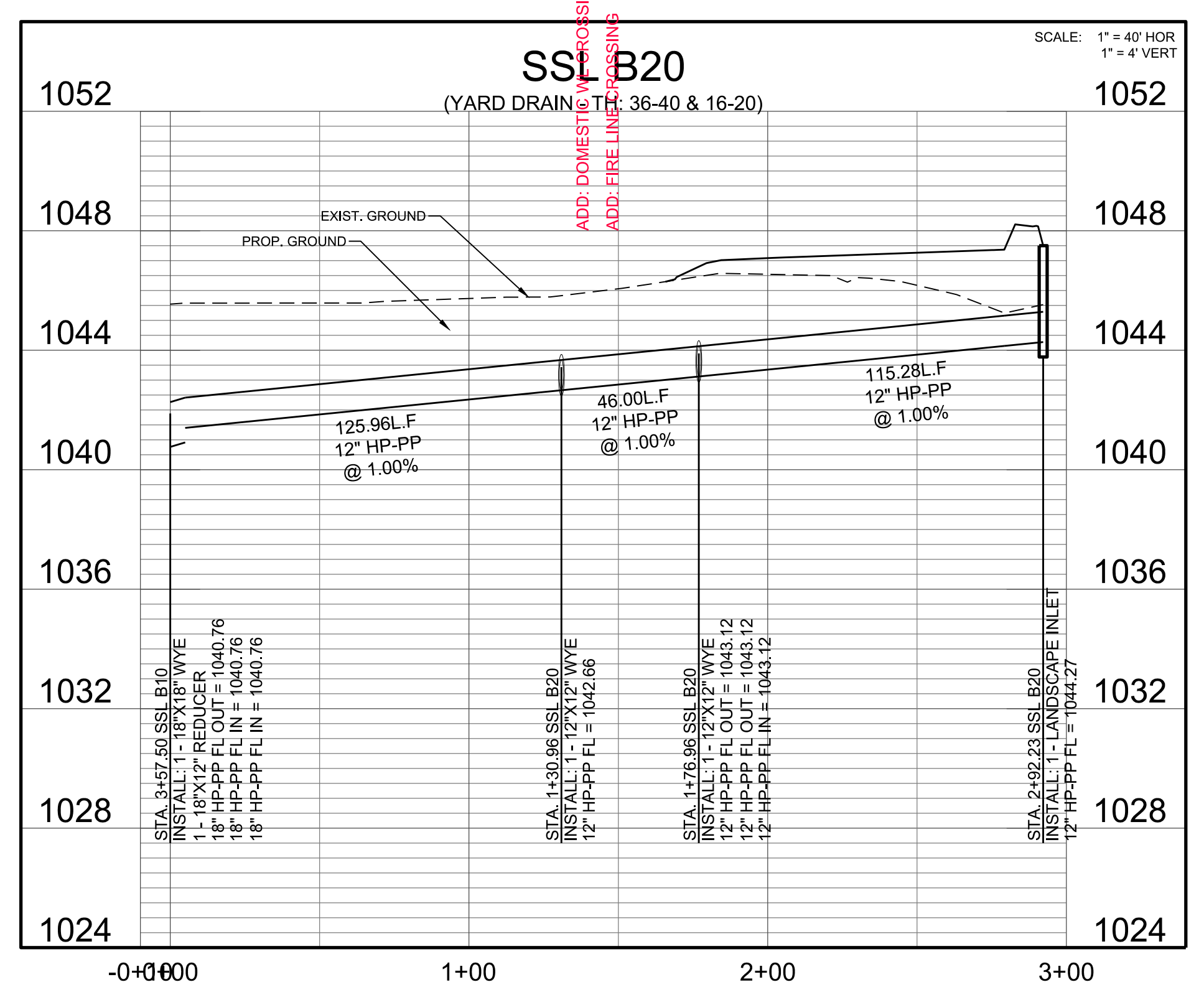
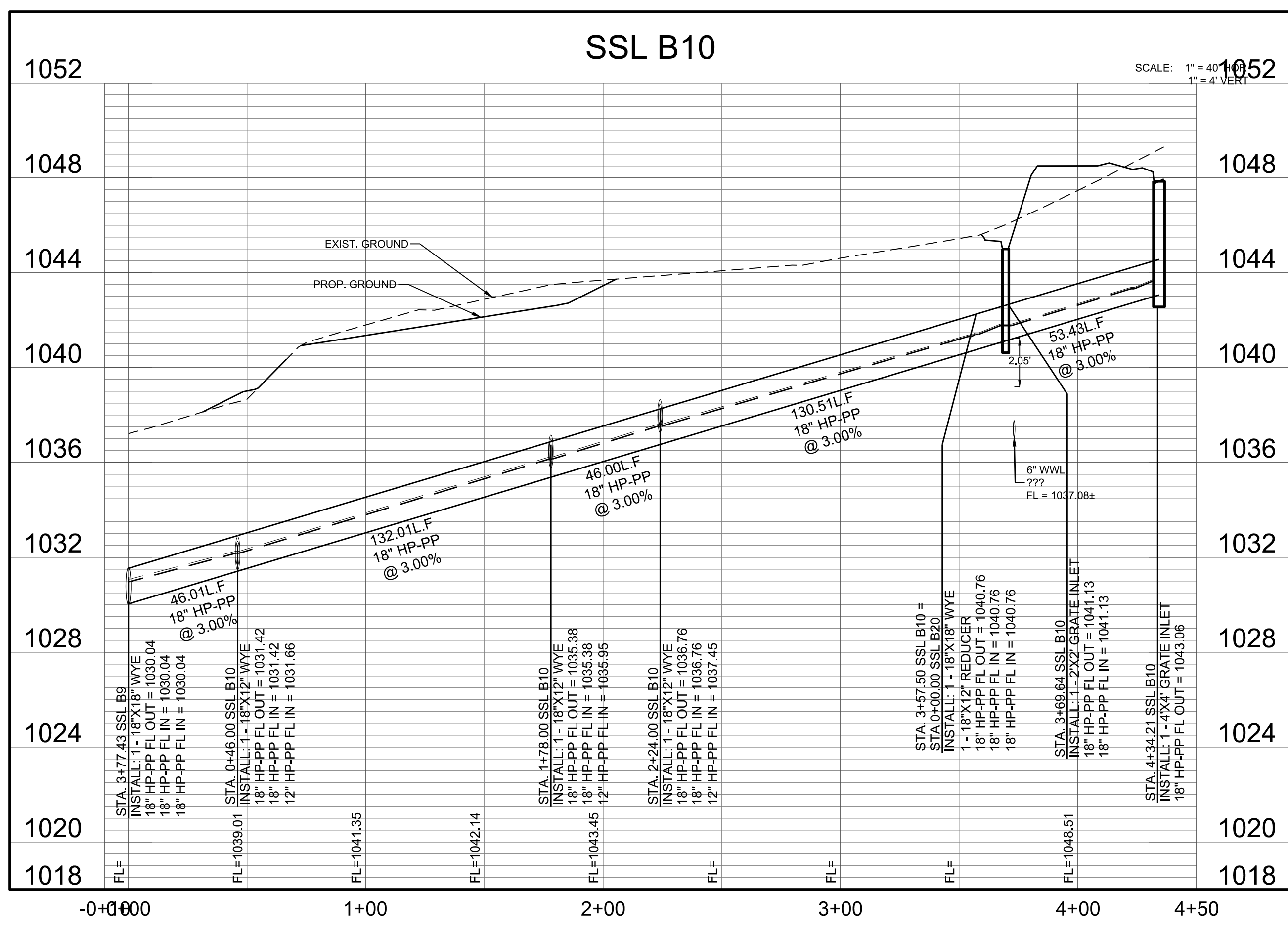
LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 FRN-F-1386

JOB NUMBER:
A116-1007

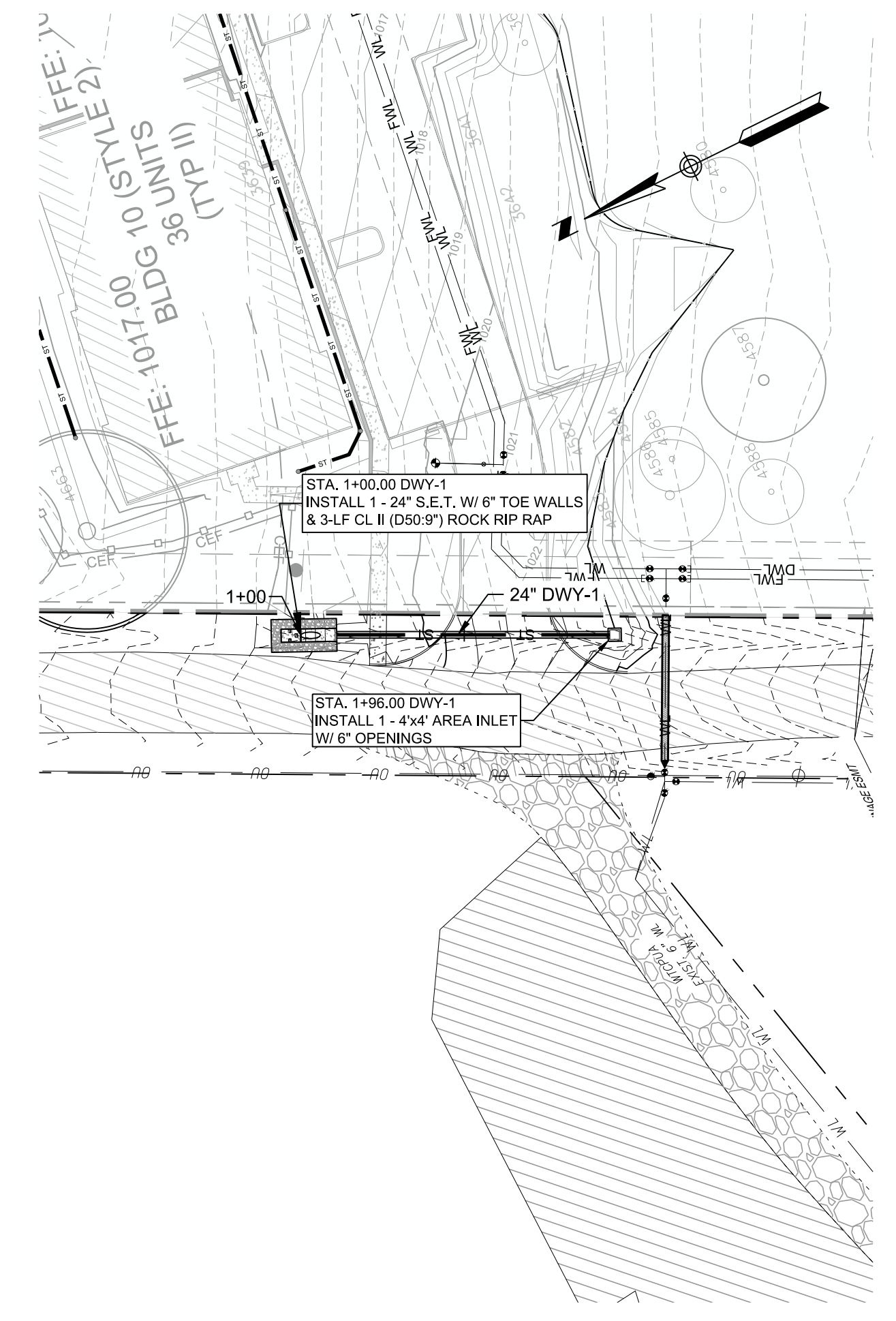
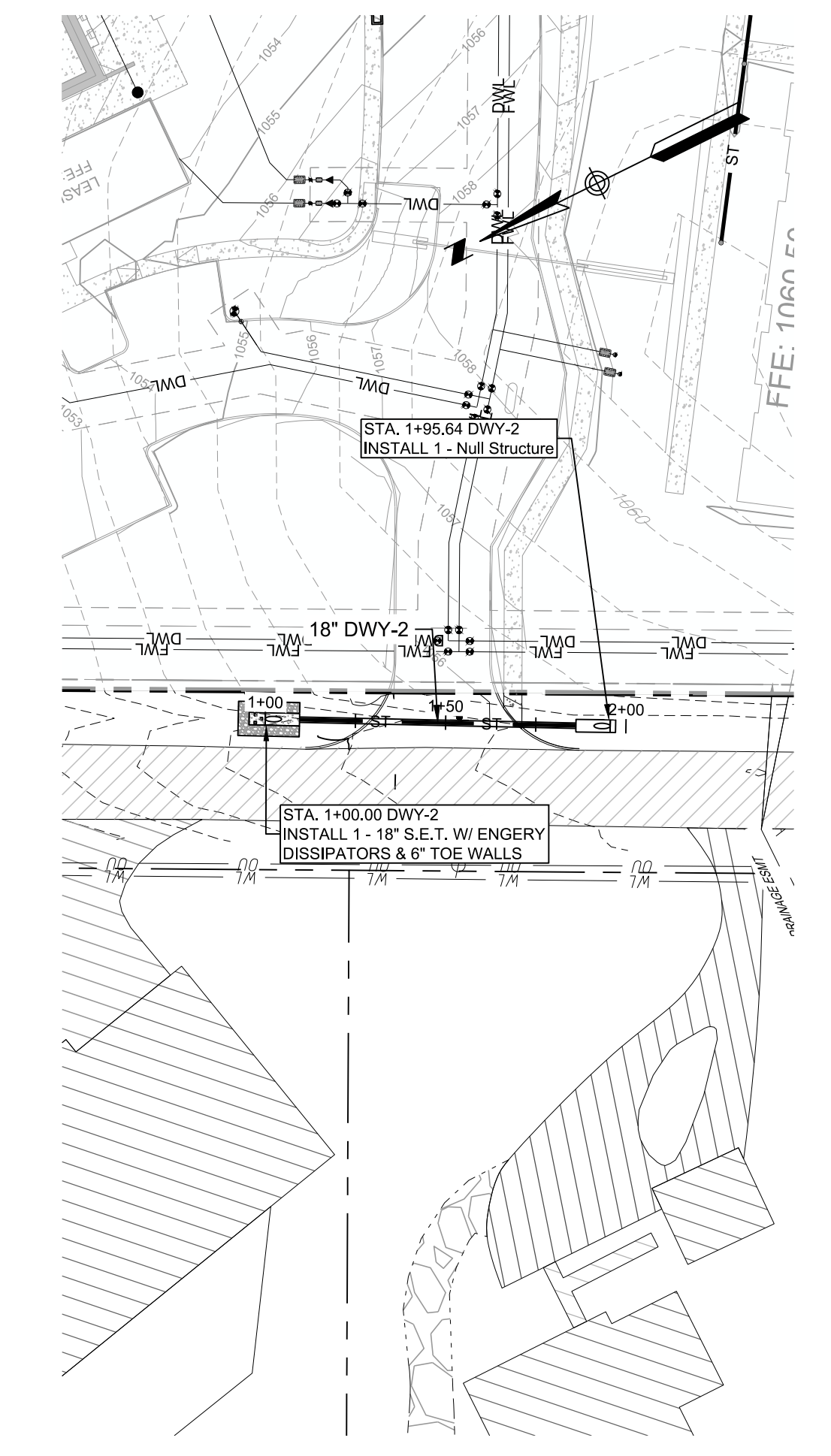
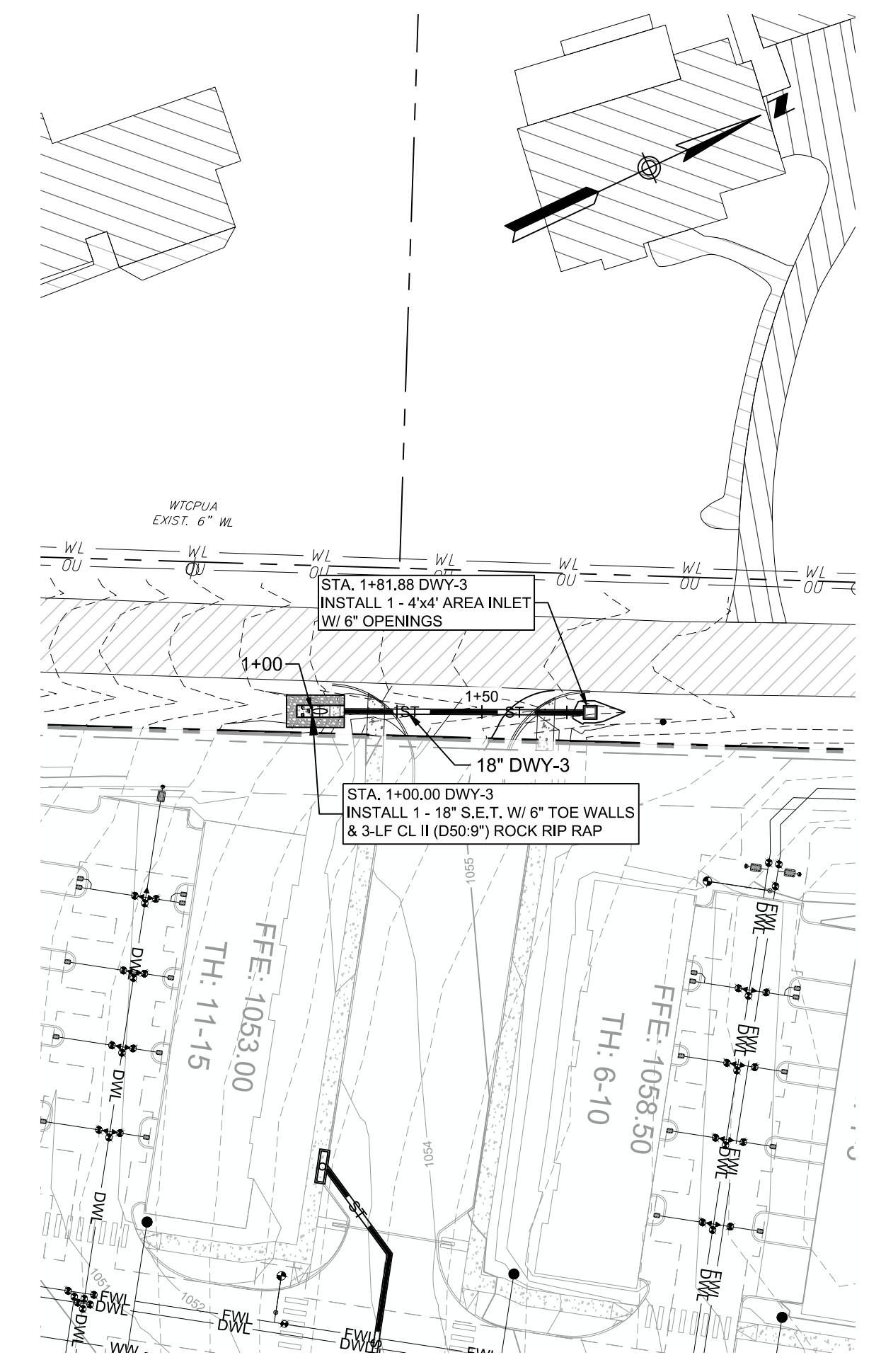
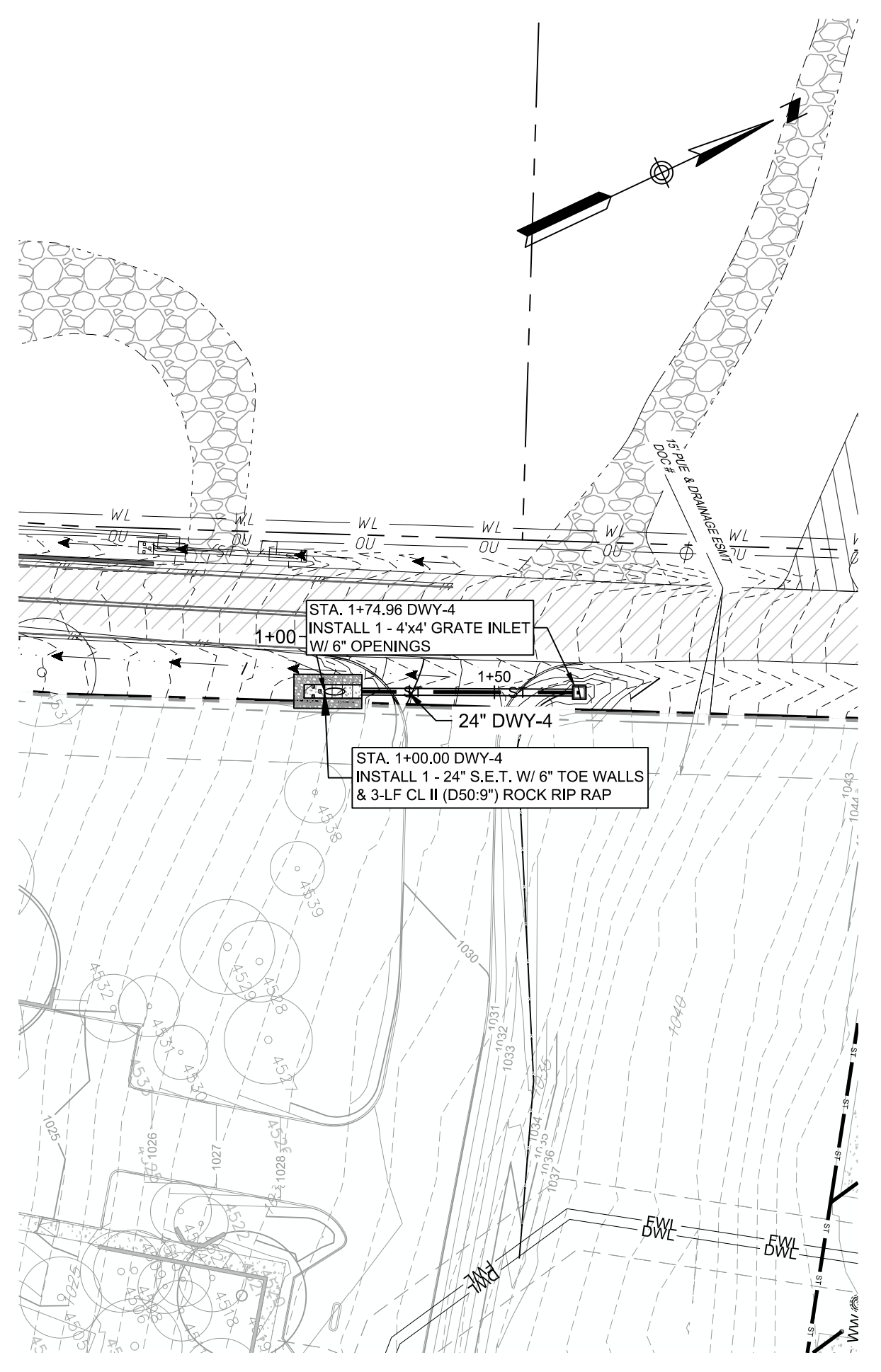
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SHEET NO.
63

OF 107 SHEETS



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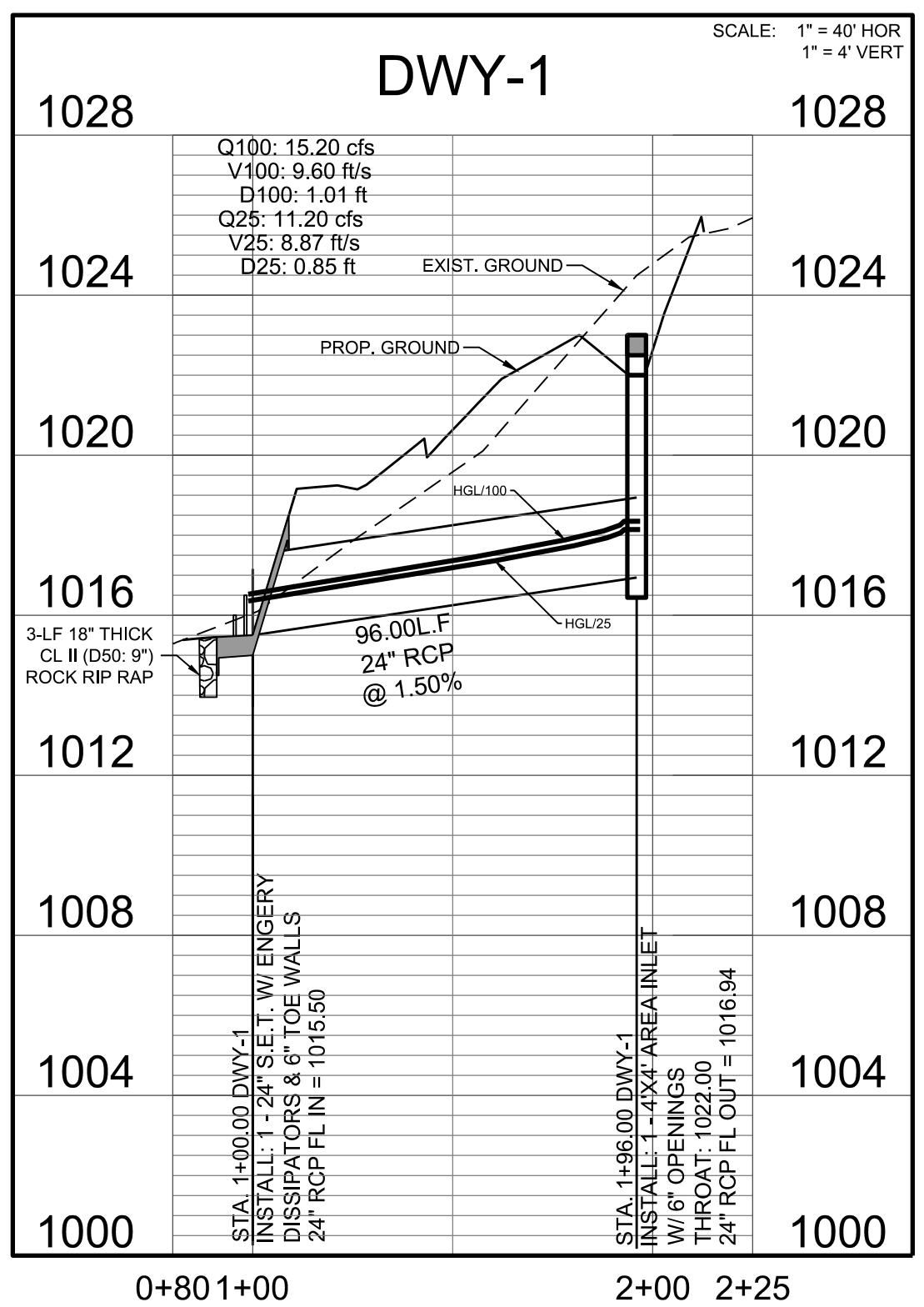
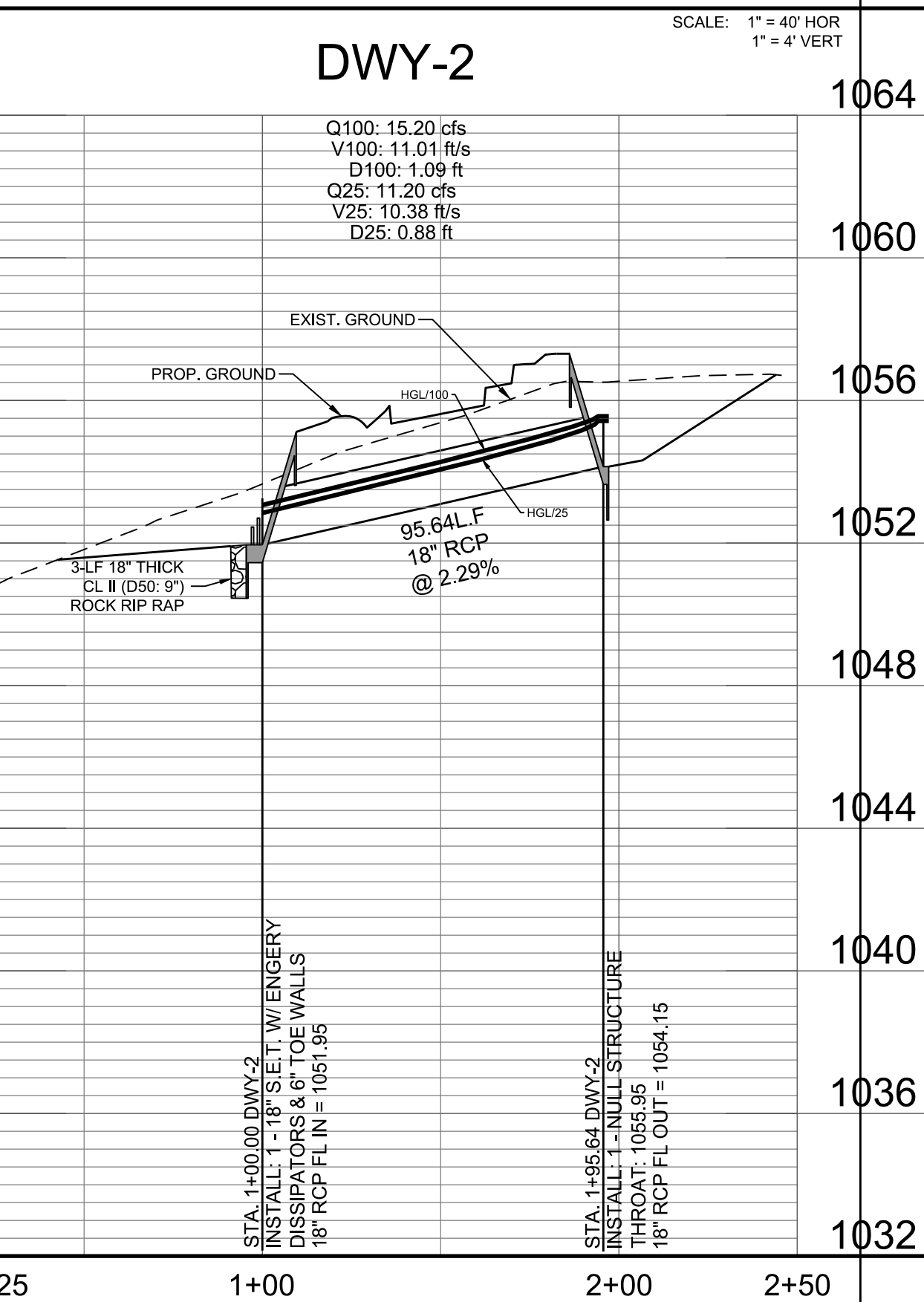
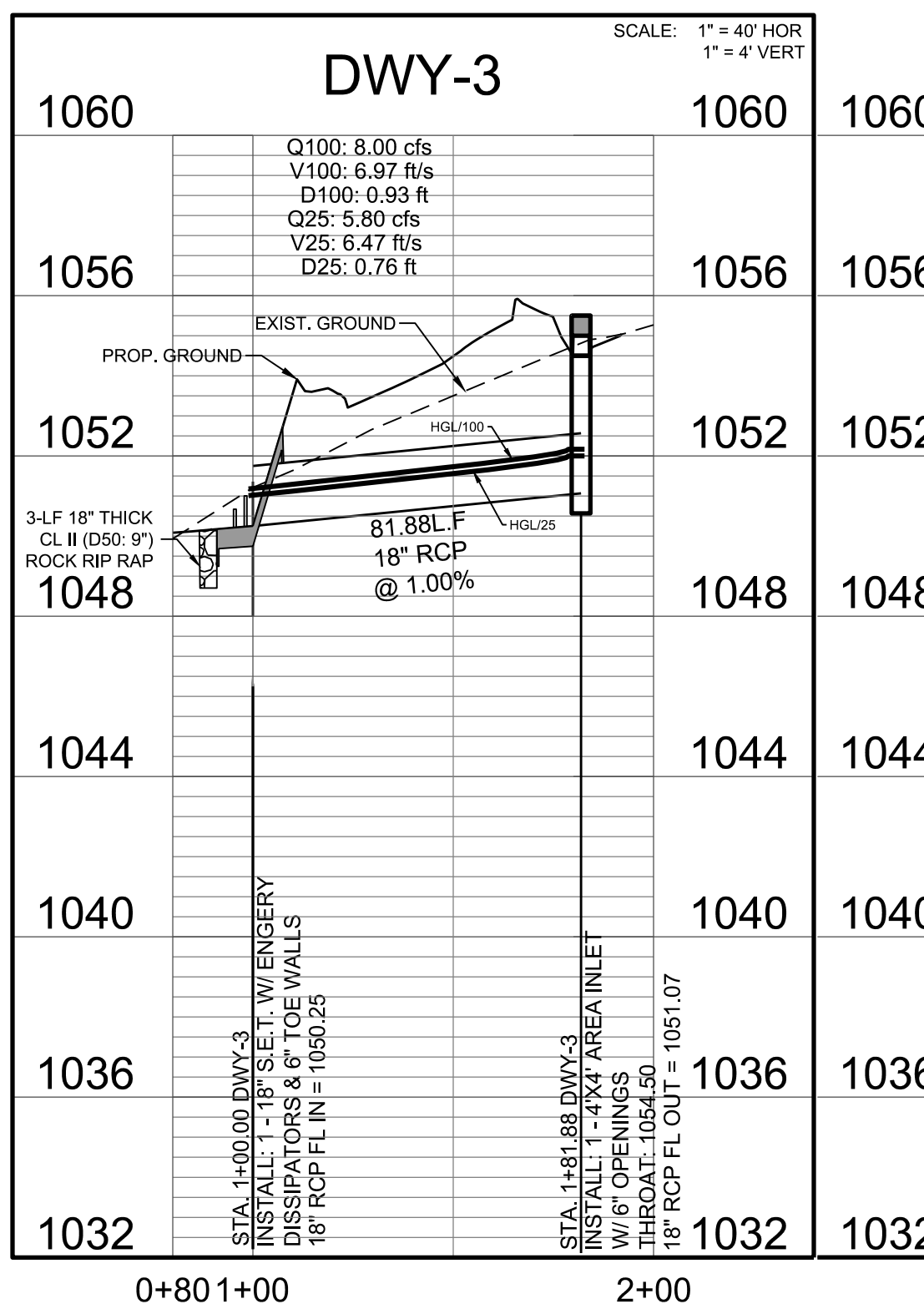
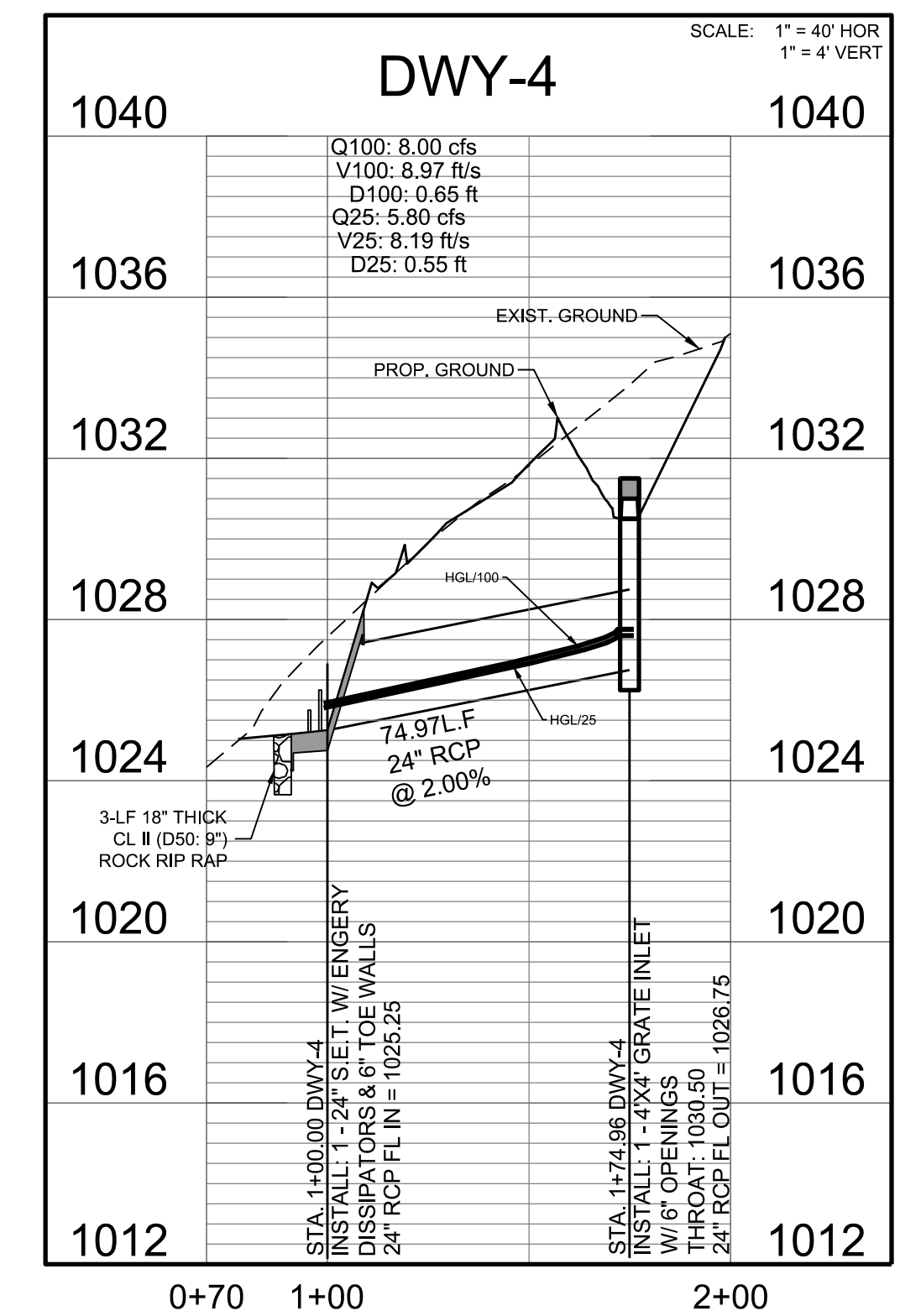


