MODIFICATION OF A PREVIOUSLY APPROVED EDWARDS AQUIFER CONTRIBUTION ZONE PLAN

FOR

LAKE TRAVIS HIGH SCHOOL 2024 AG & TURF IMPROVEMENTS

Prepared for:

Lake Travis Independent School District
3322 Ranch Road 620 South
Austin, TX 78738

Prepared by:

MALONE/WHEELER, INC.
5113 Southwest Parkway, Suite 260
Austin, Texas 78735
TBPE Firm No. 786

April 2024

MODIFICATION OF A PREVIOUSLY APPROVED CONTRIBUTING ZONE PLAN CHECKLIST

Modification of a Previously Approved Contributing Zone Plan Checklist

- **Edwards Aquifer Application Cover Page (TCEQ-20705)**
- **Modification of a Previously Approved Contributing Zone Plan Form (TCEQ-10259)**

  Attachment A - Original Approval Letter and Approved Modification Letters
  Attachment B - Narrative of Proposed Modification
  Attachment C - Current site plan of the approved project

- **Contributing Zone Plan Application (TCEQ-10257)**

  Attachment A - Road Map
  Attachment B - USGS Quadrangle Map
  Attachment C - Project Narrative
  Attachment D - Factors Affecting Surface Water Quality
  Attachment E - Volume and Character of Stormwater
  N/A ~~Attachment F - Suitability Letter from Authorized Agent (if OSSF is proposed)~~
  N/A ~~Attachment G - Alternative Secondary Containment Methods (if AST with an alternative method of secondary containment is proposed)~~
  N/A ~~Attachment H - AST Containment Structure Drawings (if AST is proposed)~~
  N/A ~~Attachment I - 20% or Less Impervious Cover Declaration (if project is multi-family residential, a school, or a small business and 20% or less impervious cover is proposed for the site)~~
  Attachment J - BMPs for Upgradient Stormwater
  Attachment K - BMPs for On-site Stormwater
  Attachment L - BMPs for Surface Streams
  Attachment M - Construction Plans
  Attachment N - Inspection, Maintenance, Repair and Retrofit Plan
  N/A ~~Attachment O - Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs~~
  Attachment P - Measures for Minimizing Surface Stream Contamination

- **Temporary Stormwater Section (TCEQ-0602)**

  Attachment A - Spill Response Actions
  Attachment B - Potential Sources of Contamination
  Attachment C - Sequence of Major Activities
  Attachment D - Temporary Best Management Practices and Measures
  N/A ~~Attachment E - Request to Temporarily Seal a Feature, if sealing a feature~~
  Attachment F - Structural Practices
  Attachment G - Drainage Area Map
  Attachment H - Temporary Sediment Pond(s) Plans and Calculations
  Attachment I - Inspection and Maintenance for BMPs
  Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

- ~~**Copy of Notice of Intent (NOI)**~~
- **Agent Authorization Form (TCEQ-0599), if application submitted by agent**

- **Application Fee Form (TCEQ-0574)**
- ~~**Check Payable to the 'Texas Commission on Environmental Quality'**~~
- **Core Data Form (TCEQ-10400)**

EDWARDS AQUIFER APPLICATION COVER PAGE (TCEQ-20705)

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: **Lake Travis High School**						**2. Regulated Entity No.: RN101495841**			
3. Customer Name: **Lake Travis Independent School District**						**4. Customer No.: 60783575**			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**			124.44
9. Application Fee:	$10,000		**10. Permanent BMP(s):**			2			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Travis		**14. Watershed:**			Little Barton 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.)	___	_X_	___
Region (1 req.)	___	_X_	___
County(ies)	___	_X_	___
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	_X_Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

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

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Jesse B. Malone, P.E.
Print Name of Customer/Authorized Agent  4/17/2024
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):	

MODIFICATION OF A PREVIOUSLY APPROVED CONTRIBUTING ZONE PLAN FORM (TCEQ-10259)

Modification of a Previously Approved Contributing Zone Plan

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), 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 **Modification of a Previously Approved Contributing Zone Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Jesse B. Malone, P.E.

Date: 04/17/24

Signature of Customer/Agent:



Project Information

1. Current Regulated Entity Name: Lake Travis High School
   Original Regulated Entity Name: Lake Travis High School
   Assigned Regulated Entity Number(s) (RN): 101495851
   Edwards Aquifer Protection Program ID Number(s): 11001572
   ☒ The applicant has not changed and the Customer Number (CN) is: 600783575
   ☐ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.

2. ☒ **Attachment A: Original Approval Letter and Approved Modification Letters**. A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):

☒ Any physical or operational modification of any best management practices or structure(s), including but not limited to temporary or permanent ponds, dams, berms, silt fences, and diversionary structures;
☐ Any change in the nature or character of the regulated activity from that which was originally approved;
☐ A change that would significantly impact the ability to prevent pollution of the Edwards Aquifer and hydrologically connected surface water; or
☒ Any development of land previously identified in a contributing zone plan as undeveloped.

4. ☒ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

CZP Modification Summary	***Approved Project***	***Proposed Modification***
Acres	124.44	124.44
Type of Development	Educational	Educational
Number of Residential Lots	N/A	N/A
Impervious Cover (acres)	43.95	48.63
Impervious Cover (%)	35.32	39.08
Permanent BMPs	2	2
Other	____	____
AST Modification Summary	***Approved Project***	***Proposed Modification***
Number of ASTs	N/A	N/A
Other	N/A	N/A
UST Modification Summary	***Approved Project***	***Proposed Modification***
Number of USTs	N/A	N/A
Other	N/A	N/A

5. ☒ **Attachment B: Narrative of Proposed Modification**. A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved,

including previous modifications, and how this proposed modification will change the approved plan.

6. ☒ **Attachment C: Current Site Plan of the Approved Projec**t. A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
   - ☐ The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
   - ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
   - ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
   - ☒ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
   - ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.

7. ☒ Acreage has not been added to or removed from the approved plan.
   ☐ Acreage has been added to or removed from the approved plan and is discussed in *Attachment B: Narrative of Proposed Modification*.

8. ☒ 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. The copies must be submitted to the appropriate regional office.

MODIFICATION OF A PREVIOUSLY APPROVED CONTRIBUTING ZONE PLAN

ATTACHMENT A – ORIGINAL APPROVAL LETTER AND APPROVED MODIFICATION LETTERS

Jon Niermann, *Chairman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 5, 2024

Mr. Robert Winovitch
Lake Travis Independent School District
3324 Ranch Road 620 S.
Austin, Texas 78738

Re: Modification of an approved Contributing Zone Plan (CZPMOD)
Lake Travis High School; Located at 3325 RR 620 S.; Lakeway (ETJ), Travis County, Texas
Edwards Aquifer Protection Program ID: 11003876, Regulated Entity No. RN101495851

Dear Mr. Winovitch:

The Texas Commission on Environmental Quality (TCEQ) has completed its review on the application for the above-referenced project submitted to the Edwards Aquifer Protection Program (EAPP) by Malone Wheeler, Inc. on behalf of the applicant, Lake Travis Independent School District, on January 30, 2024. Final review of the application was completed after additional material was received on March 4, 2024.

As presented to the TCEQ, the application was prepared in general compliance with the requirements of 30 Texas Administrative Codes (TAC) Chapter §213. The permanent best management practices (BMPs) and measures represented in the application were prepared by a Texas licensed professional engineer (PE). All construction plans and design information were sealed, signed, and dated by a Texas licensed PE. Therefore, the application for the construction of the proposed project and methods to protect the Edwards Aquifer are **approved,** subject to applicable state rules and the conditions in this letter.

This approval expires two years from the date of this letter, unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been officially requested. This approval or extension will expire, and no extension will be granted if more than 50 percent of the project has not been completed within ten years from the date of this letter.

The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this contributing zone plan or modification to a plan. A motion for reconsideration must be filed in accordance with 30 TAC §50.139.

BACKGROUND

A CZP was approved by letter dated December 3, 2013 (EAPP ID No. 11-13091001); the plan included the construction of two partial sedimentation/filtration basins. (Pond 1 and Pond 2). A CZP Exception was approved by letter dated May 14, 2018 (EAPP ID No. 11001059). An additional CZP was approved by letter dated June 26, 2019 (EAPP ID No. 11001572); the plan included the construction of a batch detention basin (Pond 3). A CZPMOD was approved by letter dated April 14, 2022 (EAPP ID No. 11002952).

PROJECT DESCRIPTION

The proposed school project will have an area of approximately 124.44 acres. The modification will include changing Pond 1 from a partial sedimentation/filtration basin to a batch detention basin, complete removal of Pond 2, rerouting of stormwater for to Pond 1 or Pond 3, demolition, construction of parking areas, and associated appurtenances. The modification will add 4.78 acres of new impervious cover; the total impervious cover will be 43.95 acres (35.3 percent). No wastewater will be generated by this project.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a batch detention basin modified from an existing partial sedimentation/filtration basin (Pond 1) and an existing batch detention basin (Pond 3), designed using the TCEQ technical guidance, *RG-348, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices,* will be implemented to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 16,015 pounds of TSS generated from the 43.95 acres of impervious cover. The approved permanent BMPs and measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The permanent BMPS shall be operational prior to occupancy or use of the proposed project. Inspection, maintenance, repair, and retrofit of the permanent BMPs shall be in accordance with the approved application.

SPECIAL CONDITIONS

I. This modification is subject to all the special and standard conditions listed in the approval letters dated listed above.

STANDARD CONDITIONS

1. The plan holder (applicant) must comply with all provisions of 30 TAC Chapter §213 and all technical specifications in the approved plan. The plan holder should also acquire and comply with additional and separate approvals, permits, registrations or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, Dam Safety, Underground Injection Control) as required based on the specifics of the plan.

2. In addition to the rules of the Commission, the plan holder must also comply with state and local ordinances and regulations providing for the protection of water quality as applicable.

Prior to Commencement of Construction:

3. The plan holder of any approved contributing zone plan must notify the EAPP and obtain approval from the executive director prior to initiating any modification to the activities described in the referenced application following the date of the approval.

4. The plan holder must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the EAPP no later than 48 hours prior to commencement of the regulated activity. Notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person.

5. Temporary erosion and sedimentation (E&S) controls as described in the referenced application, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the

construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

6. The application must indicate the placement of permanent aboveground storage tanks facilities for static hydrocarbons and hazardous substances with cumulative storage capacity of 500 gallons or more. Subsequent permanent storage tanks on this project site require a modification to be submitted and approved prior to installation.

7. If sediment escapes the construction site, the 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). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

8. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge must be filtered through appropriately selected BMPs.

9. The following records shall be maintained and made available to the executive director 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.

10. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

11. Owners of permanent BMPs and temporary measures must ensure that the BMPs and measures are constructed and function as designed. A Texas licensed PE **must certify** in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the EAPP within 30 days of site completion.

12. The applicant shall be 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 or the ownership of the property is transferred to the entity. A copy of the transfer of responsibility must be filed with the executive director through the EAPP within 30 days of the transfer. TCEQ form, Change in Responsibility for Maintenance on Permanent BMPs and Measures (TCEQ-10263), may be used.

The holder of the approved contributing zone plan is responsible for compliance with Chapter §213 subchapter B and any condition of the approved plan through all phases of plan implementation. Failure to comply with any condition within this approval letter is a violation of Chapter §213 subchapter B and is subject to administrative rule or orders and penalties as provided under §213.25 of this title (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. Upon legal transfer of this property, the new owner is required to comply with all terms of the approved contributing zone plan.

This action is taken as delegated by the executive director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. James “Bo” Slone, P.G. of the Edwards Aquifer Protection Program at (512) 239-6994 or the regional office at 512-339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/jcs

cc: Mr. Jesse B. Malone, P.E., Malone Wheeler, Inc.

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 14, 2022

Mr. Robert Winovitch
Lake Travis Independent School District
3324 Ranch Road 620 S
Austin, Texas 78738

Re: Edwards Aquifer, Travis County

NAME OF PROJECT: Lake Travis High School; Located 3322 RR 620 S, Austin, Texas

TYPE OF PLAN: Request for Modification of an Approved Contributing Zone Plan (CZP-MOD); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002952; Regulated Entity No. RN101495851

Dear Mr. Winovitch:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP-MOD for the above-referenced project submitted to the Austin Regional Office by Malone Wheeler, Inc. on behalf of Lake Travis Independent School District on February 23, 3022. Final review of the CZP was completed after additional material was received on April 8, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected, and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

A Contributing Zone Plan (CZP) was approved by letter dated December 3, 2013 (EAPP ID No. 11-1309001). The plan included the construction of two partial sedimentation/filtration basins (Pond 1 and Pond 2) for water quality. A CZP-MOD was approved by letter dated June 26, 2019 (EAPP ID No. 11001572). The CZP-MOD include ethe construction of a batch detention basin (Pond 3) for water quality.

PROJECT DESCRIPTION

The proposed non-residential project will have an area of approximately 124.41 acres. It will include a new storm collection system, addition to the existing storm system, additional parking, a new plaza, modification to a detention basin weir, modification of the existing batch detention basin (Pond 3) weir, and sidewalk additions. The impervious cover will be 39.17 acres (31.5 percent). No wastewater will be generated by this project.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two partial sedimentation/filtrations basins (Pond 1 and Pond 2) and a batch detention basin (Pond3), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be used to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 12,943 pounds of TSS generated from the 124.41 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. This modification is subject to all Special and Standard Conditions listed in the CZP approval letters dated December 3, 2013, and June 26, 2019.

II. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

III. All sediment and/or media removed from the water quality basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the 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). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director 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. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

<u>After Completion of Construction:</u>

14. Owners of permanent BMPs and measures must ensure that the 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 Austin Regional Office within 30 days of site completion.

15. The applicant shall be 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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
17. A Contributing Zone Plan approval or extension will expire, and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact James “Bo” Slone, P.G. of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/jcs

Enclosure: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Toby Baker, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 26, 2019

Mr. Robert Winovitch
Lake Travis Independent School District
3324 Ranch Road 620 S
Austin, TX 78738

Re: Edwards Aquifer, Travis County

NAME OF PROJECT: Lake Travis High School, located at 3322 RR 620 S, Austin, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP)
30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program ID (EAPP) No. 11001572; Regulated Entity No. RN101495851

Dear Mr. Winovitch:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP Application for the above-referenced project submitted to the Austin Regional Office by Malone Wheeler, Inc. on behalf of Lake Travis Independent School District on May 21, 2019. Final review of the CZP was completed after additional material was received on June 24, 2019. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The Lake Travis High School/Middle School CZP (EAPP ID No. 11-13091001), approved by letter dated December 3, 2013, included the use of two partial sedimentation/filtration basins to provide permanent stormwater treatment for the portions of the school constructed after June 1, 1999.

PROJECT DESCRIPTION

The proposed non-residential project will have an area of approximately 124.41 acres. It will include multiple site improvements such as the reconstruction of a main drive, a new parking lot, utility improvements, a batch detention basin, and new sidewalks. The site is partially on the Contributing Zone and partially on the "No Zone." The proposed improvements will add 3.69 acres of impervious cover on the Contributing Zone; therefore, the total impervious cover on the Contributing Zone will increase to 38.81 acres (31.20 percent). No wastewater will be generated by this project.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, two existing partial sedimentation/filtration basins (EAPP ID No. 11-13091001) and a proposed batch detention basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be utilized to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 3,212 pounds of TSS generated from the 3.69 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.
2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.
3. In addition to the rules of the Commission, the applicant may also be required to comply with state and local ordinances and regulations providing for the protection of water quality.

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved CZP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the

payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
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<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the 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). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
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12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must insure that the 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 Austin Regional Office within 30 days of site completion.
15. The applicant shall be 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. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved CZP. If the new owner intends to commence any new regulated activity on the site, a new CZP that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
17. A CZP approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new CZP must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Ms. Michelle Zvonkovic of the Edwards Aquifer Protection Program of the Austin Regional Office at (512) 339-2929.

Sincerely,

Robert Sadlier, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

RCS/maz

Enclosure: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

MODIFICATION OF A PREVIOUSLY APPROVED CONTRIBUTING ZONE PLAN

ATTACHMENT B – NARRATIVE OF PROPOSED MODIFICATION

MODIFICATION OF A PREVIOUSLY APPROVED CONTRIBUTING ZONE PLAN

ATTACHMENT B – NARRATIVE OF PROPOSED MODIFICATION

This application is a proposed modification to a previously modified Contributing Zone Plan approved March 5, 2024, for Lake Travis High School. The original CZP was approved in 2019. As part of the previously approved modification plan, an existing sand filter pond is being converted to a batch detention pond and one of the existing ponds is being removed. That project is currently under construction as approved.

This new modification includes two projects. One project is an addition to the agriculture (Ag) facilities which include a new pig barn, expansion to the existing welding shop, and a fire access drive to serve the new and existing barns. The other project includes converting the existing grass softball, baseball, and multisport fields to synthetic turf. This turf was designed similarly to the existing turf field on campus with rock with an uncompacted base and an underdrain stormwater system to detain the water to reduce the peak runoff to the same rates as existing conditions. No changes to the previously approved BMPs are proposed.

MODIFICATION OF A PREVIOUSLY APPROVED CONTRIBUTING ZONE PLAN

ATTACHMENT C – CURRENT SITE PLAN OF THE APPROVED PROJECT

(Please refer to the attached Construction Plans of the previously approved project)

ENGINEER'S CERTIFICATION:

I, THE UNDERSIGNED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, THAT ALL REQUIRED DOCUMENTS ENCLOSED ARE ACCURATE AND COMPLETE AND THAT THE PROVISIONS CONTAINED ON THIS PLAN COMPLY WITH THE DEVELOPMENT ORDINANCES AND DRAINAGE POLICIES ADOPTED BY THE CITY OF LAKEWAY AND OTHER FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS IN EFFECT ON THIS DATE.

SUBMITTED FOR APPROVAL BY
MALONE/WHEELER, INC.

9/29/2023

JESSE B. MALONE — DATE
REGISTERED PROFESSIONAL ENGINEER NO. 108734
MALONE/WHEELER, INC.
5113 SOUTHWEST PARKWAY,
SUITE 260
AUSTIN, TEXAS 78735
OFFICE: 512-899-0601
FAX: 512-899-0655
FIRM REGISTRATION NO. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER

REVIEWED BY:

CODE OFFICIAL: PLANNING, DEVELOPMENT & CODE ENFORCEMENT DEPARTMENT — DATE

CITY OF LAKEWAY ENGINEER — DATE

CITY OF LAKEWAY SITE DEVELOPMENT PERMIT NUMBER

TRAVIS COUNTY TRANSPORTATION AND NATURAL RESOURCES — DATE

TRAVIS COUNTY TRANSPORTATION AND NATURAL RESOURCES PERMIT NUMBER

TRAVIS COUNTY EMERGENCY SERVICES DISTRICT NO. 6 — DATE

TRAVIS COUNTY W.C.I.D. #17 — DATE

NET SITE AREA CALCULATIONS			
SLOPE CATEGORY	**GROSS SITE AREA ACRES**	**ALLOWABLE PERCENTAGE**	**NET SITE AREA ACRES**
0 - 15%	136.02	100	136.02
15 - 25%	12.67	40	5.07
25 - 35%	5.22	20	1.04
> 35%	1.83	0	0.00
TOTALS	**155.74**		**142.13**

IMPERVIOUS COVER CALCULATIONS		
ITEM	IMPERVIOUS COVER	
	ACRES	SQUARE FEET (SQ. FT.)
EXISTING	54.25	2,363,094
PROPOSED IMPERVIOUS COVER	4.17	181,651
REMOVED IP (SUBTRACT)	-0.16	-7.132
TOTAL	58.26	2,537,613

IMPERVIOUS COVER/NET SITE AREA CALCULATIONS			
ALLOWABLE IMPERVIOUS COVER	50.00%	71.07 AC	3,095,809 SF
EXISTING IMPERVIOUS COVER	37.82%	54.25 AC	2,363,094 SF
PROPOSED IMPERVIOUS COVER	2.82%	4.01 AC	174,519 SF
TOTAL	40.99%	58.26 AC	2,537,613 SF

PRE-CONSTRUCTION NOTES:

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

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

SPECIAL PRE-CON NOTES:

1. PROVIDE 48 HR. MINIMUM NOTICE TO SCHEDULE THE PRE-CON MEETING.
2. PROVIDE A 1/2 SIZE SET OF PLANS FOR THE INSPECTOR AT THE PRE-CON.
3. PROVIDE AN ANTICIPATED CONSTRUCTION SCHEDULE AT THE PRE-CON.
4. BRING YOUR SWP3 FOR COMPLETENESS CHECK AT THE PRE-CON.

ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE PLANS APPROVED BY TRAVIS COUNTY.

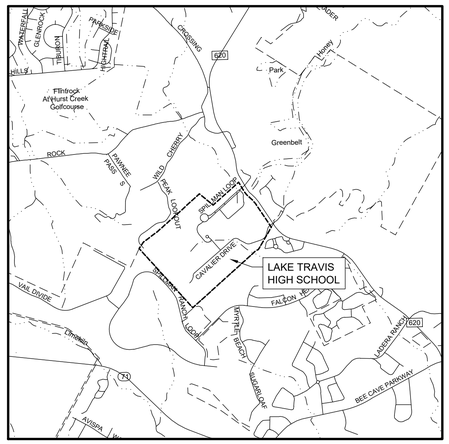
SCHEDULE YOUR PROJECTS PRE-CONSTRUCTION MEETING THROUGH MYPERMITNOW.ORG ACCOUNT AFTER THE INITIAL 3RD PARTY SWP3 INSPECTION REPORT HAS BEEN UPLOADED AND ALL PERMITS AND NOTICES HAVE BEEN POSTED, THEN FOLLOW UP WITH EMAILS TO THE ENVIRONMENTAL INSPECTOR AT ENV-INSPECTION@TRAVISCOUNTYTX.GOV.

NO.	REVISION DESCRIPTION	REVISE (R), ADD (A), VOID (V) - SHEET #	TOTAL # SHEETS	NET CHANGE IMP. COVER SQUARE FEET (SF)	TOTAL SITE IMP. COVER SF %	APPROVED BY	DATE	WCID-17

CONSTRUCTION PLANS
FOR
LAKE TRAVIS HIGH SCHOOL 2024
PHASE 1
3324 RANCH RD 620 SOUTH, AUSTIN TEXAS 78738

LEGAL DESCRIPTION

1. 23.460 ACRES OUT OF THE ALBERT BECK SURVEY NO. 54, ABSTRACT NO. 2241 IN TRAVIS COUNTY, TEXAS, BEING A PORTION OF THAT CERTAIN 23.460 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 7941, PAGE 395 OF THE DEED RECORDS OF TRAVIS COUNTY, TEXAS.
2. 55.000 ACRES OUT OF THE ALBERT BECK SURVEY NO. 54, ABSTRACT NO. 2241 IN TRAVIS COUNTY, TEXAS, BEING A PORTION OF THAT CERTAIN 55.000 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 7941, PAGE 395 OF THE DEED RECORDS OF TRAVIS COUNTY, TEXAS.
3. 24.940 ACRES OUT OF THE JOSEPH BECK SURVEY NO. 524, ABSTRACT NO. 2733 IN TRAVIS COUNTY, TEXAS, BEING ALL OF THAT CERTAIN 24.940 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 9757, PAGE 601 OF THE REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.
4. 25.000 ACRES OUT OF THE JOSEPH BECK SURVEY NO. 524, ABSTRACT NO. 2733 IN TRAVIS COUNTY, TEXAS, BEING ALL OF THAT CERTAIN 25.000 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 13258, PAGE 3066 OF THE REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.
5. 27.338 ACRES, LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT DOCUMENT NO. 2000171882 REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.
6. TOTAL ACRES IN PROJECT = 155.738.



LOCATION MAP

DATE OF SUBMITTAL:
SEPTEMBER 29, 2023

GENERAL PLAN NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. THIS PROJECT IS PARTIALLY LOCATED IN THE LITTLE BARTON CREEK WATERSHED & THE YAUPON WATERSHED.
3. ACCORDING TO THE FEDERAL FLOOD INSURANCE ADMINISTRATION FIRM PANEL NO. 48453C0405J, DATED JANUARY 22, 2022, FOR TRAVIS COUNTY, TEXAS, NO PORTION OF THIS TRACT IS WITHIN A 100-YEAR FLOODPLAIN.
4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND WERE COMPILED FROM INFORMATION PROVIDED BY THE OWNER & FROM AN ABOVE GROUND SITE SURVEY. NOT ALL UNDERGROUND UTILITIES MAY BE SHOWN THEREFORE THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
5. THE AREA WITHIN THE LIMITS OF CONSTRUCTION IS 10.69 ACRES. THE TOTAL DISTURBED AREA IS 10.69 ACRES.
6. A TPDES/SWPPP IS REQUIRED PRIOR TO STARTING CONSTRUCTION.
7. WATER, WASTEWATER AND POTABLE IRRIGATION IMPROVEMENTS ARE PERMITTED BY WCID 17.
8. THIS PROJECT IS PARTIALLY LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE.
9. THIS SITE PLAN HAS BEEN APPROVED BY TRAVIS COUNTY TNR UNDER PERMIT NUMBER _____.
10. THE BERM AND OUTLET STRUCTURE FOR EXISTING DETENTION POND 2 HAS BEEN ADDED TO THE TEXAS INVENTORY OF DAMS AND ASSIGNED THE IDENTIFIER TX09744.
11. DOWNSTREAM RECEIVING WATERS: LAKE TRAVIS (SEGMENT ID 1404) & BARTON CREEK (SEGMENT ID 1430)
12. THE OWNER'S ENGINEER WILL MAKE PERIODIC SITE VISITS AND OBSERVATIONS DURING CONSTRUCTION TO ENSURE ADEQUACY OF THE DESIGN AND THE SAFETY OF STRUCTURES IN COMPLIANCE WITH THE ISSUANCE OF THE CONSTRUCTION SUMMARY REPORT AND ENGINEERING CONCURRENCE LETTER AS REQUIRED AS PART OF THE PROJECT CLOSE-OUT PROCESS.
13. ALL STRUCTURAL FIELD CHANCES REQUIRE A PLAN REVISION APPROVAL IN WRITING BEFORE COMMENCEMENT OF THE WORK.

I, _____ HEREBY ACKNOWLEDGE THAT I HAVE READ AND UNDERSTOOD PLAN NOTES ON ALL ATTACHED DRAWINGS REGARDING MY RESPONSIBILITIES AS OWNER.

DATE: _____ _____
OWNER

I, _____ AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING AND HEREBY CERTIFY THAT THE NOTES, INFORMATION, AND PROVISIONS CONTAINED ON THIS PLAN COMPLY WITH THE SURVEY REQUIREMENTS OF THE DEVELOPMENT ORDINANCES ADOPTED BY THE CITY OF LAKEWAY, AND WAS PREPARED FROM A SURVEY MADE ON THE GROUND UNDER MY DIRECT SUPERVISION.

DATE:_____ _____

REGISTERED PROFESSIONAL LAND SURVEYOR
REGISTRATION NO. 5057
DELTA SURVEY GROUP, INC.
8213 BRODIE LANE, SUITE 102
AUSTIN, TX 78745

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62 LIGHTING PLAN

OWNER:
LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT
16101 HWY 71 WEST, BLDG. B
AUSTIN, TX 78738
(512) 533-6039

SURVEYOR:
4WARD LAND SURVEYING, LLC
P.O. BOX 90876
AUSTIN, TX 78709
(512) 537-2384

STRUCTURAL:
PICKETT KELM & ASSOCIATES
4100 DUVAL RD.
AUSTIN, TX 78759
(512) 345-5538

ARCHITECT:
PFLUGER
209 EAST RIVERSIDE DRIVE
AUSTIN, TX 78704
(512) 476-4040

ELECTRICAL:
MEP ENGINEERING
1120 S CAPITAL OF TEXAS HWY.
AUSTIN, TX 78746
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BLU FISH COLLABORATIVE INC.
107 LELAND AVENUE
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AUSTIN, TX 78704
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ENGINEER
MALONE ★ WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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CONSTRUCTION PLANS

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1

CONSTRUCTION SEQUENCING:

1. 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.

a. 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;

b. UPLOAD THE QUALIFIED INSPECTOR'S CERTIFIED SWP3 INSPECTION REPORT TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY; AND

c. 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.

2. 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)

3. 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.

4. 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:

a. 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.

b. 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)

5. CONSTRUCT 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.

6. 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-POUR INSPECTION OF THE DRIVEWAY THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY GIVING AT LEAST 3 BUSINESS DAYS NOTIFICATION. (PRIORITY INSPECTION).

7. PERFORM TEMPORARY STABILIZATION IN ALL DISTURBED AREAS THAT HAVE CEASED CONSTRUCTION ACTIVITIES FOR 14 DAYS OR LONGER.

8. 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.

9. COMPLETE PERMANENT WATER QUALITY CONTROLS. BEGIN COMPLETION OF PERMANENT WATER QUALITY CONTROL(S) AND INSTALL THE UNDERDRAIN PER APPROVED PLANS, WHEN APPLICABLE.

a. REMOVE CONSTRUCTION SEDIMENT, RE-ESTABLISH THE BASIN SUBGRADE, AND INSTALL UNDERDRAIN PIPING.

b. 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).

10. COMPLETE CONSTRUCTION SITE IMPROVEMENTS AND FINAL STABILIZATION PER THE APPROVED PLANS.

11. 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)

12. 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 DEVELOPERS 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)

BEFORE PROJECT APPROVAL/ISSUANCE OF THE CERTIFICATE OF COMPLETION (COC) AND FISCAL RELEASE, THE FOLLOWING MUST BE COMPLETED:

THE OWNER MUST COMPLETE AND SUBMIT A PWQC MAINTENANCE PERMIT APPLICATION AND A PWQC MAINTENANCE PLAN TO POSTINSPECTION@TRAVISCOUNTYTX.GOV FOR REVIEW AND APPROVAL.

ONCE THE PWQC MAINTENANCE PLAN DOCUMENT RECEIVES REVIEW APPROVAL, THE DOCUMENT WILL BE RETURNED TO BE SEALED AND SIGNED (NOTARIZED) BY THE DESIGN ENGINEER AND LEGALLY RECORDED WITH THE COUNTY CLERK'S OFFICE. A DIGITAL RECORDED COPY MUST BE PROVIDED.

UPON REQUEST, A PWQC PERMIT APPLICATION AND/OR A TEMPLATE FOR A PWQC MAINTENANCE PLAN WILL BE PROVIDED OR UPLOADED TO THE MYPERMITNOW.ORG ACCOUNT.

THE PWQC MAINTENANCE PERMIT MUST BE SIGNED BY THE SITE OWNER ONCE ALL DOCUMENTS HAVE BEEN RECEIVED.

AMERICANS WITH DISABILITIES ACT:

THE DESIGN ENGINEER IS RESPONSIBLE FOR SUBMITTING THE DRAWINGS TO THE ARCHITECTURAL BARRIERS DIVISION OF THE TEXAS DEPT. OF LICENSING AND REGULATION FOR REVIEW AND APPROVAL OF THE PLANS IN ACCORDANCE WITH THE ARCHITECTURAL BARRIERS ACT. THE ENGINEER IS RELIEVED OF THE SUBMITTAL RESPONSIBILITY IF A REGISTERED ARCHITECT HANDLES THE SUBMITTAL; HOWEVER, THE GRADING AND SITE PLAN MUST COMPLY WITH THE REFERENCED ACT, WHICH IS THE ENGINEER'S RESPONSIBILITY.

IRRIGATION NOTES: (IN ADDITION TO DESIGNER'S NOTES)

1. ALL MATERIALS AND INSTALLATIONS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE CITY'S ORDINANCES, LOCAL PLUMBING CODE AND THE STATE OF TEXAS.

2. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE PERSON WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DEISGNER.

BENCHMARKS:

PROJECT SPECIFIC (PROVIDED B Y DELTA SURVEY)

BM #1 - SQUARE CUT ON TOP OF CURB IN MEDIAN, ELEV = 1064.57

BM #2 - COTTON SPINDLE IN ZIP LINE POLE, ELEV = 1093.41

TBM #3 - L CUT ON CURB, ELEV. = 1111.48

TBM #4 - SQUARE CUT ON CURB, ELEV = 1118.06'

LANDSCAPE NOTES: (IN ADDITION TO DESIGNER'S NOTES)

1. THE PROPERTY OWNER, MANAGER, AGENT OR LESSEE SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE LANDSCAPED AREAS, PLANTS AND GRASS SHALL PRESENT A HEALTHY, NEAT AND ORDERLY APPEARANCE BE FREE OF DEBRIS, REFUSE, AND DISEASE.

2. ALL MATERIALS AND INSTALLATIONS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE LANDSCAPING REQUIREMENTS OF THE CITY OF LAKEWAY.

3. ALL LANDSCAPING ITEMS SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE LANDSCAPING REQUIREMENTS OF THE CITY OF LAKEWAY. NO MATERIALS SHALL BE PLANTED OTHER THAN THOSE SHOWN ON THE DRAWINGS.

4. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE PERSON WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGNER.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CONTRIBUTING ZONE PLAN - GENERAL CONSTRUCTION NOTES

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - THE NAME OF THE APPROVED PROJECT;
   - THE ACTIVITY START DATE; AND
   - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN (CZP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ONSITE.
3. NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
4. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
5. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
6. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
7. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
8. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON-SITE MUST HAVE PROPER E&S CONTROLS.
9. IF PORTIONS OF THE SITE WILL HAVE A CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
    - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
    - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
    - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
11. THE HOLDER OF ANY APPROVED CZP MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
    A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
    B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
    C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR
    D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE PLAN.

AUSTIN REGIONAL OFFICE
12100 PARK 35 CIRCLE, BUILDING A
AUSTIN, TEXAS 78753-1808
PHONE (512) 339-2929
FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

TREE PROTECTION NOTES:

1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED.
2. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
3. 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.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIPLINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIPLINE), OR, FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   B. ROOT ZONE DISTURBANCE DUE TO GRADE CHANGES;
   C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
7. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. 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 BEHIND THE AREA IN QUESTION;
   B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIPLINE, 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);
   C. WHERE TREES ARE ARE CLOSE TO PROPOSED BUILDINGS. ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN FENCE AND THE BUILDING;
8. 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 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
9. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
10. 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 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
11. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
12. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.)
13. ALL PRUNED LIMBS OF OAK TREES SHALL BE PAINTED WITH PRUNING SEAL IMMEDIATELY AFTER CUTTING. ANY BROKEN LIMBS OF OAK TREES SHALL BE CUT CLEAN AND PAINTED WITH PRUNING SEAL IMMEDIATELY AFTER CUTTING.
14. 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.
15. PRIOR TO CONSTRUCTION, ALL TREES OVER ROADWAYS AND CONSTRUCTION AREAS MAY BE TRIMMED TO 13 ½ -FEET IN HEIGHT.

UTILITY COMPANIES

CONTRACTORS MUST BE ABLE TO CERTIFY THAT ALL UTILITY COMPANIES HAVE BEEN NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED CUTS OR TRENCHES IN THE STREET RIGHT-OF-WAYS OR PUBLIC UTILITY EASEMENTS, AND THAT UTILITY LINES IN THE IMMEDIATE VICINITY OF THE PROJECT HAVE BEEN IDENTIFIED AND, IF NECESSARY, LOCATED AND MARKED ON THE GROUND AT A SITE BEFORE YOU DIG IN ANY PUBLIC UTILITY EASEMENT OR STREET RIGHT-OF-WAY. "ONE-CALL" THROUGH THE CITY OF AUSTIN OR SOUTHWESTERN BELL DOES NOT COVER ALL OF THE UTILITY COMPANIES IN THE CITY OF LAKEWAY. UTILITY PROVIDERS FOR THIS SITE INCLUDE BUT ARE NOT LIMITED TO:

AT&T
FOR PRE-CONSTRUCTION MEETINGS FOR ALL DEVELOPMENT IN LAKEWAY PROPER CALL- 870-5185. FOR PRE-CONSTRUCTION MEETING FOR DEVELOPMENT ALONG RR620 IN LAKEWAY (INCLUDING ETJ) CALL - 870-5214. FOR UTILITY LINE LOCATION CALL - 1-800-344-8377.

AUSTIN ENERGY
FOR PRE-CONSTRUCTION MEETINGS CALL - 505-7649. FOR UTILITY LINE LOCATION CALL - 505-7542.

TIME WARNER CABLE
FOR PRE-CONSTRUCTION MEETINGS CALL - 485-6433. FOR UTILITY LINE LOCATION CALL - 485-6356.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENTS DISTRICT #17
FOR PRE-CONSTRUCTION MEETINGS CALL - 266-1111 EXT 13 FOR UTILITY LINE LOCATION CALL - 266-1111 EXT 10

TRAVIS COUNTY SWP3 NOTES:

1. ALL CONSTRUCTION ACTIVITIES DISTURBING ONE ACRE AND GREATER MUST OBTAIN STORM WATER DISCHARGE AUTHORIZATION FRO M THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THROUGH COMPLIANCE WITH TCEQ'S GENERAL PERMIT #TXR150000. THE PRIMARY CONSTRUCTION SITE OPERATOR(S) [PCSO] MUST PREPARE AND IMPLEMENT AN SWP3 THROUGHOUT CONSTRUCTION WHICH INCLUDES THE EROSION AND SEDIMENT CONTROL (ESC) PLAN AND OTHER BEST MANAGEMENT PRACTICES (BMPS) SPECIFIED IN THESE PLANS APPROVED BY TRAVIS COUNTY.
2. SMALL CONSTRUCTION ACTIVITIES DISTURBING BETWEEN ONE AND FIVE ACRES SHALL POST A TCEQ CONSTRUCTION SITE NOTICE (CSN) ON SITE PRIOR T O COMMENCING CONSTRUCTION. LARGE CONSTRUCTION ACTIVITIES DISTURBING FIVE ACRES OR GREATER SHALL SUBMIT A NOTICE OF INTENT (NOI) TO TCEQ AND POST THE NOI ON SITE AT LEAST SEVEN (7) DAYS PRIOR TO BEGINNING CONSTRUCTION. NOTICES POSTED MUST BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. TRAVIS COUNTY IS OPERATOR OF THE SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) RECEIVING STORM WATER DISCHARGES FROM THIS PROJECT, UNDER TCEQ MS4 PERMIT #TXR040327. UPON REQUEST BY TRAVIS COUNTY, THE PCSO SHALL PROVIDE A COPY OF THE NOI AND CSN; THE SWP3; AND REGULARLY PROVIDE COPIES OF THE SWP3 INSPECTION REPORTS, REQUIRED WEEKLY, OR BI -WEEKLY AND AFTER EVERY RAIN EVENT .5 INCHES OR GREATER.
4. THE PCSO MUST REVISE THE SWP3 WHENEVER CHANGING SITE CONDITIONS, OR A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS NOT PREVIOUSLY ADDRESSED, OR WHEN RESULTS OF INSPECTIONS BY SITE OPERATORS, TRAVIS COUNTY, TCEQ, OR OTHER LOCAL AGENCY AUTHORIZED TO APPROVE ESC PLANS INDICATE THE SWP3 IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS IN DISCHARGES FROM THE SITE.
5. TEMPORARY OR PERMANENT EROSION CONTROL AND STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE, AND AS SPECIFIED ON THE PLANS, IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. THESE MEASURES MUST BE INITIATED NO LATER THAN 14 DAYS AFTER CESSATION, UNLESS CONSTRUCTION ACTIVITIES WILL RESUME WITHIN 21 DAYS IN THE AREA.
6. UPON FINAL STABILIZATION OF THE ENTIRE SITE, INCLUDING COMPLETION OF ALL STABILIZATION REQUIREMENTS OF THE APPROVED PLANS AND PERMIT AS VERIFIED BY TRAVIS COUNTY, THE PCSO SHALL SUBMIT A NOTICE OF TERMINATION (NOT) TO TCEQ.

CITY OF LAKEWAY GENERAL NOTES

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLAN SET. ANY SUBSEQUENT CHANGES WILL REQUIRE A PLAN REVISION AND APPROVAL FROM THE CITY PRIOR TO CONSTRUCTION.
3. THE CITY OF LAKEWAY 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.
4. PRIOR TO THE ISSUANCE OF A CERTIFICATE OF ACCEPTANCE, THE DESIGN ENGINEER MUST CERTIFY IN WRITING THAT ALL WORK HAS BEEN COMPLETED PER THE APPROVED PLAN SET.
5. PRIOR TO OCCUPANCY OF ANY BUILDING, ALL CITY OF LAKEWAY SITE AND BUILDING COMMENTS MUST BE CLEARED, THE WASTEWATER DISPOSAL SYSTEM ACCEPTED BY THE PROPER AUTHORITY, ALL REQUIRED EASEMENTS AND RESTRICTIVE COVENANTS MUST BE RECORDED, AND A CERTIFICATE OF ACCEPTANCE AND CERTIFICATE OF OCCUPANCY MUST BE ISSUED BY THE CITY OF LAKEWAY.
6. THE PROPERTY OWNER IS RESPONSIBLE FOR PROPER OPERATION AND MAINTENANCE OF ON-SITE STORMWATER DETENTION AND WATER QUALITY PONDS AND RELATED FACILITIES.
7. THE PROPERTY OWNER IS RESPONSIBLE FOR PROPER MAINTENANCE OF OFF-SITE STORMWATER AND DRAINAGE FACILITIES CONSTRUCTED AND PERMITTED WITH THIS PROJECT.
8. CONTRACTOR IS RESPONSIBLE FOR CONTACTING UTILITY COMPANIES TO VERIFY LOCATIONS OF ALL UTILITIES. THE "ONE-CALL" SYSTEM DOES NOT APPLY TO ALL UTILITY COMPANIES IN LAKEWAY'S JURISDICTION.
9. DESIGN PROCEDURES ARE IN COMPLETE COMPLIANCE WITH THE CITY OF LAKEWAY DEVELOPMENT ORDINANCE AND THE CITY OF AUSTIN DRAINAGE AND ENVIRONMENTAL CRITERIA MANUALS, AS ADOPTED BY THE CITY OF LAKEWAY.
10. A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE BEFORE ISSUANCE OF A PERMIT PRIOR TO ANY CONSTRUCTION.
11. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
12. CONTRACTOR IS FULLY RESPONSIBLE FOR FOLLOWING THE REQUIREMENTS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR ALL SIGNAGE AND WORK IN A PUBLIC OR PRIVATE RIGHT-OF-WAY.
13. ALL SITE WORK MUST ALSO COMPLY WITH THE CITY'S ENVIRONMENTAL REQUIREMENTS.
14. TREES & BRUSH CLEARED FROM A SITE SHALL BE MULCHED OR HAULED OFF-SITE WITHIN 48 HOURS OF BEING CUT. FAILURE TO DO SO SUBJECTS THE ENTIRE PROJECT TO A RED TAG UNTIL THE MULCHING OR HAULING IS COMPLETE.
15. SAFETY RAILING SHALL BE PROVIDED FOR ALL VERTICAL ELEVATION CHANGES FROM 30-INCHES IN HEIGHT UP TO AND INCLUDING 5'-11" IN HEIGHT. ANY ELEVATION DIFFERENCE 6-FEET AND GREATER MUST HAVE A GUARDRAIL (WROUGHT IRON FENCE).
16. EXTERIOR LIGHTING SHALL BE HOODED OR SHIELDED TO DIRECT LIGHTING DOWN AND AWAY FROM VIEW OF ADJACENT PROPERTIES.
17. PROJECT SHALL COMPLY WITH THE CITY OF LAKEWAY SIGN ORDINANCE.
18. PRIOR TO ISSUING BUILDING PERMITS, APPROVALS FROM VARIOUS OTHER AGENCIES MAY BE REQUIRED BY THE CITY OF LAKEWAY.
19. A SET OF APPROVED CONSTRUCTION DRAWINGS AND A COPY OF THE SWPPP (STORM WATER POLLUTION PREVENTION PLAN) REPORT MUST BE AVAILABLE AND LOCATED AT THE PROJECT SITE AT ALL TIMES. NO WORK CAN PROCEED WITHOUT T HE DRAWINGS AND THE SWPPP AS HEREBY REQUIRED. A COPY OF THE WEEKLY SWPPP INSPECTION REPORT MUST ALSO BE ON SITE AND SUBMITTED TO THE CITY.
20. CONTRACTOR SHALL NOT STOCKPILE ANY MATERIAL WITHIN ANY BUFFER ZONE.
21. ANY REQUIRED REGULATORY PERMITS SHALL BE ACQUIRED AND SUBMITTED TO THE CITY PRIOR TO CONSTRUCTION COMMENCING.

TRAVIS COUNTY EMERGENCY SERVICES DISTRICT NO. 6 FIRE DEPARTMENT - SITE PLAN NOTES

1. DESIGNS FOR SITE IMPROVEMENTS SHALL MEET THE CURRENT DESIGN CRITERIA AS REQUIRED BY TCESD NO. 6.
2. ALL PLANS (SITE, BUILDING, FIRE ALARM, FIRE SPRINKLER) SHALL BE SUBMITTED TO LTFR FOR REVIEW. TWO FULL-SIZE SETS ARE REQUIRED. A REVIEW LETTER WILL BE GENERATED. REVIEWS WILL NOT BE PERFORMED UNTIL THE APPLICABLE REVIEW FEES ARE PAID.
3. UPON APPROVAL, A PERMIT WILL BE ISSUED. THE PERMIT MUST BE CONSPICUOUSLY POSTED.
4. AN ALL-WEATHER DRIVING SURFACE (FIRE APPARATUS ACCESS) MUST BE INSTALLED IN LOCATIONS SHOWN ON THE SITE PLAN, PRIOR TO ANY BUILDING CONSTRUCTION BEYOND THE FOUNDATION.
5. ALL PERVIOUS/DECORATIVE PAVING SHALL BE ENGINEERED AND INSTALLED FOR 80,000 POUNDS LIVE-VEHICLE LOADS. ANY PERVIOUS/DECORATIVE PAVING WITHIN 100 FEET OF ANY BUILDING MUST BE APPROVED BY THE FIRE DEPARTMENT.
6. VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS THIRTEEN FEET, SIX INCHES FOR FULL 25' WIDTH OF ACCESS DRIVES AND ROUTES FOR INTERNAL CIRCULATION. DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150' IN LENGTH SHALL BE PROVIDED WITH APPROVED PROVISIONS FOR THE TURNING AROUND OF FIRE APPARATUS, PER FIGURE B-4 OF THIS MANUAL.
7. THE MAXIMUM ALLOWABLE DRIVEWAY, DRIVE AISLE OR FIRE LANE GRADE IS FIFTEEN PERCENT.
8. THE MARKINGS OF FIRE LANES MUST BE RED WITH WHITE STENCILING OR WHITE WITH RED STENCILING READING "FIRE LANE - TOW AWAY ZONE" IN LETTERING NO LESS THAN THREE INCHES IN HEIGHT. THE STENCILING SHALL BE AT INTERVALS OF 35 FEET OR LESS, ALTERNATIVE MARKING OF FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, OR HIS/HER DESIGNATED AGENT. PROVIDED FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. EXISTING FIRE LANE MARKINGS SHALL BE GRANDFATHERED PROVIDED THAT THEY MEET THE WORDING AND INTERVAL REQUIREMENTS THAT WERE ACCEPTED ON APPROVED SITE PLANS AND OTHER TYPE FIRE LANE SUBMITTALS APPROVED BY THE FIRE DEPARTMENT. EXISTING FIRE LANES THAT ARE IN NEED OF RE-PAINTING SHALL MEET THE REQUIREMENTS OF THIS SECTION.
9. THE FIRE DEPARTMENT CONNECTION (FDC) CONNECTION SHALL BE INSTALLED WHERE SHOWN ON THE SITE PLAN.
10. HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FOUR AND ONE-HALF INCH STEAMER OPENING AT LEAST 18" ABOVE FINISHED GRADE. THE FOUR AND ONE-HALF INCH STEAMER OPENING MUST FACE THE

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

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

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

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

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

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

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

SWP3 INSPECTION AREA AND REPORT CONTENTS:

THE OWNER OR PRIMARY OPERATOR OF THE CONSTRUCTION SITE SHALL DESIGNATE A QUALIFIED INSPECTOR POSSESSING THE REQUIRED CERTIFICATION (AS SPECIFIED IN SECTION 82.934(C)(3)) TO PERFORM A WEEKLY SWP3 INSPECTION AND PREPARE A SIGNED SWP3 INSPECTION REPORT OF THE INSPECTION FINDINGS.

THE CONSTRUCTION SITE AREAS AND THE CONTROL MEASURES LISTED HEREIN ARE TO BE USED AS A MINIMUM AS THE UNIFORM CRITERIA BY THE OWNER'S QUALIFIED INSPECTOR, AS WELL AS THE COUNTY INSPECTOR, TO EVALUATE AND DETERMINE A PROJECT'S COMPLIANCE STATUS WITH THE APPROVED SWP3 AND ESC PLAN.

IN ADDITION, ON AN ONGOING BASIS AND FOLLOWING STORM EVENTS, THE PRIMARY OPERATOR'S RESPONSIBLE ON-SITE PERSONNEL SHALL ALSO INSPECT AND ADDRESS THESE ITEMS DURING CONSTRUCTION AS REQUIRED BY THE SWP3, ESC PLAN, AND TRAVIS COUNTY CODE, SECTION 82.951.

AREAS OF INSPECTION. AT THE VERY LEAST, THE FOLLOWING AREAS MUST BE INSPECTED:

1. DISTURBED AREAS AND THE APPROVED LIMITS OF CONSTRUCTION.
2. PERIMETER AND INTERIOR SEDIMENT CONTROLS.
3. AREAS UNDERGOING TEMPORARY STABILIZATION OR PERMANENT VEGETATION ESTABLISHMENT.
4. TEMPORARY AND PERMANENT FILL AND SPOIL STORAGE OR DISPOSAL AREAS.
5. STORAGE AREAS FOR MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO RAINFALL.
6. OUTFALL LOCATIONS AND THE AREAS IMMEDIATELY DOWNSTREAM.
7. STRUCTURAL CONTROLS, INCLUDING SEDIMENT PONDS, SEDIMENT TRAPS, AND DRAINAGE DIVERSIONS.
8. HAUL ROADS AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND ADJACENT ROADWAYS FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
9. WATERWAY CROSSINGS AND AREAS ADJACENT TO WATERWAYS AND CRITICAL ENVIRONMENTAL FEATURES.
10. CONCRETE WASH OUT AREAS AND ALL AREAS REQUIRING CONTROL MEASURES FOR NONSTORM WATER DISCHARGES, INCLUDING DUST, SOLID WASTE, DE-WATERING, MATERIAL SPILLS, VEHICLE MAINTENANCE AND WASHING, AND WASH WATER DISCHARGES.
11. LOCATIONS OF ALL CONTROL MEASURES THAT REQUIRE MAINTENANCE, INCLUDING ANY CONTROL MEASURE IDENTIFIED IN THE PREVIOUS SWP3 INSPECTION REPORT WHICH REQUIRED MAINTENANCE OR REVISION BY THE OWNER OR PRIMARY OPERATOR.
12. LOCATIONS OF ANY DISCHARGE OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE AND ANY DISTURBANCE BEYOND THE APPROVED LIMITS OF CONSTRUCTION.
13. LOCATIONS OF CONTROL MEASURES THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION.
14. LOCATIONS WHERE AN ADDITIONAL ESC OR CONTROL MEASURE IS NEEDED.

THE SWP3 INSPECTION REPORT MUST INCLUDE:

A. FINDINGS AS TO WHETHER THE FOLLOWING STRUCTURAL AND NON-STRUCTURAL CONTROLS REQUIRED FOR THE SITE AREAS LISTED ABOVE ARE FUNCTIONING :IN COMPLIANCE WITH THE APPROVED SWP3 AND ESC PLAN:
   1. EROSION SOURCE CONTROLS, INCLUDING THE APPROVED SEQUENCE OF CONSTRUCTION AND GRADING PLAN LIMITS, DRAINAGE DIVERSION MEASURES, TEMPORARY AND PERMANENT FILL DISPOSAL AND STOCKPILE MANAGEMENT MEASURES.
   2. SEDIMENT CONTROLS, INCLUDING PERIMETER AND INTERIOR CONTROLS, SEDIMENT TRAPS AND BASINS, AND THE SEQUENCE OF CONSTRUCTION REQUIREMENTS FOR THE SEDIMENT CONTROLS.
   3. PERMANENT EROSION AND SOIL STABILIZATION CONTROLS, BASED ON THE SEQUENCE OF CONSTRUCTION AND CRITICAL SITE IMPROVEMENTS, AND THE CESSATION OF CONSTRUCTION ACTIVITIES, INCLUDING TEMPORARY STABILIZATION MEASURES FOR AREAS INACTIVE FOR LONGER THAN 14 DAYS, AND PERMANENT STABILIZATION MEASURES FOR AREAS AT FINAL GRADE.
   4. OTHER APPLICABLE CONTROLS AND POLLUTION PREVENTION MEASURES.

B. RAINFALL DOCUMENTATION:
   1. FOR PROJECTS THAT COMPRISE TEN ACRES OR MORE, THE DOCUMENTATION MUST INCLUDE RAINFALL DATES AND AMOUNTS IN ACCORDANCE WITH SECTION 82.934(E); AND
   2. FOR PROJECTS THAT COMPRISE LESS THAN TEN ACRES, THE DOCUMENTATION MUST INCLUDE ACCURATE RAINFALL DATA FROM A LOCATION CLOSEST TO THE SITE.

C. CORRECTIVE ACTIONS REQUIRED FOR ANY NON-COMPLIANT ITEMS AND THE SCHEDULE FOR BRINGING THESE ITEMS INTO COMPLIANCE.

THE SWP3 INSPECTION REPORT CONTENTS MUST CONTAIN THE INSPECTION FINDINGS FOR THE REQUIRED AREAS AND CONTROL MEASURES LISTED HEREIN AND CERTIFY WHETHER THE SITE IS IN COMPLIANCE WITH THE APPROVED SWP3 AND ESC PLAN.

EITHER AT THE TIME OF EACH SWP3 INSPECTION, OR NO LATER THAN THE DATE OF THE INSPECTION, THE OWNER'S QUALIFIED INSPECTOR SHALL PREPARE AND SIGN A SWP3 INSPECTION REPORT.

THE OWNER OR PRIMARY OPERATOR SHALL UPLOAD EACH REQUIRED SWP3 OR ESC PLAN INSPECTION REPORT TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY. AN ALTERNATE METHOD OF REPORT SUBMITTAL MAY BE USED IF APPROVED BY THE COUNTY INSPECTOR.

GEOTECHNICAL PAVEMENT RECOMMENDATIONS:

PAVEMENT TYPE	TRAFFIC DESIGN INDEX	DESCRIPTION
PARKING AREAS (PASSENGER VEHICLES ONLY)	DI-1	LIGHT TRAFFIC - (ESALs <5) PASSENGER CARS AND PICKUP TRUCKS, NO REGULAR USE BY HEAVILY LOADED TWO AXLE TRUCKS OR LIGHTLY LOADED LARGER VEHICLES.
PRIMARY DRIVEWAYS	DI-3	MEDIUM TRAFFIC - (20<ESALs ≤75) NO MORE THAN 300 HEAVILY LOADED TWO AXLE TRUCKS OR LIGHTLY LOADED THREE AXLE TRUCKS AND NO MORE THAN 30 HEAVILY LOADED THREE AXLE TRUCKS PER DAY.

FLEXIBLE PAVEMENT SYSTEM		
COMPONENT	MATERIAL THICKNESS (INCHES)	
	DI-1	DI-3
ASPHALTIC CONCRETE (TYPE D OR C HMAC)	2.0	3.0
CRUSHED LIMESTONE BASE [1]	8.0	12.0
MOISTURE CONDITIONED SUBGRADE [2]	6.0	6.0
IF THE ON-SITE SOILS ARE COMPLETELY REMOVED TO EXPOSE STRATUM 4 LIMESTONE, THE CRUSHED LIMESTONE BASE THICKNESS MAY BE REDUCED BY UP TO 2 INCHES, BUT IN NO CASE LESS THAN 6 INCHES THICK. MOISTURE CONDITIONING IS NOT NECESSARY IN AREAS WHERE STRATUM 4 LIMESTONE IS EXPOSED.		

RIGID PAVEMENT SYSTEM		
COMPONENT	MATERIAL THICKNESS (INCHES)	
	DI-1	DI-3[2]
REINFORCED CONCRETE (PCC)[1]	5.0	7.0
MOISTURE CONDITIONED SUBGRADE	6.0	6.0
[1] A THIN COURSE OF CRUSHED LIMESTONE BASE OR CLEAN SAND AT LEAST 1 TO 2 INCHES THICK IS RECOMMENDED UNDER THE REINFORCED CONCRETE IN EXPOSED STRATUM 4 LIMESTONE SUBGRADE AREAS. MOISTURE CONDITIONING IS NOT NECESSARY IN INTACT LIMESTONE AREAS. [2] IN STRATUM 4 AREAS, THE DI-3 CONCRETE THICKNESS MAY BE REDUCED BY X INCH.		

MOISTURE CONDITIONED SUBGRADE

AFTER PROOF-ROLLING, AND JUST PRIOR TO PLACEMENT OF FILL, THE EXPOSED SOIL SUBGRADE IN ALL CONSTRUCTION AREAS (EXCEPT LANDSCAPING) SHOULD BE EVALUATED FOR MOISTURE AND DENSITY THROUGH FIELD DENSITY TESTING. IF THE MOISTURE AND/OR DENSITY REQUIREMENTS DO NOT MEET THE MOISTURE AND DENSITY REQUIREMENTS BELOW, THE SUBGRADE SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES, MOISTURE CONDITIONED AND COMPACTED AS PER THE FILL COMPACTION REQUIREMENTS. MOISTURE CONDITIONING IS NOT REQUIRED IN INTACT STRATUM 4 LIMESTONE SUBGRADE AREAS.

PERMANENT EROSION CONTROL NOTES:

ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:

A. A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DISTURBED AREAS (EXCEPT ROCK OUTCROP). SALVAGED TOPSOIL FROM THE SITE SHOULD BE USED WHENEVER POSSIBLE. IMPORTED TOPSOIL SHALL BE WEED FREE WITH A MINIMUM 20% ORGANIC CONTENT. TRASH, WOOD, BRUSH, STUMPS, ROCKS OVER 1½ INCHES (37.5 MM) IN SIZE AND OTHER OBJECTIONABLE MATERIAL ENCOUNTERED SHALL BE SCREENED FROM THE TOPSOIL PRIOR TO PLACEMENT. NO MORE THAN 15 PERCENT OF THE TOPSOIL VOLUME SHALL BE ROCK SMALLER THAN 1½ INCHES.

B. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTURBED BY CONSTRUCTION AS FOLLOWS:

DATES	CLIMATE	SPECIES (lb/ac)	
YEAR ROUND	PERMANENT COOL/WARM SEASON (NATIVE SPECIES)	PURPLE THREE-AWN (ARISTIDA PURPUREA)	1.4
		SIDEOATS GRAMA (BOUTELOUA CURTIPENDULA)	2.0
		SILVER BLUESTEM (BOTHRIOCHLOA LAGUROIDES)	6.0
		BUFFALOGRASS (BUCHLOE DACTYLOIDES)	1.4
		CANADIAN WILDRYE (ELYMUS CANADENSIS)	1.4
		ENGELMANN'S DAISY (ENGELMANNIA PINNATIFIDA)	0.6
		GREEN SPRANGLETOP (LEPTOCHLOA DUBIA)	2.6
		MEXICAN HAT (RATIBIDA COLUMNIFERA)	1.0
		LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM)	1.8
		INDIANGRASS (SORGHASTRUM NUTANS)	1.8
		TEXAS WINTERGRASS (NASSELLA LEUCOTRICHA)	15.0
		TOTAL	35.0
MAR 30-OCT 1	PERMANENT WARM SEASON	BUFFALO/NATIVE	45.0
OCT 1-MAR 30	PERMANENT COOL/WARM SEASON	BUFFALO/NATIVE	70.0
		*CEREAL RYE (SECALE CEREALE)	90.0
		TOTAL	160

TAKE CARE TO DISTRIBUTE SEED EVENLY. BY SOWING FINE AND LARGE SEEDS SEPARATELY OR BY USING A FINE SEED BOX. WHEN BROADCASTING SEEDING, THE APPLICATION RATE SHOULD BE DOUBLED AND THE AREA ROLLED TO ENSURE A GOOD SEED/SOIL CONTACT.

FROM SEPTEMBER 15 TO MARCH 1, OATS (21 lb/acre) AND WINTER WHEAT (30 lb/acre) MAY BE SUBSTITUTED FOR RYE.

MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 3500 lb/acre (HAY), 4500 lb/acre (STRAW) OR 2500 lb/acre (HYDRAULIC MULCH). ACKIFIER, IF USED SHALL BE BIODEGRADABLE.

C. THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES. THE IRRIGATION SHALL OCCUR AT TEN-DAY INTERVALS DURING THE FIRST TWO MONTHS. RAINFALL OCCURRENCES OF ½ INCH OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK.

D. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH 70% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.

WCID-17 PRE-CONSTRUCTION CONFERENCE CHECKLIST:

PRE-CONSTRUCTION CONFERENCE CHECKLIST

WCID Inspectors	Phone Numbers
Juan Sanchez	(512) 801-2966
Dany Ramirez	(512) 247-0228
Jesus Herrera	(512) 801-2085
Storm Inspector	stormwater@wcid17.org

1. OUR DISTRICT CONSTRUCTION STANDARDS CAN BE FOUND ONLINE AT WWW.WCID17.ORG. MAKE SURE YOU HAVE THE MOST CURRENT REVISION OF THESE STANDARDS. WE STRONGLY ENCOURAGE REVIEWING THESE THROUGHOUT THE PROJECT.
2. *CHANGE ORDERS*: SUBMIT ONE COPY TO THE DISTRICT OFFICE AND ONE TO THE INSPECTOR. IF THE PROJECT IS WITHIN THE CITY OF LAKEWAY, CHANGE ORDERS MUST ALSO BE SUBMITTED TO LAKEWAY. (THESE COPIES ARE IN ADDITION TO THE COPIES THAT ARE GOING TO THE ENGINEERS).
3. ONCE WATER AND WASTEWATER LINES ARE READY FOR INSTALLATION, A WCID-17 INSPECTOR MUST BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO START-TIME. THE INSPECTOR WILL THEN SET UP AN APPOINTMENT WITH THE CONTRACTOR WHEN THERE IS AN OPENING IN HIS SCHEDULE.
4. NO UTILITY LINES WILL BE COVERED UNTIL THEY HAVE BEEN INSPECTED AND PASSED BY THE INSPECTOR. PICTURES CANNOT BE USED AS A SUBSTITUTE FOR A PHYSICAL INSPECTION.
5. EROSION CONTROL WILL BE IN PLACE AND MAINTAINED AT ALL TIMES.
6. IF WORK IS BEING CONDUCTED ON MORE THAN FIVE (5) ACRES, PREPARE AND IMPLEMENT SWPPP. POST SITE NOTICE. SUBMIT COPY OF SITE NOTICE TO MS4 OPERATOR AND TO THE STORM SEWER INSPECTOR. (NOTE: THE STORM WATER INSPECTOR WILL BE MAKING PERIODIC INSPECTIONS)
7. CONNECTIONS WILL ONLY BE MADE TO WCID-17 EXISTING SYSTEMS WITH AN INSPECTOR PRESENT. NO WATER MAINS WILL BE PUT INTO SERVICE UNTIL THE BACTERIOLOGICAL SAMPLES HAVE PASSED TESTING. THE INSPECTOR WILL NOTIFY THE CONTRACTOR WHEN THIS HAPPENS.
8. THE CONTRACTOR WILL IMMEDIATELY REPORT TO THE INSPECTOR ANY PROBLEMS ENCOUNTERED OR ANY DAMAGE TO THE EXISTING UTILITY INFRASTRUCTURE.
9. IN-GROUND LINES SHALL BE PROTECTED FROM DIRT AND ROCKS TO THE MAXIMUM EXTENT POSSIBLE. WASTEWATER LINES, WHICH ARE CONNECTED TO LIFT STATIONS OR MANHOLES, SHALL BE PROPERLY PLUGGED (WITH A MECHANICAL PLUG) DURING CONSTRUCTION TO PREVENT THE ENTRY OF ANY FOREIGN MATTER INTO THE EXISTING WASTEWATER LINES. (*I.E. MUD, DIRT, ANIMAL REMAINS*)
10. FINES:
    A. TAMPERING WITH WASTEWATER MANHOLES, UP TO A $2,000 FINE.
    B. OPENING OR CLOSING A WCID-17 WATER VALVES WITHOUT A WCID-17 REPRESENTATIVE PRESENT IS A $2,000 FINE.
    C. TAMPERING WITH A FIRE HYDRANT (*OPENING OR CLOSING*) IS A $2,000 FINE.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE QUALITY OF WORKMANSHIP AND THE SCHEDULE OF WORK.
12. THE CONTRACTOR SHALL EMPLOY ONLY EXPERIENCED PERSONNEL WHO ARE FAMILIAR WITH THE REQUIRED WORK AND SHALL PROVIDE FULL TIME SUPERVISION BY A QUALIFIED FOREMAN.

WCID #17 GENERAL NOTES:

WATER NOTES

A. 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 AS A RESULT OF THE CONTRACTOR FAILURE TO LOCATE AND PRESERVE ALL UTILITIES.
B. ALL EASEMENTS ARE REQUIRED TO BE STAKED-OUT.
C. THE BACK OF THE CURB AND THE FINISHED GRADE ARE REQUIRED TO BE STAKED-OUT.
D. ALL BENDS, GATE VALVES, TEES, AND REDUCERS MUST BE RESTRAINED.
E. ALL MAINS MUST HAVE A **MAXIMUM 48 INCHES OF COVER** FROM FINISHED GRADE TO TOP OF PIPE.
F. WATER LINE PIPE MUST BE **C-900 DR-14** BLUE IN COLOR OR **DUCTILE IRON PIPE CLASS 350**.
G. ALL FIRE LINES MUST BE **DUCTILE IRON PIPE CLASS 350**.
H. GAS MAINS MUST BE INSTALLED BEFORE WATER SERVICES ARE PUT IN.
I. ALL DRY UTILITIES (IE. ELECTRICAL, TELECOMMUNICATIONS, ETC.) MUST MAINTAIN A **5-FOOT HORIZONTAL SEPARATION** (STARTING AT THE PIPE'S WALL) FROM WCID #17 APPURTENANCES.
J. WHEN WATER/WASTEWATER UTILITIES CROSS ANY DRY UTILITY, A **2-FOOT VERTICAL SEPARATION** (STARTING AT THE PIPE'S WALL) MUST BE MAINTAINED FROM WCID #17 APPURTENANCES.
K. THE WATER SERVICE SHOULD BE INSTALLED ONE FOOT AWAY FROM THE PROPERTY WITHIN AN EASEMENT.
L. FIRE HYDRANTS MUST HAVE A **7-FOOT SEPARATION** FROM ANY STORM SEWER INLETS.
M. WATER LINES WITH **10% GRADE** OR MORE MUST HAVE CONCRETE RETARDS EVERY **20 FEET** PER WCID #17 DETAILS.
N. NO WATER UTILITIES THROUGH ANY ISLANDS.

WASTEWATER NOTES

A. 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 AS A RESULT OF THE CONTRACTOR FAILURE TO LOCATE AND PRESERVE ALL UTILITIES.
B. ALL EASEMENTS ARE REQUIRED TO BE STAKED-OUT.
C. THE BACK OF THE CURB AND THE FINISHED GRADE ARE REQUIRED TO BE STAKED-OUT.
D. ALL DRY UTILITIES (IE. ELECTRICAL, TELECOMMUNICATIONS, ETC.) MUST MAINTAIN A **5-FOOT HORIZONTAL SEPARATION** (STARTING AT THE PIPE'S WALL) FROM WCID #17 APPURTENANCES.
E. WHEN WATER/WASTEWATER UTILITIES CROSS ANY DRY UTILITY, A **2-FOOT VERTICAL SEPARATION** (STARTING AT THE PIPE'S WALL) MUST BE MAINTAINED FROM WCID #17 APPURTENANCES.
F. ALL GRAVITY WASTEWATER UTILITIES AND SERVICES MUST BE GREEN COLOR PIPE ONLY AND **SDR-26.**
G. WASTEWATER SERVICE MUST HAVE A **7-FOOT SEPARATION** FROM ANY STORM SEWER INLETS.
H. BOLT DOWN RING AND COVERS ON ALL MANHOLES THAT ARE NOT IN THE PAVEMENT ARE REQUIRED.
I. MANHOLES NOT IN THE ROAD-WAY MUST BE **1 FOOT** ABOVE FINISHED GRADE.
J. NO WASTEWATER UTILITIES THROUGH ANY ISLANDS.

IRRIGATION NOTES:

WCID #17 *WILL NOT* SIGN OFF ON IRRIGATION PLANS AS PART OF THE SITE PLAN. IRRIGATION PLANS MUST BE SUBMITTED SEPARATELY TO CSR PERMITS COORDINATOR, NANCY CARDOSO, AT NCARDOSO@WCID17.ORG, 512-266-1111 EXT. 110. SUBMISSIONS MUST INCLUDE:

1) IRRIGATION PERMIT APPLICATION. A COPY OF THE FORM CAN BE OBTAINED THROUGH THE DISTRICT'S WEBSITE, HTTPS://WWW.WCID17.ORG/FOR-BUILDERS-PLUMBERS/
2) LIST OF HYDRAULICS
3) LEGEND
4) ANNUAL WATER BUDGET. (ADD THIS NOTE TO THE IRRIGATION SHEETS IN SITE PLANS IN **BOLD** RED LETTERS)

LANDSCAPE NOTE:

TREES MUST BE **7.5 FEET** AWAY FROM ALL WCID #17 APPURTENANCES. (IE. WATER, WASTEWATER, METERS, ETC.)

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

GENERAL NOTES

MALONE★WHEELER SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY : SGC
CHECKED BY : SGC
APPROVED BY : JBM
DATE : 9/29/2023

SHEET 03
OF 62

F:\LITISD_OVERALL\PROJECTS\22-105-AUS LITISD HS 2023 PRKNG&LOT\DRAWINGS\PLANSET\02 GENERAL NOTES.DWG, 9/29/2023, ANTHONY VINCENT

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

EXISTING CONDITIONS

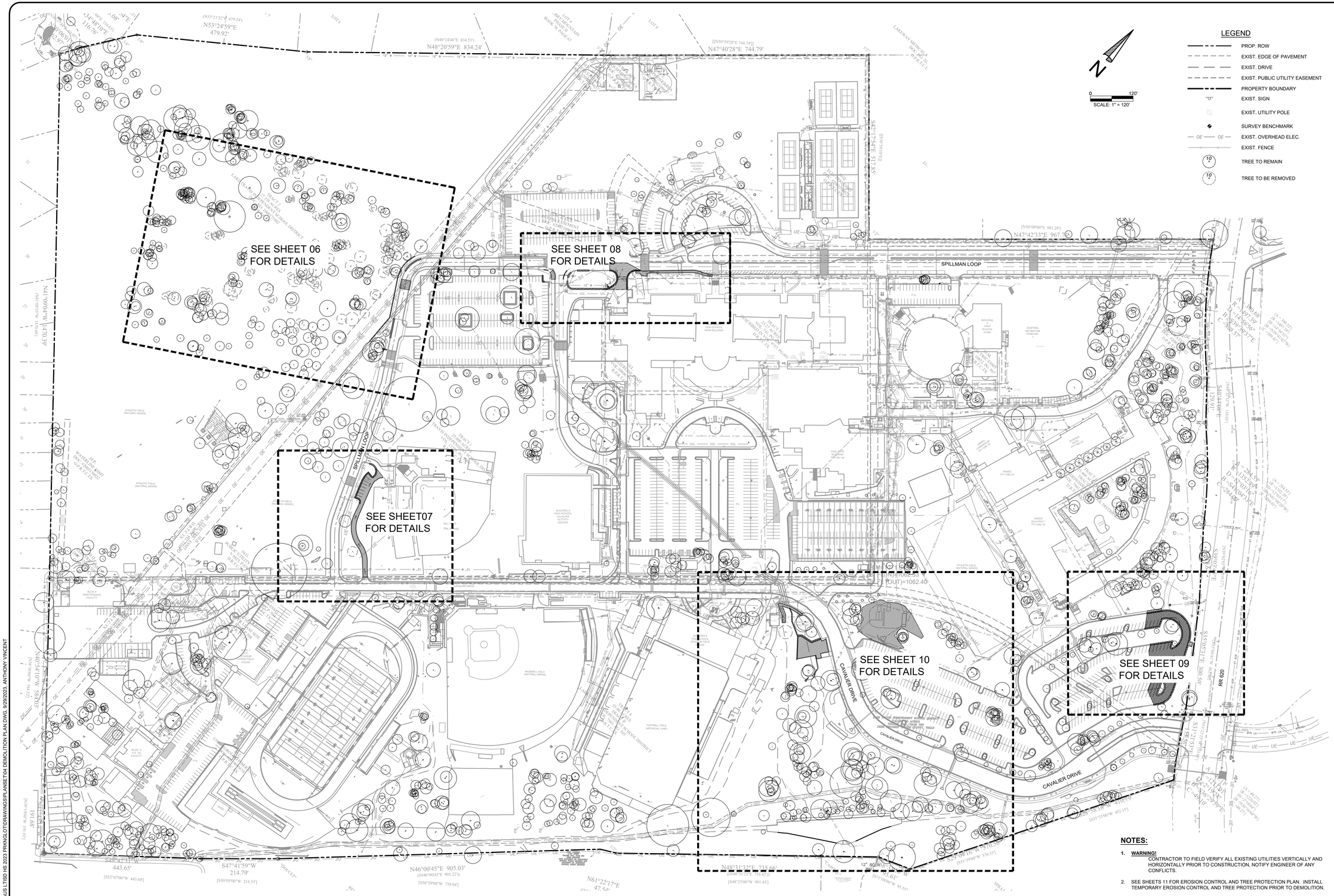
MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0455
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 04
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS, LTISD HS 2023 PRN\GLOT\DRAWINGS\PLANSET\04 EXISTING CONDITIONS.DWG, 9/29/2023, ANTHONY VINCENT



NOTES:

1. **WARNING!** CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, NOTIFY ENGINEER OF ANY CONFLICTS.
2. SEE SHEETS 11 FOR EROSION CONTROL AND TREE PROTECTION PLAN. INSTALL TEMPORARY EROSION CONTROL AND TREE PROTECTION PRIOR TO DEMOLITION.
3. CONTACT UTILITY COMPANIES PRIOR TO REMOVAL OF ANY ON-SITE UTILITY IMPROVEMENTS. COORDINATE SHUT-OFF OF SERVICE.
4. COMPLY WITH ALL APPLICABLE UTILITY COMPANY REGULATIONS AS WELL AS CITY, STATE, AND / OR FEDERAL REGULATIONS.
5. COMPLY WITH APPLICABLE "GENERAL CONSTRUCTION NOTES". SEE SHEET 02.
6. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. RELOCATE/REPLACE EXISTING SIGNS AS NEEDED.
8. COORDINATE LANDSCAPING & IRRIGATION WITH LANDSCAPE ARCHITECT.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

DEMOLITION PLAN OVERALL

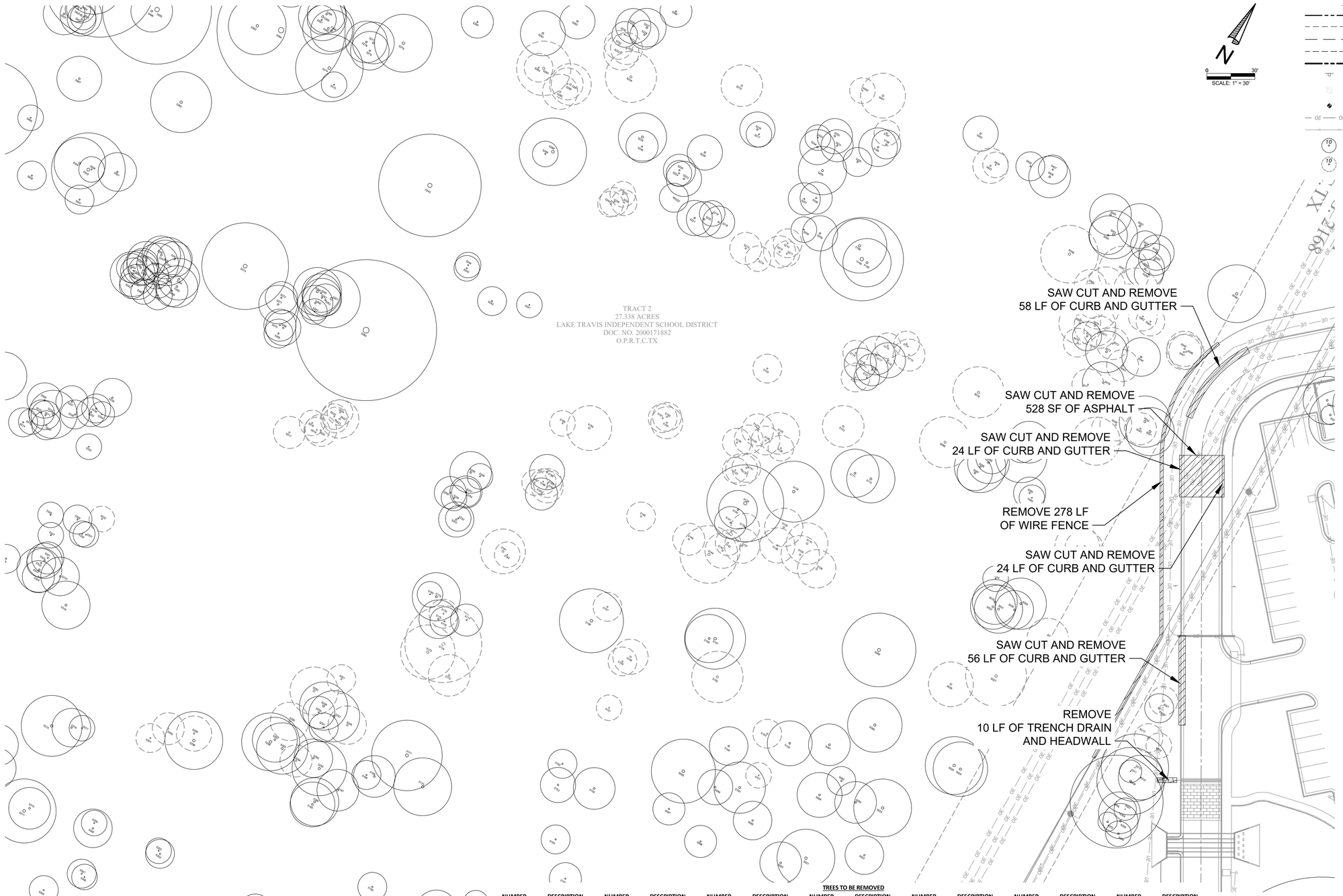
MALONE★WHEELER SINCE INC.1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 05
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS_LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\04 DEMOLITION PLAN.DWG, 9/28/2023, ANTHONY VINCENT



TREES TO BE REMOVED

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
5026	14" RED OAK	5064	12" LIVE OAK	5113	10" LIVE OAK	5138	9" LIVE OAK	5187	8" LIVE OAK	5239	9" LIVE OAK	5404	8" LIVE OAK
5027	19" RED OAK	5065	10" LIVE OAK	5114	8" LIVE OAK	5142	8" LIVE OAK	5189	8" LIVE OAK	5240	8" LIVE OAK	5517	10" LIVE OAK
5028	13" CEDAR ELM 9-7	5066	9" LIVE OAK	5115	8" LIVE OAK	5143	11" LIVE OAK	5190	14" LIVE OAK 10-8	5246	12" LIVE OAK	5518	8" LIVE OAK
5035	14" LIVE OAK	5067	9" LIVE OAK	5118	8" LIVE OAK	5144	18" LIVE OAK 14-8	5191	9" LIVE OAK	5250	15" LIVE OAK	5519	8" LIVE OAK
5036	12" LIVE OAK	5068	13" LIVE OAK	5122	9" LIVE OAK	5145	10" LIVE OAK	5192	9" LIVE OAK	5251	9" LIVE OAK	5520	10" LIVE OAK
5037	15" LIVE OAK	5069	13" LIVE OAK	5123	13" LIVE OAK	5146	9" SHIN OAK	5193	10" LIVE OAK	5283	17" LIVE OAK 12-9	5521	8" LIVE OAK
5038	11" LIVE OAK	5070	13" LIVE OAK	5124	9" LIVE OAK	5147	9" SHIN OAK	5197	8" LIVE OAK	5284	9" CEDAR	5522	12" LIVE OAK 8-7
5039	10" LIVE OAK	5071	10" LIVE OAK	5125	13" LIVE OAK	5149	11" CEDAR ELM	5210	9" LIVE OAK	5285	11" LIVE OAK	5523	8" LIVE OAK
5040	10" LIVE OAK	5072	10" LIVE OAK	5126	8" LIVE OAK	5150	9" LIVE OAK	5211	8" LIVE OAK	5286	10" LIVE OAK	5524	8" LIVE OAK
5043	10" LIVE OAK	5075	9" LIVE OAK	5127	10" LIVE OAK	5151	8" CEDAR ELM	5212	10" LIVE OAK	5287	13" LIVE OAK 10-6	6004	14" SPANISH OAK
5045	11" LIVE OAK	5077	10" LIVE OAK	5128	9" LIVE OAK	5172	13" LIVE OAK	5213	10" LIVE OAK 8-4	5290	12" LIVE OAK	6261	19" ELM
5046	11" LIVE OAK	5078	16" LIVE OAK	5129	9" LIVE OAK	5173	17" LIVE OAK 12-10	5214	8" CEDAR	5294	10" RED OAK	6309	11" 10" LIVE OAK
5047	11" LIVE OAK	5088	16" CEDAR ELM 11-10	5130	9" LIVE OAK	5174	24" RED OAK	5215	13" LIVE OAK	5299	11" LIVE OAK AD*	6310	14" LIVE OAK
5056	18" LIVE OAK	5101	8" SHIN OAK	5131	9" LIVE OAK	5178	9" LIVE OAK	5231	10" LIVE OAK	5300	10" LIVE OAK	6311	7" LIVE OAK
5057	16" CEDAR ELM	5103	9" SHIN OAK	5132	10" LIVE OAK	5181	8" LIVE OAK	5232	9" LIVE OAK	5301	9" LIVE OAK	6312	12' 9" LIVE OAK
5060	14" LIVE OAK	5105	16" CEDAR ELM 8-8-7	5133	8" LIVE OAK	5182	14" RED OAK 10-7 AD*	5233	11" LIVE OAK	5302	9" SHIN OAK	6313	9" LIVE OAK
5061	8" LIVE OAK	5108	12" LIVE OAK	5135	12" LIVE OAK	5184	10" LIVE OAK	5234	16" LIVE OAK	5400	8" CEDAR	6314	8" LIVE OAK
5062	9" LIVE OAK	5109	12" LIVE OAK	5136	11" LIVE OAK	5185	9" LIVE OAK	5237	8" LIVE OAK	5401	14" LIVE OAK	6321	9" LIVE OAK
5063	9" LIVE OAK	5110	13" CEDAR ELM	5137	11" LIVE OAK	5186	8" LIVE OAK	5238	8" CEDAR	5403	11" LIVE OAK		

NOTES:

1. **WARNING!** CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY CONFLICTS.
2. SEE SHEETS 11 FOR EROSION CONTROL AND TREE PROTECTION PLAN. INSTALL TEMPORARY EROSION CONTROL AND TREE PROTECTION PRIOR TO DEMOLITION.
3. CONTACT UTILITY COMPANIES PRIOR TO REMOVAL OF ANY ON-SITE UTILITY IMPROVEMENTS. COORDINATE SHUT-OFF OF SERVICE.
4. COMPLY WITH ALL APPLICABLE UTILITY COMPANY REGULATIONS AS WELL AS CITY, STATE, AND / OR FEDERAL REGULATIONS.
5. COMPLY WITH APPLICABLE "GENERAL CONSTRUCTION NOTES". SEE SHEET 02.
6. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. RELOCATE/REPLACE EXISTING SIGNS AS NEEDED.
8. COORDINATE LANDSCAPING & IRRIGATION WITH LANDSCAPE ARCHITECT.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

PARKING LOT DEMOLITION

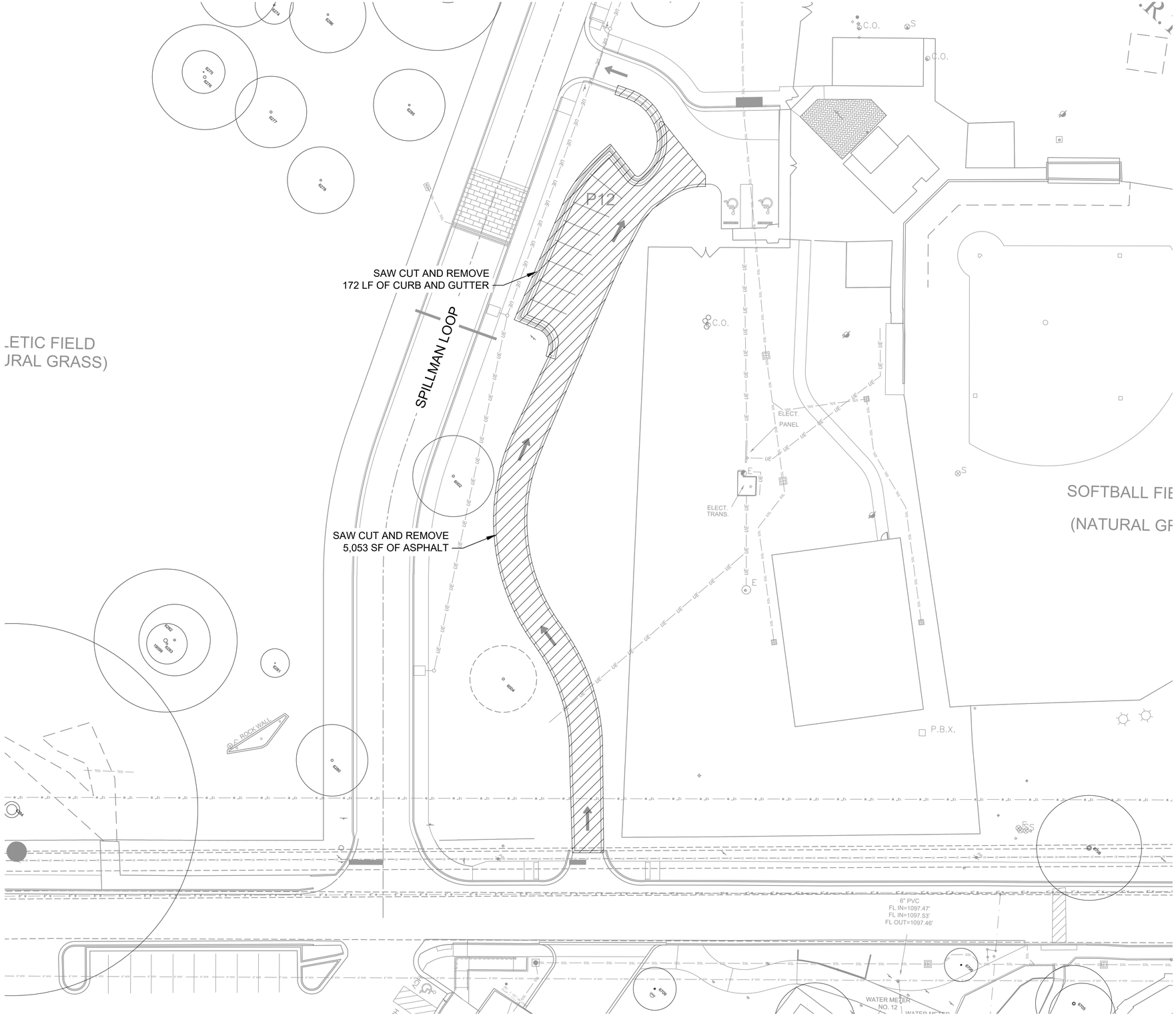
MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 06
OF 62

P:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG LOT\DRAWINGS\PLANSET\04 DEMOLITION PLAN.DWG, 9/29/2023, ANTHONY VINCENT



N

0 20'
SCALE: 1" = 20'

