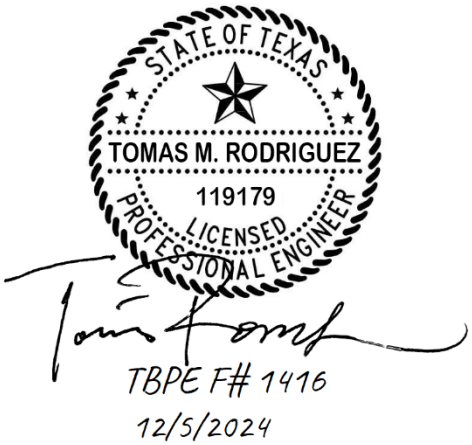
TCEQ EDWARDS AQUIFER APPLICATION

for

WESTERN HILLS ATHLETIC CLUB

City of Rollingwood, Travis County, Texas



December 2024

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Austin, TX 78753
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TCEQ - 20705

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Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

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

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

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

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Western Hills Athletic Club						**2. Regulated Entity No.: RN 106890072**			
3. Customer Name: Western Hills Athletic Club						**4. Customer No.: CN604736876**			
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):**			3.21
9. Application Fee:	$4,000		**10. Permanent BMP(s):**			Bioretention			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Travis		**14. Watershed:**			Lady Bird Lake			

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.)	___	_1_	___
Region (1 req.)	___	_1_	___
County(ies)	___	_1_	___
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	_1_Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville _1_Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

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

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

Tomas Rodriguez

horized Agent

12/5/2024

orized 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):	

TCEQ - 0587

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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: Tomas Rodriguez

Date: 12/5/2024

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: Western Hills Athletic Club
2. County: Travis
3. Stream Basin: Lady Bird Lake
4. Groundwater Conservation District (If applicable): Barton Springs / Edwards Aquifer
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☐ WPAP
   ☐ SCS
   ☒ Modification
   ☐ AST

☐ UST ☐ Exception Request

7. Customer (Applicant):

Contact Person: Zachary Elkins
Entity: Western Hills Athletic Club
Mailing Address: 4801 Rollingwood Drive
City, State: West Lake Hills, Texas Zip: 78746
Telephone: _____ FAX: _____
Email Address: zelkins@austin.utexas.edu

8. Agent/Representative (If any):

Contact Person: Tomas Rodriguez, PE, RAS
Entity: MWM Design Group
Mailing Address: 9001 N IH35, Suite 102
City, State: Austin, Texas Zip: 78753
Telephone: (512) 453-0767 FAX: _____
Email Address: tomas.rodriguez@mwmdg.com

9. Project Location:

☒ The project site is located inside the city limits of Rollingwood.
☐ 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.

Site is located on the Northwest corner at the intersection between Rollingwood Drive and Wallis Drive.

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: _____

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.

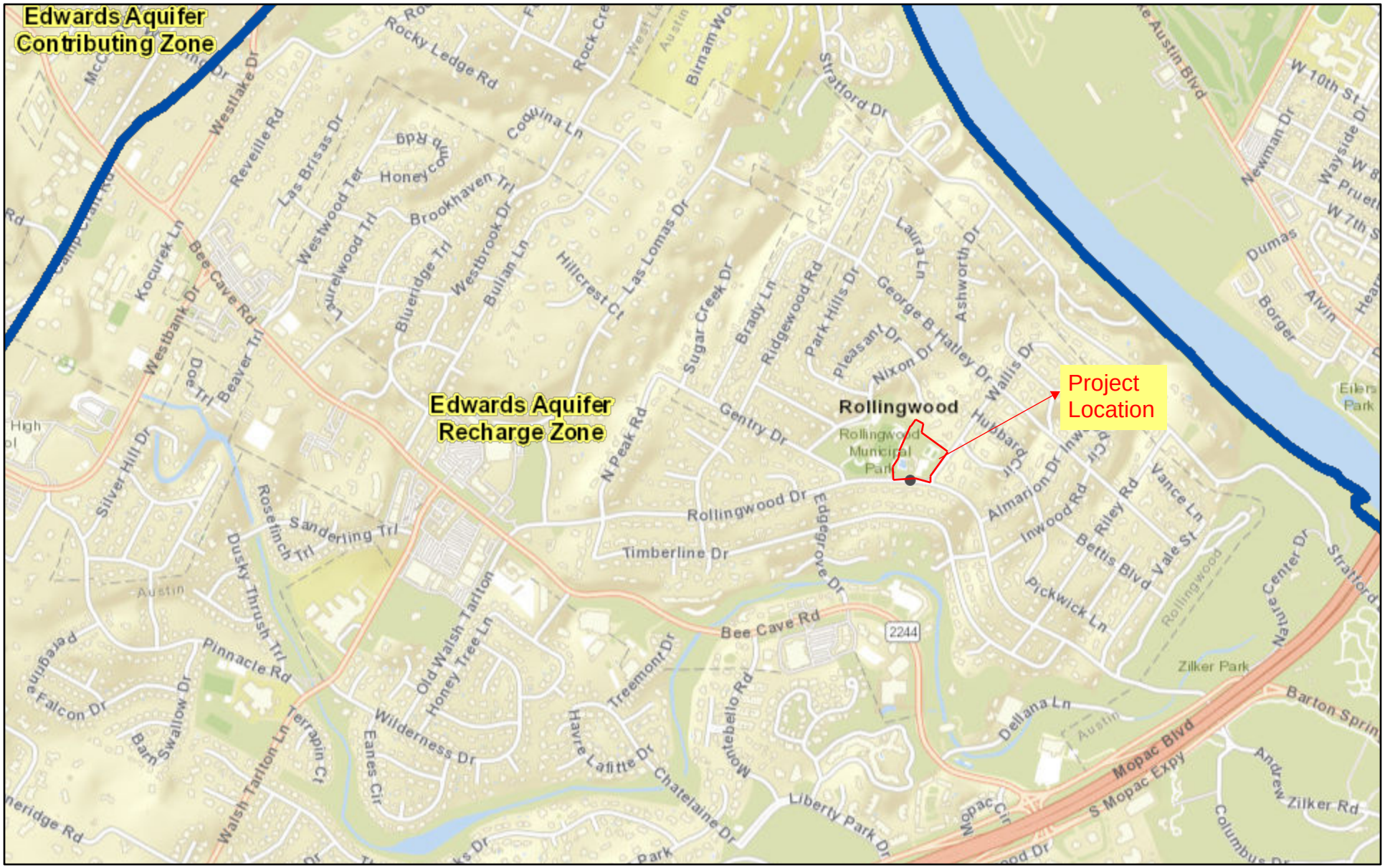
19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

☐ 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.

ATTACHMENT A - ROAD MAP



7.5 Minute Quad Grid

Edwards Aquifer Boundary

Edwards Aquifer Label

1:18,056

0 0.13 0.25 0.5 mi

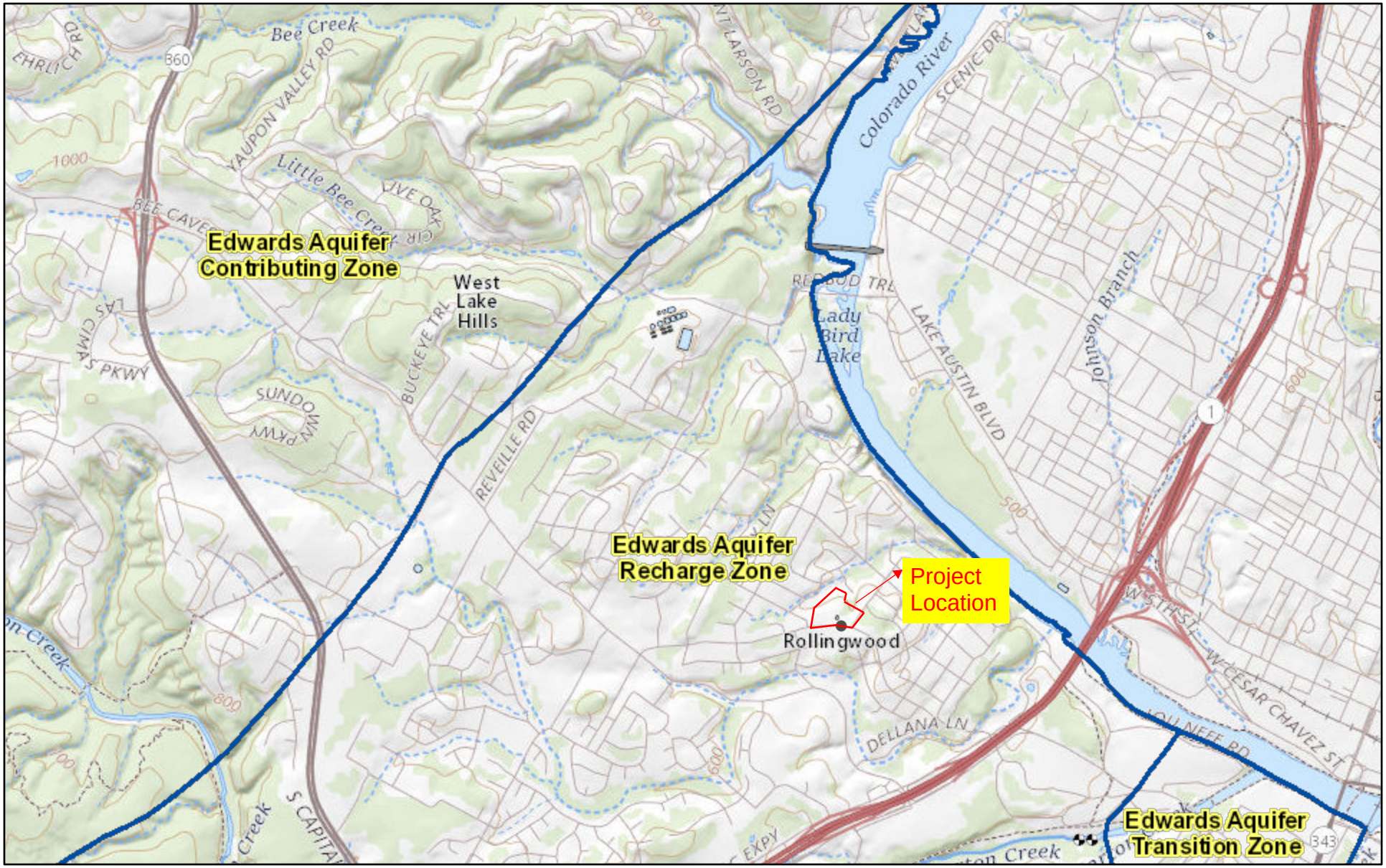
0 0.2 0.4 0.8 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,

Web AppBuilder for ArcGIS

TCEQ | Austin Community College, Esri, HERE, Garmin, INCREMENT P, NGA, USGS |

ATTACHMENT B - USGS/EDWARDS RECHARGE ZONE MAP



1:36,112

0 0.28 0.55 1.1 mi

0 0.42 0.85 1.7 km

7.5 Minute Quad Grid

Edwards Aquifer Boundary

Edwards Aquifer Label

USGS The National Map: National Boundaries Dataset, 3DEP Elevation

Web AppBuilder for ArcGIS

TCEQ | USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset;

TCEQ – 0587
Attachment C – Project Description

The project consists of a expansion of existing tennis courts at Western Hills Athletic Club located at the intersection of Rollingwood Dr and Wallis Dr in Rollingwood, Texas. The 3.21 acre site is within the Lady Bird Lake watershed and is within the Recharge Zone of the Edwards Aquifer. As such the development shall comply with all applicable rules and regulations of the Edwards Aquifer Protection Program.

The site is an existing commercial site that has building, parking, sports, and recreation with distributed tree canopy coverage. As noted in the 2013 Exception request the site was essentially fully developed by 1970.

Existing areas to be demolished include curb and gutter, asphalt paving, concrete sidewalk, rock walls, asphalt tennis courts (2), a brick pad, and a sand volleyball court.

The proposed project will consist of addition of two more tennis courts in addition to the existing courts that will be refurnished. Ancillary improvements proposed in this site are stormwater management, sidewalks, retaining walls, and landscaping.

Impervious cover that attributes to the storm flow for the site is as follows:

Existing Impervious Cover: 1.22 ac

Proposed Impervious Cover 1.51 ac

There are approximately 0.31 acres of pervious drainage area which drain to the site and flows along a vegetated area to leave the site. This area consists of parkland located on west of the site, that of east side of Wallis Dr, and undeveloped land located northeast of the site.

Period of Change	Impervious Cover Area (AC)	Treatment Requirement	Total Impervious Cover Area (AC)
Prior 2013	1.15	No treatment	1.15
At Present (After 2013)	0.07	Bioretention Basin	1.22
Proposed (2024)	0.21	Proposed Bioretention Basin	1.51

As shown in the existing drainage area map there are five onsite drainage basins and four offsite drainage basins. Basins E1 and OS2 flow to the existing bioretention area which was approved by TCEQ in 2015 to treat an addition of 0.07 acres of impervious cover. Basins E3, E4, E5 and OS3 flow offsite with no treatment. Basins E2, OS1 and OS4 flow across vegetated land before leaving the site.

Topography on the site varies, with most of the slopes lesser than 10% but isolated areas up to 30%. Existing storm water flow patterns on the site are from southeast to northwest.

The permanent Best Management Practice (BMP) proposed for this development will be bioretention. The permanent BMP will be designed to accommodate the increase in TSS loading from the proposed improvements associated with the project. Treated water will then be allowed to overflow the retention limits of the pond and be released downstream and offsite.

Water and wastewater service to the project will be provided by connections to existing mains owned by the City of Rollingwood.

TCEQ - 0585

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Austin, TX 78753
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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: Russell C Ford Telephone: 512 442-1122

Date: 6/10/20 Fax: _____

Represented by: Ford Geo Consultants, Inc. (Name of Company and TBPG or TBPE registration number)

Signature of Geologist: _____

STATE OF TEXAS
RUSSELL C. FORD
GEOLOGY
#1185
LICENSED
PROFESSIONAL
6/9/2020

Regulated Activity Name: Rollingwood Tennis Courts, 4801 Rollingwood Drive, Austin, Texas

Project Information

1. Date(s) Geologic Assessment was performed: 6/3/20
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)
TeE	C	0-1.6

* 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" = _'
   Site Geologic Map Scale: 1" = 30'
   Site Soils Map Scale (if more than 1 soil type): 1" = _'

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.

ATTACHMENT A

NO FEATURES OBSERVED

GEOLOGIC ASSESSMENT TABLE			**PROJECT NAME: Rollingwood Tennis Courts, 4801 Rollingwood Drive, Austin, Texas**																
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	

* DATUM NAD27

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	

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
Ridgetop, Hillside, Drainage, Floodplain, Streambed

I have read and understood and have followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented applies to the cited 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 213

RUSSELL C. FORD 11185 GEOLOGY LICENSED PROFESSIONAL

6/9/2020

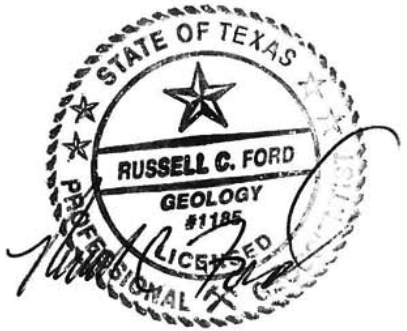
_____ Date _____

TNRCC-0585-Table (Rev. 5-1-02) Sheet _____ of _____

Attachment B
Stratigraphic Column
Rollingwood Tennis Courts
4801 Rollingwood Drive
Austin, Texas

HYDROGEOLOGIC SUBDIVISION	FORMATION	THICKNESS (feet)	LITHOLOGY
Edwards Aquifer	Georgetown Formation	60	Gray to light tan, marly, fossiliferous limestone

Source: Small, Hanson, and Hauwert, 1996



6/9/2020

ATTACHMENT C
SITE-SPECIFIC GEOLOGY

The Rollingwood Tennis Court site consists of an existing tennis court facility located at 4801 Rollingwood Drive in Austin, Texas. Exhibit 1 is a site location map depicting the site in relationship to the surrounding area. The area surrounding the site is predominately residential property. The site is characterized as gently sloping to the northwest.

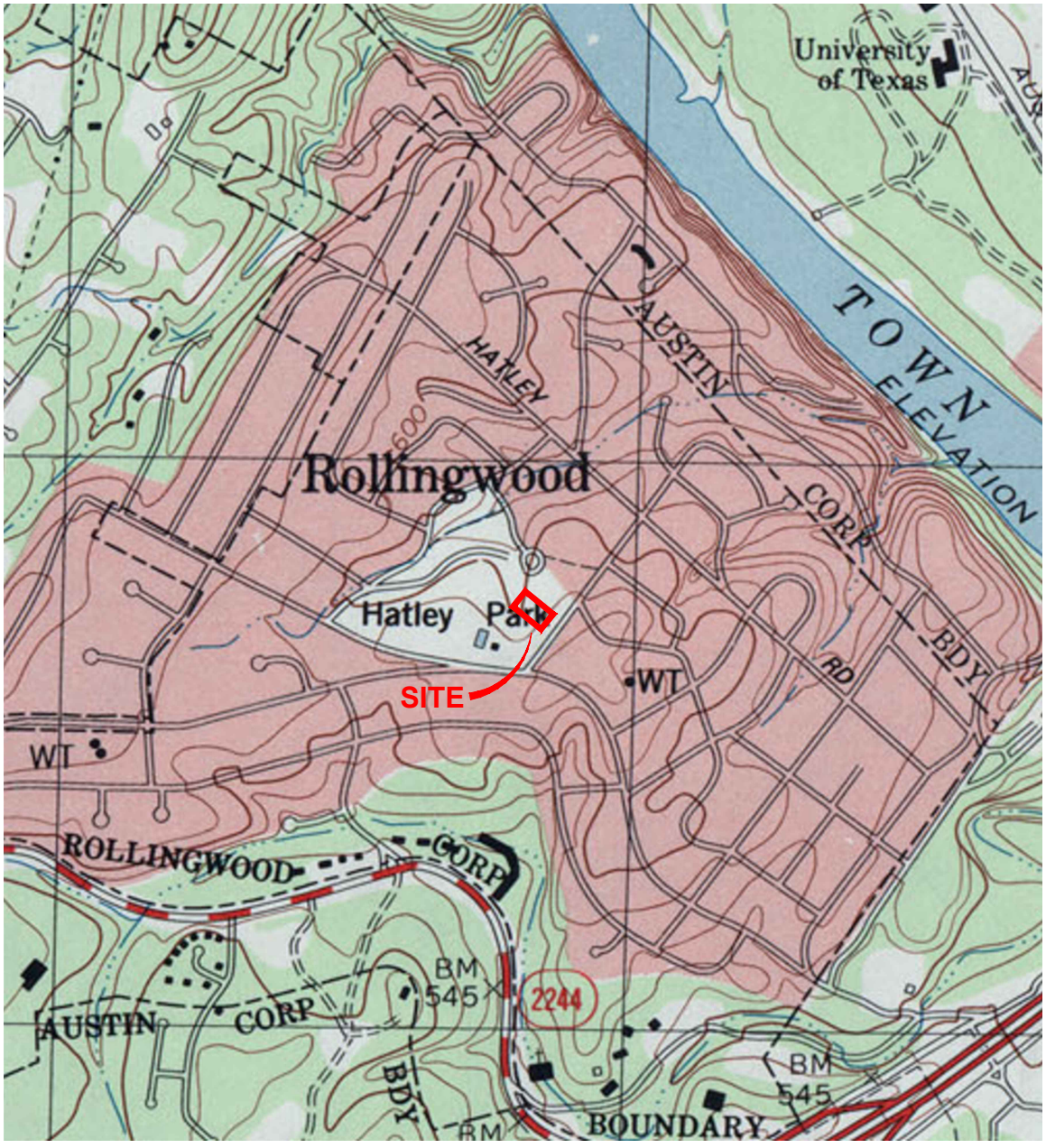
The Geologic Site Map is provided as Exhibit 2. The site is located within the Recharge Zone of the Edwards aquifer. The surficial geologic unit present at the site has been identified as the Georgetown Formation. The Georgetown Formation is composed of thin interbeds of gray to tan, fossilferous, fine grained limestone, marly limestone, and marl. The formation ranges in thickness from about 40 to 60 feet. Small vugs may occur but generally are not common. The formation forms the uppermost unit of the Edwards Aquifer. Exposure of the geologic deposits was generally obscured by the presence of a relatively thick soil cover and vegetation present as well as the existing site improvements.

A review of aerial photographs did not reveal any lineations or faults and none are mapped onsite. The nearest mapped fault is located approximately 500 feet west of the site. The fault trends to the north-northeast and is associated with the Balcones Fault zone which forms the dominant structural trend in the area.

No geologic features, as defined in 30 TAC §213, were observed on the site. Based upon the lack of any significant sensitive recharge features onsite, the potential for fluid flow through the site is considered low.

6/9/2020

UNITED STATES – DEPARTMENT OF THE INTERIOR – GEOLOGICAL SURVEY



SCALE 1:12,000

.5 .25 0 KILOMETERS .5 1

500 0 METERS 500 1000

.5 .25 0 .5

MILES

500 0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000

CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

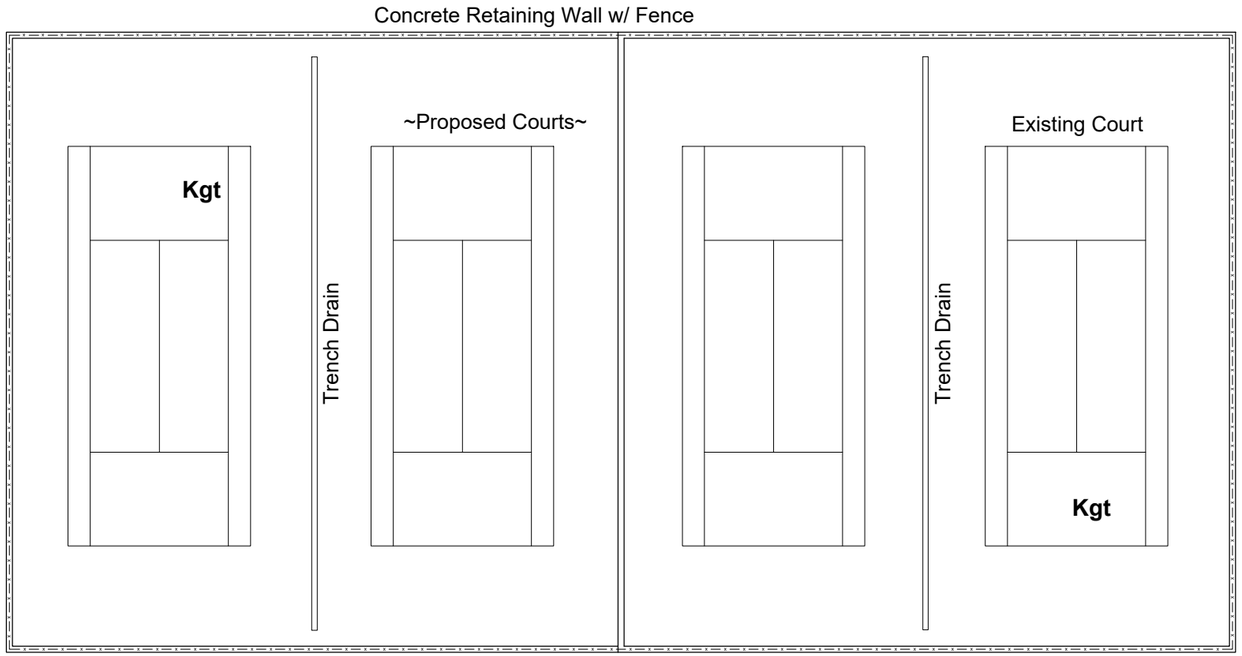
Austin West, Texas

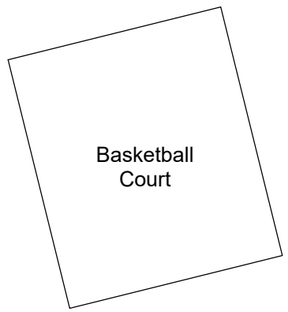
30097-C7-TF-024

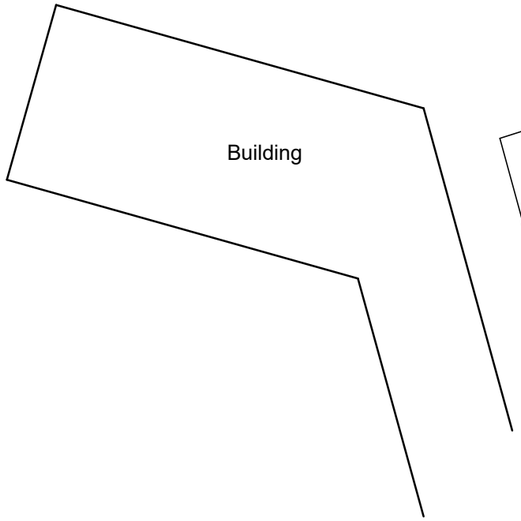
1988

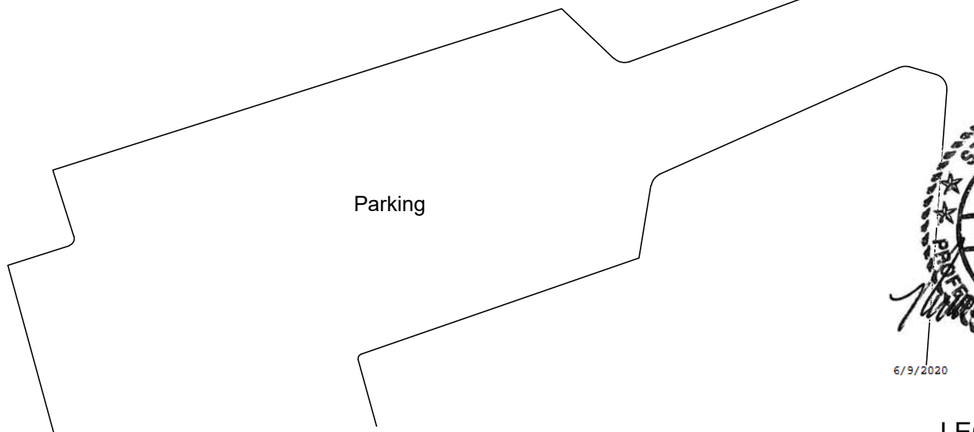
7.5 MINUTE SERIES (TOPOGRAPHIC)

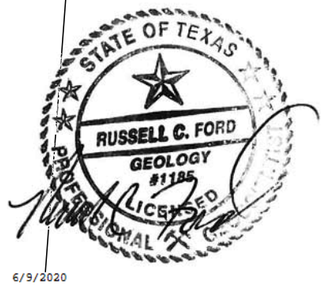
Project Mngr: RF	Project No. 96207238	Terracon Consulting Engineers and Scientists	TOPOGRAPHIC MAP	EXHIBIT
Drawn By: ATX Drafting	Scale: AS SHOWN	5307 INDUSTRIAL OAKS BLVD. - #160 AUSTIN, TX 78735	Rollingwood Tennis Courts	1
Checked By: RF	File No. 96207238	PH. (512) 442-1122 FAX (512) 442-1181	4801 Rollingwood Drive	
Approved By: RF	Date: Jun 09, 2020		Austin, Travis County, Texas	

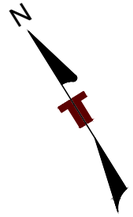












30 0 15 30

APPROXIMATE SCALE IN FEET

LEGEND

— - - - — Site Boundary

Kgt Georgetown Formation

Project Mngr: RF	Project No. 96207238	Terracon Consulting Engineers and Scientists	SITE GEOLOGIC MAP
Drawn By: ATX Drafting	Scale: AS SHOWN	5307 INDUSTRIAL OAKS BLVD. - #160 AUSTIN, TX 78735	Rollingwood Tennis Courts
Checked By: RF	File No. 96207238	PH. (512) 442-1122 FAX (512) 442-1181	4801 Rollingwood Drive
Approved By: RF	Date: Jun 09, 2020		Austin, Travis County, Texas

EXHIBIT 2

TCEQ - 0590

MWM DesignGroup
9001 N IH 35, Suite 102
Austin, TX 78753
512.453.0767

Modification of a Previously Approved Plan

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), Effective June 1, 1999

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

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

Signature

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

Print Name of Customer/Agent: Tomas Rodriguez

Date: 12/5/2024

Signature of Customer/Agent:

Project Information

1. Current Regulated Entity Name: Western Hills Athletic Club
   Original Regulated Entity Name: Western Hills Athletic Club
   Regulated Entity Number(s) (RN): RN106890072
   Edwards Aquifer Protection Program ID Number(s): 11002131
   ☒ The applicant has not changed and the Customer Number (CN) is: CN604736876
   ☐ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.

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

3. A modification of a previously approved plan is requested for (check all that apply):
   - ☒ 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;
   - ☐ 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;
   - ☐ Development of land previously identified as undeveloped in the original water pollution abatement plan;
   - ☐ Physical modification of the approved organized sewage collection system;
   - ☐ Physical modification of the approved underground storage tank system;
   - ☐ Physical modification of the approved aboveground storage tank system.

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

WPAP Modification Summary	***Approved Project***	***Proposed Modification***
Acres	Commercial	0
Type of Development	0	
Number of Residential		1.51
Lots	1.60	46.87
Impervious Cover (acres)	49.84	Bioretention Basin
Impervious Cover (%	Jellyfish JF4-2-1	_____
Permanent BMPs	_____	
Other	3.21	
3.21	Commercial	

SCS Modification Summary	***Approved Project***	***Proposed Modification***
Linear Feet	_____	_____
Pipe Diameter	_____	
Other	_____	
_____	_____	

AST Modification Summary	*Approved Project*	*Proposed Modification*
Number of ASTs	_____	_____
Volume of ASTs	_____	
Other	_____	
_____	_____	

UST Modification Summary	*Approved Project*	*Proposed Modification*
Number of USTs	_____	_____
Volume of USTs	_____	
Other	_____	
_____	_____	

5. ☒ **Attachment B: Narrative of Proposed Modification**. A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved, including any previous modifications, and how this proposed modification will change the approved plan.

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

7. ☐ The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
   ☒ Acreage has not been added to or removed from the approved plan.

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

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

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 8, 2020

Mr. Sang McDonnell
Western Hills Athletic Club
4801 Rollingwood Dr.
Austin, Texas 78746

Re: Edwards Aquifer, Travis County

NAME OF PROJECT: Western Hills Athletic Club, Located at 4801 Rollingwood Dr., West Lake Hills, Texas

TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer

Edwards Aquifer Protection Program ID No. 11002131; Regulated Entity No. RN106890072

Dear Mr. McDonnell:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Application for the above-referenced project submitted to the Austin Regional Office by MWM Design Group on behalf of Western Hills Athletic Club on July 22, 2020. Final review was completed after additional material was received on September 18, 2020 and October 7, 2020. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The original WPAP exception request approved by letter dated November 8, 2013 (EAPP ID No. 11-13082702) included the construction of recreational facilities, vegetative filter strips, and a rainwater harvesting system to treat a net increase in the impervious cover (IC) area of 0.07 acres, for a total IC of 1.30 acres.

The Modification approved by letter dated March 10, 2015 (EAPP ID No. 11-15012901) included the construction of a bioretention pond to replace the originally approved BMPs, with no

changes in the proposed improvements. Additionally, the bioretention pond captures and treats the runoff from the parking lot that was built prior the EAPP rules.

PROJECT DESCRIPTION

The proposed non-residential project will have an area of approximately 3.21 acres. It will include the construction of two additional tennis courts and replacement of the existing two, an underground detention pond, and a JellyFish filter for runoff treatment of the additional IC increase of 0.30 acres. The total impervious cover will be 1.60 acres (49.84 percent).

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a JellyFish filter (JF4-2-1), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 261 pounds of TSS generated from the 1.60 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

GEOLOGY

According to the Geologic Assessment (GA) included with the application, the surface geology of the area consists of Georgetown Formation. No sensitive features were identified in the GA. The TCEQ site assessment conducted on September 16, 2020 revealed the site to be generally as described by the GA.

SPECIAL CONDITIONS

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

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

III. This WPAP approval authorizes construction of the two additional tennis courts and replacement of the existing two, an underground detention pond, and a JellyFish filter. Regulated activities outside the scope of the approved plans must obtain approval of an Edwards Aquifer Protection Plan or modification prior to the commencement of those regulated activities. An accounting of the impervious cover must be included with each application.

STANDARD CONDITIONS

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

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the Austin Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.
5. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.
6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.
8. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.
9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

10. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.

12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Austin Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.
13. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.
14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.
15. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
16. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

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

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the Austin Regional Office within 30 days of site completion.
19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
22. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

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

Sincerely,

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

RCS/mec

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625
Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

Deed Recordation Affidavit
Edwards Aquifer Protection Plan

THE STATE OF TEXAS §

County of _____ §

BEFORE ME, the undersigned authority, on this day personally appeared _____ who, being duly sworn by me, deposes and says:

(1) That my name is _____and that I own the real property described below.

(2) That said real property is subject to an EDWARDS AQUIFER PROTECTION PLAN which was required under the 30 Texas Administrative Code (TAC) Chapter 213.

(3) That the EDWARDS AQUIFER PROTECTION PLAN for said real property was approved by the Texas Commission on Environmental Quality (TCEQ) on _____.

A copy of the letter of approval from the TCEQ is attached to this affidavit as Exhibit A and is incorporated herein by reference.

(4) The said real property is located in _____ County, Texas, and the legal description of the property is as follows:

_____
LANDOWNER-AFFIANT

SWORN AND SUBSCRIBED TO before me, on this __ day of _____, ____.

_____
NOTARY PUBLIC

THE STATE OF _____ §

County of _____ §

BEFORE ME, the undersigned authority, on this day personally appeared _____ known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this __ day of _____, _____.

_____
NOTARY PUBLIC

_____
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: _____

Change in Responsibility for Maintenance
on Permanent Best Management Practices and Measures

The applicant is no longer responsible for maintaining the permanent best management practice (BMP) and other measures. The project information and the new entity responsible for maintenance is listed below.

Customer: _____

Regulated Entity Name: _____

Site Address: _____

City, Texas, Zip: _____

County: _____

Approval Letter Date: _____

BMPs for the project: _____

New Responsible Party: _____

Name of contact: _____

Mailing Address: _____

City, State: _____ Zip: _____

Telephone: _____ FAX: _____

_____ _____

Signature of New Responsible Party Date

I acknowledge and understand that I am assuming full responsibility for maintaining all permanent best management practices and measures approved by the TCEQ for the site, until another entity assumes such obligations in writing or ownership is transferred.

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

TCEQ – 0590
Attachment B – Narrative of Proposed Modification

The approved non-residential project of approximately 3.21 acres. Includes the construction of two additional tennis courts, sidewalks, and the replacement of the existing two, an underground detention pond, and a JellyFish filter for runoff treatment of the additional impervious cover of 0.30 acres. The total impervious cover will be 1.60 acres (49.84%).

The proposed modification will not affect the site development type or area. The layout of the two additional tennis courts and sidewalks has changed, the two existing courts will still be replaced. The two additional courts will serve as detention during heavy rain events, therefore the underground detention pond will, no longer be constructed. The JellyFish filter for runoff treatment has been replaced with a bioretention basin. The proposed modification includes an additional impervious cover of 0.21 acres, the total impervious cover will be 1.51 acres (46.87%).

LOCATION MAP
NOT TO SCALE

SCALE: 1" = 30'

GRAPHIC SCALE
30 15 0 30

A SURVEY OF ALL OF LOT 1, WESTERN HILLS ATHLETIC CLUB ADDITION, A SUBDIVISION OF RECORD IN TRAVIS COUNTY, TEXAS ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN VOLUME 79, PAGE 355 OF THE THE PLAT RECORDS OF TRAVIS COUNTY, TEXAS, SAVE AND EXCEPT A 2,411 SQUARE FEET TRACT DESCRIBED IN VOLUME 11901, PAGE 1260 OF THE REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.