LEGEND

PROPOSED	EXISTING	DESCRIPTION
—ST—	—ST—	STORM SEWER LINE
—WW—	—WW—	WASTEWATER LINE
—WL—	—WL—	WATER SERVICE
—WV—	—WV—	WATER VALVE
—FH—	—FH—	FIRE HYDRANT
—WMH—	—WMH—	WASTEWATER MANHOLE
—SMH—	—SMH—	STORMSEWER MANHOLE
—CI—	—CI—	CURB INLET
—GI—	—GI—	GRATE INLET
●	●	1/2" REBAR FOUND (OR AS NOTED)
●	●	1/2" REBAR WITH CAP FOUND
●	●	1/2" REBAR WITH CHAPARRAL CAP SET
□	□	WATER METER
□	□	UTILITY POLE
—OU—	—OU—	OVERHEAD UTILITIES
□	□	ELEC. UTILITY
□	□	ELEC. MANHOLE
□	□	LIGHT POLE
□	□	TELEPHONE UTILITY
□	□	UNDERGROUND FIBER OPTIC MARKER
□	□	TELEPHONE MANHOLE
□	□	UNDERGROUND GAS MARKER
□	□	CHAIN LINK FENCE

- NOTES:**
- CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO FILL AND COMPACT TO 95% DENSITY IN FILL SECTIONS OVER STORM SEWER LINES.
 - ALL DRIVEWAY CULVERT STORM SEWER PIPE SHALL BE RCP AS SHOWN ON PROFILE.
 - ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATIONS.
 - ALL BENDS AND FITTINGS SHALL BE PREFABRICATED BY MANUFACTURER. NO FIELD FABRICATION OF FITTINGS IS ALLOWED.

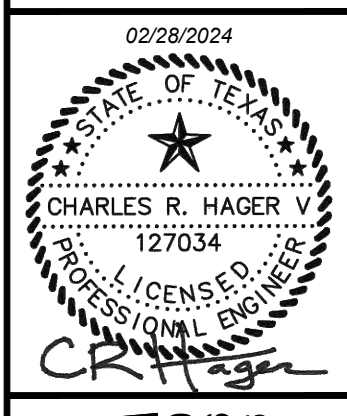
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THIS VIEWPORT WILL BE ADJUSTED
ONCE THE DESIGN IS FINALIZED.



LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



JOB NUMBER: A116-1007
SP01
SHEET NO. 64 OF 107 SHEETS



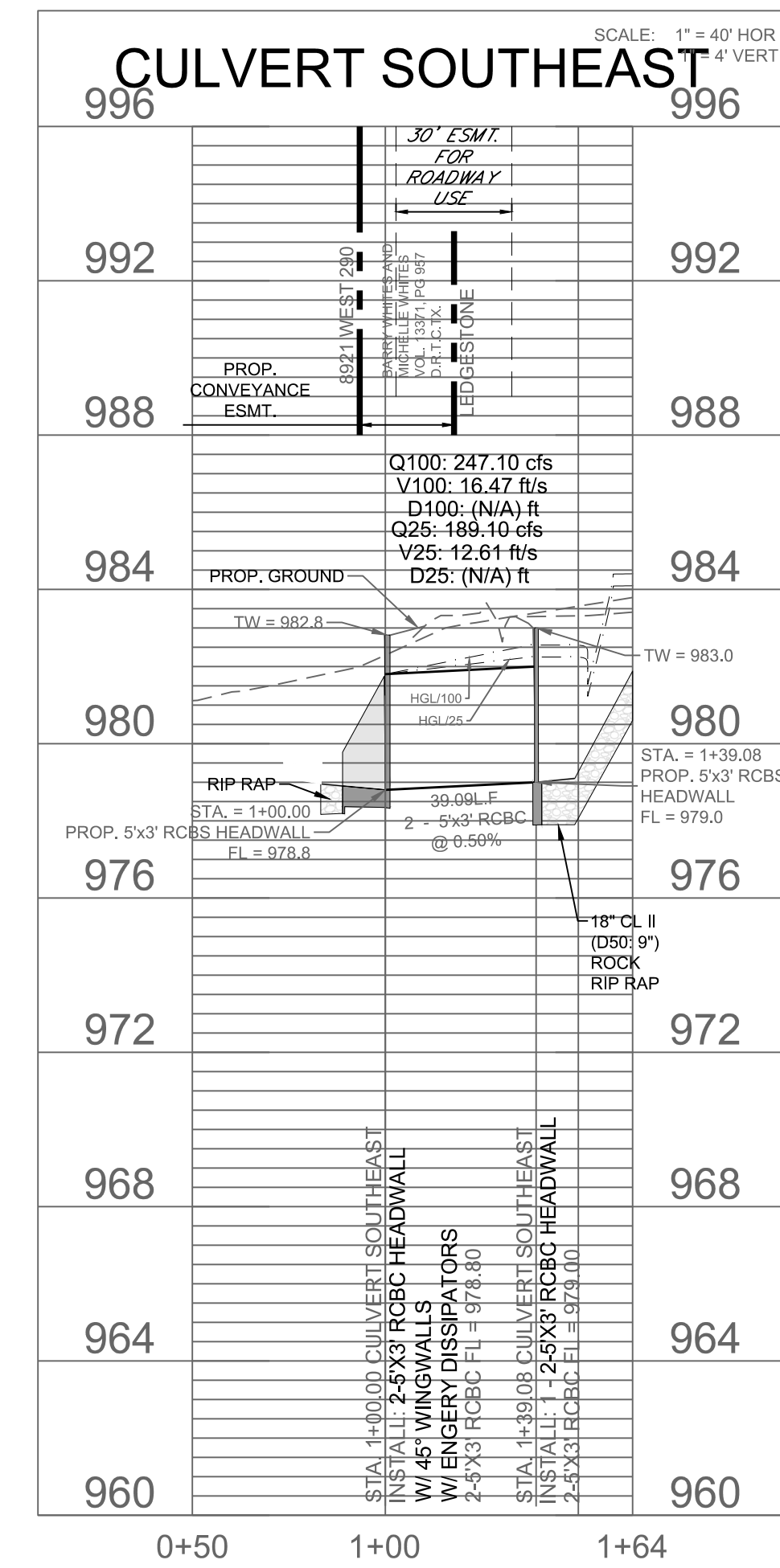
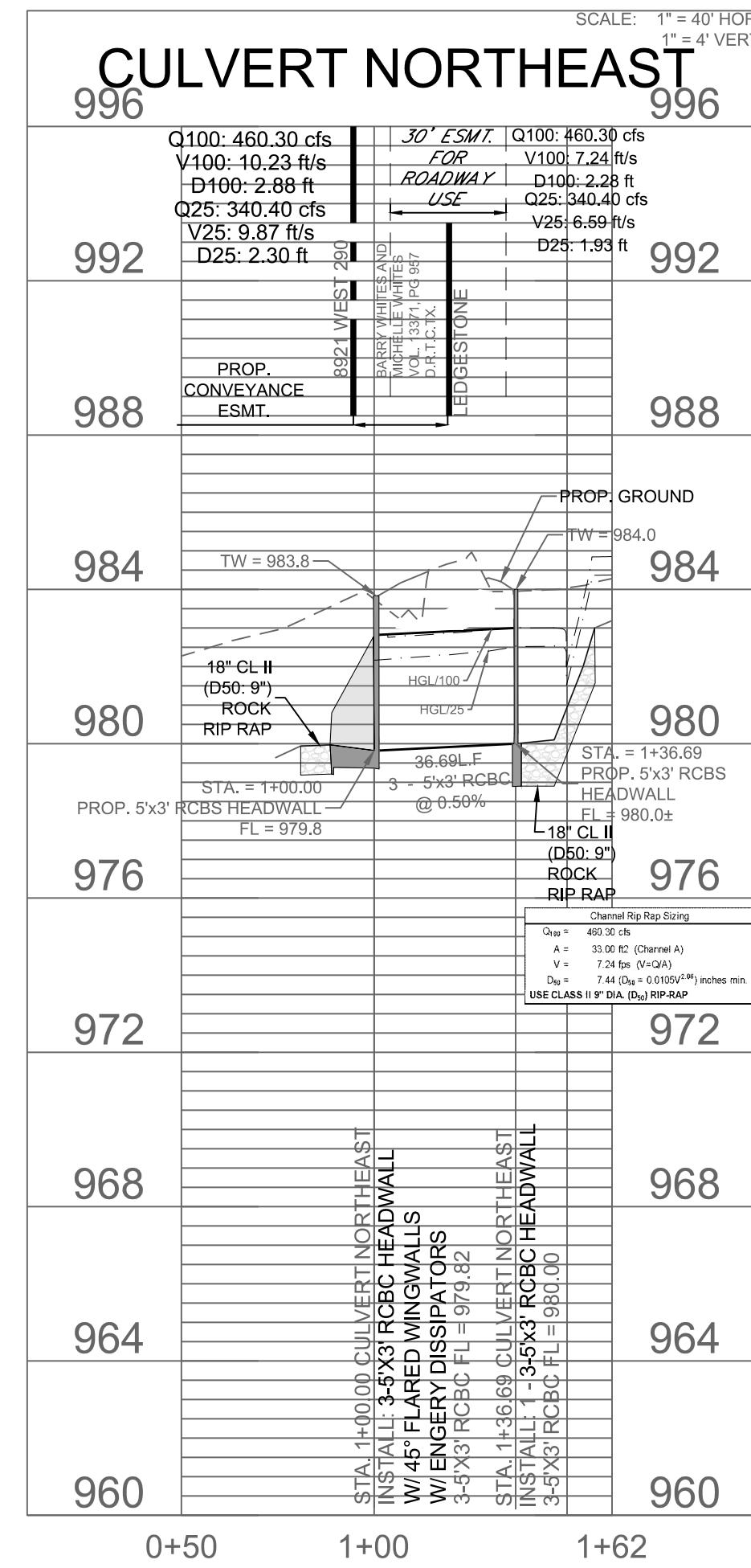
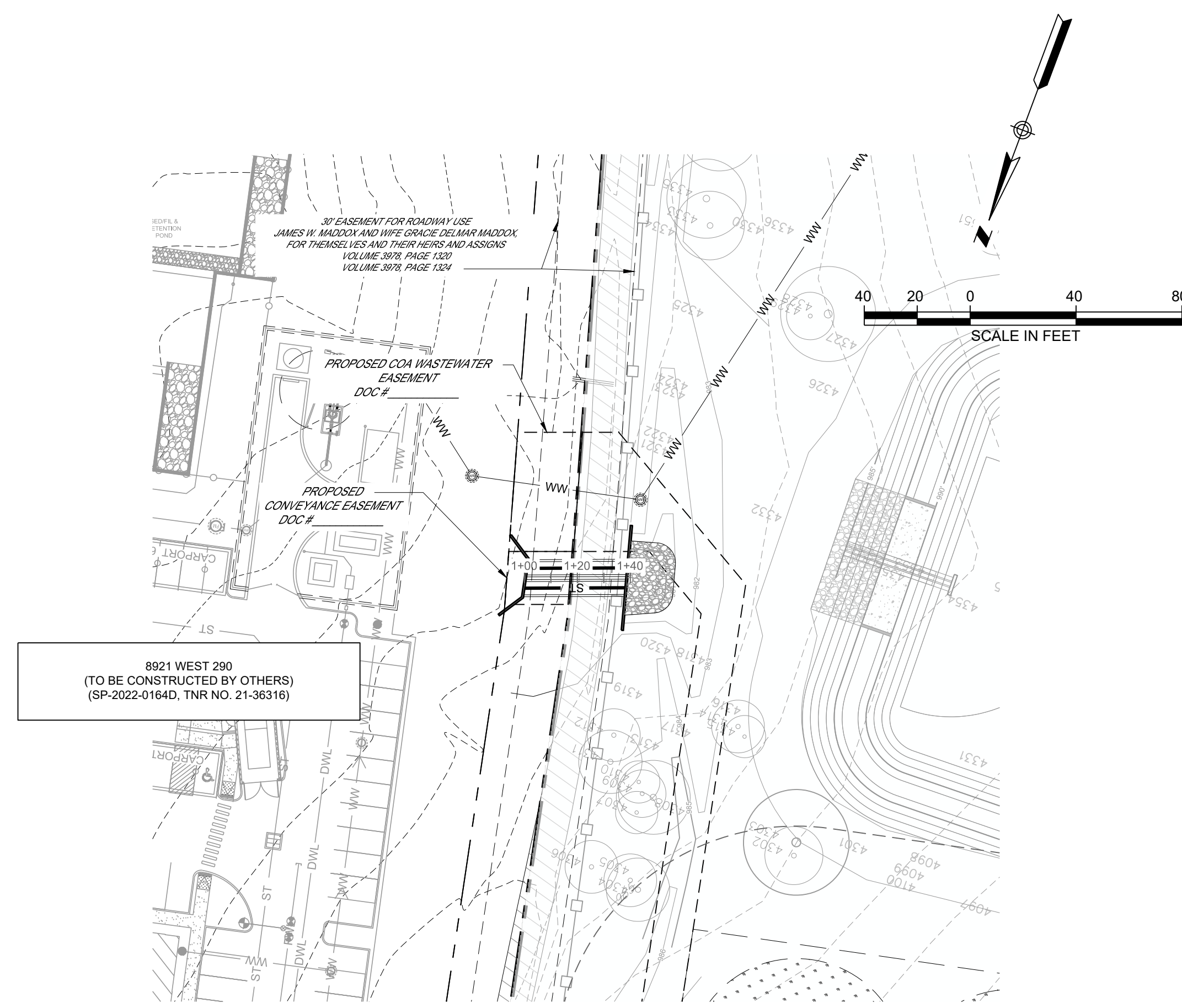
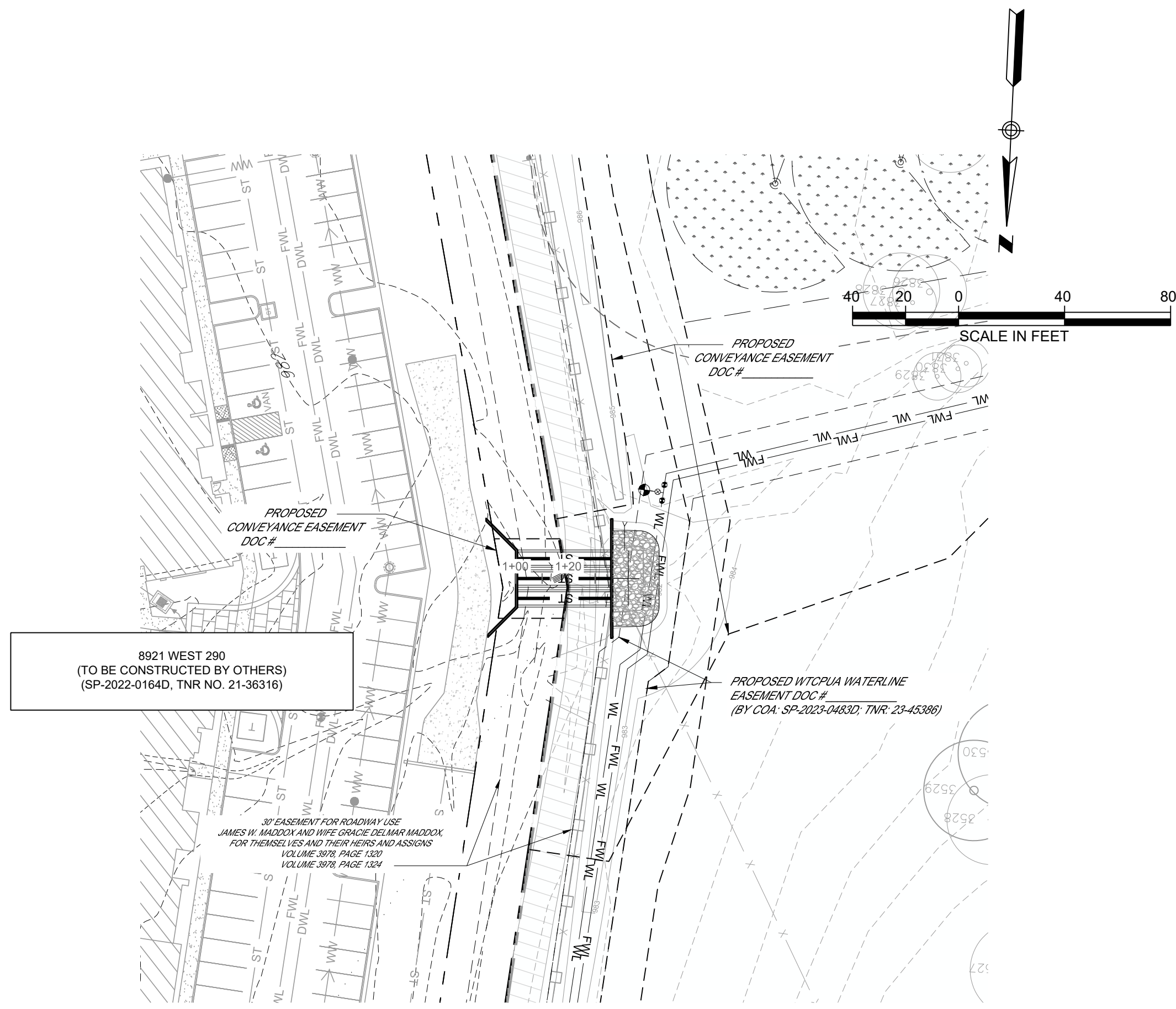
LJA Engineering, Inc.
7500 Riata Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386

LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
PUBLIC STORM SEWER DRIVEWAY
CULVERTS

9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

DATE: 02/28/2024
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME: A116-1007-SP01-CULV.dwg

REVISIONS
NO. DESCRIPTION
DATE BY



LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

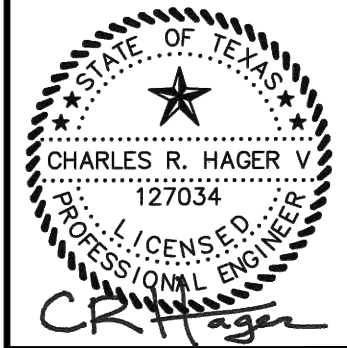


OF 107 SHEETS

LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
PRIVATE STORM SEWER DRIVEWAY
CULVERTS

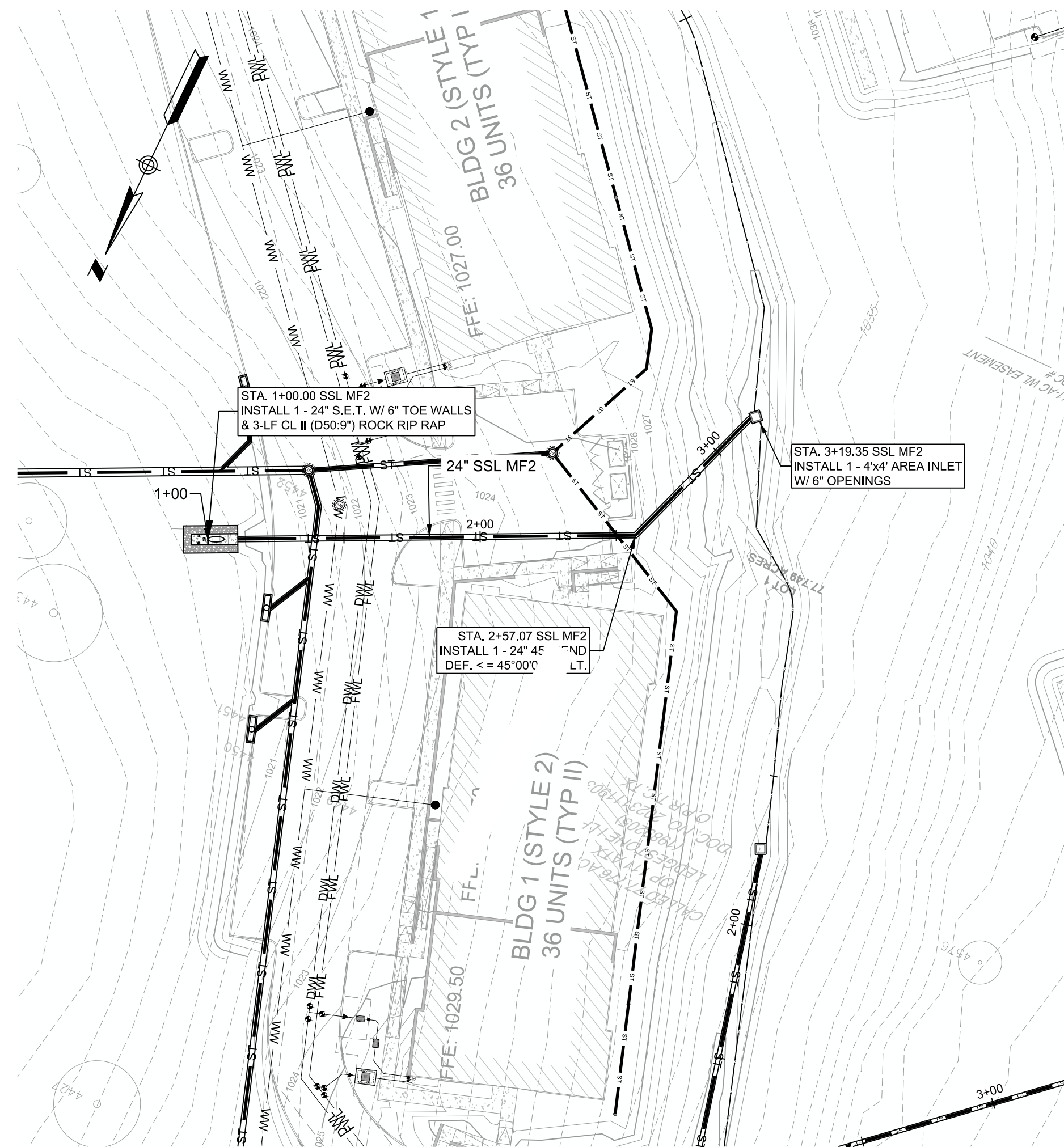
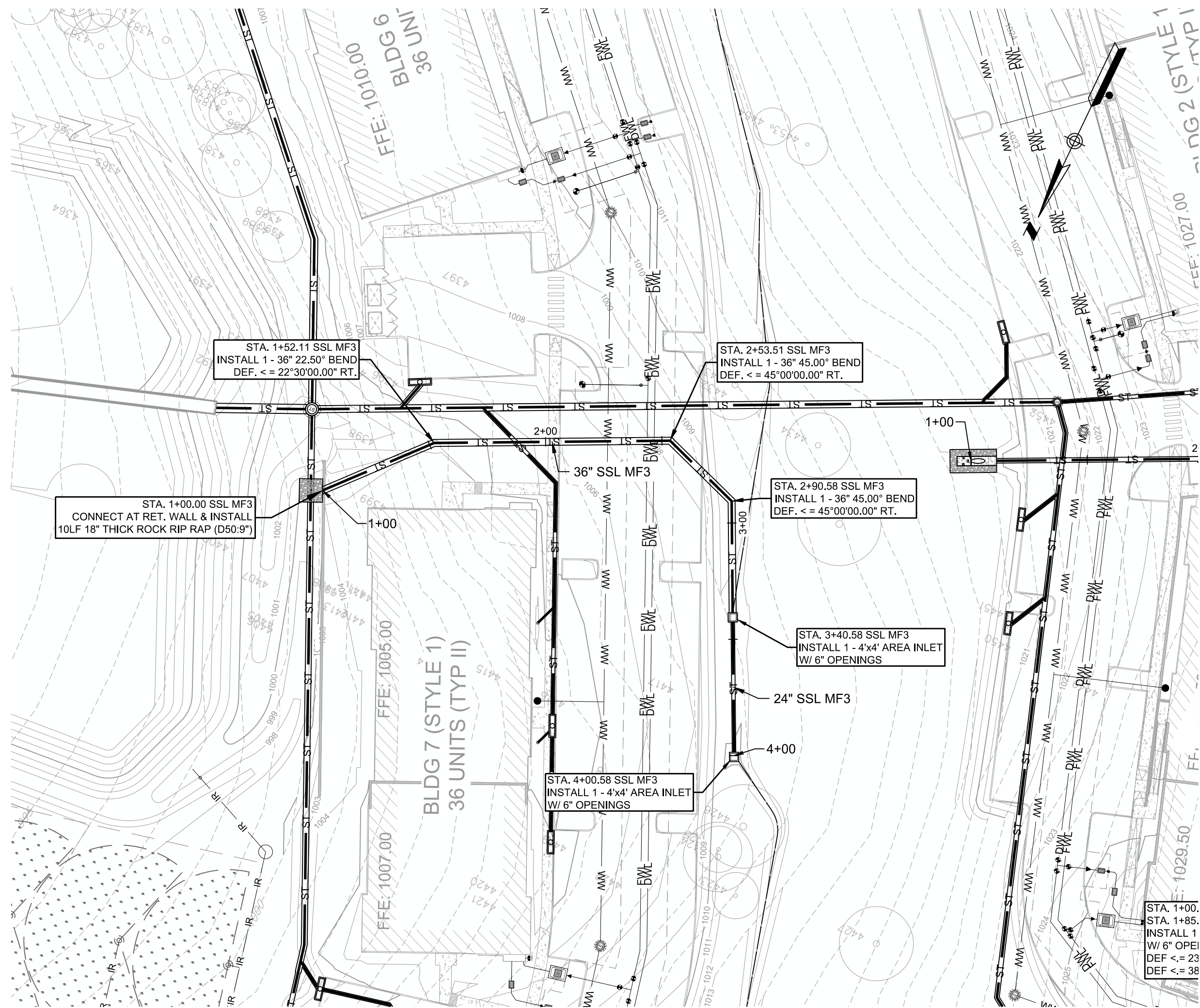
NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 02/28/2024
DESIGNED BY: CHARLES R. HAGER
DRAWN BY: 127034
CHECKED BY: A116-1007-ASTHEAST
DRAWING NAME: CULV.DWG



