WATER POLLUTION ABATEMENT PLAN

2525 CR 172 INDUSTRIAL
2525 CR 172, ROUND ROCK, TX 78681
ROUND ROCK, WILLIAMSON COUNTY, TEXAS

Prepared For:

AMAZON.COM SERVICES, LLC
Amazon Tower 1
101 Platform Way N
Nashville, TN 37203
(901) 438-4156

Prepared By:

KIMLEY-HORN AND ASSOCIATES, INC.
10814 Jollyville Road, Avallon IV, Suite 200
Austin, TX 78759
(512) 418-1771

Firm No. 928
KHA Project No. 069284918

July 2024

TABLE OF CONTENTS

SECTION 1:
EDWARDS AQUIFER APPLICATION COVER PAGE

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: 2525 CR 172 Industrial						**2. Regulated Entity No.:** N/A			
3. Customer Name: Amazon.com Services, LLC						**4. Customer No.:** N/A			
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):**		76.61 acres	
9. Application Fee:	$ 8000		**10. Permanent BMP(s):**			StormTrap Up-Flo Filters			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			Lake Creek			

Application Distribution

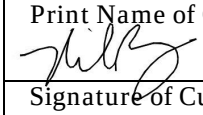
Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	__	__	X
Region (1 req.)	__	__	X
County(ies)	__	__	X
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer __Hays Trinity __Plum Creek	__Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos __Wimberley __Woodcreek	__Austin __Bee Cave __Pflugerville __Rollingwood __Round Rock __Sunset Valley __West Lake Hills	__Austin __Cedar Park __Florence __Georgetown __Jerrell __Leander __Liberty Hill __Pflugerville X 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. Nicholas C. Brown, P.E.
Print Name of Customer/Authorized Agent
 06/05/2024
Signature of Customer/Authorized Agent Date

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

SECTION 2:
GENERAL INFORMATION FORM

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: Nicholas C. Brown, P.E.

Date: 06/05/2024

Signature of Customer/Agent:

Project Information

1. Regulated Entity Name: 2525 CR 172 Industrial
2. County: Williamson
3. Stream Basin: Lake Creek
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

   [X] Recharge Zone
   [ ] Transition Zone

6. Plan Type:

   [X] WPAP
   [ ] SCS
   [ ] Modification
   [ ] AST
   [ ] UST
   [ ] Exception Request

7. Customer (Applicant):

Contact Person: David Barnett
Entity: Amazon.com Services, LLC
Mailing Address: Amazon Tower 1, 101 Platform Way N
City, State: Nashville, TN Zip: 37203
Telephone: 901-438-4156 FAX: N/A
Email Address: barnettu@amazon.com

8. Agent/Representative (If any):

Contact Person: Nicholas C. Brown, P.E.
Entity: Kimley-Horn and Associates
Mailing Address: 10814 Jollyville Rd, Avallon IV, Suite 200
City, State: Austin, TX Zip: 78759
Telephone: 512-418-1771 FAX: N/A
Email Address: nick.brown@kimley-horn.com

9. Project Location:

☐ The project site is located inside the city limits of _____.
☒ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of Round Rock.
☐ 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.

2525 CR 172

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: 05/31/2024

14. [X] **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:

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

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)
- [X] Undeveloped (Undisturbed/Uncleared)
- [ ] Other: _____

Prohibited Activities

16. [X] 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. [X] 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:

- [X] 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.

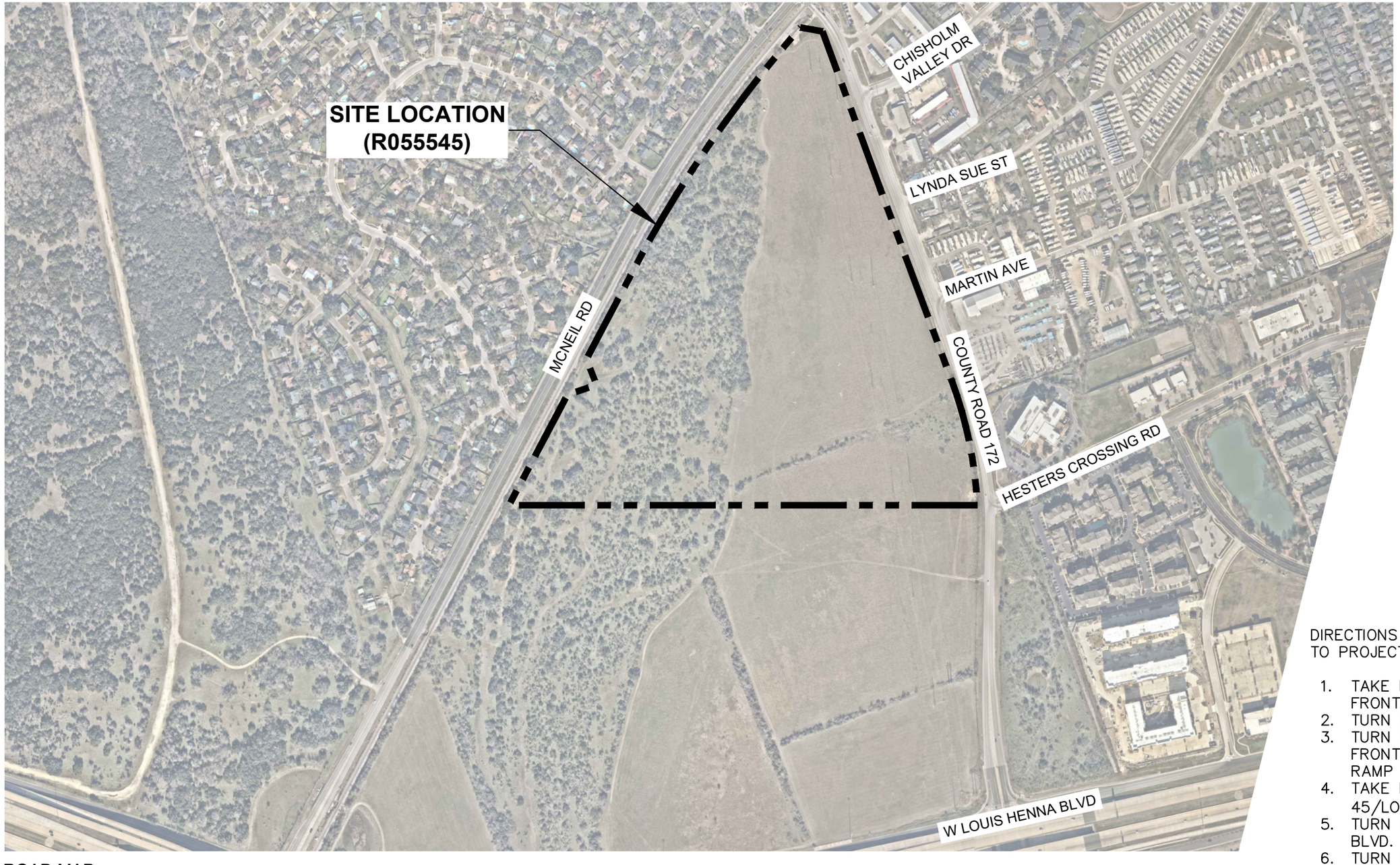
19. [X] Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

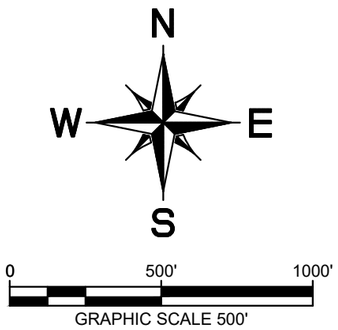
- [ ] TCEQ cashier
- [X] Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- [ ] San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

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

21. [X] 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.

ROAD MAP





DIRECTIONS FROM TCEQ HEADQUARTERS TO PROJECT SITE:

1. TAKE PARK 35 CIR TO S I-35 FRONTAGE RD.
2. TURN LEFT ONTO E BRAKER LN.
3. TURN LEFT ONTO N I-35 FRONTAGE RD AND TAKE THE RAMP ONTO I-35 N.
4. TAKE EXIT 250 TOWARDS TEXAS 45/LOUIS HENNA BLVD.
5. TURN LEFT ONTO W LOUIS HENNA BLVD.
6. TURN RIGHT ONTO COUNTY ROAD 172.