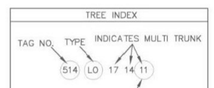
TREE LIST

16901 HB 7 4	20027 CE 8	20055 LO 8 7	20082 LO 21	20118 CDR 7	20144 LO 10 9
16902 CE 6 4	20028 CE 9	20056 CDR 13	20083 LO 17	20119 CDR 7	20145 LO 13
16903 LO 9	20029 CB 14	20057 LO 16 12	20084 LO 12	20120 CDR 9	20146 CDR 10
16904 LO 7	20030 CB 14	20058 CDR 14	20086 LO 12	20121 LO 7	20147 LO 6
16905 LO 9	20032 HB 13	20059 LO 13	20088 LO 14	20122 CDR 6	20148 LO 18 13
16906 LO 8	20033 CB 9	20060 CDR 7	20089 LO 11	20123 CDR 8	20149 CE 10 5
16907 CE 7 4	20034 CB 11 7 5	20061 CE 6	20090 LO 16	20124 CDR 6	20150 CE 14
16908 LO 13	20035 CB 7	20062 CDR 8	20093 LO 18	20125 LO 13	20151 CB 10
16909 LO 7	20036 CB 8	20063 LO 17	20094 LO 12	20126 LO 9	20152 CB 13
16910 CB 9	20038 CB 15	20064 CDR 10	20095 LO 10	20127 LO 8	20155 LIG 9 6 6
16911 CB 7	20039 CDR 10	20065 PO 19 16	20096 LO 11	20128 CDR 6	20158 CB 8
16912 LIG 8 6	20040 CE 8	20066 CDR 8	20097 LO 9	20129 CDR 12	20159 CB 20
16913 BE 8	20041 CE 13	20067 LO 7	20098 LO 12	20130 CDR 7	20160 CE 10
16914 BE 6	20042 CE 12	20068 LO 13	20099 LO 15	20131 CDR 7	20161 CE 9 8
16915 BE 6	20043 CE 10 8	20069 LO 11 8	20100 LO 12	20132 CDR 7	20162 LO 20
16916 WLNT 7	20044 LO 10	20070 CDR 7	20101 LO 13	20133 CE 9	20163 CE 11
16917 WLNT 6	20045 LO 8	20071 CE 6	20102 LO 19 17	20134 CE 10	20164 LO 22
16918 WLNT 6	20046 LO 13	20072 CB 7	20103 LO 20	20135 LO 13 10	20165 LO 22
20016 LO 23 21 19 19	20047 LO 12	20074 LO 15	20105 CE 15	20136 HB 6	20166 LO 21
20017 CE 18	20048 LO 13	20075 LO 18	20106 LO 10	20137 CDR 6	20167 LO 18
20018 LO 20	20049 HB 8	20076 LO 15	20107 LO 12	20138 CE 8	20168 LO 24
20021 LO 19	20050 CE 10	20077 LO 17	20108 LO 7	20139 CDR 8	20169 LO 19
20023 PEC 17	20051 LO 11	20078 LO 17	20109 LO 12	20140 HB 9	20170 CE 17
20024 LO 18	20052 LO 12	20079 LO 19	20114 CE 9	20141 PEC 11	20171 LO 19 19
20025 LO 13	20053 LO 10	20080 LO 18	20116 CDR 10	20142 PEC 10	20173 CE 14
20026 LO 8 5	20054 LO 17 16	20081 LO 11	20117 LO 9	20143 CDR 6	

TREE LEGEND

BE –	BOX ELDER	LIG –	LIGUSTRUM
CB –	CHINA BERRY	LO –	LIVE OAK
CDR –	CEDAR	PEC –	PECAN
CE –	CEDAR ELM	WLNT –	WALNUT
HB –	HACKBERRY		

TREE INDEX



CRITICAL ROOT ZONES (TREE CIRCLES) ARE SHOWN USING THE COA FORMULA FOR SINGLE AND MULTI TRUNK TREES.

BENCHMARK NOTE:

B.M. #1 – SQUARE CUT ON B.O.C., NORTH SIDE OF ROLLINGWOOD DR. +/–105 FEET WEST OF WALLIS DR.
ELEV.=628.77'

B.M. #3 – SQUARE CUT ON B.O.C. ON THE WEST SIDE OF WALLIS DR. +/–190 FEET NORTH OF ROLLINGWOOD DR.
ELEV.=631.07'

MANHOLE AND INLET NOTE:

THIS SURVEY SHOWS FIELD MEASURED SIZES AND DEPTHS AS OBSERVED FROM GROUND LEVEL OPENINGS. EXACT MEASUREMENTS AND DEPTHS, PARTICULARLY IN CRITICAL AREAS, SHOULD BE VERIFIED WITH UTILITY RECORD MAPS AND/OR FIELD VERIFICATION PRIOR TO FINAL PLANNING OR CONSTRUCTION.

LEGEND

- 1/2" REBAR FOUND
- CALCULATED POINT
- 3/4" IRON PIPE FOUND
- NAIL FOUND
- COTTON SPINDLE FOUND
- BENCHMARK LOCATION
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- SPRINKLER CONTROL VALVE
- UTILITY POLE
- GUY WIRE
- —OU— OVERHEAD UTILITIES
- LIGHT POLE
- WASTEWATER CLEANOUT
- WWMH WASTEWATER MANHOLE
- SSMH STORMSEWER MANHOLE
- HANDICAP PARKING SPACE
- AC AC PAD
- G GAS UTILITY
- E ELECTRIC UTILITY
- —▭— SIGN
- EDGE OF PAVEMENT
- —///— WROUGHT IRON FENCE
- —o— CHAIN LINK FENCE
- PUMP BOX
- PUMP

CURVE TABLE

NO.	DELTA	RADIUS	TAN	ARC	CHORD	BEARING	(RECORD CHORD)
C1	4°35'35"	315.81'	12.67'	25.32'	25.31'	S10°15'58"W	(S11°47'W 25.26')
C2	29°33'56"	122.57'	32.34'	63.25'	62.55'	S02°21'10"E	(S00°43'E 62.57')

FLOOD–PLAIN NOTE:

The tract shown hereon lies within Zone "X" (areas determined to be outside 500–year flood–plain), as identified by the Federal Emergency Management Agency, Federal Insurance Administration, as shown on map no. 48453C0445J, dated January 06, 2016, for Travis County, Texas and incorporated areas. If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. This flood statement shall not create liability on the part of the surveyor.

TITLE COMMITMENT NOTE:

This Survey was prepared without the benefit of a Commitment for Title, and may be subject to additional easements or restrictions not shown hereon. No additional easement research was done for the purpose of this survey.

NOTE FROM PREVIOUS SURVEY (9/26/07):

The Travis CAD map 01_0909 (01/04/2006) shows what appears to be additional R.O.W. for Rollingwood Drive and Wallis Drive. There was no monumented evidence in the field of a R.O.W. dedication along the north line of Rollingwood Drive. After researching Travis CAD and the Travis County Clerk records, we were not able to locate any documents reflecting additional street frontage conveyed to the City of Rollingwood. Since no title research was provided by the client, there was not enough data to accurately determine the position of the intersection of the north R.O.W. of Rollingwood Drive and the west R.O.W. of Wallis Drive, so the position is represented on the map by a calculated point for the purposes of this survey.

SURVEYOR'S CERTIFICATE:

CERTIFIED TO:
Julie Martinez
Western Hills Athletic Club

PROPERTY ADDRESS: Rollingwood Drive @ Wallis Drive

DATE OF SURVEY: 09/26/07; Topographic and Tree Survey Udated 09/20/17, Updated 4/27/18

BEARING BASIS: Grid azimuth for Texas Central Zone state plane coordinates, based on GPS solutions from The National Geodetic Survey (NGS) On–line Positioning User Service (OPUS).

ATTACHMENTS: none

I hereby certify that a survey of the property shown hereon was actually made upon the ground under my direction and supervision on the date shown, and that to the best of my professional knowledge and belief: there are no apparent encroachments, overlapping of improvements, discrepancies, deed line conflicts, visible utility lines or roads in place, except as shown hereon, and that this property abuts or adjoins a dedicated road right–of–way or access easement, unless noted hereon.

Robert C. Watts, Jr. Date
Registered Professional Land Surveyor
State of Texas No. 4995

5.10.18

STATE OF TEXAS
ROBERT C. WATTS, JR.
4995
REGISTERED
PROFESSIONAL
LAND SURVEYOR

Robert C. Watts, Jr.
R.P.L.S. No. 4995

Chaparral
Professional Land Surveying, Inc.
Surveying and Mapping
3500 McCall Lane
Austin, Texas 78744
512–443–1724
Firm No. 10124500

PROJECT NO.: 585–001
DRAWING NO.: 585–001–BASE
PLOT DATE: 05/10/18
PLOT SCALE: 1"=30'
DRAWN BY: RGH/MAW/EBD
SHEET 01 OF 01

TCEQ - 0584

MWM DesignGroup
9001 N IH 35, Suite 102
Austin, TX 78753
512.453.0767

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: Tomas Rodriguez

Date: 12/5/2024

:tic Club

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):3.21

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	2166.36	÷ 43,560 =	0.050
Parking	15720.02	÷ 43,560 =	0.36
Other paved surfaces	47705.17	÷ 43,560 =	1.10
Total Impervious Cover	65591.55	÷ 43,560 =	1.51

Total Impervious Cover 65591.55 **÷ Total Acreage** 139928.27 **X 100 =** 46.87**% 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:

_____% Domestic _____Gallons/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 _____ (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" = 20'.

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): FEMA FIRM PANEL #48453C0445K, dated January 22,2020.

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.

TCEQ – 0584
Attachment A – Factors Affecting Surface Water Quality

The factors which could have an impact on surface and groundwater quality during the construction period for this project are as follows:

Non Storm Water Discharges:

- Dewatering of utility trenches (uncontaminated ground water)
- Water used for water line flushing and testing
- Water used for pavement washing (will be limited to areas where no spills of hazardous materials have occurred)

All non-storm water discharges will be directed to and treated by on-site erosion control devices.

Materials which may be expected to be used during construction of the project and may be stored on site are as follows:

- Plastic (HDPE, PVC) materials for construction of the stormwater facilities
- Concrete and concrete products for curbing and headwalls
- Metal Reinforcing for concrete
- Wood for concrete forming and house construction
- Petroleum-based products
- Materials for home construction (wiring, plumbing, roofing, etc.)
- Rock, gravel and other natural materials

As stated previously (Attachment C – TCEQ-0587), this project proposes to construct tennis courts, sidewalks and other impervious areas associated with a commercial development. As a result, during and after construction, slight changes in water quality may occur.

During construction, all discharge from the site will be directed to the temporary BMPs proposed.

Post development discharge from the site will be treated by the proposed BMP. Bioretention basin to be constructed after clearing of underbrush in the proposed area.

TCEQ – 0584
Attachment B – Volume and Character of Storm Water

Storm water runoff from this development will be typical of a commercial development. As the infrastructure is installed and construction progresses, typical pollutants, including oils and greases from the paving improvements and airborne particles from the general construction activity may be expected. Upon completion of the infrastructure, tennis court construction activities may generate pollutants from construction materials (wood, plastic pipe, roofing, etc.)

Post development flow rates will be attenuated by proposed detention facilities and will be less than or equal to pre-development rates. There will also be a Bioretention constructed to treat storm water runoff to remove the increase in TSS loading. The required and proposed removal rates, basin volumes and storm water runoff rates are included in the enclosed construction plans.

TCEQ - 0602

MWM DesignGroup
9001 N IH 35, Suite 102
Austin, TX 78753
512.453.0767

Temporary Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Tomas Rodriguez

Date: 12/5/2024

Signature of Customer/Agent:

Regu thletic Center

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: N/A

   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: Lady Bird Lake

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.

TCEQ – 0602
Attachment A – Spill Response Actions

Best management practices complying with TCEQ regulations 30 T.A.C., Chapter 327 Spill Prevention and Control and any local regulations are to be used to contain all potentially hazardous spills.

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

- Materials and equipment necessary for spill cleanup should be kept onsite in anticipation of expected spills. Equipment and materials will most likely include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, sand, sawdust, and plastic and metal trash containers specifically for this purpose.

- When spills or other accidental exposure of the substances described above occur, the following steps will be taken by the operator:

    - To the maximum extent practicable, the spill or leak will be stopped.
    - Once the leaking material has been stopped, the spill must be contained so as to minimize the affected area.
    - If the spill poses an immediate danger to the public, emergency response personnel will be called. All operators on site will be notified of the spill immediately.
    - The engineer inspector will determine whether the spill is of a reportable quantity and will coordinate appropriate activities as determined by the manufacturers' recommended methods for spill cleanup or material safety data sheet.

SPILL REGULATIONS - Spill prevention, control, cleanup, and reporting shall comply with TCEQ regulations 30 T.A.C., Chapter 327 Spill Prevention and Control and any local regulations.

SPILL PROCEDURES- Spill cleanup procedures and training, including personal safety guidelines will be clearly posted and available for operator personnel in the event of a spill. The spill prevention plan will be adjusted as necessary to include measures to prevent particular types of spills from reoccurring.

SPILL CLEAN UP MATERIALS - Materials and equipment for spill cleanup, such as absorbent, rags, sand, sawdust, containers, etc., will be available in vehicles or at the materials storage area onsite. All spills will be cleaned up immediately and waste residue disposed of properly.

SPILL REPORTING – Any reportable quantities of spills of hazardous materials shall be reported to the City of Rollingwood and appropriate TCEQ and/or local officials as

required by law. If the responsible party is uncertain whether the quantity is reportable, the City of Rollingwood shall be notified, and their direction followed.

CONTACT INFORMATION – For reportable quantities of spills of hazardous materials the following information can be used to contact the appropriate entities:

Local:
City of Rollingwood
403 Nixon Drive
Rollingwood, TX, 78746
Ph: 512-327-1838
Fax: 512-327-1869

State:
State Emergency Response Commission
State of Texas Spill-Reporting Hotline
1-800-832-8224 (24 Hours)

TCEQ Regional Office
Region 11, Austin
12100 Park 35 Circle, Bldg A, Rm 179
Austin, TX 78753
(512) 339-2929 (M-F, 8a-5p)

Federal:
National Response Center
1-800-424-8802 (24 Hours)

For further direction, see https://www.tceq.texas.gov/response/spills

TCEQ – 0602
Attachment B – Potential Sources of Contamination

The factors which could have an impact on surface and groundwater quality during the construction period for this project are as follows:

Non Storm Water Discharges:

- Dewatering of utility trenches (uncontaminated ground water)
- Water used for water line flushing and testing
- Water used for pavement washing (will be limited to areas where no spills of hazardous materials have occurred)

All non-storm water discharges will be directed to and treated by on-site erosion control devices.

Materials which may be expected to be used during construction of the project and may be stored on site are as follows:

- Plastic (HDPE, PVC) materials for construction of the stormwater facilities
- Concrete and concrete products for curbing and headwalls
- Metal Reinforcing for concrete
- Wood for concrete forming and house construction
- Petroleum-based products
- Materials for home construction (wiring, plumbing, roofing, etc.)
- Rock, gravel and other natural materials

As stated previously (Attachment C – TCEQ-0587), this project proposes to construct tennis courts, sidewalks and other impervious areas associated with a commercial development. As a result, during and after construction, slight changes in water quality may occur.

During construction, all discharge from the site will be directed to the temporary BMPs proposed.

Post development discharge from the site will be treated by the proposed BMP. Bioretention basin to be constructed after clearing of underbrush in the proposed area.

TCEQ – 0602
Attachment C – Sequence of Major Activities

SEQUENCE OF CONSTRUCTION:

1. HAVE A TX PE, CPESC, OR QPSWPPP PREPARE A PROJECT-SPECIFIC SWPPP AND OBTAIN TPDES SWPPP PERMIT TXR150000 COVERAGE.

2. TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION AND INITIATE TREE MITIGATION MEASURES.

3. THE ENVIRONMENTAL PROJECT MANAGER, AND/OR SITE SUPERVISOR, AND/OR DESIGNATED RESPONSIBLE PARTY, AND THE GENERAL CONTRACTOR WILL FOLLOW THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.

4. PROVIDE TO THE PERMIT CENTER THE SIGNED, CERTIFIED TPDES SMALL CONSTRUCTION SITE NOTICE (CSN). POST THE CSN ONSITE IN PUBLIC VIEW.

5. SCHEDULE PRE-CON MEETING WITH THE PERMIT CENTER, 512-327-1838.

6. ROUGH GRADE THE TEMPORARY BMP AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A SUMP PIT OUTLET AND AN EMERGENCY SPILLWAY MEETING THE REQUIREMENTS OF THE DRAINAGE CRITERIA MANUAL AND/OR THE ENVIRONMENTAL CRITERIA MANUAL, AS REQUIRED. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT WATER QUALITY POND(S).

7. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AT LEAST WEEKLY BY A CISEC, CESSWI, OR QCIS AND MAINTAINED IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.

8. BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION ACTIVITIES).

9. PERMANENT BMPS WILL BE CLEANED OUT AND FILTER MEDIA WILL BE INSTALLED PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.

10. COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.

11. ONCE PERMANENT STABILIZATION OF AT LEAST 70% DENSITY WITH NO LARGE BARE AREAS IS ESTABLISHED, SCHEDULE SITE FINAL INSPECTION WITH THE PERMIT CENTER: CCAYLOR@ROLLINGWOODTX.GOV OR 512-327-1838.

12. AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS.

13. PROVIDE TO THE PERMIT CENTER THE INITIALED, DATED, COMPLETED TPDES CSN.

TCEQ – 0602
Attachment D – Temporary Best Management Practices and Measures

Temporary BMP's will include the use of silt fencing, rock berms, mulch sock, triangular sediment filter dike, tree protection and a stabilized construction entrance. During construction, all storm water will be directed to one or more of these control measures. These controls will defend against the transport of silt and sediment off-site or into the local drainage system and are to be routinely checked and maintained as specified in the TCEQ General Construction Notes and in the details, adjacent streets and roadways are to be cleaned immediately if any sediment is tracked offsite, and silt fencing is to be cleaned when silt reaches a depth of six inches.

Additionally, all disturbed areas are to be seeded or sodded or otherwise stabilized within 14 days of construction activity ceasing.

No sensitive features are known to be onsite.

The drainage area upgradient of the limits of construction consists primarily of the southeast side of Wallis Dr. Storm water originating within this upgradient drainage area flowing to the site will be treated by on-site temporary BMP's and will ultimately flow through the grass lined ditch and leave the site.

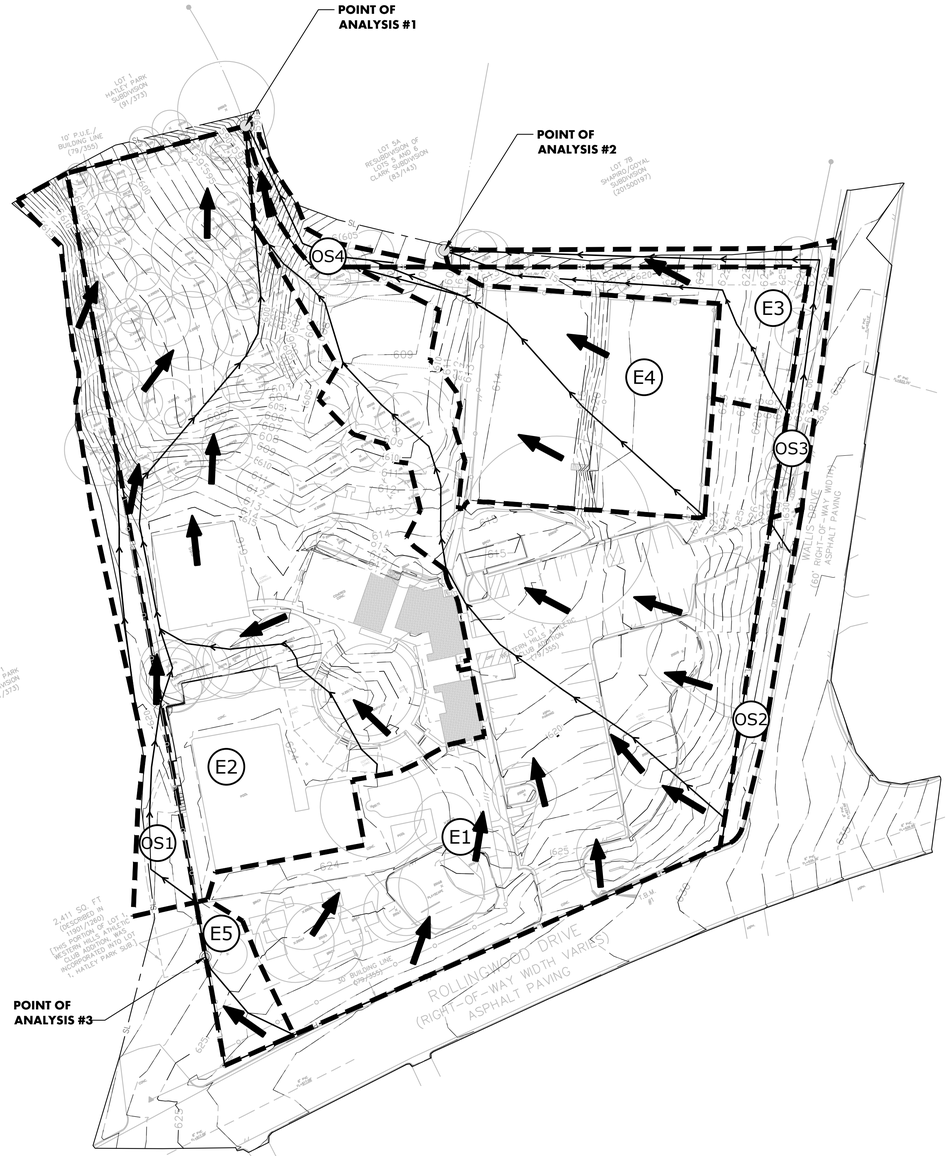
TCEQ – 0602
Attachment F – Structural Practices

The Permanent Structural Practice to reduce the runoff of total suspended solids from the site will be the construction of a Bioretention Basin.

No additional Permanent Structural Practices as described in RG-348 are 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. With the exception of the existing Bioretention Basin which will remain as previously approved and constructed.

Temporary structural controls include Silt Fencing, Rock Berms, Mulch Sock, Triangular filter dike, Tree protection and a Stabilized Construction Entrance. All storm water will flow to one or more of these controls during construction.

Attachment G - Drainage Area Map



1" = 40'-0"
ORIGINAL IS ONE INCH SQUARE
SCALE

EXISTING CONDITION CATCHMENTS SUMMARY TABLE

	E-01	E-02	E-03	E-04	E-05	OS-01	OS-02	OS-03	OS-04	OS-04+E4	OS-02+E1	OS-01+E2
AREA (AC)	1.394	1.217	0.131	0.409	0.6	0.172	0.047	0.099	0.033	0.442	1.441	1.389
IMPERVIOUS COVER (%)	34.24	26.73	0	89.7	0	0	13.7	0	0	83.3	23.42	33.57
TC (MIN)	5.636	7.359	7.882	5	5	10.828	5	8.311	5.505	8.106	5.681	8.611
CN	86	85	80	96	80	80	82	80	80	95	86	84
2-YR PEAK FLOW (CFS)	5.46	4.52	0.40	2.10	0.19	0.49	0.16	0.30	0.11	2.07	5.64	4.79
10-YR PEAK FLOW (CFS)	10.29	8.71	0.84	3.53	0.41	1.02	0.33	0.63	0.22	3.52	10.63	9.41
25-YR PEAK FLOW (CFS)	13.99	11.85	1.18	4.61	0.57	1.43	0.46	0.88	0.31	4.6	14.4	12.91
100-YR PEAK FLOW (CFS)	20.94	17.77	1.81	6.65	0.89	2.20	0.71	1.36	0.47	6.66	21.56	19.49

TIME OF CONCENTRATION TABLE

DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW			TOTAL TC (MIN)
	LENGTH	SLOPE	TC (MIN)	LENGTH	SLOPE	TC (MIN)	
E-01	100	10.00%	4.292	396.6	9.30%	1.343	5.636
E-02	100	6.30%	6.314	369.5	8.40%	1.045	7.359
E-03	100	7.50%	7.412	135	8.80%	0.470	7.882
E-04	100	7.70%	2.419	145.8	6.20%	0.605	5.00
E-05	78	3.00%	2.892	-	-	-	5.00
OS-01	100	3.00%	10.694	41.88	10.30%	0.135	10.828
OS-02	19.9	7.40%	1.254	-	-	-	5.00
OS-03	100	7.60%	7.373	209.16	5.30%	0.938	8.311
OS-04	100	16.30%	5.434	26.65	15.00%	0.071	5.505
OS-04+E-04	100	7.70%	7.334	250	11.20%	0.772	8.106
OS-02+E-01	100	10.00%	4.292	410	9.30%	1.389	5.681
OS-01+E-02	100	4.37%	7.309	374	8.80%	1.302	8.611

POINT OF ANALYSIS #1

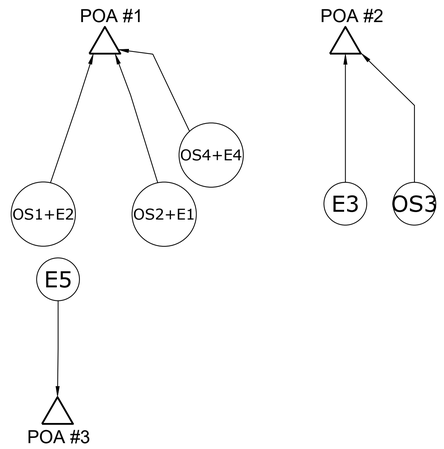
	PRE-DEVELOPMENT	POST-DEVELOPMENT	% REDUCTION
2-YR PEAK FLOW (CFS)	12.5	11.31	9.52
10-YR PEAK FLOW (CFS)	23.56	20.3	13.84
25-YR PEAK FLOW (CFS)	31.87	27.09	15
100-YR PEAK FLOW (CFS)	47.5	39.90	16

POINT OF ANALYSIS #2

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.70	0.68
10-YR PEAK FLOW (CFS)	1.47	1.42
25-YR PEAK FLOW (CFS)	2.06	1.99
100-YR PEAK FLOW (CFS)	3.17	3.07

POINT OF ANALYSIS #3

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.19	0.19
10-YR PEAK FLOW (CFS)	0.41	0.41
25-YR PEAK FLOW (CFS)	0.57	0.57
100-YR PEAK FLOW (CFS)	0.89	0.89



STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
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TBPE FM 1416
10/4/2024

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f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

EXISTING DRAINAGE AREA MAP

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

501

11 OF 30

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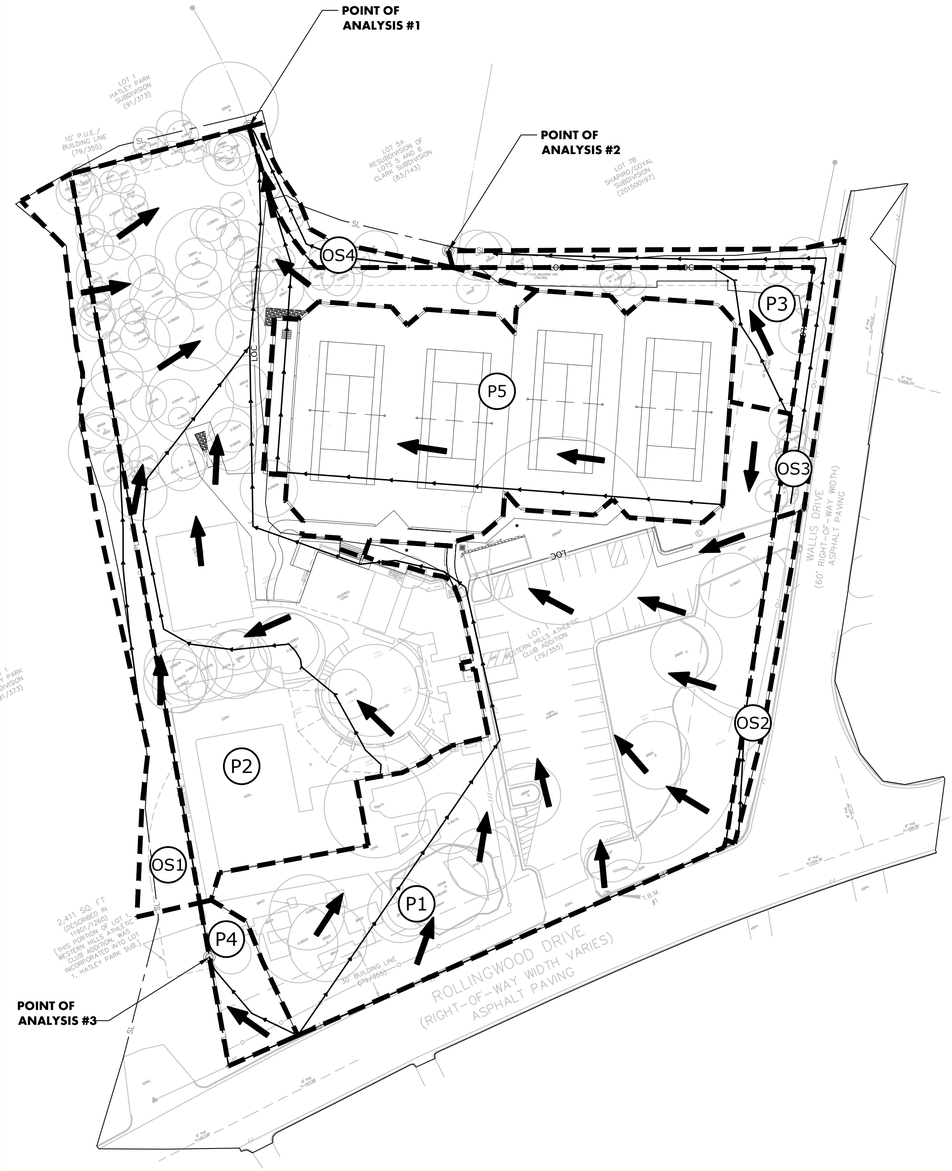

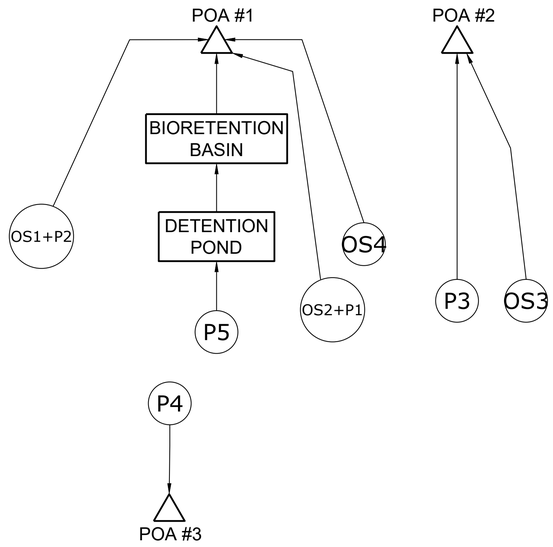

PROPOSED CONDITION CATCHMENTS SUMMARY TABLE

	P-01	P-02	P-03	P-04	P-05	OS-01	OS-02	OS-03	OS-04	OS-01+P2	OS-02+P1
AREA (AC)	1.135	1.199	0.122	0.600	0.720	0.172	0.047	0.099	0.033	1.371	1.182
IMPERVIOUS COVER (%)	42.00	27.70	0.00	0.00	97.00	0.00	13.70	0.00	0.00	24.22	40.87
TC (MIN)	6.059	7.321	7.283	5.000	3.700	10.828	5.000	8.311	5.505	8.285	8.332
CN	88.00	85.00	80.00	80.00	97.00	80.00	82.00	80.00	80.00	84	87
2-YR PEAK FLOW (CFS)	4.70	4.46	0.38	0.19	3.66	0.49	0.16	0.30	0.11	4.8	4.53
10-YR PEAK FLOW (CFS)	8.63	8.58	0.80	0.41	6.19	1.02	0.33	0.63	0.22	9.42	8.51
25-YR PEAK FLOW (CFS)	11.56	11.68	1.11	0.57	8.06	1.43	0.46	0.88	0.31	12.91	11.48
100-YR PEAK FLOW (CFS)	17.07	17.50	1.71	0.89	11.37	2.20	0.71	1.36	0.47	19.48	17.07

POINT OF ANALYSIS #1

	PRE-DEVELOPMENT	POST-DEVELOPMENT	% REDUCTION
2-YR PEAK FLOW (CFS)	12.5	11.31	9.52
10-YR PEAK FLOW (CFS)	23.56	20.3	13.84
25-YR PEAK FLOW (CFS)	31.87	27.09	15
100-YR PEAK FLOW (CFS)	47.5	39.90	16

POINT OF ANALYSIS #2

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.70	0.68
10-YR PEAK FLOW (CFS)	1.47	1.42
25-YR PEAK FLOW (CFS)	2.06	1.99
100-YR PEAK FLOW (CFS)	3.17	3.07

POINT OF ANALYSIS #3

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.19	0.19
10-YR PEAK FLOW (CFS)	0.41	0.41
25-YR PEAK FLOW (CFS)	0.57	0.57
100-YR PEAK FLOW (CFS)	0.89	0.89

TIME OF CONCENTRATION TABLE

DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW			TOTAL TC
	LENGTH	SLOPE	TC	LENGTH	SLOPE	TC	
P-01	100	10.30%	4.483	538	7.60%	1.805	6.288
P-02	100	6.30%	6.031	366	8.60%	1.289	7.321
P-03	93.15	6.80%	7.283	-	-	-	7.283
P-04	78	3.00%	2.892	-	-	-	5.00
P-05	97	0.80%	1.969	350	12.00%	3.21	5.18
OS-01	100	3.00%	10.694	41.88	10.30%	0.135	10.828
OS-02	19.9	7.40%	1.254	-	-	-	5.00
OS-03	100	7.60%	7.373	209.16	5.30%	0.938	8.311
OS-04	100	16.30%	5.434	26.65	15.00%	0.071	5.505
OS-01+P-02	100	4.37%	6.982	370	8.60%	1.303	8.285
OS-01+P-01	100	10.30%	6.316	538	7.60%	2.016	8.332

DETENTION POND SUMMARY TABLE

STORM EVENT	PEAK FLOW (IN) (CFS)	PEAK FLOW (OUT) (CFS)	WATER SURFACE ELEVATION (FT)	MAX. POND STORAGE (CU-FT)
2-YR	3.66	2	613.6	1,031.00
10-YR	6.08	2.5	613.77	2,905.00
25-YR	7.91	2.92	613.91	4,448.00
100-YR	11.37	3.46	614.15	7,559.00

DETENTION COMPOSITE OUTLET STRUCTURE POND

OPENING TYPE	AMOUNT	DIAMETER (FT)	ELEV (FT)
AREA	4	0.5	613

RAIN GARDEN SUMMARY TABLE

STORM EVENT	PEAK FLOW (IN) (CFS)	PEAK FLOW (OUT) (CFS)	WATER SURFACE ELEVATION (FT)	MAX. POND STORAGE (CU-FT)
2-YR	2	1.99	613.05	1,055.00
10-YR	2.5	2.49	613.06	1,067.00
25-YR	2.92	2.89	613.07	1,077.00
100-YR	3.46	3.45	613.08	1,090.00

COMPOSITE OUTLET STRUCTURE RAIN GARDEN

OPENING TYPE	AMOUNT	DIMENSION (FT)	ELEV (FT)
RECTANGULAR GRATE	1	5 X 5	613

1" = 40'-0"
ORIGINAL IS ONE INCH
SCALE

STATE OF TEXAS
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119179
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f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

PROPOSED DRAINAGE AREA MAP

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

503

12 OF 30

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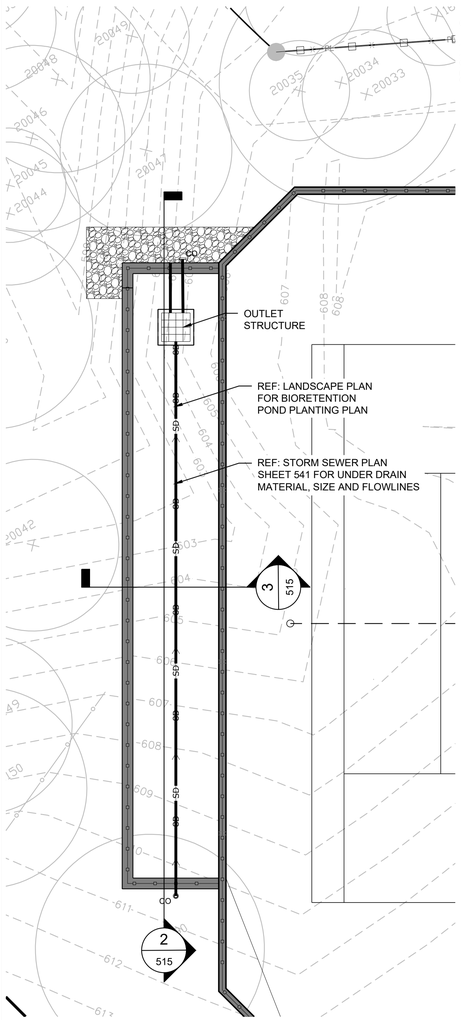
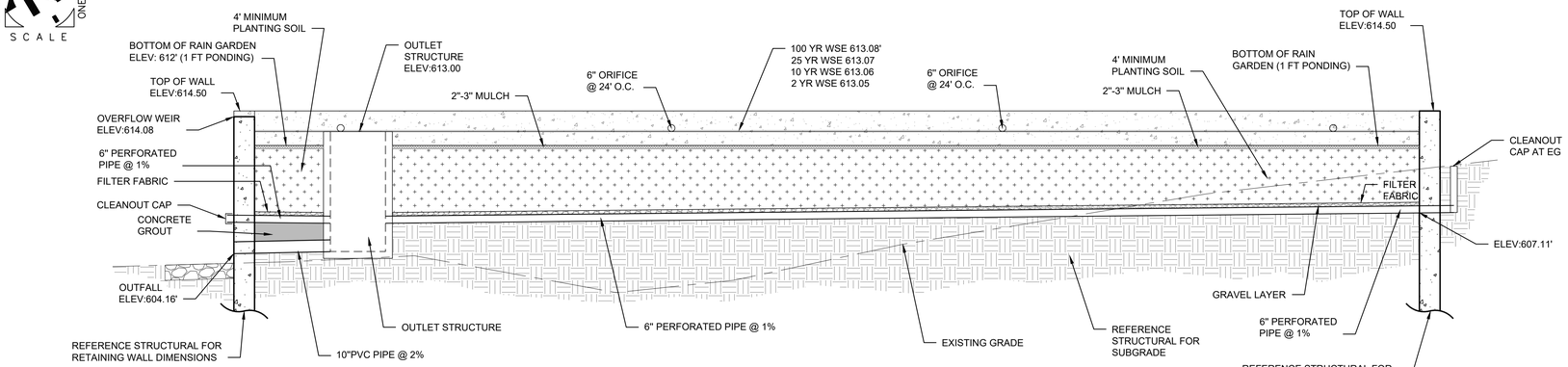
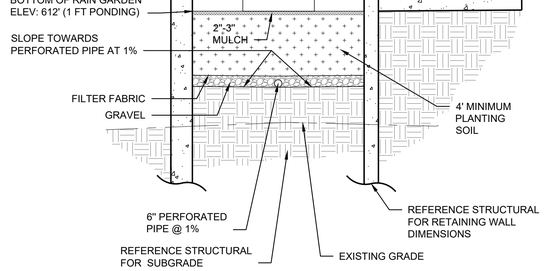


1 BIORETENTION BASIN PLAN
SCALE: 1"=10'



1 BIORETENTION BASIN SECTION
SCALE: 1"=5'



2 BIORETENTION BASIN SECTION
SCALE: 1"=5'

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Additional information is provided for cells with a red triangle in the upper right corn
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will

1. The Required Load Reduction for the total project: Calculations from RG-348

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resul
A_N = Net increase in impervious a
P = Average annual precipitation

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

County =	Travis	
Total project area included in plan * =	1.12	acres
Predevelopment impervious area within the limits of the plan * =	0.36	acres
Total post-development impervious area within the limits of the plan* =	0.72	acres
Total post-development impervious cover fraction * =	0.65	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	313	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	0.72	acres
Predevelopment impervious area within drainage basin/outfall area =	0.36	acres
Post-development impervious area within drainage basin/outfall area =	0.72	acres
Post-development impervious fraction within drainage basin/outfall area =	1.00	
$L_{M\ THIS\ BASIN}$ =	313	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Bioretention
Removal efficiency = 89 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_N x

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

A_C =	0.72	acres
A_I =	0.72	acres
A_P =	0.00	acres
L_R =	709	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 313 lbs.

