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TEXAS REGISTERED ENGINEERING FIRM F-181

SERVICES
>> ENGINEERS >> PLANNERS >> SURVEYORS

Water Pollution Abatement Plan

For

84 Lumber Office/Warehouse

In the

City of Georgetown

Williamson County, Texas

Submitted: 3/21/2023

Job Number: 22223-Phase 4

Water Pollution Abatement Plan

For

84 Lumber Office/Warehouse

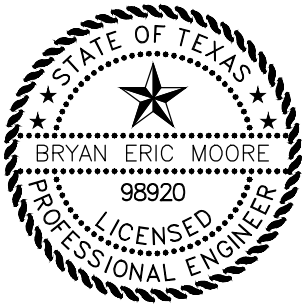
In

City of Georgetown

Williamson County, Texas

Job Number: 22914

Prepared by:



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Water Pollution Abatement Plan Checklist

- **Edwards Aquifer Application Cover Page (TCEQ-20705)**
- **General Information Form (TCEQ-0587)**

  Attachment A - Road Map
  Attachment B - USGS / Edwards Recharge Zone Map
  Attachment C - Project Description

- **Geologic Assessment Form (TCEQ-0585)**

  Attachment A - Geologic Assessment Table (TCEQ-0585-Table)
  Attachment B - Stratigraphic Column
  Attachment C - Site Geology
  Attachment D - Site Geologic Map(s)

- **Water Pollution Abatement Plan Application Form (TCEQ-0584)**

  Attachment A - Factors Affecting Surface Water Quality
  Attachment B - Volume and Character of Stormwater
  Attachment C - Suitability Letter from Authorized Agent (if OSSF is proposed)
  Attachment D - Exception to the Required Geologic Assessment (if requested)
  Site Plan

- **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
  Attachment E - Request to Temporarily Seal a Feature (if requested)
  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

- **Permanent Stormwater Section (TCEQ-0600)**

  Attachment A - 20% or Less Impervious Cover Waiver (if requested for multi-family, school, or small business site)
  Attachment B - BMPs for Upgradient Stormwater
  Attachment C - BMPs for On-site Stormwater
  Attachment D - BMPs for Surface Streams
  Attachment E - Request to Seal Features (if sealing a feature)
  Attachment F - Construction Plans
  Attachment G - Inspection, Maintenance, Repair and Retrofit Plan
  Attachment H - Pilot-Scale Field Testing Plan (if proposed)

Attachment I -Measures for Minimizing Surface Stream Contamination

- **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)**

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: 84 Lumber Office/Warehouse Expansion						**2. Regulated Entity No.:**			
3. Customer Name: 84 Lumber Company						**4. Customer No.: 602860603**			
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):**			**6.03 Acres**
9. Application Fee:	$5,000		**10. Permanent BMP(s):**			**Batch Detention**			
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**						
13. County:	Williamson		**14. Watershed:**			West Fork Smith Branch; San Gabriel			

Application Distribution

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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	X
Region (1 req.)	___	___	X
County(ies)	___	___	X
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence X 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. Bryan E. Moore
Print Name of Customer/Authorized Agent 04/12/2023
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):	

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) 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.

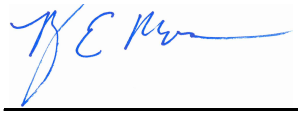
Signature

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 **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Bryan E. Moore, P.E.

Date: 02-27-2023

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: 84 Lumber Office/Warehouse Expansion
2. County: Willaimson
3. Stream Basin: West Fork Smith Branch San Gabriel River
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☒ WPAP
   ☐ SCS
   ☐ Modification
   ☐ AST
   ☐ UST
   ☐ Exception Request

7. Customer (Applicant):

   Contact Person: James A. Zaunick
   Entity: 84 Lumber
   Mailing Address: 1019 Route 519
   City, State: Eighty Four, PA Zip: 15330
   Telephone: (724) 228-3636 FAX: _____
   Email Address: Jim.Zaunick@84lumber.com

8. Agent/Representative (If any):

   Contact Person: Bryan E. Moore, P.E.
   Entity: Steger Bizzell
   Mailing Address: 1978 S. Austin Avenue
   City, State: Georgetown, TX. Zip: 78626
   Telephone: (512) 930-9412 FAX: _____
   Email Address: bmoore@stegerbizzell.com

9. Project Location:

   ☒ The project site is located inside the city limits of Georgetown, TX..
   ☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
   ☐ The project site is not located within any city's limits or ETJ.

10. ☒ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

    Lots 1 and 2 located at the northeast corner of Madison Oaks Ave. and S. Austin Avenue

11. ☐ **Attachment A – Road Map**. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

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

    ☒ Project site boundaries.
    ☒ USGS Quadrangle Name(s).
    ☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
    ☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned**. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

    ☒ Survey staking will be completed by this date: 2-23-2023

14. ☒ **Attachment C – Project Description**. Attached at the end of this form is a detailed narrative description of the proposed project. 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

15. 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/Uncleared)
- ☐ Other: _____

Prohibited Activities

16. ☒ I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);

(2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;

(3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;

(4) The use of sewage holding tanks as parts of organized collection systems; and

(5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

(6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. ☒ I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

(1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

(2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

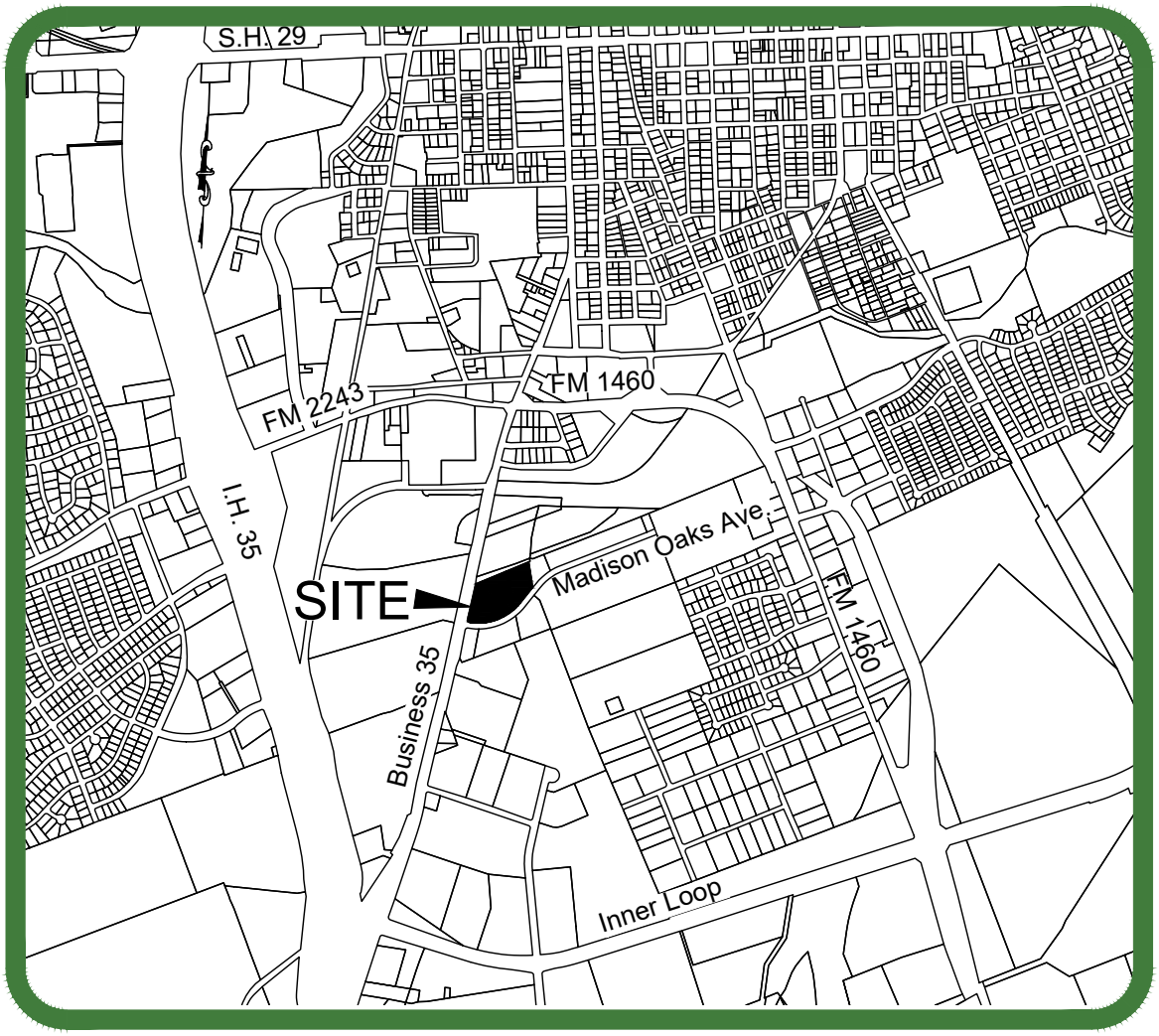
- ☒ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- ☐ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- ☐ For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
- ☐ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
- ☐ A request for an extension to a previously approved plan.

19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

- ☒ TCEQ cashier
- ☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. ☒ 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.

21. ☒ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.



Location Map

1" = 2000'

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ROUND ROCK QUADRANGLE
TEXAS—WILLIAMSON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
SW/4 ROUND ROCK 15' QUADRANGLE

SITE

Contributing Zone

Recharge Zone

Transition Zone

Mapped, edited and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1974. Field checked 1975. Revised from aerial photographs taken 1985. Field checked 1986. Map edited 1987

Projection and 10,000-foot grid ticks: Texas coordinate system, central zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid, zone 14
1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 17 meters south and 28 meters east as shown by dashed corner ticks

Fine red dashed lines indicate selected fence lines

Red tint indicates areas in which only landmark buildings are shown

UTM GRID AND 1987 MAGNETIC NORTH DECLINATION AT CENTER OF MAP DIAGRAM IS APPROXIMATE

Areas covered by dashed light-blue pattern are subject to controlled inundation

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASSIFICATION

Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Interstate Route U. S. Route State Route

INTERIOR GEOLOGICAL SURVEY, RESTON, VIRGINIA 1987

ROUND ROCK, TEX.
SW/4 ROUND ROCK 15' QUADRANGLE
30097-E6-TF-024
1987
JOB No. 22914

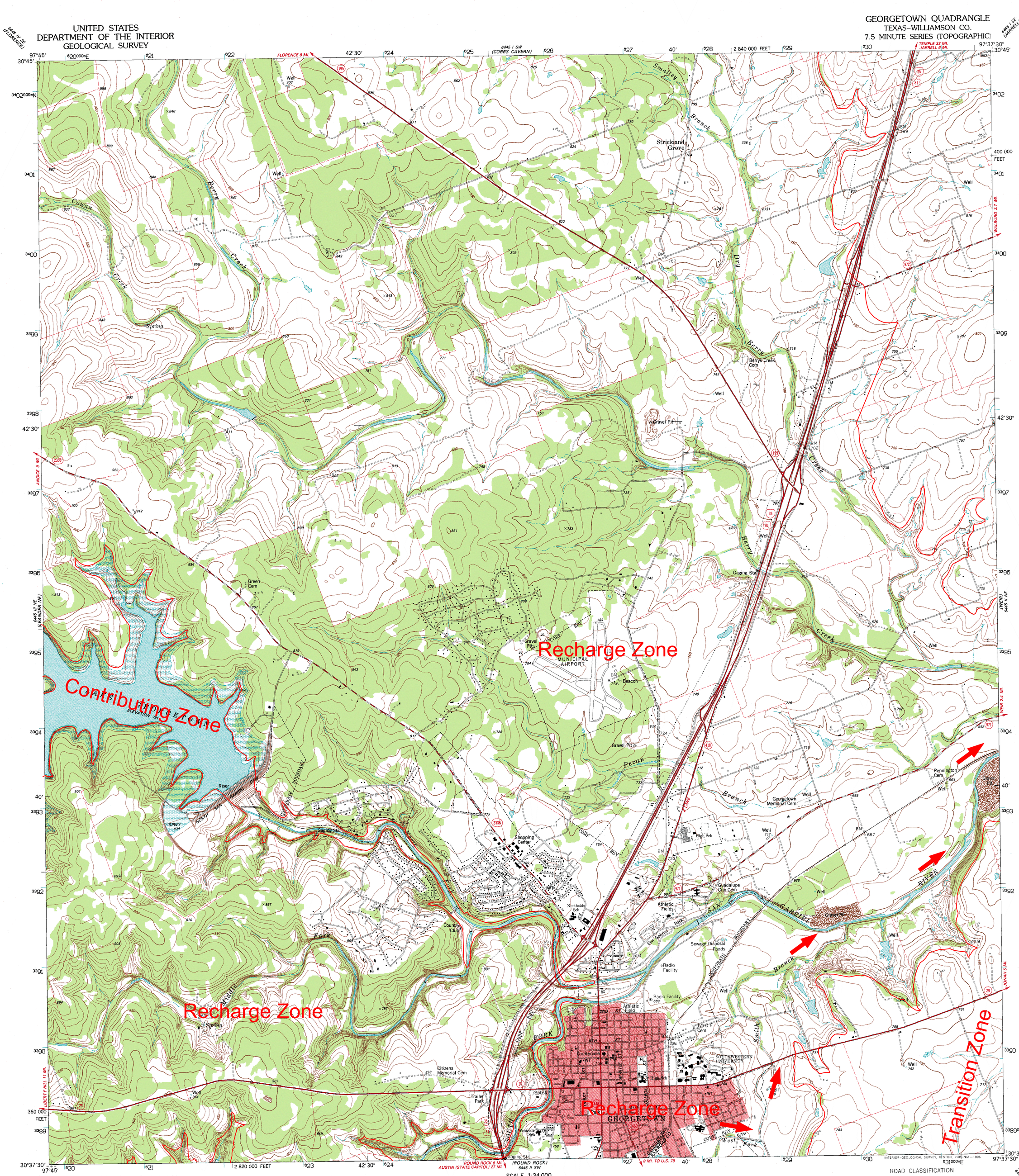
ISBN 0-607-525502-9

84 Lumber Office/Warehouse Expansion
WILLIAMSON COUNTY, TEXAS

QUADRANGLE LOCATION
TEXAS
3097-312

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

GEORGETOWN QUADRANGLE
TEXAS–WILLIAMSON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Produced by the United States Geological Survey

Control by USGS and NOS/NOAA

Compiled from aerial photographs taken 1974. Field checked 1975
Map edited 1982

North American Datum of 1927 (NAD 27). Projection and 10 000-foot ticks: Texas Coordinate System, central zone (Lambert Conformal Conic)
Blue 1000-meter Universal Transverse Mercator ticks, zone 14

North American Datum of 1983 (NAD 83) is shown by dashed corner ticks. The values of the shift between NAD 27 and NAD 83 for 7.5-minute intersections are obtainable from National Geodetic Survey NADCON software

Red tint indicates areas in which only landmark buildings are shown

Fine red dashed lines indicate selected fence lines

Areas covered by dashed light-blue pattern are subject to controlled inundation

MN GN 7½° 133 MILS 0°40′ 12 MILS

UTM GRID AND 1982 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

TEXAS
QUADRANGLE LOCATION

3097-313

ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

Interstate Route U. S. Route State Route

84 Lumber Office/Warehouse Expansion
WILLIAMSON COUNTY, TEXAS

GEORGETOWN, TX
30097-F6-TF-024

1982

JOB No. 22914

ISBN 0-607-51004-8

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WEIR QUADRANGLE
TEXAS–WILLIAMSON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 ROUND ROCK 15' QUADRANGLE

Recharge Zone

Transition Zone

84 Lumber Office/Warehouse Expansion
WILLIAMSON COUNTY, TEXAS

3097-314

Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1974. Field checked 1975. Map edited 1982

Projection and 10,000-foot grid ticks: Texas coordinate system, central zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid, zone 14
1927 North American datum
To place on the predicted North American Datum 1983 move the projection lines 17 meters south and 28 meters east as shown by dashed corner ticks

Fine red dashed lines indicate selected fence lines

UTM GRID AND 1982 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASSIFICATION

Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Interstate Route
U. S. Route
State Route

WEIR, TEX.
NE/4 ROUND ROCK 15' QUADRANGLE
N3037.5–W9730/7.5

1982

JOB No. 22914

Attachment C – Project Description

84 Lumber is proposing to expand their existing facility located on the 6.034 acre site at 103 and 107 Madison Oaks Avenue. The legal description of the site is Lots 1 and 2, Block A of Amended Final Plat Madison Oaks Phase One, recorded in Document No. 2004023453 of the Public Records of Williamson County, Texas.

The existing project site consists of undeveloped property with a manmade drainage channel that is located along the Lot1 and Lot 2 common property line and continues east along the north line of Lot 2. Access to lots 1 and 2 will be along the existing Madison Oaks Avenue roadway.

The developed commercial site (zoned C-3) adds 39,375 s.f. [0.904 ac.] of office/warehouse space and 113,772 s.f. of concrete drive and parking for a total impervious cover of 153,147 s.f. [58%]. A batch detention basin has been selected for each lot to treat the increase of total suspended solid removal while minimizing the permanent BMP footprint increase. The batch detention system will be used to regulate and treat storm water runoff for the entire site.

The existing manmade channel is the only previous development for these two lots and is contained within a drainage easement for conveyance of offsite flows from the south. This site has no history of development and is cleared and undeveloped. There are no areas of demolition planned for these two lots.

aci consulting
austin • denver

GEOLOGIC ASSESSMENT
FOR THE APPROXIMATELY 6.14-ACRE
84 LUMBER EXPANSION TRACT

Williamson County, Texas

February 2023

Submitted to:
Steger Bizzel
1978 S. Austin Avenue
Georgetown, Texas 78626

Prepared by:
aci consulting
1001 Mopac Circle
Austin, Texas 78746
TBPG Firm License No. 50260

aci project #: 22-23-016

84 LUMBER EXPANSION TRACT:
GEORGETOWN WATER QUALITY ORDINANCE MEMO

WILLIAMSON COUNTY, TEXAS

Date:	February 20, 2023
Project:	84 Lumber Expansion
To:	Steger Bizzel| C/O Bryan Moore
From:	aci consulting - TBPG License No. 50260 | Mark Adams, P.G., C.A.P.M.
Subject:	**City of Georgetown Water Quality Ordinance Memo**

INTRODUCTION

On February 24, 2015, the City of Georgetown passed a finalized ordinance regarding water quality regulations over the Edwards Aquifer Recharge Zone (EARZ), which established setbacks or buffers around springs and streams in the EARZ as well as for occupied salamander sites. This memo details the investigations **aci consulting** has conducted on the 84 Lumber Expansion Tract with regards to compliance with the City of Georgetown Water Quality Ordinance.

SUBJECT AREA

The subject area is approximately 6.14 acres and is located northeast of the intersection of South Austin Avenue and Madison Oaks Avenue in city of Georgetown, Williamson County, Texas (Figure 1).

FINDINGS

aci consulting scientists surveyed the subject area as part of the Geologic Assessment (GA) and included obtained pertinent information on springs, streams, and Georgetown Salamander Critical Habitat Units (CHUs) as part of the assessment. **aci consulting** verified that the site is contained within the Edwards Aquifer Recharge Zone (EARZ) based on the mapped boundaries. There were no springs, National Hydrography Dataset (NHD) flowlines, sensitive or non-sensitive karst features, or mapped salamander sites or known surface or subsurface CHUs within the subject area. However, there were several manmade features in bedrock found in the subject area, including a stormwater conveyance feature.

DISCUSSION

Based on the review of the City of Georgetown Ordinance, it would appear that since there were no springs, geologic features, streams, or salamander CHUs, there are no setbacks required in relation to these environmental features.

Sincerely,

Mark T. Adams P.G./C.A.P.M. No.1835
Senior Geologist
aci Group LLC TBPG Firm License No. 50260

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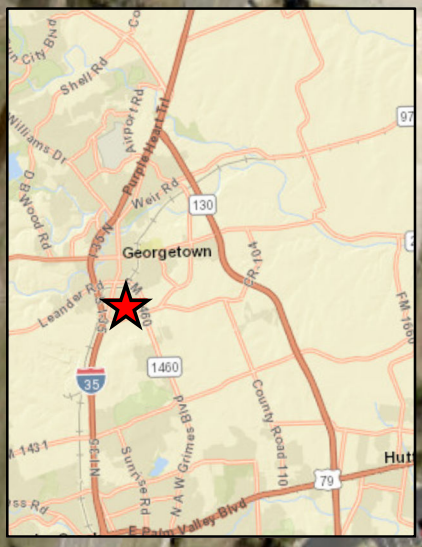
FIGURE 1
SITE LOCATION AND FEATURES MAP

P:\Project Folders\22-23-016 84 Lumber Expansion Geologic Assessment\gis\maps\Working_AM.mxd



The subject area is within the Edwards Aquifer Recharge Zone.

This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.

N

DRAFT

150 75 0 150

Feet

1:1,800 1 inch = 150 feet

Subject Area

Manmade Feature in Bedrock

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84 Lumber Expansion Tract **aci Project No.: 22-23-016**

Figure 1: Site Location and Features Map **February 2023**

Geologic Assessment

Texas Commission on Environmental Quality

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), 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

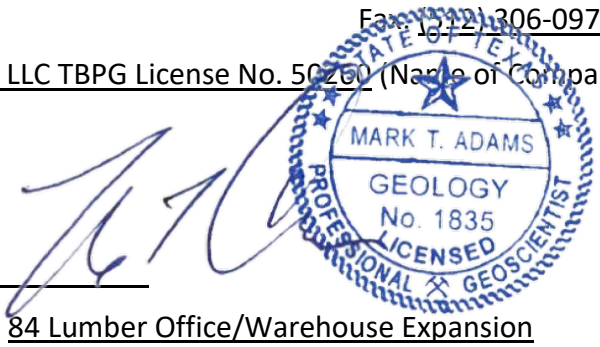
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Mark T. Adams Telephone: (512) 347-9000

Date: 2/27/2023 Fax: (512) 306-0974

Representing: aci Group LLC TBPG License No. 50260 (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: 84 Lumber Office/Warehouse Expansion

Project Information

1. Date(s) Geologic Assessment was performed: 2/9/2023
2. Type of Project:
   - ☒ WPAP
   - ☒ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone
   - ☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

5. ☒ Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
Denton silty clay, 1 to 3 percent slopes (DnB)	D	6.67
Doss silty clay, moist, 1 to 5 percent slopes (DoC)	D	6.67
Houston Black clay, 1 to 3 percent slopes (HoB)	D	6.67

Soil Name	Group*	Thickness(feet)

** Soil Group Definitions (Abbreviated)*

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1”: 400'

   Applicant's Site Plan Scale: 1" = 40'
   Site Geologic Map Scale: 1" = 40'
   Site Soils Map Scale (if more than 1 soil type): 1" = 100'

9. Method of collecting positional data:

☒ Global Positioning System (GPS) technology.
☐ Other method(s). Please describe method of data collection: _____

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.
11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.

13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.
14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    ☐ The wells are not in use and have been properly abandoned.
    ☐ The wells are not in use and will be properly abandoned.
    ☐ The wells are in use and comply with 16 TAC Chapter 76.

    ☒ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

15. ☒ 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.

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TABLE OF CONTENTS

LIST OF ATTACHMENTS

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February 2023

Geologic Assessment for the 84 Lumber Expansion Tract located in Williamson County, Texas

1.0 INTRODUCTION

The Texas Commission on the Environmental Quality (TCEQ) regulates activities that have the potential to pollute the Edwards Aquifer through the Edwards Aquifer Protection Program. Projects meeting a certain criterion over the Edwards Aquifer Recharge Zone must submit an Edwards Aquifer Protection Plan (EAPP).

The purpose of this report is to identify all potential pathways for contaminant movement to the Edwards Aquifer and provide sufficient geologic information so that the appropriate Best Management Practices (BMPs) can be proposed in the Edwards Aquifer Protection Plan (EAPP). This report complies with the requirements of Title 30, Texas Administrative Code (TAC) Chapter 213 relating to the protection of the Edwards Aquifer Recharge Zone. Per the Rules, the Geologic Assessment must be completed by a Geologist licensed according to the Texas Geoscience Practice Act.

2.0 PROJECT INFORMATION

The 84 Lumber Expansion Tract, hereafter referred to as the subject area or site, is located at 103 Madison Oaks and 107 Madison Oaks, in the City of Georgetown, Williamson County, Texas (**Attachment A, Figure 1**). Pedestrian investigations of the approximately 6.14-acre tract were performed on February 9, 2023, Marcos Cardenas, Gabriel Nejad, and Andrew Marlow, G.I.T., under the supervision of Mark Adams, P.G. with **aci consulting**.

This report is intended to satisfy the requirements for a Geologic Assessment, which shall be included as a component of a Water Pollution Abatement Plan (WPAP) and Sewage Collection System (SCS). The site is approximately 6.14 acres in total. The proposed site use is for commercial development: the expansion of the 84 Lumber yard. The scope of the report consists of a site reconnaissance, field survey, and review of existing data and reports. Features identified during the field survey were ranked utilizing the Texas Commission on Environmental Quality (TCEQ) matrix for Edwards Aquifer Recharge

Zone features. The ranking of the features will determine their viability as "sensitive" features.

3.0 INVESTIGATION METHODS

The following investigation methods and activities were used to develop this report:

- Review of existing files and literature to determine the regional geology and any known caves associated with the project area;
- Review of past geological field reports, cave studies, and correspondence regarding the existing geologic features on the project area, if available;
- Site reconnaissance by a registered professional geologist to identify and examine caves, recharge features, and other significant geological structures;
- Evaluation of collected field data and a ranking of features using the TCEQ Ranking Table 0585 for the Edwards Aquifer Recharge Zone; and
- Review of historic aerial photographs to determine if there are any structural features present, and to determine any past disturbances on the subject property.

4.0 SOILS AND GEOLOGY

The following includes a site-specific description of the soils, geologic stratigraphy, geologic structure, and karstic characteristics as they relate to the Edwards aquifer. Also included in this section is a review of historic aerials for presence of geologic changes or changes to manmade features in bedrock.

Soils

According to the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (2023), three soil units occur within the subject area (**Attachment A, Figure 2**):

- DnB—Denton silty clay, 1 to 3 percent slopes

The Denton component makes up 88 percent of the map unit. Slopes are 1 to 3 percent. This component is on hillslopes on dissected plateaus. The parent material consists of silty and clayey slope alluvium over residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 22 to 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate.

This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet the criteria for hydric soils. Hydrologic Soil Group: D.

Krum (6%), Doss (4%) and Anhalt (2%) are minor components that make up the remaining 12% of the map unit. These do not meet the criteria for hydric soils.

- DoC—Doss silty clay, moist, 1 to 5 percent slopes

The Doss component makes up 85 percent of the map unit. Slopes are 1 to 5 percent. This component is on hillslopes on dissected plateaus. The parent material consists of residuum weathered from limestone. Depth to a root restrictive layer, bedrock, paralithic, is 11 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrinkswell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet the criteria for hydric soils. Hydrologic Soil Group: D.

Brackett (7%), Bolar (5%), Purves (1%), Denton (1%), and Eckrant (1%), are minor components that make up the remaining 15% of the map unit. These do not meet the criteria for hydric soils.

- HoB—Heiden clay, 2 to 5 percent slopes, moderately eroded

The Houston Black component makes up 80 percent of the map unit. Slopes are 1 to 3 percent. This component is on linear gilgai on ridges on dissected plains. The parent material consists of clayey residuum weathered from calcareous mudstone of Upper Cretaceous Age. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is very high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet the criteria for hydric soils. Hydrologic Soil Group: D.

Heiden (15%) and Fairlie (5%) are minor soil components that make up the remaining 20% of the map unit. These do not meet the criteria for hydric soils.

Geologic Stratigraphy

According to the Geologic Map of the Georgetown Quadrangle, Texas, two geologic units occur within the subject area (**Attachment A, Figure 3**). These units and a description by Collins (1997) are as follows:

- Georgetown Limestone (Kgt)

"Limestone and marl. Nodular, very fossiliferous; diagnostic marine megafossils include Waconell wacoensis (formerly Kingena wacoensis) and Gryphaea washitaensis". Rare small vugs. Uppermost Edwards aquifer strata. Thickness increases northward from -65 ft to 110 ft."

- Edwards Limestone (Ked)

"Limestone, dolomitic limestone and marl. Massive to thin beds, chert, and fossiliferous; fossils include rudistids. Shallow subtidal to tidal-flat cycles. Honeycomb textures, voids in collapsed breccias, and cavern systems. Accounts for most of the Edwards aquifer strata. Thickness is between 100ft to 300ft; thins northward."

Site-Specific Stratigraphic Column

Formation	Members	Thickness (Collins, 1997)
Georgetown Formation	N/A	65-110 feet
Edwards Limestone	Edwards Limestone	100-300 feet

Geologic Structure

The geologic strata associated with the Edwards Aquifer include the Georgetown Limestone Formation of the Washita Group, the Edwards Limestone Group which is interfingered with the Comanche Peak Formation, followed by the Walnut formation, and finally the Glen Rose Formation of the Trinity Group. These Groups dip gently to the southeast and are a characterized by the Balcones Fault Escarpment, a zone of en echelon normal faults downthrown to the southeast. Locally, the dominant structural trend of

faults within the area is 15°, as evidenced by the mapped fault patterns (**Attachment A, Figure 4**). Thus, all features that have a trend ranging from 0° to 30° are considered "on trend" and were awarded the additional 10 points in the Geologic Assessment Table.

The subject area is underlain by Kgt and Ked. There is an inferred normal fault bisecting the property and trending approximately 8°. The western half of the property is Ked with Kgt east of the inferred normal fault (Collins, 1997).

Karstic Characteristics

In limestone landscapes, karst is expressed by erratically developed cavernous porosity from dissolution of bedrock as water combined with weak acids moves through the subsurface. Karst terrains are typical of the Edwards Limestone, occurring across a vast region of Central Texas, including the Balcones Fault Escarpment. The features produced by karst processes include, but are not limited to, sinkholes, solution cavities, solution enlarged fractures, and caves. These features can eventually provide conduits for fluid movement such as surface water runoff, as "point recharge" to the Edwards Aquifer. Faults and manmade features within bedrock can also provide conduits for point recharge in many cases.

According to Edwards aquifer zone map produced by the TCEQ (2005), the entire subject area is within the northern segment of the Edwards aquifer Recharge Zone. Thus, all karst features identified as sensitive within the project limits have the potential to be point recharge features into the Edwards aquifer.

Review of Historic Aerials

Aerial photographs were reviewed for the site, and it was determined site has been used for agricultural purposes since the 1995 aerial. (**Attachment C**). Stormwater control features can first be seen onsite by the 2004 aerial. No significant changes occur on the subject property in the remaining aerials, but building and roads can be seen constructed nearby throughout the most recent aerial.

5.0 GEORGETOWN WATER QUALITY ORDINANCE

On February 24, 2015, the City of Georgetown (CoGt) passed a finalized ordinance regarding water quality regulations over the Edwards Aquifer Recharge Zone (EARZ), which established setbacks or buffers around springs and streams in the EARZ as well as for occupied salamander sites. **aci consulting** scientists surveyed the subject area as part

of the Geologic Assessment (GA) and included obtained pertinent information on springs, streams, and Georgetown Salamander Critical Habitat Units (CHUs) as part of the assessment.

aci consulting verified that the entire site is contained within the Edwards Aquifer Recharge Zone (EARZ), based on the mapped boundaries. There were no springs or mapped salamander sites or known surface or subsurface CHUs within the subject area. Additionally, there are no mapped flowlines or waterbodies within the site, according to the National Hydrography Dataset (NHD), nor are there any mapped wetlands within the site according to the National Wetland Inventory (NWI). One mapped NHD flowline (West Fork Smith Branch) occurs approximately 0.05 miles to the west of the subject area. The nearest CHUs for the Georgetown Salamander occur approximately 3.4 miles to the north and west of the subject area, along the North and South Fork San Gabriel River.

As there are no springs or waterways located within the project area, there are no buffers or setback required as part of the Georgetown Water Quality Ordinance.

6.0 SUMMARY OF FINDINGS

This report documents the findings of a geologic assessment conducted by **aci consulting** personnel on February 9, 2023. Six features (manmade features in bedrock) were noted on the site. Comprehensive descriptions and recommendations for each feature can be found in **Attachment B**. Based on assessment of each feature, it was determined that there are zero sensitive karst features on the subject property. The remaining six features were man-made features in bedrock.

7.0 REFERENCES

Collins, E.W., 1997. *Geologic Map of the Georgetown Quadrangle, Texas*. Bureau of Economic Geology. Austin, Texas.

(SCS) Soil Conservation Survey. 1983. Soil Survey of Williamson County, Texas. United States Department of Agriculture. Texas Agriculture Experiment Station.

(TCEQ) Texas Commission on Environmental Quality. 2004. Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones. October 1, 2004. Austin, Texas.

(TCEQ) Texas Commission on Environmental Quality. 2005. "Edwards Aquifer Protection Program, Chapter 213 Rules - Recharge Zone, Transition Zone, Contributing Zone, and Contributing Zone within the Transition Zone." Map. Digital data. September 1, 2005. Austin, Texas.

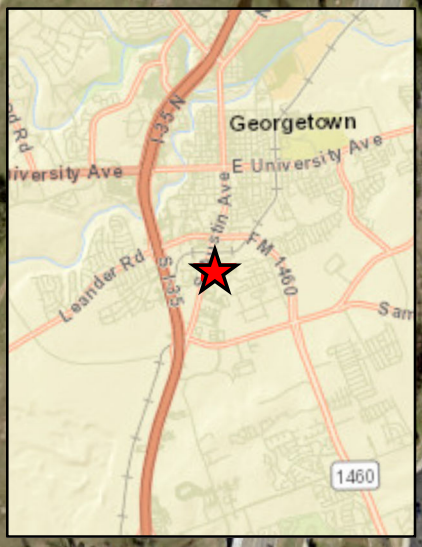
(TWDB) Texas Water Development Board. 2023. Water Data Interactive Groundwater Data Viewer. Accessed on February 9, 2023. Available at: http://www2.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer

(USDA NRCS) U.S. Department of Agriculture Natural Resources Conservation Service. 2023. WebSoilSurvey.com. Soil Survey Area: Williamson County, Texas. Date accessed: February 9, 2023.

ATTACHMENT A

Site Maps

P:\Project Folders\22-23-016 84 Lumber Expansion Geologic Assessment\gis\maps\Working_MC.mxd



This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.

N

200 100 0 200 Feet

1:2,400 1 inch = 200 feet

Subject Area

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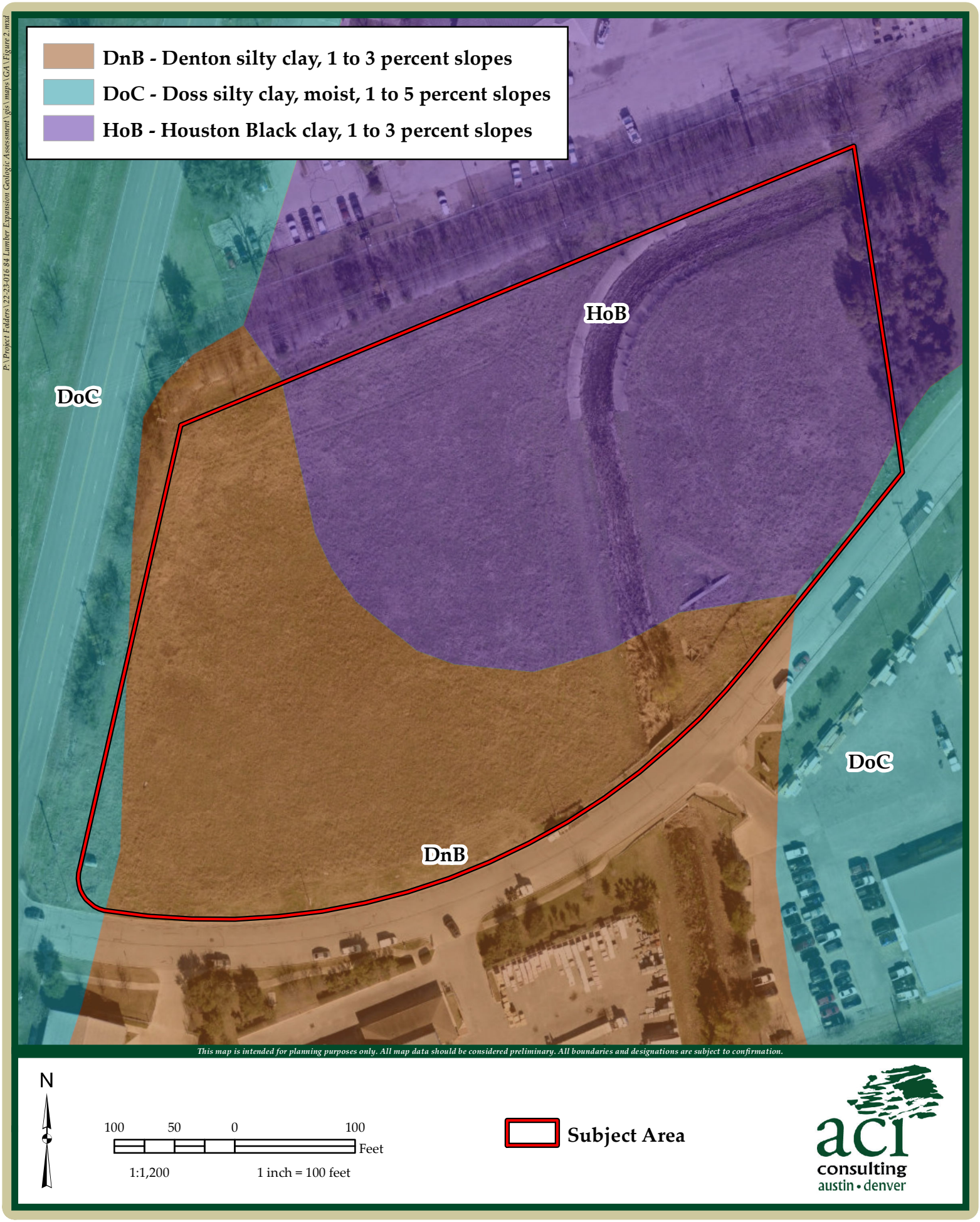
84 Lumber Expansion **aci Project No.: 22-23-016**

Figure 1: Site Location **February 2023**



84 Lumber Expansion

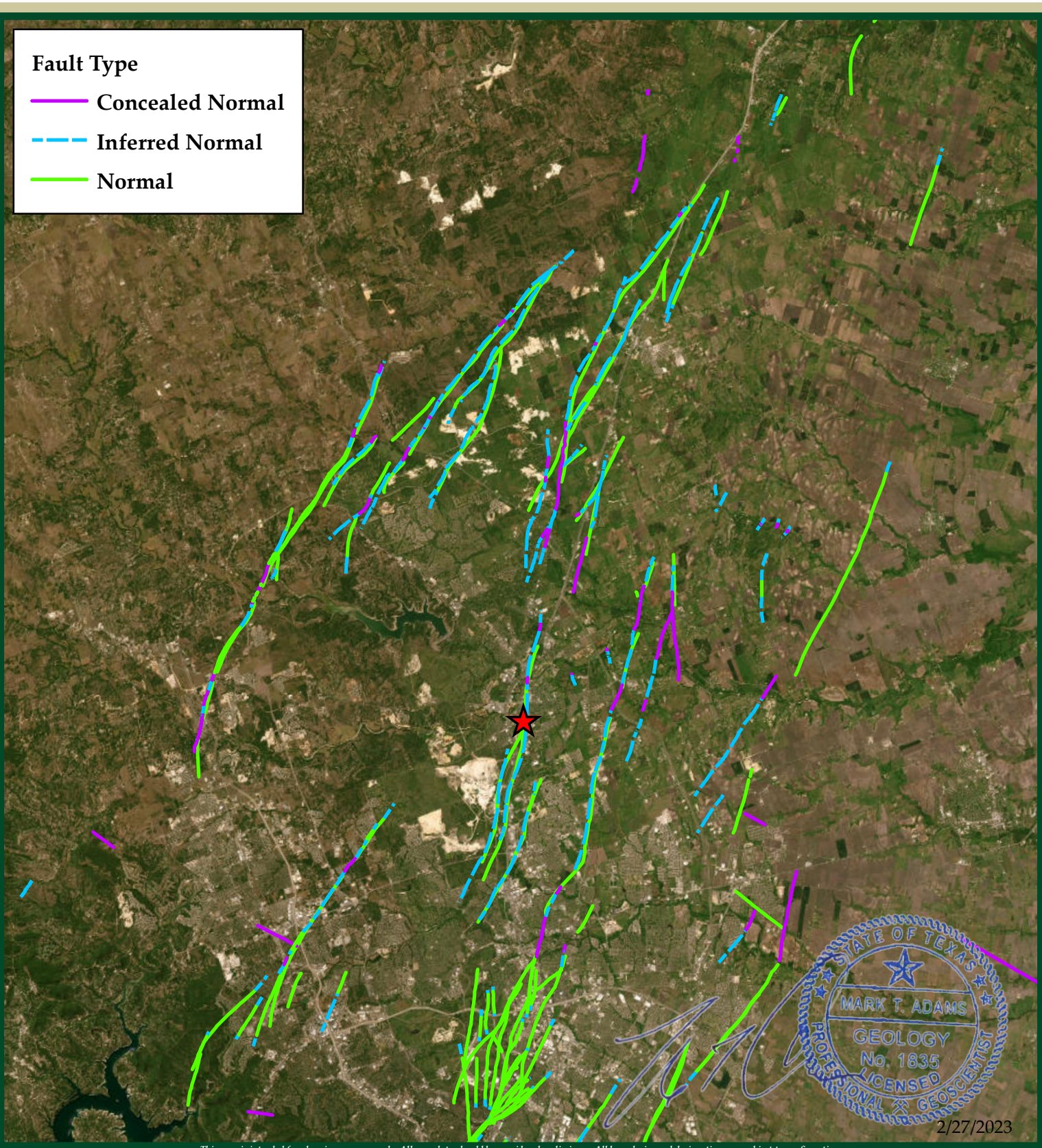
aci Project No.: 22-23-016

Figure 2: Soils

February 2023

84 Lumber Expansion **aci Project No.: 22-23-016**

Figure 3: Geology **February 2023**



P:\Project Folders\22-23-016 84 Lumber Expansion Geologic Assessment\gis\maps\GA\Figure 4.mxd

This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.

N

24,000 12,000 0 24,000 Feet

1:288,000 1 inch = 24,000 feet

Regional Fault Trend ~15°

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84 Lumber Expansion **aci Project No.: 22-23-016**

Figure 4: Regional Fault Trend **February 2023**

ATTACHMENT B

Geologic Table
Geologic and Manmade Feature Map (Figure 5)
Feature Descriptions and Recommendations

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: 84 Lumber Office/Warehouse Expansion

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
MB01	30.617642	-97.681387	MB	30	Ked	3	3	-	-	-	-	-	-	10	40		x	x		Hillside
MB02	30.617265	-97.679994	MB	30	Kgt	-	-	-	-	-	-	-	V	10	40		x		x	Drainage
MB03	30.618131	-97.67964	MB	30	Kgt	-	-	-	-	-	-	-	V	10	40		x		x	Drainage
MB04	30.617586	-97.681465	MB	30	Ked	-	-	-	-	-	-	-	-	10	40		x	x		Hillside
MB05	30.617633	-97.679477	MB	30	Kgt	-	-	-	-	-	-	-	-	10	40		x	x		Hillside
MB06	30.617554	-97.679526	MB	30	Kgt,Ked	-	-	-	-	-	-	-	-	10	40		x	x		Hillside

* DATUM: NAD 1983 State Plane 4203

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.
My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Date 2/27/2023

Sheet __1___ of __1____

STATE OF TEXAS
MARK T. ADAMS
GEOLOGY
No. 1835
LICENSED
PROFESSIONAL GEOSCIENTIST

TCEQ-0585-Table (Rev. 10-01-04)

P:\Project Folders\22-23-016 84 Lumber Expansion Geologic Assessment\GIS\mxds\GA1Figure 5.mxd

The entire subject area is within the Edwards Aquifer Recharge Zone.