ROAD MAP

2525 CR 172 INDUSTRIAL

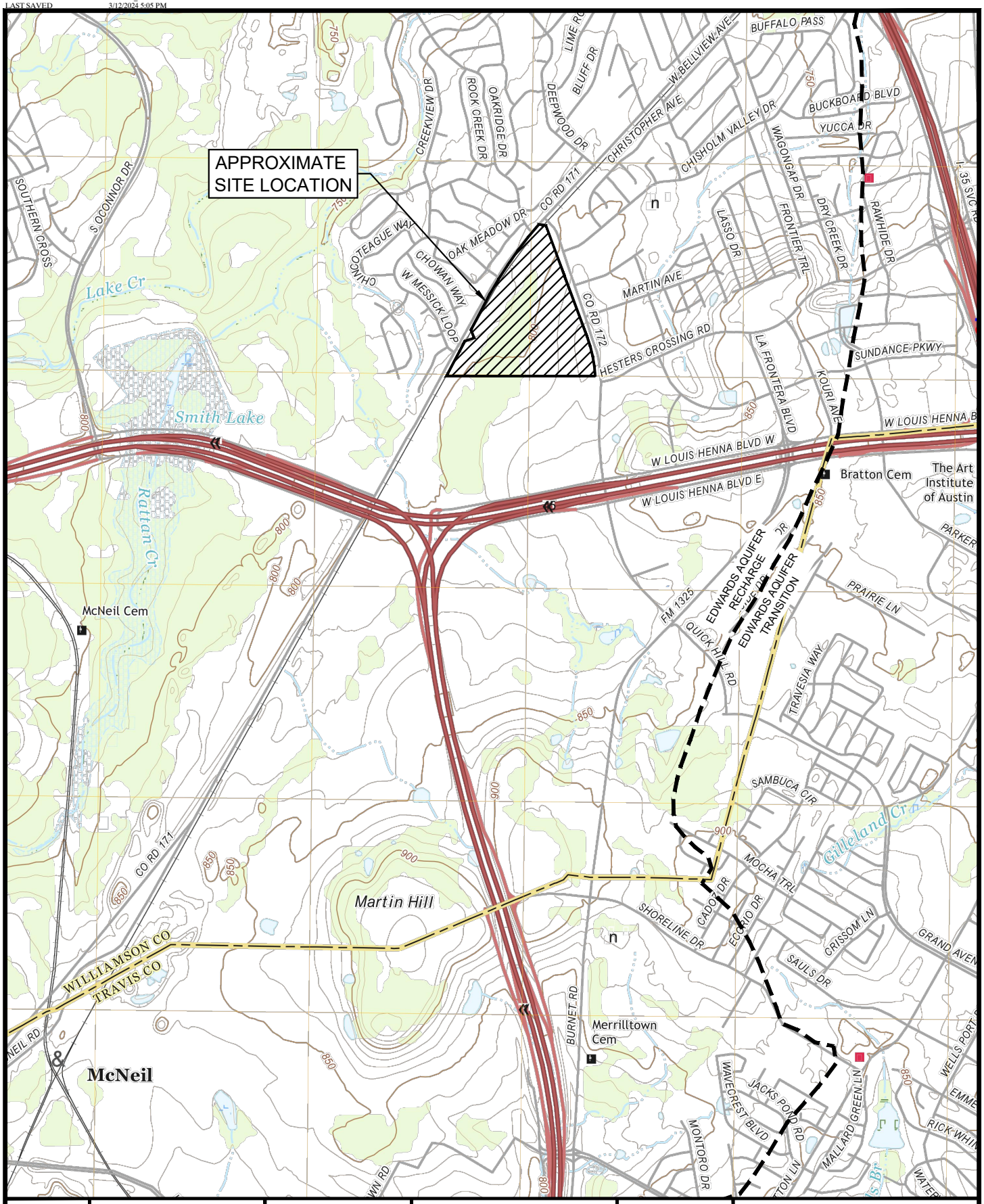
ROUND ROCK, TEXAS
MAY 2024

DWG NAME K:\AUS_CIVIL\069284910 - DAU3 ROUND ROCK\CAD\EXHIBITS\PLANSHEETS\TCEQ\ATTACHMENT A - ROAD MAP.DWG
LAST SAVED 5/6/2024 1:39 PM

Kimley»Horn
10814 Jollyville Road
Campus IV, Suite 200
Austin, TX 78759
512-418-1771
State of Texas Registration No. F-928

USGS / EDWARDS RECHARGE ZONE MAP

IMAGES
XREFS
PLOTTED BY MONEGRO, MELISSA 3/12/2024 5:08 PM
DWG NAME K:\AUS_CIVIL\069284910 - DAU3 ROUND ROCK\CAD\EXHIBITS\PLANSHEETS\TCEQ\ATTACHMENT B - USGS QUADRANGLE MAP.DWG
LAST SAVED 3/12/2024 5:05 PM



SHEET 1 OF 1 SHEETS	Scale: 1:2000 Designed by: MM Drawn by: MM Checked by: NCB Date: MAY 2024 Project No. 069284918	USGS / Edwards Recharge Zone Map	2525 CR 172 INDUSTRIAL	N W E S	Kimley»Horn

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-th-ground survey and represents only the approximate relative location of property boundaries.

PROJECT DESCRIPTION

The proposed 2525 CR 172 Industrial project located at 2525 CR 172 in Round Rock, Texas is located south of the McNeil Rd and County Road 172 intersection within the Round Rock City Limits. The property is currently zoned Planned Unit Development (PUD) 153. The current zoning supports the use of the proposed development. The proposed existing property is approximately 69.56-acres and the site is currently undeveloped. The proposed land use would be classified as Industrial. The proposed site also includes 7.05-acres of roadway improvements on CR 172.

The proposed improvements include one (1) story building along with pedestrian improvements, private drives, loading docks, parking, and associated site improvements. Parking will be provided onsite throughout the property and access is provided on CR 172. Additional improvements include roadway intersection and traffic signal updates.

This project is located within the Lake Creek Watershed, which is classified as a Suburban Watershed. A portion of this site is located within the 100-year Federal Emergency Management Agency (FEMA) floodplain as shown in the attached FEMA Flood Insurance Rate Map (FIRM) panel number 48491C0630F dated December 20, 2019, for Williamson County. A floodplain permit will not be required as we are not proposing any development within the floodplain. The site is located within the Edwards Aquifer Recharge Zone according to the TCEQ Edwards Aquifer Maps. A Critical Environmental Feature (CEF) is located on the property; however, no wastewater or site improvements are proposed within the CEF or associated setback.

The wastewater extension will serve a proposed industrial building and miscellaneous smaller buildings located on the property.

Demolition activity will be limited to tree removal and site grading.

SECTION 3:
GEOLOGICAL ASSESSMENT FORM

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: Dave Hill Telephone: 512-832-8005

Date: February 22, 2024 Fax: 512-837-8221

Representing: ECS Southwest, LLP (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:

Katherine Moore TBPG # 15137

Regulated Entity Name: 2525 CR 172 Industrial

Project Information

1. Date(s) Geologic Assessment was performed: February 22, 2024
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone
   - ☐ Contributing Zone within the Transition Zone

STATE OF TEXAS
KATHERINE MOORE
GEOLOGY
15137
LICENSED
PROFESSIONAL GEOSCIENTIST

5 June 2024

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)

** 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" = _____'
   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.

12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

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

13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.

14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☒ There are 1 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
    - ☒ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☐ The wells are in use and comply with 16 TAC Chapter 76.

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

Administrative Information

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

GEOLOGICAL ASSESSMENT TABLE

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME 51-3992 McNeil and CR 107

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	
Feature 1	30.478333	-97.704167	O	5		40	590	5					N	15	20	X				Drainage
Feature 2	30.478333	-97.701944	O	5		1200	70	3					O	15	20	X				Drainage
Feature 3	30.480833	-97.702778	O	5		35	73	2					N	15	20	X				Drainage
Feature 4	30.291	97.4151	SC	20		4	7	6					O	10	30	X				Hilltop
Feature 5	30.291	97.4152	SC	20		14	9	6					O	10	30	X				Hilltop
Water Well	30.2916	97.4151	MB	30		X	X	X					N	5	35	X				

* DATUM:_____

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

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

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

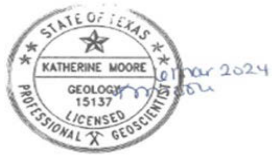
I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

_____ Date: February 22, 2024

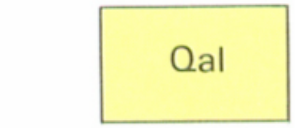
Sheet __1____ of _____

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

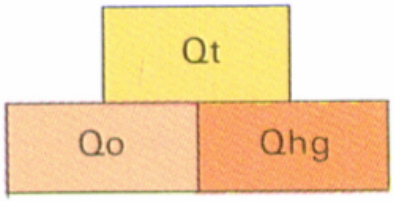


STRATIGRAPHIC COLUMN

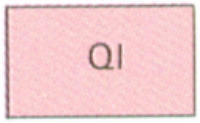
Stratigraphic Column
McNeil and CR 107
Roundrock, Williamson County, Texas



Alluvium



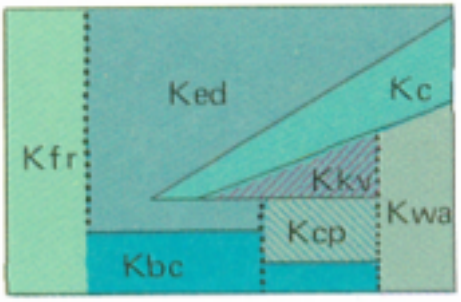
Fluviatile terrace deposits



Lissie Formation undivided

Eagle Ford Group and Buda Limestone

Del Rio Clay ("Grayson Marl") and Georgetown Formation



Fredericksburg Group

SITE GEOLOGY

GEOLOGIC ASSESSMENT

PROPOSED AUSTIN ROUND ROCK DEVLOPMENT
SOUTH CORNER OF CR 172 & MCNEIL ROAD
ROUND ROCK, WILLIAMSON COUNTY, TEXAS 78759

ECS PROJECT NO. 51:3992

FOR

KIMLEY-HORN

MARCH 6, 2024

March 6, 2024

Mr.Nick Brown
Kimley-Horn
10814 Jollyville Road, Avallon IV
Austin, Texas, 78759

ECS Project No. 51:3992

Reference: Geologic Assessment Report, Proposed Austin Round Rock Devlopment, South Corner of CR 172 & McNeil Road, Round Rock, Williamson County Texas

Dear Mr. Brown:

ECS Southwest, LLP (ECS) is pleased to provide Kimley-Horn with a Geologic Assessment for the above referenced property. ECS' services were conducted in accordance with the services outlined in ECS Proposal No. 51:5593 authorized on February 13, 2024

ECS did not observe recharge features on the site. ECS would like to thank Kimley-Horn for the opportunity to provide you with this Geologic Assessment. We look forward to assisting you further with this project and other environmental concerns you may have. If you have any questions, please feel free to contact us at any time at 512-837-8005.

Sincerely,

ECS Southwest, LLP

John Jones
Assistant Staff Project Manager
jjones5@ecslimited.com
512-837-8005

Katherine Moore, P.G.
Geologic Assessment
klmoore@ecslimited.com
512-837-8005

1.0 INTRODUCTION

The geologic assessment provided here, as part of the applicant's plan, addresses the required items as cited in Title 30 of the Texas Administrative Code (TAC), Part 1, Chapter 213, Subchapter A, Rule 213.5, relating to development over the Edwards Aquifer This report identifies observed potential pathways for contaminant movement into the underlying Edwards Aquifer as required by the Texas Commission on Environmental Quality (TCEQ).

The subject property is comprised of approximately 193.289 acres of undeveloped land. The subject property is identified by the Williamson County Central Appraisal District as portions of parcels R055545, located at South Corner of CR 172 & McNeil Road in Round Rock, Texas. The subject property is located over the Edwards Aquifer Recharge Zone.

The purpose of this Geologic Assessment is to fulfill the requirements for the applicant's plan for site improvements on the property. This report will describe surficial geologic units and identify the locations and extent of significant features that may impact the underlying Edwards Aquifer Recharge Zone.

2.0 SOIL UNITS

According to the United States Department of Agriculture (USDA) Soil Survey of Williamson County, Texas, there are nine (9) soil units mapped on the site (Figure 4). The soils on site consist of: Denton silty clay, 1 to 3 percent slopes, (DcB), Denton silty clay, 3 to 5 percent slopes, (DnC), Doss silty clay, moist, 1 to 5 percent slopes, (DoC), Eckrant cobbly clay, 1 to 8 percent slopes, (EaD), Eckrant stony clay, 0 to 3 percent slopes, stony, (EeB), Fairlie clay, 0 to 1 percent slopes, (FaA), Fairlie clay, 1 to 2 percent slopes, (FaB), Georgetown stony clay loam, 1 to 3 percent slopes, (GsB), and Heiden clay, 2 to 5 percent slopes, moderately eroded, (HedC2).