F = 0.44

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.

Rainfall Depth =	0.34	inches
Post Development Runoff Coefficient =	0.82	
On-site Water Quality Volume =	734	cubic feet

Calculations from RG-348

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 =	147	
Total Capture Volume (required water quality volume(s) x 1.20) =	881	cubic feet

10. Bioretention System Designed as Required in RG

Required Water Quality Volume for Bioretention Basin = 881 cubic feet

STATE OF TEXAS
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NO.	DATE	DESCRIPTION	BY

0 1"
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WATER QUALITY PLAN, SECTIONS, AND CALCULATIONS

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

515

13 OF 30

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TCEQ – 0602
Attachment I – Inspection and Maintenance for BMPs

Requirements for the inspection of temporary BMPs and measures for their timely maintenance, repair, and, if necessary, retrofit, as well as a description of documentation procedures and recordkeeping practices is included on the sheets including the TCEQ General Construction Notes, the Erosion/Sedimentation Control, Demolition and Tree Protection Plan Sheet, and the detail sheets in the accompanying plans.

The project controls are to be routinely checked and maintained as specified in the TCEQ General Construction Notes and in the details. Specific inspection and maintenance guidelines for proposed temporary BMPs are as follows:

Construction Entrance/Exit

- 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 onto public rights-of-way should be removed immediately by contractor.
- When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-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.

Silt Fence

- Inspect all fencing weekly, and after any rainfall.
- Remove sediment when buildup reaches 6 inches.
- Replace any torn fabric or install a second line of fencing parallel to the torn section.
- 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.
- When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

Rock Berms

- Inspection should be made weekly and after each rainfall 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 that will not cause any additional siltation.
- 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 rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

Triangular Filter Dike

- 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 dikes as needed to prevent gaps between sections.
- Accumulated silt should be removed after each rainfall, and disposed of in a manner which will not cause additional siltation.
- 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.

Mulch

- Mulched areas should be inspected weekly and after each rain event to locate and repair any damage.
- Areas damaged by storms or normal construction activities should be regraded and hydraulic mulch reapplied as soon as practical.

Washout Area

- Solids shall be removed from the containment area and disposed of properly.
- Plastic sheeting should be inspected for damage, tears and/or holes.
- When construction is complete, the hardened concrete should be removed and disposed of properly.

Misc.

- Adjacent streets and roadways are to be monitored and cleaned immediately if any sediment is tracked offsite; the stabilized construction entrance is to be maintained so that sediment is not tracked offsite.
- Sodding or seeding is to be used to stabilize exposed soil when construction ceases for longer than 14 days
- Tree protection should be in place before any excavation or grading begins, should be kept in good repair for the duration of construction activities, and should be the last items removed during the final cleanup after the completion of the project.

Documentation of inspections and maintenance of the project BMPs is to be contained within the project SWPPP document appendices.

TCEQ – 0602
Attachment J – Schedule of Interim and Permanent Soil Stabilization Practices

Stabilization of exposed soils through Sodding or Seeding is required whenever construction activities cease for 14 days or longer.

Temporary BMPs such as silt fencing, rock berms, and mulch sock will retain soil runoff during construction.

TCEQ - 0600

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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: Tomas Rodriguez

Date: 12/5/2024

Signature of Customer/Agent

Regulated Entity Name: [illegible]ls Athletic Club

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: City of Rollingwood Stormwater Management Plan

☐ 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

TCEQ – 0600
Attachment B – BMPs for Upgradient Storm Water

No surface water, groundwater or stormwater originates upgradient from the site and flows across the site to the proposed bioretention basin.

TCEQ – 0600
Attachment C – BMPs for On-Site Stormwater

Temporary BMP's will include the use of silt fencing, tree protection, rock berms, triangular sediment filter dike, mulch sock, and a stabilized construction entrance. During construction, all storm water will be directed to one or more of these control measures.

The Permanent BMP for this development will be a bioretention basin.
The TSS load removal efficiency for the proposed BMP is 89%.The biorentetion basin is 12 ft wide and 86.5 ft long, providing a total filtration area of 1038 square feet. Storm water runoff will be directed to the bioretention basin prior to exiting the site.

Detailed calculations for sizing the Bioretention Basin are included in the enclosed construction plans.

TCEQ – 0600
Attachment D – BMPs for Surfaces Streams

There are no surface streams adjacent to or within close proximity of the site.

Temporary BMP's to protect downstream drainage features will include the use of silt fencing, mulch sock, rock berms, tree protection and triangular filter dike. During construction, all storm water will be directed to one or more of these control measures.

No sensitive features are known to be onsite.

As noted on Attachment "C", the Permanent BMP for this development will be a bioretention basin. Post development storm water runoff will be directed to this storm water treatment system.

In addition, after construction of the project, all disturbed areas will be restored and revegetated.

TCEQ – 0600
Attachment F – Construction Plans

(The Construction Plans are included with this submittal)

Western Hills Athletic Club

4801 Rollingwood Drive
Rollingwood, Texas 78746

SUBMITTAL DATE:
OCTOBER 10, 2024

OWNER:
WESTERN HILLS ATHLETIC CLUB
4801 ROLLINGWOOD DR
ROLLINGWOOD, TEXAS 78746

CONTACT:
CATHERINE SCOTT, PRESIDENT
(512) 327-6373

CIVIL ENGINEER / AGENT:
MWM DESIGN GROUP, INC.
9001 N IH35, SUITE 102
AUSTIN, TX. 78753

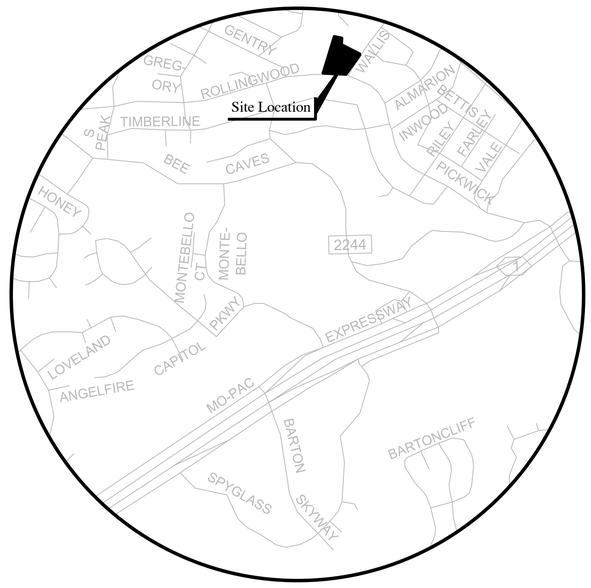
CONTACT:
TOMAS RODRIGUEZ, P.E., R.A.S.
(512) 453-0767

LANDSCAPE ARCHITECT:
MWM DESIGN GROUP, INC.
9001 N IH35, SUITE 102
AUSTIN, TX. 78753

CONTACT:
DAVID CAZARES, ASLA, LEED AP
(512) 453-0767

STRUCTURAL ENGINEER:
ENCOTECH ENGINEERING CONSULTANTS
8500 BLUFFSTONE COVE, SUITE B-103
AUSTIN, TX. 78759

CONTACT:
HAMZAH KHATAW, P.E.
(512) 338-1101



LOCATION MAP

LEGAL DESCRIPTION: LOT 1, WESTERN HILLS ATHLETIC CLUB ADDITION
ZONED: PARK ZONING DISTRICT (P)
PROPOSED IMPERVIOUS COVER: 65,591.55 SF, 46.88%
WATERSHED: LADY BIRD LAKE & EANES CREEK CLASSIFICATION: SUBURBAN

NOTES:

1. THIS SITE LIES WITHIN THE ROLLINGWOOD FULL PURPOSE JURISDICTION.
2. NO PORTION OF THIS SITE IS WITHIN THE 100 YEAR FLOODPLAIN AS PER FEMA FIRM PANEL #48453C0445K, DATED JANUARY 22, 2020.
3. NO CRITICAL ENVIRONMENTAL FEATURES ARE KNOWN TO EXIST WITHIN 150' OF THE PROJECT SITE.
4. THIS SITE IS LOCATED OVER THE EDWARD'S AQUIFER RECHARGE ZONE.
5. TREES GREATER THAN 8" IN DIAMETER ARE KNOWN TO EXIST ON THIS SITE.
6. AS PART OF THE SITE PLAN, THE STORM WATER POLLUTION PREVENTION PLAN (SWIPPP) IS REQUIRED TO BE ON SITE AT ALL TIMES.

INDEX OF SHEETS		
SHEET INDEX	SHEET NUMBER	SHEET DESCRIPTION
1	000	COVER
2	001	GENERAL NOTES
3	010	EXISTING CONDITIONS
4	101	SITE PLAN
5	181	SITE DETAILS
6	201	DEMOLITION PLAN
7	231	EROSION-SEDIMENTATION CONTROL & TREE PROTECTION PLAN
8	281	EROSION-SEDIMENTATION CONTROL & TREE PROTECTION DETAILS
9	301	GRADING PLAN
10	340	IMPERVIOUS COVER PLAN
11	501	EXISTING DRAINAGE AREA MAP
12	503	PROPOSED DRAINAGE AREA MAP
13	515	WATER QUALITY PLAN, SECTIONS, AND CALCULATIONS
14	541	STORM SEWER PLAN
15	542	STORM SEWER PROFILES
16	543	STORM SEWER PROFILES
17	581	DRAINAGE DETAILS
18	700	LANDSCAPE NOTES & CALCULATIONS
19	701	LANDSCAPE PLAN
20	791	LANDSCAPE DETAILS
21	801	IRRIGATION PLAN
22	S-001	STRUCTURAL NOTES
23	S-002	STRUCTURAL NOTES
24	S-003	CODE REQUIRED SPECIAL INSPECTIONS
25	S-101	RETAINING WALL PLAN
26	S-102	TENNIS COURT PLAN
27	S-200	TYPICAL CONCRETE DETAILS
28	S-201	TYPICAL CONCRETE DETAILS
29	S-202	TYPICAL CONCRETE DETAILS
30	S-203	CONCRETE DETAILS

RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.

SUBMITTED BY:

TOMAS RODRIGEUZ, P.E., R.A.S. DATE
MWM DESIGNGROUP
9001 N IH35, SUITE 102
AUSTIN, TX. 78753
(512)453-0767

APPROVED BY:

FOR DIRECTOR OF PLANNING AND DEVELOPMENT REVIEW DEPARTMENT DATE

SITE DEVELOPMENT PERMIT NUMBER

STATE OF TEXAS · TOMAS M. RODRIGUEZ · 119179 · LICENSED PROFESSIONAL ENGINEER
TBPE FH 1416
10/4/2024

REGISTERED LANDSCAPE ARCHITECT · DAVID J. CAZARES · 1871 · STATE OF TEXAS
04 October 2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

COVER SHEET

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

000

1 OF 30

Files: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\000 Cover.dwg 22x34

CONTRACTOR NOTES:

1. THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT TYPE AND LOCATION OF ALL UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES. THE CONTRACTOR SHALL A) IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES, AND B) PAY FOR SAME AT NO EXTRA COST TO THE OWNER.

2. THE BIDDER (CONTRACTOR AFTER AWARD) SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY UNREPORTED OBSTACLES OR DISCREPANCIES THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THIS PROJECT.

3. WHERE REMOVAL OF BASE AND PAVEMENT IS NECESSARY FOR THIS PROJECT ALL BASE AND PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND STANDARD SPECIFICATIONS. ALL PAVEMENT CUTS SHALL BE SAW CUT PRIOR TO PLACEMENT OF H.M.A.C. AND COORDINATED WITH CITY OF ROLLINGWOOD AND CITY INSPECTORS.

4. SLOPES OF ROADWAY CUTS AND EMBANKMENTS DAMAGED BY ANY OPERATION OF THE CONTRACTOR DURING THE EXECUTION OF THIS PROJECT SHALL BE REPAIRED AND RESTORED TO THE ORIGINAL PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF THE STANDARD SPECIFICATIONS. BACK FILL AND FILL PLACED DURING REMEDIAL GRADING SHALL BE COMPACTED TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE ORIGINAL CONDITIONS AND TO THE SATISFACTION OF THE ENGINEER AND GOVERNING AUTHORITIES.

5. BEFORE DISCONNECTING ANY WATER LINE OR GAS LINE, CONTRACTOR MUST PROVIDE FORTY-EIGHT (48) HOUR NOTICE TO THE OWNER EXCEPT IN THE CASE OF A BONA FIDE EMERGENCY.

6. CONTRACTOR SHALL COMPLY WITH CONSTRUCTION SEQUENCING WHICH IS SPECIFIED ON THIS SHEET.

7. ALL CONSTRUCTION SHALL FOLLOW THE LATEST VERSIONS OF THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, UNLESS NOTED OTHERWISE.

8. UPON REQUEST, COMPUTER AIDED DESIGN (CAD) FILES CAN BE MADE AVAILABLE TO THE CONTRACTOR FOR THE PURPOSES OF CONSTRUCTION STAKING.

9. CONTRACTOR TO PROVIDE A 24-HOUR (MINIMUM) NOTICE TO ENGINEER PRIOR TO ALL UTILITY INSTALLATION TO ALLOW FOR VISUAL OBSERVATION OF TRENCH EXCAVATION, BEDDING, PIPE MATERIAL, AND BACKFILL.

PAVEMENT:

1. CONCRETE PAVEMENT SHALL BE FURNISHED AND INSTALLED IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS STANDARD SPECIFICATIONS.

2. CONTRACTOR SHALL PROVIDE A 24-HOUR (MINIMUM) NOTICE TO ENGINEER PRIOR TO ALL CONCRETE POURS TO ALLOW FOR VISUAL OBSERVATION OF FORMWORK AND REBAR PLACEMENT.

EXCAVATION AND BACKFILL:

1. ALL EXCAVATION FOR THIS PROJECT SHALL BE UNCLASSIFIED.

2. CONTRACTOR/REPAIR CREW MUST NOTIFY INSPECTOR AT LEAST TWENTY FOUR (24) HOURS PRIOR TO BEGINNING PERMANENT BACK FILL OPERATIONS.

3. BACKFILL DENSITY SHALL BE AS SPECIFIED IN STANDARD SPECIFICATIONS. TEST METHODS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS UNLESS INDICATED OTHERWISE IN WRITING BY THE ENGINEER.

4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.

HANDICAP ACCESSBILITY:

1. ACCESSIBLE ROUTES MUST HAVE A RUNNING-SLOPE NO GREATER THAN 5% UNLESS DESIGNED AS A RAMP.

2. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 2%.

3. THE MAXIMUM RUNNING SLOPE OF A RAMP IN NEW CONSTRUCTION IS 8.33%.

4. TAS AND ADA CRITERIA SHALL GOVERN.

SAFETY:

1. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE, NEAT AND WORKMANLIKE MANNER AT ALL TIMES. JOB SITE SAFETY SHALL NOT BE COMPROMISED. ANY UNATTRACTIVE NUISANCE SHALL BE REMOVED OR CAMOUFLAGED BY CONTRACTOR WHEN DIRECTED BY THE OWNER OR ENGINEER.

2. ALL HOLES, TRENCHES, AND OTHER HAZARDOUS AREAS SHALL BE ADEQUATELY PROTECTED BY BARRICADES, FENCING, LIGHTS, AND/OR OTHER PROTECTIVE DEVICES AT ALL TIMES.

3. REMOVAL OF EXCAVATED MATERIALS AND DAILY CLEANUP OPERATIONS SHALL BE PERFORMED TO THE SPECIFICATIONS AND TO THE SATISFACTION OF THE OWNER AND ENGINEER.

4. CONTRACTOR SHALL MAINTAIN A SUPERINTENDENT UPON THE PROJECT AT ALL TIMES WORK IS IN PROGRESS.

TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR SHALL MAINTAIN CLEAR PASSAGE FOR LOCAL TRAFFIC AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

2. ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES, WARNING SIGNS, AND FLAG MEN OPERATIONS SHALL BE PLACED, CONSTRUCTED, EXECUTED AND MAINTAINED IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).

3. WHERE PORTABLE SIGNS REQUIRE THE USE OF WEIGHTS, SANDBAGS SHALL BE USED. THE USE OF SOLID OBJECTS SUCH AS CONCRETE, ROCKS, IRON, ETC. SHALL NOT BE PERMITTED.

4. INSTALLATION OF CONSTRUCTION BARRICADING AND SIGNING SHALL BE COORDINATED THROUGH THE CITY OF ROLLINGWOOD RIGHT OF WAY MANAGEMENT AT (512) 974-1150 (OR APPLICABLE REGULATORY ENTITY).

5. ALL TRAFFIC CONTROL SIGNS SHALL REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS. IF SIGNS REQUIRE RELOCATION, CONTRACTOR SHALL CONTACT THE APPLICABLE REGULATORY ENTITY.

6. CONTRACTOR MUST RESTORE ALL PAVEMENT MARKINGS DISTURBED DURING CONSTRUCTION. CONTRACTOR SHALL OBSERVE ALL APPLICABLE MATERIALS, SPECIFICATIONS, AND INSTALLATION REQUIREMENTS INCLUDING SPECIAL ATTENTION TO MAINTAINING PROPER DIMENSIONS AND ALIGNMENT.

TRENCH SAFETY:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED.

2. IN ACCORDANCE WITH THE U.S. OSHA REGULATIONS, WHEN EMPLOYEES ARE REQUIRED TO BE IN TRENCHES 4 FOOT DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.

ORDINANCE REQUIREMENTS

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

COMPATIBILITY

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

FIRE DEPARTMENT

1. THE ROLLINGWOOD FIRE DEPARTMENT REQUIRES ASPHALT OR CONCRETE PAVEMENT PRIOR TO CONSTRUCTION AS AN "ALL-WEATHER DRIVING SURFACE."
2. HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FOUR-INCH OPENING AT LEAST 18 INCHES ABOVE FINISHED GRADE. THE FOUR-INCH OPENING MUST FACE THE DRIVEWAY OR STREET WITH THREE- TO SIX-FOOT SETBACKS FROM THE CURBLINE(S). NO OBSTRUCTION IS ALLOWED WITHIN THREE FEET OF ANY HYDRANT AND THE FOUR-INCH OPENING MUST BE TOTALLY UNOBSTRUCTED FROM THE STREET.
3. TIMING OF INSTALLATION: WHEN FIRE PROTECTION FACILITIES ARE INSTALLED BY THE DEVELOPER, SUCH FACILITIES SHALL INCLUDE ALL SURFACE ACCESS ROADS WHICH SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION. WHERE ALTERNATIVE METHODS OF PROTECTION, AS APPROVED BY THE FIRE CHIEF, ARE PROVIDED, THE ABOVE MAY BE MODIFIED OR WAIVED.
4. ALL PERVIOUS/DECORATIVE PAVING SHALL BE ENGINEERED AND INSTALLED FOR 80,000 LB. LIVE-VEHICLE LOADS. ANY PERVIOUS/DECORATIVE PAVING WITHIN 100 FEET OF ANY BUILDING MUST BE APPROVED BY THE FIRE DEPARTMENT.
5. COMMERCIAL DUMPSTERS AND CONTAINERS WITH AN INDIVIDUAL CAPACITY OF 1.5 CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN TEN FEET OF OPENINGS, COMBUSTIBLE WALLS, OR COMBUSTIBLE EAVE LINES. CITY OF ROLLINGWOOD | CONSOLIDATED SITE PLAN APPLICATION INSTRUCTIONS REV 7/19/2016 | PAGE 30 OF 38
6. FIRE LANES DESIGNATED ON SITE PLAN SHALL BE REGISTERED WITH CITY OF ROLLINGWOOD FIRE MARSHAL'S OFFICE AND INSPECTED FOR FINAL APPROVAL.
7. VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS 14 FEET FOR FULL WIDTH OF ACCESS DRIVE.

GENERAL CONSTRUCTION NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF ROLLINGWOOD MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

2. CONTRACTOR SHALL CALL TEXAS 811 (811 OR 1-800-344-8377) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W.

3. CONTRACTOR SHALL NOTIFY THE CITY OF ROLLINGWOOD TO SUBMIT REQUIRED DOCUMENTATION, PAY CONSTRUCTION INSPECTION FEES, AND TO SCHEDULE THE REQUIRED SITE AND SUBDIVISION PRE-CONSTRUCTION MEETING. THIS MEETING MUST BE HELD PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN THE R.O.W. OR PUBLIC EASEMENTS. PLEASE VISIT HTTP://AUSTINTEXAS.GOV/PAGE/COMMERCIAL-SITE-AND-SUBDIVISION-INSPECTIONS FOR A LIST OF SUBMITTAL REQUIREMENTS, INFORMATION CONCERNING FEES, AND CONTACT INFORMATION.

4. FOR SLOPES OR TRENCHES GREATER THAN FIVE FEET IN DEPTH, A NOTE MUST BE ADDED STATING: "ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION." (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST 6TH STREET, ROLLINGWOOD TEXAS.)

5. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.

6. UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS AND PRIOR TO THE FOLLOWING, THE ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DRAINAGE, FILTRATION AND DETENTION FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS; RELEASE OF THE CERTIFICATE OF OCCUPANCY BY THE DEVELOPMENT SERVICES DEPARTMENT (INSIDE THE CITY LIMITS); OR INSTALLATION OF AN ELECTRIC OR WATER METER (IN THE FIVE-MILE ETJ)

DEVELOPER INFORMATION

WESTERN HILLS ATHLETIC CLUB OWNER	(512) 327-6373 PHONE #
4801 ROLLINGWOOD DR, ROLLINGWOOD, TX 78746 OWNER ADDRESS	
CATHERINE SCOTT OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS	(512) 327-6373 PHONE #
JOSH MCKAY PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE	(512) 426-1483 PHONE #
JOSH MCKAY PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE	(512) 426-1483 PHONE #

AMERICANS WITH DISABILITIES ACT

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

BENCHMARK INFORMATION

COORDINATE BASIS: GRID AZIMUTH FOR TEXAS CENTRAL ZONE STATE PLANE COORDINATES, BASED ON GPS SOLUTIONS FROM THE NATIONAL GEODETIC SURVEY (NGS) ON-LINE POSITIONING USER SERVICE (OPUS).

BENCHMARKS:

B.M. #1 – SQUARE CUT ON B.O.C., NORTH SIDE OF ROLLINGWOOD DR.
+/-105 FEET WEST OF WALLIS DR.
ELEV.=628.77'

B.M. #3 – SQUARE CUT ON B.O.C. ON THE WEST SIDE OF WALLIS DR.
+/-190 FEET NORTH OF ROLLINGWOOD DR.
ELEV.=631.07'

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES:

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY 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

SEQUENCE OF CONSTRUCTION:

1. TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION, INITIATE TREE MITIGATION MEASURES AND CONDUCT "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE).

2. THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR MUST CONTACT THE DEVELOPMENT SERVICES DEPARTMENT, ENVIRONMENTAL INSPECTION, AT 512-974-2278, 72 HOURS PRIOR TO THE SCHEDULED DATE OF THE REQUIRED ON-SITE PRECONSTRUCTION MEETING.

3. THE ENVIRONMENTAL PROJECT MANAGER, AND/OR SITE SUPERVISOR, AND/OR DESIGNATED RESPONSIBLE PARTY, AND THE GENERAL CONTRACTOR WILL FOLLOW THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.

4. ROUGH GRADE THE POND(S) AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A SUMP PIT OUTLET AND AN EMERGENCY SPILLWAY MEETING THE REQUIREMENTS OF THE DRAINAGE CRITERIA MANUAL AND/OR THE ENVIRONMENTAL CRITERIA MANUAL, AS REQUIRED. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT WATER QUALITY POND(S).

5. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.

6. BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.

7. IN THE BARTON SPRINGS ZONE, THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR WILL SCHEDULE A MID-CONSTRUCTION CONFERENCE TO COORDINATE CHANGES IN THE CONSTRUCTION SCHEDULE AND EVALUATE EFFECTIVENESS OF THE EROSION CONTROL PLAN AFTER POSSIBLE CONSTRUCTION ALTERATIONS TO THE SITE. PARTICIPANTS SHALL INCLUDE THE CITY INSPECTOR, PROJECT ENGINEER, GENERAL CONTRACTOR AND ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR. THE ANTICIPATED COMPLETION DATE AND FINAL CONSTRUCTION SEQUENCE AND INSPECTION SCHEDULE WILL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR.

8. PERMANENT WATER QUALITY PONDS OR CONTROLS WILL BE CLEANED OUT AND FILTER MEDIA WILL BE INSTALLED PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.

9. COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.

10. UPON COMPLETION OF THE SITE CONSTRUCTION AND REVEGETATION OF A PROJECT SITE, THE DESIGN ENGINEER SHALL SUBMIT AN ENGINEER'S LETTER OF CONCURRENCE BEARING THE ENGINEER'S SEAL, SIGNATURE, AND DATE TO THE DEVELOPMENT SERVICES DEPARTMENT INDICATING THAT CONSTRUCTION, INCLUDING REVEGETATION, IS COMPLETE AND IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.

11. UPON COMPLETION OF LANDSCAPE INSTALLATION OF A PROJECT SITE, THE LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER OF CONCURRENCE TO THE DEVELOPMENT SERVICES DEPARTMENT INDICATING THAT THE REQUIRED LANDSCAPING IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.

12. AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS.

STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
LICENSED
PROFESSIONAL ENGINEER

TBPE FH 1416
10/4/2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

GENERAL NOTES

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

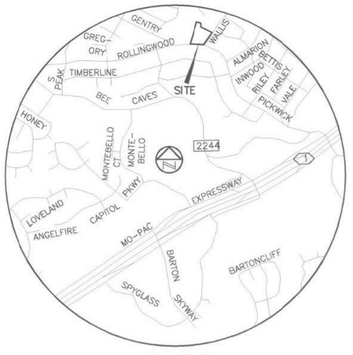
PLOTTED: 10/4/2024
JOB NO: 863-02

001

2 OF 30

Files: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\001 Notes.dwg 22x34

A SURVEY OF ALL OF LOT 1, WESTERN HILLS ATHLETIC CLUB ADDITION, A SUBDIVISION OF RECORD IN TRAVIS COUNTY, TEXAS ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN VOLUME 79, PAGE 355 OF THE THE PLAT RECORDS OF TRAVIS COUNTY, TEXAS, SAVE AND EXCEPT A 2,411 SQUARE FEET TRACT DESCRIBED IN VOLUME 11901, PAGE 1260 OF THE REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.



LOCATION MAP
NOT TO SCALE

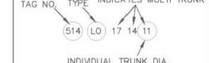
SCALE: 1" = 30'

GRAPHIC SCALE
30 15 0 30

TREE LIST					
16901 HB 7 4	20027 CE 8	20055 LO 8 7	20082 LO 21	20118 CDR 7	20144 LO 10 9
16902 CE 6 4	20028 CE 9	20056 CDR 13	20083 LO 17	20119 CDR 7	20145 LO 13
16903 LO 9	20029 CB 14	20057 LO 16 12	20084 LO 12	20120 CDR 9	20146 CDR 10
16904 LO 7	20030 CB 14	20058 CDR 14	20086 LO 12	20121 LO 7	20147 LO 6
16905 LO 9	20032 HB 13	20059 LO 13	20088 LO 14	20122 CDR 6	20148 LO 18 13
16906 LO 8	20033 CB 9	20060 CDR 7	20089 LO 11	20123 CDR 8	20149 CE 10 5
16907 CE 7 4	20034 CB 11 7 5	20061 CE 6	20090 LO 16	20124 CDR 6	20150 CE 14
16908 LO 13	20035 CB 7	20062 CDR 8	20093 LO 18	20125 LO 13	20151 CB 10
16909 LO 7	20036 CB 8	20063 LO 17	20094 LO 12	20126 LO 9	20152 CB 13
16910 CB 9	20038 CB 15	20064 CDR 10	20095 LO 10	20127 LO 8	20155 LIG 9 6 6
16911 CB 7	20039 CDR 10	20065 PO 19 16	20096 LO 11	20128 CDR 6	20158 CB 8
16912 LIG 8 6	20040 CE 8	20066 CDR 8	20097 LO 9	20129 CDR 12	20159 CB 20
16913 BE 8	20041 CE 13	20067 LO 7	20098 LO 12	20130 CDR 7	20160 CE 10
16914 BE 6	20042 CE 12	20068 LO 10	20099 LO 15	20131 CDR 7	20161 CE 9 8
16915 BE 6	20043 CE 10 8	20069 LO 11 8	20100 LO 12	20132 CDR 7	20162 LO 20
16916 WLNT 7	20044 LO 10	20070 CDR 7	20101 LO 13	20133 CE 9	20163 CE 11
16917 WLNT 6	20045 LO 8	20071 CE 6	20102 LO 19 17	20134 CE 10	20164 LO 22
16918 WLNT 6	20046 LO 13	20072 CB 7	20103 LO 20	20135 LO 13 10	20165 LO 22
20016 LO 23 21 19 19	20047 LO 12	20074 LO 15	20105 CE 15	20136 HB 6	20166 LO 21
20017 CE 18	20048 LO 13	20075 LO 18	20106 LO 10	20137 CDR 6	20167 LO 18
20018 LO 20	20049 HB 8	20076 LO 15	20107 LO 12	20138 CE 8	20168 LO 24
20021 LO 19	20050 CE 10	20077 LO 17	20108 LO 7	20139 CDR 8	20169 LO 19
20023 PEC 17	20051 LO 11	20078 LO 17	20109 LO 12	20140 HB 9	20170 CE 17
20024 LO 18	20052 LO 12	20079 LO 19	20114 CE 9	20141 PEC 11	20171 LO 19 19
20025 LO 13	20053 LO 10	20080 LO 18	20116 CDR 10	20142 PEC 10	20173 CE 14
20026 LO 8 5	20054 LO 17 16	20081 LO 11	20117 LO 9	20143 CDR 6	

TREE LEGEND			
BE –	BOX ELDER	LIG –	LIGUSTRUM
CB –	CHINA BERRY	LO –	LIVE OAK
CDR –	CEDAR	PEC –	PECAN
CE –	CEDAR ELM	WLNT –	WALNUT
HB –	HACKBERRY		

TREE INDEX



CRITICAL ROOT ZONES (TREE CIRCLES) ARE SHOWN USING THE COA FORMULA FOR SINGLE AND MULTI TRUNK TREES.

BENCHMARK NOTE:

B.M. #1 – SQUARE CUT ON B.O.C., NORTH SIDE OF ROLLINGWOOD DR. +/–105 FEET WEST OF WALLIS DR.
ELEV.=628.77'

B.M. #3 – SQUARE CUT ON B.O.C. ON THE WEST SIDE OF WALLIS DR. +/–190 FEET NORTH OF ROLLINGWOOD DR.
ELEV.=631.07'

MANHOLE AND INLET NOTE:

THIS SURVEY SHOWS FIELD MEASURED SIZES AND DEPTHS AS OBSERVED FROM GROUND LEVEL OPENINGS. EXACT MEASUREMENTS AND DEPTHS, PARTICULARLY IN CRITICAL AREAS, SHOULD BE VERIFIED WITH UTILITY RECORD MAPS AND/OR FIELD VERIFICATION PRIOR TO FINAL PLANNING OR CONSTRUCTION.

LEGEND

- 1/2" REBAR FOUND
- CALCULATED POINT
- 3/4" IRON PIPE FOUND
- NAIL FOUND
- COTTON SPINDLE FOUND
- BENCHMARK LOCATION
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- SPRINKLER CONTROL VALVE
- UTILITY POLE
- GUY WIRE
- OVERHEAD UTILITIES
- LIGHT POLE
- WASTEWATER CLEANOUT
- WASTEWATER MANHOLE
- STORMSEWER MANHOLE
- HANDICAP PARKING SPACE
- AC PAD
- GAS UTILITY
- ELECTRIC UTILITY
- SIGN
- EDGE OF PAVEMENT
- WROUGHT IRON FENCE
- CHAIN LINK FENCE
- PUMP BOX
- PUMP

CURVE TABLE							
NO.	DELTA	RADIUS	TAN	ARC	CHORD	BEARING	(RECORD CHORD)
C1	4°35'35"	315.81'	12.67'	25.32'	25.31'	S10°15'58"W	(S11°47'W 25.26')
C2	29°33'56"	122.57'	32.34'	63.25'	62.55'	S02°21'10"E	(S00°43'E 62.57')

FLOOD–PLAIN NOTE:

The tract shown hereon lies within Zone "X" (areas determined to be outside 500–year flood–plain), as identified by the Federal Emergency Management Agency, Federal Insurance Administration, as shown on map no. 48453C0445J, dated January 06, 2016, for Travis County, Texas and incorporated areas. If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. This flood statement shall not create liability on the part of the surveyor.

TITLE COMMITMENT NOTE:

This Survey was prepared without the benefit of a Commitment for Title, and may be subject to additional easements or restrictions not shown hereon. No additional easement research was done for the purpose of this survey.

NOTE FROM PREVIOUS SURVEY (9/26/07):

The Travis CAD map 01_0909 (01/04/2006) shows what appears to be additional R.O.W. for Rollingwood Drive and Wallis Drive. There was no monumented evidence in the field of a R.O.W. dedication along the north line of Rollingwood Drive. After researching Travis CAD and the Travis County Clerk records, we were not able to locate any documents reflecting additional street frontage conveyed to the City of Rollingwood. Since no title research was provided by the client, there was not enough data to accurately determine the position of the intersection of the north R.O.W. of Rollingwood Drive and the west R.O.W. of Wallis Drive, so the position is represented on the map by a calculated point for the purposes of this survey.