There are no mapped flowlines (NHD), waterbodies (NHD), or wetlands (NWI) within the subject area.

This map is intended for planning purposes only. All map data should be considered preliminary. All boundaries and designations are subject to confirmation.

N

40 20 0 40 Feet

1:480 1 inch = 40 Feet

Manmade Feature in Bedrock

Fault

Ked - Edwards Limestone

Kgt - Georgetown Limestone

STATE OF TEXAS
MARK T. ADAMS
GEOLOGY
No. 1835
LICENSED
PROFESSIONAL GEOSCIENTIST

2/27/2023

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84 Lumber Office/Warehouse Expansion
Figure 5: Geologic Feature Map

aci Project No.: 22-23-016
February 2023

MB01

GPS: N. 30.617642 W. -97.681387

This feature is a manmade feature in bedrock (a wastewater line) with an apparent diameter of 3 feet extending below the surface for an unknown depth. The feature is located in the Edwards Limestone and is positioned on a hillside. Infill material is unknown. The feature has no trend, and a drainage area of less than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 30 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer.

Photo of MB01

MB02

GPS: N. 30.617265 W. -97.679994

This feature is a manmade feature in bedrock (a stormwater detention pond) with unknown dimensions. The feature is located in the Georgetown Limestone and is positioned on a drainage. Infill material is vegetation. The feature has no trend, and a drainage area of greater than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 30 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer.

Photo of MB02

MB03

GPS: N. 30.618131 W. -97.67964

This feature is a manmade feature in bedrock (a stormwater conveyance feature) with unknown dimensions. The feature is located in the Georgetown Limestone and is positioned on a drainage. Infill material is vegetation. The feature has no trend, and a drainage area of greater than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 30 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer.

Photo of MB03

MB04

GPS: N. 30.617586 W. -97.681465

This feature is a manmade feature in bedrock (a wastewater line) with unknown dimensions. The feature is located in the Edwards Limestone and is positioned on a hillside. Infill material is unknown. The feature has no trend, and a drainage area of less than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 30 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer.

Photo of MB04

MB05

GPS: N. 30.617633 W. -97.679477

This feature is a manmade feature in bedrock (electric utility features) with unknown dimensions. The feature is located in the Georgetown Limestone and is positioned on a hillside. Infill material is unknown. The feature has no trend, and a drainage area of less than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that this feature has an infiltration rate of 30 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer.

Photo of MB05

MB06

GPS: N. 30.617554 W. -97.679526

This feature is a manmade feature in bedrock (streetlight poles) with unknown dimensions. These features are located in the Georgetown Limestone, continue along the property boundary into the Edwards Limestone, and are positioned on a hillside. Infill material is unknown. The features have no trend, and a drainage area of less than 1.6 acres. In using Figure 1 in Instructions to Geologists, it was determined that these features has an infiltration rate of 30 points due to its status as a manmade feature in bedrock, in order to bring it to the attention of the project engineer.

Recommendation: This feature needs to be brought to the attention of the engineer.

Photo of MB06

ATTACHMENT C

Historic Aerial Photographs


S Austin Ave
Georgetown Area Engineer And...
Madison Oaks Ave
84 Lumber
Gulfeagle Supply Austin
S Austin Ave

1995

aci
consulting
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2002


S Austin Ave
Georgetown Area Engineer And...
Madison Oaks Ave
84 Lumber
Gulfeagle Supply Austin
S Austin Ave

2004

aci consulting
austin • denver

2006

aci consulting
austin • denver

2009

aci consulting
austin • denver

2012

aci consulting
austin • denver

2014

aci
consulting
austin • denver

2016

aci consulting
austin • denver

2018

aci consulting
austin • denver

2019

aci consulting
austin • denver

2021

aci
consulting
austin • denver

2022

aci consulting
austin • denver

2023

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), 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.

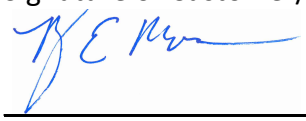
Signature

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 **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Bryan E. Moore, P.E.

Date: 02-27-2023

Signature of Customer/Agent:



Regulated Entity Name: 84 Lumber Office/Warehouse Expansion

Regulated Entity Information

1. The type of project is:

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

2. Total site acreage (size of property):6.034

3. Estimated projected population:N/A

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	39,375	÷ 43,560 =	0.904
Parking	6,000	÷ 43,560 =	0.138
Other paved surfaces	107,772	÷ 43,560 =	2.474
Total Impervious Cover	153,147	÷ 43,560 =	3.516

Total Impervious Cover 3.516 **÷ Total Acreage** 6.034 **X 100 =** 58.27**% Impervious Cover**

5. ☒ **Attachment A - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.

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

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. 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.

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

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.

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

10. 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.

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

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

12. ☐ 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

13. ☒ **Attachment B - 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 the 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

14. The character and volume of wastewater is shown below:

100% Domestic	208Gallons/day
_____% Industrial	_____Gallons/day
_____% Commingled	_____Gallons/day
TOTAL gallons/day _____	

15. Wastewater will be disposed of by:

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

- ☐ **Attachment C - 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):

- ☐ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.
- ☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

- ☐ The SCS was previously submitted on_____.
- ☐ The SCS was submitted with this application.
- ☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☒ The sewage collection system will convey the wastewater to the San Gabriel (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

16. ☒ All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

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

Site Plan Scale: 1" = 40".

18. 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): FIRM Panel 48491C0485E, Dated 09-20=2019

19. ☒ 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, open space, etc. are shown on the plan.

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

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

☐ There are _____ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

☐ The wells are not in use and have been properly abandoned.
☐ The wells are not in use and will be properly abandoned.
☐ The wells are in use and comply with 16 TAC §76.

☒ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

☒ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☐ No sensitive geologic or manmade features were identified in the Geologic Assessment.
☐ **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.
23. ☒ Areas of soil disturbance and areas which will not be disturbed.
24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
25. ☒ Locations where soil stabilization practices are expected to occur.
26. ☐ Surface waters (including wetlands).

    ☒ N/A
27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.

    ☒ There will be no discharges to surface water or sensitive features.
28. ☒ Legal boundaries of the site are shown.

Administrative Information

29. ☒ 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.
30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Attachment A – Factors Affecting Water Quality

The following factors have the potential to adversely affect water quality at the site:

- Disturbance of vegetated areas
- Leaking oil from parked vehicles
- Malfunctioning septic system/onsite spill
- Loss of vegetative ground cover due to inadequate watering or mismanagement
- Oil/grease pollutants from normal use of roads
- Accidental or improper discharge of cleaning solvents, detergents, paints, paint solvents, acids, concrete, concrete additives, petroleum based products, pesticides, and fertilizers

Attachment B – Quality and Character of Storm Water

The storm water generated by this project is typical of commercial-type development. The storm water runoff flows across pavement into a swale that conveys the runoff towards the proposed batch detention permanent BMP. A splitter box diverts runoff into a detention pond once the desired water quality volume is captured.

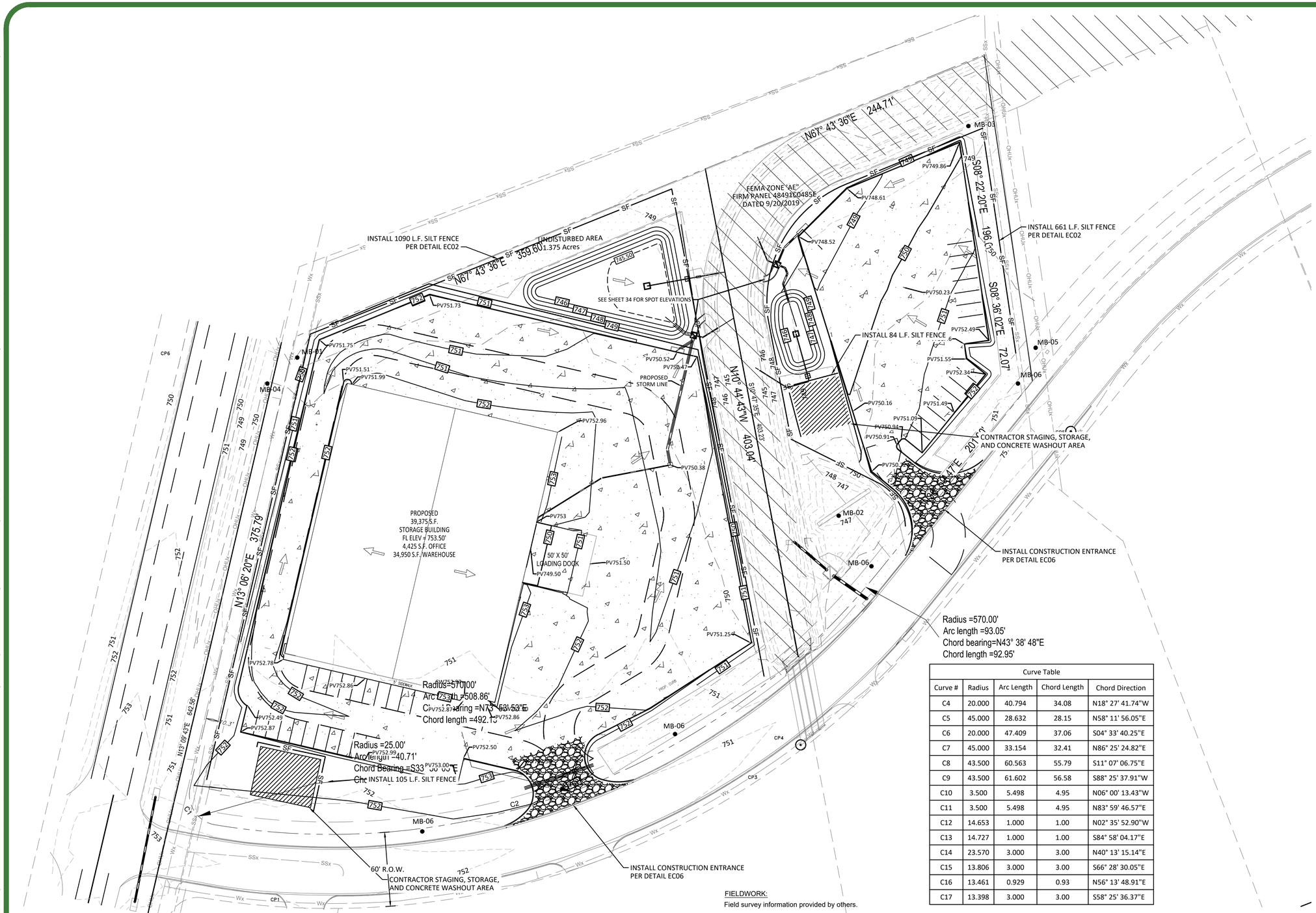
The Soil Conservation Service Methodology was used to calculate the storm water's volume. HEC-HMS files were created with the appropriate control records to analyze existing and developed runoff flow rates.

Existing conditions are undeveloped with grass coverage over 75% of site. Developed conditions add an additional 3.515 acres of concrete pavement to the site for a total of 6.034 acres, or 58% impervious cover. The table below shows the existing and developed runoff calculations for various storms.

Runoff Calculations:

DEVELOPED RUNOFF SUMMARY							
DRAINAGE AREA	**ACRES (S. Mi.)**	**TLag (Min.)**	**RCN**	**2 YEAR**	**10 YEAR**	**25 YEAR**	**100 YEAR**
PR-1	0.0065953	10.94	92.0	15.3	22.1	26.3	32.4
PR-2	0.0028328	7.31	86.0	6.7	10.4	12.8	15.7
PT. OF ANALYSIS	-	-	-	22.0	32.5	39.1	48.1

EXISTING RUNOFF SUMMARY							
DRAINAGE AREA	**ACRES (S. Mi.)**	**TLag (Min.)**	**RCN**	**2 YEAR**	**10 YEAR**	**25 YEAR**	**100 YEAR**
EX-1	0.0065953	12.38	80.0	6.4	13.5	17.5	24.0
EX-2	0.0028328	9.10	80.0	3.1	6.5	8.4	11.5
PT. OF ANALYSIS	-	-	-	9.5	20.0	25.9	35.5



LEGEND

- STORM MANHOLE
- STORM JUNCTION BOX
- WASTEWATER MANHOLE
- CURB INLET
- PAVEMENT
- PVXXX.XX — PROPOSED PAVEMENT ELEVATION
- SWXXX.XX — PROPOSED SIDEWALK ELEVATION
- PROPERTY LINE
- LIMIT OF CONSTRUCTION
- 750 — EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- OHUx — EX. OVERHEAD UTILITY
- Wx — EX. WATER LINE
- SSx — EX. WASTEWATER LINE
- EX. STREET LIGHT
- FEMA ZONE 'AE' AS SHOWN ON FIRM PANEL 48491C0485E DATED 9-20-2019
- UNDISTURBED AREA

LEGEND

- EDGE OF PAVEMENT
- LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- PROPOSED CONTOURS (MAJOR)
- PROPOSED CONTOUR (MINOR)

Curve Table				
Curve #	Radius	Arc Length	Chord Length	Chord Direction
C4	20.000	40.794	34.08	N18° 27' 41.74"W
C5	45.000	28.632	28.15	N58° 11' 56.05"E
C6	20.000	47.409	37.06	S04° 33' 40.25"E
C7	45.000	33.154	32.41	N86° 25' 24.82"E
C8	43.500	60.563	55.79	S11° 07' 06.75"E
C9	43.500	61.602	56.58	S88° 25' 37.91"W
C10	3.500	5.498	4.95	N06° 00' 13.43"W
C11	3.500	5.498	4.95	N83° 59' 46.57"E
C12	14.653	1.000	1.00	N02° 35' 52.90"W
C13	14.727	1.000	1.00	S84° 58' 04.17"E
C14	23.570	3.000	3.00	N40° 13' 15.14"E
C15	13.806	3.000	3.00	S66° 28' 30.05"E
C16	13.461	0.929	0.93	N56° 13' 48.91"E
C17	13.398	3.000	3.00	S58° 25' 36.37"E

FIELDWORK:
Field survey information provided by others.

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

FOR REVIEW.

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF BRYAN E. MOORE, P.E. #98920 ON 2/28/23. IT IS NOT TO BE USED FOR BIDDING, PERMIT OR CONSTRUCTION.

STEGER BIZZELL
ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

TCEQ SITE PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-___-SDP

Project No: 22914

SHEET 1 of 41

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\TCEQ SITE PLAN.dwg By: Kevin Mercer Date: 2/28/2023 1:20 PM

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

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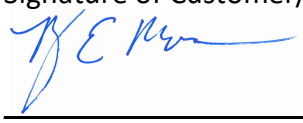
Print Name of Customer/Agent: Bryan E. Moore, P.E.

Date: 02-27-2023

Signature of Customer/Agent:



Regulated Entity Name: 84 Lumber Office/Warehouse Expansion

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

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

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

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

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

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

Sequence of Construction

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

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

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

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

Temporary Best Management Practices (TBMPs)

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

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

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

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

☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

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

   ☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

   ☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

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

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

   ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

   ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

   ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

   ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

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

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

☒ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

Attachment A – Spill Response Actions

Because fuels and hazardous substances will be provided by an off-site facility, no on-site containment procedures are provided for in this WPAP.

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees. The following steps will help reduce the storm water impacts of leaks and spills:

Education

1. Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.
2. Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
3. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
4. Establish a continuing education program to indoctrinate new employees.
5. Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

1. To the extent that the work can be accomplished safely, spills of oil, petroleum products, and substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
2. Store hazardous materials and wastes in covered containers and protect from vandalism.
3. Place a stockpile of spill cleanup materials where it will be readily accessible.
4. Train employees in spill prevention and cleanup.
5. Designate responsible individuals to oversee and enforce control measures.
6. Spills should be covered and protected from stormwater run-on during rainfall to the extent that it doesn't compromise clean-up activities.
7. Do not bury or wash spills with water.
8. Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

9. Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
10. Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
11. Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
12. Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

1. Clean up leaks and spills immediately.
2. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
3. Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
2. Use absorbent materials on small spills rather than hosing down or burying the spill.
3. Absorbent materials should be promptly removed and disposed of properly.
4. Follow the practice below for a minor spill:
5. Contain the spread of the spill.
6. Recover spilled materials.
7. Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately:

1. Contain spread of the spill.
2. Notify the project foreman immediately.

3. If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
4. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
5. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

1. Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
3. Notification should first be made by telephone and followed up with a written report.
4. The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
5. Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tceq.texas.gov/response/

Vehicle and Equipment Maintenance

1. If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runoff of storm water and the runoff of spills.
2. Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
3. Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
4. Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
5. Place drip pans or absorbent materials under paving equipment when not in use.

6. Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
7. Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
8. Oil filters disposed of in trashcans or dumpsters can leak oil and pollute storm water. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
9. Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

1. If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
2. Discourage "topping off" of fuel tanks.
3. Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

If a spill should occur, the person responsible for the spill should contact the TCEQ at (512) 339-2929 or call 911. Soil contaminated by spills that occur on-site will be removed and disposed at an approved disposal site.

Attachment B – Potential Sources of Contamination

- Hydraulic and diesel
- Portable toilet systems (sanitary waste)
- Trash from construction workers
- Paints, paint solvents, glues, concrete and other building materials
- Plant fertilizers and pesticides
- Inadequate maintenance of temporary water pollution abatement measures
- Stock piles or spoils of materials

Attachment C – Sequence of Major Activities

The following sequence of activities is suggested. The actual sequence may vary slightly depending on the contractor or weather conditions.

1. Construction activities will commence with the installation of the required silt fences, rock berms, and temporary tree protection fencing.
2. Areas of vegetative cover will be cleared for the proposed storage area, batch detention basin, and detention pond. Spoils of this material may be placed at a location on the project site as directed by the contractor and approved by the engineer. These spoils and any other loose granular material will be enclosed by a silt fence. The area disturbed by construction is 7.96 acres, representing 42% of the project site.
3. Grading on the site will consist of the placement and compaction of road base material or select fill material under and/or around the proposed building and pavement areas. The portion of the site that is subject to grading is approximately 3.5 acres.
4. The clay liner under the batch detention basin area will be installed.
5. Grading will be followed by installation of underground electric and lighting poles as required.
6. The pavement area concrete will be poured at finished grade.
7. After the building has been installed, fine grading around the site will be completed.
8. The wooden screen fence, masonry screen wall, and the security chain link fence will then be installed.
9. Disturbed areas will be hydromulched or seeded.

Attachment D – Temporary Best Management Practices and Measures

The following sequence of activities is suggested. The actual sequence may vary slightly depending on the contractor or weather conditions.

1. Construction activities will commence with the installation of the required silt fences and rock berms. **Silt fences, rock berms, and a stabilized construction entrance are the control measures.**
2. Areas of vegetative cover will be cleared for the proposed storage area, batch detention basin, and detention pond. Spoils of this material may be placed at a location on the project site as directed by the contractor and approved by the engineer. These spoils and any other loose granular material will be enclosed by a silt fence. The area disturbed by construction is 3.5 acres, representing 58% of the project site. **Silt fences, rock berms, and a stabilized construction entrance are the control measures.**
3. Grading on the site will consist of the placement and compaction of road base material or select fill material under and/or around the proposed building and pavement area. The portion of the site that is subject to grading is approximately 3.5 acres. **Silt fences, rock berms, and a stabilized construction entrance are the control measures.**
4. The clay liner under the batch detention basin area will be installed. **Silt fences, rock berms, and a stabilized construction entrance are the control measures.**
5. Grading will be followed by installation of underground electric and lighting poles as required. **Silt fences, rock berms, and a stabilized construction entrance are the control measures.**
6. The pavement concrete will be poured at finished grade. **Silt fences, rock berms, and a stabilized construction entrance are the control measures.**
7. After the building has been installed, fine grading around the site will be completed. **Silt fences, rock berms, and a stabilized construction entrance are the control measures.**
8. The wooden screen fence, masonry screen wall, and the security chain link fence will then be installed. **Silt fences, rock berms, and a stabilized construction entrance are the control measures.**
9. Disturbed areas will be hydromulched or seeded. **Silt fences, rock berms, and a stabilized construction entrance are the control measures.**

Most surface runoff originating upgradient or on site will be contained within the proposed silt fence. The silt fence will trap most pollutants and prevent them from entering off-site surface streams, sensitive features or the aquifer.

Attachment F – Structural Practices

No structural practices will be utilized to divert flows away from exposed soils or to store flows. Silt fence will be used to limit the runoff discharge of sediments from exposed areas on the site.

Attachment G – Drainage Area Map

Please see Sheets 25 and 27, “Existing Drainage Map” and “Developed Drainage Map,” from the “Site Plan” attachment in the “Water Pollution Abatement Plan Application” section.

The maximum common drainage area is 6.034 acres; however, only 4.65 acres of this area will be disturbed. No area greater than 10 acres will be disturbed at one time.

Attachment I – Inspection and Maintenance for BMPs

Silt Fence

1. Inspect all fences weekly and after any rainfall.
2. Remove sediment when buildup reaches 6 inches, or install a second line of fencing parallel to the old fence.
3. Replace any torn fabric or install a second line of fencing parallel to the torn section.
4. Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.

Stabilized Construction Entrance

1. Inspection should be made weekly or after each rainfall event and repair or replacement should be made promptly as needed by the contractor.
2. All sediment spilled, dropped, washed or tracked on to public rights-of-way should be removed immediately by contractor.
3. All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Rock Berm

1. Inspection should be made weekly and after each rainfall event.
2. Remove sediment when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause additional siltation.
3. Repair loose wire sheathing and reshape as needed during inspection
4. Replace when the berm's structure ceases to function as intended due to silt accumulation among the rocks, washout, damage, etc.
5. The berm should remain in place until all upstream areas are stabilized and accumulated silt has been removed.

The following sample form should be utilized to document the inspection and maintenance of the proposed temporary BMPs as described above. This form shall be kept on site with the WPAP until the project is completed.

Temporary BMP Log

Date	Date of Last Inspection	Inspection Performed By	Title	Company	Status of BMP(s)	Corrective Action Required (if any)	Date Corrective Action Completed

Responsible Party: 84 Lumber Company
Mailing Address: 1019 Route 519
City, State: Eighty Four, PA
Zip Code: 15330
Telephone: (724) 228-3636

Jim Zaunick
Signature of Responsible Party

3-6-23
Date

Attachment J – Schedule of Interim and Permanent Soil Stabilization Practices

Vehicular traffic should be limited to areas of the project site where construction will take place or where existing driveway and parking are provided. The contractor should endeavor to preserve existing vegetation as much as practicable to reduce erosion and lower the cost associated with stabilization. **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.**

All disturbed areas shall be stabilized as described below:

Except as provided for below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

A. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover or frozen ground conditions, stabilization measures shall be initiated as soon as practicable.
B. Where construction activity on a portion of the site has temporarily ceased, and earth-disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of the site.
C. In areas experiencing drought, where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

Stabilization measures are described as follows:

All disturbed grass areas should be planted in drought resistant species normally grown as permanent lawns, such as Zoysia, Bermuda, and Buffalo. Grass areas may be sodded, plugged, sprigged or seeded except that solid sod shall be used in swales or other areas subject to erosion. All planted areas shall be provided with a readily available water supply and watered as necessary to ensure continuous healthy growth and development. Maintenance shall include the replacement of all dead plant material if that material was used to meet the requirements of this section.

Permanent 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)(C), (D)(Ii), (E), and (5), 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.

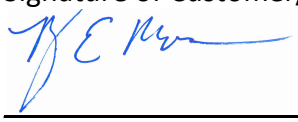
Signature

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 **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Bryan E. Moore, P.E.

Date: 02-27-2023

Signature of Customer/Agent



Regulated Entity Name: 84 Lumber Office/Warehouse Expansion

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

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

   ☐ N/A

2. ☒ 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

3. ☒ 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

4. 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.

5. 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 A - 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.

6. ☒ **Attachment B - 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.

7. ☒ **Attachment C - 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.

8. ☒ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☐ N/A

9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☐ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☒ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☒ Design calculations (TSS removal calculations)

☒ TCEQ construction notes

☒ All geologic features

☒ All proposed structural BMP(s) plans and specifications

☐ N/A

11. ☒ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

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

    ☐ N/A

12. ☐ **Attachment H - 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

13. ☐ **Attachment I -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 results in water quality degradation.

    ☒ N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. ☒ 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.

    ☐ N/A

15. ☐ 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.

    ☒ N/A

Attachment B – BMPs for Upgradient Stormwater

Upgradient off site storm water is intercepted by Madison Oaks Avenue and directed to water quality basin prior to exiting the site. This basin is located at the common south corner of lots 1 and 2. Any storm water that does flow across developed areas have been included in the drainage area and will be treated by the batch detention facility.

Attachment C – BMPs for On-site Storm water

Batch detention, as described in the Addendum to TCEQ's "Complying with the Edwards Rules: Technical Guidance Manual on Best Management Practices" in Section 3.2.17, will be utilized as the permanent BMP for this development. The capture volume for the treatment basin was calculated using the method described in Section 3.3 of the above referenced manual. The spreadsheet (v. 4-20-2009) provided by the TCEQ was used to determine the required capture volumes.

A batch detention basin will be used to remove the Total Suspended Solids (TSS) load. Batch detention have a TSS removal efficiency of 91% according to the above referenced manual. The basin has been sized for an 80% TSS removal rate for the existing site and an 85% TSS removal rate for the proposed project, which requires 5% additional TSS removal based on the City of Georgetown Salamander Ordinance.

The site will be graded so that runoff from impervious cover sources will be directed toward a splitter box connected to the batch detention basin for each lot. After the capture volume is collected in the batch detention basin and held for the required 12 hour detention time, a programmed controller will open a valve and allow the treated runoff to flow into the existing concrete lined channel.

Calculations to determine the pollutant load and sizing of the BMP are in Attachment F.

Attachment D – BMPs for Surface Streams

There are no additional BMPs for minimizing pollutants from entering surface streams due to the distance from the site to any surface streams.

Attachment F – Construction Plans

PROJECT NAME: 84 LUMBER OFFICE WAREHOUSE EXPANSION

SITE ADDRESS: 103 & 107 Madison Oaks Ave.
Georgetown. TX 78628

PROJECT DESIGN SCALE: 1" = 40'

OWNER: 84 Lumber
1019 Route 519
Eighty Four, Pa. 15330
(724) 228-3636

Applicant/Agent: Bryan E. Moore, P.E.
Steger Bizzell
1978 South Austin Ave.
Georgetown, TX 78626
(512) 930-9412

ENGINEER/SURVEYOR: Bryan E. Moore, P.E.
Steger Bizzell
1978 S. Austin Ave.
Georgetown, TX 78626
(512) 930-9412

ARCHITECT: 84 Lumber Company
Same as owner above

LANDSCAPE ARCHITECT: Ben DeBellis, PLA, ASLA
SEC Planning, LLC
4201 W. Parmer Ln. Suite A220
Austin, TX 78727

ORIGINAL DATE: February 21, 2023
REVISION DATE: XXXXXXXXXXXX
LATEST REVISION DATE:

LEGAL DESCRIPTION: Lots 1and 2 (6.034 ac), Block A, Amended Final Plat Madison Oaks Phase One, plat recorded in Williamson County Clerk's Office on March 29, 2004 in Cabinet Y, Slide 272 & 273 (Document No. 2004023453)

LIMITS OF CONSTRUCTION: 6.034 acres

TRAFFIC COUNTS: Average Daily Trips = xxx
Peak Hour Trips = xxxx

DRAINAGE: Stormwater will be directed to and thru an on-site Water Quality facility.

UTILITIES: Water - City of Georgetown, 512-930-3555
Wastewater - City of Georgetown, 512-930-3555
Electric - City of Georgetown, 512-930-3533

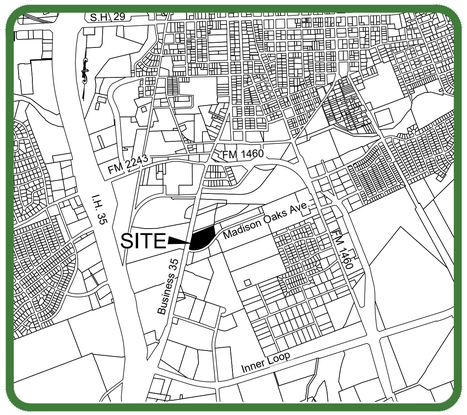
TOTAL IMPERVIOUS COVER: XXXX Acres

ZONING DISTRICT: IN Industrial (Lots 1 and 2)
PROPOSED USE: Office Warehouse (Lot 1) and Off-street Parking (Lot 2)
BENCHMARKS: TBM: Square Cut in North Curb Along Madison Oak.
TBM is Located Across The Street
From Existing 84 Lumber Most Easterly Driveway.
Elev. 748.85 NAVD 88

General Notes:

1. It is the responsibility of the property owner, and successors to the current property owner, to ensure the subject property and any improvements are maintained in conformance with this Site Development Plan.
2. This development shall comply with all standards of the Unified Development Code (UDC), the City of Georgetown Construction Standards and Specifications Manual, the Development Manual and all other applicable City standards.
3. This Site Development Plan shall meet the UDC Stormwater requirements.
4. All signage requires a separate application and approval from the Inspection Services Department. No signage is approved with the Site Development Plan.
5. Sidewalks shall be provided in accordance with the UDC.
6. Driveways will require approval by the Development Engineer of the City of Georgetown.
7. Outdoor lighting shall comply with Section 7.04 of the UDC.
8. Screening of mechanical equipment, dumpsters and parking shall comply with Chapter 8 of the UDC. The screening is shown on the Landscape and Architectural Plans, as applicable.
9. The companion Landscape Plan has been designed and plant materials shall be installed to meet all requirements of the UDC.
10. All maintenance of required landscape shall comply with the maintenance standards of Chapter 8 of the UDC.
11. A separate Irrigation Plan shall be required at the time of building permit application.
12. Fire flow requirements of 1500 gallons per minute are being met by this plan.
13. Any Heritage Tree noted on this Site Development Plan is subject, in perpetuity, to the maintenance, care, pruning and removal requirements of the Unified Development Code.
14. The construction portion of these plans were prepared, sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the construction plans for construction of the proposed project are hereby approved subject to the Standard Construction Specifications and Details Manual and all other applicable City, State and Federal Requirements and Codes.
15. This project is subject to all City Standard Construction Specifications and Details in effect at the time of submittal of the project to the City.
16. Where no existing overhead infrastructure exists, underground electric utility lines shall be located along the street and within the site. Where existing overhead infrastructure is to be relocated, it shall be re-installed underground and the existing facilities shall be removed at the discretion of the Development Engineer.
17. All electric and communication infrastructure shall comply with UDC Section 13.06.
18. Screening and location of outdoor storage shall comply with Section 5.09 of the UDC.
19. The property subject to this application is subject to the Water Quality regulations of the City of Georgetown.
20. A Geological Assessment, in accordance with the City of Georgetown Water Quality Regulations, was completed on February 20, 2023. Any springs and streams as identified in the Geological Assessment are shown herein.

SITE PLANS
FOR
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 Madison Oaks Ave.
SITE IMPROVEMENTS
CITY OF GEORGETOWN
WILLIAMSON COUNTY, TEXAS



Location Map
1" = 2000'

NOTE:

1. These construction plans were prepared, sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore based on the engineer's concurrence of compliance, the construction plans for construction of the proposed project are hereby approved subject to the Standard Construction Specifications and Details Manual and all other applicable City, State and Federal Requirements and Codes.
2. This project is subject to all City Standard Specifications and Details in effect at the time of submittal of the project to the City.
3. All bearings and coordinates are referenced to the Texas Coordinate System, Central Zone. NAD 83 horizontal control datum and NAVD 88 vertical control datum. Coordinates are based on a temporary benchmark by others NAD 83 N=10198594.3150, E=3131754.8320, NAVD 88 Elevation = 748.85.
4. Distances shown hereon are grid values represented in u.s. survey feet.
5. Drawing is in Grid. Grid to Surface Scale Factor is 1.00013.

Submitted By:

_____
Bryan E. Moore, P.E. Date

Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	FINAL PLAT (1 of 2)
3	FINAL PLAT (2 of 2)
4	DIMENSIONAL SITE PLAN
5	ARCHITECTURAL FOUNDATION
6	ARCHITECTURAL FLOOR PLAN
7	ARCHITECTURAL ELEVATIONS
8	LIGHTING PLAN
9	PHOTOMETRIC PLAN
10	LANDSCAPE PLANS - LN-1.0 CONSTRUCTION NOTES
11	LANDSCAPE PLANS - LPN-1.0 PLANTING NOTES
12	LANDSCAPE PLANS -LP-1.0 PLANTING PLAN
13	LANDSCAPE PLANS - LP-2.0 PLANTING PLAN
14	LANDSCAPE PLANS - LPD-1.0 PLANTING DETAILS
15	TREE PRESERVATION PLAN & LIST
16	UTILITY PLAN
17	WASTEWATER PLAN & PROFILE
18	WASTEWATER DETAILS
19	WATER DETAILS - (1 OF 2)
20	WATER DETAILS (2 OF 2)
21	GRADING PLAN
22	GENERAL NOTES
23	PAVING & STRIPING PLAN
24	SITE DETAILS
25	EXISTING DRAINAGE AREA MAP
26	EXISTING DRAINAGE CALCULATIONS
27	PROPOSED DRAINAGE AREA MAP
28	PROPOSED DRAINAGE CALCULATIONS
29	STORM PLAN
30	STORM DETAILS
31	EROSION & SEDIMENTATION CONTROL PLAN
32	EROSION & SEDIMENTATION CONTROL DETAILS
33	TCEQ CALCULATIONS
34	BATCH DETENTION POND PLAN
35	BATCH DETENTION POND SECTIONS & DETAILS
36	ELECTRIC SERVICE SITE PLAN
37	ELECTRIC SERVICE GENERAL & INSTALL NOTES
38	ELECTRIC SERVICE DETAILS
39	TRAFFIC CONTROL PLAN
40	UNDERGROUND FIRE LINE PLAN
41	UNDERGROUND FIRE LINE DETAILS

BEFORE YOU DIG Texas811.com

NOTE:
CONTRACTOR IS TO FURNISH A SET OF CONSTRUCTION PLANS BACK TO THE ENGINEER AT THE END OF THE PROJECT WITH ALL DEVIATIONS NOTED IN RED INK ON THE PLAN SHEETS. CONTRACTOR SHALL NOT RECEIVE FINAL PAYMENT UNTIL COMPLETE "AS-BUILT" SET IS RETURNED TO ENGINEER.

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS · BRYAN ERIC MOORE · 98920 · LICENSED PROFESSIONAL ENGINEER · 03/22/2023

F-181

STEGER BIZZELL

ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

COVER SHEET
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 1 of 41

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\1-COVER SHEET.dwg By: Ted Haynie Date: 3/23/2023 3:32 PM

Cabinet Y Slide 272 Doc. #2004023453

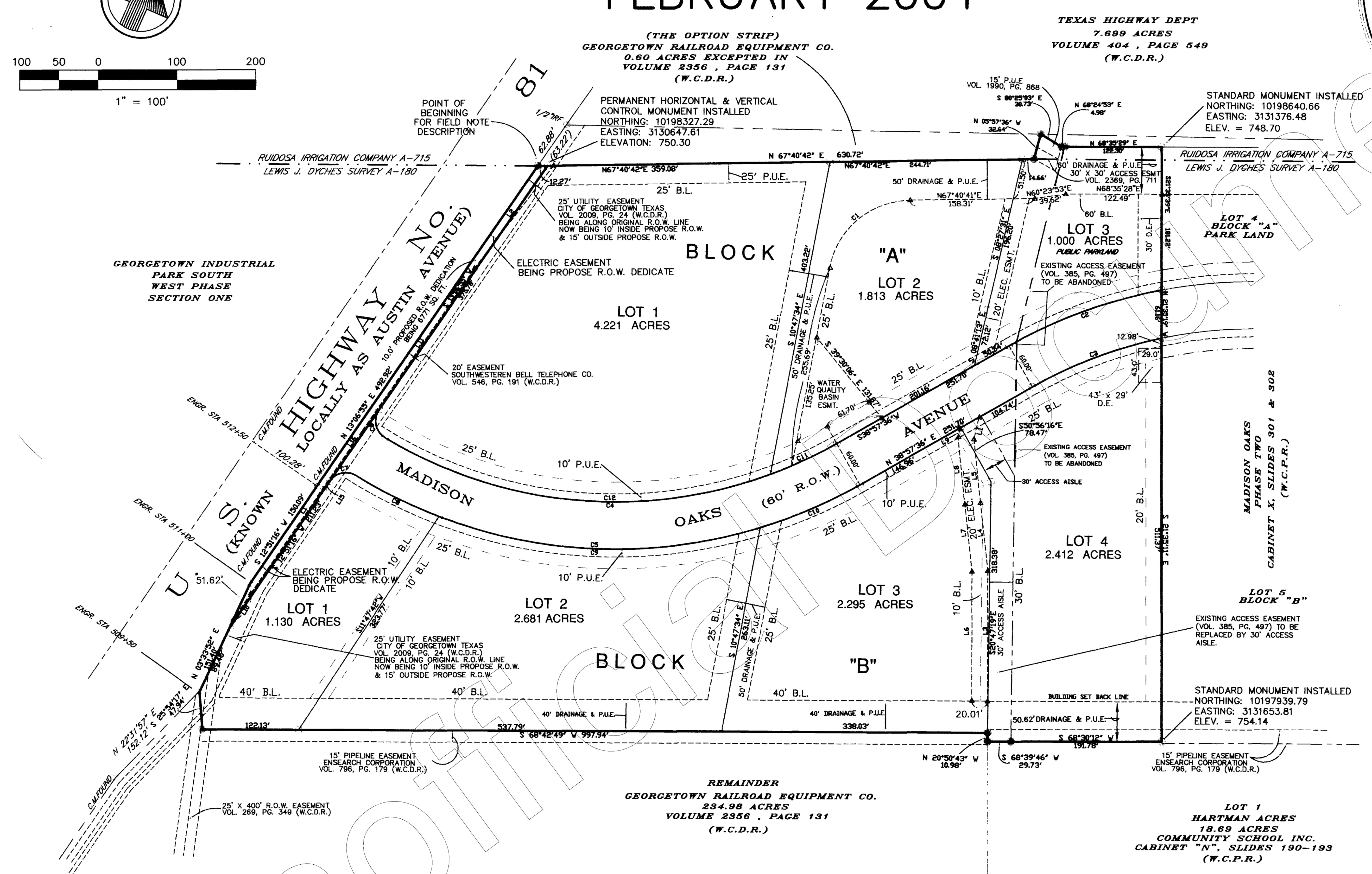
AMENDED FINAL PLAT
MADISON OAKS
PHASE ONE
IN THE CITY OF GEORGETOWN, WILLIAMSON COUNTY, TEXAS
FEBRUARY 2004

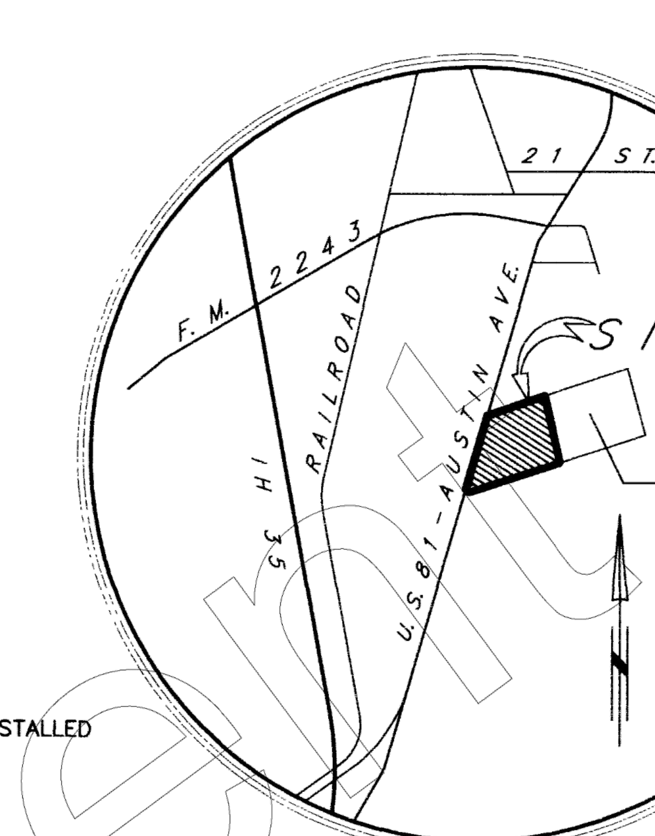
Vacation of Block B Lot 4

LEGEND

- ● PIN FOUND
- ○ PIN SET
- ( ) INDICATES RECORD INFO
- △ EASEMENT POINT
- (W.C.D.R.) WILLIAMSON COUNTY DEED RECORD

100 50 0 100 200
1" = 100'





VICINITY MAP

NOTES

THE CITY OF GEORGETOWN, WILLIAMSON COUNTY, TEXAS.

1. TOTAL ACREAGE: 17.235 ACRES
2. NUMBER OF LOTS: 7
3. NUMBER OF BLOCKS: 2
4. EXISTING ZONING: INDUSTRIAL
   LOT 1-BLOCK 'A' & LOT 2-BLOCK 'A': INDUSTRIAL (I)
   LOT 1-BLOCK 'B' & LOT 2-BLOCK 'B': INDUSTRIAL (I)
   LOT 3-BLOCK 'A': AGRICULTURAL DISTRICT (A)
   LOT 3-BLOCK 'B': INDUSTRIAL (I)
   LOT 4-BLOCK 'B': LOCAL COMMERCIAL (C1)
5. PROPOSED USE: INDUSTRIAL, COMMERICAL & PARKLAND
6. PROPOSED DENSITY: INTENSITY LEVEL 6
7. MAX. IMPERVIOUS COVER COMMERCIAL LOTS 70%, MAX. BLDG. COVERAGE 20% MAX. IMPERVIOUS COVER INDUSTRIAL LOTS 85%. MAX. BLDG. COVERAGE 50%
8. DETENTION WILL BE PROVIDED FOR THE PROPOSED LOTS. A DETAILED DRAINAGE PLAN FOR THE PROPOSED SITE DEVELOPMENT SHALL BE SUBMITTED PRIOR TO DEVELOPMENT.
9. THIS TRACT IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE. A WATER POLLUTION ABATEMENT PLAN (WPAP) MUST BE APPROVED FOR THIS SUBDIVISION BY THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION.
10. ELECTRIC, WATER AND WASTEWATER SERVICE WILL BE PROVIDED BY THE CITY OF GEORGETOWN, TEXAS. AND EASEMENT FOR THE ELECTRIC SERVICE WILL BE PROVIDED WHEN THE LINE EXTENSION ROUTE IS DETERMINED.
11. NATURAL GAS FOR THE PROPOSED SUBDIVISION WILL BE SUPPLIED BY LONE STAR GAS AT A LATER DATE. AN EASEMENT MAY BE REQUIRED WHEN THE GASLINE EXTENSION ROUTE IS DETERMINED.
12. SIDEWALK NOTE: SIX (6) FOOT SIDEWALK WILL BE PROVIDED ALONG U. S. 81 (AUSTIN AVENUE), ALONG THE NORTH SIDE OF MADISON OAKS AVENUE & ON BOTH SIDES OF THE STREET WITHIN 1000' OF PARK LAND.
13. THE PROVISIONS OF THE CENTURY PLAN – DEVELOPMENT PLAN SHALL ALSO GOVERN THIS PROJECT. THE EXISTING CENTURY PLAN INTENSITY LEVEL ASSIGNMENT FOR THIS SITE IS SIX (6). THE "CONCEPT PLAN" INTENSITY LEVEL FOR THIS SITE IS 5.34.
14. DEVELOPMENT OF MINI-WAREHOUSES AND OUTSIDE STORAGE WILL NOT BE PERMITTED ON BLOCK A, LOT 1, AND BLOCK B, LOT 1.
15. ANY AREAS REFLECTED ON THIS PLAT AS A WATER QUALITY BASIN EASEMENT SHALL BE MAINTAINED BY THE PERSON, FIRM OR CORPORATION REQUESTING APPROVAL OF THIS PLAT, THEIR SUCCESSORS, ASSIGNS, HEIRS, AND LEGAL REPRESENTATIVES.
16. ACCESS TO LOT 1, BLOCK "A" AND LOT 1, BLOCK "B" SHALL BE LIMITED TO MADISON OAKS AVENUE ONLY
17. THIS DEVELOPMENT IS TO BE COMPATIBLE WITH THE FIRE FLOW (1500 GPM MAXIMUM) REQUIREMENTS.
18. PARKLAND DEDICATION REQUIREMENTS ARE BEING MET BY THE DEDICATION OF 1.0 ACRE, BLOCK A, LOT 3 IN PHASE ONE AND 4.274 ACRES, BLOCK A, LOT 4 IN PHASE TWO.