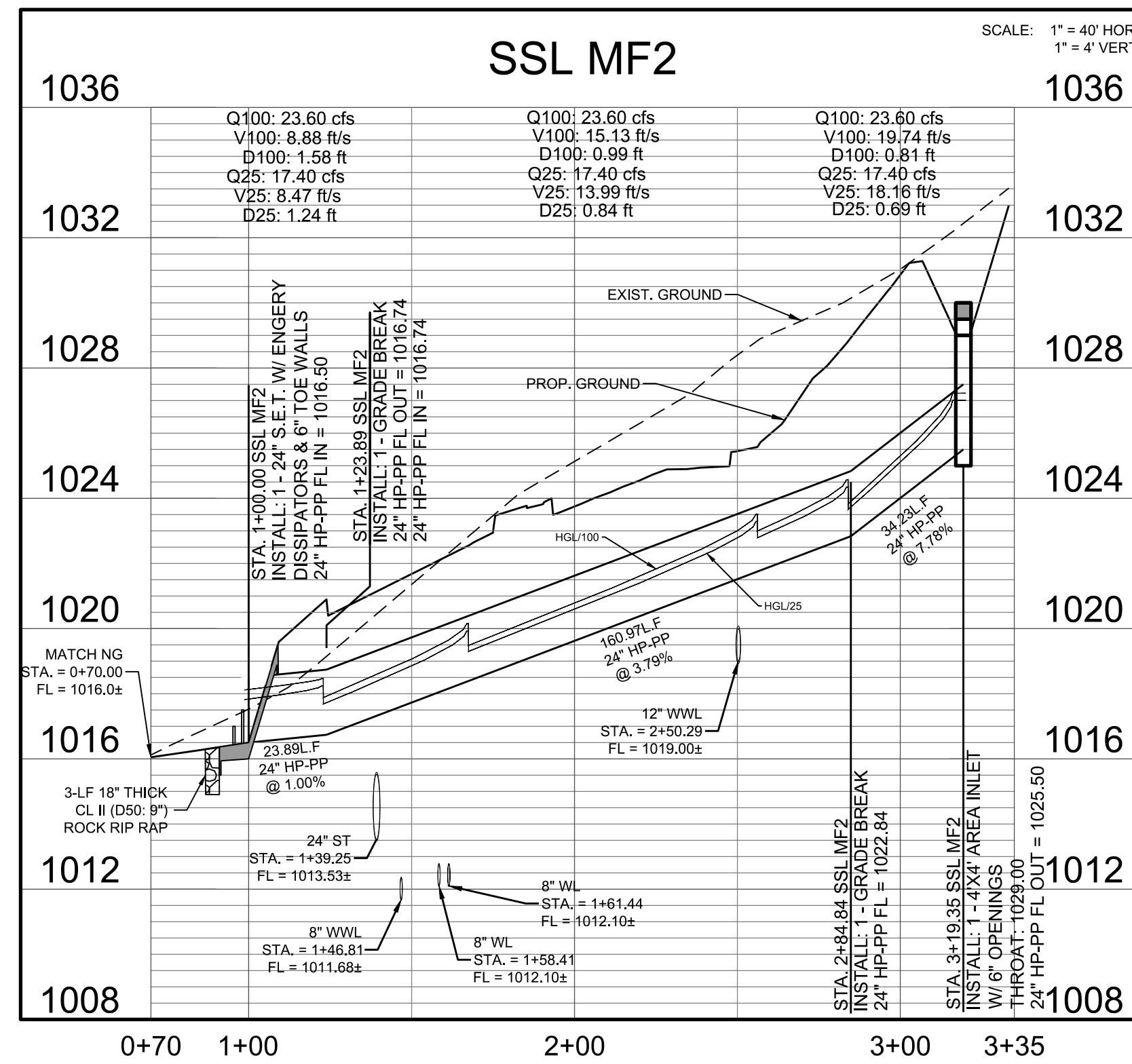
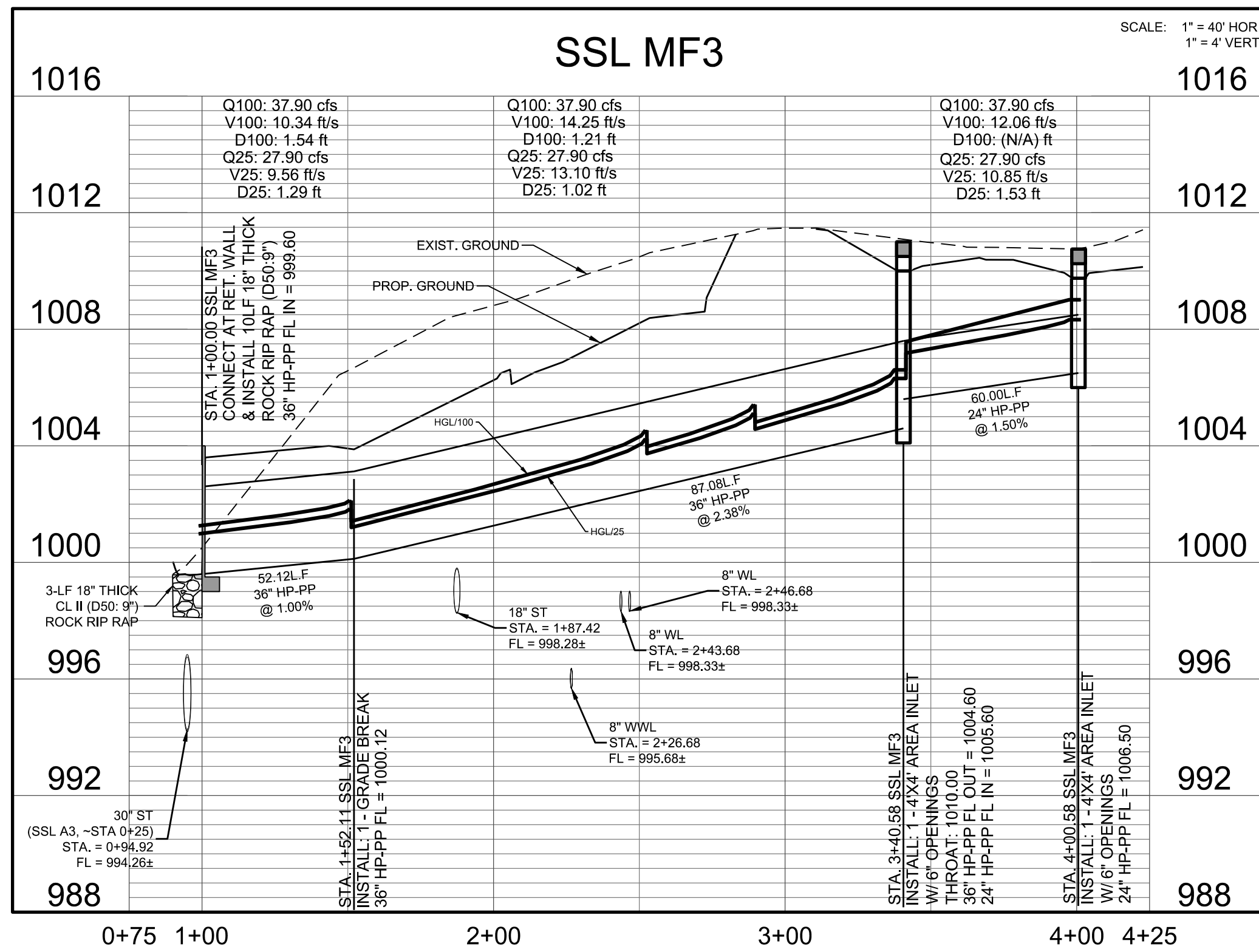
LJA Engineering, Inc.
7500 Riata Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386

JOB NUMBER: A116-1007
ST15
SHEET NO. 65



LEGEND		
PROPOSED	EXISTING	
—ST—	—ST—	STORM SEWER LINE
—WW—	—WW—	WASTEWATER LINE
—WL—	—WL—	WATER SERVICE
—WS—	—WS—	WATER SERVICE
—V—	—V—	WATER VALVE
—FH—	—FH—	FIRE HYDRANT
—WWMH—	—WWMH—	WASTEWATER MANHOLE
—SSMH—	—SSMH—	STORMSEWER MANHOLE
—CI—	—CI—	CURB INLET
—GI—	—GI—	GRATE INLET
●	●	1/2" REBAR FOUND (OR AS NOTED)
●	●	1/2" REBAR WITH CAP FOUND
●	●	1/2" REBAR WITH CHAPARRAL CAP SET
□	□	WATER METER
□	□	UTILITY POLE
—OU—	—OU—	OVERHEAD UTILITIES
□	□	ELEC. UTILITY
□	□	ELEC. MANHOLE
□	□	LIGHT POLE
□	□	TELEPHONE UTILITY
□	□	UNDERGROUND FIBER OPTIC MARKER
□	□	TELEPHONE MANHOLE
□	□	UNDERGROUND GAS MARKER
□	□	CHAIN LINK FENCE

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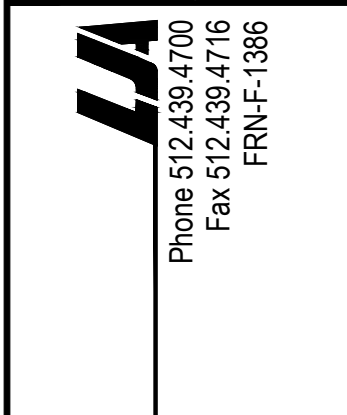
LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



**LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
STORM SEWER PLAN - BYPASS SYSTEM
SHEET 2**

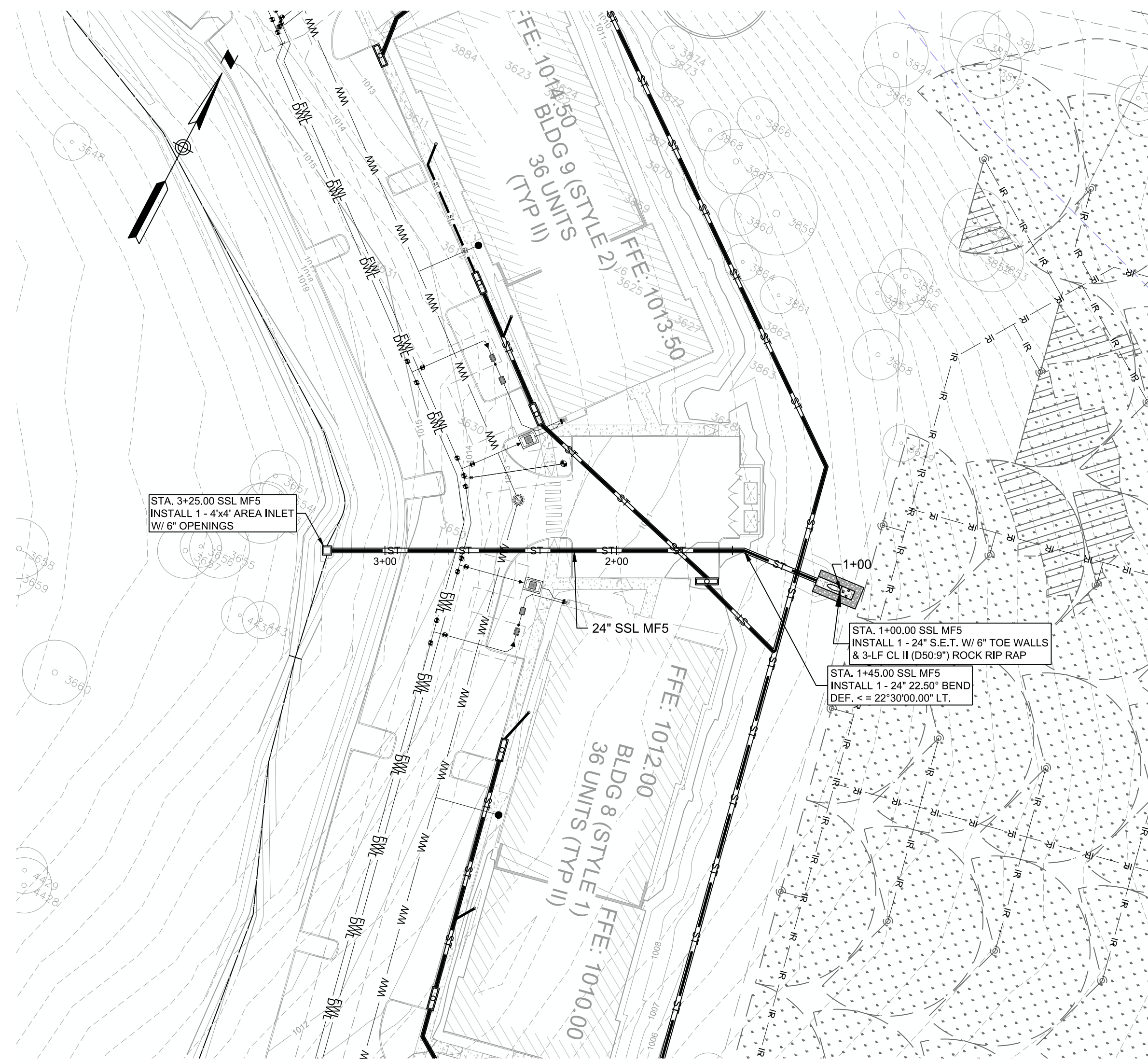
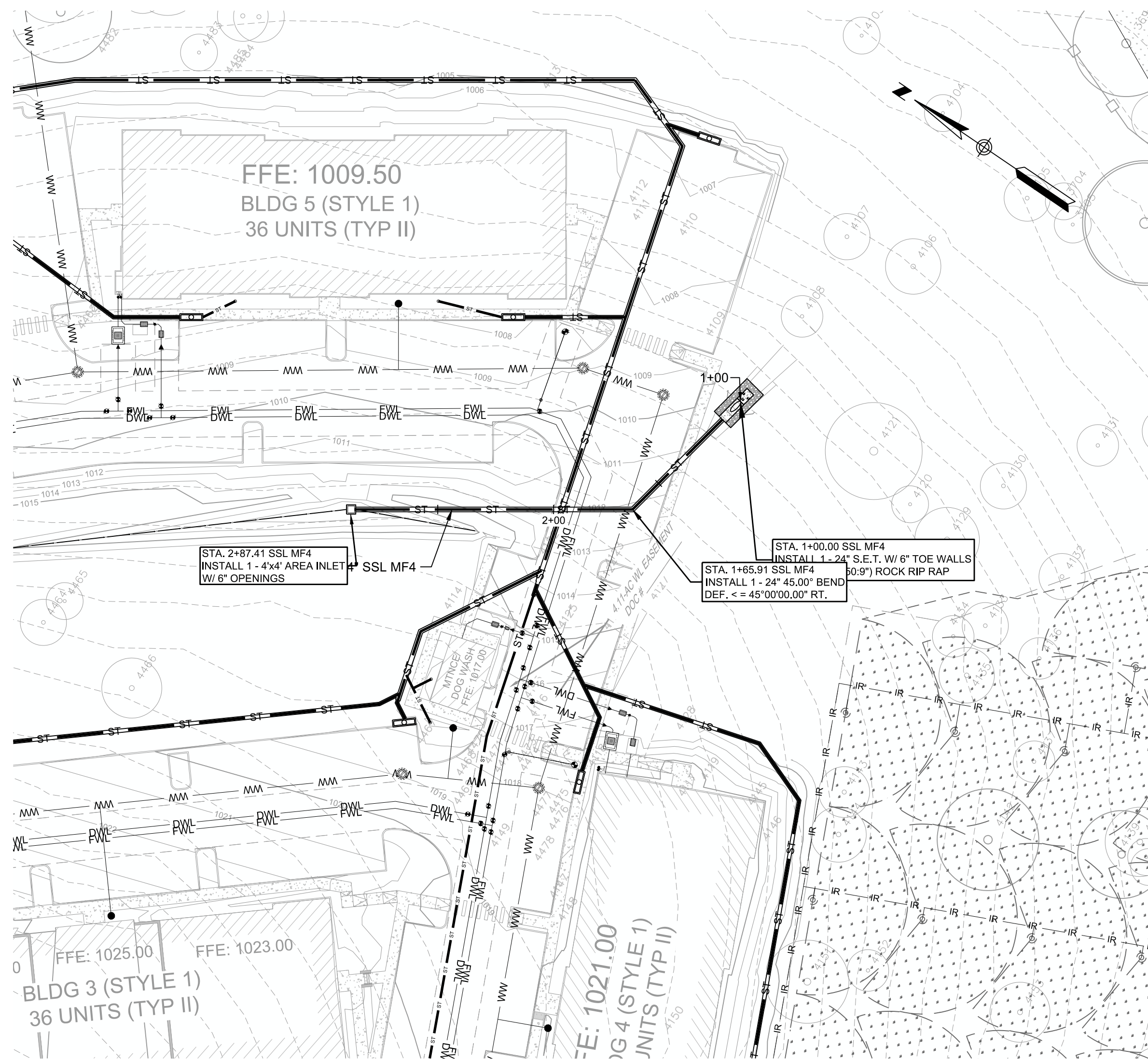
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DATE: 02/28/2024
 DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
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LJA Engineering, Inc.
 Phone 512.439.4700
 Fax 512.439.4716
 FRN-F-1386

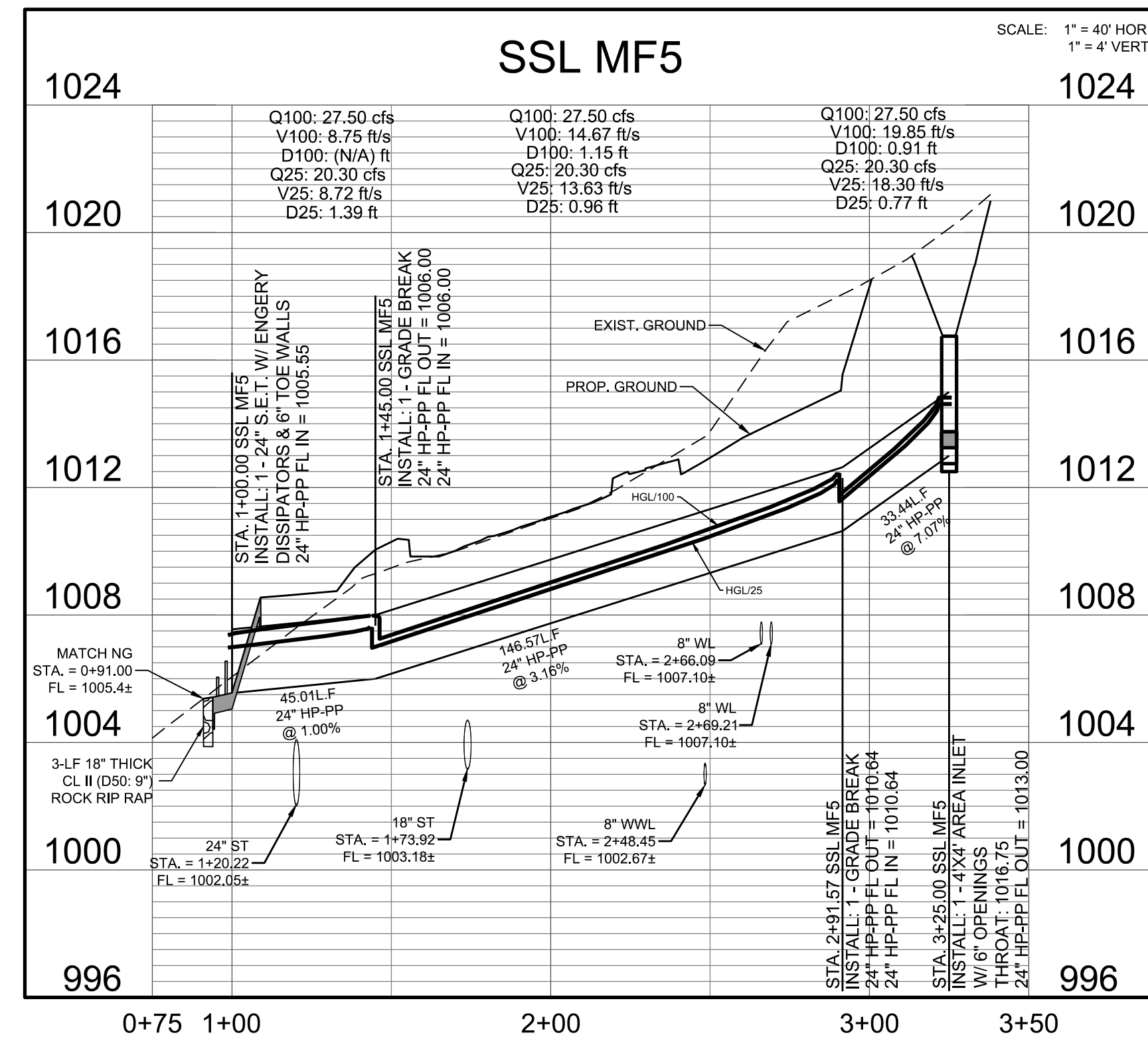
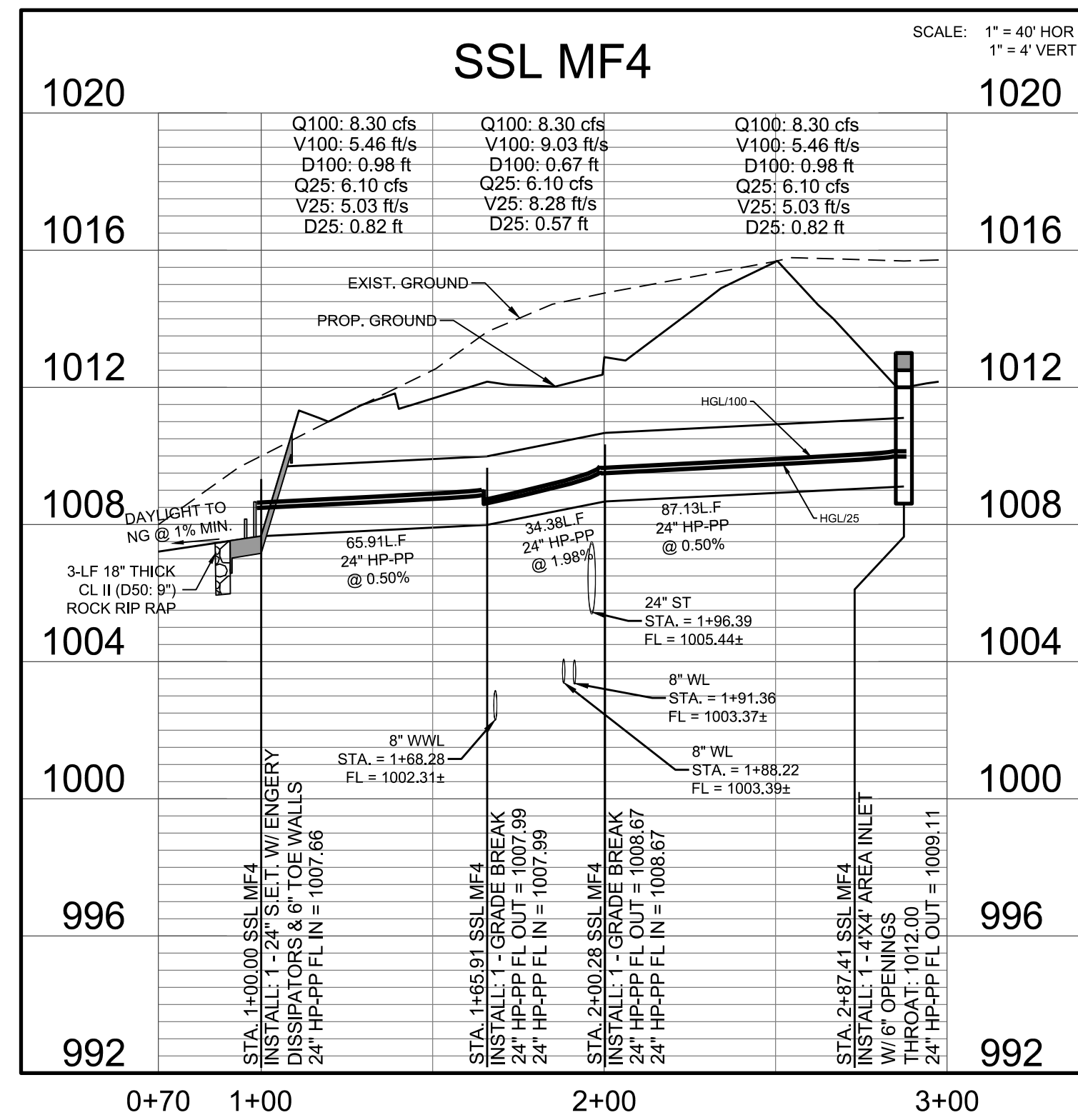
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ST17
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 OF 107 SHEETS



LEGEND

PROPOSED	EXISTING	DESCRIPTION
		ST STORM SEWER LINE
		WW WASTEWATER LINE
		WL WATER SERVICE
		WATER VALVE
		FIRE HYDRANT
		WASTEWATER MANHOLE
		STORMSEWER MANHOLE
		CURB INLET
		GRATE INLET
		1/2" REBAR FOUND (OR AS NOTED)
		1/2" REBAR WITH CAP FOUND
		1/2" REBAR WITH CHAPARRAL CAP SET
		WATER METER
		UTILITY POLE
		OVERHEAD UTILITIES
		ELEC. UTILITY
		ELEC. MANHOLE
		LIGHT POLE
		TELEPHONE UTILITY
		UNDERGROUND FIBER OPTIC MARKER
		TELEPHONE MANHOLE
		UNDERGROUND GAS MARKER
		CHAIN LINK FENCE

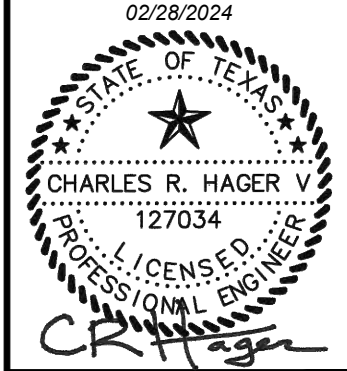
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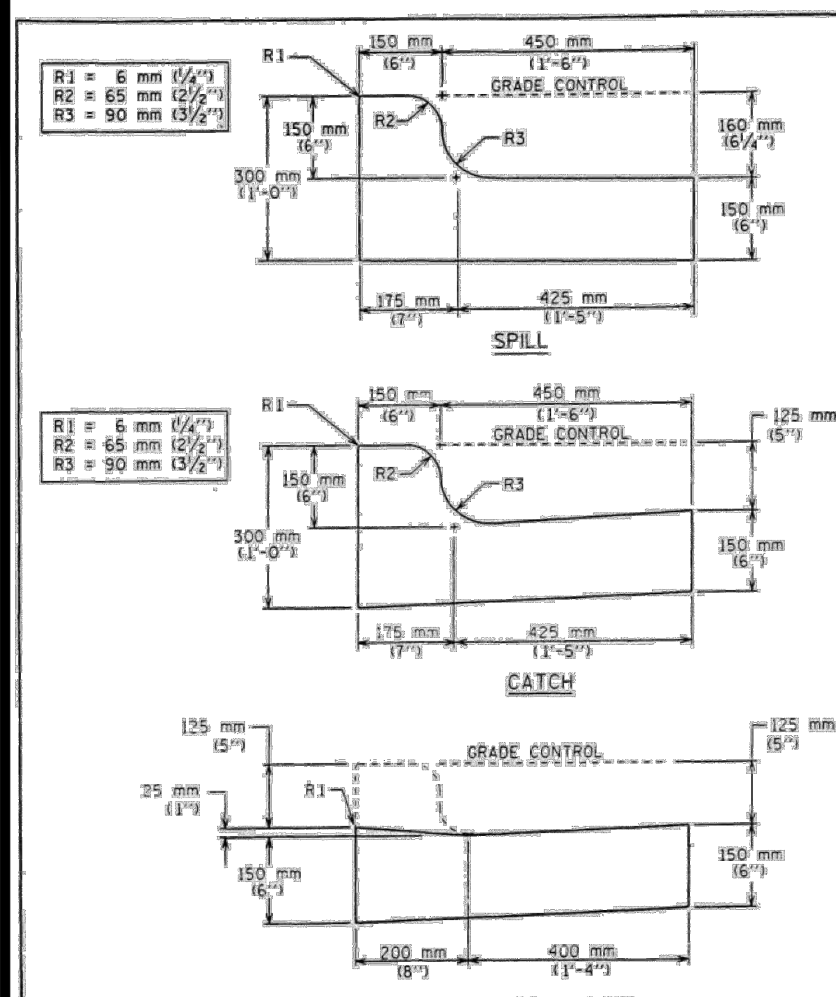
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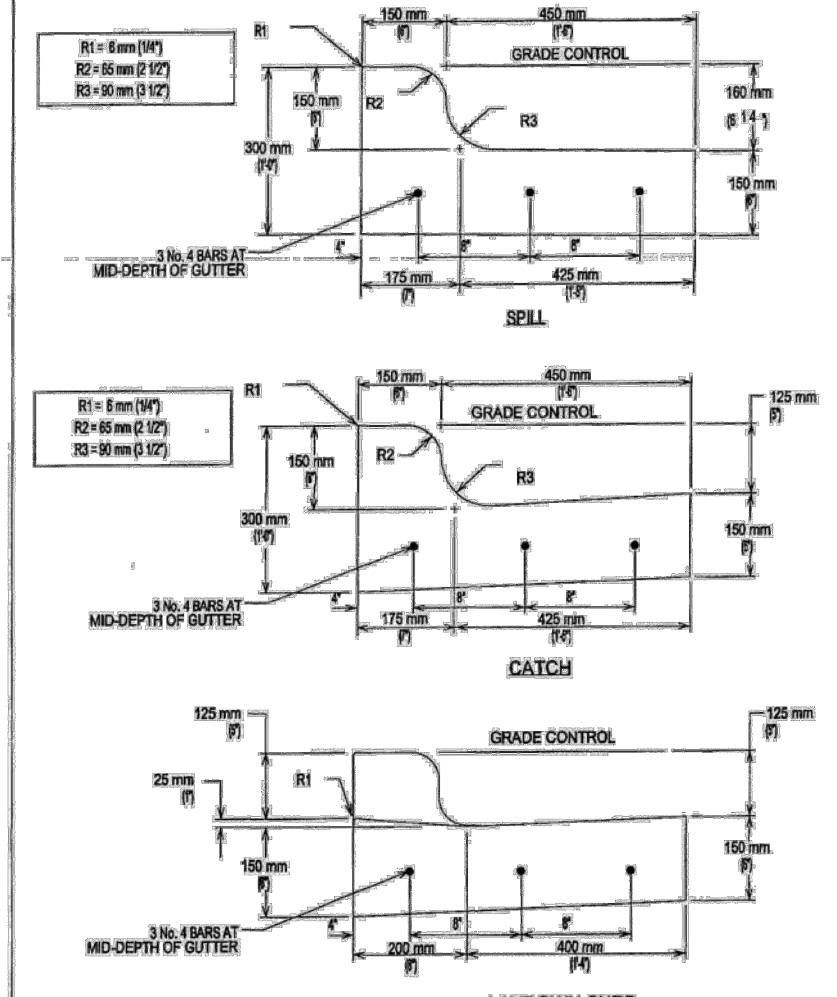
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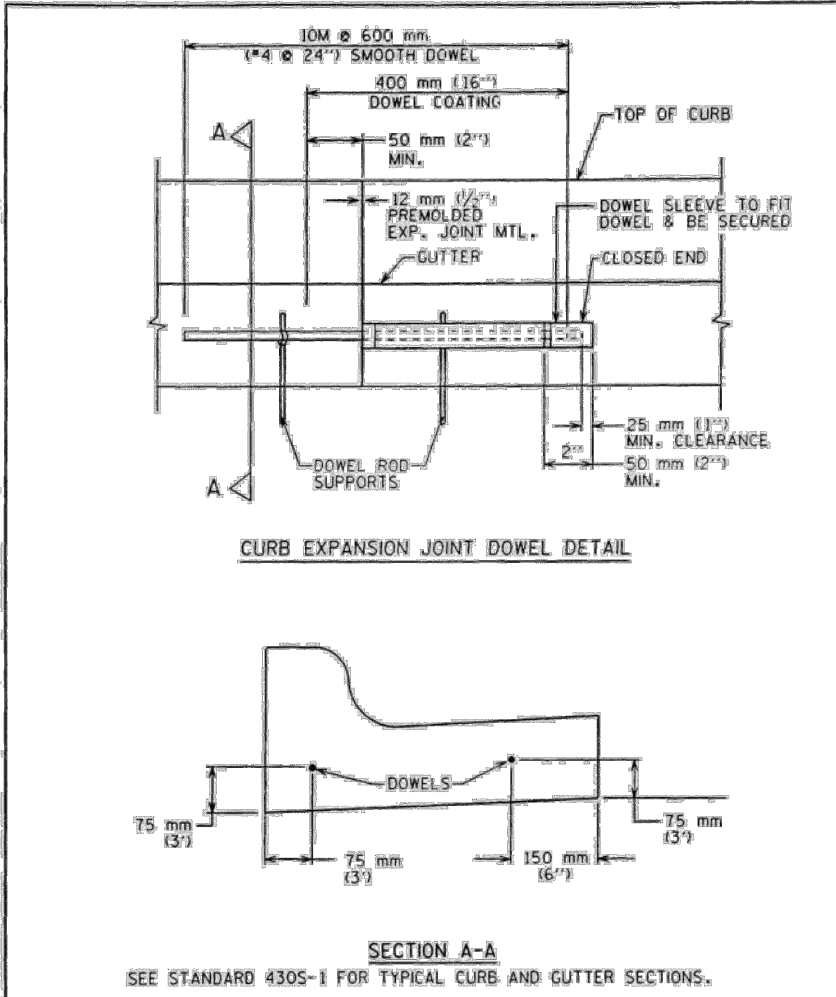
LJA Engineering, Inc.
7500 Riatico Boulevard
Building II, Suite 100
Austin, Texas 78735
Phone 512.439.4700
Fax 512.439.4716
FRN-F-1386