SURVEYOR'S CERTIFICATE:

CERTIFIED TO:
Julie Martinez
Western Hills Athletic Club

PROPERTY ADDRESS: Rollingwood Drive @ Wallis Drive

DATE OF SURVEY: 09/26/07; Topographic and Tree Survey Udated 09/20/17, Updated 4/27/18

BEARING BASIS: Grid azimuth for Texas Central Zone state plane coordinates, based on GPS solutions from The National Geodetic Survey (NGS) On–line Positioning User Service (OPUS).

ATTACHMENTS: none

I hereby certify that a survey of the property shown hereon was actually made upon the ground under my direction and supervision on the date shown, and that to the best of my professional knowledge and belief: there are no apparent encroachments, overlapping of improvements, discrepancies, deed line conflicts, visible utility lines or roads in place, except as shown hereon, and that this property abuts or adjoins a dedicated road right–of–way or access easement, unless noted hereon.

Robert C. Watts, Jr. Date
Registered Professional Land Surveyor
State of Texas No. 4995

5.10.18

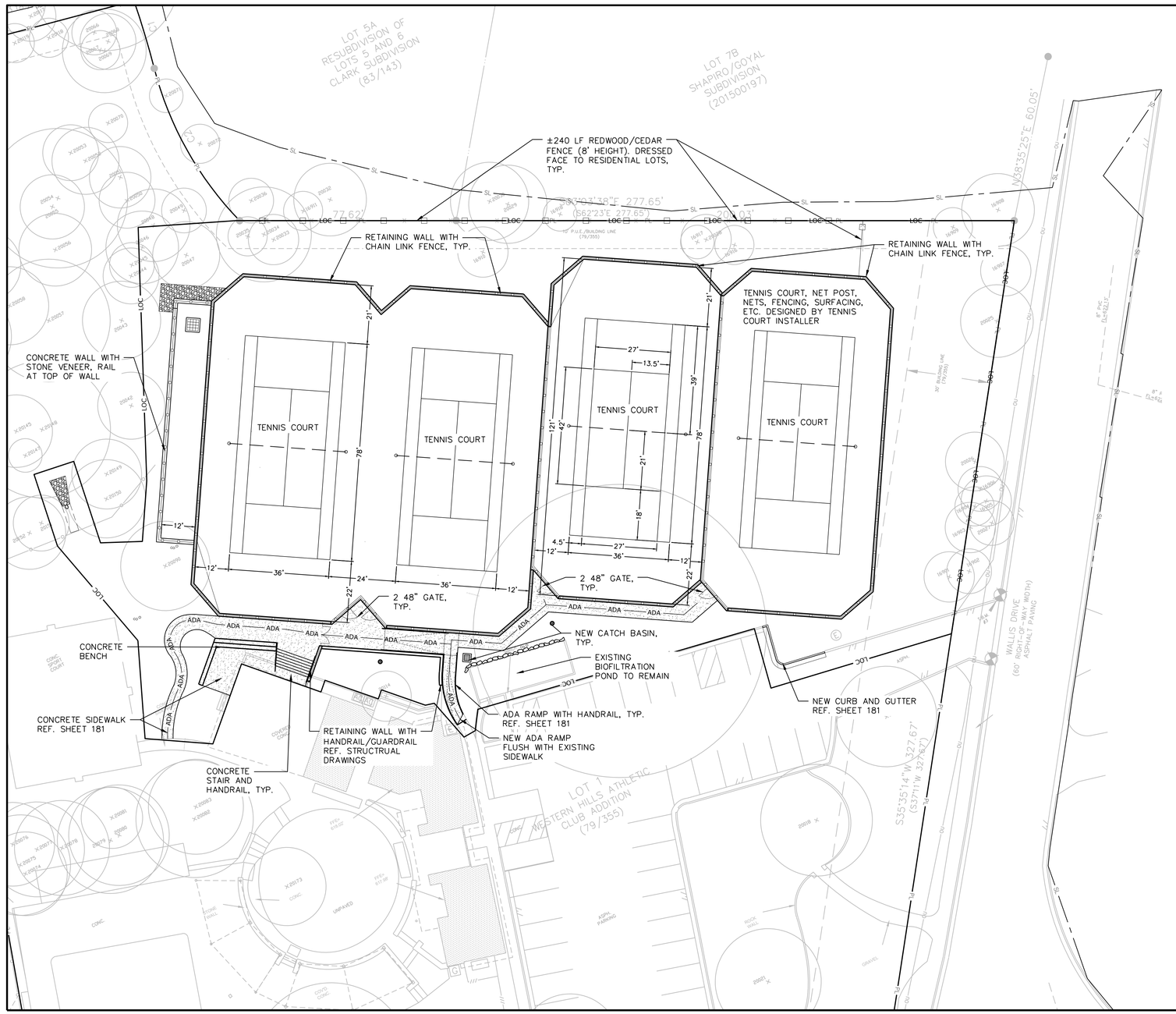
STATE OF TEXAS
ROBERT C. WATTS, JR.
4995
REGISTERED
PROFESSIONAL
LAND SURVEYOR

Robert C. Watts, Jr.
R.P.L.S. No. 4995

Chaparral
Professional Land Surveying, Inc.
Surveying and Mapping
3500 McCall Lane
Austin, Texas 78744
512–443–1724
Firm No. 10124500

PROJECT NO.: 585–001
DRAWING NO.: 585–001–BASE
PLOT DATE: 05/10/18
PLOT SCALE: 1"=30'
DRAWN BY: RGH/MAW/EBD

SHEET
01 OF 01



SITE/GEOMETRY LEGEND

- ADA — ADA ROUTE
- PL — PROPERTY LINE
- SL — SURVEY LIMIT
- CONCRETE SIDEWALK
- LANDSCAPE INLET
- GRATE INLET

SITE PLAN NOTES:
1. THE LOC SHALL SERVE AS THE BOUNDARY FOR LEED AND/OR AEGB PURPOSES.

SITE PLAN RELEASE NOTES:
1. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE RELEASED SITE PLAN. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE SITE PLAN AMENDMENT AND APPROVAL OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.
2. APPROVAL OF THE SITE PLAN DOES NOT INCLUDE BUILDING APPROVAL; FIRE CODE APPROVAL; OR BUILDING, DEMOLITION, OR RELOCATION PERMITS APPROVAL. A CITY DEMOLITION OR RELOCATION PERMIT CAN ONLY BE ISSUED ONCE THE HISTORIC REVIEW PROCESS IS COMPLETED.
3. A DEVELOPMENT PERMIT MUST BE ISSUED PRIOR TO AN APPLICATION FOR BUILDING PERMIT FOR NON-CONSOLIDATED OR COMMISSION-APPROVED SITE PLANS.
8. ANY EXISTING STRUCTURES SHOWN TO BE REMOVED WILL REQUIRE A DEMOLITION PERMIT FROM THE CITY OF AUSTIN PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.
9. FOR CONSTRUCTION IN THE RIGHT-OF-WAY, A ROW EXCAVATION PERMIT IS REQUIRED.

COMPATIBILITY STANDARD NOTES:
1. HIGHLY REFLECTIVE MATERIALS WILL NOT BE USED. MATERIALS MAY NOT EXCEED 20% REFLECTIVITY. THIS REQUIREMENT SHALL NOT APPLY TO SOLAR PANELS OR TO COPPER OR PAINTED METAL ROOFS.
2. THE NOISE LEVEL OF MECHANICAL EQUIPMENT WILL NOT EXCEED 70 DBA AT THE PROPERTY LINE ADJACENT TO RESIDENTIAL USES.
3. ALL EXTERIOR LIGHTING WILL BE HOODED OR SHIELDED FROM THE VIEW OF ADJACENT RESIDENTIAL USES OR PROPERTY.
4. ALL DUMPSTERS AND ANY PERMANENTLY PLACED REFUSE RECEPTACLES WILL BE LOCATED AT A MINIMUM OF 20 FEET FROM A PROPERTY USED OR ZONED AS SF-5 OR MORE RESTRICTIVE (SECTION 25-2-1067).

SUBCHAPTER E NOTES:
1. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIAL, IN ACCORDANCE WITH SUBCHAPTER 2,6.2.
2. ALL EXTERIOR LIGHTING WILL BE FULL CUT-OFF AND FULLY SHIELDED IN COMPLIANCE WITH SUBCHAPTER E 2.5 (REFER TO FIGURE 42 BELOW). ALL SITE LIGHTING TO BE LOCATED ON THE BUILDING WILL BE IN COMPLIANCE WITH SUBCHAPTER E.2.5, AND WILL BE REVIEWED DURING BUILDING PLAN REVIEW. ANY CHANGE OR SUBSTITUTION OF LAMP/LIGHT FIXTURES SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL IN ACCORDANCE WITH SECTION 2.5.2.E.*.

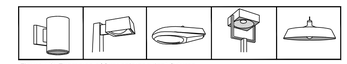


Figure 42: Examples of fully-shielded light fixtures

TOMAS M. RODRIGUEZ 119179 LICENSED PROFESSIONAL ENGINEER
TBPE FH 1916
10/4/2024

REGISTERED LANDSCAPE ARCHITECT DAVID J. CAZARES 1871 STATE OF TEXAS
04 October 2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

SITE PLAN

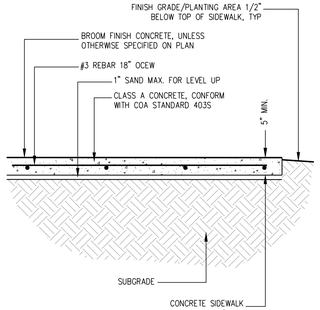
Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

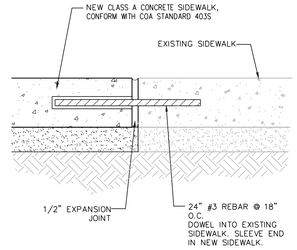
101

4 OF 30

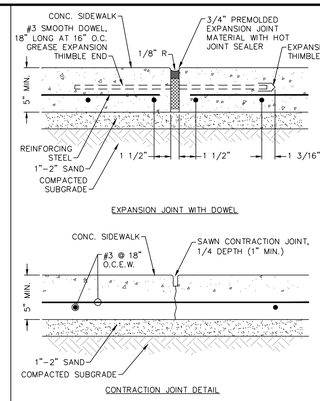
Files: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\101 Site Plan.dwg 22x34



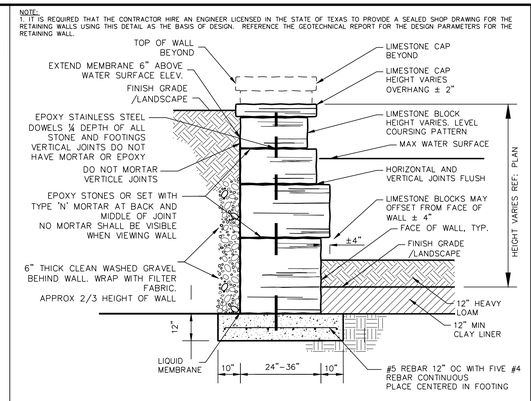
1 / 181 CONCRETE SIDEWALK
SCALE: NTS



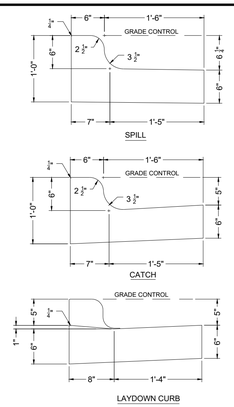
2 / 181 NEW SIDEWALK CONNECTION AT EXISTING SIDEWALK
SCALE: NTS



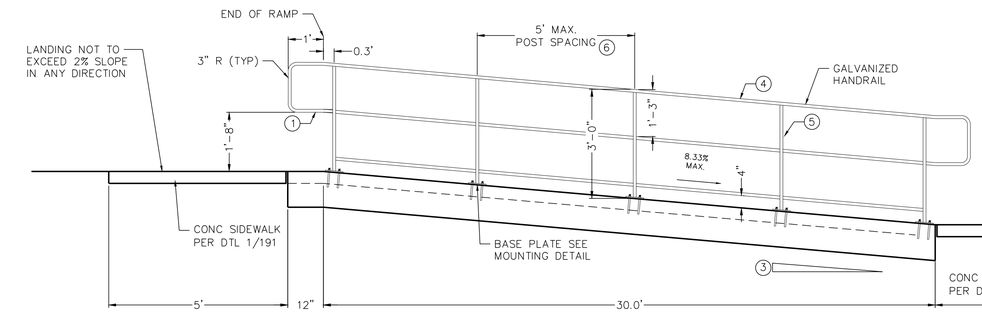
3 / 181 SIDEWALK JOINT
SCALE: NTS

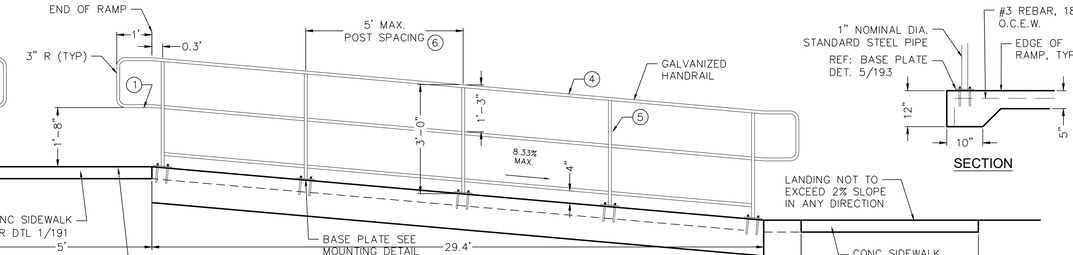


4 / 181 LIMESTONE LANDSCAPE WALL
SCALE: NTS

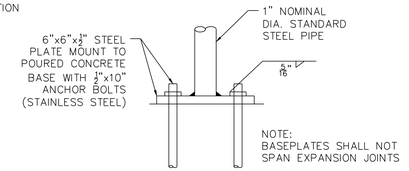


5 / 181 CURB AND GUTTER SECTION
SCALE: NTS





LEGEND
1. PARALLEL TO THE GROUND.
2. SHOP SPLICE IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.
3. SEE GRADING PLAN FOR RAMP SLOPE. MAXIMUM RAMP SLOPE WILL NOT EXCEED 8.3 PERCENT.
4. 1" DIA EXTRA HEAVY PIPE (1.315" O.D. , 0.179" WALL THICKNESS). PARALLEL TO RAMP/ SIDEWALK. PROVIDE HOLES AS NEEDED IN 1" DIA PIPE FOR GALVANIZING DRAINAGE AND VENTING.
5. 1" DIA STANDARD PIPE (1.315" O.D. , 0.179" WALL THICKNESS). PLUMB ALL POSTS. SEE POST MOUNT DETAIL FOR CRIMPING AND TRIMMING POST TO FIT DIA OF TOP RAIL. PROVIDE HOLES AS NEEDED IN POST FOR GALVANIZING DRAINAGE AND VENTING.
6. CENTER LINE ⅝ DIA ROUND BAR EQ SPACES AT 4 ½ " MAX. PLUMB ALL PICKETS.



BASE PLATE DETAIL

6 / 181 ADA RAMP WITH HANDRAIL
SCALE: NTS

STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
LICENSED
PROFESSIONAL ENGINEER
TBPE FIR 1416
10/4/2024

REGISTERED LANDSCAPE ARCHITECT
DAVID J. CAZARES
1871
STATE OF TEXAS
04 October 2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

SITE DETAILS

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

181

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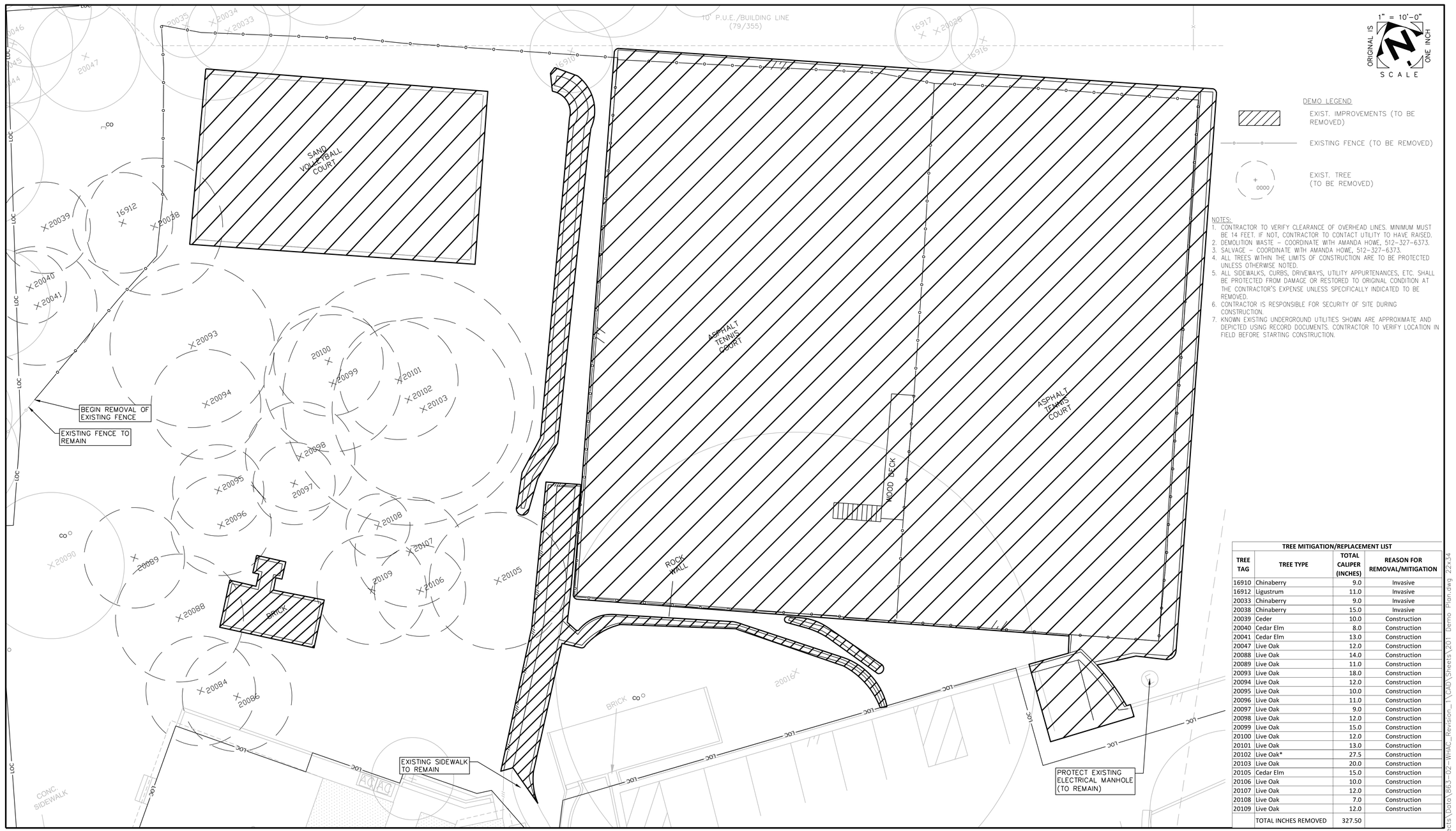
File: \\mwmrdsto\MWMProjects\Dsto\863-02-WHAC_Revision_1\CAD\Sheets\191 Site Details.dwg 22x34



1" = 10'-0"
ORIGINAL IS ONE INCH
SCALE

DEMO LEGEND

EXIST. IMPROVEMENTS (TO BE REMOVED)

EXISTING FENCE (TO BE REMOVED)

EXIST. TREE (TO BE REMOVED)

NOTES:
1. CONTRACTOR TO VERIFY CLEARANCE OF OVERHEAD LINES. MINIMUM MUST BE 14 FEET. IF NOT, CONTRACTOR TO CONTACT UTILITY TO HAVE RAISED.
2. DEMOLITION WASTE – COORDINATE WITH AMANDA HOWE, 512-327-6373.
3. SALVAGE – COORDINATE WITH AMANDA HOWE, 512-327-6373.
4. ALL TREES WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED UNLESS OTHERWISE NOTED.
5. ALL SIDEWALKS, CURBS, DRIVEWAYS, UTILITY APPURTENANCES, ETC. SHALL BE PROTECTED FROM DAMAGE OR RESTORED TO ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE UNLESS SPECIFICALLY INDICATED TO BE REMOVED.
6. CONTRACTOR IS RESPONSIBLE FOR SECURITY OF SITE DURING CONSTRUCTION.
7. KNOWN EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND DEPICTED USING RECORD DOCUMENTS. CONTRACTOR TO VERIFY LOCATION IN FIELD BEFORE STARTING CONSTRUCTION.

TREE MITIGATION/REPLACEMENT LIST

TREE TAG	TREE TYPE	TOTAL CALIPER (INCHES)	REASON FOR REMOVAL/MITIGATION
16910	Chinaberry	9.0	Invasive
16912	Ligustrum	11.0	Invasive
20033	Chinaberry	9.0	Invasive
20038	Chinaberry	15.0	Invasive
20039	Ceder	10.0	Construction
20040	Cedar Elm	8.0	Construction
20041	Cedar Elm	13.0	Construction
20047	Live Oak	12.0	Construction
20088	Live Oak	14.0	Construction
20089	Live Oak	11.0	Construction
20093	Live Oak	18.0	Construction
20094	Live Oak	12.0	Construction
20095	Live Oak	10.0	Construction
20096	Live Oak	11.0	Construction
20097	Live Oak	9.0	Construction
20098	Live Oak	12.0	Construction
20099	Live Oak	15.0	Construction
20100	Live Oak	12.0	Construction
20101	Live Oak	13.0	Construction
20102	Live Oak*	27.5	Construction
20103	Live Oak	20.0	Construction
20105	Cedar Elm	15.0	Construction
20106	Live Oak	10.0	Construction
20107	Live Oak	12.0	Construction
20108	Live Oak	7.0	Construction
20109	Live Oak	12.0	Construction
	TOTAL INCHES REMOVED	327.50	

STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
LICENSED
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TBPE Fill 1416
10/4/2024

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NO.	DATE	DESCRIPTION	BY

0 1"
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DEMOLITION PLAN

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

201

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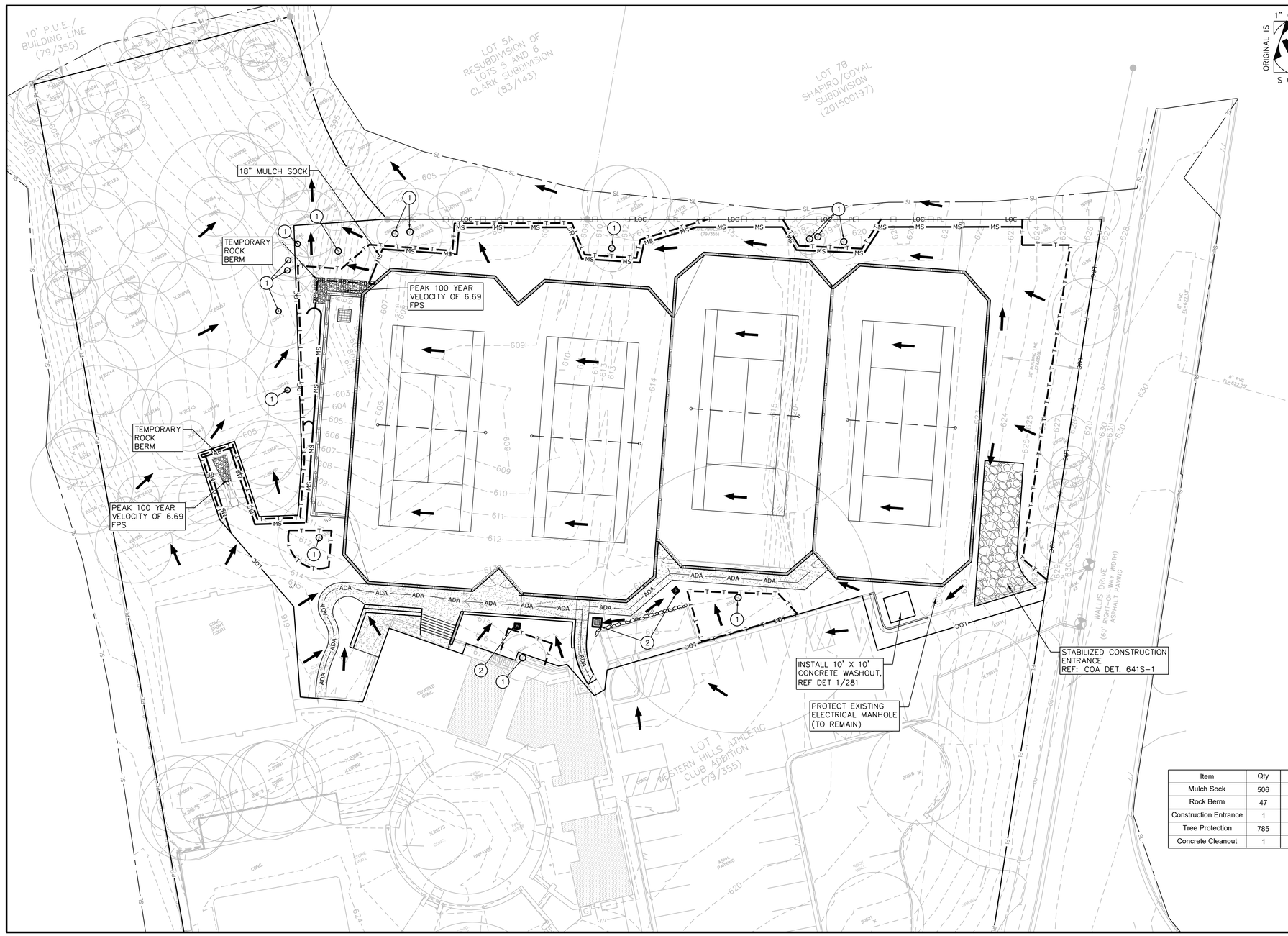
File: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\201 Demo Plan.dwg 22x34



EROSION/SEDIMENTATION LEGEND

- LOC — LIMIT OF CONSTRUCTION
- RB RB RB RB — REINFORCED ROCK BERM REF: COA DET. 639S-1
- IP IP IP IP IP IP IP — INLET PROTECTION REF: COA DET. 628S-2
- T T T T T — TREE PROTECTION FENCE REF: COA DET. 610S-1, 610S-2, 610S-4, 610S-5
- MS MS — MULCH SOCK REF: COA DET. 648S-1

NOTES:

1. CONTRACTOR TO ADJUST EROSION CONTROL AS REQUIRED FOR FIELD CONDITIONS TO MEET THE INTENT OF THE CONSTRUCTION DOCUMENTS AND SWPPP.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
3. THE STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY.
4. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY RULES AND REGULATIONS.
5. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
6. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION.
7. PRIOR TO EXCAVATION WITHIN TREE DRIP LINES, OR THE REMOVAL OF OTHER TREES THAT ARE TO REMAIN, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE ROOT DAMAGE.
   A) IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION WITH FENCING, AND WHERE HEAVY VEHICULAR TRAFFIC IS ANTICIPATED, COVER THOSE AREAS WITH TWELVE (12) INCHES OF ORGANIC MULCH TO BE PRODUCED ON SITE, TO MINIMIZE SOIL COMPACTION.
   B) PERFORM ALL GRADING WITHIN CRITICAL ROOT ZONE AREAS WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE.
   C) WATER ALL TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES DEEPLY AS NECESSARY DURING PERIOD OF HOT, DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
   D) WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.
8. THE STAGING AND SPOILS AREA SHALL ONLY BE ALLOWED DURING THE CONSTRUCTION PERIOD. NO SPOILS SHALL REMAIN STAGED AFTER COMPLETION OF THE PROJECT.
9. UNLESS OTHERWISE NOTED IN THE LANDSCAPE PLAN, ALL DISTURBED AREAS SHALL BE REVEGETATED WITH NATIVE GRASSES (REFER TO NOTE SHEET FOR SPECS). ALL DISTURBED AREAS WITH SLOPES 5:1 OR STEEPER, WHICH ARE NOT ARMORED OTHERWISE, SHALL HAVE A SOIL RETENTION BLANKET (CURLEX II OR APPROVED EQUAL) INSTALLED TO ASSIST WITH REVEGETATION.
10. CONCRETE REMOVAL SHALL OCCUR AT NEAREST JOINT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND INSPECTING, ON A REGULAR BASIS, ALL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES INCLUDING THE SILT FENCES, CONSTRUCTION ENTRANCES, ROCK FILTER DAMS, ETC. DURING CONSTRUCTION/DEMOLITION AND INCLUDING THE REMOVAL AND PROPER DISPOSAL OF ANY ACCUMULATED SILT AND DEBRIS.
12. THE CONTRACTOR SHALL NOT BEGIN ANY WORK UNTIL TREE PROTECTION AND THE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES SUCH AS SILT FENCE, CONSTRUCTION ENTRANCES, ROCK FILTER DAMS, ETC. HAVE BEEN INSTALLED.
13. INCREASED STORMWATER PEAK FLOWS DURING CONSTRUCTION MUST BE MITIGATED WITH TEMPORARY BEST MANAGEMENT PRACTICES TO PREVENT HARM TO NEIGHBORING PROPERTIES.
14. THE PERMANENT STORMWATER DETENTION POND OR AN EQUIVALENT DETENTION POND, AS APPROVED BY THE CITY ENGINEER, SHALL BE PROVIDED FOR THE CONSTRUCTION PHASE AND ROUGH CUT PRIOR TO ROUGH GRADING OF SITE.
15. NO ROUGH CUTTING OR SITE CLEARING SHALL BE PERMITTED WITHOUT AN APPROVED TEMPORARY AND PERMANENT SEDIMENT AND SOIL EROSION CONTROL PLAN (BMPs) AS PART OF THE BUILDING PERMIT PROCESS. NO PERMANENT CERTIFICATE OF OCCUPANCY SHALL BE ISSUED BEFORE ALL APPROVED BMPs HAVE BEEN INSTALLED AND ESTABLISHED AS NECESSARY TO EFFECTIVELY CONTROL SEDIMENT AND SOIL EROSION.
16. NO ROUGH CUTTING OR SITE CLEARING SHALL BE PERMITTED UNTIL THE CONSTRUCTION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND TREE PROTECTION ARE IN PLACE.
17. ALL CONSTRUCTION SHALL REQUIRE THE CONTRACTOR TO TAKE SPECIAL CARE WHEN GRADING IN THE VICINITY OF CRITICAL ROOT ZONES, INCLUDING ROOT ZONES FOR OFF-SITE TREES WITH ROOT ZONES THAT OVERLAP PROPERTY BOUNDARIES. ANY PERMITTED CONSTRUCTION REQUIRING TREE REMOVAL THAT WILL NEGATIVELY ALTER DRAINAGE FLOWS AS DETERMINED BY THE CITY ENGINEER SHALL REQUIRE APPROVAL BY THE CITY ENGINEER OR SPECIFIC MITIGATION FOR THE AREA EFFECTED.
18. REFER TO GENERAL NOTES SHEET FOR SEQUENCE OF CONSTRUCTION.

Item	Qty	Unit
Mulch Sock	506	LF
Rock Berm	47	LF
Construction Entrance	1	EA
Tree Protection	785	LF
Concrete Cleanout	1	EA

KEY NOTES:

(1) ADD PLANKING TO TREE TRUNKS PER COA 610S-1, 610S-4.

(2) 18" MULCH SOCK PER COA 648S-1.

STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
REGISTERED
PROFESSIONAL ENGINEER
TBPE F# 1976
10/10/2024

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NO.	DATE	DESCRIPTION	BY

0 — 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

EROSION-SEDIMENTATION CONTROL & TREE PROTECTION PLAN

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/11/2024
JOB NO: 863-02

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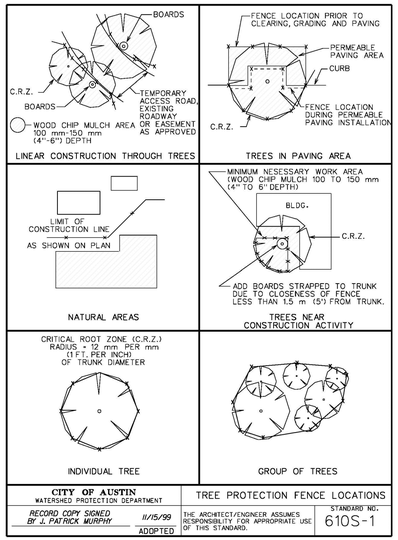
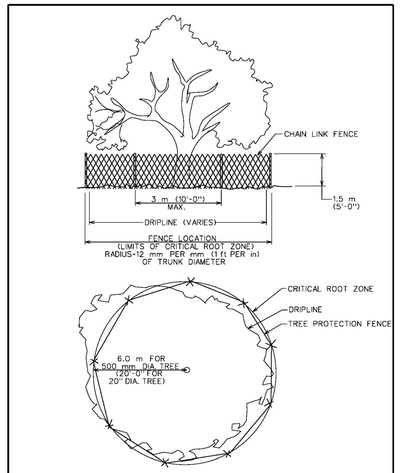
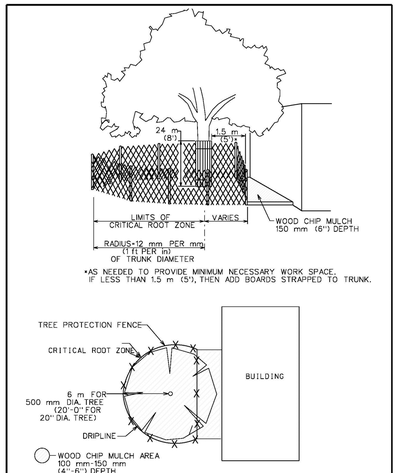
Title: Y:\863-02-WHAC_Revision_1\CAD\Sheets\231 E-S Control & TP.dwg 22x34



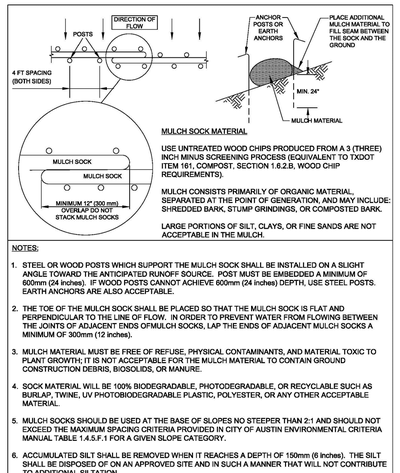
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE LOCATIONS	
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-1



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROPTECTION FENCE TYPE A - CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-2



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE MODIFIED TYPE A - CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-4



MULCH SOCK MATERIAL

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

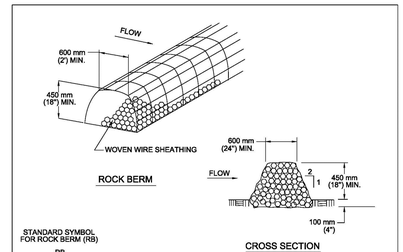
MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

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

NOTES:

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

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



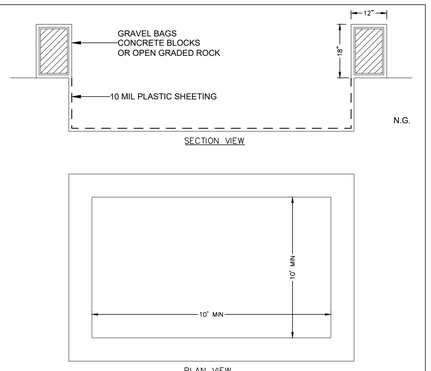
STANDARD SYMBOL FOR ROCK BERM (RB)

RB

NOTES:

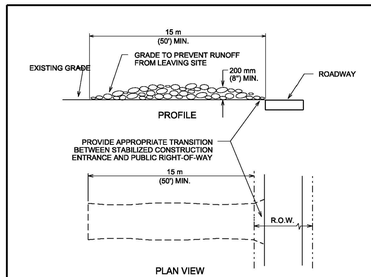
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE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

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



1. THE EXCAVATION FOR THE CONCRETE TRUCK WASHOUT SHALL BE A MINIMUM OF 10 FEET WIDE AND OF SUFFICIENT LENGTH AND DEPTH TO ACCOMMODATE 7 GALLONS OF WASHOUT WATER AND CONCRETE PER TRUCK PER DAY AND/OR 50 GALLONS OF WASHOUT WATER AND CONCRETE PER PUMP TRUCK PER DAY.
2. IN THE EVENT THAT THE CONCRETE TRUCK WASHOUT IS CONSTRUCTED ABOVE GROUND, IT SHALL BE 10 FEET WIDE AND 10 FEET LONG WITH THE SAME REQUIREMENTS FOR CONTAINMENT AS DESCRIBED IN ITEM 1.
3. THE CONTAINMENT AREA SHALL BE LINED WITH 10 MIL PLASTIC SHEETING WITHOUT HOLES OR TEARS. WHERE THERE ARE SEAMS, THESE SHALL BE SECURED ACCORDING TO MANUFACTURERS DIRECTIONS.
4. THE BERM CONSISTING OF GRAVEL BAGS, CONCRETE BLOCKS OR OPEN GRADED ROCK SHALL BE NO LESS THAN 18 INCHES HIGH AND NO LESS THAN 12 INCHES WIDE.
5. THE PLASTIC SHEETING SHALL BE OF SUFFICIENT SIZE SO THAT IT WILL OVERLAP THE TOP OF THE CONTAINMENT AREA AND BE WRAPPED AROUND THE GRAVEL BAGS, CONCRETE BLOCKS OR OPEN GRADED ROCK AT LEAST 2 TIMES.
6. THE GRAVEL BAGS OR CONCRETE BLOCKS SHALL BE PLACED ABUTTING EACH OTHER TO FORM A CONTINUOUS BERM AROUND THE OUTER PERIMETER OF THE CONTAINMENT AREA.
7. THE WASHOUT MATERIAL IN TEH CONTAINMENT AREA SHALL NOT EXCEED 50% OF CAPACITY AT ANY ONE TIME.
8. SOLIDS SHALL BE REMOVED FROM CONTAINMENT AREA AND DISPOSED OF PROPERLY. ANY DAMAGE TO THE PLASTIC SHEETING SHALL BE REPAIRED OR SHEETING REPLACED BEFORE THE NEXT USE.