LINE TABLE

NUMBER	DIRECTION	DISTANCE
L1	N 12°55'37" E	250.17'
L2	S 15°58'36" W	164.12'
L3	S 21°27'47" E	165.43'
L4	N 27°47'09" W	86.70'
L5	N 27°18'16" W	81.51'
L6	N 21°27'47" W	164.26'
L7	N 27°47'09" W	85.68'
L8	S 27°18'16" E	84.87'
L9	S 08°41'14" E	12.84'
L10	S 12°20'04" W	40.53'
L15	N 13°06'56" E	14.03'
L16	N 13°06'54" E	110.19'

CURVE TABLE

NUMBER	DELTA ANGLE	TANGENT	ARC LENGTH	CHORD LENGTH	CHORD BEARING.	RADIUS
C1	78°28'16"	85.74	143.81	132.83	S 28°26'33" W	105.00
C2	18°50'08"	104.50	207.11	206.18	S 48°22'40" W	630.00
C3	17°42'10"	88.76	176.11	175.41	S 47°48'41" W	570.00
C4	60°29'32"	332.36	601.80	574.24	N 69°12'22" E	570.00
C5	61°06'29"	371.90	671.92	640.52	N 69°30'51" E	630.00
C6	93°39'46"	26.65	40.87	36.47	S 33°42'58" E	25.00
C7	86°57'11"	23.70	37.94	34.40	S 56°35'31" W	25.00
C8	10°38'36"	58.68	117.03	116.86	N 85°15'12" W	630.00
C9	37°54'01"	216.31	416.74	409.18	N 70°28'29" E	630.00
C10	12°33'52"	69.35	138.15	137.88	N 45°14'33" E	630.00
C11	09°21'06"	46.62	93.03	92.93	S 43°38'10" W	570.00
C12	51°08'26"	272.73	508.77	492.04	N 73°52'56" E	570.00

OWNER : DAVID S. STARR
ACREAGE : 17.235 ACRES
SURVEY : LEWIS J. DYCHES SURVEY
ABSTRACT NO. 180
RUIDOSA IRRIGATION COMPANY
ABSTRACT NO. 715
NUMBER OF BLOCKS : 2
NUMBER OF LOTS : 7
PROPOSED USE : COMMERICAL/INDUSTRIAL
DATE : FEBRUARY 2004

BEARING REFERENCE IS TEXAS STATE PLANE ANAD 83, TEXAS CENTRAL ZONE 4203, WITH A COMBINED SCALE FACTOR OF 0.999866.

BEARING CONTROL IS BASED ON U.S.G.S. MONUMENTS:

GT01-96-007 LAT 30 deg 35 min 17.49685 sec N (NAD 83)
LONG 97 deg 41 min 02.32006 sec W (NAD 83)

GT04 TXDOT ROW MON LAT 30 deg 37 min 58.55013 sec N (NAD 83)
LONG 97 deg 41 min 12.41290 sec W (NAD 83)

VERTICAL DATA CONTROL NAVD 88

HAYNIE CONSULTING, INC.
Civil Engineers and Land Surveyors
1010 Provident Lane
Round Rock, Texas 78664 512-837-2446

JOB No. 00-167
FILE: Mad Oaks Amend FP-REVPHS1bak.dwg

SHEET NUMBER: 1 OF 2

PHOTOGRAPHIC MYLAR

Cabinet Y Slide 273

AMENDED FINAL PLAT
MADISON OAKS
PHASE ONE
IN THE CITY OF GEORGETOWN, WILLIAMSON COUNTY TEXAS
FEBRUARY 2004

FIELD NOTES DESCRIPTION
OF 17.235 ACRES

FILED NOTE DESCRIPTION FOR 17.235 ACRE (750756.6 SQ. FT.) TRACT OF LAND OUT THE LEWIS J. DYCHES SURVEY, ABSTRACT NO. 180 AND THE RUIDOSA IRRIGATION COMPANY SURVEY, ABSTRACT NO. 715 SITUATED IN THE CITY OF GEORGETOWN, WILLIAMSON COUNTY, TEXAS, SAID 17.235 ACRE TRACT BEING CONVEYED TO DAVID STARR AS DESCRIBED AS ALL OF THAT CERTAIN 13.528 ACRE TRACT AS RECORDED IN DOCUMENT NO. 9618588, AND ALL OF THAT CERTAIN 0.636 ACRE TRACT AS RECORDED IN DOCUMENT NO. 9712216, AND A PORTION OF THAT CERTAIN 23.5 ACRE TRACT AS RECORDED IN DOCUMENT NO. 9712216, ALL OF THE WILLIAMSON COUNTY DEED RECORDS (W.D.C.R.) WILLIAMSON COUNTY, TEXAS, SAID 17.235 ACRES (750,756 SQ. FT.) TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A 1/2" IRON ROD FOUND, SAID POINT BEING IN THE EAST RIGHT, OF-WAY (R.O.W.) LINE OF U.S. HIGHWAY 81 (100' R.O.W.) LOCALLY KNOWN AS AUSTIN AVENUE, SAME POINT BEING THE MOST SOUTHWESTERLY CORNER OF THAT CERTAIN 0.06 ACRE (60' OPTION STRIP) TRACT OUT OF SAID RUIDOSA IRRIGATION COMPANY SURVEY AND BEING A PORTION OF 234.48 ACRE TRACT AS CONVEYED TO GEORGETOWN RAILROAD EQUIPMENT COMPANY IN VOLUME 2356, PAGE 131 OF THE W.D.C.R. SAME BEING THE POINT OF BEGINNING AND THE NORTHWEST CORNER OF THE AFOREMENTIONED 0.636 ACRE TRACT FOR AN ANGLE POINT;

THENCE, N 67°40'42"E, A DISTANCE OF 630.72 FEET DEPARTING THE EAST R.O.W. LINE OF SAID U.S. HIGHWAY 81 AND ALONG THE SOUTH LINE OF SAID 0.60 ACRE TRACT (60' OPTION STRIP) TO A 1/2" IRON ROD FOUND SAID SAID POINT BEING THE SOUTHEAST CORNER OF SAID 0.60 ACRE TRACT AND BEING IN THE WEST LINE OF THE AFOREMENTIONED 0.636 ACRE TRACT FOR AND ANGLE POINT;

THENCE CONTINUING ALONG THE NORTHERLY LINE OF THE HEREIN DESCRIBED TRACT THE FOLLOWING FOUR (4) COURSES AND DISTANCES;

1. N 05°57'36"W, A DISTANCE OF 32.64 FEET TO AN 1/2" IRON ROD FOUND, SAID POINT BEING THE NORTHEAST CORNER OF SAID 0.60 ACRE (60' OPTION STRIP) AND BEING IN THE SOUTHERLY LINE OF THAT CERTAIN 7.699 ACRE TRACT AS CONVEYED TO THE TEXAS HIGHWAY DEPARTMENT AS RECORDED IN VOLUME 404, PAGE 549 OF THE W.C.D.R. FOR AN ANGLE POINT.
2. S 80° 25' 03" E, A DISTANCE OF 30.73 FEET TO AN 1/2" IRON ROD FOUND FOR AN ANGLE POINT.
3. N 68°24'53" E, A DISTANCE OF 4.98 FEET TO AN 1/2" IRON ROD FOUND, SAID POINT BEING THE NORTHWEST CORNER OF THE AFORMENTIONED 23.5 ACRE TRACT FOR AN ANGLE POINT.
4. N 68°35'29" E, A DISTANCE OF 122.30 FEET TO AN 1/2" IRON ROD SET FOR AN ANGLE POINT.

THENCE, THROUGH THE INTERIOR OF SAID 23.5 ACRE TRACT AND BEING THE EAST LINE OF THE HEREIN DESCRIBED TRACT THE FOLLOWING THREE (3) COURSES AND DISTANCES;

1. S 21°35'39" E, A DISTANCE OF 181.22 FEET TO AN 1/2" IRON ROD SET FOR AN ANGLE POINT.
2. S 21° 35' 20" E, A DISTANCE OF 61.16 FEET TO AN 1/2" IRON ROD SET FOR AN ANGLE POINT.
3. S 21°35'11" E, A DISTANCE OF 511.37 FEET TO AN 1/2" IRON ROD SET, SAID POINT BEING THE NORTHERLY LINE OF LOT 1, HARTMAN ACRES, A SUBDIVISION OF RECORD AS RECORDED IN CABINET N, SLIDES 190-193 OF THE WILLIAMSON COUNTY PLAT RECORDS (W.C.P.R.) AS CONVEYED TO COMMUNITY SCHOOL INC. AS RECORDED IN A WARRANTY DEED WITH VENDER'S LIEN, DOCUMENT NO. 9555251, IN THE HEREIN DESCRIBED TRACT;

THENCE, CONTINUING ALONG THE SOUTHERLY LINE OF THE HEREIN DESCRIBED TRACT THE FOLLOWING FIVE (5) COURSES AND DISTANCE;

1. S 68°30'12"W, A DISTANCE OF 191.78 FEET TO AN 1/2" IRON ROD FOUND, SAID POINT BEING THE SOUTHEAST CORNER OF SAID 0.636 ACRE TRACT FOR AN ANGLE POINT.
2. S 68°39'46"W, A DISTANCE OF 29.73 FEET TO AN 1/2" IRON ROD FOUND FOR AN ELL CORNER AND BEING THE SOUTHWEST CORNER OF SAID 0.636 ACRE TRACT FOR AN ANGLE POINT.
3. N 20°50'43"W, A DISTANCE OF 10.98 FEET TO AN 1/2" IRON ROD FOUND FOR AN ANGLE POINT.
4. S 68°42'49"W, A DISTANCE OF 997.94 FEET TO AN 1/2" IRON ROD FOUND FOR AN ANGLE POINT.
5. N 25°54'17"W, A DISTANCE OF 47.94 FEET TO A CONCRETE MONUMENT FOUND, SAID POINT BEING IN THE EAST R.O.W. LINE OF SAID U.S. HIGHWAY 81 AND BEING THE MOST WEST SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, CONTINUING ALONG THE EAST LINE OF U.S HIGHWAY 81 AND THE WEST LINE OF THE HEREIN DESCRIBED TRACT, THE FOLLOWING THREE (3) COURSES AND DISTANCE;

1. N 03°33'52" E, A DISTANCE OF 151.40 FEET TO A CONCRETE HIGHWAY MONUMENT FOUND FOR AN ANGLE POINT.
2. N 12°51'16"E, A DISTANCE OF 150.09 FEET TO A CONCRETE HIGHWAY MONUMENT FOUND FOR AN ANGLE POINT.
3. N 13°06'55" E, A DISTANCE OF 492.92 FEET TO THE POINT OF BEGINNING AND CONTAINING 17.235 ACRES (750756.6 SQ. FT.) OF LAND MORE OR LESS.

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

THAT I, DAVID S. STARR, SOLE OWNER OF THE CERTAIN TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED DOCUMENT NO. 9618588, 9712212 & 9712216 AMONG THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THE CERTAIN TRACT OF LAND, AND DO HEREBY SUBDIVIDE SAID PARCEL AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF GEORGETOWN THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS, AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF GEORGETOWN MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS MADISION OAKS, PHASE ONE.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS 10th DAY OF March, 2004 A.D.

David S Starr

DAVID S. STARR
121 LISCIO LOOP
GEORGETOWN, TEXAS 78628

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

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED DAVID S. STARR, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSED AND CONSIDERATION THEREIN EXPRESSED, IN THE CAPACITY THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE 10th DAY OF March, 2004 A.D.

Kathleen E. Eby
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS.

KATHLEEN E. EBY
MY COMMISSION EXPIRES
September 2, 2007

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

I, TIMOTHY E. HAYNIE, REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, AND THAT THERE ARE NO APPARENT DISCREPANCIES, CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF GEORGETOWN, TEXAS.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT GEORGTOWN, WILLIAMSON COUNTY, TEXAS, THIS THE 5th DAY OF March, 2004 A.D.

TIMOTHY E. HAYNIE,
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 2380, STATE OF TEXAS

STATE OF TEXAS
TIMOTHY E. HAYNIE
2380
PROFESSIONAL LAND SURVEYOR

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

I, TIMOTHY E. HAYNIE, LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PARCEL OF LAND IS IN THE EDWARDS AQUIFER RECHARGE ZONE AND IS NOT ENCROACHED BY A ZONE A FLOOD AREA, AND AS DEFINED BY FEDERAL EMERGENCY MANAGEMENT ADMINISTRATIVE FLOOD HAZARD BOUNDARY MAP, COMMUNITY PANEL NUMBER 48491C0230 C, EFFECTIVE DATE SEPTEMBER 27, 1991, AND THAT THIS LOT CONFORMS TO THE CITY OF GEORGETOWN SUBDIVISION REGULATIONS.

THE FULLY DEVELOPED, CONCENTRATED STORMWATER RUNOFF RESULTING FROM THE ONE HUNDRED (100) YEAR FREQUENCY STORM IS CONTAINED WITHIN THE DRAINAGE EASEMENTS SHOWN AND/OR PUBLIC RIGHTS-OF-WAY DEDICATED BY THIS PLAT.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT GEORGETOWN, WILLIAMSON COUNTY, TEXAS, THIS THE 5th DAY OF March, 2004 A.D.

TIMOTHY E. HAYNIE,
LICENSED PROFESSIONAL ENGINEER
NO. 36982, STATE OF TEXAS

STATE OF TEXAS
TIMOTHY E. HAYNIE
36982
LICENSED
PROFESSIONAL ENGINEER

DIRECTOR OF PLANNING AND DEVELOPMENT SERVICES

I, AMELIA SONDGEROTH, DIRECTOR OF THE PLANNING AND DEVELOPMENT SERVICES DIVISION OF THE CITY OF GEORGETOWN, UNDER THE AUTHORITY GRANTED ME IN SECTION 3.08.040 OF THE UNIFIED DEVELOPMENT CODE, IN ACCORDANCE WITH THE TEXAS LOCAL GOVERNMENT CODE §212.016, DO HEREBY CERTIFY THIS PLAT AS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

AMELIA SONDGEROTH, DIRECTOR
PLANNING AND DEVELOPMENT SERVICES

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

I, Nancy E. Rister, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE 29 DAY OF March, 2004 A.D., AT 11:25 O'CLOCK, A.M. AND DULY RECORDED ON THE 29 DAY OF March, 2004 A.D., AT 4:02 O'CLOCK, P.M. IN THE PLAT RECORDS OF SAID COUNTY IN CABINET Y, SLIDE 272-273

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

Nancy E. Rister
COUNTY CLERK
By: Lissa Hangard
Deputy Clerk

COUNTY COURT
WILLIAMSON COUNTY, TEXAS

HAYNIE CONSULTING, INC.
Civil Engineers and Land Surveyors
1010 Provident Lane
Round Rock, Texas 78664 512-837-2446

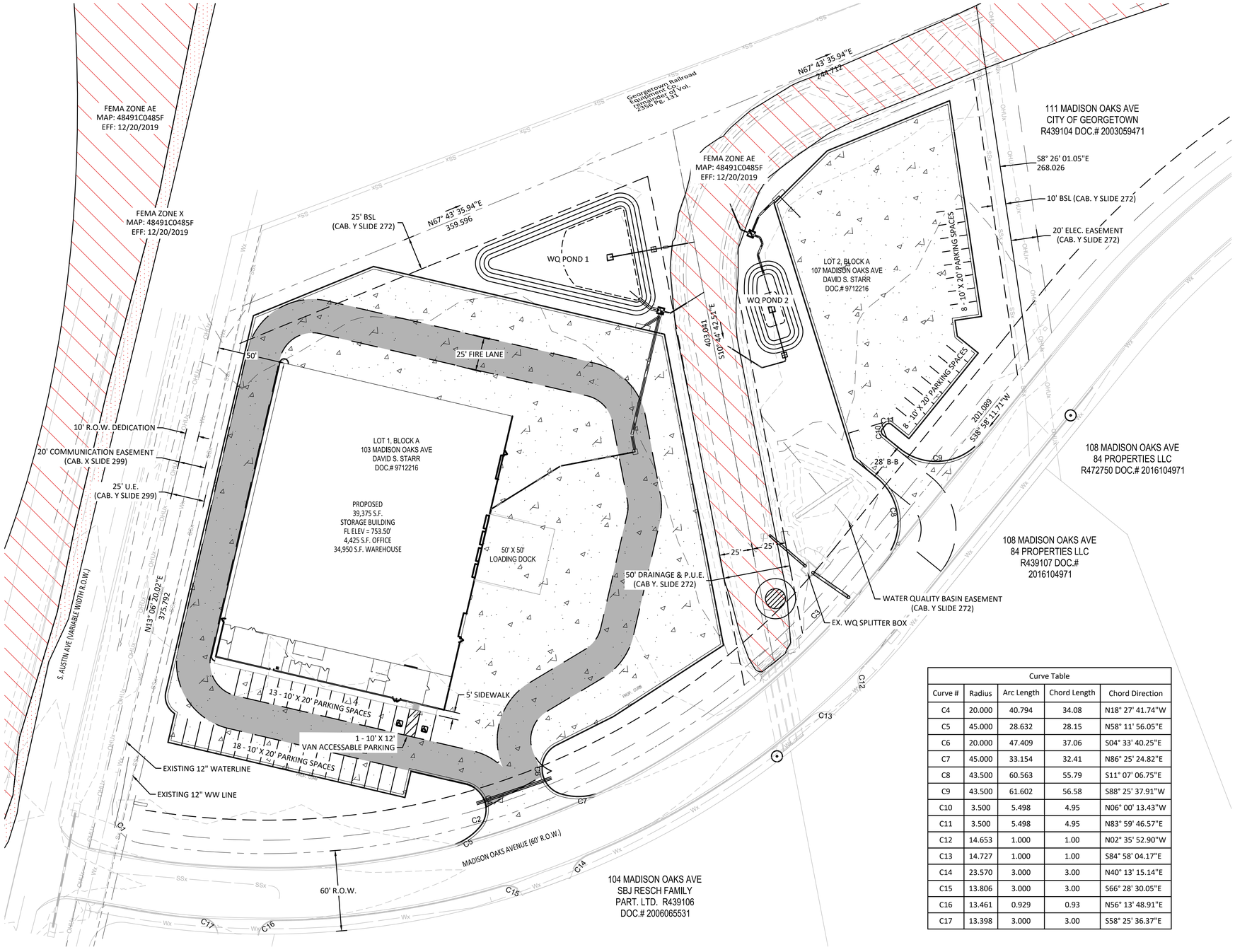
JOB No. 00-167
FILE: Mad Oaks Amend FP-REVPHS1bak.dwg

SHEET NUMBER
2 OF 2

PHOTOGRAPHIC MYLAR

FINAL PLAT (2 OF 2)
2023-13-SDP

Project No: 22914
SHEET 3 of 41



0 40 80 FEET

LEGEND

- STORM MANHOLE
- STORM JUNCTION BOX
- WASTEWATER MANHOLE
- CURB INLET
- PAVEMENT
- PROPERTY LINE
- LIMIT OF CONSTRUCTION
- 750 — EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- OHUx — EX. OVERHEAD UTILITY
- Wx — EX. WATER LINE
- SSx — EX. WASTEWATER LINE
- EX. STREET LIGHT

Dimensional Site Plan Notes:

1. All lighting fixtures shall be designed to completely conceal and fully shield, within an opaque housing, the light source from visibility from any street right-of-way. The cone of light shall not cross any adjacent property line. The illumination shall not exceed 2 foot candles at a height of three feet at the property line. Only incandescent, fluorescent, color-corrected high-pressure sodium or metal halide may be used. All vehicle or pedestrian access shall be sufficiently lighted to ensure security of property and persons.
2. All roof, wall and ground mounted mechanical equipment must be screened in accordance with Section 8 of the UDC. If roof and wall mounted equipment of any type including duct work and large vents is proposed it shall be shown on the site plan and screening identified. Screening of mechanical equipment shall result in the mechanical equipment blending in with the primary building and not appearing separate from the building and shall be screened from view of any rights-of-way or adjoining properties.
3. Per Chapter 8, the dumpster enclosures must be one (1) foot above the height of the waste container. Use protective poles in corners and at impact areas. Fence posts shall be of rust protected metal or concrete. A minimum 6" slab is required and must be sloped to drain; the enclosure must have steel framed gates with spring loaded hinges and fasteners to keep closed. Screening must be on all four sides by masonry wall or approved fence or screening with opaque gates.

SITE DATA:

1. Land Area - 4.221 ac. + 1.813 ac. = 6.034 acres (262,841 square feet)
2. Existing Impervious Cover - 0 s.f.
3. Proposed Impervious Cover - 153,148 s.f.
   Proposed Impervious Coverage = 153,148 s.f./262,841 s.f. = 58.27%
4. Calculate Maximum Impervious Coverage Allowable
   [0.70 x 5 acres] + [0.55 x (1.034 acres)] = 67.43% or 4.0687 Acres
   6.034 acres
5. Total Gross Floor Area Of All Buildings - 39,375 square feet
   Calculations: Proposed Warehouse - 34,950 square feet
   Proposed Office - 4,425 square feet
   Total - 39,375 square feet
6. Required Parking (Employee Only, No Customer Parking):
   Criteria - 1 space per 300 SF GFA Building (Office) = 15 Spaces
   Criteria - 1 space per 2500 SF GFA Building (Warehouse) = 14 Spaces
   Calculation - 4425/300 + 34950/2500 = 29 Spaces
7. Provided Parking: Employee - Regular 10' x 20' - 27 Spaces
   Handicap 10' x 20' - 2 Spaces
   Employee Total - 29 Spaces
8. This statement certifies that Stormwater Permit requirements are met by this Site Plan (ref. UDC Section 3.17).
9. All natural on-site features are shown on this Site Plan.
10. CMU Dumpster Enclosure shall be 14' x 14' x 7' with opaque, self-closing gates, compliant with UDC Section 8.04.070(D).
11. There is 1 existing sign on the site. There are no proposed signs for the site.

FIELDWORK: Field survey information provided by others.

Curve Table				
Curve #	Radius	Arc Length	Chord Length	Chord Direction
C4	20.000	40.794	34.08	N18° 27' 41.74"W
C5	45.000	28.632	28.15	N58° 11' 56.05"E
C6	20.000	47.409	37.06	S04° 33' 40.25"E
C7	45.000	33.154	32.41	N86° 25' 24.82"E
C8	43.500	60.563	55.79	S11° 07' 06.75"E
C9	43.500	61.602	56.58	S88° 25' 37.91"W
C10	3.500	5.498	4.95	N06° 00' 13.43"W
C11	3.500	5.498	4.95	N83° 59' 46.57"E
C12	14.653	1.000	1.00	N02° 35' 52.90"W
C13	14.727	1.000	1.00	S84° 58' 04.17"E
C14	23.570	3.000	3.00	N40° 13' 15.14"E
C15	13.806	3.000	3.00	S66° 28' 30.05"E
C16	13.461	0.929	0.93	N56° 13' 48.91"E
C17	13.398	3.000	3.00	S58° 25' 36.37"E

Curve Table: Property Boundary				
Curve #	Radius	Arc Length	Chord Length	Chord Direction
C1	25.000	40.707	36.36	N33° 56' 05.42"W
C2	570.000	508.858	492.13	S73° 53' 53.23"W
C3	570.000	93.050	92.95	S43° 38' 47.67"W

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS · BRYAN ERIC MOORE · 98920 · LICENSED PROFESSIONAL ENGINEER · F-181 · 03/22/2023

STEGER BIZZELL

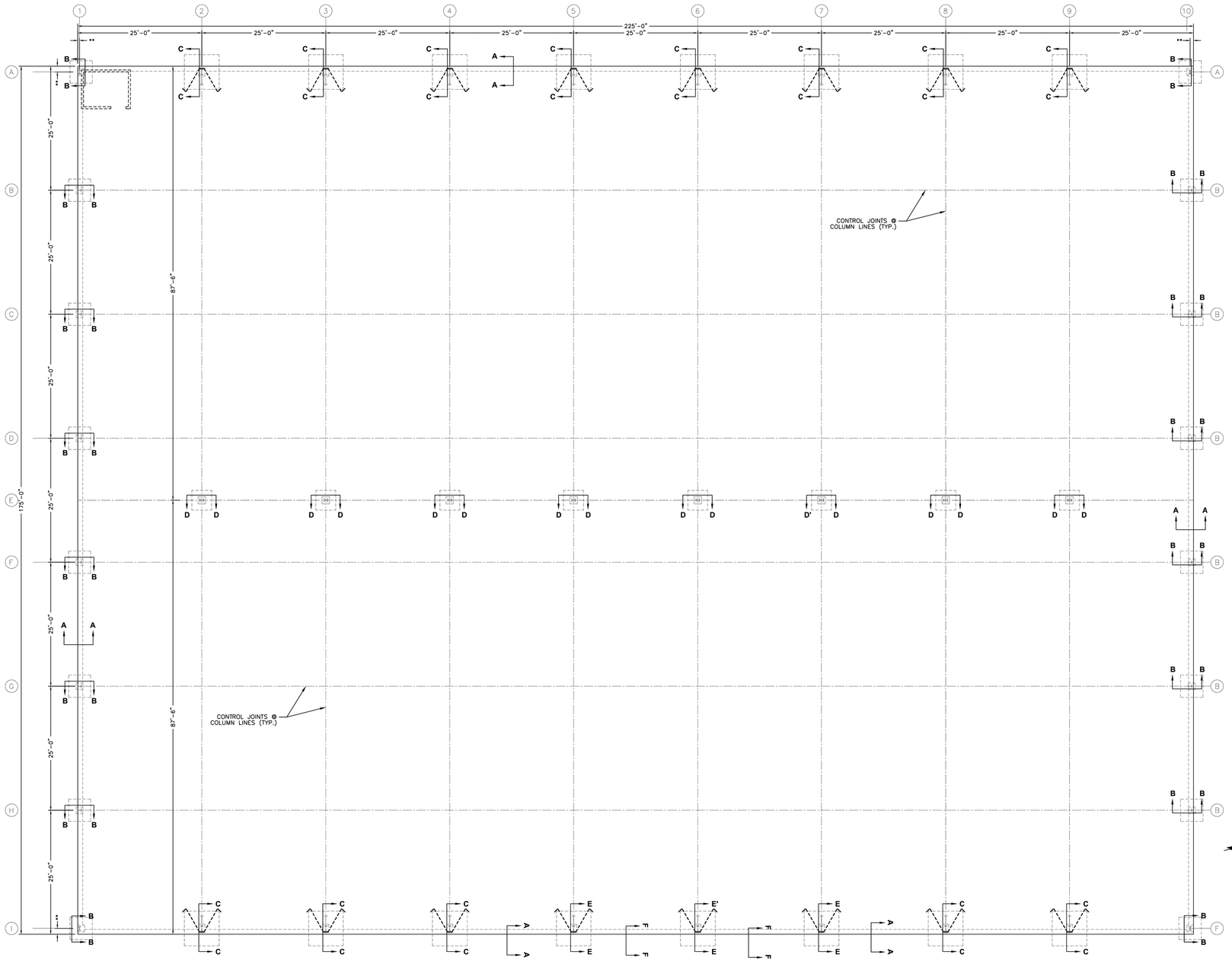
ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

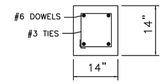
DIMENSIONAL SITE PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

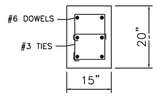
SHEET 4 of 41





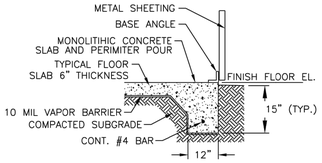
TYPICAL PIER

A1,A10,B1,B10,C1,C10
D1–D10,E1,E10,F1,F10,
G1,G10,H1,H10,I1,I10



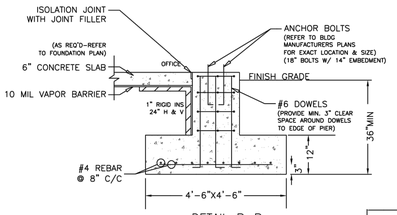
TYPICAL PIER

A2–A9,I2–I9

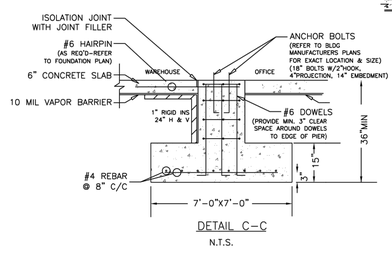


DETAIL A–A (TYP BETWEEN ALL PIERS)

N.T.S.

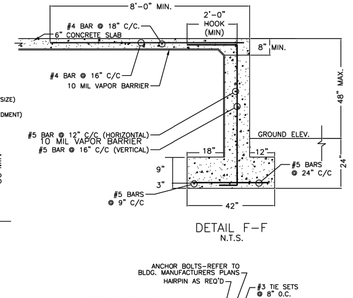


DETAIL B–B



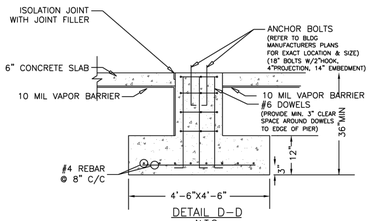
DETAIL C–C

N.T.S.



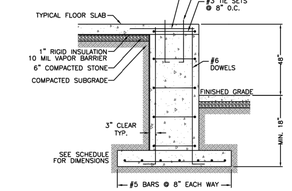
DETAIL F–F

N.T.S.



DETAIL D–D

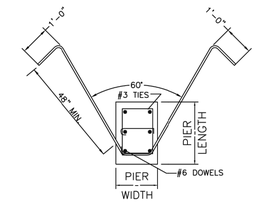
N.T.S.



SECTION E-E

LOADING DOCKWALL COLUMN PIER & FOOTING SECTION

N.T.S.



PIER W/HAIR PIN

N.T.S.

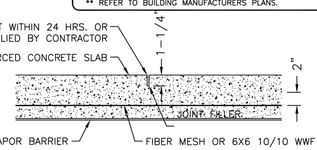
FOUNDATION SCHEDULE

DIMENSION/REINFORCING SIZES		
MARK	PIER	FOUNDATION
A2–A9,I2–I9	15"x20" W #6 DOWELS & #3 TIES	7'–0"X7'–0"X15" W/#5 REBAR EA. WAY
A1,A10,B1,B10,C1,C10 D1–D10,E2–E9,F1,F10, G1,G10,H1,H10,I1,I10	14"x14" W #6 DOWELS & #3 TIES	4'–6"X4'–6"X12" W/#5 REBAR EA. WAY

NOTES:

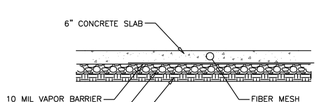
1. SEE BUILDING MANUFACTURERS PLANS FOR BASE PLATE DETAILS. ALL DIMENSIONS TO BE CHECKED AND ANY DIFFERENCES REPORTED TO THE OWNER.
2. FOOTING DEPTHS SHALL BE ACCORDING TO LOCAL REQUIREMENTS, BUILDING CODES OR SOIL TESTING RESULTS WITH MOST STRINGENT GOVERNING.
3. ALL CONCRETE, FOOTERS, PIERS, GRADE BEAMS TO BE 3000 psi MIN.
4. ALL CONCRETE SLABS ON GRADE TO BE 3000 psi MIN.
5. BUILDING MANUFACTURERS DIMENSIONS AND DETAILS SHALL GOVERN ON ALL CASES, CONSULT THE ENGINEER FOR ANY CHANGES TO THE PLAN.

** REFER TO BUILDING MANUFACTURERS PLANS.



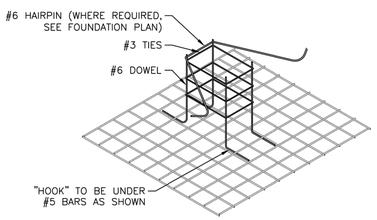
CONTROL JOINT SECTION

N.T.S.



CONCRETE DETAIL

N.T.S.



FOOTING REINFORCEMENT ISOMETRICS

N.T.S.

ARCHITECTURAL FOUNDATION

84 LUMBER

1019 ROUTE 519
EIGHTY FOUR, PA 15330
(724) 228-3636

REVISIONS

NO	DATE	DESCRIPTION

84 LUMBER OFFICE WAREHOUSE

39,375 SF STORAGE BUILDING

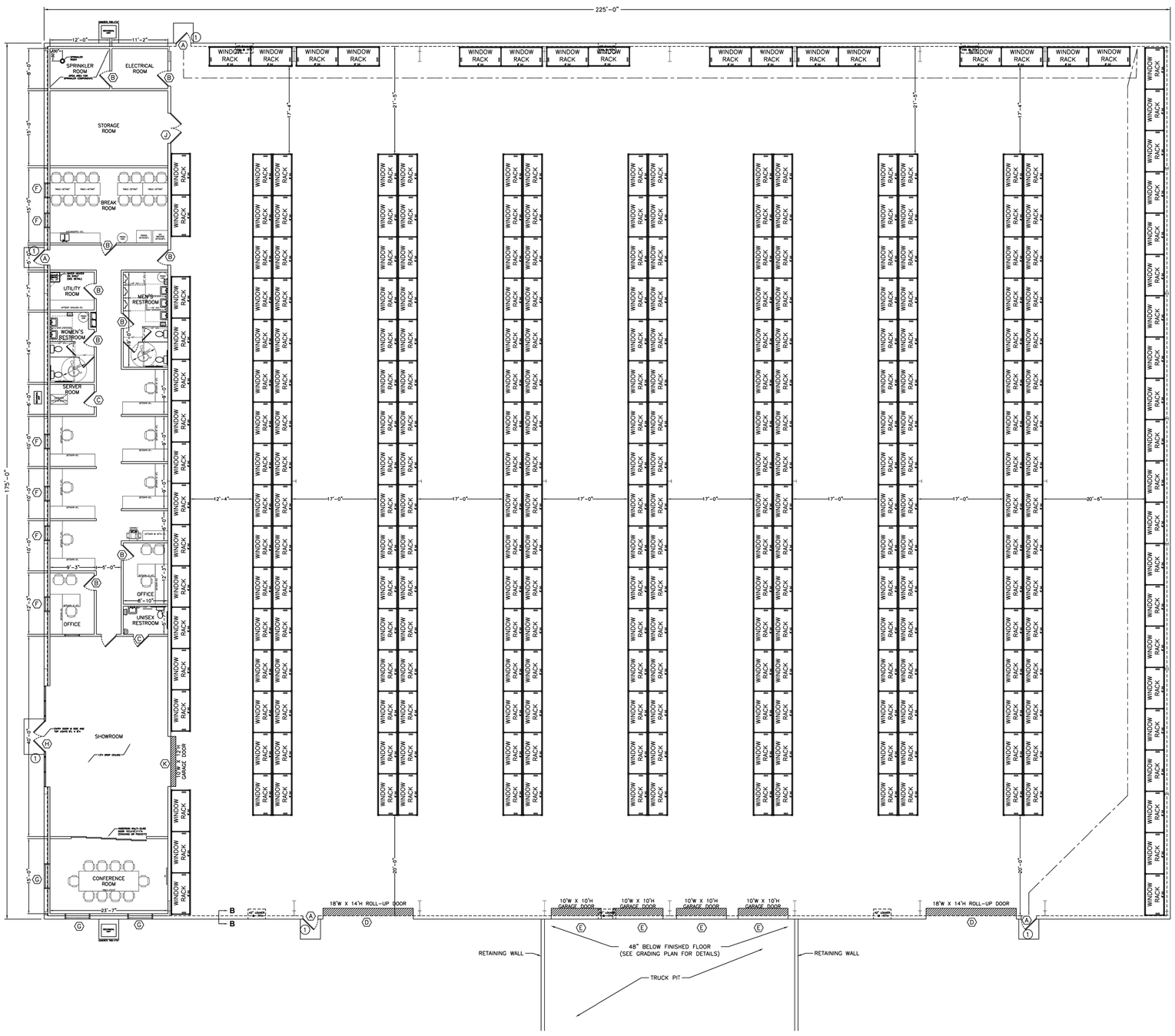
FOUNDATION PLAN

MADISON OAKS AVENUE

CITY OF GEORGETOWN

WILLIAMSON COUNTY, TEXAS

PROJECT INFORMATION	
SCALE:	3/32"=1'-0"
JOB NO.	30-1945-01
STORE NO.	1945
SHEET NO.	A01
DESIGN BY:	JAZ
DRAWN BY:	JAZ
DATE:	01/25/23



① CONCRETE LANDING PAD MAX SLOPE TO EXCEED 0.25 VERTICAL IN 12 UNITS (2-PERCENT SLOPE). THRESHOLDS NOT TO EXCEED 1/2" IN HEIGHT

ALL INTERIOR MAN DOORS TO HAVE LEVER ARM DOOR HANDLES.
ALL EXTERIOR STEEL MAN DOORS TO HAVE PANIC PUSH BARS

DOOR & WINDOW SCHEDULE

MARK	DOOR & JAMB	DIMENSIONS	HARDWARE	DESCRIPTION	QUA.	REMARKS
(A)	DJ-2	3'-0"x7'-0"	H-2	STEEL EXIT DOOR WITH PANIC HARDWARE Umax = 0.7*	4	FORCE TO OPEN 8.5 LBS. MAX.
(B)	DJ-3	3'-0"x6'-8"	H-3	SOLID CORE BIRCH FLUSH WITH PASSAGE LOCKSET	9	FORCE TO OPEN 5.0 LBS. MAX.
(C)	DJ-3	3'-0"x6'-8"	H-3	SOLID CORE BIRCH FLUSH WITH PRIVACY LOCKSET	2	FORCE TO OPEN 5.0 LBS. MAX.
(D)	DJ-5	18'-0"x14'-0"	H-5	OVERHEAD ROLL-UP DOOR	2	FORCE TO OPEN 15.0 LBS. MAX.
(E)	DJ-5	10'-0"x10'-0"	H-5	OVERHEAD ROLL-UP DOOR	4	FORCE TO OPEN 15.0 LBS. MAX.
(F)		3'-0"x3'-0"		3'X3' GLASS WINDOW U=max 0.75 SHGC=.25*	6	
(G)		5'-0"x3'-0"		U=max 0.75 SHGC=.25*	3	FORCE TO OPEN 5.0 LBS. MAX.
(H)	DJ-1	8'-0"x8'-0"	H-1	GLASS DOUBLE DOORS W/TOP & SIDELIGHTS	1	FORCE TO OPEN 8.5 LBS. MAX.
(I)	DJ-1	3'-0"x7'-0"	H-3	GLASS DOOR	1	FORCE TO OPEN 8.5 LBS. MAX.
(J)	DJ-3	6'-0"x6'-8"	H-3	SOLID CORE BIRCH FLUSH WITH PASSAGE LOCKSET	1	FORCE TO OPEN 15.0 LBS. MAX.
(K)	DJ-5	10'-0"x12'-0"	H-5	OVERHEAD GARAGE DOOR	1	FORCE TO OPEN 15.0 LBS. MAX.

DJ-1 GLAZED STEEL DOOR, METAL JAMB, 7 1/2" BOTTOM FRAME
DJ-2 HOLLOW METAL DOOR, METAL JAMB
DJ-3 HOLLOW CORE WOOD DOOR, METAL JAMB
DJ-4 METAL DOOR FRAME (FABRICATED), METAL JAMB, DOOR SHEETING TO MATCH BUILDING
DJ-5 GALVANIZED STEEL DOOR, METAL JAMB

H-1 ADAAG ENTRANCE LOCK AND DEADBOLT LOCKSET (ENTRANCE) BY DOOR SUPPLIER
H-2 PANIC HARDWARE BY DOOR SUPPLIER
H-3 LOCKSET & BUTT HINGES FROM DOOR SUPPLIER
H-4 TRACK & BOLT TYPE LOCK BY DOOR SUPPLIER
H-5 DOOR HARDWARE BY DOOR SUPPLIER

ROOM FINISH SCHEDULE

NAME	FLOOR	REAR	LEFT	FRONT	RIGHT	CEILING	HEIGHTS
RESTROOMS,BREAK ROOM	F1	W2	W2	W2	W2	C2	9'
OFFICE AREA,LOCKER ROOM	F1	W2	W2	W2	W2	C2	9'
FACTORY AREA	F2	W1	W1	W1	W1	C1	VARIES
SPRINKLER ROOM	F2	W2	W2	W2	W2	C2	8'
MAINT.ROOM,COMP. ROOM	F2	W4	W4	W4	W4	C2	10'

F1 POLISHED CONCRETE SLAB
F2 CONCRETE SLAB
C1 EXPOSED METAL ROOF W/2" VINYL FACED INSULATION
C2 SUSPENDED 2X4 CEILING TILE

W1 EXPOSED STRUCTURAL METAL & SHEETING
W2 PAINTED DRYWALL
W3 WATER-RESISTANT DRYWALL FROM 0-8' COVE BASE FROM 0"-6" FIBER REINFORCED PLASTIC PANELING 0'-4' PAINTED WATER-RESISTANT DRYWALL FROM 4'-8'
W4 7/16" OSB

* BUILDING SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL HANDICAP REQUIREMENTS.