LEGEND

- PROP. ROW
- EXIST. EDGE OF PAVEMENT
- EXIST. DRIVE
- EXIST. PUBLIC UTILITY EASEMENT
- PROPERTY BOUNDARY
- EXIST. SIGN
- EXIST. UTILITY POLE
- SURVEY BENCHMARK
- EXIST. OVERHEAD ELEC.
- EXIST. FENCE
- TREE TO REMAIN
- TREE TO BE REMOVED

NOTES:

1. **WARNING!** CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, NOTIFY ENGINEER OF ANY CONFLICTS.
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8. COORDINATE LANDSCAPING & IRRIGATION WITH LANDSCAPE ARCHITECT.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

SOFTBALL FIELD PARKING DEMOLITION

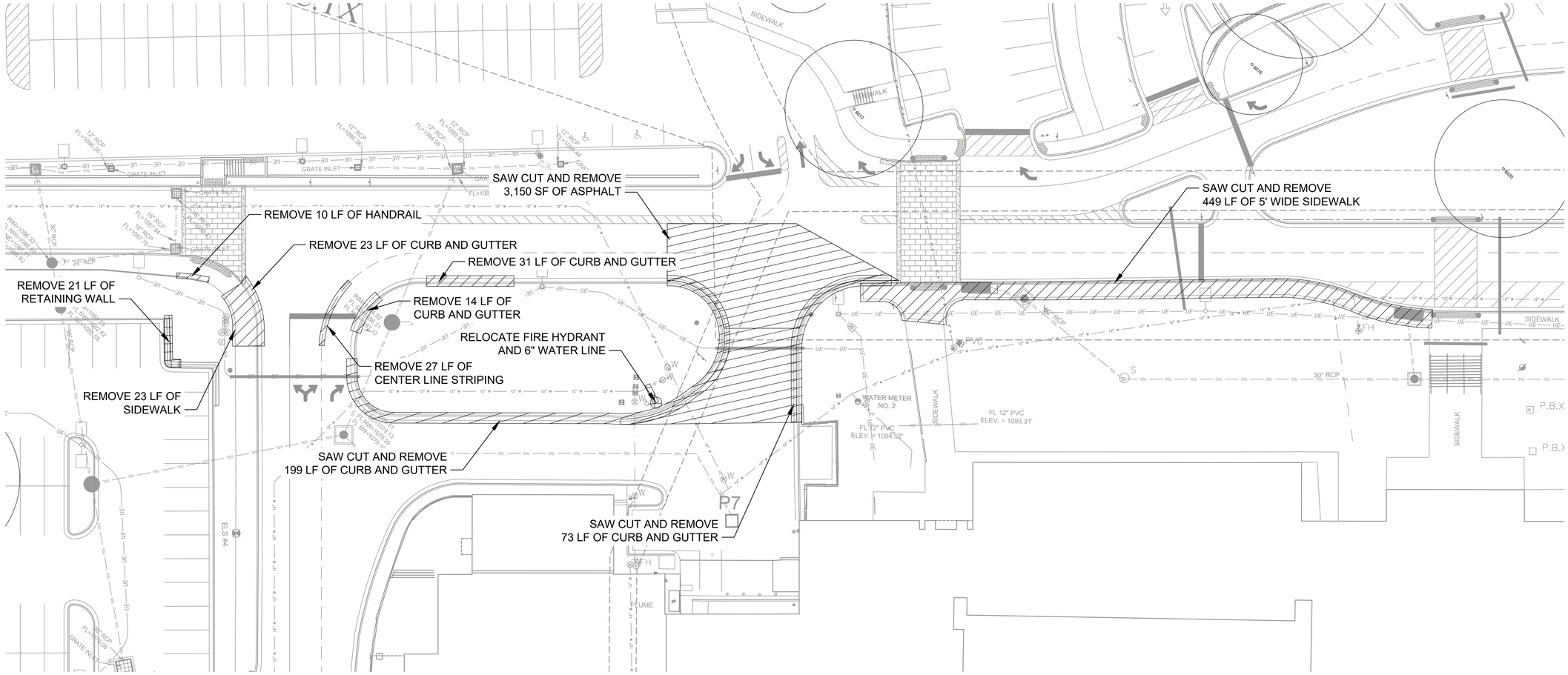
MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0640 Fax: (512) 899-0655
Firm Registration No. F-786

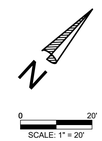
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
11-9-2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 07
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\04 DEMOLITION PLAN.DWG, 9/29/2023, ANTHONY VINCENT





LEGEND

- PROP. ROW
- EXIST. EDGE OF PAVEMENT
- EXIST. DRIVE
- EXIST. PUBLIC UTILITY EASEMENT
- PROPERTY BOUNDARY
- EXIST. SIGN
- EXIST. UTILITY POLE
- SURVEY BENCHMARK
- EXIST. OVERHEAD ELEC.
- EXIST. FENCE
- TREE TO REMAIN
- TREE TO BE REMOVED

NOTES:

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8. COORDINATE LANDSCAPING & IRRIGATION WITH LANDSCAPE ARCHITECT.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

CAFETERIA PARKING DEMOLITION

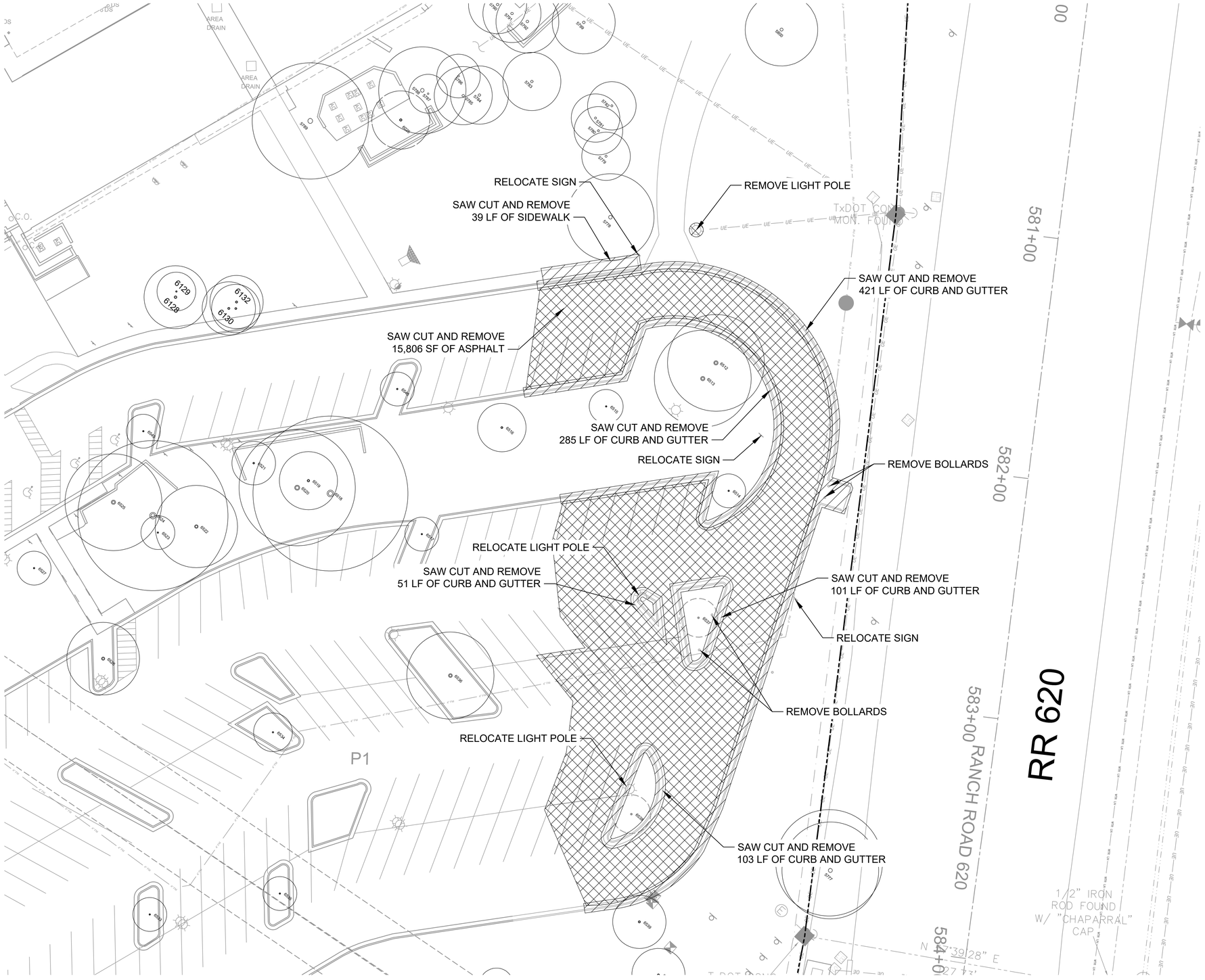
MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 08
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS\LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\04 DEMOLITION PLAN.DWG, 9/29/2023, ANTHONY VINCENT



0 20'
SCALE: 1" = 20'

LEGEND

- PROP. ROW
- EXIST. EDGE OF PAVEMENT
- EXIST. DRIVE
- EXIST. PUBLIC UTILITY EASEMENT
- PROPERTY BOUNDARY
- EXIST. SIGN
- EXIST. UTILITY POLE
- SURVEY BENCHMARK
- EXIST. OVERHEAD ELEC.
- EXIST. FENCE
- TREE TO REMAIN
- TREE TO BE REMOVED

NOTES:

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8. COORDINATE LANDSCAPING & IRRIGATION WITH LANDSCAPE ARCHITECT.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ANNEX BLDG 1 PARKING DEMOLITION

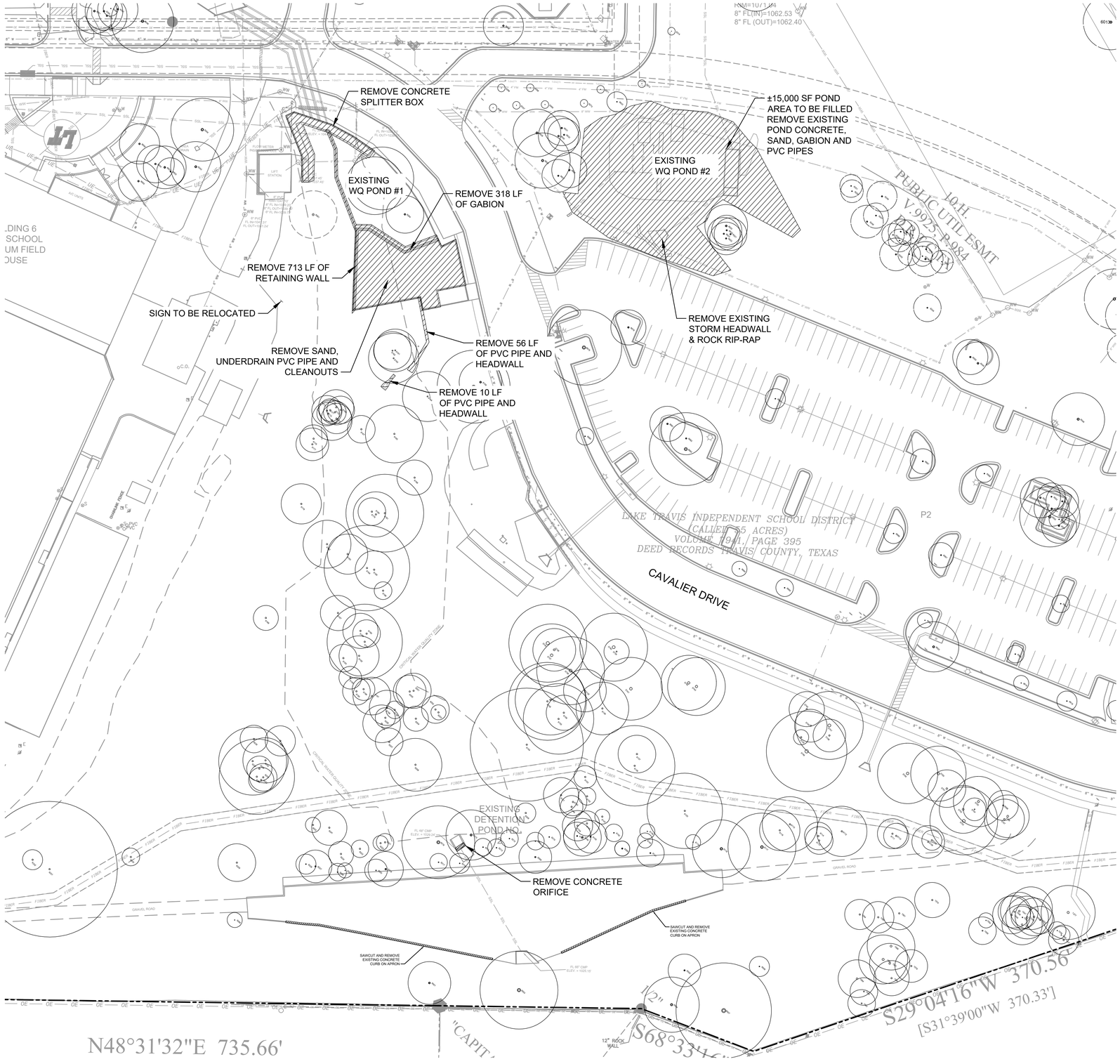
MALONE★WHEELER SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0400 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 09
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG LOT\DRAWINGS\PLANSET\04 DEMOLITION PLAN.DWG, 9/29/2023, ANTHONY VINCENT



0 40'
SCALE: 1" = 40'

LEGEND

- PROP. ROW
- EXIST. EDGE OF PAVEMENT
- EXIST. DRIVE
- EXIST. PUBLIC UTILITY EASEMENT
- PROPERTY BOUNDARY
- EXIST. SIGN
- EXIST. UTILITY POLE
- SURVEY BENCHMARK
- EXIST. OVERHEAD ELEC.
- EXIST. FENCE
- TREE TO REMAIN
- TREE TO BE REMOVED
- IMPROVEMENTS TO BE REMOVED

NOTES:

1. **WARNING!** CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, NOTIFY ENGINEER OF ANY CONFLICTS.
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7. RELOCATE/REPLACE EXISTING SIGNS AS NEEDED.
8. COORDINATE LANDSCAPING & IRRIGATION WITH LANDSCAPE ARCHITECT.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

WATER QUALITY POND DEMOLITION

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 10
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS_LTISD HS 2023 PRN\GLOT\DRAWINGS\PLANSET\04 DEMOLITION PLAN.DWG, 9/29/2023, ANTHONY VINCENT

PRE-DEVELOPMENT DRAINAGE AREAS

DRAIN. AREA NO.	AREA (acres)	MANNING n	TC (min)	COMP. C	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)	DRAIN. AREA NO.
PRE-A	107.01	0.24	23.34	76	99.90	268.01	372.72	549.55	PRE-A
PRE-B1	19.64	0.24	16.36	76	20.84	56.22	78.04	114.83	PRE-B1
PRE-B2	6.27	0.24	15.27	76	6.82	18.27	25.33	37.34	PRE-B2
PRE-C	14.28	0.24	15.84	76	15.35	41.29	57.27	84.20	PRE-C
PRE-D	5.00	0.24	14.04	76	5.59	15.09	20.96	30.86	PRE-D
PRE-E	7.38	0.24	12.20	76	8.62	23.04	31.90	46.82	PRE-E
PRE-F	2.62	0.24	10.78	76	3.15	8.43	11.70	17.21	PRE-F
TOTAL	162.20				160.27	430.35	597.92	880.81	TOTAL

0 120'
SCALE: 1" = 120'

LEGEND

- PROPERTY BOUNDARY
- EXIST. STORM SEWER
- EXIST. CURB INLET
- EXIST. DRAINAGE AREA
- EXIST. FLOW DIRECTION
- E-1 / 1.00 ACRES — EXIST. DRAINAGE AREA ID / DRAINAGE AREA ACREAGE

PRE-B1 19.64 ACRES
PRE-D 5.00 ACRES
PRE-C 14.28 ACRES
PRE-A 107.01 ACRES
PRE-B2 6.27 ACRES
PRE-F 2.62 ACRES
PRE-E 7.38 ACRES

ANALYSIS POINT D
ANALYSIS POINT C
ANALYSIS POINT B1
ANALYSIS POINT B2
ANALYSIS POINT
ANALYSIS POINT E
ANALYSIS POINT A

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

PRE-DEVELOPED DRAINAGE AREAS

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
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Phone: (512) 899-0601 Fax: (512) 899-0655
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STATE OF TEXAS
JESSE B. MALONE
109734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY : SGC
CHECKED BY : SGC
APPROVED BY : JBM
DATE : 9/29/2023

SHEET 12
OF 62

F:\LTISD OVERALL\PROJECT 5\22-105-AUS LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\05 PRE-DEVELOPED DRAINAGE AREAS DWG, 9/29/2023, ANTHONY VINCENT

EXISTING DRAINAGE AREAS

DRAIN. AREA NO.	AREA (acres)	MANNING n	TC (min)	COMP. C	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)	DRAIN. AREA NO.
E-A1	102.05	0.24	23.39	86	191.37	365.15	497.44	745.16	E-A1
E-A2	13.15	0.24	7.99	88	36.00	66.44	89.41	132.38	E-A2
E-A3	1.91	0.24	8.90	79	3.85	8.12	11.45	17.73	E-A3
E-B1	15.20	0.24	15.88	79	26.43	56.13	79.33	123.16	E-B1
E-B2	5.23	0.24	15.31	88	12.41	23.00	30.99	45.95	E-B2
E-C1	7.56	0.24	9.82	89	20.74	37.68	50.44	74.34	E-C1
E-C2	4.59	0.24	10.75	86	11.34	21.53	29.26	43.72	E-C2
E-C3	3.81	0.24	11.67	87	9.50	17.82	24.12	35.90	E-C3
E-E1	0.78	0.24	5.00	85	2.07	3.95	5.37	8.03	E-E1
E-D1	3.83	0.24	11.18	83	8.47	16.87	23.30	35.38	E-D1
E-F1	4.26	0.24	7.13	86	11.22	21.26	28.86	43.08	E-F1
TOTAL	162.37				333.40	637.95	869.97	1304.83	TOTAL

0 120'
SCALE: 1" = 120'

LEGEND

- PROPERTY BOUNDARY
- EXIST. STORM SEWER
- EXIST. CURB INLET
- EXIST. DRAINAGE AREA
- EXIST. FLOW DIRECTION
- E-1 / 1.00 ACRES — EXIST. DRAINAGE AREA ID / DRAINAGE AREA ACREAGE

ANALYSIS POINT D
E-D1 3.83 ACRES
E-C3 3.81 ACRES
E-B1 15.20 ACRES
ANALYSIS POINT B1
ANALYSIS POINT C
EDWARDS AQUIFER CONTRIBUTING ZONE NORTHERN BOUNDARY
EXISTING DETENTION POND 1
E-C1 7.56 ACRES
E-C2 4.59 ACRES
E-F1 4.26 ACRES
E-A1 102.05 ACRES
WATER QUALITY POND #1
WATER QUALITY POND #3
ANALYSIS POINT F
E-E1 0.78 ACRES
EXISTING DETENTION POND 2
E-B2 5.23 ACRES
E-A2 13.15 ACRES
E-A3 1.91 ACRES
ANALYSIS POINT E
ANALYSIS POINT A
ANALYSIS POINT B2
SPILLMAN LOOP
CAVALIER DRIVE
RR 620

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

EXISTING DRAINAGE AREA MAP

MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0455
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 13
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRR\GLO\DRAWINGS\PLANSET\03 EXISTING DRAINAGE AREA MAP.DWG, 9/29/2023, ANTHONY VINCENT

PROPOSED DRAINAGE AREAS

DRAIN. AREA NO.	AREA (acres)	MANNING n	TC (min)	COMP. C	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)	DRAIN. AREA NO.
P-A1	102.14	0.24	23.39	66	**196.15**	**377.09**	**514.29**	**789.65**	P-A1
P-A2	13.15	0.24	7.89	66	**36.00**	**66.44**	**89.81**	**132.35**	P-A2
P-A3	1.91	0.24	8.90	79	**3.85**	**6.12**	**11.45**	**17.73**	P-A3
P-B1	14.96	0.24	15.56	79	**26.01**	**50.24**	**70.07**	**101.21**	P-B1
P-B2	5.23	0.24	15.31	66	**12.41**	**23.00**	**30.99**	**45.95**	P-B2
P-C1	7.56	0.24	9.82	89	**20.74**	**37.66**	**50.44**	**74.54**	P-C1
P-C2	4.59	0.24	10.75	86	**11.54**	**21.63**	**29.26**	**43.72**	P-C2
P-C3	3.81	0.24	11.67	87	**9.66**	**17.02**	**24.13**	**36.90**	P-C3
P-E1	0.92	0.24	5.00	84	**2.36**	**4.58**	**6.26**	**9.41**	P-E1
P-D1	3.83	0.24	11.19	83	**9.47**	**16.97**	**23.30**	**35.35**	P-D1
P-F1	4.26	0.24	7.13	86	**11.22**	**21.26**	**28.86**	**43.08**	P-F1
TOTAL	162.36				395.43	670.64	908.18	1322.78	TOTAL

ANALYSIS POINT FLOW RATES

ANALYSIS POINT	FLOW SCENARIO	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
AP-A	PRE-DEVELOPED	144.74	325.93	470.27	747.90
	EXISTING	108.84	160.03	328.48	757.53
	PROPOSED	137.82	197.93	242.81	701.59
AP-B1	PRE-DEVELOPED	29.63	66.65	96.11	152.25
	EXISTING	26.43	56.13	79.33	123.16
	PROPOSED	26.01	55.24	78.07	121.21
AP-B2	PRE-DEVELOPED	9.67	21.65	31.22	49.59
	EXISTING	12.41	23.00	30.99	45.95
	PROPOSED	12.41	23.00	30.99	45.95
AP-C	PRE-DEVELOPED	21.80	48.93	70.50	111.60
	EXISTING	19.35	40.56	54.62	123.40
	PROPOSED	19.35	40.56	54.62	123.40
AP-D	PRE-DEVELOPED	7.94	17.90	25.82	40.93
	EXISTING	8.47	16.87	23.30	35.38
	PROPOSED	8.47	16.87	23.30	35.38
AP-E	PRE-DEVELOPED	12.21	27.27	39.23	62.03
	EXISTING	2.07	3.95	5.37	8.03
	PROPOSED	2.36	4.58	6.26	9.41
AP-F	PRE-DEVELOPED	4.45	9.99	14.40	22.81
	EXISTING	11.22	21.23	28.86	43.08
	PROPOSED	11.22	21.23	28.86	43.08

Notes:
1. Pre-developed conditions analyze the drainage patterns prior to any development on site.
2. Atlas 14 rainfall data used for drainage modeling.

N

0 120'
SCALE: 1" = 120'

LEGEND

- PROPERTY BOUNDARY
- EXIST. STORM SEWER
- EXIST. CURB INLET
- PROP. DRAINAGE AREA
- PROP. FLOW DIRECTION
- P-A1 / 1.00 ACRES — PROP. DRAINAGE AREA ID / DRAINAGE AREA ACREAGE

P-B1 14.96 ACRES
P-D1 3.83 ACRES
P-C3 3.81 ACRES
P-C1 7.56 ACRES
EXISTING DETENTION POND 1
P-C2 4.59 ACRES
P-F1 4.26 ACRES
P-A1 102.14 ACRES
P-B2 5.23 ACRES
P-A2 13.15 ACRES
P-A3 1.91 ACRES
P-E1 0.92 ACRES
EXISTING DETENTION POND 2

ANALYSIS POINT B1
ANALYSIS POINT C
ANALYSIS POINT F
ANALYSIS POINT E
ANALYSIS POINT A
ANALYSIS POINT B2

EDWARDS AQUIFER CONTRIBUTING ZONE NORTHERN BOUNDARY

WATER QUALITY POND #1
WATER QUALITY POND #3

SPILLMAN LOOP
CAVALIER DRIVE
RR 620

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

PROPOSED DRAINAGE AREA MAP

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 14
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\06 PROPOSED DRAINAGE AREA MAP.DWG, 9/29/2023, ANTHONY VINCENT

LAKE TRAVIS HIGH SCHOOL
TCEQ WATER QUALITY PONDS SUMMARY

WATER QUALITY POND ID	DRAINAGE AREA	AREA (AC)	IMPERVIOUS AREA (AC)	TSS LOAD REMOVAL (LBS)	REQUIRED CAPTURE VOLUME (CF)	PROVIDED CAPTURE VOLUME (CF)
1	WQ:1A,1B,&1C	73.44	33.43	17,759	49,639	50,421
3	WQ:3	10.52	6.98	2,800	6,027	6,246
Total Proposed & Future TSS Load Removal at Analysis Point A (lbs)				20,559	-	-
Total Required TSS Load Removal at Analysis Point A (lbs)				20,559	-	-

N

0 120'
SCALE: 1" = 120'

LEGEND

- PROPERTY BOUNDARY
- EXIST. STORM SEWER
- EXIST. CURB INLET
- PROP. DRAINAGE AREA
- PROP. FLOW DIRECTION
- E-1 / 1.00 ACRES — PROP. DRAINAGE AREA ID / DRAINAGE AREA ACREAGE

NORTHERN BOUNDARY OF EDWARDS AQUIFER CONTRIBUTING ZONE

WQ:1A
62.73 ACRES

WQ:1B
3.76 ACRES

WQ:1C
6.95 ACRES

WQ:3
10.52 ACRES

X:1
1.03 ACRES

MODIFIED WATER QUALITY POND 1
CAPTURED AREA: WQ:1A,1B, & 1C
TSS REMOVAL = 17,759 LBS

EXISTING WATER QUALITY POND "3"
CAPTURED AREA: WQ:3
TSS REMOVAL = 2,800 LBS

PARKING CHANGES DUE TO TXDOT WIDENING OF RR620

IMPERVIOUS ADDED = 2,306 SF
IMPERVIOUS REMOVED = 9,832 SF
NET IMPERVIOUS = 7,526 SF REMOVED

SPILLMAN LOOP

CAVALIER DRIVE

RR 620

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

PROPOSED WATER QUALITY DRAINAGE AREA MAP

MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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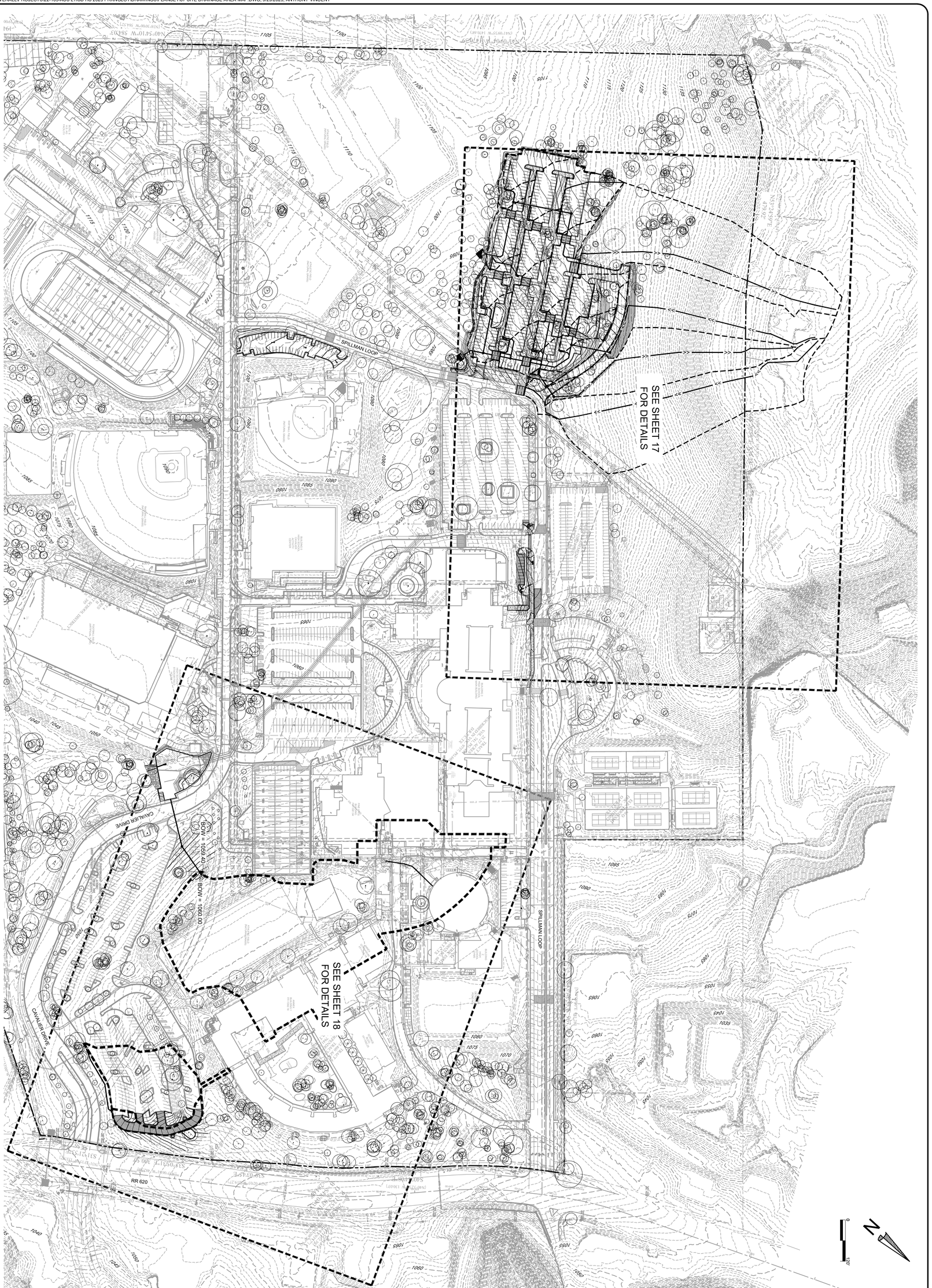
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 15
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRINGLO\DRAWINGS\PLANSET\08 PROPOSED WATER QUALITY DRAINAGE AREA MAP.DWG, 9/29/2023, ANTHONY VINCENT

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNGLOT\DRAWINGS\PLANSET\07 SITE DRAINAGE AREA MAP.DWG, 9/29/2023, ANTHONY VINCENT



SHEET 16 OF 62

DESIGN BY: SDC
CHECKED BY: SDC
APPROVED BY: JBM
DATE: 9/29/2023

STATE OF TEXAS
JESSE B. MALONE
108714
LICENSED
PROFESSIONAL ENGINEER

MALONE ★ WHEELER
SINCE INC. 1995

CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT

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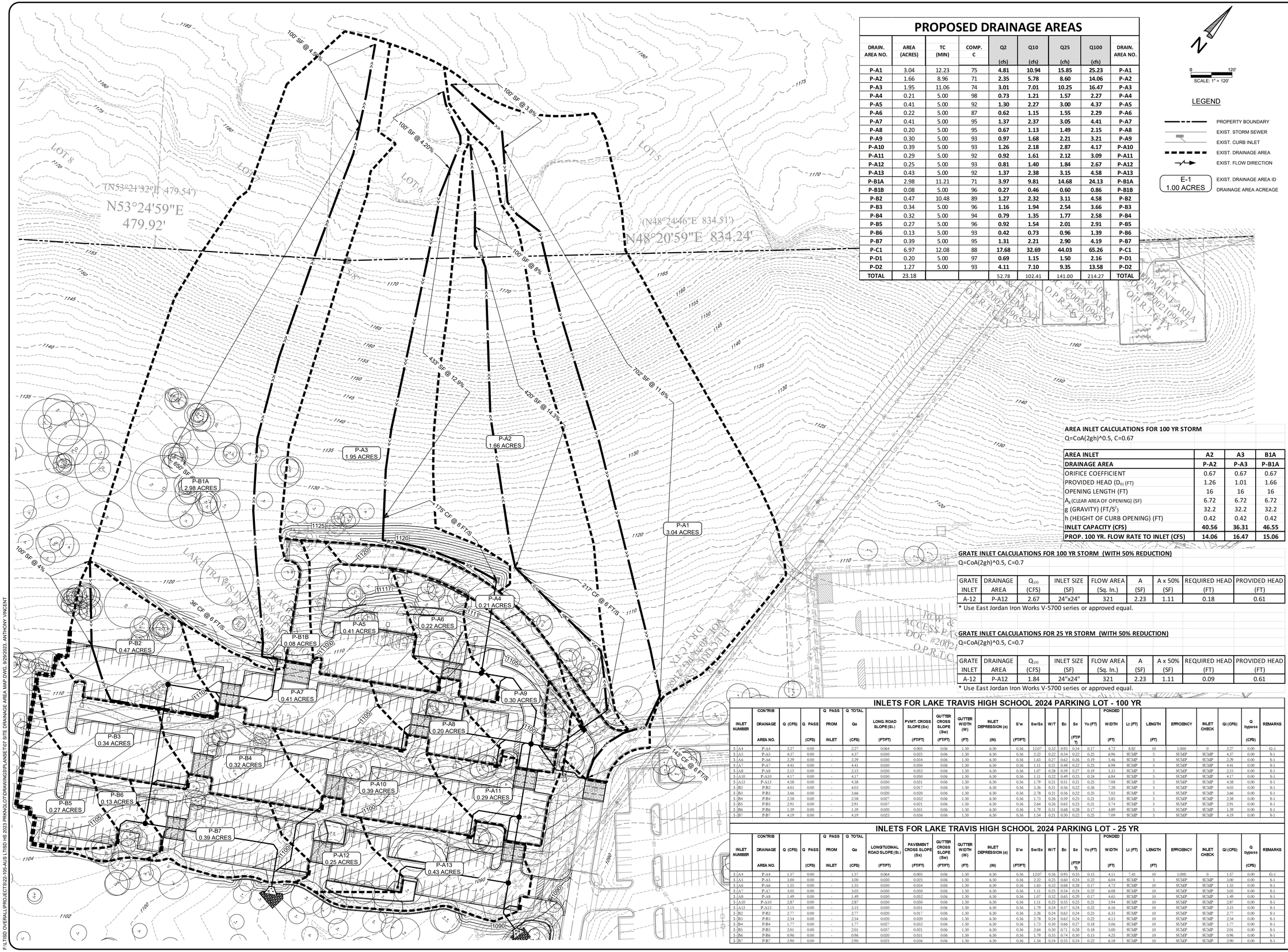
Firm Registration No. F-786

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

OVERALL STORM SEWER DRAINAGE AREA PLAN

NO.	DATE	REVISION	BY


100' SF @ 4.5%
100' SF @ 3.8%
100' SF @ 4.20%
100' SF @ 8%
433' SF @ 12.9%
420' SF @ 14.3%
702' SF @ 11.6%
175' CF @ 6 FT/S
217' CF @ 6 FT/S
143' CF @ 6 FT/S
36' CF @ 6 FT/S
100' SF @ 4%
680' SF
(N53°21'32"E 479.54')
N53°24'59"E
479.92'
(N48°24'46"E 834.51')
N48°20'59"E 834.24'
LOT 8
LOT 7
LOT 6
LOT 5
P-A1
3.04 ACRES
P-A2
1.66 ACRES
P-A3
1.95 ACRES
P-A4
0.21 ACRES
P-A5
0.41 ACRES
P-A6
0.22 ACRES
P-A7
0.41 ACRES
P-A8
0.20 ACRES
P-A9
0.30 ACRES
P-A10
0.39 ACRES
P-A11
0.29 ACRES
P-A12
0.25 ACRES
P-A13
0.43 ACRES
P-B1A
2.98 ACRES
P-B1B
0.08 ACRES
P-B2
0.47 ACRES
P-B3
0.34 ACRES
P-B4
0.32 ACRES
P-B5
0.27 ACRES
P-B6
0.13 ACRES
P-B7
0.39 ACRES
LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT
DOC. #2002210965
O.P.R.T.C.T.
TRACT 1
3.38 ACRES
TRACT 2
0.58 ACRES
TRACT 3
0.58 ACRES
TRACT 4
0.58 ACRES
TRACT 5
0.58 ACRES
TRACT 6
0.58 ACRES
TRACT 7
0.58 ACRES
TRACT 8
0.58 ACRES
TRACT 9
0.58 ACRES
TRACT 10
0.58 ACRES
TRACT 11
0.58 ACRES
TRACT

PROPOSED DRAINAGE AREAS

DRAIN. AREA NO.	AREA (ACRES)	TC (MIN)	COMP. C	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)	DRAIN. AREA NO.
P-A1	3.04	12.23	75	4.81	10.94	15.85	25.23	P-A1
P-A2	1.66	8.96	71	2.35	5.78	8.60	14.06	P-A2
P-A3	1.95	11.06	74	3.01	7.01	10.25	16.47	P-A3
P-A4	0.21	5.00	98	0.73	1.21	1.57	2.27	P-A4
P-A5	0.41	5.00	92	1.30	2.27	3.00	4.37	P-A5
P-A6	0.22	5.00	87	0.62	1.15	1.55	2.29	P-A6
P-A7	0.41	5.00	95	1.37	2.37	3.05	4.41	P-A7
P-A8	0.20	5.00	95	0.67	1.13	1.49	2.15	P-A8
P-A9	0.30	5.00	93	0.97	1.68	2.21	3.21	P-A9
P-A10	0.39	5.00	93	1.26	2.18	2.87	4.17	P-A10
P-A11	0.29	5.00	92	0.92	1.61	2.12	3.09	P-A11
P-A12	0.25	5.00	93	0.81	1.40	1.84	2.67	P-A12
P-A13	0.43	5.00	92	1.37	2.38	3.15	4.58	P-A13
P-B1A	2.98	11.21	71	3.97	9.81	14.68	24.13	P-B1A
P-B1B	0.08	5.00	96	0.27	0.46	0.60	0.86	P-B1B
P-B2	0.47	10.48	89	1.27	2.32	3.11	4.58	P-B2
P-B3	0.34	5.00	96	1.16	1.94	2.54	3.66	P-B3
P-B4	0.32	5.00	94	0.79	1.35	1.77	2.58	P-B4
P-B5	0.27	5.00	96	0.92	1.54	2.01	2.91	P-B5
P-B6	0.13	5.00	93	0.42	0.73	0.96	1.39	P-B6
P-B7	0.39	5.00	95	1.31	2.21	2.90	4.19	P-B7
P-C1	6.97	12.08	88	17.68	32.69	44.03	65.26	P-C1
P-D1	0.20	5.00	97	0.69	1.15	1.50	2.16	P-D1
P-D2	1.27	5.00	93	4.11	7.10	9.35	13.58	P-D2
TOTAL	23.18			52.78	102.41	141.00	214.27	TOTAL

0 120'
SCALE: 1" = 120'

LEGEND

- PROPERTY BOUNDARY
- EXIST. STORM SEWER
- EXIST. CURB INLET
- EXIST. DRAINAGE AREA
- EXIST. FLOW DIRECTION
- E-1 / 1.00 ACRES — EXIST. DRAINAGE AREA ID / DRAINAGE AREA ACREAGE

P-C1
6.97 ACRES

P-D2
1.27 ACRES

P-D1
0.20 ACRES

AREA INLET CALCULATIONS FOR 25 YR STORM

Q=CoA(2gh)^0.5, C=0.67

AREA INLET	C1
DRAINAGE AREA	P-C1
ORIFICE COEFFICIENT	0.67
PROVIDED HEAD ($D_{(i)}$ (FT)	2.31
OPENING LENGTH (FT)	16
A_g (CLEAR AREA OF OPENING) (SF)	6.72
g (GRAVITY) (FT/S^2)	32.2
h (HEIGHT OF CURB OPENING) (FT)	0.42
INLET CAPACITY (CFS)	54.92
PROP. 25 YR. FLOW RATE TO INLET (CFS)	44.03

BOW = 1059.40

BOW = 1060.00

INLETS FOR LAKE TRAVIS HIGH SCHOOL 2024 PARKING LOT - 100 YR

INLET NUMBER	CONTRIB DRAINAGE AREA NO.	Q (CFS)	Q PASS (CFS)	Q PASS FROM INLET	Q TOTAL Qa (CFS)	LONG. ROAD SLOPE (SL) (FT/FT)	PVMT. CROSS SLOPE (Sx) (FT/FT)	GUTTER CROSS SLOPE (Sw) (FT/FT)	GUTTER WIDTH (W) (FT)	INLET DEPRESSION (a) (IN)	S'w (FT/FT)	Sw/Sx	W/T	Eo	Se (FT/FT)	Yo (FT)	PONDED WIDTH (FT)	Lt (FT)	LENGTH (FT)	EFFICIENCY	INLET CHECK	QI (CFS)	Q bypass (CFS)	REMARKS
I-D1	P-D1	2.16	0.00	-	2.16	0.050	0.035	0.06	1.50	6.50	0.36	1.59	0.31	0.67	0.28	0.17	4.86	9.08	10	1.000	0	2.16	0.00	G-1
I-D2	P-D2	13.58	0.00	-	13.58	0.012	0.055	0.06	1.50	6.50	0.36	1.01	0.12	0.29	0.16	0.45	12.64	17.88	20	1.000	0	13.58	0.00	G-1

INLETS FOR LAKE TRAVIS HIGH SCHOOL 2024 PARKING LOT - 25 YR

INLET NUMBER	CONTRIB DRAINAGE AREA NO.	Q (CFS)	Q PASS (CFS)	Q PASS FROM INLET	Q TOTAL Qa (CFS)	LONG. ROAD SLOPE (SL) (FT/FT)	PVMT. CROSS SLOPE (Sx) (FT/FT)	GUTTER CROSS SLOPE (Sw) (FT/FT)	GUTTER WIDTH (W) (FT)	INLET DEPRESSION (a) (IN)	S'w (FT/FT)	Sw/Sx	W/T	Eo	Se (FT/FT)	Yo (FT)	PONDED WIDTH (FT)	Lt (FT)	LENGTH (FT)	EFFICIENCY	INLET CHECK	QI (CFS)	Q bypass (CFS)	REMARKS
I-D1	P-D1	1.50	0.00	-	1.50	0.050	0.035	0.06	1.50	6.50	0.36	1.59	0.35	0.73	0.30	0.15	4.23	7.43	10	1.000	0	1.50	0.00	G-1
I-D2	P-D2	9.35	0.00	-	9.35	0.012	0.055	0.06	1.50	6.50	0.36	1.01	0.14	0.32	0.17	0.39	10.99	14.54	20	1.000	0	9.35	0.00	G-1

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

STORM SEWER DRAINAGE AREA MAP 2

MALONE★WHEELER INC.
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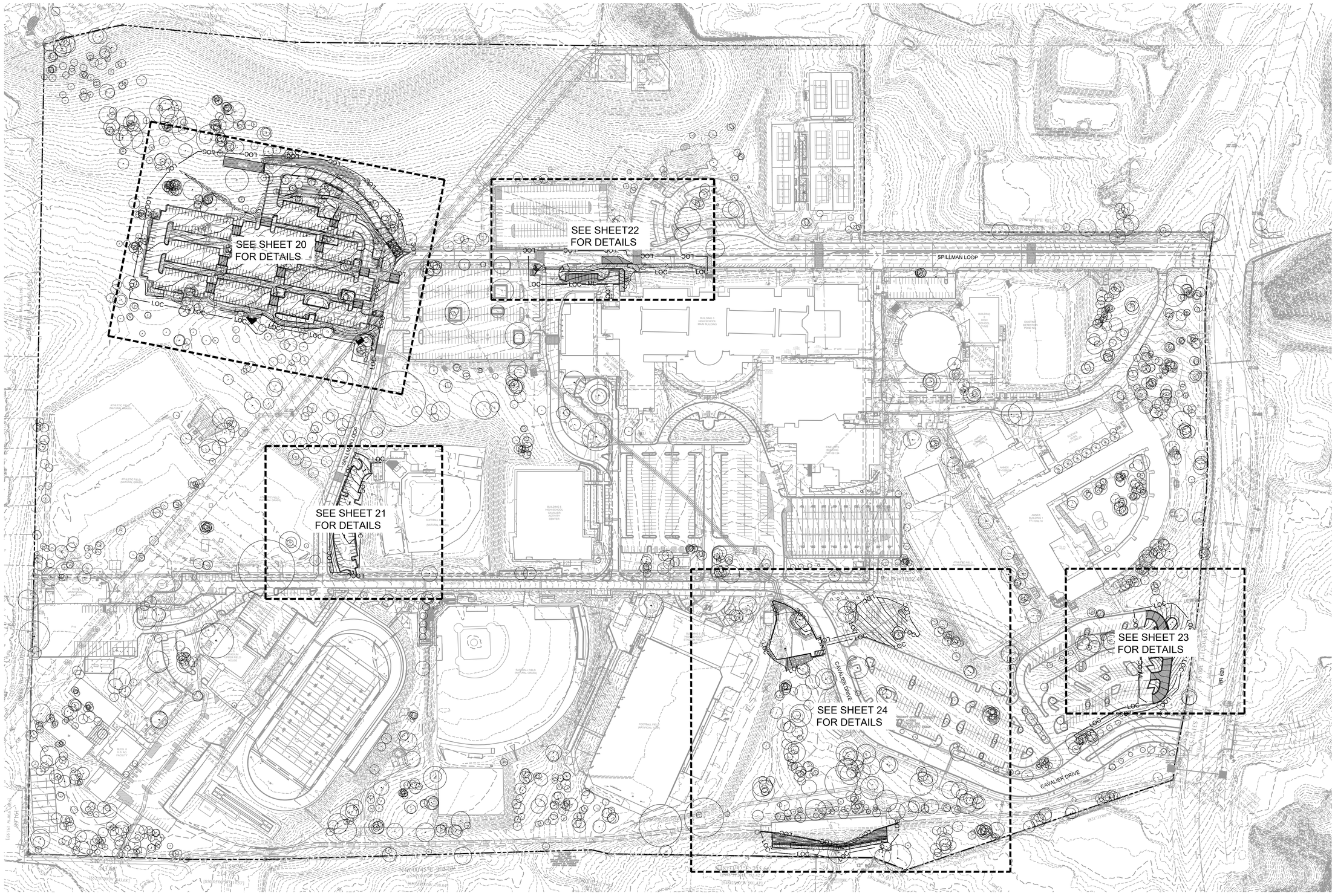
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 18
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS_LTISD HS 2023 PKRNG\LOT\DRAWINGS\PLANSET\07 SITE DRAINAGE AREA MAP.DWG, 9/28/2023, ANTHONY VINCENT



LEGEND

	PROPERTY BOUNDARY	IP	INLET PROTECTION	950	PROPOSED FINISHED GRADE
	PLAT BOUNDARY	TP	TREE PROTECTION	10	TREE TO REMAIN
LOC	LIMITS OF CONSTRUCTION	ML	MULCH LOG	10	TREE TO BE REMOVED
SF	SILT FENCE	RB	ROCK BERM		
JH	SILT FENCE W/ J HOOKS		CONTRACTOR'S STAGING/SPOILS AREA		
		SCE	STABILIZED CONSTRUCTION ENTRANCE		

N

0 120'
SCALE: 1" = 120'

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

OVERALL EROSION & SEDIMENTATION CONTROL PLAN

MALONE ★ WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNGLOT\DRAWINGS\PLANSET\18 OVERALL EROSION & SEDIMENTATION CONTROL PLAN.DWG, 9/29/2023, ANTHONY VINCENT

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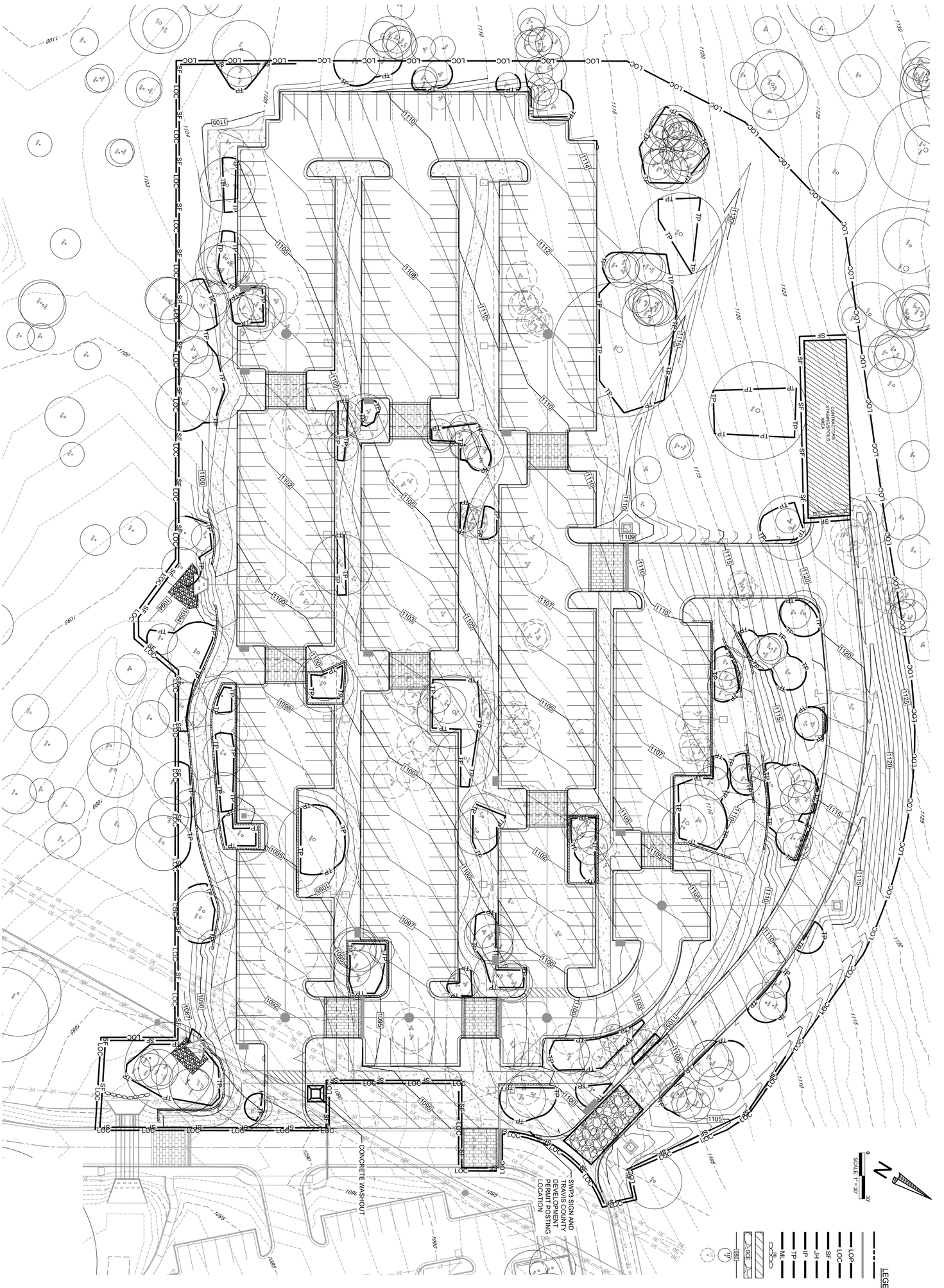

MALONE ★ WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

PARKING LOT EROSION & SEDIMENTATION CONTROL PLAN

NO.	DATE	REVISION	BY

DESIGN BY: SGC
CHECKED BY: SGC
APPROVED BY: JBM
DATE: 9/29/2023

SHEET 20 OF 62

N

0 20'
SCALE: 1" = 20'

LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- LOP — LIMITS OF PROJECT
- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- JH — SILT FENCE W/ J HOOKS
- IP — INLET PROTECTION
- TP — TREE PROTECTION
- ML — MULCH LOG
- RB — ROCK BERM
- CONTRACTOR'S STAGING/SPOILS AREA
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- 950 — PROPOSED FINISHED GRADE
- TREE TO REMAIN
- TREE TO BE REMOVED

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

SOFTBALL FIELD EROSION &
SEDIMENTATION CONTROL PLAN

MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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Austin, Texas 78735
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STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 21
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS_LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\18 OVERALL EROSION & SEDIMENTATION CONTROL PLAN.DWG, 9/29/2023, ANTHONY VINCENT

10.W. & 10.X.
ACCESS EASEMENT
DOC. #2002109657
O.P.R.T.C.TX

LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- LOP — LIMITS OF PROJECT
- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- JH — SILT FENCE W/ J HOOKS
- IP — INLET PROTECTION
- TP — TREE PROTECTION
- ML — MULCH LOG
- RB — ROCK BERM
- CONTRACTOR'S STAGING/SPOILS AREA
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- 950 — PROPOSED FINISHED GRADE
- TREE TO REMAIN
- TREE TO BE REMOVED

SCALE: 1" = 20'

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

CAFETERIA PARKING EROSION &
SEDIMENTATION CONTROL PLAN

MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0400 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 22
OF 62

F:\LTISD OVERALL\PROJECT\S22-105-AUS LTISD HS 2023 PRO\NGLOT\DRAWINGS\PLANSET\18 OVERALL EROSION & SEDIMENTATION CONTROL PLAN.DWG, 9/29/2023, ANTHONY VINCENT

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LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- LOP — LIMITS OF PROJECT
- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- JH — SILT FENCE W/ J HOOKS
- IP — INLET PROTECTION
- TP — TREE PROTECTION
- ML — MULCH LOG
- RB — ROCK BERM
- SCE — CONTRACTOR'S STAGING/SPOILS AREA
- STABILIZED CONSTRUCTION ENTRANCE
- (350) — PROPOSED FINISHED GRADE
- 19 — TREE TO REMAIN
- TREE TO BE REMOVED

SCALE: 1" = 20'

N

DESIGN BY:	SGC
CHECKED BY:	SGC
APPROVED BY:	JBM
DATE:	9/29/2023

SHEET 23 OF 62

STATE OF TEXAS
ESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER

MALONE ★ WHEELER
SINCE INC. 1995

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LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ANNEX BLDG 1 PARKING EROSION & SEDIMENTATION CONTROL PLAN

NO.	DATE	REVISION	BY

N

0 40'
SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- LOP — LIMITS OF PROJECT
- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- JH — SILT FENCE W/ J HOOKS
- IP — INLET PROTECTION
- TP — TREE PROTECTION
- ML — MULCH LOG
- RB — ROCK BERM
- CONTRACTOR'S STAGING/SPOILS AREA
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- (950) — PROPOSED FINISHED GRADE
- TREE TO REMAIN
- TREE TO BE REMOVED

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

WATER QUALITY POND EROSION & SEDIMENTATION CONTROL PLAN

MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
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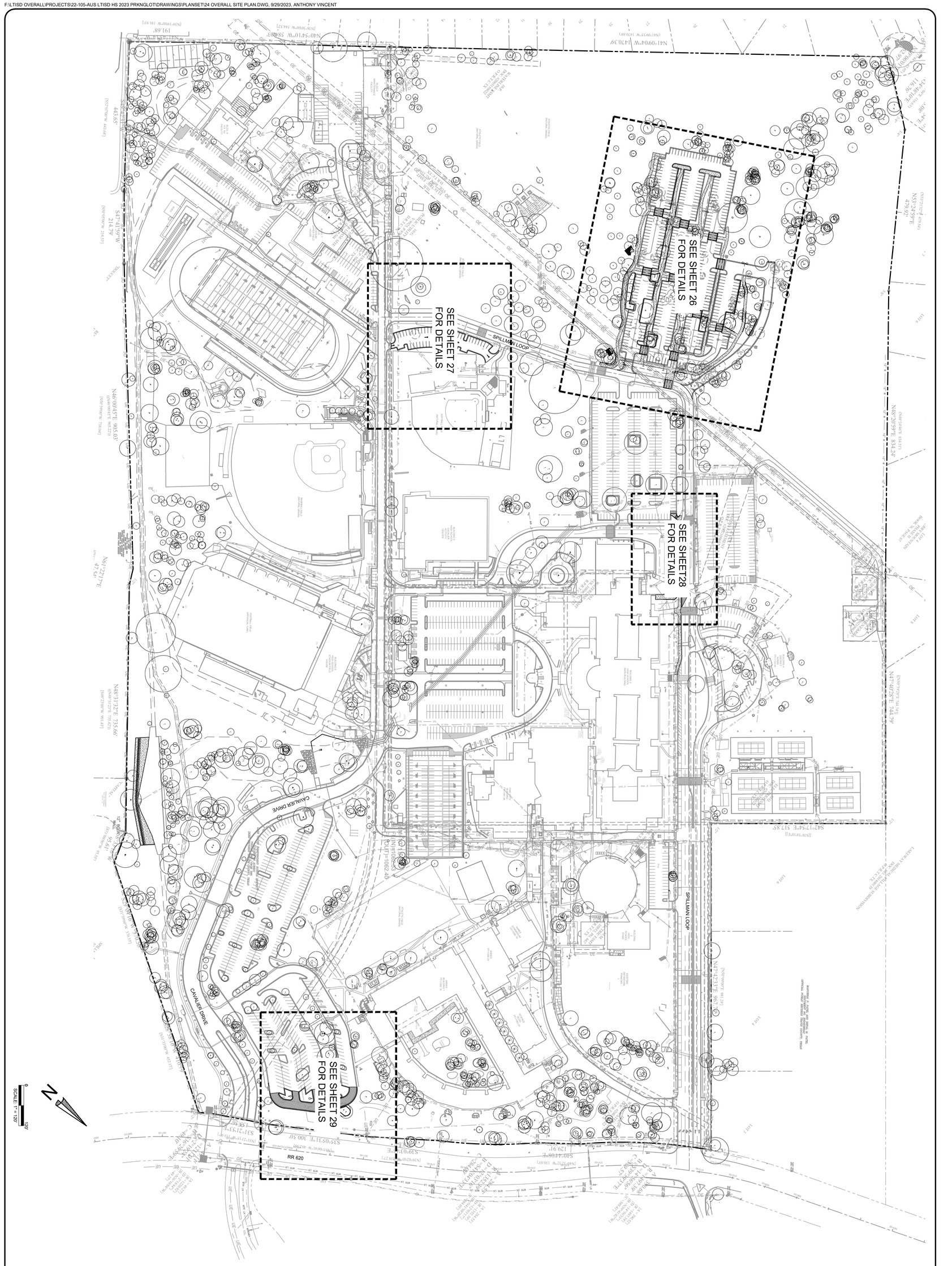
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 24
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS_LTISD_HS 2023 PRN\GLOT\DRAWINGS\PLANSET\18 OVERALL EROSION & SEDIMENTATION CONTROL PLAN.DWG, 9/29/2023, ANTHONY VINCENT

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNGLOT\DRAWINGS\PLANSET\24 OVERALL SITE PLAN.DWG, 9/29/2023, ANTHONY VINCENT



SHEET 25 OF 62

DESIGN BY: SSC
CHECKED BY: SSC
APPROVED BY: JBM
DATE: 9/29/2023

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER

MALONE★WHEELER
SINCE INC. 1995
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LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

OVERALL SITE PLAN

NO.	DATE	REVISION	BY

ELEC. CONDUIT TYP.

BARRICADE

R15'

R250'

R275'

25'

35'

R10'

26'

8' SIDEWALK

R2' TYP. U.N.O.

R8'

9' TYP.

18.5' TYP.

RAISED PAVER CROSSWALK TYP.

R66'

R40'

8' SIDEWALK

R25'

STOP SIGN

24' RAISED CROSSWALK TYP.

LIGHT POLE TYP.

26'

ELEC. CONDUIT TYP.

PEDESTRIAN CROSSING

R15'

STOP SIGN

RETAINING WALL TYP.

0 30'

SCALE: 1" = 30'

N

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. FIRE LANE
- PROP. METAL FENCE
- PROP. CURB AND GUTTER
- PROP. SPILL CURB
- PROP. CONCRETE
- PROP. STORM SEWER
- PROP. ELEC. CONDUIT
- PROP. LIGHT POLE
- PROP. STORM INLET
- PROP. STORM MANHOLE
- PROP. SLOTTED DRAIN
- PROP. GRATE INLET
- PROP. AREA INLET
- PROP. RETAINING WALL

NOTES:

1. ALL CURBS SHALL BE SPILL CURBS.
2. CONTRACTOR TO STAKE PROPOSED SIDEWALK. OWNER, ENGINEER & LANDSCAPE ARCHITECT MUST APPROVE STAKED SIDEWALK PRIOR TO CONSTRUCTION.
3. 354 PARKING SPACES PROVIDED.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED PARKING LOT

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
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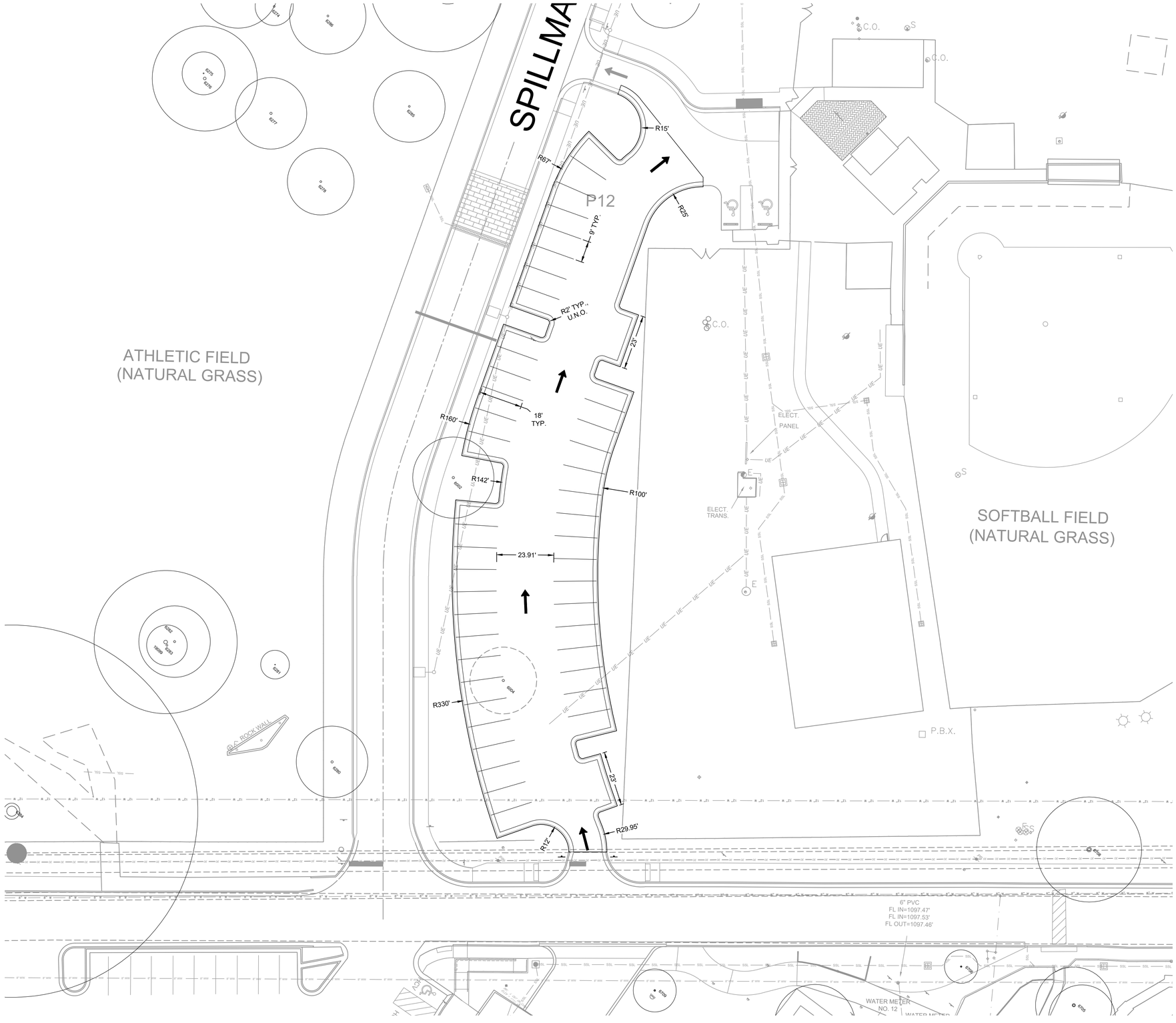
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 26
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG LOT\DRAWINGS\PLANSET\24 OVERALL SITE PLAN.DWG, 9/29/2023, ANTHONY VINCENT



N

0 20'
SCALE: 1" = 20'

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. FIRE LANE
- PROP. METAL FENCE
- PROP. CURB AND GUTTER
- PROP. SPILL CURB
- PROP. RIBBON CURB
- PROP. CONCRETE
- PROP. STORM SEWER
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. WASTEWATER LINE
- PROP. LIGHT POLE
- PROP. STORM INLET
- PROP. STORM MANHOLE
- PROP. SLOTTED DRAIN
- PROP. GRATE INLET
- PROP. AREA INLET

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED SOFTBALL FIELD PARKING

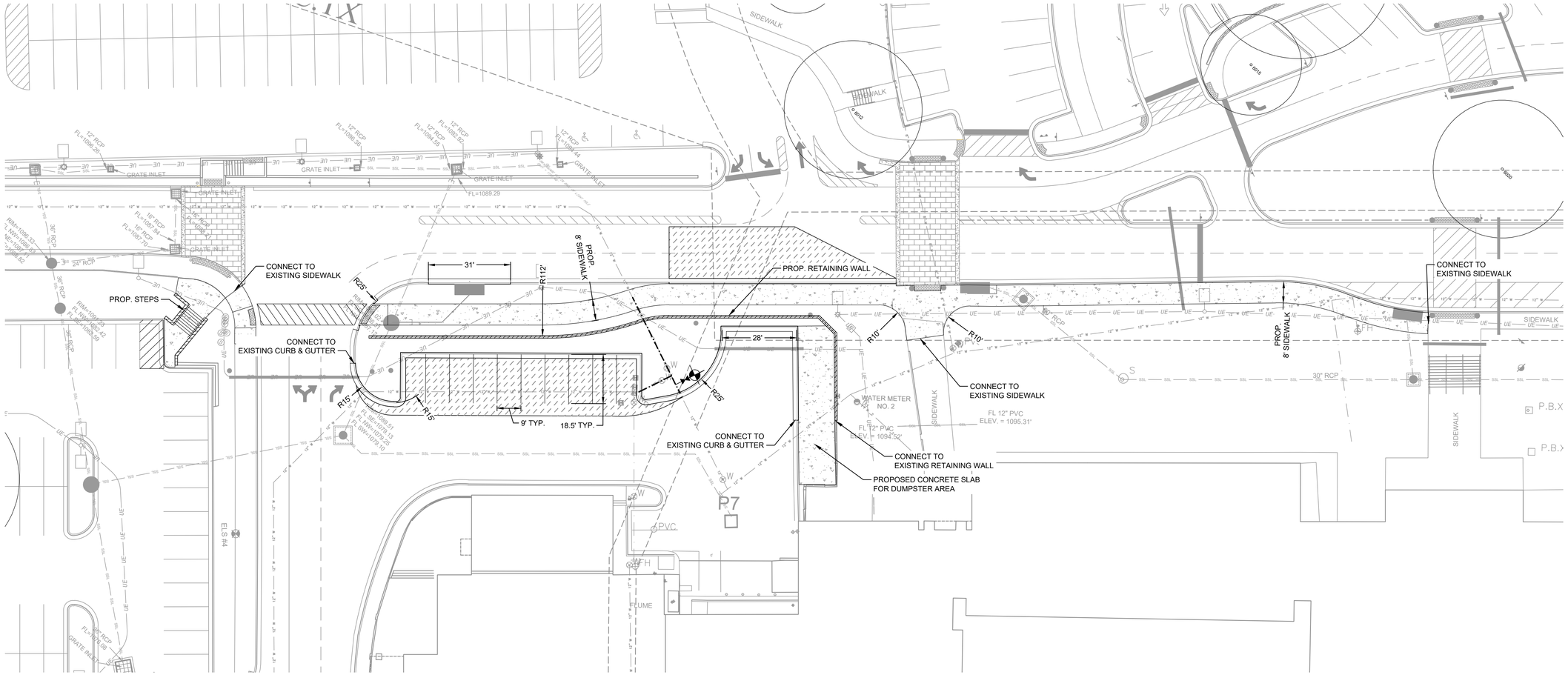
MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 27
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS_LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\24 OVERALL SITE PLAN.DWG, 9/29/2023, ANTHONY VINCENT



N

0 20'

SCALE: 1" = 20'

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. FIRE LANE
- PROP. METAL FENCE
- PROP. CURB AND GUTTER
- PROP. SPILL CURB
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- PROP. STORM INLET
- PROP. STORM MANHOLE
- PROP. SLOTTED DRAIN
- PROP. GRATE INLET
- PROP. AREA INLET

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED SITE PLAN CAFETERIA PARKING

MALONE★WHEELER SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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Austin, Texas 78735
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STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
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APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 28
OF 62

F:\LTISD OVERALL\PROJECT S\22-105-AUS LTISD HS 2023 PRKNG LOT\DRAWINGS\PLANSET\24 OVERALL SITE PLAN.DWG, 9/29/2023, ANTHONY VINCENT

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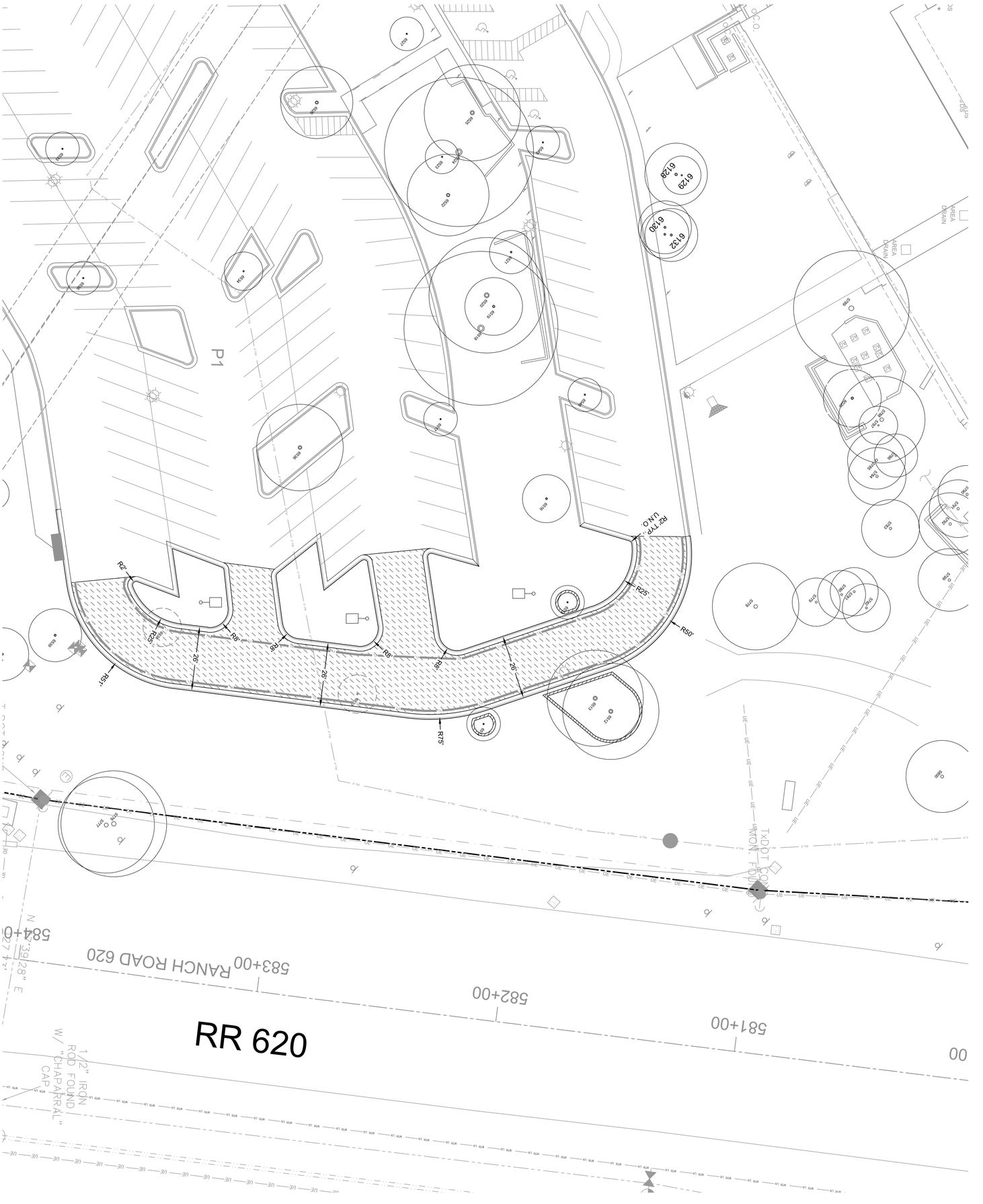

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. FIRE LANE
- PROP. METAL FENCE
- PROP. CURB AND GUTTER
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- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. WASTEWATER LINE
- PROP. LIGHT POLE
- PROP. STORM INLET
- PROP. STORM MANHOLE
- PROP. SLOTTED DRAIN
- PROP. GRATE INLET
- PROP. AREA INLET

SCALE: 1" = 20'

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED SITE PLAN ANNEX BLDG 1 PARKING

MALONE★WHEELER SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER

DESIGN BY: SDC
CHECKED BY: SDC
APPROVED BY: JBM
DATE: 9/29/2023

SHEET 29 OF 62

SEE SHEET 31
FOR DETAILS

SEE SHEET33
FOR DETAILS

SEE SHEET 32
FOR DETAILS

SEE SHEET
36 FOR
DETAILS

SEE SHEET 35
FOR DETAILS

SEE SHEET 34
FOR DETAILS

SEE SHEET 42
FOR DETAILS

SPILLMAN LOOP

CAVALIER DRIVE

0 120'
SCALE: 1" = 120'

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

OVERALL GRADING PLAN

MALONE★WHEELER
SINCE INC.1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0455
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
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APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 30
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS_LTISD HS 2023 PRN\GLOT\DRAWINGS\PLANSET\04 ENLARGED GRADING PLAN POND FILL AREA.DWG, 9/29/2023, ANTHONY VINCENT

CONSTRUCT DIVERSION SWALES WITH MIN. TOTAL DEPTH OF 1.0'

CONSTRUCT DIVERSION SWALE WITH MIN. TOTAL DEPTH OF 1.0'

MATCH EXISTING ELEVATIONS AT ALL CONNECTIONS, TYP.

N

0 30'

SCALE: 1" = 30'

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. FIRE LANE
- PROP. METAL FENCE
- PROP. CURB AND GUTTER
- PROP. SPILL CURB
- PROP. RIBBON CURB
- PROP. CONCRETE
- PROP. STORM SEWER
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. WASTEWATER LINE
- PROP. LIGHT POLE
- PROP. STORM INLET
- PROP. STORM MANHOLE
- PROP. SLOTTED DRAIN
- PROP. GRATE INLET
- PROP. AREA INLET

SPOT ELEVATION KEY

CS	CONCRETE SURFACE
TP	TOP OF PAVEMENT
SW	TOP OF SIDEWALK
TW	TOP OF WALL
BW	BOTTOM OF WALL
HP	HIGH POINT
TI	TOP OF INLET
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE

NOTE:

1. ALL SPOT ELEVATIONS ARE GROUND/PAVEMENT UNLESS NOTED OTHERWISE.
2. WALL ELEVATIONS ARE FOR GRADING PURPOSES ONLY AND A STRUCTURAL DESIGN IS REQUIRED BY-OTHERS..
3. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP. [ANSI 403.3]
4. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50. [ANSI 403.3]

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED GRADING PLAN PARKING LOT

MALONE★WHEELER SINCE INC. 1995
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5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registrtion No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 31
OF 62

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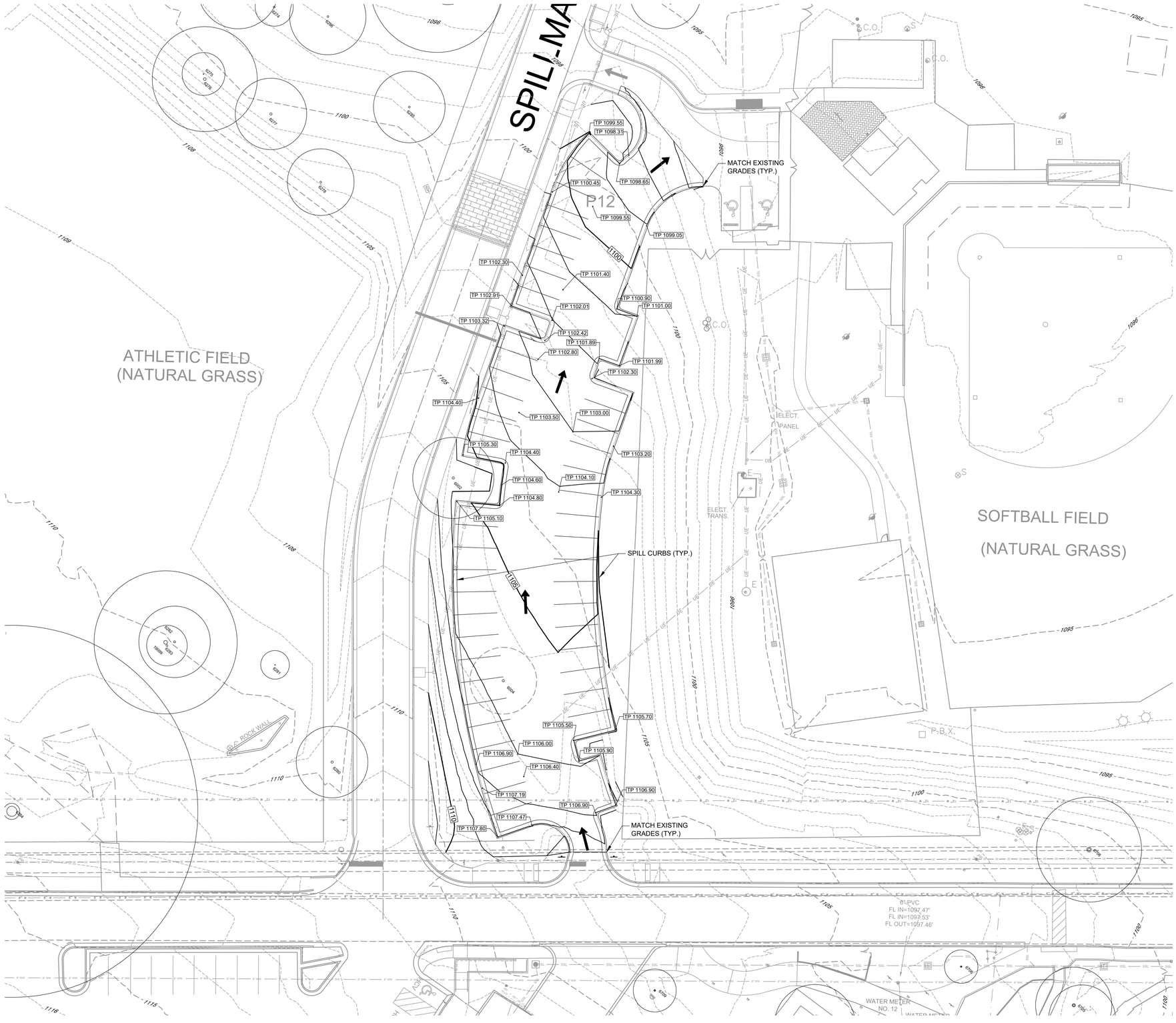

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. FIRE LANE
- PROP. METAL FENCE
- PROP. CURB AND GUTTER
- PROP. SPILL CURB
- PROP. RIBBON CURB
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- PROP. WASTEWATER LINE
- PROP. LIGHT POLE
- PROP. STORM INLET
- PROP. STORM MANHOLE
- PROP. SLOTTED DRAIN
- PROP. GRATE INLET
- PROP. AREA INLET

SPOT ELEVATION KEY

CS	CONCRETE SURFACE
TP	TOP OF PAVEMENT
SW	TOP OF SIDEWALK
TW	TOP OF WALL
BW	BOTTOM OF WALL
HP	HIGH POINT
TI	TOP OF INLET
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE

NOTE:

1. ALL SPOT ELEVATIONS ARE GROUND/PAVEMENT UNLESS NOTED OTHERWISE.
2. WALL ELEVATIONS ARE FOR GRADING PURPOSES ONLY AND A STRUCTURAL DESIGN IS REQUIRED BY-OTHERS..
3. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP. [ANSI 403.3]
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NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED GRADING PLAN SOFTBALL FIELD PARKING

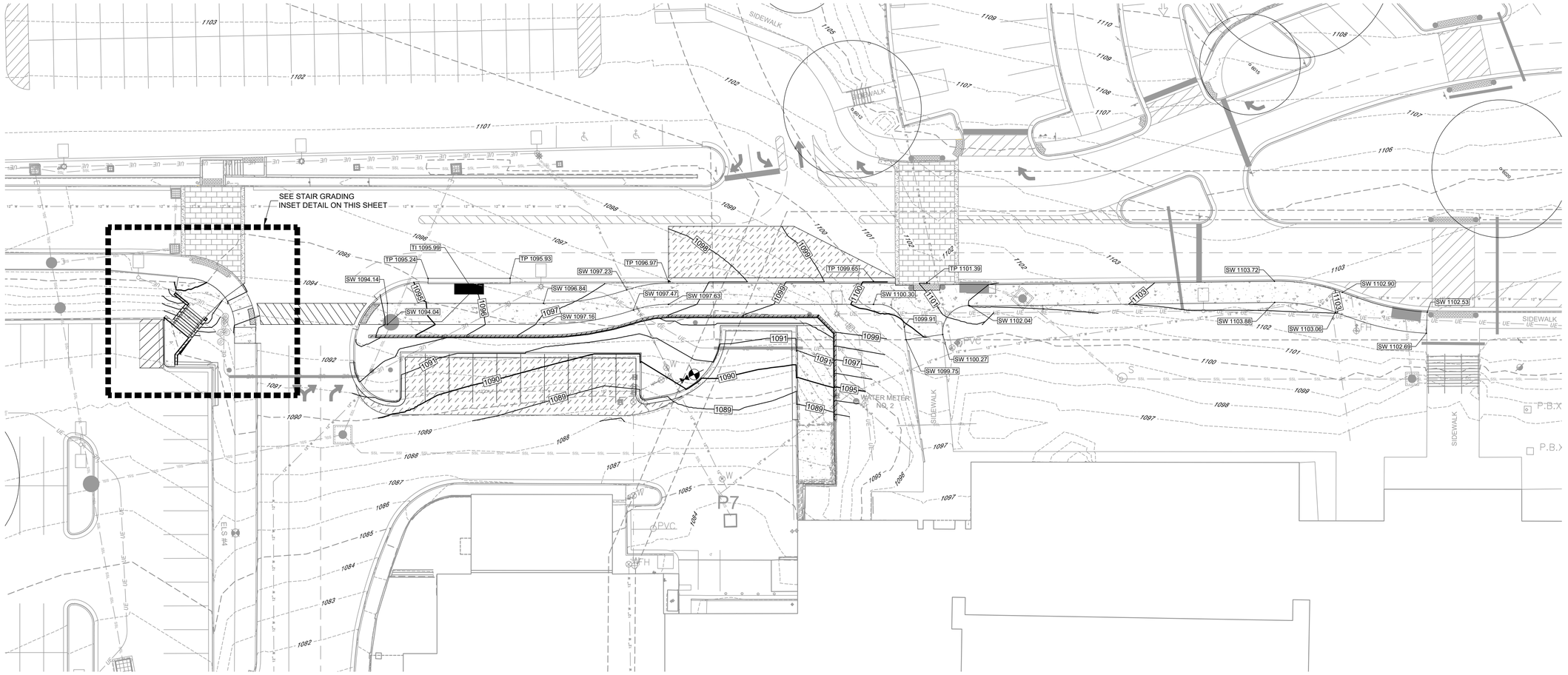
MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0640 Fax: (512) 899-0655
Firm Registration No. F-786

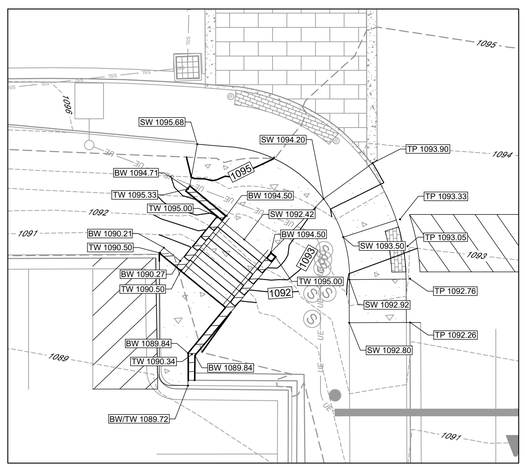
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 32
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS L TISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\34 ENLARGED GRADING PLAN POND FILL AREA.DWG, 9/29/2023, ANTHONY VINCENT





STAIR GRADING INSET DETAIL
SCALE: 1" = 10'

SPOT ELEVATION KEY

CS	CONCRETE SURFACE
TP	TOP OF PAVEMENT
SW	TOP OF SIDEWALK
TW	TOP OF WALL
BW	BOTTOM OF WALL
HP	HIGH POINT
TI	TOP OF INLET
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE

NOTE:

1. ALL SPOT ELEVATIONS ARE GROUND/PAVEMENT UNLESS NOTED OTHERWISE.
2. WALL ELEVATIONS ARE FOR GRADING PURPOSES ONLY AND A STRUCTURAL DESIGN IS REQUIRED BY-OTHERS..
3. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP. [ANSI 403.3]
4. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50. [ANSI 403.3]

N

0 20'
SCALE: 1" = 20'

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. FIRE LANE
- PROP. METAL FENCE
- PROP. CURB AND GUTTER
- PROP. SPILL CURB
- PROP. RIBBON CURB
- PROP. CONCRETE
- PROP. STORM SEWER
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. WASTEWATER LINE
- PROP. LIGHT POLE
- PROP. STORM INLET
- PROP. STORM MANHOLE
- PROP. SLOTTED DRAIN
- PROP. GRATE INLET
- PROP. AREA INLET

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED GRADING PLAN CAFETERIA PARKING

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 33
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG LOT\DRAWINGS\PLANSET\34 ENLARGED GRADING PLAN POND FILL AREA.DWG, 9/29/2023, ANTHONY VINCENT



N

0 20'
SCALE: 1" = 20'

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. FIRE LANE
- PROP. METAL FENCE
- PROP. CURB AND GUTTER
- PROP. SPILL CURB
- PROP. RIBBON CURB
- PROP. CONCRETE
- PROP. STORM SEWER
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- PROP. WASTEWATER LINE
- PROP. LIGHT POLE
- PROP. STORM INLET
- PROP. STORM MANHOLE
- PROP. SLOTTED DRAIN
- PROP. GRATE INLET
- PROP. AREA INLET

SPOT ELEVATION KEY

CS	CONCRETE SURFACE
TP	TOP OF PAVEMENT
SW	TOP OF SIDEWALK
TW	TOP OF WALL
BW	BOTTOM OF WALL
HP	HIGH POINT
TI	TOP OF INLET
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE

NOTE:

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4. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50. [ANSI 403.3]

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED GRADING PLAN ANNEX BLDG 1 PARKING

MALONE★WHEELER
SINCE 1995
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STATE OF TEXAS
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DESIGN BY :	SGC
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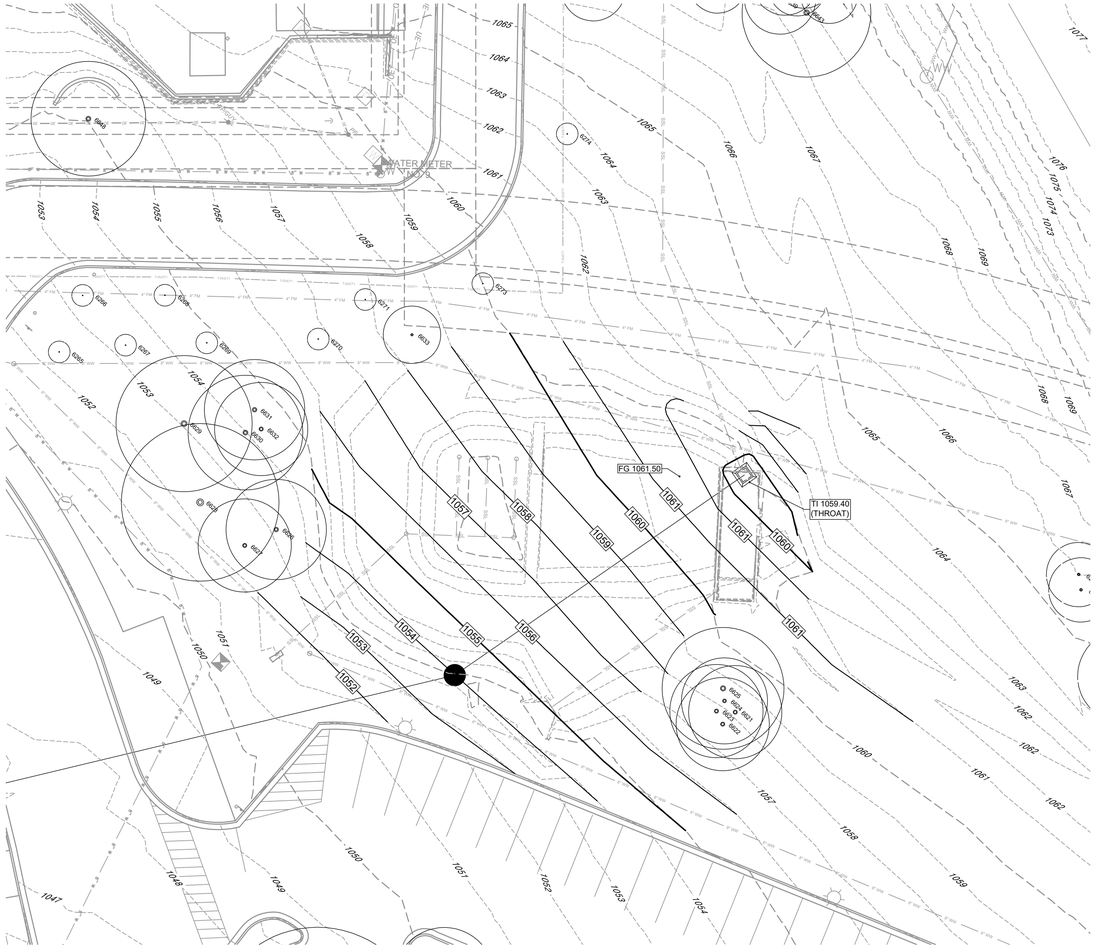

N

0 20'
SCALE: 1" = 20'

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. FIRE LANE
- PROP. METAL FENCE
- PROP. CURB AND GUTTER
- PROP. SPILL CURB
- PROP. RIBBON CURB
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- PROP. LIGHT POLE
- PROP. STORM INLET
- PROP. STORM MANHOLE
- PROP. SLOTTED DRAIN
- PROP. GRATE INLET
- PROP. AREA INLET

SPOT ELEVATION KEY

CS	CONCRETE SURFACE
TP	TOP OF PAVEMENT
SW	TOP OF SIDEWALK
TW	TOP OF WALL
BW	BOTTOM OF WALL
HP	HIGH POINT
TI	TOP OF INLET
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE

NOTE:

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NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED GRADING PLAN POND FILL AREA

MALONE ★ WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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STATE OF TEXAS
JESSE B. MALONE
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PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
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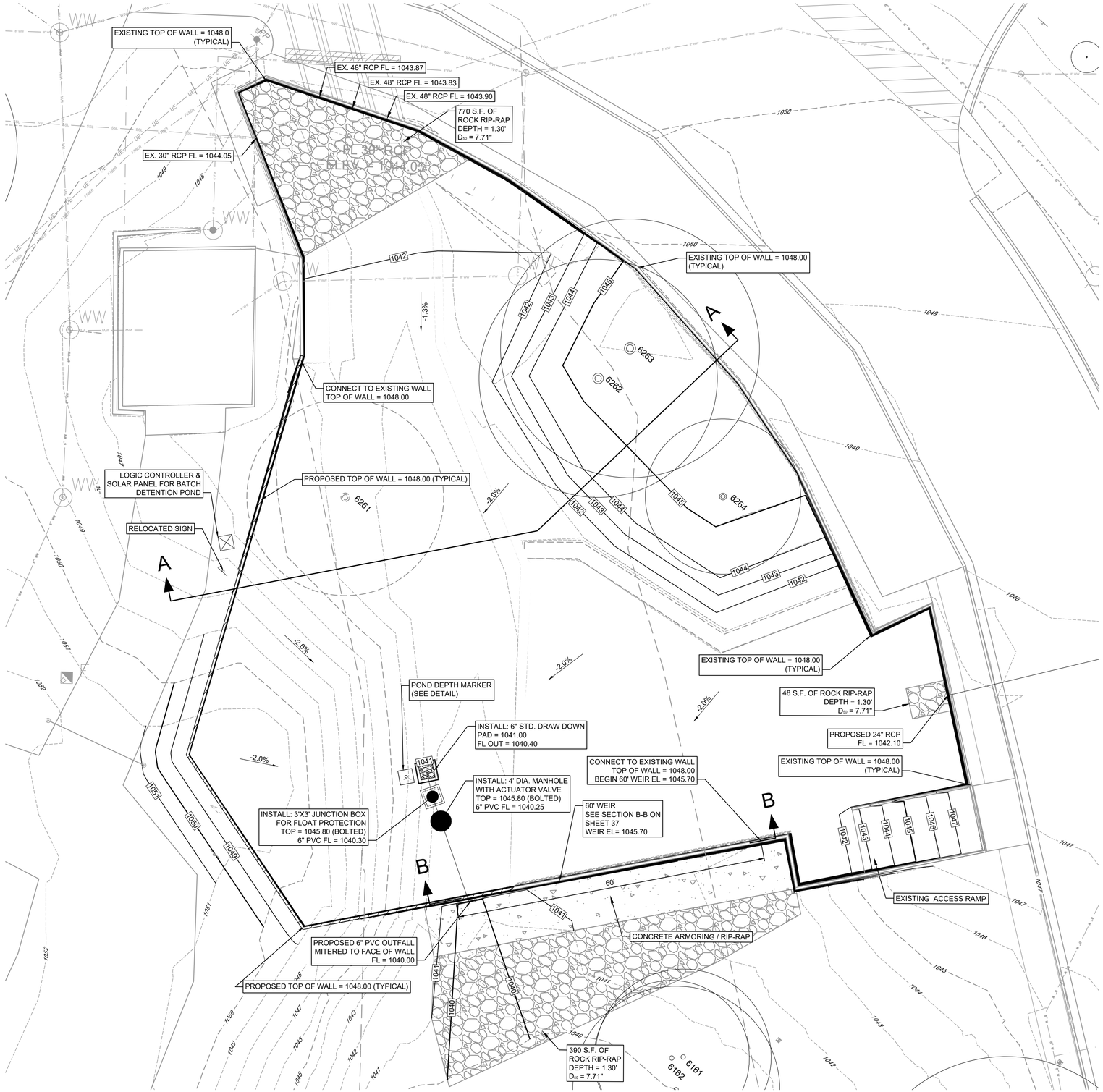

0 10'
SCALE: 1" = 10'

LEGEND

- PROPERTY BOUNDARY
- EXIST. GROUND CONTOUR
- PROP. FINISHED CONTOUR
- PROP. SPOT ELEVATION
- PROP. CURB
- PROP. SIDEWALK
- PROP. BUILDING SETBACK
- PROP. EASEMENT
- PROP. HANDRAIL / FENCE
- PROP. RETAINING WALL
- PROP. STORM SEWER
- PROP. STORM SEWER MANHOLE
- PROP. GRATE INLET
- PROP. HEADWALL

WQ. POND 1 VOLUME

CONTOUR	AREA (SF)	AVERAGE AREA (SF)	INCREMENTAL STORAGE (CF)	CUMULATIVE STORAGE (CF)
1041	0	0	0	0
1042	10,733	5,366.50	5,366.50	5,366.50
1043	12,574	11,653.50	11,653.50	17,020.00
1044	13,057	12,815.50	12,815.50	29,835.50
1045	13,899	13,478.00	13,478.00	43,313.50
1045.7	***14,785***	***14,342.10***	***10,039.47***	***53,352.97***
1046	15,165	14,975.10	4,492.53	57,845.50
1047	15,293	15,229.00	15,229.00	73,074.50

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

WATER QUALITY POND 1 PLAN

MALONE★WHEELER SINCE INC. 1995
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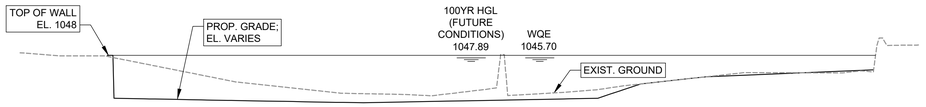
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER

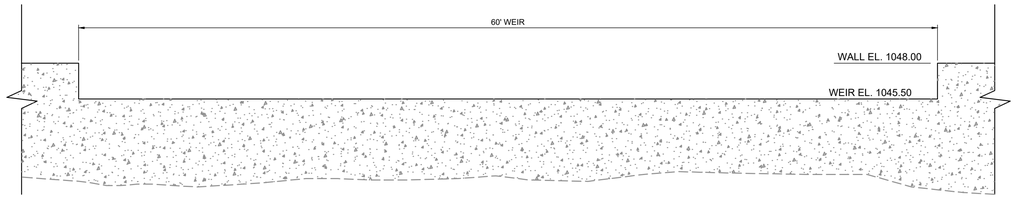
DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	11/29/2023

SHEET 36
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG&OTO\DRAWINGS\PLANSET\36 POND 1 SECTIONS & DETAILS.DWG, 11/29/2023, ANTHONY VINCENT



POND 1 SECTION A-A
APPROX. SCALE: 1" = 10'



WEIR STRUCTURE SECTION B-B
APPROX. SCALE: 1" = 5'

POND "1A" WEIR CALCULATIONS

100yr.