1	10' x 10' CONCRETE WASHOUT
281	SCALE: NTS



NOTES:

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

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

TBPE FH 1416
10/4/2024

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Austin, Texas 78753
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f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

EROSION-SEDIMENTATION CONTROL & TREE PROTECTION DETAILS

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

281

8 OF 30

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GRADING LEGEND

- 000 — PROP. CONTOUR
- 1/2 FOOT PROP. CONTOUR
- ADA — ADA ROUTE
- PROP. RETAINING WALL
- PROP. RETAINING WALL AT GRADE
- 000.00 — SPOT ELEVATION
- TC 000.00 — TOP OF CURB ELEVATION
- TP 000.00 — TOP OF WALL AT GRADE ELEVATION
- TW 000.00 — TOP OF WALL ELEVATION
- TG 000.00 — TOP OF GRATE ELEVATION

NOTES:
1. NEW PAVEMENT SHALL ALIGN WITH EXISTING PAVEMENT, VERTICALLY AND HORIZONTALLY. PONDING AT JOINTS IS NOT ACCEPTABLE.
2. ALL ACCESSIBLE PARKING SPACES, ROUTES, CURB RAMPS, SIGNAGE, ETC. SHALL FULLY COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS AND ADA.
3. REFER TO EXISTING SURVEY FOR HORIZONTAL & VERTICAL CONTROL.
4. ELEVATIONS SHOWN ARE TO TOP OF SURFACE. CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING SUBGRADE ELEVATIONS FOR PAVEMENT AND LANDSCAPE AREAS.
5. ALL SIDEWALKS SHALL NOT EXCEED MORE THAN 2% CROSS SLOPE (IN THE DIRECTION OF SURFACE DRAINAGE) OR 5% RUNNING SLOPE EXCEPT AS NOTED. RUNNING SLOPES MAY EXCEED 5% ADJACENT TO EXISTING STREETS UP TO THE SLOPE OF THE STREET.
6. FFE OF EXISTING BUILDINGS ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.

ORIGINAL IS 1" = 10'-0" ONE INCH SCALE

REGISTERED LANDSCAPE ARCHITECT — DAVID J. CAZARES — 1871 — STATE OF TEXAS
04 October 2024

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0 — 1"
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GRADING PLAN

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

301

9 OF 30

File: \\mwmdata\WWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\301 Grading Plan.dwg 22x34

SITE: 139928.27 SQ. FT. LIMITS OF CONSTRUCTION: 50546 SQ. FT.		
	AREA SQ. FT.	% IMP. COVER
EXISTING IMPERVIOUS COVER:	53064.02	37.92%
PROPOSED IMPERVIOUS COVER:	65591.55	46.87%

IMPERVIOUS COVER AREAS		
	COLOR	AREA SQ. FT.
EXISTING IMPERVIOUS COVER TO REMAIN: BUILDINGS		2166.36
EXISTING IMPERVIOUS COVER TO REMAIN: ASPHALT PAVEMENT		15720.02
EXISTING IMPERVIOUS COVER TO REMAIN: CONCRETE PAVEMENT		16041.48
MAINTENANCE OF EXISTING IMPERVIOUS COVER: CONCRETE PAVEMENT		13849.65
MAINTENANCE OF EXISTING IMPERVIOUS COVER: ASPHALT PAVEMENT		79.18
PROPOSED IMPERVIOUS COVER: CONCRETE PAVEMENT		2252.56
MAINTENANCE OF EXISTING IMPERVIOUS COVER: CONCRETE DETENTION POND		4176.85
PROPOSED IMPERVIOUS COVER: CONCRETE DETENTION POND		11305.45
TOTAL IMPERVIOUS COVER		65591.55

PERVIOUS COVER AREAS		
	COLOR	AREA SQ. FT.
EXISTING IMPERVIOUS TO BE REMOVED		1030.49
EXISTING PERVIOUS COVER		63438.65
EXISTING PERVIOUS COVER: SWIMMING POOL		5117.07
EXISTING PERVIOUS COVER: GRAVEL TRAIL/ PLANTER / BIORETENTION BASIN		3536.85
PROPOSED PERVIOUS COVER: BIORETENTION BASIN		1181.25
TOTAL PERVIOUS COVER		74304.31

1" = 40'-0"
ORIGINAL IS ONE INCH SQUARE
SCALE

STATE OF TEXAS
TOMAS M. RODRIGUEZ
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LICENSED
PROFESSIONAL
ENGINEER
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10/4/2024

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IMPERVIOUS COVER PLAN

Western Hills Athletic Club
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PLOTTED: 10/4/2024
JOB NO: 863-02

340

10 OF 30

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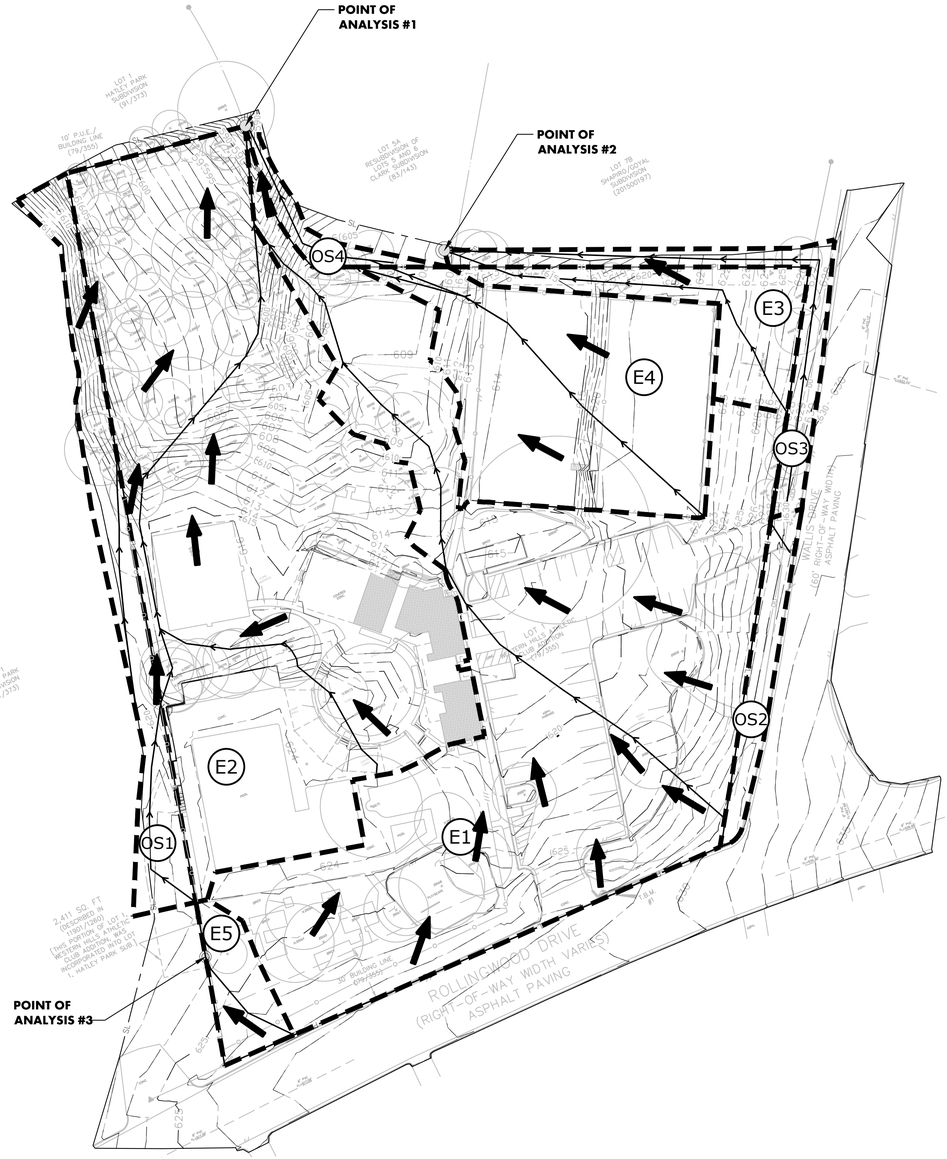

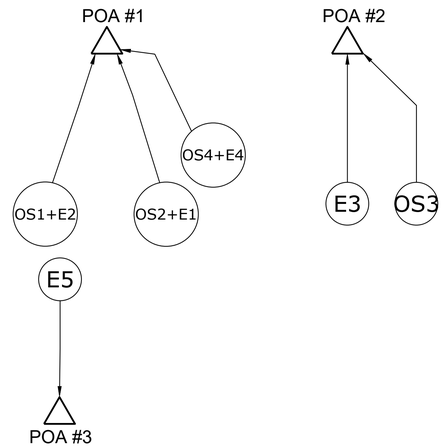

1" = 40'-0"
ORIGINAL IS ONE INCH
SCALE

EXISTING CONDITION CATCHMENTS SUMMARY TABLE

	E-01	E-02	E-03	E-04	E-05	OS-01	OS-02	OS-03	OS-04	OS-04+E4	OS-02+E1	OS-01+E2
AREA (AC)	1.394	1.217	0.131	0.409	0.6	0.172	0.047	0.099	0.033	0.442	1.441	1.389
IMPERVIOUS COVER (%)	34.24	26.73	0	89.7	0	0	13.7	0	0	83.3	23.42	33.57
TC (MIN)	5.636	7.359	7.882	5	5	10.828	5	8.311	5.505	8.106	5.681	8.611
CN	86	85	80	96	80	80	82	80	80	95	86	84
2-YR PEAK FLOW (CFS)	5.46	4.52	0.40	2.10	0.19	0.49	0.16	0.30	0.11	2.07	5.64	4.79
10-YR PEAK FLOW (CFS)	10.29	8.71	0.84	3.53	0.41	1.02	0.33	0.63	0.22	3.52	10.63	9.41
25-YR PEAK FLOW (CFS)	13.99	11.85	1.18	4.61	0.57	1.43	0.46	0.88	0.31	4.6	14.4	12.91
100-YR PEAK FLOW (CFS)	20.94	17.77	1.81	6.65	0.89	2.20	0.71	1.36	0.47	6.66	21.56	19.49

TIME OF CONCENTRATION TABLE

DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW			TOTAL TC (MIN)
	LENGTH	SLOPE	TC (MIN)	LENGTH	SLOPE	TC (MIN)	
E-01	100	10.00%	4.292	396.6	9.30%	1.343	5.636
E-02	100	6.30%	6.314	369.5	8.40%	1.045	7.359
E-03	100	7.50%	7.412	135	8.80%	0.470	7.882
E-04	100	7.70%	2.419	145.8	6.20%	0.605	5.00
E-05	78	3.00%	2.892	-	-	-	5.00
OS-01	100	3.00%	10.694	41.88	10.30%	0.135	10.828
OS-02	19.9	7.40%	1.254	-	-	-	5.00
OS-03	100	7.60%	7.373	209.16	5.30%	0.938	8.311
OS-04	100	16.30%	5.434	26.65	15.00%	0.071	5.505
OS-04+E-04	100	7.70%	7.334	250	11.20%	0.772	8.106
OS-02+E-01	100	10.00%	4.292	410	9.30%	1.389	5.681
OS-01+E-02	100	4.37%	7.309	374	8.80%	1.302	8.611

POINT OF ANALYSIS #1

	PRE-DEVELOPMENT	POST-DEVELOPMENT	% REDUCTION
2-YR PEAK FLOW (CFS)	12.5	11.31	9.52
10-YR PEAK FLOW (CFS)	23.56	20.3	13.84
25-YR PEAK FLOW (CFS)	31.87	27.09	15
100-YR PEAK FLOW (CFS)	47.5	39.90	16

POINT OF ANALYSIS #2

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.70	0.68
10-YR PEAK FLOW (CFS)	1.47	1.42
25-YR PEAK FLOW (CFS)	2.06	1.99
100-YR PEAK FLOW (CFS)	3.17	3.07

POINT OF ANALYSIS #3

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.19	0.19
10-YR PEAK FLOW (CFS)	0.41	0.41
25-YR PEAK FLOW (CFS)	0.57	0.57
100-YR PEAK FLOW (CFS)	0.89	0.89

STATE OF TEXAS
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NO.	DATE	DESCRIPTION	BY

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EXISTING DRAINAGE AREA MAP

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

501

11 OF 30

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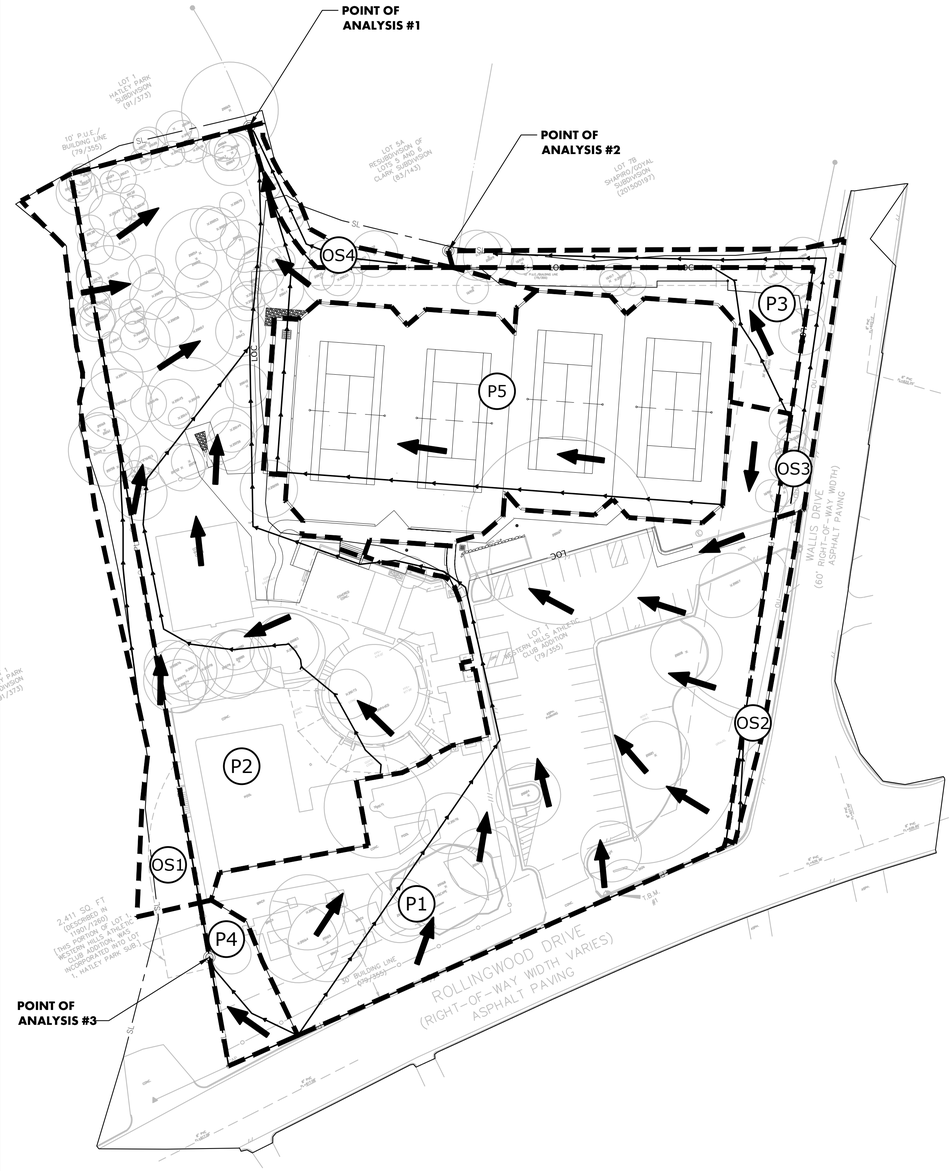

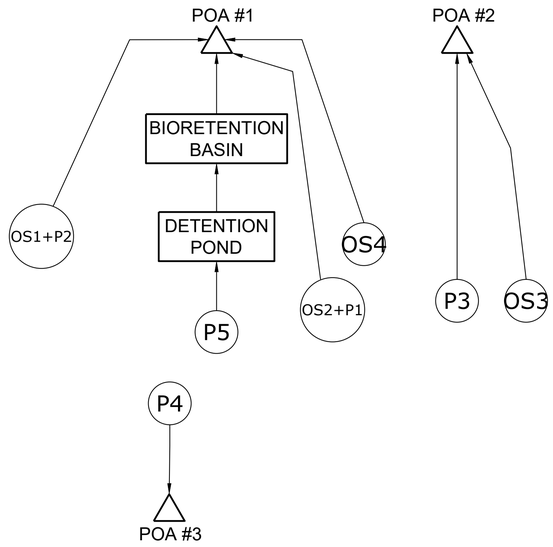

PROPOSED CONDITION CATCHMENTS SUMMARY TABLE

	P-01	P-02	P-03	P-04	P-05	OS-01	OS-02	OS-03	OS-04	OS-01+P2	OS-02+P1
AREA (AC)	1.135	1.199	0.122	0.600	0.720	0.172	0.047	0.099	0.033	1.371	1.182
IMPERVIOUS COVER (%)	42.00	27.70	0.00	0.00	97.00	0.00	13.70	0.00	0.00	24.22	40.87
TC (MIN)	6.059	7.321	7.283	5.000	3.700	10.828	5.000	8.311	5.505	8.285	8.332
CN	88.00	85.00	80.00	80.00	97.00	80.00	82.00	80.00	80.00	84	87
2-YR PEAK FLOW (CFS)	4.70	4.46	0.38	0.19	3.66	0.49	0.16	0.30	0.11	4.8	4.53
10-YR PEAK FLOW (CFS)	8.63	8.58	0.80	0.41	6.19	1.02	0.33	0.63	0.22	9.42	8.51
25-YR PEAK FLOW (CFS)	11.56	11.68	1.11	0.57	8.06	1.43	0.46	0.88	0.31	12.91	11.48
100-YR PEAK FLOW (CFS)	17.07	17.50	1.71	0.89	11.37	2.20	0.71	1.36	0.47	19.48	17.07

POINT OF ANALYSIS #1

	PRE-DEVELOPMENT	POST-DEVELOPMENT	% REDUCTION
2-YR PEAK FLOW (CFS)	12.5	11.31	9.52
10-YR PEAK FLOW (CFS)	23.56	20.3	13.84
25-YR PEAK FLOW (CFS)	31.87	27.09	15
100-YR PEAK FLOW (CFS)	47.5	39.90	16

POINT OF ANALYSIS #2

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.70	0.68
10-YR PEAK FLOW (CFS)	1.47	1.42
25-YR PEAK FLOW (CFS)	2.06	1.99
100-YR PEAK FLOW (CFS)	3.17	3.07

POINT OF ANALYSIS #3

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.19	0.19
10-YR PEAK FLOW (CFS)	0.41	0.41
25-YR PEAK FLOW (CFS)	0.57	0.57
100-YR PEAK FLOW (CFS)	0.89	0.89

TIME OF CONCENTRATION TABLE

DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW			TOTAL TC
	LENGTH	SLOPE	TC	LENGTH	SLOPE	TC	
P-01	100	10.30%	4.483	538	7.60%	1.805	6.288
P-02	100	6.30%	6.031	366	8.60%	1.289	7.321
P-03	93.15	6.80%	7.283	-	-	-	7.283
P-04	78	3.00%	2.892	-	-	-	5.00
P-05	97	0.80%	1.969	350	12.00%	3.21	5.18
OS-01	100	3.00%	10.694	41.88	10.30%	0.135	10.828
OS-02	19.9	7.40%	1.254	-	-	-	5.00
OS-03	100	7.60%	7.373	209.16	5.30%	0.938	8.311
OS-04	100	16.30%	5.434	26.65	15.00%	0.071	5.505
OS-01+P-02	100	4.37%	6.982	370	8.60%	1.303	8.285
OS-01+P-01	100	10.30%	6.316	538	7.60%	2.016	8.332

DETENTION POND SUMMARY TABLE

STORM EVENT	PEAK FLOW (IN) (CFS)	PEAK FLOW (OUT) (CFS)	WATER SURFACE ELEVATION (FT)	MAX. POND STORAGE (CU-FT)
2-YR	3.66	2	613.6	1,031.00
10-YR	6.08	2.5	613.77	2,905.00
25-YR	7.91	2.92	613.91	4,448.00
100-YR	11.37	3.46	614.15	7,559.00

DETENTION COMPOSITE OUTLET STRUCTURE POND

OPENING TYPE	AMOUNT	DIAMETER (FT)	ELEV (FT)
AREA	4	0.5	613

RAIN GARDEN SUMMARY TABLE

STORM EVENT	PEAK FLOW (IN) (CFS)	PEAK FLOW (OUT) (CFS)	WATER SURFACE ELEVATION (FT)	MAX. POND STORAGE (CU-FT)
2-YR	2	1.99	613.05	1,055.00
10-YR	2.5	2.49	613.06	1,067.00
25-YR	2.92	2.89	613.07	1,077.00
100-YR	3.46	3.45	613.08	1,090.00

COMPOSITE OUTLET STRUCTURE RAIN GARDEN

OPENING TYPE	AMOUNT	DIMENSION (FT)	ELEV (FT)
RECTANGULAR GRATE	1	5 X 5	613

1" = 40'-0"
ORIGINAL IS ONE INCH
SCALE

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PROPOSED DRAINAGE AREA MAP

Western Hills Athletic Club
4801 Rollingwood Drive
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PLOTTED: 10/4/2024
JOB NO: 863-02

503

12 OF 30

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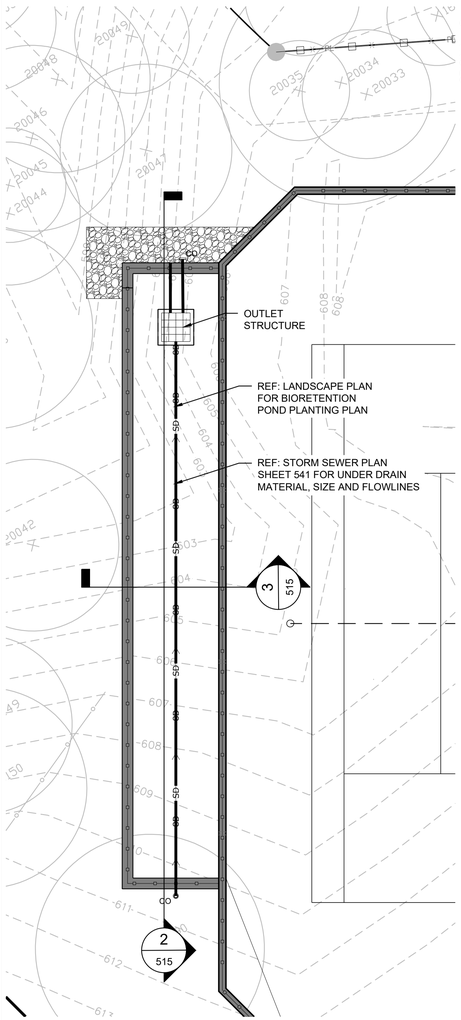
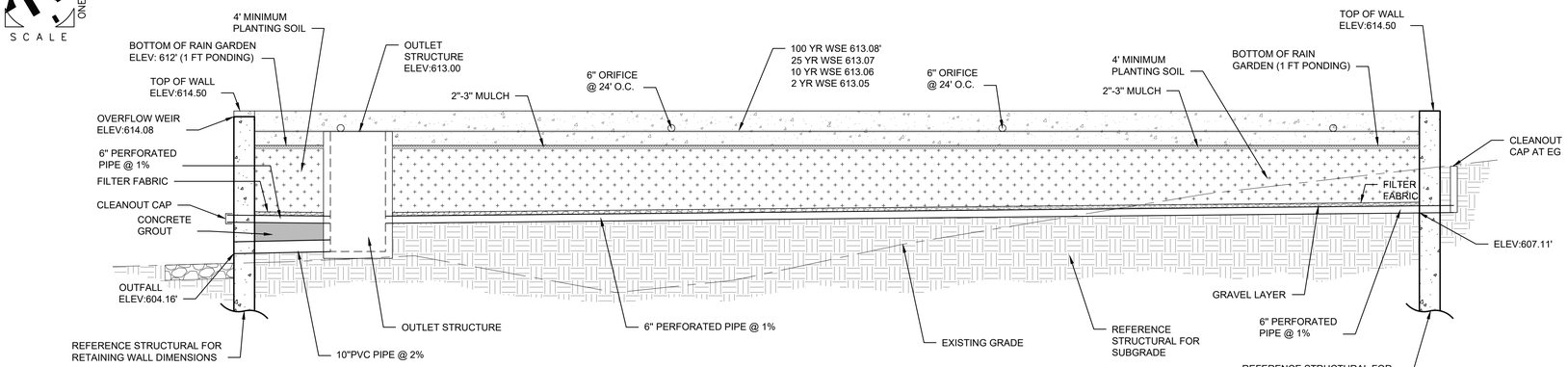
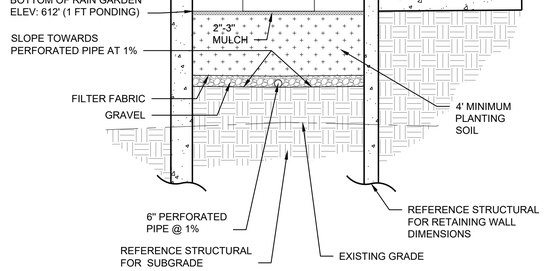


1 BIORETENTION BASIN PLAN
SCALE: 1"=10'



1 BIORETENTION BASIN SECTION
SCALE: 1"=5'



2 BIORETENTION BASIN SECTION
SCALE: 1"=5'

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Additional information is provided for cells with a red triangle in the upper right corn
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will

1. The Required Load Reduction for the total project: Calculations from RG-348

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resul
A_N = Net increase in impervious a
P = Average annual precipitation

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

County =	Travis	
Total project area included in plan * =	1.12	acres
Predevelopment impervious area within the limits of the plan * =	0.36	acres
Total post-development impervious area within the limits of the plan* =	0.72	acres
Total post-development impervious cover fraction * =	0.65	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	313	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	0.72	acres
Predevelopment impervious area within drainage basin/outfall area =	0.36	acres
Post-development impervious area within drainage basin/outfall area =	0.72	acres
Post-development impervious fraction within drainage basin/outfall area =	1.00	
$L_{M\ THIS\ BASIN}$ =	313	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Bioretention
Removal efficiency = 89 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_N x

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

A_C =	0.72	acres
A_I =	0.72	acres
A_P =	0.00	acres
L_R =	709	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 313 lbs.

F = 0.44

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.

Rainfall Depth =	0.34	inches
Post Development Runoff Coefficient =	0.82	
On-site Water Quality Volume =	734	cubic feet

Calculations from RG-348

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 =	147	
Total Capture Volume (required water quality volume(s) x 1.20) =	881	cubic feet

10. Bioretention System Designed as Required in RG

Required Water Quality Volume for Bioretention Basin = 881 cubic feet

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WATER QUALITY PLAN, SECTIONS, AND CALCULATIONS

Western Hills Athletic Club
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JOB NO: 863-02

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13 OF 30

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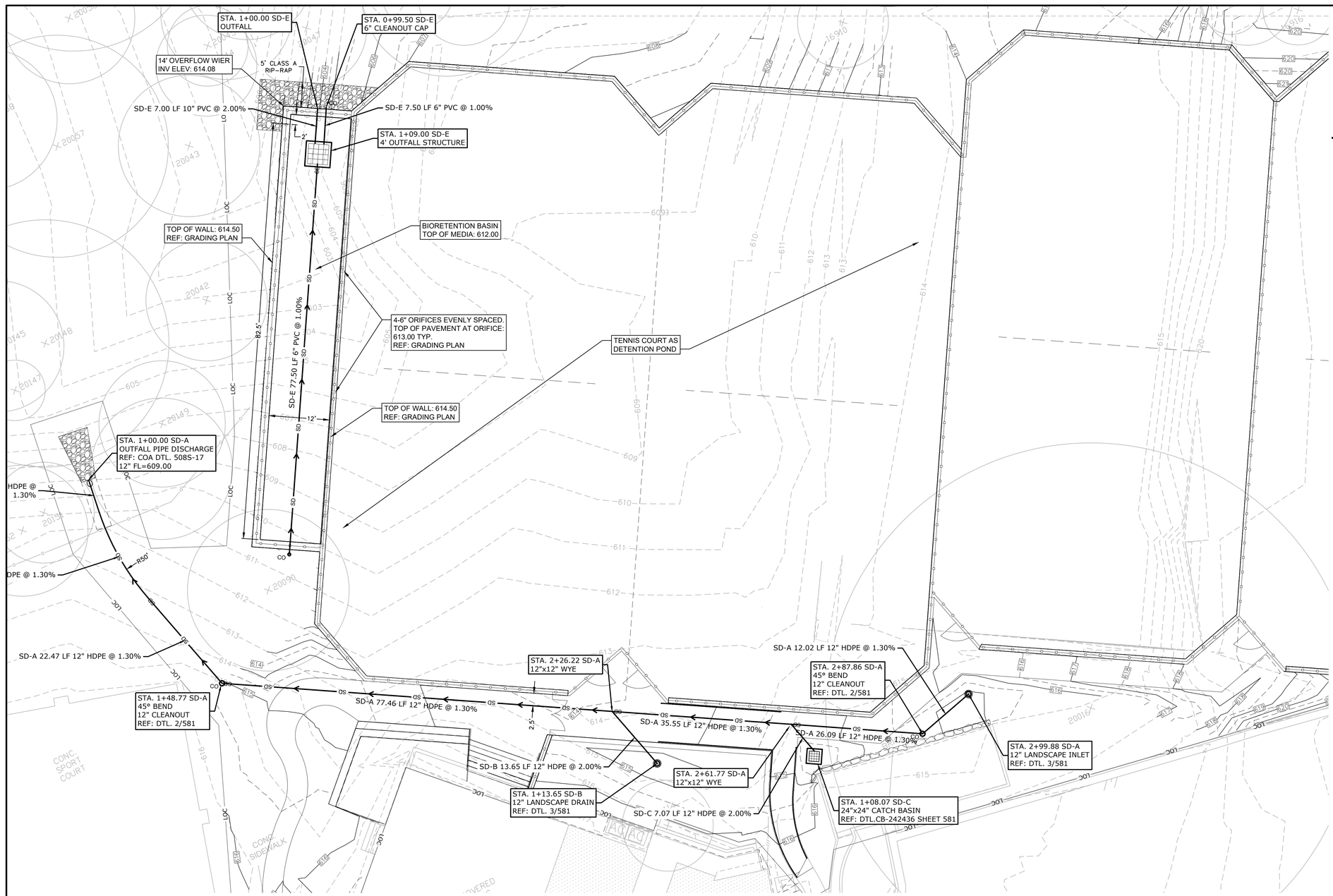

NOTES:
1. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND/OR CROSSINGS TWO WEEKS PRIOR TO CONSTRUCTION.
2. PIPING OF VARYING DIAMETERS SHALL BE INSTALLED TO MATCH CROWN, UNLESS OTHERWISE NOTED.
3. ALL STORM PIPE SHALL BE HDPE EXCEPT AS NOTED.