FIRE EXTINGUISHERS TABLE

NFPA 10
*TOP OF FIRE EXTINGUISHER, HAVING A GROSS WEIGHT LESS THAN 40 LB, SHALL BE NOT MORE THAN 5' ABOVE THE FLOOR; 3-1/2 # GROSS WEIGHT 40 LBS OR GREATER
* FINISH CLASSIFICATION - CLASS II
△=FIRE EXTINGUISHER

OCCUPANCY CLASSIFICATION	OCCUPANCY AREA	FIRE CLASS	CLASSIFICATION OF HAZARDS	QUANTITY/TYPE OF EXTINGUISHER PROVIDED	MINIMUM RATED SINGLE EXTINGUISHER	MAXIMUM FLOOR AREA PER EXTINGUISHER	MAXIMUM FLOOR AREA PER UNIT OF A	MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER
B,F-1	45,000	A	MODERATE	(8)2A	1,500 SF	3,000 SF	1,500 SF	75'

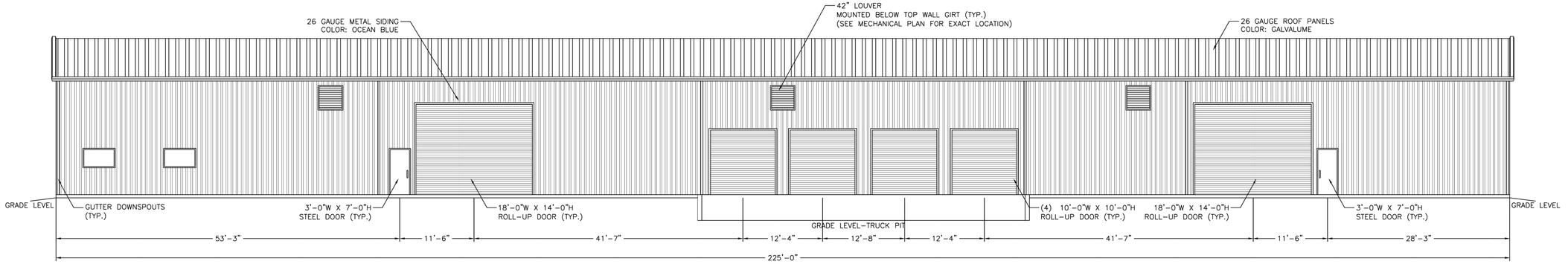
ARCHITECTURAL FLOOR PLAN

84 LUMBER
1019 ROUTE 519
EIGHTY FOUR, PA 15330
(724) 228-3636

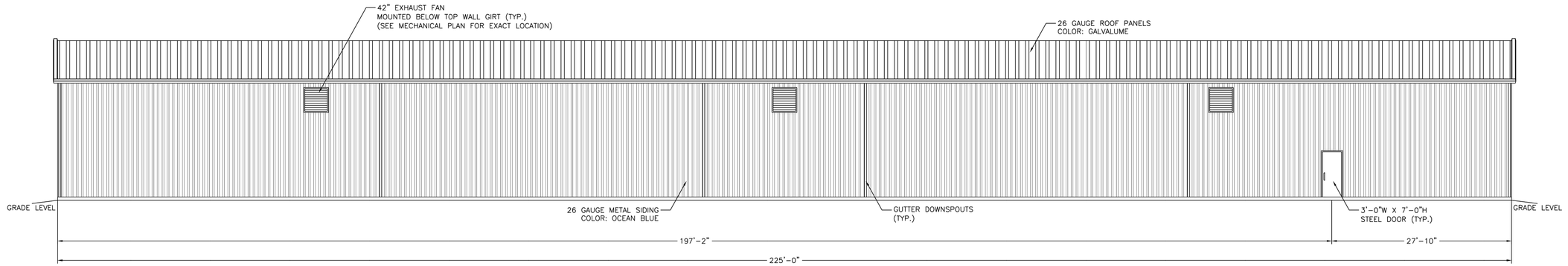
REVISIONS		
NO	DATE	DESCRIPTION

84 LUMBER OFFICE WAREHOUSE
39,370 SF STORAGE BUILDING
FLOOR/LIFE SAFETY PLAN
MADISON OAKS AVENUE
CITY OF GEORGETOWN
WILLIAMSON COUNTY, TEXAS

PROJECT INFORMATION	
SCALE:	3/32"=1'-0"
JOB NO.	30-1945-01
STORE NO.	1945
SHEET NO.	A01
DESIGN BY:	JAZ
DRAWN BY:	JAZ
DATE:	01/25/23

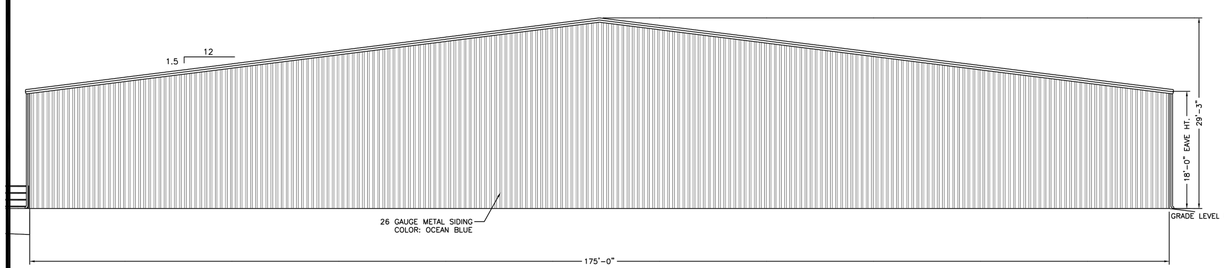


SOUTH ELEVATION



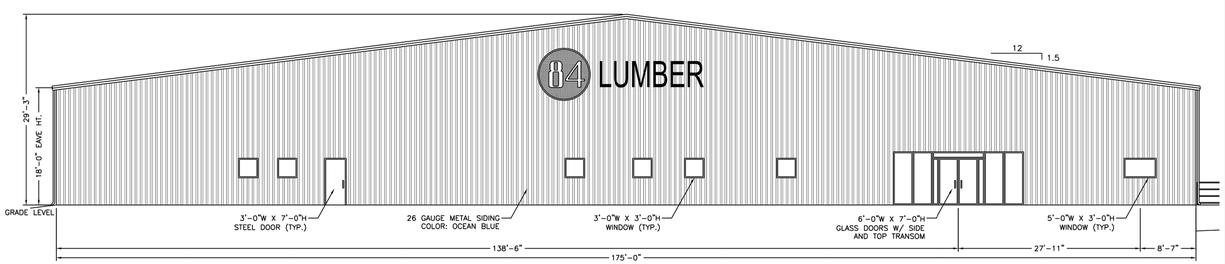
NORTH ELEVATION

SCALE:1/8"=1'-0"



EAST ELEVATION

SCALE:3/32"=1'-0"



WEST ELEVATION

SCALE:3/32"=1'-0"

ARCHITECTURAL ELEVATIONS

84 LUMBER
1019 ROUTE 519
EIGHTY FOUR, PA 15330
(724) 228-3636

REVISIONS		
NO	DATE	DESCRIPTION

84 LUMBER OFFICE WAREHOUSE
39,375 SF. STORAGE BUILDING
ELEVATIONS
MADISON OALS AVENUE
CITY OF GEORGETOWN
WILLIAMSON COUNTY, TEXAS

PROJECT INFORMATION	
SCALE:	AS NOTED
JOB NO.	30-1945-01
STORE NO.	1945
SHEET NO.	A03
DESIGN BY:	JAZ
DRAWN BY:	JAZ
DATE:	01/25/23

KEY NOTES

1. NEW ELECTRICAL SECONDARY OVERHEAD.
2. (1) - 2" PVC CONDUIT FOR DATA
3. NEW UTILITY POLE.
4. NEW UTILITY POLE WITH POLE MOUNTED TRANSFORMER.

Schedule

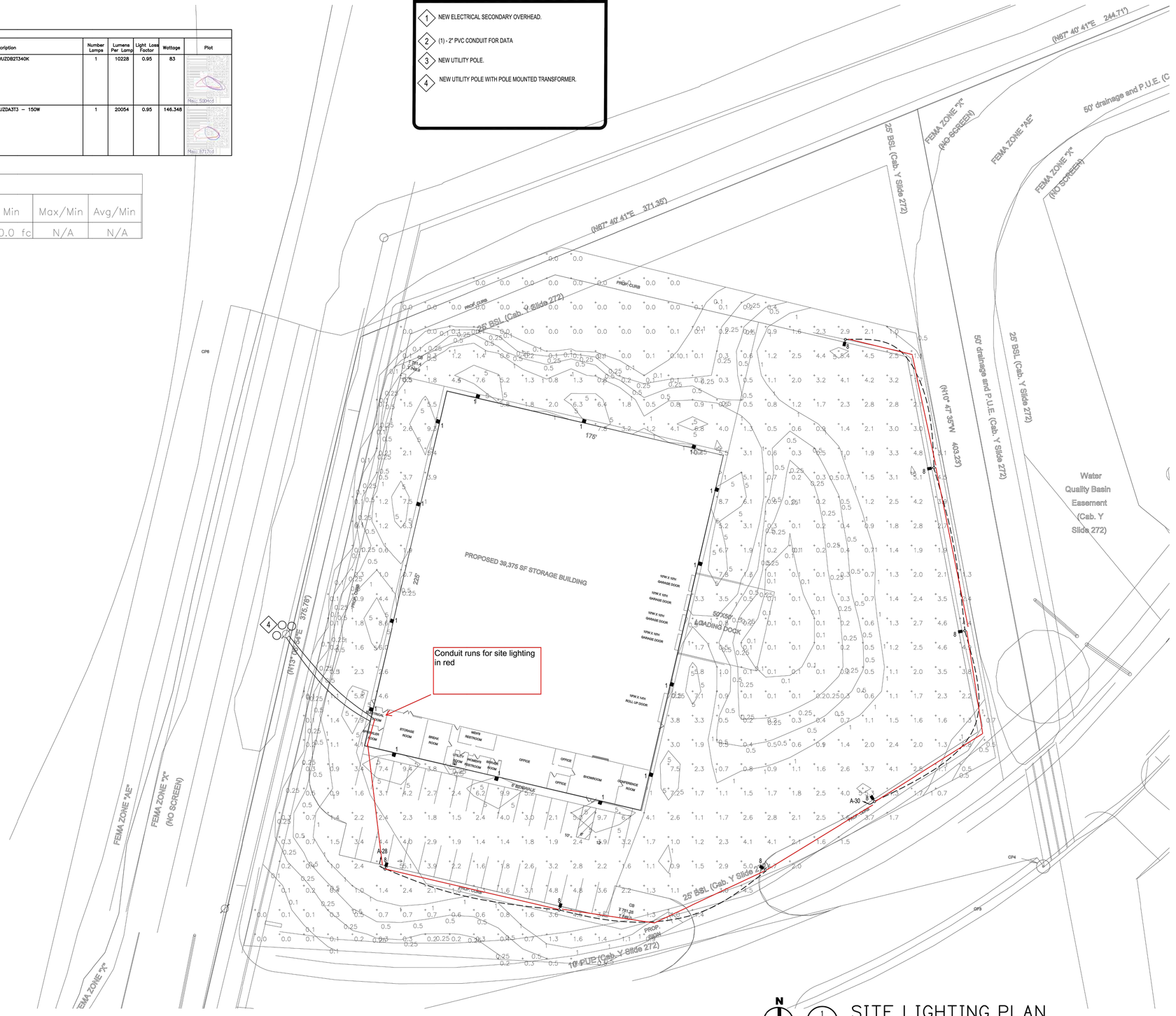
Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	Plot
▭	1		14	TCP		FCWUZDBZT340K	1	10228	0.95	83	Main: 5084cd
▯	2		7	TCP	TALUZDA3T3F40KBR	TALUZDA3T3 – 150W	1	20054	0.95	146.348	Main: 8717cd

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #2	+	1.8 fc	9.9 fc	0.0 fc	N/A	N/A

FIXTURE 1
TCP
FCWUZDBZT340KBRPC
WALL MOUNT 16'-0"

FIXTURE 2
TCP
TALUZDA3T3-150W
WALL MOUNT 30'-0" POLE



N

1 / E100 SITE LIGHTING PLAN
SCALE: 1" = 30'-0"

CLA
Corbett Legge & Associates, PLLC
Mechanical & Electrical Engineers
Tower Ct. at F-8656
431 W. Main St., Suite 101 | P.O. Box 7370 (38802) | Tupelo, MS 38804 | 662.844.7114

YARD EXPANSION
108 MADISON OAKS AVE.
CITY OF GEORGETOWN
WILLIAMSON COUNTY, TX

84 LUMBER
1019 ROUTE 519
EIGHTY FOUR, PA 15330
(724) 228-3636

REVISION	DATE	DESCRIPTION

PROJECT NO. 23003
DRAWN BY: GMW
CHECKED BY: JDL
DATE: FEBRUARY 2023
CAD FILE NAME: 19106 E100

SHEET NUMBER
E100
8

Schedule

Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	Plot
▭	1		14	TCP		FCWUZD82T340K	1	10228	0.95	83	
▯•	2		7	TCP	TALUZDA3T3F40KBR	TALUZDA3T3 – 150W	1	20054	0.95	146.348	

Statistics

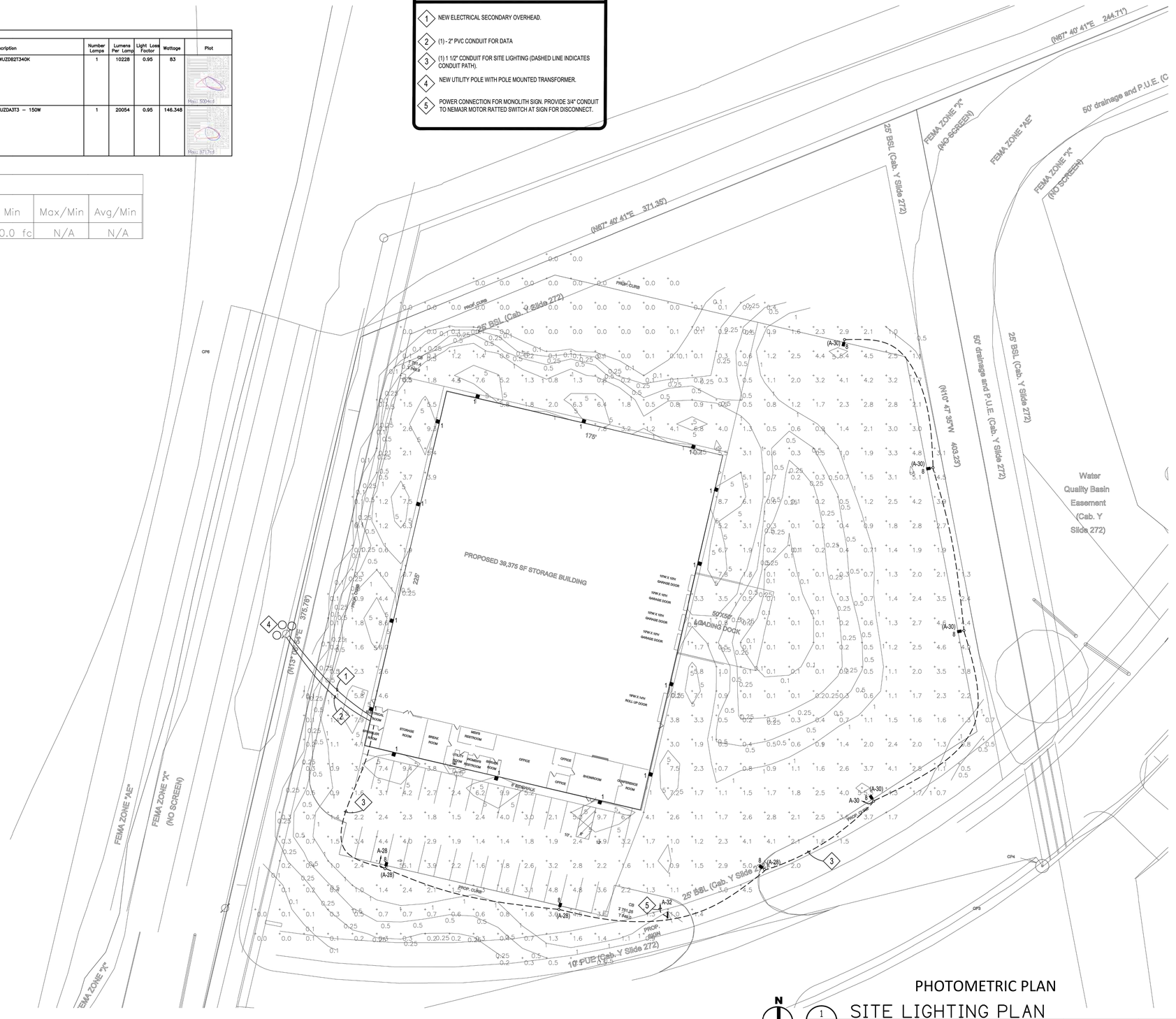
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #2	+	1.8 fc	9.9 fc	0.0 fc	N/A	N/A

FIXTURE 1
TCP
FCWUZD82T340KBRPC
WALL MOUNT 16'-0"

FIXTURE 2
TCP
TALUZDA3T3-150W
WALL MOUNT 30'-0" POLE

KEY NOTES

1. NEW ELECTRICAL SECONDARY OVERHEAD.
2. (1) - 2" PVC CONDUIT FOR DATA
3. (1) 1 1/2" CONDUIT FOR SITE LIGHTING (DASHED LINE INDICATES CONDUIT PATH).
4. NEW UTILITY POLE WITH POLE MOUNTED TRANSFORMER.
5. POWER CONNECTION FOR MONOLITH SIGN. PROVIDE 3/4" CONDUIT TO NEMA3R MOTOR RATTED SWITCH AT SIGN FOR DISCONNECT.



PHOTOMETRIC PLAN

N

1 / E100 SITE LIGHTING PLAN
SCALE: 1" = 30'-0"

STATE OF TEXAS
JOSEPH D. LEGGE
95306
LICENSED
PROFESSIONAL ENGINEER
02-28-23

CLA
Corbett Legge & Associates, PLLC
Mechanical & Electrical Engineers
Tyler, TX # F-6568
431 W. Main St. | Suite 101 | P.O. Box 7370 (38802) | Tupelo, MS 38804 | 662.844.7114

YARD EXPANSION
108 MADISON OAKS AVE.
CITY OF GEORGETOWN
WILLIAMSON COUNTY, TX

84 LUMBER
1019 ROUTE 519
EIGHTY FOUR, PA 15330
(724) 228-3636

REVISION	DATE	DESCRIPTION

PROJECT NO. 23003
DRAWN BY: GMW
CHECKED BY: JDL
DATE: FEBRUARY 2023
CAD FILE NAME: 19106 E100

SHEET NUMBER
E100
9

GENERAL CONSTRUCTION NOTES

1. These drawings and documents are submitted to the Owner of the project for review and approval prior to any release for bidding or construction. Contractors shall receive all bid information, instructions, bid forms, general terms and conditions, and all other required clarification from the Owner's Authorized Representative administering this project. Unless otherwise indicated, the Owner's Representative for this project shall be a specifically designated Landscape Architect from SEC Planning. The contractor will also be required to coordinate and correspond with the Landscape Architect from SEC Planning and key consultants for the Owner.

2. These drawings supplement other contractual information which includes Bid Instructions and Project Specifications. Anything mentioned in the Project Specifications and not in the drawings, or vice-versa, shall be of like effect as if shown on or mentioned in both. In case of a discrepancy between Drawings or Project Specifications, the matter shall be immediately submitted to the Owners Representative; without his decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense. The contractor shall not take advantage of any apparent error or omission on the Drawings or in the Specifications. In the event the Contractor discovers such error or omission, they shall immediately notify the Owner's Representative. The Owner's Representative will then make such clarification and interpretations as may be deemed necessary for the Contractor to fulfill the intent of the Contract.

3. The intent of these drawings, details and associated specifications is for the Contractor to provide the Owner with a complete, accurate, functionally and technically sound project as generally described in these documents. In most cases, unless explicitly noted otherwise, drawing symbols are used to represent complete-in-place systems to be provided as part of the base bid. All elements shown or implied by the drawings, if not specifically detailed or specified, shall be installed per building codes, manufacturer's recommendations, state highway department standards, city standards and specifications and standard industry practices.

4. All plan quantities provided are approximate only. The Contractor is responsible for their own plan take-off's and accuracy of their bid based on actual site conditions. The contractor shall not take advantage of any apparent error or omission on the Drawings or in the Specifications. In the event the Contractor discovers such error or omission, they shall immediately notify the Owner's Representative. The Owner's Representative will then make such clarification and interpretations as may be deemed necessary for the Contractor to fulfill the intent of the Contract.

5. All work within this project shall conform to current local codes, ordinances, as well as all other applicable governing regulations in effect.

6. All range points, ties, benchmarks or other survey control points which may be encountered during construction, must be preserved or modified/recorded by a registered surveyor at the Contractor's expense. Immediately upon discovery, the Contractor shall notify the Owner's Representative of any survey control points found and obtain direction prior to proceeding with construction.

7. The Contractor shall coordinate and obtain all permits which are necessary to perform the proposed work. Owner is to pay for all construction permits unless otherwise indicated in the Contract Documents. Contractor shall obtain, at his expense, all specialty permits needed for specific items included with the work, unless otherwise indicated in the Contract Documents. Should the Contractor commence work, prior to obtaining the required permits or jurisdictional approvals, the Contractor shall be responsible corrections, modifications, replacement or removal of the non-permitted work.

8. It is the Contractor's responsibility to be aware of and comply with all notifications and inspection requirements of the Jurisdiction.

9. Unless specifically noted otherwise in the Contract Documents, the Contractor shall obtain and coordinate all technical tests and reports by a certified independent laboratory or agency as outlined in the Specifications or these Drawings. The Owner may, at the Owner's sole discretion, provide separate testing and/or inspection service and the Contractor is required to fully coordinate with those consultants/contractors. Owner is to pay for all soils and materials testing.

10. An Existing Condition Survey may have been provided to the Owner by registered surveyors under separate contracts for the basis of design. It is not to be considered as part of these Contract Documents. If provided, these survey plans may have been reformatted and included in these documents. The Contractor is required to visit the site to verify information. Without exception, any deviations or omissions found between these plans and existing site conditions shall immediately be brought to the attention of the Owner's Representative, but will not be considered as basis for additional payment except as allowed in change order process per General Conditions and Supplementary Conditions under the "Owner-Contractor Agreements/Contracts. For official survey information, Contractor may wish to contact the Owner, or Owner's surveyor at the Contractors expense.

11. Existing utility information and utility information for proposed work by others that is shown in these documents is approximate and for general information only. It is not intended to depict exact locations of all utilities. The Contractor shall notify all utility companies to stake and field verify the locations including depths of all utilities (existing, proposed by others, or currently under construction), prior to commencing any related operations. Contractor shall maintain utility locations/structures during all remaining phases of work. The Contractor shall report to the Owner's Representative any utilities that may conflict with proposed work. This Contractor shall explore, understand, and coordinate (with subcontractors and others) all utilities impacts prior to submitting bid and shall be responsible for any modifications or damages to utility lines, structures or injuries therefrom. For existing utility information contact Texas 811. A minimum notice of 3 business days in advance of locational needs is required.

12. These drawings do not specify safety materials, staffing, equipment, methods or sequencing to protect persons and property. It shall be the Contractor's sole responsibility to direct and implement safety operations, staffing, procedures to protect the Owner and his representatives, new improvements, property, other contractors, the public and others.

13. The Contractor shall meet periodically with the Owner's Representative to determine marshalling areas, on-site storage, and contractor staff parking and to coordinate security issues, construction sequencing/phasing, scheduling, and maintaining public, emergency, handicapped or operations access before starting the related work. The Contractor shall meet any "Construction Criteria" or requirements shown on any Contract Documents, phasing plans or any imposed plan by the Owner as a part of the Base Bid.

14. Some work in this Contract may occur concurrent with work by others. Phasing, sequencing and coordination, with work by others, and on-going facility operations in and around the site area, is a part of the scope of work for this project. Notice to proceed with work in any general area shall be obtained from the Owner.

15. The Contractor will be required to complete all the work of this project according to these proposed drawings or subsequent clarification. A strict period of performance, including dates of substantial completion (for all and/or portions) and liquidation damages may be an integral element of the Contract.

16. Any site improvements requiring removal under this contract shall be properly and legally disposed off-site or, at the Owner's option, surrendered/stockpiled in an approved on-site location per the direction of the Owner or Owner's Representative.

17. The Contractor is required to maintain a complete and "up-to-date" set of all Contract Documents, including clarifications, change orders, etc., in good condition, at the construction site at all times. This set of documents will be made immediately available for review by the Owner's Representative and/or authorized Consultants upon request. Complete "As-Built" drawings and document submittals are also a requirement of this contract.

18. Maintenance, warranties and performance guarantees may be a requirement of this contract - see specifications.

19. Notes and details on specific drawings shall take precedence over general notes and typical details. The Contractor shall refer to all other Division Notes, Sheets Notes, Drawings and Project Contract Documents for additional information.

20. Contractor shall refer to other related drawings for all other related improvements that will impact this project and require coordination. Drawings may be made available to the Contractors at request.

TREE PROTECTION NOTE

1. All existing trees shall be protected from construction activities within construction zone. During which time, the use of a silt or chain link fence is required around each singular or group of protected trees. Parking of construction vehicles, equipment, and stockpiles within tree root zones is strictly prohibited. Contractor shall be responsible for any damage incurred to existing trees, including replacement, fees, fines or reimbursement to owner for said damages and, or to the City or Jurisdiction with governing authority per the Tree Ordinance.

OAK WILT PREVENTION NOTE

1. If Oak Wilt is found on site within work zone, owner must be notified and the following procedures must be followed in accordance with USDA standards, (http://www.na.fs.fed.us) including disinfecting construction removal devices, tree removal and treatment to prevent development of spore mats. These treatments include debarking, chipping and drying the wood, covering dead wood with plastic, burying the edges for six months and air drying for a similar amount of time to kill fungus and associated insects off site at state designated facility.

SIDEWALK NOTES:

1. Layout of concrete walkways shall be staked in the field and review by the Owner or Owner's Representative prior to construction. At that time walk may be adjusted as needed, using the Hardscape Plan as a guide. All grades and layout shall be confirmed prior to construction. Notify Owner and Owner's Representative of any conflicts or deviations to the issued plans.

2. All pedestrian paths shall be in compliance with all current Texas Accessibility Standards (T.A.S.) and ADA standards.

3. All walkway grades shall have a running slope of no greater than 4.7% (1:21) and a cross-slope that is not greater than 1.5% (1:66).

4. Slopes at or between 5.0% (1:20) and 8.3% (1:12) must have hand rails on both sides with ADA compliant level landings, and cross-slopes shall not exceed 1.5% (1:66).

HARDSCAPE LAYOUT AND INSTALLATION

1. All work shown shall be field staked and subject to field verification, review and approval by the Owner or Owner's Representative prior to any constructions or demolition. Field staking of all proposed work and adjacent construction (even if future work by others) may be required by the Owner's Representative prior to approval of all improvements and adequate stakes shall be provided by Contractor's surveyor.

2. To expedite, the layout of the site layout coordinates and/or grids may have been established in the Drawings. These points shall be field staked by the Contractor's surveyor as a part of this contract. The establishment of these points shall be approved by the Owner's Representative prior to any construction in those areas and will assist the Contractor in the layout of all site improvements as shown on drawing or otherwise.

3. The construction tolerances for this project are minimal and the dimensions shown are to be strictly adhered to.

4. Computed dimensions shall take precedence over scaled dimensions. Large scale drawings shall take precedence over small scale drawings. Dimensions shown with (+/-) shall be the only layout information allowed to vary, and may only vary to the tolerances given.

5. The Contractor is responsible to provide complete-in-place systems, and a complete project. Any intermittent or periodic approvals received for portions of work, stakes, grades, or forms (by the Owner or Owner's Representative, Architects, Engineers, or others) shall not waive the Contractor's requirements to comply with the intent of any and all portions of this contract.

6. All locations for walks, roads, swales, walls, curbs, structures etc. shall be staked by the Contractor. All layout information is based on ground coordinates and the Contractor shall meet with the owner's surveyors and engineers to clarify all datum, benchmark and control point requirements. Specific layout information will be provided to the Contractor by the Owner's Representative in AutoCAD (.dwg) format when requested.

7. It is the intent and requirement of this contract to provide curvilinear walks, walls and curbs with smooth transitions and arcs (both horizontal and vertical). Straight segments and abrupt transitions will not be accepted unless shown as such on the plans. Wood curving forms may be required to obtain the proper effects.

8. Hardscape improvements that are to be constructed per the drawings, shall be coordinated on site with the Owner's Representative, and be field staked or painted for approval of layout by the Owner's Representative prior to installation. Notify the Owner's Representative a minimum of 24 hours in advance for review. Improvements installed without field approval by Owner's Representative may be rejected and will be replaced at Contractors expense. At the time of staking, the Contractor shall confirm the quantity of the improvements match the approved contract. In the event the Contractor discovers such a discrepancy, he shall immediately notify the Owner's or Owner's Representative for direction on how to proceed, prior to commencing work.

9. All lot fencing or lot screen walls shall be placed on the property line or property boundary. Contractor shall confirm final location by field staking, to be reviewed by the Owner or Owner's Representative prior to construction.

10. Rock gravel, rock mulch, synthetic mulch should be installed over weed barrier fabric. Weed barrier fabric should overlap edges a minimum of 6".

GRADING NOTES

1. The Contractor shall obtain and review the Summary Report and Recommendations prepared by the geotechnical engineers and fully understand the existing soil conditions encountered prior to submitting bid. The Contractor shall comply with all recommendations made by the geotechnical engineers, civil engineers, structural engineers and Owner's Representative, as designated in the soil report, on these drawings, specified, or as directed during field observations and inspections.

2. All earthwork operations will be subject to full inspection and regular testing by a qualified soils and materials engineer and this Contractor shall be responsible to coordinate scheduling, notification and procuring test results and documentation as required. The Contractor shall notify the Owner's Representative of any subsoil conditions encountered, which vary from those found during previous soil investigations and/or that may not have been known during design. Any failed tests which must be retested will be a Contractor's expense.

3. All earthwork operations shall be conducted in strict compliance with the project specifications including but not limited to:

   a. Full locating, investigating and protection of ALL existing utilities to remain.
   b. Removal of any organic materials or debris.
   c. Stripping and stockpiling of all topsoil in approved location(s).
   d. Removal of all unstable fill materials encountered.
   e. Scarification and re-compaction to the minimum depth as specified and/or directed within all areas to receive fill, pavements or structures.
   f. All classifications of "excavation" as required to meet proposed lines, grades, typical cross sections and improvement elevations.
   g. Placement, shaping, and structural compaction of all classifications of "fill" or "embankment" as required to meet proposed lines, grades, typical cross sections and improvement elevations.
   h. Providing dewatering, optimum moisture control, climate protection, dust control, erosion control and all other specified treatments.
   i. Replacement of topsoil after grading changes have been accomplished.

4. See, and comply with, all specifications for depth of moisture density treatments, controls and compaction requirements.

5. These grading plans are intended to show vertical control of the site and are based upon the benchmarks, existing elevations and topography as provided by the Owner's surveyor. However, the Contractor, upon submittal of bid, agrees to accept the site grades and make all adjustments required to accomplish the work as proposed. Additionally proposed design elevations for adjacent construction projects may have to be incorporated if necessary. (Construction drawings for work by others, if applicable, are available upon request). Staking of future adjacent improvements, by this contract phase or by others, may be required if directed by the Owner's Representative to ensure proper coordination and requested staking is to be provided as part of this Base Bid.

6. This Contractor shall verify all existing grades to remain and all adjacent new construction grades for compliance with those shown, prior to bid and construction. All deviations or conflicts with proposed work shall be reported immediately (with follow-up written) notice within 24 hours to the Owner's Representative for direction to proceed, but will not be considered as basis for additional payment except as allowed in change order process per General Conditions and Supplementary Conditions under the existing "Owner-Contractor Agreements/Contracts".

7. The plans may call for specific temporary benchmarks to be transferred to the site by a certified surveyor and accurately established on site as a part of this contract. Contractor shall verify all benchmarks and information used in design and compare to existing conditions.

8. It is this Contractor's responsibility to provide proper positive drainage throughout this contract area. Field conditions shall be verified in conjunction with the proposed elevations to ensure that adequate drainage is provided. Report deviations or conflicts to Owner's Representative. Unless otherwise indicated, minimum slope for paved surfaces shall be 1% and minimum slope for non-paved areas shall be 2%. Slope away from all structures shall be 3% minimum, for a distance of 5' minimum. Maximum ground slopes to be 4' horizontal to 1' vertical, unless otherwise approved in advance.

9. All design elevations shown are "finished grades" unless otherwise indicated. Contractors shall refer to drawings, details and specifications regarding depth of sub-grade materials required to construct project improvements.

10. All topsoil and/or drainage way muck excavation shall be saved and stockpiled in approved locations for future use.

LIGHTING

1. Landscape lighting system is to be installed by a licensed electrician with documented experience in installing lighting systems of similar scope within the last two years. The Contractor is to supply a complete lighting system including all associated equipment such as conduit, weather proof and/or water proof junction boxes, ballasts, connectors, harnesses, time clocks, photocells, etc.

2. The Contractor shall review proposed layout of lighting system and all related equipment locations with the Owner or Owner's Representative prior to commencing installation.

3. After installation the Contractor will be required to adjust light fixtures until the Owner's Representative is satisfied with the desired effect. This will require the Contractor and/or the Contractor's electrician to meet with the Owner and Owner's Representative after sunset. This adjustment is to be included in the base Bid amount.

4. The Contractor shall provide a two year warranty on all equipment including lamps, ballasts and installation.

5. Independent ballasts, if required, shall be "ganged" in an inconspicuous, accessible location in a horizontal, weatherproof box or tray near ground level. Mounting of ballast in trees will not be allowed without written authorization from the Owner's Representative.

6. All exposed boxes, trays, conduit, etc. shall be painted by the contractor to blend in with surrounding landscape elements.

7. All equipment shall be U.L. listed and installation shall comply with N.E.C. and all other applicable codes.

8. All lights are to be controlled by a photocell on and timer off system unless specified otherwise on the drawings.

9. All wire run underground must be in rigid conduit.

10. Plan layout of underground wiring to minimize disturbance to the roots of existing trees. If underground wiring must pass through the critical root zone of protected trees, trenching and related work must be preformed by hand. No mechanical trenching is permitted within the Critical Root Zone.

11. Tree lighting (if applicable):
    a) Install Karlock (or equal) flexible conduit from base of tree to a minimum eight foot height above ground. At the end of the conduit install a waterproof hub (for single cable) or W-P bell box for multiple cables. Paint conduit and box to match tree trunk. Use SJTO electrical cord from conduit to light fixture. Attach cord to tree using long galvanized cord staples or other approved method. Provide a 36" loop of extra cord at the light fixture to allow for light adjustment and tree growth.
    b) Attach light fixtures to trees utilizing galvanized mounting plates drilled for hub connection with a minimum of two mounting screws. Mounting screws are to be ¼-20 threads x 5" length (one end wood screw threads and the other end bolt threads). Install at least two inches of thread into tree and install with at least two inches between tree and mounting plate.
    c) All tree downlights are to be mounted in the top third of the tree canopy.
    d) All fixtures are to be located, adjusted as needed and shielded to prevent glare, light trespass on to adjacent properties or Rights-of-way.

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02/17/2023

LANDSCAPE IMPROVEMENT PLANS

84 LUMBER OFFICE / WAREHOUSE

GEORGETOWN , TEXAS 78626

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Reviewed By: BD

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STEG-230002

CONSTRUCTION NOTES

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LN-1 _____ of _____

GENERAL PLANTING NOTES

1. Contractor shall be responsible for becoming aware of all related existing conditions, utilities, pipes and structures, etc. prior to bidding and construction. The Contractor shall be held responsible for contacting all utility companies for field location of all underground utility lines, including depths, prior to any excavation. The Contractor shall notify the Owner's representative of apparent conflicts with construction and utilities so that adjustments can be planned prior to installation. Contractor shall take sole responsibility for any and all cost or other liabilities incurred due to damage of said utilities/structures/etc.
2. The Contractor shall not willfully proceed with construction as designed when it is apparent that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Owner's Representative for clarification. The Contractor shall assume full responsibility for all liabilities, including necessary revisions due to failure to give such notification.
3. Contractor shall be responsible for coordination with subcontractors and other contractors of related trades as required to accomplish the planting and related operations.
4. The acceptable tolerances for this project are minimal and specific layout is required as shown on the layout, planting and other plans. Final location and staking of all plant materials shall be accepted by the Owner's Representative in advance of plantings.
5. Coordinate installation of all plant material with installation of all adjacent irrigation, pavements, curb and related structures. Any damage to existing improvements is the responsibility of the Contractor.
6. Contractor shall notify Owner's Representative 48 hours prior to commencement of work to coordinate project inspection schedules.
7. The Contractor shall take all necessary scheduling and other precautions to avoid climatic damage to plants. A "planting" of specific calendar days is required to be submitted by the Contractor for approval and planting operations should occur per this approved schedule.
8. If conflicts arise between size of areas and plans, Contractor is required to contact Owner's Representative for resolution. Failure to make such conflicts known to the Owner's Representative will result in Contractor's liability to relocate the materials.
9. Plant names may be abbreviated on the drawings. See plant legend for symbols, abbreviations, botanical/common names, sizes, estimated quantities (if given) and other remarks.
10. It is the Contractor's responsibility to furnish all plant materials free of pests or plant diseases. Pre-selected or "tagged" material must be inspected by the Contractor and certified pest and disease free. It is the Contractor's obligation to maintain and warranty all plant materials per the specifications. All plants shall be subject to Owner's approval prior to installation.
11. Where provided, area takeoffs and plant quantity estimates in plant list are for information only. Contractor is responsible to do their own quantity take-offs for all plant materials and sizes shown on plans. In case of any discrepancies, plans take precedence over call-outs and/or the plant list(s).
12. Contractor shall provide "per-unit costs" for every size of plant material, and by type, as called out on Planting Plans in the Bid Proposal. Unit cost to include the plant material itself and installation, including all labor, amendments, fertilizers, warranty, etc., as detailed and specified for each size, "complete in place".
13. The Contractor is responsible to restore all areas of the site, or adjacent areas, where disturbed by operations of or related to the Contractor's work. Sod areas disturbed shall be restored with new sod. Native areas disturbed, if not already improved to meet other requirements of this contract, shall be restored consistent with type, rates and species of existing condition.
14. During plant establishment, native and wetland areas shall be protected from sedimentation and erosion. Prior to construction activities, native and wetland areas outside of the project limits shall be protected with silt fence.
15. When planting trees and shrubs in existing natural areas, minimize disturbance to adjacent existing vegetation.
16. No Ball & Burlap (B&B) material will be allowed or accepted unless specifically specified.
17. All plants shall be nursery grown, Grade 1 plants meeting American Nursery and Landscape Association (ANLA) standards set forth in the "American Standard for Nursery Stock" (ANSI Z60.1-2004). Plants are to be typical in shape and size for species. Plants shall not be root-bound or loose in their containers. Handle all plants with care in transporting, planting and maintenance until inspection and final acceptance.
18. Warranty: Provide a one-year replacement warranty for all plant materials. Warranty shall cover plants which have died or partially died (thereby ruining their natural shape), but shall not include damage by vandalism, browsing, hail, abnormal freezes, drought or negligence by the Owner. The Warranty is intended to cover Contractor negligence, infestations, disease and damage or shock to plants. Plants replaced under Warranty will be warranted for one year following replacement.

PLANTING LAYOUT AND INSTALLATION

1. The Contractor shall be responsible for accurately laying out the plant beds and lawn areas by scaling the Drawings. The Contractor shall provide paint lines/stakes/hose or other means to fully indicate the specific layout geometry of all bed lines for approval by Owner's Representative prior to installation. The Contractor's Base Bid shall anticipate minor adjustments as directed by the Landscape Architect in the field. Changes affecting quantities will be covered by unit prices.
2. Following the approval of layout, the Contractor shall closely coordinate the installation of the irrigation system to conform to the approved layout.
3. All planting beds are to be separated from adjacent Turf Sod, Turf Seed and Native Seed areas with edging per specifications and details. Additional locations may be indicated on the Drawings. Install edging following manufacture's installation instructions. Maintain an accurate layout with smooth curves and transitions, free of kinks and abrupt bends. Top of edging is to be 1" above soil level of adjacent turf. In Bid Proposal furnish a unit price per linear foot of edging installed.
4. Provide matching sizes and forms for all species of trees and plants installed on grid or spaced equally in rows as shown on drawings. Adjust spacing (to "equal-equal") as necessary, subject to acceptance by the Owner's Representative.
5. Unless otherwise indicated:

   a. All groupings of groundcovers, perennials, ornamental grasses and annuals shall be triangularly spaced (equal-equal).
   b. All planting areas including sod, seed and planting beds, shall receive soil amendments per the notes and specifications.
   c. Sodded lawn shall have been grown between 9 and 18 months and shall be vigorous, well-rooted and healthy turf. Minimum thatch thickness shall be ¾".
   d. All gravel areas or rock mulches should be installed over weed barrier fabric. Edges of weed barrier should overlap minimum 6".
   e. All bulb planting shall occur after mid-October and before ground is frozen. See details for bulb planting layout.
6. All Plant Beds and pit planted plants shall receive a 3" depth layer of shredded hardwood mulch. Refer to plans, details and specifications for location and type of any alternate mulch used. In Bid Proposal furnish a unit price(s) per cubic yard of mulch(es) placed. This unit price(s) will be used in the adjustment of bed areas.
7. Planting pits for 1 and 5 gallon shrubs shall be at least 8" larger in diameter than the container size. Larger container sizes and B&B plants shall be planted in pits at least 3 times larger in diameter than the root ball size.
8. Plants shall be installed to present their best side facing the viewer.
9. Owner's representative shall have final approval of plant material layout.