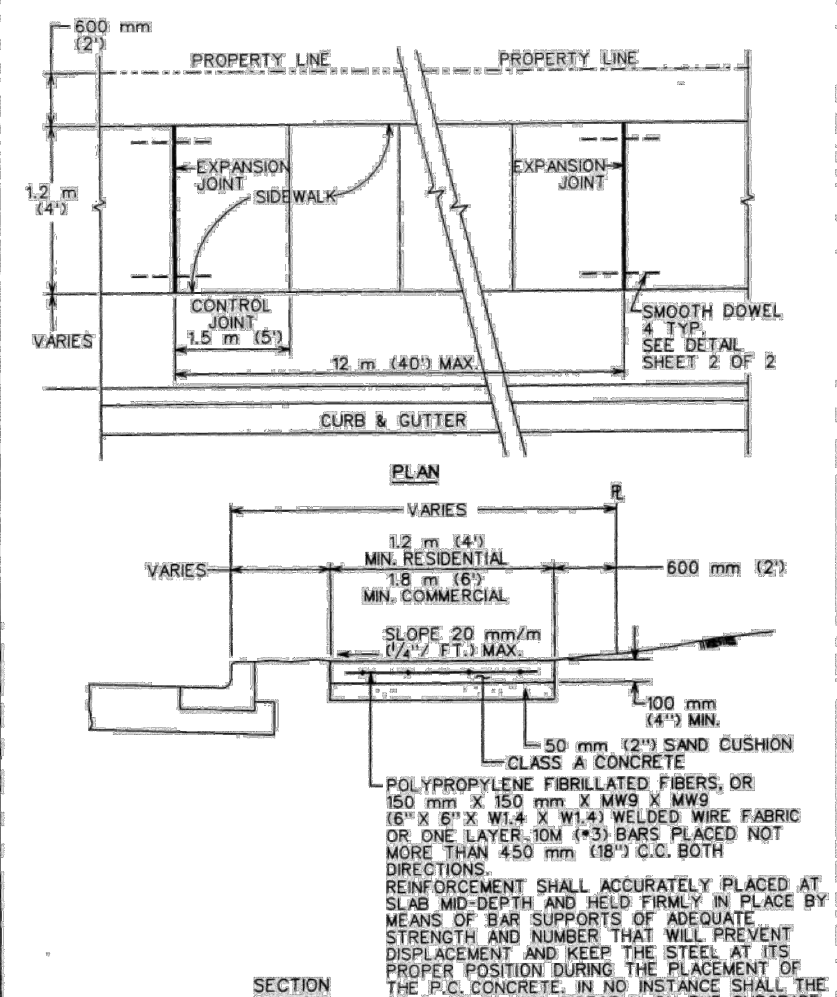
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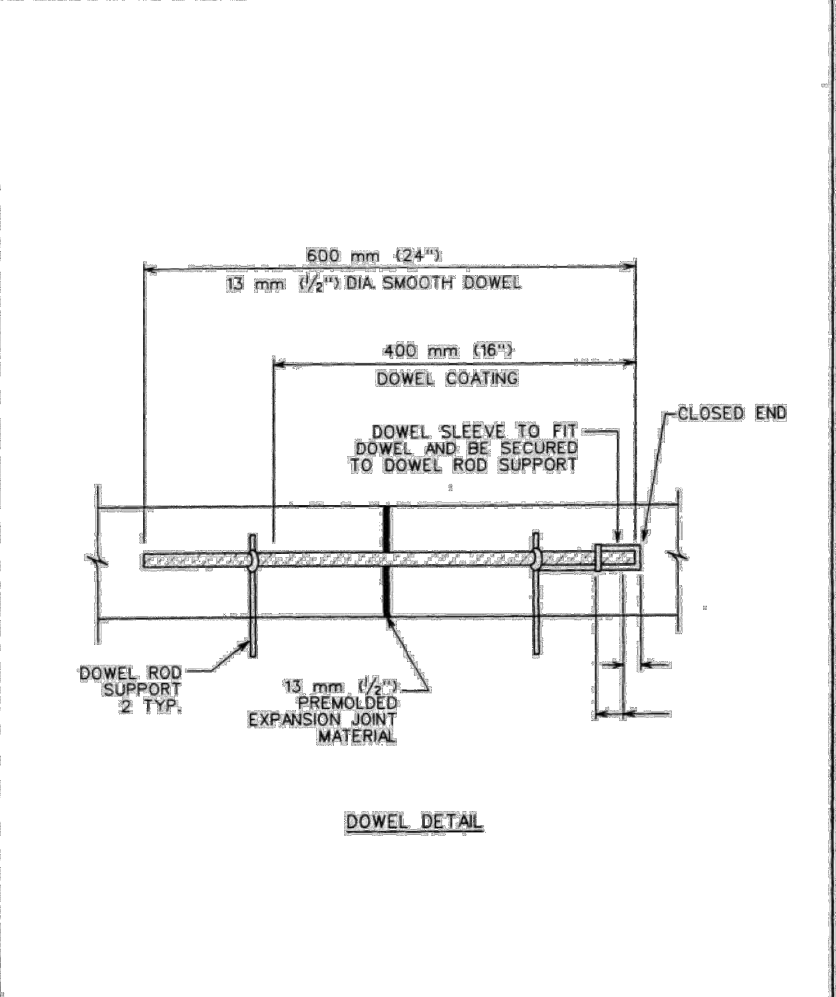
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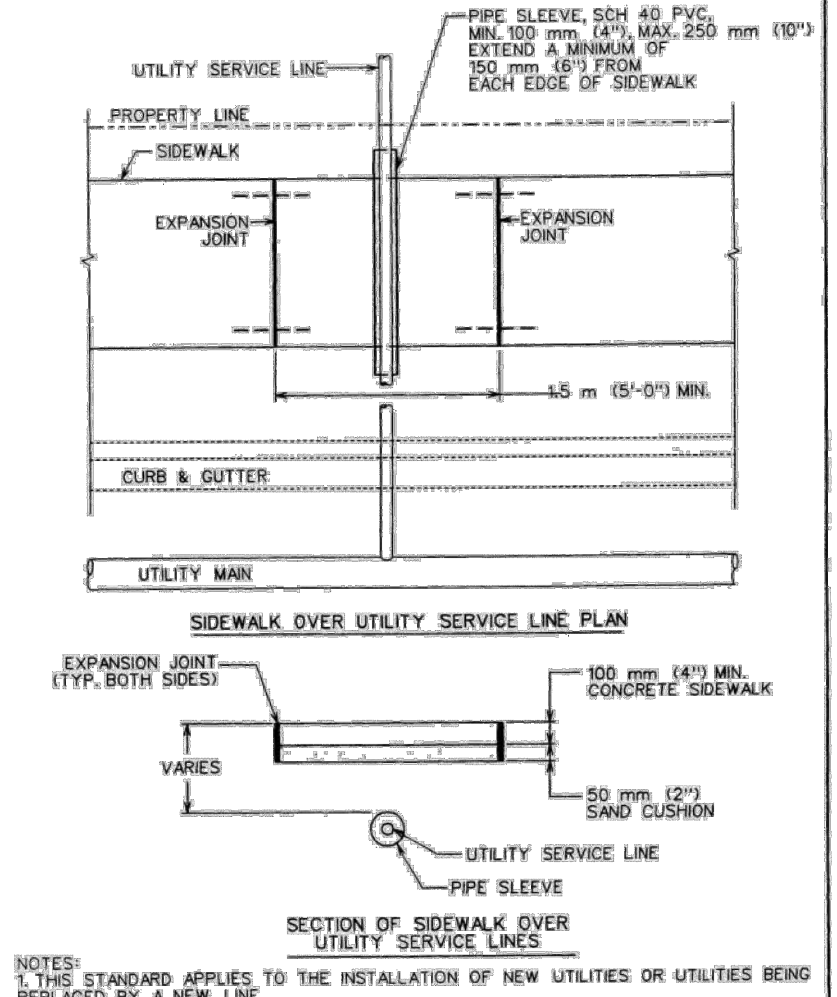
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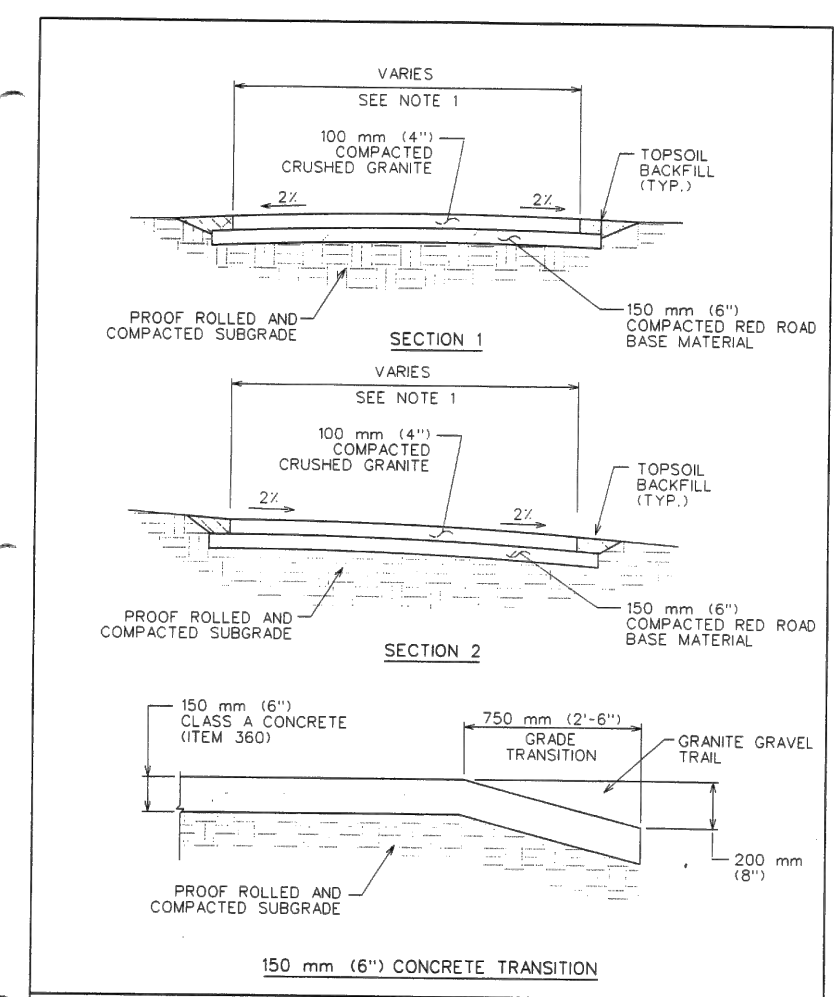
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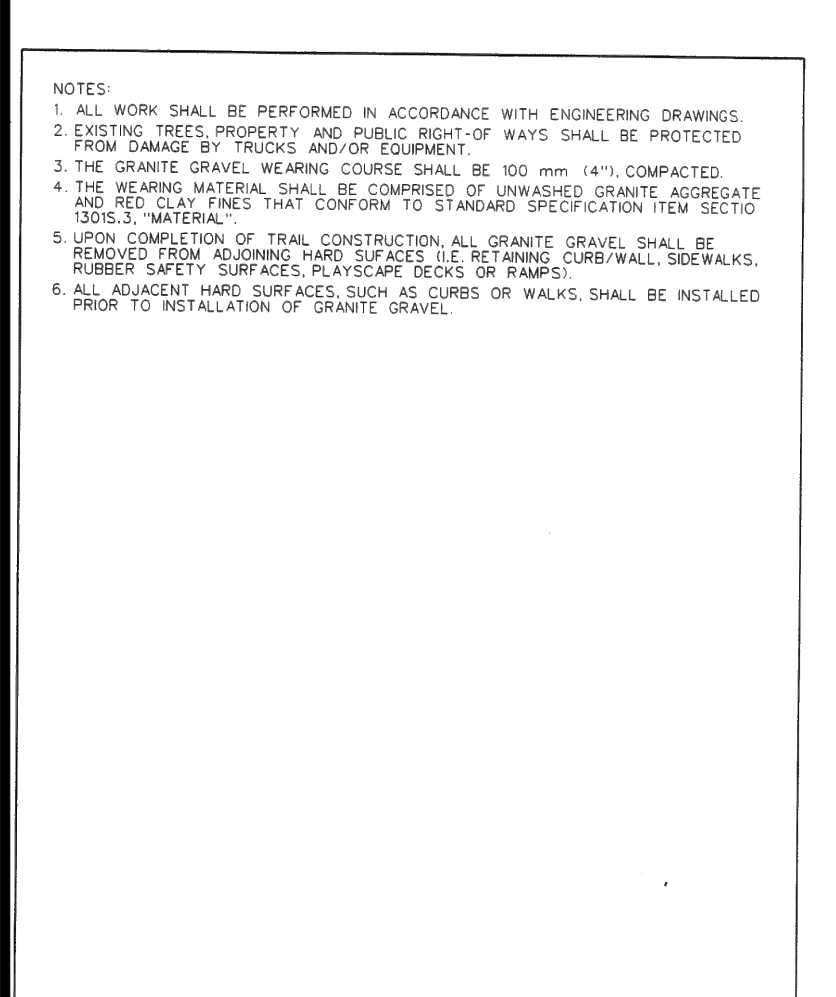
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SIDEWALK
STANDARD NO. 4325-1
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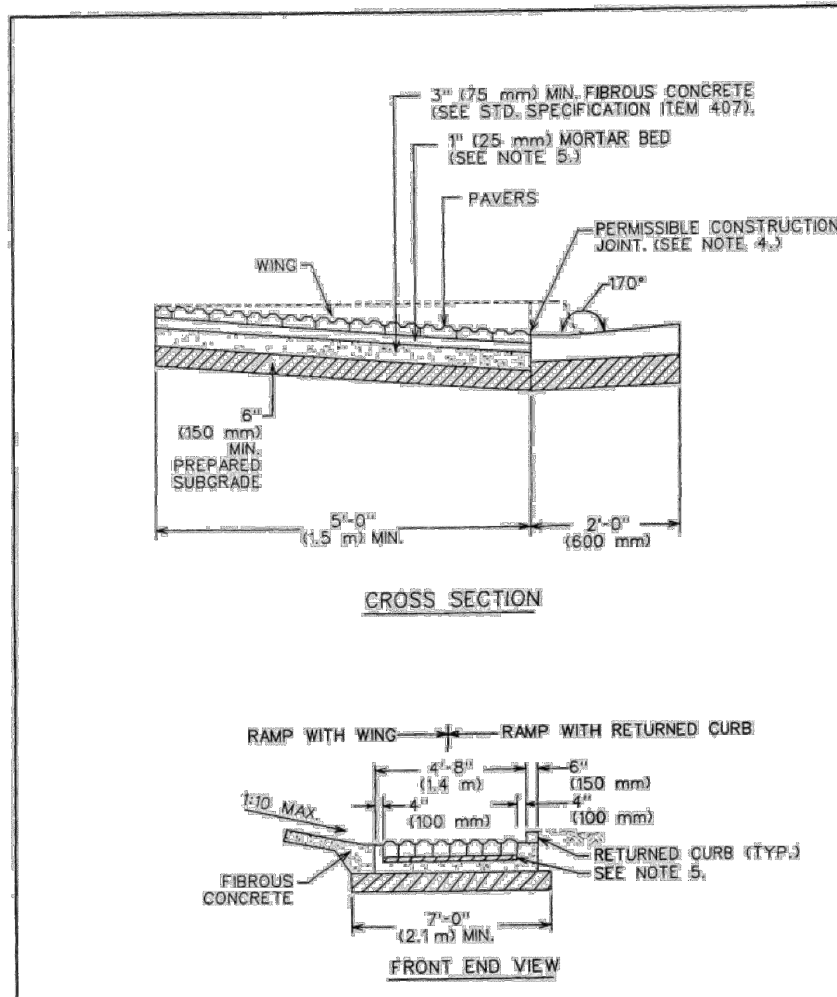
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DEPARTMENT OF PUBLIC WORKS
SIDEWALK
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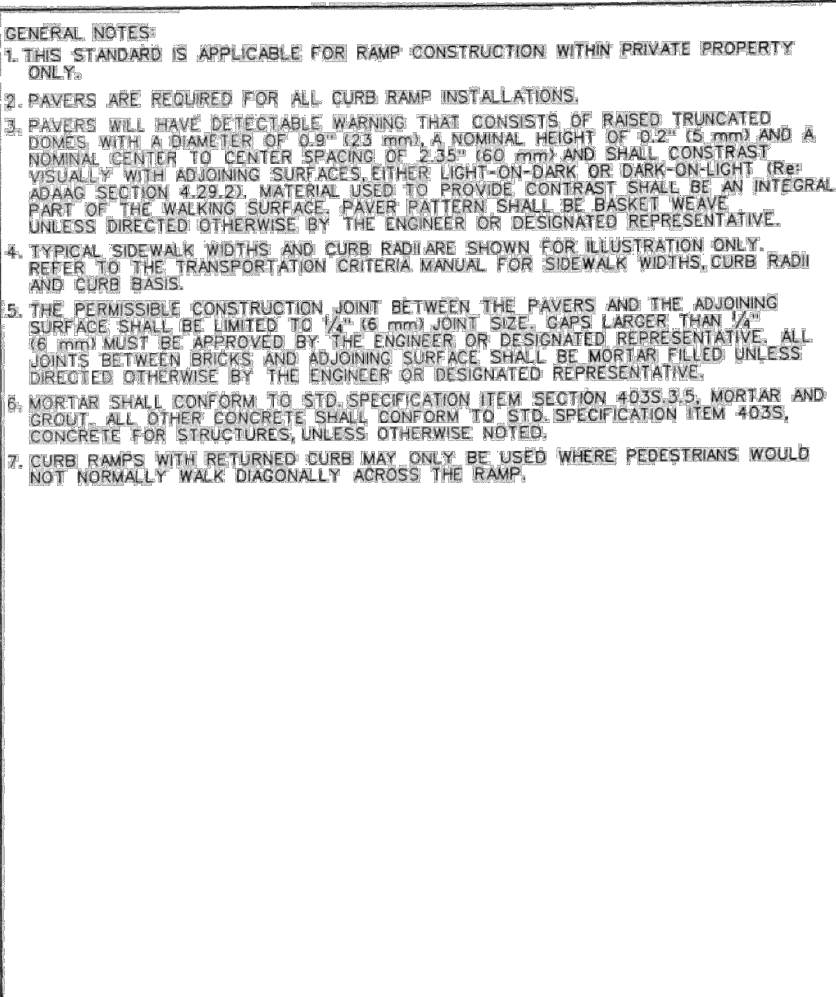
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DEPARTMENT OF PUBLIC WORKS
GRANITE GRAVEL HILE AND BIKE TRAILS
STANDARD NO. 1301S-1
1 OF 2



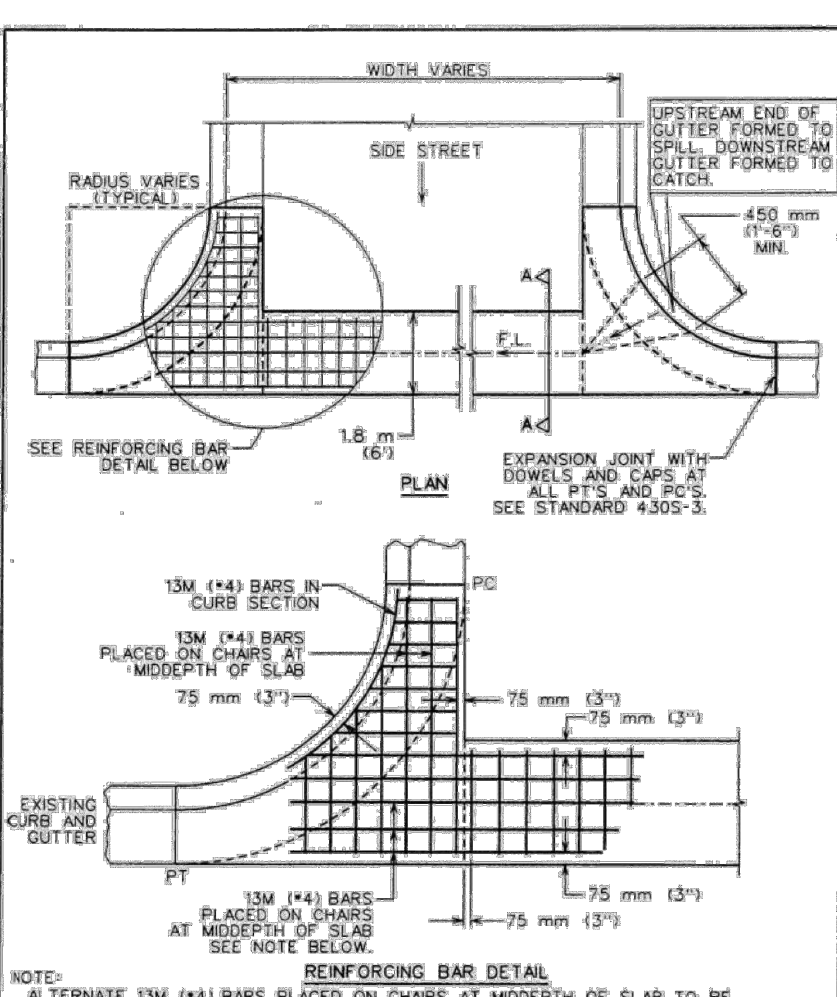
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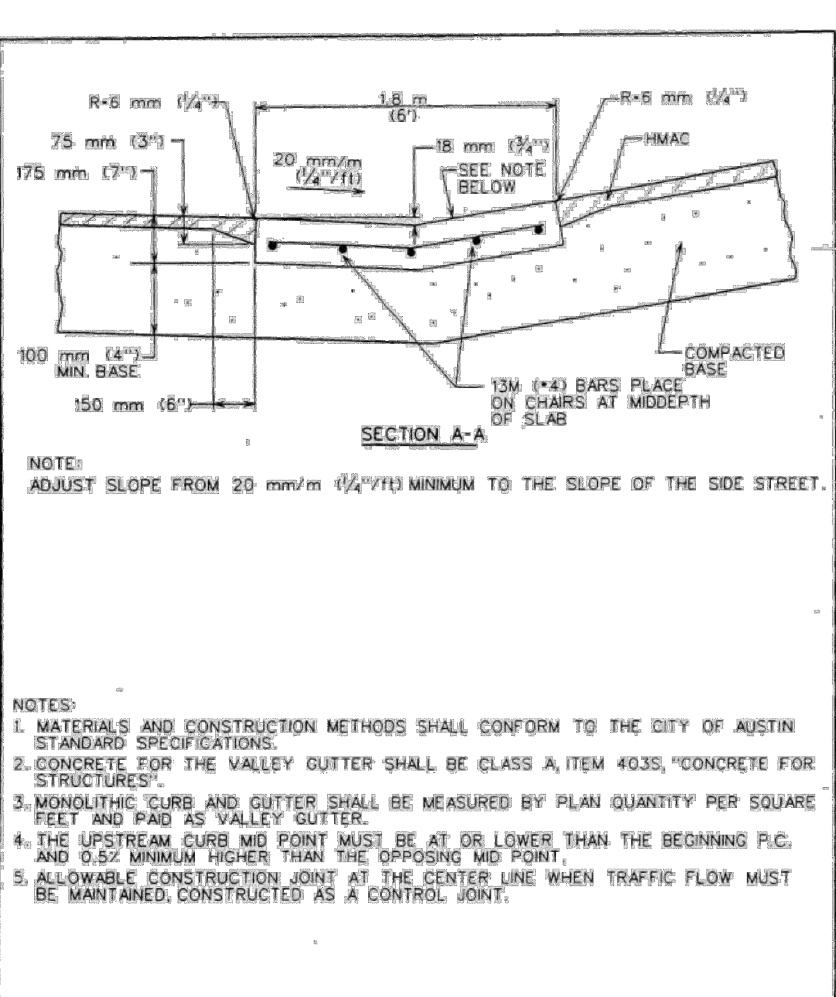
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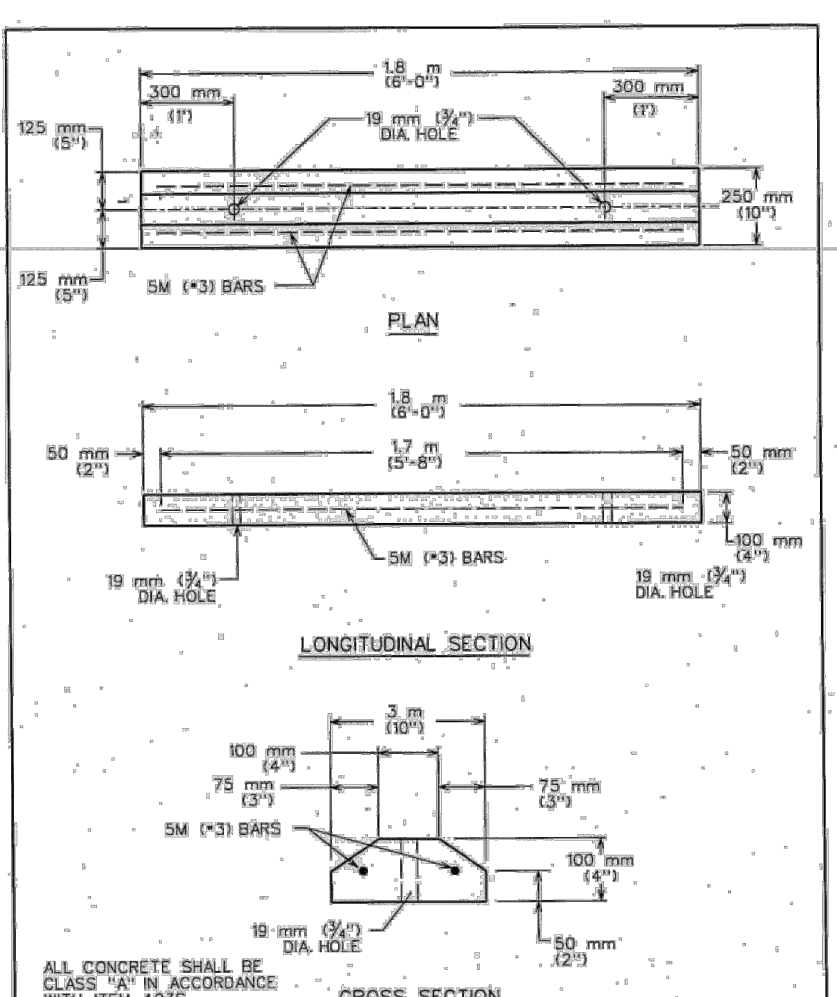
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1 OF 2



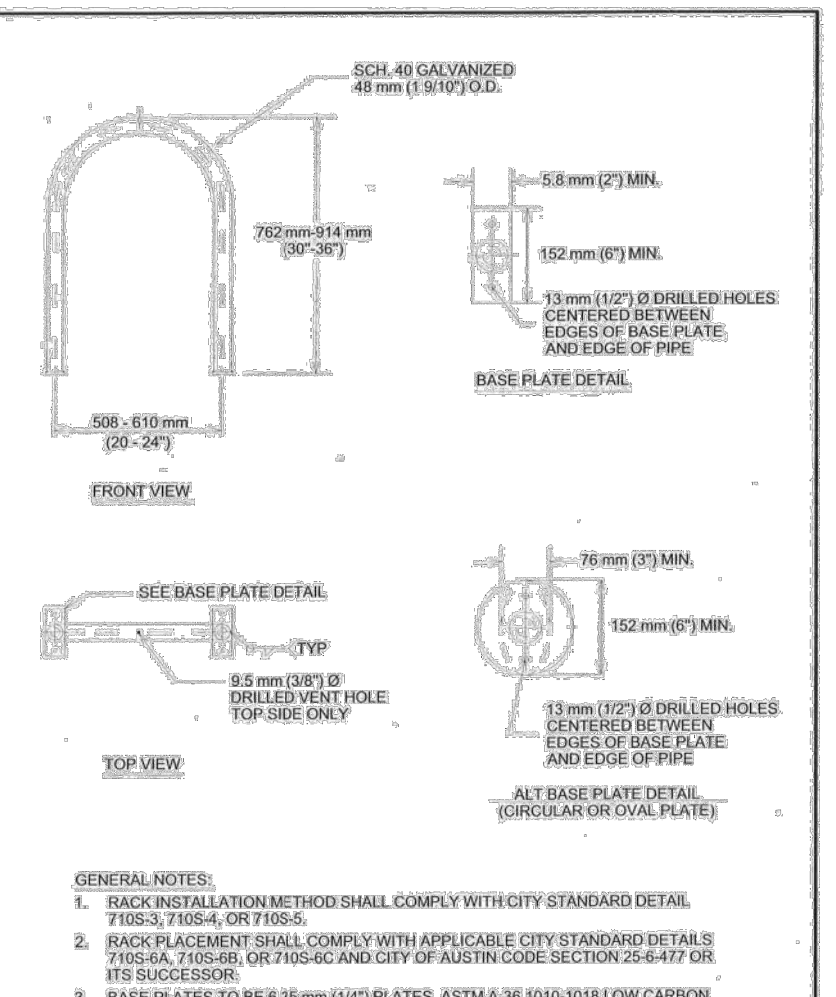
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DEPARTMENT OF PUBLIC WORKS
CONCRETE VALLEY GUTTER
STANDARD NO. 436S-2
2 OF 2



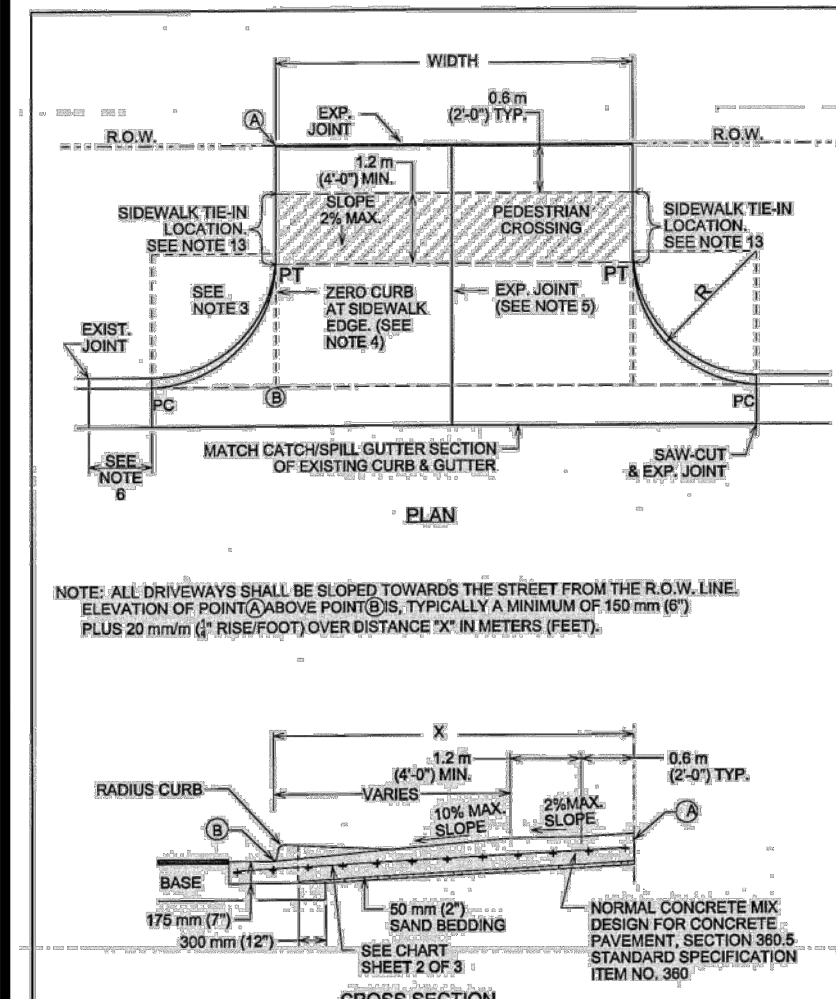
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CONCRETE VALLEY GUTTER
STANDARD NO. 436S-2
3 OF 2



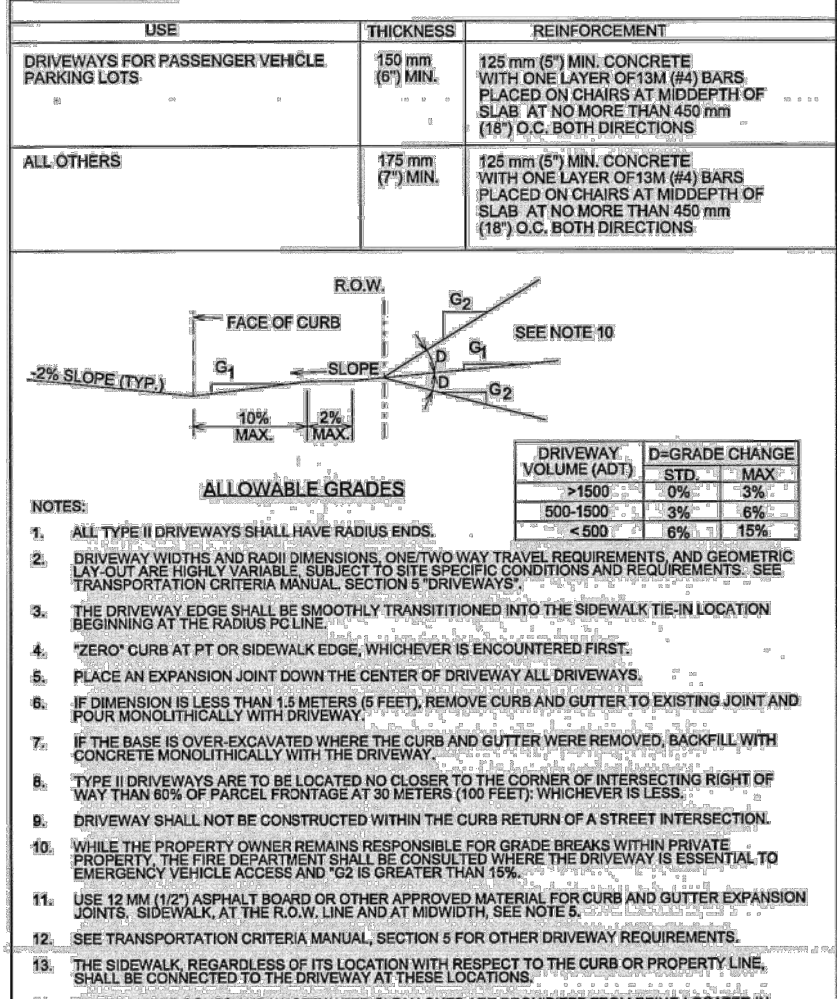
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CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
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STANDARD NO. 710S-1
1 OF 2



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TYPE II DRIVEWAY
STANDARD NO. 433S-2
1 OF 2



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TYPE II DRIVEWAY
STANDARD NO. 433S-2
2 OF 2



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TYPE II DRIVEWAY
STANDARD NO. 433S-2
3 OF 2



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TYPE II DRIVEWAY
STANDARD NO. 433S-2
4 OF 2

Table with columns: NO., DATE, REVISIONS, DESCRIPTION.

Professional Engineer Seal for Charles R. Hager, State of Texas, License No. 127034.

LJA Engineering, Inc. logo and contact information: Phone 512.439.4700, Fax 512.439.4716, 7500 Rialto Boulevard, Building II, Suite 100, Austin, Texas 78735.