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STORM SEWER PLAN

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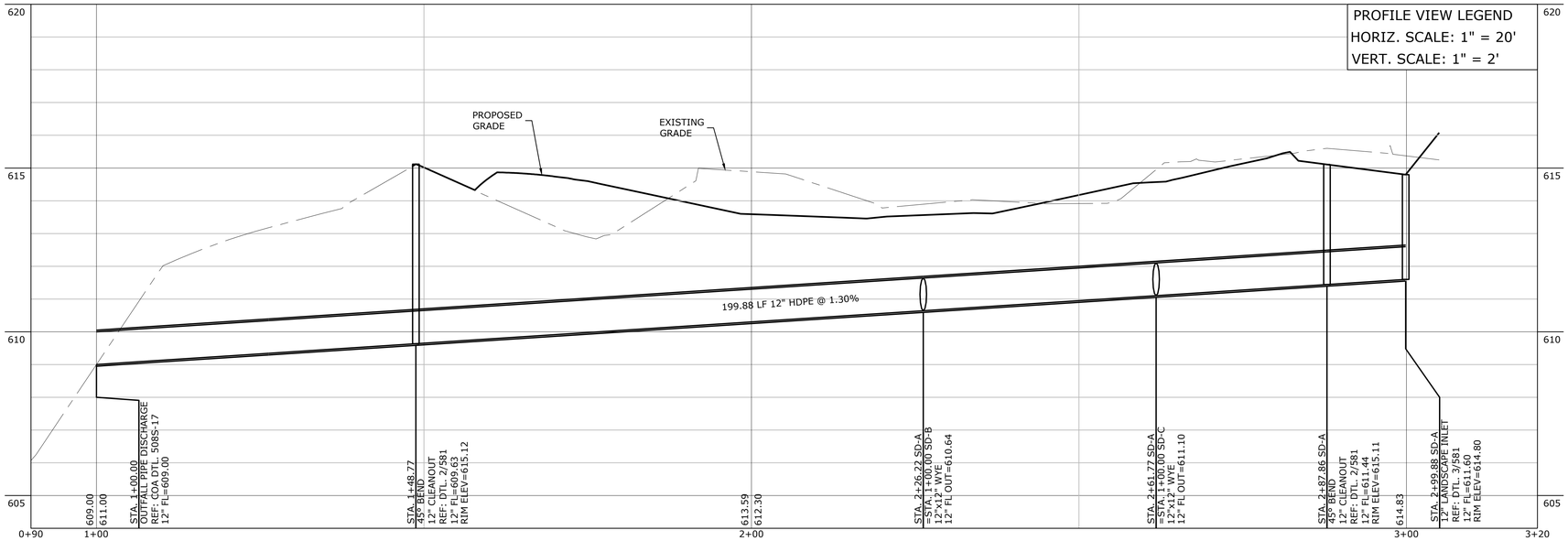
14 OF 30

File: \\mwmdata\MWMProjects\Data\863-02 - WHAC - Revision_1\CAD\Sheets\541_STORM SEWER PLAN.dwg 22x34

SD-A PROFILE



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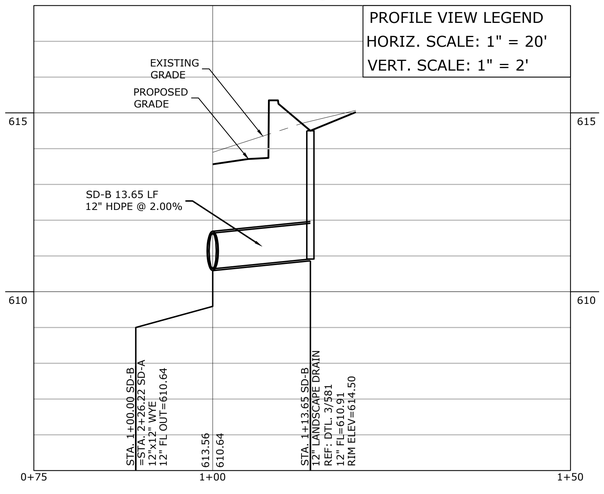
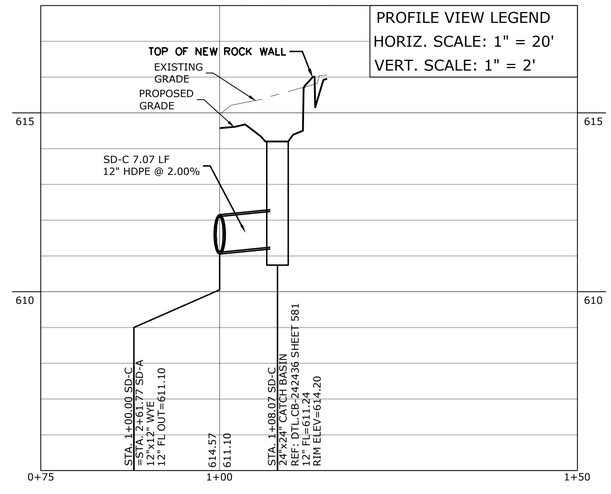


SD-C PROFILE



TOMAS M. RODRIGUEZ
119179
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
TBPE FH 1916
10/4/2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

STORM SEWER PROFILES

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

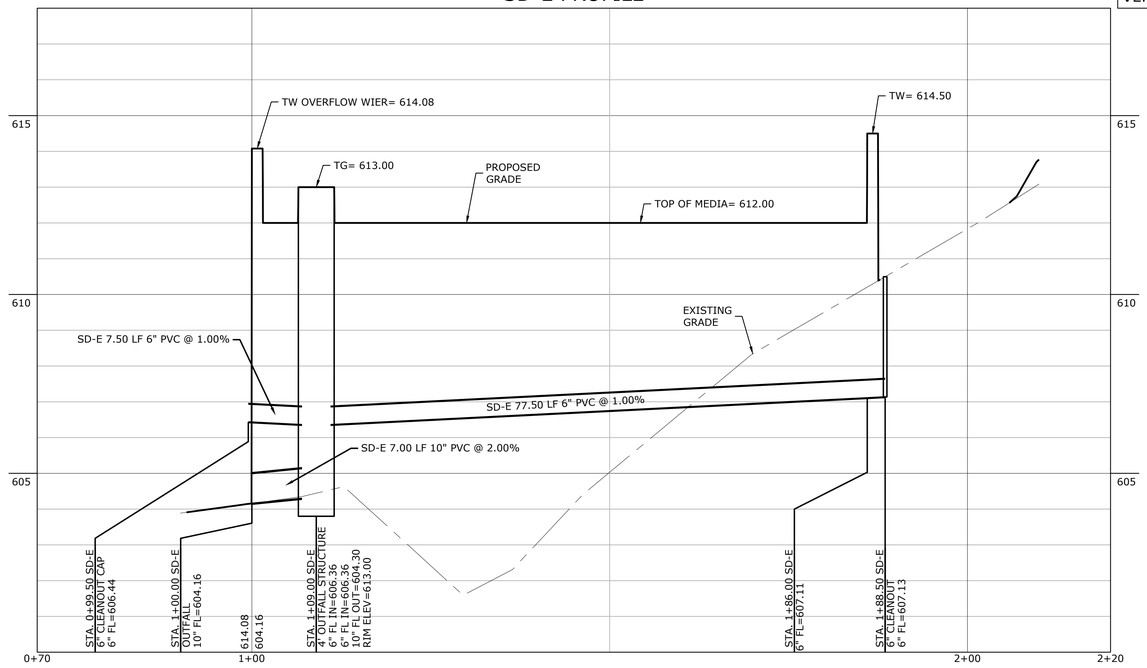
542

15 OF 30

Files: \\mwmdata\MWMProjects\Data\863-02 - WHAC_Revision_1\CAD\Sheets\542_STORM SEWER PROFILE.dwg 22x34

PROFILE VIEW LEGEND
HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 2'

SD-E PROFILE



STATE OF TEXAS
TOMAS M. RODRIGUEZ
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STORM SEWER PROFILES

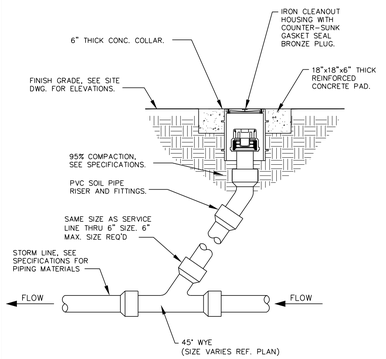
Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

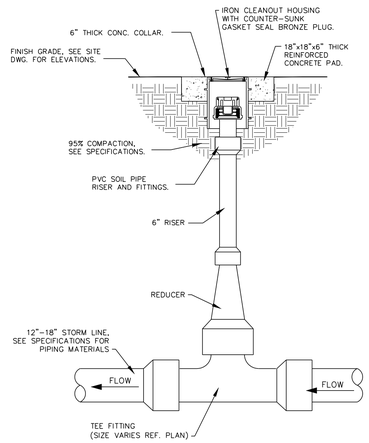
543

16 OF 30

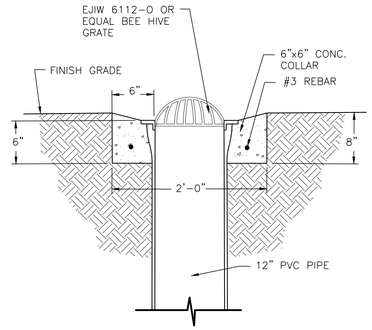
File: \\mwmdata\MWMProjects\Data\863-02_WHAC_Revision_1\CAD\Sheets\542_STORM SEWER PROFILE.dwg 22x34



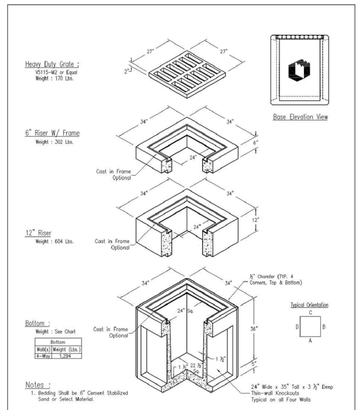
1	SD CLEANOUT DETAIL
581	n.t.s.



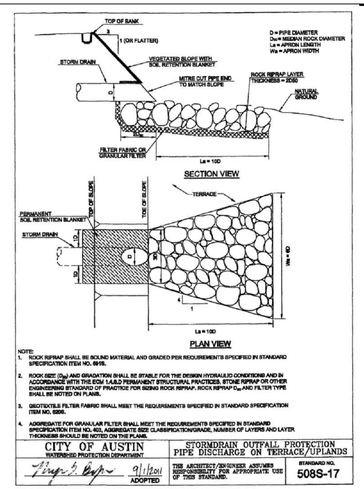
2	12"-18" SD CLEANOUT DETAIL
581	n.t.s.



3	12" LANDSCAPE INLET
581	n.t.s.

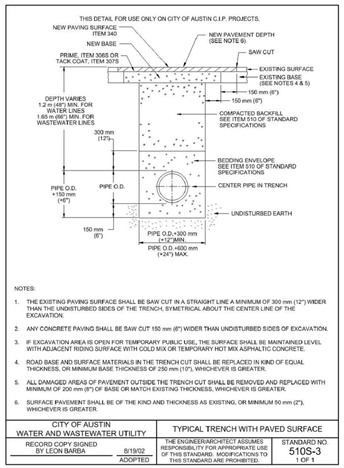


Oldcastle Precast	CB-242436	24" x 24" CATCH BASIN STANDARD DRAWING
1128 FM 359 S Brookshire, TX 77423 Phone: 713-624-7900 Fax: 713-624-7901	FILE NAME: 266-24x24-DC	
	ISSUE DATE: JANUARY, 2008	
	www.oldcastleprecastshs.com	Copyright © 2008



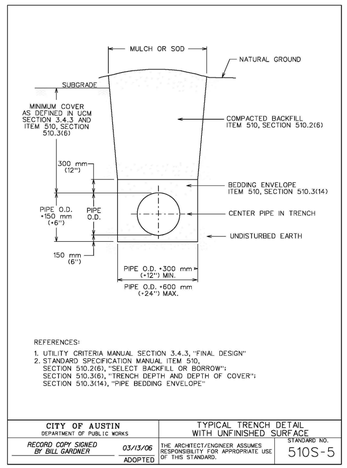
NOTE:
1. ROCK RIPRAP SHALL BE SOUND MATERIAL AND GRADED PER REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 9915.
2. ROCK SIZE (D_m) AND GRADATION SHALL BE STABLE FOR THE DESIGN HYDRAULIC CONDITIONS AND IN ACCORDANCE WITH THE ECM 1.4.6.3 PERMANENT STRUCTURAL PRACTICES. STONE RIPRAP OR OTHER ENGINEERING STANDARD OF PRACTICE FOR SIZING ROCK RIPRAP. ROCK RIPRAP D_m AND FILTER TYPE SHALL BE NOTED ON PLANS.
3. GEOTEXTILE FILTER FABRIC SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 9200.
4. AGGREGATE FOR GRANULAR FILTER SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 402, AGGREGATE SIZE CLASSIFICATION/GRADE, NUMBER OF LAYERS AND LAYER THICKNESS SHOULD BE NOTED ON THE PLANS.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STORMDRAIN OUTFALL PROTECTION PIPE DISCHARGE ON TERRACE/UPLANDS
ADOPTED 9/1/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
	STANDARD NO. 508S-17



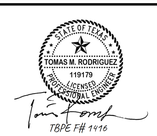
NOTES:
1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 300 mm (12") WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 150 mm (6") WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
4. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND OF EQUAL THICKNESS, OR MINIMUM BASE THICKNESS OF 250 mm (10"), WHICHEVER IS GREATER.
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 200 mm (8") OF BASE OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 50 mm (2"), WHICHEVER IS GREATER.

CITY OF AUSTIN WATER AND WASTEWATER UTILITY	TYPICAL TRENCH WITH PAVED SURFACE	
RECORD COPY SIGNED BY LEON BARBA 8/19/02 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 510S-3 1 OF 1



REFERENCES:
1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510, SECTION 510.2(6), "SELECT BACKFILL OR BORROW"; SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER"; SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE	
RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S-5



TBPE FM 1416
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NO.	DATE	DESCRIPTION	BY

0 1"
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DRAINAGE DETAILS

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

581

17 OF 30

File: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\581_StormDetails.dwg 22x34

LANDSCAPE NOTES

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL OVERHEAD AND UNDERGROUND UTILITIES (INCLUDING THOSE PROPOSED WITH THIS PROJECT, I.E. IRRIGATION, WASTEWATER, WATER, STORM SEWER, GAS, TELECOM, FIBER OPTIC, ELECTRIC, ETC.) PRIOR TO STARTING WORK.

2. INFORMATION PROVIDED ON THIS PLAN IS GENERAL IN NATURE; DIMENSIONS, AREAS, AND DISTANCES ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO BIDDING. DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR RESOLUTION PRIOR TO STARTING WORK.

3. THE CONTRACTOR IS TO THOROUGHLY FAMILIARIZE HIM/HERSELF WITH ALL PLANS, SPECIFICATIONS AND THE SITE PRIOR TO BIDDING. FAILURE TO DO SO WILL NOT REDUCE THE CONTRACTOR'S OBLIGATION TO PERFORM THE WORK AS DESCRIBED FOR THE PRICE BID.

4. QUANTITIES SHOWN ARE INTENDED TO ASSIST CONTRACTORS IN EVALUATING THEIR OWN TAKE OFFS AND ARE NOT GUARANTEED AS ACCURATE REPRESENTATIONS OF REQUIRED MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS BID QUANTITIES AND IS REQUIRED TO REFLECT THE DESIGN INTENT.

5. ALL PLANT MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, OR EQUIVALENT

6. NO SUBSTITUTIONS OF PLANT MATERIAL LOCATIONS, SPECIES OR SIZE WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT. ALL PLANT MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

7. AS PART OF THE BASE BID, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL LANDSCAPE MAINTENANCE AS INDICATED IN THE PROJECT SPECIFICATIONS (INCLUDING, BUT NOT LIMITED TO MOWING, WATERING, REPLACEMENT OF UNACCEPTABLE, DISEASED OR DEAD PLANTS, ETC.) AND WEED CONTROL UNTIL FINAL ACCEPTANCE BY OWNER.

8. CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL TO BE ALIVE AND BE IN A HEALTHY, VIGOROUS CONDITION FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION OF THE ENTIRE PROJECT OR OTHER DATE(S) ESTABLISHED BY THE LANDSCAPE ARCHITECT, OR OWNER, EXCEPT AS MAY RESULT FROM NEGLECT OR DAMAGE BY THE OWNER, DAMAGE BY OTHERS OR UNUSUAL PHENOMENA BEYOND THE CONTRACTORS CONTROL.

9. CONTRACTOR SHALL REPLACE ALL DEAD, AND/OR UNHEALTHY PLANT MATERIALS AND/OR PLANT MATERIALS THAT HAVE PARTIALLY DIED PURSUANT TO THE CONDITION OF THE WARRANTY AT NO EXPENSE TO THE OWNER. DEAD MATERIALS MUST BE REPLACED WITHIN 10 BUSINESS DAYS PER TECHNICAL PROVISIONS. RE-WARRANT REPLACEMENT PLANTS FOR AN ADDITIONAL ONE YEAR UNDER THE SAME TERMS AS THE ORIGINAL WARRANTY. PLANT MATERIALS USED FOR REPLACEMENT SHALL BE THE SAME SPECIES, SIZE AND SHAPE.

10. ALL PLANTS SHALL BE HEALTHY, VIGOROUS AND REPRESENTATIVE OF THE SPECIES SPECIFIED. ALL PLANTS SHALL BE WELL BRANCHED, PROPORTIONED, AND FREE OF ALL INSECTS, DISEASES, BARK BRUISES, SCRAPES, CRACKED BRANCHES AND PHYSICAL DAMAGE. PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO PLANT MATERIALS WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL SHALL BE REMOVED AT TIME OF PLANTING, AS SHOWN ON DETAILS.

11. ALL PLANTS SHALL BE INSTALLED AS PER DETAILS AND THE CONTRACT SPECIFICATIONS.

12. ALL PLANTS AND STAKES SHALL BE SET PLUMB UNLESS OTHERWISE SPECIFIED.

13. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

14. INSTALLATION OF LANDSCAPE SHALL BE PERFORMED BY A QUALIFIED LANDSCAPE INSTALLER WITH A MINIMUM OF FIVE YEARS CONTINUOUS EXPERIENCE OF INSTALLING LANDSCAPE PLANTINGS OF SIMILAR SIZE AND SCOPE.

15. CONTRACTOR SHALL PROVIDE MAINTENANCE FOR LANDSCAPE & IRRIGATION SYSTEM FOR 12 MONTHS FOLLOWING FINAL ACCEPTANCE OF ENTIRE PROJECT.

16. LANDSCAPE MATERIALS SHALL BE LOCATED SO AS NOT TO OBSTRUCT VISUAL OR PHYSICAL ACCESS TO FIRE HYDRANTS. ALL LANDSCAPE MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH UTILITY COMPANY REQUIREMENTS AT TRANSFORMERS, METERS, OVERHEAD LINES, ETC. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.

17. EXECUTE ALL LANDSCAPING AND REVEGETATION PRIOR TO REQUEST FOR CERTIFICATE OF OCCUPANCY, FINAL INSPECTION OR AS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER. HOWEVER, NO PLANT MATERIALS SHALL BE INSTALLED BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE LANDSCAPE ARCHITECT, OWNER OR OWNER'S DESIGNATED REPRESENTATIVE. FULLY PREPARE ALL LANDSCAPE BEDS (INCLUDING IRRIGATION) PRIOR TO INSTALLATION OF LANDSCAPE PLANTS.

18. SITE STOCKPILED TOPSOIL MAY BE USED IF IT HAS BEEN DEEMED ACCEPTABLE IN QUALITY AND APPROVED BY LANDSCAPE ARCHITECT.

19. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING.

20. THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN IRRIGATION SYSTEM FULLY COMPLIANT WITH TCEQ REQUIREMENTS AND COMPLIANT WITH THE LANDSCAPE IRRIGATION NOTES AND CONTRACT SPECIFICATIONS.

LANDSCAPE IRRIGATION NOTES

AUTOMATIC IRRIGATION SYSTEMS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS. THESE REQUIREMENTS SHALL BE NOTED ON THE SITE DEVELOPMENT PERMIT AND SHALL BE IMPLEMENTED AS PART OF THE LANDSCAPE INSPECTION:

1. A NEW COMMERCIAL AND MULTI-FAMILY IRRIGATION SYSTEM MUST BE DESIGNED AND INSTALLED SO THAT:

(A) THERE IS NOT DIRECT OVERSPRAY ONTO NON-IRRIGATED AREAS;

(B) THE SYSTEM DOES NOT INCLUDE SPRAY IRRIGATION ON AREAS LESS THAN SIX (6) FEET WIDE (SUCH AS MEDIANS, BUFFER STRIPS, AND PARKING LOT ISLANDS)

(C) ABOVE-GROUND IRRIGATION EMISSION DEVICES ARE SET BACK AT LEAST SIX (6) INCHES FROM IMPERVIOUS SURFACES;

(D) THE IRRIGATION SYSTEM HAS A MASTER VALVE;

(E) CIRCUIT REMOTE CONTROL VALVES HAVE ADJUSTABLE FLOW CONTROLS;

(F) SERVICEABLE IN-HEAD CHECK VALVES ARE ADJACENT TO PAVED AREAS WHERE ELEVATION DIFFERENCES MAY CAUSE LOW HEAD DRAINAGE;

(G) THE IRRIGATION SYSTEM HAS A CITY- APPROVED WEATHER BASED CONTROLLER;

(H) AN AUTOMATIC RAIN SHUT-OFF DEVICE SHUTS OFF THE IRRIGATION SYSTEM AUTOMATICALLY AFTER NOT MORE THAN A ONE-HALF INCH (1/2") RAINFALL;

(I) ZONE VALVES AND CIRCUITS ARE SEPARATED BASED ON PLANT WATER REQUIREMENTS;

(J) AN IRRIGATION EMISSION DEVICE (SUCH AS SPRAY, ROTOR, OR DRIP EMITTER) DOES NOT EXCEED THE MANUFACTURER'S RECOMMENDED OPERATING PRESSURE; AND

(K) NO COMPONENT OF THE IRRIGATION SYSTEM DEVIATES FROM THE MANUFACTURER'S RECOMMENDED USE OF THE PRODUCT.

2. THE MAXIMUM SPACING BETWEEN SPRAY OR ROTARY SPRINKLER HEADS MUST NOT EXCEED THE RADIUS OF THROW OF THE HEAD UNLESS MANUFACTURER OF THE SPRINKLER HEAD SPECIFICALLY RECOMMENDS A GREATER SPACING. THE RADIUS OF THROW IS DETERMINED BY REFERENCE TO THE MANUFACTURER'S SPECIFICATIONS FOR A SPECIFIC NOZZLE AT A SPECIFIC OPERATING PRESSURE.

3. THE IRRIGATION INSTALLER SHALL DEVELOP AND PROVIDE AN AS-BUILT DESIGN PLAN AND WATER BUDGET TO THE CITY AT THE TIME THE FINAL PLUMBING INSPECTION IS PERFORMED. THE WATER BUDGET SHALL INCLUDE:

(A) A CHART CONTAINING ZONE NUMBERS, PRECIPITATION RATE, AND GALLONS PER MINUTE; AND

(B) THE LOCATION OF THE EMERGENCY IRRIGATION SYSTEM SHUT-OFF VALVE. A LAMINATED COPY OF THE WATER BUDGET SHALL BE PERMANENTLY INSTALLED INSIDE THE IRRIGATION CONTROLLER DOOR.

4. IRRIGATION CONTRACTOR SHALL PROVIDE A COMPLETE AS-BUILT PLAN TO OWNER, OR OWNER'S DESIGNATED REPRESENTATIVE SHOWING ALL IRRIGATION COMPONENTS AND SIZE OF COMPONENTS, INCLUDING WATER PRESSURE, MAIN LINE, LATERAL LINES, VALVES, HEADS, BACKFLOW DEVICE, CONTROLLER, QUICK COUPLERS, ETC.

5. COMPLY WITH ALL APPLICABLE TCEQ IRRIGATION RULES AND REGULATIONS.

6. CONTRACTOR IS TO VERIFY PRESSURE AND WATER SUPPLY CHARACTERISTICS ARE ADEQUATE FOR THIS INSTALLATION. ANY DISCREPANCIES OR INADEQUACIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY, BEFORE STARTING CONSTRUCTION. DESIGN PRESSURE IS 65 PSI AT 45 GMP.

7. CONTRACTOR SHALL OBTAIN ALL PERMITS AND HANDLE ALL INSPECTIONS FOR THIS WORK AS REQUIRED BY LOCAL REGULATIONS AND SHALL PAY ALL FEES ASSOCIATED WITH THESE PERMIT(S).

8. VERIFY LOCATION OF CONTROLLER, WATER SUPPLY; SITE CONDITIONS MAY VARY. OPERABLE IRRIGATION EQUIPMENT (VALVES, QUICK COUPLERS, BFP, ETC.) SHALL BE INSTALLED SEPARATELY IN VALVE BOXES.

9. ALL HEADS SHALL BE INSTALLED ON TRIPLE SWING JOINTS. HEADS SHALL BE NOT BE LOCATED CLOSER THAN 6" FROM PAVEMENT.

10. ADJUST RADII AND SPRAY PATTERNS TO ELIMINATE OVERSPRAY ONTO BUILDINGS, SIDEWALKS, FENCES, DRIVEWAYS, ROADWAYS, ETC.

11. ALL PAVEMENT CROSSINGS (LATERALS, WIRING, MAINLINE, ETC.) SHALL OCCUR WITHIN SLEEVES. INCLUDING SIDEWALKS, DRIVEWAYS, TRAILS, BIKE WAYS, ROADWAYS, ETC.

12. PRIOR TO CONSTRUCTION, VERIFY WITH THE GENERAL CONTRACTOR AND ALL UTILITY COMPANIES THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES. IMMEDIATELY REPORT ANY BREAKAGES TO THE APPROPRIATE UTILITY COMPANY.

13. THE CONTRACTOR IS TO INSTALL ALL SLEEVES IN SEQUENCE WITH OTHER CONSTRUCTION ACTIVITIES, AND WILL BE RESPONSIBLE FOR COORDINATING WITH OTHER SITE CONTRACTORS FOR THIS WORK. ADEQUATELY MARK THE LOCATIONS OF ALL SLEEVES AND PIPE CONNECTION POINTS TO EXISTING LINES.

14. INSTALL THE MAIN LINE A MINIMUM OF 15" DEEP AND LATERAL LINES MIN. 12" DEEP.

15. PROVIDE A NEW WATER PROOF TAG WITH CONTRACTOR'S NAME AND TELEPHONE NUMBER CLEARLY SHOWN AND SECURELY ATTACHED TO THE INSIDE OF THE CONTROLLER DOOR.

TREE MITIGATION/REPLACEMENT LIST

TREE TAG	TREE TYPE	SIZE (INCHES)				TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT TREE TYPE	PROPOSED TREE CALIPER (INCHES)
16910	Chinaberry	9.00				9.0	0%	-	Invasive		
16912	Ligustrum	8.00	6.0			11.0	0%	-	Invasive		
20033	Chinaberry	9.00				9.0	0%	-	Invasive		
20038	Chinaberry	15.00				15.0	0%	-	Invasive		
20047	Live Oak	12.00				12.0	25%	3.00	Construction	MEXICAN SYCAMORE	4.00
20088	Live Oak	14.00				14.0	25%	3.50	Construction	MEXICAN SYCAMORE	4.00
20089	Live Oak	11.00				11.0	0%	-	Construction		
20093	Live Oak	18.00				18.0	25%	4.50	Construction	CEDAR ELM	6.00
20094	Live Oak	12.00				12.0	25%	3.00	Construction	MEXICAN SYCAMORE	4.00
20095	Live Oak	10.00				10.0	0%	-	Construction		
20096	Live Oak	11.00				11.0	0%	-	Construction		
20097	Live Oak	9.00				9.0	0%	-	Construction		
20098	Live Oak	12.00				12.0	25%	3.00	Construction	MEXICAN SYCAMORE	4.00
20099	Live Oak	15.00				15.0	25%	3.75	Construction	TEXAS ASH	4.00
20100	Live Oak	12.00				12.0	25%	3.00	Construction	TEXAS ASH	4.00
20101	Live Oak	13.00				13.0	25%	3.25	Construction	TEXAS ASH	4.00
20102	Live Oak*	19.00	17.0			27.5	25%	6.00	Construction	CEDAR ELM	6.00
20103	Live Oak	20.00				20.0	25%	5.00	Construction	CEDAR ELM	6.00
20105	Cedar Elm	15.00				15.0	25%	3.75	Construction	CEDAR ELM	4.00
20106	Live Oak	10.00				10.0	0%	-	Construction		
20107	Live Oak	12.00				12.0	25%	3.00	Construction	CEDAR ELM	4.00
20108	Live Oak	7.00				7.0	0%	-	Construction		-
20109	Live Oak	12.00				12.0	25%	3.00	Construction	TEXAS ASH	4.00
					TOTAL INCHES REMOVED	296.50	TOTAL REPLACEMENT INCHES REQUIRED	33.75	TOTAL REPLACEMENT INCHES PROVIDED		40.00

* Only replacing 6" maximum, as allowed by code

NOTE:
TOTAL CALIPER OF REPLACEMENT INCHES MUST EQUAL REQUIRED INCHES AS MEASURED AT DBH.

PLANT LIST

COMMON NAME	BOTANICAL NAME	SIZE	COMMENT
CEDAR ELM	ULMUS CRASSIFOLIA	6" CALIPER	12' HT., SINGLE TRUNK, B&B OR CONTAINER/BOX
CEDAR ELM	ULMUS CRASSIFOLIA	4" CALIPER	12' HT., SINGLE TRUNK, B&B OR CONTAINER/BOX
MEXICAN SYCAMORE	PLATANUS MEXICANA	4" CALIPER	12' HT., SINGLE TRUNK, B&B OR CONTAINER/BOX
TEXAS ASH	FRAXINUS TEXENSIS	4" CALIPER	12' HT., SINGLE TRUNK, B&B OR CONTAINER/BOX
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPRAIUM	1 GAL	24" O.C. TYP.
OBEDIENT PLANT	PHYSOSTEGIA VIRGINIANA	1 GAL	36" O.C. TYP.
SWITCH GRASS	PANICUM VIRGATUM	1 GAL	48" O.C. TYP.
BERMUDA SOD	CYNODON DACTYLON	SOD	AS SHOWN

City Tree Requirements
Total Lot Area = 139,929
1 tree per 2000' s.f.
Required trees = 70 trees
Existing Tree Credit
11' height or more (1 for 1) = 95 trees
Trees Provided
Proposed trees = 13 trees
Total trees provided = 108 trees

REGISTERED LANDSCAPE ARCHITECT · DAVID J. CAZARES · 1871 · STATE OF TEXAS
04 October 2024

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NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

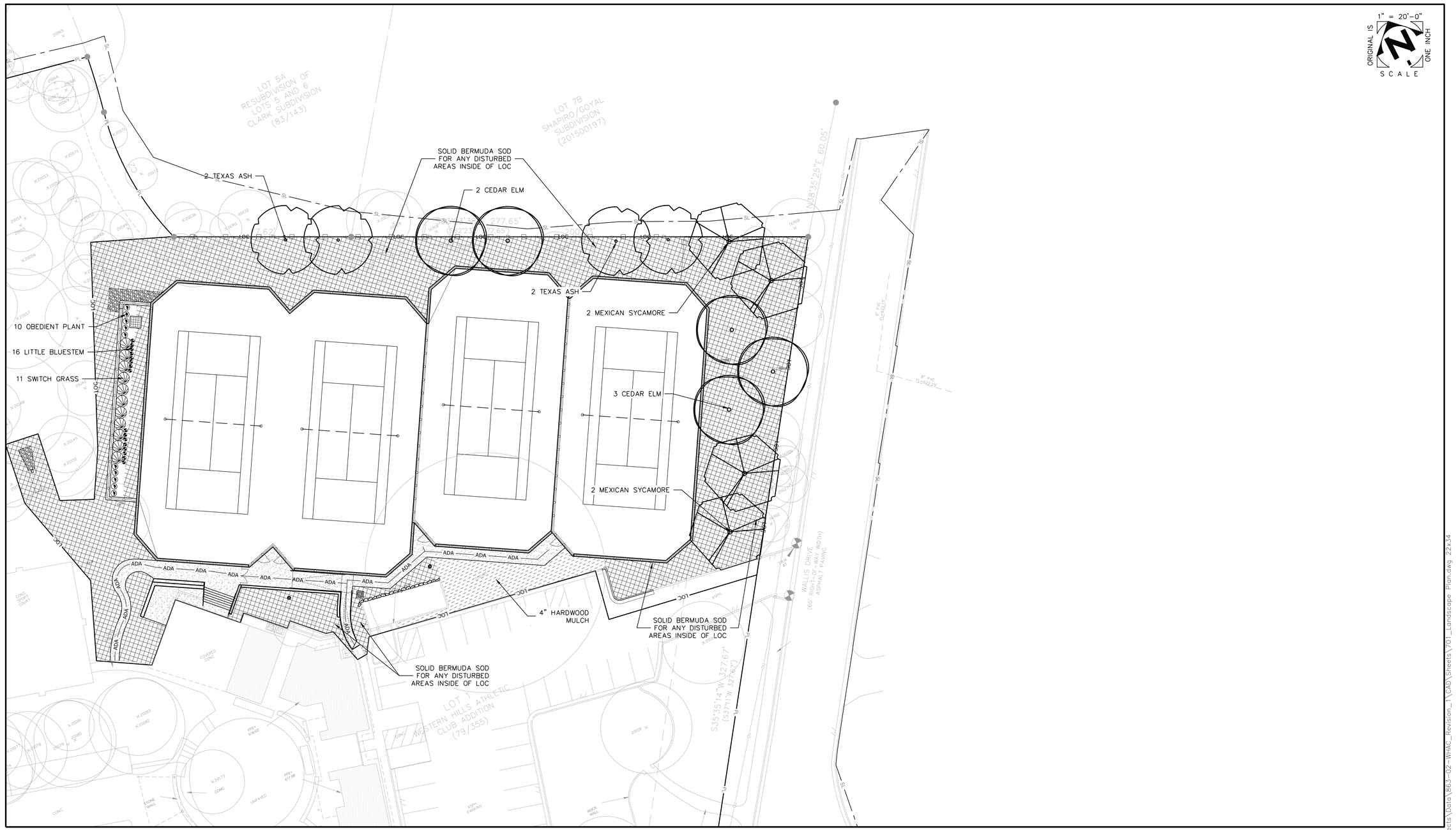
LANDSCAPE NOTES & CALCULATIONS

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

700

File: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\700_Landscape Notes.dwg 22x34



1" = 20'-0"
ORIGINAL IS ONE INCH
SCALE

REGISTERED LANDSCAPE ARCHITECT
DAVID J. CAZARES
1871
STATE OF TEXAS
04 October 2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

LANDSCAPE PLAN

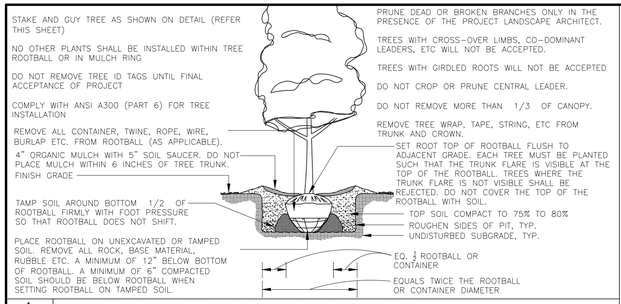
Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

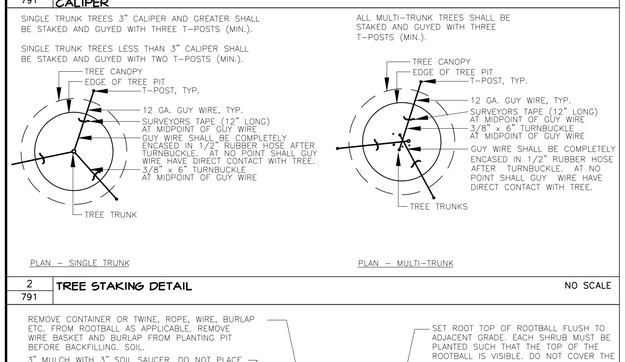
701

19 OF 30

Files: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\701_Landscape Plan.dwg 22x34



1 / 791 **TREE PLANTING DETAIL (SINGLE TRUNK) GREATER THAN 3" CALIPER** NO SCALE



2 / 791 **TREE STAKING DETAIL** NO SCALE

3 / 791 **PERENNIAL / GROUNDCOVER PLANTING DETAIL** NO SCALE

4 / 791 **SHRUB PLANTING DETAIL** NO SCALE

REGISTERED LANDSCAPE ARCHITECT
DAVID J. CAZARES
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STATE OF TEXAS
04 October 2024

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NO.	DATE	DESCRIPTION	BY

0 1"
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LANDSCAPE DETAILS

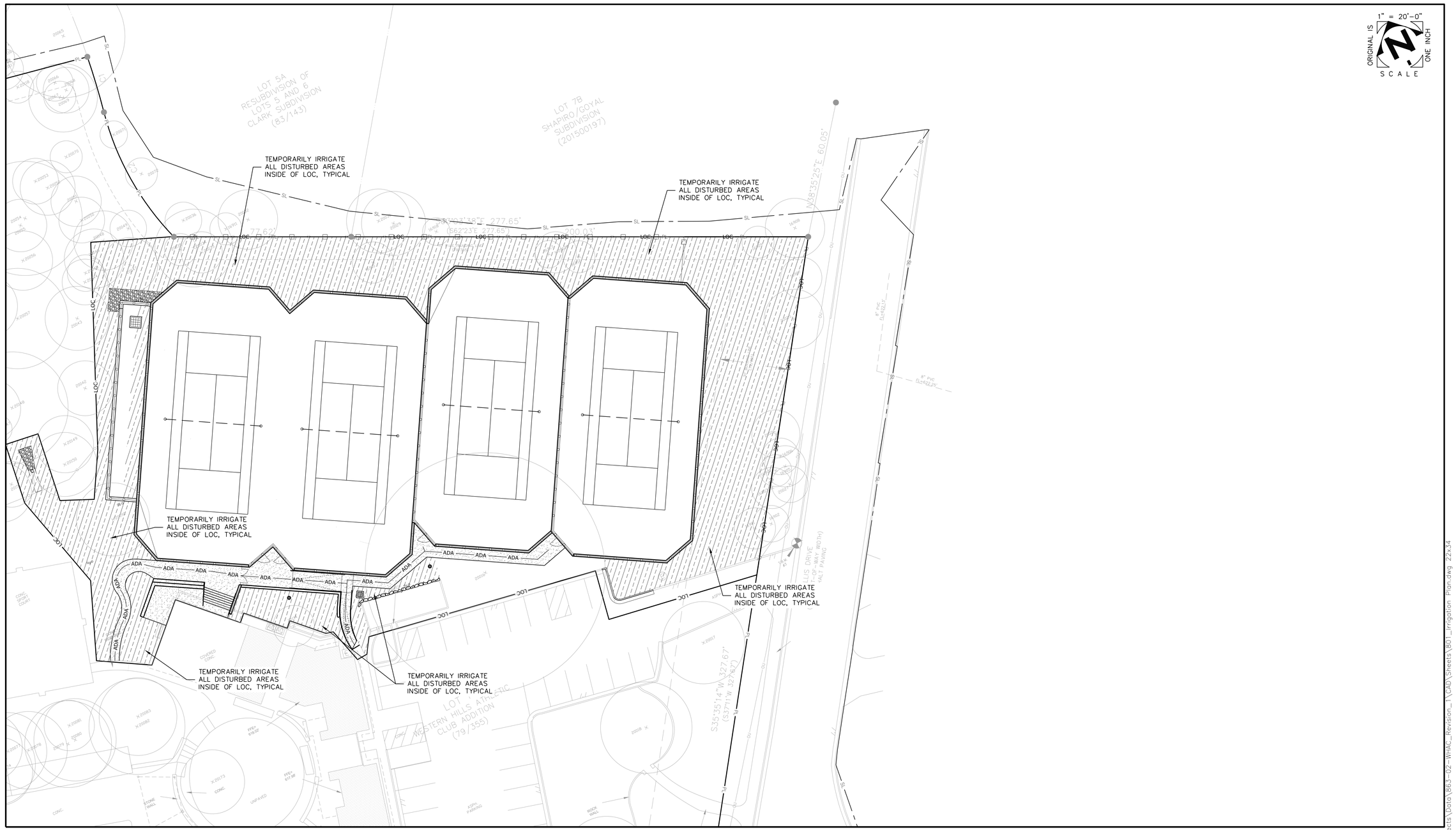
Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

791

20 OF 30

File: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\791 Landscape Details.dwg 22x34



REGISTERED LANDSCAPE ARCHITECT
DAVID J. CAZARES
1871
STATE OF TEXAS
04 October 2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
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9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

IRRIGATION PLAN

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

801

21 OF 30

File: \\mwmdata\MWMProjects\Data\863-02 - WHAC_Revision_1\CAD\Sheets\801_Irrigation Plan.dwg 22x34

COORDINATION

1. The Contractor shall compare the Landscape, Structural, Civil, and other series drawings and report any discrepancies between each set of drawings and within each set of drawings prior to fabrication and installation of any structural members.