BROAD-CRESTED RECTANGULAR WEIR:

$$Q = C * L * H^{3/2}$$

WHERE:
- Q= WEIR DISCHARGE (cfs)
- C= WEIR COEFFICIENT
- L= HORIZ LENGTH IN FEET
- H= HEAD OVER WEIR IN FEET

GIVEN:
- Q100= 600 NOTE: WEIR SIZED FOR FUTURE CONDITIONS
- C= 2.7
- H= 2.5
- L= 60

CALCULATIONS:

SOLVE FOR LENGTH

$$L = \frac{600}{2.7 * 2.5^{3/2}} = \frac{600}{10.6727} = \mathbf{56}$$

SOLVE FOR HEAD

$$H = \left(\frac{600}{2.7*60}\right)^{2/3} = \left(\frac{600}{162}\right)^{2/3} = \left(3.7037\right)^{2/3} = \mathbf{2.39}$$

USE 60' WEIR AT 2.39' OF HEAD

OPERATIONS & TEST CYCLE CONTROL FOR BATCH DETENTION POND VALVE CONTROLLER

SYSTEM OVERVIEW
-THIS SYSTEM SHALL UTILIZE A SINGLE FLOAT SWITCH TO ACTIVATE TIMERS THAT CONTROL A SINGLE VALVE OPEN AND CLOSE COMMANDS.

MODES OF OPERATION
-THE SYSTEM SHALL HAVE THREE BASIC MODES OF OPERATION; OFF, MANUAL, AND AUTOMATIC.
-WHEN THE ON/OFF SWITCH IS IN THE 'OFF' POSITION, POWER SHALL NOT BE PROVIDED TO THE VALVE ACTUATOR OR VALVE PROGRAMMABLE LOGIC CONTROLLER (PLC).
-WHEN THE ON/OFF SWITCH IS IN THE 'ON' POSITION, THE SYSTEM SHALL OPERATE BASED ON THE OPEN/AUTO/CLOSE SWITCH POSITION. THE SOLAR CIRCUIT IS FULLY OPERATIONAL, TO CHARGE THE BATTERY, WHITE THE SWITCH IS IN THE 'ON' OR 'OFF' POSITION.

MANUAL CONTROL
-THE OPEN/AUTO/CLOSE SWITCH SHALL HAVE TWO MANUAL POSITIONS, OPEN AND CLOSE.
-THERE SHOULD BE A FIVE SECOND DELAY BEFORE THEY SYSTEM SHALL RECOGNIZE THE AUTO POSITION, SO THE VALVE CAN BE SWITCHED FROM OPEN TO CLOSE WITHOUT AUTOMATIC OPERATION.
-WHEN THE OPEN/AUTO/CLOSE SWITCH IS IN THE OPEN POSITION, THE VALVE SHALL OPEN AND STAY OPEN, WHEN THE OPEN/AUTO/CLOSE SWITCH IS IN THE CLOSE POSITION, THE VALVE SHALL CLOSE AND STAY CLOSED.

AUTOMATIC CONTROL
-VALVE SHALL HAVE A DEFAULT CLOSED POSITION. AN INSTALLED FLOAT SWITCH SHALL INDICATE THE PRESENCE OF WATER FOLLOWING A RAIN EVENT.
-UPON ACTIVATION OF THE FLOAT SWITCH, A 12 HOUR DETENTION TIMER SHALL BE STARTED. THE VALVE SHALL REMAIN CLOSED.
-AFTER THE 12 HOUR TIMER EXPIRES, THE VALVE SHALL OPEN. VALVE SHALL REMAIN OPEN WHILE WATER IS DRAINING AND REMAIN OPEN AS LONG AS THE FLOAT SWITCH CONTACT REMAINS CLOSED.
-WHEN THE WATER LEVEL FALLS BELOW THE FLOAT SWITCH ELEVATION, AND THE FLOAT SWITCH CONTACT OPENS, A 2 HOUR TIMER SHALL BE STARTED. AFTER THE 2 HOUR TIMER EXPIRES, THE VALVE SHALL CLOSE.
-WHEN THE VALVE CLOSES, THE SYSTEM BEGINS A STANDBY PERIOD, WITH THE VALVE CLOSED, UNTIL THE WATER LEVEL RISES ABOVE THE FLOAT SWITCH ELEVATION.

ADDITIONAL FEATURES

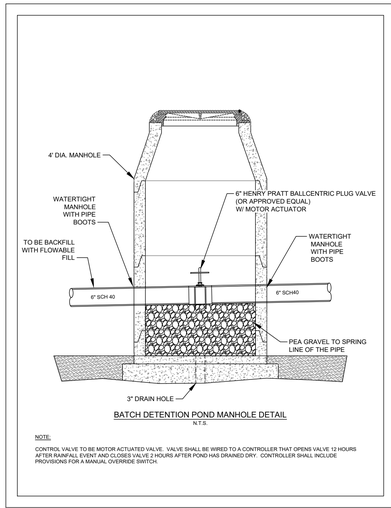
THE FOLLOWING FEATURES SHALL BE PART OF THE NORMAL CONTROL SEQUENCE OF OPERATION.

VALVE EXERCISE
-A TIMER IN THE VALVE CONTROLLER, SET AT ONE WEEK, SHALL START WHEN THE FLOAT SWITCH CONTACT HAS REMAINED OPEN FOR THE SEVEN DAYS. THE VALVE CONTROLLER SHALL OPEN THE VALVE FOR 120 MINUTES. AFTER 120 MINUTES THE VALVE CONTROLLER SHALL CLOSE. THE VALVE.

VALVE ACTUATION TIME
-A TIMER IN THE VALVE CONTROLLER SHALL MONITOR THE VALVE OPEN OR CLOSE COMMAND TIME. THIS TIMER SHALL BE SYNCHRONIZED WITH THE VALVE OPENINGN AND CLOSING SEQUENCE, TO SAVE BATTERY POWER.

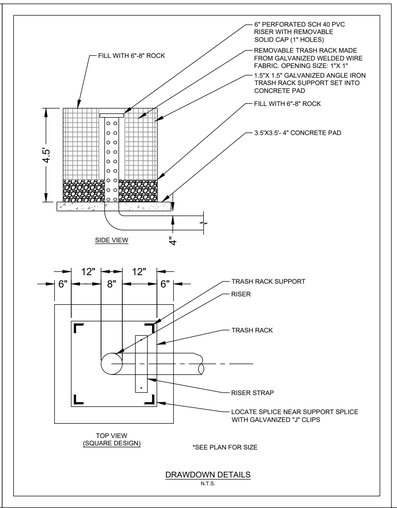
CHANGING TIMER SET POINTS
-FOUR TIMERS SHALL BE PROIDED AND MODIFIED AS NEEDED FOR FINE TUNED CONTROL. THESE TIMERS, IN ORDER OF DISPLAY ON THE PLC SCREEN, SHALL BE:
- -DELAY ON TIME (DEFAULT 12 HOURS) : TIME DELAY BETWEEN THE FLOAT INDICATING WATER IS PRESENT AND THE VALVE AUTOMATICALLY OPENING.
- -DELAY OFF TIME (DEFAULT 2 HOURS) : TIME DELAY BETWEEN THE FLOAT INDICATING WAS HAS EMPTIED AND THE VALVE AUTOMATICALLY CLOSING.
- -EXERCISE TIME (DEFAULT 120 MINUTES) : LENGTH OF TIME THE VALVE SHALL STAY OPEN WHILE IN EXERCISE MODE.
- -ACTUATION TIME (DEFAULT 60 SECONDS) : LENGTH OF TIME THE OPEN OR CLOSE COMMANDS SHALL BE GIVEN TO THE VALVE ACTUATOR.

NOTES:
1. WATER QUALITY POND IS A BATCH DETENTION POND PER TCEQ DESIGN CRITERIA.
2. OUTLET STRUCTURE FOR WATER QUALITY POND IS A PVC PIPE (PER DETAIL) WITH A DOWNSTREAM ACTUATOR VALVE.
3. ACTUATOR VALVE IS TO BE CONTROLLED SUCH THAT A 12 HOUR MINIMUM DETENTION TIME IS ACHIEVED AND SHALL REMAIN OPEN FOR TWO HOURS AFTER THE LEVEL SENSOR INDICATES THE BASIN IS EMPTY TO ALLOW ANY REMAINING SHALLOW WATER TO BE DISCHARGED.
4. ORIFICE/PIPE HAS BEEN SIZED TO ALLOW COMPLETE DRAWDOWN OF WATER QUALITY VOLUME WITHIN 48 HOURS AFTER THE 12 HOUR DETENTION TIME.
5. ELECTRIC CONTROL PANEL SHALL BE CAPABLE OF:
   1. 12 HOUR DELAY PRIOR TO OPENING ACTUATED VALVE
   2. PROVIDE MANUAL OVERRIDE TO ACTUATOR

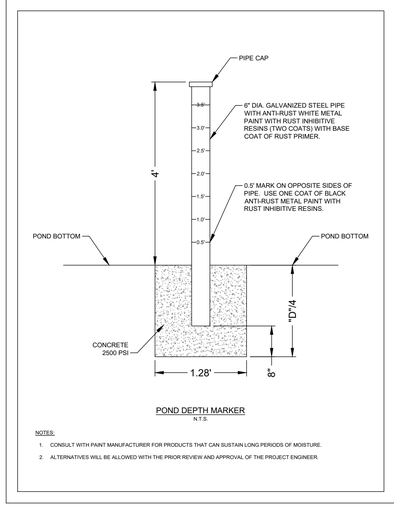


BATCH DETENTION POND MANHOLE DETAIL
N.T.S.

NOTE:
CONTROL VALVE TO BE MOTOR ACTUATED VALVE. VALVE SHALL BE WIRED TO A CONTROLLER THAT OPENS VALVE 12 HOURS AFTER RAINFALL EVENT AND CLOSES VALVE 2 HOURS AFTER POND HAS DRAINED DRY. CONTROLLER SHALL INCLUDE PROVISIONS FOR A MANUAL OVERRIDE SWITCH.

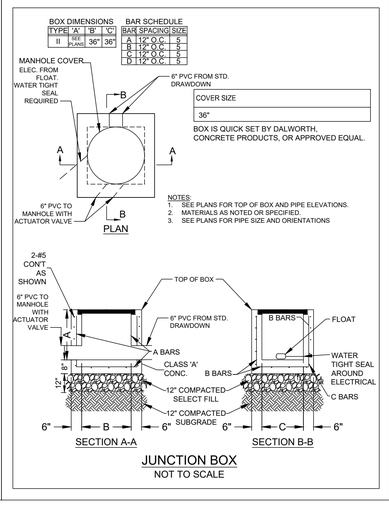


DRAWDOWN DETAILS
N.T.S.

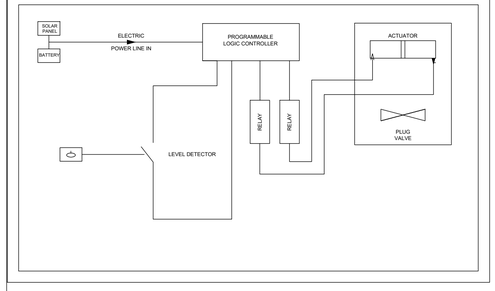


POND DEPTH MARKER
N.T.S.

NOTES:
1. CONSULT WITH PAINT MANUFACTURER FOR PRODUCTS THAT CAN SUSTAIN LONG PERIODS OF MOISTURE.
2. ALTERNATIVES WILL BE ALLOWED WITH THE PRIOR REVIEW AND APPROVAL OF THE PROJECT ENGINEER.



JUNCTION BOX
NOT TO SCALE



Batch Detention Pond Valve and Actuator

COMPONENT	DESCRIPTION
Power	System to be solar powered. See plans for location of solar panels. Actuator and Contoller are 24V. Backup battery to be provided.
Logic Controller	Allen Bradley 810 Programmable Logic Controller. (Or approved equal). See attached notes for operations and test cycle control.
Parts Enclosure	Saginaw SCE-24EL2416SSLP NEMA 4X, 304 stainless steel lockable enclosure. (Or approved equal)
Circuit	See below block diagram for controller circuit.
Nature of Event Sensing	ECO-FLOAT Model G Mercury Free Float Sensor. (Or approved equal). Float to be located within a concrete box with manhole cover for access. Stormwater will flow through trash rack and perforated pipe to remove vegetation and debris prior to reaching the float.
Actuator	EIM HQ series Electric Quarter turn actuator Model HQ-015 with no local controls for 24V power supply with integral condensation heater and manual handwheel override with padlock capability. (Or approved equal).
Valve Type	Henry Pratt Ballcentric Plug Valve with over torque sensors. Able to withstand 100 PSI minimum. (Or approved equal).

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

WATER QUALITY POND 1 SECTIONS & DETAILS

MALONE★WHEELER INC.
SINCE 1995
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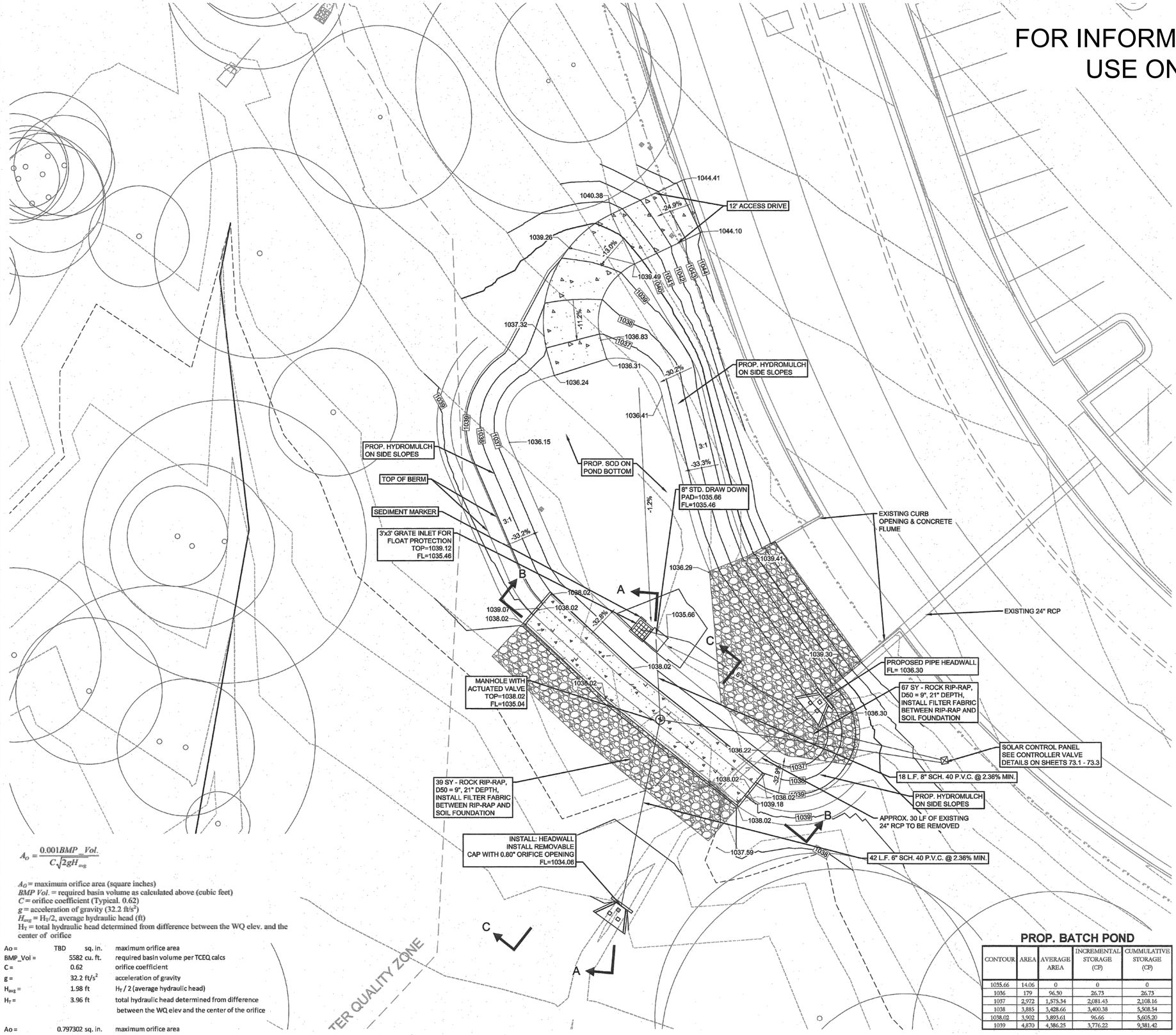
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

DESIGN BY : SGC
CHECKED BY : SGC
APPROVED BY : JBM
DATE : 11/29/2023

SHEET 37
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS_LTISD HS 2023 PH\ENGLOT\DRAWINGS\PLANSET\36 POND 1 SECTIONS & DETAILS.DWG, 11/28/2023, ANTHONY VINCENT

FOR INFORMATIONAL USE ONLY



$$A_O = \frac{0.001 BMP\_Vol.}{C\sqrt{2gH_{avg}}}$$

A_O = maximum orifice area (square inches)
$BMP\ Vol.$ = required basin volume as calculated above (cubic feet)
C = orifice coefficient (Typical. 0.62)
g = acceleration of gravity (32.2 ft/s^2)
H_{avg} = $H_T/2$, average hydraulic head (ft)
H_T = total hydraulic head determined from difference between the WQ elev. and the center of orifice

Ao =	TBD	sq. in.	maximum orifice area
BMP_Vol =	5582	cu. ft.	required basin volume per TCEQ calcs
C =	0.62		orifice coefficient
g =	32.2	ft/s^2	acceleration of gravity
H_{avg} =	1.98	ft	
H_T =	3.96	ft	H_T / 2 (average hydraulic head) total hydraulic head determined from difference between the WQ elev and the center of the orifice
Ao =	0.797302	sq. in.	maximum orifice area

PROP. BATCH POND

CONTOUR	AREA	AVERAGE AREA	INCREMENTAL STORAGE (CF)	CUMMULATIVE STORAGE (CF)
1035.66	14.06	0	0	0
1036	179	96.30	26.73	26.73
1037	2,972	1,575.34	2,081.43	2,108.16
1038	3,885	3,428.66	3,400.38	5,508.54
1038.02	3,902	3,893.61	96.66	5,605.20
1039	4,870	4,386.25	3,776.22	9,381.42

SCALE: 1" = 10'

LEGEND

- PROPERTY BOUNDARY
- PLAT BOUNDARY
- ROCK BERM - PERMANENT
- PROPOSED SLOPE MATTING
- PROPOSED ROCK RIP-RAP
- PROPOSED NVFS
- PROPOSED PVC PIPE
- PROP. PERFORATED PVC PIPE
- 930.00 PROPOSED SPOT ELEVATION
- 350 EXISTING GROUND CONTOUR
- 350 PROPOSED FINISHED CONTOUR
- PROPOSED STORM SEWER
- PROPOSED CURB INLET
- DRIP FIELDS

NOTES:
1. PRIOR TO SOLAR CONTROL PANEL INSTALLATION, CONTRACTOR IS TO MARK LOCATION AND CONTACT ENGINEER TO FIELD VERIFY.
2. SEE SHEET 86 FOR WATER QUALITY CALCULATIONS.

BATCH POND WEIR CALCULATIONS

100yr.

BROAD-CRESTED RECTANGULAR WEIR:

$$Q = C * L * H^{3/2}$$

WHERE:
- Q= WEIR DISCHARGE (cfs)
- C= WEIR COEFFICIENT
- L= HORIZ. LENGTH IN FEET
- H= HEAD OVER WEIR IN FEET

GIVEN:
- Q100= 84.84
- C= 2.7
- H= 0.5
- L= 60.75

CALCULATIONS:

SOLVE FOR LENGTH

$$L = \frac{84.84}{2.7 * 0.5^{3/2}} = \frac{84.84}{0.954594} = \mathbf{88.88}$$

SOLVE FOR HEAD

$$H = \left(\frac{84.84}{2.7*60.75}\right)^{2/3} = \left(\frac{84.84}{164.025}\right)^{2/3} = \left(0.517238\right)^{2/3} = \mathbf{0.6444}$$

USE 60.75' WEIR AT 0.64' OF HEAD
0.6400

BATCH POND WEIR CALCULATIONS

25yr.

BROAD-CRESTED RECTANGULAR WEIR:

$$Q = C * L * H^{3/2}$$

WHERE:
- Q= WEIR DISCHARGE (cfs)
- C= WEIR COEFFICIENT
- L= HORIZ. LENGTH IN FEET
- H= HEAD OVER WEIR IN FEET

GIVEN:
- Q100= 62.73
- C= 2.7
- H= 0.5
- L= 60.75

CALCULATIONS:

SOLVE FOR LENGTH

$$L = \frac{62.73}{2.7 * 0.5^{3/2}} = \frac{62.73}{0.954594} = \mathbf{65.71}$$

SOLVE FOR HEAD

$$H = \left(\frac{62.73}{2.7*60.75}\right)^{2/3} = \left(\frac{62.73}{164.025}\right)^{2/3} = \left(0.382442\right)^{2/3} = \mathbf{0.5269}$$

USE 60.75' WEIR AT 0.53' OF HEAD
0.5300

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2019 IMPROVEMENTS
3324 RANCH RD 620 SOUTH

EXISTING WQ POND 3 (1 OF 2)

MALONE ★ WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

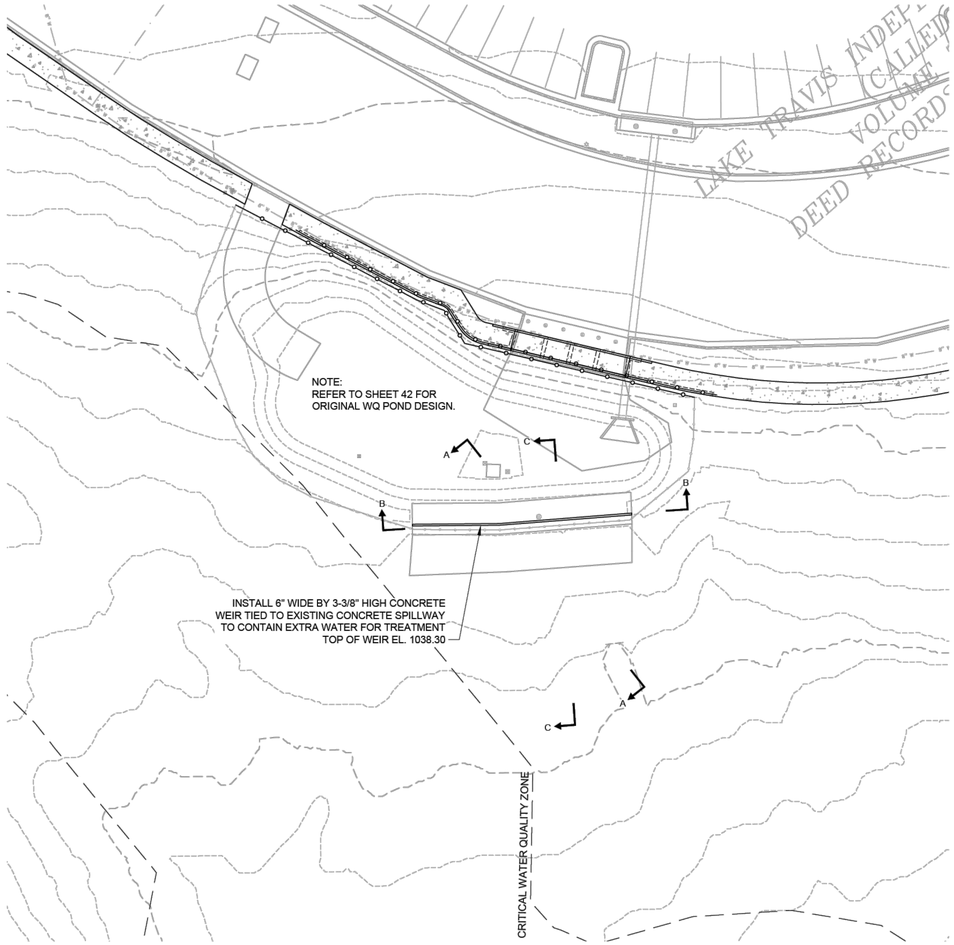
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
6/28/19

DESIGN BY :	SGC, TME, JV
CHECKED BY :	JBM
APPROVED BY :	JBM
DATE :	6/21/2019

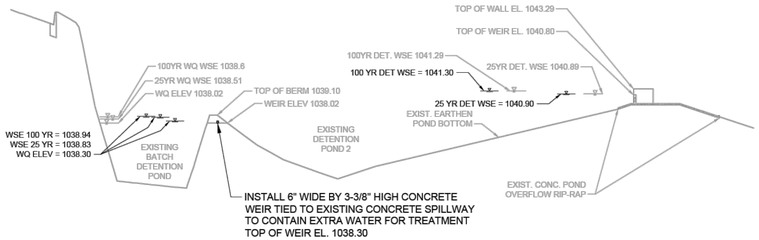
SHEET 75 OF 134

F:\LTISD Overall\Projects\19-034-AUS LTISD HS 2020 Improvements\Drawings\Plansets\41 EXISTING POND 2.dwg, 4/1/2022 3:41:03 PM, SCOTT

F:\LTISD OVERALL\PROJECTS\19-034\02 LTISD HS 2019\DRAWINGS\PLANSETS\85 WEIR & BERM MODIFICATION DETAILS.DWG, 6/28/2019, JOAQUIN VILLARREAL



OVERALL SECTION



CONCRETE CURB REINFORCEMENT:

REINFORCE THE CURB WITH 1 - #4 BAR CONTINUOUS AND #4 "L" BARS 6" LG. X 12" LG. AT 24" O.C. ATTACHED TO THE EXISTING WALL WITH ANCHORING ADHESIVE AND 4" EMBEDMENT (PER RECOMMENDATIONS BY PICKETT, KELM & ASSOCIATES, INC.).

NOTES:

CONTACT *POSTINSPECTION@TRAVISCOUNTYTX.GOV* TO SCHEDULE THE FOLLOWING MILESTONE INSPECTION(S) FOR THE WATER QUALITY STRUCTURES WITH AT LEAST A 48-HOUR NOTICE, IF APPLICABLE:

-PRE-POUR OF ALL CONCRETE WITHIN THE FOOTPRINT OF THE WQ CONTROL OR POND

-PLACEMENT OF ALL ROCK-FILLED GABIONS/MATTRESSES AND LEVEL SPREADERS

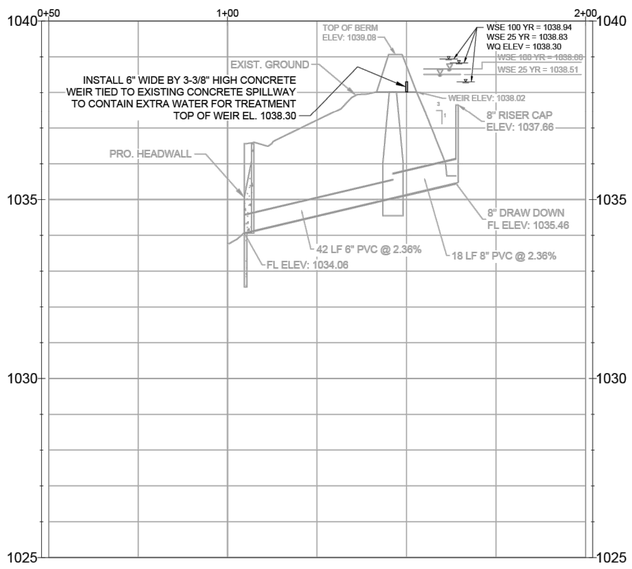
-INSPECTION OF SAND/BIO-FILTRATION MEDIA AND/OR ROCK PRIOR TO INSTALLING

-UNDERDRAIN PIPING PRIOR TO COVERING WITH SAND/BIO-FILTRATION MEDIA OR ROCK IN INFILTRATION TRENCH - IF COVERED, REMOVAL OF MATERIAL WILL BE REQUIRED

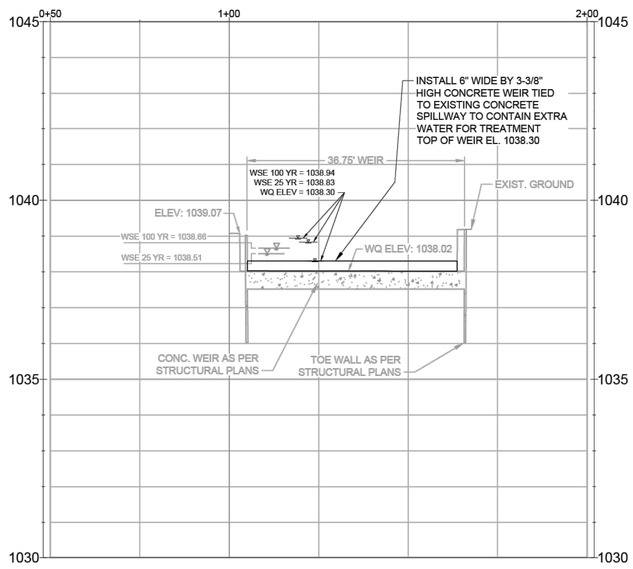
-COMPLETED CONSTRUCTION OF WATER QUALITY STRUCTURE(S)

FOR INFORMATIONAL USE ONLY

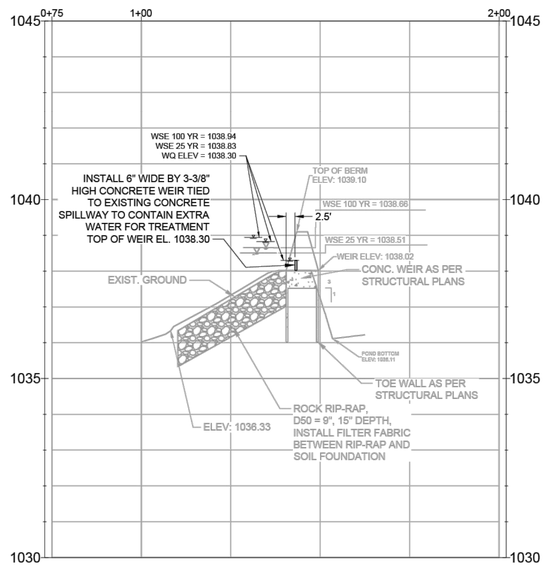
POND SECTION A-A



POND SECTION B-B



POND SECTION C-C



NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2022 IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

EXISTING WQ POND 3 (2 OF 2)

MALONE★WHEELER SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
4/11/2022

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	4/1/2022

SHEET 37
OF 60

SHEET 39 OF 62

F:\LTISD Overall\Projects\19-034-AUS LTISD HS 2020 Improvements\Drawings\Phase\37 PROPOSED WATER QUALITY IMPROVEMENTS.dwg, 4/1/2022 3:40:12 PM, SCOTT

F:\LTISD OVERALL\PROJECTS\19-034-AUS LTISD HS 2020 IMPROVEMENTS\DRAWINGS\PLANSET\37 PROPOSED WATER QUALITY IMPROVEMENTS.DWG, 4/1/2022, SCOTT COLE

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: LTHS 2024 Improvements - Phase 1 & 2
Date Prepared: 9/29/2023

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

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

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

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

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

County =	**Travis**		
Total project area included in plan * =	**124.44**	acres	
Predevelopment impervious area within the limits of the plan * =	**25.55**	acres	
Total post-development impervious area within the limits of the plan* =	**49.17**	acres	2022 Approved CZP + LTHS 2024 PH1 & PH2 + 5.22 acres future impervious
Total post-development impervious cover fraction * =	**0.40**		
P =	**32**	inches	
$L_{M\ TOTAL\ PROJECT}$ =	**20559**	lbs.	

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

Number of drainage basins / outfalls areas leaving the plan area = **2**

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

Drainage Basin/Outfall Area No. = **1**

Total drainage basin/outfall area =	**75.87**	acres
Predevelopment impervious area within drainage basin/outfall area =	**14.37**	acres
Post-development impervious area within drainage basin/outfall area =	**32.43**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.43**	
$L_{M\ THIS\ BASIN}$ =	**15719**	lbs.

3. Indicate the proposed BMP Code for this basin.

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

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

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

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

A_C =	**75.87**	acres
A_I =	**32.43**	acres
A_P =	**43.44**	acres
L_R =	**33358**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**18109**	lbs.
F =	**0.54**	

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

Rainfall Depth =	**0.47**	inches
Post Development Runoff Coefficient =	**0.32**	
On-site Water Quality Volume =	**41793**	cubic feet

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

Off-site area draining to BMP =	**4.82**	acres
Off-site Impervious cover draining to BMP =	**0.88**	acres
Impervious fraction of off-site area =	**0.18**	
Off-site Runoff Coefficient =	**0.19**	
Off-site Water Quality Volume =	**1570**	cubic feet
Storage for Sediment =	**8673**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**52036**	cubic feet

8. Batch Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for batch detention basin = **52036** cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: LTHS 2024 Improvements - Phase 1 & 2
Date Prepared: 9/29/2023

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

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

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

County =	**Travis**		
Total project area included in plan * =	**124.44**	acres	
Predevelopment impervious area within the limits of the plan * =	**24.30**	acres	
Total post-development impervious area within the limits of the plan* =	**49.17**	acres	2022 Approved CZP + LTHS 2024 PH1 & PH2 + 5.22 acres future impervious
Total post-development impervious cover fraction * =	**0.40**		
P =	**32**	inches	
$L_{M\ TOTAL\ PROJECT}$ =	**21647**	lbs.	

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

Number of drainage basins / outfalls areas leaving the plan area = **2**

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

Drainage Basin/Outfall Area No. = **3**

Total drainage basin/outfall area =	**8.09**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**4.84**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.60**	
$L_{M\ THIS\ BASIN}$ =	**4216**	lbs.

3. Indicate the proposed BMP Code for this basin.

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

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

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

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

A_C =	**8.09**	acres	43.15-.72
A_I =	**4.84**	acres	
A_P =	**3.25**	acres	
L_R =	**4931**	lbs	

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

Desired $L_{M\ THIS\ BASIN}$ =	**2450**	lbs.
F =	**0.50**	

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

Rainfall Depth =	**0.42**	inches
Post Development Runoff Coefficient =	**0.42**	
On-site Water Quality Volume =	**5198**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**1040**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**6237**	cubic feet

8. Batch Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for batch detention basin = **6237** cubic feet

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

TCEQ WATER QUALITY CALCULATIONS

MALONE★WHEELER SINCE INC. 1995
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5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	11/29/2023

SHEET 40
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PR\ENGLOT\DRAWINGS\PLANSET\37 WATER QUALITY POND 3.DWG, 11/29/2023, ANTHONY VINCENT

BUILDING 6
HIGH SCHOOL
STADIUM FIELD
HOUSE

CAVALIER DRIVE

WATER QUALITY POND 1

EXISTING WATER QUALITY POND 3

EXISTING DETENTION POND "2"

CRITICAL WATER QUALITY ZONE

LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT
(CALLED 55 ACRES)
VOLUME 7941, PAGE 395
DEED RECORDS TRAVIS COUNTY, TEXAS

"CAPITAL VIEW"

48" CMP WITH HEADWALL
FL 48" CMP
ELEV. = 1030.24

RAISE CONCRETE WEIR WALL TO ELEVATION 1041.25 (REFER TO STRUCTURAL FOR REINF.)

RAISE CONCRETE POND WALL TO 1043.85 (REFER TO STRUCTURAL FOR REINF.)

RAISE GRAVEL ROADWAY TO ELEVATION 1043.85

RAISE CONCRETE WEIR WALL TO ELEVATION 1041.25 (REFER TO STRUCTURAL FOR REINF.). SEE SHEET 43 FOR WEIR CROSS-SECTION

EXISTING CONCRETE APRON

EXISTING 6" CURB TO BE REMOVED

EXISTING 6" CURB TO BE RAISED BY 1' AND TIED TO PROPOSED 1.5' CURB

PROPOSED 1.5' CURB

PROPOSED 3.5' CURB

TC 1033.16

TC 1035.16

C 1031.66

TC 1031.98

PROPOSED 15' FLAT (0% SLOPE) CONCRETE SECTION (SEE STRUCTURAL DETAILS)

SEE SHEET 43 FOR SECTION A-A THRU CONCRETE SLAB

PROPOSED CONCRETE APRON TO TIE TO EXISTING CONCRETE (SEE STRUCTURAL DETAILS)

C 1025.56

TC 1025.88

.5'x1.5' BAFFLE BLOCKS (106 TOTAL)

MATCH EXIST. ELEVATIONS OF CONCRETE SPILLWAY

1'x1' BAFFLE BLOCKS (159 TOTAL)

TC 1031.04

TC 1033.04

TC 1029.54

C 1029.54

TC 1029.86

PROPOSED CONCRETE APRON TO TIE TO EXISTING CONCRETE (SEE STRUCTURAL DETAILS)

PROPOSED 15' FLAT (0% SLOPE) CONCRETE SECTION (SEE STRUCTURAL DETAILS)

12" ROCK WALL

GRAVEL ROAD

SIDEWALK

EQUIPMENT PADS

F.E.

2" PVC

2" PVC

C.O.

OE

FIBER

N

0 30'
SCALE: 1" = 30'

LEGEND

- PROPERTY BOUNDARY
- 940 EXIST. GROUND CONTOUR
- 940 PROP. FINISHED CONTOUR
- FG 100.00 PROP. SPOT ELEVATION
- PROP. CURB
- PROP. SIDEWALK
- PROP. BUILDING SETBACK
- PROP. EASEMENT
- PROP. HANDRAIL / FENCE
- PROP. RETAINING WALL
- PROP. STORM SEWER
- PROP. STORM SEWER MANHOLE
- PROP. GRATE INLET
- PROP. HEADWALL

DETENTION POND 2
STAGE-STORAGE-DISCHARGE

STORM EVENT	MAX. POND WSE (FT)	PEAK DISCHARGE (CFS)	MAX. POND STORAGE (CU-FT)
2-YEAR	1,035.69	125.37	146,678
10-YEAR	1,038.95	171.16	412,756
25-YEAR	1,040.90	193.44	661,220
100-YEAR	1,041.82	644.05	796,118

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

DETENTION POND 2 MODIFICATIONS PLAN

MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
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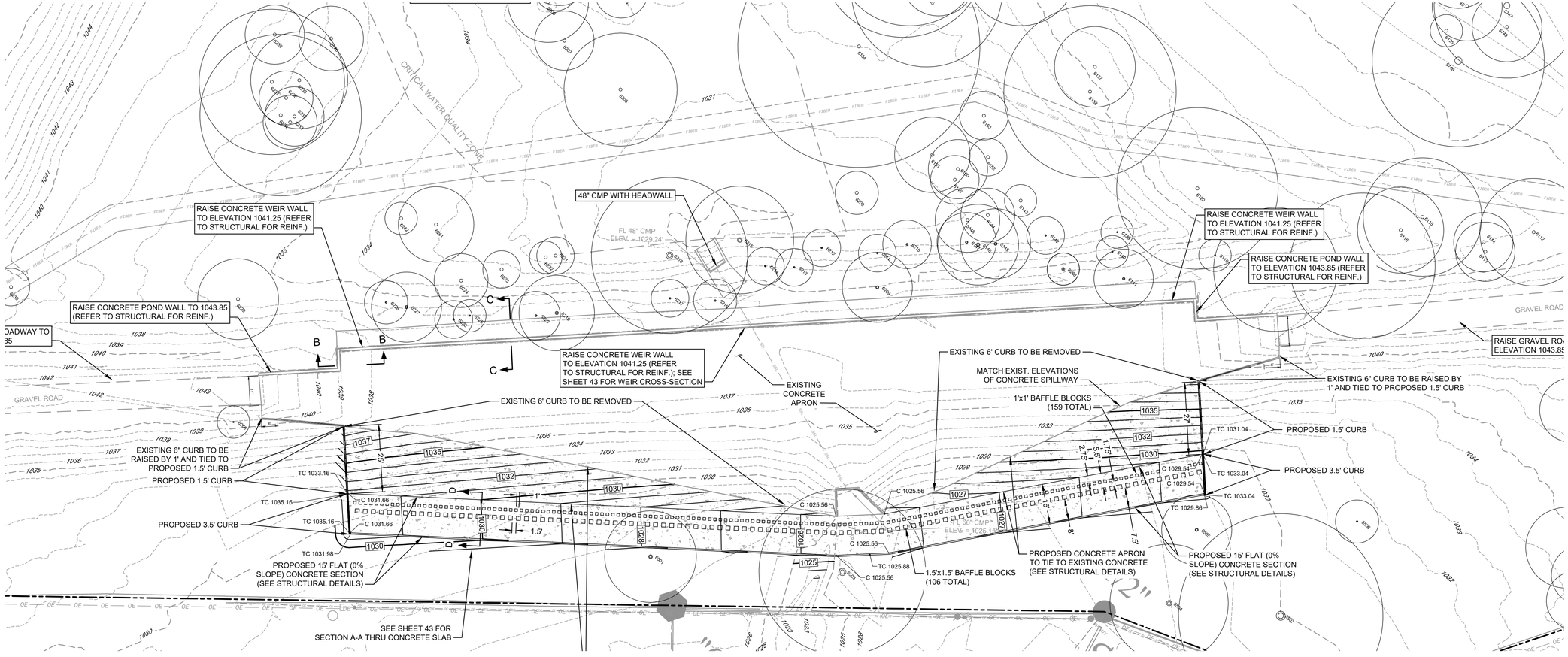
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 41
OF 62

F:\LTISD\OVERALL\PROJECTS\22-105-AUS_LTISD_HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\42 DETENTION POND 2 SECTIONS & DETAILS.DWG, 9/28/2023, ANTHONY VINCENT



0 20'
SCALE: 1" = 20'

LEGEND

- PROPERTY BOUNDARY
- EXIST. GROUND CONTOUR
- PROP. FINISHED CONTOUR
- PROP. SPOT ELEVATION
- PROP. CURB
- PROP. SIDEWALK
- PROP. BUILDING SETBACK
- PROP. EASEMENT
- PROP. HANDRAIL / FENCE
- PROP. RETAINING WALL
- PROP. STORM SEWER
- PROP. STORM SEWER MANHOLE
- PROP. GRATE INLET
- PROP. HEADWALL

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

DETENTION POND 2 WEIR MODIFICATIONS

MALONE★WHEELER INC.
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STATE OF TEXAS
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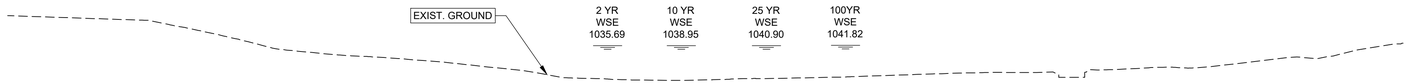
9-29-2023

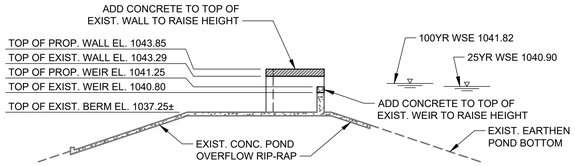
DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 42
OF 62

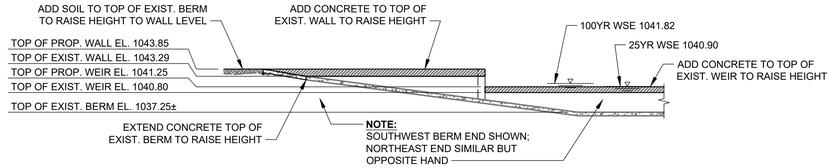
F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\42 DETENTION POND 2 SECTIONS & DETAILS.DWG, 9/29/2023, ANTHONY VINCENT



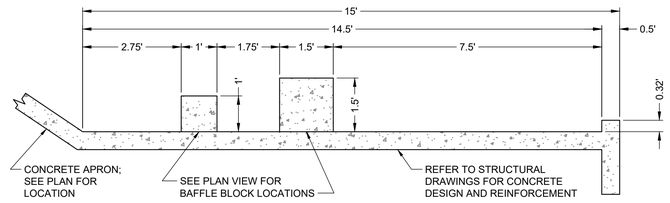
DETENTION POND 2 SECTION A-A
APPROX. SCALE: 1" = 20'



EXISTING DETENTION POND 2 SECTION B-B
APPROX. SCALE: 1" = 10'



EXISTING DETENTION POND 2 SECTION C-C
APPROX. SCALE: 1" = 10'



SECTION D-D THROUGH SPILLWAY SLAB
SCALE: 1" = 2'

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

DETENTION POND 2 SECTIONS & DETAILS

MALONE★WHEELER SINCE INC. 1995
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Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 43
OF 62

F:\LTISD OVERALL\PROJECT\S22-105-AUS LTISD HS 2023 PH\ENGLOT\DRAWINGS\PLANSET\H2 DETENTION POND 2 SECTIONS & DETAILS.DWG, 9/29/2023, ANTHONY VINCENT

LEGEND

- PROPERTY LINE
- PROP. STORM SEWER
- PROP. CURB INLET
- PROP. STORM SEWER MANHOLE
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. SLOTTED DRAIN
- PROP. ROOF DRAIN
- PROP. AREA INLET
- PROP. GRATE INLET

NOTES:

1. EXISTING UTILITIES SHOWN FROM RECORD DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED STORM PLAN PARKING LOT

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0455
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 44
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS, LTISD HS 2023 PRKNG\LDD\DRAWINGS\PLANSET\46 ENLARGED STORM PLAN ANNEX BLDG 1 PARKING.DWG, 9/29/2023, ANTHONY VINCENT

LEGEND

- PROPERTY LINE
- PROP. STORM SEWER
- PROP. CURB INLET
- PROP. STORM SEWER MANHOLE
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. SLOTTED DRAIN
- PROP. ROOF DRAIN
- PROP. AREA INLET
- PROP. GRATE INLET

NOTES:

1. EXISTING UTILITIES SHOWN FROM RECORD DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED STORM PLAN PARKING LOT

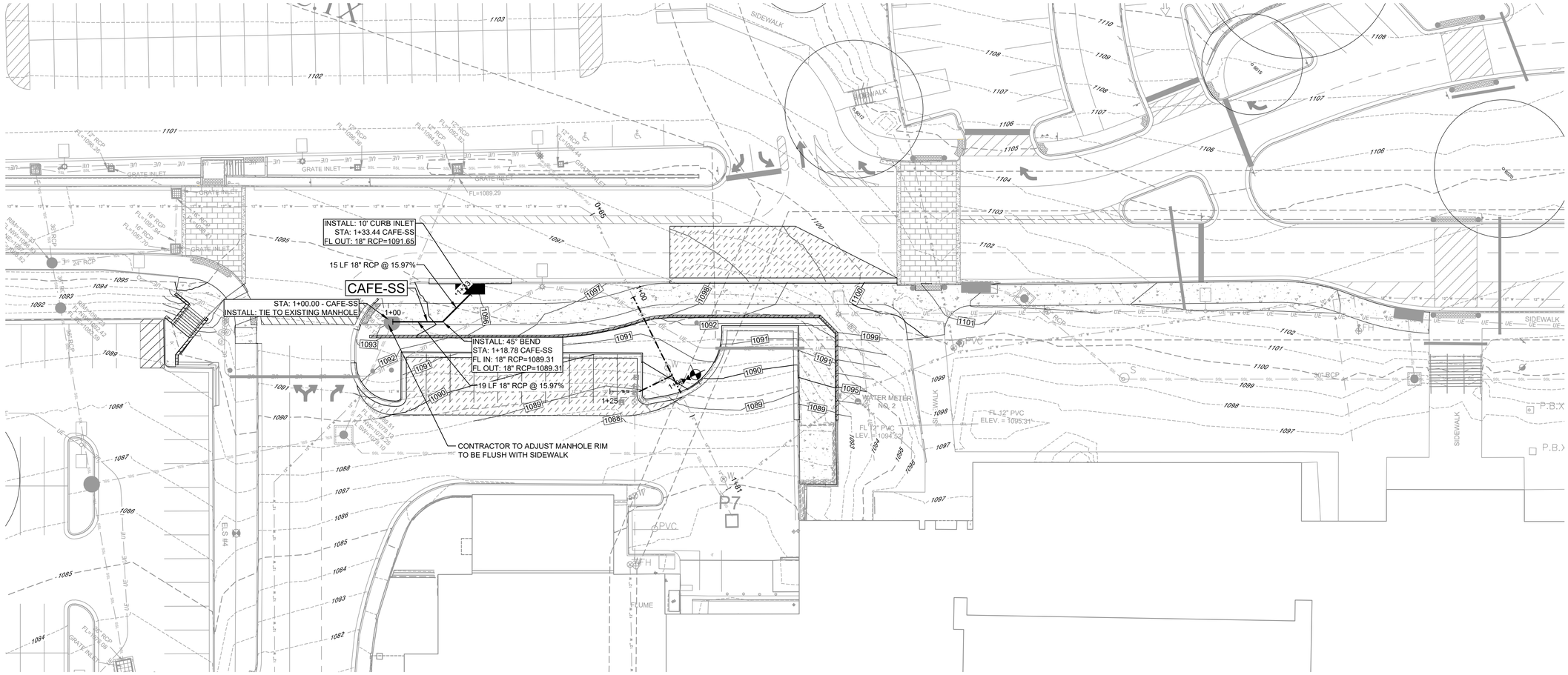
MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 45
OF 62

F:\LTISD_OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\46 ENLARGED STORM PLAN ANNEX BLDG 1 PARKING.DWG, 9/29/2023, ANTHONY VINCENT



N

0 20'
SCALE: 1" = 20'

LEGEND

- PROPERTY LINE
- PROP. STORM SEWER
- PROP. CURB INLET
- PROP. STORM SEWER MANHOLE
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. SLOTTED DRAIN
- PROP. ROOF DRAIN
- PROP. AREA INLET
- PROP. GRATE INLET

NOTES:

1. EXISTING UTILITIES SHOWN FROM RECORD DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED STORM PLAN CAFETERIA PARKING

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 46
OF 62

F:\LTISD\OVERALL\PROJECTS\22-105-AUS_LTISD_HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\46 ENLARGED STORM PLAN ANNEX BLDG 1 PARKING.DWG, 9/29/2023, ANTHONY VINCENT

0 20'
SCALE: 1" = 20'

LEGEND

- PROPERTY LINE
- PROP. STORM SEWER
- PROP. CURB INLET
- PROP. STORM SEWER MANHOLE
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. SLOTTED DRAIN
- PROP. ROOF DRAIN
- PROP. AREA INLET
- PROP. GRATE INLET

NOTES:

1. EXISTING UTILITIES SHOWN FROM RECORD DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED STORM PLAN ANNEX BLDG 1 PARKING

MALONE★WHEELER SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
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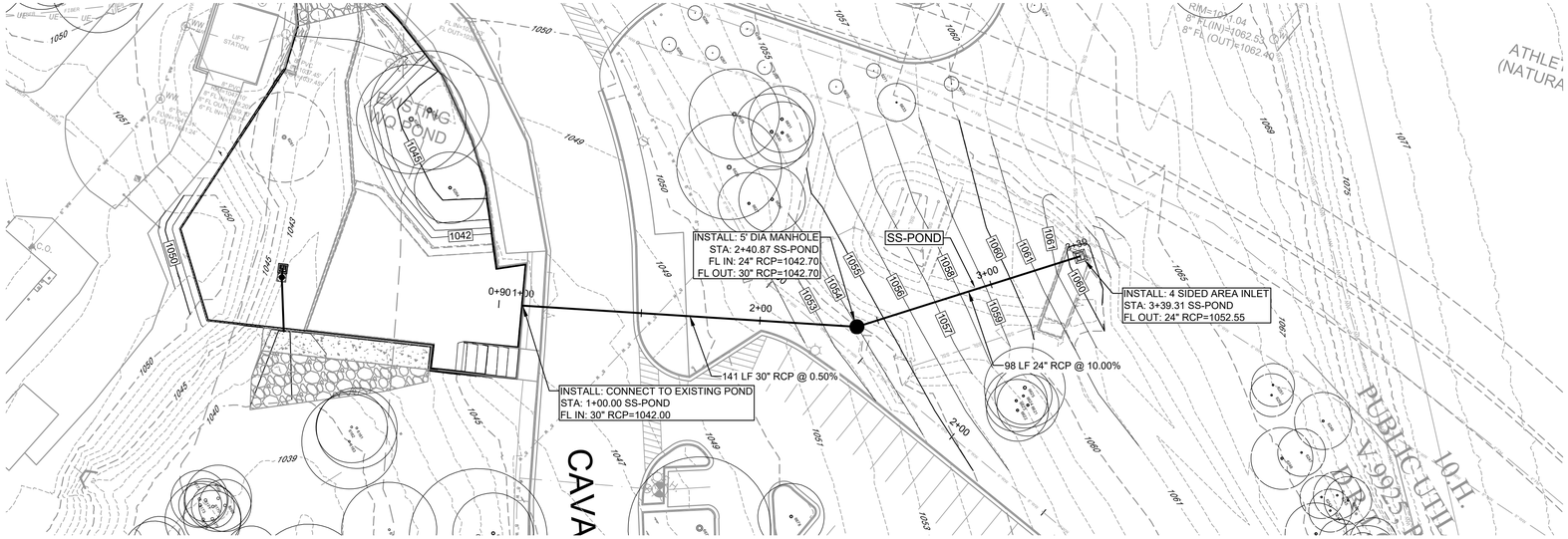
Firm Registration No. F-786

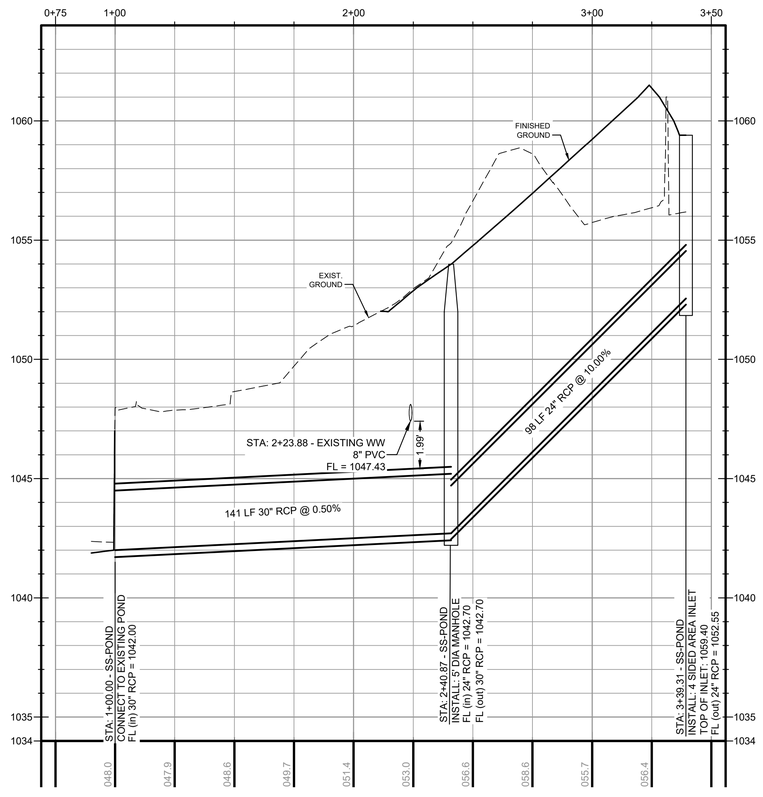
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

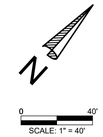
DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 47
OF 62

F:\LTISD OVERALL\PROJECT\3122-105-AUS LTISD HS 2023 PRNG\LOT\DRAWINGS\PLANSET\46 ENLARGED STORM PLAN ANNEX BLDG 1 PARKING.DWG, 9/29/2023, ANTHONY VINCENT







LEGEND

- PROPERTY LINE
- PROP. STORM SEWER
- PROP. CURB INLET
- PROP. STORM SEWER MANHOLE
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. SLOTTED DRAIN
- PROP. ROOF DRAIN
- PROP. AREA INLET
- PROP. GRATE INLET

NOTES:

1. EXISTING UTILITIES SHOWN FROM RECORD DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED STORM PLAN WATER QUALITY POND

MALONE★WHEELER SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 48
OF 62

F:\LTISD OVERALL\PROJECT\S22-105-AUS_LTISD HS 2023 PR\ENGLOT\DRAWINGS\PLANSET\48 ENLARGED STORM PLAN ANNEX BLDG 1 PARKING.DWG, 9/29/2023, ANTHONY VINCENT

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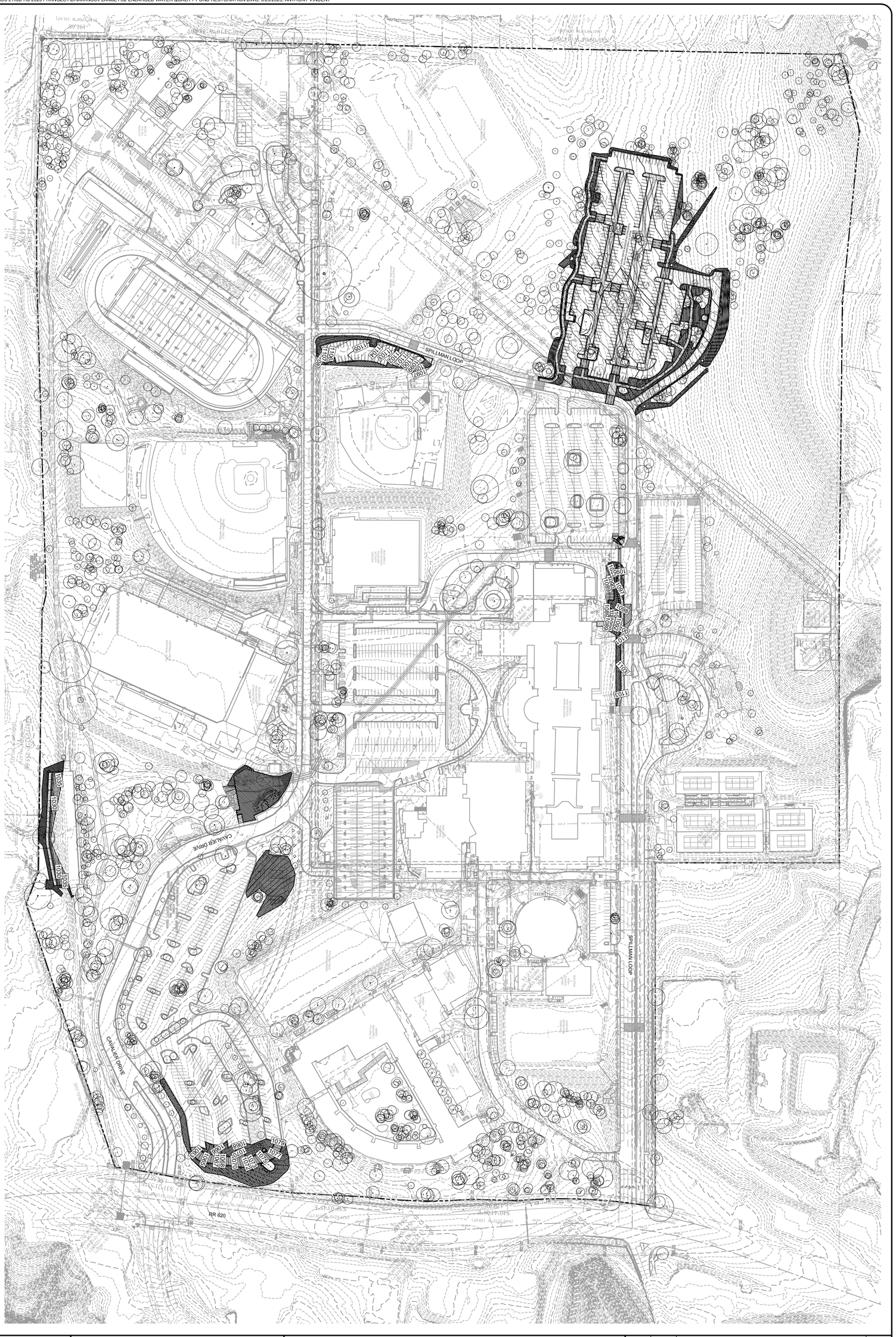

SCALE: 1" = 120'

MALONE ★ WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
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Firm Registration No. F-786

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

OVERALL RESTORATION PLAN

NO.	DATE	REVISION	BY

DESIGNED BY: SDC
CHECKED BY: SDC
APPROVED BY: JBM
DATE: 9/29/2023

SHEET 49 OF 62

REFER TO LANDSCAPE PLANS FOR
PLANTINGS ON INTERIOR ISLAND AREAS

SCALE: 1" = 30'

LEGEND

- PROP. ROW
- PROP. PLAT BOUNDARY
- LOC — LIMIT OF CONSTRUCTION
- PROP. HYDROMULCH
- 10" — TREE TO REMAIN
- 10" — TREE TO BE REMOVED

NOTES:

1. NO CONSTRUCTION EQUIPMENT OR VEHICLE ALLOWED OUTSIDE LIMITS OF CONSTRUCTION (LOC).
2. SLOPE MATTING ON ALL SLOPES 3:1 OR GREATER. CLASS 1, TYPE B PER LCRA TECHNICAL MANUAL.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED PARKING LOT RESTORATION

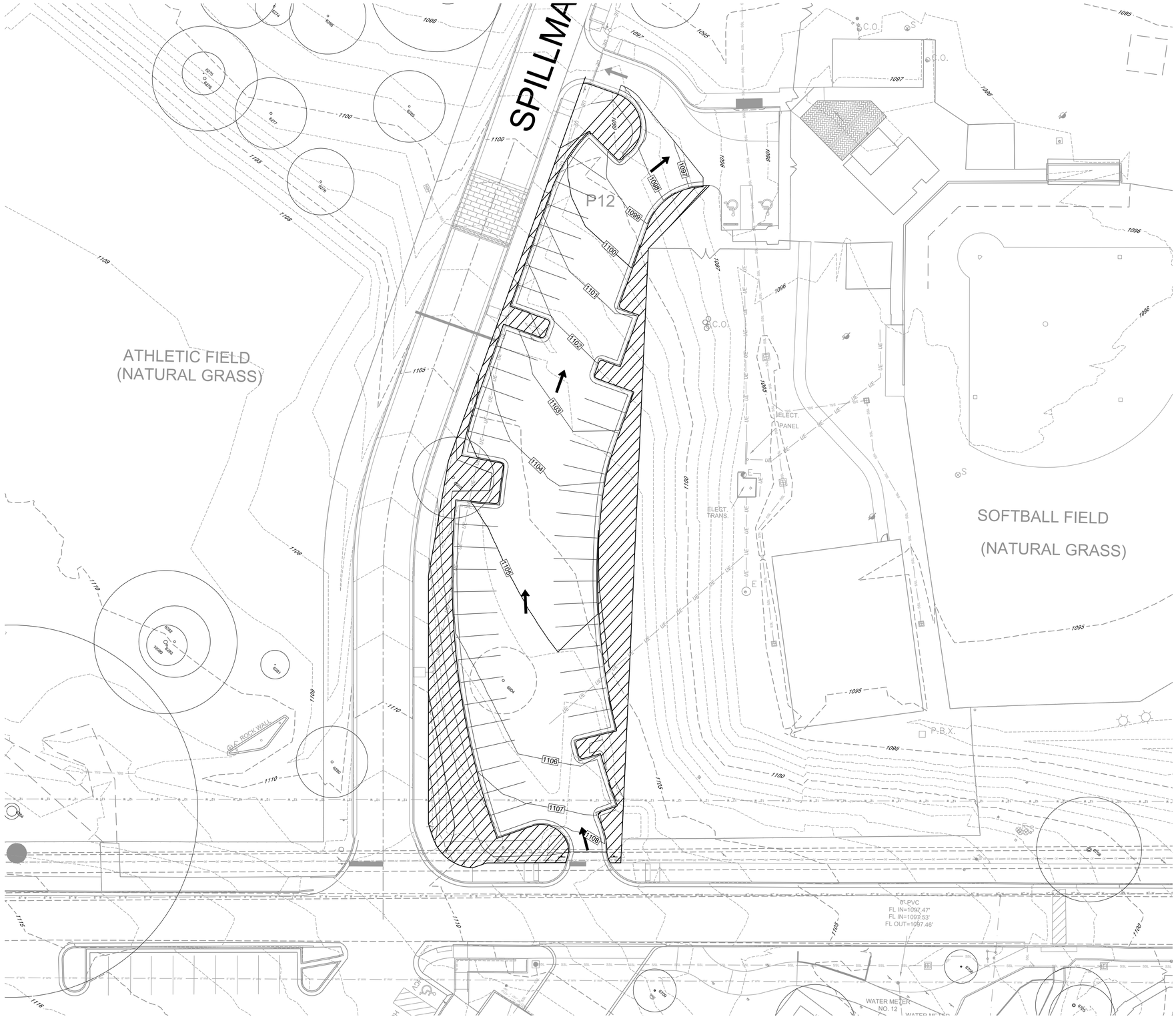
MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 50
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNG LOT\DRAWINGS\PLANSET\52 ENLARGED WATER QUALITY POND RESTORATION.DWG, 9/29/2023, ANTHONY VINCENT



N

0 20'
SCALE: 1" = 20'

LEGEND

- PROP. ROW
- PROP. PLAT BOUNDARY
- LOC — LIMIT OF CONSTRUCTION
- PROP. HYDROMULCH
- TREE TO REMAIN
- TREE TO BE REMOVED

NOTES:

1. NO CONSTRUCTION EQUIPMENT OR VEHICLE ALLOWED OUTSIDE LIMITS OF CONSTRUCTION (LOC).
2. SLOPE MATTING ON ALL SLOPES 3:1 OR GREATER. CLASS 1, TYPE B PER LCRA TECHNICAL MANUAL.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED SOFTBALL FIELD PARKING RESTORATION

MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0455
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 51
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS, LTISD HS 2023 PRKNG\LOTD\DRAWINGS\PLANSET\02 ENLARGED WATER QUALITY POND RESTORATION.DWG, 9/29/2023, ANTHONY VINCENT

LEGEND

- PROP. ROW
- PROP. PLAT BOUNDARY
- LOC — LIMIT OF CONSTRUCTION
- PROP. HYDROMULCH
- TREE TO REMAIN
- TREE TO BE REMOVED

NOTES:

1. NO CONSTRUCTION EQUIPMENT OR VEHICLE ALLOWED OUTSIDE LIMITS OF CONSTRUCTION (LOC).
2. SLOPE MATTING ON ALL SLOPES 3:1 OR GREATER. CLASS 1, TYPE B PER LCRA TECHNICAL MANUAL.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED CAFETERIA PARKING RESTORATION

MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 52
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS.LTISD HS 2023 PRKNG\LOT\DRAWINGS\PLANSET\02 ENLARGED WATER QUALITY POND RESTORATION.DWG, 9/29/2023, ANTHONY VINCENT

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NOTES:

1. NO CONSTRUCTION EQUIPMENT OR VEHICLE ALLOWED OUTSIDE LIMITS OF CONSTRUCTION (LOC).
2. SLOPE MATTING ON ALL SLOPES 3:1 OR GREATER. SEE TYPE B PER LCRA TECHNICAL MANUAL.

LEGEND

- PROP. ROW
- PROP. PLAT BOUNDARY
- LOC — LIMIT OF CONSTRUCTION
- PROP. HYDROMULCH
- TREE TO REMAIN
- TREE TO BE REMOVED

SCALE: 1" = 20'

SHEET	OF
53	62

DESIGN BY: SGC
CHECKED BY: SGC
APPROVED BY: JBM
DATE: 9/29/2023

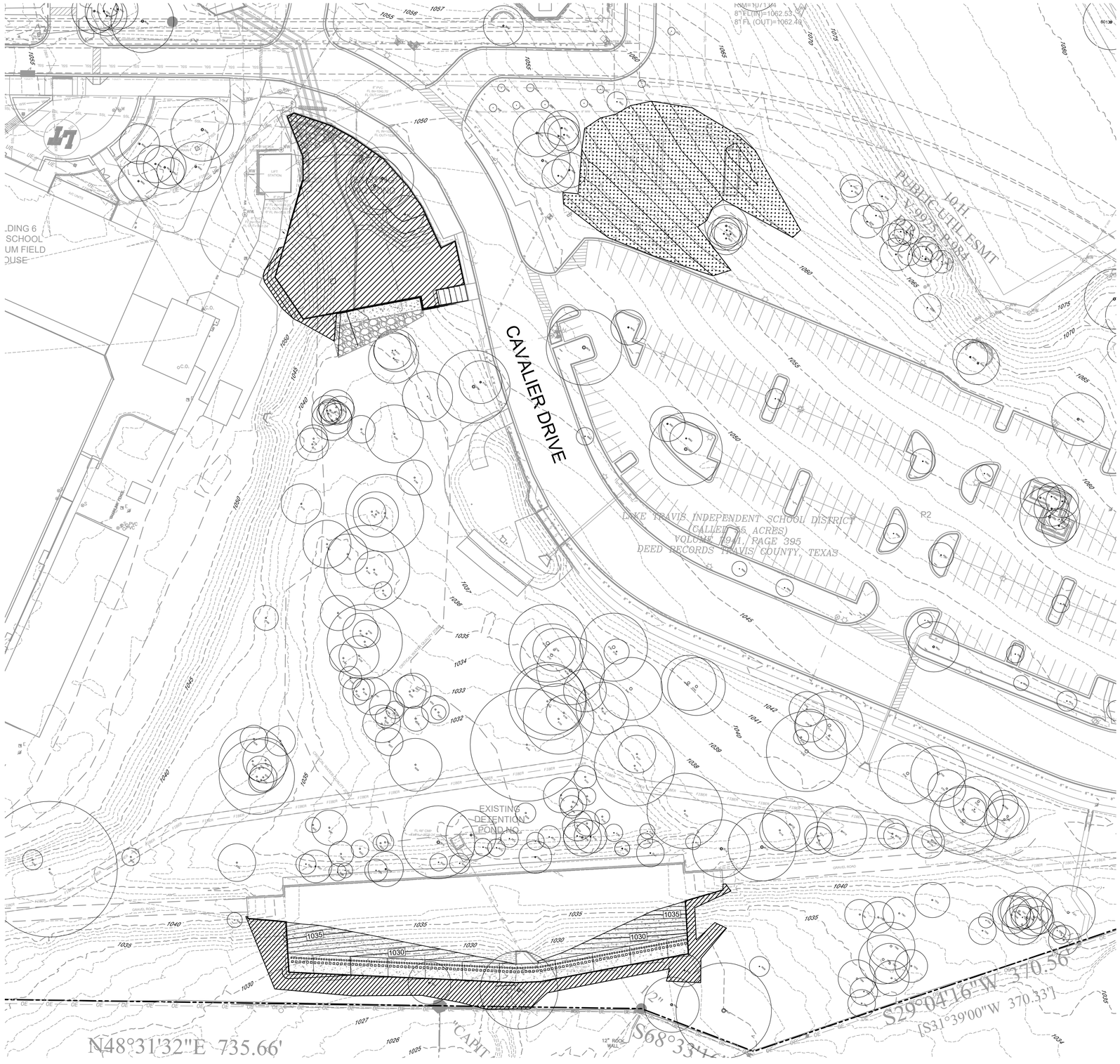
STATE OF TEXAS — JESSE B. MALONE — 108734 — LICENSED PROFESSIONAL ENGINEER

MALONE ★ WHEELER SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED ANNEX BLDG 1 PARKING RESTORATION

NO.	DATE	REVISION	BY



N

0 40'
SCALE: 1" = 40'

LEGEND

- PROP. ROW
- PROP. PLAT BOUNDARY
- LOC — LIMIT OF CONSTRUCTION
- PROP. HYDROMULCH
- PROP. SOD
- TREE TO REMAIN
- TREE TO BE REMOVED

NOTES:

1. NO CONSTRUCTION EQUIPMENT OR VEHICLE ALLOWED OUTSIDE LIMITS OF CONSTRUCTION (LOC).
2. SLOPE MATTING ON ALL SLOPES 3:1 OR GREATER. CLASS 1, TYPE B PER LCRA TECHNICAL MANUAL.

NOTES:

-INITIATE PERMANENT STABILIZATION IMMEDIATELY ONCE WORK HAS CEASED AND FINAL GRADE HAS BEEN ACHIEVED IN ANY GIVEN AREA.

-THE FINAL STABILIZATION/REVEGETATION EFFORTS SHALL BE IN ACCORDANCE WITH THE APPROVED RESTORATION PLAN DETAILS AND SPECIFICATIONS.

-ALL 3:1 SLOPES OR STEEPER REQUIRE SOIL RETENTION BLANKET (SRB).

-THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE WATERING/IRRIGATION TO ACHIEVE THE PERMANENT STABILIZATION REQUIREMENTS IN ALL DISTURBED/REVEGETATED AREAS BEFORE FINAL ACCEPTANCE FOR THIS PROJECT CAN BE OBTAINED.

-ALL COMMON AREAS INCLUDING PWQC STRUCTURES MUST BE PERMANENTLY STABILIZED PER; JURISDICTIONAL TECHNICAL SPECIFICATIONS BEFORE A CONDITIONAL ACCEPTANCE CAN BE ISSUED.

-ALL DISTURBED/BARE AREAS WILL REQUIRE PERMANENT STABILIZATION BEFORE FINAL ACCEPTANCE CAN BE ACHIEVED. AVOID DISTURBING AREAS OF THE PROJECT THAT ARE NOT NECESSARY FOR CONSTRUCTION.

-ANY DISTURBED AREA(S) NOT INDICTED TO BE RESTORED ON THE RESTORATION PLAN REQUIRES THE SAME EFFORTS AS THOSE INDICATED.

-ALL DISTURBED AREAS MUST MEET THE REQUIREMENT FOR PERMANENT STABILIZATION.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

ENLARGED POND RESTORATIONS

MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 54
OF 62

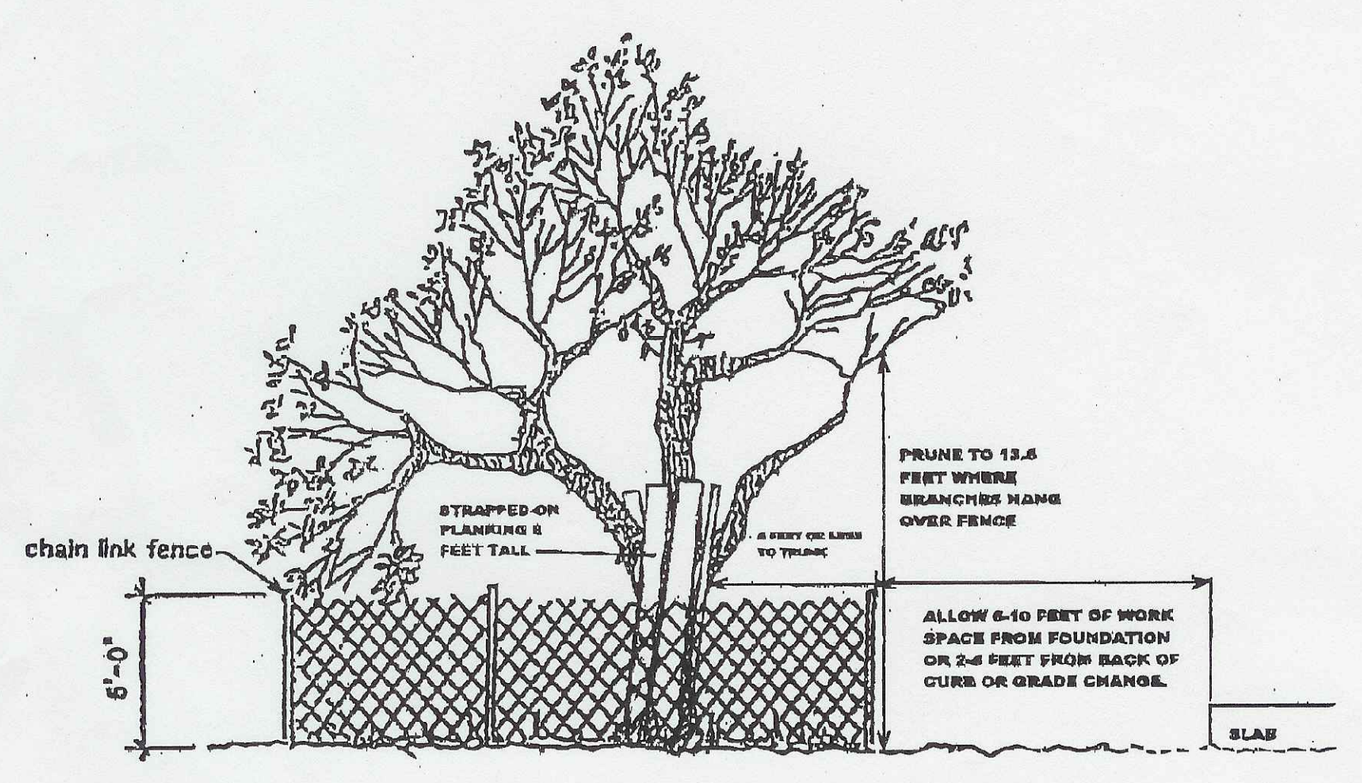
F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNGLOT\DRAWINGS\PLANSET\52 ENLARGED WATER QUALITY POND RESTORATION.DWG, 9/29/2023, ANTHONY VINCENT

Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

CHAIN LINK FENCE, PRUNING AND PLANKING
(Tree Protection Notes #7, Exhibits K and L)

Exceptions to installing fences at tree drip lines may be permitted in the following cases:

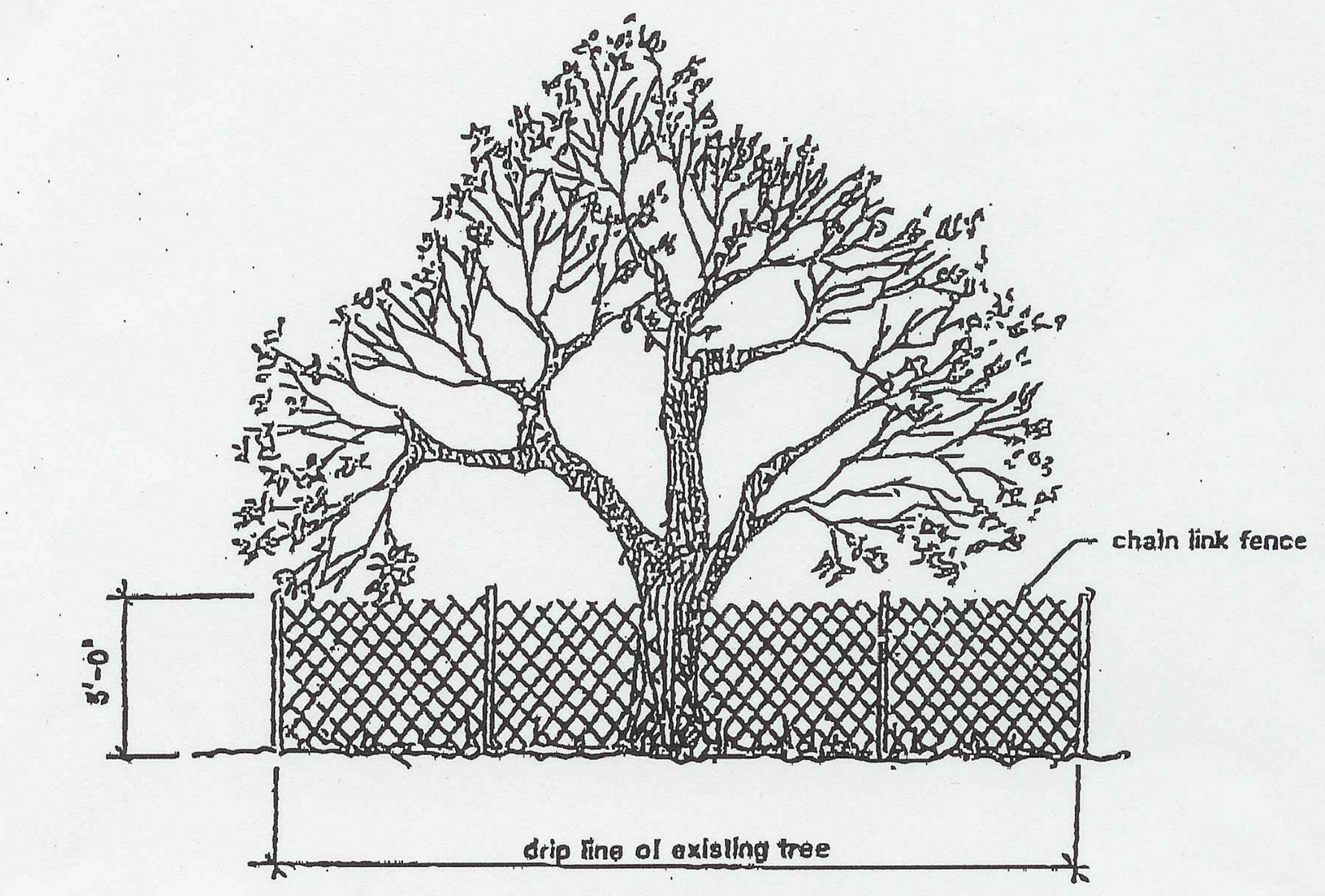
1. Where there is to be an approved grade change, impermeable paving surface, tree well, or other such site development, erect the fence approximately 2 to 4 feet behind the area in question.
2. Where permeable paving is to be installed within a tree's drip line, erect the fence at the outer limits of the permeable paving area (prior to site grading so that this area is graded separately prior to paving installation to minimize root damage).
3. Where trees are close to proposed buildings, erect the fence to allow 6 to 10 feet of work space between the fence and the building.
4. 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 8 feet (or to the limits of lower branching) in addition to the reduced fencing provided.
5. All branches that hang over the fence shall be pruned to a minimum height of 13.5 feet or higher if required for equipment clearance.