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	CONTAINER	CALIPER	HT/SPD	WATER USE	NOTES		REMARKS
QUMU	9	Quercus muehlenbergii / Chinkapin Oak	Container Grown	3"Cal	12-15 H X 8 Spd	M			
QUVI	7	Quercus virginiana / Southern Live Oak	Container Grown	3"Cal	12-15 H X 8 Spd	L	Must be from a Single Root Stock		
ULCR	9	Ulmus crassifolia / Cedar Elm	Container Grown	3"Cal	12-15 H X 8 Spd	M	Must be from a Single Root Stock		
ORNAMENTAL TREES	QTY	BOTANICAL / COMMON NAME	CONTAINER	CALIPER	HT/SPD	WATER USE	NOTES		REMARKS
MYCE	18	Myrica cerifera / Wax Myrtle	30 gal, cont. grwn		8 H X 4 Spd	H	Must be from a Single Root Stock		
SHRUBS	QTY	BOTANICAL / COMMON NAME	CONTAINER	CONTAINER SIZE	NOTES	WATER USE			
DIBI	55	Dietes bicolor / Fortnight Lily	Container Grown	5 gallon	Full to Ground	L			
ILVN	67	Ilex vomitoria Nana / Dwarf Yaupon	Container Grown	5 gallon	Full to Ground	L			
GRASSES	QTY	BOTANICAL / COMMON NAME	CONTAINER	CONTAINER SIZE	NOTES	WATER USE			
STTE	61	Stipa tenuissima / Mexican Feathergrass	Container Grown	1 gallon	Full	L			

TURF GRASS/ PLANT BEDS

NAME	TOTAL	UNITS	DESCRIPTION	
Plant Bed	1,506	sf		
	28	cy	Planting mix	6" depth (Pro-Gro Soil Mix by Whittlesey Landscape Supply or approved equal)
	14	cy	Mulch	3" Depth (Native Hardwood Mulch)
Cynodon dactylon 'Tif 419' / Bermuda Grass	37,895	sf		*Cynodon dactylon "TIFWAY 419"*
	4,211	sy	Turf Sod	Bermuda T419
	468	cy	Top Soil	4" Depth (75% Chocolate Loam / 25% Compost)
Cynodon dactylon / Bermuda Seed Hydromulch	32,407	sf		*Cynodon dactylon*
	3,601	sy	Turf Seed	Common Bermuda
	200	cy	Top Soil	2" Depth (Chocolate Loam)

MISCELANEOUS

NAME	TOTAL	UNITS	DESCRIPTION	COMMENTS
Steel Edging	652	lf	3/16" thick; Brown	
Mulch Bed	65	cy	3" Depth texas Hardwood	
Concrete Wall	187	lf	Per Detail, See Sheet LPD-1.0	

84 Lumber Office / Warehouse
Georgetown, TX

LANDSCAPE CALCULATIONS

Streetyard Landscaping				
Total Streetyard Area			55010	sf
Streetyard Landscape Area Required	(20% of Total)	(55010*.02)	1100	sf
Streetyard Landscape Area Provided			1129	sf
Shade Trees Required	(4 per 10,000 sf + 1.5 per 10,000 sf)		11	sf
Shade Trees Provided			12	sf
Shrubs Required	(12 per 10,000 sf + 4 per 10,000 sf)		30	sf
Shrubs Provided			183	sf
Parking Lot Landscaping				
Parking Stalls Between Building and R.O.W.			32	
Pervious Landscape Area Required	(20 sf per stall)	(32*20)	640	sf
Pervious Landscape Area Provided			692	sf
Parking Stalls NOT Between Building and R.O.W.			16	
Pervious Landscape Area Required	(10 sf per stall)	(16*10)	160	sf
Pervious Landscape Area Provided			377	sf
Shade Trees Required	(1 per 12 parking stalls)	((32+16)/12)	4	
Shade Trees Provided			4	
Bufferyard Landscaping				
Site Zoning Designation			IN	
Adjacent Property Zoning Designation (East)			AG	
	221.01 lf			
Level of Bufferyard Required			Level e, High	
Shade Trees Required	(2 tree per 50 lf, 221 lf)	4.42	9	
Shade Trees Provided			9	
Evergreen Ornamental Trees Required	(4 trees per 50 lf, 221 lf)	4.42	18	
Evergreen Ornamental Trees Provided			18	
Evergreen Shrubs Required	(0 shrubs per 50 lf, 221 lf)		N/A	
Evergreen Shrubs Provided			N/A	

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BENEDICT P. DEBOER
2890
STATE OF TEXAS

02/17/2023

LANDSCAPE IMPROVEMENT PLANS
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GEORGETOWN, TEXAS 78626

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Reviewed By: BD

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PLANTING NOTES

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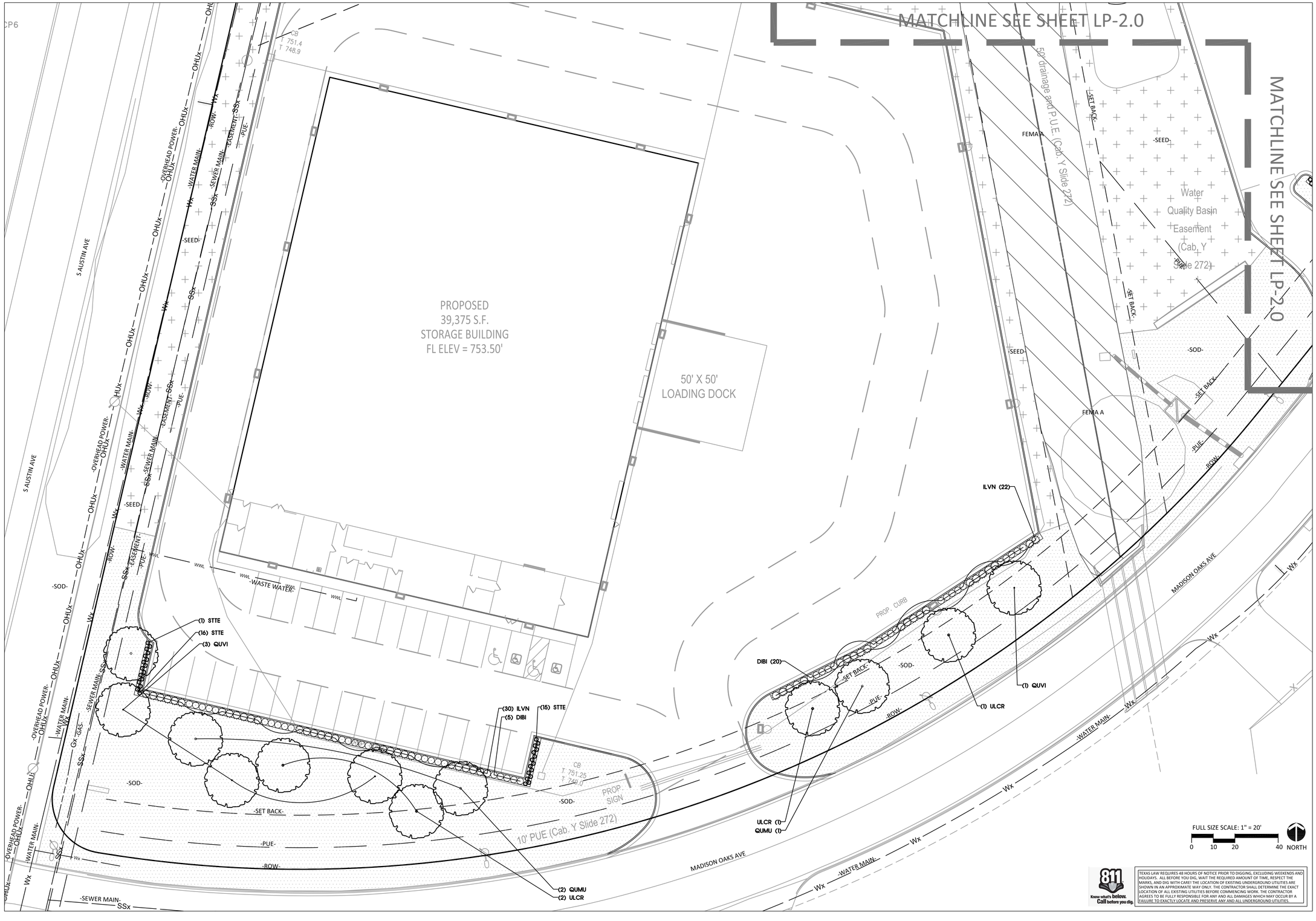

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PLANTING PLAN

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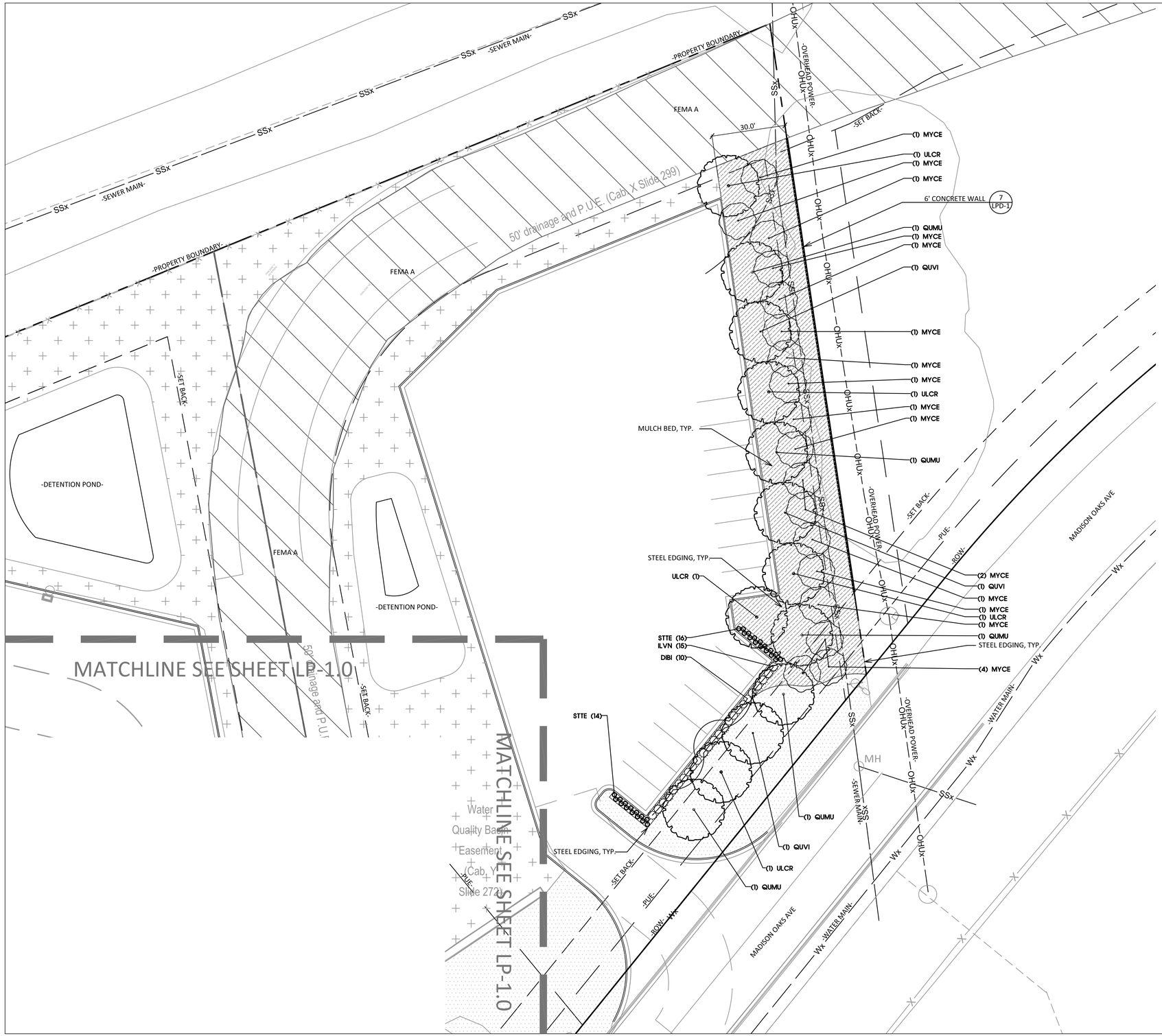

FULL SIZE SCALE: 1" = 20'

0 10 20 40 NORTH

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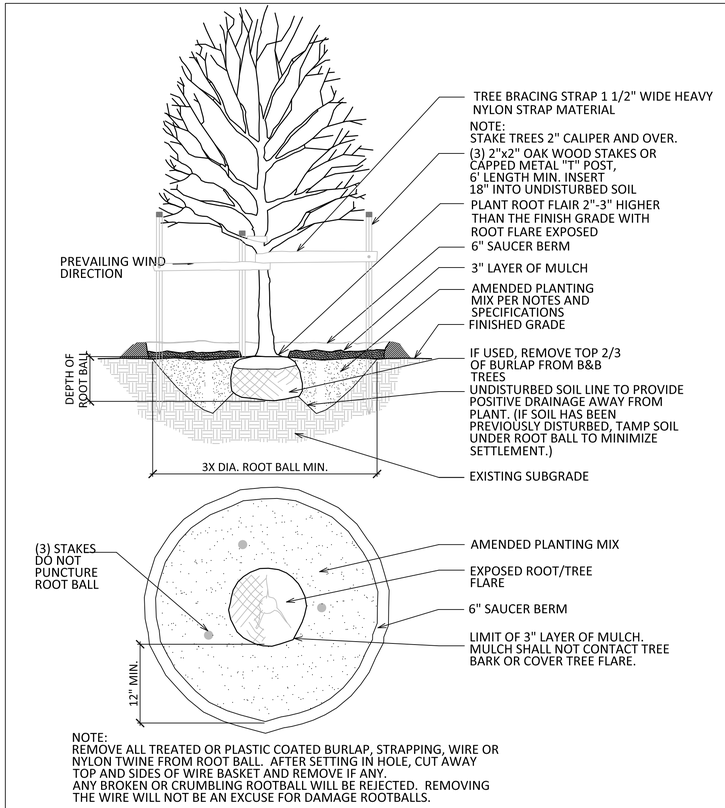
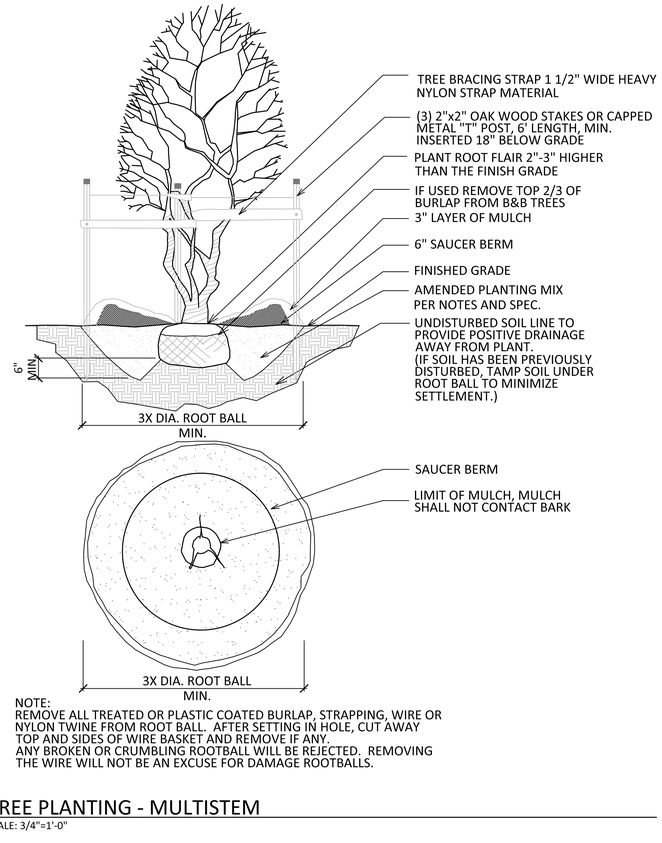
PLANTING PLAN

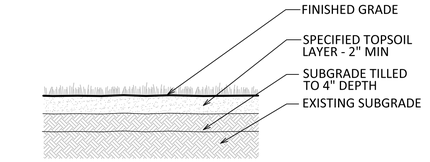
Sheet No.
LP-2.0 _____ of _____



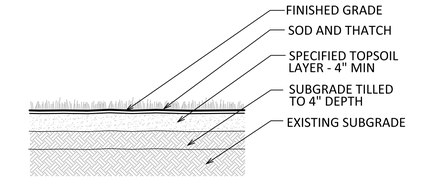
1 TREE PLANTING
SCALE: 3/4"=1'-0"



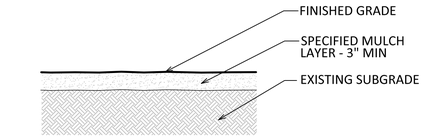
2 TREE PLANTING - MULTISTEM
SCALE: 3/4"=1'-0"



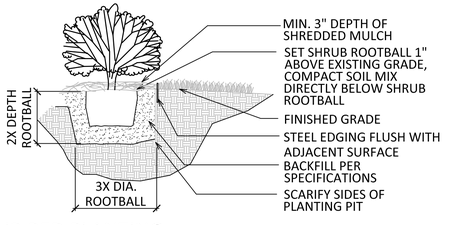
3 TURF SEEDED AREA
SCALE: 1/2"=1'-0"



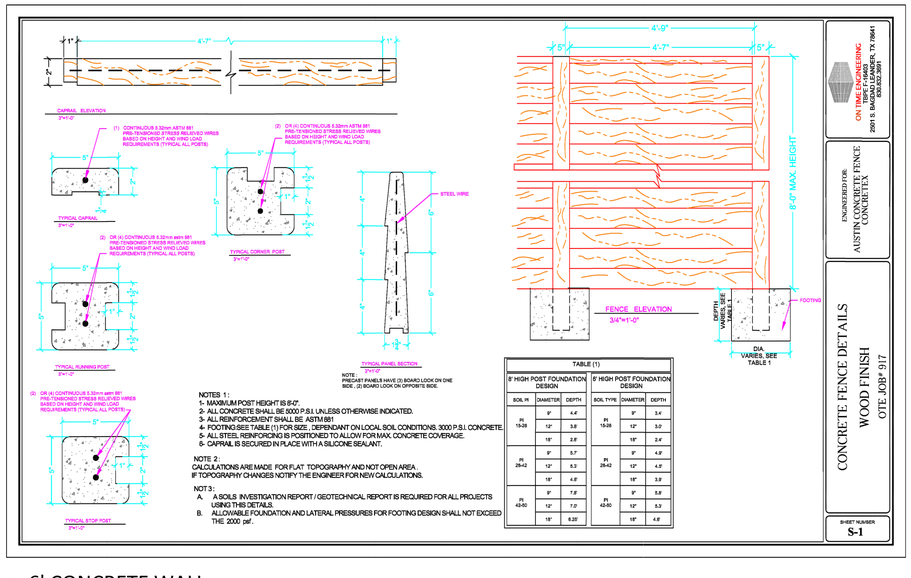
4 TURF SODDED AREA
SCALE: 1/2"=1'-0"



5 MULCH BED
SCALE: 1/2"=1'-0"



6 SHRUB BED PLANTING
SCALE: 1/2"=1'-0"



7 6' CONCRETE WALL
SCALE: NTS

SEC Planning, LLC
LANDSCAPE ARCHITECTURE
LAND PLANNING
4201 W. Parmer Lane Bldg A Suite 220
Austin, TX 78727
T 512.246.7003
www.secplanning.com
info@secplanning.com

STEGER BIZZELL
1987 S. AUSTIN AVENUE
GEORGETOWN, TX 78626
T: 512.930.9412

REVIEW ONLY
NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

PRODUCED UNDER THE SUPERVISION OF
BEN DEBELLIS
TX PLA #2690

02/20/2023

LANDSCAPE IMPROVEMENT PLANS
84 LUMBER OFFICE / WAREHOUSE
GEORGETOWN , TEXAS 78626

Drawing File Name
K:\230002-STEG\Cadfiles\LA\Sheets\LPD-1.0.dwg

Issued:
1. CITY SUBMITTAL 02/20/2023
2.
3.
4.
5.

Revisions:
1.
2.
3.
4.
5.

Issue Date: 02/20/2023

Drawn By: JL
Reviewed By: BD

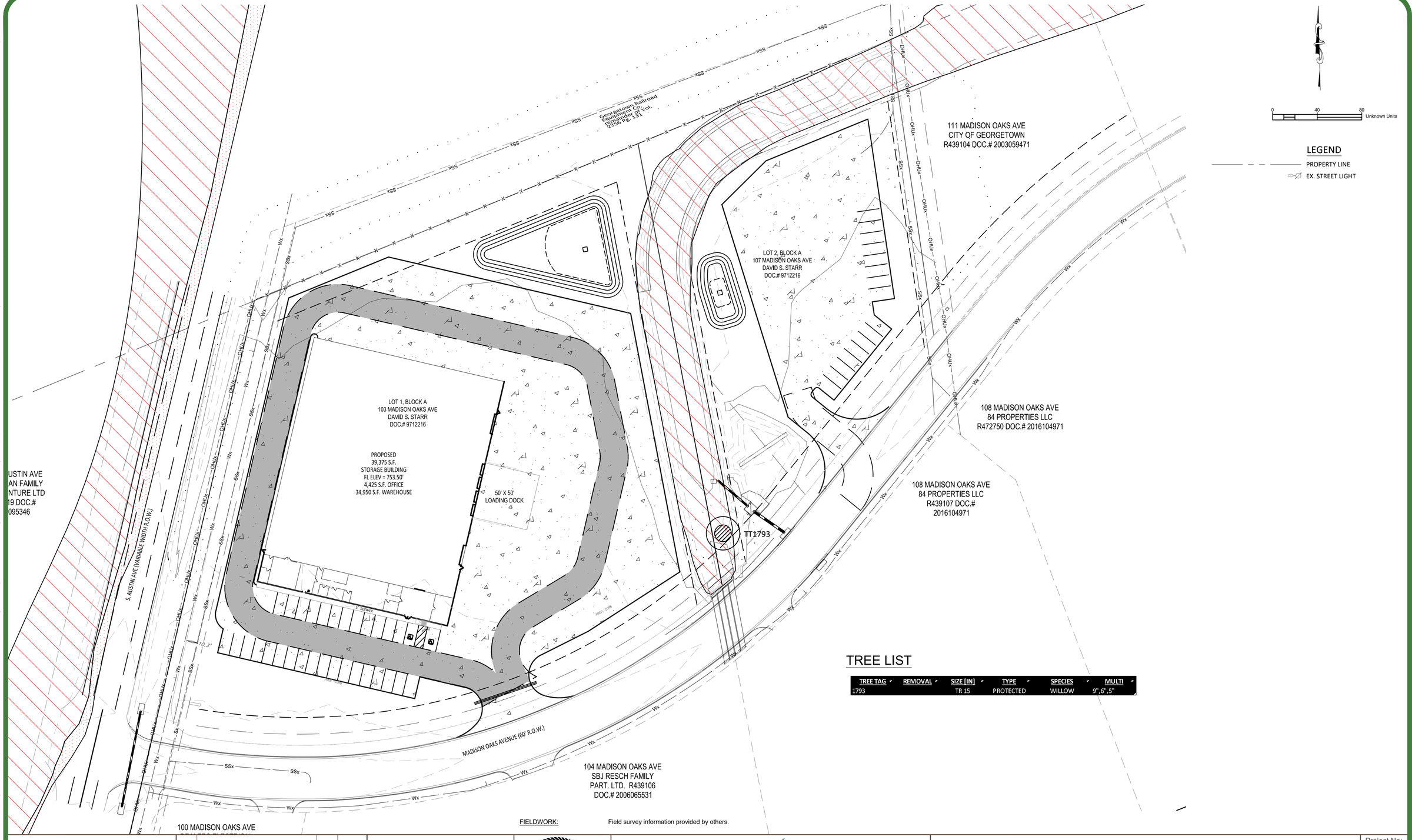
Project No.
STEG-230002

PLATING DETAILS

Sheet No.
LPD-1 _____ of _____

TEXAS LAW REQUIRES 48 HOURS OF NOTICE PRIOR TO DIGGING, EXCLUDING WEEKENDS AND HOLIDAYS. ALL BEFORE YOU DIG, WAIT THE REQUIRED AMOUNT OF TIME, RESPECT THE MARKS, AND DIG WITH CARE! THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY OCCUR BY A FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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



TREE LIST

TREE TAG	REMOVAL	SIZE [IN]	TYPE	SPECIES	MULTI
1793		TR 15	PROTECTED	WILLOW	9",6",5"

FIELDWORK: Field survey information provided by others.

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED
PROFESSIONAL ENGINEER
03/22/2023

F-181

STEGER BIZZELL

ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

TREE PRESERVATION PLAN & LIST
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 15 of 41

LEGEND

- RPZ — REDUCED PRESSURE ZONE VALVE
- BPA — BACK-FLOW PREVENTION ASSEMBLY
- PAVEMENT
- PROPERTY LINE
- 750 — PROPOSED CONTOURS (MAJOR)
- 751 — PROPOSED CONTOURS (MAJOR)
- 750 — EXISTING CONTOURS (MAJOR)
- 750 — EXISTING CONTOURS (MINOR)
- OHUx — EX. OVERHEAD UTILITY
- Wx — EX. WATER LINE
- SSx — EX. WASTEWATER LINE
- EX. STREET LIGHT

0 40 80 FEET

FIELDWORK:
Field survey information provided by others.

TBM SQUARE CUT IN BOC
748.85
N=10198594.3150
E=3131754.8320

PROPOSED 39,375 S.F. STORAGE BUILDING FL ELEV = 753.50' 4,425 S.F. OFFICE 34,950 S.F. WAREHOUSE

50' X 50' LOADING DOCK

S. AUSTIN AVE (VARIABLE WIDTH ROW)

MADISON OAKS AVE. (60' ROW)

EXISTING FIRE HYDRANT

PROPOSED 6" WASTE WATER LINE, SEE WASTEWATER PLAN AND PROFILE SHEET FOR DETAILS

PROPOSED 8" FIRE LINE, SEE UNDERGROUND FIRE LINE SHEETS FOR DETAILS

PROPOSED FIRE DEPARTMENT CONNECTION

66.42'

EXISTING 12" WW LINE

EXISTING 12" WATER LINE

EXISTING STREET LIGHT

EXISTING OVERHEAD UTILITIES

EXISTING 8" WATER LINE

SEE IENLARGED PLAN AT RIGHT

EXISTING 10" WW LINE

EXISTING STREET LIGHT

EXISTING OVERHEAD UTILITIES

EXISTING STREET LIGHT

EXISTING STREET LIGHT

EXISTING FIRE HYDRANT

111 MADISON OAKS A
CITY OF GEORGETOWN
R439104 DOC.# 200305947

108 MADISON OAKS AVE
84 PROPERTIES LLC
R472750 DOC.# 2016104971

108 MADISON OAKS AVE
84 PROPERTIES LLC
R439107 DOC.#
2016104971

104 MADISON OAKS AVE
SBJ RESCH FAMILY
PART. LTD. R439106
DOC.# 2006065531

100 MADISON OAKS AVE
DEALERS ELECTRICAL
SUPPLY CO. R4394105

Georgetown Railroad Easement Co Vol. 2350 Pg. 131

PROPOSED 1-1/4" WATERLINE
PROP. 1-1/4"BPA
PROP. 1-1/4" RPZ
PROP. BALL VALVE
PROPOSED 1" DOMESTIC WATER METER
PROP. REDUCE PRESSURE ZONE VALVE
12x8 TAPPING SLEEVE w/ 8" VALVE
PROPOSED THRUST BLOCKING
66.42'
EXISTING 12" WW LINE
EXISTING 12" WATER LINE
EXISTING STREET LIGHT
FIRE LINE RISER PER MEP PLANS
FIRE DEPARTMENT CONNECTION LINE
PROP. 1-1/4" RPZ
PROP. BALL VALVE
PROPOSED 1" IRRIGATION WATER METER
PROP. REDUCE PRESSURE ZONE VALVE
PROPOSED THRUST BLOCKING
WATTS RDPA w/ ES-BW ABOVE GROUND ENCLOSURE

ENLARGED PLAN - 1"=30'

* NOTE - VERIFY PRESSURE AT PRV LOCATION PRIOR TO INSTALLATION - NOTIFY ENGINEER OF RESULTS

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED PROFESSIONAL ENGINEER
F-181
03/22/2023

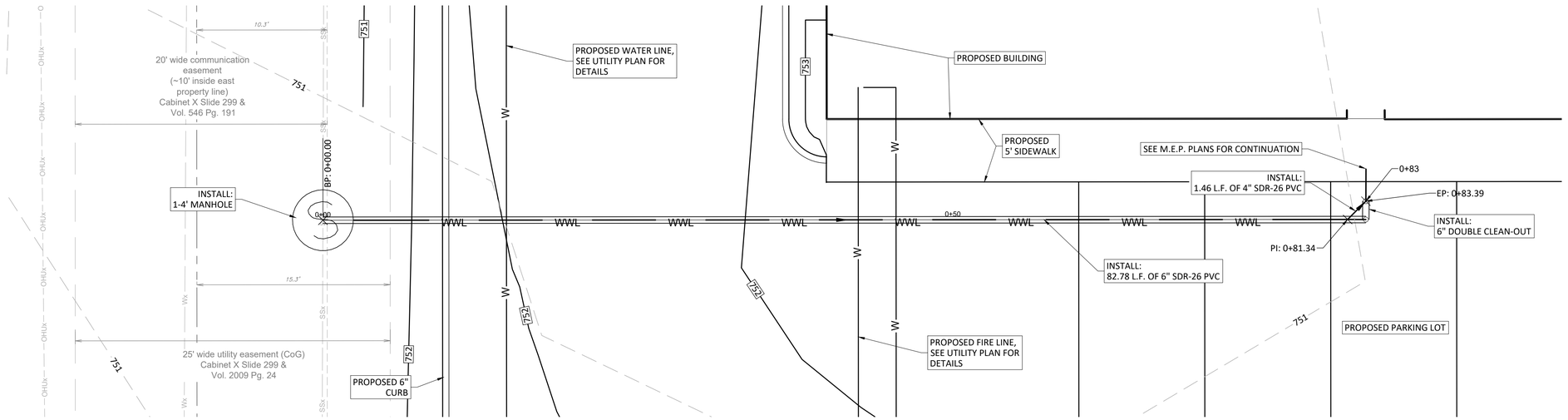
STEGER BIZZELL
ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

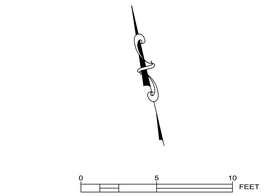
UTILITY PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 16 of 41

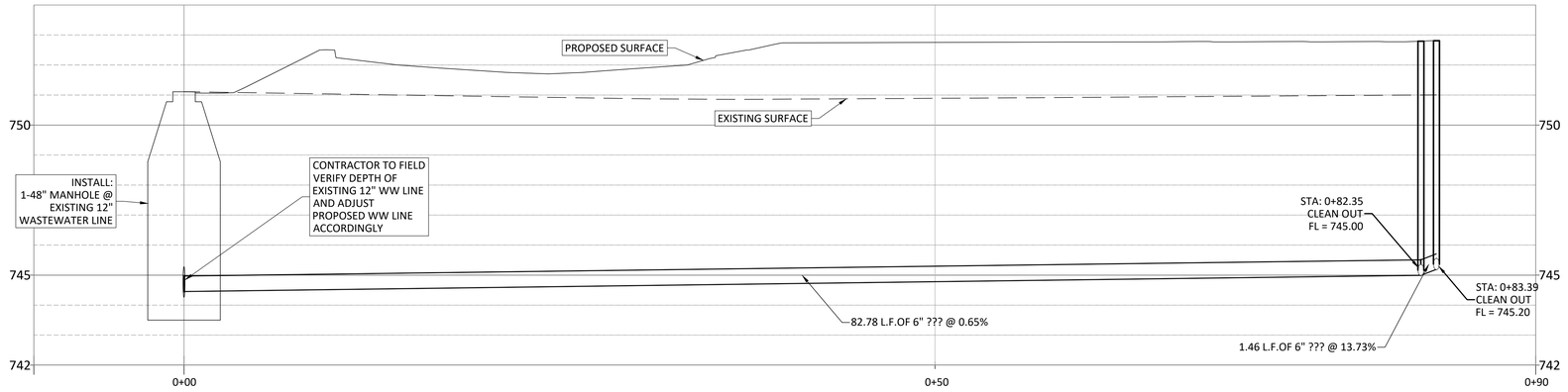




LEGEND

- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER LINE
- PROPOSED CONTOURS (MAJOR)
- PROPOSED CONTOURS (MINOR)
- EX. OVERHEAD UTILITY
- EX. WATER LINE
- EX. WASTEWATER LINE

WASTEWATER



WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: ____ DATE ____
DRAWN BY: ____ DATE ____
CHECKED BY: ____ DATE ____
APPROVED BY: ____ DATE ____

STATE OF TEXAS · BRYAN ERIC MOORE · 98920 · LICENSED PROFESSIONAL ENGINEER · F-181 · 03/22/2023

STEGER BIZZELL
ADDRESS 1978 S. AUSTIN AVENUE | GEORGETOWN, TX 78626
METRO 512.930.9412 | TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 | WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

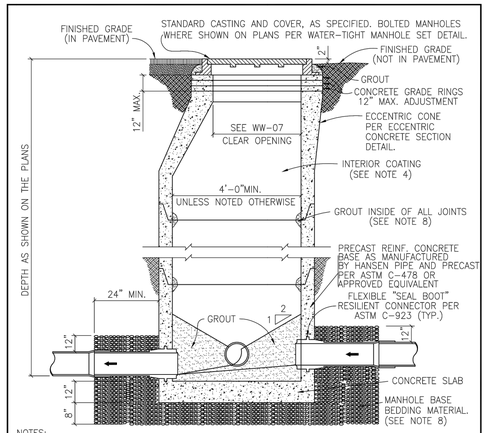
WASTEWATER PLAN & PROFILE
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 17 of 41

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\WASTEWATER PLAN & PROFILE.dwg By: Ted Haynie Date: 3/23/2023 3:37 PM



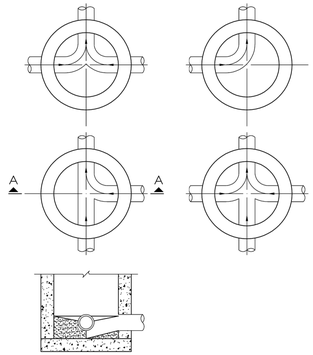
NOTES:

1. MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET – SINGLE OFF-SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL. COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH WASTEWATER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
9. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:
   SIEVE SIZE 2", PERCENT (%) RETAINED 0
   SIEVE SIZE 1 1/2", % RETAINED 0-10
   SIEVE SIZE 1", % RETAINED 45-80
   SIEVE SIZE 3/4", % RETAINED 85-100
   SIEVE SIZE 3/8", % RETAINED 95-100

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

REVISION NOTE: ADOPTED 6/21/2006	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: WW03
STANDARD MANHOLE – SECTION	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

FLOW PATTERNS FOR INVERT CHANNELS



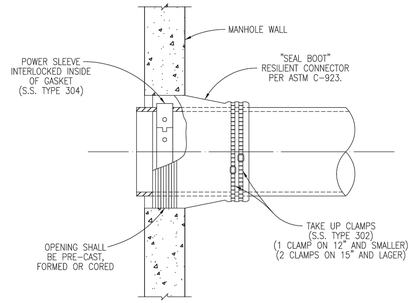
SECTION "A–A"

NOTES:

1. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
2. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
3. CHANNELS FOR FUTURE CONSTRUCTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND, AND COVERED WITH 1" OF MORTAR.
4. SLOPE MANHOLE ITSELF WITH A 1:2 SLOPE FROM MANHOLE WALL TO CHANNEL.
5. INVERT SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR 4" DEEP.

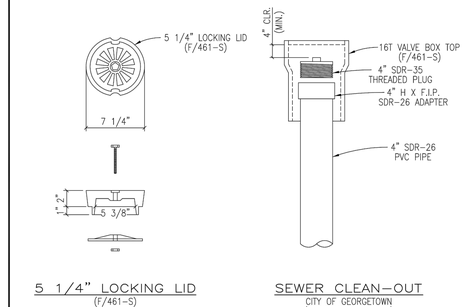
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: WW06
FLOW PATTERNS FOR INVERT CHANNELS	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



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

REVISION NOTE: ADOPTED 6/21/2006	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: WW10
FLEXIBLE "SEAL BOOT" CONNECTOR	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

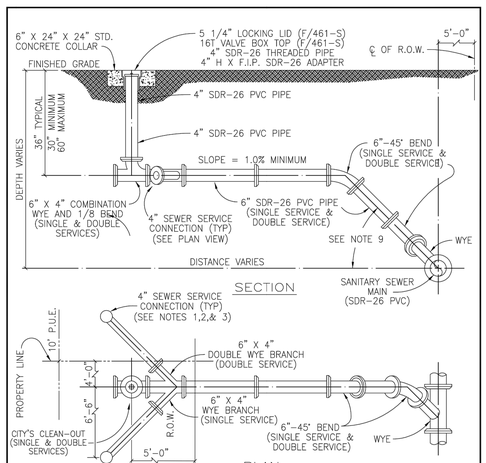


5 1/4" LOCKING LID
(F/461-S)

SEWER CLEAN-OUT
CITY OF GEORGETOWN
(RESIDENTIAL SERVICE)

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

REVISION NOTE: ADOPTED 6/21/2006	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: WW12
SEWER CLEAN-OUT DETAIL	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

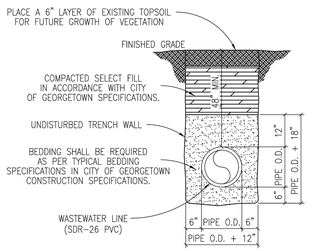


NOTES:

1. SERVICE CONNECTION RISERS SHALL TERMINATE 8' IN-SIDE THE PROPETY LINE.
2. THE END OF EACH SERVICE CONNECTION RISER SHALL BE EXTENDED 12" ABOVE FINISH GRADE.
3. EACH SERVICE CONNECTION SHALL BE PLUGGED WATER-TIGHT WITH AN APPROVED CAP OR PLUG.
4. FOR P.V.C. INSTALLATIONS, CONNECT TO EXISTING "BELL END" AND CONNECT OPPSITE END WITH P.V.C. TO P.V.C. KNOCK ON SLEEVE.
5. SOLIDLY TAMP BACKFILL AT LEAST ONE FOOT (1'-0") ABOVE TOP OF PIPE. SERVICES UNDER PAVED AREAS SHALL BE BACKFILLED TO THE SAME SPECIFICATIONS AS SHOWN ON PAVEMENT REPLACEMENT DETAIL.
6. CONTRACTOR SHALL MARK ON A CLEAN SET OF PLANS THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE TO EACH SERVICE LATERAL AND GIVE TO ENGINEER FOR RECORD DRAWING PURPOSES.
7. ANY DEVIATION FROM THESE METHODS MUST BE APPROVED BY THE CITY OF GEORGETOWN ENGINEERING DEPARTMENT.
8. SERVICE LINE MATERIAL SHALL BE P.V.C., SDR-26.
9. SEWER SERVICE SLOPE TO BE 45° OFF CENTERLINE OF MAIN.

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

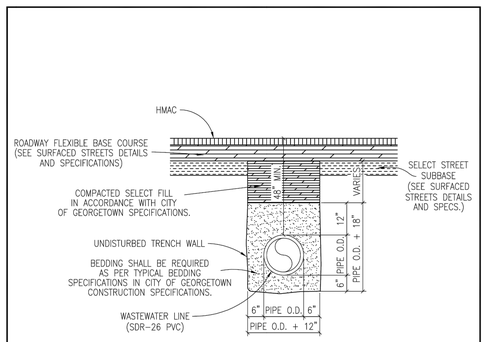
REVISION NOTE: ADOPTED 6/21/2006	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: WW13
SEWER SERVICE CONNECTIONS	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

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

REVISION NOTE: ADOPTED 6/21/2006	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: WW16
TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



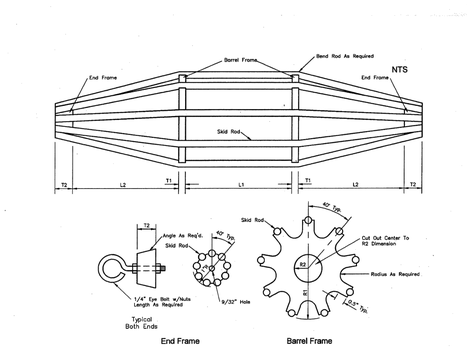
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

NOTES:

1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

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

REVISION NOTE: ADOPTED 6/21/2006	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: WW18
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB



End Frame

Barrel Frame

Note: Weld All Rods To Frame

Mandrel Shall Be Constructed From Metal That Can Withstand 200 PSI Without Being Deformed.

Mandrel Dimensions
5% Deflection
For O.D. Controlled PVC Pipe
(All Dimensions In Inches)

Size	Type	O.D. Average	Min. Wall Thickness	L1	L2	R1	R2	T1	T2	Rod Diameter	MANDREL O.D.
6"	D3034 SDR35	6.275	0.180	4.50	6	2.61	0.75	0.375	1.0	0.375	5.62
6"	D3034 SDR26	6.275	0.241	4.50	6	2.75	0.75	0.375	1.0	0.375	5.50
6"	D3034 DR26	6.275	0.241	4.50	6	2.75	0.75	0.375	1.0	0.375	5.50
8"	D3034 SDR35	8.400	0.240	6.00	6	3.96	1.25	0.375	1.0	0.375	7.52
8"	D3034 SDR26	8.400	0.323	6.00	6	3.68	1.25	0.375	1.0	0.375	7.37
8"	D3034 DR26	8.625	0.322	6.00	6	3.76	1.25	0.375	1.0	0.375	7.525
10"	D3034 SDR35	10.500	0.300	7.50	6	4.70	1.50	0.375	1.0	0.375	9.40
10"	D3034 SDR26	10.500	0.404	7.50	6	4.60	1.50	0.375	1.0	0.375	9.21
12"	D3034 SDR35	12.500	0.360	9.00	6	5.60	1.75	0.375	1.0	0.375	11.20
12"	D3034 SDR26	12.500	0.481	9.00	6	5.48	1.75	0.375	1.0	0.375	10.98
15"	D3034 SDR26	15.300	0.588	11.25	6	6.71	2.00	0.375	1.0	0.375	13.42
15"	D3034 SDR35	15.300	0.437	11.25	6	6.85	2.00	0.375	1.0	0.375	13.70
18"	F679 T-1	18.701	0.536	13.50	9	8.37	2.50	0.50	1.5	0.50	16.74
21"	F679 T-1	22.047	0.632	15.75	9	9.87	3.00	0.50	1.5	0.50	19.74
24"	F679 T-1	24.803	0.711	18.00	9	11.11	3.50	0.50	1.5	0.50	22.22
27"	F679 T-1	27.953	0.801	20.25	9	12.52	4.00	0.50	1.5	0.50	25.04
6"	CL350 D.I.	6.9	0.25	4.50	6	3.04	0.75	0.375	1.0	0.375	6.08
8"	CL350 D.I.	9.05	0.25	6.00	6	4.06	1.25	0.375	1.0	0.375	8.12

Typical Mandrel Details
No Scale

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

REVISION NOTE: ADOPTED 6/21/2006	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS	DRAWING NAME: WW20
MANDREL DETAILS	SCALE: NTS; DATE: 1/2003; DRAWN BY: MRS; APPROVED BY: TRB

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: ____ DATE ____
DRAWN BY: ____ DATE ____
CHECKED BY: ____ DATE ____
APPROVED BY: ____ DATE ____

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED PROFESSIONAL ENGINEER
F-181
03/22/2023

STEGER BIZZELL

ADDRESS: 1978 S. AUSTIN AVENUE, GEORGETOWN, TX 78626
METRO: 512.930.9412
TEXAS REGISTERED ENGINEERING FIRM F-181
TBPLS FIRM No.10003700
WEB: STEGERBIZZELL.COM
SERVICES: >>ENGINEERS >>PLANNERS >>SURVEYORS

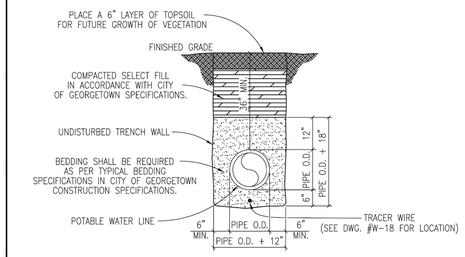
WASTEWATER DETAILS
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 18 of 41

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\WASTE WATER DETAILS.dwg By: Ted Haynie Date: 3/23/2023 3:37 PM



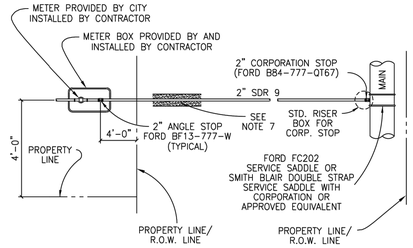
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS

W02 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



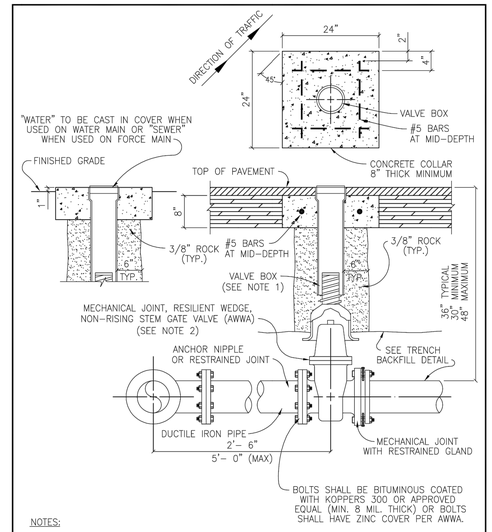
NOTES:
1. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR-9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
2. ANGLE STOP SHALL BE 1" MINIMUM.
3. 1" ANGLE STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.
4. MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER SERVICE AND SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
5. ANGLE STOPS 1 1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH A LOCKING CAP AND METER FLANGE.
6. ANGLE STOPS SHALL BE INSTALLED 9" BELOW FINISHED GRADE AND MARKED WITH A 2" X 2" X 48" TREATED WOOD STAKE, PAINTED BLUE.
7. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
8. CASING REQUIREMENTS FOR SERVICE LINES CROSSING ROADWAYS SEE DETAIL W-03 NOTE #7.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY.