Denton silty clay, 1 to 3 percent slopes (DcB), and Denton silty clay, 3 to 5% slopes (DnC), The Hydrologic Soil Group is listed as D, The Denton series consists of deep, well-drained, slowly permeable soils that formed in clayey materials over residuum weathered from limestone bedrock of lower Cretaceous age (USDA, 2023). Flooding or ponding is reported as “none.” The depth to a restrictive layer is reported to be 22 to 60 inches to lithic bedrock, and the available water supply is listed as low, 0 to 60 inches.

Doss silty clay, moist, 1 to 5 percent slopes, (DoC). The Hydrologic Soil Group is listed as D, The Doss series consists of shallow to weakly cemented limestone, well drained, moderately slow permeable soils that formed in calcareous loamy and clayey residuum derived from marls and limestone. (USDA, 2023). Flooding or ponding is reported as “none.” The depth to a restrictive layer is reported to be 11 to 20 inches to lithic bedrock, and the available water supply is listed as very low, 0 to 60 inches.

Eckrant cobbly clay, 1 to 8 percent slopes, (EaD) and Eckrant cobbly clay, 0 to 3 percent slopes, stony (EeB), is formed on ridges derived from residuum weathered from limestone, very stony, (USDA, 2023). The Hydrologic Soil Group is listed as D, and the soil is well drained. Flooding or ponding is reported as “none.” The depth to a restrictive layer is reported to be 4 to 20 inches to lithic bedrock, and the available water supply is listed as very low, 0 to 60 inches.

Fairlie clay, 0 to 1 percent slopes, (FaA), and Fairlie clay, 1 to 3 percent slopes (FaB). The Fairlie series consists of deep, moderately well-drained, very slowly permeable soils (USDA, 2023). The Hydrologic Soil Group is listed as D, and the soil is well drained. Flooding or ponding is reported as “none.” The depth to a restrictive layer is reported to be 40 to 60 inches to paralithic bedrock, and the available water supply is listed as moderate, 0 to 60 inches.

Georgetown stony clay loam, 1 to 3 percent slopes, (GsB), The Georgetown series consists of moderately deep, well drained, very slowly permeable soils that have formed over indurated limestone of Cretaceous age (USDA, 2023). The Hydrologic Soil Group is listed as D, and the soil is well drained. Flooding or ponding is reported as “none.” The depth to a restrictive layer is reported to be 20 to 40 inches to lithic bedrock, and the available water supply is listed as low, 0 to 60 inches.

Heiden clay, 2 to 5 percent slopes, moderately eroded, (HedC2), The Heiden series consists of deep and very deep to mudstone, well drained, very slowly permeable soils that formed in clayey residuum weathered from mudstone (USDA, 2023). The Hydrologic Soil Group is listed as D, and the soil is well drained. Flooding or ponding is reported as “none.” The depth to a restrictive layer is reported to be 40 to 65 inches to densic material, and the available water supply is listed as very high, 0 to 60 inches

3.0 GEOLOGY

3.1 Regional Geology

Ranging from north to south, two primary physiographic provinces are present in Williamson County: the Great Plain and the Gulf Coastal Plain. The Gulf Coastal Plain is comprised mainly of Blackland prairie.

The Great Plain is comprised chiefly of limestone plains, which locally merges with the Edwards Plateau in the vicinity of the Colorado River.

Groundwater recharge and flow are controlled by faulted Edwards Aquifer and adjacent strata. Water enters the aquifer by means of solution features controlled by faults, fractures and solution conduits. Solution features are created by the dissolution of limestone primarily from rainwater and groundwater. Deformation of the Balcones fault system controls both the large- and small-scale flow barriers and pathways present in the Edwards Aquifer.

3.2 Site Geology

Geological information pertaining to the area was obtained from the Geologic Atlas of Texas, Austin Sheet, published by University of Texas at Austin, Bureau of Economic Geology (BEG), 1997. The subject property is situated on Del Rio (Kdr) (Figure 6).

BEG describes Kdr as "calcareous and gypsiferous becoming less calcareous and more gypsiferous upward, pyrite common, blocky medium gray, some thin lenticular beds of highly calcareous siltstone; marine megafossils include abundant Exogyra arietina and other pelecypods; thickness 40-70 feet"

Obvious signs of faulting were not mapped or observed on the subject property.

4.0 HYDROLOGY

4.1 Site Hydrology

Based upon interpretation of the United States Geological Survey 7.5 Minute Series topographic quadrangle map, Pflugerville West, Texas Quadrangle (2022), and the onsite reconnaissance, the estimated onsite shallow groundwater flow direction is south to an unnamed tributary of Lake Creek, and Ratten Creek Figure 2). It should be noted that shallow groundwater flow direction is estimated based on a review of published maps, surface topography, and site reconnaissance. Local conditions that may influence the subsurface hydrology would be local topography (hills and valleys), geologic anomalies, utilities, and nearby wells or sumps.

4.2 Surface Water Hydrology

Site drainage appears to slope generally to the southeast from Lake Creek, and Ratten Creek towards unkown tributary (Figure 2). Three (3) drainage features were observed at the subject site.

5.0 SITE INVESTIGATION

The site reconnaissance was performed on February 22, 2024. The site investigation was performed by traversing the subject property in meandering transects, spaced 10 to 15 meters apart depending on thickness of vegetation. Photographs were taken to document any features observed during the reconnaissance.

The subject property is currently undeveloped land. Five (5) potential site recharge features (S-1, S-2, S-3, S-4, and S-5) were observed on the subject property. S-1 and S-2 were near the southwest boundary, S-3 was located slightly north off the southern boundary, and S-4 and S-5 were located on the northern part of the subject property. These are marked on the Site Geologic Map (Figure 6C). S-1, S-2, and S-3 appeared to be natural drainage, S-1 and S-2 are karst like features. One (1) water well was observed on the northern part of the subject property. These features are described in further detail in the Geologic Assessment Table.

Other potential natural recharge features such as caves, faults, or lineaments were not observed on the subject property.

6.0 SUMMARY

The subject property is comprised of approximately 193.289 acres of developed land. The subject property is identified by the Williamson County Central Appraisal District as Parcel R055545, located at South Corner of CR 172 & McNeil Road in Round Rock, Texas. The subject property is located over the Edwards Aquifer Recharge Zone.

The subject property is currently undeveloped land. Five (5) potential site recharge features (S-1, S-2, S-3, S-4, and S-5) were observed on the subject property. S-1 and S-2 were near the southwest boundary, S-3 was located slightly north off the southern boundary, and S-4 and S-5 were located on the northern part of the subject property. These are marked on the Site Geologic Map (Figure 6C). S-1, S-2, and S-3 appeared to be natural drainage, S-1 and S-2 are karst like features. One (1) water well was observed on the northern part of the subject property. These features are described in further detail in the Geologic Assessment Table, and in the Site Narrative.

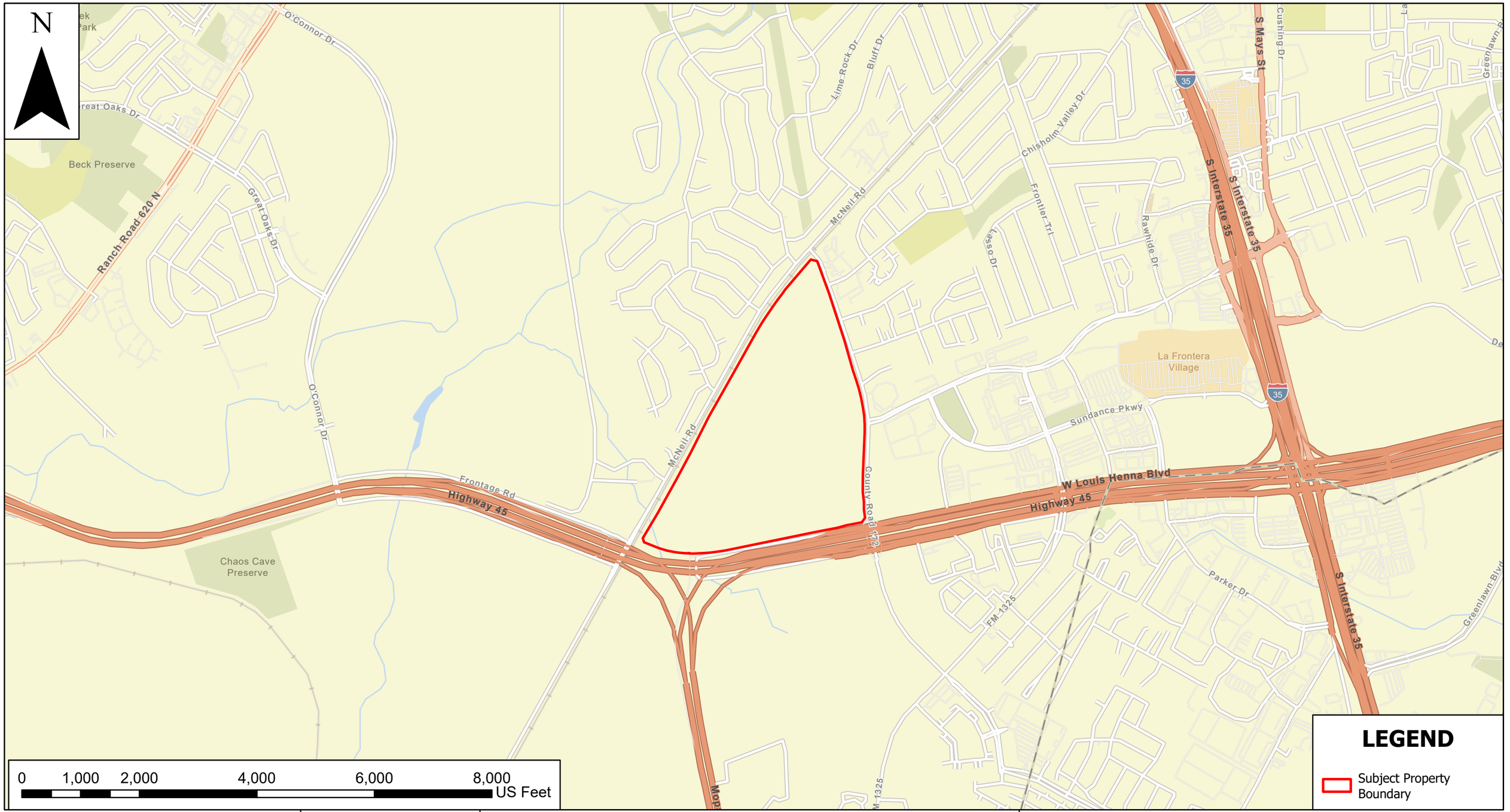
Caves, were not observed on the subject property at the time of the site reconnaissance.