Source: City of Austin Tree Standards (modified for the City of Lakeway)

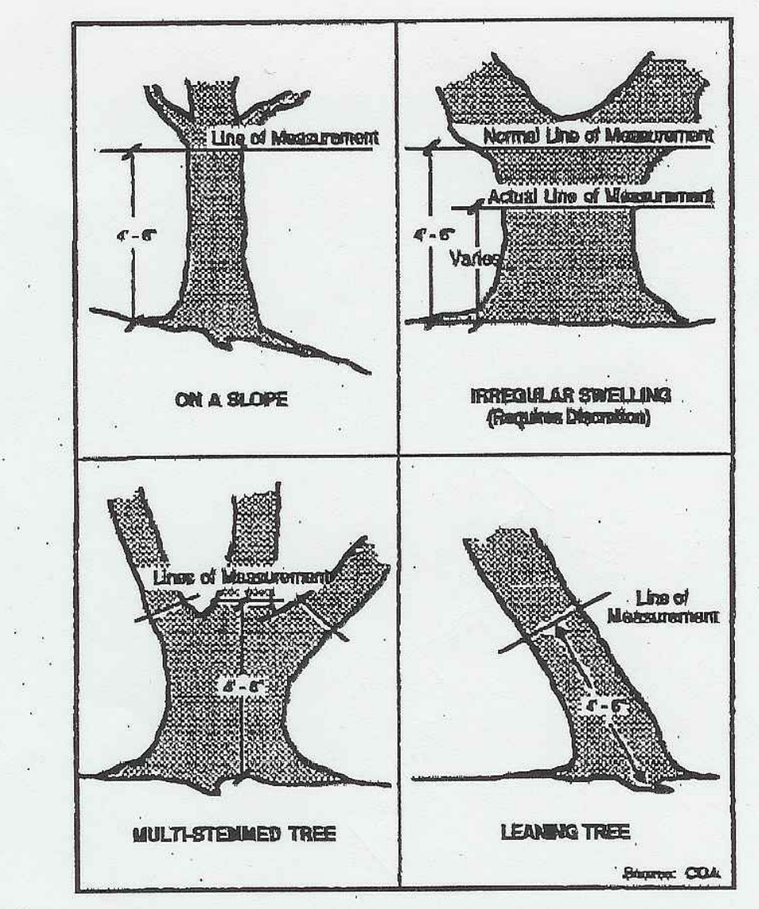
Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

CHAIN LINK FENCE TO DRIP LINE
Required for all trees to be preserved during construction
(Tree Protection Notes, Exhibits K and L)



Source: City of Austin

Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

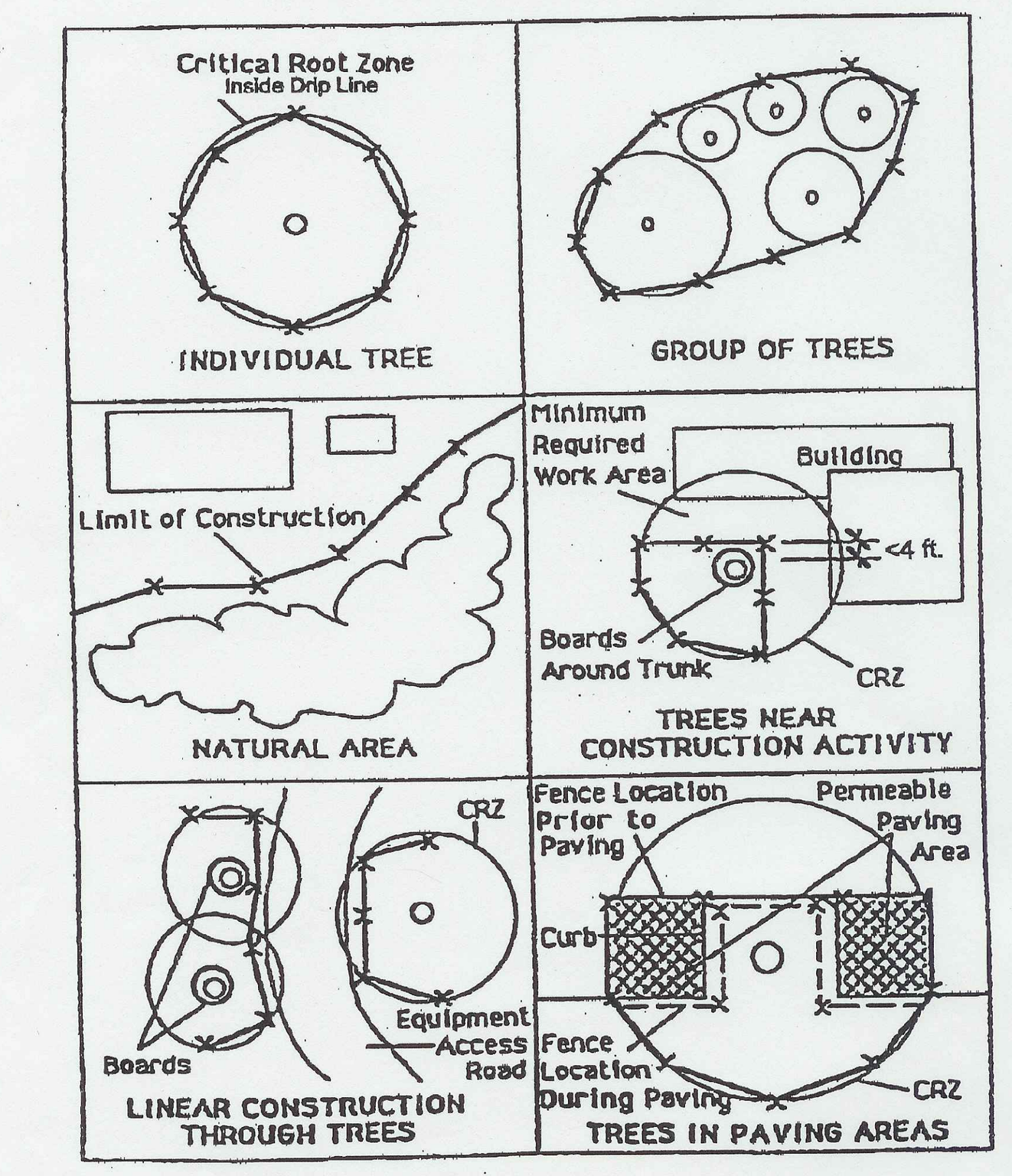


MEASURING TREE DIAMETERS
(Section 10.04, Exhibits B, C, D, F and G)

1. Measure tree diameters at a height of 4-1/2 feet (4 feet 6 inches).
2. If the tree forks at 4-1/2 feet, measure below the swell.
3. Diameter measurement should be accurate to one inch and should be rounded up or down to the nearest inch. (Examples: 15.3" = 15", 15.7" = 16")
4. Trees which are connected at ground level or above are considered to be multi-trunk trees. Look for bark at the base joining the stems.
   a. Measure all trunks larger than 6 inches at a height of 4-1/2 feet and add for total diameter inches.
   b. If none of the trunks is larger than 6 inches when measured at 4-1/2 feet, measure the trunk below the swell beneath the lowest fork.
   c. Example: A Spanish oak with three 8 inch stems and two 4 inch stems would be shown as a "24 inch multi-stem Spanish Oak."
      i. Only the three 8 inch stems would count toward the total.
      ii. Show the total diameter inches in the tree list. Do not show as "8" 8" 8" SO" or "8 inch triple oak", etc.
5. Clusters of many small stems forking from the ground do not need to be measured or shown on the tree survey.
   a. The only exception is the rare Texas Madrone, for which the tree survey should show an approximate height and drip line.

Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

STANDARD TREE PROTECTION LOCATIONS
(Tree Protection Notes, Exhibits K and L)



Source: City of Austin Tree Standards (modified for the City of Lakeway)

Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

TREE SURVEY SPECIFICATIONS
(Section 10.04, Exhibits B, C, D, F and G)

All General Development Plans, Preliminary Plans, Final Plats, Subdivision Improvement Plans and Site Development Plans require an accurate tree survey which meets the following specifications.

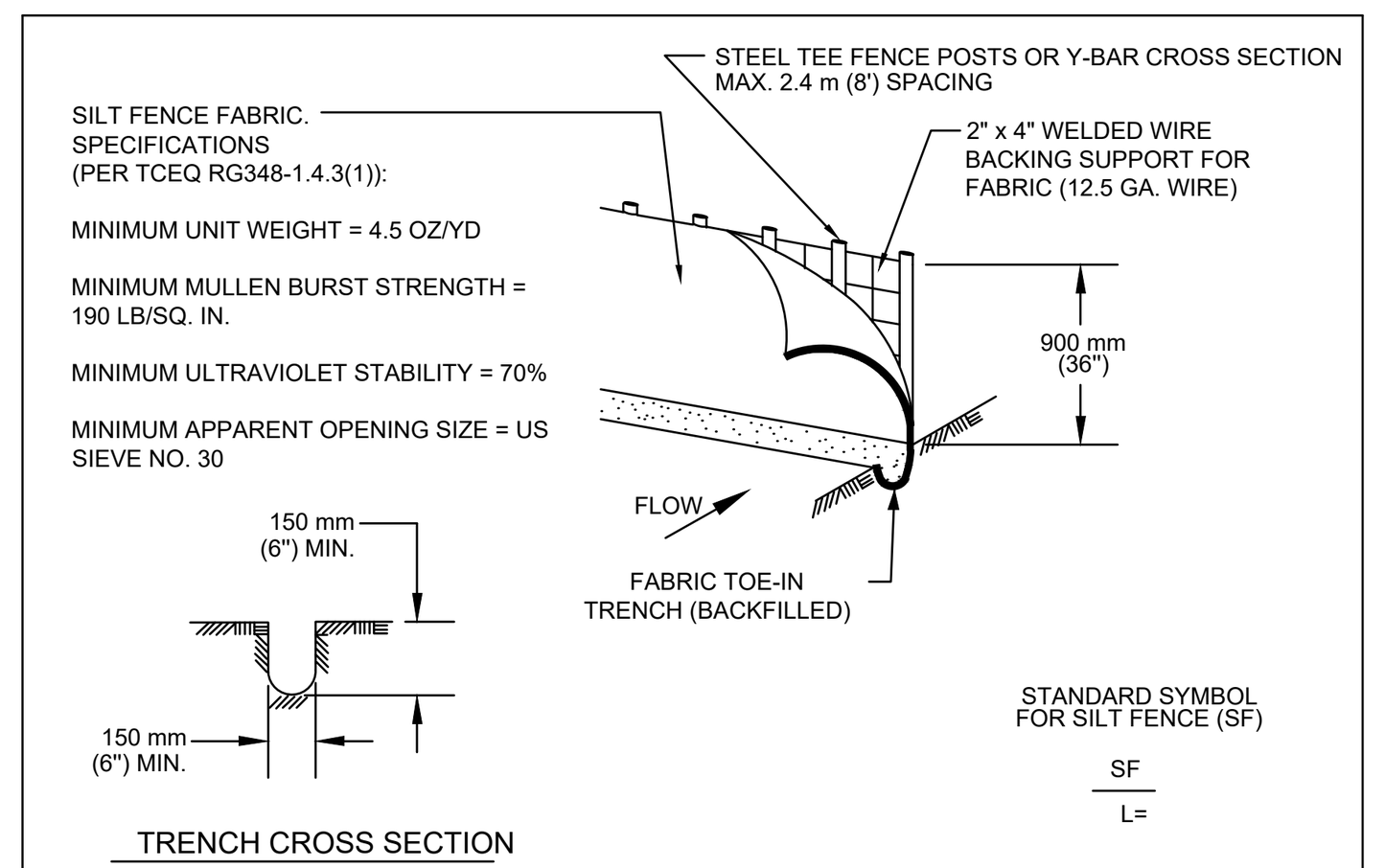
1. The surveyor should locate and measure the following trees according to City of Lakeway standards:
   a. All hardwood trees six (6) inches and larger in diameter.
   b. All trees of any size of the following species which is rare in Lakeway: Texas Madrone (*Arbutus xalapensis var. texana*)
2. All trees should be tagged and numbered on site.
3. The tree survey plat should include a tree list showing tag number, DBH and species.
4. The tree list should show the total diameter inches of multi-trunk trees, with the exception of Texas Madrones.
5. Texas Madrones should be shown in the tree list and on the survey with an approximate height and an actual (not calculated) drip line.
6. The tree survey should show the location of each tree and a calculated drip line drawn for each tree at one foot radius per inch of diameter.
   a. Example: a 10 inch diameter oak would show a calculated drip line with a 10 foot radius.
7. The tree survey plat must contain a surveyor's certification (Exhibit I).
8. Field work for the tree survey shall be performed within one year of submittal to the City.



Texas Madrone: Small multi-stem evergreen tree, usually less than 20 feet tall, rarely 30 feet. Distinguishing feature is smooth bark, rose to deep red in color. Leaves are oval, up to 3-1/2 inches long, leathery and light green. Rare in this area, usually found on slopes sheltered beside Ashe Juniper (cedar) trees.

Photo by Benny J. Simpson, Texas Agricultural Extension Service, Dallas.

CITY OF LAKEWAY
TREE PROTECTION DETAILS
N.T.S.



1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES).

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

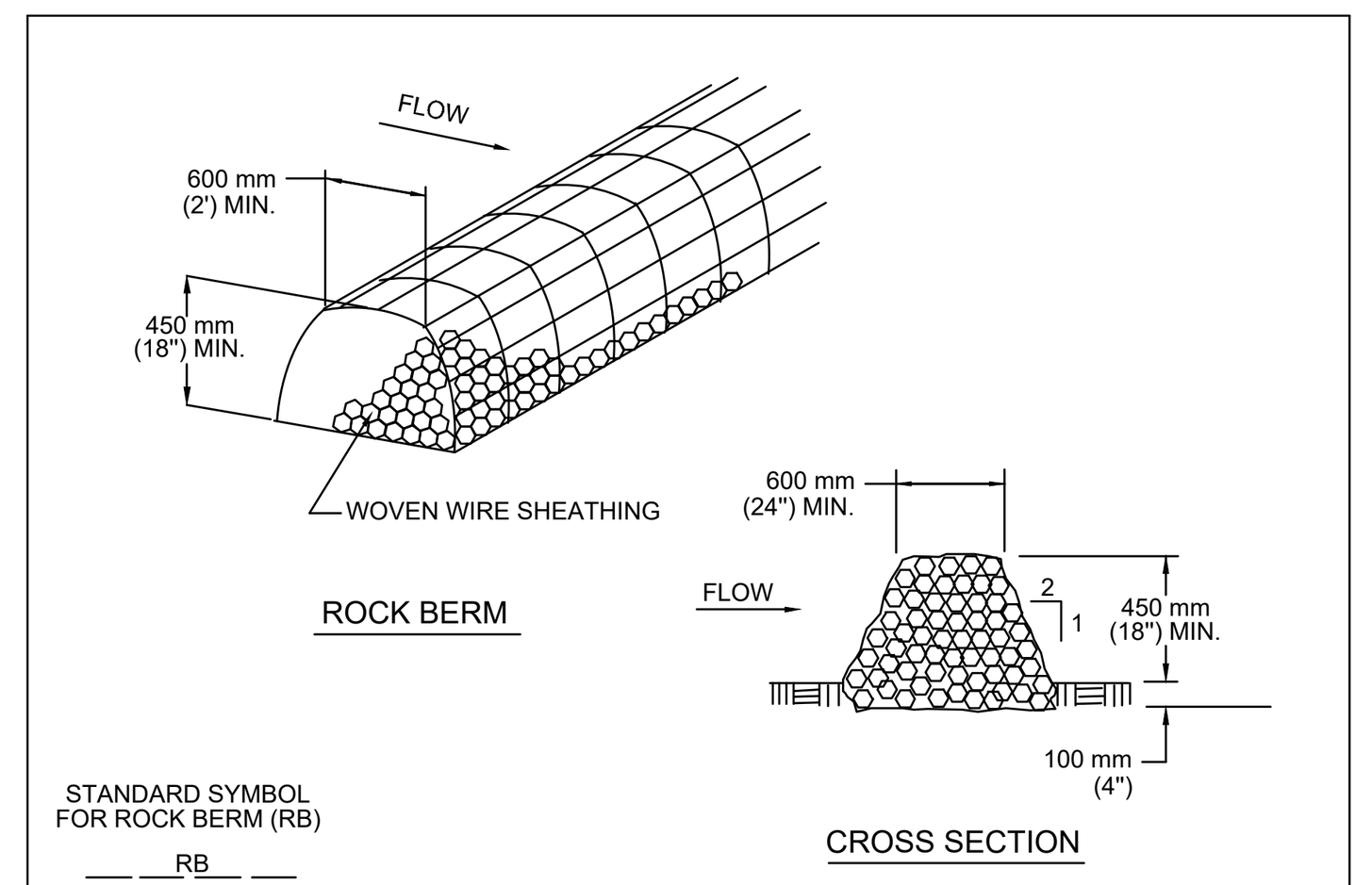
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

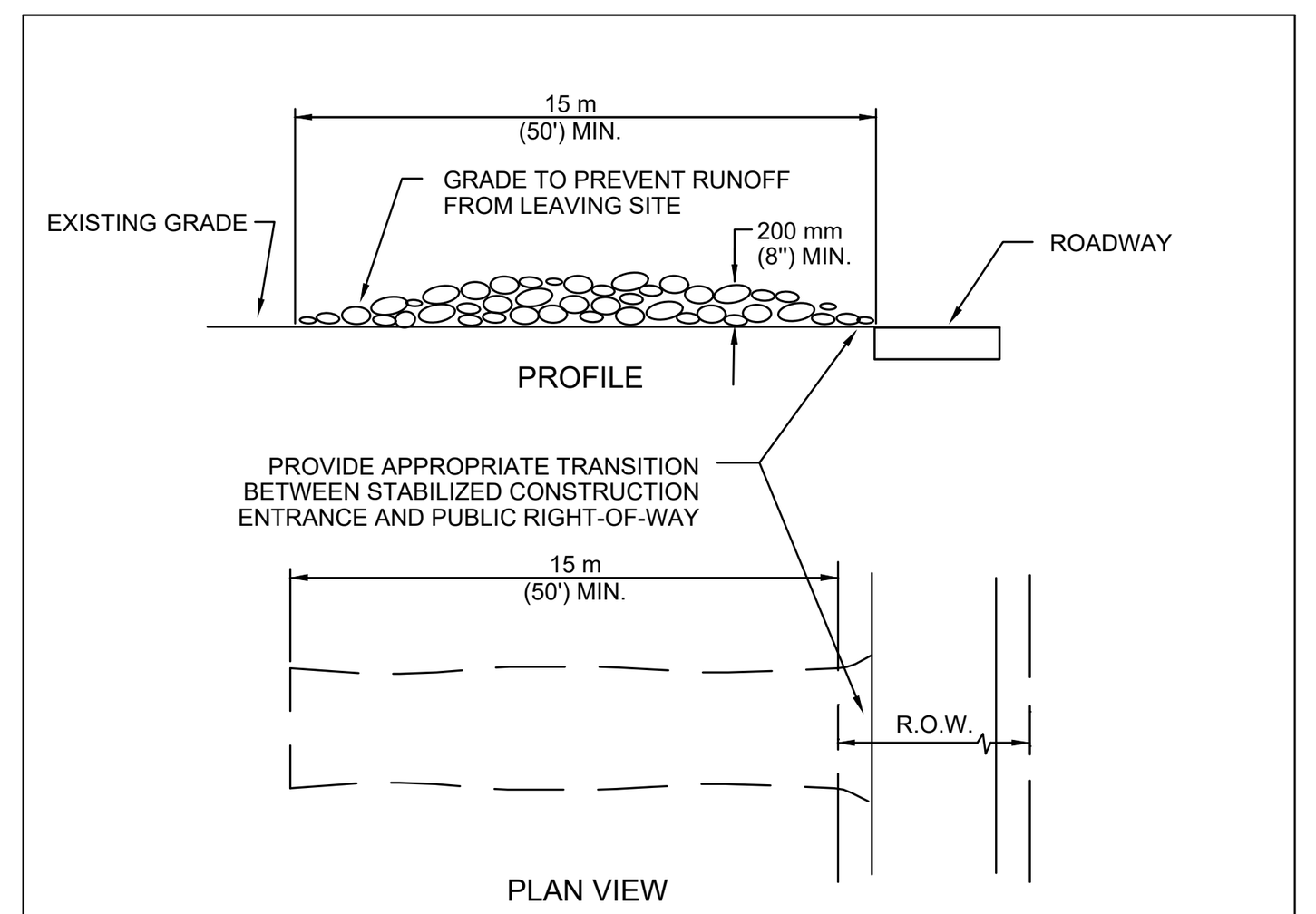
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		MODIFIED SILT FENCE PER TCEQ STANDARDS	
RECORD COPY SIGNED BY MORGAN BYARS	*09/01/2011* ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 642S-1



NOTES:

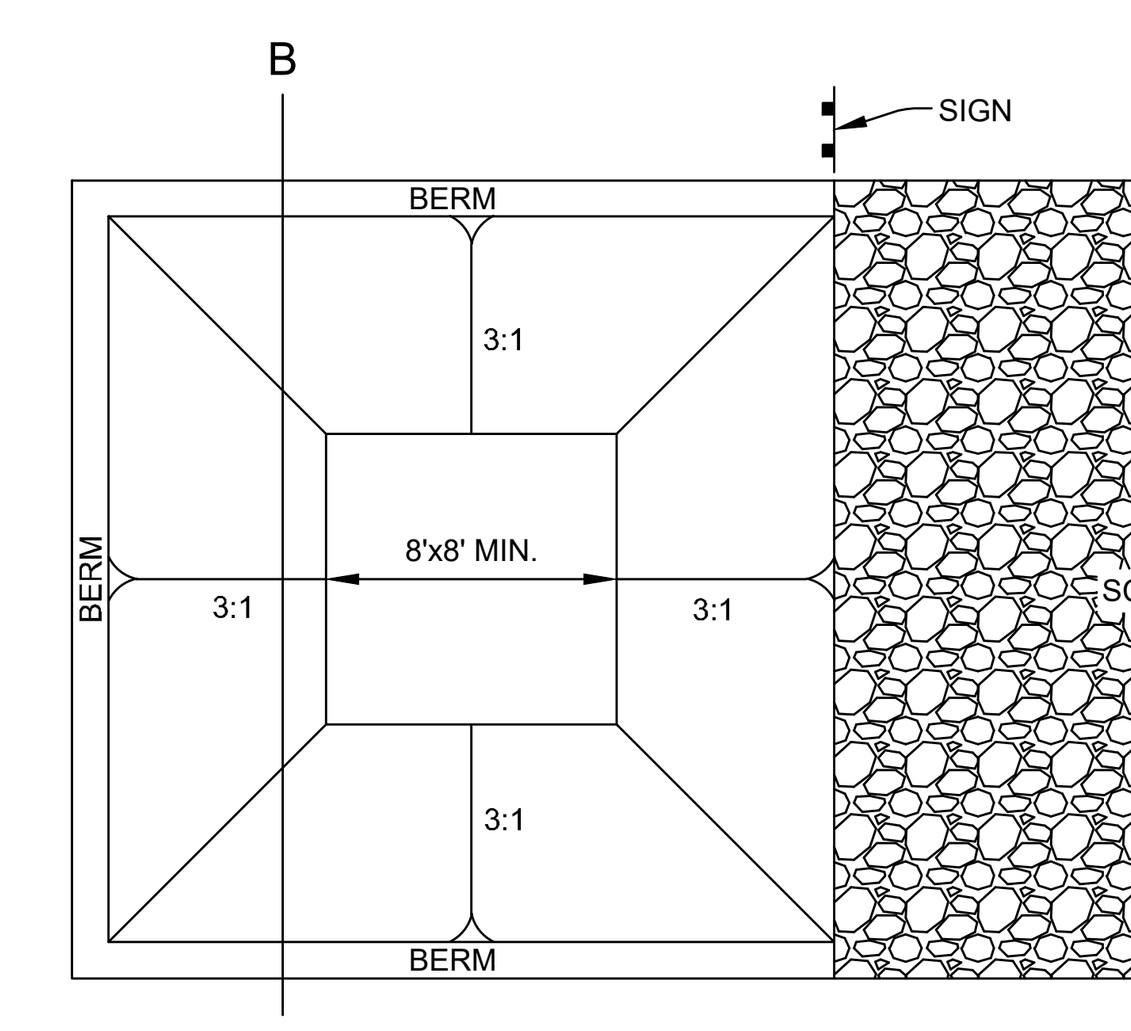
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		ROCK BERM	
RECORD COPY SIGNED BY MORGAN BYARS	8/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 639S-1

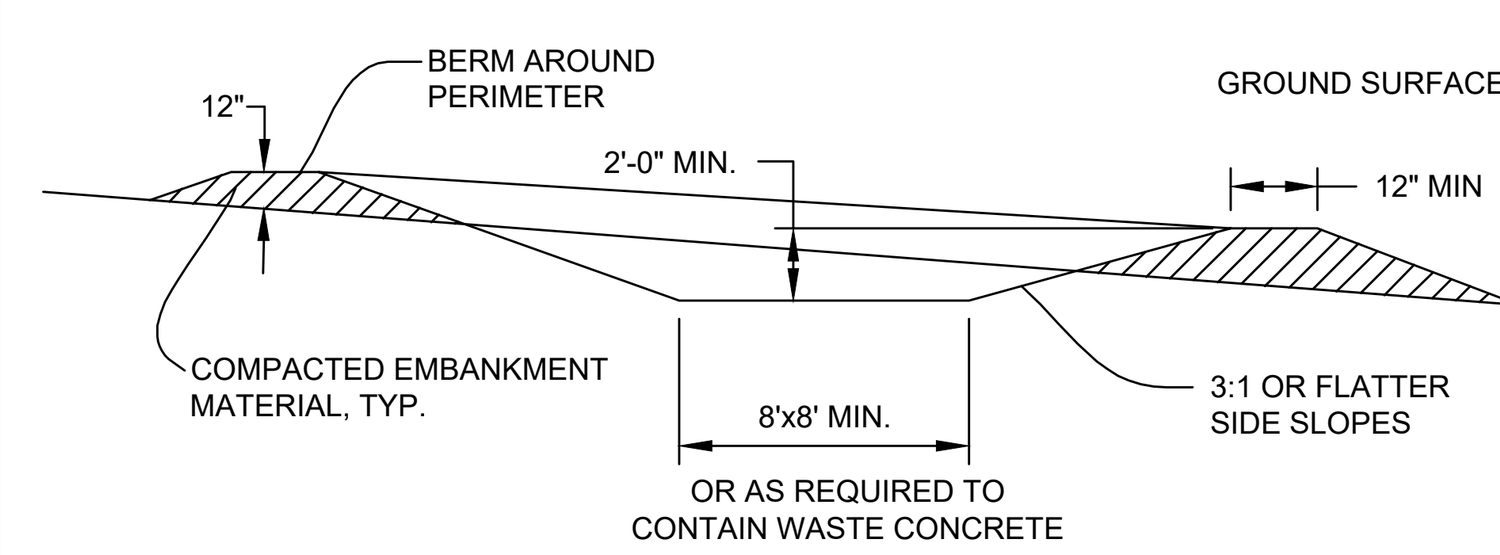


NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		STABILIZED CONSTRUCTION ENTRANCE	
RECORD COPY SIGNED BY J. PATRICK MURPHY	5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1



SECTION A
N.T.S



SECTION B
N.T.S.

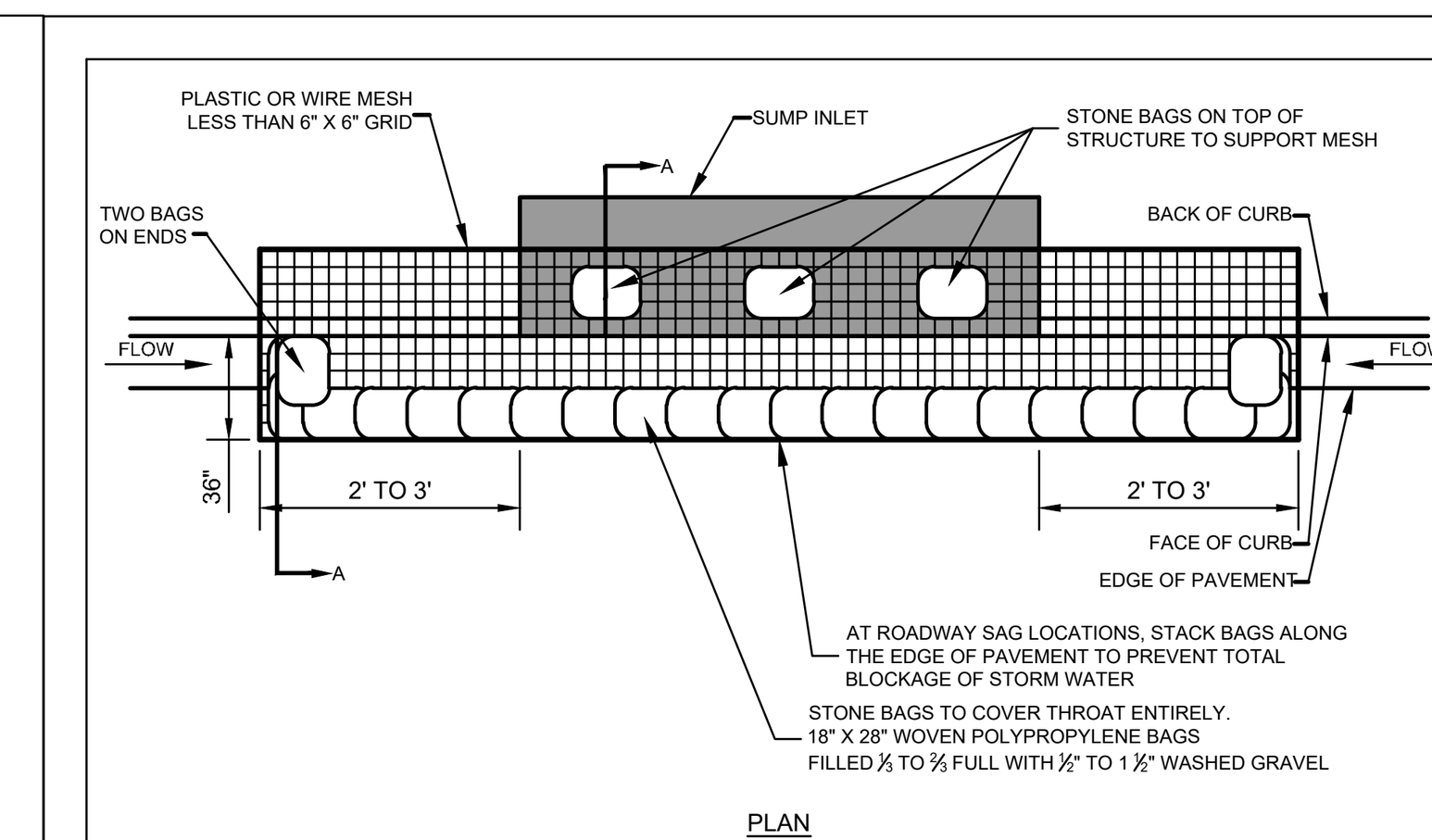
CONCRETE WASHOUT AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR: LOCATIONS OF CONCRETE WASHOUT AREA. (TO BE PLACED A MINIMUM OF 100' FROM DRINAGEWAYS, BODIES OF WATER, AND INLETS.)
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. STABILIZED CONSTRUCTION ENTRANCE (DETAIL 641S-1) IS REQUIRED AT THE ACCESS POINT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

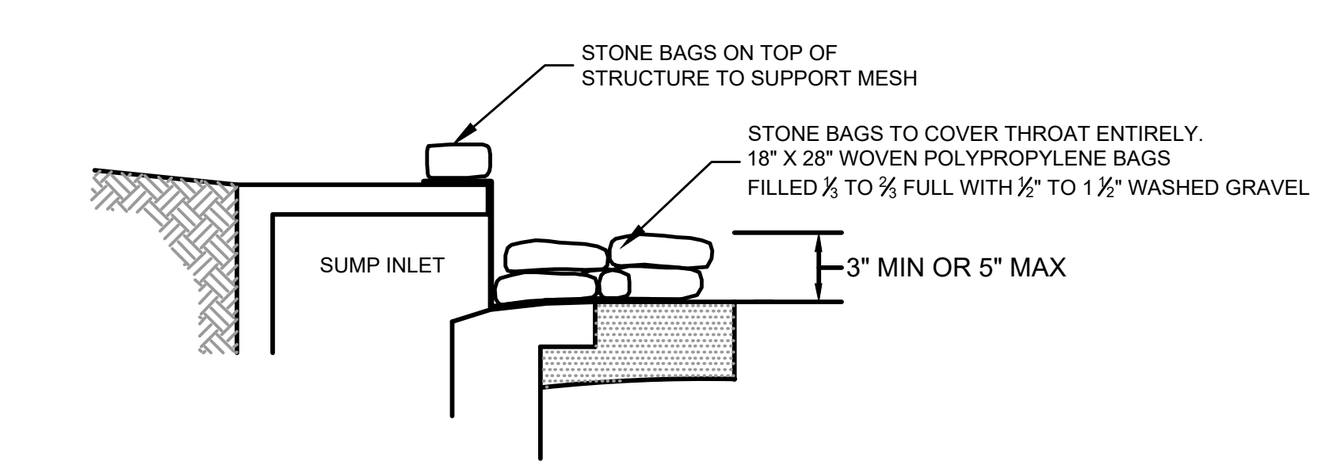
CONCRETE WASHOUT AREA MAINTENANCE NOTES

1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.
4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

CONCRETE WASHOUT AREA



PLAN

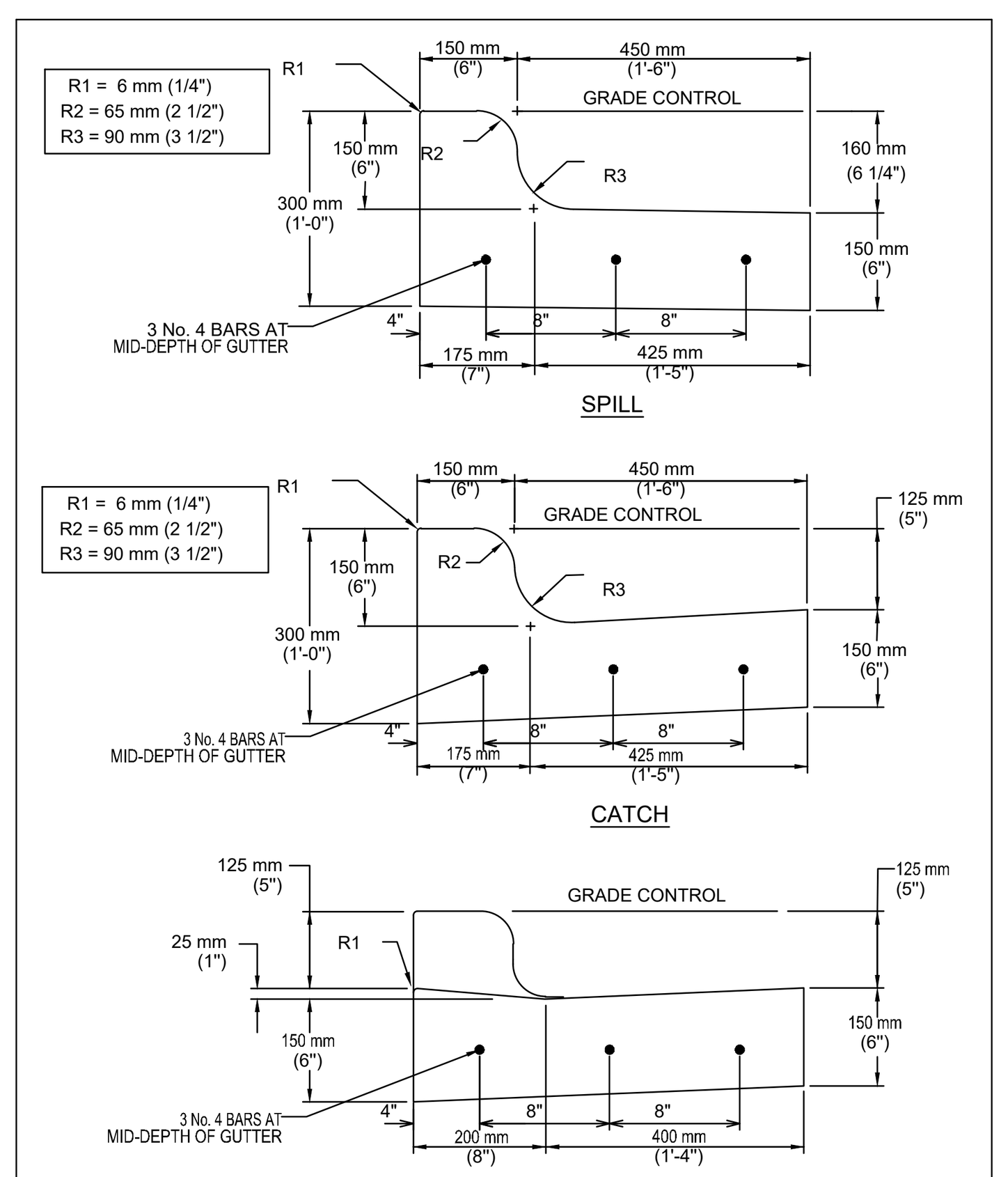


SECTION A-A

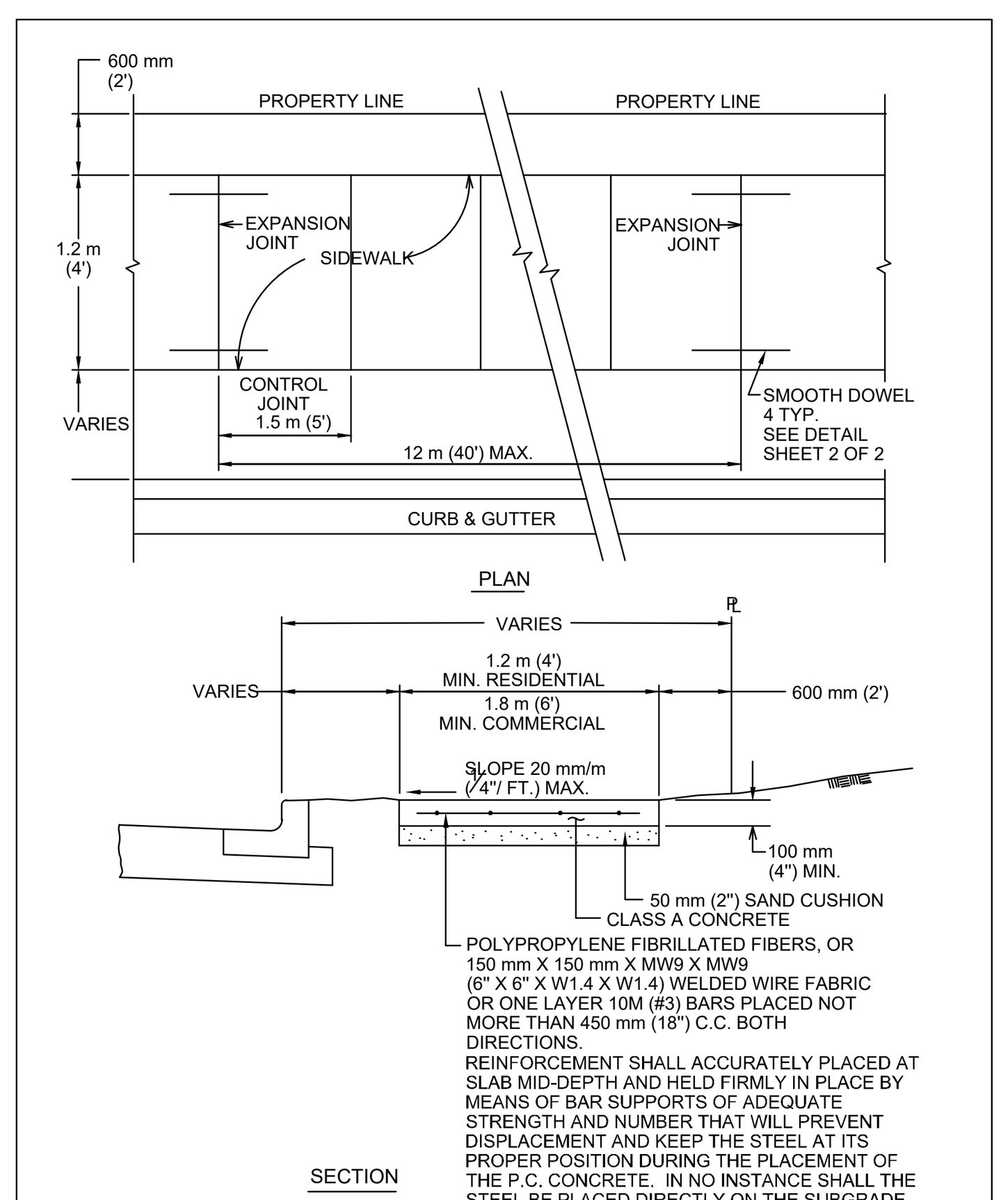
MAINTENANCE NOTES:

1. SEDIMENT ACCUMULATION SHOULD BE REMOVED IF IT EXCEEDS 1/2 HEIGHT OF THE BAGS.
2. REPLACE BAGS AS APPROPRIATE IF HOLES OR EXTREME WEATHERING IS APPARENT.
3. BAGS SHALL BE INTERWOVEN TO ELIMINATE GAPS
4. INSPECT AFTER RAINFALL TO DETERMINE IF SEDIMENT REMOVAL OR REPAIRS ARE NEEDED TO RESTORE PROPER FUNCTION OF THE BMP.

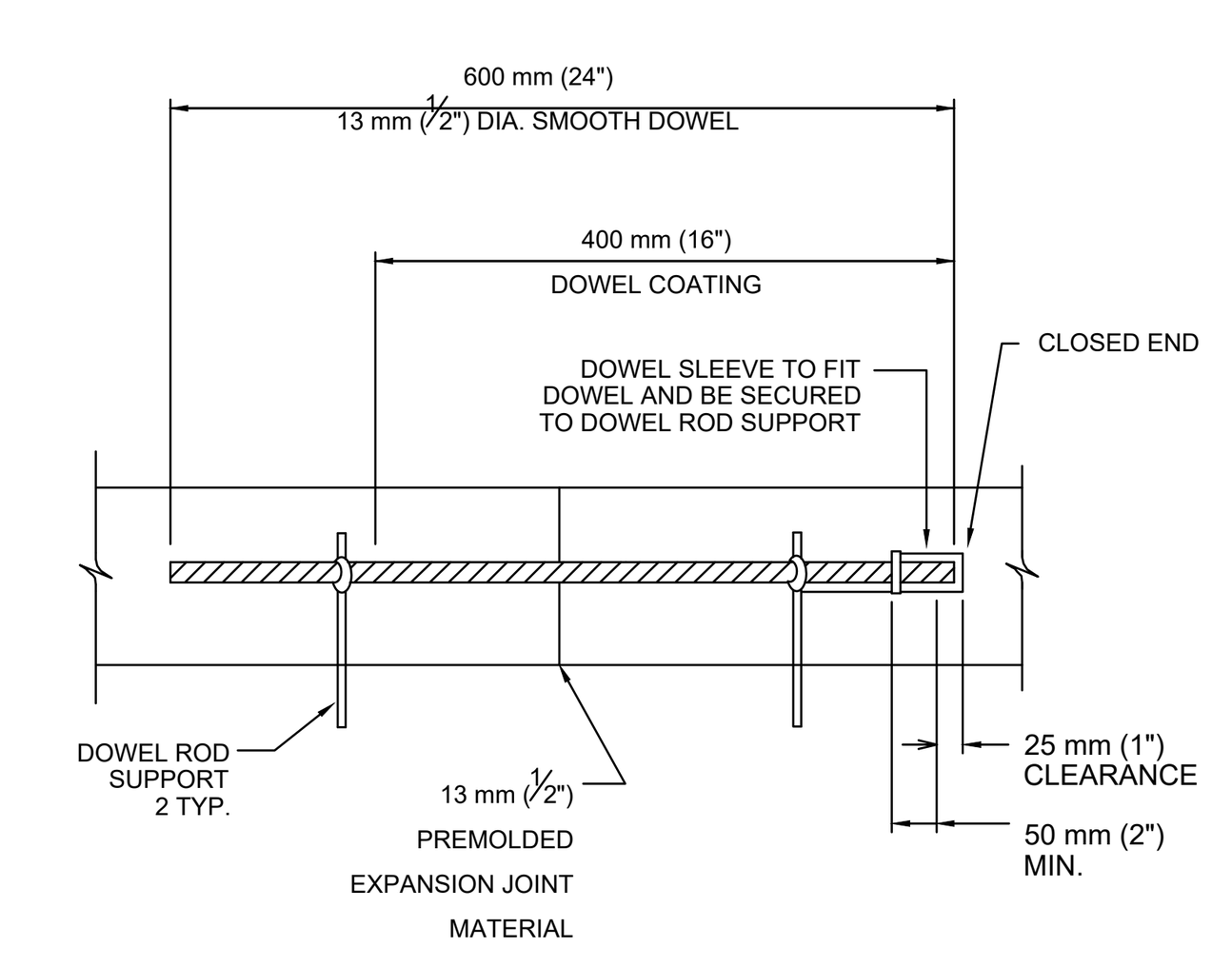
INLET PROTECTION DETAIL
FOR SUMP INLETS
N.T.S.



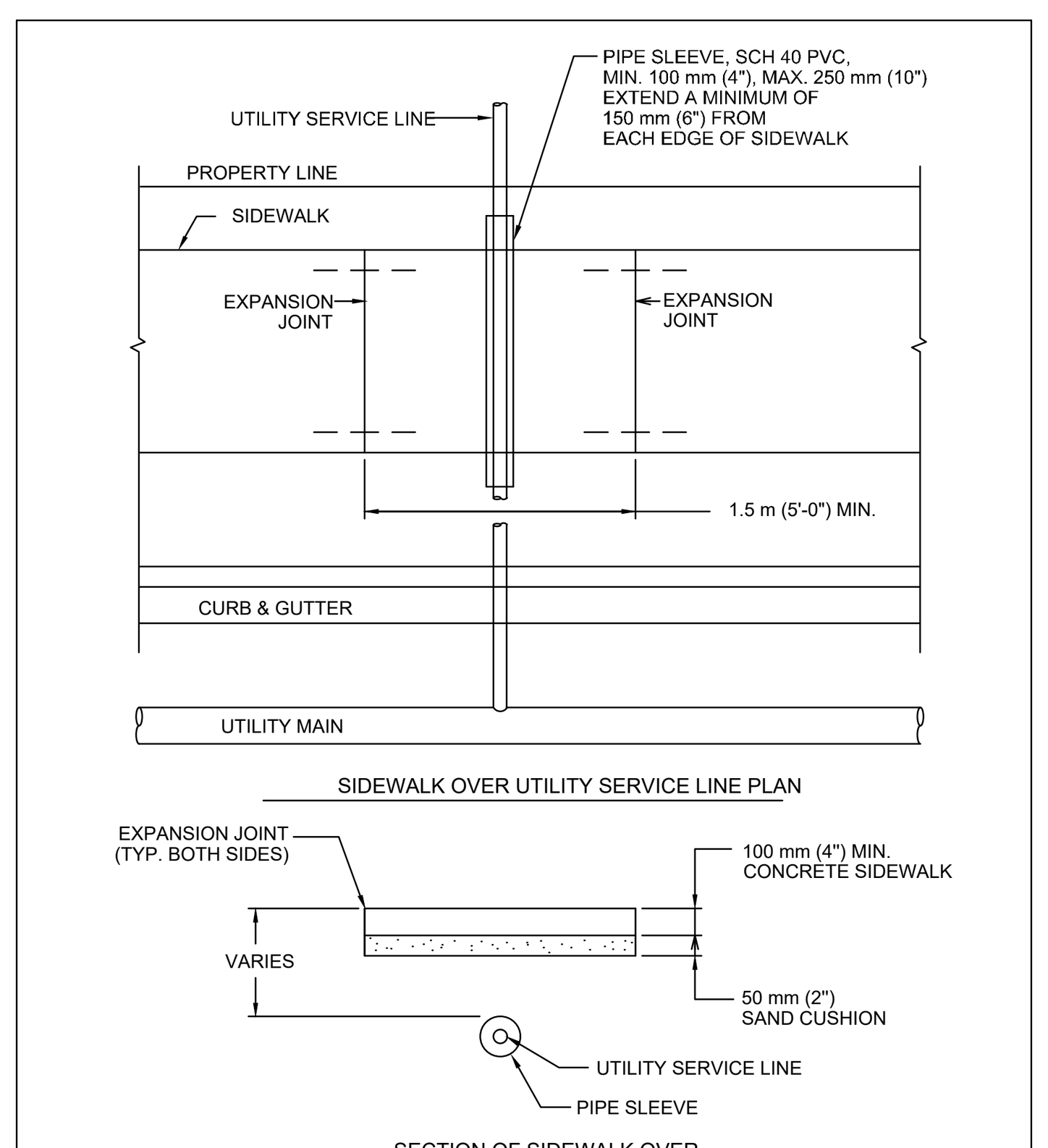
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		REINFORCED CURB AND GUTTER SECTION	
RECORD COPY SIGNED BY SAM ANGOORI	01/04/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	03/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 1 OF 3

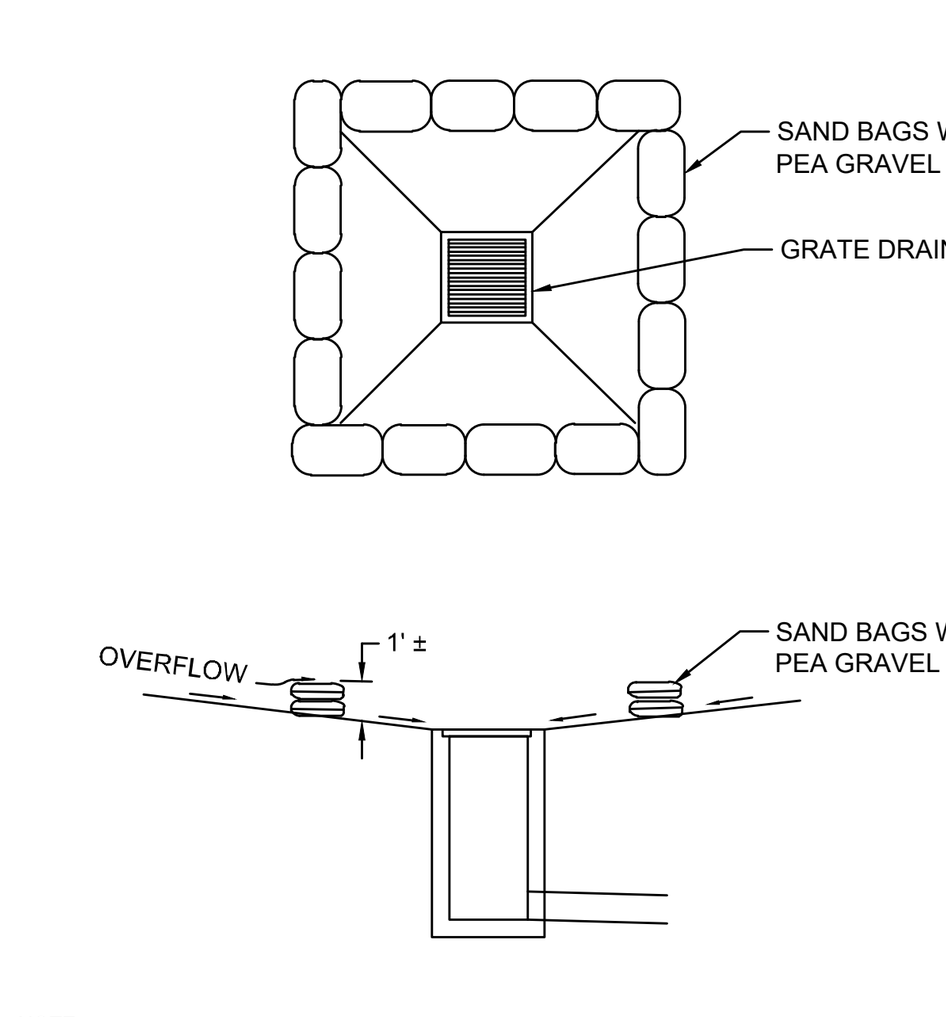


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	03/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 2 OF 3



NOTES:
1. THIS STANDARD APPLIES TO THE INSTALLATION OF NEW UTILITIES OR UTILITIES BEING REPLACED BY A NEW LINE.
2. NO JOINTS IN UTILITY SERVICE PIPE TO BE LOCATED INSIDE PVC PIPE SLEEVE.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	03/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 3 OF 3



NOTE:

SANDBAGS FILLED WITH PEA GRAVEL CAN BE USED TO CONSTRUCT A SEDIMENT BARRIER AROUND DRAIN INLETS. THE SANDBAGS SHOULD BE FILLED WITH WASHED PEA GRAVEL AN STACKED TO FORM A CONTINUOUS BARRIER ABOUT 1 FOOT HIGH AROUND THE INLET. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

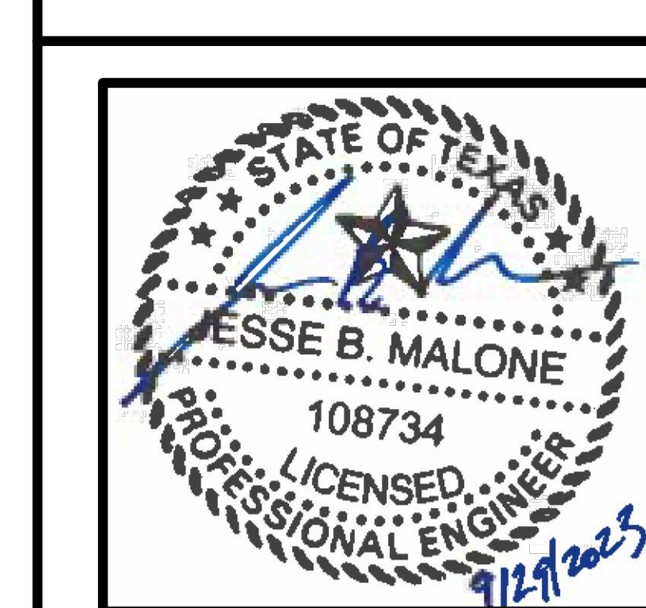
BAGGED GRAVEL GRATE INLET PROTECTION DETAIL
N.T.S.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

STANDARD DETAILS

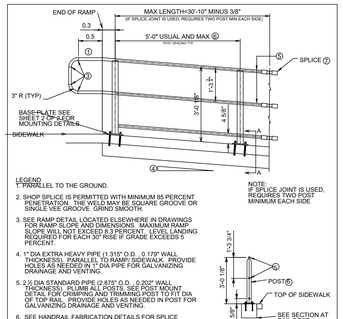
MALONE ★ WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786



DESIGN BY : SGC
CHECKED BY : SGC
APPROVED BY : JBM
DATE : 9/29/2023

SHEET 56
OF 62

F:\LTISD OVERALL\PROJECTS\22-105-AUS LTISD HS 2023 PRKNGLOT\DRAWINGS\PLANSET\54 STANDARD DETAILS.DWG, 9/29/2023, ANTHONY VINCENT



LEGEND
1. PARALLEL TO THE GROUND.

2. SHOP SPLICE IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.

3. SEE RAMP DETAIL LOCATED ELSEWHERE IN DRAWINGS FOR RAMP SLOPE AND DIMENSIONS. MAXIMUM RAMP SLOPE WILL NOT EXCEED 8.3 PERCENT. LEVEL LANDING SHALL BE PROVIDED FOR EACH 30" RISE IF GRADE EXCEEDS 5 PERCENT.

4. 1" DIA EXTRA HEAVY PIPE (1.315" O.D., 0.179" WALL THICKNESS). PARALLEL TO RAMP/ SIDEWALK. PROVIDE WEEP HOLES DRILLED IN 1" DIA PIPE FOR GALVANIZING DRAINAGE AND VENTING.

5. 2 ½ DIA STANDARD PIPE (2.875" O.D., 0.202" WALL THICKNESS). PLUMB ALL POSTS. SEE POST MOUNT DETAIL FOR CRIMPING AND TRIMMING POST TO FIT DIA OF TOP RAIL. PROVIDE HOLES AS NEEDED IN POST FOR GALVANIZING DRAINAGE AND VENTING.

6. SEE HANDRAIL FABRICATION DETAILS FOR SPLICE JOINTS.

7. CENTER LINE ¾ DIA ROUND BAR EQ SPACES AT 4 ½" MAX. PLUMB ALL PICKETS.

NOTE:
IF SPLICE JOINT IS USED, REQUIRES TWO POST MINIMUM EACH SIDE

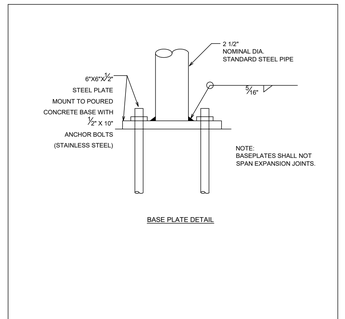
SECTION A-A

NOTES:
* WHEN NEEDED FOR ACCESSIBILITY (GRADE >5 PERCENT) OR AS NEEDED FOR PEDESTRIAN SAFETY.

* NOT TO BE USED ON BRIDGES

* ONE SHOP SPLICE PER PANEL IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.

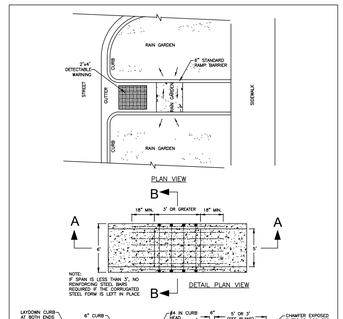
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		PEDESTRIAN ADA HANDRAIL ON SIDEWALK OPTION 3	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707-4 1 OF 2
ADOPTED			



NOTE:
BASE-PLATES SHALL NOT SPAN EXPANSION JOINTS.

BASE PLATE DETAIL

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		PEDESTRIAN ADA HANDRAIL ON SIDEWALK- OPTION 3	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707-4 2 OF 2
ADOPTED			



NOTE:
ELEVATED SIDEWALK SHALL COMPLY WITH SECTION 6 OF THE TRANSPORTATION CRITERIA MANUAL REQUIREMENTS

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		ELEVATED SIDEWALK DETAIL	
ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. SPD 660-5

INLET DIMENSIONS		
TYPE	'A'	'C'
I	SEE PLANS	48"	48"
II	SEE PLANS	36"	36"
III	SEE PLANS	24"	24"
IV	SEE PLANS	18"	18"

BAR SCHEDULE	
BAR SPACING SIZE	
A 12" O.C.	5
B 12" O.C.	5
C 12" O.C.	5
D 12" O.C.	5

INLET CAPACITIES	
TYPE	CFS W/ h = 0.50'
I	24.19
II	14.19
III	3.91
IV	2.07

INLET EQUATION

$Q = 0.6A(2gh)^{.5}$

CLOGGING FACTOR = 50%

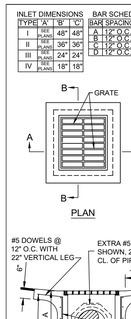
$2g = 64.4$

$h = 0.50'$

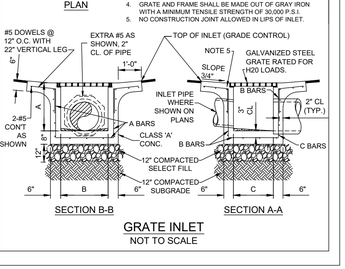
GRATE OPEN AREA CHART

GRATE SIZE	OPEN AREA (SF)	OPEN AREA W/ 50% CLOGGING FACTORS /SF
48" X 48"	14.22	7.11
36" X 36"	8.35	4.17
24" X 24"	2.30	1.15
18" X 18"	1.22	0.61

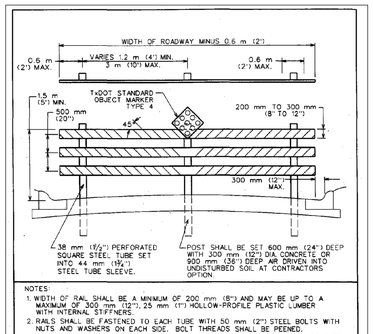
GRATES ARE QUICK SET BY DALWORTH, CONCRETE PRODUCTS, OR APPROVED EQUAL.



NOTES:
1. SEE PLANS FOR TOP OF INLET AND PIPE ELEVATIONS.
2. MATERIALS AS NOTED OR SPECIFIED.
3. SEE PLANS FOR PIPE SIZE AND ORIENTATIONS
4. GRATE AND FRAME SHALL BE MADE OF GRAY IRON WITH A MINIMUM TENSILE STRENGTH OF 30,000 P.S.I.
5. NO CONSTRUCTION JOINT ALLOWED IN LIPS OF INLET.

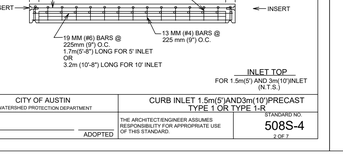


GRATE INLET
NOT TO SCALE

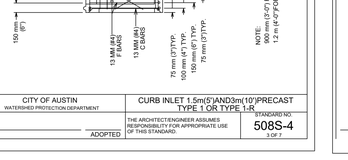


NOTES:
1. WIDTH OF RAIL SHALL BE A MINIMUM OF 200 mm (8") AND MAY BE UP TO A MAXIMUM OF 300 mm (12"). 25 mm (1") HOLLOW-PROFILE PLASTIC LUMBER WITH INTERNAL STIFFNERS.
2. RAILS SHALL BE FASTENED TO EACH TUBE WITH 50 mm (2") STEEL BOLTS WITH NUTS AND WASHERS ON EACH SIDE. BOLT THREADS SHALL BE PEENED.
3. THE RAILS SHALL HAVE 150 mm (6") WIDE REFLECTORIZED RED STRIPES OF TAPE PLACED ON 45 DEGREE SLOPES, DOWN AND TOWARD THE CENTER OF THE BARRICADE.
4. BARRICADES MAY BE CONSTRUCTED IN SECTIONS OR MAY BE CONTINUOUS ACROSS ROADWAY WIDTH. SPLICES ON CONTINUOUS RAIL. BARRICADES SHALL BE AT POSTS AND SHALL HAVE A 600 mm (2') SPLICE BLOCK ON BACK SIDE OF THE SAME MATERIAL AS RAIL.
5. 450 mm (18") DIAMOND REFLECTORIZED RED PANEL OR 450 mm (18") DIAMOND RED OR BLACK PANEL WITH NINE-75 mm (3") DIAMETER RED REFLECTORS SYMMETRICALLY PLACED AT CENTER POSTS, A MINIMUM OF 1.2 m (4') ABOVE GROUND SHALL BE USED FOR END OF ROAD MARKERS AS PER TEXAS MANUAL on UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) SECTION 3C.04.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		STREET-END BARRICADE	
Bill Gardner	3/16/07	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 803S-1
ADOPTED			



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



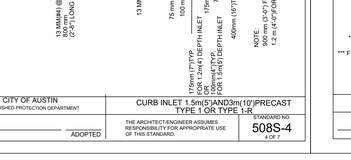
NOTES:
1. ALL CONCRETE SHALL BE TYPE "C" AS PER SPEC. 403S, CONCRETE FOR STUCTURES.
2. CHAMFER ALL EXTERNAL VISIBLE CORNERS.
3. DISSIPATOR BLOCKS REQUIRED ON DISCHARGE HEADWALLS ONLY.

D	457 mm (18")	533 mm (21")	610 mm (24")	686 mm (27")	765 mm (30")	838 mm (33")	914 mm (36")	1,067 m (42")	1,219 m (48")	1,372 m (54")	1,524 m (60")
A	225 mm (9")	250 mm (10")	300 mm (12")	350 mm (14")	375 mm (15")	400 mm (16")	450 mm (18")	525 mm (21")	600 mm (24")	675 mm (27")	750 mm (30")
B	150 mm (6")	175 mm (7")	200 mm (8")	225 mm (9")	250 mm (10")	275 mm (11")	300 mm (12")	350 mm (14")	400 mm (16")	450 mm (18")	500 mm (20")
C	2.29 m (90")	2.67 m (105")	3.05 m (120")	343 m (135")	3.81 m (150")	4.19 m (165")	4.57 m (180")	5.33 m (210")	6.10 m (240")	6.86 m (270")	7.62 m (300")
L	1.37 m (54")	1.60 m (63")	1.83 m (72")	2.06 m (81")	2.29 m (90")	2.51 m (99")	2.74 m (108")	3.20 m (126")	3.66 m (144")	4.11 m (162")	4.57 m (180")
E	300 mm (12")	350 mm (14")	400 mm (16")	450 mm (18")	500 mm (20")	550 mm (22")	600 mm (24")	700 mm (28")	800 mm (32")	900 mm (36")	1000 mm (40")

DIMENSIONS IN MILLIMETERS, METERS AND (INCHES).

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

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



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		DETECTABLE WARNING-PAVER (CITY PROPERTY/EASEMENTS)	
RECORD COPY SIGNED BY BILL GARDNER	06/21/07	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-2A 1 OF 2
ADOPTED			

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 RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9" (23 MM), A NOMINAL HEIGHT OF 0.2" (5 MM) AND A NOMINAL CENTER TO CENTER SPACING OF 2.35" (60 MM) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT (RE: ADAAG SECTION 4.29.2). MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. PAVER PATTERN SHALL BE BASKET WEAVE UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.

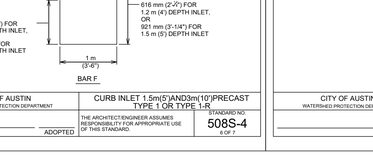
4. TYPICAL SIDEWALK WIDTHS AND CURB RADII ARE SHOWN FOR ILLUSTRATION ONLY. REFER TO THE TRANSPORTATION CRITERIA MANUAL FOR SIDEWALK WIDTHS, CURB RADII AND CURB BASIS.

5. THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE PAVERS AND THE ADJOINING SURFACE SHALL BE LIMITED TO ¼" (6MM) JOINT SIZE. GAPS LARGER THAN ¼" (6MM) MUST BE APPROVED BY THE ENGINEER OR DESIGNATION REPRESENTATIVE. ALL JOINTS BETWEEN BRICKS AND ADJOINING SURFACE SHALL BE MORTAR FILLED UNLESS DIRECTED OTHERWISE BY THE THE ENGINEER OR DESIGNATED REPRESENTATIVE.

6. MORTAR SHALL CONFORM TO STD. SPECIFICATION ITEM SECTION 403S.3.5. 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		DETECTABLE WARNING-PAVER (CITY PROPERTY/EASEMENTS)	
RECORD COPY SIGNED BY BILL GARDNER	06/21/07	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-2A 2 OF 2
ADOPTED			



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 1 OF 7

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 2 OF 7

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 3 OF 7

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 4 OF 7

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 5 OF 7

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 6 OF 7

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" AS PER ITEM 403S.
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. 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.
5. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB, IN ACCORDANCE WITH CITY OF AUSTIN STANDARD INLET DESIGN.
6. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE BY CONTRACTOR, SHAPED AS "V" SECTION.
7. THIS STANDARD COMPLIES WITH THE CITY OF AUSTIN STANDARD SPECIFICATIONS ITEM NO. 508S.
8. WHEN PLACING PRECAST INLETS IN SERIES TO CREATE A 15'-0" OR 20'-0" CURB INLET, THE CONNECTION BETWEEN INLET BOXES SHALL BE SOIL TIGHT AND FULLY CONVEY THE PEAK DESIGN FLOW FROM THE UPSTREAM INLET(S). THE 1:20 INVERT SLOPE DESCRIBED IN NOTE 6 OF THIS DETAIL SHALL EXTEND FROM THE MOST DOWNSTREAM POINT TO THE MOST UPSTREAM OF THE CONNECTED INLET BOXES. AT NO TIME CAN MORE THAN 20LF OF CURB OPENING BE CONNECTED TO A MAIN STORM DRAIN LINE WITH ONE LATERAL STORM DRAIN CONNECTION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		CURB INLET 1.5m(5')AND3m(10')PRECAST TYPE 1 OR TYPE 1-R	
ADOPTED		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-4 7 OF 7

FILTSD OVERALL\PROJECT\2023-105-AUS LTSD HS 2023 PRKNG LOT\DRAWINGS\PLANSET\54 STANDARD DETAILS.DWG, 9/29/2023, ANTHONY VINCENT

REVISION

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

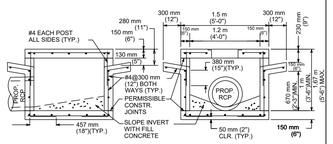
STANDARD DETAILS

MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0600 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
9/29/2023

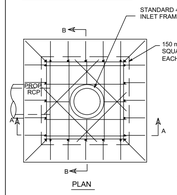
DESIGN BY : SGC
CHECKED BY : SGC
APPROVED BY : JBM
DATE : 9/29/2023

SHEET 57
OF 62



ELEVATION-SECTION A-A

ELEVATION-SECTION B-B

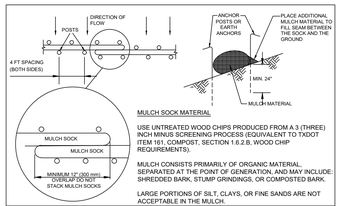


PLAN

NOTES:

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

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



MULCH SOCK MATERIAL

USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		MULCH SOCK	
RECORD COPY SIGNED BY MORGAN BYARS	08/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 648S-1

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

STANDARD DETAILS

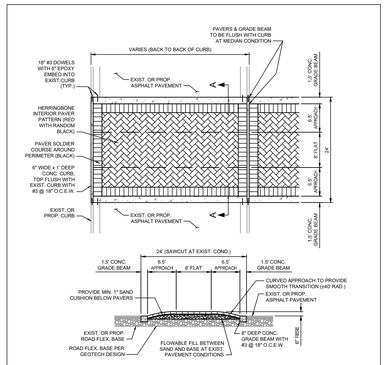
MALONE★WHEELER SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
109734
LICENSED
PROFESSIONAL ENGINEER
11-9-2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 58
OF 62

F:\LTISD OVERALL\PROJECT S\22-105-AUS LTISD HS 2023 PRKNG,LOT\DRAWINGS\PLANSET\04 STANDARD DETAILS.DWG, 9/29/2023, ANTHONY VINCENT



SECTION A-A

RAISED CROSSWALK DETAIL

NOT TO SCALE

NOTES:

1. PAVER COLORS TO BE PER LANDSCAPE ARCHITECT SHEET 114.
2. HERRINGBONE PAVER PATTERN REQUIRED IN TRAFFIC AREAS.
3. PAVERS SHALL BE 3-1/8" THICH (80M) PER MANUFACTURER FOR TRAFFIC AREAS.
4. FLOWABLE FILL SHALL BE USED TO FORM RAISED PAVER BASE AT EXISTING PAVEMENT CONDITION. FLEXIBLE BASE MAY BE USED IN PROPOSED PAVEMENT AREAS.

R-4990
HEAVY DUTY TRENCH

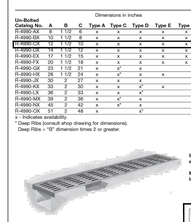
Materials: All frames and grates/lids are furnished standard in gray iron, meeting ASTM-A48 Class 35-B for heavy-duty use. For extra heavy-duty use or superior durability requirements, see our ductile iron Airport and Port Grating Series on page 286.

Neenah recommends project designers avoid the use of light duty trench installations because it is likely that applications will be subjected to heavy delivery vehicle traffic at some time. Furthermore, the use of a site could be changed to heavy duty use patterns at some unanticipated future date.

Dimensions in inches

Un-Bolted Catalog No.	A	B	C	Type A	Type C	Type D	Type E	Type P	Type Q
R-4990-AX	9	1 1/2	6	x	x	x	x	x	
R-4990-BX	13	1 1/2	8	x	x	x	x	x	
R-4990-CX	13	1 1/2	10	x	x	x	x	x	x
R-4990-DX	14	1 1/2	12	x	x	x	x	x	x
R-4990-EX	17	1 1/2	15	x	x	x	x	x	
R-4990-FX	20	1 1/2	18	x	x	x	x	x	
R-4990-GX	23	1 1/2	21	x	x*	x			
R-4990-HX	26	1 1/2	24	x	x*	x	x		x
R-4990-JX	30	2	27	x	x	x			
R-4990-KX	33	2	30	x	x	x*	x		
R-4990-LX	36	2	33	x	x	x*			
R-4990-MX	39	2	36	x	x*	x			
R-4990-NX	45	2	42	x	x*	x			
R-4990-OX	51	2	48	x		x*			

x - Indicates availability
* Deep Ribs (consult shop drawing for dimensions)
Deep Ribs - "R" dimension times 2 or greater.

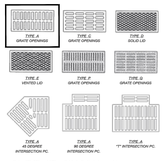




General schematic shown may not apply to all designs. Bar and rib depths, plate thicknesses and seating widths vary on different sizes and styles. If your project has design restrictions, contact your sales representative or product engineering.

Illustrating Type C trench. Trench sections are furnished in 24" standard lengths.

Note: In Type A and P grates the slots are perpendicular to the trench run. In Type C and Q grates the slots are parallel with the trench run.



Read Carefully Before Ordering

The various standard trench drains are available with a number of alternatives. It is important to examine all of the variables carefully and specify your requirements fully. Your order will be entered correctly and promptly if it includes the following information:

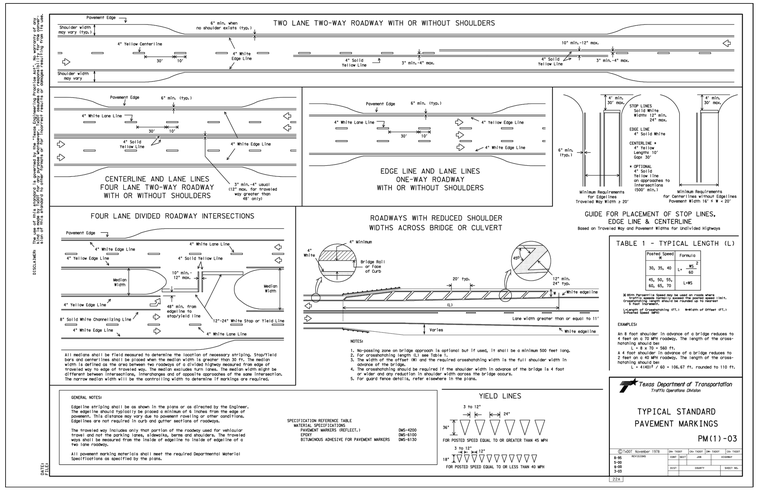
- Complete catalog number
- Frame end pieces, when required
- Type of Lid or Grate: A, C, D, E, P or Q
- Length of trench sections
- Angles and intersections *
- Load requirements

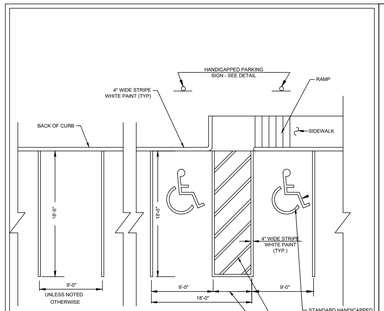
*Trenches with angles, intersections, size changes or other special requirements require detail drawings prior to ordering. Contact your sales representative or product engineering for assistance.

800-558-5070

Note: 45°, 90° and "T" available in limited sizes and types.

NOTE: NEENAH 12" TRENCH DRAIN ASSEMBLY OR APPROVED EQUAL.



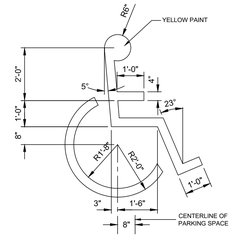


NOTES:

1. DRIVE AISLE IS MIN. 26' WIDE
2. RAMP ACCESS AND SURFACE SLOPES SHALL COMPLY WITH ADA/TAS REQUIREMENTS.
3. EACH HANDICAPPED PARKING SPACE SHALL BE SIGNED IN ACCORDANCE WITH ADA REQUIREMENTS.

TYPICAL PARKING SPACE LAYOUT

NOT TO SCALE



INTERNATIONAL HANDICAP SYMBOL

NOT TO SCALE



TABLE - D3 SIGNS

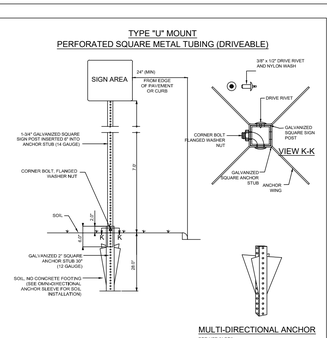
A	B	C	D	E	F	T
24"	9"	1/2"	3/4"	8"	12"	0.08"
30"	9"	1/2"	3/4"	8"	15"	0.08"
36"	9"	1/2"	3/4"	8"	18"	0.08"
42"	9"	1/2"	3/4"	8"	21"	0.08"
48"	9"	1/2"	3/4"	8"	24"	0.08"
54"	9"	1/2"	3/4"	8"	27"	0.08"

SIGN TO POLE INSTALLATION

HEIGHT	9'
LENGTH	24" MIN. 54 MAX. 6" INCREMENTS OF LENGTH
THICKNESS	0.08"
SUBSTRATE	ALUMINUM ALLOY, 6061-T-6, OR TYPE IV 5052-H38 (ASTM B-209)
SIGN FACE MATERIALS	GREEN FILM OVER HIGH INTENSITY PRISMATIC SHEETING
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON GREEN BACKGROUND WITH ½" WHITE BORDER

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		GROUND MOUNTED TRAFFIC AND STREET NAME SIGNS	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 824-2 1 OF 3

TYPE "U" MOUNT
PERFORATED SQUARE METAL TUBING (DRIVEABLE)



MULTI-DIRECTIONAL ANCHOR

FOR USE IN SOIL

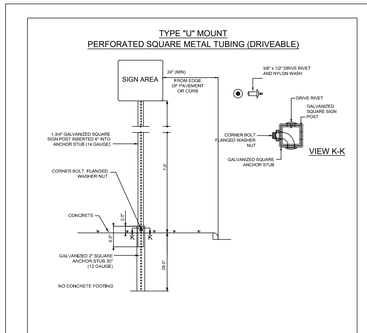
SIGN POST: 12 GAUGE 2" SQUARE x 30"

WINGS: 12 GAUGE

4" x 12" - ASTM A569 COM. QUALITY WELDED TO ALL 4 CORNERS STARTING 2 1/2" DOWN FROM TOP

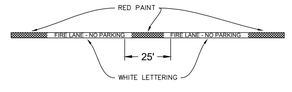
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		GROUND MOUNTED TRAFFIC AND STREET NAME SIGNS - SOIL	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 824-2 2 OF 3

TYPE "U" MOUNT
PERFORATED SQUARE METAL TUBING (DRIVEABLE)



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		GROUND MOUNTED TRAFFIC AND STREET NAME SIGNS - CONCRETE	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 824-2 3 OF 3

NOTE:
BOTH SIDES OF ALL FIRE LANES MUST BE CONTINUOUSLY MARKED WITH RED PAINT ON THE FACE AND THE TOP OF THE CURB OR, IF NO CURB EXISTS, WITH A RED STRIPE AT 4 INCH WIDE, IN 3 INCH WHITE LETTERING "FIRE LANE - NO PARKING" SHALL OCCUR AT 25 FOOT INTERVALS ALONG THE FIRE LANE.



FIRE LINE STRIPING DETAIL

N.T.S.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1
3324 RANCH ROAD 620 SOUTH

STANDARD DETAILS

MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0640 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
9/29/2023

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	9/29/2023

SHEET 59
OF 62

P:\LTISD_OVERALL\PROJECT\S22-105-AUS_LTISD HS 2023 PRKNG,OT\DRAWINGS\PLANSET\04 STANDARD DETAILS.DWG, 9/29/2023, ANTHONY VINCENT

CONTRIBUTING ZONE PLAN APPLICATION (TCEQ-10257)

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: Jesse B. Malone, P.E.

Date: 04/17/24

Signature of Customer/Agent:



Regulated Entity Name: Lake Travis High School

Project Information

1. County: Travis
2. Stream Basin: Little Barton Creek
3. Groundwater Conservation District (if applicable): N/A
4. Customer (Applicant):

   Contact Person: Robert Winovitch
   Entity: Lake Travis Independent School district
   Mailing Address: 3324 Ranch Road, 620 S
   City, State: Austin, TX Zip: 78738
   Telephone: 512-533-6000 Fax: 512-533-6001
   Email Address: winovitchr@ltisdschools.org

5. Agent/Representative (If any):

   Contact Person: Jesse B. Malone, P.E.
   Entity: Malone Wheeler Inc.
   Mailing Address: 5113 southwest Parkway, Suite 260
   City, State: Austin, TX Zip: 78735
   Telephone: 512-899-0601 Fax: 512-899-0655
   Email Address: jessem@malonewheeler.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 Lakeway.
   ☐ 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.

   Lake Travis High School - 3324 Ranch Road 620 S, Austin, TX 78738

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: Existing Educational Institution

12. The type of project is:

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

13. Total project area (size of site): 124.44 Acres

Total disturbed area: 6.79 Acres

14. Estimated projected population: N/A

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

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	***Sq. Ft.***	***Sq. Ft./Acre***	***Acres***
Structures/Rooftops		÷ 43,560 =	
Parking		÷ 43,560 =	
Other paved surfaces	2,118,323	÷ 43,560 =	48.63
Total Impervious Cover	2,118,323	÷ 43,560 =	48.63

Total Impervious Cover 48.63 **÷ Total Acreage** 124.44 **X 100 =** 39.08% **Impervious Cover**

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

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

For Road Projects Only

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

☒ N/A

18. Type of project:

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

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

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

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

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

21. Pavement Area:

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

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

☒ N/A

26. Wastewater will be disposed of by:

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

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

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

☒ Sewage Collection System (Sewer Lines):

The sewage collection system will convey the wastewater to the Travis County Water Control District No. 17 (name) Treatment Plant. The treatment facility is:

☒ Existing.

☐ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

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

☒N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

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

Total x 1.5 = _____ Gallons

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

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

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

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

Table 3 - Secondary Containment

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

Total: _____ Gallons

30. Piping:

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

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

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

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

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

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

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

Site Plan Requirements

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

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

    Site Plan Scale: 1" = 120'.

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 Map No. 48453C0405J dated January 22, 2022 (Travis County).

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

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

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

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

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

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

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

42. ☐ Surface waters (including wetlands).

    ☒ N/A

43. ☐ Locations where stormwater discharges to surface water.

    ☐ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

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

45. ☐ Permanent aboveground storage tank facilities.

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

46. ☒ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

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

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

☐ N/A

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

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

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

☐ N/A

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

☐ N/A

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

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

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

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

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

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

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

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

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

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

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

    ☐ N/A

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

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

☐ N/A

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

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

☐ N/A

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

☒ N/A

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

☐ N/A

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

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

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

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

Administrative Information

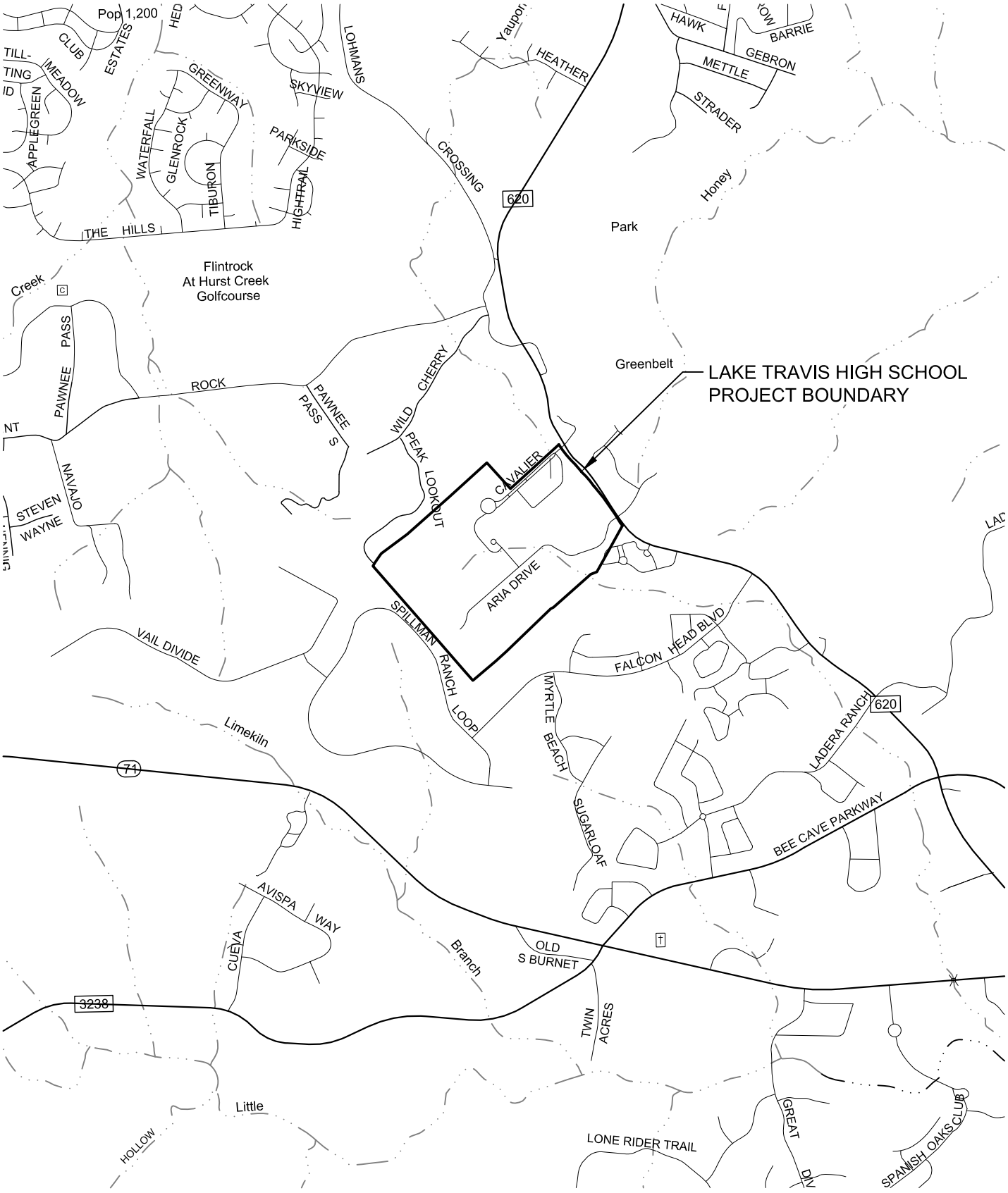
61. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.