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

ADOPTED 01/23/2013

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SINGLE WATER SERVICE PLAN

W04 | SCALE: NTS | DATE: 1/2013 | DRAWN BY: - | APPROVED BY: MH



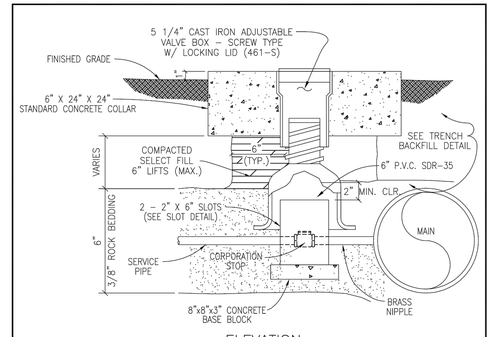
NOTES:
1. VALVE BOX SHALL BE 5 1/4" CAST IRON ADJUSTABLE HAVING AN ADJUSTABLE RANGE OF + OR - 6 INCHES FROM INSTALLED FINISH GRADE.
2. ACCEPTABLE GATE VALVES ARE:
   A. AMERICAN FLOW CONTROL - SERIES 2500
   B. MUELLER - 2360 SERIES
   C. CLOW

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

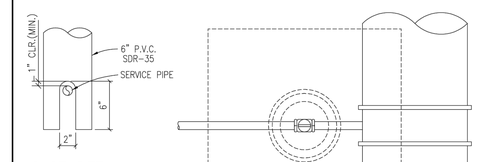
ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL VALVE SETTING

W07 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



ELEVATION



SLOT DETAIL

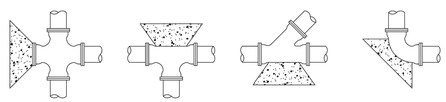
PLAN

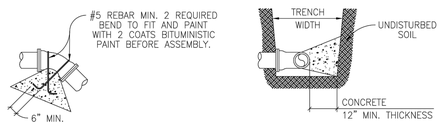
The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD RISER BOX FOR CORPORATION STOP

W08 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB





*DEADMAN

TYPICAL SECTION

ALL THRUST BLOCKS SHALL BE FORMED. LAID FORMS SHALL BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO THE POURING OF CONCRETE AND SHALL ALSO BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO COVERING. TYPICAL LOCATIONS WHICH REQUIRE CONCRETE REACTION (THRUST) BLOCKS, FOR PRESSURE MAINS FOUR INCHES (4") AND GREATER. CONCRETE SHALL HAVE 2,500 P.S.I. MINIMUM STRENGTH AT TWENTY EIGHT (28) DAYS AND BEAR AGAINST UNDISTURBED STABLE SOILS, AREA OF CONTACT SHALL BE GOVERNED BY PIPE SIZE, MAXIMUM PRESSURE IN PIPE, AND BEARING CAPACITY OF SOIL. PROTECT FITTINGS, BOLTS, ETC. BY COVERING WITH VISQUEEN OR OTHER ACCEPTABLE MATERIAL. CONCRETE SHALL BE A MINIMUM OF TWELVE INCHES (12") THICK.

PIPE SIZE	THRUST BLOCK AREA REQUIRED	PIPE SIZE	THRUST BLOCK AREA REQUIRED	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	VALUES ARE FOR 90° BENDS, BASED ON 2000 P.S.F. SAFE BEARING LOAD AND PIPE PRESSURE OF 150 P.S.I. PLUS 33% SAFETY FACTOR FOR OTHER SOILS AND PRESSURES, THE AREA REQUIRED IS IN DIRECT PROPORTION.
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	
8"	6.6 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.0 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

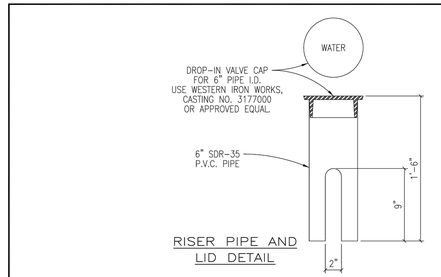
* THE ENGINEER OF RECORD SHALL CALCULATE THE SIZE OF THE DEADMAN REQUIRED AS WELL AS ANY INSTALLATION WHICH IS NOT COVERED BY THE ABOVE.

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

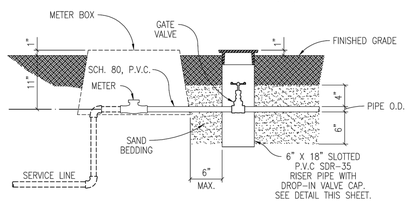
ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL THRUST BLOCKS FOR WATER AND FORCE MAIN

W11 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



RISER PIPE AND LID DETAIL



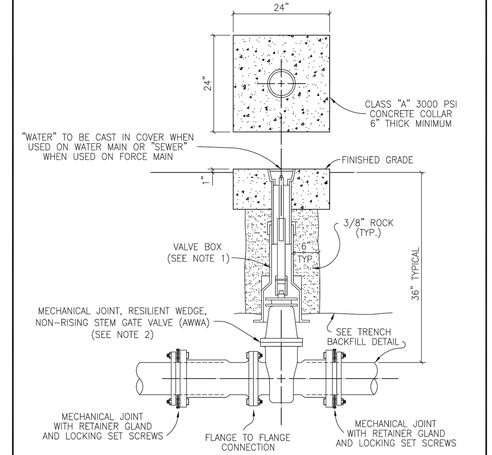
NOTES:
1. GATE VALVE SHALL BE A HAMMOND IR645, CLASS 125, BRONZE GATE, SCREWED BONNET, NON-RISING STEM, SOLID WEDGE DISC WITH THREADED ENDS OR APPROVED EQUAL.
2. DROP-IN VALVE CAP SHALL BE CAST WITH THE WORD "WATER" ON TOP.
3. USE SCHEDULE 80, M.I.P. ADAPTER AS REQUIRED.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CUSTOMER'S CUT-OFF

W20 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



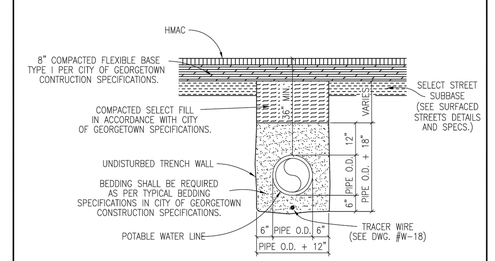
NOTES:
1. SEE VALVE SETTING DETAIL, DWG. #W-07.
2. ACCEPTABLE GATE VALVES ARE:
   A. MUELLER - 2360 SERIES
   B. CLOW

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
INLINE VALVE INSTALLATION

W21 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

NOTES:
1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY

W22 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: _____ DATE _____
DRAWN BY: _____ DATE _____
CHECKED BY: _____ DATE _____
APPROVED BY: _____ DATE _____

STATE OF TEXAS · BRYAN ERIC MOORE · 98920 · LICENSED PROFESSIONAL ENGINEER · F-181 · 03/22/2023

STEGER BIZZELL

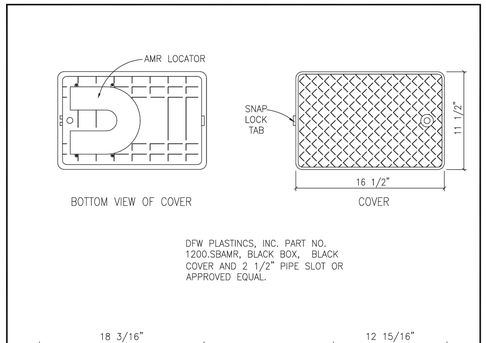
ADDRESS: 1978 S. AUSTIN AVENUE | GEORGETOWN, TX 78626
METRO: 512.930.9412 | TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 | WEB: STEGERBIZZELL.COM
SERVICES: >>ENGINEERS >>PLANNERS >>SURVEYORS

WATER DETAILS - (1 OF 2)
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 19 of 41



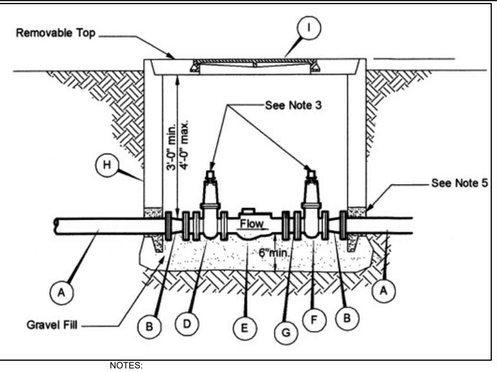
DFW PLASTINCS, INC. PART NO. 1200.SBAMR, BLACK BOX, BLACK COVER AND 2 1/2" PIPE SLOT OR APPROVED EQUAL.

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

ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
METER BOX (NON-TRAFFIC AREAS)

DRAWING NAME: W2.3
SCALE: NTS
DATE: 1/2003
DRAWN BY: MRS
APPROVED BY: TRB



NOTES:

1. BOX MUST BE BEHIND CURB AND/OR WALK AND OUT OF VEHICULAR TRAFFIC AREA.
2. PIPE AND FITTINGS TO BE DUCTILE IRON.
3. NO RISING STEM OR WHEEL OPERATED VALVES.
4. ROD RESTRAINT REQUIRED AT ALL MECHANICAL OR PUSH ON TYPE JOINTS.
5. METER BOX TO BE SET AFTER METER IS INSTALLED. SIDE NOTCHES IN BOX TO BE FILLED WITH MORTAR AFTER INSTALLATION OF PIPE.
6. DOUBLE HARNESS MJ W/ TIE ROD. ALL OTHER FITTINGS IN VAULT TO BE FLANGED. CONTRACTOR TO PROVIDE WATER METER.

MATERIALS:

A - 8" PIPE
B - 8"x8", FLG x MJ
C - 8" D.I. PIPE, FLG x FLG
D - 8" GATE VALVE, FLG X FLG
E - 8" OCTAVE ULTRASONIC FLOW METER (2800 GPM MAX)
F - 8" CUSTOMER GATE VALVE, FLG x FLG
G - DOUBLE HARNESS MJ FITTING
H - HILL COUNTRY CONCRETE PRODUCTS, INC. METER VAULT 6798-MV-4 (98"x67") OR APPROVED EQUAL
I - 30"x30" OPENING AREA DROP HANDLE SELF LOCKING LID. NON TRAFFIC RATING. COLD GALVANIZING COATING.

METER VAULT DETAIL

OCTAVE® ULTRASONIC METER

NSF · FM APPROVED · SS 316

Octave brings the latest in ultrasonic metering technology to Commercial/ Industrial (C&I) water meters and puts precise measurement where the real flows exist. An excellent alternative to mechanical compound, single-jet, floating ball, fire-service type and turbine meters, Octave excels at maintaining sustained accuracy for the life of the meter while providing smart AMR capabilities.

Technical Specifications:

Working Pressure - 175 PSI

Liquid Temperature - 32.1° - 122 °F

Metrological Characteristics - Meets ANSI/AWWA Standard C715-18, C750-10, ISO 4064 rev. 2005

Configuration - Compact-Display built into unit

Power Source - 2 x D Size Lithium Thionyl Chloride batteries - 10 year warranted life time

Environmental Protection - NEMA 6P (IP68), Ambient operation temp. - -13 °F / +131 °F for the display

Display Units - Multi line 12 digit LCD (Programmable USG, Cubic Feet, Cubic Meters, Acre Feet for volume and GPM, Lt/s, or M³/h for rate of flow)

Output - Programmable digital pulse, Modbus, encoder OR externally powered loop 4-20 mA. Optional dual output available in encoder + pulse.

Features & Benefits:

- Industry leading low flow sensitivity reduces Non-Revenue Water
- Grade 316 Stainless Steel (2"-8") or Epoxy Coated Ductile Iron (10"-12") body design provides full compliance with ANSI/NSF 372 (AB1953 or NSF61G)
- Easy to install Floating Flanges on 2"-8" and Integrated Flanges on 10"-12".
- No moving parts. Minimal flow intrusion. Enduring accuracy.
- No required strainer
- Industry standard communication protocol for integration with most third-party AMR/AMI systems
- Active leak, theft, backflow, meter damage/tamper, rate of flow, and battery life indication
- Detailed LCD display features immediate reporting and visual indicators for 8 critical conditions
- Ruggedized NEMA 6P/IP-68 construction; fully submersible design
- Designed to meet standards for both North American and International C&I water meters
- Optional flow measurements; Forward Only, Net Volume or Alternating Display (Forward and Reverse Consumption displayed separately)

ZURN Model 375DA
Reduced Pressure Detector Assembly

Application
Designed for installation on water lines in fire protection systems to protect against both backsiphonage and back-pressure of contaminated water into the potable water supply. The Model 375DA shall provide protection where a potential health hazard exists. Incorporates metered by-pass to detect leaks and unauthorized water use.

Standards Compliance
(Unless otherwise noted, applies to sizes 2 1/2" thru 10")
- ASSE® Listed 1047
- UL® Classified
- AWWA Compliant C550
- CSA® Certified B64.4 (4" & 6")
- C-UL® Classified
- FM® Approved
- NYC MEA 218-01-M VOL 3
- Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
- Meets the requirements of NSF/ANSI 61*

*(0.25% MAX. WEIGHTED AVERAGE LEAD CONTENT)

By-Pass Backflow Assembly 3/4" Model 975XLD

Materials

Main valve body	Ductile Iron ASTM A 536
Access covers	Ductile Iron ASTM A 536
Coatings	NSF Approved fusion epoxy finish
Internals	Stainless steel, 300 Series NORYL™
Fasteners	Stainless Steel, 300 Series
Elastomers	EPDM (FDA approved) Buna Nitrile (FDA approved)
Polymers	NORYL™
Springs	Stainless steel, 300 series
Sensing line	Stainless steel, braided hose

Features

Sizes:	2 1/2", 3", 4", 6", 8", 10"
Maximum working water pressure	175 PSI
Maximum working water temperature	140°F
Hydrostatic test pressure	350 PSI
End connections (Grooved for steel pipe) (Flanged bolt pattern)	AWWA C606 ASME B16.42 Class 150

Dimensions & Weights (do not include pkg.)

MODEL 375DA SIZE	DIMENSION (approximate) A	A WITH BUTTERFLY VALVES	B LESS GATE VALVES	C	D	E OS&Y OPEN	E OS&Y CLOSED	E WITH BUTTERFLY VALVES	F	G	WEIGHT LESS SHUT-OFF VALVES	OS&Y GATE VALVES FLANGED	OS&Y GATE VALVES GROOVED	BUTTERFLY VALVES GROOVED
in. / mm	in. / mm	in. / mm	in. / mm	in. / mm	in. / mm	in. / mm	in. / mm	in. / mm	in. / mm	in. / mm	lbs. / kg	lbs. / kg	lbs. / kg	lbs. / kg
2 1/2	65	31	787	28	711	13 7/8	403	7 1/4	184	9	229	17 3/4	451	15 3/8	391	13 3/4	349	9 1/2	241	8 3/8	213	75	34	165	84	167	76	147	67
3	80	32	813	28 1/2	724	13 7/8	403	7 1/4	184	9	229	20 1/4	514	17	432	13 3/4	349	9 1/2	241	8 3/8	213	78	35	208	94	190	72	130	59
4	100	37 5/8	956	32 9/9	835	19 1/2	495	9	203	9	229	22 1/2	572	18 1/4	464	17	432	11	279	9 1/4	235	116	53	306	139	292	132	200	91
6	150	44 5/8	1133	37 3/8	956	23 1/2	597	10	254	10 1/2	267	30 1/2	775	24 1/4	616	17 1/2	445	12 3/8	314	9 1/4	235	194	88	454	224	466	212	312	142
8	200	50 7/8	1549	53 7/8	1369	37 3/4	959	11	279	15 1/2	394	37	940	29 1/2	724	16 15/16	430	13 3/8	391	16 3/4	426	382	173	958	399	810	367	556	252
10	250	60 7/8	1822	67 7/8	1470	37 3/4	959	11	279	15 1/2	394	45 5/8	1159	34 3/4	883	16 15/16	430	13 3/8	391	16 3/4	426	412	187	1230	558	1164	528	800	363

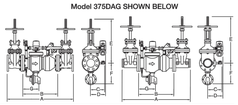
Options
(Suffixes can be combined)
- ☐ - with OS & Y gate valves (standard)
- ☐ L - less shut-off valves (flanged body connections)
- ☐ LM - less water meter
- ☐ - with gpm meter (standard)
- ☐ CFM - with cu ft/min meter
- ☐ G - with groove end gate valves
- ☐ FG - with flanged inlet gate connection and grooved outlet gate connection
- ☐ PI - with Post Indicator Gate Valve
- ☐ GF - with flanged inlet connection and grooved outlet connection
- ☐ BG - with grooved end butterfly valves with integral monitor switches (2 1/2" - 10")

Accessories
- ☐ Air gap (Model AG)
- ☐ Repair kit (rubber only)
- ☐ Thermal expansion tank (Model XT)
- ☐ OS & Y Gate valve tamper switch (OSY-40)
- ☐ QT-SET Quick Test Fitting Set

Attention: Model 375DA (flange body) and Model 375DADA (grooved body) have different lay lengths.

Relief Valve discharge port:
2 1/2" - 6" - 2.75 sq. in.
8" - 10" - 3.69 sq. in.

Model 375DAG SHOWN BELOW

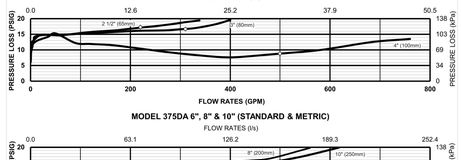


Zurn Industries, LLC | Wilkins
1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766
In Canada | Zurn Industries Limited
7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-5216
www.zurn.com

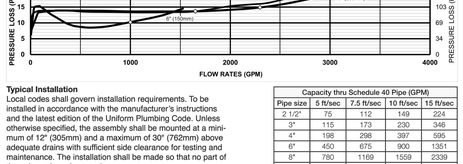
Rev. N
Date: 3/20
Document No. BF-375DA
Patent No. 5, 913, 331
Product No. Model 375DA

Flow Characteristics ◊Rated Flow (established by approval agencies)

MODEL 375DA 2 1/2", 3" & 4" (STANDARD & METRIC)
FLOW RATES (l/s)



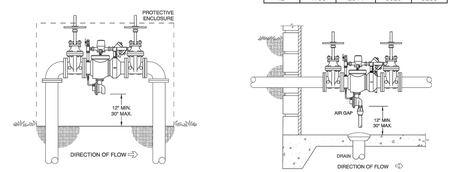
MODEL 375DA 6", 8" & 10" (STANDARD & METRIC)
FLOW RATES (l/s)



Typical Installation
Local codes shall govern installation requirements. To be installed in accordance with the manufacturer's instructions and the latest edition of the Uniform Plumbing Code. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

Capacity thru Schedule 40 Pipe (GPM)

Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
2 1/2"	75	112	149	224
3"	115	173	230	346
4"	198	298	397	595
6"	450	675	900	1351
8"	780	1169	1559	2339
10"	1229	1843	2458	3687
12"	1763	2644	3525	5288



Specifications
The Reduced Pressure Detector Backflow Prevention Assembly shall be certified to NSF/ANSI 61, ASSE® Listed 1047, and supplied with full port OS & Y gate valves. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), the seat ring and check valve shall be NORYL™, the stem shall be stainless steel (ASTM A 276) and the seat disc elastomers shall be EPDM. The checks and the relief valve shall be accessible for maintenance without removing the device from the line. The Reduced Pressure Detector Backflow Prevention Assembly shall be a ZURN WILKINS Model 375DA.

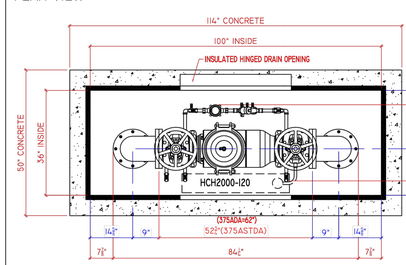
Zurn Industries, LLC | Wilkins
1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766
In Canada | Zurn Industries Limited
7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-5216
www.zurn.com

ENCLOSURE MODEL: 600TM-AL
JOB: ----
DRAWN BY: MTP | SCALE: NONE | DATE: 12/4/19

SAFE-T-COVER BY HYDROCAP
ENCLOSURES DESIGNED FOR THE WORLDS WATER SYSTEMS™
WEBSITE: SAFE-T-COVER.COM | PHONE: (800) 366-8723
EMAIL: SALES@SAFE-T-COVER.COM | FAX: (610) 395-8491

ELEVATION VIEW

PLAN VIEW



1. DRAWING NOT TO SCALE
2. ALL DIMENSIONS ARE IN INCHES. (GASKETS INCLUDED)
3. WALL AND INSULATION THICKNESS IS 1-1/2".
4. ROOF AND INSULATION THICKNESS IS 3".
5. MODEL 600TM-AL ENCLOSURE
6. OVERALL DIMENSIONS: 36"W X 100"L X 70"H
7. CONCRETE PAD IS 50"W x 114"L
8. BFP - 8" WILKINS 375DA, 375ADA, OR 375ASTDA OSSY

8WI375ASTDA-OSY12
SHEET 1 OF 1

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: ____ DATE ____
DRAWN BY: ____ DATE ____
CHECKED BY: ____ DATE ____
APPROVED BY: ____ DATE ____

STATE OF TEXAS · BRYAN ERIC MOORE · 98920 · LICENSED PROFESSIONAL ENGINEER · F-181 · 03/22/2023

STEGER BIZZELL

ADDRESS: 1978 S. AUSTIN AVENUE | GEORGETOWN, TX 78626
METRO: 512.930.9412 | TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 | WEB: STEGERBIZZELL.COM
SERVICES: >>ENGINEERS >>PLANNERS >>SURVEYORS

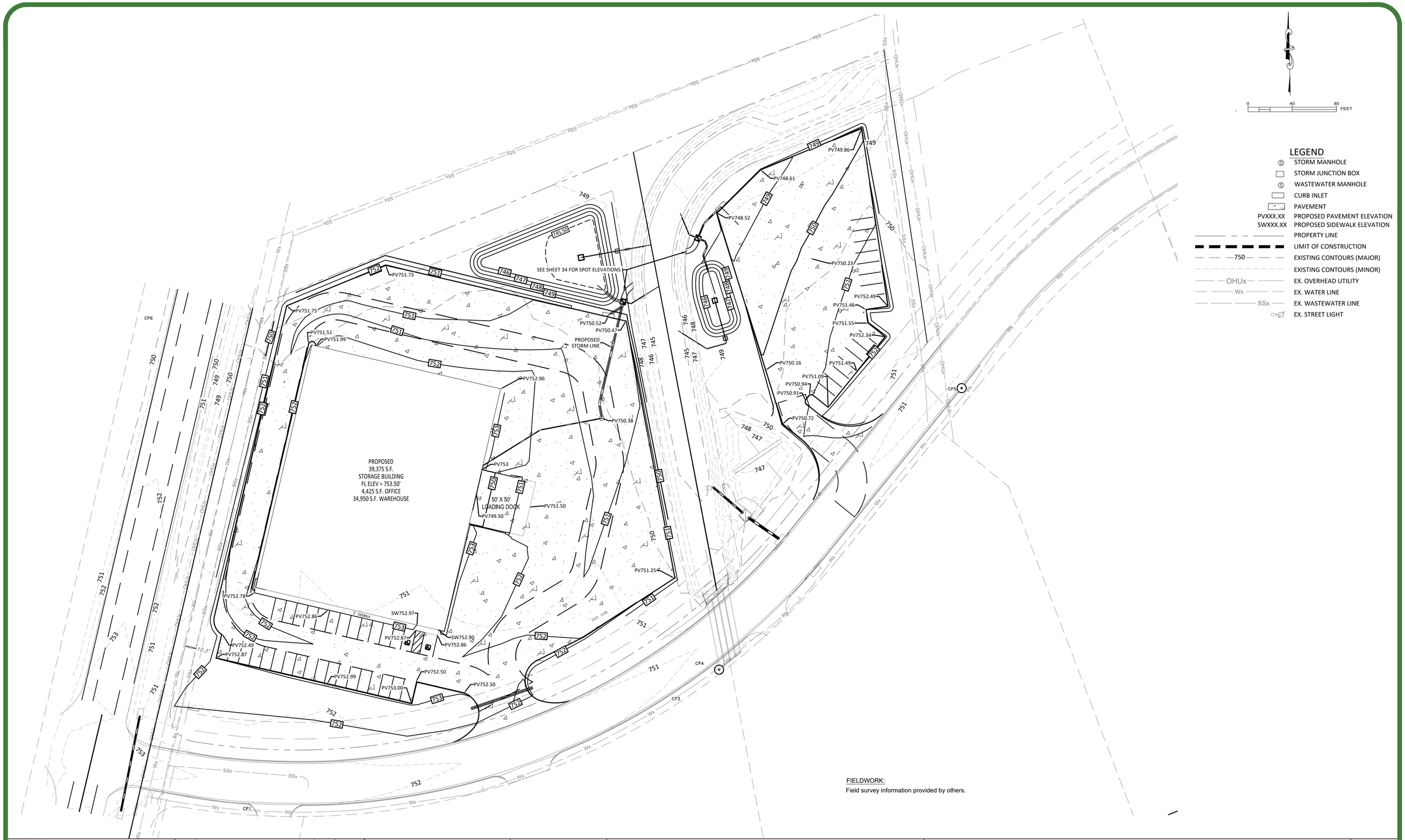
WATER DETAILS (2 OF 2)
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 20 of 41

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\WATER DETAILS (2 OF 2).dwg By: Ted Haynie Date: 3/23/2023 3:37 PM



LEGEND

- STORM MANHOLE
- STORM JUNCTION BOX
- WASTEWATER MANHOLE
- CURB INLET
- PAVEMENT
- PVXXX.XX — PROPOSED PAVEMENT ELEVATION
- SWXXX.XX — PROPOSED SIDEWALK ELEVATION
- PROPERTY LINE
- LIMIT OF CONSTRUCTION
- 750 — EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- OHUx — EX. OVERHEAD UTILITY
- Wx — EX. WATER LINE
- SSx — EX. WASTEWATER LINE
- EX. STREET LIGHT

FIELDWORK:
Field survey information provided by others.

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED
PROFESSIONAL ENGINEER
F-181
03/22/2023

STEGER BIZZELL
ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

GRADING PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 21 of 41

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\GRADING PLAN.dwg By: Ted Haynie Date: 3/23/2023 3:38 PM

Texas Commission on Environmental Quality
Water Pollution Abatement Plan
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

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

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any regulated 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 must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.

3. If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. Construction activities may not be resumed until the TCEQ has reviewed and approved the appropriate protective measures in order to protect any sensitive feature and the Edwards Aquifer from potentially adverse impacts to water quality.

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

5. 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 approved plans and 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.

6. 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.

7. Sediment must be removed from the sediment traps or sedimentation basins not later than when it occupies 50% of the basin's design capacity.

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

9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.

10. If portions of the site will have a temporary or permanent 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.

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

12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;

B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;

C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

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

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

TEMPORARY EROSION CONTROL NOTES

1. The Contractor shall install erosion/sedimentation controls and tree protective fencing prior to any site preparation work (clearing, grubbing or excavation).
2. The placement of erosion/sedimentation controls shall be in accordance with the TEMPORARY POLLUTION ABATEMENT PLAN.
3. Any significant variation in materials or locations of controls or fences from those shown on the approved plans must be approved by the City Engineer.
4. The Contractor is required to inspect all controls and fences at weekly intervals and after significant rainfall events to insure that they are functioning properly. The person(s) responsible for maintenance of controls and fences shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six (6) inches.
5. Prior to final acceptance, haul roads and waterway crossings constructed for temporary Contractor access must be removed, accumulated sediment removed from the waterway, and the area restored to the original grade and revegetated. All land clearing debris shall be disposed of in approved spoil disposal sites.
6. Field revisions to the TEMPORARY POLLUTION ABATEMENT PLAN may be required by the Engineer or field inspector with the Texas Commission on Environmental Quality (TCEQ) during the course of construction to correct control inadequacies. Major revisions must be approved by the TCEQ.

PERMANENT EROSION CONTROL NOTES

1. All on site disturbed areas shall be restored as noted below:
   a. A minimum of four inches of imported sandy loam topsoil or approved equal shall be placed in all drainage channels (except rock) and on all cleared areas.
   b. The seeding for permanent erosion control shall be applied over areas disturbed by construction as follows, unless specified elsewhere:
   i. From September 15 to March 1, seeding shall be with a combination of 1 pound per 1,000 square feet of unhulled Bermuda and 7 pounds per 1,000 square feet of Winter Rye with a purity of 95% with 90% termination.
   ii. From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 3 pounds per 1,000 square feet with a purity of 95% with 85% germination.
   c. Fertilizer shall be slow release granular or pelleted type and shall have an analysis of 15-15-15 and shall be applied at the rate of 23 pounds per acre once at the time of planting and again once during the time of establishment.
   d. The planted area shall be irrigated or sprinkled in a manner that will not erode the top soil, 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 1/2 inch or more shall postpone the watering schedule for one week.
   e. Mulch type used shall be Mulch, applied at a rate of 1,500 pounds per acre.

GENERAL CONSTRUCTION NOTES

1. All construction shall be in accordance with the latest City of Georgetown Technical Specifications and Details.
2. Prior to beginning construction, the Owner or his authorized representative, shall convene a Pre-Construction Conference between the City of Georgetown, Engineer, Contractor, County Engineer (if applicable), Texas Commission on Environmental Quality Field Office, and any other affected parties. Notify all such parties at least 48 hours prior to the time of the conference and 48 hours prior to beginning construction. Written construction notification must be given to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the regulated activity. Information must include the date on which the regulated activity will commence, the name of the approved plan for the regulated activity, the name of the prime contractor and the name and telephone number of the contact person.
3. The Contractor shall give the City a minimum of 48 hours notice before beginning each phase of construction, call 512-930-3555.
4. Barricades, built to City of Georgetown Standard Specifications, shall be constructed on all dead-end streets and as necessary during construction to maintain job safety.
5. No blasting will be permitted on this project.
6. Any existing utilities, pavement, curbs, and/or sidewalks damaged or removed will be repaired by the Contractor at his expense before acceptance of the project.
7. The location of any existing water and/or wastewater lines shown on the plans must be verified by the Community Owned Utilities Department.
8. All storm sewer pipes shall be Class III RCP unless noted otherwise.
9. Manhole frames, covers, water valve covers, etc., shall be raised to finished pavement grade at the Contractor's expense by a qualified contractor with City inspection. All utility adjustments shall be completed prior to final paving construction.
10. When lime stabilization of the subgrade is required, it shall follow the requirements of the City of Georgetown Standard Specifications.
11. The Contractor is responsible for any damages to any public improvements.

SEQUENCE OF CONSTRUCTION

Note: Other contractors could be working on this site. Coordinate all activities with the activities of others.

1. Call all affected parties at least 48 hours prior to beginning any construction to schedule a pre-construction conference and secure all required permits.
2. Install temporary erosion controls prior to any clearing and grubbing. Notify the City of Georgetown when installed.
3. Rough grade site. Excavation & fill for building pad, driveway, detention/WQ facility and parking area.
4. Install all utility services.
5. Insure that all underground utility installations are complete.
6. Complete all installations within the site.
7. Complete final site grading and restoration.
8. Remove and dispose of temporary erosion controls.
9. Complete any necessary final dress-up.

BENCHMARKS: TBM: Square Cut in North Curb Along Madison Oak. TBM is Located Across The Street From Existing 84 Lumber Most Easterly Driveway.
Elev. 748.85 NAVD 88

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS · BRYAN ERIC MOORE · 98920 · LICENSED PROFESSIONAL ENGINEER · F-181
03/22/2023

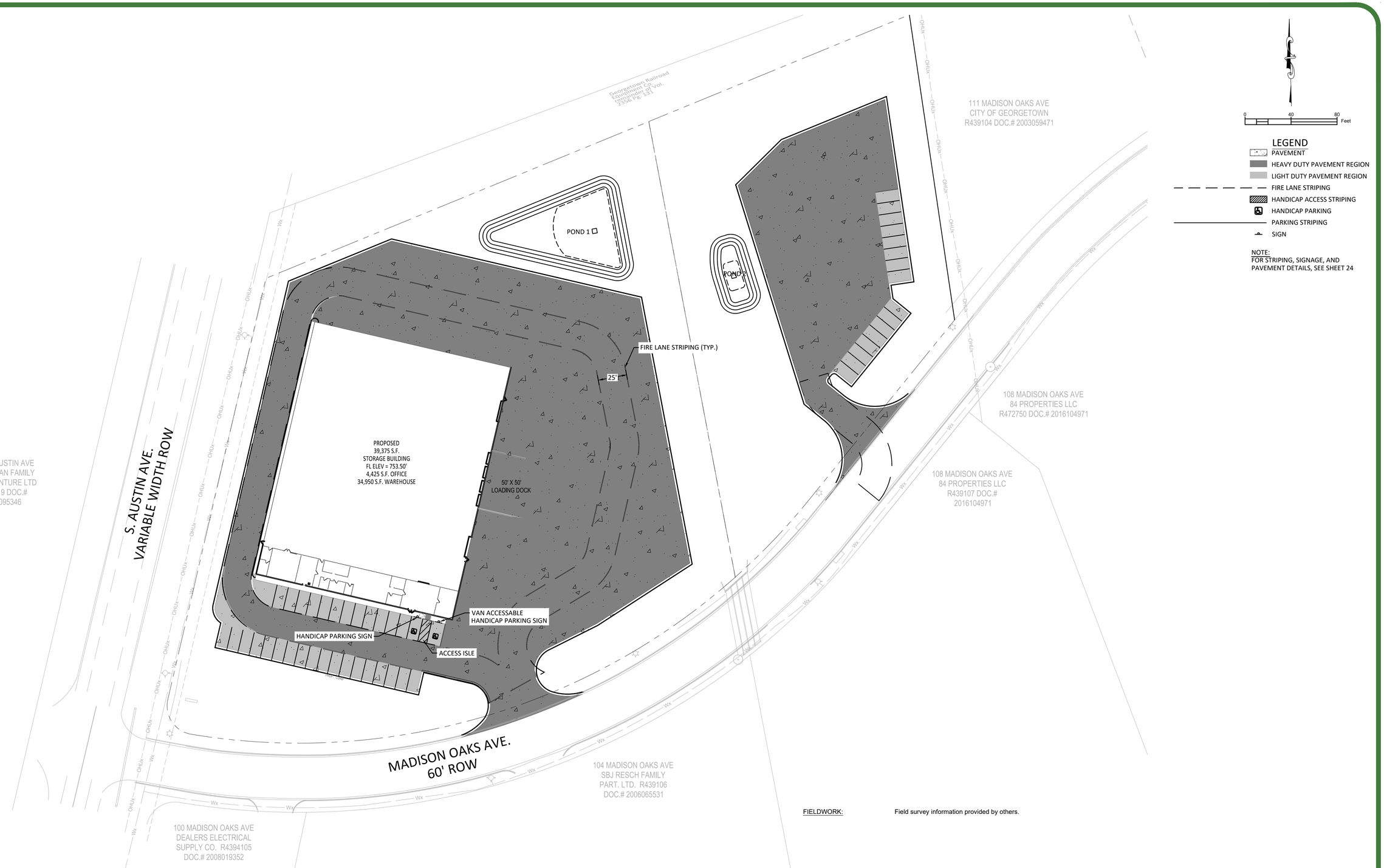
STEGER BIZZELL
ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

GENERAL NOTES
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 22 of 41



LEGEND

- PAVEMENT
- HEAVY DUTY PAVEMENT REGION
- LIGHT DUTY PAVEMENT REGION
- FIRE LANE STRIPING
- HANDICAP ACCESS STRIPING
- HANDICAP PARKING
- PARKING STRIPING
- SIGN

NOTE:
FOR STRIPING, SIGNAGE, AND PAVEMENT DETAILS, SEE SHEET 24

FIELDWORK: Field survey information provided by others.

WARNING!
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NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED
PROFESSIONAL ENGINEER
03/22/2023

F-181

STEGER BIZZELL

ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

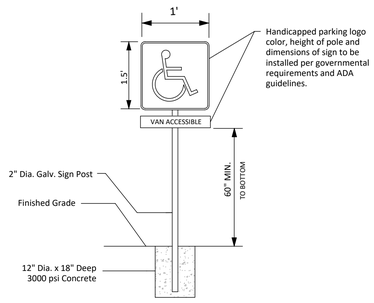
PAVING & STRIPING PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

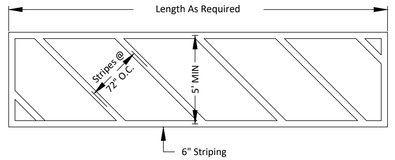
Project No: 22914

SHEET 23 of 41

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\PAVING & STRIPING PLAN.dwg By: Ted Haynie Date: 3/23/2023 3:39 PM



HANDICAP VAN ACCESSIBLE PARKING SIGN
NTS



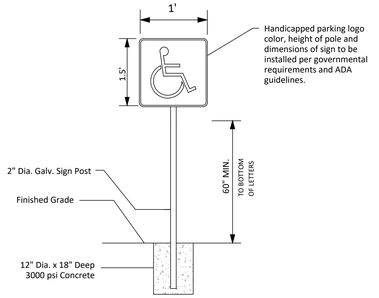
ACCESS AISLE/CROSSWALK STRIPING
NTS

NOTE:

All striping shall be white paint.
All striping widths shall be 6" unless otherwise noted. Stripes are dimensioned to the centerline of stripe.

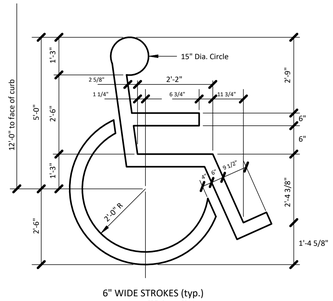
Typical Parking Space Sizes:

Standard - 9' x 18'
Handicap - 9' x 18'
Handicap Access - As Indicated x 18'



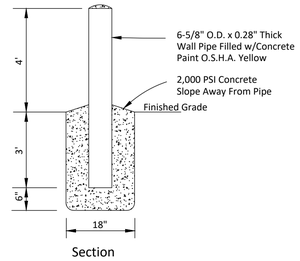
HANDICAP ACCESSIBLE PARKING SIGN
NTS

Note:
These signs shall be placed at the location(s) designated in the review of this project by the TEXAS DEPARTMENT OF LICENSING AND REGULATIONS, Architectural Barriers Section.



6" WIDE STROKES (typ.)
WHITE PAINT

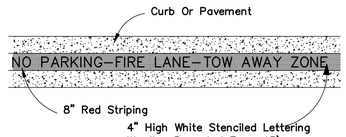
HANDICAP STRIPING
NTS



Section

BOLLARD DETAIL
NTS

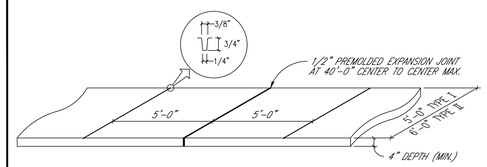
NOTE:
ALL ADA SIGNAGE AND STRIPING SHALL CONFORM WITH THE CURRENT REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS.



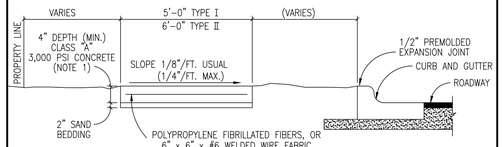
FIRE LANE STRIPING DETAIL
No Scale

NOTE:

All striping shall be the color paint indicated per TxDOT Specification Item 666 TYPE II marking materials "Traffic Paint". All striping widths shall be 4" unless otherwise noted. Stripes are dimensioned to centerline of stripe.



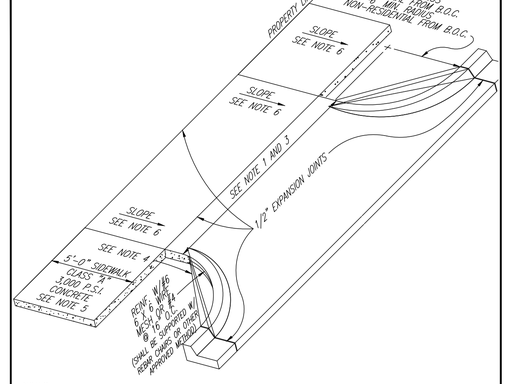
TYPE I – AS REQUIRED FOR SINGLE FAMILY, DUPLEXES AND TOWNHOUSES, TRIPLEXES AND QUADRAPLEXES.
TYPE II – AS REQUIRED FOR MULTI-FAMILY, OTHER NON-RESIDENTIAL USES AND PARKING LOTS/STRUCTURES.
ALL THOROUGHFARES (COLLECTOR AND ABOVE) REQUIRE TYPE II.



NOTES:
1. STANDARD LOCATION OF SIDEWALK SHALL BE IN CONFORMANCE WITH THE UDC.
2. SIDEWALK SHALL CONFORM TO CURRENT TDLR/TAS STANDARDS.
3. ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND ENGINEER OF RECORD.
4. ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT SHALL BE APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND BY THE CITY ENGINEER.
5. SLIP DOWEL SHALL BE INSTALLED AT EVERY LONGITUDINAL EXPANSION JOINT (UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER DURING ENGINEERING PLAN REVIEW PRIOR TO FINAL DESIGN).

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

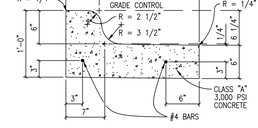
	REVISION NOTE: REVISED 6/25/2015 WBD REVISION NOTE: ADOPTED 6/21/2006 TRB	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS SIDEWALK SECTION AND JOINT DETAIL	DRAWING NAME: SD14 SCALE: NTS DRAWN BY: MRS DATE: 1/2003 APPROVED BY: TRB	



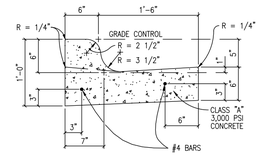
NOTES:
1. MAXIMUM WIDTH OF APPROACH SHALL BE 24'–0" FOR RESIDENTIAL, 30'–0" FOR NON–RESIDENTIAL UNDIVIDED AND 45'–0" FOR NON–RESIDENTIAL DIVIDED.
2. DRIVEWAY PERMITS SHALL BE ACQUIRED FROM CITY INSPECTION OFFICE.
3. MINIMUM WIDTH OF APPROACH SHALL BE 10'–0" FOR RESIDENTIAL AND 15'–0" FOR NON–RESIDENTIAL.
4. LINEAR "RADIUS" AT CORNERS, PERMITTED FOR "SINGLE FAMILY" OR "TWO FAMILY" RESIDENTIAL DRIVEWAY APPROACH.
5. SIDEWALK LOCATION SHALL BE APPROVED BY CITY ENGINEER PRIOR TO FINAL DESIGN.
6. SLOPE 1/8" PER FOOT USUAL, SHALL NOT EXCEED 2.0%.
7. DRIVEWAY APPROACH THICKNESS SHALL BE A MIN. OF 6".

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

	REVISION NOTE: REVISED 6/25/2015 WBD REVISION NOTE: ADOPTED 6/21/2006 TRB	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS CONCRETE DRIVEWAY APPROACH TYPICAL	DRAWING NAME: SD15 SCALE: NTS DRAWN BY: MRS DATE: 1/2003 APPROVED BY: TRB	

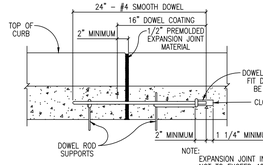


SPILL CURB



CATCH AND LAYDOWN CURB

NOTES:
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D–1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP–RAP.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR THE CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. THE FOLLOWING SCHEME OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACEMENT AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
   A. ALL CURB AND CURB AND GUTTER (REINFORCED) SHALL HAVE TWO #4 LONGITUDINAL REINFORCING BARS.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THAT REBAR IS PROPERLY GUIDED INTO THE CURB SECTION.