811 logo and text: 'Know what's below. Call before you dig.' LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

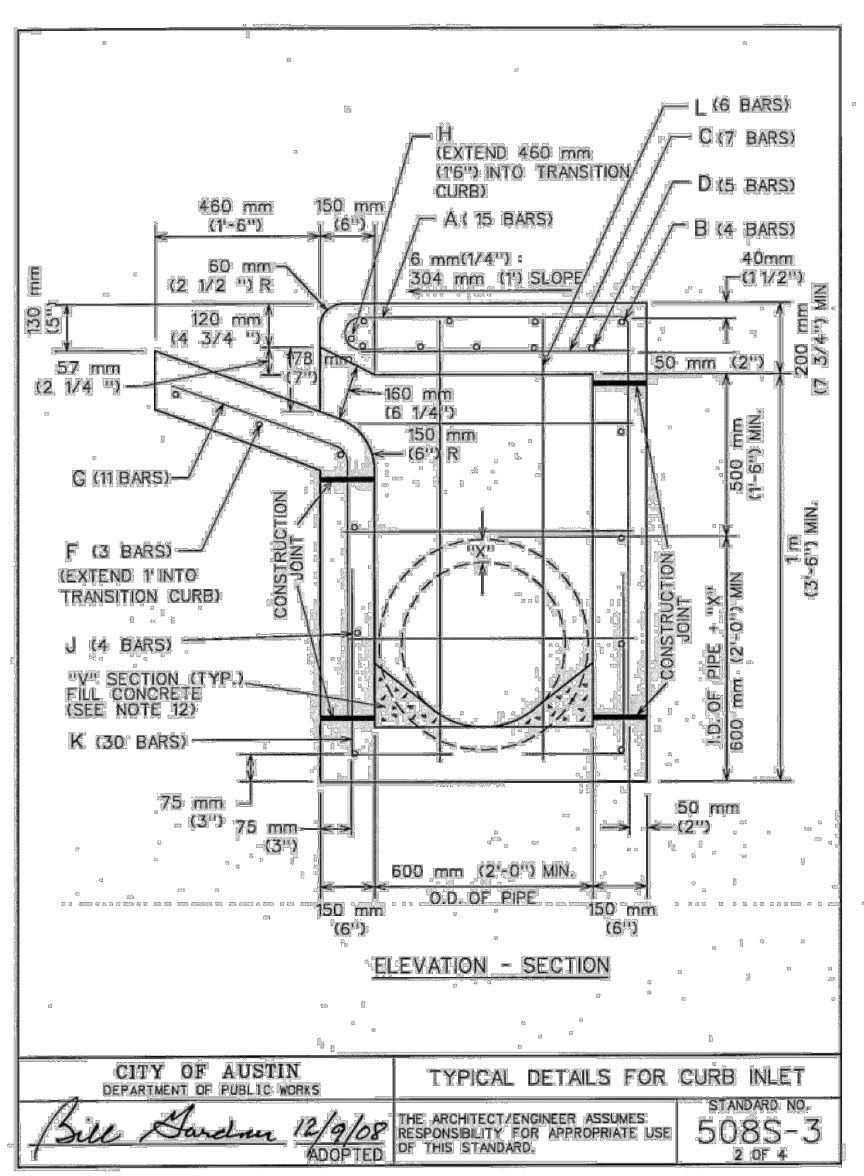
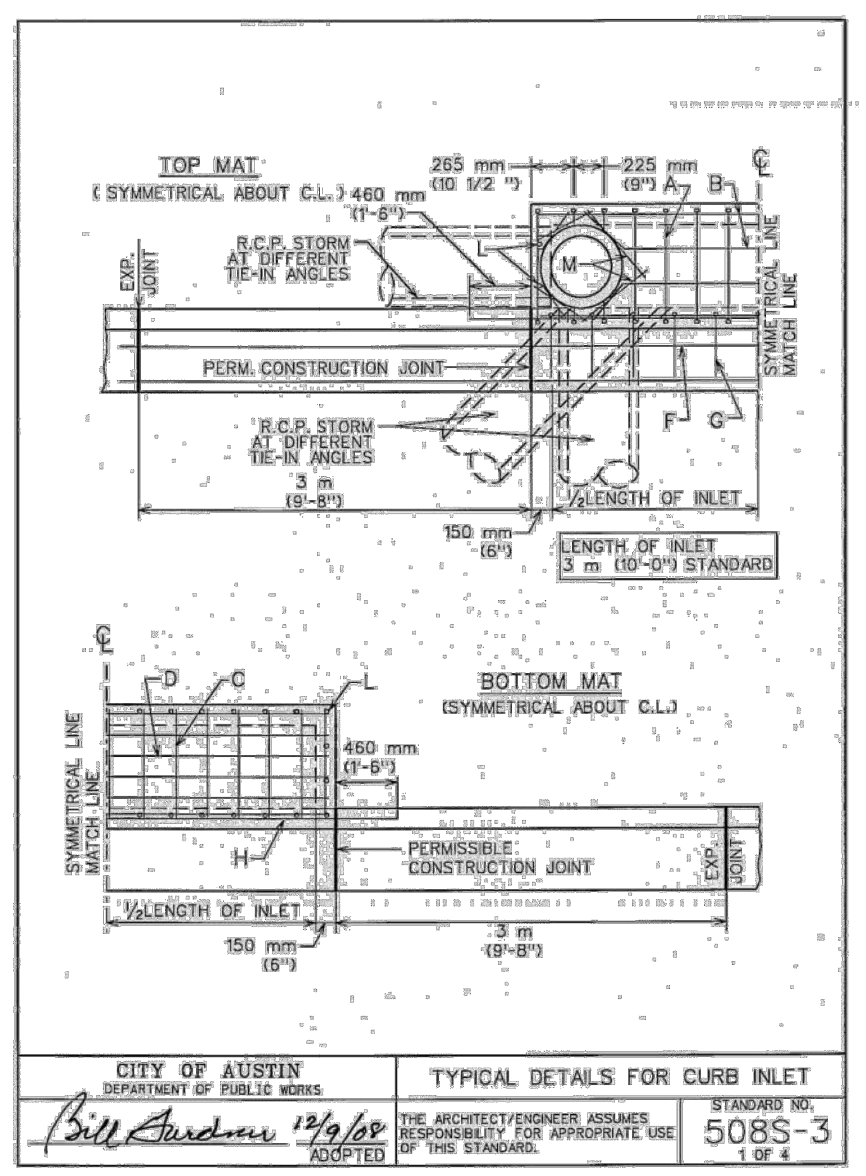
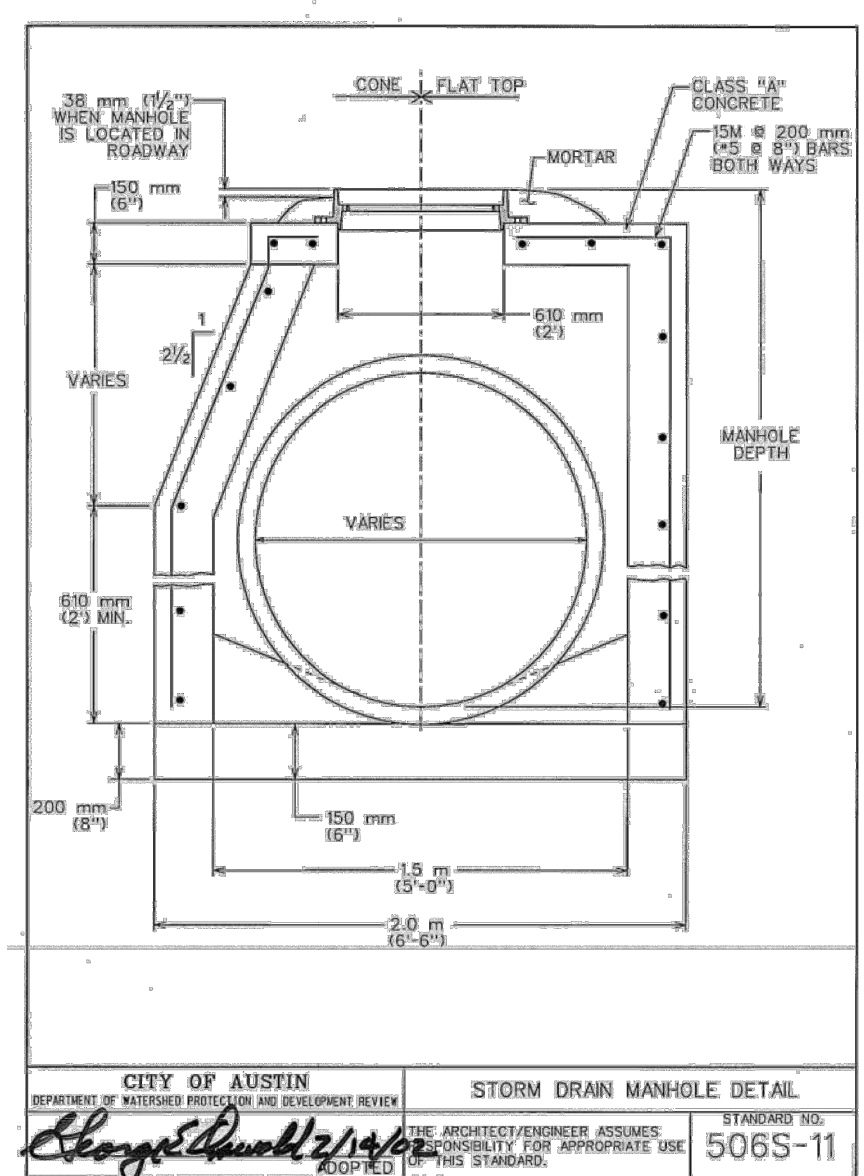
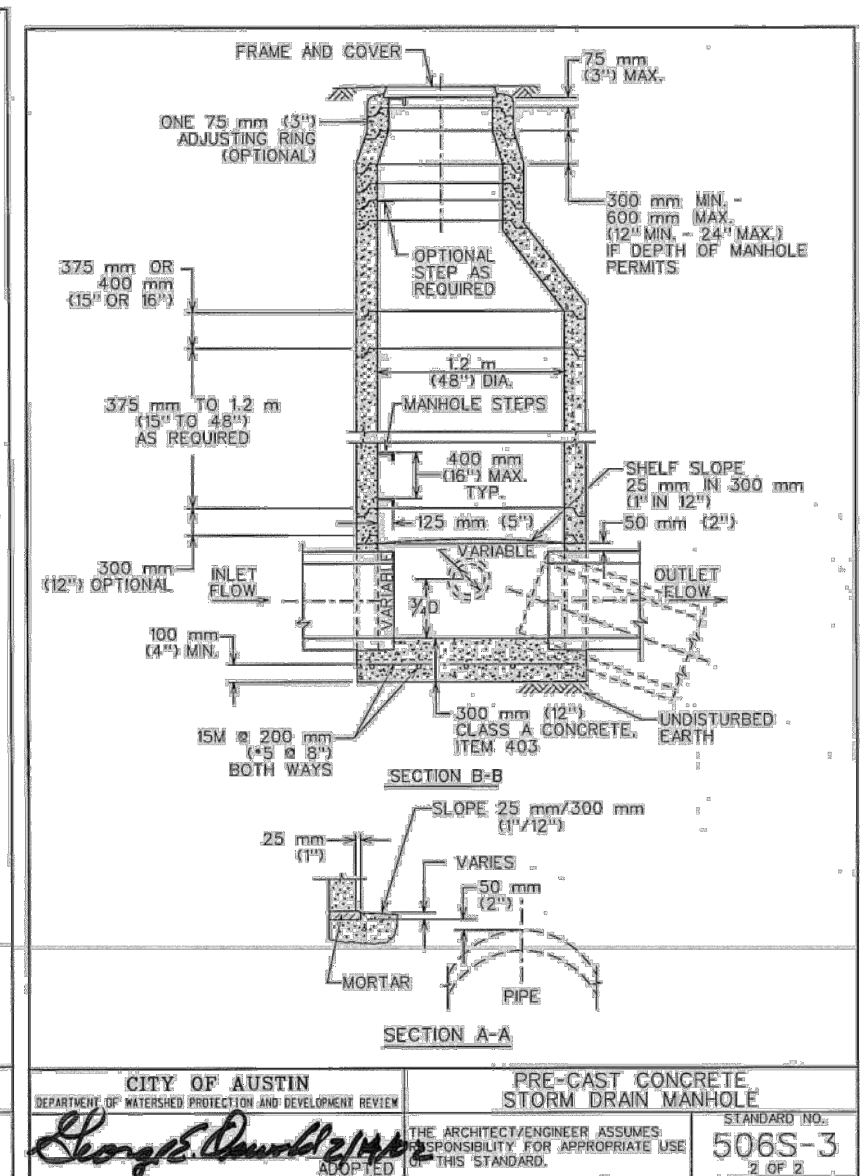
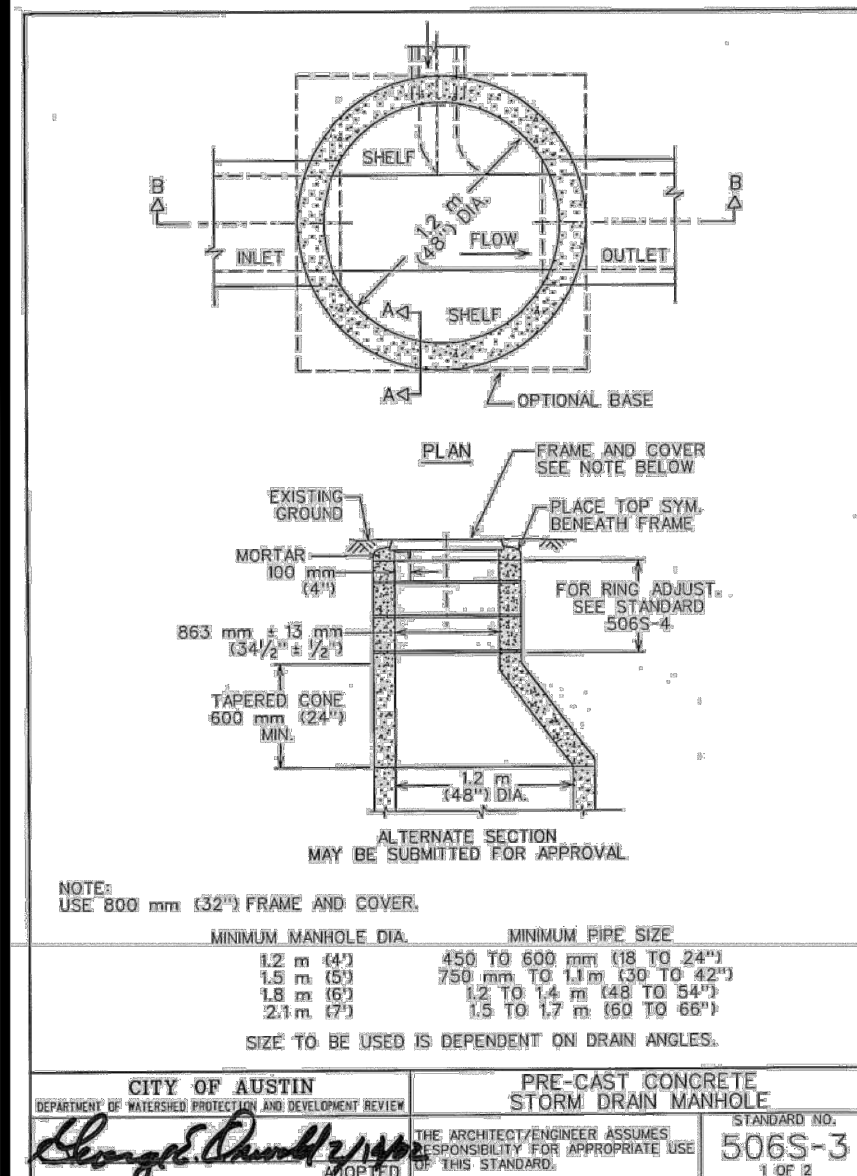
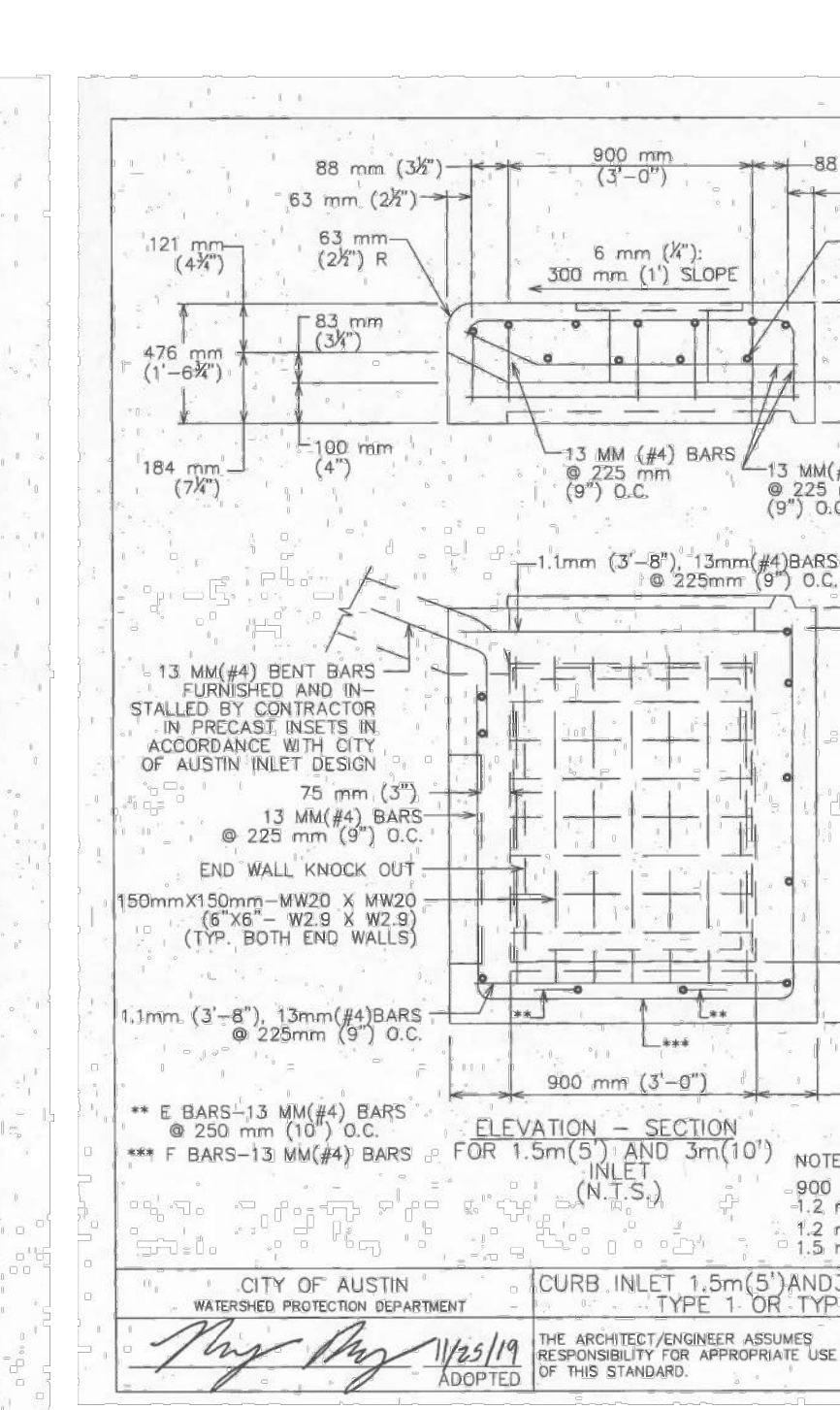
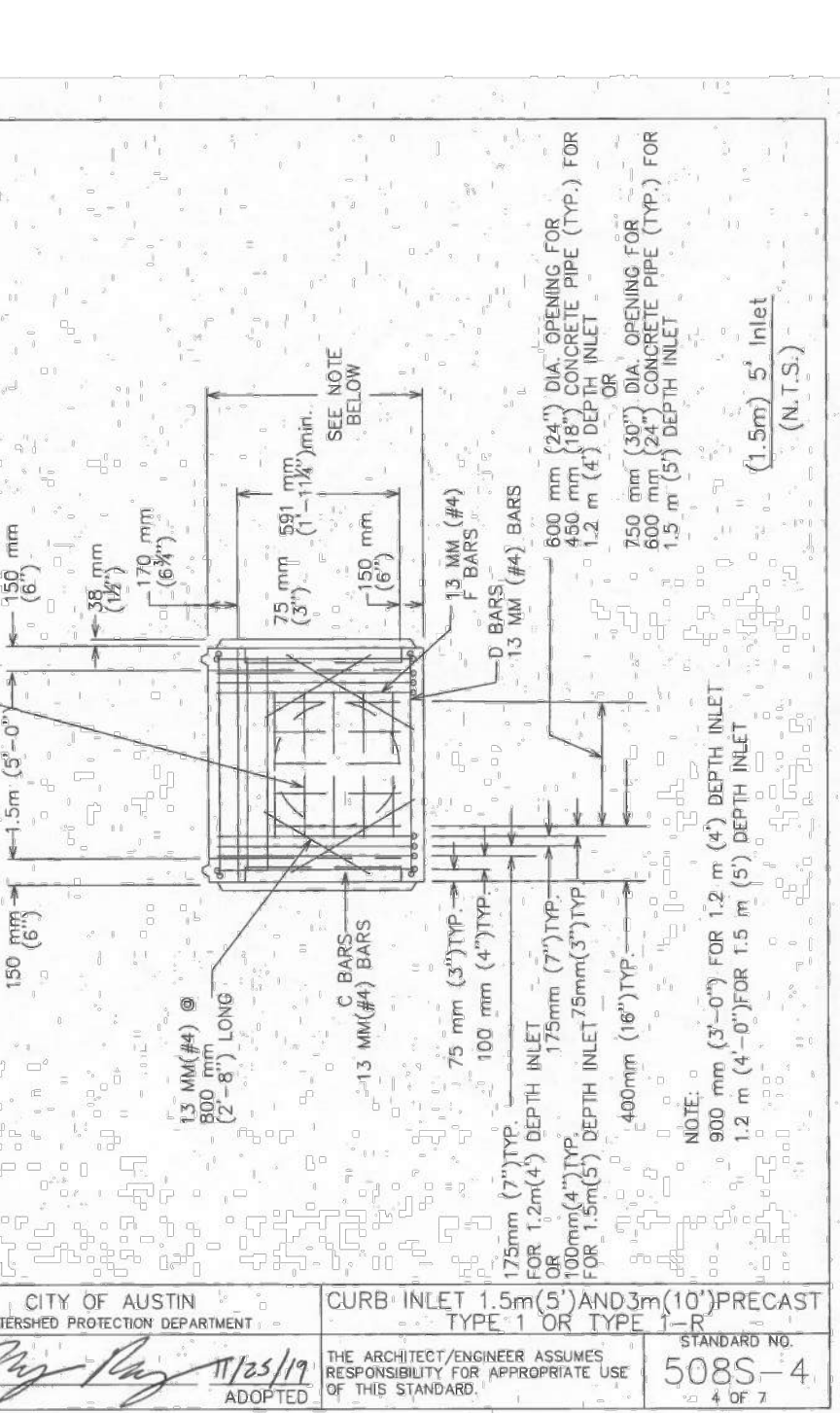
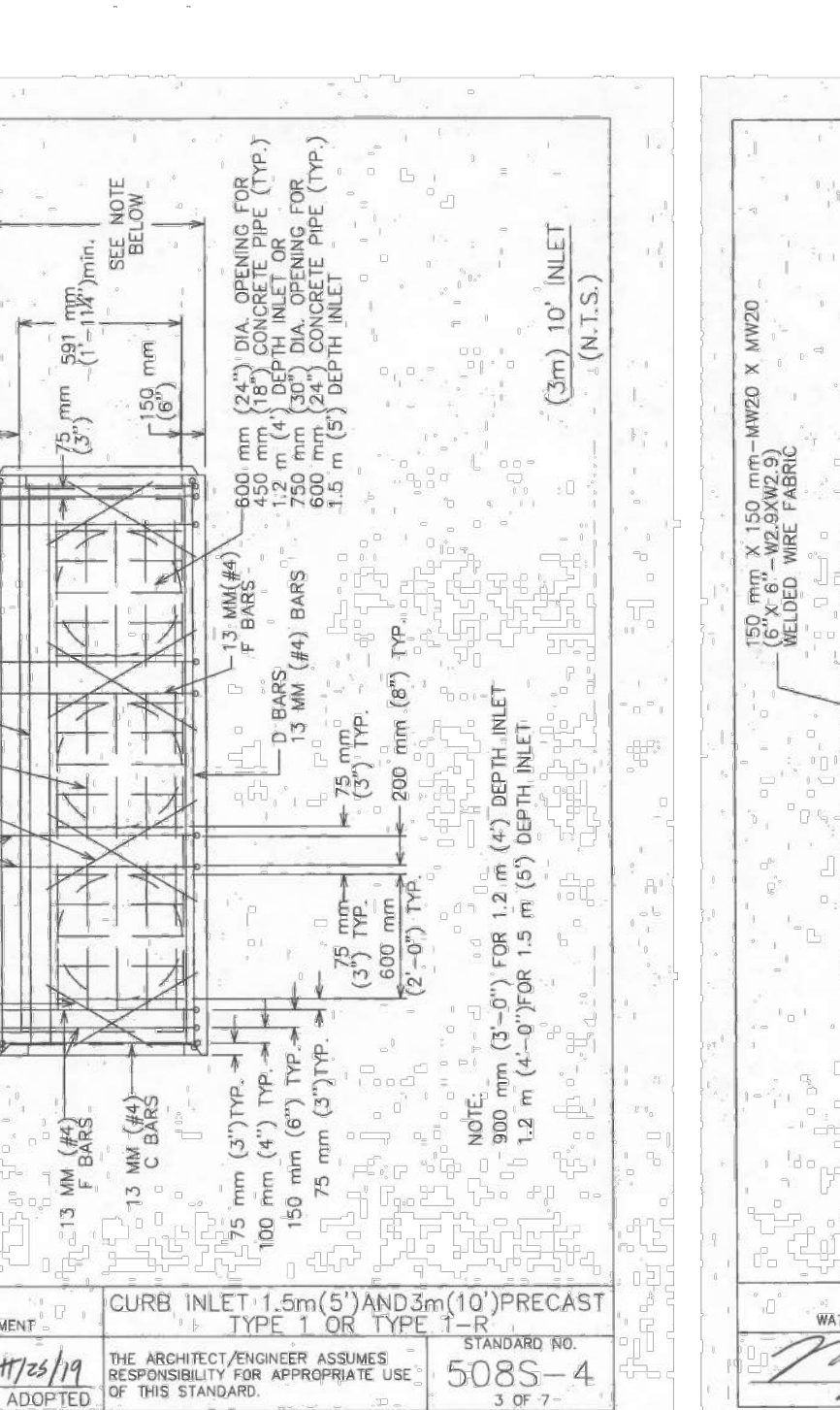
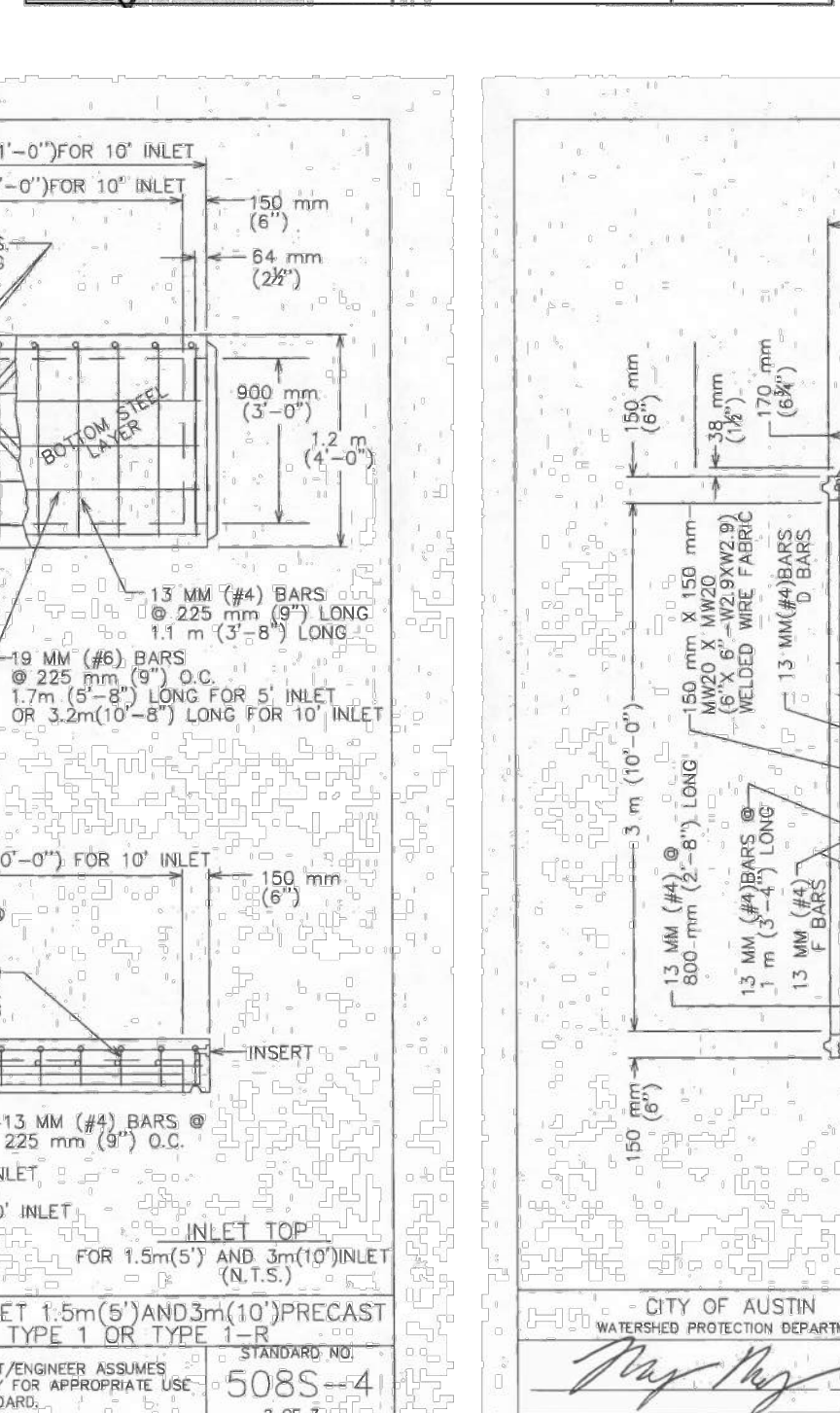
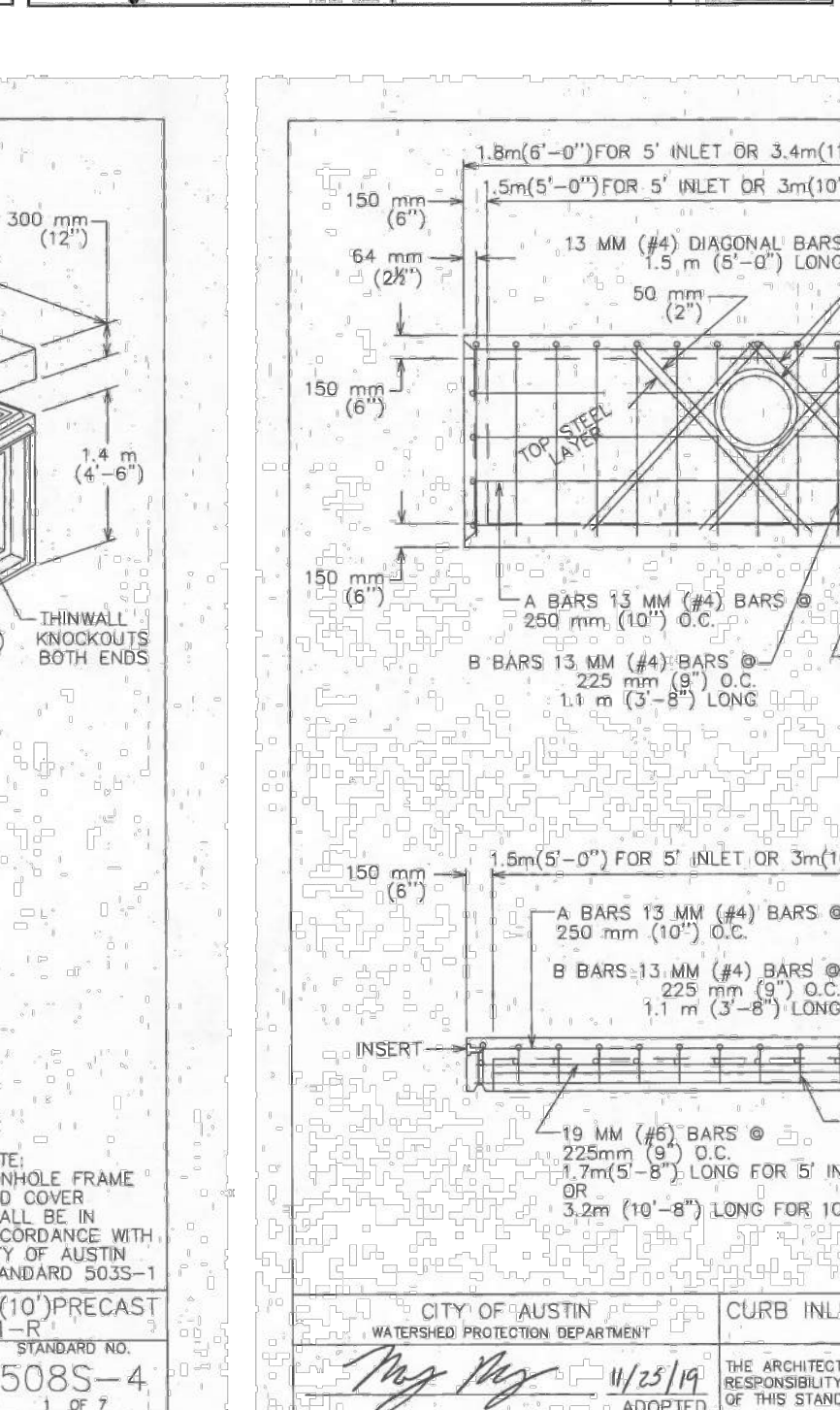
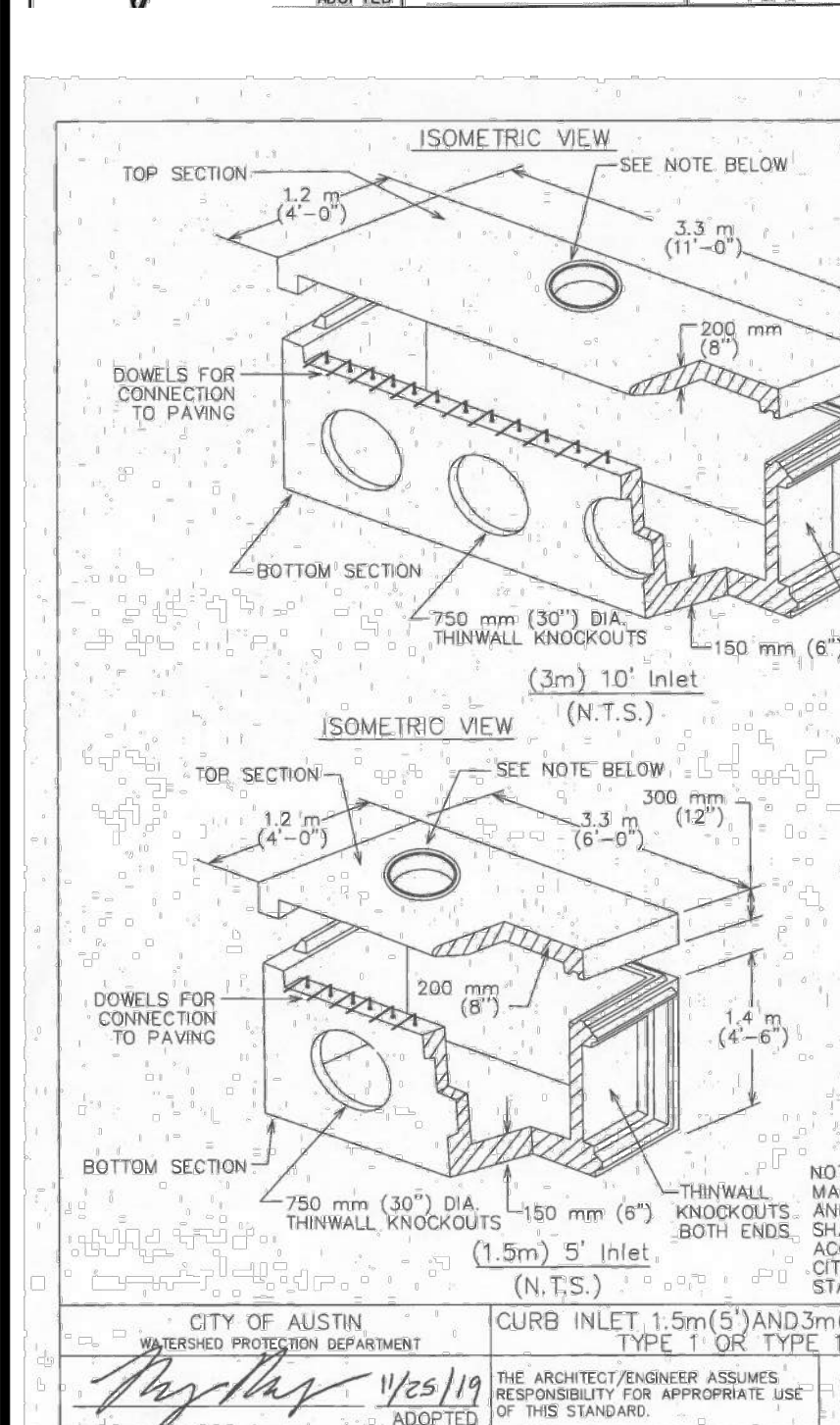