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

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

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

CONTRIBUTING ZONE PLAN APPLICATION
ATTACHMENT A – ROAD MAP



N

0 2000'

SCALE: 1" = 2000'

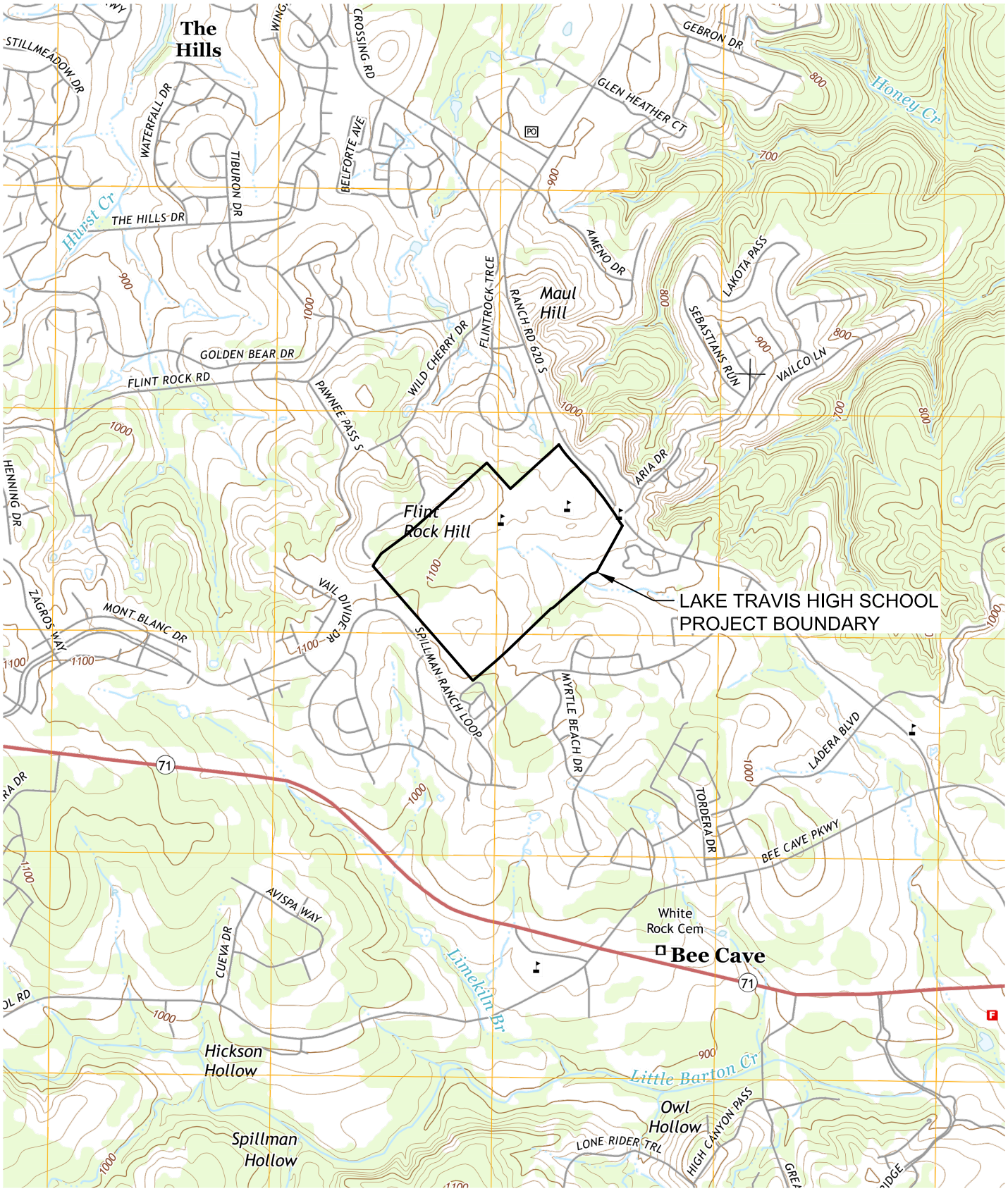
ROAD MAP

MALONE ★ WHEELER
SINCE INC. 1995

CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT

5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

CONTRIBUTING ZONE PLAN APPLICATION
ATTACHMENT B – USGS QUADRANGLE MAP



N

0 2000'

SCALE: 1" = 2000'

USGS MAP

QUADRANGLE: BEE CAVE

MALONE ★ WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

CONTRIBUTING ZONE PLAN APPLICATION
ATTACHMENT C – PROJECT NARRATIVE

CONTRIBUTING ZONE PLAN APPLICATION

ATTACHMENT C - Project Narrative

The improvements proposed by this project fall within the limits of the 155.74-acre Lake Travis High School property. The property has been developed in several stages as the result of several projects being constructed over a long period of time. This property is split between two drainage basins, one to the north and one to the south. Each basin drains to an existing detention pond. The northern basin lies outside of the Edwards Aquifer Contributing Zone. The southern basin lies within the Contributing Zone and totals 124.45 acres.

This application is a proposed modification to a previously modified Contributing Zone Plan approved April This application is a proposed modification to a previously modified Contributing Zone Plan approved March 5, 2024, for Lake Travis High School. The original CZP was approved in 2019. As part of the previously approved modification plan, an existing sand filter pond is being converted to a batch detention pond and one of the existing ponds is being removed. That project is currently under construction as approved.

This new modification includes two projects.

One project is an addition to the agriculture (Ag) facilities which include a new pig barn, expansion to the existing welding shop, and a fire access drive to serve the new and existing barns. This project will add 0.29 acres of impervious to the site. The runoff from this project will be collected via storm sewer and routed to the sites existing detention pond but will not be treated by a permanent BMP. Previously untreated impervious cover will be treated to offset the TSS created by this project.

The other project includes converting the existing grass softball, baseball, and multisport fields to synthetic turf. This turf was designed similarly to the existing turf field on campus with rock with an uncompacted base and an underdrain stormwater system to detain the water to reduce the peak runoff to the same rates as existing conditions. 4.39 acres of turf are proposed.

No changes to the previously approved BMPs are proposed.

CONTRIBUTING ZONE PLAN APPLICATION ATTACHMENT D – FACTORS AFFECTING SURFACE WATER QUALITY

CONTRIBUTING ZONE PLAN APPLICATION

ATTACHMENT D - Factors Affecting Surface Water Quality

The proposed improvements will contain additional asphalt pavement drives & parking lots, concrete sidewalks, storm drainage structures, driveways and detention structures that will increase the impervious cover for the site and school campus. Due to the impervious cover areas, potential factors could affect surface water and groundwater quality. They are as follows:

1. Driveways, streets, drives and parking lots may potentially collect fluids such as oil, fuel, etc. from vehicles and can be conveyed downstream of the site.
2. Trash may contain commercial products or chemicals that could potentially leak and be conveyed downstream of site.
3. During construction activities, vehicle and equipment maintenance can generate pollutants that can also be conveyed downstream of the site.
4. During construction activities, soil disturbing activities can expose pollutants and be conveyed downstream.
5. During construction activities, materials used for construction can be moved downstream due to surface stormwater and distribute pollutants.

CONTRIBUTING ZONE PLAN APPLICATION ATTACHMENT E – VOLUME AND CHARACTER OF STORMWATER

CONTRIBUTING ZONE PLAN APPLICATION

ATTACHMENT E - Volume and Character of Stormwater

Following the improvements shown in the attached construction plans, there will be 48.63 acres of impervious cover at Lake Travis High School within the contributing zone. Runoff will be conveyed to the existing detention ponds for a majority of the site via overland flow and storm sewer systems. The existing detention ponds will reduce the runoff from the campus to be less than predeveloped flows. The type of pollutants produced by this campus will be consistent with other school facilities.

CONTRIBUTING ZONE PLAN APPLICATION ATTACHMENT J – BMPs FOR UPGRADIENT STORMWATER

CONTRIBUTING ZONE PLAN APPLICATION

ATTACHMENT J – BMPs for Upgradient Stormwater

In accordance with Texas Commission on Environmental Quality (TCEQ), permanent BMPs or measures are required to prevent pollution of surface water, groundwater or stormwater that originates upgradient from this site or flows across this site. The proposed BMP TSS calculation will incorporate this up-gradient drainage area.

CONTRIBUTING ZONE PLAN APPLICATION ATTACHMENT K – BMPs FOR ON-SITE STORMWATER

CONTRIBUTING ZONE PLAN APPLICATION

ATTACHMENT K – BMPs for On-Site Stormwater

Due to the proposed impervious cover for the school campus improvements being over the 20% threshold, permanent BMPs and measures will be required to prevent pollution caused by the contaminated stormwater runoff that originates from on-site and flows off site. The permanent BMPs and measures for the proposed project are the following:

- One proposed and one existing batch detention pond that captures surface stormwater and treats pollutants during a specific time and discharges flows at a rate in which pollutants are captured within the batch detention pond.

Additionally, temporary BMPs and measures will be implemented during the construction of the school campus improvements to prevent pollution from being conveyed downstream of the construction activity. The temporary BMPs and measures are as follows:

- Concrete Washout Areas: A pit containment area to prevent or reduce the discharge of pollutants from concrete waste.
- Silt Fence: A barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site.
- Rock Berms: A structure of 3-to-5-inch diameter rock secured with a woven wire sheath to serve as a check dam in areas of concentrated flow, to intercept sediment-laden runoff, detain the sediment and release of the water in sheet flow.
- Seeding: Seeding of disturbed areas to stabilize grades and minimize silt erosion; applied to areas expected to not have any construction activity for at least 21 days.

CONTRIBUTING ZONE PLAN APPLICATION
ATTACHMENT L – BMPs FOR SURFACE STREAMS

CONTRIBUTING ZONE PLAN APPLICATION

ATTACHMENT L – BMPs for Surface Streams

As stated in the previous attachment sections and on the construction plans, temporary and permanent BMPs & measures will be utilized for the proposed project site to prevent pollution from entering surface streams.

Temporary BMPs to be implemented are concrete washout areas, silt fences, rock berms and seeding. These BMPs will mitigate pollution and sedimentation from being conveyed offsite or downstream to surface streams.

Permanent BMPs to be implemented for the proposed improvements are one existing and one proposed batch detention pond & two existing sand filter systems. These BMPs will permanently mitigate pollution and sediments from being conveyed offsite or downstream to surface streams.

CONTRIBUTING ZONE PLAN APPLICATION
ATTACHMENT M – CONSTRUCTION PLANS

CONTRIBUTING ZONE PLAN APPLICATION

ATTACHMENT M – Construction Plans

The construction plans and design calculations for the modification of the existing permanent BMP and measures for the proposed project have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. The design calculations, construction notes, proposed BMP measures and appropriate details are show on the construction plans.

The construction plans are provided following this page.

ENGINEER'S CERTIFICATION:

I, THE UNDERSIGNED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, THAT ALL REQUIRED DOCUMENTS ENCLOSED ARE ACCURATE AND COMPLETE AND THAT THE PROVISIONS CONTAINED ON THIS PLAN COMPLY WITH THE DEVELOPMENT ORDINANCES AND DRAINAGE POLICIES ADOPTED BY THE CITY OF LAKEWAY AND OTHER FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS IN EFFECT ON THIS DATE.

SUBMITTED FOR APPROVAL BY
MALONE/WHEELER, INC.

4/17/2024
DATE

JESSE B. MALONE
REGISTERED PROFESSIONAL ENGINEER NO. 108734
MALONE/WHEELER, INC.
5113 SOUTHWEST PARKWAY,
SUITE 260
AUSTIN, TEXAS 78735
OFFICE: 512-899-0601
FAX: 512-899-0655
FIRM REGISTRATION NO. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER

REVIEWED BY:

CITY OF LAKEWAY ENGINEER — DATE

CITY OF LAKEWAY SITE DEVELOPMENT PERMIT NUMBER

TRAVIS COUNTY TRANSPORTATION AND NATURAL RESOURCES

TRAVIS COUNTY TRANSPORTATION AND NATURAL RESOURCES PERMIT NUMBER

NO REVIEW REQUIRED PER EMAIL FROM ESD NO. 6 ON 04/08/24

TRAVIS COUNTY EMERGENCY SERVICES DISTRICT NO. 6 — DATE

TRAVIS COUNTY W.C.I.D. #17 — DATE

NET SITE AREA CALCULATIONS			
SLOPE CATEGORY	**GROSS SITE AREA ACRES**	**ALLOWABLE PERCENTAGE**	**NET SITE AREA ACRES**
0 - 15%	136.02	100	136.02
15 - 25%	12.67	40	5.07
25 - 35%	5.22	20	1.04
> 35%	1.83	0	0.00
TOTALS	**155.74**		**142.13**

IMPERVIOUS COVER CALCULATIONS		
ITEM	IMPERVIOUS COVER	
	ACRES	SQUARE FEET (SQ. FT.)
EXISTING	58.55	2,548,098
PROPOSED IMPERVIOUS COVER (TURF)	4.39	191,328
TOTAL	62.94	2,739,426

IMPERVIOUS COVER/NET SITE AREA CALCULATIONS			
ALLOWABLE IMPERVIOUS COVER	50.00%	71.07 AC	3,095,809 SF
EXISTING IMPERVIOUS COVER	41.19%	58.55 AC	2,548,098 SF
PROPOSED IMPERVIOUS COVER (TURF)	3.09%	4.39 AC	191,328 SF
TOTAL	44.28%	62.94 AC	2,739,426 SF

IMPERVIOUS COVER NOTE
EXISTING IMPERVIOUS COVER IS THE IMPERVIOUS COVER ON SITE FOLLOWING "LTHS 2024 AG IMPROVEMENTS PROJECT", TRAVIS COUNTY PERMIT #24-46619

PRE-CONSTRUCTION NOTES:

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

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

SPECIAL PRE-CON NOTES:

1. PROVIDE 48 HR. MINIMUM NOTICE TO SCHEDULE THE PRE-CON MEETING.
2. PROVIDE A 1/2 SIZE SET OF PLANS FOR THE INSPECTOR AT THE PRE-CON.
3. PROVIDE AN ANTICIPATED CONSTRUCTION SCHEDULE AT THE PRE-CON.
4. BRING YOUR SWP3 FOR COMPLETENESS CHECK AT THE PRE-CON.

ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE PLANS APPROVED BY TRAVIS COUNTY.

SCHEDULE YOUR PROJECTS PRE-CONSTRUCTION MEETING THROUGH MYPERMITNOW.ORG ACCOUNT AFTER THE INITIAL 3RD PARTY SWP3 INSPECTION REPORT HAS BEEN UPLOADED AND ALL PERMITS AND NOTICES HAVE BEEN POSTED, THEN FOLLOW UP WITH EMAILS TO THE ENVIRONMENTAL INSPECTOR AT ENV-INSPECTION@TRAVISCOUNTYTX.GOV.

I, _____ HEREBY ACKNOWLEDGE THAT I HAVE READ AND UNDERSTOOD PLAN NOTES ON ALL ATTACHED DRAWINGS REGARDING MY RESPONSIBILITIES AS OWNER.

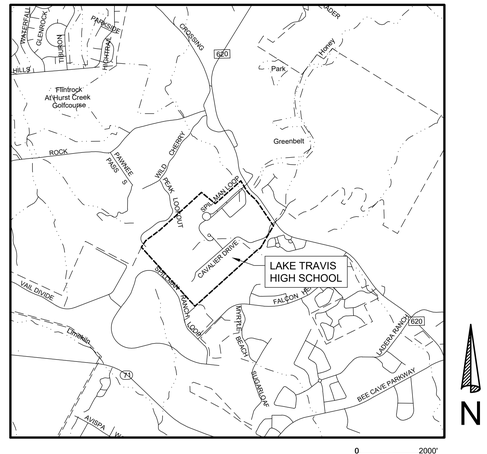
DATE: _____ _____
OWNER

NO.	REVISION DESCRIPTION	REVISE (R), ADD (A), VOID (V) - SHEET #	TOTAL # SHEETS	NET CHANGE IMP. COVER SQUARE FEET (SF)	TOTAL SITE IMP. COVER SF %	APPROVED BY	DATE	WCID-17	TRAVIS COUNTY

CONSTRUCTION PLANS
FOR
LAKE TRAVIS HIGH SCHOOL 2024 SYNTHETIC TURF BASEBALL, SOFTBALL AND MULTI PURPOSE FIELD
3324 RANCH RD 620 SOUTH, AUSTIN TEXAS 78738

LEGAL DESCRIPTION

1. 23.460 ACRES OUT OF THE ALBERT BECK SURVEY NO. 54, ABSTRACT NO. 2241 IN TRAVIS COUNTY, TEXAS, BEING A PORTION OF THAT CERTAIN 23.460 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 7941, PAGE 395 OF THE DEED RECORDS OF TRAVIS COUNTY, TEXAS.
2. 55.000 ACRES OUT OF THE ALBERT BECK SURVEY NO. 54, ABSTRACT NO. 2241 IN TRAVIS COUNTY, TEXAS, BEING A PORTION OF THAT CERTAIN 55.000 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 7941, PAGE 395 OF THE DEED RECORDS OF TRAVIS COUNTY, TEXAS.
3. 24.940 ACRES OUT OF THE JOSEPH BECK SURVEY NO. 524, ABSTRACT NO. 2733 IN TRAVIS COUNTY, TEXAS, BEING ALL OF THAT CERTAIN 24.940 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 9757, PAGE 601 OF THE REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.
4. 25.000 ACRES OUT OF THE JOSEPH BECK SURVEY NO. 524, ABSTRACT NO. 2733 IN TRAVIS COUNTY, TEXAS, BEING ALL OF THAT CERTAIN 25.000 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 13258, PAGE 3066 OF THE REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.
5. 27.338 ACRES, LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT DOCUMENT NO. 2000171882 REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.
6. TOTAL ACRES IN PROJECT = 155.738.



LOCATION MAP

DATE OF SUBMITTAL:
APRIL 17, 2024

GENERAL PLAN NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. THIS PROJECT IS PARTIALLY LOCATED IN THE LITTLE BARTON CREEK WATERSHED.
3. ACCORDING TO THE FEDERAL FLOOD INSURANCE ADMINISTRATION FIRM PANEL NO. 48453C0405J, DATED JANUARY 22, 2022, FOR TRAVIS COUNTY, TEXAS, NO PORTION OF THIS TRACT IS WITHIN A 100-YEAR FLOODPLAIN.
4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND WERE COMPILED FROM INFORMATION PROVIDED BY THE OWNER & FROM AN ABOVE GROUND SITE SURVEY. NOT ALL UNDERGROUND UTILITIES MAY BE SHOWN THEREFORE THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
5. THE AREA WITHIN THE LIMITS OF CONSTRUCTION IS 4.34 ACRES. THE TOTAL DISTURBED AREA IS 4.34 ACRES.
6. A TPDES/SWPPP IS REQUIRED PRIOR TO STARTING CONSTRUCTION.
7. WATER, WASTEWATER AND POTABLE IRRIGATION IMPROVEMENTS ARE PERMITTED BY WCID 17.
8. THIS PROJECT IS PARTIALLY LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE.
9. THE BERM AND OUTLET STRUCTURE FOR EXISTING DETENTION POND 2 HAS BEEN ADDED TO THE TEXAS INVENTORY OF DAMS AND ASSIGNED THE IDENTIFIER TX09744.
10. DOWNSTREAM RECEIVING WATERS: BARTON CREEK (SEGMENT ID 1430)
11. THE OWNER'S ENGINEER WILL MAKE PERIODIC SITE VISITS AND OBSERVATIONS DURING CONSTRUCTION TO ENSURE ADEQUACY OF THE DESIGN AND THE SAFETY OF STRUCTURES IN COMPLIANCE WITH THE ISSUANCE OF THE CONSTRUCTION SUMMARY REPORT AND ENGINEERING CONCURRENCE LETTER AS REQUIRED AS PART OF THE PROJECT CLOSE-OUT PROCESS.
12. ALL STRUCTURAL FIELD CHANCES REQUIRE A PLAN REVISION APPROVAL IN WRITING BEFORE COMMENCEMENT OF THE WORK.
13. THE ENGINEER WHO PREPARED THESE PLANS IS RESPONSIBLE FOR THEIR ADEQUACY. IN APPROVING THESE PLANS, TRAVIS COUNTY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

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OWNER:
LAKE TRAVIS INDEPENDENT
SCHOOL DISTRICT
16101 HWY 71 WEST, BLDG. B
AUSTIN, TX 78738
(512) 533-6039

TURF ENGINEER:
TALON ENGINEERING
CIVIL ENGINEERING & SPORTS DESIGN CONSULTANTS
1118 WOLFS KNOLL
HOUSTON, TX 77094
832-287-9874

CONTRACTOR:
HELLAS CONSTRUCTION, INC
12000 WEST PARMER LANE
AUSTIN, TX 78613
(512) 533-6100

ENGINEER

MALONE★WHEELER
SINCE INC. 1995

CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT

5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

CONSTRUCTION PLANS
LAKE TRAVIS HIGH SCHOOL SYNTHETIC TURF BASEBALL, SOFTBALL AND MULTI PURPOSE FIELD

CONSTRUCTION SEQUENCING:

1. 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.

a. 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;

b. UPLOAD THE QUALIFIED INSPECTOR'S CERTIFIED SWP3 INSPECTION REPORT TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY; AND

c. 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.

2. 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)

3. INSPECTION 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.

4. 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:

a. 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.

b. 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)

5. CONSTRUCT 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.

6. 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-POUR INSPECTION OF THE DRIVEWAY THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY GIVING AT LEAST 3 BUSINESS DAYS NOTIFICATION. (PRIORITY INSPECTION).

7. PERFORM TEMPORARY STABILIZATION IN ALL DISTURBED AREAS THAT HAVE CEASED CONSTRUCTION ACTIVITIES FOR 14 DAYS OR LONGER.

8. 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.

9. COMPLETE PERMANENT WATER QUALITY CONTROLS. BEGIN COMPLETION OF PERMANENT WATER QUALITY CONTROL(S) AND INSTALL THE UNDERDRAIN PER APPROVED PLANS, WHEN APPLICABLE.

a. REMOVE CONSTRUCTION SEDIMENT, RE-ESTABLISH THE BASIN SUBGRADE, AND INSTALL UNDERDRAIN PIPING.

b. 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).

10. COMPLETE CONSTRUCTION SITE IMPROVEMENTS AND FINAL STABILIZATION PER THE APPROVED PLANS.

11. 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)

12. 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 DEVELOPERS CONTRACT TO THE COUNTY TO REQUEST CONDITIONAL ACCEPTANCE FOR THE 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)

BEFORE PROJECT APPROVAL/ISSUANCE OF THE CERTIFICATE OF COMPLETION (COC) AND FISCAL RELEASE, THE FOLLOWING MUST BE COMPLETED:

THE OWNER MUST COMPLETE AND SUBMIT A PWQC MAINTENANCE PERMIT APPLICATION AND A PWQC MAINTENANCE PLAN TO POSTINSPECTION@TRAVISCOUNTYTX.GOV FOR REVIEW AND APPROVAL.

ONCE THE PWQC MAINTENANCE PLAN DOCUMENT RECEIVES REVIEW APPROVAL, THE DOCUMENT WILL BE RETURNED TO BE SEALED AND SIGNED (NOTARIZED) BY THE DESIGN ENGINEER AND LEGALLY RECORDED WITH THE COUNTY CLERK'S OFFICE. A DIGITAL RECORDED COPY MUST BE PROVIDED.

UPON REQUEST, A PWQC PERMIT APPLICATION AND/OR A TEMPLATE FOR A PWQC MAINTENANCE PLAN WILL BE PROVIDED OR UPLOADED TO THE MYPERMITNOW.ORG ACCOUNT.

THE PWQC MAINTENANCE PERMIT MUST BE SIGNED BY THE SITE OWNER ONCE ALL DOCUMENTS HAVE BEEN RECEIVED.

AMERICANS WITH DISABILITIES ACT:

THE DESIGN ENGINEER IS RESPONSIBLE FOR SUBMITTING THE DRAWINGS TO THE ARCHITECTURAL BARRIERS DIVISION OF THE TEXAS DEPT. OF LICENSING AND REGULATION FOR REVIEW AND APPROVAL OF THE PLANS IN ACCORDANCE WITH THE ARCHITECTURAL BARRIERS ACT. THE ENGINEER IS RELIEVED OF THE SUBMITTAL RESPONSIBILITY IF A REGISTERED ARCHITECT HANDLES THE SUBMITTAL. HOWEVER, THE GRADING AND SITE PLAN MUST COMPLY WITH THE REFERENCED ACT, WHICH IS THE ENGINEER'S RESPONSIBILITY.

IRRIGATION NOTES: (IN ADDITION TO DESIGNER'S NOTES)

1. ALL MATERIALS AND INSTALLATIONS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE CITY'S ORDINANCES, LOCAL PLUMBING CODE AND THE STATE OF TEXAS.
2. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE PERSON WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DEISGNER.

BENCHMARKS:

PROJECT SPECIFIC (PROVIDED BY DELTA SURVEY)

BM #1 - SQUARE CUT ON TOP OF CURB IN MEDIAN, ELEV = 1064.57

BM #2 - COTTON SPINDLE IN ZIP LINE POLE, ELEV = 1093.41

TBM #3 - L CUT ON CURB, ELEV. = 1111.48

TBM #4 - SQUARE CUT ON CURB, ELEV = 1118.06'

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CONTRIBUTING ZONE PLAN - GENERAL CONSTRUCTION NOTES

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE:

   - THE NAME OF THE APPROVED PROJECT;
   - THE ACTIVITY START DATE; AND
   - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN (CZP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ONSITE.

3. NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.

4. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

5. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.

6. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.

7. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.

8. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON-SITE MUST HAVE PROPER E&S CONTROLS.

9. IF PORTIONS OF THE SITE WILL HAVE A CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.

10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:

    - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
    - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
    - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

11. THE HOLDER OF ANY APPROVED CZP MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:

    A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
    B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
    C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR
    D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE PLAN.

AUSTIN REGIONAL OFFICE
12100 PARK 35 CIRCLE, BUILDING A
AUSTIN, TEXAS 78753-1808
PHONE (512) 339-2929
FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

TREE PROTECTION NOTES:

1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED.
2. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
3. 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.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIPLINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIPLINE), OR, FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:

   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   B. ROOT ZONE DISTURBANCE DUE TO GRADE CHANGES;
   C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.

7. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:

   A. 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 BEHIND THE AREA IN QUESTION;
   B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIPLINE, 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);
   C. WHERE TREES ARE ARE CLOSE TO PROPOSED BUILDINGS. ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN FENCE AND THE BUILDING;

8. 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 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
9. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
10. 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 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
11. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
12. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.).
13. ALL PRUNED LIMBS OF OAK TREES SHALL BE PAINTED WITH PRUNING SEAL IMMEDIATELY AFTER CUTTING. ANY BROKEN LIMBS OF OAK TREES SHALL BE CUT CLEAN AND PAINTED WITH PRUNING SEAL IMMEDIATELY AFTER CUTTING.
14. 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.
15. PRIOR TO CONSTRUCTION, ALL TREES OVER ROADWAYS AND CONSTRUCTION AREAS MAY BE TRIMMED TO 13 ½ -FEET IN HEIGHT.

UTILITY COMPANIES

CONTRACTORS MUST BE ABLE TO CERTIFY THAT ALL UTILITY COMPANIES HAVE BEEN NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED CUTS OR TRENCHES IN THE STREET RIGHT-OF-WAYS OR PUBLIC UTILITY EASEMENTS, AND THAT UTILITY LINES IN THE IMMEDIATE VICINITY OF THE PROJECT HAVE BEEN IDENTIFIED AND, IF NECESSARY, LOCATED AND MARKED ON THE GROUND AT A SITE BEFORE YOU DIG IN ANY PUBLIC UTILITY EASEMENT OR STREET RIGHT-OF-WAY. "ONE-CALL" THROUGH THE CITY OF AUSTIN OR SOUTHWESTERN BELL DOES NOT COVER ALL OF THE UTILITY COMPANIES IN THE CITY OF LAKEWAY. UTILITY PROVIDERS FOR THIS SITE INCLUDE BUT ARE NOT LIMITED TO:

AT&T
FOR PRE-CONSTRUCTION MEETINGS FOR ALL DEVELOPMENT IN LAKEWAY PROPER CALL- 870-5185. FOR PRE-CONSTRUCTION MEETING FOR DEVELOPMENT ALONG RR620 IN LAKEWAY (INCLUDING ETJ) CALL - 870-5214. FOR UTILITY LINE LOCATION CALL - 1-800-344-8377.

AUSTIN ENERGY
FOR PRE-CONSTRUCTION MEETINGS CALL - 505-7649. FOR UTILITY LINE LOCATION CALL - 505-7542.

TIME WARNER CABLE
FOR PRE-CONSTRUCTION MEETINGS CALL - 485-6433. FOR UTILITY LINE LOCATION CALL - 485-6356.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENTS DISTRICT #17
FOR PRE-CONSTRUCTION MEETINGS CALL - 266-1111 EXT 13 FOR UTILITY LINE LOCATION CALL - 266-1111 EXT 10

TRAVIS COUNTY SWP3 NOTES:

1. ALL CONSTRUCTION ACTIVITIES DISTURBING ONE ACRE AND GREATER MUST OBTAIN STORM WATER DISCHARGE AUTHORIZATION FRO M THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THROUGH COMPLIANCE WITH TCEQ'S GENERAL PERMIT #TXR150000. THE PRIMARY CONSTRUCTION SITE OPERATOR(S) (PCSO) MUST PREPARE AND IMPLEMENT AN SWP3 THROUGHOUT CONSTRUCTION WHICH INCLUDES THE EROSION AND SEDIMENT CONTROL (ESC) PLAN AND OTHER BEST MANAGEMENT PRACTICES (BMPS) SPECIFIED IN THESE PLANS APPROVED BY TRAVIS COUNTY.
2. SMALL CONSTRUCTION ACTIVITIES DISTURBING BETWEEN ONE AND FIVE ACRES SHALL POST A TCEQ CONSTRUCTION SITE NOTICE (CSN) ON SITE PRIOR T O COMMENCING CONSTRUCTION. LARGE CONSTRUCTION ACTIVITIES DISTURBING FIVE ACRES OR GREATER SHALL SUBMIT A NOTICE OF INTENT (NOI) TO TCEQ AND POST THE NOI ON SITE AT LEAST SEVEN (7) DAYS PRIOR TO BEGINNING CONSTRUCTION. NOTICES POSTED MUST BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. TRAVIS COUNTY IS OPERATOR OF THE SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) RECEIVING STORM WATER DISCHARGES FROM THIS PROJECT, UNDER TCEQ MS4 PERMIT #TXR040327. UPON REQUEST BY TRAVIS COUNTY, THE PCSO SHALL PROVIDE A COPY OF THE NOI AND CSN. THE SWPPP AND REGULARLY PROVIDE COPIES OF THE SWP3 INSPECTION REPORTS, REQUIRED WEEKLY, OR BI -WEEKLY AND AFTER EVERY RAIN EVENT .5 INCHES OR GREATER.
4. THE PCSO MUST REVISE THE SWP3 WHENEVER CHANGING SITE CONDITIONS, OR A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS NOT PREVIOUSLY ADDRESSED; OR WHEN RESULTS OF INSPECTIONS BY SITE OPERATORS, TRAVIS COUNTY, TCEQ, OR OTHER LOCAL AGENCY AUTHORIZED TO APPROVE ESC PLANS INDICATE THE SWP3 IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS IN DISCHARGES FROM THE SITE.
5. TEMPORARY OR PERMANENT EROSION CONTROL AND STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE, AND AS SPECIFIED ON THE PLANS, IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. THESE MEASURES MUST BE INITIATED NO LATER THAN 14 DAYS AFTER CESSATION, UNLESS CONSTRUCTION ACTIVITIES WILL RESUME WITHIN 21 DAYS IN THE AREA.
6. UPON FINAL STABILIZATION OF THE ENTIRE SITE, INCLUDING COMPLETION OF ALL STABILIZATION REQUIREMENTS OF THE APPROVED PLANS AND PERMIT AS VERIFIED BY TRAVIS COUNTY, THE PCSO SHALL SUBMIT A NOTICE OF TERMINATION (NOT) TO TCEQ.

CITY OF LAKEWAY GENERAL NOTES

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLAN SET. ANY SUBSEQUENT CHANGES WILL REQUIRE A PLAN REVISION AND APPROVAL FROM THE CITY PRIOR TO CONSTRUCTION.
3. THE CITY OF LAKEWAY 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.
4. PRIOR TO THE ISSUANCE OF A CERTIFICATE OF ACCEPTANCE, THE DESIGN ENGINEER MUST CERTIFY IN WRITING THAT ALL WORK HAS BEEN COMPLETED PER THE APPROVED PLAN SET.
5. PRIOR TO OCCUPANCY OF ANY BUILDING, ALL CITY OF LAKEWAY SITE AND BUILDING COMMENTS MUST BE CLEARED, THE WASTEWATER DISPOSAL SYSTEM ACCEPTED BY THE PROPER AUTHORITY, ALL REQUIRED EASEMENTS AND RESTRICTIVE COVENANTS MUST BE RECORDED, AND A CERTIFICATE OF ACCEPTANCE AND CERTIFICATE OF OCCUPANCY MUST BE ISSUED BY THE CITY OF LAKEWAY.
6. THE PROPERTY OWNER IS RESPONSIBLE FOR PROPER OPERATION AND MAINTENANCE OF ON-SITE STORMWATER DETENTION AND WATER QUALITY PONDS AND RELATED FACILITIES.
7. THE PROPERTY OWNER IS RESPONSIBLE FOR PROPER MAINTENANCE OF OFF-SITE STORMWATER AND DRAINAGE FACILITIES CONSTRUCTED AND PERMITTED WITH THIS PROJECT.
8. CONTRACTOR IS RESPONSIBLE FOR CONTACTING UTILITY COMPANIES TO VERIFY LOCATIONS OF ALL UTILITIES. THE "ONE-CALL" SYSTEM DOES NOT APPLY TO ALL UTILITY COMPANIES IN LAKEWAY'S JURISDICTION.
9. DESIGN PROCEDURES ARE IN COMPLETE COMPLIANCE WITH THE CITY OF LAKEWAY DEVELOPMENT ORDINANCE AND THE CITY OF AUSTIN DRAINAGE AND ENVIRONMENTAL CRITERIA MANUALS, AS ADOPTED BY THE CITY OF LAKEWAY.
10. A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE BEFORE ISSUANCE OF A PERMIT PRIOR TO ANY CONSTRUCTION.
11. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
12. CONTRACTOR IS FULLY RESPONSIBLE FOR FOLLOWING THE REQUIREMENTS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR ALL SIGNAGE AND WORK IN A PUBLIC OR PRIVATE RIGHT-OF-WAY.
13. ALL SITE WORK MUST ALSO COMPLY WITH THE CITY'S ENVIRONMENTAL REQUIREMENTS.
14. TREES & BRUSH CLEARED FROM A SITE SHALL BE MULCHED OR HAULED OFF-SITE WITHIN 48 HOURS OF BEING CUT. FAILURE TO DO SO SUBJECTS THE ENTIRE PROJECT TO A RED TAG UNTIL THE MULCHING OR HAULING IS COMPLETE.
15. SAFETY RAILING SHALL BE PROVIDED FOR ALL VERTICAL ELEVATION CHANGES FROM 30-INCHES IN HEIGHT UP TO AND INCLUDING 5'-11" IN HEIGHT. ANY ELEVATION DIFFERENCE 6-FEET AND GREATER MUST HAVE A GUARDRAIL (WROUGHT IRON FENCE).
16. EXTERIOR LIGHTING SHALL BE HOODED OR SHIELDED TO DIRECT LIGHTING DOWN AND AWAY FROM VIEW OF ADJACENT PROPERTIES.
17. PROJECT SHALL COMPLY WITH THE CITY OF LAKEWAY SIGN ORDINANCE.
18. PRIOR TO ISSUING BUILDING PERMITS, APPROVALS FROM VARIOUS OTHER AGENCIES MAY BE REQUIRED BY THE CITY OF LAKEWAY.
19. A SET OF APPROVED CONSTRUCTION DRAWINGS AND A COPY OF THE SWPPP (STORM WATER POLLUTION PREVENTION PLAN) REPORT MUST BE AVAILABLE AND LOCATED AT THE PROJECT SITE AT ALL TIMES. NO WORK CAN PROCEED WITHOUT T HE DRAWINGS AND THE SWPPP AS HEREBY REQUIRED. A COPY OF THE WEEKLY SWPPP INSPECTION REPORT MUST ALSO BE ON SITE AND SUBMITTED TO THE CITY.
20. CONTRACTOR SHALL NOT STOCKPILE ANY MATERIAL WITHIN ANY BUFFER ZONE.
21. ANY REQUIRED REGULATORY PERMITS SHALL BE ACQUIRED AND SUBMITTED TO THE CITY PRIOR TO CONSTRUCTION COMMENCING.

TRAVIS COUNTY EMERGENCY SERVICES DISTRICT NO. 6 FIRE DEPARTMENT - SITE PLAN NOTES

1. ~~DESIGNS FOR SITE IMPROVEMENTS SHALL MEET THE CURRENT DESIGN CRITERIA AS REQUIRED BY TCESD NO. 6.~~
2. ~~ALL PLANS (SITE, BUILDING, FIRE ALARM, FIRE SPRINKLER) SHALL BE SUBMITTED TO LTFR FOR REVIEW. TWO FULL-SIZE SETS ARE REQUIRED. A REVIEW LETTER WILL BE GENERATED. REVIEWS WILL NOT BE PERFORMED UNTIL THE APPLICABLE REVIEW FEES ARE PAID.~~
3. ~~UPON APPROVAL, A PERMIT WILL BE ISSUED. THE PERMIT MUST BE CONSPICUOUSLY POSTED.~~
4. ~~AN ALL-WEATHER DRIVING SURFACE (FIRE APPARATUS ACCESS) MUST BE INSTALLED IN LOCATIONS SHOWN ON THE SITE PLAN, PRIOR TO ANY BUILDING CONSTRUCTION BEYOND THE FOUNDATION.~~
5. ~~ALL PERVIOUS/DECORATIVE PAVING SHALL BE ENGINEERED AND INSTALLED FOR 80,000 POUNDS LIVE-VEHICLE LOADS. ANY PERVIOUS/DECORATIVE PAVING WITHIN 100 FEET OF ANY BUILDING MUST BE APPROVED BY THE FIRE DEPARTMENT.~~
6. ~~VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS THIRTEEN FEET, SIX INCHES FOR FULL 25' WIDTH OF ACCESS DRIVES AND ROUTES FOR INTERNAL CIRCULATION. DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150' IN LENGTH SHALL BE PROVIDED WITH APPROVED PROVISIONS FOR THE TURNING AROUND OF FIRE APPARATUS, PER FIGURE D.4 OF THIS MANUAL.~~
7. ~~THE MAXIMUM ALLOWABLE DRIVEWAY, DRIVE AISLE OR FIRE LANE GRADE IS FIFTEEN PERCENT.~~
8. ~~THE MARKINGS OF FIRE LANES MUST BE RED WITH WHITE STENCILING OR WHITE WITH RED STENCILING READING "FIRE LANE - TOW AWAY ZONE" IN LETTERING NO LESS THAN THREE INCHES IN HEIGHT. THE STENCILING SHALL BE AT INTERVALS OF 35 FEET OR LESS. ALTERNATIVE MARKING OF FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, OR HIS/HER DESIGNATED AGENT, PROVIDED FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. EXISTING FIRE LANE MARKINGS SHALL BE GRANDFATHERED PROVIDED THAT THEY MEET THE WORDING AND INTERVAL REQUIREMENTS THAT WERE ACCEPTED ON APPROVED SITE PLANS AND OTHER TYPE FIRE LANE SUBMITTALS APPROVED BY THE FIRE DEPARTMENT. EXISTING FIRE LANES THAT ARE IN NEED OF RE-PAINTING SHALL MEET THE REQUIREMENTS OF THIS SECTION.~~
9. ~~THE FIRE DEPARTMENT CONNECTION (FDC) CONNECTION SHALL BE INSTALLED WHERE SHOWN ON THE SITE PLAN.~~
10. ~~HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FOUR AND ONE-HALF INCH STEAMER OPENING AT LEAST 18" ABOVE FINISHED GRADE. THE FOUR AND ONE-HALF INCH STEAMER OPENING MUST FACE THE DRIVEWAY OR STREET WITH THREE TO SIX FOOT SETBACKS FROM THE CURB LINE(S). NO OBSTRUCTION IS ALLOWED WITHIN THREE FEET OF ANY HYDRANT, AND THE FOUR AND ON-HALF INCH OPENING MUST BE TOTALLY UNOBSTRUCTED FROM THE STREET/DRIVEWAY.~~
11. ~~CONTRACTOR SHALL INSTALL BLUE REFLECTIVE MARKERS IN THE PAVEMENT PER TCESD NO. 6 SPECIFICATIONS. NO IMPROVEMENTS MAY BE OCCUPIED UNTIL THE MARKERS ARE INSTALLED.~~
12. ~~FIRE HYDRANTS SHALL HAVE NATIONAL PIPE THREADS.~~
13. ~~A CERTIFIED OR WITNESSED PRESSURE TEST IS REQUIRED FOR ALL WATER MODELS, REQUIRED HYDRANT FLOW TESTS OR SPRINKLER SYSTEM DESIGNS.~~
14. ~~HYDRANTS SHALL BE PAINTED SILVER AND THE BONNET AND CAPS SHALL BE PAINTED THE DESIGNATED COLOR PER THE GALLONS PER MINUTE (GPM) AS FOL

LAKE TRAVIS ISD

SUBMITTAL DRAWINGS FOR:

SYNTHETIC TURF BASEBALL, SOFTBALL AND MULTI PURPOSE FIELD

Austin, Texas

Hellas Construction, Inc.
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Austin, TX 78613

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matrix TURF

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CIVIL ENGINEERING & SPORTS DESIGN CONSULTANTS

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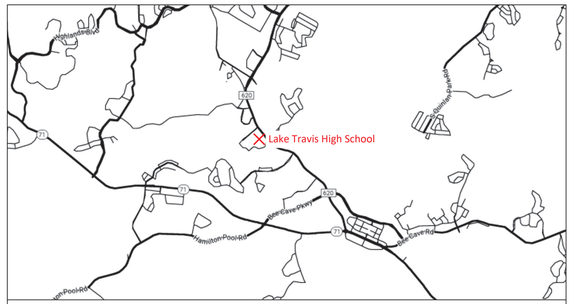
Texas Firm Registration
No. F-24281



VICINITY MAP



SITE LOCATION PLAN

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

INDEX OF DRAWINGS

C0.0 COVER PAGE
C1.1 EXISTING CONDITIONS
C2.1 DEMOLITION PLAN
C3.1 LAYOUT PLAN
C4.1 GRADING PLAN
C5.1 DRAINAGE PLAN
C5.2 DRAINAGE PLAN - DRAINAGE CALCS
C6.1 COLOR RENDERING

D1.1 SECTIONS AND DETAILS
D1.2 SECTIONS AND DETAILS

EV1.1 STORM WATER POLLUTION PREVENTION PLAN
EV1.2 STORM WATER POLLUTION PREVENTION PLAN
EV2.1 ENVIRONMENTAL DETAILS

ISSUE: FOR REVIEW

DATE: April 5, 2024

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Lake Travis High School
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PROJECT:
SYNTHETIC TURF BASEBALL, SOFTBALL AND MULTIPURPOSE FIELD

PROJECT LOCATION:
AUSTIN, TEXAS

matrix TURF

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STATE OF TEXAS
BRIAN W. REED
126933
LICENSED
PROFESSIONAL ENGINEER
4-5-2024

COMMENTS:
Drawing scale accurate ONLY when printed on 24x36 paper.

DRAWN BY: RWD | REV BY:

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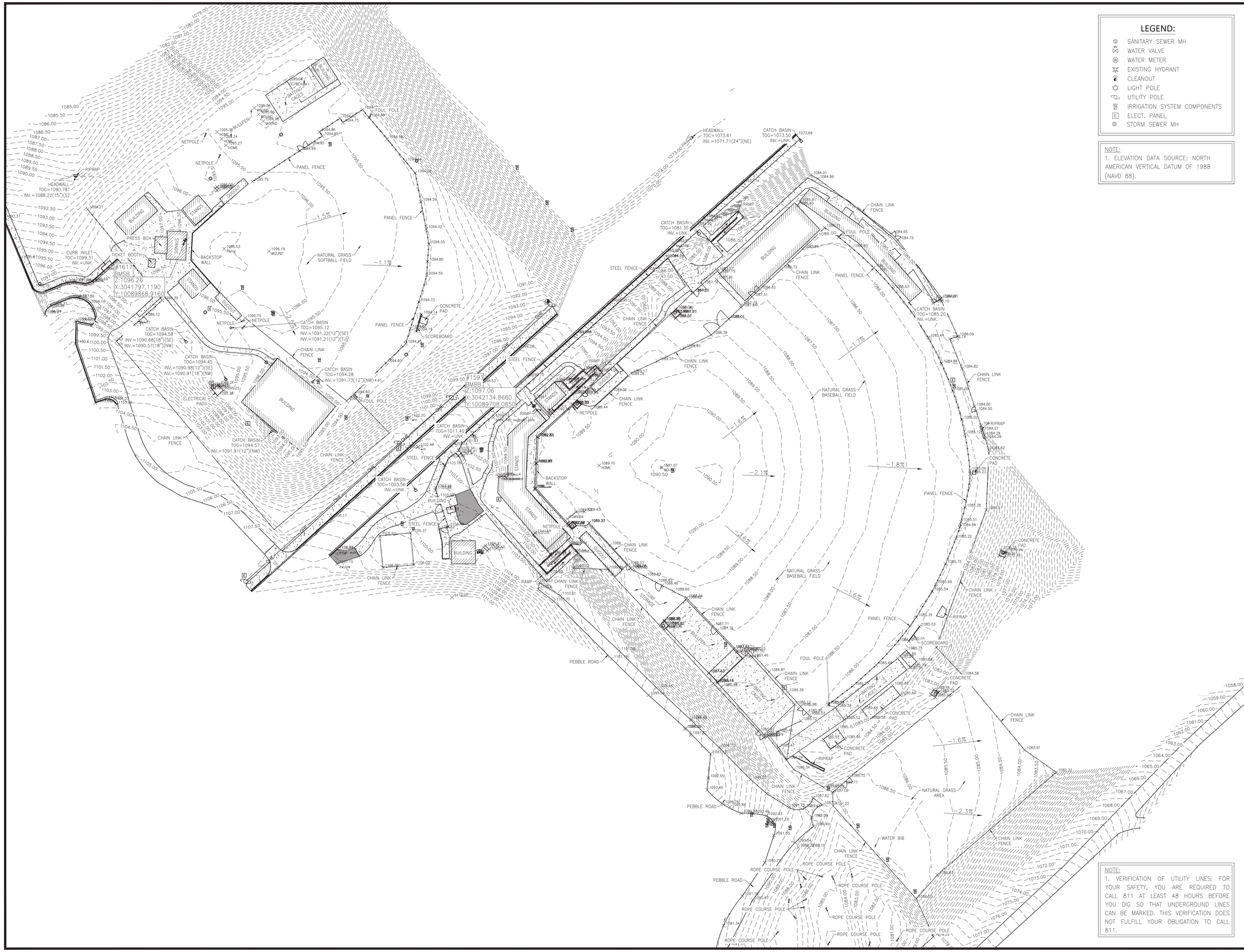
DATE:
April 5, 2024

REVISION LIST

NO.	DATE	DESCRIPTION

SHEET TITLE:
COVER PAGE

SHEET NUMBER:
C0.0



LEGEND:

- SANITARY SEWER MH
- WATER VALVE
- WATER METER
- EXISTING HYDRANT
- CLEANOUT
- LIGHT POLE
- UTILITY POLE
- IRRIGATION SYSTEM COMPONENTS
- [E] ELECT. PANEL
- STORM SEWER MH

NOTE:
1. ELEVATION DATA SOURCE: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

NOTE:
1. VERIFICATION OF UTILITY LINES: FOR YOUR SAFETY, YOU ARE REQUIRED TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS VERIFICATION DOES NOT FULFILL YOUR OBLIGATION TO CALL 811.

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SHEET TITLE:
EXISTING CONDITIONS

SHEET NUMBER:
C1.1

N

SCALE: 1:40

0 20 40 80

DEMO NOTES	
LIMITS OF DISTURBED AREA: ±	188,611 SQ. FT.

1. DEMOLISH EXISTING IRRIGATION SYSTEM WITHIN PROJECT LIMITS, CAP THE WATER LINE
2. REMOVE EXISTING VEGETATION
3. EXCAVATE TO DESIGNED SUBGRADE ELEVATION
4. EXCAVATED MATERIALS TO BE HAULED OFF SITE AND DISPOSED OFF SITE

REMOVE AND REPLACE TURF AT STORAGE

DEMO AND REMOVE HOME PLATE MOUND ONLY

DEMO AND REMOVE CONCRETE MOUND ONLY

REMOVE AND REPLACE TURF AT DRIVING BAYS, CONCRETE TO REMAIN

DEMO AND REMOVE EXISTING CONCRETE

DEMO AND REMOVE EXISTING CONCRETE

DEMO AND REMOVE EXISTING FENCE, 170 LF

DEMO AND REMOVE EXISTING FENCE, 45 LF

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NO.	DATE	DESCRIPTION

SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER:
C2.1

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SCALE: 1:40

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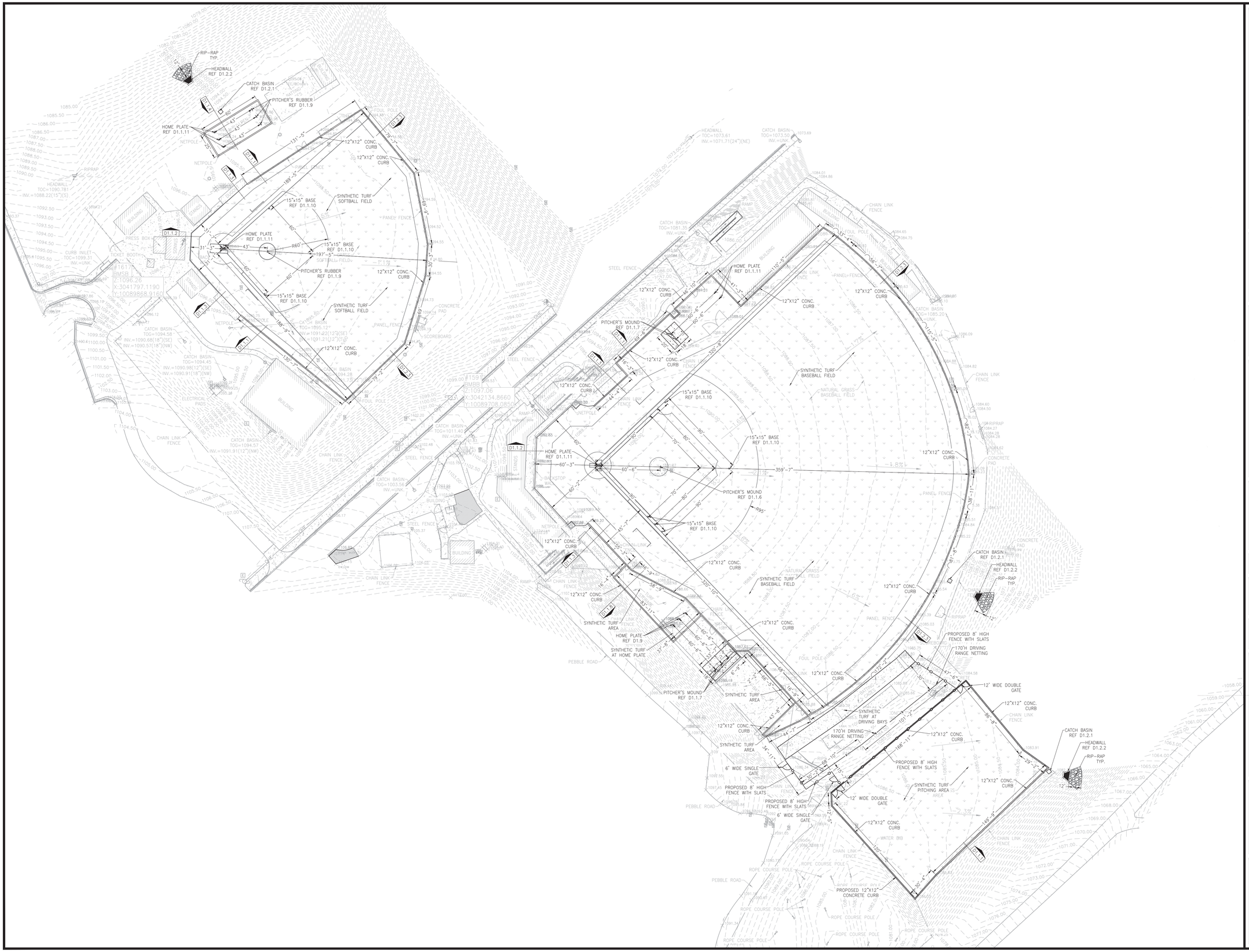

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NO.	DATE	DESCRIPTION

SHEET TITLE:
LAYOUT PLAN

SHEET NUMBER:
C3.1

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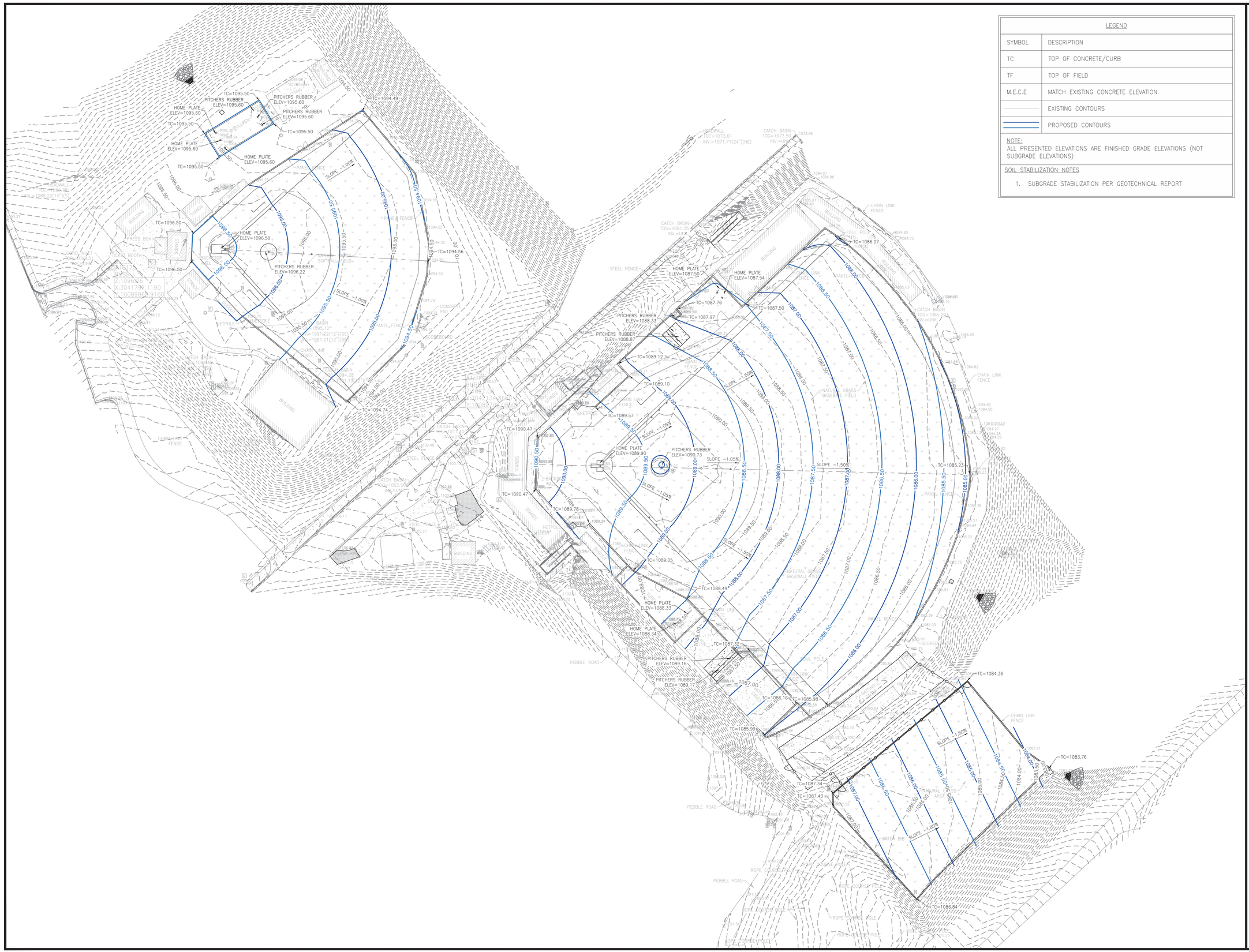

LEGEND	
SYMBOL	DESCRIPTION
TC	TOP OF CONCRETE/CURB
TF	TOP OF FIELD
M.E.C.E	MATCH EXISTING CONCRETE ELEVATION
	EXISTING CONTOURS
	PROPOSED CONTOURS

NOTE:
ALL PRESENTED ELEVATIONS ARE FINISHED GRADE ELEVATIONS (NOT SUBGRADE ELEVATIONS)

SOIL STABILIZATION NOTES

1. SUBGRADE STABILIZATION PER GEOTECHNICAL REPORT

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NO.	DATE	DESCRIPTION

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C4.1

N

SCALE: 1:40

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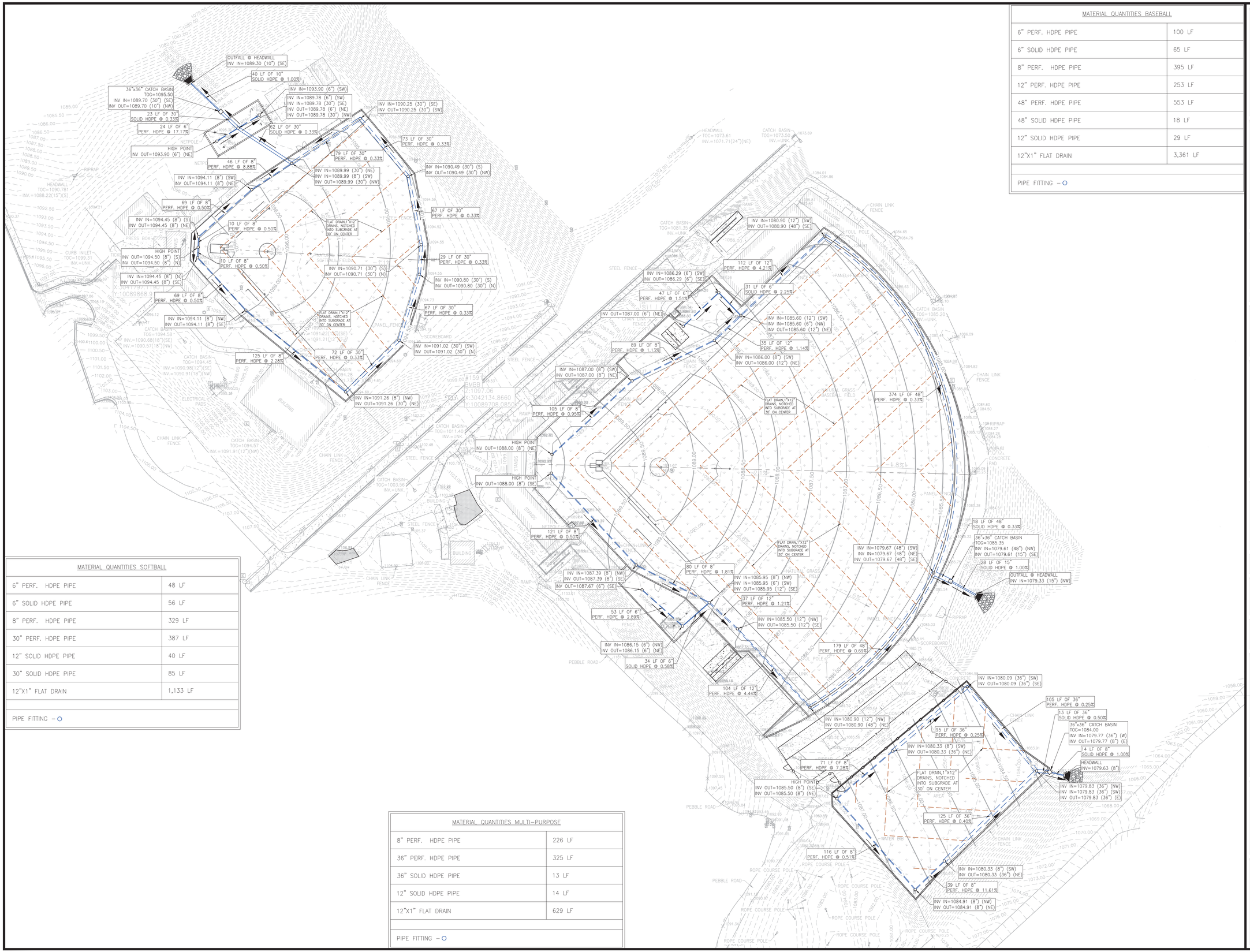

MATERIAL QUANTITIES BASEBALL	
6" PERF. HDPE PIPE	100 LF
6" SOLID HDPE PIPE	65 LF
8" PERF. HDPE PIPE	395 LF
12" PERF. HDPE PIPE	253 LF
48" PERF. HDPE PIPE	553 LF
48" SOLID HDPE PIPE	18 LF
12" SOLID HDPE PIPE	29 LF
12"X1" FLAT DRAIN	3,361 LF
PIPE FITTING – O	

MATERIAL QUANTITIES SOFTBALL	
6" PERF. HDPE PIPE	48 LF
6" SOLID HDPE PIPE	56 LF
8" PERF. HDPE PIPE	329 LF
30" PERF. HDPE PIPE	387 LF
12" SOLID HDPE PIPE	40 LF
30" SOLID HDPE PIPE	85 LF
12"X1" FLAT DRAIN	1,133 LF
PIPE FITTING – O	

MATERIAL QUANTITIES MULTI-PURPOSE	
8" PERF. HDPE PIPE	226 LF
36" PERF. HDPE PIPE	325 LF
36" SOLID HDPE PIPE	13 LF
12" SOLID HDPE PIPE	14 LF
12"X1" FLAT DRAIN	629 LF
PIPE FITTING – O	

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SHEET TITLE:
DRAINAGE PLAN

SHEET NUMBER:
C5.1

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SCALE: 1:40

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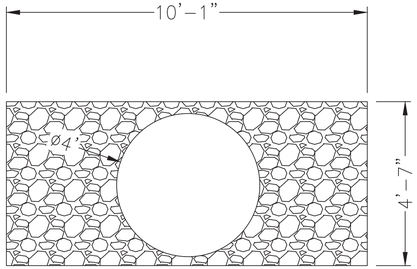
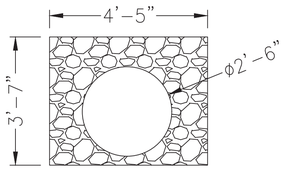
BASEBALL REQUIRED VOLUME CALCULATIONS



VOLUME REQUIRED
14,375 CF

VOLUMES – EXPANDED DESIGN				
AREA	SQUARE FEET	TRENCH LF	VOIDS	CUBIC FEET
OUTFIELD TRENCH STONE	33.6600	553	40.00%	7445.5900
OUTFIELD PIPE – 48"	12.5660	553	100.00%	6948.9980
TURF SECTION – 6"	8075.5000		40.00%	45.3100
			TOTAL VOLUME (CF)	14439.8980

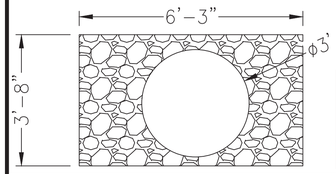
SOFTBALL REQUIRED VOLUME CALCULATIONS



VOLUME REQUIRED
4,356 CF

VOLUMES – EXPANDED DESIGN				
AREA	SQUARE FEET	TRENCH LF	VOIDS	CUBIC FEET
OUTFIELD TRENCH STONE	10.9100	471	40.00%	2055.4440
OUTFIELD PIPE – 30"	4.9087	471	100.00%	2311.9980
TURF SECTION – 6"	4216.0000		40.00%	31.2200
			TOTAL VOLUME (CF)	4398.6620

MULTIPURPOSE REQUIRED VOLUME CALCULATIONS



VOLUME REQUIRED
4,356 CF

VOLUMES – EXPANDED DESIGN				
AREA	SQUARE FEET	TRENCH LF	VOIDS	CUBIC FEET
OUTFIELD TRENCH STONE	15.8479	325	40.00%	2060.2270
OUTFIELD PIPE – 36"	7.0686	325	100.00%	2297.2950
TURF SECTION – 6"	1016.0000		40.00%	31.2200
			TOTAL VOLUME (CF)	4388.7420

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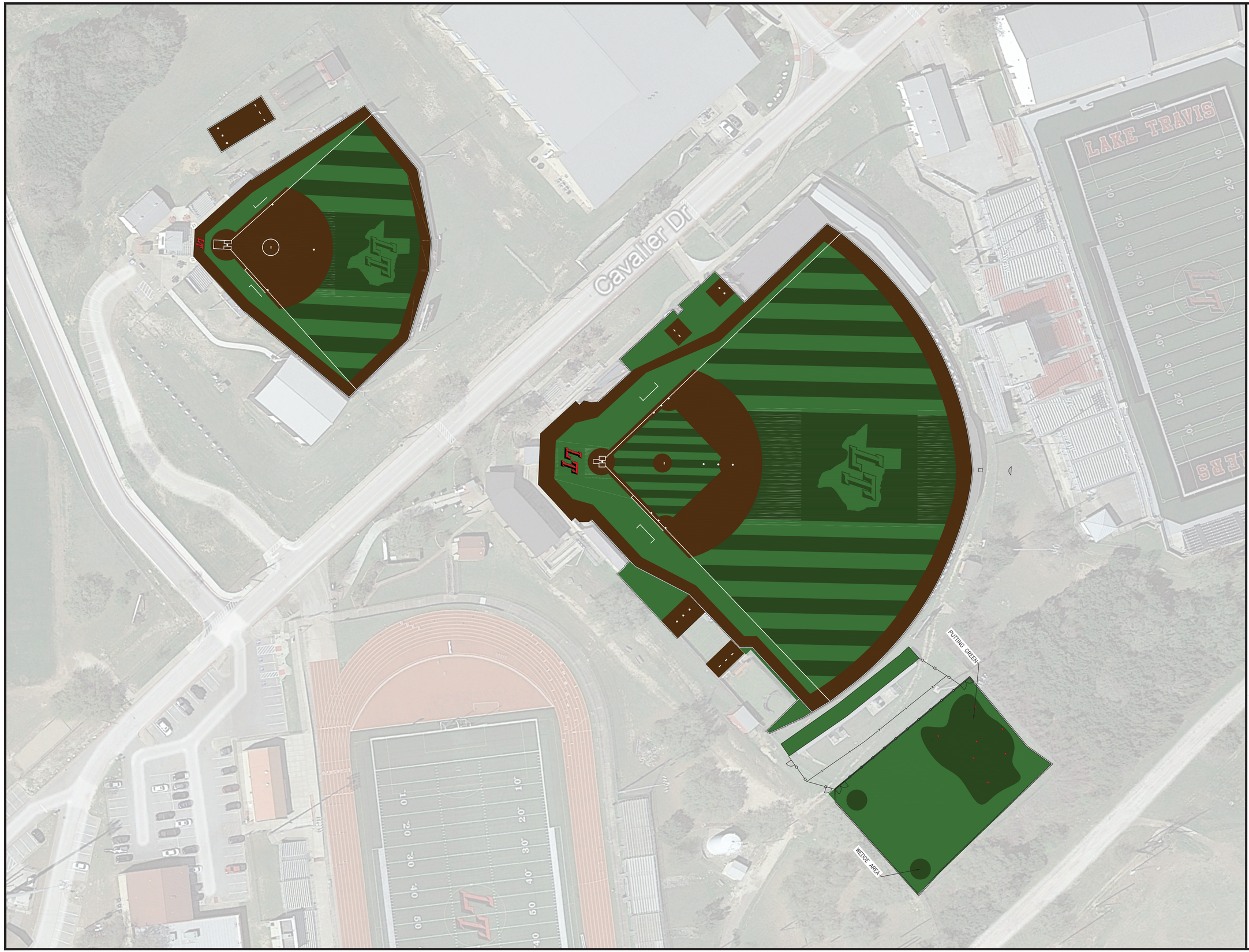
SHEET TITLE:
DRAINAGE PLAN - DRAINAGE CALCS

SHEET NUMBER:
C5.2



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(P) (512) 250-2910
(F) (512) 250-1960
hellasconstruction.com

OWNER:
Lake Travis ISD
Lake Travis High School
3324 Ranch Rd 620 S, Austin, TX 78738
(512) 533-6100

PROJECT:
SYNTHETIC TURF BASEBALL, SOFTBALL AND MULTIPURPOSE FIELD

PROJECT LOCATION:
AUSTIN, TEXAS

matrix.TURF

TALON ENGINEERING
CIVIL ENGINEERING & SPORTS DESIGN CONSULTANTS

1118 Wolfs Knoll
Houston, Texas 77094
(832) 287-9874

Texas Firm Registration No. F-24281

STATE OF TEXAS
BRIAN W. REED
126933
LICENSED
PROFESSIONAL ENGINEER
4-5-2024

COMMENTS:
Drawing scale accurate ONLY when printed on 24x36 paper.

DRAWN BY: RWD
REV BY:

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DATE:
April 5, 2024

REVISION LIST

NO.	DATE	DESCRIPTION

SHEET TITLE:
COLOR RENDERING

SHEET NUMBER:
C6.1

N

SCALE: 1:40
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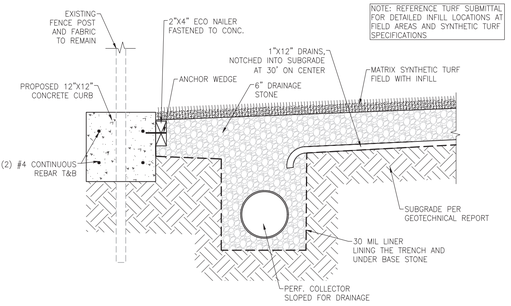

1 FIELD EDGE DETAIL
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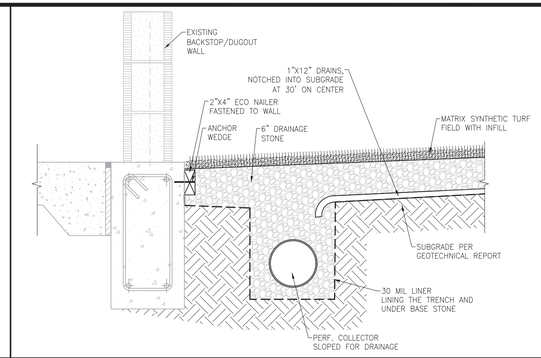
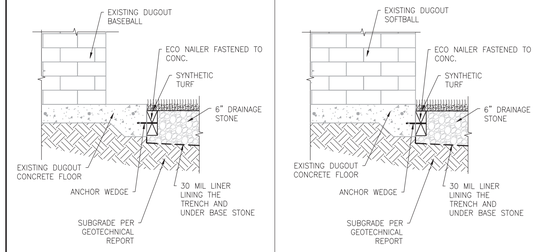
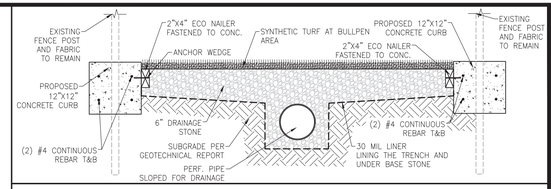


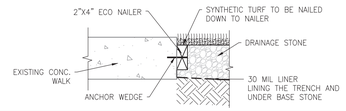
2 FIELD EDGE AT BACKSTOP WALL
Scale: NTS



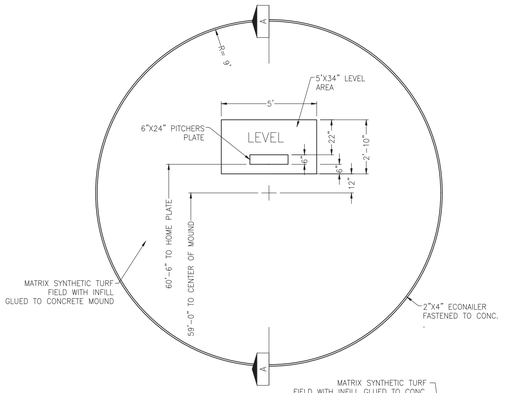
3 DUGOUT WALL FIELD EDGE
Scale: NTS



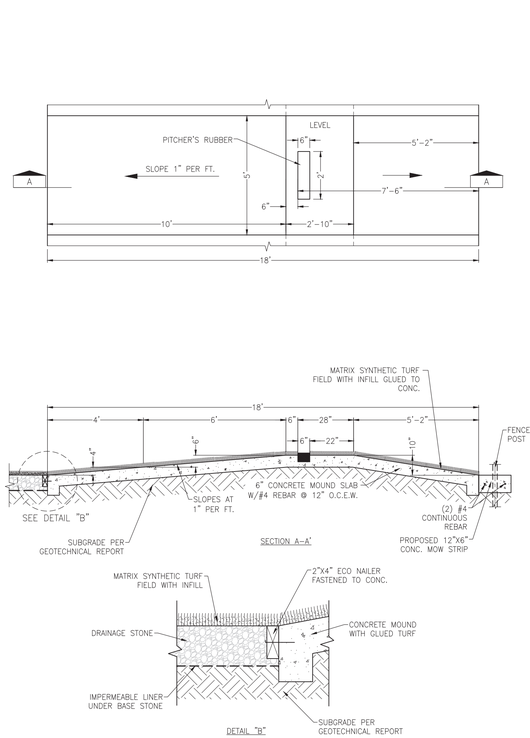
4 BULLPEN SECTION DETAIL
Scale: NTS



5 EDGE DETAIL
Scale: NTS



6 PITCHER'S MOUND DETAIL
Scale: NTS



7 BULLPEN SECTION DETAIL
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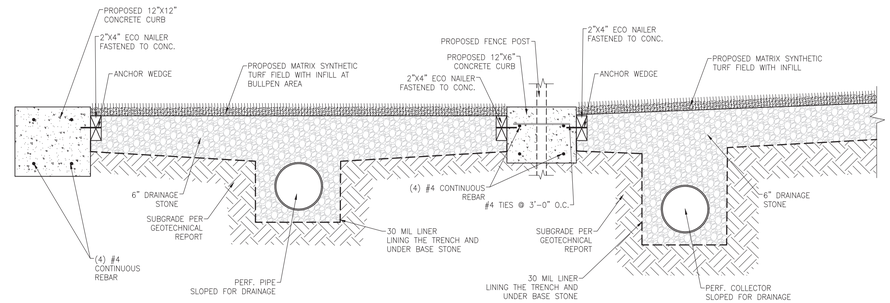

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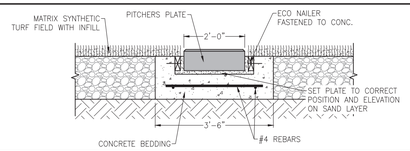
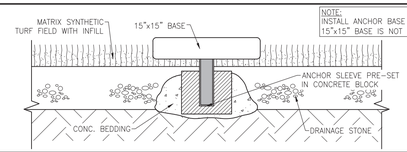
Scale: NTS



9 PITCHER'S RUBBER DETAIL
Scale: NTS



10 BASE DETAIL
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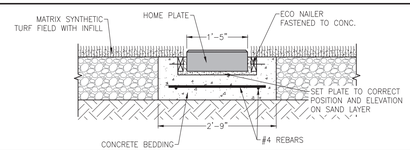

11 HOME PLATE DETAIL
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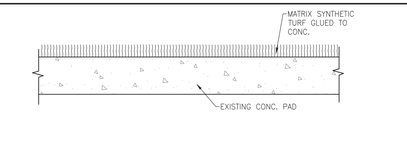
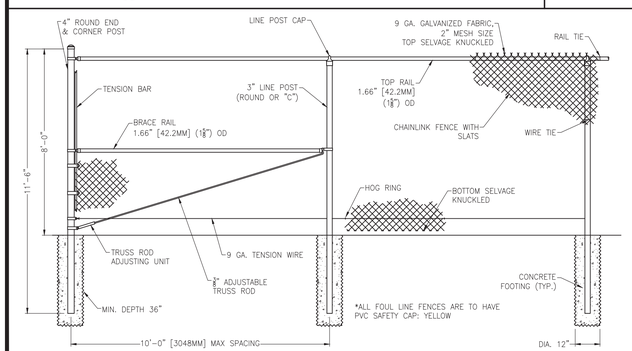
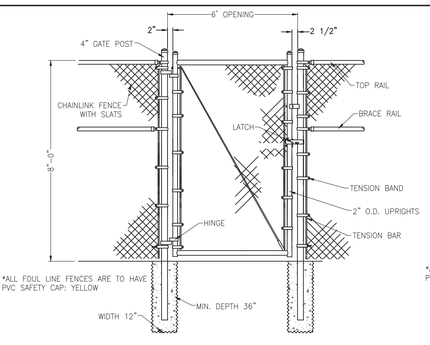
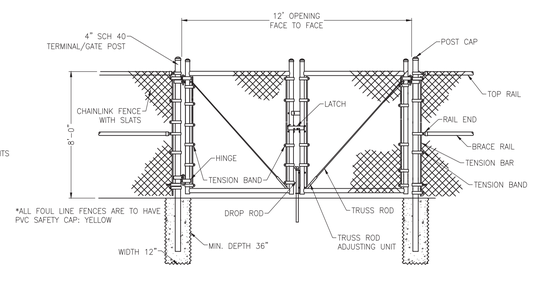


12 TURF ON CONCRETE PAD DETAIL
Scale: NTS







13 FENCE & GATE DETAILS
Scale: NTS

REINFORCED CONCRETE NOTES:

1. ALL CONCRETE SHALL BE CLASS C (3000 PSI) NORMAL WEIGHT CONCRETE.
2. THE CONCRETE MIX DESIGN FOR THE PROJECT SHALL HAVE A WATER / CEMENT RATIO OF NOT MORE THAN 0.46. WATER CONTENT SHALL BE CLOSELY MONITORED DURING THE BATCHING PROCESS. UNDER NO CIRCUMSTANCES SHALL THE WATER / CEMENT RATIO BE PERMITTED TO EXCEED THE SPECIFIED MAXIMUM. CONCRETE SHALL BE PROPORTIONED TO PROVIDE THE SPECIFIED COMPRESSIVE STRENGTH OR GREATER AT A SLUMP IN THE RANGE OF 4 TO 6 INCHES USING A WATER REDUCER. THE USE FLY ASH IS RECOMMENDED, BUT SHALL NOT EXCEED 20% OF THE TOTAL OF THE CEMENT PLUS FLY ASH BY WEIGHT.
3. REINFORCING STEEL SHALL BE ASTM // ANSI A615, GRADE 60. DETAILING, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" ACI 315.
4. CONCRETE CONSTRUCTION INCLUDING MINIMUM REINFORCING STEEL COVERAGE BY CONCRETE SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, UNLESS OTHERWISE NOTED.
5. PROVIDE SUPPORTS OR CHAIRS TO SUPPORT REBAR AT THE APPLICABLE POSITIONS AS REQUIRED TO PROVIDE PROPER REBAR SUPPORT.
6. LAP CONTINUOUS UNSCHEDULED REINFORCING BARS SHALL BE EQUIVALENT TO 20 BAR DIAMETERS UNLESS OTHERWISE NOTED.
7. THE CONTRACTOR SHALL INSURE THAT EMBEDDED ITEMS ARE DELIVERED IN A TIMELY FASHION AND INSTALLED IN THE FORM WORK PRIOR TO PLACEMENT OF CONCRETE.
8. FIELD CUTTING OF REINFORCEMENT SHALL BE BY SHEARING OR SAWING. FIELD CUTTING BY TORCH WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER.
9. UNLESS OTHERWISE NOTED ALL 90, 135 AND 180-DEGREE REINFORCING STEEL HOOKS SHALL BE STANDARD ACI HOOKS.
10. THE CONTRACTOR SHALL USE A "TREMIE" TO PLACE CONCRETE IN ALL AREAS WHERE THE FALL OF THE CONCRETE IS GREATER THAN 5 FEET.
11. THE CONTRACTOR SHALL USE CARE TO PROPERLY VIBRATE CONCRETE DURING PLACING OPERATIONS TO ENSURE GOOD DENSITY OF CONCRETE AND TO MINIMIZE DEFECTS.
12. FORM WORK FOR SURFACES EXPOSED TO VIEW IN THE FINISHED CONSTRUCTION SHALL BE SMOOTH, EITHER WOOD OR METAL FORMS SHALL BE FREE OF RAISED GRAIN, TORN SURFACES, WORN EDGES, PATCHES, DENTS, OR OTHER DEFECTS. STRENGTH OF FORMS SHALL BE SUCH THAT NO WARPING, BULGING, OR BOWING OCCURS UNDER THE WEIGHT OF WET CONCRETE, JOINTS SHALL BE SMOOTH AND MORTAR TIGHT, FORMS WHICH DO NOT PRESENT A SMOOTH SURFACE OR DO NOT LINEUP PROPERLY SHALL NOT BE USED. FORMS SHALL BE FREE OF RUST GREASE, OR OTHER FOREIGN SURFACES THAT MAY DISCOLOR THE FINISHED CONCRETE.

Hellas Construction, Inc.
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PROJECT:
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PROJECT LOCATION:
AUSTIN, TEXAS

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1118 Wolfs Knoll
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STATE OF TEXAS
BRIAN W. REED
126933
LICENSED
PROFESSIONAL ENGINEER
4-5-2024

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DRAWN BY: RWD
REV BY:

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DATE:
April 5, 2024

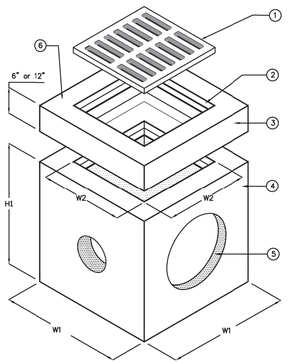
REVISION LIST

NO.	DATE	DESCRIPTION

SHEET TITLE:
SECTIONS AND DETAILS

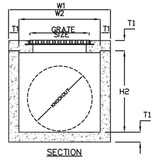
SHEET NUMBER:
D1.1

Plot By: William Reed (BCraftsman) Last Saved By: RWD Date/Time: 4/5/2024 - 10:05pm
File Name: C:\Users\BCraftsman\Talon Engineering\Talon Engineering - Documents\Projects\Lake Travis ISD - 2024\Civil\Lake Travis ISD - Synthetic Turf Baseball, Softball and Multipurpose Field - Sections and Details.dwg



ISOMETRIC

NOTE: KNOCKOUTS–STD, PENETRATIONS–OPTIONAL

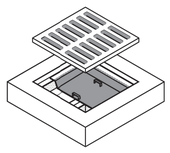


SECTION

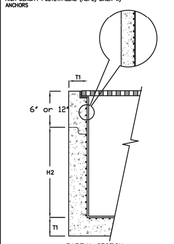
KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	GRATE OR COVER AS REQUESTED, SEE OPTIONS
2	1	CAST–IN STEEL FRAME
3	1	OPTIONAL TOP/EXTENSION 6" TO 18"
4	1	PRECAST CONCRETE BASIN SECTION
5	4	KNOCKOUTS (STD) AND PENETRATIONS (OPT) AS REQUIRED, SEE KO DIMENSION FOR MAXIMUM PIPE O.D.*
6	1	NAMEPLATE INDICATING: MFG: PARKUSA 888–611–PARK WWW.PARKUSA.COM MODEL: CB–01 DATE MANUFACTURED

ADDITIONAL OPTIONS

REMOVABLE DEBRIS SCREEN w/ (2) LIFT HANDLES, 304 STAINLESS STEEL, ¼" HOLES @ ⅝" O.C. (50% FREE OPEN AREA)



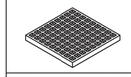
HIGH DENSITY POLYETHYLENE (HDPE) LINER W/ ANCHORS



PARTIAL SECTION

COVER OPTIONS

ACID RESISTANT FRP GRATING, w/ STAINLESS STEEL FRAME (PEDESTRIAN DUTY)



GRATING. GRATING SHALL BE ACID–RESISTANT FIBERGLASS GRATING W/ STAINLESS STEEL ANGLE FRAME.

SKID–RESISTANT STEEL PEDESTRIAN DUTY STD.



D.I. CASTINGS: MANHOLE FRAMES, COVERS OR GRATES ARE MANUFACTURED OF DUCTILE IRON CONFORMING TO ASTM A536, AASHTO M306, & AASHTO M105 STANDARDS.

TRAFFIC DUTY CAST IRON GRATE



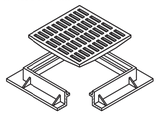
D.I. CASTINGS: MANHOLE FRAMES, COVERS OR GRATES ARE MANUFACTURED OF DUCTILE IRON CONFORMING TO ASTM A536, AASHTO M306, & AASHTO M105 STANDARDS.

STAINLESS STEEL/FIBERGLASS GRATE, ADA APPROVED



ACCESS COVER: GRATE TO BE FURNISHED WITH 316 STAINLESS STEEL BOLTS AND HINGES.

CAST IRON FRAME & GRATE V5000–SERIES



D.I. CASTINGS: MANHOLE FRAMES, COVERS OR GRATES ARE MANUFACTURED OF DUCTILE IRON CONFORMING TO ASTM A536, AASHTO M306, & AASHTO M105 STANDARDS.

MODEL	W1	W2	H1	H2	T1	T2	KO	GRATE SIZE	OPEN AREA	WEIGHT LBS
CB–12	15"	10"	21"	18"	3"	2"	10"	12"x12"x1"	90	180
CB–14	20"	12"	28"	24"	4"	4"	12"	14"x14"x1⅜"	120	600
CB–18	24"	16"	34"	30"	4"	4"	15"	18"x18"x1⅜"	168	1,000
CB–20	26"	18"	34"	30"	4"	4"	17"	20"x20"x1⅜"	170	1,335
CB–24	32"	22"	41"	36"	5"	5"	22"	24"x24"x2"	268	2,245
CB–27	37"	25"	42"	36"	6"	6"	24"	27"x27"x2"	350	2,875
CB–30	42"	30"	42"	36"	6"	6"	30"	32"x32"x2"	490	3,675
CB–36	48"	36"	42"	36"	6"	6"	32"	38"x38"x2"	693	4,585
CB–48	60"	48"	54"	48"	6"	6"	48"	38"x38"x2"	693	7,250
*CB–60	72"	60"	66"	60"	6"	6"	60"	38"x38"x2"	693	10,500
*CB–72	84"	72"	78"	72"	6"	6"	72"	38"x38"x2"	693	13,350
*CB–84	96"	84"	78"	72"	6"	6"	72"	38"x38"x2"	693	19,500

*KNOCKOUTS NOT AVAILABLE

SPECIFICATIONS

CONCRETE : CLASS I/II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH.

REINFORCEMENT: GRADE 60 REINFORCED. STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

C.I. CASTINGS: CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48–76 CLASS 30.