2. Only larger sleeve openings and framed openings in structural framing component members are indicated on the Structural Drawings. However, all sleeves, inserts and openings, including frames and/or sleeves shall be provided for passage, provision and/or incorporation of the work of the contract, including but not limited to Mechanical, Electrical and Plumbing work. This work shall include the coordination of sizes, alignment, dimensions, position, locations, elevations and grades as required to serve the intended purpose. Openings not indicated on the Structural Drawings, but required as noted above, shall be submitted to the Engineer for review.

3. Refer to Civil drawings for floor elevations, slopes, drains and location of depressed and elevated floor areas.

4. Compatibility of the structure and provisions for building equipment supported on or from structural components shall be verified as to size, dimensions, clearances, accessibility, weights and reaction with the equipment for which the structure has been designed prior to submission of shop drawings and data for each piece of equipment and for structural components. Differences shall be noted on the submittals. Compatibility of the structure and provisions for equipment supported on or from structural components shall be verified as to size, dimensions, clearances, accessibility, weights and reaction with the equipment for which the structure has been designed prior to submission of shop drawings and data for each piece of equipment and for structural components. Differences shall be noted on the submittals.

5. Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Structural Drawings shall not be reproduced and used as shop drawings. All items deviating from the Structural Drawings or from previously submitted shop drawings shall be clouded.

6. The details designated as "Typical Details" apply generally to the Structural Drawings in all areas where conditions are similar to those described in the details.

7. All dimensions and conditions of existing construction shall be verified at the job site prior to the preparation of shop drawings. Differences between existing construction and that shown on the Structural Drawings shall be referred to the Architect. Differences shall also be clouded on the shop drawings.

8. All structural elements of the project have been designed by the Engineer to resist the required code vertical and lateral forces that could occur in the final completed structure only. It is the responsibility of the Contractor to provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the lateral-load resisting or stability-providing system is completely installed and the structure is completely tied together. Temporary supports shall not result in the overstress or damage of the elements to be braced nor any elements used as brace supports.

9. The Contract Structural Drawings and Specifications represent the finished structure, and except where specifically shown, do not indicate the means or methods of construction. The Contractor and their Sub-Contractors shall supervise and direct the Work and shall be solely responsible for all construction means, methods, procedures, techniques, sequences and safety measures including, but not limited to, adherences to all OSHA guidelines. The Engineer shall not have control of, and shall not be responsible for, construction means, methods, techniques, sequences or procedures, for safety precautions and programs in connection with the Work, for the acts or omissions of the Contractor, Subcontractors, or any other person performing any of the Work, or for the failure of any of these persons to carry out the Work in accordance with the Structural Contract Documents.

10. Where conflict exists among the various parts of the Structural Contract Documents, Structural Drawings, Structural Notes, and Specifications, the strictest requirements, as indicated by the Engineer, shall govern.

11. Periodic site observation by field representatives of Encotech is solely for the purpose of determining if the Work is proceeding in accordance with the Structural Contract Documents. This limited site observation is not intended to be a check of the quality or quantity of the Work, but rather a periodic check in an effort to inform the Owner against defects and deficiencies in the work of the Contractor.

12. These structural drawings do not address water issues as it relates to but not limited to site drainage, roof runoff, or water introduced by adjacent properties. Adequate drainage shall be provided to limit the effects of erosion and to maintain the integrity of the structural system described. Water issues and/or waterproofing are the responsibility of the Architect and Contractor and are beyond the scope of these documents.

CODES AND REFERENCED REPORTS

1. The General Building Code used as the basis for the structural design is as follows:
   A. International Building Code, 2015 Edition

1. Structural Loading: Minimum Design Loads and Associated Criteria for Buildings and Other Structures, American Society of Civil Engineers, ASCE 7, as reference by the General Building Code.

2. Structural Concrete: Building Code Requirements for Reinforced Concrete, American Concrete Institute, ACI 318, as referenced by the General Building Code.

3. Geotechnical Report: Foundation elements have been designed in accordance with information provided in the following geotechnical report:

Geotechnical Engineer:	Terracon
Report Number:	96205112
Date:	07/31/2020

DESIGN LOADS

1. Dead Loads include the self-weight of the structural elements

2. Live Loads
   A. Tennis courts — 100 psf

3. Snow Loads
   A. Ground snow load, Pg — 5 psf

4. Seismic Loads
   A. The structure and structural components of the building have been designed in accordance with General Building Code with the following criteria:

a.	Risk Category	II
b.	Seismic Importance Factor: Ie	1.0
c.	Site Class	D
d.	Seismic Design Category	A
e.	Spectral Response Coefficients	
	• Ss (%g)	0.053
	• S1 (%g)	0.031
	• SDS	0.056
	• SD1	0.049
f.	Basic Seismic-force-resisting system	
	• Ground-supported cantelever wall	
g.	Response Modification Factor(s), R	1.5
h.	Seismic Response Coefficient(s), Cs	SDS/(R/Ie)
i.	Design Base Shear, V	Cs*W
j.	Analysis Procedure Used	Equivalent Lateral Force

5. Wind Loads
   A. Wind lateral load on structural frame is based on ASCE 7 using the following:

a.	Basic Wind Speed	(LRFD)	115 mph
		(ASD)	83 mph
b.	Exposure		C
c.	Internal Pressure Coefficient, Gcpi		+/-0.18
d.	Risk Category		II

SUBMITTALS

1. Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Structural Drawings shall not be reproduced and used as shop drawings. All items deviating from the Structural Drawings or from previously submitted shop drawings shall be clouded.

2. Contractor shall review shop drawings for compliance with the Structural Drawings and shall certify that they have done so by a stamp noting that the drawings have been "Approved" and which bears the signature (or initials) of an authorized representative of the Contractor and the date. Submittals which do not reflect the Contractor's approval, signature and date will be returned without review.

3. Contractor shall be responsible for delays caused by rejection of inadequate shop drawings.

4. Where review and return of shop drawings is required or requested, the Engineer will review each submittal and, where possible, return within two (2) weeks of receipt.

5. Corrections or comments on shop drawings or manufacturer's data sheets do not relieve the Contractor from compliance with requirements of the plans and specifications. Engineer's review is for general conformance with the requirements of the Structural Drawings. Contractor is responsible for confirming and correcting all quantities and dimensions, selecting fabrication processes and techniques of construction, and coordinating the work with that of all other contractors.

6. Refer to individual sections for specific submittal requirements.

7. Contractor shall provide submittals electronically to Architect. Architect will provide to Engineer for review and comment. Engineer will return reviewed submittal to Architect for distribution to the Architect, Owner, and Contractor. Contractor will be responsible for providing and distributing Engineer's comments to their subcontractors.

EXCAVATION PROTECTION

1. The sides of all excavations greater than 5'-0" in depth shall be laid back to a slope of 2 horizontal to 1 vertical, unless the following applies:
   A. A steeper slope is allowed by the Geotechnical Engineer for the particular location and site conditions in question.
   B. A temporary retention system is indicated on the Structural Drawings.
   C. An alternative protective system is submitted by the Contractor and allowed by the Owner.

2. Contractor shall submit drawings and calculations sealed by a Registered Engineer licensed in the state having jurisdiction at the project site for the design of any temporary retention or alternative protective systems. Temporary retention or alternative protective systems shall be designed to resist the soil pressures stipulated in the referenced geotechnical report. In addition, the design shall consider surcharges created by construction equipment, excavation spoil, and other surface encumbrances.

3. Contractor shall comply with all Occupational Safety and Health Administration standards and all other regulatory agency standards regarding excavation safety.

SITE PREPARATION

2. After demolition of the existing structure, construction areas shall be stripped of all vegetation,concrete, loose soils, fill soils, top soils, construction debris, and other unsuitable materialcurrently present at the site. Roots of trees to be removed within construction areas, if any, shallbe grubbed to full depths, including the dry soil around the roots. All remnants of existingfoundations shall be completely excavated and removed to at least 2 feet below finished grades.If any unusual items are unearthed during or after demolition, please contact us for furtherevaluation. A geotechnical engineer shall be retained to assist in evaluating exposed subgradesduring earthwork so that unsuitable materials, if any, are removed at the time of construction.

3. Once initial subgrade elevations have been achieved (i.e., after cuts but prior to fills), the exposed subgrade in all construction areas (except landscaping) shall be carefully and thoroughly proof-rolled with a 20-ton pneumatic roller, fully-loaded dump truck, or similar equipment to detect weak zones in the subgrade. Proof-rolling is not necessary in intact Stratum 3 limestone subgrade areas. Weak areas detected during proof-rolling, zones containing debris or organics, and voids resulting from removal of tree roots, existing foundation elements, utilities, fill, boulders, etc. shall be removed and replaced with soils exhibiting similar classification, moisture content, and density as the adjacent in-situ soils (or flowable fill).

4. The Edwards Formation limestone could exhibit voids, clay-filled zones, and/or solution activity which may impact construction. If voids or other significant solution features are encountered during site preparation/excavation operations, the project geotechnical engineer shall be contacted to evaluate the feature from a geotechnical engineering standpoint.

5. For the proposed tennis court areas and 5ft beyond, the on-site soils be excavated at least 20 inches below the proposed slab. The removed soils shall be replaced with properly compacted select fill within all structural areas up to final grades. If Stratum 3 limestone is encountered within 12 inches of the final subgrade elevation, the limestone shall beover excavated such that at least 6 inches of properly compacted select fill can be provided under the gravel layer.

6. Structural fill/select fill underneath the tennis court and 5 feet beyond shall consist of CL, SC, and/or GC soils according to the USCS Classification system. Select fill shall also comply with one of the following:
   - TxDOT Item 247, Type A, Grade 3
   - Percent retained on No. 4 Sieve ≤ 40 percent with 5≤PI≤20 and rocks ≤ 4 inches in maximum dimensions
   - Crushed concrete (TxDOT Item 247, Type D, Grade 3 or better)

7. Select fill shall consist of approved materials free of organic matter and debris. A sampleof each material type shall be submitted to the Geotechnical Engineer for evaluation prior to use on this site.

8. Based on the laboratory testing performed during this exploration, the excavated Stratum 1 soils are not suitable for re-use as select fill.

9. The excavated Stratum 2 soils and Stratum 3 limestone material may be acceptable for re-use as select fill provided that it is processed to meet the Structural Fill performance criteria above and as approved by the project geotechnical engineer. After initial processing of the fill material, samples shall be submitted to the project geotechnical engineer for evaluation of proper gradation, plasticity index, and maximum rock size priorto re-use as select fill. Periodic testing shall be performed throughout the material excavationphase to check for conformance with the select fill requirements given above as reccomended by the project geotechnical engineer.

10. Structural fill/select fill less than 5 feet in depth shall be compacted to 95% of the maximum dry unit weight per the standard proctor trst (ASTM D698) at a moisture content of within 3% of optimum.

11. Structural fill/select fill greater than 5 feet in depth shall be compacted to 100% maximum dry unit weight per the standard proctor trst (ASTM D698) at a moisture content of within 3% of optimum.

12. Structural fill shall be placed in 8 inch loose lifts when more than 3feet away from retaining walls. When within 3 feet away from retaining walls, light construction equipment must be used and lift thickness shall be reduced to 4-6 in.

13. When the existing structures are demolished, the Earthwork Contractor may uncover structure pad select fill. The Contractor shall perform several test pit excavations (under observation of the geotechnical engineer) in the fill pad area to assess the thickness of the existing select fill. At that same time,the project geotechnical engineer shall obtain samples for testing to ensure the existing select fill meets the project structural fill requirements.

14. The upper 6 in of select fill may be replaced with crushed limestone at the contractor's option.

15. Provide a vapor retarder that conforms to ASTM E1745, Class A or better with a maximum water vapor permeance of 0.01 perms per ASTM E96. Vapor retarder shall be no less than 15 mils thick.

16. The above recommendations have been prepared in accordance with the referenced geotechnical report.

CONTROLLED BACKFILL BEHIND BASEMENT AND RETAINING WALLS

1. Backfill material shall be clean gravel compacted to between 95% and 100% of Standard Proctor (ASTM D 698) maximum dry density. Backfill shall not be overcompacted.

2. Compaction and moisture content of controlled backfill shall be verified by an independent testing laboratory.

3. The top 2 ft of material below the ground surface shall consist of relatively impervious material, with a liquid limit between 40 and 50 percent and a plasticity index between 20 and 30. This material shall be placed in 6" lifts and compacted at optimum moisture content, to 95 percent of the maximum density per ASTM D698.

4. Backfill material shall not be placed against foundation walls until all supporting slabs, beams, struts, etc., have attained their 28 day design strength unless proper bracing is installed.

5. Where backfill is required on both sides of a structure or building element, backfill shall be placed simultaneously along both sides so that the backfill height on one side does not exceed the height on the opposite side by more than 4'-0".

6. Compaction and moisture content of subgrade and each lift of structural fill shall be inspected and approved by a qualified engineering technician, supervised by a Geotechnical Engineer.

7. Design of retaining walls is based on equivalent hydrostatic pressures of 36 pcf, assuming free draining backfill and use of weep holes.

8. The above recommendations have been prepared in accordance with the referenced geotechnical report.

DESIGN BY OTHERS

1. In accordance with the Specifications the items listed below are not included in the Contract Documents. Design of these elements shall be the responsibility of the Contractor, and shall be designed and sealed by a registered professional engineer licensed in the state having jurisdiction at the project site.
   A. Guardrail and Handrail Systems
   B. Excavation Support and Protection
   C. Specialty Retention Systems

2. Design of the items listed above shall be in accordance with the General Building Code, and shall include all attachments to the structure.

DEFERRED SUBMITTALS

1. In accordance with the General Building Code, Section 107.3.4.2, the following submittals will not be issued at the time of permit application, and will be "deferred" to a later date. Deferred submittals are required to be submitted to the Building Official. However, these submittals shall be submitted and approved by the Registered Design Professional in Responsible Charge (RDPiRC) prior to submitting to the Building Official. Deferred submittals are design items being delegated to the Contractor which shall be designed and sealed by a registered professional engineer licensed in the state having jurisdiction at the project site.

2. The following structural components shall be treated as deferred submittals:
   A. Guardrail and Handrail Systems
   B. Excavation Support and Protection
   C. Specialty Retention Systems

3. Design of the items listed above shall be in accordance with the General Building Code, and shall include all attachments to the structure.

4. Work associated with Deferred Submittals shall not be performed until the deferred submittal documents have been approved by the Building Official.

5. Refer to the Contract Documents for additional Deferred Submittal items.

SHEET LIST

ENCOTECH ENGINEERING CONSULTANTS
TBPE Firm 1141 | 8500 Bluffstone Cove, Suite B-103 Austin, Texas 78759 | 512.338.1101

STATE OF TEXAS
HAMZAH KHATAW
132935
LICENSED
PROFESSIONAL ENGINEER
10/04/2024

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TBAE FIRM REGISTRATION NO.: 1452
TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

STRUCTURAL NOTES

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-001

FILE: C:\Users\Hamzah.Khataw\Documents\22027 - Western Hills AC - 2022_Hamzah.Khataw.rvt

CONCRETE FOOTINGS

1. Concrete footing design is based on an allowable net bearing capacity of 4,000 psf in accordance with the referenced geotechnical report.
2. Bearing stratum shown on the footing details is Stratum 3 Limestone.
3. Footings not specifically located on the plan shall be located on centerline of pilaster or column above. Where no pilaster or column occurs, locate on centerline of wall or beam.
4. Elevation of top of plinths/footings, unless noted otherwise on the Structural Drawings, is at the bottom of the deepest intersecting beam or wall supported by the footing.
5. Footing excavations shall be to neat lines and shall be free of loose or wet materials.
6. Footing reinforcing and concrete shall be placed immediately after excavations are complete; in no case shall a footing be excavated that cannot be placed by the end of the workday.
7. Reinforcing steel shop drawings shall include placing drawings for templates to set dowels in footings.
8. All footings shall be inspected by a representative of a qualified Geotechnical Engineering firm in order to ensure that the proposed bearing material has been reached in accordance with the recommendations given in the referenced geotechnical report and that the footing has been constructed to specified size, with detailed reinforcing, and to specified tolerances.

CAST-IN-PLACE CONCRETE

1. Classes of Concrete: All concrete shall conform to the requirements as specified in the table below, unless noted otherwise on the Structural Drawings:

Concrete Mix Schedule

DESCRIPTION OF USE	STRENGTH (psi)	AGG. TYPE	AGG. SIZE	SLUMP (inches)	MAX W/C	EXPOSURE CLASSES	AIR CONTENT
Grade Beams and Footings	3000	NWT	1 1/2"	5-7	-	F0/S0/W0/C1	-
Slab-on-Grade	3000	NWT	1"	3-5	-	F0/S0/W0/C1	-
Retaining Walls	3000	NWT	1"	3-5	0.45	F0/S0/W0/C1	3 - 6%

A. "NWT" refers to normal concrete having air dry unit weight of approximately 145 PCF (ASTM C33 aggregate).
B. Where w/c ratio is not indicated in the Concrete Mix Schedule, it shall be as necessary to meet strength requirements.
C. Where the w/c ratio is shown, it shall be adhered to regardless of strength requirements.
D. "Strength" is required compressive cylinder strength at an age of 28 days.

1. A maximum of 20% of the cementitious materials used in mix designs may be replaced with class C or F fly ash.
2. Provide 5 percent plus or minus 1 1/2 percent of entrained air in concrete permanently exposed to the weather and elsewhere at the contractor's option.
3. Horizontal construction joints in concrete placements shall be permitted only where indicated on the Structural Drawings. All vertical construction joints shall be made in the center of spans in accordance with the typical details. Contractor shall submit proposed locations for construction joints not shown on the Structural Drawings for review by the Architect and Engineer. Additional construction joints may require additional reinforcing as specified by the Engineer which shall be provided by the contractor at no additional cost to the owner.
4. Embedded conduits, pipes, and sleeves shall meet the requirements of ACI 318, Section 26.8, including the following:
   A. Conduits and pipes embedded within a slab, wall, or beam (other than those passing through) shall not be larger in outside dimension than 1/3 the overall thickness of the slab, wall or beam in which they are embedded.
   B. Conduits, pipes and sleeves shall not be spaced closer than three diameters or widths on center.
5. Concrete placements shall not exceed 10,000 square feet or 100 linear feet on each side without prior approval by the engineer for each placement.
6. Submittal: Submit proposed mix designs in accordance with ACI 301, chapter 3.9. Each proposed mix design shall be accompanied by a record of past performance based on at least 30 consecutive strength tests, or by three laboratory trial mixtures with confirmation tests.
7. Concrete sampling for quality assurance: Concrete that is pumped shall be sampled at the point of discharge from the truck.
8. For each concrete mixture on the project placed in any one day, obtain samples of fresh concrete in accordance with ASTM C172.
9. Obtain one composite sample for each 150 cubic yards of concrete or 5000 square feet of surface area of slabs or walls, or fractions thereof.
10. Each sample used to mold strength test specimens (ASTM C31) shall be tested for slump (ASTM C143), air content (ASTM C231), and temperature (ASTM C138).
11. Conduct strength tests by making and curing test specimens in accordance with ASTM C31 and testing them according to ASTM C39. Test one (1) cylinder at 7 days for information. Concrete strengths for acceptance shall be the average of two (2) 6" by 12" or three (3) 4" by 8" cylinders tested at 28 days.
12. Inspect all forms, foundation preparation, reinforcement, embedded items, and reinforcement placement prior to placement of concrete for compliance with the contract documents and shop drawings. All instances of non-compliance shall be immediately brought to the attention of the contractor for correction.
13. Report test and inspection results to the owner, Architect/Engineer, contractor, and concrete supplier within 7 days after the tests and inspections were performed.

CONCRETE REINFORCING

1. Concrete reinforcement for the project shall conform to the following:
   A. All reinforcing steel shall be new billet steel in accordance ASTM A615, Grade 60, unless noted otherwise in the Structural Drawings or these notes.
2. Detailing of reinforcing steel shall conform to the American Concrete Institute 315 Detailing Manual and all hooks and bends in reinforcing bars shall conform to ACI detailing standards, unless noted otherwise on the Structural Drawings.
3. In unscheduled grade beams, walls, and slabs, detail reinforcing as follows:
   A. Class A lap beam top reinforcing bars at mid span.
   B. Class A lap beam bottom reinforcing bars at the supports.
   C. Provide Class B lap at other location pending Engineer's approval.
   D. Provide standard hooks in top bars at cantilever and discontinuous ends of beams, walls and slabs.
   E. Provide corner bars for all horizontal bars at the inside and outside faces of intersecting beams or walls. Corner bars are not required if horizontal bars are hooked.
   F. Provide 2-#4 diagonal bars at all slab re-entrant corners placed under the top mat of steel.
4. Welding of reinforcing steel will not be permitted unless specifically shown on the Structural Drawings.
5. Heat shall not be used in the fabrication or installation of reinforcement.
6. Reinforcing steel clear cover shall be as follows:
   A. Footings 3"
   B. Slab-on-grade 3/4" top
   C. Walls 2"
7. Submittal: Submit shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Details and Detailing of Concrete Reinforcement". Do not reproduce the Structural Drawings for use as shop drawings.

POST-TENSIONED SLAB-ON-GRADE

1. Tendon placement, integrity of protective wrapping, and stressing operation shall be observed by the Testing Laboratory.
2. Post-tensioning reinforcing shall be 1/2 inch diameter, seven wire, stress relieved strand conforming to ASTM A416 with a minimum yield strength of 270 ksi.
3. All anchorages, couplers and miscellaneous hardware shall be standard products as manufactured by the Post-Tensioning Supplier and shall be approved by ICC-ES. Anchorages shall conform to ACI 318. Minimum concrete cover over anchorages shall be 2 inches.
4. Tendons shall be unbonded and protected from corrosion by plastic sheathing and grease conforming to the requirements of PTI Specification for Unbonded Single Strand Tendons, latest edition. Sheathing shall have a minimum thickness of 25 mils. Sheathing shall be continuous between anchorages. Tears in sheathing shall be repaired.
5. Place a minimum of two #4 bars continuous along edges behind all slab anchorages, and two # 4 x 7'-0" hairpins at slab corners. Place a minimum of two #4 bars, horizontal and vertical, with appropriate development length behind all beam anchorages. Provide additional bursting reinforcement where required by calculations.
6. Tendons shall be fabricated with sufficient length beyond edge form to allow stressing. Fixed end and intermediate anchors shall be placed on the tendon prior to shipment to the jobsite.
7. Tendons shall be placed to conform to the control points shown on the Structural Drawings. Profile dimensions locate the center of gravity of the tendon or tendon group steel (CGS) measured from the member soffit, unless noted otherwise.
8. Tendons shall be secured to a sufficient number of positioning devices, spaced at a maximum of 3'-6" on center, to ensure correct location during and after concrete placement. Twisting or entwining of individual tendons within a bundle shall not be permitted. A maximum of 5 strands may be bundled.
9. Slight deviations in the spacing of slab tendons will be permitted if required to avoid openings, inserts, and dowels which are specifically located. Tendons shall clear openings by 6" minimum, and shall have a maximum horizontal deviation of 1:6 beginning no closer than 2'-0" from opening edge. If tendons interfere with other tendons, contact the Engineer before relocating tendons.
10. Tendons shall not be stressed over 120 feet in a one end pull or 240 feet in a two end pull except as approved by the Engineer. A record of all initial stressing forces and elongations shall be made and submitted to the Engineer within 48 hours of stressing. Lift-off shall not be performed unless directed by the Engineer. Lift-off stressing force and elongations shall be submitted to the Engineer for review. Measured elongations shall not vary by more than 7% from the calculated values, except as approved the Engineer.
11. After stressing is complete and tendon elongations have been approved by the Engineer, tendons shall be cut (sheared) off to provide a minimum 3/4 inch cover. Fill anchor recesses flush with non-shrink epoxy grout.
12. If concrete is placed by pump, horses shall be provided to support the hose. The hose shall not be allowed to rest on the tendons. Concrete shall not be placed by bucket directly on the tendons. The Contractor shall take precautions to assure complete consolidation on concrete behind post-tensioning anchorages.
13. Embedded conduits, pipes, or sleeves shall not be placed within 18 inches of a post-tensioning anchorage.
14. Grout or concrete containing chlorides, fluorides, sulfides, nitrates, or other substances detrimental to prestressing steel shall not be used.
15. Contractor shall accurately locate post tensioned tendons prior to drilling or cutting the slab for installation of expansion anchors, etc. Post tensioned tendons shall not be damaged.
16. Provide two layers of 10 mil (or 15 mil) conforming to ASTM E1745 Class C (or Class A) over a 6 mil polyethylene vapor barrier under slab. Place in accordance with the manufacturer's directions.
17. Stress the slab tendons the day after concrete placement to 25% of the specified jacking force, minimum, or as determined by the PT supplier. Restress the tendons to 100% of the specified jacking force after the concrete has attained at least 75% of the specified 28 day strength.
18. Submittal: Contractor shall submit shop drawings showing the following:
   A. Tendon layouts and profiles, stressing and dead-end anchor details, stressing sequence, tendon forces and detail design calculations, openings and other related details.
   B. Calculations for tendon forces and elongations, anchorage stresses, and system losses.
   C. Certified mill reports for all prestressing reinforcing steel.

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TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

STRUCTURAL NOTES

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-002

2 OF 9

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SPECIAL INSPECTIONS

The following Statement and Schedules of Inspections are those Special Inspections and Tests that shall be performed for this project. Special Inspectors shall reference these plans and IBC Chapter 17 for all special inspection requirements.

The owner shall retain an "approved agency" per IBC 1703 to provide special inspections for this project. Special Inspectors shall be qualified persons per IBC 1704.2.1. Submit copies of all inspection reports to the Architect/Engineer and the Authority Having Jurisdiction for review. In addition to special inspection reports and tests, submit reports and certificates noted in IBC 1704.5 to the Authority Having Jurisdiction. Final special inspection reports will be required by each special inspection firm per IBC 1704.2.4.

STATEMENT OF SPECIAL INSPECTIONS:

This statement of Special Inspections has been written with the understanding that the Building Official will:

- Review and approve the qualifications of the Special Inspectors
- Monitor the special inspection activity on the project site to assure that Special Inspectors are qualified and performing their duty as state within this statement.
- Review all Special Inspection Reports submitted to them by the Special Inspector Perform inspections as required by IBC Section 110.3.

SPECIAL INSPECTION OF CONCRETE CONSTRUCTION

Special inspection and tests of concrete construction shall be performed in accordance with this section and Table 1705.3 with the following exceptions:

- Special inspections shall not be required for:
  1. Isolated spread concrete footings of buildings three stories or less above the grade plane fully supported on earth or rock.
  2. Continuous footings supporting walls of buildings three stories or less above the grade plane that are fully supported on earth or rock where:
     a. The footings support walls of light frame construction.
     b. The footings are designed in accordance with IBC Table 1809.7.
     c. The structural design of the footing is based on a specified compressive strength, f'_c , not more than 2,500 psi.
  3. Nonstructural concrete supported directly on the ground, including prestressed slabs on grade, where the effective prestress in the concrete is less than 150 psi
  4. Concrete foundation walls constructed in accordance with Table 1807.1.6.2.
  5. Concrete patios, driveways, and sidewalks, on grade.

SCHEDULES OF SPECIAL INSPECTIONS:

TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION TASK	FREQUENCY		REFERENCED STANDARD	IBC REFERENCE	REQUIRED? Y/N
	CONTINUOUS	PERIODIC			
1. Inspect reinforcement, including pre-stressing tendons, and verify placement.	—	X	AC I 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4	Y
2. Reinforcing bar welding: a. Verify weldability of reinforcing bars other than ASTM A706. b. Inspect single pass fillet weld maximum 5/16". c. Inspect all other welds.	— — X	X X —	AWS D1.4 ACI 318: 26.6.5	—	N/A
3. Inspect anchors cast in concrete.	—	X	ACI 318: 17.8.2	—	Y
4. Inspect anchors post-installed in hardened concrete members: a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. b. Mechanical anchors and adhesive anchors not defined in 4a.	X —	— X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	— —	Y Y
5. Verify use of required design mix.	—	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1-3	Y
6. Prior to concrete placement, fabricate specimens, for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C172 ASTM C31 ACI 318: 26.12	1908.10	Y
7. Inspect concrete and shotcrete placement for proper application techniques.	X	—	ACI 318: 26.5	1908.6-8	N/A
8. Verify maintenance of specified curing temperature and techniques.	—	X	ACI 318 :26.5.3 - 26.5.5	1908.9	Y
9. Inspect Prestressed concrete for: a. Application of prestressing forces. b. Grouting of bonded prestressing tendons.	X X	— —	ACI 318: 26.10	— —	N/A N/A
10. Inspect erection of precast concrete members.	—	X	ACI 318: 26.11.2	—	N/A
11. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318: 26.11.2	—	Y
12. Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	X	ACI 318: 26.11.1.2(b)	—	Y

TABLE 1705.6
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

VERIFICATION AND INSPECTION TASK	FREQUENCY DURING TASK LISTED		REQUIRED? Y/N
	CONTINUOUS	PERIODIC	
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	—	X	Y
2. Verify excavations are extended to proper depth and have reached proper material.	—	X	Y
3. Perform classification and testing of compacted fill materials	—	X	Y
4. Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill.	X	—	Y
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	—	X	Y

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TBPLS FIRM REGISTRATION NO.: 10065600

NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"

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CODE REQUIRED SPECIAL INSPECTIONS

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-003

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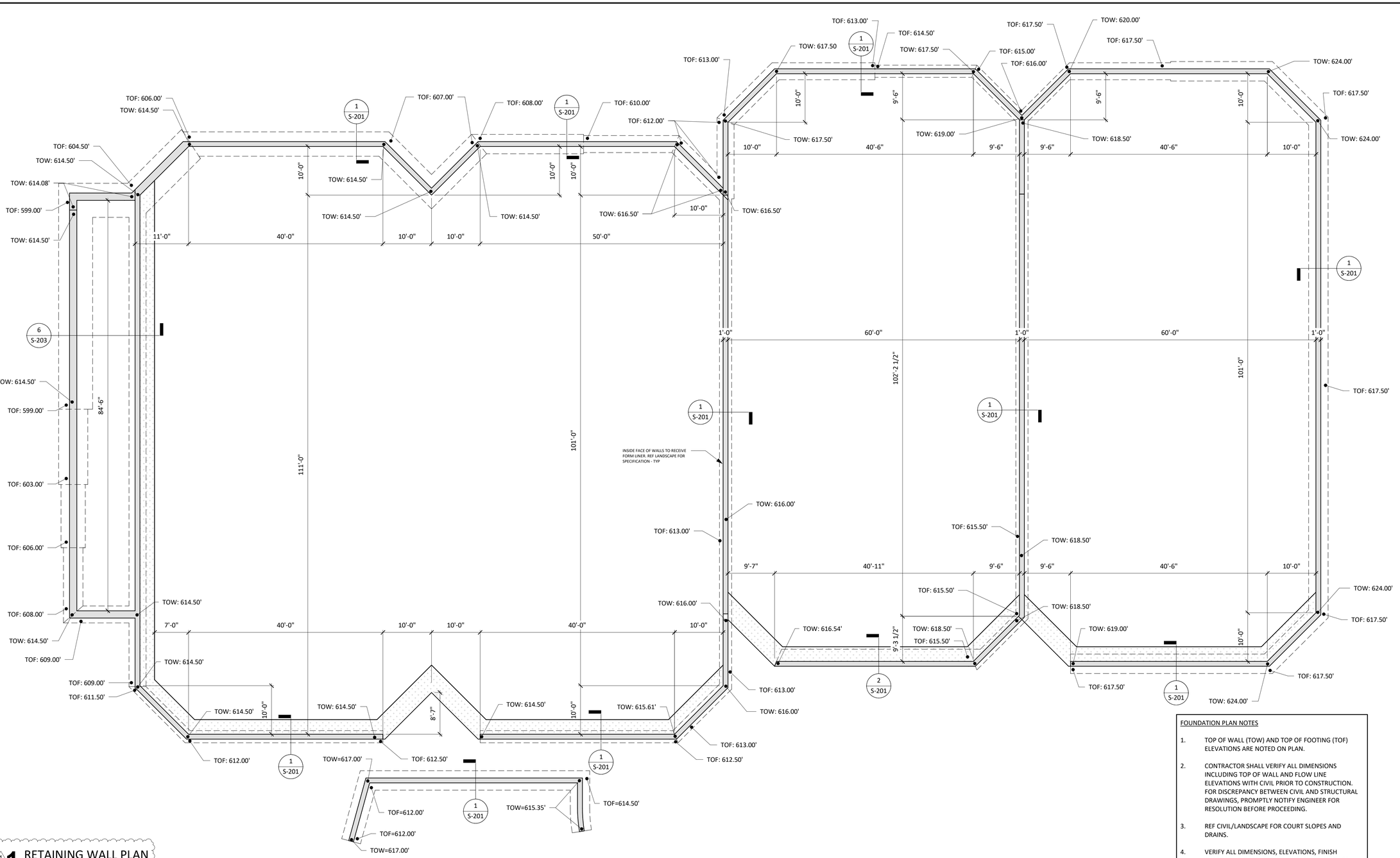

1 RETAINING WALL PLAN

SCALE: 1" = 10'-0"

FOUNDATION PLAN NOTES

1. TOP OF WALL (TOW) AND TOP OF FOOTING (TOF) ELEVATIONS ARE NOTED ON PLAN.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS INCLUDING TOP OF WALL AND FLOW LINE ELEVATIONS WITH CIVIL PRIOR TO CONSTRUCTION. FOR DISCREPANCY BETWEEN CIVIL AND STRUCTURAL DRAWINGS, PROMPTLY NOTIFY ENGINEER FOR RESOLUTION BEFORE PROCEEDING.
3. REF CIVIL/LANDSCAPE FOR COURT SLOPES AND DRAINS.
4. VERIFY ALL DIMENSIONS, ELEVATIONS, FINISH SURFACES, SLOPES, DRAINS, CURBS, ETC. WITH CIVIL DRAWINGS PRIOR TO START OF CONSTRUCTION.