7.0 REFERENCES

(BEG) The University of Texas at Austin Bureau of Economic Geology, Geologic Map of Texas, Austin Sheet, 1997.

(USDA) United States Department of Agriculture (USDA) Custom Soil Survey of Williamson County, 2022.

(USGS) United States Geologic Survey (USGS), 7.5- Minute Topographic Quadrangle Georgetown, Texas. 2019.



ECS Southwest, LLP
14050 Summit Drive, Suite 104
Austin, Texas 78728
Phone: (512) 837-8005
www.ecslimited.com

ECS Project No. 51:3992

Williamson County

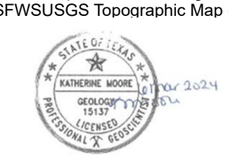
Figure 1 - Site Location Map

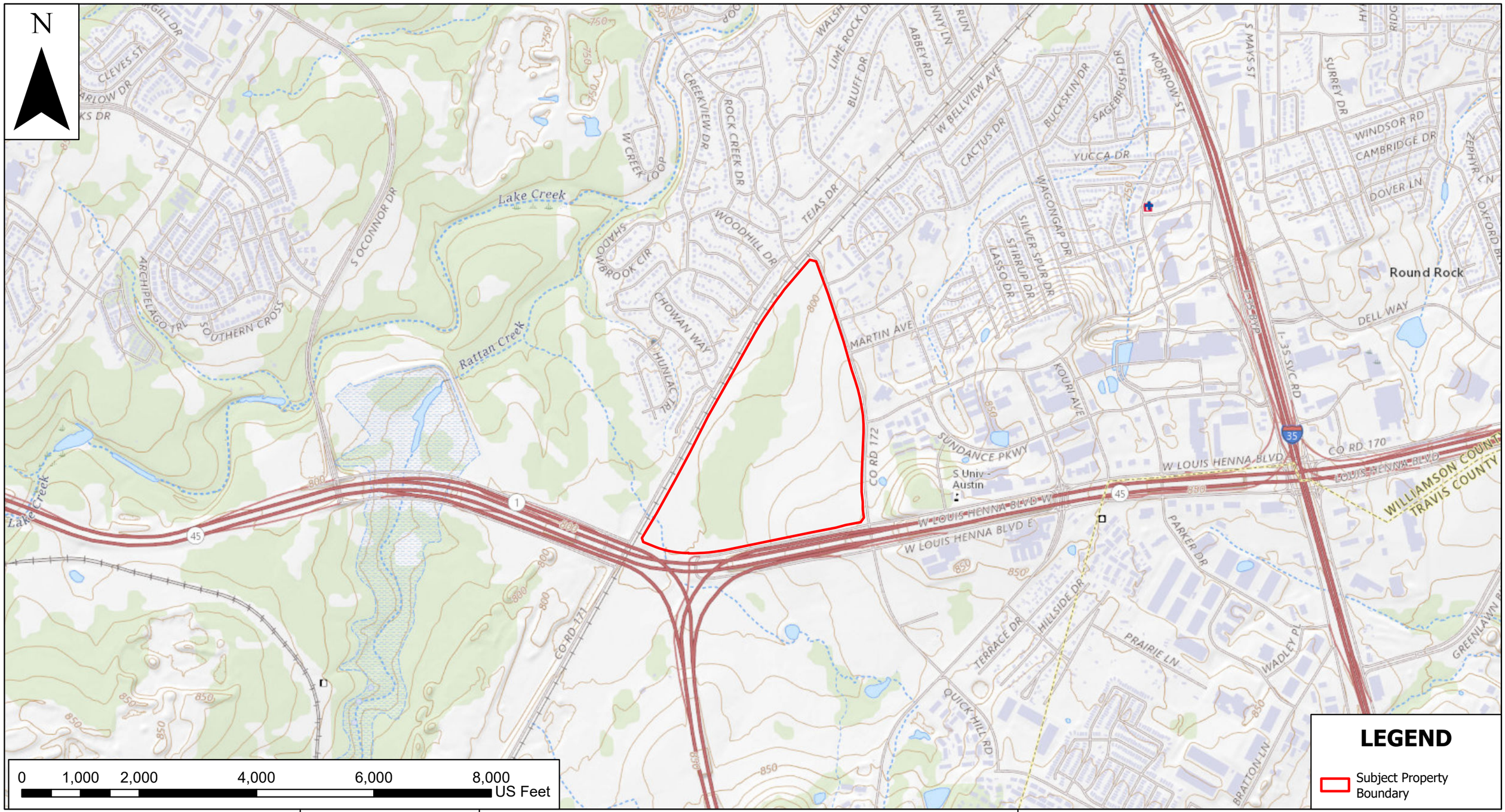
McNeil Road and CR 172 Geologic Assessment (GA)
McNeil Road and CR 172, Round Rock, TX
Williamson County, Texas
(193.289 acres)

Watershed: San Gabriel
USGS Quadrangle: Pflugerville West, TX 2022

March 5, 2024

Service Layer Credits:
World Street Map: Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWSUSGS Topographic Map of the Pflugerville West, Texas Quadrangle (2022)
Soils Data: USDA NRCS Web Soil Survey
Wetlands Data: National Wetlands Inventory
Floodplain Data: FEMA National Flood Hazard Layer
LIDAR Data: USGS 3D Elevation Program





ECS Southwest, LLP
14050 Summit Drive, Suite 104
Austin, Texas 78728
Phone: (512) 837-8005
www.ecslimited.com

ECS Project No. 51:3992

Williamson County

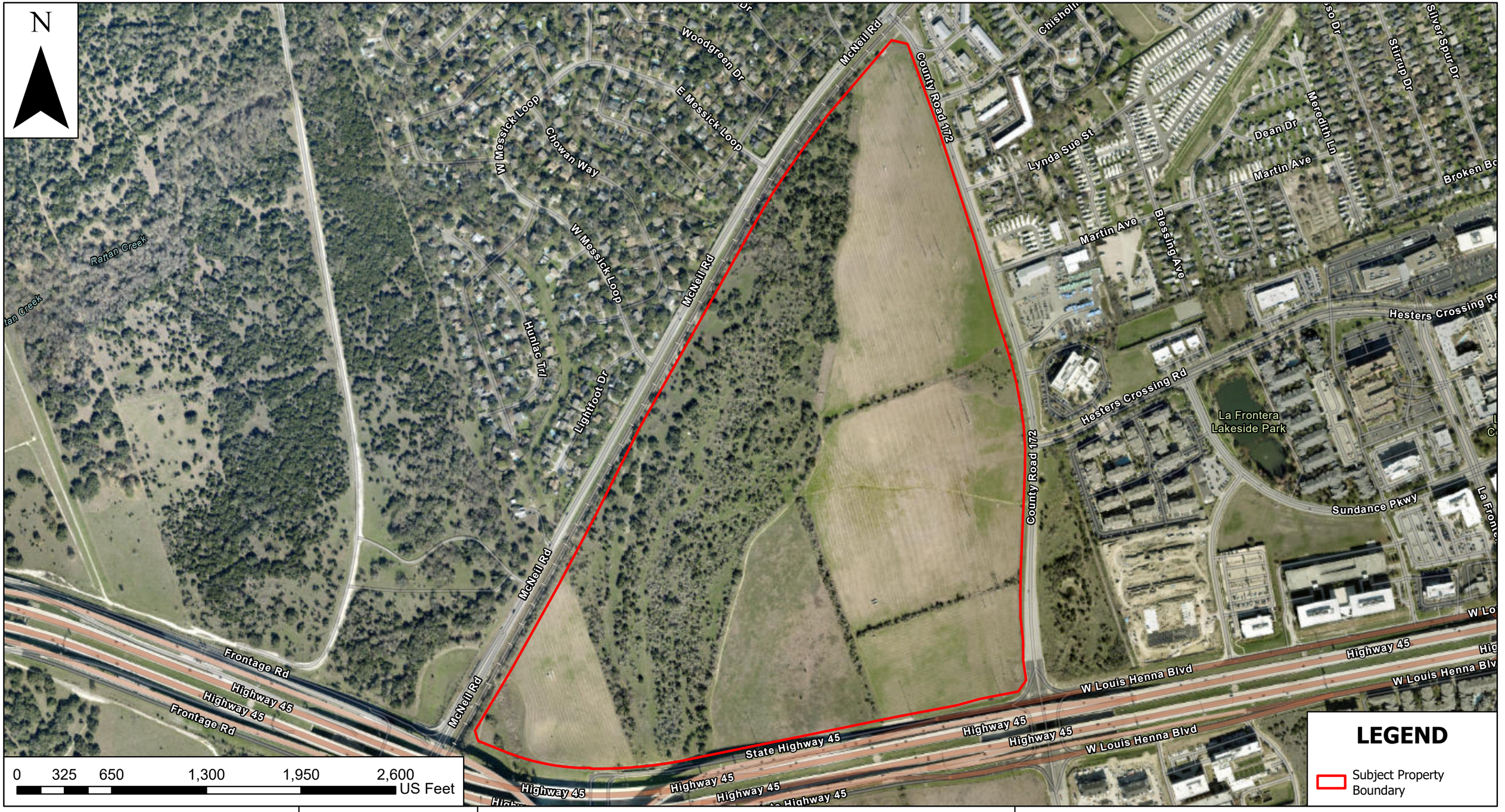
Figure 2 - USGS Topographic Map

McNeil Road and CR 172 Geologic Assessment (GA)
McNeil Road and CR 172, Round Rock, TX
Williamson County, Texas
(193.289 acres)

Watershed: San Gabriel
USGS Quadrangle: Pflugerville West, TX 2022

March 5, 2024

Service Layer Credits:
USGSTopo: 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; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed April, 2023.USGS Topographic Map of the Pflugerville West, Texas Quadrangle (2022)
Soils Data: USDA NRCS Web Soil Survey
Wetlands Data: National Wetlands Inventory
Floodplain Data: FEMA National Flood Hazard Layer
LIDAR Data: USGS 3D Elevation Program