TABLE OF QUANTITIES FOR 18" OUTLET PIPE REINFORCING STEEL QUANTITIES

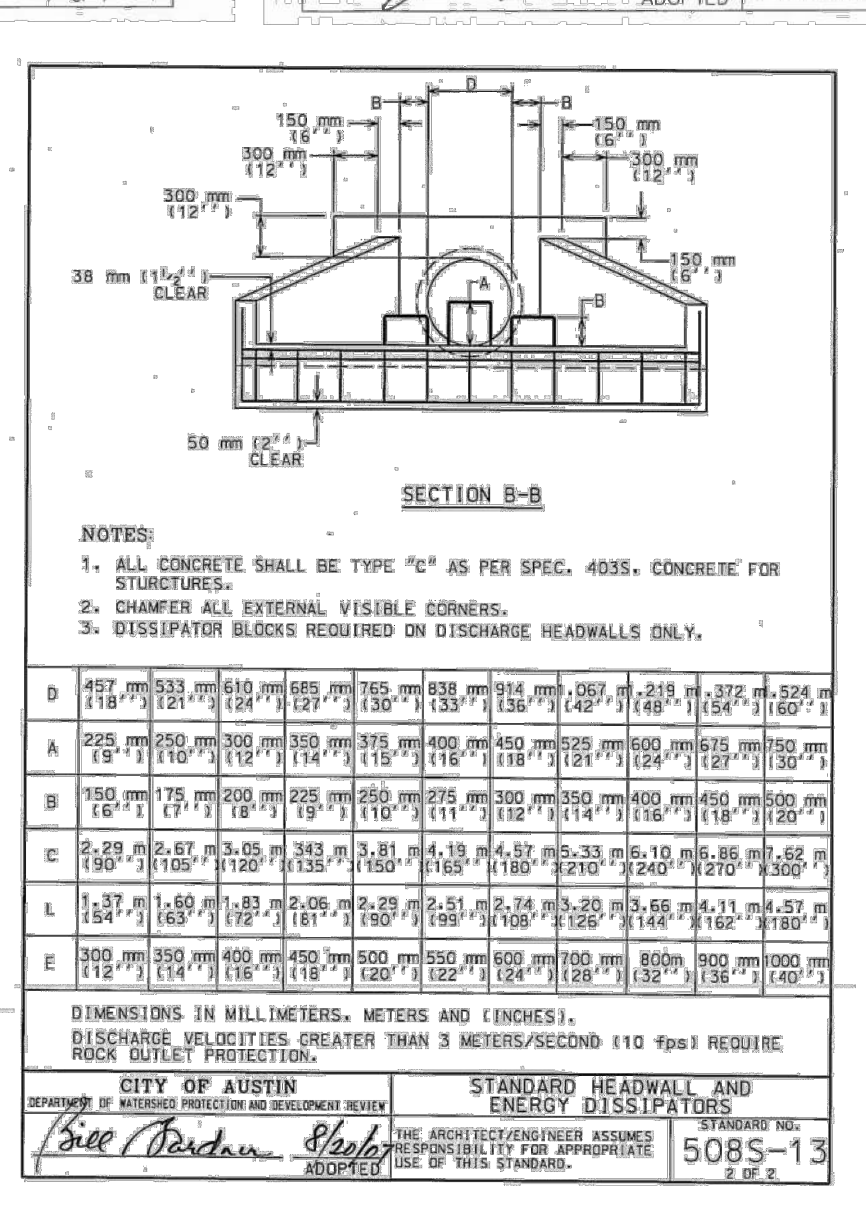
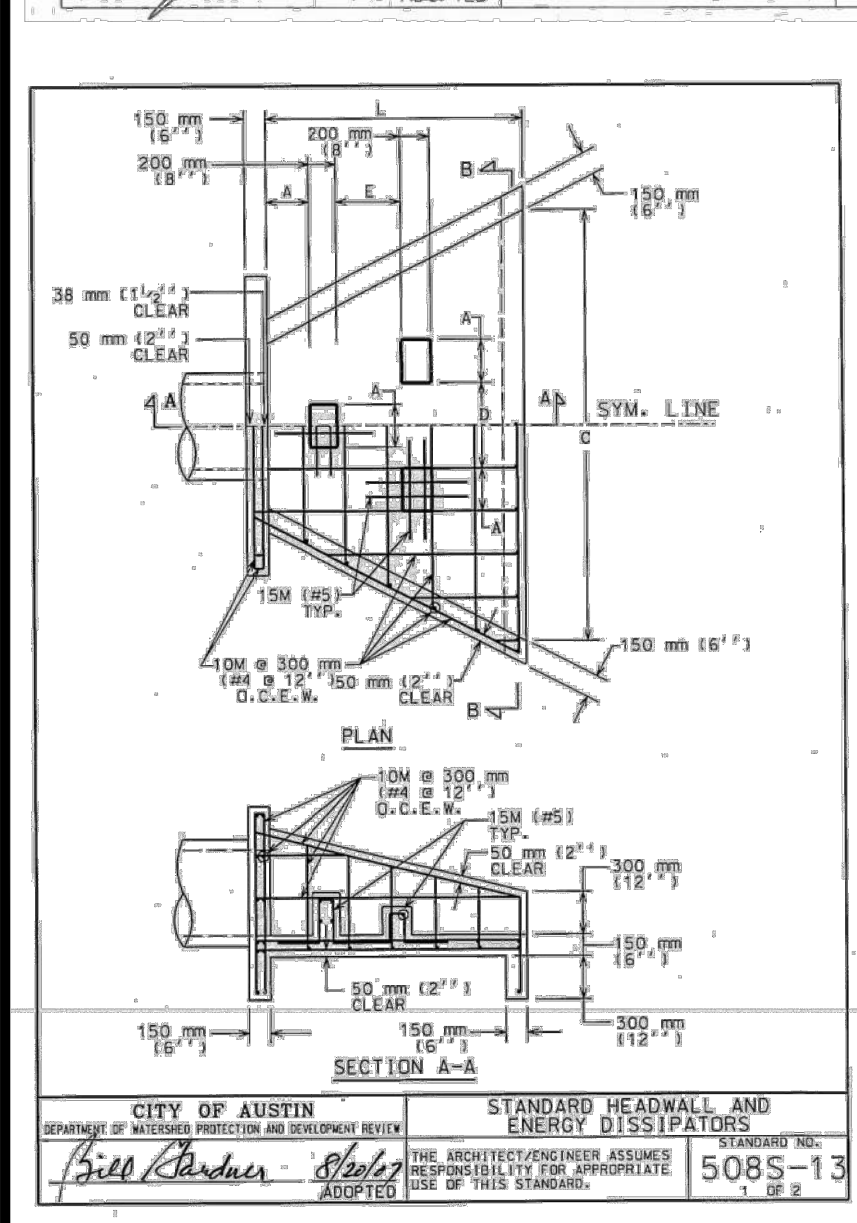
BAR SIZE	SPACING	NUMBER	LENGTH	WEIGHT	
A	4	230mm (9")	15	2 m (7'-0")	73
B	4	250 mm (10")	4	3.25 m (10'-8")	28
C	4	460 mm (18")	7	7.90 m (26'-0")	32
D	6	150 mm (6")	8	13.25 m (43'-6")	80
E	4	300 mm (12")	6	7.80 m (25'-6")	30
F	4	250 mm (10")	3	4 m (13'-0")	35
G	4	300 mm (12")	1	1.25 m (4'-1")	31
H	6	300 mm (12")	1	4.25 m (14'-0")	20
J	4	300 mm (12")	7	13.25 m (43'-6")	90
K	4	250 mm (10")	30	8.00 m (26'-3")	52
L	4	300 mm (12")	6	13 m (42'-8")	37
M	4	300 mm (12")	4	5.00 m (16'-5")	8
TOTAL STEEL L.B.				413	
TOTAL CONCRETE C.Y.				4.08	

NOTES:
 1. ALL REINFORCING STEEL SHALL BE GRADE 60.
 2. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
 3. LOWER QUALITY OF ALL INLET WALLS - 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.
 4. QUANTITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S INFORMATION ONLY. PAYMENT WILL BE MADE FOR EACH INLET OF THE TYPES SPECIFIED, COMPLETE IN PLACE INCLUDING MANHOLE FRAME AND COVER.
 5. MANHOLE FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 5035-1.
 6. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION.
 7. 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.
 8. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE, SHAPED AS PER SECTION.
 9. NO SPRING OF REINFORCING STEEL SHALL BE PERMITTED UNLESS OTHERWISE NOTED ON THE PLANS OR PRINTED IN WRITING BY THE ENGINEER.



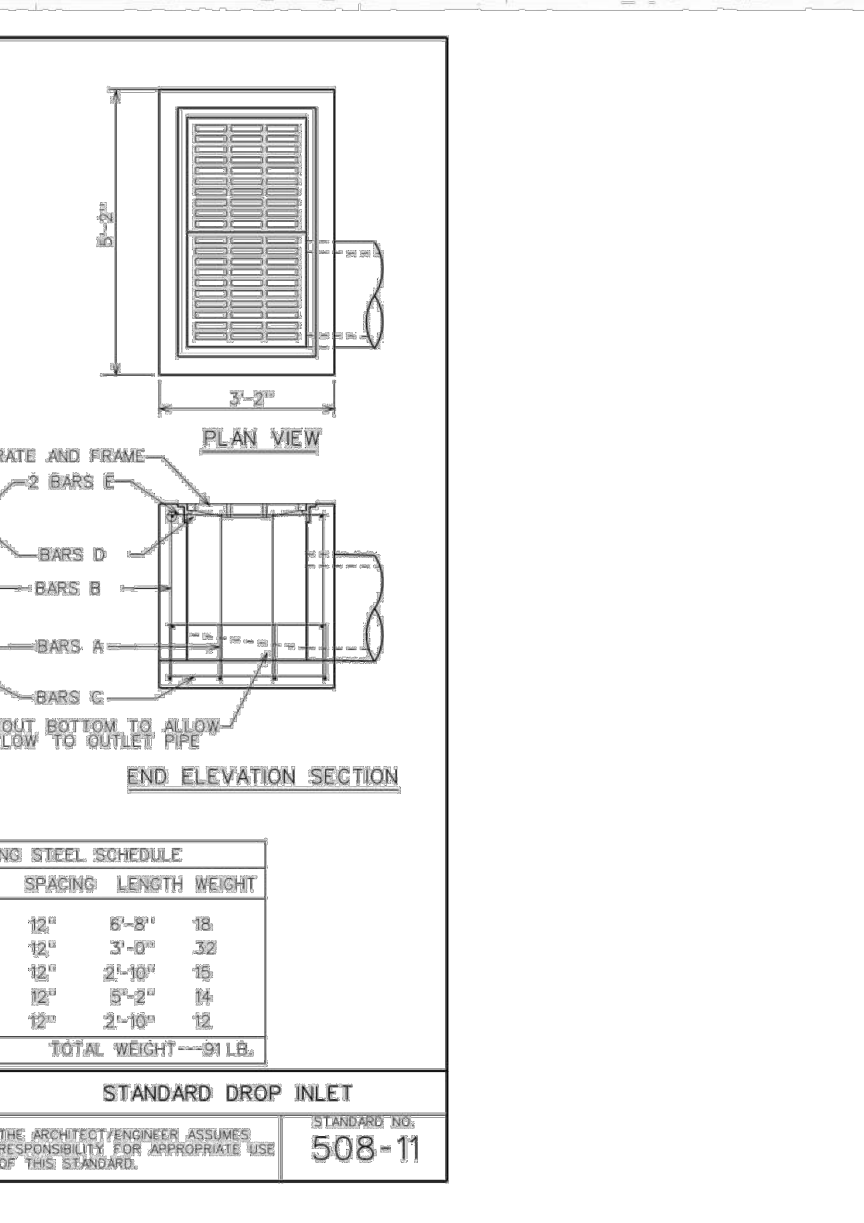
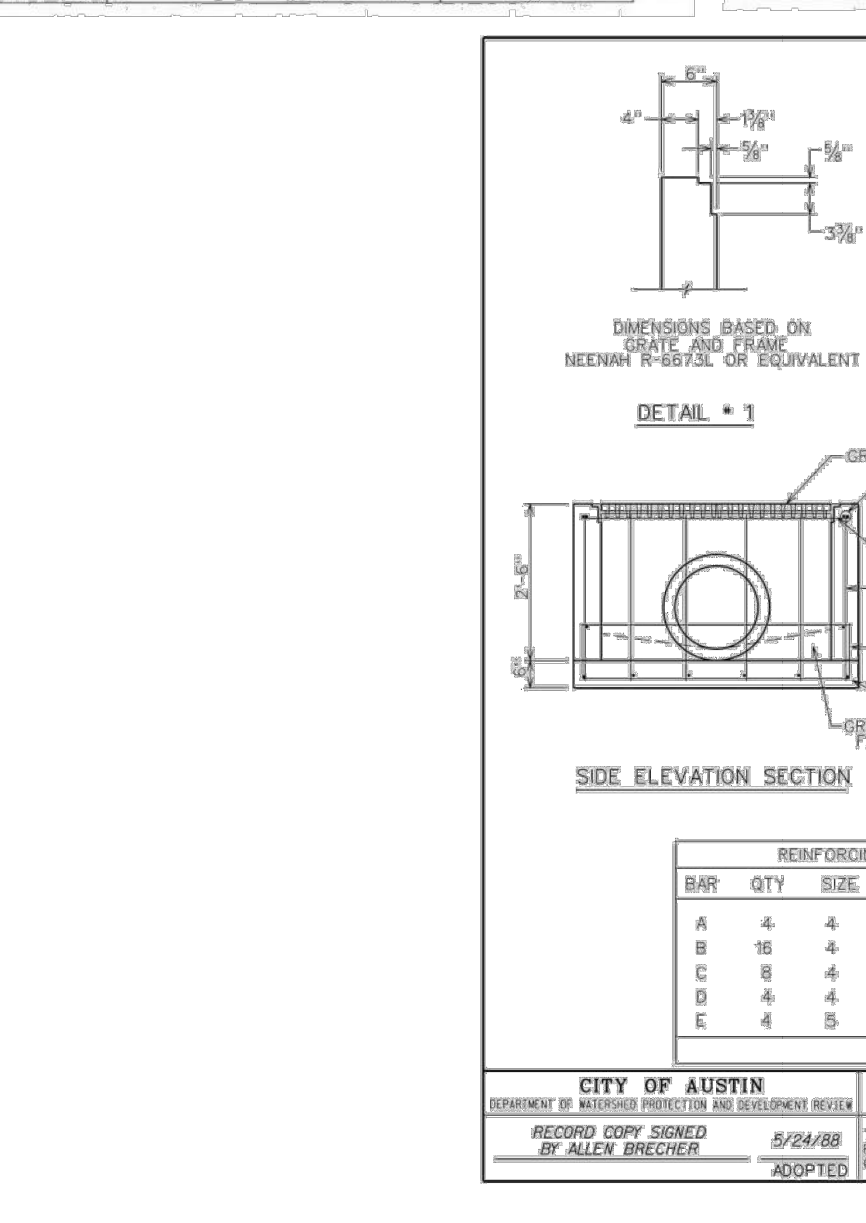
REINFORCING STEEL SCHEDULE

BAR	QTY	SIZE	SPACING	LENGTH	WEIGHT
A	4	12"	6'-0"	18	
B	4	12"	3'-0"	32	
C	4	12"	2'-0"	18	
D	4	12"	3'-0"	18	
E	4	12"	2'-0"	18	
TOTAL WEIGHT=91 L.B.					



STANDARD HEADWALL AND ENERGY DISSIPATORS

SECTION	MINIMUM MANHOLE DIA.	MINIMUM PIPE SIZE	STANDARD NO.
D	427 mm (16 7/8")	150 mm (6")	508S-13
A	225 mm (8 7/8")	150 mm (6")	508S-13
B	150 mm (6")	150 mm (6")	508S-13
C	225 mm (8 7/8")	150 mm (6")	508S-13
E	150 mm (6")	150 mm (6")	508S-13



LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

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

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
 STANDARD HEADWALL AND ENERGY DISSIPATORS
 508S-13

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
 STANDARD HEADWALL AND ENERGY DISSIPATORS
 508S-13

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
 STANDARD HEADWALL AND ENERGY DISSIPATORS
 508S-13

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
 STANDARD HEADWALL AND ENERGY DISSIPATORS
 508-11

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
 STANDARD HEADWALL AND ENERGY DISSIPATORS
 508S-4

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
 STANDARD HEADWALL AND ENERGY DISSIPATORS
 508S-4

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT
 STANDARD HEADWALL AND ENERGY DISSIPATORS
 508S-4

DATE	BY	REVISIONS	DESCRIPTION
02/28/2024			

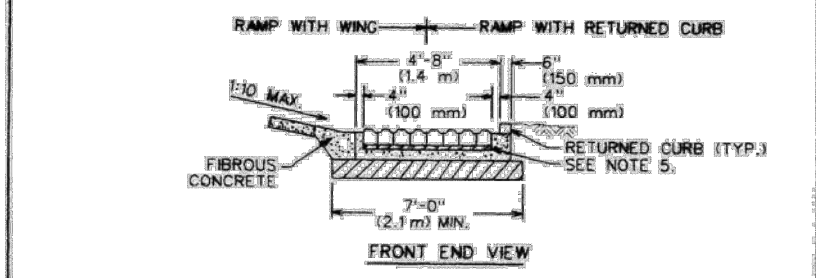
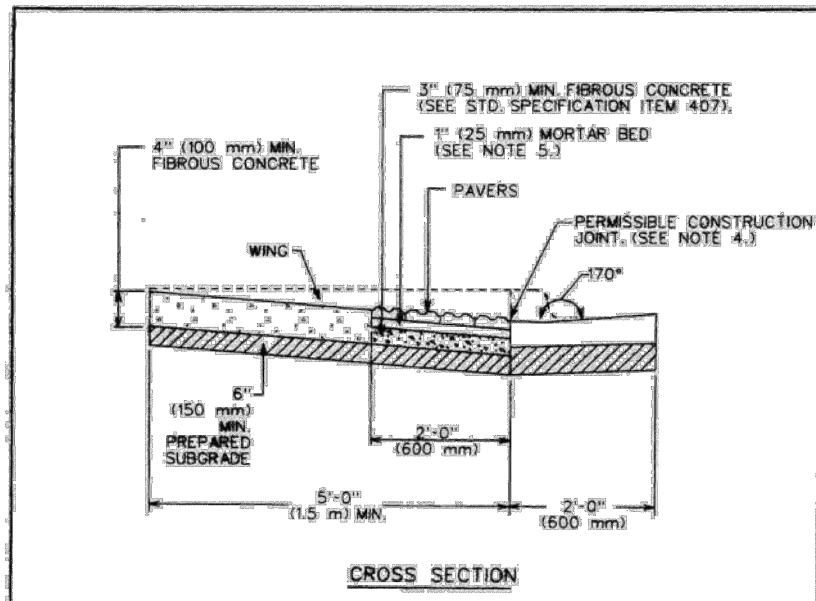
DESIGNED BY: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DRAWING NAME: A116-1007-010.DWG

02/28/2024
 CHARLES R. HAGER
 127034
 PROFESSIONAL ENGINEER

LJA Engineering, Inc.
 7500 Riatico Boulevard
 Building II, Suite 100
 Austin, Texas 78735
 Phone 512.438.4700
 Fax 512.438.4716
 FRN-F-1386

JOB NUMBER: A116-1007
 DET02
 SHEET NO. 103 OF 107 SHEETS

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 Plot Date/Time: Mar 01, 24 - 15:04:59



- GENERAL NOTES:
1. THIS STANDARD IS APPLICABLE FOR RAMP CONSTRUCTION ON CITY PROPERTY AND EASEMENT AREAS ONLY.
 2. PAVERS ARE REQUIRED FOR ALL CURB RAMP INSTALLATIONS.
 3. PAVERS WILL HAVE DETECTABLE WARNING THAT CONSISTS OF RATED TRUNCATED DOMES WITH A DIAMETER OF 0.59 (15 mm) A NOMINAL HEIGHT OF 0.15 (4 mm) AND A NOMINAL CENTER TO CENTER SPACING OF 2.35 (60 mm) AND SHALL CONFORM TO ASTM SECTION 432.2. MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. PAVES PATTERN SHALL BE BASKET WEAVE UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
 4. TYPICAL SIDEWALK WIDTHS AND CURB RADII ARE SHOWN FOR ILLUSTRATION ONLY. REFER TO THE TRANSPORTATION CRITERIA MANUAL FOR SIDEWALK WIDTHS, CURB RADI AND CURB BASES.
 5. THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE PAVERS AND THE ADJOINING SURFACE SHALL BE LIMITED TO 1/2 (16 mm) JOINT SIZE. CURBS LARGER THAN 1/2 (16 mm) MUST BE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. ALL JOINTS BETWEEN BRICKS AND ADJOINING SURFACE SHALL BE MORTAR FILLED UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
 6. MORTAR SHALL CONFORM TO STD. SPECIFICATION ITEM SECTION 403S.1.5. MORTAR AND GROUT, ALL OTHER CONCRETE SHALL CONFORM TO STD. SPECIFICATION ITEM 403S. CONCRETE FOR STRUCTURES, UNLESS OTHERWISE NOTED.
 7. CURB RAMPS WITH RETURNED CURB MAY ONLY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK DIAGONALLY ACROSS THE RAMP.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
Bill Anderson 6/6/24
APPROVED

DETECTABLE WARNING-PAVER
(CITY PROPERTY/EASEMENTS)
THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.
432S-2A
1 OF 2

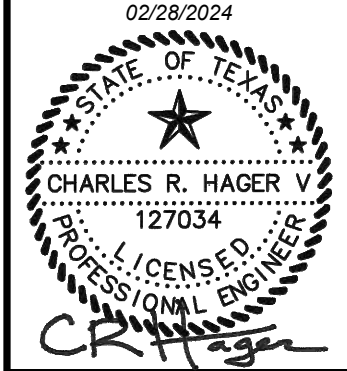
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
Bill Anderson 6/6/24
APPROVED

DETECTABLE WARNING-PAVER
(CITY PROPERTY/EASEMENTS)
THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.
432S-2A
2 OF 2

LEDGESTONE TERRACES
SITE CONSTRUCTION PLANS
GENERAL DETAILS SHEET 6
9209 LEDGESTONE TERRACE, AUSTIN, TX 78737

NO.	REVISIONS DESCRIPTION	BY	DATE

DATE: 02/28/2024
DESIGNED BY:
DRAWN BY:
CHECKED BY:
DRAWING NAME: A:\16-1007-1000.DWG



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

JOB NUMBER:
A116-1007

DET06

SHEET NO.
107
OF 107 SHEETS

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



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User: jdoyle
Date Modified: Mar 01, 24 - 12:53
Plot Date/Time: Mar 01, 24 - 15:05:21

ATTACHMENT N – INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

The Maintenance Plan for Permanent Best Management Practices for *Ledgestone Terraces*.is included herein.

**Maintenance Plan
For Permanent Best Management Practices
Ledgestone Terraces**

PROJECT NAME: Ledgestone Terraces
PROJECT ADDRESS: 9209 and 9401 Ledgestone Terrace
Austin, Texas 78737

The Best Management Practices associated with Water Quality for this project includes the use of a Sed/Fil/Irrigation Pond, Pump Station, Irrigation Lines and Spray Heads for irrigating stormwater.

Stormwater collected onsite by storm inlets is conveyed to the splitter box via storm sewers. The splitter box weir is set to the water quality elevation. When the required water quality volume is collected in the water quality pond, the splitter box diverts the remainder into the detention pond.

The water quality pond contains a sedimentation basin and a filtration basin. The sedimentation basin collects sediment and debris. Water then filters through a rock gabion into the filtration basin, where a sand bed traps additional small particles in order to eliminate clogging of the pump and irrigation system. Perforated underdrains convey the water to the wet well. The submersible pump is designed to turn on 12 hours after the storm event and should empty the water quality pond via irrigation through pressure pipes and spray heads within 72 hours.

MAINTENANCE FOR STRUCTURAL (STORMWATER CAPTURE) SYSTEMS

Routine Maintenance for All Structural Systems

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

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

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

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

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

Excessive sediment must be removed and properly disposed of in an approved off-site disposal area. Excessive sediment is when accumulations reach 6 inches in depth.

**Maintenance Plan
For Permanent Best Management Practices
Ledgestone Terraces**

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

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

A maintenance access route shall extend to the pond from a public or private road. The maintenance access shall have a slope of no greater than 4:1.

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

Upon completion of the construction of these facilities, the contractor shall provide the owner/responsible party with all parts lists, suppliers, and other similar information.

ADDITIONAL MAINTENANCE REQUIREMENTS FOR SPECIFIC STRUCTURAL (STORMWATER CAPTURE) BMPS

Retention/Irrigation Pond, Pump Station and Irrigation system

Remove sediment from sediment chamber area in front of rock gabion, and from the pump sump area at least 2 times annually or when depth reaches 6 inches.

Rake the sand bed area to break up any crust that has been formed. Remove all grass from the sand bed area. If sand bed area has any accumulation of sediment on surface, the sediment must be removed. This procedure is performed by hand operations. No mechanized machinery should be allowed on top of the sand bed area.

The pumping and irrigation system must be inspected and tested (or observed while in operation) to assure proper operation at least 2 times annually. At least one of these inspections must occur during or immediately following wet weather.

Immediately repair any leaks, broken spray heads, or other malfunctions with the irrigation system.

Upon completion of the construction of these facilities, the contractor shall provide the owner/responsible party with all parts lists, O&M manuals, suppliers, and other similar information.

**Maintenance Plan
For Permanent Best Management Practices
Ledgestone Terraces**

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

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

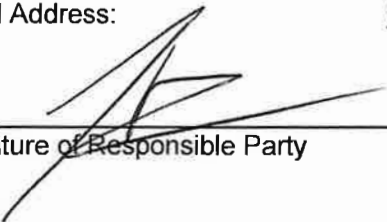
Engineer's Certification

I certify that the BMP described by this Maintenance Plan has been designed in compliance with the regulations of Title 30 Texas Administrative Code Chapter 213.

By: CR Hager
Charles R Hager V, P.E.

Maintenance Certification

Responsible Party for Maintenance: OP III ATX LEDGESTONE I, LP
Address: c/o Endeavor Real Estate Group,
500 W. 5th St. Suite 700
City, State Zip: Austin, Texas 78701
Email Address: vtrupiano@endeavor-re.com


Signature of Responsible Party

2/21/24
Date

ATTACHMENT O – PILOT-SCALE FIELD TESTING PLAN

NOT APPLICABLE

ATTACHMENT P – MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

The existing water quality pond discussed in the previous attachments will provide water quality treatment for the storm water run-off from this project.

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: Charles R. Hager V

Date: 3/4/2024

Signature of Customer/Agent:



Regulated Entity Name: Ledgestone Terraces

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: Slaughter Creek

Temporary Best Management Practices (TBMPs)

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

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

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

- There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
11. **Attachment H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
- N/A
12. **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
13. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
14. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
15. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
16. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

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

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

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

Administrative Information

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

ATTACHMENT A – SPILL RESPONSE ACTIONS

The following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area on site. Equipment and materials will include, but not be limited to, brooms, dustpans, mops, rags, gloves, goggles, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately upon discovery.
- The spill area will be kept well ventilated, and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.
- The spill prevention plan will be adjusted to include measures to prevent the reoccurrence of similar spills and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The Contractor will be the spill prevention and cleanup coordinator. The names of responsible spill personnel will be posted in the material storage area and in the office trailer on site.

The following practices are used to reduce the risks associated with hazardous materials:

- Products will be kept in original containers unless they are not resealable.
- Original labels and material safety data will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturer or local and state recommended methods for proper disposal will be followed.

In the event of a large spill (please see link to reportable quantities here: https://www.tceq.texas.gov/response/spills/spill_rq.html), the following steps should be taken:

1. Determine Reportable Discharge or Spill: A reportable discharge or spill is a discharge or spill of oil, petroleum product, used oil, hazardous substances, industrial solid waste, or other substances into the environment in a quantity equal to or greater than the reportable quantity listed in TAC §327.4 in any 24-hour period.

The reportable quantities for crude oil and oil other than that defined as petroleum product or used oil shall be:

- For spills or discharges onto land: 210 gallons (five barrels).

- For spills or discharges directly into water in the state: quantity sufficient to create a sheen.

The reportable quantities for petroleum product and used oil shall be:

- For spills or discharges onto land: 25 gallons.
 - For spills or discharges to land from PST exempted facilities: 210 gallons (five barrels).
 - For spills or discharges directly into water in the state: quantity sufficient to create a sheen.
2. Initial Notification: Upon the determination that a reportable or spill has occurred, a telephone report is required by the person responsible as soon as possible but not later than 24 hours after the discovery of the spill or discharge. The telephone report required may be made to the TCEQ. Alternately, the TCEQ encourages calls directly to a regional office during regular business hours (8:00 AM to 5:00 PM) or to the agency's 24-hour number. After hours, an answering service receives incoming calls and then an operator/paging system notifies TCEQ staff of release reports.