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NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"

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RETAINING WALL PLAN

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-101

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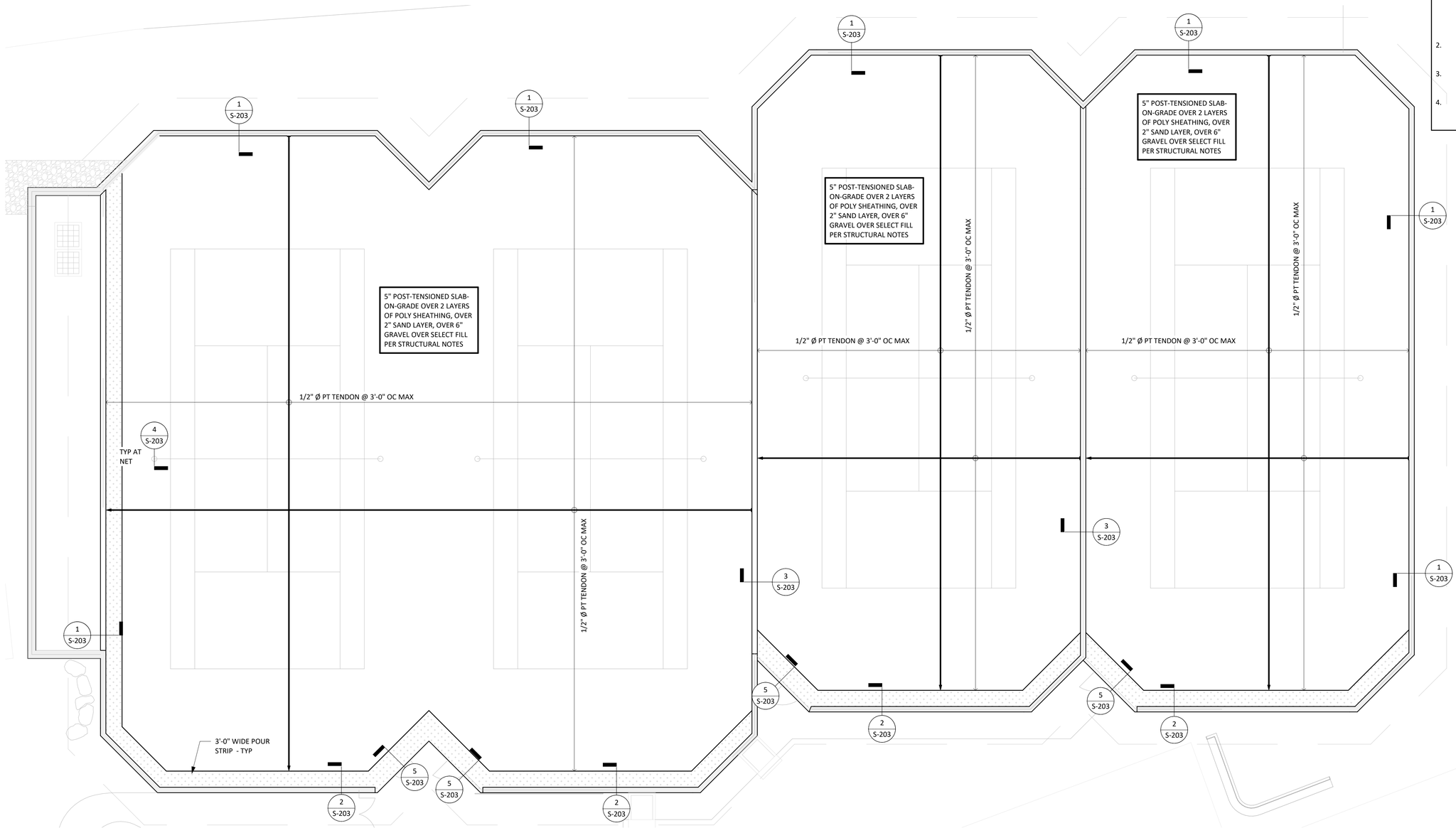

1 TENNIS COURT PLAN
SCALE: 1" = 10'-0"

FOUNDATION PLAN NOTES

1. PT TENDIONS ARE INDICATED AS FOLLOWS:

2. PT TENDONS SHALL BE STRESSED TO 27.3 KIPS PER TENDON AFTER ALL CALCULATED LOSSES.
3. REF CIVIL/LANDSCAPE FOR COURT SLOPES AND DRAINS.
4. VERIFY ALL DIMENSIONS, ELEVATIONS, FINISH SURFACES, SLOPES, DRAINS, CURBS, ETC. WITH CIVIL DRAWINGS PRIOR TO START OF CONSTRUCTION.

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NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"
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TENNIS COURT PLAN

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-102

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REINFORCEMENT SPLICE LENGTH SCHEDULE (SLABS, WALLS, & FOOTINGS)

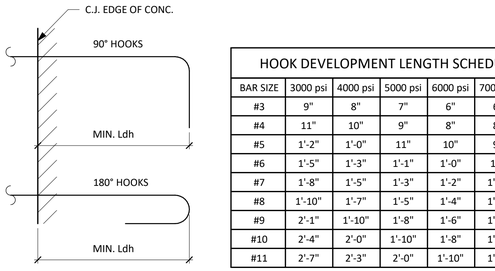
	f'c=3000 psi CONCRETE		f'c=4000 psi CONCRETE		f'c=5000 psi CONCRETE		f'c=6000 psi CONCRETE		f'c=7000 psi CONCRETE		f'c=8000 psi CONCRETE	
CLASS / BAR SIZE	"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"
#3	1'-0"	1'-1"	1'-1"	1'-1"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
#4	1'-1"	1'-5"	1'-0"	1'-3"	1'-0"	1'-1"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
#5	1'-8"	2'-2"	1'-5"	1'-10"	1'-3"	1'-8"	1'-3"	1'-6"	1'-1"	1'-5"	1'-0"	1'-4"
#6	2'-3"	3'-1"	'1-11"	2'-6"	1'-9"	2'-3"	1'-7"	2'-1"	1'-4"	1'-11"	1'-4"	1'-9"
#7	3'-8"	4'-9"	3'-2"	4'-1"	2'-10"	3'-8"	2'-7"	3'-4"	2'-5"	3'-1"	2'-3"	2'-11"
#8	4'-7"	5'-11"	4'-0"	5'-2"	3'-7"	4'-7"	3'-3"	4'-3"	3'-0"	3'-11"	2'-10"	3'-8"
#9	5'-7"	7'-3"	4'-10"	6'-4"	5'-2"	5'-7"	3'-9"	5'-1"	3'-8"	4'-9"	3'-5"	4'-5"
#10	6'-9"	8'-9"	5'-10"	7'-7"	5'-3"	6'-10"	4'-9"	6'-3"	4'-5"	5'-7"	4'-2"	5'-5"
#11	8'-0"	10'-5"	7'-11"	9'-0"	6'-2"	8'-0"	5'-8"	7'-4"	5'-3"	6'-10"	4'-11"	6'-4"

NOTE:

1. WHERE SPLICE TYPE IS NOT INDICATED, USE CLASS "B" SPLICE.
2. LAP LENGTHS LISTED ABOVE APPLY UNDER THE FOLLOWING CONDITIONS:
   A. WALL AND SLAB BARS ARE SPACED AT LEAST 2 BAR DIA OC.
   B. FOR UNCOATED AND ZINC-COATED (GALVANIZED) REINFORCEMENT.
   C. FOR REINFORCEMENT THAT CONFORMS DEFORMED NEW BILLET STEEL BARS IN ACCORDANCE TO ASTM A615 GR. 60.
3. FOR LIGHTWEIGHT CONCRETE, MULTIPLY TABULATIONS BY 1.3.
4. FOR HORIZ TOP BARS WITH 12" OF CONCRETE CAST BELOW, MULTIPLY TABULATIONS BY 1.3.
5. WHERE A LARGER BAR LAPS A SMALLER BAR, THE SMALLER SCHEDULED LAP LENGTH APPLIES.
6. WHERE DEVELOPMENT LENGTH "Ld" IS CALLED OUT ON DRAWINGS, USE CLASS A LAP LENGTH.
7. REFER TO "CONCRETE REINFORCING" SECTION OF THE STRUCTURAL NOTES FOR FURTHER INFORMATION.
8. FOR CMU REINFORCEMENT SPLICE LENGTH SCHEDULE, SEE CMU DETAILS.

LAP SPLICE SCHEDULE (SLABS, WALLS, & FOOTINGS)

1 TYPICAL DETAIL
SCALE: NTS



HOOK DEVELOPMENT LENGTH SCHEDULE, Ldh

BAR SIZE	3000 psi	4000 psi	5000 psi	6000 psi	7000 psi	8000 psi
#3	9"	8"	7"	6"	6"	6"
#4	11"	10"	9"	8"	8"	7"
#5	1'-2"	1'-0"	11"	10"	9"	9"
#6	1'-5"	1'-3"	1'-1"	1'-0"	11"	11"
#7	1'-8"	1'-5"	1'-3"	1'-2"	1'-1"	1'-0"
#8	1'-10"	1'-7"	1'-5"	1'-4"	1'-3"	1'-2"
#9	2'-1"	1'-10"	1'-8"	1'-6"	1'-5"	1'-4"
#10	2'-4"	2'-0"	1'-10"	1'-8"	1'-7"	1'-6"
#11	2'-7"	2'-3"	2'-0"	1'-10"	1'-9"	1'-7"

NOTES:

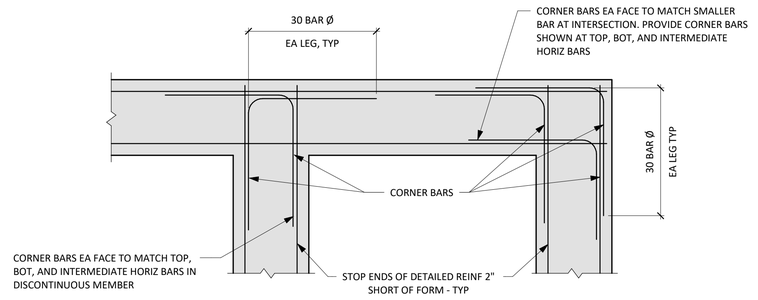
1. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE.
2. FOR TABULATED BARS SIZES ONLY:
   A. IF CONCRETE COVER SATISFIES ACI 318-14, SECTION 25.4.3.2, THEN A MODIFICATION FACTOR OF 0.7 MAY BE APPLIED BUT THE LENGTH MUST NOT BE LESS THAN 8 x db NOR 6 IN.
   B. IF HOOK IS ENCLOSED IN TIES OR STIRRUPS PER ACI 318-14, SECTION 25.4.3.2, THEN A MODIFICATION FACTOR OF 0.8 MAY BE APPLIES BUT THE LENGTH MUST NOT BE LESS THAN 8 x db NOR 6 IN.
3. FOR EPOXY-COATED HOOKS, MULTIPLY THE TABULATED VALUES BY 1.2.

STANDARD HOOK SCHEDULE

2 TYPICAL DETAIL
SCALE: NTS

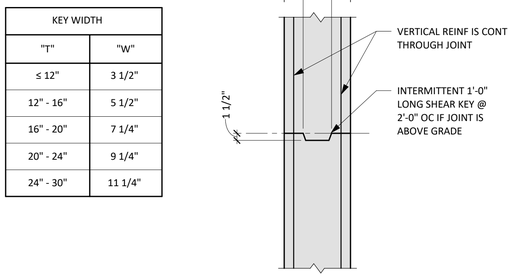
NOTES:

1. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR TOP BARS, CORNER BARS MAY BE OMITTED AT TOP. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR BOTTOM BARS, CORNER BARS MAY BE OMITTED AT BOTTOM.
2. MATCH SIZE, LOCATION AND NUMBER OF HORIZONTAL BEAM AND WALL BARS, EXCEPT THAT WHERE THERE ARE MORE THAN 2 TOP OR BOTTOM BARS, ONLY THE INSIDE AND OUTSIDE BARS MUST BE MATCHED.



CORNER BARS AT WALL OR GRADE BEAM INTERSECTION

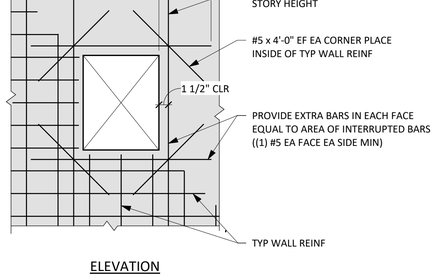
3 TYPICAL DETAIL
SCALE: NTS



KEY WIDTH	
"T"	"W"
≤ 12"	3 1/2"
12" - 16"	5 1/2"
16" - 20"	7 1/4"
20" - 24"	9 1/4"
24" - 30"	11 1/4"

HORIZONTAL CONSTRUCTION JOINT IN WALLS

4 TYPICAL DETAIL
SCALE:NTS



ELEVATION

CONCRETE WALL OPENING

5 TYPICAL DETAIL
SCALE: NTS

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NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"
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TYPICAL CONCRETE DETAILS

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

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6 OF 9

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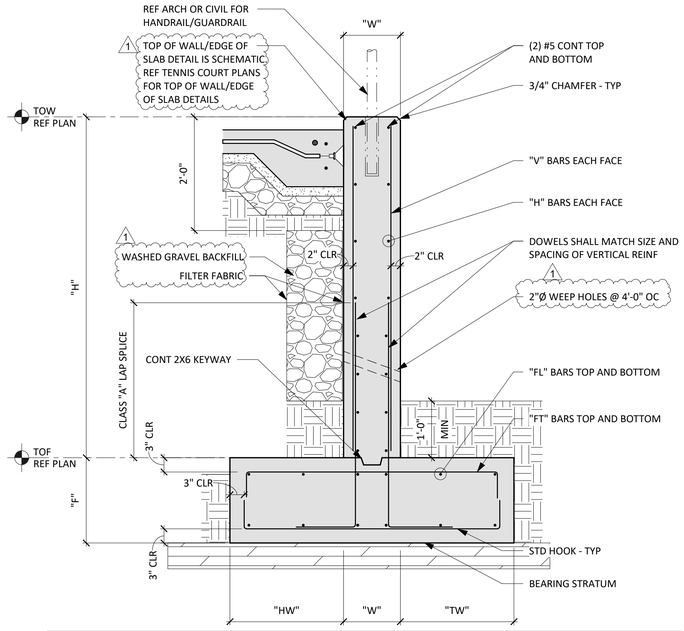


NOTES:

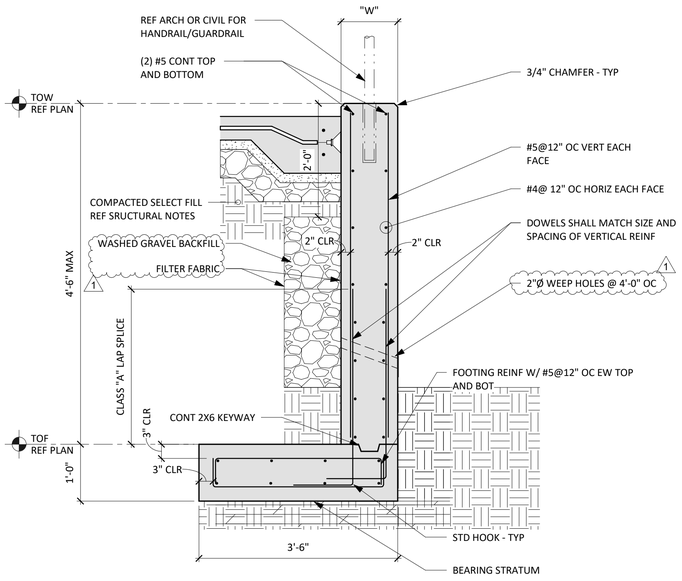
1. FOOTING SHALL BEAR ON STRATUM 3 LIMESTONE.
2. FOOTING EXCAVATION SHALL BE INSPECTED BY THE GEOTECHNICAL LABORATORY TO DETERMINE THAT THE PROPER BEARING STRATUM IS OBTAINED AND THAT EXCAVATIONS ARE PROPERLY CLEAN AND DRY BEFORE CONCRETE IS PLACED.
3. LOCATE CONTROL JOINTS AT 30'-0" OC MAX
4. LOCATE EXPANSION JOINTS AT 90'-0" OC MAX

DIMENSIONS					RETAINING WALL SCHEDULE REINFORCING			
"H"	"W"	"HW"	"TW"	"F"	"V"	"H"	"FT"	"FL"
≤3'-0"	1'-0"	0'-9"	0'-9"	1'-0"	#5@12"	#4@12"	#5@12"	#4@12"
≤4'-6"	1'-0"	1'-3"	1'-3"	1'-0"	#5@12"	#4@12"	#5@12"	#4@12"
≤6'-6"	1'-0"	1'-6"	1'-6"	1'-6"	#5@12"	#4@12"	#6@12"	#4@12"
≤8'-6"	1'-0"	2'-0"	2'-0"	1'-6"	#5@12"	#4@12"	#6@12"	#4@12"
≤10'-0"	1'-0"	2'-6"	2'-6"	1'-6"	#5@9"	#4@12"	#6@12"	#4@12"
≤15'-6"	1'-6"	3'-6"	2'-0"	1'-6"	#6@6"	#4@12"	#6@9"	#4@12"

TYPICAL RETAINING WALL DETAIL

1 TYPICAL DETAIL

SCALE: NTS



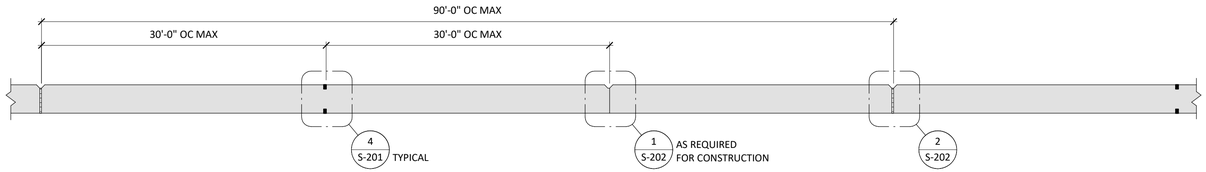
NOTES:

1. FOOTING SHALL BEAR ON STRATUM 3 LIMESTONE.
2. FOOTING EXCAVATION SHALL BE INSPECTED BY THE GEOTECHNICAL LABORATORY TO DETERMINE THAT THE PROPER BEARING STRATUM IS OBTAINED AND THAT EXCAVATIONS ARE PROPERLY CLEAN AND DRY BEFORE CONCRETE IS PLACED.
3. LOCATE CONTROL JOINTS AT 30'-0" OC MAX
4. LOCATE EXPANSION JOINTS AT 90'-0" OC MAX

RETAINING WALL SECTION

2 TYPICAL DETAIL

SCALE: NTS

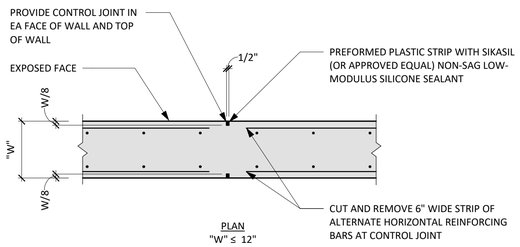


PLAN VIEW
WALLS ≤ 12" THICK

C-RET-TYP- RETAINING WALL JOINT DIAGRAM

3 TYPICAL DETAIL

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



PLAN
"W" ≤ 12"

RETAINING WALL CONTROL JOINT

4 TYPICAL DETAIL

SCALE: NTS

ENCOTECH ENGINEERING CONSULTANTS
TBPE Firm 1141 | 8500 Bluffstone Cove, Suite B-103 Austin, Texas 78759 | 512.338.1101

STATE OF TEXAS · HAMZAH KHATAW · 132935 · LICENSED PROFESSIONAL ENGINEER · 10/04/2024

mwm Design Group
305 East Huntland Drive
Suite 200
Austin, Texas 78752
p:512.453.0767
f:512.453.1734
TBAE FIRM REGISTRATION NO.: 1452
TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

TYPICAL CONCRETE DETAILS

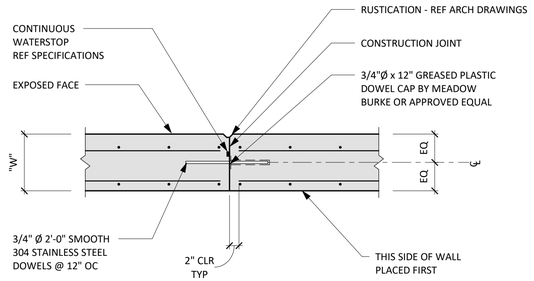
WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-201

7 OF 9

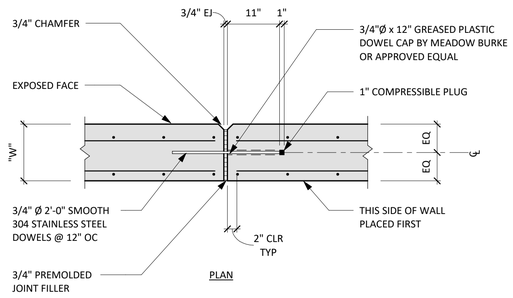
FILE: C:\Users\Hamzah.Khatkar\Documents\22027 – Western Hills AC – S22_HamzahKhatkar.rvt



RETAINING WALL CONSTRUCTION JOINT

1 TYPICAL DETAIL

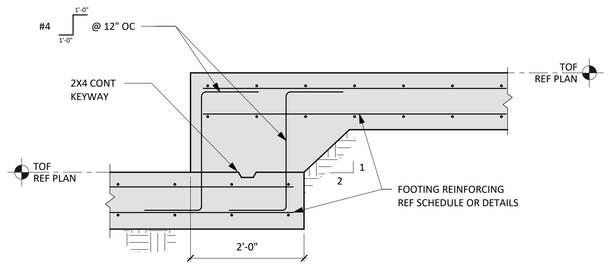
SCALE: NTS



RETAINING WALL EXPANSION JOINT

2 TYPICAL DETAIL

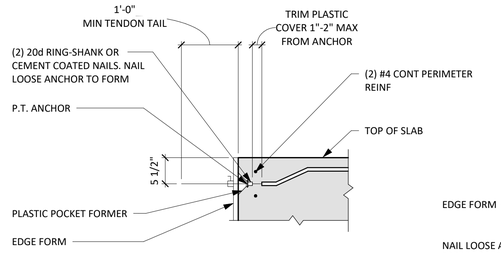
SCALE: NTS



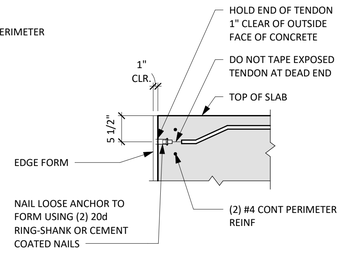
RETAINING WALL FOOTING STEP

3 TYPICAL DETAIL

SCALE: NTS



LIVE END

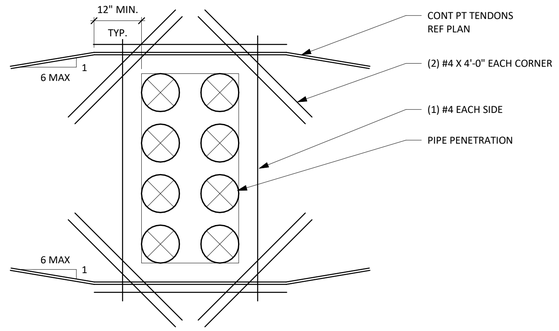


DEAD END

LIVE & DEAD ENDS

4 TYPICAL DETAIL

SCALE:NO SCALE



TENDON DEVIATION AT OPENING

5 TYPICAL DETAIL

SCALE:NO SCALE

ENCOTECH
ENGINEERING CONSULTANTS
TBPE Firm 1141 | 8500 Bluffstone Cove, Suite B-103
Austin, Texas 78759 | 512.338.1101

STATE OF TEXAS
HAMZAH KHATAW
132935
LICENSED
PROFESSIONAL ENGINEER
10/04/2024

mwm Design Group
305 East Huntland Drive
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p:512.453.0767
f:512.453.1734
TBAE FIRM REGISTRATION NO.: 1452
TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

TYPICAL CONCRETE DETAILS

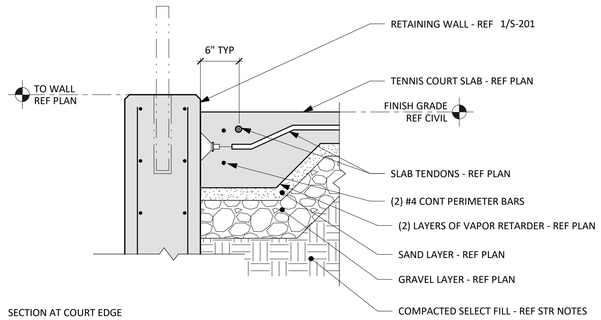
WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-202

8 OF 9

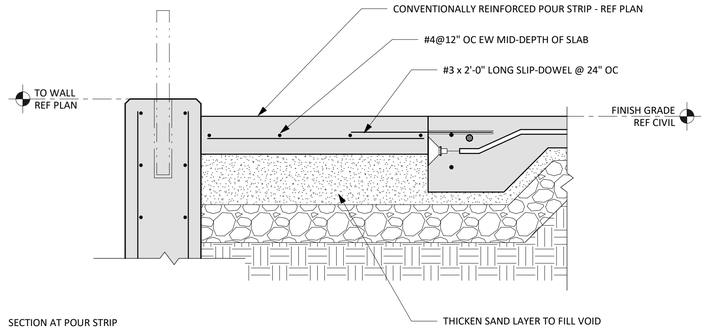
FILE: C:\Users\Hamzah.Khataw\Documents\23027 - Western Hills AC - SZZ_Hamzah.Khataw.rvt



SECTION AT COURT EDGE

1 DETAIL

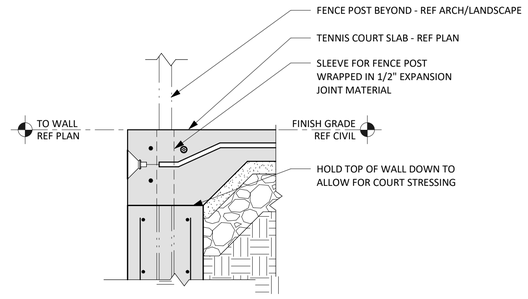
SCALE: 1" = 1'-0"



SECTION AT POUR STRIP

2 DETAIL

SCALE: 1" = 1'-0"



SECTION BETWEEN COURTS

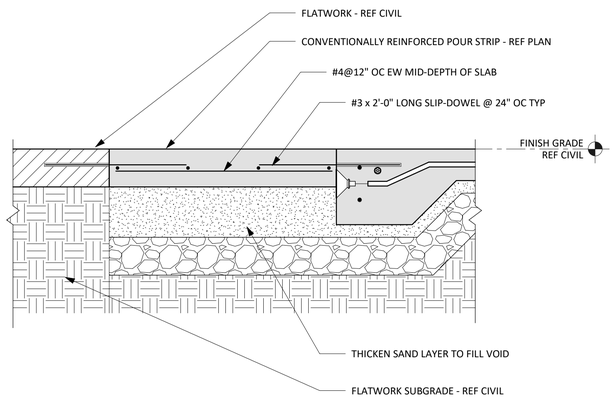
3 DETAIL

SCALE: 1" = 1'-0"

NET POST FOUNDATION

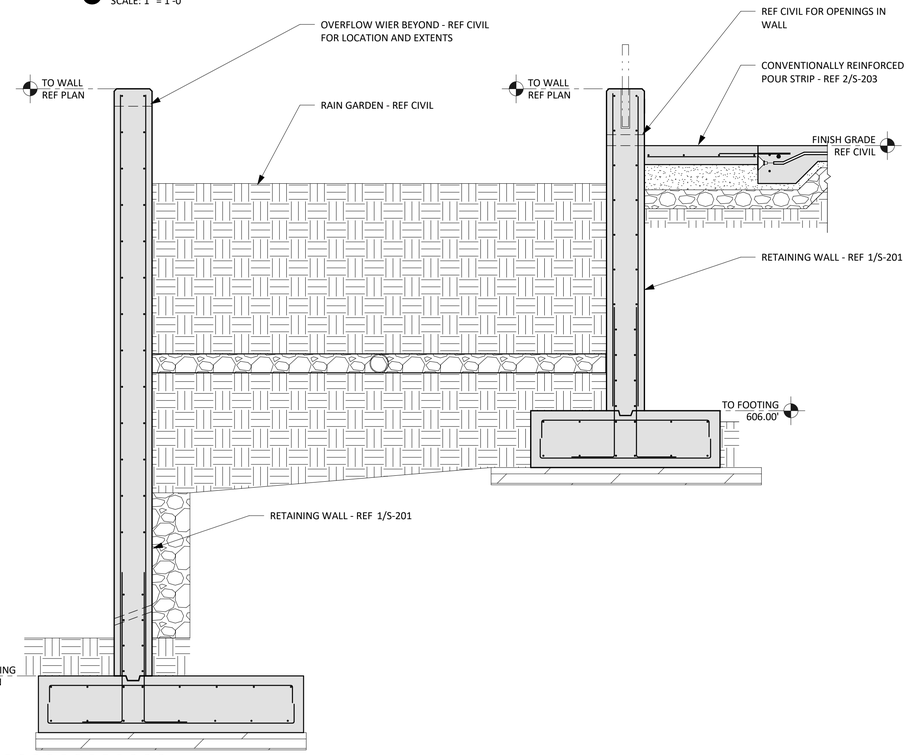
4 DETAIL

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



5 SECTION AT POUR STRIP WITH FLATWORK

SCALE: 1" = 1'-0"



1

6 SECTION AT RAIN GARDEN

SCALE: 1/2" = 1'-0"

ENCOTECH ENGINEERING CONSULTANTS
TBPE Firm 1141 | 8500 Bluffstone Cove, Suite B-103 Austin, Texas 78759 | 512.338.1101

STATE OF TEXAS
HAMZAH KHATAW
132935
LICENSED
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10/04/2024

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305 East Huntland Drive
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TBAE FIRM REGISTRATION NO.: 1452
TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

CONCRETE DETAILS

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-203

9 OF 9

FILE: C:\Users\Hamzah.Khataw\Documents\23267 - Western Hills AC - CD2_Hamzah.Khataw.rvt

TCEQ – 0600
Attachment G – Inspection, Maintenance, Repair, and Retrofit Plan

Below are the plans for the inspection, maintenance, repair, and retrofit of the bioretention water quality treatment best management practice (BMP).

Detention Pond and Bioretention Basin: Operation

The lower two tennis courts have dual use as a detention pond. The courts will pond water during storm events. Storm runoff from the upper courts and adjacent sidewalk areas will flow to the lower court. There are four 6” orifices that allow this runoff to exit the detention pond/lower courts and flow to the bioretention basin for water quality treatment.

The “first flush” of runoff will soak into the planting soil, through to a gravel layer, and eventually to the perforated PVC pipe underdrain. The PVC pipe underdrain will discharge to a concrete 4x4 overflow inlet located in the bioretention basin.

In heavy storm events, up to a foot of water will pond in the bioretention basin. Additional water in excess of the one foot of ponding depth will flow over the aforementioned concrete overflow inlet.

The overflow inlet discharges through a 10” PVC pipe, where it flows over a rip rap flow spreader to reduce flow velocity and prevent erosion.

Detention Pond: Maintenance Plan and Schedule

Inspect the four 6” outlets on the western wall of the detention pond are not obstructed before each expected rainfall and after all storm events greater than 1”.

Inspect the stone riprap outlet for sediment and debris after each rain event greater than 1”. Remove sediment and/or reposition the stones when 2” or more of sediment has accumulated in order to ensure a suitably rough surface for dissipating flow from the outlet.

After storm events, use of a roller, broom, or squeegee may be necessary to direct excess water to the four 6” outlets for faster draining/drying. Sediment and debris deposited during the storm event may be swept into the bioretention basin.

Bioretention Basin: Maintenance Plan and Schedule
(adapted from TCEQ guidance)

The primary maintenance requirement for bioretention areas is that of inspection and repair or replacement of the treatment area's components. Generally, this involves nothing more than the routine periodic maintenance that is required of any landscaped area. Plants that are appropriate for the site, climatic, and watering conditions should be selected for use in the bioretention basin. Appropriately selected plants will aide in reducing fertilizer, pesticide, water, and overall maintenance requirements (the original landscape plan contains suggested plants that will perform well in a bioretention basin).

Bioretention system components should blend over time through plant and root growth, organic decomposition, and the development of a natural soil horizon. These biologic and physical processes over time will lengthen the facility's life span and reduce the need for extensive maintenance.

Routine maintenance should include a semi-annual health evaluation of the trees and shrubs and subsequent removal of any dead or diseased vegetation. Diseased vegetation should be treated as needed using preventative and low-toxic measures to the extent possible. BMPs have the potential to create very attractive habitats for mosquitoes and other vectors because of highly organic, often heavily vegetated areas mixed with shallow water. Routine inspections for areas of standing water within the BMP and corrective measures to restore proper infiltration rates are necessary to prevent creating mosquito and other vector habitat.

In addition, bioretention BMPs are susceptible to invasion by aggressive plant species such as cattails, which increase the chances of standing water and subsequent vector production if not routinely maintained. In order to maintain the treatment area’s appearance it may be necessary to prune and weed.

Furthermore, mulch replacement is suggested when erosion is evident or when the site begins to look unattractive. Specifically, the entire area may require mulch replacement every two to three years, although spot mulching may be sufficient when there are random void areas.

New Jersey's Department of Environmental Protection states in their bioretention systems standards that accumulated sediment and debris removal (especially at the inflow point) will normally be the primary maintenance function. Other potential tasks include replacement of dead vegetation, soil pH regulation, erosion repair at inflow points, mulch replenishment, unclogging the underdrain, and repairing overflow structures.

Other recommended maintenance guidelines include:

- Inspections. BMP facilities should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or revegetated immediately.
- Sediment Removal. Remove sediment from the facility when sediment depth reaches 3 inches or when the sediment interferes with the health of ve getation or ability of the facility to meet required drawdown times. Sediment removal should be performed at least every 2 years.
- Drain Time. When the drain time exceeds 72 hours as observed in the observation well, the filter media should be removed and replaced with more permeable material.
- Vegetation. All dead and diseased vegetation considered beyond treatment shall be removed and replaced during semi-annual inspections. Diseased trees and shrubs should be treated during inspections. Remulch any bare areas by hand whenever needed. Replace mulch annually in the spring, or more frequently if needed, in landscaped areas of the basin where grass or groundcover is not planted. Grass areas in and around bioretention facilities must be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.
- Debris and Litter Removal. Debris and litter will accumulate in the facility and should be removed during regular mowing operations and inspections.
- Filter Underdrain. Clean underdrain piping network to remove any sediment buildup every 5 years, or as needed to maintain design drawdown time.

Signature of Responsible Party

Zachary Elkins _____ December4, 2024

Zach Elkins
President, Board of Directors
Western Hills Athletic Club

Date

TCEQ – 0600
Attachment I – Measures for Minimizing Surface Stream Contamination

There are no surface streams adjacent to or within close proximity of the site. The water treatment facilities proposed with this development consist of a bioretention basin. Detention facilities are provided, in part, to attenuate peak flows to their predevelopment rates. These measures will serve to minimize contaminants leaving the property and entering the downstream drainage system. There will be no adverse impact to surface streams.

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

I Zachary Elkins,
Print Name

Board of Directors-President,
Title - Owner/President/Other

of Western Hills Athletic Club,
Corporation/Partnership/Entity Name

have authorized Tomas Rodriguez
Print Name of Agent/Engineer

of MWM Design Group
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

Nov. 7, 2024
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Zachary Elkins 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 1 day of November, 2024.

NOTARY PUBLIC

Gloria Campos
Typed or Printed Name of Notary

GLORIA CAMPOS
NOTARY PUBLIC, STATE OF TEXAS
ID# 134517414
COMM. EXP. 08-21-2027
NOTARY WITHOUT BOND

MY COMMISSION EXPIRES: 8.21.2027

TCEQ - 0574

MWM DesignGroup
9001 N IH 35, Suite 102
Austin, TX 78753
512.453.0767

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Western Hills Athletic Club
Regulated Entity Location: 4801 Rollingwood Dr, West Lake Hills, TX 78746
Name of Customer: Western Hills Athletic Club
Contact Person: Zachary Elkins Phone: ___
Customer Reference Number (if issued):CN 604736876
Regulated Entity Reference Number (if issued):RN 106890072

Austin Regional Office (3373)

☐ Hays ☐ Williamson
☒ Travis

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

☒ Austin Regional Office ☐ San Antonio Regional Office

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

☐ 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	3.21 Acres	$ 4000
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	$

Type of Plan	*Size*	*Fee Due*
Extension of Time	Each	$

Signature: Zachary Elkins Date: December 4, 2024

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	***Fee***
Exception Request	$500

Extension of Time Requests

Project	***Fee***
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

☒ Other **Modification**

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 604736876		**RN 106890072**

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)*

Elkins, Zachary

If new Customer, enter previous Customer below:

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

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:

4801 Rollingwood Drive

City	West Lake Hills	**State**	TX	**ZIP**	78746	**ZIP + 4**	

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	zelkins@austin.utexas.edu / whacmanager@att.net

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

(0) 327-6373		( ) -

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.)*

Western Hills Athletic Club

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	4801 Rollingwood Drive							
	City	West Lake Hills	**State**	TX	**ZIP**	78746	**ZIP + 4**	
24. County	Travis							

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

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

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.27538		**28. Longitude (W) In Decimal:**	97.78558	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	16	36.74	97	47	8.09

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)
7997	0203	713940	N/A

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

Membership Sports and Athletic Club

34. Mailing Address:								
	City		**State**		**ZIP**		**ZIP + 4**	
35. E-Mail Address:								

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 327-6373		( ) -

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:	Tomas Rodriguez	**41. Title:**	Project Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512 **)** 453-0767		**( )** -	tomas.rodriguez@mwmdg.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:	MWM Design Group	**Job Title:**	Project Manager	
Name *(In Print):*	Tomas Rodriguez		**Phone:**	**(** 512 **)** 453- **0767**
Signature:			**Date:**	12/5/2024