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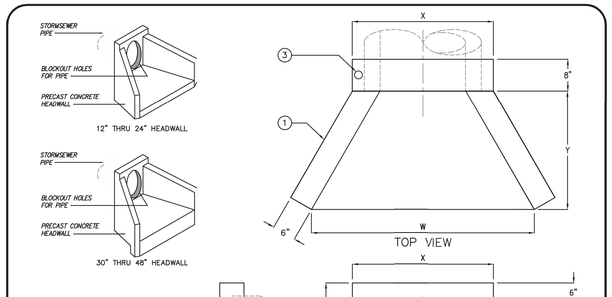
PROJECT:	.
CUSTOMER:	.
ENGINEER:	.
ORDER #:	.
PROJ #:	.
DATE:	.
LOCATION:	.

PARK USA
www.parkusa.com 888–611–PARK

CATCH BASIN
MODEL CB – 12" THRU 84"

PM	PC	DRN	ENG	DWG. NO.	REV.
-	-	-	-	CB–1	
DATE 01/2019					

1 CATCH BASIN DETAILS
Scale: NTS



Headwall shall have energy dissipators.
Model number shall be HWE

KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	PRECAST CONCRETE HEADWALL
2	1	BLOCKOUT HOLE FOR PIPE
3	1	NAMEPLATE PARKUSA 888–611–PARK WWW.PARKUSA.COM MODEL HW–1

MODEL	PIPE DIA	DIMENSIONS					WEIGHT (LBS)
		H	W	X	Y	Z	
HW–12	12"	2'–6"	4'–3"	3'–0"	2'–0"	N/A	2,700
HW–15	15"	2'–6"	4'–3"	3'–0"	2'–0"	N/A	2,700
HW–18	18"	2'–6"	4'–3"	3'–0"	2'–0"	N/A	2,600
HW–21	21"	3'–0"	5'–10"	3'–2"	3'–0"	N/A	4,300
HW–24	24"	3'–0"	5'–10"	3'–2"	3'–0"	N/A	4,200
HW–30	30"	3'–6"	7'–6"	4'–1"	4'–0"	9"	6,200
HW–36	36"	4'–1"	9'–3"	4'–8"	5'–0"	9"	8,100
HW–42	42"	4'–11"	12'–6"	5'–10"	6'–0"	12"	11,000
HW–48	48"	4'–11"	12'–6"	5'–10"	6'–0"	12"	11,000

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SPECIFICATIONS

CONCRETE: Class ii concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction including walls and floor.

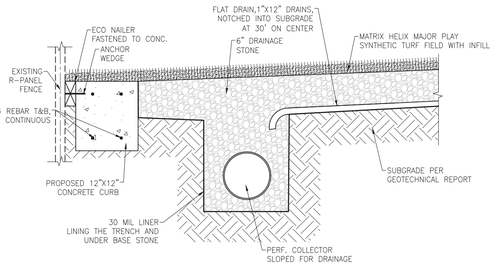
REINFORCEMENT: Grade 60 reinforced. No. 4 steel rebar to conform to ASTM A615 on required centers or equal. Bar bending and placement shall with the latest ACI standards.

PARK USA
A Northwest Pipe Company

CONCRETE HEADWALL
FOR STORMWATER PIPING

PM	PC	DRN	ENG	DWG. NO.	REV.
-	-	-	-	HW–1	A
DATE 2023					

2 HEADWALL W/ DISSIPATOR DETAIL
Scale: NTS



3 EDGE DETAIL AT R–PANEL FENCE
Scale: NTS

REINFORCED CONCRETE NOTES:

1. ALL CONCRETE SHALL BE CLASS C (3000 PSI) NORMAL WEIGHT CONCRETE.
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5. PROVIDE SUPPORTS OR CHAIRS TO SUPPORT REBAR AT THE APPLICABLE POSITIONS AS REQUIRED TO PROVIDE PROPER REBAR SUPPORT.
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9. UNLESS OTHERWISE NOTED ALL 90, 135 AND 180–DEGREE REINFORCING STEEL HOOKS SHALL BE STANDARD ACI HOOKS.
10. THE CONTRACTOR SHALL USE A "TREMIE" TO PLACE CONCRETE IN ALL AREAS WHERE THE FALL OF THE CONCRETE IS GREATER THAN 5 FEET.
11. THE CONTRACTOR SHALL USE CARE TO PROPERLY VIBRATE CONCRETE DURING PLACING OPERATIONS TO ENSURE GOOD DENSITY OF CONCRETE AND TO MINIMIZE DEFECTS.
12. FORM WORK FOR SURFACES EXPOSED TO VIEW IN THE FINISHED CONSTRUCTION SHALL BE SMOOTH, EITHER WOOD OR METAL FORMS SHALL BE FREE OF RAISED GRAIN, TORN SURFACES, WORN EDGES, PATCHES, DENTS, OR OTHER DEFECTS. STRENGTH OF FORMS SHALL BE SUCH THAT NO WARPING, BULGING, OR BOWING OCCURS UNDER THE WEIGHT OF WET CONCRETE, JOINTS SHALL BE SMOOTH AND MORTAR TIGHT, FORMS WHICH DO NOT PRESENT A SMOOTH SURFACE OR DO NOT LINEUP PROPERLY SHALL NOT BE USED. FORMS SHALL BE FREE OF RUST GREASE, OR OTHER FOREIGN SURFACES THAT MAY DISCOLOR THE FINISHED CONCRETE.

Hellas Construction, Inc.
12000 West Parmer Lane
Austin, TX 78613
(P) (512) 250-2910
(F) (512) 250-1960
hellasconstruction.com

OWNER:
Lake Travis ISD
Lake Travis High School
3324 Ranch Rd 620 S, Austin, TX 78738
(512) 533-6100

PROJECT:
SYNTHETIC TURF BASEBALL, SOFTBALL AND MULTIPURPOSE FIELD

PROJECT LOCATION:
AUSTIN, TEXAS

matrix.TURF

TALON ENGINEERING
CIVIL ENGINEERING & SPORTS DESIGN CONSULTANTS
1118 Wolfs Knoll
Houston, Texas 77094
(832) 287-9874
Texas Firm Registration No. F-24281

STATE OF TEXAS
BRIAN W. REED
128933
LICENSED
PROFESSIONAL ENGINEER
4-5-2024

COMMENTS:
Drawing scale accurate ONLY when printed on 24x36 paper.

DRAWN BY: RWD | REV BY:

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DATE:
April 5, 2024

REVISION LIST		
NO.	DATE	DESCRIPTION

SHEET TITLE:
SECTIONS AND DETAILS

SHEET NUMBER:
D1.2

PLOTTED ON: 04/05/2024 3:40 PM BY: Brianna Ochs, V:\Workspace\Master 2023 - HBED TO SOUTH\FOUNDATION-1.2022
Last Saved Date: 4/5/2024 - 3:23pm
Path File: V:\Lake Travis ISD\Lake Travis HS\Construction\Current\Lake Travis HS - SD\Sheets.dwg

MATERIAL QUANTITIES		
SILT FENCE — SILT — SILT — SILT — SILT —		4,771 LF
NOTE: FIELD VERIFY STAGING AREAS WITH OWNER AT PRECONSTRUCTION MEETING.		

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DATE:
April 5, 2024

REVISION LIST		
NO.	DATE	DESCRIPTION

SHEET TITLE:
STORMWATER POLLUTION PREVENTION PLAN

SHEET NUMBER:
EV1.1

SCALE: 1:40
0 20 40 80

MATERIAL QUANTITIES	
SILT FENCE — SILT — SILT — SILT — SILT —	4,771 LF
NOTE: FIELD VERIFY STAGING AREAS WITH OWNER AT PRECONSTRUCTION MEETING.	

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(512) 533-6100

PROJECT:
SYNTHETIC TURF BASEBALL, SOFTBALL AND MULTIPURPOSE FIELD

PROJECT LOCATION:
AUSTIN, TEXAS

matrix.TURF

TALON ENGINEERING
CIVIL ENGINEERING & SPORTS DESIGN CONSULTANTS

1118 Wolfs Knoll
Houston, Texas 77094
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Texas Firm Registration No. F-24281

STATE OF TEXAS
BRIAN W. REED
126933
LICENSED PROFESSIONAL ENGINEER
4-5-2024

COMMENTS:
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DRAWN BY: RWD	REV BY:

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DATE:
April 5, 2024

REVISION LIST		
NO.	DATE	DESCRIPTION

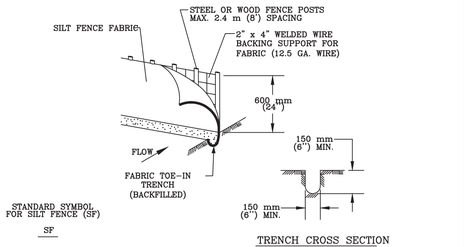
SHEET TITLE:
STORMWATER POLLUTION PREVENTION PLAN

SHEET NUMBER:
EV1.2

N

SCALE: 1:50

0 25 50 100



TRENCH CROSS SECTION

1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 inches) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

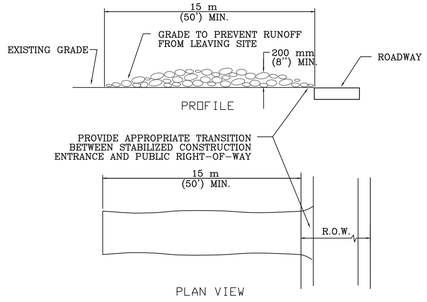
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

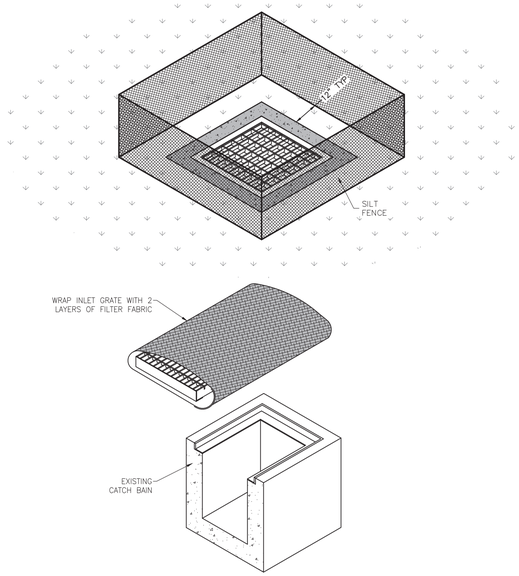
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

1 SILT FENCE DETAIL
Scale: NTS

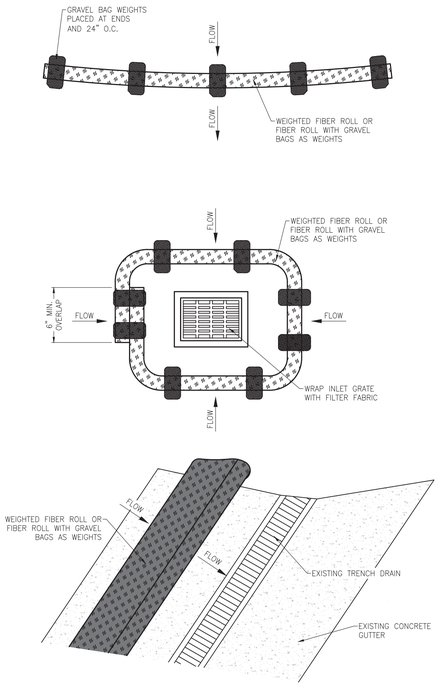


NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

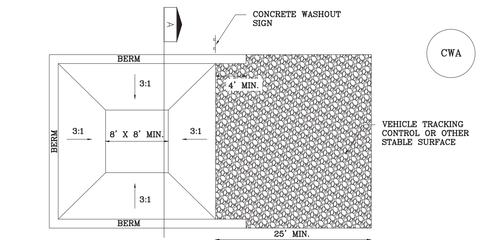
2 STABILIZED CONSTRUCTION ENTRANCE
Scale: NTS



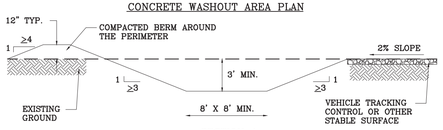
3 AREA INLET PROTECTION (F.V.)
Scale: NTS



4 FIBER ROLL PROTECTION
Scale: NTS



CONCRETE WASHOUT AREA PLAN



SECTION A

CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (10 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE A MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

5 CONCRETE WASHOUT AREA (F.V. LOCATION)
Scale: NTS

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3324 Ranch Rd 620 S, Austin, TX 78738
(512) 533-6100

PROJECT:
SYNTHETIC TURF BASEBALL, SOFTBALL AND MULTIPURPOSE FIELD

PROJECT LOCATION:
AUSTIN, TEXAS

TALON ENGINEERING
CIVIL ENGINEERING & SPORTS DESIGN CONSULTANTS
1118 Wolfs Knoll
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STATE OF TEXAS
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4-5-2024

COMMENTS:
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DRAWN BY: RWD | REV BY:

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DATE:
April 5, 2024

REVISION LIST

NO.	DATE	DESCRIPTION

SHEET TITLE:
ENVIRONMENTAL DETAILS

SHEET NUMBER:
EV2.1

Plot Date/Time: 4/5/2024 - 12:19pm

ENGINEER'S CERTIFICATION:

I, THE UNDERSIGNED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, THAT ALL REQUIRED DOCUMENTS ENCLOSED ARE ACCURATE AND COMPLETE AND THAT THE PROVISIONS CONTAINED ON THIS PLAN COMPLY WITH THE DEVELOPMENT ORDINANCES AND DRAINAGE POLICIES ADOPTED BY THE CITY OF LAKEWAY AND OTHER FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS IN EFFECT ON THIS DATE.

SUBMITTED FOR APPROVAL BY
MALONE/WHEELER, INC.

3/14/2024
DATE

JESSE B. MALONE
REGISTERED PROFESSIONAL ENGINEER NO. 108734
MALONE/WHEELER, INC.
5113 SOUTHWEST PARKWAY,
SUITE 260
AUSTIN, TEXAS 78735
OFFICE: 512-899-0601
FAX: 512-899-0655
FIRM REGISTRATION NO. F-786

REVIEWED BY:

CITY OF LAKEWAY ENGINEER — DATE

CITY OF LAKEWAY SITE DEVELOPMENT PERMIT NUMBER

TRAVIS COUNTY TRANSPORTATION AND NATURAL RESOURCES — DATE

TRAVIS COUNTY TRANSPORTATION AND NATURAL RESOURCES PERMIT NUMBER

TRAVIS COUNTY EMERGENCY SERVICES DISTRICT NO. 6 — DATE

TRAVIS COUNTY W.C.I.D. #17 — DATE

NET SITE AREA CALCULATIONS			
SLOPE CATEGORY	**GROSS SITE AREA ACRES**	**ALLOWABLE PERCENTAGE**	**NET SITE AREA ACRES**
0 - 15%	136.02	100	136.02
15 - 25%	12.67	40	5.07
25 - 35%	5.22	20	1.04
> 35%	1.83	0	0.00
TOTALS	**155.74**		**142.13**

IMPERVIOUS COVER CALCULATIONS		
ITEM	IMPERVIOUS COVER	
	ACRES	SQUARE FEET (SQ. FT.)
EXISTING (AFTER PHASE 1)	58.26	2,537,613
PROPOSED IMPERVIOUS COVER	0.53	23,246
REMOVED IP (SUBTRACT)	0.24	-12,761
TOTAL	58.55	2,548,098

IMPERVIOUS COVER/NET SITE AREA CALCULATIONS			
ALLOWABLE IMPERVIOUS COVER	50.00%	71.07 AC	3,095,809 SF
EXISTING IMPERVIOUS COVER	40.99%	58.26 AC	2,537,613 SF
PROPOSED IMPERVIOUS COVER	0.20%	0.29 AC	12,761 SF
TOTAL	41.19%	58.55 AC	2,548,098 SF

PRE-CONSTRUCTION NOTES:

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

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

SPECIAL PRE-CON NOTES:

1. PROVIDE 48 HR. MINIMUM NOTICE TO SCHEDULE THE PRE-CON MEETING.
2. PROVIDE A 1/2 SIZE SET OF PLANS FOR THE INSPECTOR AT THE PRE-CON.
3. PROVIDE AN ANTICIPATED CONSTRUCTION SCHEDULE AT THE PRE-CON.
4. BRING YOUR SWP3 FOR COMPLETENESS CHECK AT THE PRE-CON.

ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE PLANS APPROVED BY TRAVIS COUNTY.

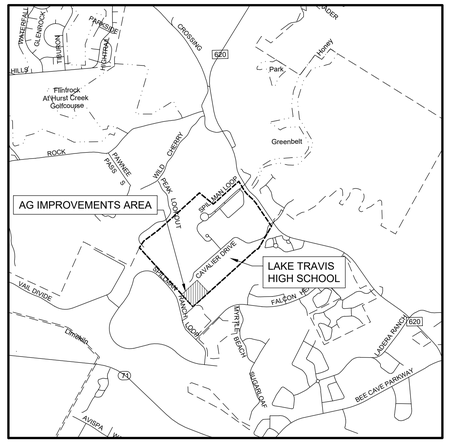
SCHEDULE YOUR PROJECTS PRE-CONSTRUCTION MEETING THROUGH MYPERMITNOW.ORG ACCOUNT AFTER THE INITIAL 3RD PARTY SWP3 INSPECTION REPORT HAS BEEN UPLOADED AND ALL PERMITS AND NOTICES HAVE BEEN POSTED, THEN FOLLOW UP WITH EMAILS TO THE ENVIRONMENTAL INSPECTOR AT ENV-INSPECTION@TRAVISCOUNTYTX.GOV.

NO.	REVISION DESCRIPTION	REVISE (R), ADD (A), VOID (V) - SHEET #	TOTAL # SHEETS	NET CHANGE IMP. COVER SQUARE FEET (SF)	TOTAL SITE IMP. COVER SF %	APPROVED BY	DATE	WCID-17

CONSTRUCTION PLANS
FOR
LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH RD 620 SOUTH, AUSTIN TEXAS 78738

LEGAL DESCRIPTION

1. 23.460 ACRES OUT OF THE ALBERT BECK SURVEY NO. 54, ABSTRACT NO. 2241 IN TRAVIS COUNTY, TEXAS, BEING A PORTION OF THAT CERTAIN 23.460 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 7941, PAGE 395 OF THE DEED RECORDS OF TRAVIS COUNTY, TEXAS.
2. 55.000 ACRES OUT OF THE ALBERT BECK SURVEY NO. 54, ABSTRACT NO. 2241 IN TRAVIS COUNTY, TEXAS, BEING A PORTION OF THAT CERTAIN 55.000 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 7941, PAGE 395 OF THE DEED RECORDS OF TRAVIS COUNTY, TEXAS.
3. 24.940 ACRES OUT OF THE JOSEPH BECK SURVEY NO. 524, ABSTRACT NO. 2733 IN TRAVIS COUNTY, TEXAS, BEING ALL OF THAT CERTAIN 24.940 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 9757, PAGE 601 OF THE REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.
4. 25.000 ACRES OUT OF THE JOSEPH BECK SURVEY NO. 524, ABSTRACT NO. 2733 IN TRAVIS COUNTY, TEXAS, BEING ALL OF THAT CERTAIN 25.000 ACRE TRACT IN DEED TO LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT OF RECORD IN VOLUME 13258, PAGE 3066 OF THE REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.
5. 27.338 ACRES, LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT DOCUMENT NO. 2000171882 REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.
6. TOTAL ACRES IN PROJECT = 155.738.



LOCATION MAP

GENERAL PLAN NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. THIS PROJECT IS PARTIALLY LOCATED IN THE LITTLE BARTON CREEK WATERSHED & THE YAUPON WATERSHED.
3. ACCORDING TO THE FEDERAL FLOOD INSURANCE ADMINISTRATION FIRM PANEL NO. 48453C0405J, DATED JANUARY 22, 2022, FOR TRAVIS COUNTY, TEXAS, NO PORTION OF THIS TRACT IS WITHIN A 100-YEAR FLOODPLAIN.
4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND WERE COMPILED FROM INFORMATION PROVIDED BY THE OWNER & FROM AN ABOVE GROUND SITE SURVEY. NOT ALL UNDERGROUND UTILITIES MAY BE SHOWN THEREFORE THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
5. THE AREA WITHIN THE LIMITS OF CONSTRUCTION IS 2.45 ACRES. THE TOTAL DISTURBED AREA IS 2.45 ACRES.
6. A TPDES/SWPPP IS REQUIRED PRIOR TO STARTING CONSTRUCTION.
7. WATER, WASTEWATER AND POTABLE IRRIGATION IMPROVEMENTS ARE PERMITTED BY WCID 17.
8. THIS PROJECT IS PARTIALLY LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE.
9. THIS SITE PLAN HAS BEEN APPROVED BY TRAVIS COUNTY TNR UNDER PERMIT NUMBER _____.
11. PLANS AND SPECIFICATIONS SHALL NOT BE SUBSTANTIALLY OR MATERIALLY ALTERED WITHOUT PRIOR WRITTEN APPROVAL OF THE TCEQ'S EXECUTIVE DIRECTOR.
12. DOWNSTREAM RECEIVING WATERS: LAKE TRAVIS (SEGMENT ID 1404) & BARTON CREEK (SEGMENT ID 1430)
13. THE OWNER'S ENGINEER WILL MAKE PERIODIC SITE VISITS AND OBSERVATIONS DURING CONSTRUCTION TO ENSURE ADEQUACY OF THE DESIGN AND THE SAFETY OF STRUCTURES IN COMPLIANCE WITH THE ISSUANCE OF THE CONSTRUCTION SUMMARY REPORT AND ENGINEERING CONCURRENCE LETTER AS REQUIRED AS PART OF THE PROJECT CLOSE-OUT PROCESS.
14. ALL STRUCTURAL FIELD CHANCES REQUIRE A PLAN REVISION APPROVAL IN WRITING BEFORE COMMENCEMENT OF THE WORK.

I, _____ HEREBY ACKNOWLEDGE THAT I HAVE READ AND UNDERSTOOD PLAN NOTES ON ALL ATTACHED DRAWINGS REGARDING MY RESPONSIBILITIES AS OWNER.

DATE: _____ _____
OWNER

I, _____ AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING AND HEREBY CERTIFY THAT THE NOTES, INFORMATION, AND PROVISIONS CONTAINED ON THIS PLAN COMPLY WITH THE SURVEY REQUIREMENTS OF THE DEVELOPMENT ORDINANCES ADOPTED BY THE CITY OF LAKEWAY, AND WAS PREPARED FROM A SURVEY MADE ON THE GROUND UNDER MY DIRECT SUPERVISION.

DATE:_____ _____
REGISTERED PROFESSIONAL LAND SURVEYOR
REGISTRATION NO. 5057
DELTA SURVEY GROUP, INC.
8213 BRODIE LANE, SUITE 102
AUSTIN, TX 78745

SHEET INDEX

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03 GENERAL NOTES
04 EXISTING CONDITIONS
05 EROSION & SEDIMENTATION CONTROL PLAN 1
06 EROSION & SEDIMENTATION CONTROL PLAN 2
07 DEMOLITION PLAN
08 DEMOLITION PLAN
09 PRE-DEVELOPED DRAINAGE AREAS
10 EXISTING DRAINAGE AREA MAP
11 PROPOSED DRAINAGE AREA MAP
12 EXITING DETENTION POND 2
13 DETENTION POND 2 SECTIONS & DETAILS
14 SITE PLAN
15 GRADING PLAN
16 8" WATER LINE PLAN & PROFILE
17 WASTEWATER LINE PLAN & PROFILE
18 OVERALL STORM PLAN
19 STORM PLAN
20 STORM PLAN
21 STORM PLAN
22 STORM PLAN
23 RESTORATION PLAN
24 RESTORATION PLAN
25 STANDARD DETAILS
26 STANDARD DETAILS
27 STANDARD DETAILS
28 STANDARD DETAILS

FIRE FLOW DEMAND TABLE
SPRINKLERS ARE NOT PROPOSED IN BUILDINGS

NEW PIG BARN
FIRE FLOW AREA= 8,448 SF
CONSTRUCTION TYPE: IIB
REQUIRED FIRE FLOW: 2,000 GPM

EXISTING WELDING SHOP WITH EXPANSION
FIRE FLOW AREA= 6,830 SF
CONSTRUCTION TYPE: IIB
REQUIRED FIRE FLOW: 1,750 GPM

MARCH 2024

OWNER:
LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT
16101 HWY 71 WEST, BLDG. B
AUSTIN, TX 78738
(512) 533-6039

SURVEYOR:
4WARD LAND SURVEYING, LLC
P.O. BOX 90876
AUSTIN, TX 78709
(512) 537-2384

STRUCTURAL:
PICKETT KELM & ASSOCIATES
4100 DUVAL RD.
AUSTIN, TX 78759
(512) 345-5538

ARCHITECT:
PARKHILL
11902 BURNET RD, SUITE 100
AUSTIN, TX 78758
(512) 676-2100

ELECTRICAL:
MEP ENGINEERING
1120 S CAPITAL OF TEXAS HWY.
AUSTIN, TX 78746
(512) 306-9650

ENGINEER

MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

CONSTRUCTION PLANS

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS

CONSTRUCTION SEQUENCING:

1. 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.

a. 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;

b. UPLOAD THE QUALIFIED INSPECTOR'S CERTIFIED SWP3 INSPECTION REPORT TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY; AND

c. 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.

2. 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)

3. 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.

4. 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:

a. 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.

b. 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)

5. CONSTRUCT 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.

6. 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-POUR INSPECTION OF THE DRIVEWAY THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY GIVING AT LEAST 3 BUSINESS DAYS NOTIFICATION. (PRIORITY INSPECTION).

7. PERFORM TEMPORARY STABILIZATION IN ALL DISTURBED AREAS THAT HAVE CEASED CONSTRUCTION ACTIVITIES FOR 14 DAYS OR LONGER.

8. 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.

9. COMPLETE PERMANENT WATER QUALITY CONTROLS. BEGIN COMPLETION OF PERMANENT WATER QUALITY CONTROL(S) AND INSTALL THE UNDERDRAIN PER APPROVED PLANS, WHEN APPLICABLE.

a. REMOVE CONSTRUCTION SEDIMENT, RE-ESTABLISH THE BASIN SUBGRADE, AND INSTALL UNDERDRAIN PIPING.

b. 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).

10. COMPLETE CONSTRUCTION SITE IMPROVEMENTS AND FINAL STABILIZATION PER THE APPROVED PLANS.

11. 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)

12. 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 DEVELOPERS 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)

BEFORE PROJECT APPROVAL/ISSUANCE OF THE CERTIFICATE OF COMPLETION (COC) AND FISCAL RELEASE, THE FOLLOWING MUST BE COMPLETED:

THE OWNER MUST COMPLETE AND SUBMIT A PWQC MAINTENANCE PERMIT APPLICATION AND A PWQC MAINTENANCE PLAN TO POSTINSPECTION@TRAVISCOUNTYTX.GOV FOR REVIEW AND APPROVAL.

ONCE THE PWQC MAINTENANCE PLAN DOCUMENT RECEIVES REVIEW APPROVAL, THE DOCUMENT WILL BE RETURNED TO BE SEALED AND SIGNED (NOTARIZED) BY THE DESIGN ENGINEER AND LEGALLY RECORDED WITH THE COUNTY CLERK'S OFFICE. A DIGITAL RECORDED COPY MUST BE PROVIDED.

UPON REQUEST, A PWQC PERMIT APPLICATION AND/OR A TEMPLATE FOR A PWQC MAINTENANCE PLAN WILL BE PROVIDED OR UPLOADED TO THE MYPERMITNOW.ORG ACCOUNT.

THE PWQC MAINTENANCE PERMIT MUST BE SIGNED BY THE SITE OWNER ONCE ALL DOCUMENTS HAVE BEEN RECEIVED.

AMERICANS WITH DISABILITIES ACT:

THE DESIGN ENGINEER IS RESPONSIBLE FOR SUBMITTING THE DRAWINGS TO THE ARCHITECTURAL BARRIERS DIVISION OF THE TEXAS DEPT. OF LICENSING AND REGULATION FOR REVIEW AND APPROVAL OF THE PLANS IN ACCORDANCE WITH THE ARCHITECTURAL BARRIERS ACT. THE ENGINEER IS RELIEVED OF THE SUBMITTAL RESPONSIBILITY IF A REGISTERED ARCHITECT HANDLES THE SUBMITTAL; HOWEVER, THE GRADING AND SITE PLAN MUST COMPLY WITH THE REFERENCED ACT, WHICH IS THE ENGINEER'S RESPONSIBILITY.

IRRIGATION NOTES: (IN ADDITION TO DESIGNER'S NOTES)

1. ALL MATERIALS AND INSTALLATIONS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE CITY'S ORDINANCES, LOCAL PLUMBING CODE AND THE STATE OF TEXAS.
2. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE PERSON WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DEISGNER.

BENCHMARKS:

PROJECT SPECIFIC (PROVIDED BY DELTA SURVEY)

BM #1 - SQUARE CUT ON TOP OF CURB IN MEDIAN, ELEV = 1064.57

BM #2 - COTTON SPINDLE IN ZIP LINE POLE, ELEV = 1093.41

TBM #3 - L CUT ON CURB, ELEV. = 1111.48

TBM #4 - SQUARE CUT ON CURB, ELEV = 1118.06'

LANDSCAPE NOTES: (IN ADDITION TO DESIGNER'S NOTES)

1. THE PROPERTY OWNER, MANAGER, AGENT OR LESSEE SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE LANDSCAPED AREAS. PLANTS AND GRASS SHALL PRESENT A HEALTHY, NEAT AND ORDERLY APPEARANCE BE FREE OF DEBRIS, REFUSE, AND DISEASE.
2. ALL MATERIALS AND INSTALLATIONS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE LANDSCAPING REQUIREMENTS OF THE CITY OF LAKEWAY.
3. ALL LANDSCAPING ITEMS SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE LANDSCAPING REQUIREMENTS OF THE CITY OF LAKEWAY. NO MATERIALS SHALL BE PLANTED OTHER THAN THOSE SHOWN ON THE DRAWINGS.
4. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE PERSON WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGNER.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CONTRIBUTING ZONE PLAN - GENERAL CONSTRUCTION NOTES

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - THE NAME OF THE APPROVED PROJECT;
   - THE ACTIVITY START DATE; AND
   - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN (CZP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ONSITE.
3. NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
4. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
5. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
6. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
7. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
8. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON-SITE MUST HAVE PROPER E&S CONTROLS.
9. IF PORTIONS OF THE SITE WILL HAVE A CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
    - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
    - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
    - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
11. THE HOLDER OF ANY APPROVED CZP MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
    A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
    B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
    C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR
    D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE PLAN.

AUSTIN REGIONAL OFFICE
12100 PARK 35 CIRCLE, BUILDING A
AUSTIN, TEXAS 78753-1808
PHONE (512) 339-2929
FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

TREE PROTECTION NOTES:

1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED.
2. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
3. 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.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIPLINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIPLINE), OR, FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   B. ROOT ZONE DISTURBANCE DUE TO GRADE CHANGES;
   C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
7. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. 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 BEHIND THE AREA IN QUESTION;
   B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIPLINE, 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);
   C. WHERE TREES ARE ARE CLOSE TO PROPOSED BUILDINGS. ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN FENCE AND THE BUILDING;
8. 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 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
9. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
10. 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 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
11. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
12. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.).
13. ALL PRUNED LIMBS OF OAK TREES SHALL BE PAINTED WITH PRUNING SEAL IMMEDIATELY AFTER CUTTING. ANY BROKEN LIMBS OF OAK TREES SHALL BE CUT CLEAN AND PAINTED WITH PRUNING SEAL IMMEDIATELY AFTER CUTTING.
14. 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.
15. PRIOR TO CONSTRUCTION, ALL TREES OVER ROADWAYS AND CONSTRUCTION AREAS MAY BE TRIMMED TO 13 ½ -FEET IN HEIGHT.

UTILITY COMPANIES

CONTRACTORS MUST BE ABLE TO CERTIFY THAT ALL UTILITY COMPANIES HAVE BEEN NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED CUTS OR TRENCHES IN THE STREET RIGHT-OF-WAYS OR PUBLIC UTILITY EASEMENTS, AND THAT UTILITY LINES IN THE IMMEDIATE VICINITY OF THE PROJECT HAVE BEEN IDENTIFIED AND, IF NECESSARY, LOCATED AND MARKED ON THE GROUND AT A SITE BEFORE YOU DIG IN ANY PUBLIC UTILITY EASEMENT OR STREET RIGHT-OF-WAY. "ONE-CALL" THROUGH THE CITY OF AUSTIN OR SOUTHWESTERN BELL DOES NOT COVER ALL OF THE UTILITY COMPANIES IN THE CITY OF LAKEWAY. UTILITY PROVIDERS FOR THIS SITE INCLUDE BUT ARE NOT LIMITED TO:

AT&T
FOR PRE-CONSTRUCTION MEETINGS FOR ALL DEVELOPMENT IN LAKEWAY PROPER CALL- 870-5185. FOR PRE-CONSTRUCTION MEETING FOR DEVELOPMENT ALONG RR620 IN LAKEWAY (INCLUDING ETJ) CALL - 870-5214. FOR UTILITY LINE LOCATION CALL - 1-800-344-8377.

AUSTIN ENERGY
FOR PRE-CONSTRUCTION MEETINGS CALL - 505-7649. FOR UTILITY LINE LOCATION CALL - 505-7542.

TIME WARNER CABLE
FOR PRE-CONSTRUCTION MEETINGS CALL - 485-6433. FOR UTILITY LINE LOCATION CALL - 485-6356.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENTS DISTRICT #17
FOR PRE-CONSTRUCTION MEETINGS CALL - 266-1111 EXT 13 FOR UTILITY LINE LOCATION CALL - 266-1111 EXT 10

TRAVIS COUNTY SWP3 NOTES:

1. ALL CONSTRUCTION ACTIVITIES DISTURBING ONE ACRE AND GREATER MUST OBTAIN STORM WATER DISCHARGE AUTHORIZATION FRO M THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THROUGH COMPLIANCE WITH TCEQ'S GENERAL PERMIT #TXR150000. THE PRIMARY CONSTRUCTION SITE OPERATOR(S) [PCSO] MUST PREPARE AND IMPLEMENT AN SWP3 THROUGHOUT CONSTRUCTION WHICH INCLUDES THE EROSION AND SEDIMENT CONTROL (ESC) PLAN AND OTHER BEST MANAGEMENT PRACTICES (BMPS) SPECIFIED IN THESE PLANS APPROVED BY TRAVIS COUNTY.
2. SMALL CONSTRUCTION ACTIVITIES DISTURBING BETWEEN ONE AND FIVE ACRES SHALL POST A TCEQ CONSTRUCTION SITE NOTICE (CSN) ON SITE PRIOR T O COMMENCING CONSTRUCTION. LARGE CONSTRUCTION ACTIVITIES DISTURBING FIVE ACRES OR GREATER SHALL SUBMIT A NOTICE OF INTENT (NOI) TO TCEQ AND POST THE NOI ON SITE AT LEAST SEVEN (7) DAYS PRIOR TO BEGINNING CONSTRUCTION. NOTICES POSTED MUST BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. TRAVIS COUNTY IS OPERATOR OF THE SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) RECEIVING STORM WATER DISCHARGES FROM THIS PROJECT, UNDER TCEQ MS4 PERMIT #TXR040327. UPON REQUEST BY TRAVIS COUNTY, THE PCSO SHALL PROVIDE A COPY OF THE NOI AND CSN, THE SWP3; AND REGULARLY PROVIDE COPIES OF THE SWP3 INSPECTION REPORTS, REQUIRED WEEKLY, OR BI -WEEKLY AND AFTER EVERY RAIN EVENT .5 INCHES OR GREATER.
4. THE PCSO MUST REVISE THE SWP3 WHENEVER CHANGING SITE CONDITIONS, OR A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS NOT PREVIOUSLY ADDRESSED; OR WHEN RESULTS OF INSPECTIONS BY SITE OPERATORS, TRAVIS COUNTY, TCEQ, OR OTHER LOCAL AGENCY AUTHORIZED TO APPROVE ESC PLANS INDICATE THE SWP3 IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS IN DISCHARGES FROM THE SITE.
5. TEMPORARY OR PERMANENT EROSION CONTROL AND STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE, AND AS SPECIFIED ON THE PLANS, IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. THESE MEASURES MUST BE INITIATED NO LATER THAN 14 DAYS AFTER CESSATION, UNLESS CONSTRUCTION ACTIVITIES WILL RESUME WITHIN 21 DAYS IN THE AREA.
6. UPON FINAL STABILIZATION OF THE ENTIRE SITE, INCLUDING COMPLETION OF ALL STABILIZATION REQUIREMENTS OF THE APPROVED PLANS AND PERMIT AS VERIFIED BY TRAVIS COUNTY, THE PCSO SHALL SUBMIT A NOTICE OF TERMINATION (NOT) TO TCEQ.

CITY OF LAKEWAY GENERAL NOTES

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF LAKEWAY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLAN SET. ANY SUBSEQUENT CHANGES WILL REQUIRE A PLAN REVISION AND APPROVAL FROM THE CITY PRIOR TO CONSTRUCTION.
3. THE CITY OF LAKEWAY 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.
4. PRIOR TO THE ISSUANCE OF A CERTIFICATE OF ACCEPTANCE, THE DESIGN ENGINEER MUST CERTIFY IN WRITING THAT ALL WORK HAS BEEN COMPLETED PER THE APPROVED PLAN SET.
5. PRIOR TO OCCUPANCY OF ANY BUILDING, ALL CITY OF LAKEWAY SITE AND BUILDING COMMENTS MUST BE CLEARED, THE WASTEWATER DISPOSAL SYSTEM ACCEPTED BY THE PROPER AUTHORITY, ALL REQUIRED EASEMENTS AND RESTRICTIVE COVENANTS MUST BE RECORDED, AND A CERTIFICATE OF ACCEPTANCE AND CERTIFICATE OF OCCUPANCY MUST BE ISSUED BY THE CITY OF LAKEWAY.
6. THE PROPERTY OWNER IS RESPONSIBLE FOR PROPER OPERATION AND MAINTENANCE OF ON-SITE STORMWATER DETENTION AND WATER QUALITY PONDS AND RELATED FACILITIES.
7. THE PROPERTY OWNER IS RESPONSIBLE FOR PROPER MAINTENANCE OF OFF-SITE STORMWATER AND DRAINAGE FACILITIES CONSTRUCTED AND PERMITTED WITH THIS PROJECT.
8. CONTRACTOR IS RESPONSIBLE FOR CONTACTING UTILITY COMPANIES TO VERIFY LOCATIONS OF ALL UTILITIES. THE "ONE-CALL" SYSTEM DOES NOT APPLY TO ALL UTILITY COMPANIES IN LAKEWAY'S JURISDICTION.
9. DESIGN PROCEDURES ARE IN COMPLETE COMPLIANCE WITH THE CITY OF LAKEWAY DEVELOPMENT ORDINANCE AND THE CITY OF AUSTIN DRAINAGE AND ENVIRONMENTAL CRITERIA MANUALS, AS ADOPTED BY THE CITY OF LAKEWAY.
10. A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE BEFORE ISSUANCE OF A PERMIT PRIOR TO ANY CONSTRUCTION.
11. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
12. CONTRACTOR IS FULLY RESPONSIBLE FOR FOLLOWING THE REQUIREMENTS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR ALL SIGNAGE AND WORK IN A PUBLIC OR PRIVATE RIGHT-OF-WAY.
13. ALL SITE WORK MUST ALSO COMPLY WITH THE CITY'S ENVIRONMENTAL REQUIREMENTS.
14. TREES & BRUSH CLEARED FROM A SITE SHALL BE MULCHED OR HAULED OFF-SITE WITHIN 48 HOURS OF BEING CUT. FAILURE TO DO SO SUBJECTS THE ENTIRE PROJECT TO A RED TAG UNTIL THE MULCHING OR HAULING IS COMPLETE.
15. SAFETY RAILING SHALL BE PROVIDED FOR ALL VERTICAL ELEVATION CHANGES FROM 30-INCHES IN HEIGHT UP TO AND INCLUDING 5'-11" IN HEIGHT. ANY ELEVATION DIFFERENCE 6-FEET AND GREATER MUST HAVE A GUARDRAIL (WROUGHT IRON FENCE).
16. EXTERIOR LIGHTING SHALL BE HOODED OR SHIELDED TO DIRECT LIGHTING DOWN AND AWAY FROM VIEW OF ADJACENT PROPERTIES.
17. PROJECT SHALL COMPLY WITH THE CITY OF LAKEWAY SIGN ORDINANCE.
18. PRIOR TO ISSUING BUILDING PERMITS, APPROVALS FROM VARIOUS OTHER AGENCIES MAY BE REQUIRED BY THE CITY OF LAKEWAY.
19. A SET OF APPROVED CONSTRUCTION DRAWINGS AND A COPY OF THE SWPPP (STORM WATER POLLUTION PREVENTION PLAN) REPORT MUST BE AVAILABLE AND LOCATED AT THE PROJECT SITE AT ALL TIMES. NO WORK CAN PROCEED WITHOUT T HE DRAWINGS AND THE SWPPP AS HEREBY REQUIRED. A COPY OF THE WEEKLY SWPPP INSPECTION REPORT MUST ALSO BE ON SITE AND SUBMITTED TO THE CITY.
20. CONTRACTOR SHALL NOT STOCKPILE ANY MATERIAL WITHIN ANY BUFFER ZONE.
21. ANY REQUIRED REGULATORY PERMITS SHALL BE ACQUIRED AND SUBMITTED TO THE CITY PRIOR TO CONSTRUCTION COMMENCING.

TRAVIS COUNTY EMERGENCY SERVICES DISTRICT NO. 6 FIRE DEPARTMENT - SITE PLAN NOTES

1. DESIGNS FOR SITE IMPROVEMENTS SHALL MEET THE CURRENT DESIGN CRITERIA AS REQUIRED BY TCESD NO. 6.
2. ALL PLANS (SITE, BUILDING, FIRE ALARM, FIRE SPRINKLER) SHALL BE SUBMITTED TO LTFR FOR REVIEW. TWO FULL-SIZE SETS ARE REQUIRED. A REVIEW LETTER WILL BE GENERATED. REVIEWS WILL NOT BE PERFORMED UNTIL THE APPLICABLE REVIEW FEES ARE PAID.
3. UPON APPROVAL, A PERMIT WILL BE ISSUED. THE PERMIT MUST BE CONSPICUOUSLY POSTED.
4. AN ALL-WEATHER DRIVING SURFACE (FIRE APPARATUS ACCESS) MUST BE INSTALLED IN LOCATIONS SHOWN ON THE SITE PLAN, PRIOR TO ANY BUILDING CONSTRUCTION BEYOND THE FOUNDATION.
5. ALL PERVIOUS/DECORATIVE PAVING SHALL BE ENGINEERED AND INSTALLED FOR 80,000 POUNDS LIVE-VEHICLE LOADS. ANY PERVIOUS/DECORATIVE PAVING WITHIN 100 FEET OF ANY BUILDING MUST BE APPROVED BY THE FIRE DEPARTMENT.
6. VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS THIRTEEN FEET, SIX INCHES FOR FULL 25' WIDTH OF ACCESS DRIVES AND ROUTES FOR INTERNAL CIRCULATION. DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150' IN LENGTH SHALL BE PROVIDED WITH APPROVED PROVISIONS FOR THE TURNING AROUND OF FIRE APPARATUS, PER FIGURE B-4 OF THIS MANUAL.
7. THE MAXIMUM ALLOWABLE DRIVEWAY, DRIVE AISLE OR FIRE LANE GRADE IS FIFTEEN PERCENT.
8. THE MARKINGS OF FIRE LANES MUST BE RED WITH WHITE STENCILING OR WHITE WITH RED STENCILING READING "FIRE LANE - TOW AWAY ZONE" IN LETTERING NO LESS THAN THREE INCHES IN HEIGHT. THE STENCILING SHALL BE AT INTERVALS OF 35 FEET OR LESS. ALTERNATIVE MARKING OF FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, OR HIS/HER DESIGNATED AGENT, PROVIDED FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. EXISTING FIRE LANE MARKINGS SHALL BE GRANDFATHERED PROVIDED THAT THEY MEET THE WORDING AND INTERVAL REQUIREMENTS THAT WERE ACCEPTED ON APPROVED SITE PLANS AND OTHER TYPE FIRE LANE SUBMITTALS APPROVED BY THE FIRE DEPARTMENT. EXISTING FIRE LANES THAT ARE IN NEED OF RE-PAINTING SHALL MEET THE REQUIREMENTS OF THIS SECTION.
9. THE FIRE DEPARTMENT CONNECTION (FDC) CONNECTION SHALL BE INSTALLED WHERE SHOWN ON THE SITE PLAN.
10. HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FOUR AND ONE-HALF INCH STEAMER OPENING AT LEAST 18" ABOVE FINISHED GRADE. THE FOUR AND ONE-HALF INCH STEAMER OPENING MUST FACE THE D

WCID #17 CONSTRUCTION NOTES:

1. CONTRACTORS ARE RESPONSIBLE FOR QUALITY OF WORKMANSHIP AND SCHEDULE OF WORK. WATER AND WASTEWATER UTILITIES SHALL BE INSTALLED BY EXPERIENCED PERSONNEL FAMILIAR WITH THE WORK AND SUPERVISED BY A QUALIFIED FOREMAN.

2. CONTRACTOR MUST OBTAIN A STREET CUT PERMIT FROM TRAVIS COUNTY TRANSPORTATION & NATURAL RESOURCES DEPARTMENT BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET, ALLEY, OR EASEMENT. PRIOR TO BEGINNING ANY CONSTRUCTION, A CITY (LAKEWAY, BEE CAVE OR AUSTIN) AND COUNTY PERMIT MUST BE POSTED ON THE JOB SITE.

3. AT LEAST FORTY-EIGHT HOURS (48 HOURS) BEFORE BEGINNING ANY UTILITY CONSTRUCTION IN PUBLIC OR PUBLIC EASEMENT, THE CONTRACTOR SHALL NOTIFY TRAVIS COUNTY TRANSPORTATION & NATURAL RESOURCES INSPECTION DIVISION, WCID NO. 17 AND THE APPLICABLE CITY. CONTACT WCID NO. 17 FORTY-EIGHT HOURS (48 HOURS) PRIOR TO CONNECTING TO EXISTING LINES.

4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

5. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM AT "811" (1-800-344-8377) FOR EXISTING UTILITY LOCATIONS AT LEAST FORTY-EIGHT HOURS (48 HOURS) PRIOR TO BEGINNING EXCAVATION. IN ADVANCE OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES TO BE TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS. (NOTE: "ONE CALL" DOES NOT TAKE CARE OF ALL UTILITY LOCATIONS.)

6. BEFORE ANY PIPE IS LAID, SUBGRADE MUST BE ESTABLISHED AND CURB AND FINISHED GRADE STAKES INSTALLED.

7. PRESSURE TAPS: THE CONTRACTOR SHALL DO ALL EXCAVATION AND SHALL FURNISH, INSTALL, AND AIR TEST THE SLEEVES AND VALVE, WHEN A CONTRACTOR MAKES A TAP INTO WCID NO. 17 FACILITIES, A WCID NO. 17 INSPECTOR MUST BE PRESENT. "SIZE ON SIZE" TAPS WILL NOT BE PERMITTED UNLESS MADE BY USE OF AN APPROVED HEAVY DUTY MJ DUCTILE IRON TAPPING SLEEVE. AIR TESTS ON WET TAPS ARE 100 PSI (POUNDS PER SQUARE INCH) FOR TEN (10) MINUTES.

8. EROSION CONTROLS SHALL BE IN PLACE PRIOR TO CONSTRUCTION START.

9. NO DRY UTILITIES (I.E. ELECTRIC, GAS, TELEPHONE) SHALL BE LOCATED NEARER THAN FIVE FEET (5') HORIZONTALLY AND TWO FEET (2') VERTICALLY OF WATER OR WASTEWATER LINES OR FACILITIES.

10. NO TREES SHALL BE PLANTED WITHIN SEVEN FEET (7') OF A WATER OR WASTEWATER LINE OR SERVICE.

PIPING / VALVES

i. ALL MAINS SHALL HAVE A MAXIMUM 48 INCHES (48") OF COVER FROM FINISHED GRADE TO TOP OF PIPE UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.

ii. ALL DUCTILE IRON PIPE AND FITTINGS TO BE WRAPPED WITH MINIMUM 8 MIL. POLYETHYLENE.

iii. ALL PIPES SHALL BE MARKED WITH 12 INCH (12") DETECTABLE TAPE FOR EASE OF IDENTIFICATION. (SEE STANDARD DETAILS FOR WATER APPURTENANCES.)

iv. NO YELLOW MINE OR SDR35 PIPE MAY BE USED.

v. ALL WATER LINES TWELVE INCHES (12") IN DIAMETER OR ABOVE SHALL BE DUCTILE IRON - CLASS 350 OR APPROVED CLASS.

vi. ONLY ARI PLASTIC AIR RELIEF VALVES FOR WATER AND WASTEWATER ARE ACCEPTABLE.

vii. ALL VALVE PIPING IN LIFT STATION DRY WELLS AND FORCE MAIN CLEANOUTS SHALL BE PAINTED TO PREVENT CORROSION WITH A RUST RESISTANT PAINT **APPROVED BY WCID NO. 17**.

viii. ALL GRAVITY WASTEWATER MAINS MUST BE EIGHT INCH (8") MINIMUM.

ix. ALL WATER OR WASTEWATER LINES WHICH CROSS UNDER 24 INCH (24") OR LARGER RCP PIPE WITH A SEPARATION OF TWO FEET (2') OR LESS SHALL BE SLEEVED OR CAPPED WITH SIX INCH (6") CONCRETE TO FIVE FEET (5') EITHER SIDE OF THE RCP.

x. MAXIMUM ALLOWABLE DEFLECTION OF PIPE JOINTS IS ONE-HALF (1/2) OF MANUFACTURERS STANDARDS. DEFLECTIONS TO BE APPROVED BY THE INSPECTOR AT INSTALLATION.

xi. IF A VALVE OPERATING NUT IS TO BE DEEPER THAN THIRTY-SIX INCHES (36"), AN EXTENSION MUST BE ADDED TO BRING THE NUT TO WITHIN TWENTY-FOUR INCHES (24") OF FINISHED GRADE.

xii. IF A VALVE IS TO BE LOCATED OUTSIDE A PAVEMENT AREA, THE CONTRACTOR WILL MARK THE VALVE LOCATION WITH A "V" MARKER. VALVES WILL BE RAISED TO FINISHED GRADE PRIOR TO PAVING.

xiii. FIRE HYDRANTS NORTH OF MANSFIELD DAM SHALL BE SET WITH CITY OF AUSTIN THREADS. THOSE LOCATED SOUTH OF MANSFIELD DAM SHALL FOLLOW THE NATIONAL STANDARD THREAD WITH STEAMER CONNECTOR OF FOUR AND ONE-HALF INCHES (4.5"). COLORS - BASES SHALL BE PAINTED SILVER AND THE BOLT AND CAPS SHALL BE PAINTED THE DESIGNATED COLOR PER THE GALLON PER MINUTE (GPM) FLOW AS FOLLOWS:
CLASS AALIGHT BLUE1500 OR HIGHER GPMCLASS AGREEN1000 - 1499 GPMCLASS BORANGE500 - 999 GPMCLASS CREDLESS THAN 500 GPMCLASS DBLACK OR BAGGEDOUT OF SERVICE

xiv. WATER LINES WHICH ARE STUBBED OUT SHALL BE REQUIRED TO PASS DRIVEWAYS AND HAVE A VALVE AND A TWENTY FOOT (20') SECTION INSTALLED FOR FUTURE USE. **ALL VALVES AND FITTINGS SHALL BE MEGA LUGGED OR RESTRAINED.**

xv. IF ANY WATER OR WASTEWATER MAIN OR SERVICE LINE IS INTENDED TO BE CONSTRUCTED UNDER A WALL OR OTHER STRUCTURE WHICH WOULD RENDER THE LINE INACCESSIBLE FOR REPAIR, THAT LINE SHALL BE SLEEVED FOR TEN FEET (10') EITHER SIDE OF THE WALL. THE SLEEVE SHALL ALLOW FOR THE REMOVAL OF THE LENGTH OF LINE UNDER THE WALL.

xvi. NO VALVES WILL BE OPENED WHICH CONNECT NEW SERVICES TO THE EXISTING SYSTEM WITHOUT PRIOR DISTRICT APPROVAL AND A **DISTRICT REPRESENTATIVE PRESENT.** SEWER LINES WILL BE FLUSHED AND WATER LINES WILL BE PROPERLY DISINFECTED AND TESTED PRIOR TO CONNECTING TO THE EXISTING SYSTEM.

xvii. ALL WATER LINES WHICH ARE DEAD-ENDED SHALL HAVE FIRE HYDRANTS OR APPROVED TWO FOOT (2') BLOW OFF VALVES INSTALLED FOR FLUSHING.

FLUSHING, TESTING AND DISINFECTION

A. WASTEWATER FACILITY TESTING WILL BE DONE IN ACCORDANCE WITH TCEQ RULES. DISTRICT 17 REQUIRES CAMERA TESTS, AIR TESTS, VACUUM TESTS ON MANHOLES, AND MANDREL TESTS ON WASTEWATER LINES. WCID NO. 17 INSPECTORS WILL PROVIDE PROCEDURES.

B. AIR PRESSURE TESTS ON WET TAPS SHALL BE 100 PSI (POUNDS PER SQUARE INCH) FOR TEN (10) MINUTES.

C. CAMERA TESTING OF WASTEWATER LINES SHALL BE DONE ONLY AFTER CASTINGS ARE RAISED, MANHOLES COATED, AND HYDRO JETTING COMPLETED.

D. CONTRACTORS ARE RESPONSIBLE FOR FLUSHING WATER LINES. SCHEDULE WITH WCID NO.17 INSPECTOR.

E. ALL MATERIAL TESTS, INCLUDING SOIL DENSITY TESTS AND RELATED SOIL ANALYSIS, SHALL BE ACCOMPLISHED BY A QUALIFIED LABORATORY.

F. ALL FORCE MAINS AND WATER MAINS SHALL BE PRESSURE TESTED AT 200 PSI FOR TEN (10) MINUTES AND 150 PSI FOR SIXTY (60) MINUTES WITH ZERO PRESSURE LOSS UNLESS OTHERWISE SPECIFIED BY WCID NO. 17 REPRESENTATIVE. [SITE CONDITIONS MAY REQUIRE VARIATION ON TEST PROCEDURES.]

G. WATER LINE TESTING AND DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH AWWA STANDARDS AND TCEQ RULES. CONTRACTOR WILL PROVIDE ANY FITTINGS, VALVES AND OTHER APPURTENANCES NECESSARY FOR DISINFECTION. ALL MAINS WILL BE CHLORINATED FOR TWENTY-FOUR (24) HOURS AT 50 PPM (PARTS PER MILLION) CHLORINE USING PRE-DISSOLVED INJECTION SYSTEMS ONLY.

WASTEWATER

a. ALL FORCE MAINS SHALL BE WHITE WITH BROWN POLY WRAP STATING "FORCE MAIN."

b. FORCE MAINS SHALL HAVE BROWN "FORCE MAIN" TWELVE INCH (12") WIDE MAGNETIC TAPE PLACED EIGHTEEN INCHES (18") BELOW FINISH GRADES.

c. LIFT STATIONS WHICH ARE NOT COMPOSITE OR FIBERGLASS WILL BE COATED INSIDE WITH LAFARGE ALUMINUM SILICATE COMPOUND TO AN APPROVED THICKNESS OF ONE INCH (1") MINIMUM.

d. HDPE OR COMPOSITE RINGS FOR MANHOLES ARE ACCEPTABLE. ALL MANHOLE COVERS WILL BE THE BOLT DOWN TYPE REGARDLESS OF LOCATION.

e. EXISTING WASTEWATER MANHOLES WHICH ARE TO BE TIED INTO AND WET WELLS BEING MODIFIED MUST BE REFURBISHED TO NEW CONDITION. REFURBISHMENT INCLUDES REMOVING THE OLD COATING (IF NOT CALCIUM ALUMINATE) AND RECOATING WITH A MINIMUM ONE-HALF INCH (1/2") CALCIUM ALUMINATE FOR MANHOLES AND ONE INCH (1") FOR WET WELLS. IF THE RING AND COVER IS NOT AT LEAST THIRTY-TWO INCHES (32") IN DIAMETER, THE RING AND COVER WILL BE UPGRADED.

f. MANHOLE FRAMES AND COVERS SHALL BE RAISED TO FINISHED PAVEMENT GRADE BY THE CONTRACTOR PRIOR TO FINAL CONSTRUCTION / PAVING.

g. MANHOLES NOT IN PAVEMENT MUST BE ONE FOOT (1') ABOVE FINISHED GRADE.

REQUIREMENTS FOR GPS LOCATION OF IMPROVEMENTS AND AS-BUILT DOCUMENTATION

IMPROVEMENTS SHALL BE LOCATED USING GLOBAL POSITIONING SYSTEM (GPS) AS THEY ARE INSTALLED AND USED TO PRODUCE THE AS-BUILT DRAWINGS FOR EACH PROJECT. DIGITAL AND HARD COPIES OF THESE AND OTHER PROJECT DOCUMENTS SHALL BE SUPPLIED TO AND APPROVED BY TRAVIS COUNTY WCID NO. 17 (DISTRICT) PRIOR TO PROJECT ACCEPTANCE.

a. GPS REQUIREMENTS
1. GPS LOCATIONS SHALL BE TAKEN WITH A MINIMUM ACCURACY OF:
i. HORIZONTAL: +/- 4"
ii. VERTICAL: +/- 6"
2. GPS LOCATIONS SHALL BE TAKEN, AND THE RESULTING DRAWING PREPARED IN, STATE PLANE COORDINATE SYSTEM (NAD 1983 STATE PLANE TEXAS CENTRAL FIPS 4203 FEET).
3. GPS POINTS SHALL BE DELIVERED IN THREE DIMENSIONS (X, Y AND Z COORDINATES).
4. GPS POINTS SHALL BE TAKEN FOR ALL CHANGES IN ALIGNMENT OF THE PIPING AND AT ALL APPURTENANCES AND IMPROVEMENTS, INCLUDING:
i. WATER LINES AND FORCE MAINS:
1. FITTINGS: INCLUDING BENDS, TEES, CROSSES AND PLUGS.
2. VALVES.
3. FIRE HYDRANTS AND FLUSH VALVES: TAKE GPS LOCATION AT BOTTOM FLANGE OF HYDRANT.
4. SERVICES: TAKE GPS LOCATION ON CENTER OF LID.
5. FORCE MAIN CLEANOUTS: TAKE GPS LOCATION ON CENTER OF COVER.
ii. GRAVITY WASTEWATER LINES:
1. MANHOLES: TAKE GPS LOCATIONS AT THE CENTER OF THE TOP COVER AND THE FLOWLINE.
iii. STORM SEWER SYSTEMS:
1. MANHOLES AND JUNCTION BOXES: TAKE GPS LOCATIONS AT THE CENTER OF THE TOP COVER AND THE FLOWLINE.
2. CURB INLETS: TAKE GPS LOCATION AT CENTER OF TOP OF INLET.
3. AREA INLETS: TAKE GPS LOCATION AT CENTER OF TOP OF INLET.
4. HEADWALLS: TAKE GPS LOCATION AT CENTER OF OUTFALL (FLOWLINE).

b. DRAWING REQUIREMENTS
1. AS-BUILT PLANS SHALL BE PREPARED USING THE GPS LOCATIONS OF THE UTILITIES.
2. THE AS-BUILT DRAWING SHALL BE DELIVERED IN DWG FORMAT AND IN MODEL SPACE.
3. DRAWINGS SHALL BE DRAWN IN U.S. SURVEY FEET AT A 1:1 SCALE AND IN THE STATE PLANE COORDINATE SYSTEM (NAD 1983 STATE PLANE TEXAS CENTRAL FIPS 4203 FEET).
4. IMPROVEMENTS SHALL BE ON DISTINCT AND SEPARATE LAYERS, WITH DESCRIPTIVE LAYER NAMES THAT INDICATE THE TYPE OF IMPROVEMENT. PIPE LINE LAYERS SHALL ALSO INDICATE THE NOMINAL SIZE OF THE PIPE LINE.
5. THE AS-BUILT DRAWING SHALL BE DELIVERED WITH LINES THAT ARE SOLID, CONTINUOUS AND SNAPPED AT ALL INTERSECTIONS.
i. WATER LINES AND FORCE MAINS SHALL BE SPLIT AND SNAPPED AT ALL SYSTEM VALVES, FITTINGS AND APPURTENANCES.
ii. GRAVITY WASTEWATER LINES AND STORM SEWER LINES SHALL BE STRAIGHT TWO-POINT LINES THAT ARE SPLIT AND SNAPPED AT MANHOLES AND/OR JUNCTION BOXES, AND SHALL BE DRAWN IN THE DIRECTION OF THEIR PHYSICAL FLOW. THE BEGINNING POINT OF THE LINE SHALL BE ITS UPSTREAM END.

c. SUBMISSION PROCEDURE
1. THE FOLLOWING SHALL BE SUBMITTED TO THE DISTRICT:
i. AS-BUILT DRAWING IN DWG FORMAT,
ii. FULL-SIZE PAPER COPY OF THE FULL AS-BUILT PLANS, STAMPED OR NOTED AS SUCH,
iii. DIGITAL COPY IN PDF FORMAT OF THE FULL AS-BUILT PLANS,
iv. DIGITAL COPY IN PDF FORMAT OF THE PROJECT'S DESIGN/ENGINEERING REPORT, SUBMITTALS AND OPERATION & MAINTENANCE MANUAL(S).
2. DIGITAL FILES SHALL BE SUBMITTED ON A USB FLASH DRIVE, OR OTHER MEDIUM APPROVED BY THE DISTRICT.
3. ALL PLANS, FILES AND INFORMATION SUBMITTED SHALL BE THE PROPERTY OF THE DISTRICT UPON DELIVERY.

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

BEFORE STARTING CONSTRUCTION, THE OWNER OR THEIR REPRESENTATIVE MUST SUBMIT A REQUEST, USING THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY, TO PARTICIPATE IN A PRECONSTRUCTION CONFERENCE WITH THE DESIGNATED COUNTY INSPECTOR. PRIOR TO THE PRECONSTRUCTION CONFERENCE REQUEST, THE OWNER OR OWNER'S REPRESENTATIVE SHALL ENSURE THE FIRST PHASE OF THE ESC CONTROLS ARE INSTALLED CONFORMANCE WITH THE APPROVED PLANS, THE OWNER'S QUALIFIED INSPECTOR HAS INSPECTED THE CONTROLS AND VERIFIED COMPLIANCE WITH THE PLANS, AND AN SWP3 INSPECTION REPORT DOCUMENTING THIS INFORMATION HAS BEEN SENT TO THE COUNTY THROUGH THE METHOD SPECIFIED BY THE DESIGNATED COUNTY INSPECTOR.
AFTER ARRANGING AN AGREED UPON DATE WITH THE COUNTY AND PROVIDING THE INITIAL SWP3 INSPECTION REPORT, THE OWNER OR OWNER'S DESIGNATED REPRESENTATIVE SHALL PROVIDE NOTICE OF THE SWP3 PRE-CONSTRUCTION CONFERENCE AND A COPY OF THE APPROVED PLANS, IF REQUESTED, TO THE FOLLOWING PERSONS OR ENTITIES AT LEAST TWO BUSINESS DAYS BEFORE THE CONFERENCE:

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

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

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

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

SWP3 INSPECTION AREA AND REPORT CONTENTS:

THE OWNER OR PRIMARY OPERATOR OF THE CONSTRUCTION SITE SHALL DESIGNATE A QUALIFIED INSPECTOR POSSESSING THE REQUIRED CERTIFICATION (AS SPECIFIED IN SECTION 82.934(C)(3)) TO PERFORM A WEEKLY SWP3 INSPECTION AND PREPARE A SIGNED SWP3 INSPECTION REPORT OF THE INSPECTION FINDINGS.

THE CONSTRUCTION SITE AREAS AND THE CONTROL MEASURES LISTED HEREIN ARE TO BE USED AS A MINIMUM AS THE UNIFORM CRITERIA BY THE OWNER'S QUALIFIED INSPECTOR, AS WELL AS THE COUNTY INSPECTOR, TO EVALUATE AND DETERMINE A PROJECT'S COMPLIANCE STATUS WITH THE APPROVED SWP3 AND ESC PLAN.

IN ADDITION, ON AN ONGOING BASIS AND FOLLOWING STORM EVENTS, THE PRIMARY OPERATOR'S RESPONSIBLE ON-SITE PERSONNEL SHALL ALSO INSPECT AND ADDRESS THESE ITEMS DURING CONSTRUCTION AS REQUIRED BY THE SWP3, ESC PLAN, AND TRAVIS COUNTY CODE, SECTION 82.951.

AREAS OF INSPECTION. AT THE VERY LEAST, THE FOLLOWING AREAS MUST BE INSPECTED:

1. DISTURBED AREAS AND THE APPROVED LIMITS OF CONSTRUCTION.
2. PERIMETER AND INTERIOR SEDIMENT CONTROLS.
3. AREAS UNDERGOING TEMPORARY STABILIZATION OR PERMANENT VEGETATION ESTABLISHMENT.
4. TEMPORARY AND PERMANENT FILL AND SPOIL STORAGE OR DISPOSAL AREAS.
5. STORAGE AREAS FOR MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO RAINFALL.
6. OUTFALL LOCATIONS AND THE AREAS IMMEDIATELY DOWNSTREAM.
7. STRUCTURAL CONTROLS, INCLUDING SEDIMENT PONDS, SEDIMENT TRAPS, AND DRAINAGE DIVERSIONS.
8. HAUL ROADS AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND ADJACENT ROADWAYS FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
9. WATERWAY CROSSINGS AND AREAS ADJACENT TO WATERWAYS AND CRITICAL ENVIRONMENTAL FEATURES.
10. CONCRETE WASH OUT AREAS AND ALL AREAS REQUIRING CONTROL MEASURES FOR NONSTORM WATER DISCHARGES, INCLUDING DUST, SOLID WASTE, DE-WATERING, MATERIAL SPILLS, VEHICLE MAINTENANCE AND WASHING, AND WASH WATER DISCHARGES.
11. LOCATIONS OF ALL CONTROL MEASURES THAT REQUIRE MAINTENANCE, INCLUDING ANY CONTROL MEASURE IDENTIFIED IN THE PREVIOUS SWP3 INSPECTION REPORT WHICH REQUIRED MAINTENANCE OR REVISION BY THE OWNER OR PRIMARY OPERATOR.
12. LOCATIONS OF ANY DISCHARGE OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE AND ANY DISTURBANCE BEYOND THE APPROVED LIMITS OF CONSTRUCTION.
13. LOCATIONS OF CONTROL MEASURES THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION.
14. LOCATIONS WHERE AN ADDITIONAL ESC OR CONTROL MEASURE IS NEEDED.

THE SWP3 INSPECTION REPORT MUST INCLUDE:

A. FINDINGS AS TO WHETHER THE FOLLOWING STRUCTURAL AND NON-STRUCTURAL CONTROLS REQUIRED FOR THE SITE AREAS LISTED ABOVE ARE FUNCTIONING :IN COMPLIANCE WITH THE APPROVED SWP3 AND ESC PLAN:

1. EROSION SOURCE CONTROLS, INCLUDING THE APPROVED SEQUENCE OF CONSTRUCTION AND GRADING PLAN LIMITS, DRAINAGE DIVERSION MEASURES, TEMPORARY AND PERMANENT FILL DISPOSAL AND STOCKPILE MANAGEMENT MEASURES.
2. SEDIMENT CONTROLS, INCLUDING PERIMETER AND INTERIOR CONTROLS, SEDIMENT TRAPS AND BASINS, AND THE SEQUENCE OF CONSTRUCTION REQUIREMENTS FOR THE SEDIMENT CONTROLS.
3. PERMANENT EROSION AND SOIL STABILIZATION CONTROLS, BASED ON THE SEQUENCE OF CONSTRUCTION AND CRITICAL SITE IMPROVEMENTS, AND THE CESSATION OF CONSTRUCTION ACTIVITIES, INCLUDING TEMPORARY STABILIZATION MEASURES FOR AREAS INACTIVE FOR LONGER THAN 14 DAYS, AND PERMANENT STABILIZATION MEASURES FOR AREAS AT FINAL GRADE.
4. OTHER APPLICABLE CONTROLS AND POLLUTION PREVENTION MEASURES.

B. RAINFALL DOCUMENTATION:

1. FOR PROJECTS THAT COMPRISE TEN ACRES OR MORE, THE DOCUMENTATION MUST INCLUDE RAINFALL DATES AND AMOUNTS IN ACCORDANCE WITH SECTION 82.934(E); AND
2. FOR PROJECTS THAT COMPRISE LESS THAN TEN ACRES, THE DOCUMENTATION MUST INCLUDE ACCURATE RAINFALL DATA FROM A LOCATION CLOSEST TO THE SITE.

C. CORRECTIVE ACTIONS REQUIRED FOR ANY NON-COMPLIANT ITEMS AND THE SCHEDULE FOR BRINGING THESE ITEMS INTO COMPLIANCE.

THE SWP3 INSPECTION REPORT CONTENTS MUST CONTAIN THE INSPECTION FINDINGS FOR THE REQUIRED AREAS AND CONTROL MEASURES LISTED HEREIN AND CERTIFY WHETHER THE SITE IS IN COMPLIANCE WITH THE APPROVED SWP3 AND ESC PLAN.

EITHER AT THE TIME OF EACH SWP3 INSPECTION, OR NO LATER THAN THE DATE OF THE INSPECTION, THE OWNER'S QUALIFIED INSPECTOR SHALL PREPARE AND SIGN A SWP3 INSPECTION REPORT.

THE OWNER OR PRIMARY OPERATOR SHALL UPLOAD EACH REQUIRED SWP3 OR ESC PLAN INSPECTION REPORT TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY. AN ALTERNATE METHOD OF REPORT SUBMITTAL MAY BE USED IF APPROVED BY THE COUNTY INSPECTOR.

GEOTECHNICAL PAVEMENT RECOMMENDATIONS:

Layer Description		Layer Thickness	
		Clay Subgrade	Limestone Subgrade
General Parking Areas	HMAC Surface Course, Type "D"	2.0 in.	2.0 in.
	Flexible Base	10.0 in.	7.0 in.
	Combined Total	**12.0 in.**	**9.0 in.**
Channelized Traffic Areas	HMAC Surface Course, Type "D"	2.5 in.	2.5 in.
	Flexible Base	11.0 in.	8.0 in.
	Combined Total	**13.5 in.**	**10.5 in.**

DETAILED PAVEMENT RECOMMENDATIONS:

REFER TO GEOTECHNICAL ENGINEERING STUDY FOR LAKE TRAVIS HIGH SCHOOL COMBINED IMPROVEMENTS 3324 RANCH TO MARKET ROAD 620 SOUTH, AUSTIN, TEXAS, BY RABA KISTNER.

PERMANENT EROSION CONTROL NOTES:

ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:

A. A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DISTURBED AREAS (EXCEPT ROCK OUTCROP). SALVAGED TOPSOIL FROM THE SITE SHOULD BE USED WHENEVER POSSIBLE. IMPORTED TOPSOIL SHALL BE WEED FREE WITH A MINIMUM 20% ORGANIC CONTENT. TRASH, WOOD, BRUSH, STUMPS, ROCKS OVER 1½ INCHES (37.5 MM) IN SIZE AND OTHER OBJECTIONABLE MATERIAL ENCOUNTERED SHALL BE SCREENED FROM THE TOPSOIL PRIOR TO PLACEMENT. NO MORE THAN 15 PERCENT OF THE TOPSOIL VOLUME SHALL BE ROCK SMALLER THAN ½ INCHES.

B. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTURBED BY CONSTRUCTION AS FOLLOWS:

DATES	CLIMATE	SPECIES (lb/ac)	
YEAR ROUND	PERMANENT COOL/WARM SEASON (NATIVE SPECIES)	PURPLE THREE-AWN (ARISTIDA PURPUREA)	1.4
		SIDEOATS GRAMA (BOUTELOUA CURTIPENDULA)	2.0
		SILVER BLUESTEM (BOTHRIOCHLOA LAGURIOIDES)	6.0
		BUFFALOGRASS (BUCHLOE DACTYLOIDES)	1.4
		CANADIAN WILDRYE (ELYMUS CANADENSIS)	1.4
		ENGELMANN'S DAISY (ENGELMANNIA PINNATIFIDA)	0.6
		GREEN SPRANGLETOP (LEPTOCHLOA DUBIA)	2.6
		MEXICAN HAT (RATIBIDA COLUMNIFERA)	1.0
		LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM)	1.8
		INDIANGRASS (SORGHASTRUM NUTANS)	1.8
		TEXAS WINTERGRASS (NASSELLA LEUCOTRICHA)	15.0
		TOTAL	35.0
MAR 30-OCT 1	PERMANENT WARM SEASON	BUFFALO/NATIVE	45.0
OCT 1-MAR 30	PERMANENT COOL/WARM SEASON	BUFFALO/NATIVE	70.0
		*CEREAL RYE (SECALE CEREALE)	90.0
		TOTAL	160

TAKE CARE TO DISTRIBUTE SEED EVENLY, BY SOWING FINE AND LARGE SEEDS SEPARATELY OR BY USING A FINE SEED BOX. WHEN BROADCASTING SEEDING, THE APPLICATION RATE SHOULD BE DOUBLED AND THE AREA ROLLED TO ENSURE A GOOD SEED/SOIL CONTACT.

FROM SEPTEMBER 15 TO MARCH 1, OATS (21 lb/acre) AND WINTER WHEAT (30 lb/acre) MAY BE SUBSTITUTED FOR RYE.

MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 3500 lb/acre (HAY), 4500 lb/acre (STRAW) OR 2500 lb/acre (HYDRAULIC MULCH). ACKIFIER, IF USED SHALL BE BIODEGRADABLE.

C. THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES. THE IRRIGATION SHALL OCCUR AT TEN-DAY INTERVALS DURING THE FIRST TWO MONTHS. RAINFALL OCCURRENCES OF ½ INCH OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK.

D. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH 70% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.

WCID-17 PRE-CONSTRUCTION CONFERENCE CHECKLIST:

**PRE

N

0 120'

SCALE: 1" = 120'

LEGEND

- EXIST. PUBLIC UTILITY EASEMENT
- PROPERTY BOUNDARY
- EXIST. SIGN
- EXIST. UTILITY POLE
- SURVEY BENCHMARK
- OE — OE — EXIST. OVERHEAD ELEC.
- EXIST. FENCE
- TREE TO REMAIN

PROJECT AREA

SPILLMAN LOOP

CAVALIER DRIVE

RR 620

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

EXISTING CONDITIONS

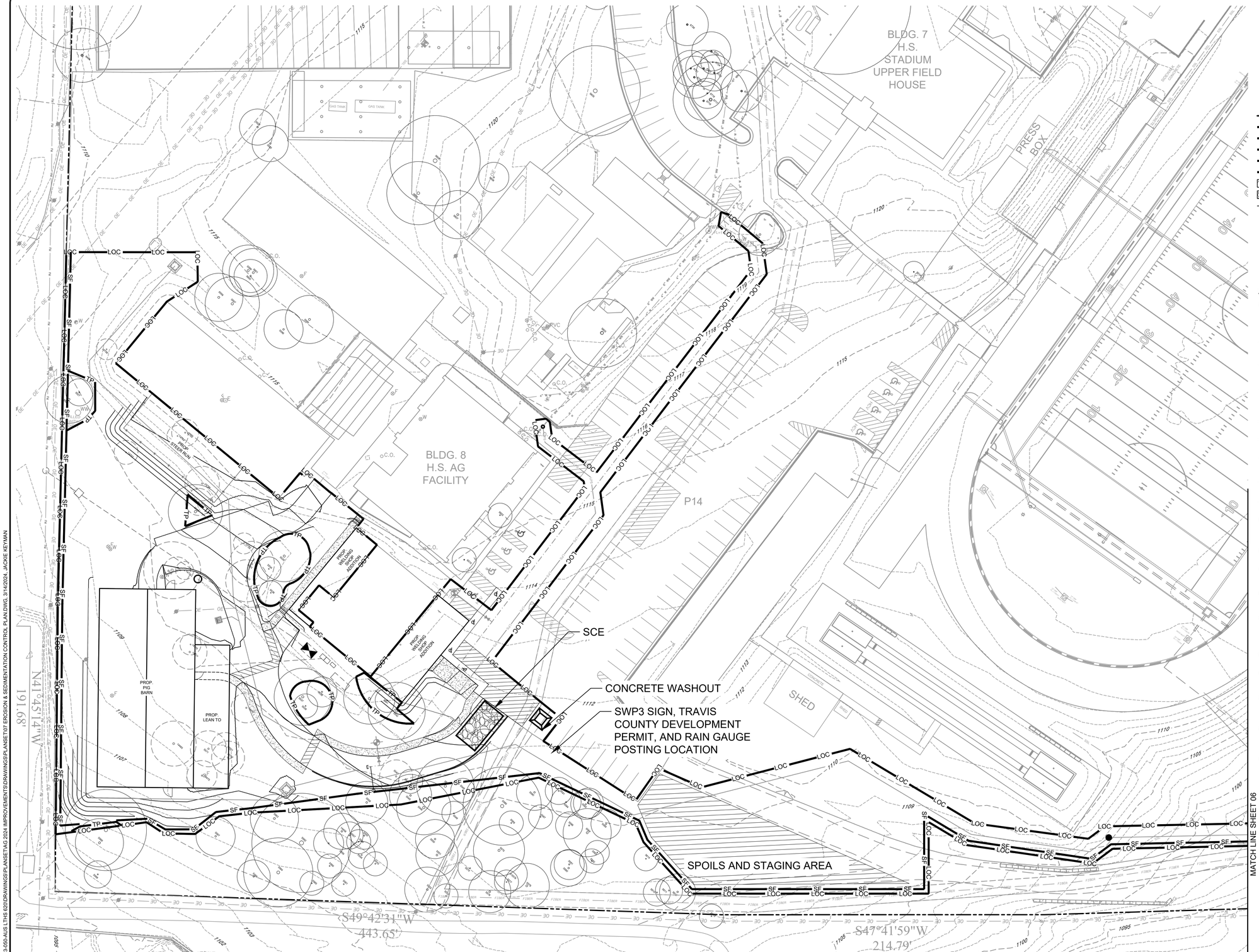
MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0640 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY :	CB
CHECKED BY :	AV
APPROVED BY :	JBM
DATE :	2/28/2024

SHEET 04
OF 28

P:\LTISD OVERALL\PROJECTS\23-050-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\06 EXISTING TREE LIST.DWG, 3/14/2024, JACKIE KEYMAN



0 30'
SCALE: 1" = 30'

LEGEND

- PROPERTY BOUNDARY
- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- JH — SILT FENCE W/ J HOOKS
- IP — INLET PROTECTION
- TP — TREE PROTECTION
- CONTRACTOR'S STAGING/SPOILS AREA
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- 950 — PROPOSED FINISHED GRADE
- TREE TO REMAIN
- TREE TO BE REMOVED

NOTES:

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

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

EROSION & SEDIMENTATION CONTROL PLAN 1

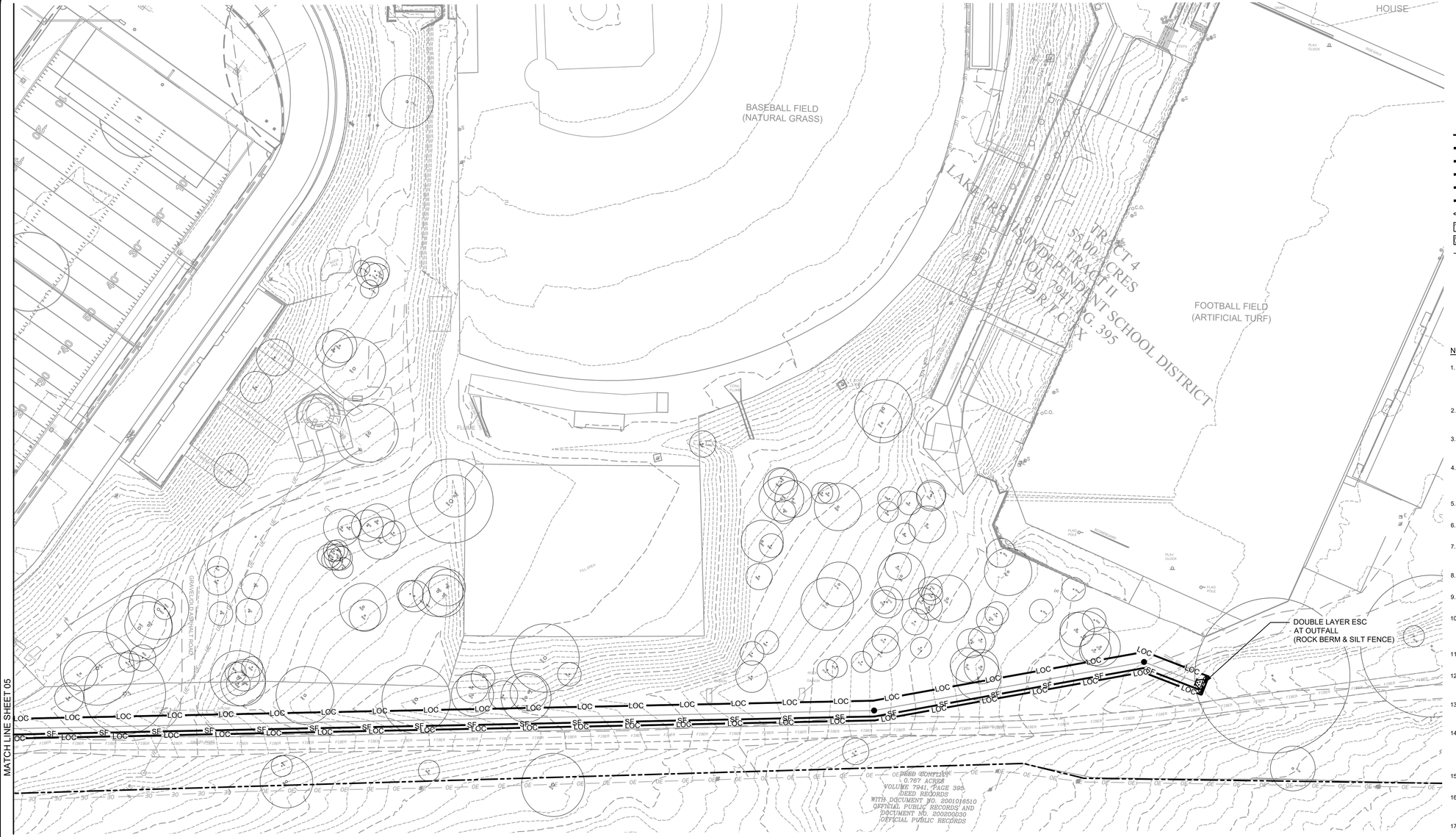
MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899.0600 Fax: (512) 899.0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY :	CB
CHECKED BY :	AV
APPROVED BY :	JBM
DATE :	3/6/2024

SHEET 05
OF 28

P:\LTISD_OVERALL\PROJECTS\23-005-AG\S_LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\07 EROSION & SEDIMENTATION CONTROL PLAN.DWG, 3/14/2024, JACKIE KEYMAN



N

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SCALE: 1" = 40'

LEGEND

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- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- JH — SILT FENCE W/ J HOOKS
- IP — INLET PROTECTION
- TP — TREE PROTECTION
- ROCK BERM
- CONTRACTOR'S STAGING/SPOILS AREA
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- 950 — PROPOSED FINISHED GRADE
- 10" — TREE TO REMAIN
- 10" — TREE TO BE REMOVED

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TREE LIST

* INDICATES TREE THAT WILL BE REMOVED

TREE LIST

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
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5529	18" SHIN OAK 13-10	5544	8" CEDAR	5559	10" CEDAR	5574	8" CEDAR	5589	26" RED OAK 18-15	*14475	
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*5531	9" LIVE OAK	5546	18" HACKBERRY	5561	8" CEDAR	5576	14" CEDAR 10-7	5591	9" CEDAR	*14493	
*5532	14" CEDAR 9-9	5547	19" ASH	5562	33" LIVE OAK	5577	8" CEDAR	5592	10" CEDAR	*14501	
*5533	14" CEDAR 9-5-5	5548	8" CEDAR	5563	16" ASH	5578	11" CEDAR	5593	10" CEDAR	*14752	
5534	8" CEDAR	5549	8" CEDAR	5564	23" CEDAR 8-8-8-7-7	5579	15" CEDAR 12-6	5594	10" CEDAR	*14758	
5535	17" LIVE OAK 12-10	5550	13" CEDAR 10-6	5565	8" CEDAR	5580	12" CEDAR 8-8	5602	8" ORNAMENTAL	*14764	
5536	8" SHIN OAK	5551	14" CEDAR 8-6-5	5566	11" CEDAR 8-6	5581	10" CEDAR	5603	23" LIVE OAK	*14765	
5537	19" ASH	5552	15" CEDAR 8-7-6	5567	13" CEDAR 10-6	5582	8" CEDAR	5610	9" CEDAR	*14774	
5538	8" SHIN OAK	5553	8" CEDAR	5568	9" CEDAR	5583	8" CEDAR	5611	9" CEDAR	*14776	
5539	10" CEDAR ELM	5554	9" CEDAR	5569	16" LIVE OAK	5584	16" CEDAR 12-8	5612	12" RED OAK AD*	*14777	
5540	17" CEDAR ELM	5555	9" CEDAR	5570	27" RED OAK 14-13-12	5585	10" CEDAR	5613	8" LIVE OAK	*14782	
5541	8" CEDAR	5556	8" CEDAR	*5571	12" ASH	5586	9" CEDAR	5614	8" LIVE OAK	*14785	
										*14786	

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

EROSION & SEDIMENTATION CONTROL PLAN 2

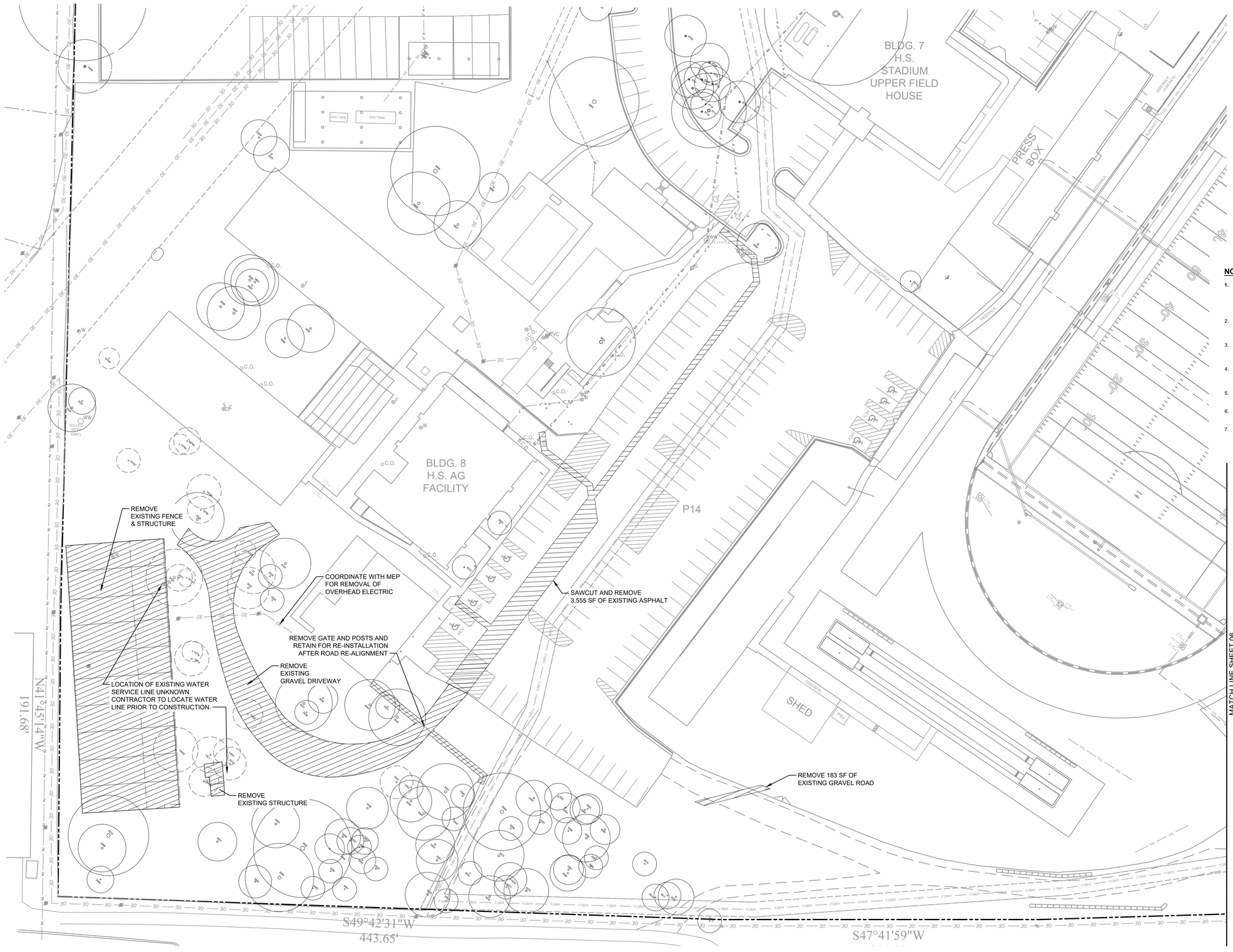
MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0455
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY :	CB
CHECKED BY :	AV
APPROVED BY :	JBM
DATE :	3/6/2024