ECS Southwest, LLP
14050 Summit Drive, Suite 104
Austin, Texas 78728
Phone: (512) 837-8005
www.ecslimited.com

ECS Project No. 51:3992

Williamson County

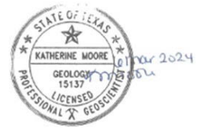
Figure 3 - Aerial Map

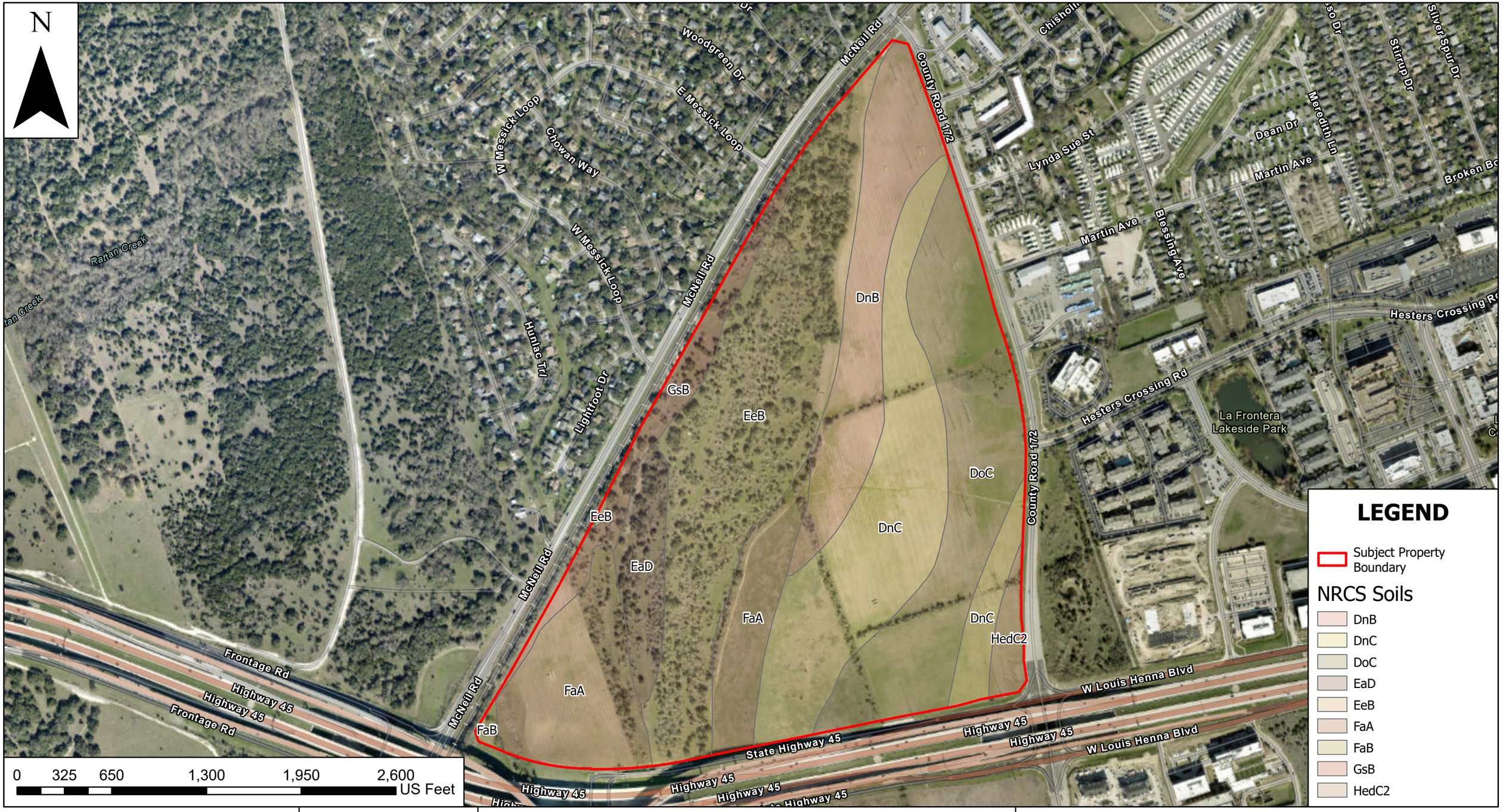
McNeil Road and CR 172 Geologic Assessment (GA)
McNeil Road and CR 172, Round Rock, TX
Williamson County, Texas
(193.289 acres)

Watershed: San Gabriel
USGS Quadrangle: Pflugerville West, TX 2022

March 5, 2024

Service Layer Credits:
World Imagery: Williamson County TX, Maxar
Hybrid Reference Layer: Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWSUSGS Topographic Map of the Pflugerville West, Texas Quadrangle (2022)
Soils Data: USDA NRCS Web Soil Survey
Wetlands Data: National Wetlands Inventory
Floodplain Data: FEMA National Flood Hazard Layer
LIDAR Data: USGS 3D Elevation Program





ECS Southwest, LLP
14050 Summit Drive, Suite 104
Austin, Texas 78728
Phone: (512) 837-8005
www.ecslimited.com

ECS Project No. 51:3992

Williamson County

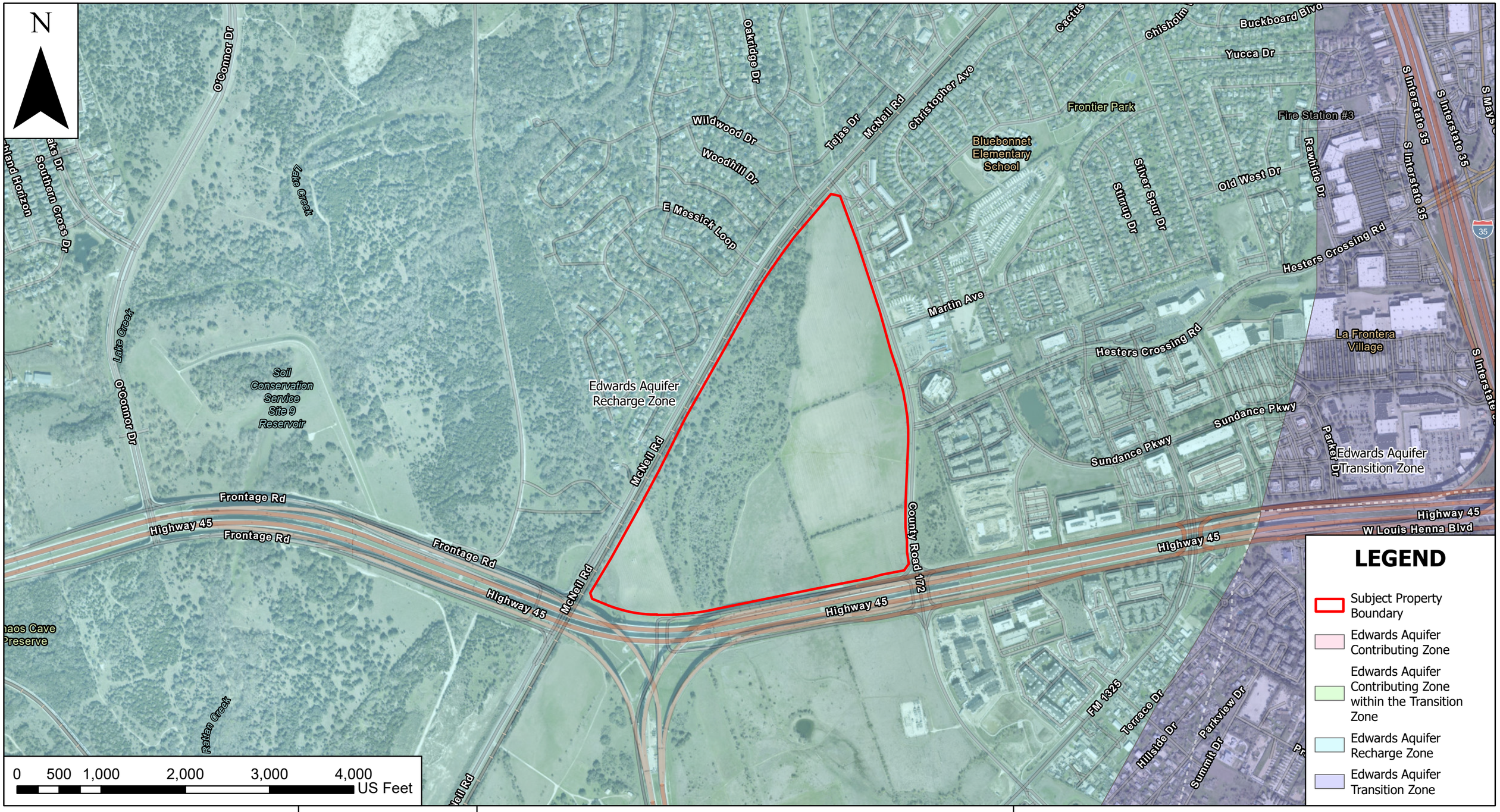
Figure 4 - NRCS Soils Map

McNeil Road and CR 172 Geologic Assessment (GA)
McNeil Road and CR 172, Round Rock, TX
Williamson County, Texas
(193.289 acres)

Watershed: San Gabriel
USGS Quadrangle: Pflugerville West, TX 2022

March 5, 2024

Service Layer Credits:
World Imagery: Williamson County TX, Maxar
Hybrid Reference Layer: Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWSUSGS Topographic Map of the Pflugerville West, Texas Quadrangle (2022)
Soils Data: USDA NRCS Web Soil Survey
Wetlands Data: National Wetlands Inventory
Floodplain Data: FEMA National Flood Hazard Layer
LIDAR Data: USGS 3D Elevation Program



LEGEND

- Subject Property Boundary
- Edwards Aquifer Contributing Zone
- Edwards Aquifer Contributing Zone within the Transition Zone
- Edwards Aquifer Recharge Zone
- Edwards Aquifer Transition Zone

ECS Southwest, LLP
14050 Summit Drive, Suite 104
Austin, Texas 78728
Phone: (512) 837-8005
www.ecslimited.com