CURB DOWEL DETAIL

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

	REVISION NOTE: ADOPTED 6/21/2006	
CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS CURB AND GUTTER DETAILS	DRAWING NAME: SD06 SCALE: NTS DRAWN BY: MRS DATE: 1/2003 APPROVED BY: TRB	

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED PROFESSIONAL ENGINEER
F-181
03/22/2023

STEGER BIZZELL

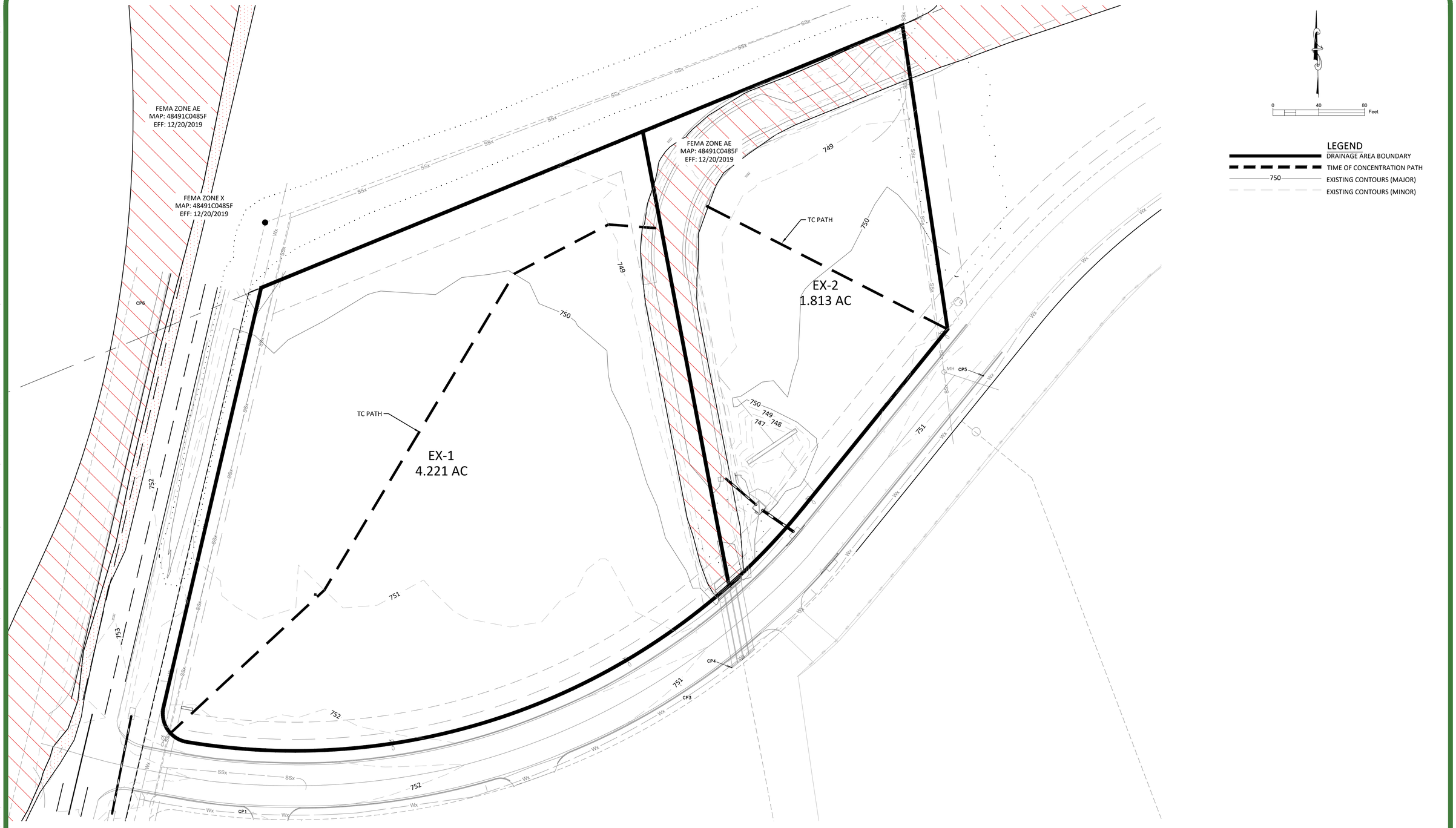
ADDRESS: 1978 S. AUSTIN AVENUE, GEORGETOWN, TX 78626
METRO: 512.930.9412
TEXAS REGISTERED ENGINEERING FIRM F-181
TBPLS FIRM No.10003700
WEB: STEGERBIZZELL.COM
SERVICES: >>ENGINEERS >>PLANNERS >>SURVEYORS

SITE DETAILS
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 24 of 41



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EXISTING DRAINAGE AREA MAP

for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\EXISTING DRAINAGE AREA MAP.dwg By: Ted Haynie Date: 3/23/2023 3:40 PM

	Sheet Flow							Shallow Concentrated Flow						Channel Flow											
Drainage Area	Length (ft)	Surface Condition	"n"	U/S Elev	D/S Elev	Slope (%)	T_t	Length (ft)	Surface Condition	U/S Elev	D/S Elev	Slope (%)	T_t	Length (ft)	A (ft2)	P (ft)	R (ft)	U/S Elev	D/S Elev	S (ft/ft)	n	Velocity (fps)	T_t	T_c Total (min)	Tlag
EX-1	150	RANGE (NATURAL)	0.130	752.49	751.04	0.97%	14.11	478	UNPAVED	751.04	748.30	0.57%	6.52	0	0.00	0.00	0.00	0.00	0.00	0.00%	0.013	0.00	0.00	20.63	12.38
EX-2	150	RANGE (NATURAL)	0.130	751.01	749.65	0.91%	14.48	86	UNPAVED	749.65	748.19	1.68%	0.69											15.16	9.10

EXISTING RUNOFF CONDITIONS

EXISTING SITE CONDITION: UNDEVELOPED (RANGE)
HYDROLOGIC SOIL GROUP: D

DRAINAGE AREA: EX-1
RCN: 80

TC = 20.65 MIN
TLAG = 12.58 MIN

2-YR RUNOFF: 6.4 CFS
10-YR RUNOFF: 13.5 CFS
25-YR RUNOFF: 17.5 CFS
100-YR RUNOFF: 24.0 CFS

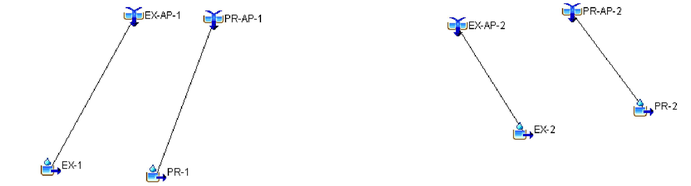
DRAINAGE AREA: EX-2
RCN: 80

TC = 15.16 MIN
TLAG = 9.10

2-YR RUNOFF: 3.1CFS
10-YR RUNOFF: 6.5 CFS
25-YR RUNOFF: 8.4 CFS
100-YR RUNOFF: 11.5 CFS

IMPERVIOUS COVER CALCULATIONS

EXISTING							
BASIN	TOTAL AREA	ACRES	SQ. MI.	I.C. (s.f.)	I.C. (acres)	I.C. %	CN
EX-1	183,867	4.221	0.0065953	-	-	0.0%	80
EX-2	78,974	1.813	0.0028328	-	-	0.0%	80
TOTALS	262,841	6.034	0.0094281				



WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

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METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
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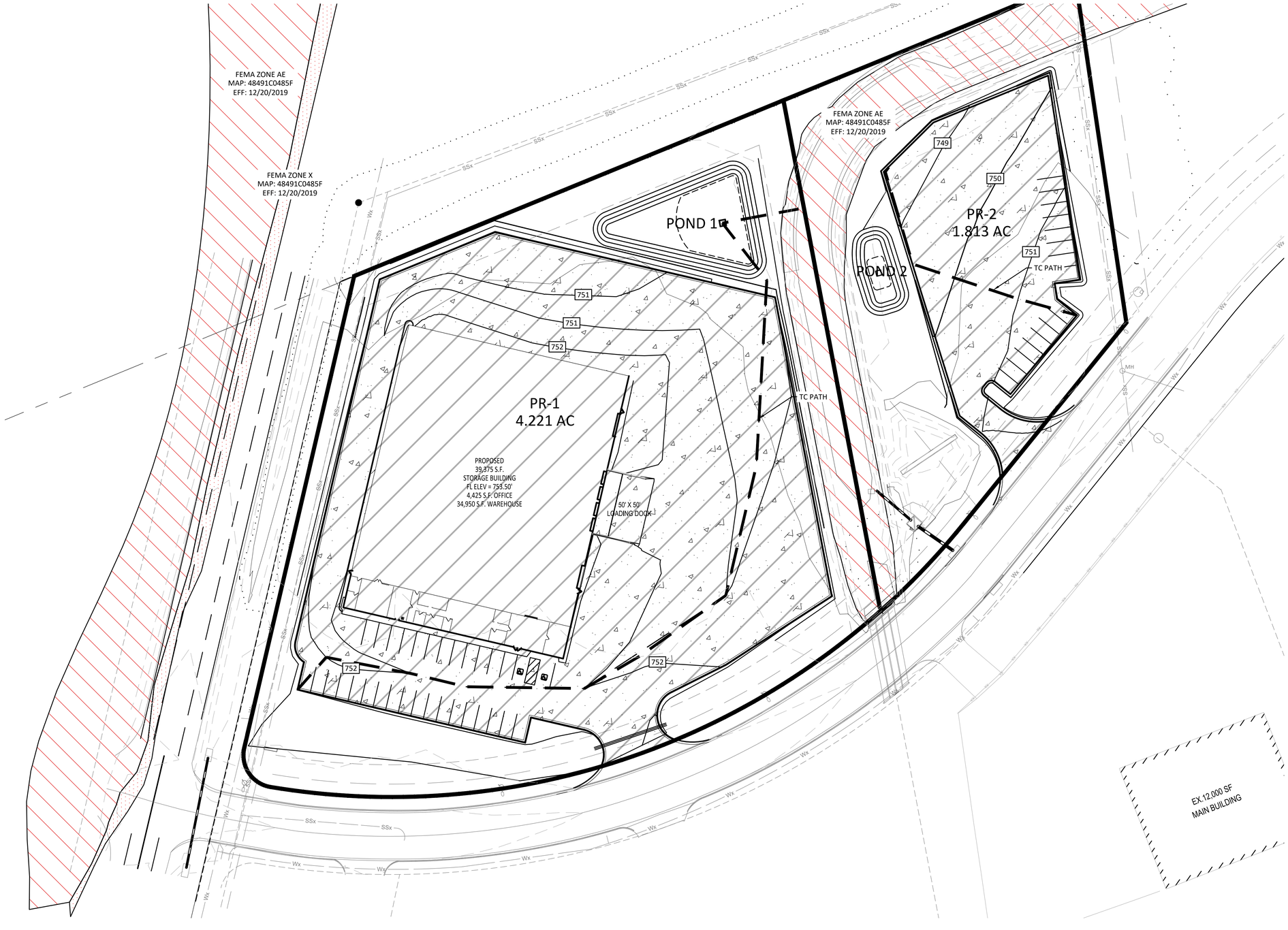
EXISTING DRAINAGE CALCULATIONS
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\EXISTING DRAINAGE CALCULATIONS.dwg By: Ted Haynie Date: 3/23/2023 3:40 PM



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PROPOSED DRAINAGE AREA MAP
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 27 of 41

	Sheet Flow							Shallow Concentrated Flow						Channel Flow											
Drainage Area	Length (ft)	Surface Condition	"n"	U/S Elev	D/S Elev	Slope (%)	T_t	Length (ft)	Surface Condition	U/S Elev	D/S Elev	Slope (%)	T_t	Length (ft)	A (ft2)	P (ft)	R (ft)	U/S Elev	D/S Elev	S (ft/ft)	n	Velocity (fps)	T_t	T_c Total (min)	Tlag
EX-1	150	RANGE (NATURAL)	0.130	752.49	751.04	0.97%	14.11	478	UNPAVED	751.04	748.30	0.57%	6.52	0	0.00	0.00	0.00	0.00	0.00	0.00%	0.013	0.00	0.00	20.63	12.38
EX-2	150	RANGE (NATURAL)	0.130	751.01	749.65	0.91%	14.48	86	UNPAVED	749.65	748.19	1.68%	0.69											15.16	9.10
PR-1	90	LAWN	0.150	752.49	751.41	1.20%	9.64	567	PAVED	751.41	749.75	0.29%	8.60											18.24	10.94
PR-2	0	LAWN	0.150	751.01	750.50	#DIV/0!	####	0	PAVED	750.50	748.19	#DIV/0!	####	0	0.00	0.00	0.00	0.00	0.00	0.00%	0.000	0.00	0.00	5.00	3.60

PROPOSED RUNOFF CONDITIONS

DEVELOPED SITE CONDITION: COMMERCIAL
HYDROLOGIC SOIL GROUP: D

DRAINAGE AREA: PR-1
RCN: 92

TC = 18.24 MIN
TLAG = 10.94 MIN

2-YR RUNOFF: 15.3 CFS
10-YR RUNOFF: 22.1 CFS
25-YR RUNOFF: 26.3 CFS
100-YR RUNOFF: 32.4 CFS

DRAINAGE AREA: PR-2
RCN: 86

TC = 5.00 MIN
TLAG = 3.60

2-YR RUNOFF: 6.8 CFS
10-YR RUNOFF: 10.5 CFS
25-YR RUNOFF: 12.3 CFS
100-YR RUNOFF: 15.7

IMPERVIOUS COVER CALCULATIONS

PROPOSED

BASIN	TOTAL AREA	ACRES	SQ. MI.	I.C. (s.f.)	I.C. (acres)	I.C. %	CN
PR-1	183,867	4.221	0.0065953	125,702	2.89	68.4%	92
PR-2	78,974	1.813	0.0028328	27,446	0.63	34.8%	86
TOTALS	262,841	6.034	0.0094281	153,148	3.52	58.27%	

WARNING!
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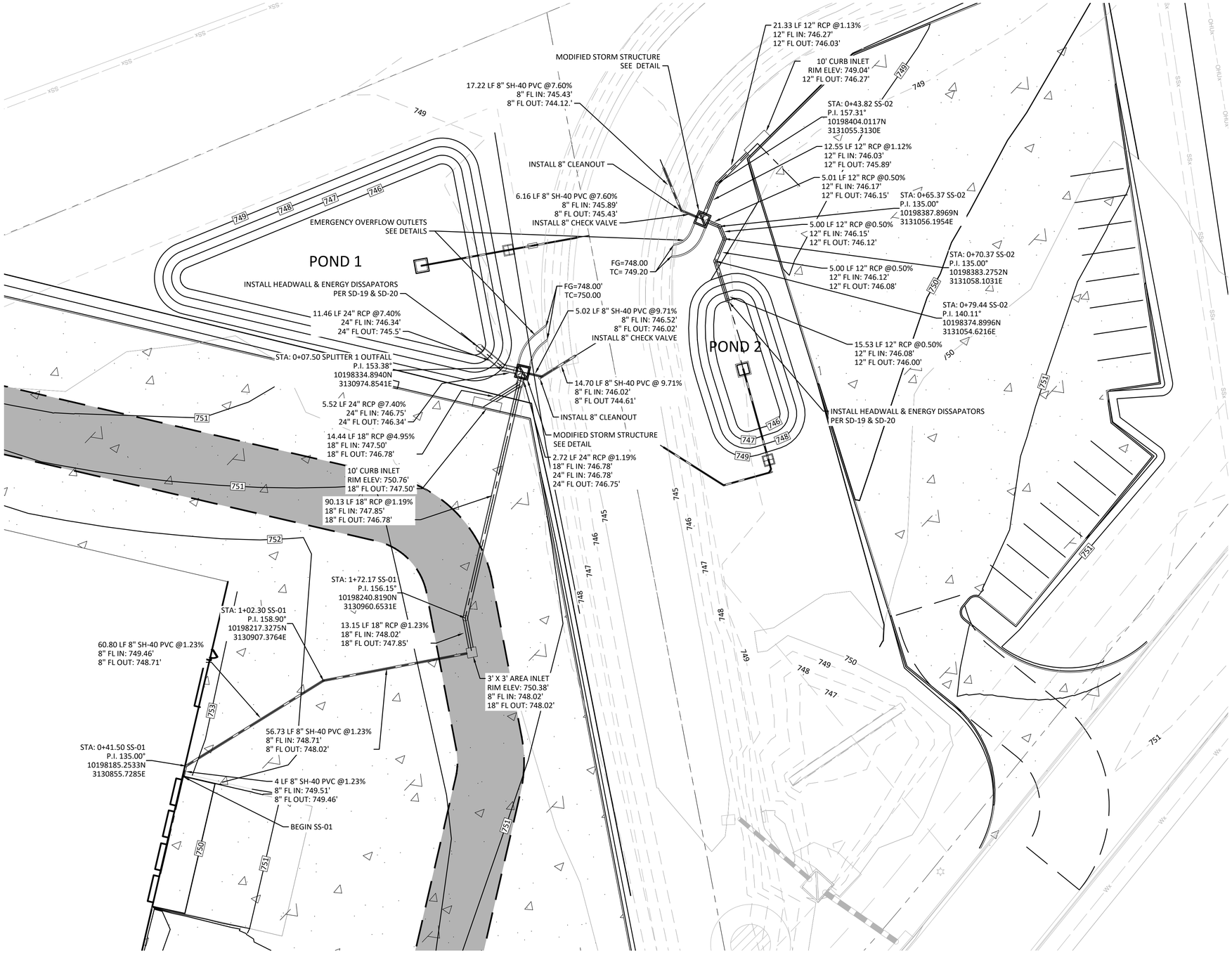
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS
2023-13-SDP

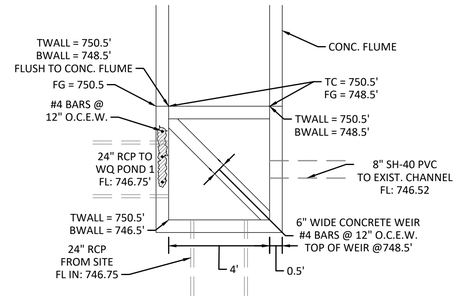
Project No: 22914

SHEET 28 of 41

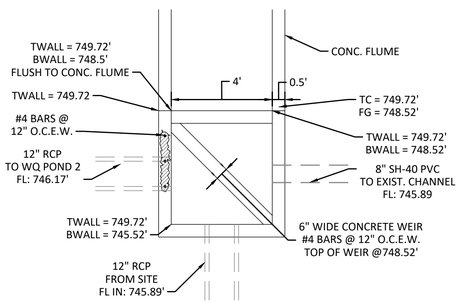


LEGEND

- CURB INLET
- PAVEMENT
- PROPERTY LINE
- 750 EXISTING CONTOURS (MAJOR)
- 750 EXISTING CONTOURS (MINOR)
- 750 PROPOSED CONTOURS (MAJOR)
- 750 PROPOSED CONTOURS (MINOR)
- STORM CENTERLINE
- STORM LINE



POND 1: MODIFIED STORM STRUCTURE DETAIL
SCALE 1" = 3'



POND 2: MODIFIED STORM STRUCTURE DETAIL
SCALE 1" = 3'

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STATE OF TEXAS
98920
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F-181
03/22/2023

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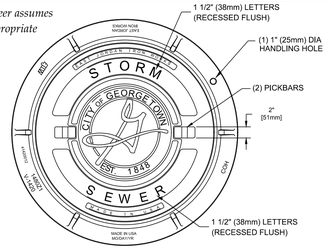
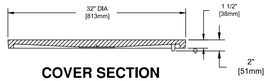
STORM PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

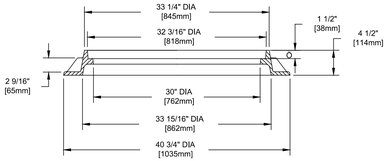
Project No: 22914

SHEET 29 *of 41*





COVER SECTION



FRAME SECTION

NOTES:

1. STANDARD STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420\1480Z1, COVER TO BE STAMPED WITH "STORM SEWER".
2. STANDARD STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148391.
4. FOR BOLTED STORM SEWER MANHOLE SET REFER TO DETAIL SD11A.

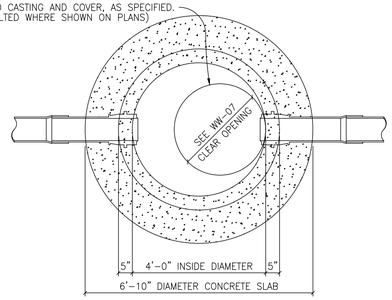
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

STANDARD STORM SEWER MANHOLE SET

DRAWING NAME: SD11

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



MANHOLE PLAN

CITY OF GEORGETOWN NOTES:

MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

A. ALL MANHOLES SHALL BE 48" I.D., R.C.P., CLASS III, WITH RUBBER O-RING GASKET JOINTS CONFORMING TO ASTM C478, C433 AND C76.
B. ALL MANHOLES SHALL HAVE FRAME AND COVER, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL # WW-07) OR APPROVED EQUIVALENT.
C. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
D. ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE.
E. MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF GEORGETOWN, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURED BY CALVERT CONCRETE OR APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING, AND O-RING JOINT CONFORMING TO ASTM C443.
F. INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C-923, SHALL BE CAST INTO BASE SECTION.
G. MINIMUM DROP BETWEEN INVERTS SHALL BE ONE-TENTH OF A FOOT (0.1').
H. GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING WITH A MAXIMUM OF FIVE (5) GRADE RINGS ARE ALLOWED.

REVISION NOTE: ADOPTED 6/21/2006

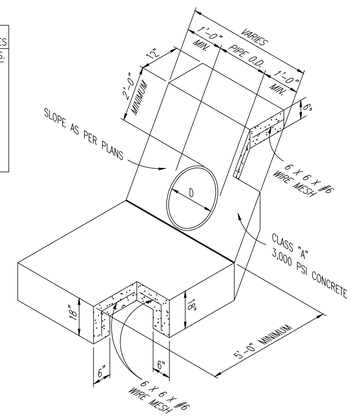
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

STANDARD STORM SEWER MANHOLE PLAN

DRAWING NAME: SD12

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

MINIMUM RIP-RAP QUANTITIES	
PIPE	SQ. YDS.
18"	6.2
24"	6.9
27"	7.8
30"	9.5
36"	10.4
42"	12.0
48"	14.3
54"	16.4



NOTES:

1. WHEN HEADWALLS AND WINGWALLS ARE REQUIRED, THEY SHALL CONFORM TO THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARDS, OR AS DIRECTED BY THE CITY.
2. ENERGY DISSIPATERS SHALL BE REQUIRED IF PIPE VELOCITY IS GREATER THAN 5.0 F.P.S. OR AS DIRECTED BY THE CITY OF GEORGETOWN.
3. SUPPORT REINFORCING WIRE MESH REQUIRED AS SUPPORT FOR APPROACH SLAB AND SHALL BE SUPPORTED BY REBAR CHAIRS OR OTHER APPROVED METHODS.

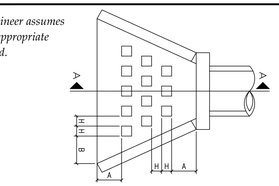
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

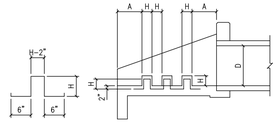
TYPICAL CONCRETE RIP-RAP AT PIPE

DRAWING NAME: SD19

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



PLAN VIEW



BARS SECTION "A-A"

NOTES:

1. USE CLASS "A" CONCRETE, 3,000 PSI AT 28 DAYS, UNLESS NOTED.
2. REINFORCING STEEL - ASTM A615, GRADE 40, UNLESS NOTED.
3. LAP REINFORCING 30 BAR DIAMETERS MIN. AT SPLICES, UNLESS NOTED.
4. CHAMFER EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED.
5. PLACE REINFORCING WITH THE CENTER OF THE OUTSIDE BARS 2 INCHES FROM THE SURFACE OF THE CONCRETE.

TABLE OF DIMENSIONS FOR ENERGY DISSIPATOR DETAIL

D PIPE DIAMETER (INCHES)	NUMBER OF ROWS OF DISSIPATORS	NUMBER OF DISSIPATORS IN FRONT ROW	H (INCHES)	A (INCHES)	B (INCHES)
12	1	3	4	4	9.1875
18	2	4	4 1/2	9 1/2	15.5625
24	2	5	6	14 3/4	16 1/2
30	3	6	7 1/2	12 1/2	14 3/8
36	3	6	9	16 1/4	18 5/16
42	3	6	10 1/2	20	22 1/4
48	3	6	12	23 3/4	26 1/4
54	3	6	13 1/2	27 1/2	27 3/4
60	3	6	15	31 1/4	31 5/8

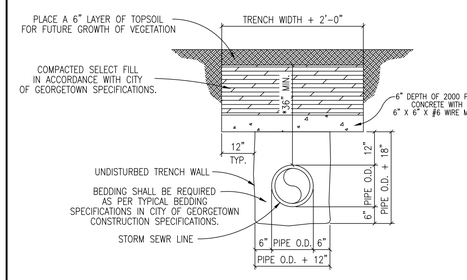
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

ENERGY DISSIPATER DETAIL

DRAWING NAME: SD20

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



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

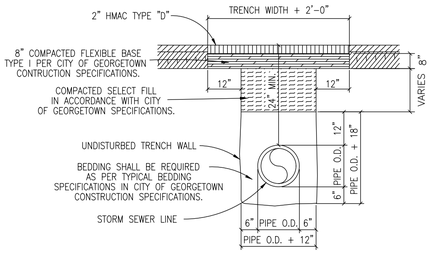
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

CONCRETE TRANCH CAP DETAIL FOR STORM SEWER

DRAWING NAME: SD39

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



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

NOTES:

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE.
2. BASE MATERIAL SHALL BE IN LIFTS NOT TO EXCEED 6" AND EACH LIFT THOROUGHLY ROLLED OR TAMPED TO SPECIFIED MAXIMUM DENSITY.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE.
5. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
6. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

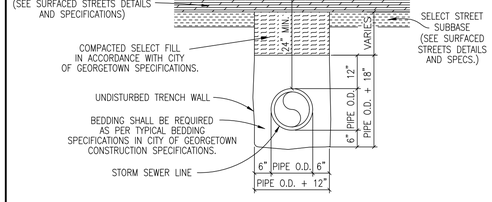
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

TRENCH, EMBEDMENT AND PAVEMENT REPLACEMENT DETAIL UNDER EXISTING ROADWAY FOR STORM SEWER

DRAWING NAME: SD40

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



NOTES:

1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

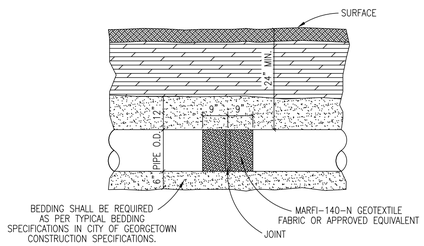
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY FOR STORM SEWER

DRAWING NAME: SD41

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



NOTES

1. PIPE SHALL BE REINFORCED CONCRETE PIPE CLASS III UNLESS THE DEPTH OF PIPE REQUIRES A STRONGER CLASS.
2. ALL FITTINGS AND WYES SHALL BE MANUFACTURED AND NOT CONSTRUCTED ON THE PROJECT WITHOUT PRIOR APPROVAL FROM THE CITY.
3. ALL JOINTS SHALL BE WRAPPED WITH MARFI-140-N GEOTEXTILE FABRIC OR APPROVED EQUIVALENT. EACH JOINT SHALL BE WRAPPED WITH 18" WIDE FABRIC CENTERED ON THE JOINT.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

TRENCH AND EMBEDMENT DETAIL (PROFILE) FOR STORM SEWER

DRAWING NAME: SD42

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

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED PROFESSIONAL ENGINEER
03/22/2023

STEGER BIZZELL

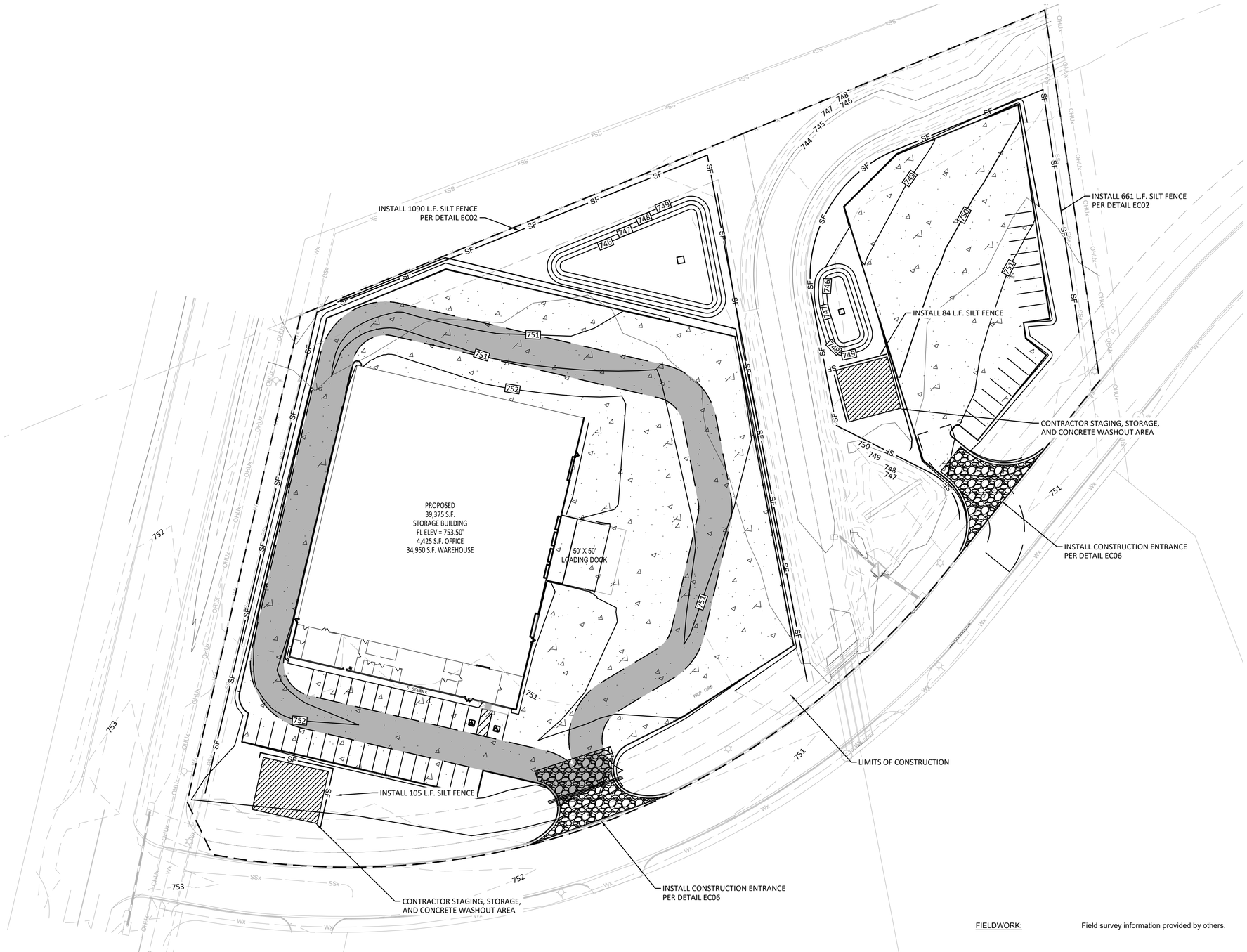
ADDRESS 1978 S. AUSTIN AVENUE | GEORGETOWN, TX 78626
METRO 512.930.9412 | TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 | WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

STORM DETAILS
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 30 of 41



0 40 80 Feet

LEGEND

- EDGE OF PAVEMENT
- LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- PROPOSED CONTOURS (MAJOR)
- PROPOSED CONTOUR (MINOR)

FIELDWORK: Field survey information provided by others.

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED
PROFESSIONAL ENGINEER
F-181
03/22/2023

STEGER BIZZELL
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SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

EROSION & SEDIMENTATION CONTROL PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 31 of 41

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

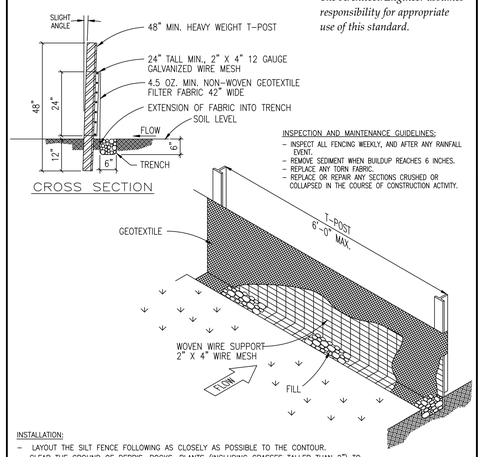
1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
4. ALL PLANTING SHALL BE DONE BETWEEN MAY 1 AND SEPTEMBER 15 EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING. IF PLANTING IS AUTHORIZED TO BE DONE OUTSIDE THE DATES SPECIFIED, THE SEED SHALL BE PLANTED WITH THE ADDITION OF WINTER FESCUE (VENTURY 31) AT A RATE OF 100LN/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE "A" RECENT CROP, RECLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
5. ALL DISTURBED AREAS TO BE RESTORED AS NOTED IN THE WATER POLLUTION ABATEMENT PLAN.
6. THE PLANTED AREA TO BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF FOUR (4) INCHES. THE IRRIGATION TO OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS . RAINFALL OCCURRENCES OF 1/2 INCH OR GREATER TO POSTPONE THE WATERING SCHEDULE ONE WEEK.
7. RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 25 SQUARE FEET EXIST.
8. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL TO BE PLACED IN ALL AREAS DISTURBED BY CONSTRUCTION.
9. THE CONTRACTOR TO HYDROMULCH OR SOD (AS SHOWN ON PLANS) ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION.
10. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINE.
11. TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIPLINE AREAS.
12. WHERE A FENCE IS CLOSER THAN FOUR (4) FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT (8) FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE FENCING.
13. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
14. ANY ROOT EXPOSED BY CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
15. CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES").
16. THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/4 INCH TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL SITE. THE CONTRACTOR TO CONDUCT PERIODIC INSPECTIONS OF ALL EROSION/SEDIMENTATION CONTROLS AND TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
17. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR FEET (2'-4') BEHIND THE AREA IN QUESTION.
18. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES TO BE STORED ON THE PROJECT SITE.
19. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVE AND THE CONTRACTOR TO EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONSTRUCTION. ANY DAMAGE TO PREEXISTING EROSION AND SEDIMENTATION CONTROLS NOTED TO BE REPAIRED AT OWNERS EXPENSE.
20. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

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

REVISION NOTE: ADOPTED 6/21/2006

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

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



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

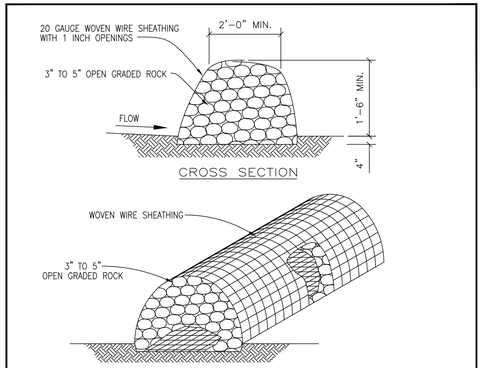
INSTALLATION:
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY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

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

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SILT FENCE DETAIL

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



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

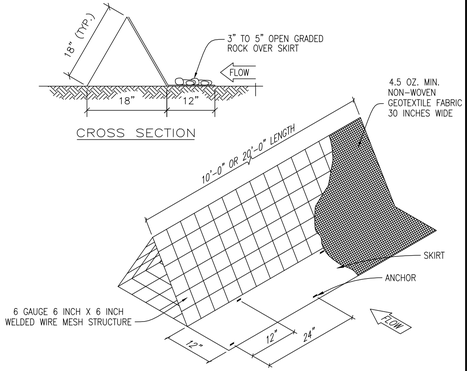
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED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

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

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
ROCK BERM DETAIL

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



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

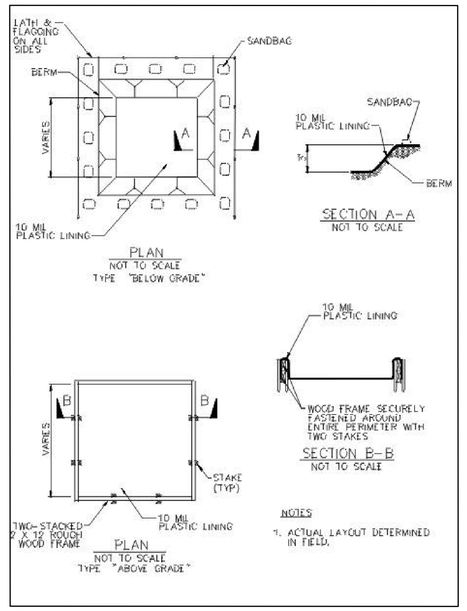
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- INSPECT AND REALIGN BERMS AS NEEDED TO PREVENT GAPS BETWEEN THE SECTIONS.
- ACCUMULATED SILT SHOULD BE REMOVED AFTER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

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

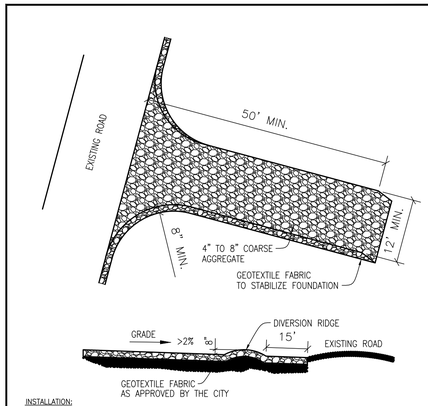
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRIANGULAR FILTER DIKE

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



Temporary Concrete Washout Area Detail



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

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

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

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STABILIZED CONSTRUCTION ENTRANCE

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

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: ____ DATE ____
DRAWN BY: ____ DATE ____
CHECKED BY: ____ DATE ____
APPROVED BY: ____ DATE ____

STATE OF TEXAS · BRYAN ERIC MOORE · 98920 · LICENSED PROFESSIONAL ENGINEER · F-181 · 03/22/2023

STEGER BIZZELL
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METRO 512.930.9412 | TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 | WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

EROSION & SEDIMENTATION CONTROL DETAILS
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS
2023-13-SDP

Project No: 22914

SHEET 32 of 41

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: 84 Lumber Office/Warehouse Expansion - Lot 1
Date Prepared: 4/12/2023

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 =	Williamson	
Total project area included in plan * =	6.034	acres
Predevelopment impervious area within the limits of the plan * =	0.000	acres
Total post-development impervious area within the limits of the plan* =	3.516	acres
Total post-development impervious cover fraction * =	0.58	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	3060	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 =	4.22	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	2.89	acres
Post-development impervious fraction within drainage basin/outfall area =	0.68	
$L_{M\ THIS\ BASIN}$ =	2515	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention Basin
Removal efficiency = 91 percent

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

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

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

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

A_C =	4.22	acres
A_I =	2.89	acres
A_P =	1.33	acres
L_R =	2933	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 2515 lbs.

F = 0.86

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

Rainfall Depth = 1.38 inches
Post Development Runoff Coefficient = 0.49
On-site Water Quality Volume = 10377 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 = 2075
Total Capture Volume (required water quality volume(s) x 1.20) = 12452 cubic feet

TSS REMOVAL @ 80% FOR LOTS 1 & 2
MINIMUM TCEQ REQUIREMENTS

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: 84 Lumber Office/Warehouse Expansion - Lot 2
Date Prepared: 4/12/2023

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 =	Williamson	
Total project area included in plan * =	6.034	acres
Predevelopment impervious area within the limits of the plan * =	0.000	acres
Total post-development impervious area within the limits of the plan* =	3.516	acres
Total post-development impervious cover fraction * =	0.58	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	3060	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. = 2

Total drainage basin/outfall area =	1.81	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.63	acres
Post-development impervious fraction within drainage basin/outfall area =	0.35	
$L_{M\ THIS\ BASIN}$ =	548	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention Basin
Removal efficiency = 91 percent

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

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

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

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

A_C =	1.81	acres
A_I =	0.63	acres
A_P =	1.18	acres
L_R =	653	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 548 lbs.

F = 0.84

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

Rainfall Depth = 1.26 inches
Post Development Runoff Coefficient = 0.28
On-site Water Quality Volume = 2334 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 = 467
Total Capture Volume (required water quality volume(s) x 1.20) = 2801 cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: 84 Lumber Office/Warehouse Expansion - Lot 1
Date Prepared: 4/12/2023

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.
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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: $L_M = 28.9(A_N \times P)$

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 85% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

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

County =	Williamson	
Total project area included in plan * =	6.034	acres
Predevelopment impervious area within the limits of the plan * =	0.000	acres
Total post-development impervious area within the limits of the plan* =	3.516	acres
Total post-development impervious cover fraction * =	0.58	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	3252	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 =	4.220	acres
Predevelopment impervious area within drainage basin/outfall area =	0.000	acres
Post-development impervious area within drainage basin/outfall area =	2.890	acres
Post-development impervious fraction within drainage basin/outfall area =	0.68	
$L_{M\ THIS\ BASIN}$ =	2673	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention Basin
Removal efficiency = 91 percent

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

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

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

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

A_C =	4.22	acres
A_I =	2.89	acres
A_P =	1.33	acres
L_R =	2933	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 2673 lbs.

F = 0.91

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

Rainfall Depth = 1.80 inches
Post Development Runoff Coefficient = 0.49
On-site Water Quality Volume = 13535 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 = 2707
Total Capture Volume (required water quality volume(s) x 1.20) = 16242 cubic feet

TSS REMOVAL @ 85% FOR LOTS 1 & 2
MINIMUM CITY OF GEORGETOWN REQUIREMENTS

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: 84 Lumber Office/Warehouse Expansion - Lot 2
Date Prepared: 4/12/2023

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: $L_M = 28.9(A_N \times P)$

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 85% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

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

County =	Williamson	
Total project area included in plan * =	6.034	acres
Predevelopment impervious area within the limits of the plan * =	0.000	acres
Total post-development impervious area within the limits of the plan* =	3.516	acres
Total post-development impervious cover fraction * =	0.58	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	3252	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. = 2

Total drainage basin/outfall area =	1.81	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.63	acres
Post-development impervious fraction within drainage basin/outfall area =	0.35	
$L_{M\ THIS\ BASIN}$ =	583	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention Basin
Removal efficiency = 91 percent

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

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

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

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

A_C =	1.81	acres
A_I =	0.63	acres
A_P =	1.18	acres
L_R =	653	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 583 lbs.