SHEET 06
OF 28

F:\LTISD OVERALL\PROJECTS\23-090-AUS_LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\07 EROSION & SEDIMENTATION CONTROL PLAN.DWG, 3/14/2024, JACKIE KEYMAN



0 30'
SCALE: 1" = 30'

LEGEND

- PROP. BOUNDARY
- EXIST. EDGE OF PAVEMENT
- EXIST. DRIVE
- EXIST. PUBLIC UTILITY EASEMENT
- PROPERTY BOUNDARY
- EXIST. SIGN
- EXIST. UTILITY POLE
- SURVEY BENCHMARK
- EXIST. OVERHEAD ELEC.
- EXIST. FENCE
- TREE TO REMAIN
- TREE TO BE REMOVED

NOTES:

1. **WARNING!** CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, NOTIFY ENGINEER OF ANY CONFLICTS.
2. FOR EROSION CONTROL SEE EROSION CONTROL AND TREE PROTECTION PLANS. INSTALL TEMPORARY EROSION CONTROL AND TREE PROTECTION PRIOR TO DEMOLITION.
3. CONTACT UTILITY COMPANIES PRIOR TO REMOVAL OF ANY ON-SITE UTILITY IMPROVEMENTS. COORDINATE SHUT-OFF OF SERVICE.
4. COMPLY WITH ALL APPLICABLE UTILITY COMPANY REGULATIONS AS WELL AS CITY, STATE, AND / OR FEDERAL REGULATIONS.
5. COMPLY WITH APPLICABLE "GENERAL CONSTRUCTION NOTES". SEE SHEET 02.
6. A PRECONSTRUCTION MEETING IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
7. RELOCATE/REPLACE EXISTING SIGNS AS NEEDED.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

DEMOLITION PLAN

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
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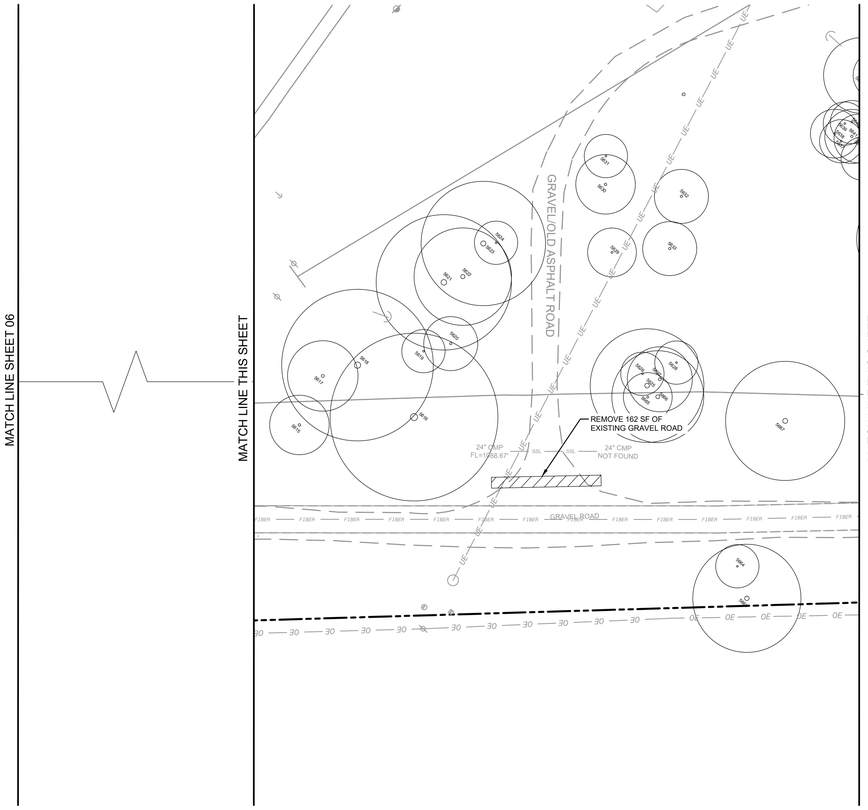
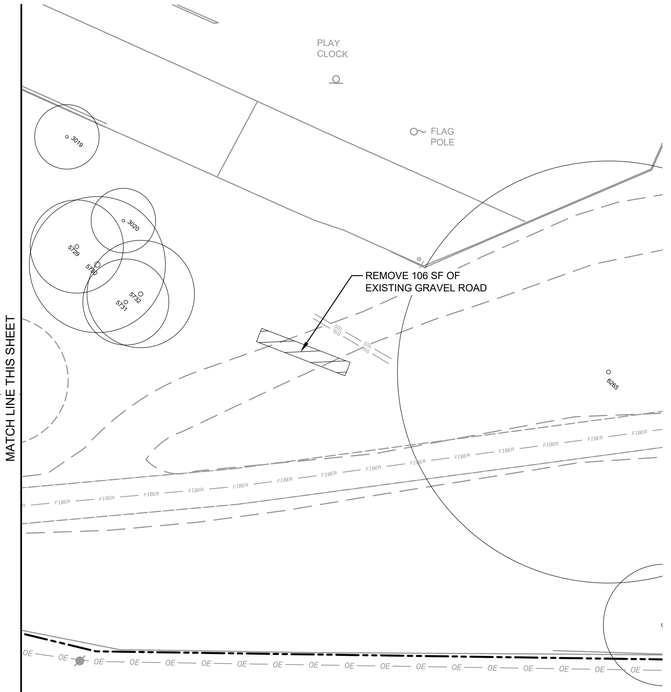
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
3/14/2024

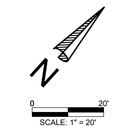
DESIGN BY :	CB
CHECKED BY :	AV
APPROVED BY :	JBM
DATE :	3/6/2024

SHEET 07
OF 28

F:\LTISD_OVERALL\PROJECTS\23-060-AUS (LTHS 620)\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\05 DEMOLITION PLAN.DWG, 3/14/2024, JACKIE KEYMAN







LEGEND

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NOTES:

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TREE LIST

* INDICATES TREE THAT WILL BE REMOVED

TREE LIST

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
5527	9" LIVE OAK	5542	19" CEDAR ELM	5557	9" LIVE OAK AD*	*5572	11" ASH	5587	8" CEDAR	6510	8" SUMAC
5528	16" LIVE OAK 12-8	*5543	11" CEDAR	5558	14" CEDAR	5573	8" CEDAR	5588	8" CEDAR	14456	
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*5530	19" LIVE OAK 13-11	5545	14" CEDAR	5560	8" CEDAR	5575	17" HACKBERRY	5590	12" CEDAR	*14482	
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5539	10" CEDAR ELM	5554	9" CEDAR	5569	16" LIVE OAK	5584	16" CEDAR 12-8	5612	12" RED OAK AD*	*14777	
5540	17" CEDAR ELM	5555	9" CEDAR	5570	27" RED OAK 14-13-12	5585	10" CEDAR	5613	8" LIVE OAK	*14782	
5541	8" CEDAR	5556	8" CEDAR	*5571	12" ASH	5586	9" CEDAR	5614	8" LIVE OAK	*14785	
										*14786	

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

DEMOLITION PLAN

MALONE ★ WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0060 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY : CB
CHECKED BY : AV
APPROVED BY : JBM
DATE : 3/6/2024

SHEET 08
OF 28

F:\LTISD OVERALL\PROJECTS\23-050-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\08 DEMOLITION PLAN.DWG, 3/14/2024, JACKIE KEYWAN

PRE-DEVELOPMENT DRAINAGE AREAS

DRAIN. AREA NO.	AREA (acres)	MANNING n	TC (min)	COMP. C	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)	DRAIN. AREA NO.
PRE-A	107.01	0.24	23.34	76	99.90	268.01	372.72	549.55	PRE-A
PRE-B1	19.64	0.24	16.36	76	20.84	56.22	78.04	114.83	PRE-B1
PRE-B2	6.27	0.24	15.27	76	6.82	18.27	25.33	37.34	PRE-B2
PRE-C	14.28	0.24	15.84	76	15.35	41.29	57.27	84.20	PRE-C
PRE-D	5.00	0.24	14.04	76	5.59	15.09	20.96	30.86	PRE-D
PRE-E	7.38	0.24	12.20	76	8.62	23.04	31.90	46.82	PRE-E
PRE-F	2.62	0.24	10.78	76	3.15	8.43	11.70	17.21	PRE-F
TOTAL	162.20				160.27	430.35	597.92	880.81	TOTAL

0 120'
SCALE: 1" = 120'

LEGEND

- PROPERTY BOUNDARY
- EXIST. STORM SEWER
- EXIST. CURB INLET
- EXIST. DRAINAGE AREA
- EXIST. FLOW DIRECTION
- E-1 / 1.00 ACRES — EXIST. DRAINAGE AREA ID / DRAINAGE AREA ACREAGE

PRE-D 5.00 ACRES
PRE-B1 19.64 ACRES
PRE-C 14.28 ACRES
PRE-A 107.01 ACRES
PRE-B2 6.27 ACRES
PRE-F 2.62 ACRES
PRE-E 7.38 ACRES

ANALYSIS POINT D
ANALYSIS POINT C
ANALYSIS POINT B1
ANALYSIS POINT B2
ANALYSIS POINT
ANALYSIS POINT E
ANALYSIS POINT A

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

PRE-DEVELOPED DRAINAGE AREAS

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
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STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY :	CB
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APPROVED BY :	JBM
DATE :	2/28/2024

SHEET 09
OF 28

F:\LTISD OVERALL\PROJECT\23-030-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\07 PRE-DEVELOPED DRAINAGE AREAS.DWG, 3/14/2024, JACKIE KEYMAN

EXISTING DRAINAGE AREAS

DRAIN. AREA NO.	AREA (acres)	MANNING n	TC (min)	COMP. C	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)	DRAIN. AREA NO.
P-A1	102.14	0.24	23.39	86	198.15	377.88	514.28	769.65	P-A1
P-A2	13.15	0.24	7.99	88	36.00	66.44	89.41	132.38	P-A2
P-A3	1.91	0.24	8.90	79	3.85	8.12	11.45	17.73	P-A3
P-B1	14.96	0.24	15.88	79	26.01	55.24	78.07	121.21	P-B1
P-B2	5.23	0.24	15.31	88	12.41	23.00	30.99	45.95	P-B2
P-C1	7.56	0.24	9.82	89	20.74	37.68	50.44	74.34	P-C1
P-C2	4.59	0.24	10.75	86	11.34	21.53	29.26	43.72	P-C2
P-C3	3.81	0.24	11.67	87	9.50	17.82	24.12	35.90	P-C3
P-E1	0.92	0.24	5.00	84	2.36	4.58	6.26	9.41	P-E1
P-D1	3.83	0.24	11.18	83	8.47	16.87	23.30	35.38	P-D1
P-F1	4.26	0.24	7.13	86	11.22	21.26	28.86	43.08	P-F1
TOTAL	162.36				340.05	650.42	886.44	1328.75	TOTAL

0 120'
SCALE: 1" = 120'

LEGEND

- PROPERTY BOUNDARY
- EXIST. STORM SEWER
- EXIST. CURB INLET
- EXIST. DRAINAGE AREA
- EXIST. FLOW DIRECTION
- E-A1 / 1.00 ACRES — EXIST. DRAINAGE AREA ID / DRAINAGE AREA ACREAGE

ANALYSIS POINT D
E-D1 3.83 ACRES
E-C3 3.81 ACRES
E-B1 14.97 ACRES
ANALYSIS POINT C
E-C2 4.59 ACRES
EDWARDS AQUIFER CONTRIBUTING ZONE NORTHERN BOUNDARY
EXISTING DETENTION POND 1
E-C1 7.56 ACRES
ANALYSIS POINT B1
E-A1 102.14 ACRES
E-F1 4.26 ACRES
WATER QUALITY POND #1
ANALYSIS POINT B2
ANALYSIS POINT F
WATER QUALITY POND #3
E-B2 5.25 ACRES
E-E1 0.92 ACRES
E-A2 13.16 ACRES
EXISTING DETENTION POND 2
E-A3 1.90 ACRES
ANALYSIS POINT E
ANALYSIS POINT A

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

EXISTING DRAINAGE AREA MAP

MALONE★WHEELER INC. SINCE 1995
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STATE OF TEXAS
JESSE B. MALONE
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LICENSED PROFESSIONAL ENGINEER
3/14/2024

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APPROVED BY :	JBM
DATE :	2/28/2024

SHEET 10 OF 28

F:\LTISD OVERALL\PROJECTS\23-050-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\08 EXISTING DRAINAGE AREA MAP.DWG, 2/14/2024, JACKIE KEYMAN

PROPOSED DRAINAGE AREAS

DRAIN. AREA NO.	AREA (acres)	MANNING n	TC (min)	COMP. C	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)	DRAIN. AREA NO.
P-A1	102.14	0.24	23.39	86	**198.15**	**377.88**	**514.28**	**769.65**	P-A1
P-A2	13.15	0.24	7.99	88	**36.00**	**66.44**	**89.41**	**132.38**	P-A2
P-A3	1.91	0.24	8.90	79	**3.85**	**8.12**	**11.45**	**17.73**	P-A3
P-A4	1.59	0.24	13.51	91	**4.27**	**7.57**	**10.06**	**14.72**	P-A4
P-B1	14.96	0.24	15.88	79	**26.01**	**55.24**	**78.07**	**121.21**	P-B1
P-B2	3.66	0.24	15.31	87	**8.43**	**15.84**	**21.46**	**31.96**	P-B2
P-C1	7.56	0.24	9.82	89	**20.74**	**37.68**	**50.44**	**74.34**	P-C1
P-C2	4.59	0.24	10.75	86	**11.34**	**21.53**	**29.26**	**43.72**	P-C2
P-C3	3.81	0.24	11.67	87	**9.50**	**17.82**	**24.12**	**35.90**	P-C3
P-E1	0.92	0.24	5.00	84	**2.36**	**4.58**	**6.26**	**9.41**	P-E1
P-D1	3.83	0.24	11.18	83	**8.47**	**16.87**	**23.30**	**35.38**	P-D1
P-F1	4.26	0.24	7.13	86	**11.22**	**21.26**	**28.86**	**43.08**	P-F1
TOTAL	162.38				340.34	650.63	886.97	1329.48	TOTAL

ANALYSIS POINT FLOW RATES

ANALYSIS POINT	FLOW SCENARIO	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
AP-A	PRE-DEVELOPED	144.74	325.93	470.27	747.90
	EXISTING	137.82	197.93	242.81	701.59
	PROPOSED	138.98	199.15	244.11	721.32
AP-B1	PRE-DEVELOPED	29.63	66.65	96.11	152.25
	EXISTING	26.01	55.24	78.07	121.21
	PROPOSED	26.01	55.24	78.07	121.21
AP-B2	PRE-DEVELOPED	9.67	21.65	31.22	49.59
	EXISTING	12.41	23.00	30.99	45.95
	PROPOSED	8.43	15.84	21.46	31.96
AP-C	PRE-DEVELOPED	21.80	48.93	70.50	111.60
	EXISTING	19.35	40.56	54.62	123.40
	PROPOSED	19.35	40.56	54.62	123.40
AP-D	PRE-DEVELOPED	7.94	17.90	25.82	40.93
	EXISTING	8.47	16.87	23.30	35.38
	PROPOSED	8.47	16.87	23.30	35.38
AP-E	PRE-DEVELOPED	12.21	27.27	39.23	62.03
	EXISTING	2.07	3.95	5.37	8.03
	PROPOSED	2.36	4.58	6.26	9.41
AP-F	PRE-DEVELOPED	4.45	9.99	14.40	22.81
	EXISTING	11.22	21.23	28.86	43.08
	PROPOSED	11.22	21.23	28.86	43.08

Notes:
1. Pre-developed conditions analyze the drainage patterns prior to any development on site.
2. Existing conditions are site conditions following the construction of "Lake Travis High School 2024 Phase 1" improvements (TNR PERMIT #23-44877)
3. Atlas 14 rainfall data used for drainage modeling.

0 120'
SCALE: 1" = 120'

LEGEND

- PROPERTY BOUNDARY
- EXIST. STORM SEWER
- EXIST. CURB INLET
- PROP. DRAINAGE AREA
- PROP. FLOW DIRECTION
- P-A1 / 1.00 ACRES — PROP. DRAINAGE AREA ID / DRAINAGE AREA ACREAGE

P-B1
14.97 ACRES

ANALYSIS POINT D

P-D1
3.83 ACRES

P-C3
3.81 ACRES

ANALYSIS POINT C

SPILLMAN LOOP

EDWARDS AQUIFER CONTRIBUTING ZONE NORTHERN BOUNDARY

EXISTING DETENTION POND 1

P-C2
4.59 ACRES

P-C1
7.56 ACRES

P-F1
4.26 ACRES

ANALYSIS POINT B1

P-A1
102.14 ACRES

WATER QUALITY POND #1

ANALYSIS POINT B2

P-B2
3.66 ACRES

WATER QUALITY POND #3

ANALYSIS POINT F

CAVALIER DRIVE

P-E1
0.92 ACRES

EXISTING DETENTION POND 2

P-A2
13.16 ACRES

P-A4
1.59 ACRES

P-A3
1.90 ACRES

ANALYSIS POINT E

START P-A4 LAG
(AREA P-A4 CONVEYED TO POND 2 VIA STORM SEWER)

ANALYSIS POINT A

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

PROPOSED DRAINAGE AREA MAP

MALONE★WHEELER INC.
SINCE 1995
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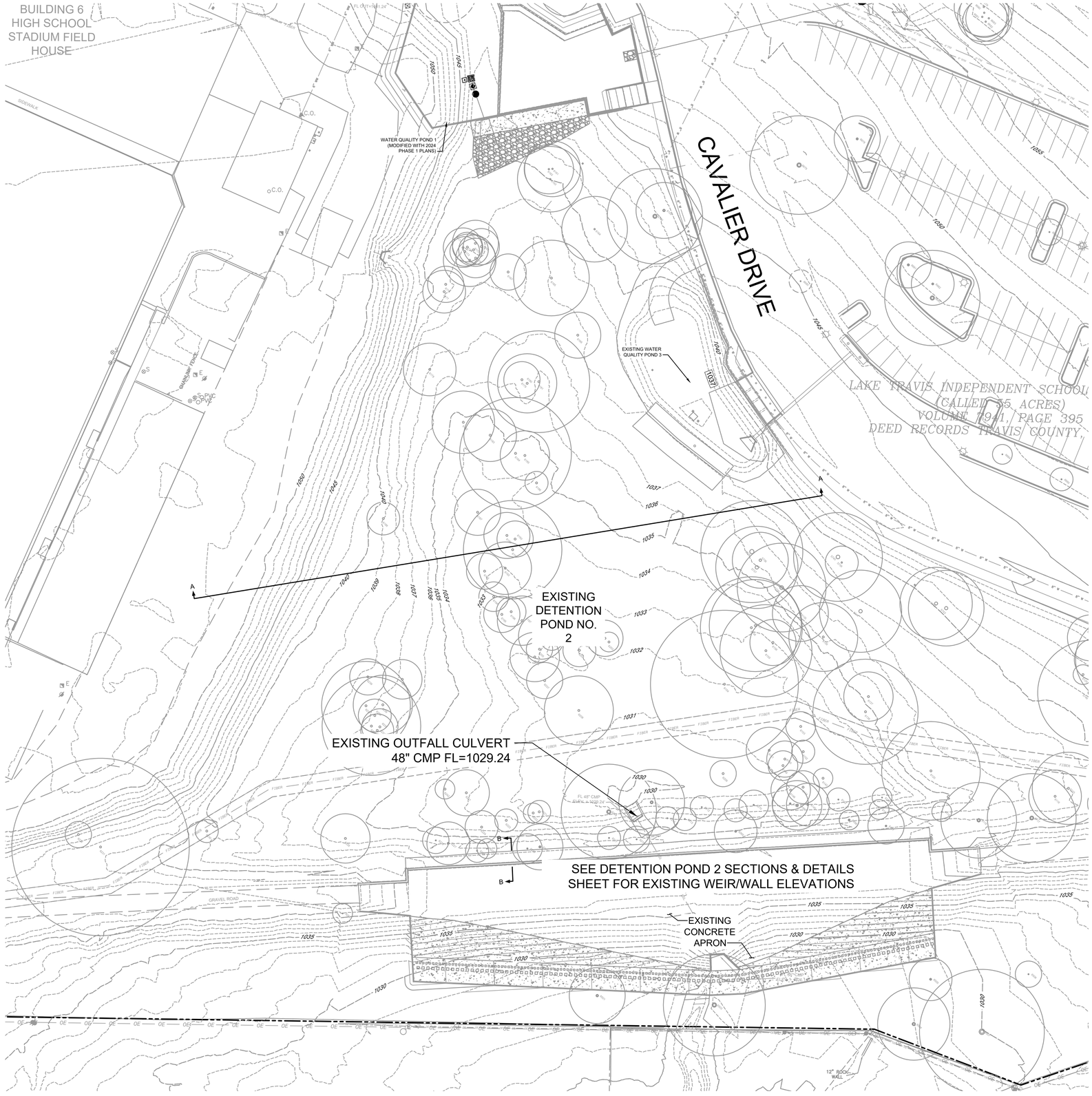
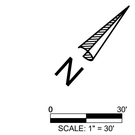
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
3/5/2024

DESIGN BY :	CB
CHECKED BY :	AV
APPROVED BY :	JBM
DATE :	3/5/2024

SHEET 11
OF 28

P:\LTISD_OVERALL\PROJECT\3123-030-AUS_LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\09 PROPOSED DRAINAGE AREA MAP.DWG, 3/14/2024, JACKIE KEYMAN





DETENTION POND 2
STAGE-STORAGE-DISCHARGE

STORM EVENT	MAX. POND WSE (FT)	PEAK DISCHARGE (CFS)	MAX. POND STORAGE (CU-FT)
2-YEAR	1,035.77	126.63	151,089
10-YEAR	1,039.04	172.36	423,857
25-YEAR	1,041.01	194.71	677,821
100-YEAR	1,041.84	663.78	799,078

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LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

EXITING DETENTION POND 2

MALONE★WHEELER INC. SINCE 1995
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STATE OF TEXAS
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108734
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3/14/2024

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SHEET 12
OF 28

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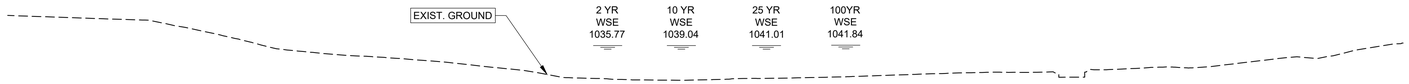
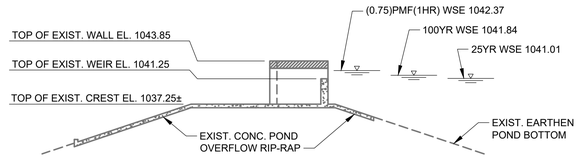


DETENTION POND 2 SECTION A-A

APPROX. SCALE: 1" = 20'



EXISTING DETENTION POND 2 SECTION B-B

APPROX. SCALE: 1" = 10'

75% PMF Analysis

DRAIN. AREA NO.	75% OF AREA (acres)	COMP. C (ARC II)	COMP. C (ARC III)	PEAK DISCHARGE PER STORM EVENT							
				1hr (cfs)	2hr (cfs)	3hr (cfs)	6hr (cfs)	12hr (cfs)	24hr (cfs)	48hr (cfs)	72hr (cfs)
P-A1	76.61	86	94	1330.69	993.46	958.38	727.09	514.57	359.03	213.48	153.81
P-A4	1.19	91	97	28.07	20.99	20.33	15.26	10.80	7.59	4.48	3.21

75% PMF - Detention Pond 2

Storm Event (hr)	Discharge (cfs)	Pond WSE (ft)
1	1356.98	1042.37
2	1012.50	1042.16
3	977.00	1042.10
6	741.55	1041.91
12	524.79	1041.70
24	365.69	1041.55
48	216.80	1041.29
72	150.47	1037.35

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LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

DETENTION POND 2 SECTIONS & DETAILS

MALONE★WHEELER INC.
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STATE OF TEXAS
JESSE B. MALONE
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LICENSED
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3/14/2024

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APPROVED BY : JBM
DATE : 3/14/2024

SHEET 13
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F:\LTISD OVERALL\PROJECTS\23-030-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\11-2 DETENTION POND 2 SECTIONS & DETAILS.DWG, 3/14/2024, JACKIE KEYMAN

SEE 18 SHEET FOR STORM SEWER CONTINUATION

SEE 16 SHEET FOR WATER SLINE CONTINUATION

BLDG. 8
H.S. AG
FACILITY

P14

PROP. STEER RUN

PROPOSED FENCE (SEE ARCHITECT'S PLANS FOR DETAILS)

(FILLED WITH DIRT)

CONCRETE STEPS WITH HANDRAILS

PROP. WELDING SHOP ADDITION

5' WALKWAY

PROPOSED FIRE HYDRANT

CONCRETE STEPS WITH HANDRAILS

PROPOSED GRINDER PUMP

PROPOSED LOW PRESSURE SEWER LINE

PROP. PIG BARN

PROP. LEAN TO

5' ADA WALKWAY

PROPOSED WATER LINE

PROPOSED 148 LF OF CONCRETE CURB

PROPOSED STORM SEWER LINE

PROPOSED AUTO. FLUSHING VALVE

SEE 18 SHEET FOR STORM SEWER CONTINUATION

N41°45'14"W
191.68'

S49°42'31"W
443.65'

0 20'
SCALE: 1" = 20'

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. ADA ROUTE
- PROP. FIRE LANE
- PROP. CURB AND GUTTER
- PROP. CONCRETE
- PROP. ASPHALT
- PROP. STORM SEWER
- PROP. WATER LINE
- PROP. FORCE MAIN SEWER
- PROP. ELEC. CONDUIT
- PROP. GRATE INLET
- PROP. AREA INLET

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

SITE PLAN

MALONE★WHEELER INC. SINCE 1995
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STATE OF TEXAS
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SHEET 14
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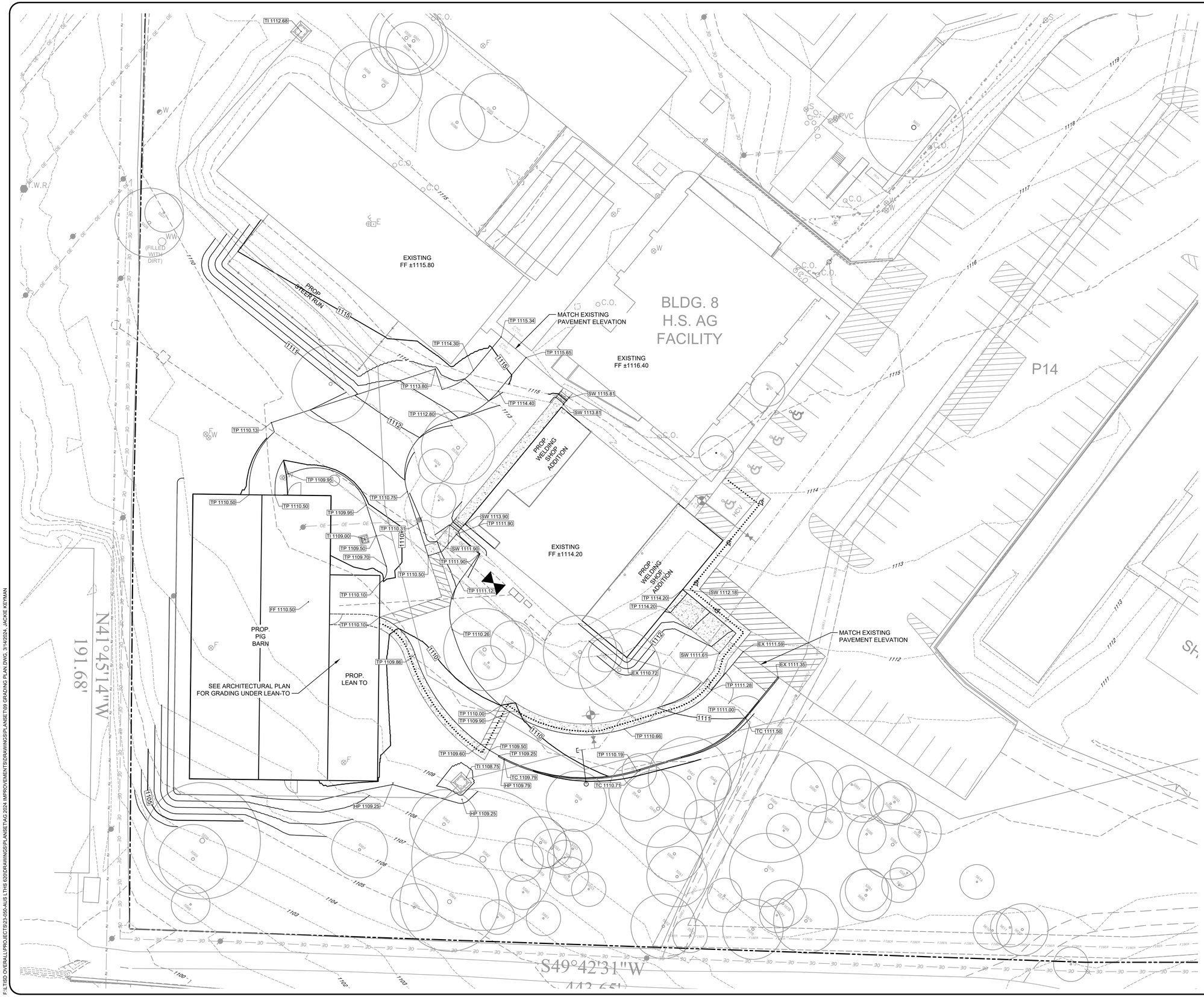

0 20'
SCALE: 1" = 20'

LEGEND

- BOUNDARY LINE
- PROP. CENTER LINE
- PROP. SIDEWALK
- PROP. CURB AND GUTTER
- PROP. CONCRETE
- PROP. STORM SEWER
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. GRATE INLET
- PROP. AREA INLET
- 930.00 PROP. SPOT ELEVATION
- EXIST. GROUND CONTOUR
- 350 PROP. FINISHED CONTOUR

SPOT ELEVATION KEY

CS	CONCRETE SURFACE
TP	TOP OF PAVEMENT
TC	TOP OF CURB
SW	TOP OF SIDEWALK
EX	EXISTING ELEVATION
HP	HIGH POINT
TI	TOP OF INLET
FF	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE

NOTE:

1. ALL SPOT ELEVATIONS ARE GROUND/PAVEMENT UNLESS NOTED OTHERWISE.
2. WALL ELEVATIONS ARE FOR GRADING PURPOSES ONLY AND A STRUCTURAL DESIGN IS REQUIRED BY-OTHERS..
3. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP. [ANSI 403.3]
4. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50. [ANSI 403.3]

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

GRADING PLAN

MALONE ★ WHEELER INC. SINCE 1995
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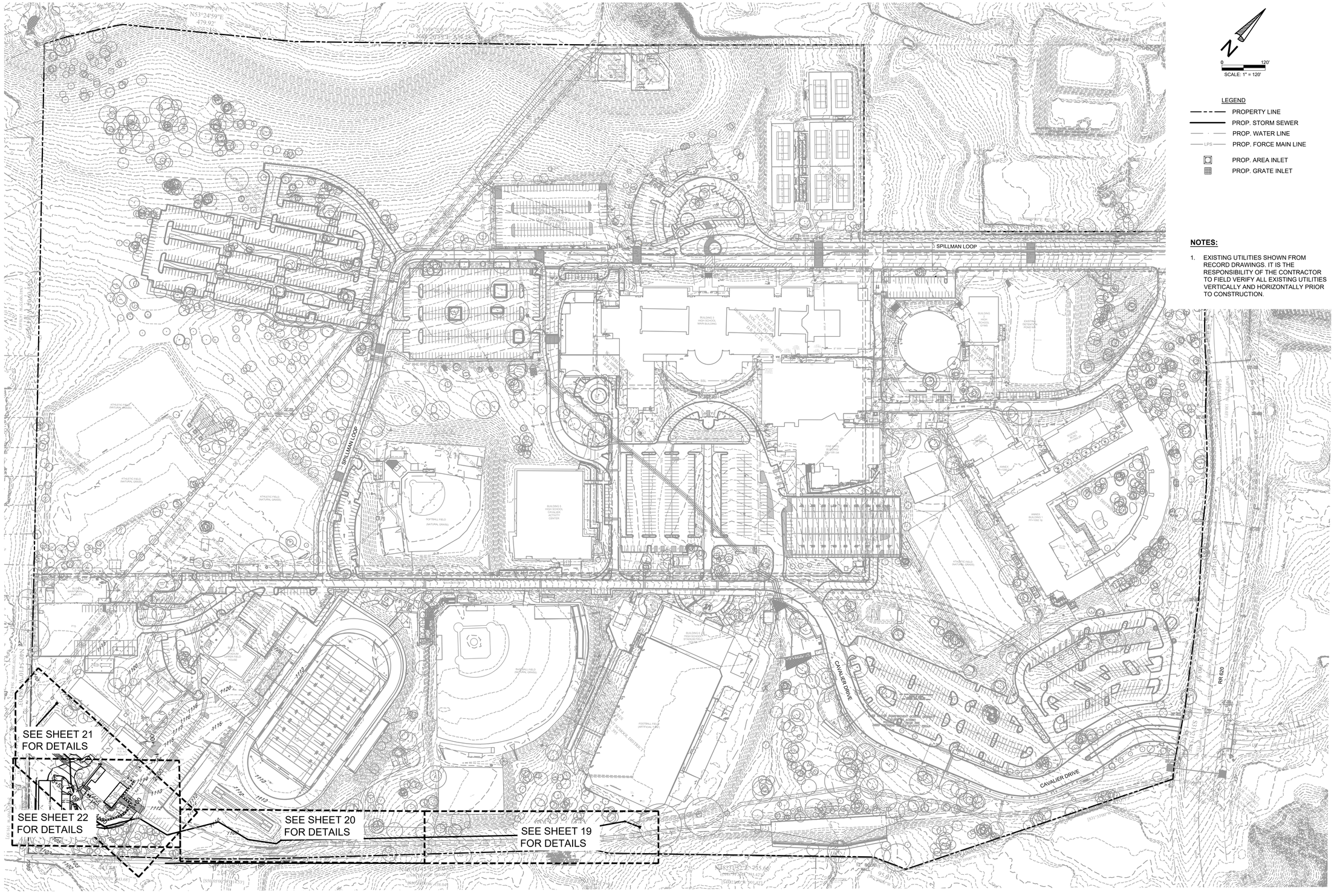
SHEET 15
OF 28

F:\LTISD_OVERALL\PROJECTS\23-030-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\09 GRADING PLAN.DWG, 3/14/2024, JACKIE KEYNAN



NOTES:

1. EXISTING UTILITIES SHOWN FROM RECORD DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

OVERALL STORM PLAN

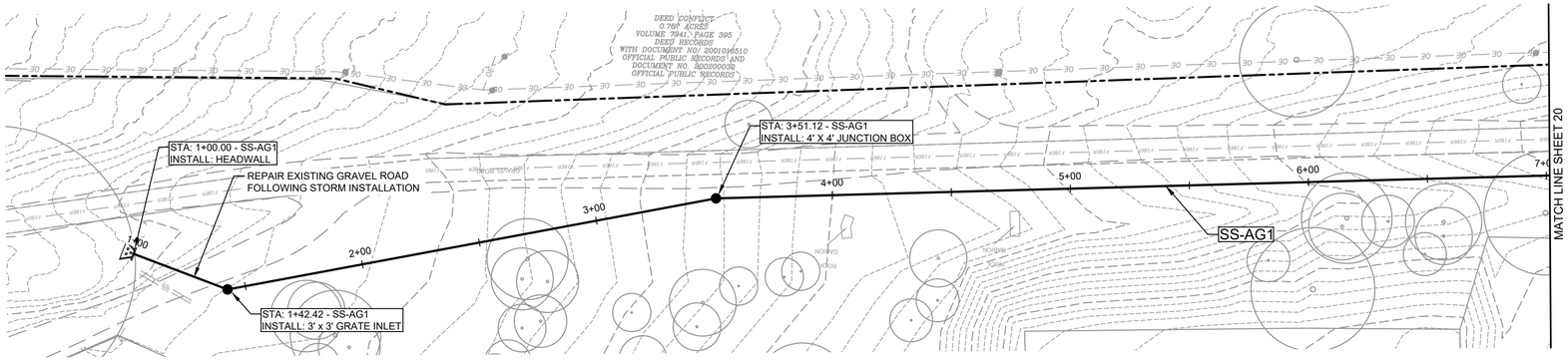
MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0400 Fax: (512) 899-0655
Firm Registration No. F-786

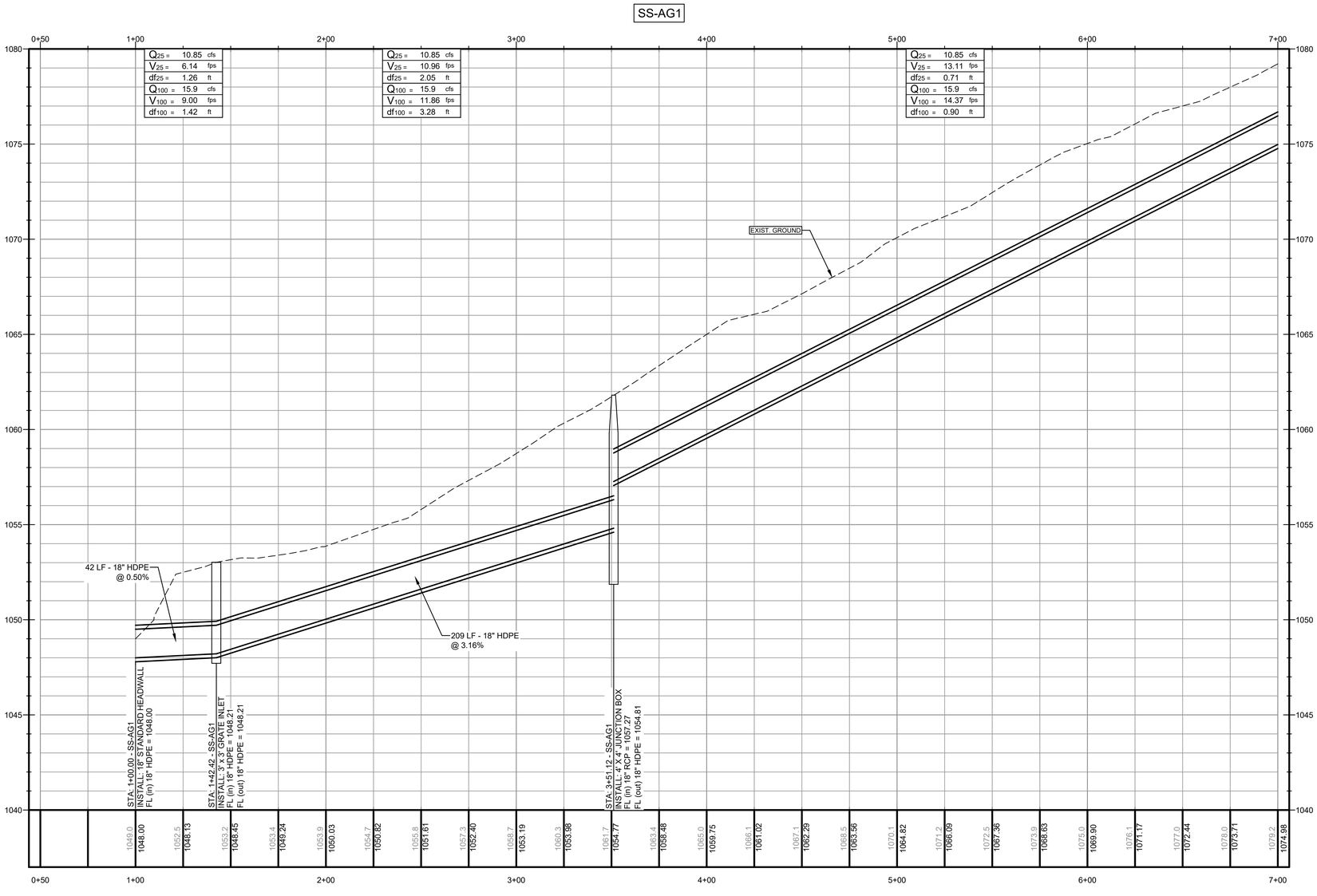
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
3/14/2024

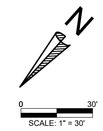
DESIGN BY :	CB
CHECKED BY :	AV
APPROVED BY :	JBM
DATE :	3/14/2024

SHEET 18
OF 28

P:\LTISD OVERALL\PROJECTS\23-050-AUS LTHS 60\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\19 STORM PLAN.DWG, 3/14/2024, JACKIE KEYMAN







LEGEND

- PROPERTY LINE
- PROP. STORM SEWER
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. AREA INLET
- PROP. GRATE INLET

NOTES:

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3/14/2024

DESIGN BY :	CB
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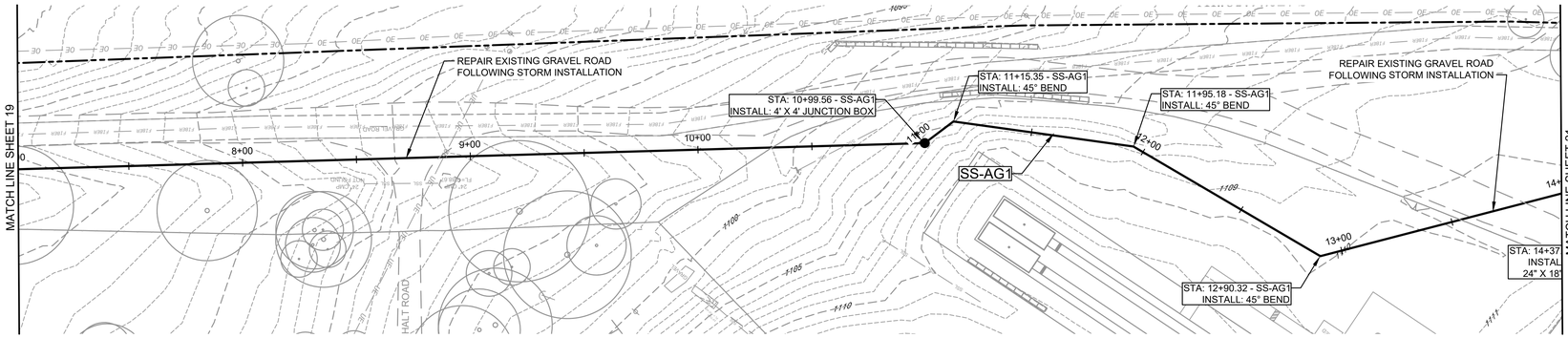
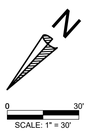
DATE :	3/14/2024

SHEET 19
OF 28

F:\LTISD OVERALL\PROJECTS\23-050-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\16 STORM PLAN.DWG, 3/14/2024, JACKIE KEYMAN





LEGEND

- PROPERTY LINE
- PROP. STORM SEWER
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. AREA INLET
- PROP. GRATE INLET

NOTES:

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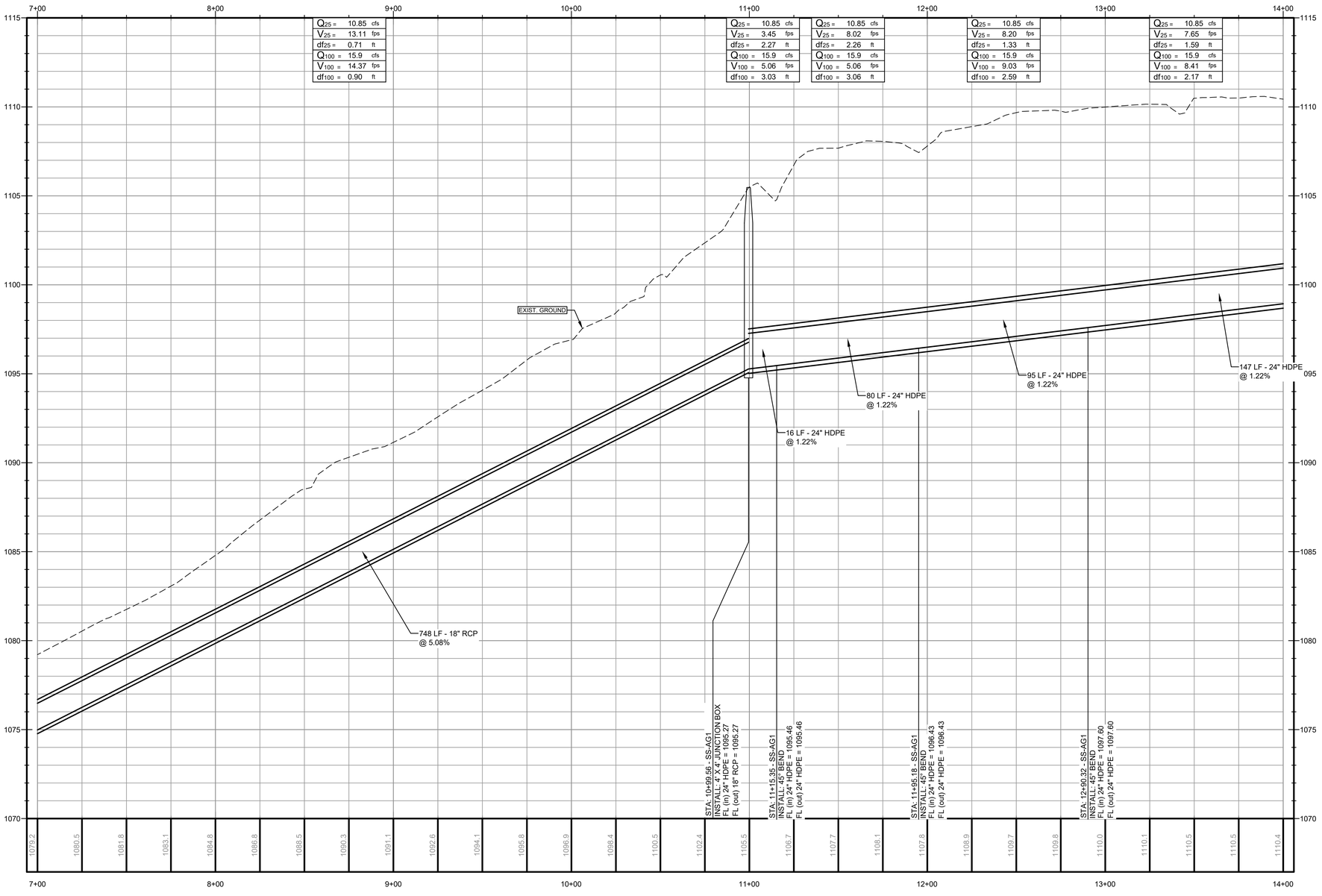
SS-AG1



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3324 RANCH ROAD 620 SOUTH

STORM PLAN

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY :	CB
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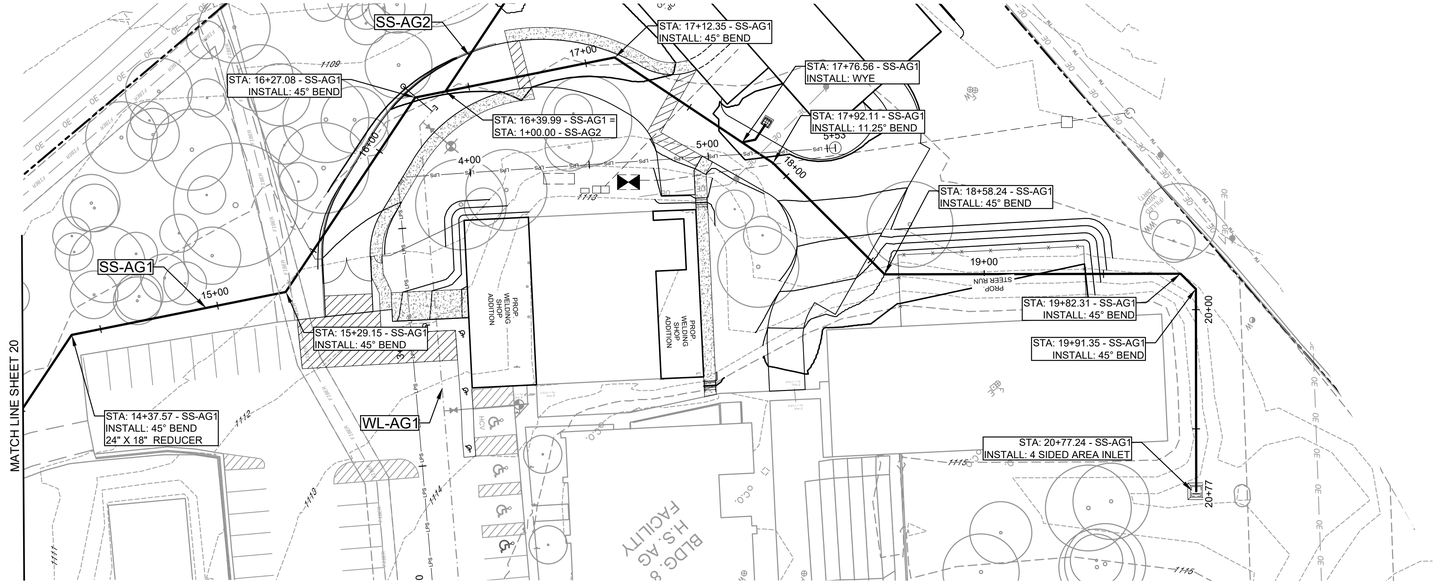
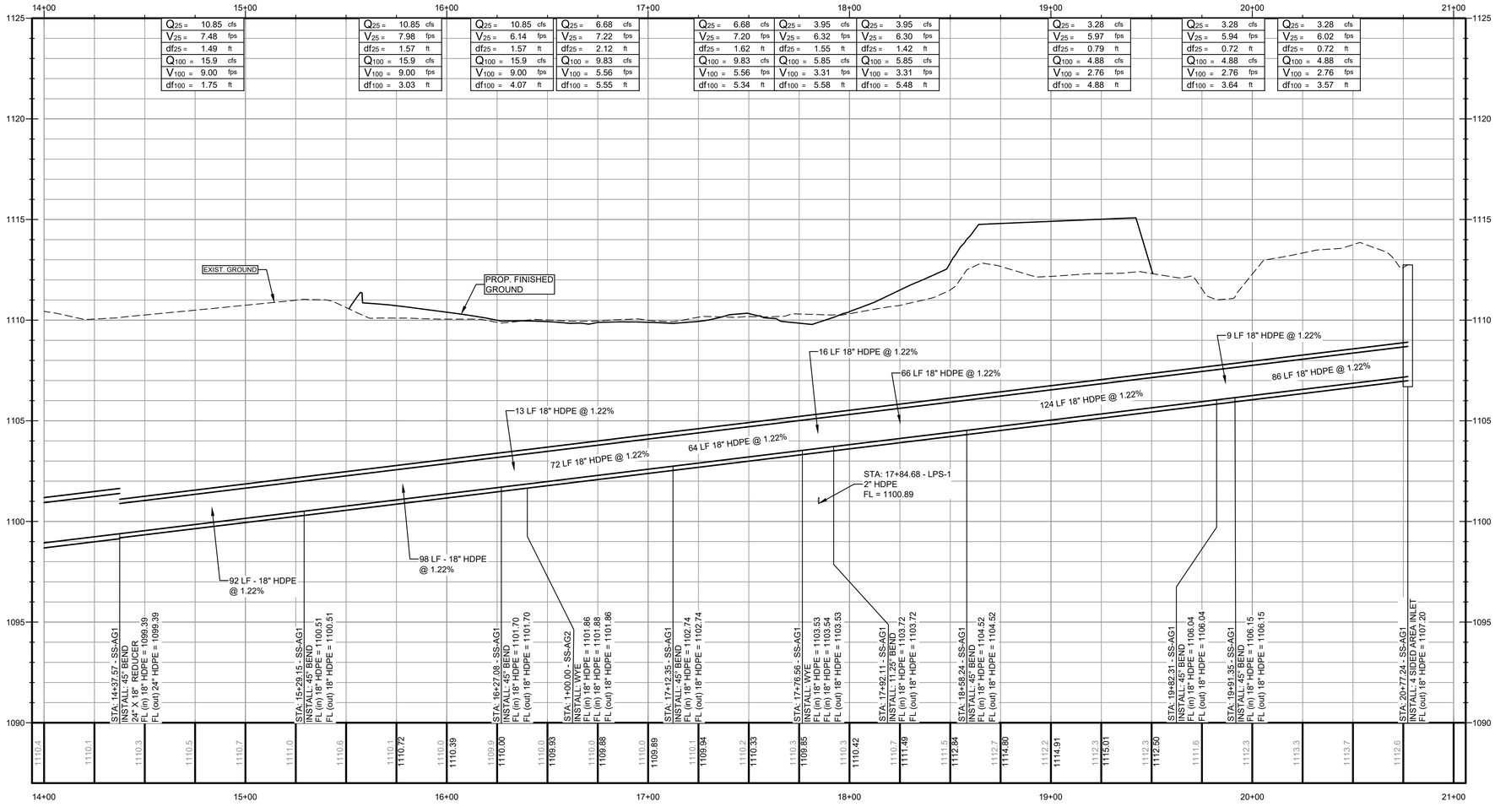
DATE :	3/14/2024

SHEET 20
OF 28

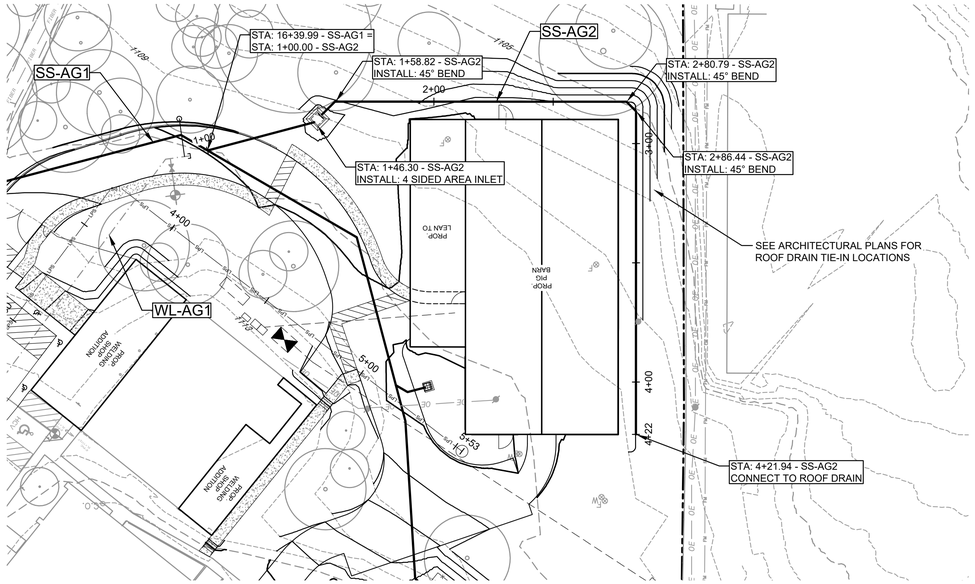
F:\LTISD OVERALL\PROJECTS\23-050-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\15 STORM PLAN.DWG, 3/14/2024, JACKIE KEYMAN

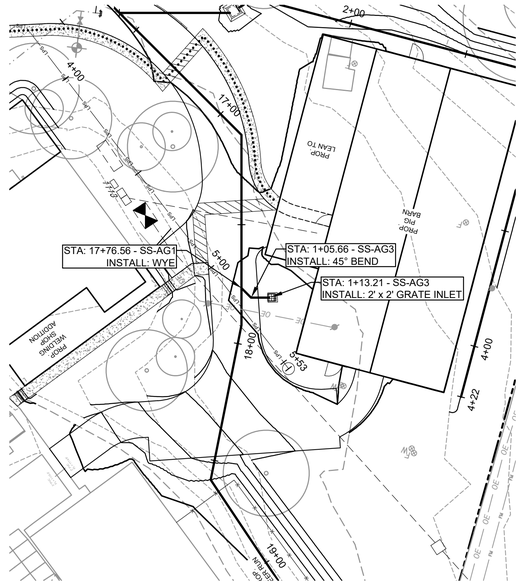

SS-AG2
STA: 16+27.08 - SS-AG1
INSTALL: 45° BEND
STA: 16+39.99 - SS-AG1 =
STA: 1+00.00 - SS-AG2
STA: 17+12.35 - SS-AG1
INSTALL: 45° BEND
STA: 17+76.56 - SS-AG1
INSTALL: WYE
STA: 17+92.11 - SS-AG1
INSTALL: 11.25° BEND
STA: 18+58.24 - SS-AG1
INSTALL: 45° BEND
STA: 19+82.31 - SS-AG1
INSTALL: 45° BEND
STA: 19+91.35 - SS-AG1
INSTALL: 45° BEND
STA: 20+77.24 - SS-AG1
INSTALL: 4 SIDED AREA INLET
SS-AG1
STA: 15+29.15 - SS-AG1
INSTALL: 45° BEND
STA: 14+37.57 - SS-AG1
INSTALL: 45° BEND
24" X 18" REDUCER
WL-AG1
MATCH LINE SHEET 20
PROP WATER/SHOP ADDITION
PROP WELDING SHOP ADDITION
PROP STEER RUN
BLDG 8 H.S.AG FACILITY

SS-AG1


14+00
15+00
16+00
17+00
18+00
19+00
20+00
21+00
1125
1120
1115
1110
1105
1100
1095
1090
EXIST. GROUND
PROP. FINISHED GROUND
STA: 14+37.57 - SS-AG1
INSTALL: 45° BEND
24" X 18" REDUCER
FL (in) 18" HDPE = 1099.39
FL (out) 24" HDPE = 1099.39
STA: 15+29.15 - SS-AG1
INSTALL: 45° BEND
FL (in) 18" HDPE = 1100.51
FL (out) 18" HDPE = 1100.51
STA: 16+27.08 - SS-AG1
INSTALL: 45° BEND
FL (in) 18" HDPE = 1101.70
FL (out) 18" HDPE = 1101.70
STA: 1+00.00 - SS-AG2
INSTALL: WYE
FL (in) 18" HDPE = 1101.86
FL (in) 18" HDPE = 1101.88
FL (out) 18" HDPE = 1101.86
STA: 17+12.35 - SS-AG1
INSTALL: 45° BEND
FL (in) 18" HDPE = 1102.74
FL (out) 18" HDPE = 1102.74
STA: 17+76.56 - SS-AG1
INSTALL: WYE
FL (in) 18" HDPE = 1103.53
FL (in) 18" HDPE = 1103.54
FL (out) 18" HDPE = 1103.53
STA: 17+92.11 - SS-AG1
INSTALL: 11.25° BEND
FL (in) 18" HDPE = 1103.72
FL (out) 18" HDPE = 1103.72
STA: 18+58.24 - SS-AG1
INSTALL: 45° BEND
FL (in) 18" HDPE = 1104.52
FL (out) 18" HDPE = 1104.52
STA: 19+82.31 - SS-AG1
INSTALL: 45° BEND
FL (in) 18" HDPE = 1106.04
FL (out) 18" HDPE = 1106.04
STA: 19+91.35 - SS-AG1
INSTALL: 45° BEND
FL (in) 18" HDPE = 1106.15
FL (out) 18" HDPE = 1106.15
STA: 20+77.24 - SS-AG1
INSTALL: 4 SIDED AREA INLET
FL (out) 18" HDPE = 1107.20
92 LF - 18" HDPE @ 1.22%
98 LF - 18" HDPE @ 1.22%
13 LF 18" HDPE @ 1.22%
72 LF 18" HDPE @ 1.22%
64 LF 18" HDPE @ 1.22%
16 LF 18" HDPE @ 1.22%
66 LF 18" HDPE @ 1.22%
124 LF 18" HDPE @ 1.22%
9 LF 18" HDPE @ 1.22%
86 LF 18" HDPE @ 1.22%
STA: 17+84.68 - LPS-1
2' HDPE
FL = 1100.89

| | | |



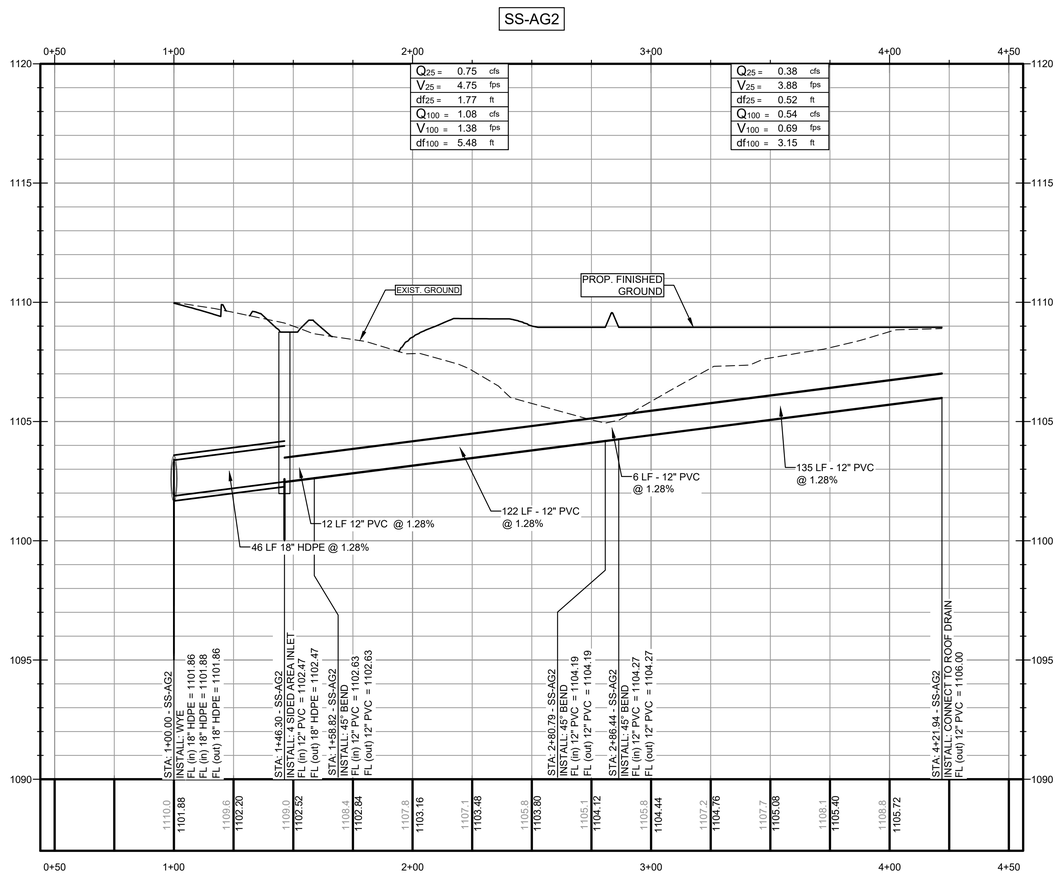


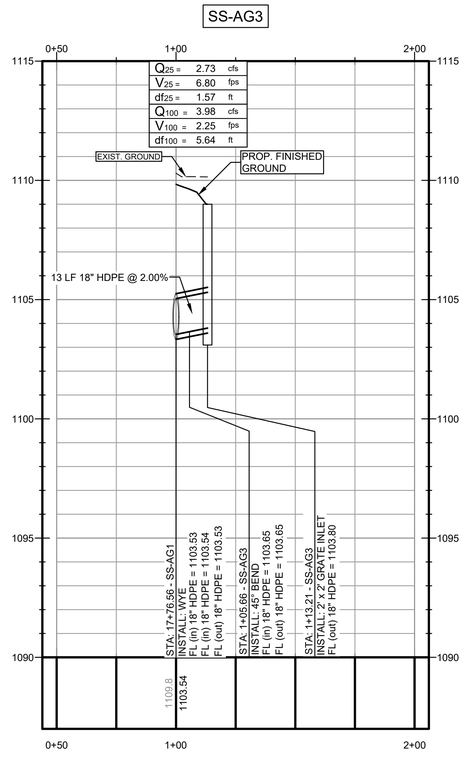
LEGEND

- PROPERTY LINE
- PROP. STORM SEWER
- PROP. WATER LINE
- PROP. FORCE MAIN LINE
- PROP. AREA INLET
- PROP. GRATE INLET

NOTES:

1. EXISTING UTILITIES SHOWN FROM RECORD DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION.





NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

STORM PLAN

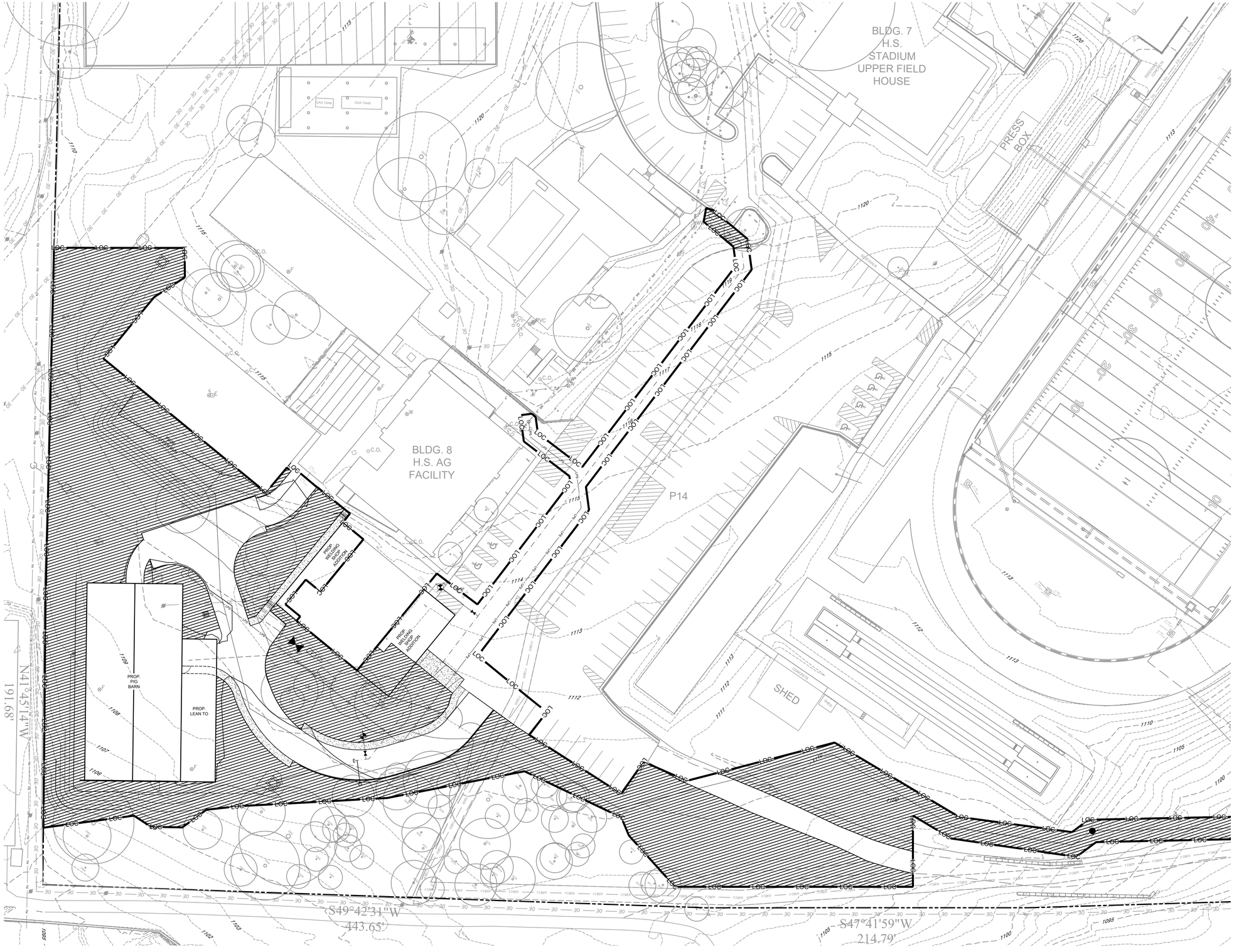
MALONE★WHEELER SINCE 1995 INC.
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0460 Fax: (512) 899-0455
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY :	CB
CHECKED BY :	AV
APPROVED BY :	JBM
DATE :	3/14/2024

SHEET 22
OF 28

F:\LTISD OVERALL\PROJECTS\23-090-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\16 STORM PLAN.DWG, 3/14/2024, JACKIE KEYMAN



N

0 30'

SCALE: 1" = 30'

LEGEND

- PROPERTY BOUNDARY
- LOC — LIMIT OF CONSTRUCTION
- PROP. HYDROMULCH
- PROP. SOD
- 10" — TREE TO REMAIN
- 10" — TREE TO BE REMOVED

NOTES:

1. NO CONSTRUCTION EQUIPMENT OR VEHICLE ALLOWED OUTSIDE LIMITS OF CONSTRUCTION (LOC).
2. SLOPE MATTING ON ALL SLOPES 3:1 OR GREATER. CLASS 1, TYPE B PER LCRA TECHNICAL MANUAL.
3. SEE GENERAL NOTES (SHEET 3) FOR SEED, SOIL, AND SEASONAL PLANTING NOTES FOR FINAL STABILIZATION
4. INITIATE PERMANENT STABILIZATIONIMMEDIATELY ONCE WORK HAS CEASED AND FINAL GRADE HAS BEEN ACHIEVED IN ANY GIVEN AREA.
5. THE FINAL STABILIZATION/REVEGETATION EFFORTS SHALL BE IN ACCORDANCE WITH THE APPROVED RESTORATION PLAN DETAILS AND SPECIFICATIONS.
6. ALL 3:1 SLOPES OR STEEPER REQUIRE SOIL RETENTION BLANKET (SRB).
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE WATERING/IRRIGATION TO ACHIEVE THE PERMANENT STABILIZATION REQUIREMENTS IN ALL DISTURBED/REVEGETATED AREAS BEFORE FINAL ACCEPTANCE FOR THIS PROJECT CAN BE OBTAINED.
8. ALL COMMON AREAS INCLUDING PWQC STRUCTURES MUST BE PERMANENTLY STABILIZED PER; JURISDICTIONAL TECHNICAL SPECIFICATIONS BEFORE A CONDITIONAL ACCEPTANCE CAN BE ISSUED.
9. ALL DISTURBED/BARE AREAS WILL REQUIRE PERMANENT STABILIZATION BEFORE FINAL ACCEPTANCE CAN BE ACHIEVED. AVOID DISTURBING AREAS OF THE PROJECT THAT ARE NOT NECESSARY FOR CONSTRUCTION.
10. ANY DISTURBED AREA(S) NOT INDICTED TO BE RESTORED ON THE RESTORATION PLAN REQUIRES THE SAME EFFORTS AS THOSE INDICATED.
11. ALL DISTURBED AREAS MUST MEET THE REQUIREMENT FOR PERMANENT STABILIZATION.
12. THE NOTICE OF TERMINATION (NOT) FOR THIS PROJECT SHALL NOT BE SUBMITTED UNTIL THE TRAVIS COUNTY ENVIRONMENTAL INSPECTOR APPROVES CLEARANCE.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

RESTORATION PLAN

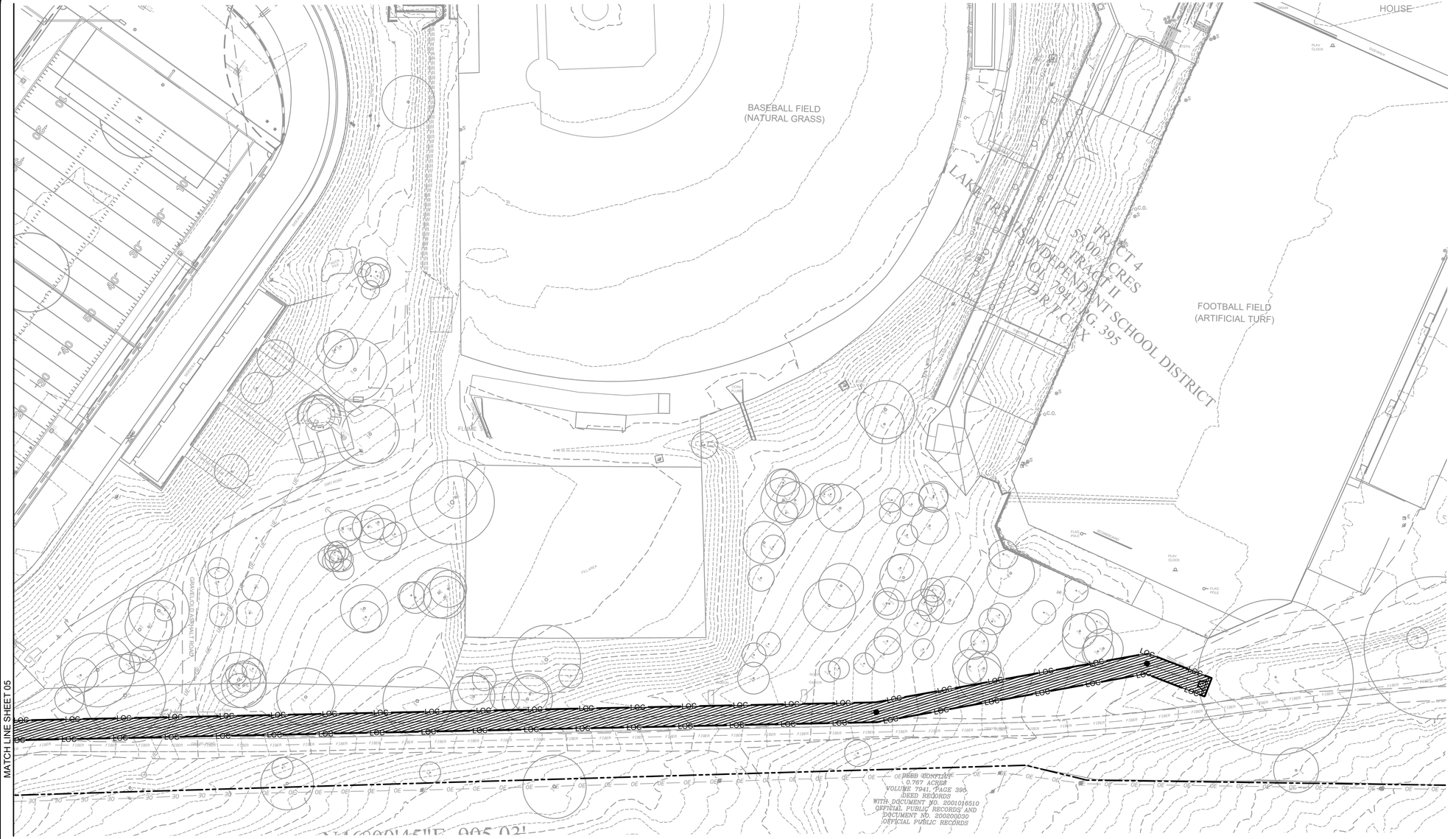
MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	3/14/2024

SHEET 23
OF 28

F:\LTISD OVERALL\PROJECTS\23-009-AUS_LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\16 RESTORATION PLAN.DWG, 3/14/2024, JACKIE KEYMAN



MATCH LINE SHEET 05

N

0 40'

SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- LOC — LIMIT OF CONSTRUCTION
- PROP. HYDROMULCH
- PROP. SOD
- 10 — TREE TO REMAIN
- 10 — TREE TO BE REMOVED

NOTES:

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LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

RESTORATION PLAN

MALONE★WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
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Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY :	SGC
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	3/14/2024

SHEET 24
OF 28

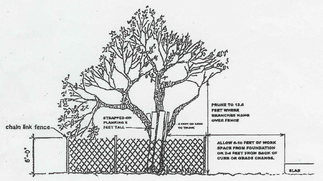
F:\LTISD OVERALL\PROJECTS\23-030-AG\LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS PLAN DWG, 3/14/2024, JACKIE KEYMAN

Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

CHAIN LINK FENCE, PRUNING AND PLANKING
(Tree Protection Notes #7, Exhibits K and L)

Exceptions to installing fences at tree drip lines may be permitted in the following cases:

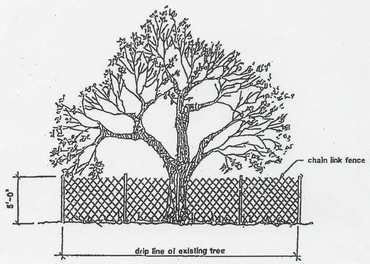
1. Where there is to be an approved grade change, impermeable paving surface, tree well, or other such site development, erect the fence approximately 2 to 4 feet behind the area in question.
2. Where permeable paving is to be installed within a tree's drip line, erect the fence at the outer limits of the permeable paving area (prior to site grading so that this area is graded separately prior to paving installation to minimize root damage).
3. Where trees are close to proposed buildings, erect the fence to allow 6 to 10 feet of work space between the fence and the building.
4. 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 8 feet (or to the limits of lower branching) in addition to the reduced fencing provided.
5. All branches that hang over the fence shall be pruned to a minimum height of 13.5 feet or higher if required for equipment clearance.



Source: City of Austin Tree Standards (modified for the City of Lakeway)

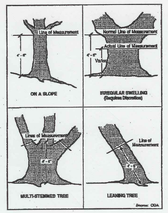
Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

CHAIN LINK FENCE TO DRIP LINE
Required for all trees to be preserved during construction
(Tree Protection Notes, Exhibits K and L)



Source: City of Austin

Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

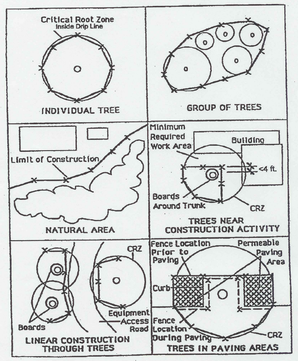


MEASURING TREE DIAMETERS
(Section 10.04, Exhibits B, C, D, F and G)

1. Measure tree diameters at a height of 4-1/2 feet (4 feet 6 inches).
2. If the tree forks at 4-1/2 feet, measure below the swell.
3. Diameter measurement should be accurate to one inch and should be rounded up or down to the nearest inch. (Examples: 15.3" = 15", 15.7" = 16")
4. Trees which are connected at ground level or above are considered to be multi-trunk trees. Look for bark at the base joining the stems.
   a. Measure all trunks larger than 6 inches at a height of 4-1/2 feet and add for total diameter inches.
   b. If none of the trunks is larger than 6 inches when measured at 4-1/2 feet, measure the trunk below the swell beneath the lowest fork.
   c. Example: A Spanish oak with three 8 inch stems and two 4 inch stems would be shown as a "24 inch multi-stem Spanish Oak."
      i. Only the three 8 inch stems would count toward the total.
      ii. Show the total diameter inches in the tree list. Do not show as "8" 8" 8" 8-0" or "8 inch triple oak", etc.
5. Clusters of many small stems forking from the ground do not need to be measured or shown on the tree survey.
   a. The only exception is the rare Texas Madrone, for which the tree survey should show an approximate height and drip line.

Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

STANDARD TREE PROTECTION LOCATIONS
(Tree Protection Notes, Exhibits K and L)



Source: City of Austin Tree Standards (modified for the City of Lakeway)

Development Ordinance – EXHIBIT U
Tree Survey and Protection Specifications

TREE SURVEY SPECIFICATIONS
(Section 10.04, Exhibits B, C, D, F and G)

All General Development Plans, Preliminary Plans, Final Plats, Subdivision Improvement Plans and Site Development Plans require an accurate tree survey which meets the following specifications.

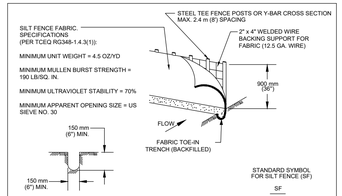
1. The surveyor should locate and measure the following trees according to City of Lakeway standards:
   a. All hardwood trees six (6) inches and larger in diameter.
   b. All trees of any size of the following species which is rare in Lakeway: Texas Madrone (*Arbutus xalapensis var. texana*)
2. All trees should be tagged and numbered on site.
3. The tree survey plat should include a tree list showing tag number, DBH and species.
4. The tree list should show the total diameter inches of multi-trunk trees, with the exception of Texas Madrones.
5. Texas Madrones should be shown in the tree list and on the survey with an approximate height and an actual (not calculated) drip line.
6. The tree survey should show the location of each tree and a calculated drip line drawn for each tree at one foot radius per inch of diameter.
   a. Example: a 10 inch diameter oak would show a calculated drip line with a 10 foot radius.
7. The tree survey plat must contain a surveyor's certification (Exhibit I).
8. Field work for the tree survey shall be performed within one year of submittal to the City.



Texas Madrone: Small multi-stem evergreen tree, usually less than 20 feet tall, rarely 30 feet. Distinguishing feature is smooth bark, rose to deep red in color. Leaves are oval, up to 3-1/2 inches long, leathery and light green. Rare in this area, usually found on slopes sheltered beside Ashe Juniper (cedar) trees.

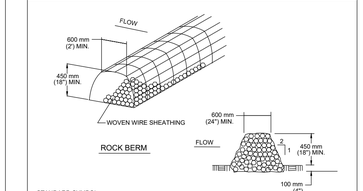
Photo by Benny J. Simpson, Texas Agricultural Extension Service, Dallas.

CITY OF LAKEWAY
TREE PROTECTION DETAILS
N.T.S.



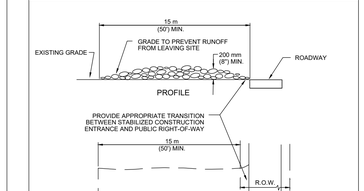
1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES).
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		MODIFIED SILT FENCE PER TCEQ STANDARDS
RECORD COPY SIGNED BY MORGAN BYARS ADOPTED	*09/01/2011*	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 642S-1



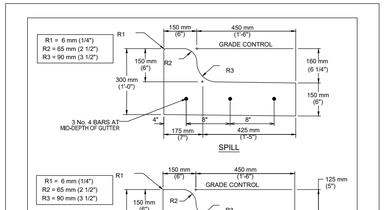
NOTES:
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		ROCK BERM
RECORD COPY SIGNED BY MORGAN BYARS ADOPTED	8/24/2010	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 639S-1

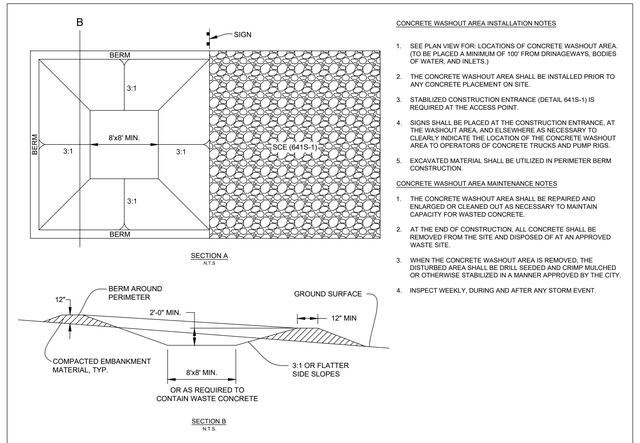


NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		STABILIZED CONSTRUCTION ENTRANCE
RECORD COPY SIGNED BY J. PATRICK MURPHY ADOPTED	5/23/00	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		REINFORCED CURB AND GUTTER SECTION
RECORD COPY SIGNED BY SAM ANGOORI ADOPTED	01/04/10	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-2



CONCRETE WASHOUT AREA

CONCRETE WASHOUT AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR: LOCATIONS OF CONCRETE WASHOUT AREA. (TO BE PLACED A MINIMUM OF 100' FROM DRINAGEWAYS, BODIES OF WATER, AND INLETS.)
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. STABILIZED CONSTRUCTION ENTRANCE (DETAIL 641S-1) IS REQUIRED AT THE ACCESS POINT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

CONCRETE WASHOUT AREA MAINTENANCE NOTES

1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.
4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

STANDARD DETAILS

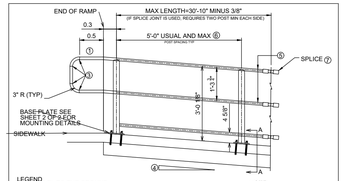
MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0401 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY :	CB
CHECKED BY :	SGC
APPROVED BY :	JBM
DATE :	3/14/2024

SHEET 25
OF 28

F:\LTISD_OVERALL\PROJECTS\23-030-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\19 STANDARD DETAILS.DWG, 3/14/2024, JACKIE KEYMAN



LEGEND
T PARALLEL TO THE GROUND.

2. SHOP SPLICE IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.

3. SEE RAMP DETAIL LOCATED ELSEWHERE IN DRAWINGS FOR RAMP SLOPE AND DIMENSIONS. MAXIMUM RAMP SLOPE WILL NOT EXCEED 8.3 PERCENT. LEVEL LANDING REQUIRED FOR EACH 30" RISE IF GRADE EXCEEDS 5 PERCENT.

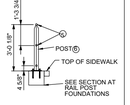
4. 1" DIA EXTRA HEAVY PIPE (1.315" O.D., 0.179" WALL THICKNESS). PARALLEL TO RAMP/ SIDEWALK. PROVIDE HOLES AS NEEDED IN 1" DIA PIPE FOR GALVANIZING DRAINAGE AND VENTING.

5. 2 ½ DIA STANDARD PIPE (2.875" O.D., 0.200" WALL THICKNESS). PLUMB ALL POSTS. SEE POST MOUNT DETAIL FOR CRIMPING AND TRIMMING POST TO FIT DIA OF TOP RAIL. PROVIDE HOLES AS NEEDED IN POST FOR GALVANIZING DRAINAGE AND VENTING.

6. SEE HANDRAIL FABRICATION DETAILS FOR SPLICE JOINTS.

7. CENTER LINE ⅝ DIA ROUND BAR EQ SPACES AT 4 ½ " MAX. PLUMB ALL PICKETS.

NOTE:
IF SPLICE JOINT IS USED, REQUIRES TWO POST MINIMUM EACH SIDE



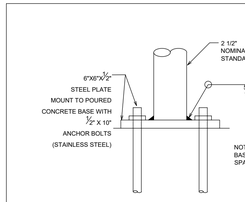
SECTION A-A

NOTES:
1. RAMPS NEEDED FOR ACCESSIBILITY (GRADE >5 PERCENT) OR AS NEEDED FOR PEDESTRIAN SAFETY.