ECS Project No. 51:3992

Williamson County

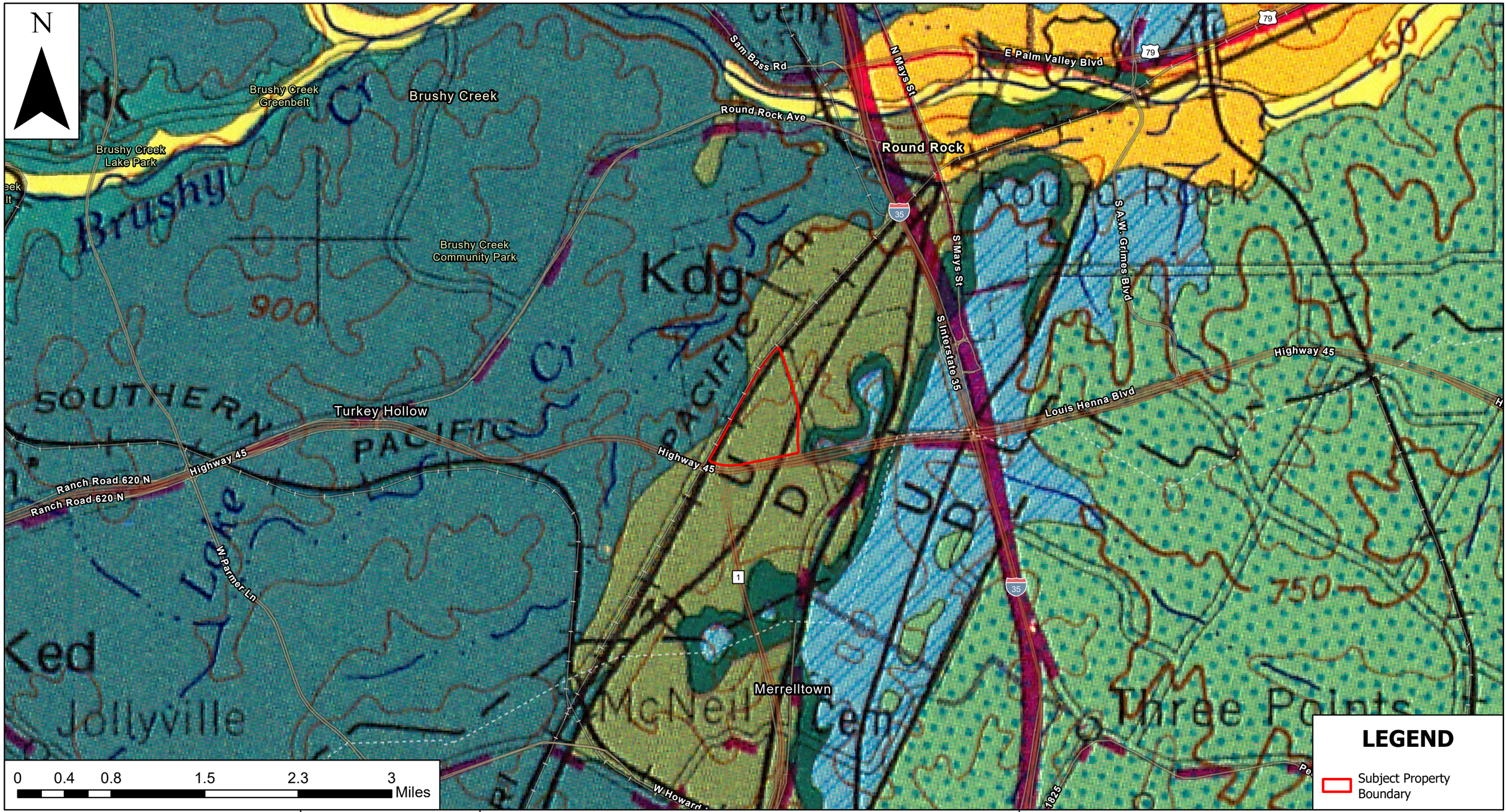
Figure 5 - Edwards Aquifer Map

McNeil Road and CR 172 Geologic Assessment (GA)
McNeil Road and CR 172, Round Round, TX
Williamson County, Texas
(193.289 acres)

Watershed: San Gabriel
USGS Quadrangle: Pflugerville West, TX 2022

March 5, 2024

Service Layer Credits:
World Imagery: Williamson County TX, Maxar
Hybrid Reference Layer: Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWSUSGS Topographic Map of the Pflugerville West, Texas Quadrangle (2022)
Soils Data: USDA NRCS Web Soil Survey
Wetlands Data: National Wetlands Inventory
Floodplain Data: FEMA National Flood Hazard Layer
LIDAR Data: USGS 3D Elevation Program



ECS Southwest, LLP
14050 Summit Drive, Suite 104
Austin, Texas 78728
Phone: (512) 837-8005
www.ecslimited.com

ECS Project No. 51:3992

Williamson County

Figure 6 - Area Geologic Map

McNeil Road and CR 172 Geologic Assessment (GA)
McNeil Road and CR 172, Round Rock, TX
Williamson County, Texas
(193.289 acres)

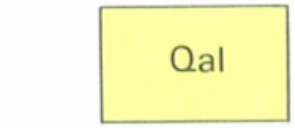
Watershed: San Gabriel
USGS Quadrangle: Pflugerville West, TX 2022

March 5, 2024

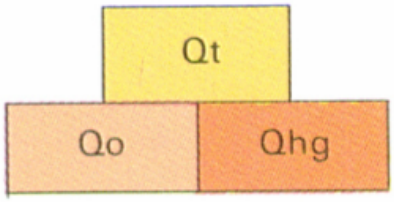
Service Layer Credits:
World Imagery: Williamson County TX, Maxar
Hybrid Reference Layer: Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWSUSGS Topographic Map of the Pflugerville West, Texas Quadrangle (2022)
Soils Data: USDA NRCS Web Soil Survey
Wetlands Data: National Wetlands Inventory
Floodplain Data: FEMA National Flood Hazard Layer
LIDAR Data: USGS 3D Elevation Program

STATE OF TEXAS
KATHERINE MOORE
GEOLOGY
15137
LICENSED
PROFESSIONAL GEOSCIENTIST
Mar 2024

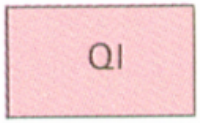
Stratigraphic Column
McNeil and CR 107
Roundrock, Williamson County, Texas



Alluvium



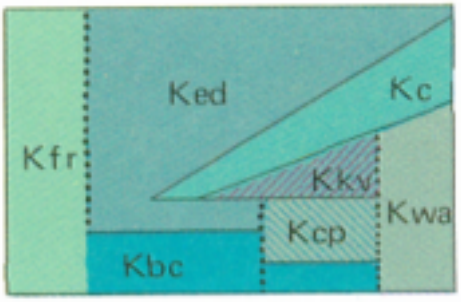
Fluviatile terrace deposits



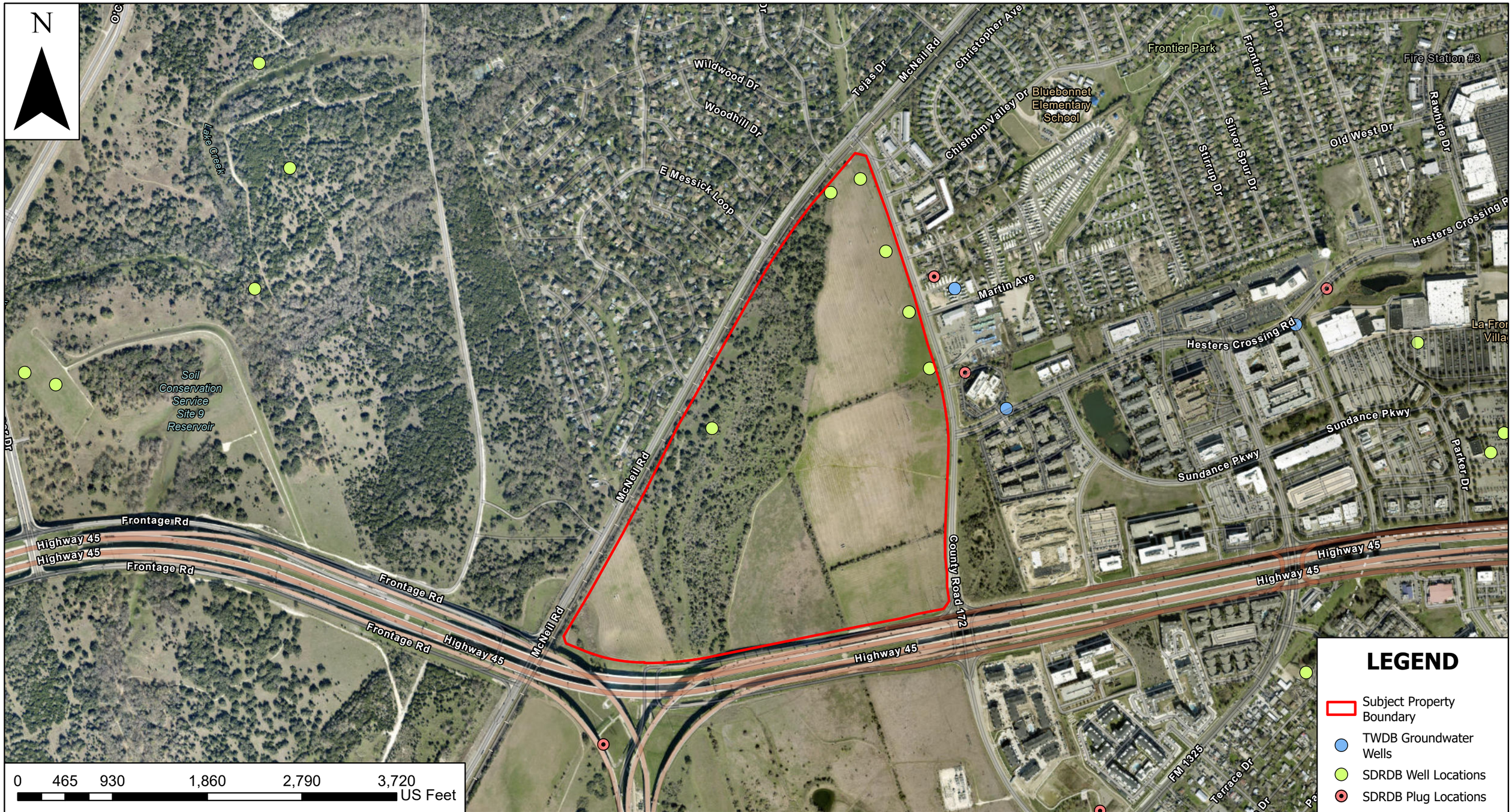
Lissie Formation undivided

Eagle Ford Group and Buda Limestone

Del Rio Clay ("Grayson Marl") and Georgetown Formation



Fredericksburg Group



ECS Southwest, LLP
14050 Summit Drive, Suite 104
Austin, Texas 78728
Phone: (512) 837-8005
www.ecslimited.com