TCEQ Emergency Release Hotline (24 hours a day)	(512) 463-7727
	or
	(512) 239-2507
TCEQ Region 11 Office (Austin)	(512) 339-2929
SERC c/o TX Emergency Release Hotline (24 hours a day)	(800) 832-8224
City of Austin Pollution Hotline (24 hours a day)	(512) 974-2550
Travis County Local Emergency Planning Committee	(512) 974-0476
Texas Department of Health	(512) 463-7727
National Response Center (NRC)	(800) 424-8802

When making a telephone report of a spill or pollution complaint, it will be helpful if the following information is at available:

- The date and time of the spill or release.
- The identity or chemical name of any material released or spilled, as well as whether the substance is extremely hazardous.
- An estimate of the quantity of material released or spilled and the time or duration of the event.
- The exact location of the spill, including the name of waters involved or threatened, and any other media affected by the release or spill.
- The extent of actual and potential water pollution.
- The source of the release or spill.
- The name, address, and phone number of the party in charge of, or responsible for, the facility, vessel, or activity associated with the release or spill. If that party is not at the site, also have the name and phone number of the party at the site who is in charge of operations.

-
- The steps being taken or proposed to contain and clean up the released or spilled material and any precautions taken to minimize impacts, including evacuation.
 - The extent of injuries, if any.
 - Any known or anticipated health risks associated with the incident and, where appropriate, advice regarding medical attention necessary for persons exposed.
 - Possible hazards to the environment (air, soil, water, wildlife, etc.). This assessment may include references to accepted chemical databases, material safety data sheets, and health advisories. The TCEQ may request estimated or measured concentrations of the contaminant for the state's hazard assessment.
 - The identities of any government or private-sector representatives responding at the scene.
3. Abate and Contain: The responsible person shall immediately abate and contain the spill or discharge and cooperate fully with the executive director and the local incident command system. The responsible person shall also begin reasonable response actions, which may include, but are not limited to, the following actions:
- Arrival of the responsible person or response personnel hired by the responsible person at the site of the discharge or spill.
 - Initiating efforts to stop the discharge or spill.
 - Minimizing the impact to the public health and the environment.
 - Neutralizing the effects of the incident.
 - Removing the discharged or spilled substances.
 - Managing the wastes.

Upon request of the local government responders or the executive director, the responsible person shall provide a verbal or written description, or both, of the planned response actions and all actions taken before the local governmental responders or the executive director arrive. When the agency on-scene coordinator requests this information, it is subject to possible additional response action requirements by the executive director. The information will serve as a basis for the executive director to determine the need for:

- Further response actions by the responsible person.
 - Initiating state funded actions for which the responsible person may be held liable to the maximum extent allowed by law.
 - Subsequent reports on the response actions.
4. Follow-up Report: Within 30 working days of the discovery of a reportable discharge or spill, the person responsible must submit written information to the appropriate TCEQ regional office describing the details and supporting the adequacy of the response. The documentation must contain one of the following:

- a. Information from the initial notification, and a statement that the response to the discharge or spill has been completed and a description of how the action was conducted.
- b. A request for the extension of time to complete the response, along with the reasons for the request, and a projected work schedule outlining the time required to complete the response action. Proceed according to the projected schedule unless otherwise notified by the appropriate TCEQ regional director.
- c. A statement and explanation that the discharge or spill response has not been, and is not expected to be, completed within the maximum allowable extension (six months from the date of the discharge or spill), along with a projected work schedule.

Additional information to include:

- a. Response Chronology: A chronology, listing times and dates, of the responses by the responsible person, as well as:
 - the nature of the responses, along with the name, address, and phone number of the response contractor as well as the name of a contact, if different than the responsible person
 - the date and time of the first containment actions and the name of the individuals or company conducting these activities
 - a detailed description of the containment equipment and personnel used and a description of the effectiveness of the initial response actions; etc.
- b. Meteorology: Describe weather conditions during the incident and include a discussion of how the weather may have helped or hindered the cleanup.
- c. Reported Injuries: Describe any injuries or fatalities.
- d. Remediation of Contamination: Describe actions taken to remove or neutralize the substances discharged or spilled including:
 - The amounts of substances recovered and contained.
 - The amounts of substances lost to the environment.
 - If soil was affected, the amounts of substances removed. Include a scaled map indicating the lateral and vertical extent of excavation.
 - The disposition of any excavated substances, any recovered substances, and any additional wastes generated from the cleanup, including any on-site or off-site storage, processing, or treatment. If the material is stored off-site, the responsible person must give the name, physical address, and phone number for the storage facility.
- e. Sampling and Analysis: A description of all sampling activities including:
 - A list of the person(s) collecting the samples.
 - A scaled map indicating the lateral and vertical location of the sampling locations.

-
- A tabulation of the analyses performed and the analytical methods used.
 - The name and address of the laboratory conducting the analytical work.
 - The name and address of the supplier of the sample containers.
 - A copy of the analytical results as reported by the laboratory to the responsible person.
- f. Waste Classification and Disposal: List the U.S. EPA and TCEQ waste-classification and waste-code numbers, along with:
- Copies of any analytical results used to obtain the waste classifications as well as any correspondence from the TCEQ.
 - A list of any temporary generator or transporter numbers used, if applicable.
 - Copies of the manifests for the shipment of the wastes.
 - The name, address, and phone number of the facility receiving the waste.

ATTACHMENT B – POTENTIAL SOURCES OF CONTAMINATION

Below is a list of description of any activities or processes that may be a potential source of contamination affecting surface water quality.

Non-Stormwater Discharges: It is expected that the following non-stormwater discharges will occur from the site during the construction period:

- Water from water line flushing.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater (from dewatering of excavation).
- All non-stormwater discharges will be directed towards erosion control structures prior to discharge.

Material Inventory: The materials or substances listed below are expected to be present on-site during construction:

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

ATTACHMENT C – SEQUENCE OF MAJOR ACTIVITIES

1. Temporary erosion and sedimentation controls are to be installed as indicated on the approved site plan. Install tree protection and initial tree mitigation measures. I) Area Disturbed = 57.3 acres, II) Description of Temporary Control Measures = Silt Fence, Rock Berm, Tree Fence, Inlet Protection, III) General Implementation of Temporary Control Measures Timing = Start of construction activity.
2. The Environmental Project Manager or Site Supervisor must contact the City of Austin Planning and Development Review Department, Environmental Inspection, at (512) 974-2278, 72 hours prior to the scheduled date of the required pre-construction meeting. I) Area Disturbed = N/A, II) Description of Temporary Control Measures = Silt Fence, Rock Berm, Tree Fence, Inlet Protection, III) General Implementation of Temporary Control Measures Timing = Start of construction activity.
3. The Environmental Project Manager, and/or Site Supervisor, and/or designated responsible party, and the General Contractor will monitor construction activities on the site. Temporary erosion and sedimentation controls will be revised, if needed, to comply with City Inspectors' directives, and revised construction schedule relative to the water quality plan requirements and the erosion plan. I) Area Disturbed = N/A, II) Description of Temporary Control Measures = Silt Fence, Rock Berm, Tree Fence, Inlet Protection, III) General Implementation of Temporary Control Measures Timing = Start of construction activity.
4. Temporary erosion and sedimentation controls will be inspected and maintained. I) Area Disturbed = N/A, II) Description of Temporary Control Measures = Silt Fence, Rock Berm, Tree Fence, Inlet Protection, III) General Implementation of Temporary Control Measures Timing = Start of construction activity.
5. Begin site clearing/construction (or demolition) activities. I) Area Disturbed = 57.3 acres, II) Description of Temporary Control Measures = Silt Fence, Rock Berm, Tree Fence, Inlet Protection, III) General Implementation of Temporary Control Measures Timing = Start of construction activity.
6. Permanent water quality ponds or controls will be inspected and cleaned out if necessary prior to/concurrently with revegetation of site. I) Area Disturbed = 3.0 acres, II) Description of Temporary Control Measures = Silt Fence, Rock Berm, Tree Fence, Inlet Protection, III) General Implementation of Temporary Control Measures Timing = Prior to pond construction activity.
7. Complete construction and start revegetation of the site and installation of landscaping. I) Area Disturbed = 40.8 acres, II) Description of Temporary Control Measures = Silt Fence, Rock Berm, Tree Fence, Inlet Protection, III) General Implementation of Temporary Control Measures Timing = Near final activity of construction.
8. Upon completion of the site construction and revegetation of a project site, the design engineer shall submit an engineer's letter of concurrence to the Planning and Development Review Department indicating that construction, including revegetation, is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the appropriate City Inspector. I) Area Disturbed = N/A II) Description of Temporary Control Measures = None III) General Implementation of Temporary Control Measures Timing = After construction is complete

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9. Upon completion of landscape installation of a project site, the Landscape Architect shall submit a letter of concurrence to the Planning and Development Review Department indicating that the required landscaping is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the appropriate City Inspector. I) Area Disturbed = N/A, II) Description of Temporary Control Measures = Silt Fence, Rock Berm, Tree Fence, Inlet Protection, III) General Implementation of Temporary Control Measures Timing = After construction is complete
 10. After a final inspection has been conducted by the City Inspector and with approval from the City Inspector, remove the temporary erosion and sedimentation controls and complete any necessary final revegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the water quality ponds or controls. I) Area Disturbed = 40.8 acres, II) Description of Temporary Control Measures = None III) General Implementation of Temporary Control Measures Timing = After construction is complete

ATTACHMENT D – TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Prevention of pollution of surface water, groundwater, or stormwater, including stormwater that originates upgradient of the site, or from within the site, will be managed by the BMPs shown on the construction drawings. Disturbances on the site will be minimized by delineating allowable work areas with the BMPs and with temporary fencing. The BMPs are designed to contain and filter runoff containing suspended solids, reduce velocities and encourage a return flows to sheet flow regime where practicable. The runoff of stormwater from the developed portions of the site will be routed towards silt fencing and rock berms; therefore, preventing pollutants in surface runoff from entering surface streams, sensitive features, or the aquifer.

Pollutants will also be prevented from entering the environment by implementing the practices listed below.

Spill Prevention and Cleanup Practices: The following practices will be followed for spill prevention and cleanup.

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area on site. Equipment and materials will include, but not be limited to, brooms, dustpans, mops, rags, gloves, goggles, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spill will be cleaned up immediately upon discovery.
- The spill area will be kept well-ventilated, and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.
- The spill prevention plan will be adjusted to include measures to prevent the reoccurrence of similar spills and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The Contractor will be the spill prevention and cleanup coordinator. The names of responsible spill personnel will be posted in the material storage area and in the office trailer on site.

Hazardous Materials: The following practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not resealable.
- Original labels and material safety data will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturer or local and state recommended methods for proper disposal will be followed.

Material Management Practices: The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

- All soil, sand, gravel, and excavated materials stockpiles on site will have appropriate erosion and sedimentation controls placed downgradient.
- An effort will be made to store only product required to do the job.
- All materials stored on site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Materials will be stored in the construction staging, material storage, and temporary spoils disposal area as shown on the construction plans.
- Products will be kept in their original containers with the original manufacturer's labels.
- Whenever possible all of a product will be used before disposing of the container.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The Contractor will make a daily inspection to ensure the proper use and disposal of materials on site.

Product Specific Practices: The following product specific practices will be followed on site.

- **Petroleum Products:** All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Any asphaltic substances used on site will be applied according to the manufacturer's recommendations.
- **Fertilizers:** Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.
- **Paints:** All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturer's instructions or state and local regulations.
- **Concrete Trucks:** Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum water on the site except in designated areas. Upon completion of the project, the Contractor will clean up the wash-out site in accordance with state and local regulations.
- **Construction Equipment/Vehicles:** Construction equipment/vehicles will be limited, as much as possible, to the project site. Any soil, mud, etc. to be carried from the project into public roads will be cleaned up within 24 hours.

ATTACHMENT E – REQUEST TO TEMPORARILY SEAL A FEATURE

NOT APPLICABLE

ATTACHMENT F – STRUCTURAL PRACTICES

During construction the site will be protected by temporary structural erosion controls to trap construction sediment on site. The controls primarily consist of silt fence, rock berm, and inlet protection designed in accordance with City of Austin Environmental Criteria Standards.

ATTACHMENT G – DRAINAGE AREA MAP

The drainage area map, showing that all development proposed by this project will flow to the proposed retention/irrigation facility (“ONSITE DRAINAGE AREA MAP”), is on Sheet DM03 of the site construction plans.

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

NOT APPLICABLE

ATTACHMENT I – INSPECTION AND MAINTENANCE FOR BMPS

Inspection and maintenance for Best Management Practices is taken from the TCEQ Manual, "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices", dated July 2005.

SILT FENCE:

1. Inspect all fencing weekly, and after any rainfall.
2. Remove sediment when buildup reaches 6 inches.
3. Replace any torn fabric or install a second line of fencing parallel to the torn section.
4. Replace or repair any section crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicular access points.
5. When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

ROCK BERMS:

1. Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.
2. Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.
3. Repair any loose wire sheathing.
4. The berm should be reshaped as needed during inspection.
5. The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
6. The rock berm should be left in place until all upstream areas are stabilized and accumulated silt is removed.

STABILIZED CONSTRUCTION ENTRANCE:

1. The entrance should be maintained in a condition that will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.
2. All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
3. When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.
4. When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.

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5. All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

CONCRETE WASHOUT AREA:

1. Routine inspection in accordance with section 1.4.18 of TCEQ Manual: RG-348 of the area to ensure that sufficient quantity and volume remain to contain all liquid and concrete waste generated by washout operations.
2. Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
3. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.
4. When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of. Holes, depressions, or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Periodically throughout the project all erosion controls will be re-analyzed and repaired as needed. Upon completion of construction, all areas of disturbance will be re-vegetated utilizing hydromulch seeding or sod, in accordance with City of Austin Environmental Criteria Manual (ECM). Bare soils should be seeded or otherwise stabilized within 14 days after final grading or where construction activity has temporarily ceased for more than 21 days.



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

IMPORTANT:

- Use the [INSTRUCTIONS](#) to fill out each question in this form.
- Use the [CHECKLIST](#) to make certain all you filled out all required information. Incomplete applications **WILL** delay approval or result in automatic denial.
- Once processed your permit can be viewed at:
http://www2.tceq.texas.gov/wq_dpa/index.cfm

ePERMITS: Sign up now for online NOI: <https://www3.tceq.texas.gov/steers/index.cfm>
Pay a \$225 reduced application fee by using ePermits.

APPLICATION FEE:

- You must pay the **\$325** Application Fee to TCEQ for the paper application to be complete.
- Payment and NOI must be mailed to separate addresses.
- Did you know you can pay on line?
 - Go to <https://www3.tceq.texas.gov/epay/index.cfm>
 - Select Fee Type: GENERAL PERMIT CONSTRUCTION STORM WATER DISCHARGE NOI APPLICATION

• **Provide your payment information below, for verification of payment:**

Mailed	Check/Money Order No.:	_____
	Name Printed on Check:	_____
EPAY	Voucher No.:	_____
	Is the Payment Voucher copy attached?	Yes

RENEWAL: Is this NOI a Renewal of an existing General Permit Authorization?
(Note: A permit cannot be renewed after June 3, 2013.)

Yes The Permit number is: TXR15_____

(If a permit number is not provided, a new number will be assigned.)

No

1) OPERATOR (Applicant)

a) If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? You may search for your CN at:
<https://www.tceq.texas.gov/permitting/tier2/reporting-steps/tier2-numbers>

CN _____

b) What is the Legal Name of the entity (applicant) applying for this permit?

(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal document forming the entity.)

c) What is the name and title of the person signing the application? The person must be an executive official meeting signatory requirements in TAC 305.44(a).

Prefix (Mr. Ms. Miss): _____

First/Last Name: _____ Suffix: _____

Title: _____ Credential: _____

d) What is the Operator Contact's (Responsible Authority) contact information and mailing address as recognized by the US Postal Service (USPS)? You may verify the address at:

<http://zip4.usps.com/zip4/welcome.jsp>

Phone #: _____ ext: _____ Fax #: _____

E-mail: _____

Mailing Address: _____

Internal Routing (Mail Code, Etc.): _____

City: _____ State: _____ ZIP Code: _____

If outside USA: Territory: _____ Country Code: _____ Postal Code: _____

e) Indicate the type of Customer (The instructions will help determine your customer type):

Individual	Limited Partnership	Sole Proprietorship-DBA
Joint Venture	General Partnership	Corporation
Trust	Estate	Federal Government
State Government	County Government	City Government
Other Government		

f) Independent Operator? Yes No
(If governmental entity, subsidiary, or part of a larger corporation, check "No".)

g) Number of Employees: 0-20; 21-100; 101-250; 251-500; or 501 or higher

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

State Franchise Tax ID Number: _____

Federal Tax ID: _____

Texas Secretary of State Charter (filing) Number: _____

DUNS Number (if known): _____

2) APPLICATION CONTACT

If TCEQ needs additional information regarding this application, who should be contacted?

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

Yes, go to Section 3). No, complete section below.

Prefix (Mr. Ms. Miss): _____

First/Last Name: _____ Suffix: _____

Title: _____ Credential: _____

Organization Name: _____
Phone No.: _____ ext: _____ Fax Number: _____
E-mail: _____
Mailing Address: _____
Internal Routing (Mail Code, Etc.): _____
City: _____ State: _____ ZIP Code: _____
Mailing Information if outside USA:
Territory: _____ Country Code: _____ Postal Code: _____

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

If the site of your business is part of a larger business site or if other businesses were located at this site before yours, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search TCEQ's Central Registry to see if the larger site may already be registered as a regulated site at:
<https://www.tceq.texas.gov/permitting/tier2/reporting-steps/tier2-numbers>.

If the site is found, provide the assigned Regulated Entity Reference Number and provide the information for the site to be authorized through this application below. The site information for this authorization may vary from the larger site information.

a) TCEQ issued RE Reference Number (RN): RN _____

b) Name of project or site (the name known by the community where located):

c) In your own words, briefly describe the primary business of the Regulated Entity: (Do not repeat the SIC and NAICS code):

d) County (or counties if > 1) _____

e) Latitude: _____ Longitude: _____

f) Does the site have a physical address?
Yes, complete Section A for a physical address.
No, complete Section B for site location information.

Section A: Enter the physical address for the site.
Verify the address with USPS. If the address is not recognized as a delivery address, provide the address as identified for overnight mail delivery, 911 emergency or other online map tools to confirm an address.

Physical Address of Project or Site:
Street Number: _____ Street Name: _____
City: _____ State: _____ ZIP Code: _____

Section B: Enter the site location information.

If no physical address (Street Number & Street Name), provide a written location access description to the site. (Ex.: located 2 miles west from intersection of Hwy 290 & IH35 accessible on Hwy 290 South)

City where the site is located or, if not in a city, what is the nearest city:

State: _____ ZIP Code where the site is located: _____

4) GENERAL CHARACTERISTICS

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

Yes - If the answer is Yes, you must obtain authorization through EPA, Region 6.

No

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

Yes - If the answer is Yes, you may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization through EPA, Region 6.

No

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

Primary SIC Code: _____

d) If applicable, what is the Secondary SIC Code(s): _____

e) What is the total number of acres disturbed? _____

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

Yes - If the answer is Yes, the total number of acres disturbed can be less than 5 acres.

No - If the answer is No, the total number of acres disturbed must be 5 or more. If the total number of acres disturbed is less than 5 then the project site does not qualify for coverage through this Notice of Intent. Coverage will be denied. See the requirements in the general permit for small construction sites.

g) What is the name of the first water body(s) to receive the stormwater runoff or potential runoff from the site?

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

i) Is the discharge into an MS4?

Yes - If the answer is Yes, provide the name of the MS4 operator below.

No

If Yes, provide the name of the MS4 operator:

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

j) Are any of the surface water bodies receiving discharges from the construction site on the latest EPA-approved CWA 303(d) List of impaired waters?

Yes - If the answer is Yes, provide the name(s) of the impaired water body(s) below.

No

If Yes, provide the name(s) of the impaired water body(s):

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

Yes - If the answer is Yes, complete certification below by checking "Yes."

No

I certify that a copy of the TCEQ approved Plan required by the Edwards Aquifer Rule (30 TAC Chapter 213) is either included or referenced in the Stormwater Pollution Prevention Plan.

Yes

5) CERTIFICATION

Check Yes to the certifications below. Failure to indicate Yes to **ALL** items may result in denial of coverage under the general permit.

- a) I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000). Yes
- b) I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas. Yes
- c) I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed. Yes
- d) I certify that a Stormwater Pollution Prevention Plan has been developed, will be implemented prior to construction and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the general permit TXR150000. Note: For multiple operators who prepare a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator. Yes

Operator Certification:

I, _____
Typed or printed name Title

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

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

Signature: _____ Date: _____
(Use blue ink)

NOTICE OF INTENT CHECKLIST (TXR150000)

- Did you complete everything? Use this checklist to be sure!
- Are you ready to mail your form to TCEQ? Go to the General Information Section of the Instructions for mailing addresses.

This checklist is for use by the operator to ensure a complete application. Missing information may result in denial of coverage under the general permit. (See NOI process description in the Instructions)

Application Fee:

If paying by Check:

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

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

If using ePay:

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

PERMIT NUMBER:

Permit number provided – if this application is for renewal of an existing authorization.

OPERATOR INFORMATION - Confirm each item is complete:

Customer Number (CN) issued by TCEQ Central Registry

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

Name and title of responsible authority signing the application

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

Phone numbers/e-mail address

Type of operator (entity type)

Independent operator

Number of employees

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

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

REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE - Confirm each item is complete:

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

Site/project name/regulated entity

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

County

Site/project physical address. Do not use a rural route or post office box.

Business description

GENERAL CHARACTERISTICS - Confirm each item is complete:

Indian Country Lands –the facility is not on Indian Country Lands

Construction activity related to facility associated to oil, gas, or geothermal

Resources Standard Industrial Classification (SIC) Code www.osha.gov

Acres disturbed is provided and qualifies for coverage through a NOI

Common plan of development or sale

Receiving water body(s)

Segment number(s)

Impaired water body(s)

MS4 operator

Edwards Aquifer rule

CERTIFICATION

Certification statements have been checked indicating “Yes”

Signature meets 30 Texas Administrative Code (TAC) 305.44 and is original.

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

General Information and Instructions

GENERAL INFORMATION

Where to Send the Notice of Intent (NOI):

BY REGULAR U.S. MAIL
Texas Commission on
Environmental Quality
Stormwater Processing Center
(MC228)
P.O. Box 13087
Austin, Texas 78711-3087

BY OVERNIGHT/EXPRESS MAIL
Texas Commission on
Environmental Quality
Stormwater Processing Center
(MC228)
12100 Park 35 Circle
Austin, TX 78753

TCEQ Contact List:

Application – status and form questions:	<i>512/239-3700, swpermit@tceq.texas.gov</i>
Technical questions:	<i>512/239-4671, swgp@tceq.texas.gov</i>
Environmental Law Division:	<i>512/239-0600</i>
Records Management - obtain copies of forms:	<i>512/239-0900</i>
Reports from databases (as available):	<i>512/239-DATA (3282)</i>
Cashier's office:	<i>512/239-0357 or 512/239-0187</i>

Notice of Intent Process:

When your NOI is received by the program, the form will be processed as follows:

- 1) **Administrative Review:** Each item on the form will be reviewed for a complete response. In addition, the operator's legal name must be verified with Texas Secretary of State as valid and active (if applicable). The address(s) on the form must be verified with the US Postal service as receiving regular mail delivery. Never give an overnight/express mailing address.
- 2) **Notice of Deficiency:** If an item is incomplete or not verifiable as indicated above, a notice of deficiency (NOD) will be mailed to the operator. The operator will have 30 days to respond to the NOD. The response will be reviewed for completeness.
- 3) **Acknowledgment of Coverage:** An Acknowledgment Certificate will be mailed to the operator. This certificate acknowledges coverage under the general permit.
-OR-
Denial of Coverage: If the operator fails to respond to the NOD or the response is inadequate, coverage under the general permit may be denied. If coverage is denied, the operator will be notified.

General Permit (Your Permit)

For NOIs submitted **electronically** through ePermits, provisional coverage under the general permit begins immediately following confirmation of receipt of the NOI form by the TCEQ.

For **paper** NOIs, provisional coverage under the general permit begins **7 days after a completed NOI is postmarked for delivery** to the TCEQ.

You should have a copy of your general permit when submitting your application. You may view and print your permit for which you are seeking coverage, on the TCEQ web site <http://www.tceq.texas.gov>. Search using key word TXR150000.

General Permit Forms

The Notice of Intent (NOI), Notice of Termination (NOT), and Notice of Change (NOC) (including instructions) are available in Adobe Acrobat PDF format on the TCEQ web site <http://www.tceq.texas.gov>.

Change in Operator

An authorization under the general permit is not transferable. If the operator of the regulated entity changes, the present permittee must submit a Notice of Termination and the new operator must submit a Notice of Intent. The NOT and NOI must be submitted no later than 10 days prior to the change in Operator status.

TCEQ Central Registry Core Data Form

The Core Data Form has been incorporated into this form. Do not send a Core Data Form to TCEQ. After final acknowledgment of coverage under the general permit, the program will assign a Customer Number and Regulated Entity Number.

You can find the information on the Central Registry web site at <https://www.tceq.texas.gov/permitting/tier2/reporting-steps/tier2-numbers>. You can search by the Regulated Entity (RN), Customer Number (CN) or Name (Permittee), or by your permit number under the search field labeled "Additional ID". Capitalize all letters in the permit number.

The Customer (Permittee) is responsible for providing consistent information to the TCEQ, and for updating all CN and RN data for all authorizations as changes occur. For General Permits, a Notice of Change form must be submitted to the program area.

Fees associated with a General Permit

Payment of the fee may be made by check or money order, payable to TCEQ, or through EPAY (electronic payment through the web).

Application Fee: This fee is required to be paid at the time the NOI is submitted. Failure to submit payment at the time the application is filed will cause delays in acknowledgment or denial of coverage under the general permit.

Mailed Payments:

Payment must be mailed under separate cover at one of the addresses below using the attached Application Fee submittal form. (DO NOT SEND A COPY OF THE NOI WITH THE APPLICATION FEE SUBMITTAL FORM)

BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, TX 78711-3088

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753

ePAY Electronic Payment: <http://www.tceq.texas.gov/epay>

When making the payment you must select Water Quality, and then select the fee category “General Permit Construction Storm Water Discharge NOI Application”. You must include a copy of the payment voucher with your NOI. Your NOI will not be considered complete without the payment voucher.

INSTRUCTIONS FOR FILLING OUT THE NOI FORM

Renewal of General Permit. Dischargers holding active authorizations under the expired General Permit are required to submit a NOI to continue coverage. The existing permit number is required. If the permit number is not provided or has been terminated, expired, or denied a new permit number will be issued.

1. Operator (Applicant)

a) Enter assigned Customer Number (CN)

TCEQ’s Central Registry will assign each customer a number that begins with CN, followed by nine digits. **This is not a permit number, registration number, or license number.**

If this customer has not been assigned a CN, leave the space for the CN blank.

If this customer has already been assigned this number, enter the permittee’s CN.

b) Legal Name

Provide the current legal name of the permittee, as authorized to do business in Texas. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, that is filed in the county where doing business. You may contact the SOS at 512/463-5555, for more information related to filing in Texas. If filed in the county where doing business, provide a copy of the legal documents showing the legal name.

c) Person Signing Application

Provide information about person signing section 5) Certification.

d) Operator Contact’s (Responsible Authority) Contact Information and Mailing Address

Provide a complete mailing address for receiving mail from the TCEQ. The address must be verifiable with the US Postal Service at <http://www.usps.com> for regular mail delivery (not overnight express mail). If you find that the address is not verifiable using the USPS web search, please indicate the address is used by the USPS for regular mail delivery.

The area code and phone number should provide contact to the operator. Leave Extension blank if not applicable.

The fax number and e-mail address are optional and should correspond to the operator.

e) Type of Customer (Entity Type)

Check only one box that identifies the type of entity. Use the descriptions below to identify the appropriate entity type. Note that the selected entity type also indicates the name that must be provided as an applicant for a permit, registration or authorization.

Sole Proprietorship – DBA

A sole proprietorship is a customer that is owned by only one person and has not been incorporated. This business may:

- be under the person's name
- have its own name (doing business as or d.b.a.)
- have any number of employees

If the customer is a Sole Proprietorship or DBA, the 'legal name' of the individual business 'owner' must be provided. The DBA name is not recognized as the 'legal name' of the entity. The DBA name may be used for the site name (regulated entity).

Individual

An individual is a customer who has not established a business, but conducts an activity that needs to be regulated by the TCEQ.

Partnership

- A customer that is established as a partnership as defined by the Texas Secretary of State Office (TX SOS). A Limited Partnership or Limited Liability Partnership (Partnership) is required to file with the Texas Secretary of State. A General Partnership or Joint Venture is not required to register with the state.
- **Partnership (Limited Partnership or Limited Liability Partnership):** A limited partnership is defined in the Act as a partnership formed by two or more persons under the provisions of Section 3 of the Uniform Limited Partnership Act (Art. 6132a, Revised Civil Statutes of Texas) and having as members one or more general partners and one or more limited partners. The limited partners as such are not bound by the obligations of the partnership. Limited partners may not take part in the day-to-day operations of the business. A Limited Partnership must file with the Texas Secretary of State. A registered limited liability partnership is a general or limited partnership that is registered with the Texas Secretary of State. The partnership's name must contain the words "Registered Limited Liability Partnership" or the abbreviation "L.L.P." as the last words or letters of its name.
- **General Partnership:** A general partner may or may not invest, participates in running the partnership and is liable for all acts and debts of the partnership and any member of it. A General Partnership does not have limited partners. For a General Partnership, there is no registration with the state or even written agreement necessary for a general partnership to be formed. The legal definition of a partnership is generally stated as "an association of two or more persons to carry on as co-owners a business for profit" (Revised Uniform Partnership Act § 101 [1994]).
- **Joint Venture:** A joint venture is but another name for a special partnership. It might be distinguished from a general partnership in that the latter is formed for the transaction of a general business, while a joint venture is usually limited to a single transaction. That is, a joint venture is a special combination of persons in the nature of a partnership engaged in the joint prosecution of a particular transaction for mutual benefit or profit.

Corporation

A customer meets all of these conditions:

- is a legally incorporated entity under the laws of any state or country
- is recognized as a corporation by the Texas Secretary of State

- has proper operating authority to operate in Texas.
- The corporation's 'legal name' as filed with the Texas Secretary of State must be provided as applicant. An 'assumed' name of a corporation is not recognized as the 'legal name' of the entity.

Government

Federal, state, county, or city government (as appropriate)

The customer is either an agency of one of these levels of government or the governmental body itself. The government agency's 'legal name' must be provided as the applicant. A department name or other description of the organization should not be included as a part of the 'legal name' as applicant.

Trust or Estate

A trust and an estate are fiduciary relationships governing the trustee/executor with respect to the trust/estate property.

Other Government

A utility district, water district, tribal government, college district, council of governments, or river authority. Write in the specific type of government.

f) Independent Entity

Check No if this customer is a subsidiary, part of a larger company, or is a governmental entity. Otherwise, check Yes.

g) Number of Employees

Check one box to show the number of employees for this customer's entire company, at all locations. This is not necessarily the number of employees at the site named in the application.

h) Customer Business Tax and Filing Numbers

These are required for Corporations and Limited Partnerships. These are not required for Individuals, Government, and Sole Proprietors.

State Franchise Tax ID Number

Corporations and limited liability companies that operate in Texas are issued a franchise tax identification number. If this customer is a corporation or limited liability company, enter this number here.

Federal Tax ID

All businesses, except for some small sole proprietors, individuals, or general partnerships should have a federal taxpayer identification number (TIN). Enter this number here. Use no prefixes, dashes, or hyphens. Sole proprietors, individuals, or general partnerships do not need to provide a federal tax ID.

TX SOS Charter (filing) Number

Corporations and Limited Partnerships required to register with the Texas Secretary of State are issued a charter or filing number. You may obtain further information by calling SOS at 512/463-5555.

DUNS Number

Most businesses have a DUNS (Data Universal Numbering System) number issued by Dun and Bradstreet Corp. If this customer has one, enter it here.

2. APPLICATION CONTACT

Provide the name, title and communication information of the person that TCEQ can contact for additional information regarding this application.

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

a) Regulated Entity Reference Number (RN)

A number issued by TCEQ's Central Registry to sites (a location where a regulated activity occurs) regulated by TCEQ. This is not a permit number, registration number, or license number. If this regulated entity has not been assigned an RN, leave this space blank.

If the site of your business is part of a larger business site, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search TCEQ's Central Registry to see if the larger site may already be registered as a regulated site at: <https://www.tceq.texas.gov/permitting/tier2/reporting-steps/tier2-numbers>

If the site is found, provide the assigned Regulated Entity Reference Number (RN) and provide the information for the site to be authorized through this application. The site information for this authorization may vary from the larger site information.

An example is a chemical plant where a unit is owned or operated by a separate corporation that is accessible by the same physical address of your unit or facility. Other examples include industrial parks identified by one common address but different corporations have control of defined areas within the site. In both cases, an RN would be assigned for the physical address location and the permitted sites would be identified separately under the same RN.

b) Site/Project Name/Regulated Entity

Provide the name of the site as known by the public in the area where the site is located. The name you provide on this application will be used in the TCEQ Central Registry as the Regulated Entity name.

c) Description of Activity Regulated

In your own words, briefly describe the primary business that you are doing that requires this authorization. Do not repeat the SIC Code description.

d) County

Identify the county or counties in which the regulated entity is located.

e) Latitude and Longitude

Enter the latitude and longitude of the site in degrees, minutes, and seconds or decimal form. For help obtaining the latitude and longitude, go to:

<http://www.tceq.texas.gov/gis/sqmvview.html> or <http://nationalmap.gov/ustopo>

f) Site/Project (RE) Physical Address/Location Information

Enter the complete address for the site in Section A if the address can be validated through the US Postal Service. If the physical address is not recognized as a USPS delivery address, you may need to validate the address with your local police (911 service) or through an online map site used to locate a site. Please confirm this to be a complete and valid address. Do not use a rural route or post office box for a site location.