* NOT TO BE USED ON BRIDGES

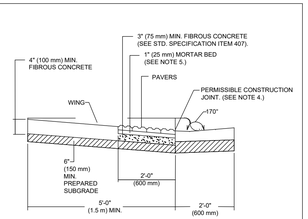
* ONE SHOP SPLICE PER PANEL IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN ADA HANDRAIL ON SIDEWALK OPTION 3	
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707-4 1 OF 2

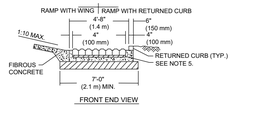


BASE PLATE DETAIL

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN ADA HANDRAIL ON SIDEWALK-OPTION 3	
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707-4 2 OF 2



CROSS SECTION



FRONT END VIEW

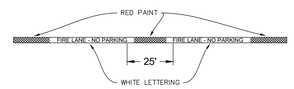
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	DETECTABLE WARNING-PAVER (CITY PROPERTY/EASEMENTS)	
RECORD COPY SIGNED BY BILL GARDNER 06/21/07 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-2A 1 OF 2

GENERAL NOTES:

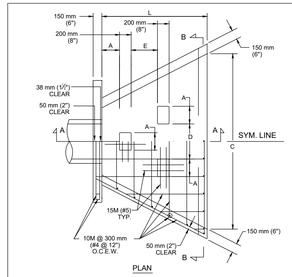
1. THIS STANDARD IS APPLICABLE FOR RAMP CONSTRUCTION ON CITY PROPERTY AND EASEMENT AREAS ONLY.
2. PAVERS ARE REQUIRED FOR ALL CURB RAMP INSTALLATIONS.
3. PAVERS WILL HAVE DETECTABLE WARNING THAT CONSISTS OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9" (23 MM), A NOMINAL HEIGHT OF 0.2" (5 MM) AND A NOMINAL CENTER TO CENTER SPACING OF 2.35" (60 MM) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT (RE: ADAAG SECTION 4.29.2). MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. PAVER 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 RADII AND CURB BASIS.
5. THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE PAVERS AND THE ADJOINING SURFACE SHALL BE LIMITED TO 2" (6MM) JOINT SIZE. GAPS LARGER THAN 2" (6MM) MUST BE APPROVED BY THE ENGINEER OR DESIGNATION REPRESENTATIVE. ALL JOINTS BETWEEN BRICKS AND ADJOINING SURFACE SHALL BE MORTAR FILLED UNLESS DIRECTED OTHERWISE BY THE THE ENGINEER OR DESIGNATED REPRESENTATIVE.
6. MORTAR SHALL CONFORM TO STD. SPECIFICATION ITEM SECTION 403S.3.5. 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	DETECTABLE WARNING-PAVER (CITY PROPERTY/EASEMENTS)	
RECORD COPY SIGNED BY BILL GARDNER 06/21/07 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-2A 2 OF 2

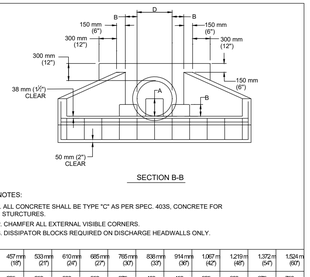
NOTE:
BOTH SIDES OF ALL FIRE LANES MUST BE CONTINUOUSLY MARKED WITH RED PAINT ON THE FACE AND THE TOP OF THE CURB OR, IF NO CURB EXISTS, WITH A RED STRIPE AT 4 INCH WIDE, IN 3 INCH WHITE LETTERING "FIRE LANE - NO PARKING" SHALL OCCUR AT 25 FOOT INTERVALS ALONG THE FIRE LANE.



FIRE LINE STRIPING DETAIL
N.T.S.



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



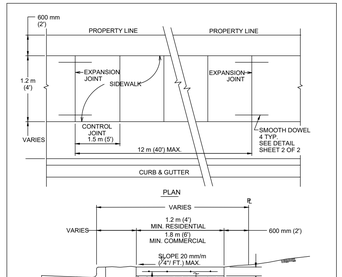
SECTION B-B

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

D	457 mm (18")	533 mm (21")	610 mm (24")	686 mm (27")	762 mm (30")	838 mm (33")	914 mm (36")	1,067 mm (42")	1,219 mm (48")	1,372 mm (54")	1,524 mm (60")
A	225 mm (9")	250 mm (10")	300 mm (12")	350 mm (14")	375 mm (15")	400 mm (16")	450 mm (18")	525 mm (21")	600 mm (24")	675 mm (27")	750 mm (30")
B	150 mm (6")	175 mm (7")	200 mm (8")	225 mm (9")	250 mm (10")	275 mm (11")	300 mm (12")	350 mm (14")	400 mm (16")	450 mm (18")	500 mm (20")
C	2.29 m (90")	2.67 m (105")	3.05 m (120")	343 m (135")	3.81 m (150")	4.19 m (165")	4.57 m (180")	5.33 m (210")	6.10 m (240")	6.86 m (270")	7.62 m (300")
L	1.37 m (54")	1.60 m (63")	1.83 m (72")	2.06 m (81")	2.29 m (90")	2.51 m (99")	2.74 m (108")	3.20 m (126")	3.66 m (144")	4.11 m (162")	4.57 m (180")
E	300 mm (12")	350 mm (14")	400 mm (16")	450 mm (18")	500 mm (20")	550 mm (22")	600 mm (24")	700 mm (28")	800 m (32")	900 mm (36")	1000 mm (40")

DIMENSIONS IN MILLIMETERS, METERS AND (INCHES).
DISCHARGE VELOCITIES GREATER THAN 3 METERS/SECOND (10 fps) REQUIRE ROCK OUTLET PROTECTION.

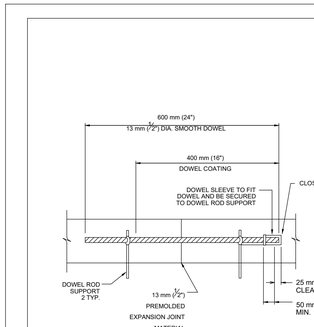
CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW	STANDARD HEADWALL AND ENERGY DISSIPATORS	
RECORD COPY SIGNED BY BILL GARDNER 08/20/07 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 508S-13 2 OF 2



PLAN

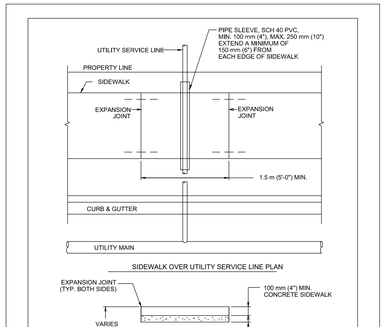
SECTION

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER 03/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 1 OF 3



DOWEL DETAIL

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER 03/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 2 OF 3

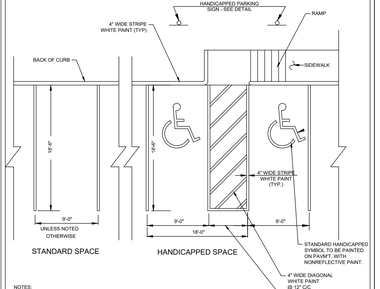


SIDEWALK OVER UTILITY SERVICE LINE PLAN

SECTION OF SIDEWALK OVER UTILITY SERVICE LINES

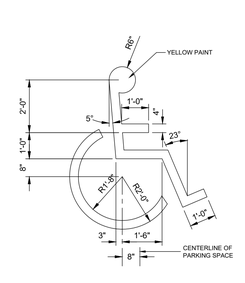
NOTES:
1. THIS STANDARD APPLIES TO THE INSTALLATION OF NEW UTILITIES OR UTILITIES BEING REPLACED BY A NEW LINE.
2. NO JOINTS IN UTILITY SERVICE PIPE TO BE LOCATED INSIDE PVC PIPE SLEEVE.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER 03/26/08 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 3 OF 3

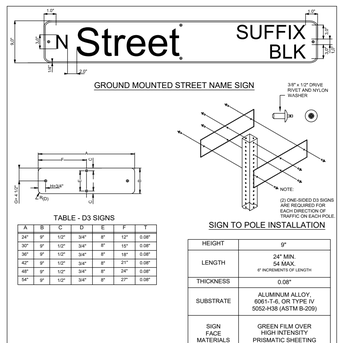


NOTES:
1. DRIVE AISLE IS MIN. 25' WIDE
2. RAMP ACCESS AND SURFACE SLOPES SHALL COMPLY WITH ADA/TAS REQUIREMENTS.
3. EACH HANDICAPPED PARKING SPACE SHALL BE SIGNED IN ACCORDANCE WITH ADA REQUIREMENTS.

TYPICAL PARKING SPACE LAYOUT
NOT TO SCALE



INTERNATIONAL HANDICAP SYMBOL
NOT TO SCALE



GROUND MOUNTED STREET NAME SIGN

SIGN TO POLE INSTALLATION

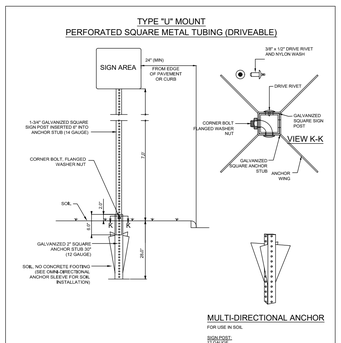
TABLE - D3 SIGNS

A	B	C	D	E	F	I
24"	9"	1/2"	3/4"	8"	12"	0.09"
30"	9"	1/2"	3/4"	8"	15"	0.09"
36"	9"	1/2"	3/4"	8"	18"	0.09"
42"	9"	1/2"	3/4"	8"	21"	0.09"
48"	9"	1/2"	3/4"	8"	24"	0.09"
54"	9"	1/2"	3/4"	8"	27"	0.09"

HEIGHT	9'
LENGTH	24" MIN. 54 MAX. 6" INCREMENTS OF LENGTH
THICKNESS	0.08"
SUBSTRATE	ALUMINUM ALLOY, 6061-T-6, OR TYPE IV 5052-H38 (ASTM B-209)
SIGN FACE MATERIALS	GREEN FILM OVER HIGH INTENSITY PRISMATIC SHEETING
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY
COLOR	WHITE LEGEND ON GREEN BACKGROUND WITH ½" WHITE BORDER

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	GROUND MOUNTED TRAFFIC AND STREET NAME SIGNS	
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 824-2 1 OF 3

TYPE "U" MOUNT
PERFORATED SQUARE METAL TUBING (DRIVEABLE)



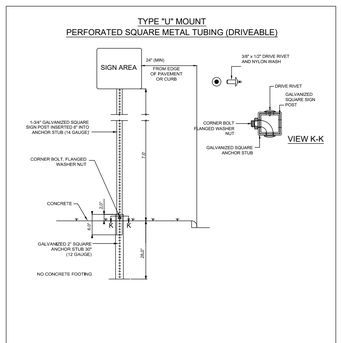
MULTI-DIRECTIONAL ANCHOR
FOR USE IN SOIL

SIGN POST:
13 GAUGE
2" SQUARE x 30"

WINGS:
10 GAUGE
STEEL
ASTM A569 COM. QUALITY WELDED TO ALL 4 CORNERS STARTING 2 1/2" DOWN FROM TOP

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	GROUND MOUNTED TRAFFIC AND STREET NAME SIGNS - SOIL	
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 824-2 2 OF 3

TYPE "U" MOUNT
PERFORATED SQUARE METAL TUBING (DRIVEABLE)



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	GROUND MOUNTED TRAFFIC AND STREET NAME SIGNS - CONCRETE	
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 824-2 3 OF 3

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

STANDARD DETAILS

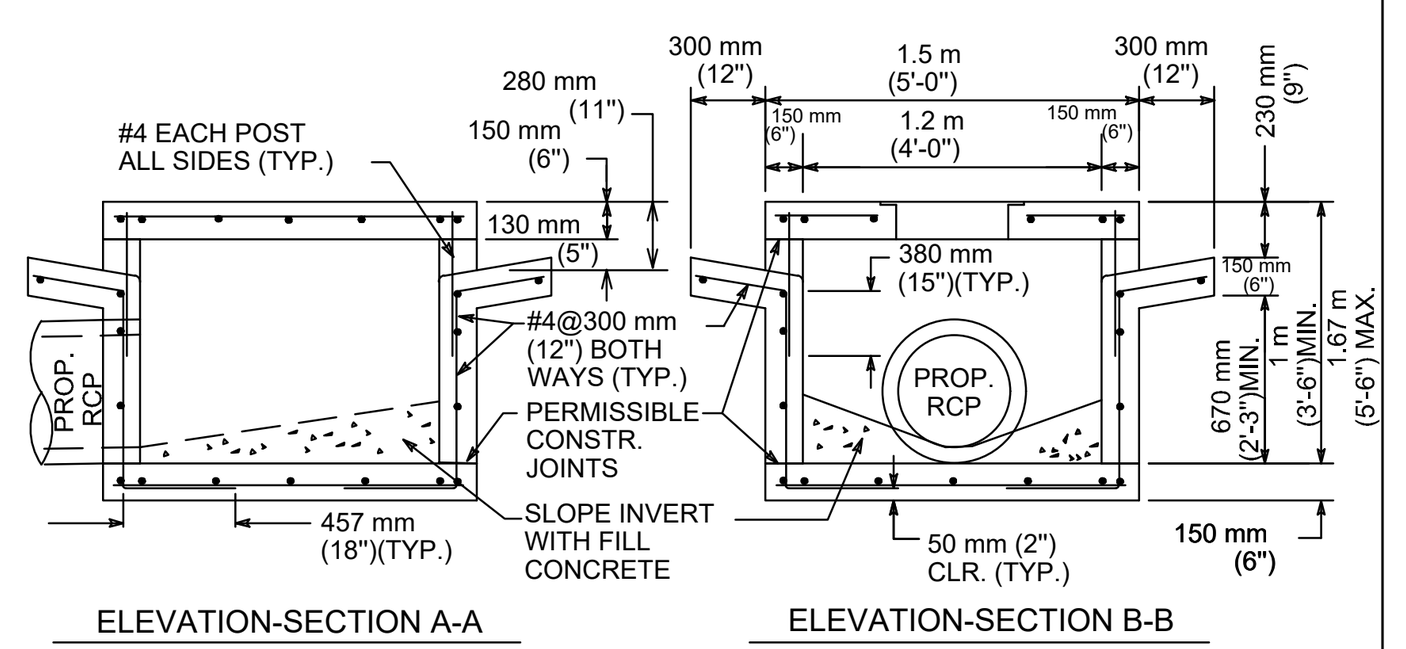
MALONE★WHEELER
SINCE INC. 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 894-0601 Fax: (512) 899-0655
Firm Registration No. F-786

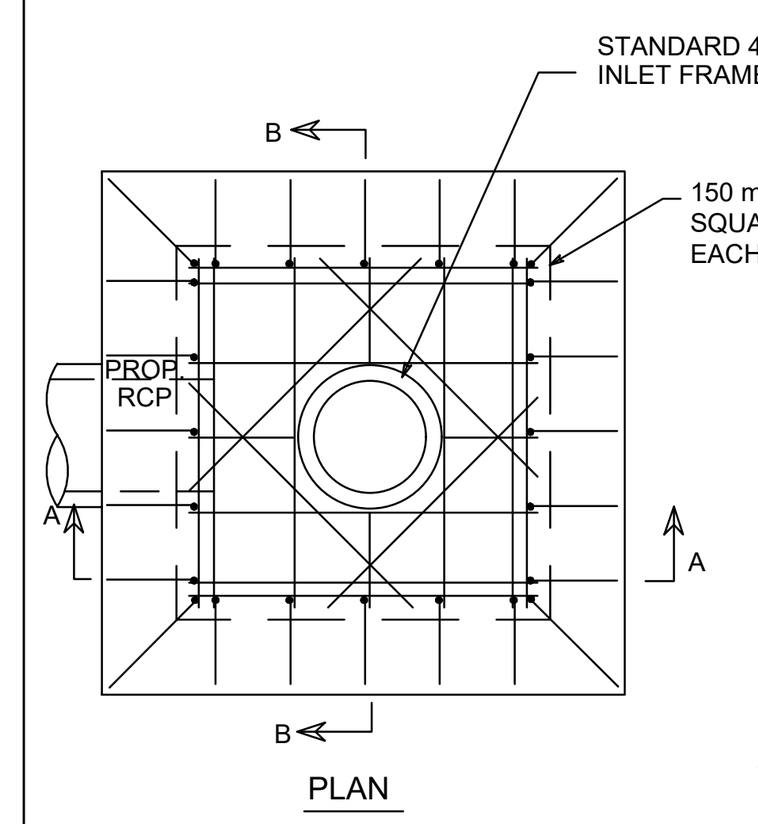
STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED
PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY : CB
CHECKED BY : AV
APPROVED BY : JBM
DATE : 3/14/2024

SHEET 26
OF 28

F:\LTISD_OVERALL\PROJECTS\23-030-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\19 STANDARD DETAILS.DWG, 3/14/2024, JACKIE KEYMAN





NOTES:

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

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

INLET DIMENSIONS

TYPE	'A'	'B'	'C'
I	SEE PLANS	48"	48"
II	SEE PLANS	36"	36"
III	SEE PLANS	24"	24"
IV	SEE PLANS	18"	18"

BAR SCHEDULE

BAR	SPACING	SIZE
A	12" O.C.	5
B	12" O.C.	5
C	12" O.C.	5
D	12" O.C.	5

INLET CAPACITIES

TYPE	CFS W/ h = 0.50'
I	24.19
II	14.19
III	3.91
IV	2.07

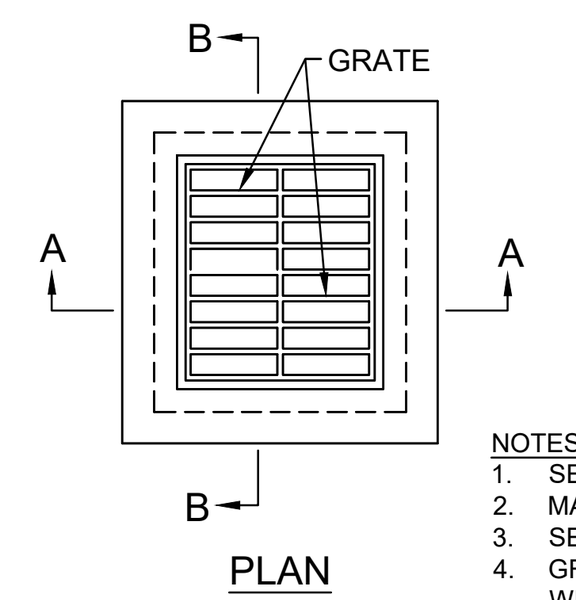
INLET EQUATION

$Q = 0.6A(2gh)^{.5}$
CLOGGING FACTOR = 50%
2g = 64.4
h = 0.50'

GRATE OPEN AREA CHART

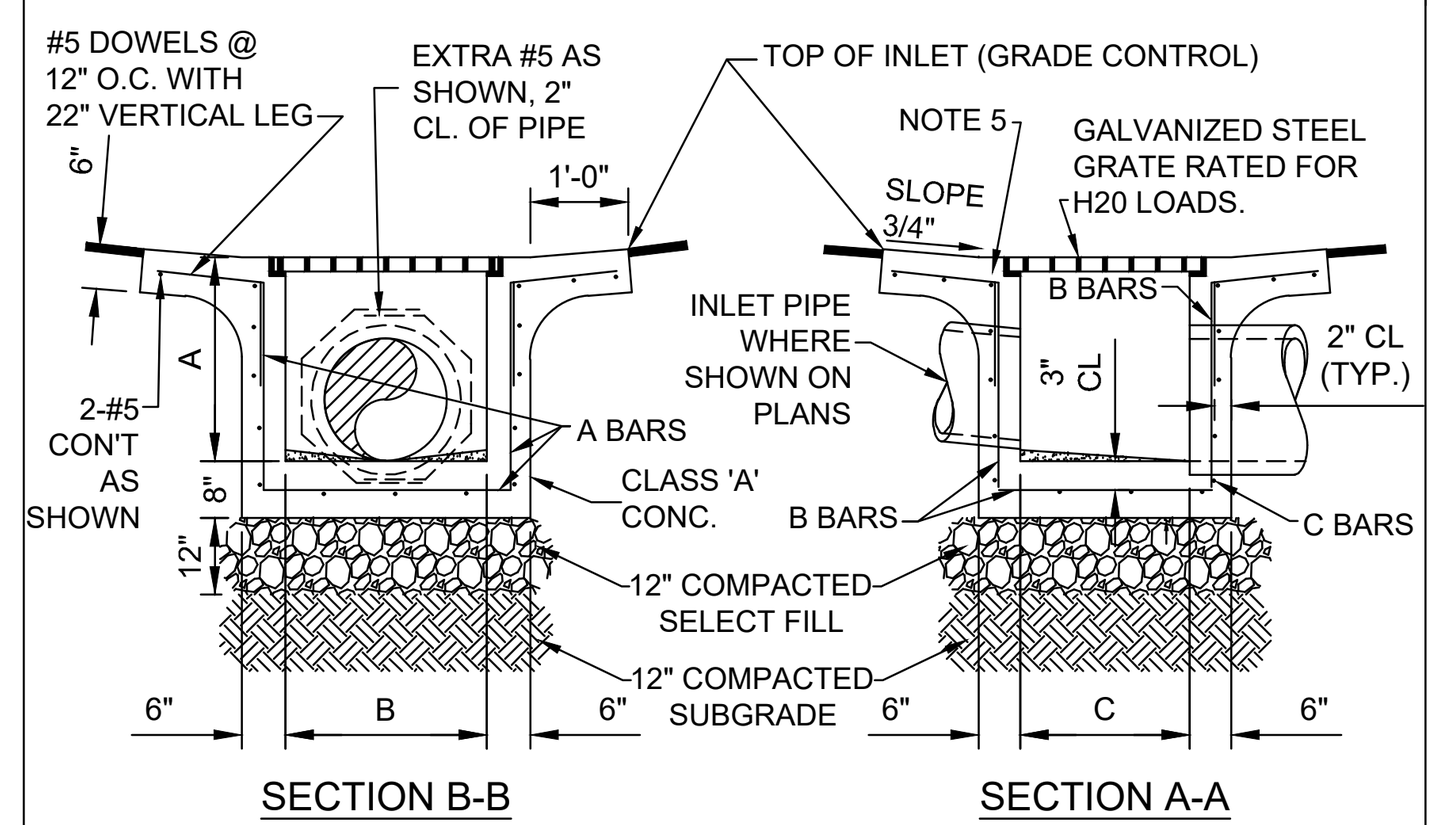
GRATE SIZE	OPEN AREA (SF)	OPEN AREA W/ 50% CLOGGING FACTORS /SF
48" X 48"	14.22	7.11
36" X 36"	8.35	4.17
24" X 24"	2.30	1.15
18" X 18"	1.22	0.61

GRATES ARE QUICK SET BY DALWORTH, CONCRETE PRODUCTS, OR APPROVED EQUAL.



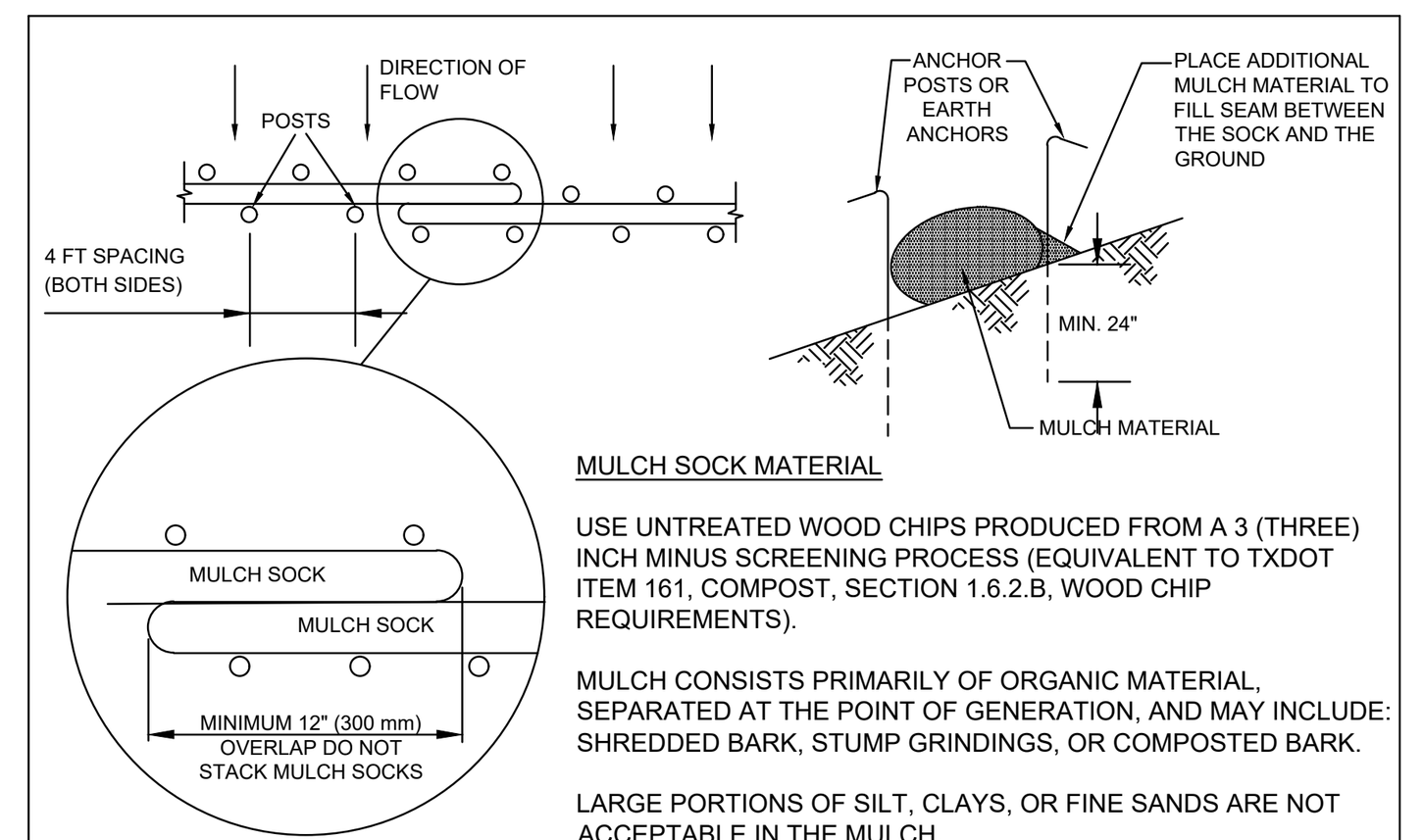
NOTES:

1. SEE PLANS FOR TOP OF INLET AND PIPE ELEVATIONS.
2. MATERIALS AS NOTED OR SPECIFIED.
3. SEE PLANS FOR PIPE SIZE AND ORIENTATIONS
4. GRATE AND FRAME SHALL BE MADE OUT OF GRAY IRON WITH A MINIMUM TENSILE STRENGTH OF 30,000 P.S.I.
5. NO CONSTRUCTION JOINT ALLOWED IN LIPS OF INLET.



GRATE INLET

NOT TO SCALE



MULCH SOCK MATERIAL

USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

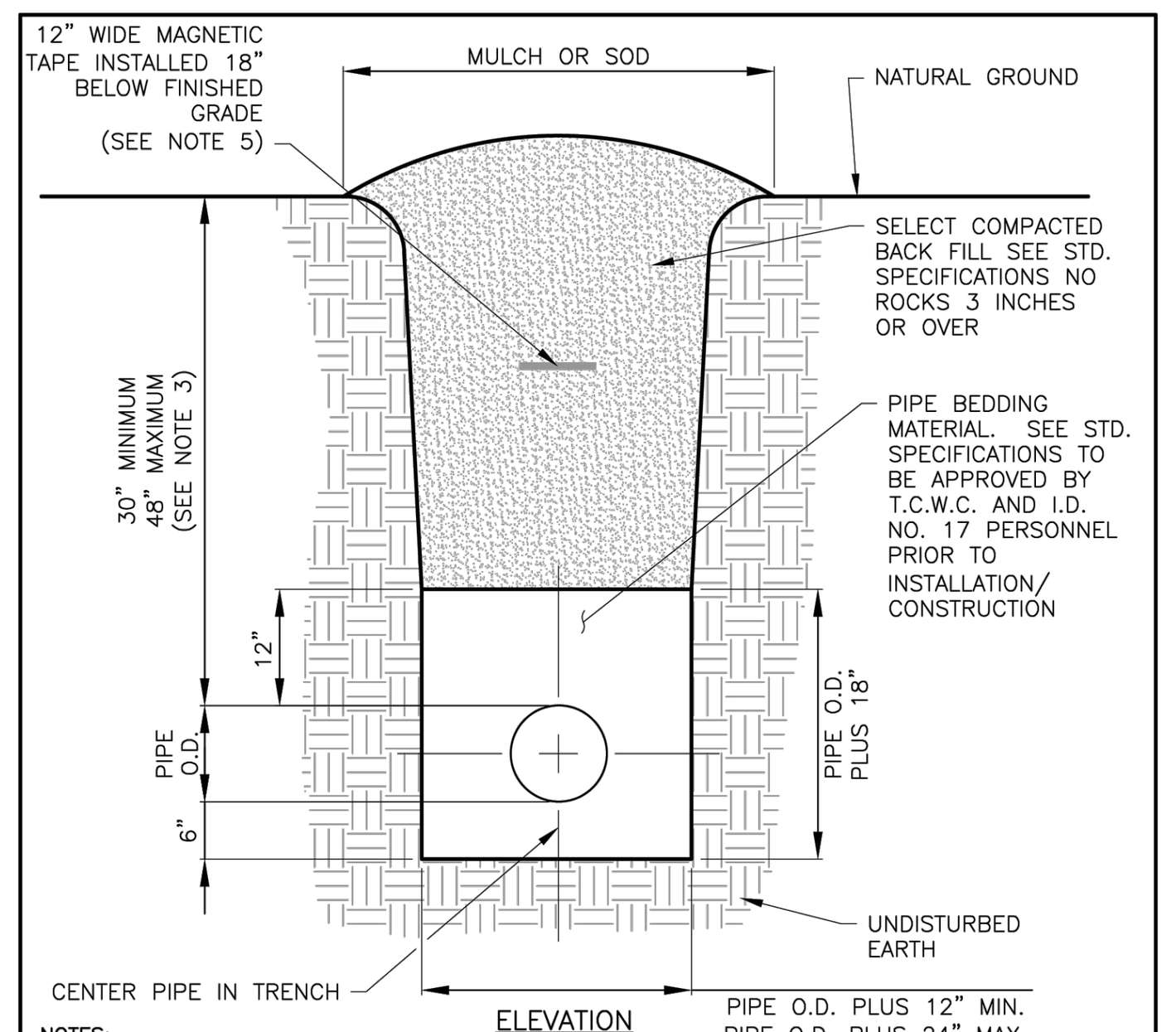
MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

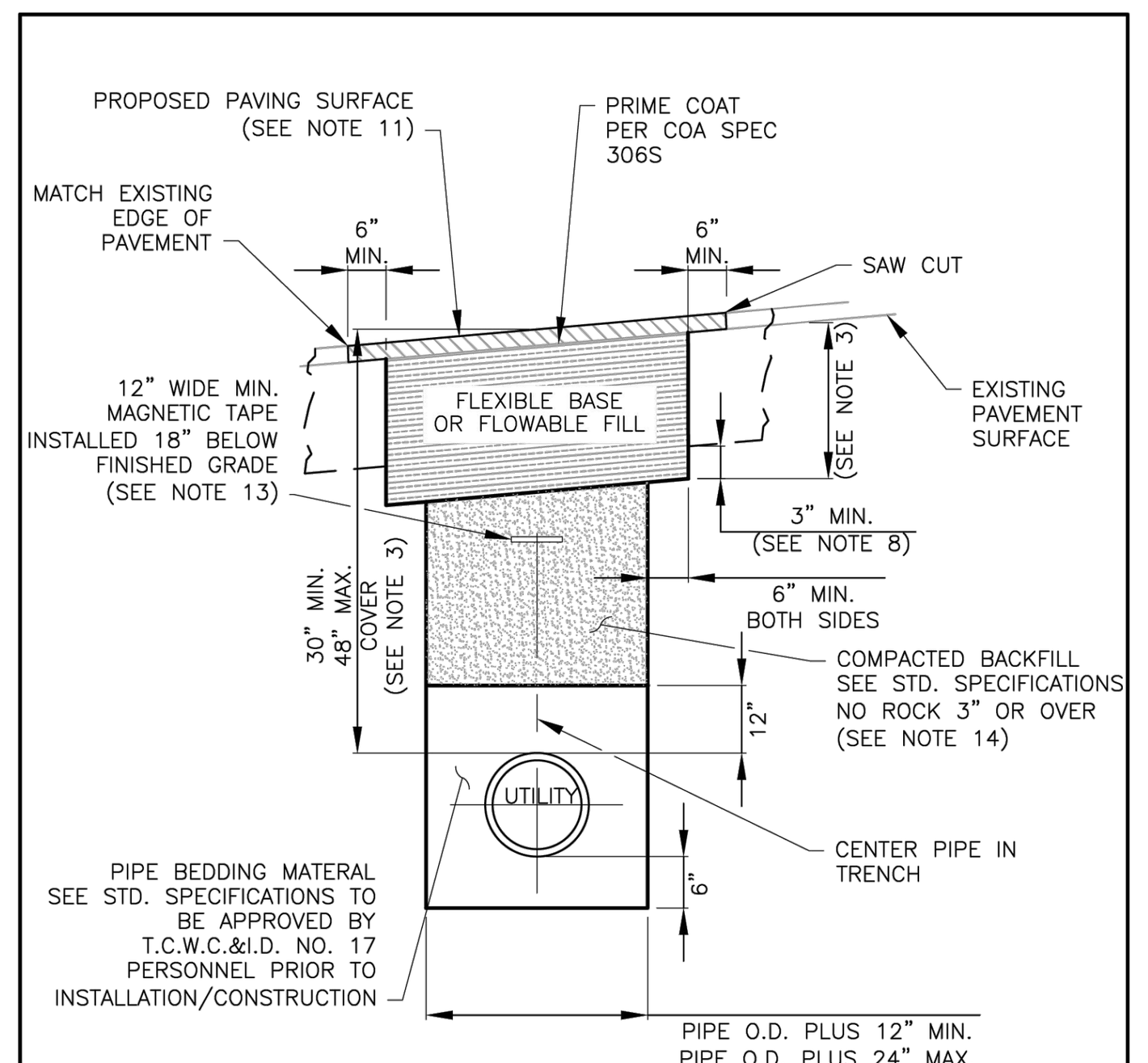
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	MULCH SOCK	
RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 648S-1



NOTES:

1. ALL WASTEWATER PVC PIPING SHALL BE COLOR CODED GREEN. NO WATER DESIGNATED PIPE WILL BE USED IN WASTEWATER.
2. ALL WATER PIPING SHALL HAVE A MINIMUM PRESSURE CLASS OF 200 PSI. WATER PVC PIPING SHALL BE COLOR CODED BLUE.
3. ALL WATER LINES AND WASTEWATER FORCEMAIN SHALL HAVE 30" MINIMUM COVER AND 48" MAXIMUM COVER. WASTEWATER GRAVITY LINES SHALL HAVE 30" MINIMUM COVER AND 15' MAXIMUM COVER.
4. CONTRACTOR SHALL NOT CUT ANY MORE TRENCH PER DAY THEN THEY CAN INSTALL PIPE PER DAY.
5. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON–METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND 18" BELOW FINISHED GRADE, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S RE–QUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TRENCH WITH UNFINISHED SURFACE	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W/WW01

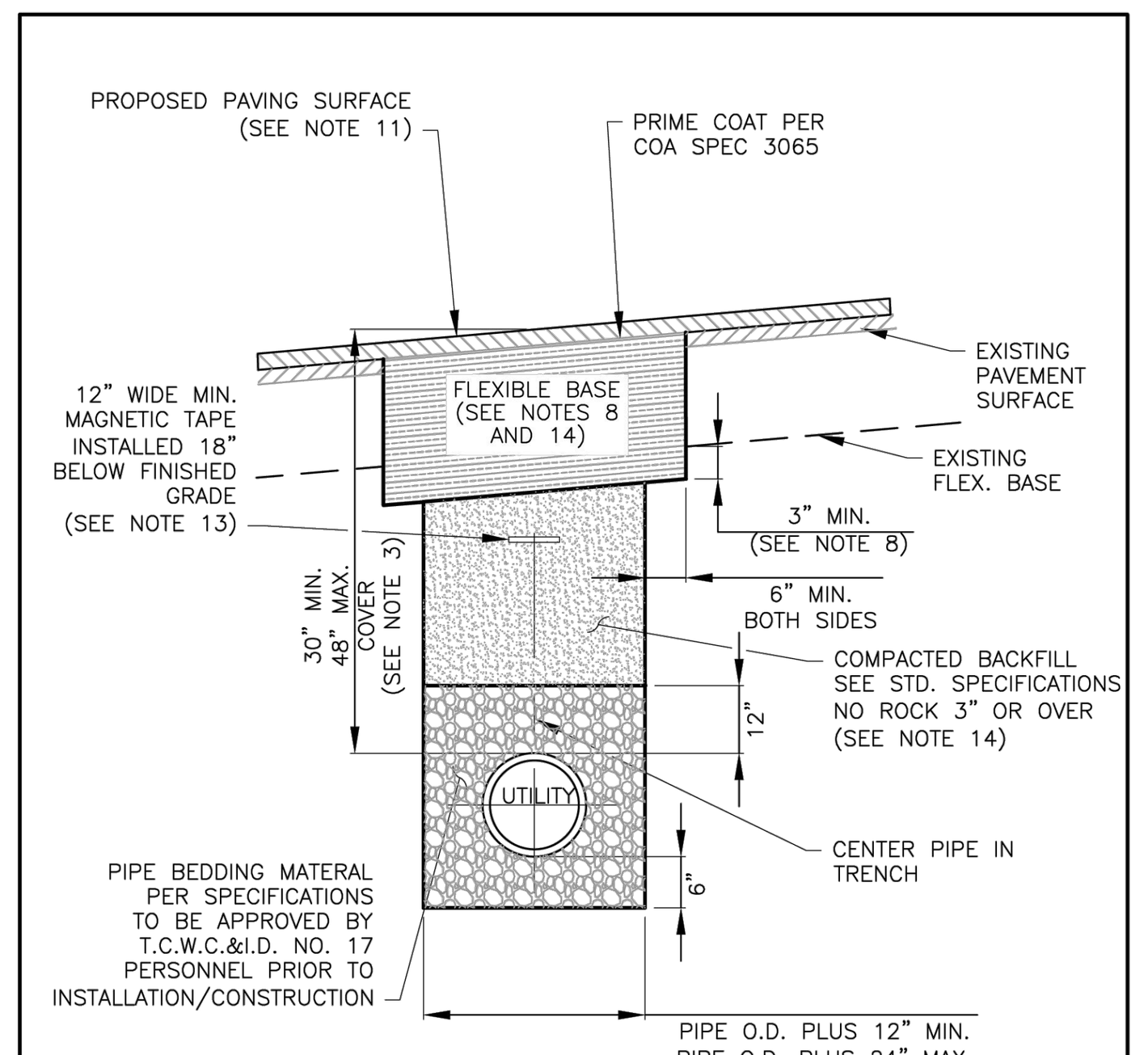


TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TRENCH - EXISTING ASPHALTIC SURFACE REPAIR (1 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W/WW02

NOTES:

1. ALL WASTEWATER PVC PIPING SHALL BE COLOR CODED GREEN. NO WATER DESIGNATED PIPE WILL BE USED IN WASTEWATER.
2. ALL WATER PIPING SHALL HAVE A MINIMUM PRESSURE CLASS OF 200 PSI. WATER PVC PIPING SHALL BE COLOR CODED BLUE.
3. ALL WATER LINES AND WASTEWATER FORCEMAIN SHALL HAVE 30" MINIMUM COVER AND 48" MAXIMUM COVER. WASTEWATER GRAVITY LINES SHALL HAVE 30" MINIMUM COVER AND 15' MAXIMUM COVER.
4. GENERAL CONTRACTOR SHALL CONTACT TRAVIS COUNTY TNR AND SHALL PROCESS, POST FISCAL SURETY, AND HAVE STREET CUT PERMIT ISSUED IN THEIR NAME.
5. CONTRACTOR SHALL NOT CUT ANY MORE TRENCH PER DAY THEN THEY CAN INSTALL PIPE PER DAY.
6. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
7. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH TEMPORARY COLD MIX AC OR TEMPORARY HMAC. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
8. ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3", BUT IN NO CASE LESS THAN 12".
9. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
10. TACK COAT ALL EXPOSED EDGES AND SURFACES.
11. TYPE AND THICKNESS OF PROPOSED OF PAVING SURFACE SHALL BE AS NOTED ON PLANS AND SHALL BE AS FOLLOWS:
    - TWO COURSE SURFACE TREATMENT: SHALL BE WITH/WITHOUT DOLOMITE TO MATCH EXISTING SURFACE. SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATION 320S.
    - ASPHALT PAVING: SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATION 340S. HMAC TYPE 'D' FOR THICKNESS UP TO 2", AND TYPE 'C' FOR THICKNESS OVER 2" AND UP TO 3".
12. ALL PAVING SHALL BE ACCOMPLISHED BY A COMPANY/CONTRACTOR WHO SPECIALIZES IN PAVING.
13. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON–METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND 18" BELOW FINISHED GRADE, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S RE–QUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.
14. AS SPECIFIED, OR AS APPROVED CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MAY BE SUBSTITUTED FOR THE FLEXIBLE BASE AND COMPACTED BACKFILL. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TRENCH - EXISTING ASPHALTIC SURFACE REPAIR (2 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W/WW02



TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TRENCH - EXISTING ASPHALTIC SURFACE OVERLAY (1 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W/WW03

NOTES:

1. ALL WASTEWATER PVC PIPING SHALL BE COLOR CODED GREEN. NO WATER DESIGNATED PIPE WILL BE USED IN WASTEWATER.
2. ALL WATER PIPING SHALL HAVE A MINIMUM PRESSURE CLASS OF 200 PSI. WATER PVC PIPING SHALL BE COLOR CODED BLUE.
3. ALL WATER LINES AND WASTEWATER FORCEMAIN SHALL HAVE 30" MINIMUM COVER AND 48" MAXIMUM COVER. WASTEWATER GRAVITY LINES SHALL HAVE 30" MINIMUM COVER AND 15' MAXIMUM COVER.
4. GENERAL CONTRACTOR SHALL CONTACT TRAVIS COUNTY TNR AND SHALL PROCESS, POST FISCAL SURETY, AND HAVE STREET CUT PERMIT ISSUED IN THEIR NAME.
5. CONTRACTOR SHALL NOT CUT ANY MORE TRENCH PER DAY THEN THEY CAN INSTALL PIPE PER DAY.
6. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
7. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH TEMPORARY COLD MIX AC OR TEMPORARY HMAC. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
8. ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3", BUT IN NO CASE LESS THAN 12".
9. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
10. TACK COAT ALL EXPOSED EDGES AND SURFACES.
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    - TWO COURSE SURFACE TREATMENT: SHALL BE WITH/WITHOUT DOLOMITE TO MATCH EXISTING SURFACE. SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATION 320S.
    - ASPHALT PAVING: SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATION 340S. HMAC TYPE 'D' FOR THICKNESS UP TO 2", AND TYPE 'C' FOR THICKNESS OVER 2" AND UP TO 3".
12. ALL PAVING SHALL BE ACCOMPLISHED BY A COMPANY/CONTRACTOR WHO SPECIALIZES IN PAVING.
13. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON–METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND 18" BELOW FINISHED GRADE, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S RE–QUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.
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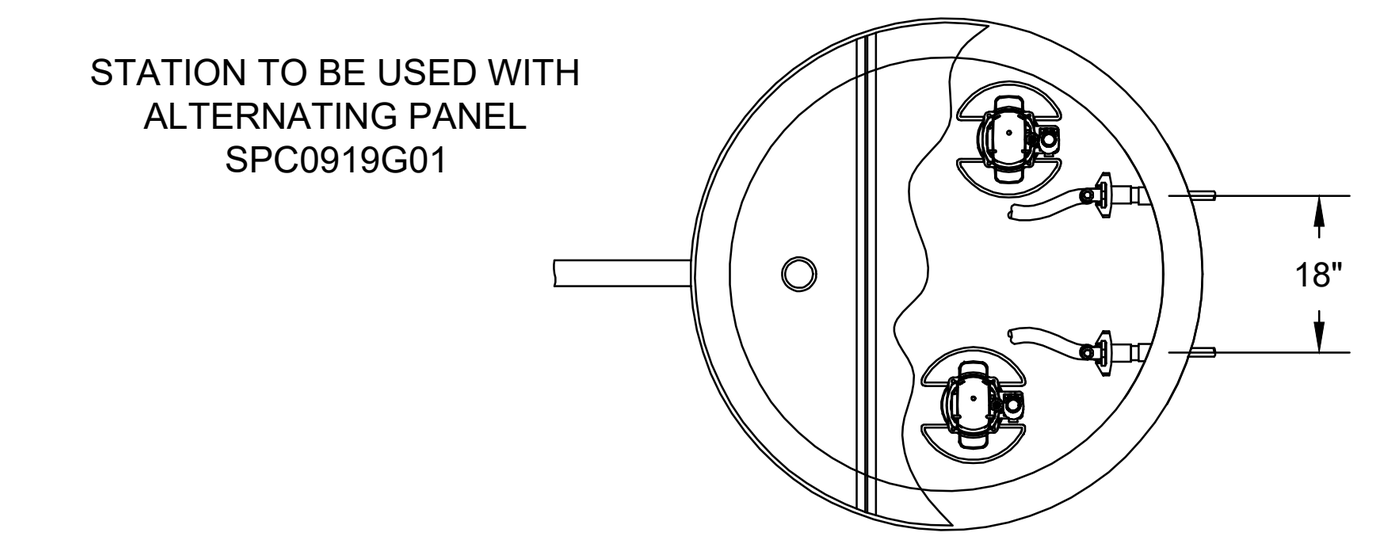
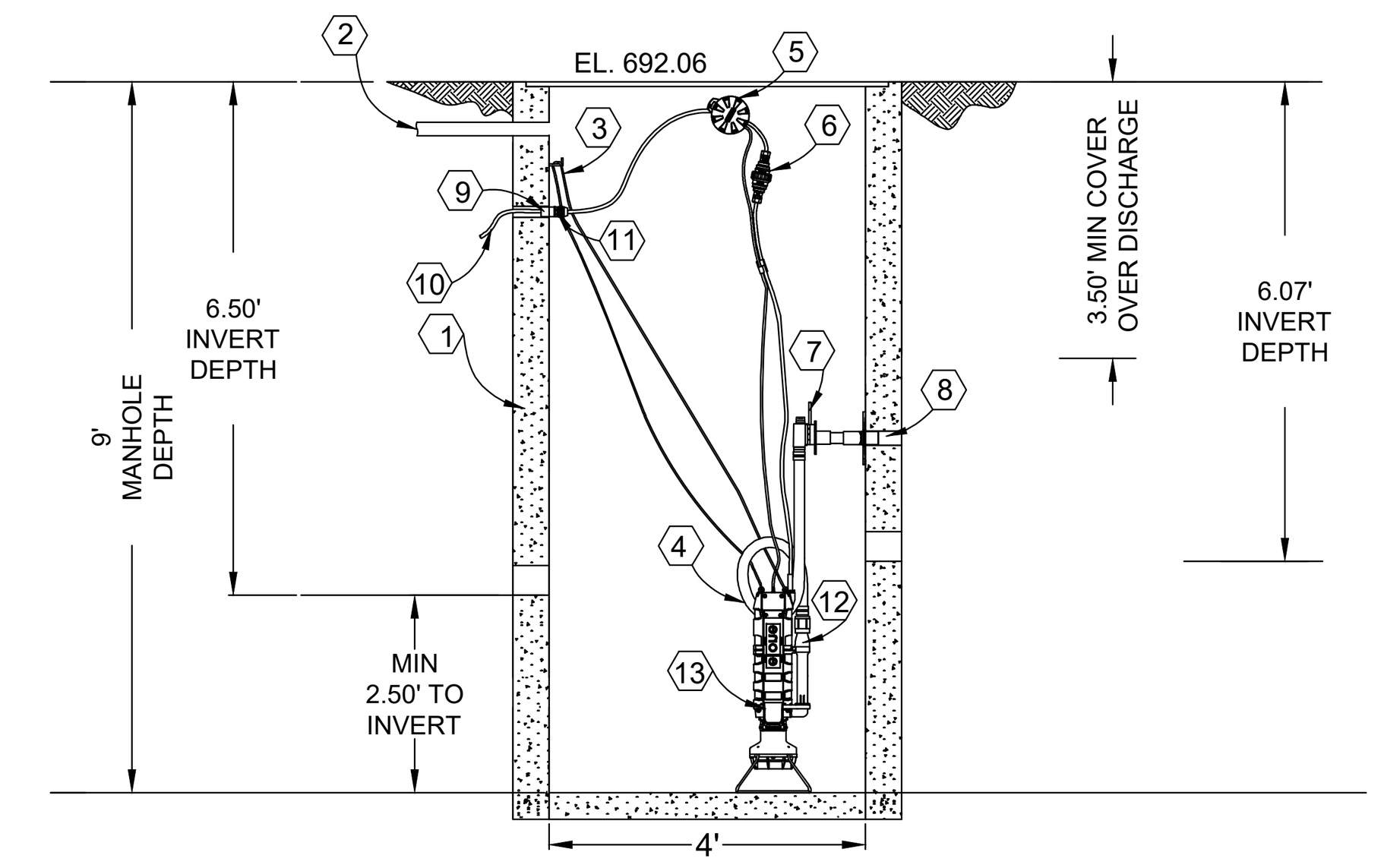
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TRENCH - EXISTING ASPHALTIC SURFACE OVERLAY (2 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W/WW03



NOTES:

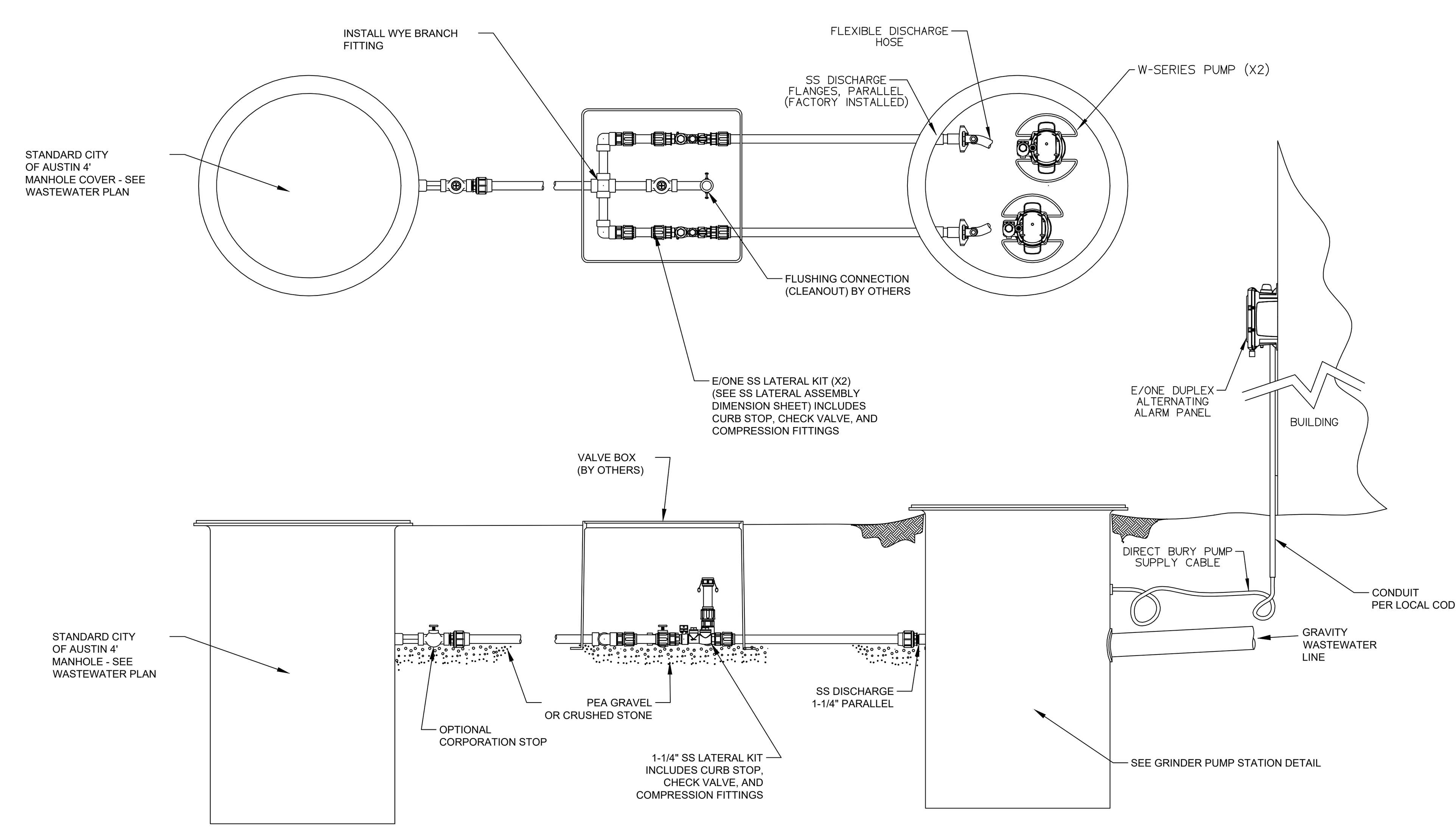
1. ALL EQUIPMENT LISTED TO BE MANUFACTURED BY E/ONE UNLESS NOTED AS "BY OTHERS."
2. ALL MATERIALS SHALL CONFORM TO THE BELOW EQUIPMENT LIST OF APPROVED EQUALS.



EQUIPMENT LIST

1. CITY OF AUSTIN 4' STANDARD MANHOLE PER CITY STANDARD DETAIL 506S-10 WITH MANHOLE COATING PER COA SPL WW-511A
2. 2" PVC VENT PIPE (TO CONNECT TO BUILDING VENT SYSTEM)
3. STAINLESS STEEL LIFTING CHAIN & HOOK
4. FLEXIBLE DISCHARGE HOSE BLACK EPDM SYNTHETIC RUBBER, 150 PSI RATED
5. E/ONE EQUALIZER
6. ELECTRICAL QUICK DISCONNECT (EQD)
7. DISCHARGE SLIDE FACE QUICK DISCONNECT
8. SS DISCHARGE HUB 1 1/4" MALE NPT
9. BULKHEAD FITTING (BY OTHERS)
10. SUPPLY CABLE 6 CONDUCTOR, TYPE TC DIRECT BURY
11. CABLE CONNECTOR (BY OTHERS)
12. ANTI-SIPHON CHECK VALVE
13. E/ONE GH091 G-SERIES GATORGRINDER DUPLEX GRINDER PUMP STATION

GRINDER PUMP STATION DETAIL



TYPICAL W-SERIES MANHOLE INSTALLATION, DUAL DISCHARGE, VALVE BOX

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

STANDARD DETAILS

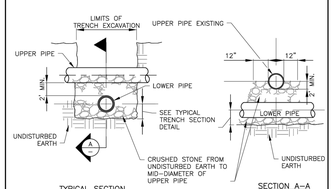
MALONE ★ WHEELER INC. SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE
108734
LICENSED PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY : CB
CHECKED BY : SGC
APPROVED BY : JBM
DATE : 3/14/2024

SHEET 27 OF 28

F:\LTISD OVERALL\PROJECTS\23-050-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\19 STANDARD DETAILS.DWG, 3/14/2024, JACKIE KEYMAN



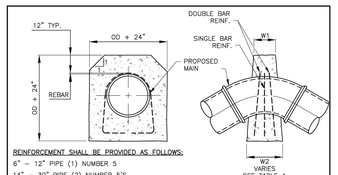
TYPICAL SECTION

SECTION A–A

NOTES:

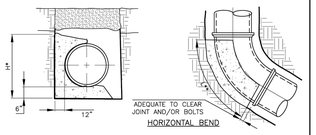
1. T.C.E.Q. RULES AND REGULATIONS ON SANITARY SEWER, STORM SEWER AND WATER MAIN CROSSINGS AND SEPARATIONS WILL BE STRICTLY ENFORCED, 30 TAC, CHAPTER 290, SUBCHAPTER D.
2. ALL OTHER UTILITIES TO MAINTAIN MINIMUM 5 FOOT HORIZONTAL AND 2 FOOT VERTICAL SEPARATION FROM WATER AND WASTEWATER MAINS AND SERVICES. GAS, ELECTRIC, CABLE, ETC. TO BE LOCATED OPPOSITE SIDES OF PROPERTIES.
3. UTILITY CROSSINGS SEPARATED BY LESS THAN 12 INCHES, PIPES SHALL BE ENCASED WITH 6 INCHES OF CONCRETE ALL AROUND AND CENTERED TO CROSSING FOR A MINIMUM LENGTH OF 20 FEET TOTAL.
4. SPECIFICATIONS; BEDDING MATERIAL MUST BE APPROVED BY AUTHORIZED T.C.W.C. AND I.D. NO. 17 DISTRICT PERSONNEL, BEFORE START OF JOB.
5. AT ANY CREEK CROSSING, THE MAIN SHALL BE STEEL ENCASED AND 6" CONCRETE ENCASEMENT TO WITHIN 10 FEET OUTSIDE OF CREEK OR DRAINAGE DITCH AREA.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	UTILITY CROSSING	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW07



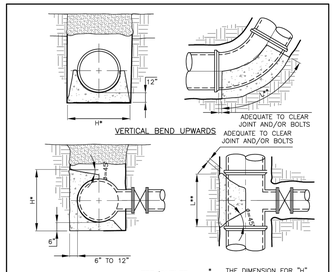
REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS:
6" – 12" PIPE (1) NUMBER 5
14" – 30" PIPE (2) NUMBER 5'S
36" – 48" PIPE (3) NUMBER 7'S

VERTICAL DOWN BEND



HORIZONTAL BEND

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	CONCRETE THRUST BLOCKING (1 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW08



VERTICAL BEND UPWARDS

TEE/OUTLET

* THE DIMENSION FOR "H" MUST BE GREATER THAN DIAMETER OF THE PIPE

** LENGTH "L" ALONG THE BEND MUST BE GREATER THAN "H" AND LESS THEN 2 TIMES "H"

NOTES:

1. THE EARTH BEARING SURFACE SHALL BE UNDISTURBED MATERIAL, IF NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND THE UNDISTURBED SOIL MUST BE COMPACTED TO A MINIMUM OF 90% STANDARD PROCTOR DENSITY.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL ADEQUATE THRUST BLOCKING. THE CONTRACTOR SHALL MAKE THE DETERMINATION IN THE FIELD AS TO TYPE OF SOIL AND USE THE "THRUST BLOCKING DESIGN" TO ADJUST THE AMOUNT OF THRUST BLOCKING REQUIRED AT EACH PLACE OF USE.
3. ALL FITTINGS SHALL BE BLOCKED REGARDLESS OF THE ANGLE OF DIRECTION.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	CONCRETE THRUST BLOCKING (2 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW08

TABLE A
UPWARD THRUST GRAVITY BLOCKS

PIPE DIA.	MIN. TOP WIDTH W1	ANGLE (DEGREES)	BOTTOM WIDTH W2 (IN)
6"	6"	0–5	NOTE 2
		5–15	24
		15–25	48
		>25	NOTE 1
8"	6"	0–5	NOTE 2
		5–9	30
		9–15	36
		>15	NOTE 1
12"	6"	0–5	NOTE 2
		5–15	48
		>15	NOTE 1
16"	12"	0–5	NOTE 2
		5–10	60
		10–15	96
		>15	NOTE 1
24" THRU 36"		>5.0	NOTE 1
42" THRU 48"		>3.0	NOTE 1

THRUST BLOCK DESIGN AS FOLLOWS:

A. PRESSURE OF 150 P.S.I. (ACTUAL IF HIGHER) + 50% SURGE ALLOWANCE

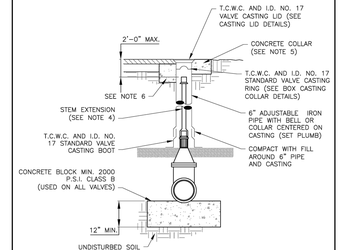
B. MAXIMUM SOIL BEARING SEE TABLE BELOW

SOIL TYPES	PRESSURE
LOOSE OR SPONGY SOIL	1500 Lb/SQ.FT.
UNDISTURBED SOIL, CALICHE	2000 Lb/SQ.FT.
LIMESTONE ROCK	4000 Lb/SQ.FT.

TABLE A NOTES:

1. FOR ANGLES GREATER THEN THOSE INDICATED, RESTRAINT JOINTS SHALL BE INSTALLED.
2. FOR JOINT DEFECTIONS LESS THEN 5 DEGREES, NO HORIZONTAL OR VERTICAL THRUST RESTRAINT IS REQUIRED FOR PIPES LESS THEN 42" IN DIAMETER.

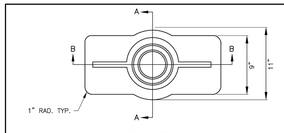
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	CONCRETE THRUST BLOCKING (3 OF 3)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW08



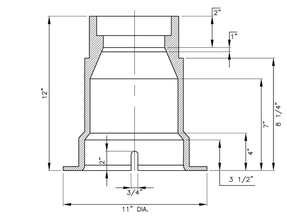
NOTES:

1. WELD SOCKET 2 1/2" X 2" DEEP TO 1" (SCH. 40) ROUND STEM EXTENSION. FITTED ON OPERATING NUT, SCH. 80 FOR LENGTHS OVER 10'.
2. T.C.W.C. AND I.D. NO. 17 STANDARD VALVE CASTING RING AND METAL LID IN UNPAVED AREAS.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 2" LONG WELDED TO TOP OF ROD.
4. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3 FEET DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 18 TO 24 INCHES FROM FINISHED GRADE.
5. CONCRETE COLLARS TO BE INSTALLED ON ALL VALVE BOXES LOCATED OUTSIDE PAVEMENT, SEE APPROPRIATE VALVE BOX ADJUSTMENT DETAILS.
6. FOR VALVE BOXES LOCATED IN PAVEMENT, SEE APPROPRIATE VALVE BOX ADJUSTMENT DETAIL.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VERTICAL GATE VALVE WITH BOX ASSEMBLY	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW10

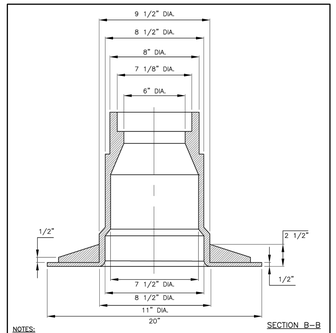


PLAN VIEW



SECTION A–A

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VALVE BOX CASTING BOOT (1 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW11

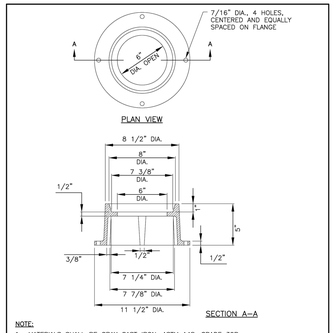


SECTION B–B

NOTES:

1. MATERIAL SHALL BE GREY CAST IRON, A.S.T.M. A48, GRADE 30B.
2. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER AND COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH BOOT.
3. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
4. FINISH BY REMOVING FINS AND FLASHING: PAINT WITH BLACK ASPHALT COATING.
5. WEIGHT: APPROXIMATELY 78 LBS.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VALVE BOX CASTING BOOT (2 OF 2)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW11



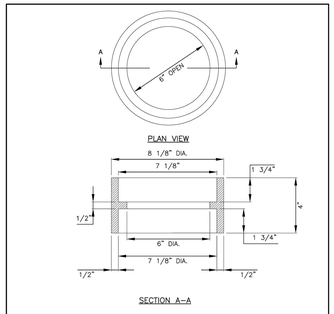
PLAN VIEW

SECTION A–A

NOTE:

1. MATERIALS SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH RING.
3. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
4. FINISH BY REMOVING FINS AND FLASHING; PAINT WITH BLACK ASPHALT COATING.
5. WEIGHT: APPROXIMATELY 23 LBS.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VALVE BOX CASTING COLLAR (PAVING RING)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW12



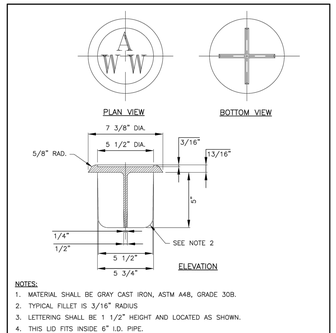
PLAN VIEW

SECTION A–A

NOTES:

1. MATERIALS SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ON TO EACH COLLAR.
3. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
4. FINISH BY REMOVING FINS AND FLASHING; PAINT WITH BLACK ASPHALT COATING.
5. WEIGHT: APPROXIMATELY 17 LBS.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VALVE BOX CASTING COLLAR (NOT IN PAVEMENT)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW13

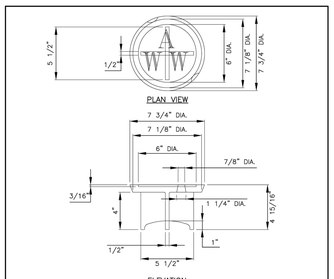


ELEVATION

NOTES:

1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. TYPICAL FILLET IS 3/16" RADIUS
3. LETTERING SHALL BE 1 1/2" HEIGHT AND LOCATED AS SHOWN.
4. THIS LID FITS INSIDE 6" I.D. PIPE.
5. THE MANUFACTURER'S IDENTIFICATION, CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID.
6. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
7. FINISH BY REMOVING FINS AND FLASHING; PAINT WITH BLACK ASPHALT COATING.
8. WEIGHT: APPROXIMATELY 13 LBS.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VALVE BOX CASTING LID (NOT IN PAVEMENT)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW14



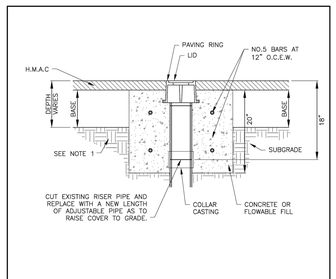
PLAN VIEW

ELEVATION

NOTES:

1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. TYPICAL FILLET IS 3/16" RADIUS.
3. LETTERING SHALL BE 1 1/2" HEIGHT AND LOCATED AS SHOWN.
4. THIS LID REQUIRES TWO (2) PICK SLOTS.
5. THE MANUFACTURER'S IDENTIFICATION, CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID.
6. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
7. FINISH BY REMOVING FINS AND FLASHING; PAINT WITH BLACK ASPHALT COATING.
8. WEIGHT: APPROXIMATELY 13 LBS.

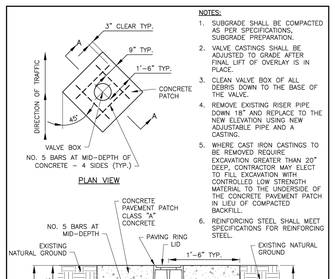
TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VALVE BOX CASTING LID (IN PAVEMENT)	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW15



NOTES:

1. SUBGRADE SHALL BE COMPACTED AS PER SPECIFICATIONS, SUBGRADE PREPARATION.
2. VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OF OVERLAY IS IN PLACE.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE BASE OF THE VALVE.
4. REMOVE EXISTING RISER PIPE DOWN 18" AND REPLACE TO THE NEW ELEVATION USING NEW ADJUSTABLE PIPE AND A CASTING.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VALVE BOX ADJUSTMENT TO GRADE IN PAVEMENT	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW16

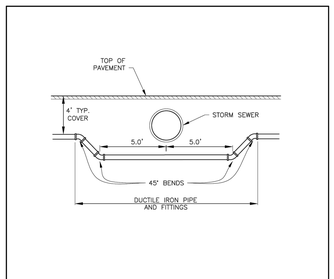


SECTION A–A

NOTES:

1. SUBGRADE SHALL BE COMPACTED AS PER SPECIFICATIONS, SUBGRADE PREPARATION.
2. VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OF OVERLAY IS IN PLACE.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE BASE OF THE VALVE.
4. REMOVE EXISTING RISER PIPE DOWN 18" AND REPLACE TO THE NEW ELEVATION USING NEW ADJUSTABLE PIPE AND A CASTING.
5. WHERE CAST IRON CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 20" DEEP, CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL TO THE UNDERSIDE OF THE CONCRETE PAVEMENT PATCH IN LIEU OF COMPACTED BACKFILL.
6. REINFORCING STEEL SHALL MEET SPECIFICATIONS FOR REINFORCING STEEL.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	VALVE BOX ADJUSTMENT TO GRADE OUTSIDE OF PAVEMENT	
ADOPTED: 06/15/2010	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW17

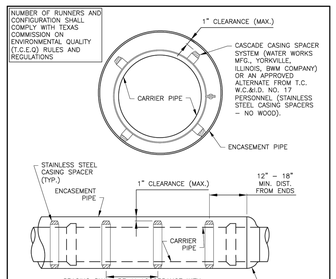


NOTES:

1. MAINTAIN 24 INCH (MIN.) SEPARATION FROM STORM SEWER LINE.
2. 45° BENDS MUST BE THRUSTBLOCKED AT BOTTOM BENDS. SEE STANDARD DETAIL.
3. RESTRAIN BELLS ON EITHER SIDE OF SWING.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	TYPICAL WATER LINE / FORCEMAIN CROSSING UNDER STORM SEWER	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW19

NUMBER OF RUNNERS AND CONFIGURATION SHALL COMPLY WITH TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (T.C.E.Q) RULES AND REGULATIONS



NOTES:

1. APPLICABLE CITY OF AUSTIN REFERENCES
   STANDARD SPECIFICATION: ITEM 510S.3 (19) W/WW STANDARD PRODUCTS LIST: SPLWW–575 (NO WOOD) CASING SPACERS AND SPLWW–575A (ONE PIECE BOOT) END SEALS.
2. T.E.C.Q. RULES AND REGULATIONS ON SANITARY SEWER, STORM SEWER AND WATER MAIN CROSSING AND SEPARATIONS WILL BE STRICTLY ENFORCED TO TAC, CHAPTER 290, SUBCHAPTER D.
3. ALL PIPE IN ENCASEMENT PIPE SHALL BE RESTRAINT JOINT. FOR ENTIRE LENGTH OF THE ENCASEMENT PIPE PLUS 10 FEET ON EACH SIDE.
4. FOR A PIPE 20' IN LENGTH, A MINIMUM OF 5 SPACERS IS REQUIRED. FOR A PIPE 13' IS LENGTH, A MINIMUM OF 3 SPACERS IS REQUIRED.

TRAVIS COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT No. 17 STANDARD DETAILS	ENCASEMENT DETAIL WITH CASING SPACERS	
ADOPTED: 03/01/2016	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. WWW18

NO.	DATE	REVISION	BY

LAKE TRAVIS HIGH SCHOOL 2024 AG IMPROVEMENTS
3324 RANCH ROAD 620 SOUTH

STANDARD DETAILS

MALONE★WHEELER INC.
SINCE 1995
CIVIL ENGINEERING ★ DEVELOPMENT CONSULTING ★ PROJECT MANAGEMENT
5113 Southwest Pkwy, Suite 260
Austin, Texas 78735
Phone: (512) 899-0601 Fax: (512) 899-0655
Firm Registration No. F-786

STATE OF TEXAS
JESSE B. MALONE, JR.
108734
LICENSED PROFESSIONAL ENGINEER
3/14/2024

DESIGN BY : CB
CHECKED BY : SGC
APPROVED BY : JBM
DATE : 3/14/2024

SHEET 28 OF 28

F:\LTHS\OVERALL\PROJECTS\23-056-AUS LTHS 620\DRAWINGS\PLANSET\AG 2024 IMPROVEMENTS\DRAWINGS\PLANSET\19 STANDARD DETAILS.DWG, 3/14/2024, JACKIE KEYMAN

CONTRIBUTING ZONE PLAN APPLICATION ATTACHMENT N – INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

CONTRIBUTING ZONE PLAN APPLICATION
ATTACHMENT "N"

INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

LAKE TRAVIS HIGH SCHOOL 2024 AG & TURF IMPROVEMENTS

Batch Detention Basin

Inspections. Inspections should take place a minimum of twice a year. One inspection should take place during wet weather to determine if the basin is meeting the target detention time of 12 hours and a drawdown time of no more than 48 hours. The remaining inspections should occur between storm events so that manual operation of the valve and controller can be verified. The level sensor in the basin should be inspected and any debris or sediment in the area should be removed. The outlet structure and the trash screen should be inspected for signs of clogging. Debris and sediment should be removed from the orifice and outlet(s) as described in previous sections. Debris obstructing the valve should be removed. During each inspection, erosion areas inside and downstream of this BMP should be identified and repaired/revegetated immediately.

Mowing. The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.

Litter and Debris Removal. Litter and debris removal should take place at least twice a year, as part of the periodic mowing operations and inspections. Debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed.

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

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

Structural Repairs and Replacement. With each inspection, any damage to structural elements of the basin (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. An example of this type of repair can include patching

of cracked concrete, sealing of voids, removal of vegetation from cracks and joints. The various inlet/outlet structures in a basin will eventually deteriorate and must be replaced.

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

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

“Proper” disposal of vegetation trimmings and accumulated silt shall be accomplished following Texas Commission on Environmental Quality and Travis County rules and regulation.

Recordkeeping. Maintain a field logbook to record any relevant information noted during inspections. At a minimum, the field notebook should include the date and time, field staff names, weather conditions, uniformity of grass cover, presence of debris and/or litter, and areas of sediment accumulation as well as any corrective actions taken and date they were completed. Records shall be maintained for a minimum of 3 years and shall be made available to TCEQ upon request. A sample inspection report is included with this attachment.

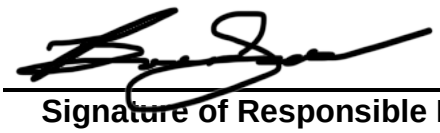
An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

Responsible Party: Lake Travis Independent School District

Mailing Address: 3322 Ranch Road 620 S

City, State: Austin, Texas **Zip:** 78738

Telephone: 512-533-6000 **Email:** snyderb@ltisdschools.org



Signature of Responsible Party

04-17-2024

Date

CONTRIBUTING ZONE PLAN APPLICATION ATTACHMENT P – MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

CONTRIBUTING ZONE PLAN APPLICATION

ATTACHMENT P – Measures for Minimizing Surface Stream Contamination

Temporary and permanent BMPs measure will be utilized for the proposed project site 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. These BMP's and measures have been described previously in other sections of this report and are included within the construction plans. Below is a description of the measures and their intended use.

Temporary BMPs and measures to be implemented are stabilized construction entrances / exits, concrete washout area, silt fences, rock berms and seeding. These BMPs & measures will be utilized to avoid or decrease the amount of contamination that could potentially enter a stream. These components provide a barrier to prevent and capture pollution and sediments from being conveyed to surface streams due to construction activity. The components additionally provide measures to prevent erosion by disbursing and slowing down storm water being conveyed to surface streams.

Permanent BMPs are an existing water quality batch detention pond and a proposed batch detention pond. This BMP will permanently mitigate pollution and sediments from being conveyed to surface streams. These BMPs will treat and capture pollutants from storm water permanently for the life of the development. Water quality ponds and engineered outlets provide measures to disburse water and prevent erosion at outfall areas.

TEMPORARY STORMWATER SECTION (TCEQ-0602)

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: Jesse B. Malone, P.E.

Date: 04/17/24

Signature of Customer/Agent:



Regulated Entity Name: Lake Travis High School

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.

N/A 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.

N/A 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: _____

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.

CONTRIBUTING ZONE PLAN APPLICATION

TEMPORARY STORMWATER ATTACHMENT A – SPILL RESPONSE ACTIONS

CONTRIBUTING ZONE PLAN APPLICATION
TEMPORARY STORMWATER
ATTACHMENT "A"

SPILL RESPONSE ACTIONS

LAKE TRAVIS HIGH SCHOOL 2024 PHASE 1 & 2 IMPROVEMENTS

Fuel and hazardous substances will not be stored on-site. Sources of spills would include accidents during refueling operations or damage to mechanical equipment. In addition to general care and good "housekeeping" practices, the following practices will be followed for accidental spill prevention and cleanup:

1. Site and construction personnel will be required to be aware of manufacturer's recommended methods for spill cleanup, the location of information, and the cleanup supplies.

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

3. All spills will be cleaned up immediately upon discovery.

4. All spill response actions shall comply with 30 TAC 327, Spill Prevention and Control, Texas Commission on Environmental Quality.

5. The threshold quantity that triggers the requirement to report a spill is called the "reportable quantity". To determine the reportable quantity for various materials, refer to the attached table. Additional information can be found on the following websites.

    - TCEQ's Spill Response Website
      https://www.tceq.texas.gov/response/spills/spill_rq.html

    - "Final RQ" in Table 302.4 (This table provides a comprehensive list of hazardous substances and their reportable quantities.)
      https://www.govinfo.gov/content/pkg/CFR-2004-title40-vol26/pdf/CFR-2004-title40-vol26-sec302-4.pdf

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

- State
  - State of Texas Spill-Reporting Hotline and the SERC: 1-800-832-8224 (24 hours a day)
  - TCEQ Regional Office, Monday-Friday 8:00am-5:00pm.
    - Region 11, Austin: 1-800-832-8224 (24 hours a day)
- Federal
  - National Response Center: 1-800-424-8802 (notifying NRC **does not** constitute notice to the state). **Notification of the State is required.**

USE LINK BELOW TO ACCESS THIS TABLE AND ADDITIONAL INFORMATION
https://www.tceq.texas.gov/response/spills/spill_rq.html

Kind of spill	Where discharged	Reportable quantity	Rule, statute, or responsible agency
Hazardous substance	onto land	"Final RQ" in Table 302.4 in 40 CFR 302.4 (PDF)	30 TAC 327
	into water	"Final RQ" or 100 lbs, whichever is **less**	
Any oil	coastal waters	as required by the Texas General Land Office	Texas General Land Office
Crude oil, oil that is neither a petroleum product nor used oil	onto land	210 gallons (five barrels)	30 TAC 327
	directly into water	enough to create a sheen	
Petroleum product, used oil	onto land, from an exempt PST facility	210 gallons (five barrels)	30 TAC 327
	onto land, or onto land from a non-exempt PST facility	25 gallons	
	directly into water	enough to create a sheen	
Associated with the exploration, development and production of oil, gas, or geothermal resources	under the jurisdiction of the Railroad Commission of Texas	as required by the Railroad Commission of Texas	Railroad Commission of Texas
Industrial solid waste or other substances	into water	100 lbs	30 TAC 327
From petroleum storage tanks, underground or aboveground	into water	enough to create a sheen on water	30 TAC 334 .75-81
From petroleum storage tanks, underground or aboveground	onto land	25 gallons or equal to the RQ under 40 CFR 302	30 TAC 327
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	into water	100 lbs	30 TAC 327

CONTRIBUTING ZONE PLAN APPLICATION

TEMPORARY STORMWATER
ATTACHMENT B –
POTENTIAL SOURCES OF CONTAMINATION

CONTRIBUTING ZONE PLAN APPLICATION
TEMPORARY STORMWATER
ATTACHMENT “B”

POTENTIAL SOURCES OF CONTAMINANTS

LAKE TRAVIS HIGH SCHOOL 2024 AG & Turf Improvements

The materials or substances listed below are expected to be used on-site during construction.

1. Concrete and concrete products
2. Asphaltic products
3. Petroleum-based products
4. Paints
5. Fertilizers
6. Lumber

The following procedures are potential sources of contamination:

1. Earth grading
2. Installation of asphalt and concrete
3. Moving/storage of soil
4. Construction traffic
5. Trenching for underground utilities

CONTRIBUTING ZONE PLAN APPLICATION

TEMPORARY STORMWATER ATTACHMENT C – SEQUENCE OF MAJOR ACTIVITIES

CONTRIBUTING ZONE PLAN APPLICATION
TEMPORARY STORMWATER
ATTACHMENT “C”

SEQUENCE OF MAJOR ACTIVITIES

LAKE TRAVIS HIGH SCHOOL 2024 AG & TURF IMPROVEMENTS

TURF

1. REMOVE EXISTING IMPROVEMENTS (Area = 4.34 acres)
2. ROUGH GRADE (Area = 4.34 acres)
3. INSTALL STORM SEWER SYSTEM (Area = 4.34 acres)
4. INSTALL TURF (Area = 4.34 acres)
5. RESTORATION OF SITE (Area = 4.34 acres)

AG

1. REMOVE EXISTING IMPROVEMENTS (Area =1.23 acres)
2. ROUGH GRADE (Area = 0.78 acres)
3. INSTALL UTILITIES & BUILDING IMPROVEMENTS (Area = 1.00 acres)
4. RESTORATION OF SITE (Area = 2.45 acres)

Tree protection fences shall be put in place according to City of Austin standards for tree protection prior to the start of any site preparation work. Fences shall be maintained throughout all phases of the construction project. Inlet protection will be used at all inlets throughout the construction phase.

During the installation of utilities and base and paving application, the contractor shall use dust control measures such as irrigation trucks and mulching. Contractor will clean up spoils that migrate onto the roads a minimum of once daily.

CONTRIBUTING ZONE PLAN APPLICATION

TEMPORARY STORMWATER ATTACHMENT D – TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

CONTRIBUTING ZONE PLAN APPLICATION
TEMPORARY STORMWATER
ATTACHMENT “D”

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

LAKE TRAVIS HIGH SCHOOL 2024 AG & TURF IMPROVEMENTS

Inlet protection will be installed to stop the pollution of stormwater runoff by preventing soil and debris from entering storm drain inlets. Silt fences will be utilized to filter stormwater runoff and keep soil on the disturbed land, rather than letting it be washed off into natural water bodies. Silt fences and rock berms downstream of disturbed areas shall be installed per the plans, maintained, and regularly inspected throughout the duration of all major construction activities until revegetation is complete. The revegetation shall be deemed complete when coverage is 85% on slopes of 0-5% and 95% on areas exceeding 5% slope with no bare areas greater than ten (10) square feet remain.

In addition to the installation of silt fencing and inlet protection, a stabilized construction entrance will be provided for all traffic accessing the site and a concrete washout will be provided. Tree protection will also be provided as needed.

CONTRIBUTING ZONE PLAN APPLICATION

TEMPORARY STORMWATER ATTACHMENT F – STRUCTURAL PRACTICES

CONTRIBUTING ZONE PLAN APPLICATION
TEMPORARY STORMWATER
ATTACHMENT “F”

STRUCTURAL PRACTICES

LAKE TRAVIS HIGH SCHOOL 2024 AG & TURF IMPROVEMENTS

The following structural controls and procedures will be utilized on this project to limit runoff discharge of pollutants:

1. A stabilized construction entrance will be used for all traffic accessing the site.

2. Silt fences or rock berms will be installed downstream of all disturbed areas and remain in place until final site stabilization is achieved.

3. A washout will be in place for concrete trucks exiting the site.

CONTRIBUTING ZONE PLAN APPLICATION

TEMPORARY STORMWATER ATTACHMENT G – DRAINAGE AREA MAP

CONTRIBUTING ZONE PLAN APPLICATION
TEMPORARY STORMWATER
ATTACHMENT “G”

DRAINAGE AREA MAP

LAKE TRAVIS HIGH SCHOOL 2024 AG & TURF IMPROVEMENTS

Refer to the Drainage Area Maps in the construction plans.

CONTRIBUTING ZONE PLAN APPLICATION

TEMPORARY STORMWATER ATTACHMENT H – TEMPORARY SEDIMENT BASIN

CONTRIBUTING ZONE PLAN APPLICATION
TEMPORARY STORMWATER
ATTACHMENT “H”

TEMPORARY SEDIMENT BASIN

LAKE TRAVIS HIGH SCHOOL 2024 AG & TURF IMPROVEMENTS

Since more than 10 acres of the site will not be disturbed at one time, a temporary sediment basin is not required. Temporary BMPs will be used as shown on the plans in each area of the site where soil disturbance is occurring.

CONTRIBUTING ZONE PLAN APPLICATION

TEMPORARY STORMWATER ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

CONTRIBUTING ZONE PLAN APPLICATION
TEMPORARY STORMWATER
ATTACHMENT “J”

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

LAKE TRAVIS HIGH SCHOOL 2024 AG & TURF IMPROVEMENTS

Soil Stabilization Practice	Schedule of Implementation
Silt Fences	Prior to and throughout site development
Mulch Logs	Prior to and throughout site development
Stabilized Construction Entrance	Prior to and throughout site development
Concrete Wash Out	Prior to and throughout site development
Temporary Stabilization	Temporary stabilization of disturbed areas must be initiated immediately whenever any earth disturbing activities have temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.
Permanent Restoration and Revegetation	Permanent stabilization of disturbed areas must be initiated immediately whenever earth disturbing activities have permanently ceased

AGENT AUTHORIZATION FORM (TCEQ-0599)

APPLICATION FEE FORM (TCEQ-0574)

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

I Brandon Snyder,
Print Name

Facilities Construction & Energy Manager,
Title - Owner/President/Other

of Lake Travis Independent School District,
Corporation/Partnership/Entity Name

have authorized Jesse Malone, P.E.
Print Name of Agent/Engineer

of Malone Wheeler, Inc.
Print Name of Firm

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

I also understand that:

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

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

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

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

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

SIGNATURE PAGE:



Applicant's Signature

04-17-2024

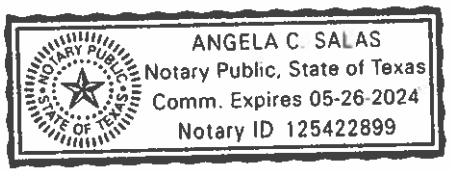
Date

THE STATE OF TEXAS §

County of TRAVIS §

BEFORE ME, the undersigned authority, on this day personally appeared _____known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 17th day of April, 2024.



NOTARY PUBLIC

ANGELA C. SALAS

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 05-26-2024

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Lake Travis High School

Regulated Entity Location: 3324 Ranch Rd. 620 S., Austin, TX 787338

Name of Customer: Lake Travis Independent School District

Contact Person: Brandon Snyder Phone: (512)-533-6000

Customer Reference Number (if issued): CN 600783575

Regulated Entity Reference Number (if issued): RN 101495851

Austin Regional Office (3373)

☐ Hays ☒ Travis ☐ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde

☐ Comal ☐ Kinney

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

☒ Austin Regional Office

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

☐ San Antonio Regional Office

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	124.41 Acres	$ 10,000
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: 04-17-2024

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

CORE DATA FORM (TCEQ-10400)

TCEQ Core Data Form

TCEQ Use Only

For detailed instructions regarding completion of 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.*)

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 600783575		RN 101495851

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	04/17/2024

[ ] New Customer No change to customer information made [X] Update to Customer Information [ ] Change in Regulated Entity Ownership

[ ] Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

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

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

Lake Travis Independent School District

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

11. Type of Customer: [ ] Corporation [ ] Individual Partnership: [ ] General [ ] Limited

Government: [ ] City [ ] County [ ] Federal [ ] State [X] Other [ ] Sole Proprietorship [X] Other: Educational/School District

12. Number of Employees

[ ] 0-20 [ ] 21-100 [ ] 101-250 [ ] 251-500 [X] 501 and higher

13. Independently Owned and Operated?

[ ] Yes [X] No

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

[ ] Owner [ ] Operator [X] Owner & Operator

[ ] Occupational Licensee [ ] Responsible Party [ ] Voluntary Cleanup Applicant [ ] Other:

15. Mailing Address:	3322 Ranch Road 620 S.						
	City	Austin	State	TX.	ZIP	78738	ZIP + 4

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

18. Telephone Number	19. Extension or Code	20. Fax Number (*if applicable*)
(512)533-6000		(512)533-6001

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected below this form should be accompanied by a permit application*)

[ ] New Regulated Entity [ ] Update to Regulated Entity Name [X] Update to Regulated Entity Information No change to regulated entity information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency 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.*)

Lake Travis High School

23. Street Address of the Regulated Entity: *(No PO Boxes)*								
	3325 Ranch Road. 620 S							
	City	Austin	**State**	TX	**ZIP**	78738	**ZIP + 4**	
24. County								

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**
			Texas		78613
27. Latitude (N) In Decimal:	30.32768		**28. Longitude (W) In Decimal:**	-97.96753	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	19	39.65	-97	58	3.11

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
8211	0300	611110	

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

Education

34. Mailing Address:								
	3324 Ranch Road. 620 S							
	City	Austin	**State**	TX	**ZIP**	78738	**ZIP + 4**	
35. E-Mail Address:								

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512)533-6000		(512)533-6001

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

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Jesse Malone, P.E.	**41. Title:**	Engineer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512)899-0601		(512)899-0655	jessem@malonewheeler.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:	Lake Travis ISD	**Job Title:**	Facilities Construction & Energy Manager
Name *(In Print):*	Brandon Snyder	**Phone:**	(512)-956-5600
Signature:		**Date:**	04-17-2024