ECS Project No. 51:3992

Williamson County

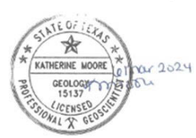
Figure 7 - Texas Water Development Board (TWDB) Well Map

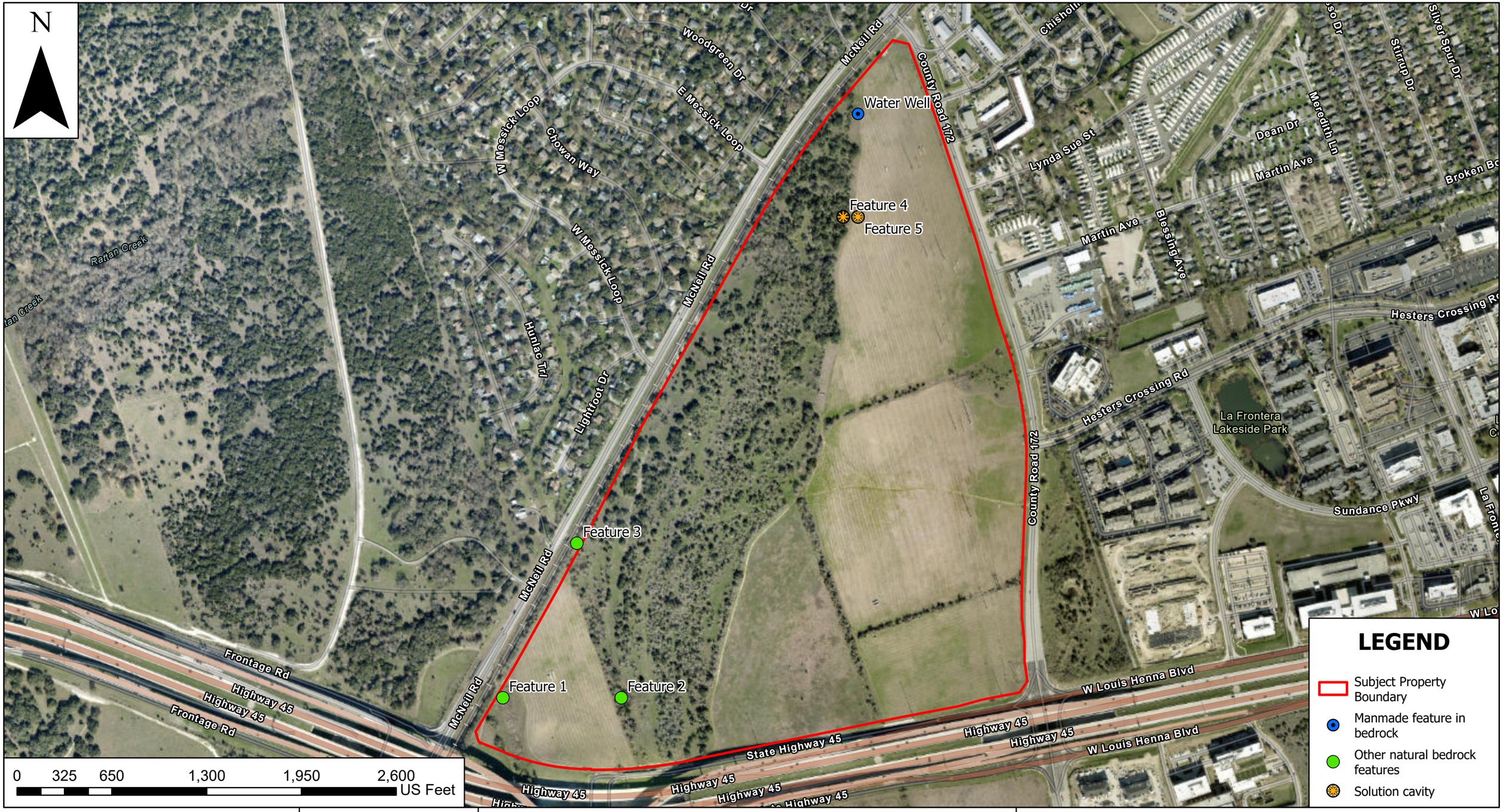
McNeil Road and CR 172 Geologic Assessment (GA)
McNeil Road and CR 172, Round Rock, TX
Williamson County, Texas
(193.289 acres)

Watershed: San Gabriel
USGS Quadrangle: Pflugerville West, TX 2022

March 5, 2024

Service Layer Credits:
World Imagery: Williamson County TX, Maxar
Hybrid Reference Layer: Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWSUSGS Topographic Map of the Pflugerville West, Texas Quadrangle (2022)
Soils Data: USDA NRCS Web Soil Survey
Wetlands Data: National Wetlands Inventory
Floodplain Data: FEMA National Flood Hazard Layer
LIDAR Data: USGS 3D Elevation Program





ECS Southwest, LLP
14050 Summit Drive, Suite 104
Austin, Texas 78728
Phone: (512) 837-8005
www.ecslimited.com

ECS Project No. 51:3992

Williamson County

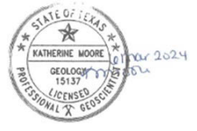
Figure 8 - Geologic Features Map

McNeil Road and CR 172 Geologic Assessment (GA)
McNeil Road and CR 172, Round Rock, TX
Williamson County, Texas
(193.289 acres)

Watershed: San Gabriel
USGS Quadrangle: Pflugerville West, TX 2022

March 5, 2024

Service Layer Credits:
World Imagery: Williamson County TX, Maxar
Hybrid Reference Layer: Esri Community Maps Contributors, Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWSUSGS Topographic Map of the Pflugerville West, Texas Quadrangle (2022)
Soils Data: USDA NRCS Web Soil Survey
Wetlands Data: National Wetlands Inventory
Floodplain Data: FEMA National Flood Hazard Layer
LIDAR Data: USGS 3D Elevation Program



United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Williamson County, Texas

March 5, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 24, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DnB	Denton silty clay, 1 to 3 percent slopes	20.5	11.2%
DnC	Denton silty clay, 3 to 5 percent slopes	36.0	19.6%
DoC	Doss silty clay, moist, 1 to 5 percent slopes	32.3	17.7%
EaD	Eckrant cobbly clay, 1 to 8 percent slopes	7.5	4.1%
EeB	Eckrant stony clay, 0 to 3 percent slopes, stony	47.9	26.2%
FaA	Fairlie clay, 0 to 1 percent slopes	27.0	14.7%
FaB	Fairlie clay, 1 to 2 percent slopes	0.6	0.3%
GsB	Georgetown stony clay loam, 1 to 3 percent slopes	8.6	4.7%
HedC2	Heiden clay, 2 to 5 percent slopes, moderately eroded	2.8	1.5%
Totals for Area of Interest		**183.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They

generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Williamson County, Texas

DnB—Denton silty clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t26l
Elevation: 570 to 1,870 feet
Mean annual precipitation: 31 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 220 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Denton and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Denton

Setting

Landform: Hillslopes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty and clayey slope alluvium over residuum weathered from limestone

Typical profile

A - 0 to 14 inches: silty clay
Bw - 14 to 25 inches: silty clay
Bk - 25 to 33 inches: silty clay
Ck - 33 to 36 inches: gravelly silty clay
R - 36 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 22 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Minor Components

Krum

Percent of map unit: 6 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Doss

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081BY343TX - Shallow 23-31 PZ
Hydric soil rating: No

Anhalt

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

DnC—Denton silty clay, 3 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2t26r
Elevation: 570 to 1,870 feet
Mean annual precipitation: 31 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 220 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Denton and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Denton

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty and clayey slope alluvium over residuum weathered from limestone

Typical profile

A - 0 to 14 inches: silty clay
Bw - 14 to 25 inches: silty clay
Bk - 25 to 33 inches: silty clay
Ck - 33 to 36 inches: gravelly silty clay
R - 36 to 80 inches: bedrock

Properties and qualities

Slope: 3 to 5 percent
Depth to restrictive feature: 22 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 6 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Doss

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Purves

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

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

Map Unit Setting

National map unit symbol: 2s0st
Elevation: 630 to 1,840 feet
Mean annual precipitation: 30 to 36 inches
Mean annual air temperature: 66 to 68 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Doss and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Doss

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 9 inches: silty clay
Bk - 9 to 17 inches: silty clay
Cr - 17 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: 11 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R081CY362TX - Steep Adobe 29-35 PZ
Hydric soil rating: No

Bolar

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Denton

Percent of map unit: 1 percent
Landform: Plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Eckrant

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Purves

Percent of map unit: 1 percent
Landform: Plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

EaD—Eckrant cobbly clay, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t0sg
Elevation: 650 to 1,900 feet
Mean annual precipitation: 30 to 35 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 4 inches: cobbly clay
A2 - 4 to 11 inches: very cobbly clay
R - 11 to 80 inches: bedrock

Properties and qualities

Slope: 1 to 8 percent
Surface area covered with cobbles, stones or boulders: 2.3 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Minor Components

Brackett

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Bexar

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Krum

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

EeB—Eckrant stony clay, 0 to 3 percent slopes, stony

Map Unit Setting

National map unit symbol: djpv
Elevation: 650 to 1,320 feet
Mean annual precipitation: 30 to 35 inches

Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 210 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Eckrant, stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eckrant, Stony

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A1 - 0 to 4 inches: stony clay
A2 - 4 to 11 inches: extremely stony clay
R - 11 to 80 inches: bedrock

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 0.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Minor Components

Georgetown

Percent of map unit: 8 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ

Hydric soil rating: No

Doss

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

FaA—Fairlie clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: djq0
Elevation: 550 to 850 feet
Mean annual precipitation: 30 to 42 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 230 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Fairlie and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fairlie

Setting

Landform: Ridges
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from austin chalk formation

Typical profile

H1 - 0 to 8 inches: clay
H2 - 8 to 46 inches: clay
H3 - 46 to 54 inches: bedrock

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

FaB—Fairlie clay, 1 to 2 percent slopes

Map Unit Setting

National map unit symbol: djq1
Elevation: 550 to 850 feet
Mean annual precipitation: 30 to 42 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 230 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Fairlie and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fairlie

Setting

Landform: Ridges
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Residuum weathered from austin chalk formation