If a site does not have an address that includes a street (or house) number and street name, enter NO ADDRESS for the street name in Section A. In Section B provide a complete written location description. For example: "The site is located 2 miles west from intersection of Hwy 290 & IH35, located on the southwest corner of the Hwy 290 South bound lane."

Provide the city (or nearest city) and zip code of the facility location.

4. GENERAL CHARACTERISTICS

a) Indian Country Lands

If your site is located on Indian Country Lands, the TCEQ does not have authority to process your application. You must obtain authorization through EPA, Region 6, Dallas. Do not submit this form to TCEQ.

b) Construction activity associated with facility associated with exploration, development, or production of oil, gas, or geothermal resources

If your activity is associated with oil and gas exploration, development, or production, you may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization from EPA Region 6.

Construction activities associated with a facility related to oil, gas or geothermal resources may include the construction of a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel.

Where required by federal law, discharges of stormwater associated with construction activities under the Railroad Commission's jurisdiction must be authorized by the EPA and the Railroad Commission of Texas, as applicable. Activities under Railroad Commission of Texas jurisdiction include construction of a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources, such as a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility under the jurisdiction of the Railroad Commission of Texas; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel. The Railroad Commission of Texas also has jurisdiction over stormwater from land disturbance associated with a site survey that is conducted prior to construction of a facility that would be regulated by the Railroad Commission of Texas. Under 33 U.S.C. §1342(l)(2) and §1362(24), EPA cannot require a permit for discharges of stormwater from "field activities or operations associated with {oil and gas} exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities" unless the discharge is contaminated by contact with any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the facility. Under §3.8 of this title (relating to Water Protection), the Railroad

Commission of Texas prohibits operators from causing or allowing pollution of surface or subsurface water. Operators are encouraged to implement and maintain best management practices (BMPs) to minimize discharges of pollutants, including sediment, in stormwater during construction activities to help ensure protection of surface water quality during storm events.

c) Primary Standard Industrial Classification (SIC) Code

Provide the SIC Code that best describes the construction activity being conducted at this site.

Common SIC Codes related to construction activities include:

- 1521 - Construction of Single Family Homes
- 1522 - Construction of Residential Bldgs. Other than Single Family Homes
- 1541 - Construction of Industrial Bldgs. and Warehouses
- 1542 - Construction of Non-residential Bldgs, other than Industrial Bldgs. and Warehouses
- 1611 - Highway and Street Construction, except Highway Construction
- 1622 - Bridge, Tunnel, and Elevated Highway Construction
- 1623 - Water, Sewer, Pipeline and Communications, and Power Line Construction

For help with SIC Codes, go to:

<http://www.osha.gov/pls/imis/sicsearch.html>

d) Secondary SIC Code

Secondary SIC Code(s) may be provided. Leave blank if not applicable. For help with SIC Codes, go to:

<http://www.osha.gov/pls/imis/sicsearch.html>

e) Total Number of Acres Disturbed

Provide the approximate number of acres that the construction site will disturb. Construction activities that disturb less than one acre, unless they are part of a larger common plan that disturbs more than one acre, do not require permit coverage. Construction activities that disturb between one and five acres, unless they are part of a common plan that disturbs more than five acres, do not require submission of an NOI. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

If you have any questions about this item, please contact the stormwater technical staff by phone at (512)239-4671 or by email at swgp@tceq.texas.gov.

f) Common Plan of Development

Construction activities that disturb less than five acres do not require submission of an NOI unless they are part of a common plan of development or for sale where the area disturbed is five or more acres. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

For more information on "What is a common plan of development?" go to:

www.tceq.texas.gov/permitting/stormwater/common_plan_of_development_steps.html

For further information, go to the TCEQ stormwater construction webpage at:

www.tceq.texas.gov/goto/construction and search for "Additional Guidance and Quick Links". If

you have any further questions about this item, please call the stormwater technical staff at (512)239-4671.

g) Identify the water body(s) receiving stormwater runoff

The stormwater may be discharged directly to a receiving stream or through a MS4 from your site. It eventually reaches a receiving water body such as a local stream or lake, possibly via a drainage ditch. You must provide the name of the water body that receives the discharge from the site (a local stream or lake).

If your site has more than one outfall you need to include the name of the first water body for each outfall, if they are different.

h) Identify the segment number(s) of the classified water body(s)

Identify the classified segment number(s) receiving a discharge directly or indirectly. Go to the following link to find the segment number of the classified water body where stormwater will flow from the site: www.tceq.texas.gov/waterquality/monitoring/viewer.html

You may also find the segment number in TCEQ publication GI-316:
www.tceq.texas.gov/publications/gi/gi-316

If the discharge is into an unclassified receiving water and then crosses state lines prior to entering a classified segment, select the appropriate watershed:

- 0100 (Canadian River Basin)
- 0200 (Red River Basin)
- 0300 (Sulfur River Basin)
- 0400 (Cypress Creek Basin)
- 0500 (Sabine River Basin)

Call the Water Quality Assessments section at (512)239-4671 for further assistance.

i) Discharge into MS4 – Identify the MS4 Operator

The discharge may initially be into a municipal separate storm sewer system (MS4). If the stormwater discharge is into an MS4, provide the name of the entity that operates the MS4 where the stormwater discharges. An MS4 operator is often a city, town, county, or utility district, but possibly can be another form of government. Please note that the Construction General Permit requires the Operator to supply the MS4 with a copy of the NOI submitted to TCEQ. For assistance, you may call the technical staff at (512)239-4671.

j) Surface Water bodies on list of impaired waters – Identify the impaired water body(s)

Indicate Yes or No if any surface water bodies receiving discharges from the construction site are on the latest EPA-approved CWA 303(d) List of impaired waters. Provide the name(s) of surface water bodies receiving discharges or potential discharges from the construction site that are on the latest EPA-approved CWA 303(d) List of impaired waters. The EPA-approved CWA 303(d) List of impaired waters in Texas can be found at:
www.tceq.texas.gov/waterquality/assessment/305_303.html

NOTE: Do not use any "draft" documents.

k) Discharges to the Edwards Aquifer Recharge Zone and Certification

See maps on the TCEQ website to determine if the site is located within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer at: www.tceq.texas.gov/field/eapp/viewer.html

If the discharge or potential discharge is within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, a site specific authorization approved by the Executive Director under the Edwards Aquifer Protection Program (30 TAC Chapter 213) is required before construction can begin. The certification must be answered "Yes" for coverage under the Construction General Permit. The TCEQ approved plan must be readily available for TCEQ staff to review at the time that the NOI is submitted.

The general permit requires the approved Contributing Zone Plan or Water Pollution Abatement Plan to be included or referenced as a part of the Stormwater Pollution Prevention Plan.

For questions regarding the Edwards Aquifer Protection Program, contact the appropriate TCEQ Regional Office. For projects in Hays, Travis and Williamson Counties: Austin Regional Office, 12100 Park 35 Circle, Austin, TX 78753, 512-339-2929. For Projects in Bexar, Comal, Kinney, Medina and Uvalde Counties: TCEQ San Antonio Regional Office, 14250 Judson Rd., San Antonio, TX 78233-4480, 210-490-3096.

5. CERTIFICATIONS

Failure to indicate **Yes** to ALL of the certification items may result in denial of coverage under the general permit.

a) Certification of Understanding the Terms and Conditions of Construction General Permit (TXR150000)

Provisional coverage under the Construction General Permit (TXR150000) begins 7 days after the completed paper NOI is postmarked for delivery to the TCEQ. (Electronic applications submitted through ePermits have immediate provisional coverage). You must obtain a copy and read the Construction General Permit before submitting your application. You may view and print the Construction General Permit for which you are seeking coverage at the TCEQ web site: www.tceq.texas.gov/goto/construction

b) Certification of Legal Name

The full legal name of the applicant as authorized to do business in Texas is required. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, that is filed in the county where doing business. You may contact the SOS at (512)463 5555, for more information related to filing in Texas.

c) Understanding of Notice of Termination

A permittee shall terminate coverage under this Construction General Permit through the submittal of a NOT when the operator of the facility changes, final stabilization has been reached, the discharge becomes authorized under an individual permit, or the construction activity never began at this site.

d) Certification of Stormwater Pollution Prevention Plan

The SWP3 identifies the areas and activities that could produce contaminated runoff at your site and then tells how you will ensure that this contamination is mitigated. For example, in describing your mitigation measures, your site's plan might identify the devices that collect and

filter stormwater, tell how those devices are to be maintained, and tell how frequently that maintenance is to be carried out. You must develop this plan in accordance with the TCEQ general permit requirements. This plan must be developed and implemented before you complete this NOI. The SWP3 must be available for a TCEQ investigator to review on request.

Operator Certification:

The certification must bear an original signature of a person meeting the signatory requirements specified under 30 Texas Administrative Code (TAC) §305.44.

IF YOU ARE A CORPORATION:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(1) (see below). According to this code provision, any corporate representative may sign an NOI or similar form so long as the authority to sign such a document has been delegated to that person in accordance with corporate procedures. By signing the NOI or similar form, you are certifying that such authority has been delegated to you. The TCEQ may request documentation evidencing such authority.

IF YOU ARE A MUNICIPALITY OR OTHER GOVERNMENT ENTITY:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(3) (see below). According to this code provision, only a ranking elected official or principal executive officer may sign an NOI or similar form. Persons such as the City Mayor or County Commissioner will be considered ranking elected officials. In order to identify the principal executive officer of your government entity, it may be beneficial to consult your city charter, county or city ordinances, or the Texas statute(s) under which your government entity was formed. An NOI or similar document that is signed by a government official who is not a ranking elected official or principal executive officer does not conform to §305.44(a)(3). The signatory requirement may not be delegated to a government representative other than those identified in the regulation. By signing the NOI or similar form, you are certifying that you are either a ranking elected official or principal executive officer as required by the administrative code. Documentation demonstrating your position as a ranking elected official or principal executive officer may be requested by the TCEQ.

If you have any questions or need additional information concerning the signatory requirements discussed above, please contact the Texas Commission on Environmental Quality's Environmental Law Division at (512)239-0600.

30 Texas Administrative Code

§305.44. Signatories to Applications

(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

Texas Commission on Environmental Quality General Permit Payment Submittal Form

Use this form to submit your Application Fee only if you are mailing your payment.

- Complete items 1 through 5 below:
- Staple your check in the space provided at the bottom of this document.
- Do not mail this form with your NOI form.
- Do not mail this form to the same address as your NOI.

Mail this form and your check to:

BY REGULAR U.S. MAIL

Texas Commission on Environmental
Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, TX 78711-3088

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental
Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753

Fee Code: GPA

General Permit:

TXR150000

1. Check / Money Order No: _____
2. Amount of Check/Money Order: _____
3. Date of Check or Money Order: _____
4. Name on Check or Money Order: _____
5. NOI INFORMATION

If the check is for more than one NOI, list each Project/Site (RE) Name and Physical Address exactly as provided on the NOI. DO NOT SUBMIT A COPY OF THE NOI WITH THIS FORM AS IT COULD CAUSE DUPLICATE PERMIT ENTRIES.

See Attached List of Sites (If more space is needed, you may attach a list.)

Project/Site (RE) Name: _____

Project/Site (RE) Physical Address:

Staple Check in This Space

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

I Luke Phillippi
Print Name

EVP (Executive Vice President)
Title - Owner/President/Other

of OP III ATX LEDGESTONE I, LP
Corporation/Partnership/Entity Name

have authorized Charles R. Hager V, P.E.
Print Name of Agent/Engineer

of LJA Engineering, Inc.
Print Name of Firm

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

I also understand that:

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

SIGNATURE PAGE:

[Signature]
Applicant's Signature

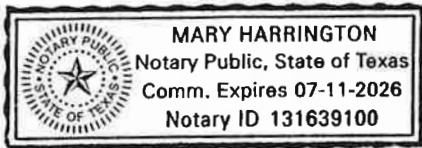
2/21/24
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Luke Phillipi 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 21st day of February, 2024



[Signature]
NOTARY PUBLIC
Mary Harrington
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 7/11/2026



Dyana Limon-Mercado

Dyana Limon-Mercado, County Clerk
Travis County, Texas

Sep 29, 2023 10:07 AM Fee: \$50.00

2023111903

Electronically Recorded

**SPECIAL WARRANTY DEED WITH
VENDOR'S LIEN**

THE STATE OF TEXAS
COUNTY OF TRAVIS

§
§
§

KNOW ALL MEN BY THESE PRESENTS:

MITCHEL WONG, TRUSTEE OF THE: MICHAEL Y. WONG 1991 TRUST; LAWRENCE SHAWN WONG 1991 TRUST; PATRICK Y. WONG 1991 TRUST; AND SHANNON M. WONG 1991 TRUST (collectively, "**Grantor**"), for and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration to it in hand paid and caused to be paid by **OP III ATX LEDGESTONE I, LP**, a Delaware limited partnership ("**Grantee**"), whose address is 500 W 5th Street, Suite 700, Austin, TX 78701, the receipt and sufficiency of which is hereby acknowledged and confessed, and the further consideration of a promissory note of even date herewith, executed by Grantee and payable to the order of Grantor, in the principal amount of **TEN MILLION SIX HUNDRED THOUSAND AND 00/100 DOLLARS (\$10,600,000.00)** (the "**Note**"), which Note is secured by the vendor's lien retained herein and additionally secured by a deed of trust of even date herewith from Grantee to Katherine D. Davy, whose address is 401 Congress, Suite 2700, Austin, Texas 78701, as trustee for the benefit of Grantor, the receipt and sufficiency of which consideration is hereby acknowledged, has GRANTED, BARGAINED, SOLD, ASSIGNED and CONVEYED, and by these presents does GRANT, BARGAIN, SELL, ASSIGN and CONVEY, unto Grantee:

The real property located in Travis County, Texas and more particularly described in **Exhibit A** attached hereto and made a part hereof for all purposes and any and all structures, fixtures, and improvements situated thereon (collectively, the "**Land**"); together with all of Grantor's right, title and interest in and to the following: (i) all strips and gores between the Land and abutting properties, (ii) all rights in and to easements, air rights, development rights, and drainage rights incidental to the such Land including, without limitation, all development approvals or rights in respect thereto, and (iii) any and all reversionary interests in and to, and all of Grantor's rights to use, any of the foregoing (clauses (i) through (iii) above being herein collectively called the "**Rights and Appurtenances**" and the Land and the Rights and Appurtenances being herein collectively called the "**Real Property**").

There is hereby reserved from the conveyances hereunder for Grantor and Grantor's successors and assigns, all of Grantor's interest in all oil, gas and other minerals that are under the surface of the Land and that may be produced therefrom; provided, however, that Grantor and its successors and assigns shall not have and hereby waive any surface rights in connection with this reservation of oil, gas, and other minerals, including any right of ingress and egress over the surface of the Land or use of the surface of the Land for the purpose of utilizing, drilling, exploring, operating, or developing the oil, gas or other minerals. Notwithstanding anything to the contrary, nothing herein shall be construed as preventing Grantor and Grantor's successors and assigns from developing or producing the oil, gas or other minerals under the surface of the Land by pooling, or by directional or horizontal drilling under the surface of the Land from well sites located on tracts other than the Land, or by any other method that does not require ingress and egress over the surface of the Land. For purposes of this mineral reservation, the term "surface" shall mean the area between the ground elevation of the Land to a depth of five hundred feet (500') below ground elevation.

TO HAVE AND TO HOLD the Real Property, together with all and singular any other rights and appurtenances thereto in anywise belonging, unto Grantee, its successors and assigns, FOREVER; and Grantor does hereby bind itself, its successors and assigns, to WARRANT AND FOREVER DEFEND all and singular the Real Property unto Grantee, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof by, through, or under Grantor, but not otherwise.

The warranty of Grantor made herein is made subject only to the matters listed on Exhibit B attached hereto and incorporated herein to the extent, but no further, that the same are valid and subsisting as of the date hereof and affect title to the Real Property.

Grantor reserves for itself a vendor's lien against and superior title to the Real Property until the Note is fully paid, at which time this Special Warranty Deed with Vendor's Lien shall become absolute.

GRANTEE IS TAKING THE PROPERTY "AS-IS" WITH ANY AND ALL LATENT AND PATENT DEFECTS. GRANTEE ACKNOWLEDGES THAT, EXCEPT AS SET FORTH OTHERWISE REGARDING THE "EXPRESS REPRESENTATIONS" SET FORTH IN SECTION 8a (AND ONLY FOR THE SURVIVAL PERIOD SET FORTH IN SECTION 8b) OF THE EARNEST MONEY CONTRACT BETWEEN GRANTOR AND GRANTEE FOR THE PROPERTY AND IN THE CLOSING DOCUMENTS, IT IS NOT RELYING UPON THE ACCURACY OR COMPLETENESS OF ANY REPRESENTATION, RENDERING, PROMISE, ASSERTION, OR INFORMATION WITH RESPECT TO THE PROPERTY MADE OR FURNISHED BY OR ON BEHALF OF, OR OTHERWISE ATTRIBUTED TO, GRANTOR OR ANY OF ITS AGENTS, EMPLOYEES OR REPRESENTATIVES, ANY AND ALL SUCH RELIANCE BEING HEREBY DISCLAIMED (INCLUDING ANY RELIANCE UPON THE PROPERTY INFORMATION). GRANTEE TAKES THE PROPERTY WITH NO EXPRESS OR IMPLIED WARRANTIES (EXCEPT FOR THE WARRANTY OF TITLE IN THE DEED AND GRANTOR'S EXPRESS REPRESENTATIONS IN THE EARNEST MONEY CONTRACT BETWEEN GRANTOR AND GRANTEE FOR THE PROPERTY AS SET FORTH ABOVE. THIS PROVISION PLAYED AN IMPORTANT PART IN THE BARGAINING PROCESS FOR THIS CONVEYANCE. GRANTEE HAS AGREED TO DISCLAIM RELIANCE ON GRANTOR WITH FULL AWARENESS THAT THE PROPERTY'S PRIOR USE OR OTHER MATTERS COULD AFFECT ITS CONDITION, VALUE, SUITABILITY OR FITNESS.

[End of Page; See Following Page for Signatures]

This instrument is executed effective as of the 28th day of September 2023.

Mitchel Wong

Mitchel Wong, Trustee of the Michael Y. Wong
1991 Trust created under trust agreement dated
August 5, 1991

Mitchel Wong

Mitchel Wong, Trustee of the Lawrence Shawn
Wong 1991 Trust created under trust agreement
dated August 5, 1991

Mitchel Wong

Mitchel Wong, Trustee of the Patrick Y. Wong
1991 Trust created under trust agreement dated
August 5, 1991

Mitchel Wong

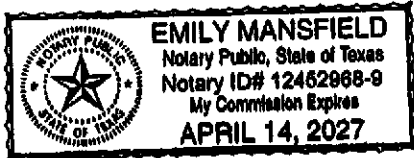
Mitchel Wong, Trustee of the Shannon M. Wong
1991 Trust created under trust agreement dated
August 5, 1991

THE STATE OF TEXAS

COUNTY OF Travis

§
§
§

This instrument was acknowledged before me on the 28th day of September 2023, by Mitchel Wong, Trustee of the: Michael Y. Wong 1991 Trust; Lawrence Shawn Wong 1991 Trust; Patrick Y. Wong 1991 Trust; and Shannon M. Wong 1991 Trust, on behalf of said entities.



emily mansfield

Notary Public in and for the
State of _____
Printed Name: _____

My Commission Expires: _____

- Exhibit A - Land
- Exhibit B - Permitted Exceptions

EXHIBIT A

Riviera SMA de la Tulle Survey No. 68
 Abstract No. 222
 Travis County, TX

September 27, 2023
 LIAS116-1007 Ledgestone Terrace
 Page 1 of 3

FIELD NOTE DESCRIPTION

77.749 ACRES (3,386,753 SQUARE FEET)

BEING A 77.749 ACRE TRACT (3,386,753 SQUARE FEET) OF LAND, MORE OR LESS, SITUATED IN THE RIVIERA SMA DE LA TULLE SURVEY NO 68, ABSTRACT NO. 222, TRAVIS COUNTY, TEXAS, BEING ALL OF A CALLED 77.776 ACRE TRACT OF LAND DESCRIBED AS TRACT 10, CONVEYED TO MITCHEL WONG, TRUSTEE OF THE MICHAEL Y. WONG 1991 TRUST, ET AL, RECORDED IN DOCUMENT NO. 2016215691 IN THE OFFICIAL PUBLIC RECORDS OF TRAVIS COUNTY, TEXAS (O.P.R.T.C.TX.); SAID 77.749 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A CALCULATED POINT (GRID COORDINATES N: 10,056,280.98, E: 3,056,801.91) IN THE SOUTH RIGHT-OF-WAY LINE OF U.S. HIGHWAY 290 (U.S. 290) (RIGHT-OF-WAY VARIES), BEING THE NORTHWEST CORNER OF THE HEREIN DESCRIBED TRACT, FROM WHICH A 60D NAIL FOUND IN THE RIGHT-OF-WAY OF SAID U.S. 290 BEARS NORTH 45 DEGREES 22 MINUTES 48 SECONDS EAST, A DISTANCE OF 0.40 FEET;

THENCE NORTH 77 DEGREES 17 MINUTES 36 SECONDS EAST, WITH THE SOUTH RIGHT-OF-WAY LINE OF SAID U.S. 290 AND THE NORTH LINE OF THIS TRACT, A DISTANCE OF 766.46 FEET TO A CALCULATED POINT FOR THE NORTHEAST CORNER OF THIS TRACT, FROM WHICH A COTTON SPINDLE FOUND BEARS NORTH 35 DEGREES 17 MINUTES 20 SECONDS EAST, A DISTANCE OF 0.43 FEET;

THENCE WITH THE EAST LINE OF THE HEREIN DESCRIBED TRACT AND THE WEST LINE OF A CALLED 8.768 ACRE TRACT OF LAND CONVEYED TO ROBERT K. BEGGS, JR., A SINGLE PERSON, RECORDED IN DOCUMENT NO. 2004212901, O.P.R.T.C.TX., THE FOLLOWING NINE (9) COURSES AND DISTANCES:

1. SOUTH 05 DEGREES 49 MINUTES 28 SECONDS WEST, A DISTANCE OF 503.81 FEET TO A 1/2-INCH IRON ROD FOUND,
2. SOUTH 12 DEGREES 42 MINUTES 32 SECONDS EAST, A DISTANCE OF 483.72 FEET TO A 1/2-INCH IRON ROD FOUND,
3. SOUTH 12 DEGREES 00 MINUTES 32 SECONDS EAST, A DISTANCE OF 342.40 FEET TO A 1/2-INCH IRON ROD FOUND,
4. SOUTH 16 DEGREES 11 MINUTES 32 SECONDS EAST, A DISTANCE OF 644.23 FEET TO A 1/2-INCH IRON ROD FOUND,
5. SOUTH 24 DEGREES 17 MINUTES 32 SECONDS EAST, A DISTANCE OF 41.04 FEET TO A 1/2-INCH IRON ROD FOUND FOR A SOUTHEASTERLY CORNER OF THE HEREIN DESCRIBED TRACT,
6. SOUTH 58 DEGREES 28 MINUTES 28 SECONDS WEST, A DISTANCE OF 15.12 FEET TO A 1/2-INCH IRON ROD FOUND,
7. SOUTH 25 DEGREES 48 MINUTES 28 SECONDS WEST, A DISTANCE OF 257.84 FEET TO A CALCULATED POINT, FROM WHICH A 1/2-INCH IRON ROD FOUND BEARS NORTH 08 DEGREES 29 MINUTES 31 SECONDS EAST, A DISTANCE OF 4.34 FEET,
8. SOUTH 41 DEGREES 48 MINUTES 28 SECONDS WEST, A DISTANCE OF 348.36 FEET TO A 1/2-INCH IRON ROD FOUND, AND

Riviera SMA de la Tulle Survey No. 68
 Abstract No. 222
 Travis County, TX

September 27, 2023
 LJA5116-1007 Ledgestone Terrace
 Page 2 of 3

9. SOUTH 44 DEGREES 52 MINUTES 32 SECONDS EAST, A DISTANCE OF 216.84 FEET TO A 1/2-INCH IRON ROD FOUND FOR THE SOUTH CORNER OF SAID 8.768 ACRE TRACT AND A WESTERLY CORNER OF BEST TECHNOLOGIES CENTER, RECORDED IN VOLUME 97, PAGE 255, PLAT RECORDS, TRAVIS COUNTY, TEXAS (P.R.T.C.TX.);

THENCE WITH THE EAST LINE OF THE HEREIN DESCRIBED TRACT AND THE WEST LINE OF BEST TECHNOLOGIES CENTER, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. SOUTH 31 DEGREES 52 MINUTES 32 SECONDS EAST, WITH THE EAST LINE OF SAID 77.749 ACRE TRACT AND THE WEST LINE OF SAID BEST TECHNOLOGIES CENTER, A DISTANCE OF 436.80 FEET TO A 1/2-INCH IRON ROD FOUND FOR THE MOST EASTERLY SOUTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;
2. SOUTH 73 DEGREES 11 MINUTES 28 SECONDS WEST, A DISTANCE OF 123.11 FEET TO A 1/2-INCH IRON ROD FOUND IN THE NORTHEAST LINE OF WYNNROCK ESTATES, SECTION ONE, A SUBDIVISION OF RECORD IN VOLUME 17, PAGE 19, P.R.T.C.TX., FOR THE MOST SOUTHERLY EAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE WITH THE SOUTHWEST LINE OF THIS TRACT AND THE NORTHEAST LINE OF LOTS 8 THROUGH 1 OF SAID WYNNROCK ESTATES, SECTION ONE, THE FOLLOWING SIX (6) COURSES AND DISTANCES:

1. NORTH 62 DEGREES 21 MINUTES 32 SECONDS WEST, A DISTANCE OF 391.89 FEET TO A 1/2-INCH IRON ROD FOUND FOR THE COMMON NORTH CORNER OF LOT 8 AND LOT 7, WYNNROCK ESTATES, SECTION ONE,
2. NORTH 61 DEGREES 36 MINUTES 32 SECONDS WEST, A DISTANCE OF 390.43 FEET TO A 1/2-INCH IRON ROD FOUND FOR THE COMMON NORTH CORNER OF LOT 7 AND LOT 6, WYNNROCK ESTATES, SECTION ONE,
3. NORTH 62 DEGREES 19 MINUTES 32 SECONDS WEST, AT A DISTANCE OF 253.11 FEET PASSING A 5/8-INCH IRON ROD WITH CAP STAMPED "LIA SURVEY" SET, AND CONTINUING FOR A TOTAL DISTANCE OF 506.23 FEET TO A 1/2-INCH IRON ROD FOUND FOR THE COMMON NORTH CORNER OF LOT 5 AND LOT 4, WYNNROCK ESTATES, SECTION ONE,
4. NORTH 62 DEGREES 37 MINUTES 09 SECONDS WEST, A DISTANCE OF 420.35 FEET TO A 1/2-INCH IRON ROD FOUND FOR THE COMMON NORTH CORNER OF LOT 2 AND LOT 3, WYNNROCK ESTATES, SECTION ONE,
5. NORTH 62 DEGREES 45 MINUTES 32 SECONDS WEST, A DISTANCE OF 227.40 FEET TO A 1/2-INCH IRON ROD FOUND FOR THE COMMON NORTH CORNER OF LOT 1 AND LOT 2, WYNNROCK ESTATES, SECTION ONE, AND
6. NORTH 63 DEGREES 08 MINUTES 29 SECONDS WEST, A DISTANCE OF 232.85 FEET TO A 1/2-INCH IRON ROD FOUND IN THE EAST RIGHT-OF-WAY LINE OF LEDGESTONE TERRACE (50-FOOT-WIDE RIGHT-OF-WAY), FOR THE NORTH CORNER OF LOT 1, WYNNROCK ESTATES, SECTION ONE, AND THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

Riviera SMA de la Tulle Survey No. 68
Abstract No. 222
Travis County, TX

September 27, 2023
LIAS116-1007 Ledgestone Terrace
Page 3 of 3

THENCE WITH THE WEST LINE OF THIS TRACT AND THE EAST RIGHT-OF-WAY LINE OF SAID LEDGESTONE TERRACE, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. NORTH 28 DEGREES 54 MINUTES 28 SECONDS EAST, A DISTANCE OF 239.20 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "TRIAD RPLS 5952" FOUND, AND
2. NORTH 26 DEGREES 45 MINUTES 28 SECONDS EAST, A DISTANCE OF 1,837.55 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 77.749 ACRE OF LAND, MORE OR LESS.

Bearing Basis: All bearings shown are based on the Texas State Plane Coordinate System, Grid North, Central Zone (4203), NAD83. All distances were adjusted to Surface using a combined scale factor of 0.99990001.

Matt Overall



Matt Overall
Registered Professional Land Surveyor No. 6864
LJA Surveying, Inc.
7500 Rialto Blvd, Building II, Suite 100
Austin, Texas 78735
TBPLS No. 10194382

Date: 09/27/2023

EXHIBIT B

Permitted Exceptions

1. 30-foot roadway easements reserved by James W. Maddox and wife Gracie Delmar a. Maddox for themselves, their heirs and assigns, in instruments dated December 31, 1970, recorded in Volume 3978, Page 1320 and Volume 3978, Page 1324, both of the Deed Records of Travis County, Texas, as shown on survey dated September 27, 2023, prepared by Matt Overall, Registered Professional Land Surveyor No. 6864 (the "**Survey**").
2. Underground water line easement granted to Lower Colorado River Authority, by instrument dated October, 18, 2000, recorded under Document No. 2000174140 of the Official Public Records of Travis County, Texas, as shown on the Survey.
3. Fences inset along interior property lines as shown on the Survey.
4. Building encroachment along southwest boundary line as shown on the Survey.
5. Overhead utility lines and poles outside of any dedicated easement along the northeast property line as shown on the Survey.
6. Taxes for the year 2023 and subsequent years.

11-GF# 202102464-cm
Return to: Heritage Title
200 W 6th Street, Suite 1600
Austin, TX 78701

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Ledgestone Terraces

Regulated Entity Location: 9209 and 9401 Ledgestone Terrace, Austin, Texas 78737

Name of Customer: OP III ATX Ledgestone I, LP

Contact Person: Vito Trupiano

Phone: (512) 532-2194

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

San Antonio Regional Office

Mailed to: TCEQ - Cashier

Overnight Delivery to: TCEQ - Cashier

Revenues Section

12100 Park 35 Circle

Mail Code 214

Building A, 3rd Floor

P.O. Box 13088

Austin, TX 78753

Austin, TX 78711-3088

(512)239-0357

Site Location (Check All That Apply):

Recharge Zone

Contributing Zone

Transition Zone

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
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	76.49 Acres	\$ 8,000.00
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: 2/21/24

Application Fee Schedule

Texas Commission on Environmental Quality

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

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

Extension of Time Requests

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



TCEQ Core Data Form

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

SECTION I: General Information

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

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)	
<input checked="" type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)			
<i>The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).</i>			
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)		If new Customer, enter previous Customer below:	
OP III ATX LedgeStone I 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)
		88-3443820	
11. Type of Customer:		Partnership: <input type="checkbox"/> General <input checked="" type="checkbox"/> Limited	
<input type="checkbox"/> Corporation Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Individual <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Other:	
12. Number of Employees		13. Independently Owned and Operated?	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following			
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational License <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant			
15. Mailing Address:			
500 West 5 th St			
City	Austin	State	TX
ZIP	78701	ZIP + 4	
16. Country Mailing Information (if outside USA)		17. E-Mail Address (if applicable)	
		vtrupiano@endeavor-re.com	
18. Telephone Number	19. Extension or Code	20. Fax Number (if applicable)	

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.)

Ledgestone Terraces

23. Street Address of the Regulated Entity:

9209 & 9401 Ledgestone Terrace

(No PO Boxes)

City	Austin	State	TX	ZIP	78737	ZIP + 4	
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24. County

Travis

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

30. Secondary SIC Code

31. Primary NAICS Code

32. Secondary NAICS Code

(4 digits)

(4 digits)

(5 or 6 digits)

(5 or 6 digits)

6513

531110

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

Apartment complex & townhomes leasing

34. Mailing Address:

9209 & 9401 Ledgestone Terrace

Address:

City	Austin	State	TX	ZIP	78737	ZIP + 4	
-------------	--------	--------------	----	------------	-------	----------------	--

35. E-Mail Address:

vtrupiano@endeavor-re.com

36. Telephone Number

37. Extension or Code

38. Fax Number (if applicable)

(512) 532-2194

() -

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

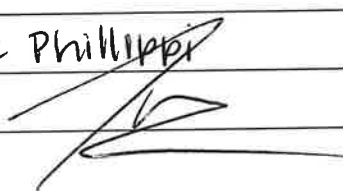
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source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

SECTION IV: Preparer Information

40. Name:	Charles R. Hager V	41. Title:	Senior Project Manager, P.E.
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(843) 405-5140		() -	chager@LJA.com

SECTION V: Authorized Signature

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

Company:	OP III ATX Ledgestone I LP	Job Title:	EVP
Name (In Print):	Luke Phillippi	Phone:	(210) 319-5887
Signature:		Date:	2/21/24