F = 0.89

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

Rainfall Depth = 1.60 inches
Post Development Runoff Coefficient = 0.28
On-site Water Quality Volume = 2964 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 = 593
Total Capture Volume (required water quality volume(s) x 1.20) = 3557 cubic feet

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS · BRYAN ERIC MOORE · 96920 · LICENSED PROFESSIONAL ENGINEER · F-181
03/22/2023

STEGER BIZZELL
ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

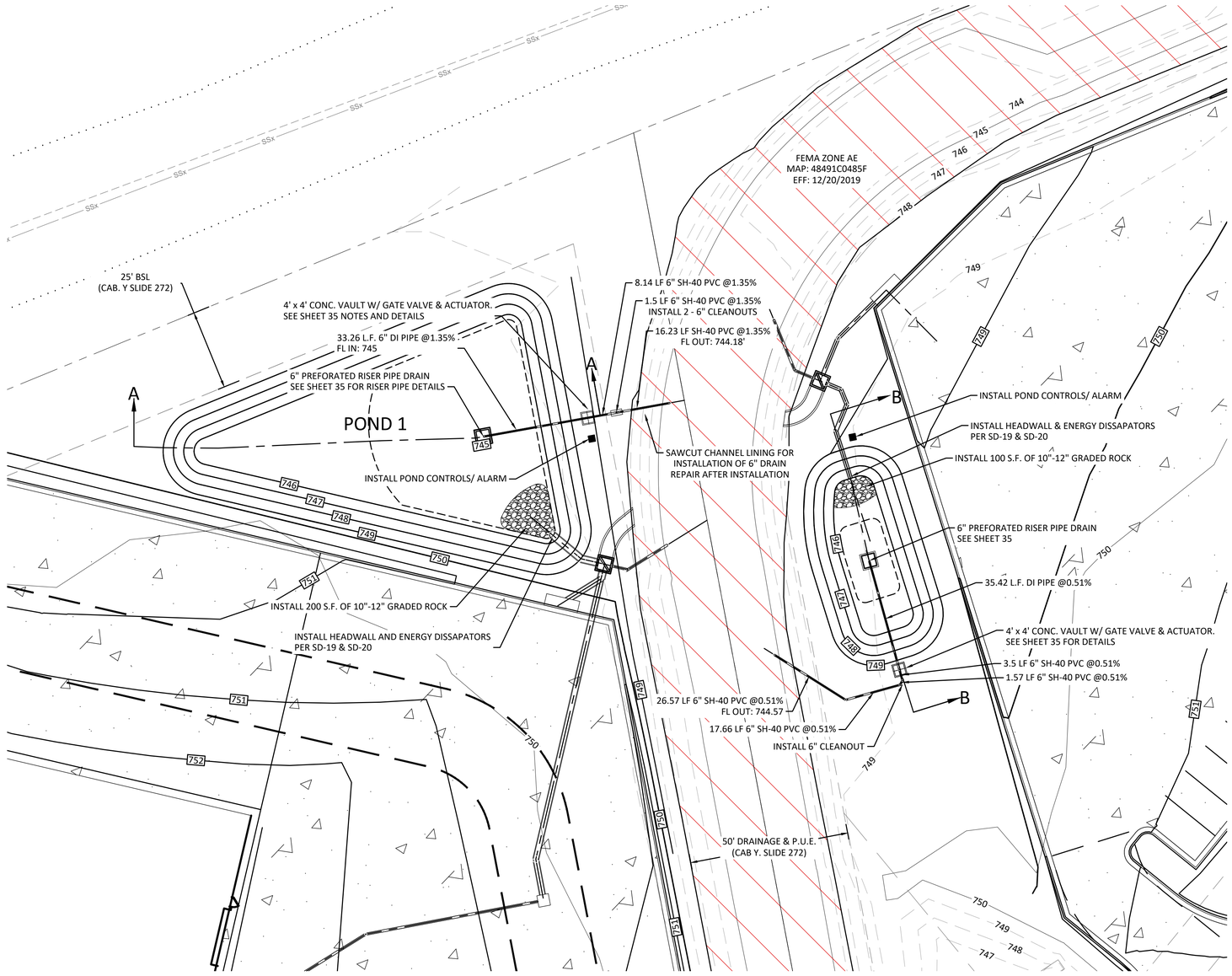
TCEQ CALCULATIONS
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

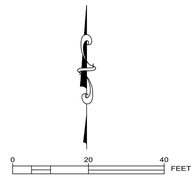
2023-13-SDP

Project No: 22914

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Xref\SB 22x34 Title Block.dwg By: Kevin Mercer Date: 4/12/2023 2:44 PM

BATCH DETENTION PONDS 1 & 2 PLAN





LEGEND

- PAVEMENT
- PROPERTY BOUNDARY
- EASEMENT
- 750 EXISTING CONTOURS (MAJOR)
- 750 EXISTING CONTOURS (MINOR)
- 750 PROPOSED CONTOURS (MAJOR)
- 750 PROPOSED CONTOURS (MINOR)
- STORM DRAIN CENTERLINE
- STORM STRUCTURE

PROPOSED POND 1 VOLUME SUMMARY TABLE				
CONTOUR ELEVATION (FT.)	CONTOUR AREA (SQ. FT.)	INCREMENTAL DEPTH (FT)	INCREMENTAL VOLUME (CU. FT)	CUMULATIVE VOL. (CU. FT.)
745	16	0	0	0
745.5	2763.52	0.5	694.88	694.88
746	4434.62	0.5	1799.53	2494.41
746.5	4965.89	0.5	2350.13	4844.54
747	5442.18	0.5	2602.02	7446.56
747.5	6008.51	0.5	2862.67	10309.23
748	6515.23	0.5	3130.93	13440.16
748.5	7116.61	0.5	3407.96	16848.12
749	7653.76	0.5	3692.59	20540.71

SEDIMENT VOLUME (2,707 CU. FT.) = 746.05'
W.Q. VOLUME REQUIRED = 16,240 CU. FT FOR 2,673 LBS. LOAD REMOVAL
W.Q. VOLUME PROVIDED @ 748.42'

PROPOSED POND 2 VOLUME SUMMARY TABLE				
CONTOUR ELEVATION (FT.)	CONTOUR AREA (SQ. FT.)	INCREMENTAL DEPTH (FT)	INCREMENTAL VOLUME (CU. FT)	CUMULATIVE VOL. (CU. FT.)
745	16	0	0	0
745.5	332.08	0.5	87.02	87.02
746	777.56	0.5	277.41	364.43
746.5	983.42	0.5	440.25	804.68
747	1188.43	0.5	542.96	1347.64
747.5	1426.14	0.5	653.64	2001.28
748	1660.57	0.5	771.68	2772.96
748.5	1930.12	0.5	897.67	3670.63
749	2193.99	0.5	1031.03	4701.66

SEDIMENT VOLUME (593 CU. FT.) = 746.26'
WQ VOLUME REQURED = 3560 CU. FT. FOR 583 LBS. LOAD REMOVAL
WQ VOLUME PROVIDED @ 748.44 FT

NOTE:
SEE SHEET 35 FOR POND SECTION A-A, B-B, & COMPONENT DETAILS

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED
PROFESSIONAL ENGINEER
F-181
03/22/2023

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SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

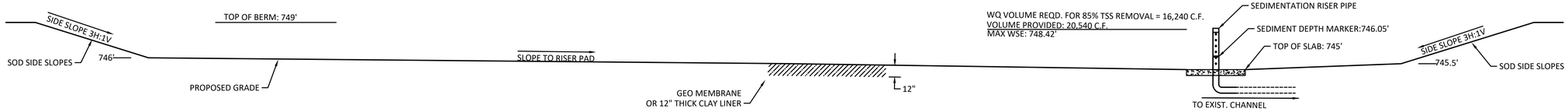
BATCH DETENTION POND PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

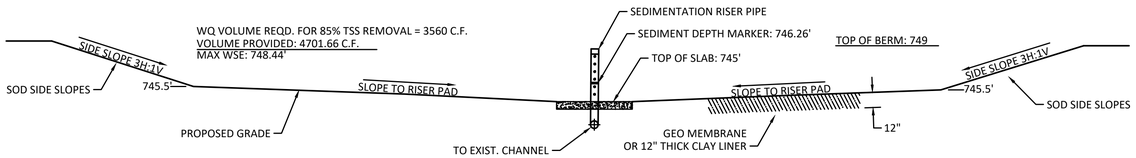
Project No: 22914

SHEET 34 of 41

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\36 BATCH DETENTION POND PLAN.dwg By: Ted Haynie Date: 3/23/2023 3:43 PM



POND 1 - BATCH DETENTION BASIN
SECTION A-A
SCALE: 1" = 5'



POND 2 - BATCH DETENTION BASIN
SECTION B-B
SCALE: 1" = 5'

GEOTEXTILE FABRIC DATA			
PROPERTY	TEST METHOD	UNIT	SPECIFICATION
MATERIAL	NON-WOVEN GEOTEXTILE FABRIC		
UNIT WEIGHT		OZ./SQ. YD.	8 (MIN.)
FILTRATION WEIGHT		IN./SEC.	0.08 (MIN)
PUNCTURE STRENGTH	ASTM D-751 (MODIFIED)	LB.	125 (MIN)
MULLEN BURST STRENGTH	ASTM D-751	P.S.I.	400 (MIN.)
TENSILE STRENGTH	ASTM D-1682	LB.	200 (MIN.)
EQUIV. OPENING SIZE	U.S. STANDARD SIEVE	NO.	80 (MIN.)

SOURCE: CITY OF AUSTIN WATER QUALITY MGMT. 6/1/88

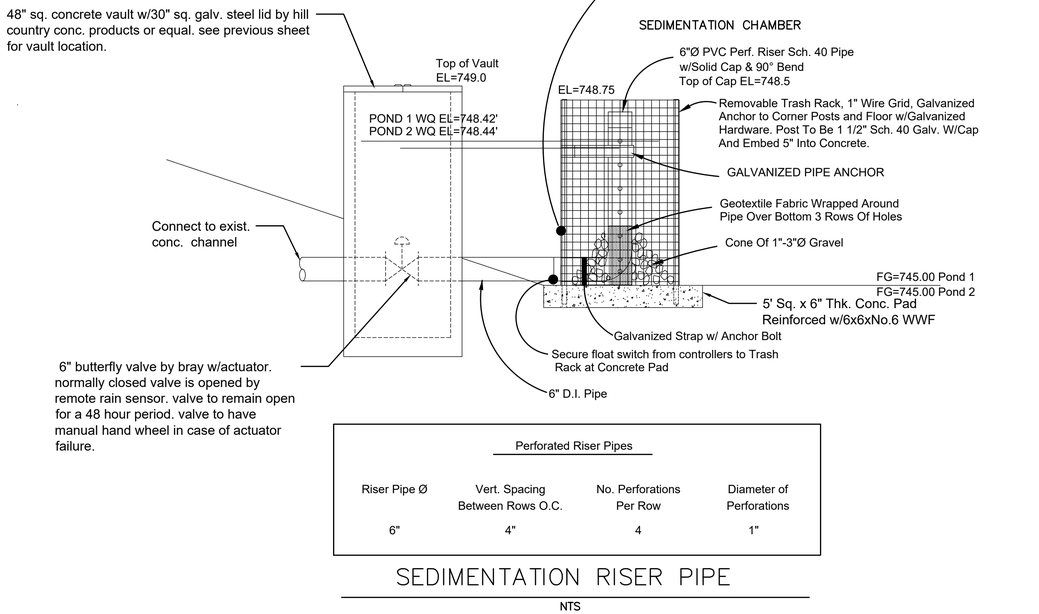
IMPERMEABLE LINERS MAY BE CLAY, CONCRETE OR GEOMEMBRANE. IF GEOMEMBRANE IS USED, SUITABLE GEOTEXTILE FABRIC SHOULD BE PLACED ON THE TOP AND BOTTOM OF THE MEMBRANE FOR PUNCTURE PROTECTION AND THE LINERS COVERED WITH A MINIMUM OF 6 INCHES OF COMPACTED TOPSOIL. THE TOPSOIL SHOULD BE STABILIZED WITH APPROPRIATE VEGETATION. CLAY LINERS SHOULD MEET THE SPECIFICATIONS AS SHOWN BELOW AND HAVE A MINIMUM THICKNESS OF 12 INCHES.

CLAY LINER SPECIFICATIONS (MIN. THICKNESS = 12")			
PROPERTY	TEST METHOD	UNIT	SPECIFICATION
PERMEABILITY	ASTM D-2434	Cm/Sec	$1X10^{-6}$
PLASTICITY INDEX OF CLAY	ASTM D-423 & D-424	%	NOT LESS THAN 15
LIQUID LIMIT OF CLAY	ASTM D-2216	%	NOT LESS THAN 30
CLAY PARTICLES PASSING	ASTM D-422	%	NOT LESS THAN 30
CLAY COMPACTION	ASTM D-2216	%	95% OF STANDARD PROCTOR DENSITY

SOURCE: CITY OF AUSTIN WATER QUALITY MGMT. 9/97

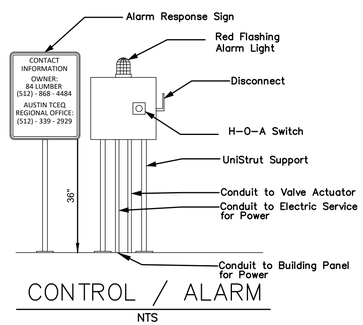
GEOMEMBRANE DATA

IF A GEOMEMBRANE IS USED IT SHALL HAVE A MINIMUM THICKNESS OF (30) THIRTY MILS AND BE ULTRAVIOLET RESISTANT. THE GEOTEXTILE FABRIC (FOR PROTECTION OF GEOMEMBRANE) SHOULD BE NONWOVEN GEOTEXTILE FABRIC AND MEET THE SPECIFICATIONS AS SHOWN BELOW.



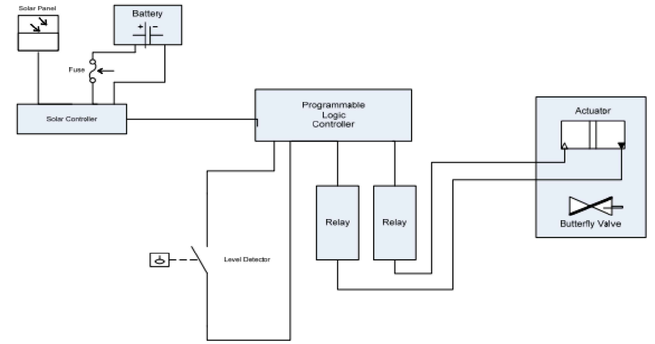
Perforated Riser Pipes			
Riser Pipe Ø	Vert. Spacing Between Rows O.C.	No. Perforations Per Row	Diameter of Perforations
6"	4"	4	1"

SEDIMENTATION RISER PIPE
NTS



CONTROL / ALARM
NTS

CONTROLLER CIRCUIT BOX DIAGRAM



BATCH POND CONTROLLER NOTES:

1. SUBMITTALS - THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH BATCH POND CONTROLLER SUBMITTALS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. SUBMITTALS SHALL INCLUDE: POWER SOURCE, BATTERY BACKUP, LOGIC CONTROLLER, LOCKABLE PARTS ENCLOSURE, FLOAT, VALVE, ACTUATOR, RELAY, ALARM SYSTEM, SIGNAGE, ETC. TOTAL WATTAGE OF POWER CONSUMPTION AND W-HOURS OF ACTUATOR, CONTROLLER AND RELAY SHALL BE PROVIDED. A COPY OF THE APPROVED SUBMITTALS SHALL BE PROVIDED TO TCEQ WITH THE ENGINEERS CERTIFICATION OF PROJECT COMPLETION FOR INCLUSION IN THE TCEQ PROJECT FILE .
2. CONTROLLER - THE CONTROLLER CONSISTS OF A LEVEL SENSOR IN THE DETENTION BASIN, A VALVE (WITH A DEFAULT CLOSED POSITION), AN ACTUATOR, AND THE ASSOCIATED CONTROL. THE CONTROLLER DETECTS WATER FILLING THE BASIN FROM THE LEVEL SENSOR AND INITIATES A 12-HOUR DETENTION TIME. AT THE END OF THE REQUIRED DETENTION TIME, THE CONTROLLER OPENS THE VALVE AND DRAINS INTO THE SECOND BASIN. SUBSEQUENT RAINFALL EVENTS THAT OCCUR PRIOR TO THE BASIN DRAINING SHOULD CAUSE THE VALVE TO REMAIN OPEN AND ALLOW THE ADDITIONAL STORMWATER RUNOFF TO PASS THROUGH THE BASIN. ONCE THE BASIN IS DRAINED THE CONTROLLER CLOSES THE VALVE. THE DRAWDOWN TIME OF THE BASIN SHOULD NOT EXCEED 48 HOURS FOR A SINGLE STORM EVENT AFTER THE 12 HOUR REQUIRED DETENTION TIME. ALL CABLES SHOULD BE PROTECTED BY CONDUIT AND BURIED TO PREVENT DAMAGE DURING MAINTENANCE ACTIVITIES. INFORMATION ON THE DESIGN AND CONFIGURATION OF AN EXISTING SYSTEM, INCLUDING THE SYSTEM SCHEMATIC, CAN BE VIEWED AT THE AUSTIN OR SAN ANTONIO REGIONAL OFFICES.
3. LOGIC CONTROLLER – THE CONTROLLER SHOULD BE PROGRAMMED TO BEGIN DRAINING STORMWATER RUNOFF FROM THE BASIN 12 HOURS AFTER THE FIRST STORMWATER RUNOFF IS SENSED. THE SYSTEM SHOULD BE PROGRAMMED TO HAVE THE VALVE REMAIN OPEN FOR TWO HOURS AFTER THE LEVEL SENSOR INDICATES THE BASIN IS EMPTY TO ALLOW ANY REMAINING SHALLOW WATER TO BE DISCHARGED. THE SYSTEM SHOULD PROVIDE THE FOLLOWING: A TEST SEQUENCE, BE ABLE TO DEAL WITH LOW BATTERY/POWER OUTAGES, AN ON/OFF/RESET SWITCH, MANUAL OPEN/CLOSE SWITCHES (MAINTENANCE/SPILL), CLEARLY VISIBLE EXTERNAL INDICATOR TO INDICATE A CYCLE IS IN PROGRESS WITHOUT OPENING THE BOX, AND ABILITY TO EXERCISE THE VALVE TO PREVENT SEIZING.
4. POWER – THE POND CONTROL SYSTEM CONTROLLER AND ACTUATOR SHALL BE 120 VOLT POWDERED OR 120 VOLT SOLAR POWERED WITH BACKUP BATTERY POWER TO RESPOND TO A LOSS OF POWER IN THE MIDDLE OF A CYCLE.
5. PARTS ENCLOSURE & ALARM SYSTEM - THE PARTS ENCLOSURE SHALL BE LOCKABLE. AN ALARM SYSTEM CLEARLY VISIBLE TO INDICATE SYSTEM MALFUNCTION, WITH PHONE NUMBERS OF THE OWNER AND TCEQ REGION 11 OFFICE SHALL BE PROVIDED.
6. TEMPERATURE/WEATHER - THE SYSTEM SHALL BE BE CAPABLE OF OPERATION FROM 0 TO 130 DEGREES FAHRENHEIT AND FROM 10 TO 90% HUMIDITY.
7. RELIABILITY - THE SYSTEM SHALL HAVE A MINIMUM RELIABILITY OF 40,000 HOURS (4.6 YEARS).

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: DATE
DRAWN BY: DATE
CHECKED BY: DATE
APPROVED BY: DATE

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED
PROFESSIONAL ENGINEER
F-181
03/22/2023

STEGER BIZZELL
ADDRESS 1978 S. AUSTIN AVENUE GEORGETOWN, TX 78626
METRO 512.930.9412 TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

BATCH DETENTION POND SECTIONS & DETAILS
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

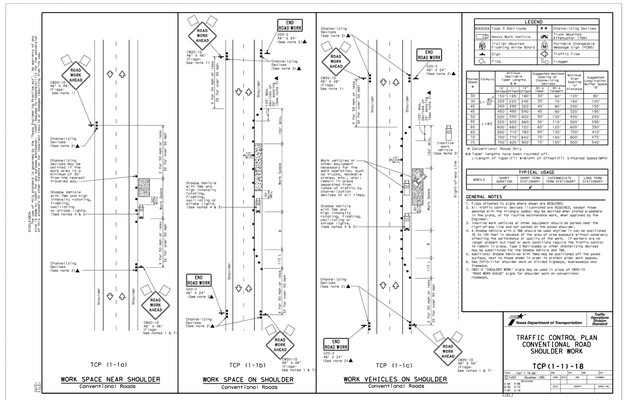
Project No: 22914

SHEET 35 of 41

ELECTRIC SERVICE SITE PLAN

ELECTRIC SERVICE GENERAL & INSTALL NOTES

ELECTRIC SERVICE DETAILS



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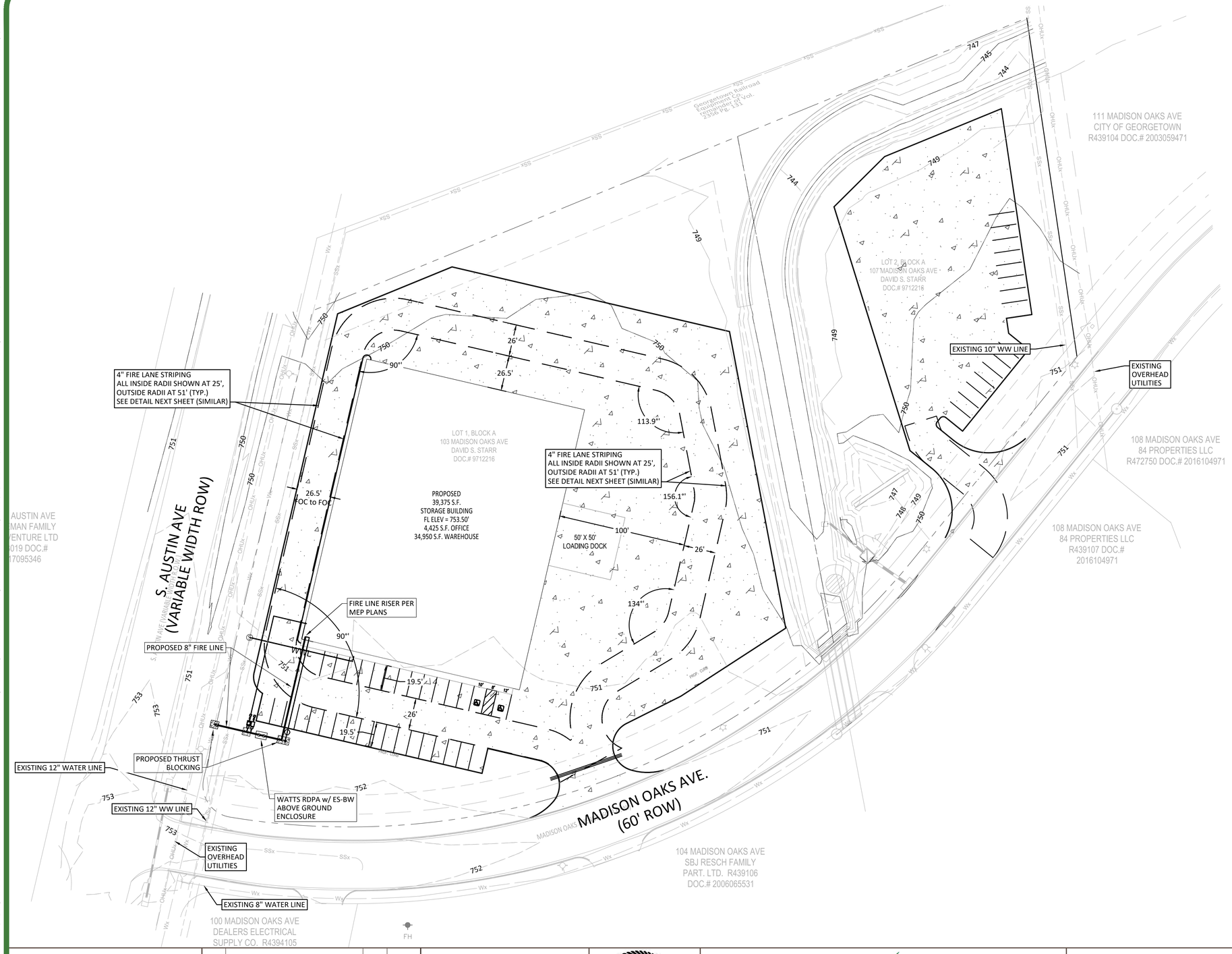
TRAFFIC CONTROL PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 39 of 41



FIELDWORK:
Field survey information provided by others.

WARNING!
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UNDERGROUND FIRE LINE PLAN
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

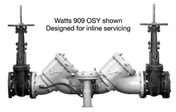
SHEET 40 of 41

File Name: P:\22000-22999\22914 84 Lumber 103 & 107 Madison Oaks\CAD\Plans\43 UNDERGROUND FIRE LINE DETAILS.dwg By: Ted Haynie Date: 3/23/2023 3:45 PM

Installation, Maintenance, & Repair Series 909, LF909, 909RPDA, LF909RPDA

Reduced Pressure Zone Assemblies
Reduced Pressure Detector Assemblies

Sizes: 2½" – 10" (65-250mm)



⚠ WARNING

THINK SAFETY FIRST

Read this Manual BEFORE using this equipment.
Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment.
Keep this Manual for future reference.

⚠ WARNING

Local building or plumbing codes may require modifications to the information provided. You are required to consult the local building and plumbing codes prior to installation. If the information provided here is not consistent with local building or plumbing codes, the local codes should be followed. This product must be installed by a licensed contractor in accordance with local codes and ordinances.

⚠ WARNING

Need for Periodic Inspection/Maintenance: This product must be tested periodically in compliance with local codes, but at least once per year or more as service conditions warrant. If installed on a fire suppression system, all mechanical checks, such as alarms and backflow preventers, should be flow tested and inspected in accordance with NFPA 13 and/or NFPA 25. All products must be retested once maintenance has been performed. Corrosive water conditions and/or unauthorized adjustments or repair could render the product ineffective for the service intended. Regular checking and cleaning of the product's internal components helps assure maximum life and proper product function.

⚠ WARNING

The installation and maintenance of backflow assemblies should be performed by a qualified, licensed technician. Failure to do so may result in a malfunctioning assembly.

NOTICE

For *Australia* and *New Zealand*, line strainers should be installed between the upstream shutoff valve and the inlet of the backflow preventer.

Testing

For field testing procedure, refer to Watts installation sheets IS-TK-DL, IS-TK-9A, IS-TK-99E and IS-TK-99D found on **watts.com**.

For other repair kits and service parts, refer to our Backflow Prevention Products *Repair Kits & Service Parts* price list PL-RP-BPD found on **watts.com.**

For technical assistance, contact your local Watts representative.

Basic Installation Guidelines

NOTICE

The flange gasket bolts for the gate valves should be retightened during installation as the bolts may have loosened due to storage and shipping.

High Capacity Relief Series: Location and Installation Considerations

1. Backflow preventers must be installed in high-visibility locations in order to allow for immediate notice of leftale discharge or other malfunction. This location should also facilitate testing and servicing, and protect against freezing and vandalism.
2. Installing a backflow preventer in a pit or vault is not recommended. However, if this becomes necessary, Watts highly recommends that a licensed journeyman tradesperson, who is recognized by the authority having jurisdiction, be consulted to ensure that all local codes and required safety provisions are met. An air gap below the relief port must be maintained so as to avoid flooding and submersion of the assembly, which may lead to a cross connection. *"Please refer to Figure No. 1 for further information.*
3. Pipe lines should be thoroughly flushed to remove foreign material before installing the unit. A strainer should be installed ahead of backflow preventer to prevent disc from unnecessary fouling. Install valve in the line with arrow on valve body pointing in the direction of flow.

⚠ CAUTION

Do not install a strainer ahead of the backflow preventer on seldom-used, emergency water lines (i.e. fire sprinkler lines). The strainer mesh could potentially become clogged with debris present in the water and cause water blockage during an emergency.

4. Normal discharge and nuisance spitting are accommodated by the use of a Watts air gap fitting and a fabricated indirect waste line. Floor drains of the same size MUST be provided in case of excessive discharge. *"Please refer to Figure No. 1 and Figure No. 2 for further information.*
5. When a 909/LF909 Series backflow preventer is installed for dead-end service applications (i.e. boiler feed lines, cooling tower makeup or other equipment with periodic flow requirements), discharge from the relief vent may occur due to water supply pressure fluctuation during static no-flow conditions. A check valve may be required ahead of the backflow preventer. *"Please see "Troubleshooting", Page 7, prior to installation.*

Basic Installation Guidelines Series 909/LF909 Sizes: 2½" – 10" (65-250mm)

6. The relief valve module on 2½" – 10" (65-250mm) 909/LF909 Series assemblies may be turned to discharge to the opposite side. To do so, unbolt the relief valve and turn the relief valve discharge port to the opposite side. Mount the high pressure hose on the opposite side. This should be done by a licensed journeyman tradesperson, who is recognized by the authority having jurisdiction and only when space is critical for testing or repair.

NOTICE

7. **ASSEMBLY:** If the backflow preventer is disassembled during installation, it MUST be reassembled in its proper order. The gate valve with the test cock is to be mounted on the inlet side of the backflow preventer. The test cock must be on the inlet side of the wedge. Please see above. Failure to reassemble correctly will result in possible water damage due to excessive discharge from the relief port/vent and possible malfunction of the backflow preventer.
8. Installation procedures must comply with all state and local codes and must be completed by a licensed journeyman tradesperson who is recognized by the authority having jurisdiction.
9. Prior to installation, thoroughly flush all pipe lines to remove any foreign matter.
10. START UP at Initial Installation and After Servicing: The downstream shutoff should be closed. Slowly open upstream shutoff and allow the backflow preventer to fill slowly. Bleed air at each test cock. When backflow preventer is filled, slowly open the downstream shutoff and fill the water supply system. This is necessary to avoid dislodging O-rings or causing damage to internal components.
11. **TEST:** The 909/LF909 Series backflow preventer may be tested by a certified tester at the time of installation in order to ascertain that the assembly is in full working order and may be relied upon to protect the safe drinking water as per applicable standard.

Watts No. 909/LF909
2½" – 10" (65-250mm)

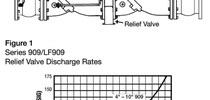


Figure 1
Series 909/LF909
Relief Valve Discharge Rates

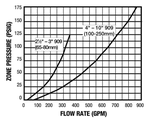


Figure 2

VALVE SIZE	TYPICAL FLOW RATES AS SIZED BY FLOOR DRAIN MANUFACTURERS	DRAIN SIZE
in.		in.
2½"	55 gpm	2
3"	112 gpm	3
4"	170 gpm	4
6", 8", 10"	350 gpm	5

For Outdoor Installations

Job Name _____ Contractor _____
Job Location _____ Approval _____
Engineer _____ Contractor's P.O. No. _____
Approval _____ Representative _____

WattsBox
Insulated Enclosures

WattsBox Aluminum Enclosure

Specifications

Backflow prevention assemblies subjected to potential freezing conditions shall be protected with the WattsBox enclosure as shown.

The enclosure shall be of reinforced aluminum construction, providing access through doors for testing/certification purposes. It must also be totally removable for maintenance purposes. The enclosure shall be structurally lined with a unicellular, non-wicking insulation consisting of a sandwich laminate or applied by spray. It shall contain a thermostatically controlled heat source mounted to the interior wall or on the backflow preventer to provide protection to -30°F. No wood or "particle board" shall be allowed in assembly. Insulation mounted with glue will be cause for rejection. Power source will be protected with a ground fault circuit interrupting receptacle, UL Standard 943, NEMA 3R, installed by others, inside the box.

The enclosure shall contain drain openings sized to accommodate the maximum discharge of the reduced pressure zone assembly. Drain openings shall open to discharge under the most severe conditions. These openings are protected against intrusion of either wind, debris or animal. The enclosure is provided with means of permanent anchor and "lockable" access doors and/or lid to prohibit theft or vandalism.

All "wet" portions of the backflow prevention assembly shall be protected within the enclosure. Fire department hose connections and OSY indicating valve handles shall be maintained outside the enclosure.

The enclosure shall be factory assembled and delivered to the site ready to install with no drilling, screwing or riveting of enclosure required on site. The enclosure and the backflow preventer shall be covered by a single warranty policy. Enclosure shall be a Watts Series WattsBox.

Features

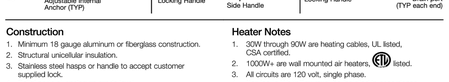
- Designed to eliminate valve vault entry requirements of OSHA confined Space Ruling 29CFR 1910.146.
- Single source Watts Regulator warranty of the enclosure, the backflow preventer, and the heat source.
- Allows for the installation of the backflow preventer "at the service connection" in accordance with AWWA Standards.
- Is specifically designed to meet NFPA guidelines. The enclosure provides freeze protection to maintain the water supply to the property's fire protection system. (NFPA 3-3.1.8 and 3-6.1.3.2).
- Strategically placed doors provide access to the backflow prevention assembly for testing and repair without removal of the entire unit.
- An economical alternative to expensive retrofit installations.
- Eliminates potential drainage constraints in existing equipment rooms.
- Saves valuable floor space.
- Standardly furnished with thermostatically controlled heat source for freeze protection down to -30°F.
- Contains no structural wood or particle board for long life.
- Easy installation aluminum enclosures feature interlocking panels which eliminate the use of screws during assembly.
- Can be temporarily removed for replacement of the backflow preventer without the need for replacement of freeze protection services.
- ASSE 1060 Certified (Consult factory for approved models)

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

WATTS



Construction

1. Minimum 18 gauge aluminum or fiberglass construction.
2. Structural unicellular insulation.
3. Stainless steel hasps or handle to accept customer supplied lock.
4. Relief ports at enclosure grade level.
5. Designed to protect to -30°F.
6. Minimum R of 8.
7. Adjustable internal anchors.

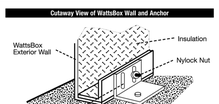
Heater Notes

1. 30W through 90W are heating cables, UL listed, CSA certified.
2. 1000W+ are wall mounted air heaters, ETL listed.
3. All circuits are 120 volt, single phase.
4. Service to WattsBox must be installed in accordance with the National Electric code and local ordinances, and protected with a G.F.I.

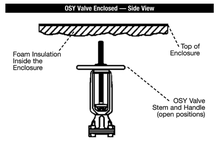
Typical Installation

1. Enclosure supplied with "anchor angles" at grade.
   a. Recommended installation: on concrete slab
   b. "Anchor angles" anchored to grade with mechanical fasteners (interior or exterior)
2. NRS (non-rising stem) valve handles enclosed inside enclosure
3. OSY (outside stem and yoke) valve handles concealed inside enclosure roof.
4. Door and construction hardware are lockable to prevent theft, vandalism or unauthorized entry.

Cutaway View of WattsBox Wall and Anchor

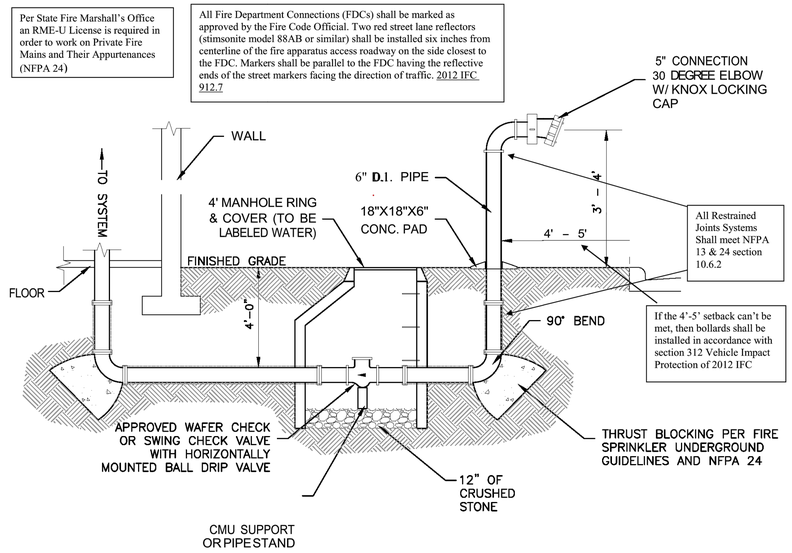


OSY Valve Enclosed — Side View



Per State Fire Marshall's Office an RME-U License is required in order to work on Private Fire Mains and Their Appurtenances (NFPA 24)

All Fire Department Connections (FDCs) shall be marked as approved by the Fire Code Official. Two red street lane reflectors (stimsonite model 88AB or similar) shall be installed six inches from centerline of the fire apparatus access roadway on the side closest to the FDC. Markers shall be parallel to the FDC having the reflective ends of the street markers facing the direction of traffic. 2012 IFC 912.7



FIRE DEPARTMENT CONNECTION

NOT TO SCALE

Georgetown Fire Department
3500 DB Wood
Georgetown, Texas 78628
512-930-3473
Fax: 512-450-3897

Water Flow Test Report

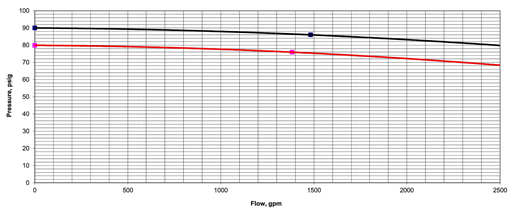
LOCATION	103 Madison Oaks		TEST DATE: 12/26/2022
TEST BY:	Capital Hydrant		TIME: 2:05 PM
WATER SUPPLIED BY:	COG		
PURPOSE OF TEST:	Fire flow test		MAIN SIZE:

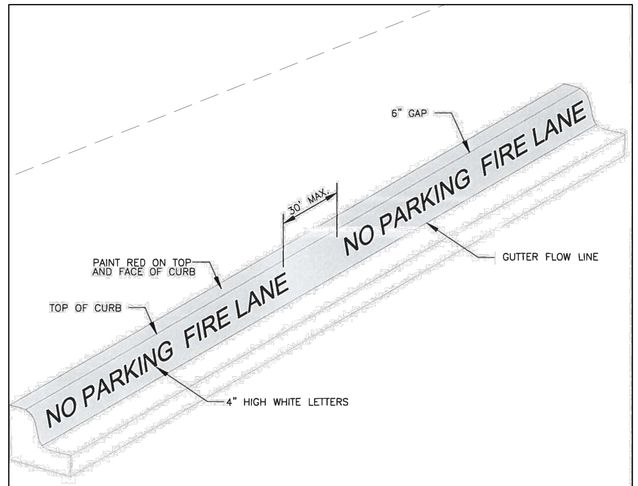
FLOW HYDRANT(S)	A1	A2	A3
SIZE OPENING:	2.5	2.5	2.5
COEFFICIENT:	0.9	0.9	0.9
PITOT READING:	78	0	0
GPM:	1482	0	0

				A1 Flow	A2 Flow	A3 Flow
TOTAL FLOW DURING TEST:	1482	GPM	ADJ. TOTAL FLOW:	1383	0	0
TOWER LEVEL @ TIME OF TEST:	143.9		TOWER LOW	120.65		
STATIC READING:	90 PSI		RESIDUAL:	86 PSI		

ADJ. STATIC:	79.91	PSI	AJD. RESIDUAL:	75.91	PSI
ADJ. FLOW:	1383 GPM		ADJ. PITOT:	67.91	0.00 0.00
FLOW AT 20 PSI RESIDUAL	5963	GPM	TOTAL FLOW	6967	GPM

Please be advised that the Georgetown Fire Marshal's Office requires that all fire protection plan submittals be accompanied the waterflow (fire hydrant flow) test information. This report must be included with plan submittal. The Fire Sprinkler Contractor must design the applicable fire sprinkler system, based on the minimum water supply available, in accordance with the requirements of NFPA 13. Please also note that the 10-psi safety factor required by Section 903.3.5 of the Fire Code still applies to the fire protection system design.





NOTES:

FIRE LANE STRIPING TO BE 6" WIDE RED PAINT WITH "NO PARKING FIRE LANE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 30' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

WARNING!
There are existing water pipelines, underground telephone cables and other above and below ground utilities in the vicinity of this project. The Contractor shall contact all appropriate companies prior to any construction in the area and determine if any conflicts exist. If so, the Contractor shall immediately contact the Engineer who shall revise the design as necessary.

NO.	REVISION	BY	DATE

DESIGNED BY: _____ DATE _____
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CHECKED BY: _____ DATE _____
APPROVED BY: _____ DATE _____

STATE OF TEXAS
BRYAN ERIC MOORE
98920
LICENSED
PROFESSIONAL ENGINEER
F-181
03/22/2023

STEGER BIZZELL

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UNDERGROUND FIRE LINE DETAILS
for
84 LUMBER OFFICE WAREHOUSE EXPANSION
103 & 107 MADISON OAKS AVENUE
WILLIAMSON COUNTY, TEXAS

2023-13-SDP

Project No: 22914

SHEET 41 of 41

Attachment G –Inspection, Maintenance, Repair and Retrofit Plan

The following can be found in the TCEQ's Addendum to "Complying with the Edwards Rules: Technical Guidance Manual on Best Management Practices," Section 3.5.20.

Maintenance Guidelines for Batch Detention Basins

Batch detention basins may have somewhat higher maintenance requirements than an extended detention basin since they are active stormwater controls. The maintenance activities are identical to those of extended detention basins with the addition of maintenance and inspections of the automatic controller and the valve at the outlet.

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 regarding 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.

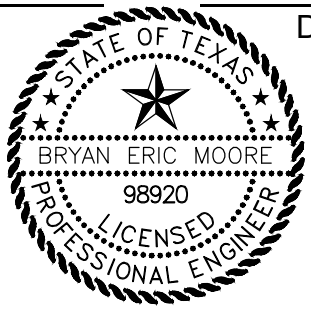
Sediment Removal. A properly designed batch detention basin will accumulate quantities of sediment over time. The accumulated sediment can detract from the appearance of the facility and reduce the pollutant removal performance of the facility. The sediment also tends to accumulate near the outlet structure 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.

NOTE: This Inspection, Maintenance, Repair and Retrofit Plan was created and designed by the engineer of these BMPs. Maintenance should be followed in accordance with this plan in order to keep the BMPs operating correctly.

F-181
03/21/2023

Bryan E. Moore, P.E. Date



Permanent BMP Log

Date	Date of Last Inspection	Inspection Performed By	Title	Company	Status of BMP(s)	Corrective Action Required (if any)	Date Corrective Action Completed

Responsible Party: 84 Lumber Company
Mailing Address: 1019 Route 519
City, State: Eighty Four, PA
Zip Code: 15330
Telephone: (724) 228-3636

Jim Zaunick
Signature of Responsible Party

3-6-23
Date

Attachment I – Measures for Minimizing Surface Stream Contamination

The site will use a batch detention basin to regulate and treat storm water runoff. The batch detention basin will help to minimize surface stream contamination.

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

I James A. Zaunick, P.E.,
Print Name

Director of Engineering,
Title - Owner/President/Other

of 84 Lumber Company,
Corporation/Partnership/Entity Name

have authorized Bryan E. Moore, P.E.
Print Name of Agent/Engineer

of Steger Bizzell
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

3-3-23
Date

THE STATE OF Pennsylvania §

County of Washington §

BEFORE ME, the undersigned authority, on this day personally appeared Jim Zaunick 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 3RD day of March 2023.

Tamara R DeMarino
NOTARY PUBLIC

Tamara R. DeMarino
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: November 3, 2026

Commonwealth of Pennsylvania - Notary Seal
Tamara R. DeMarino, Notary Public
Washington County
My commission expires November 3, 2026
Commission number 1225445
Member, Pennsylvania Association of Notaries

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: 84 Lumber Office/Warehouse Expansion
Regulated Entity Location: 103 and 107 Madison Oaks Avenue
Name of Customer: 84 Lumber Company
Contact Person: James A. Zaunik, P.E. Phone: 412-997-0068
Customer Reference Number (if issued):CN 602860603
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	6.03 Acres	$ 5,000
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: 04/12/2023

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 602860603		**RN**

SECTION II: Customer Information

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

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

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

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

84 Lumber Company

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
N/A		25-1613116	

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

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

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

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

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

15. Mailing Address:							
84 Lumber Company							
1019 Route 519							
City	Eighty Four	**State**	PA	**ZIP**	15330	**ZIP + 4**	

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	Jim.Zaunick@84lumber.com

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

(724) 228-3636		(877) 332-9925

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

84 Lumber Office/Warehouse Expansion

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	103 and 107 Madison Oaks Avenue							
	City	Georgetown	**State**	TX	**ZIP**	78626	**ZIP + 4**	
24. County	Williamson							

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

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

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.6175		**28. Longitude (W) In Decimal:**	97.680278	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
97.6802730	37	03	97	40	49

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)
5211	2439	444180	321215

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

Lumber Products

34. Mailing Address:	**c/o Jim Zaunick, P.E.**							
	1019 Route 519							
	City	**Eighty Four**	**State**	**PA**	**ZIP**	**15330**	**ZIP + 4**	
35. E-Mail Address:	**Jim.Zaunick@84lumber.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(724) 228-3636		**(877) 332-9925**

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☒ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

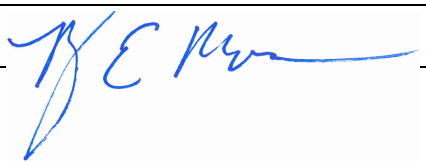
SECTION IV: Preparer Information

40. Name:	Mr. Bryan E. Moore, P.E.	**41. Title:**	Principal

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512 **)** 930-9412		**( ) -**	bmoore@stegerbizzell.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:	Steger Bizzell	**Job Title:**	Principal	
Name *(In Print):*	Bryan E. Moore, P.E.		**Phone:**	**(** 512 **)** 930- **9412**
Signature:			**Date:**	04/12/2023