Typical profile

H1 - 0 to 8 inches: clay
H2 - 8 to 46 inches: clay
H3 - 46 to 54 inches: bedrock

Properties and qualities

Slope: 1 to 2 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

GsB—Georgetown stony clay loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t277
Elevation: 620 to 1,250 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 65 to 68 degrees F
Frost-free period: 230 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Georgetown and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Georgetown

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone

Typical profile

A - 0 to 7 inches: stony clay loam
Bt - 7 to 35 inches: cobbly clay
R - 35 to 60 inches: bedrock

Properties and qualities

Slope: 1 to 3 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Minor Components

Tarpley

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Eckrant

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Fairlie

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

HedC2—Heiden clay, 2 to 5 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2sshp
Elevation: 320 to 750 feet
Mean annual precipitation: 37 to 40 inches
Mean annual air temperature: 67 to 68 degrees F
Frost-free period: 245 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Heiden, moderately eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Heiden, Moderately Eroded

Setting

Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from mudstone

Typical profile

Ap - 0 to 6 inches: clay
Bkss1 - 6 to 18 inches: clay
Bkss2 - 18 to 58 inches: clay
CBdk - 58 to 80 inches: clay

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 40 to 65 inches to densic material
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 12.0
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: R086AY009TX - Southern Eroded Blackland
Hydric soil rating: No

Minor Components

Ferris, moderately eroded

Percent of map unit: 8 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY009TX - Southern Eroded Blackland

Hydric soil rating: No

Heiden

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Microfeatures of landform position: Linear gilgai
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

NARRATIVE DESCRIPTION OF SITE-SPECIFIC GEOLOGY

Ranging from north to south, two primary physiographic provinces are present in Williamson County: the Great Plain and the Gulf Coastal Plain. The Gulf Coastal Plain is comprised mainly of Blackland prairie. The Great Plain is comprised chiefly of limestone plains, which merges with the Edwards Plateau in the vicinity of the Colorado River.

Groundwater recharge and flow are controlled by faulted Edwards Aquifer and adjacent strata. Water enters the aquifer by means of solution features controlled by faults, fractures and solution conduits. Solution features are created by the dissolution of limestone primarily from rainwater and groundwater. Deformation of the Balcones fault system controls both the large- and small-scale flow barriers and pathways present in the Edwards Aquifer.

Geological information pertaining to the area was obtained from the Geologic Atlas of Texas, Austin Sheet, published by University of Texas at Austin, Bureau of Economic Geology (BEG), 1997. The subject property is situated on Terraces along streams (Qt) (Figure 6).

BEG describes Qt as "consist of three or more levels which may correspond to coastal Piestocene units; gravel, sand, silt, and clay in various proportions with gravel prominent in the older, higher terraces, gravel along Guadalupe River, siliceous, course, along Colorado River, mostly dolomite, limestone, chert, quartz, and various igneous and metamorphic rocks from the Llano Region and dolomite, limestone and chert from the Edwards Plateau; sand mostly quartz."

The Georgetown Limestone is inferred to lie just below the porous and permeable Qt. The Kgt is described by the BEG as "limestone and marl; mostly fine-grained, argillaceous, nodular, moderately indurated, light gray; some limestone, hard, brittle, thick-bedded, shite; some shale, marly soft, light gray to yellowish gray; marine megafossils include Kingena wacoensis and Gryphaea washitaensis; thickness 30 - 80 feet thing southward"

Other potential natural recharge features such as caves, sinkholes, closed depressions, solution cavities, fractured rock outcrops, faults or lineaments were not observed on the subject property. Additionally, seeps or springs were not observed on the subject property.

Attachment 1:

NRCS Soil Map Report

1 - Wellhouse located on the northern part of the subject property

2 - View of the Inside of the well house

3 - Well house located on the subject property

4 - Outside of wellhouse

5 - Outside of wellhouse faucet

6 - Drainage feature S-3

7 - Drainage feature S-2

8 - Drainage feature S-1 along the western site boundary

9 - View of wetland area observed near the southwest corner of the subject property.

10 - View of apparent wetland area observed near the southwest portion of the subject property.

11 - Drainage feature S-3 along the western site boundary

12 - Drainage feature S-3 along the western site boundary

13 - Drainage feature S-3 along the western site boundary

14 - View south along subject property boundary from near feature S-3.

15 - View north along subject property boundary from near feature S-3.

16 - View of feature S-2.

17 - View south along drainage feature S-2

18 - View of standing water observed in feature S-2.

19 - View north across property interior from the south poriton of the site.

20 - View northeast across the interior of the subject property.

21 - View south from the northern part of the subject property

22 - View north from the southern part of the subject property

23 - View of scattered/exposed rocks near the north-center of the subject property

24 - View east from west center portion of the subject property

25 - View of railroad tracks, and McNeil towards the western property boundary

26 - Karst feature S-4

27 - Karst feature S-4

28 - Karst feature S-4

29 - Karst feature S-4

30 - Karst feature S-4

31 - Karst feature S-5

32 - Karst feature S-5

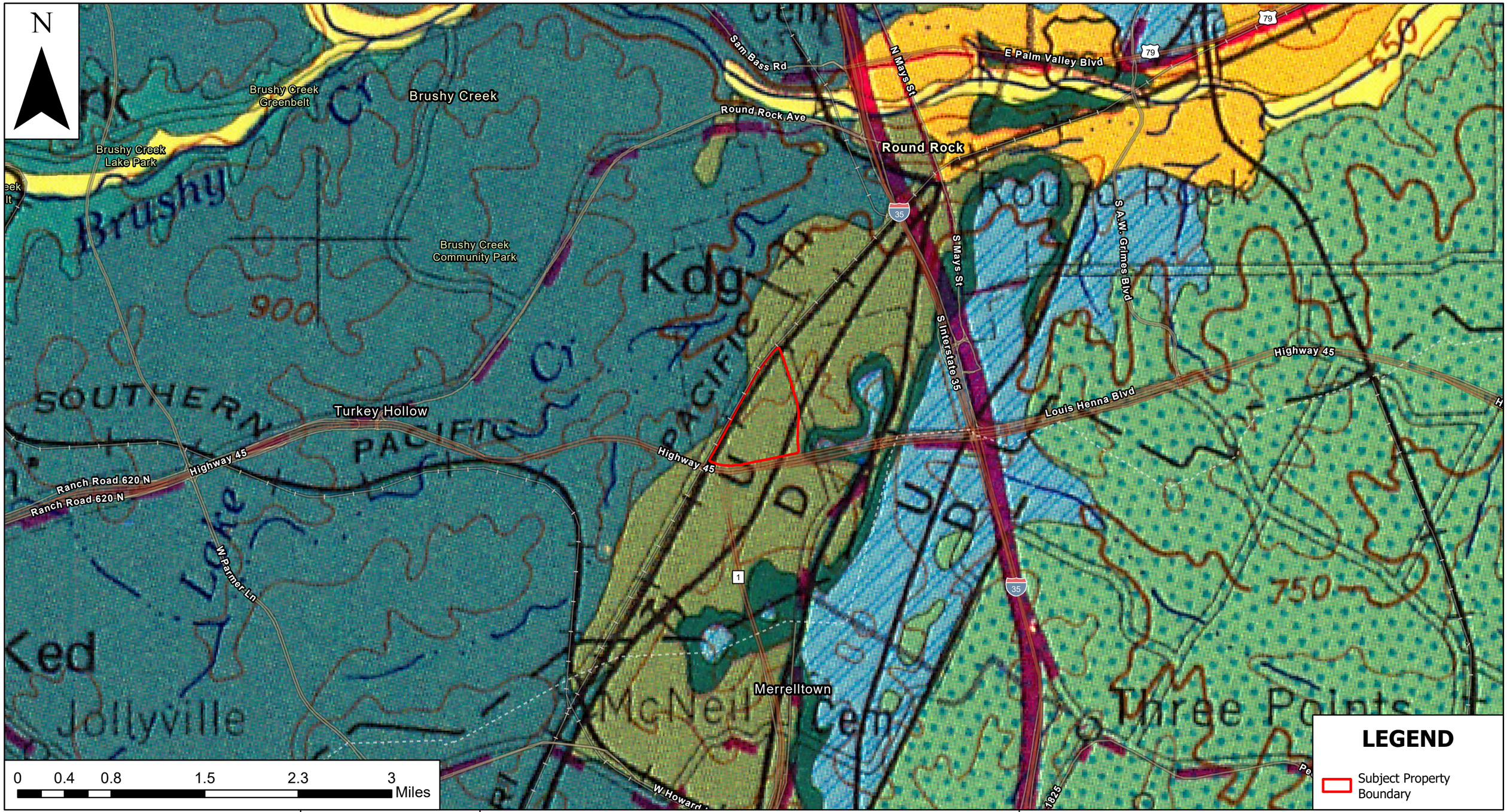
33 - Karst feature S-5

34 - Karst feature S-5

35 - Karst feature S-5

36 - Karst feature S-5

SITE GEOLOGIC MAP(S)



ECS Southwest, LLP
14050 Summit Drive, Suite 104
Austin, Texas 78728
Phone: (512) 837-8005
www.ecslimited.com

ECS Project No. 51:3992

Williamson County

Figure 6 - Area Geologic Map

McNeil Road and CR 172 Geologic Assessment (GA)
McNeil Road and CR 172, Round Rock, TX
Williamson County, Texas
(193.289 acres)

Watershed: San Gabriel
USGS Quadrangle: Pflugerville West, TX 2022

March 5, 2024

Service Layer Credits:
World Imagery: Williamson County TX, Maxar
Hybrid Reference Layer: Austin Community College, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWSUSGS Topographic Map of the Pflugerville West, Texas Quadrangle (2022)
Soils Data: USDA NRCS Web Soil Survey
Wetlands Data: National Wetlands Inventory
Floodplain Data: FEMA National Flood Hazard Layer
LIDAR Data: USGS 3D Elevation Program

STATE OF TEXAS
KATHERINE MOORE
GEOLOGY
15137
LICENSED
PROFESSIONAL GEOSCIENTIST
Mar 2024

SECTION 4:
WATER POLLUTION ABATEMENT APPLICATION FORM

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: Nicholas C. Brown, P.E.

Date: 06/05/2024

Signature of Customer/Agent:

Regulated Entity Name: 2525 CR 172 Industrial

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): 76.61 acres

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	294,931.95	÷ 43,560 =	6.77
Parking	744,543.27	÷ 43,560 =	17.09
Other paved surfaces	1,105,552.80	÷ 43,560 =	25.38
Total Impervious Cover	2,145,028.02	÷ 43,560 =	49.24

Total Impervious Cover 49.24 **÷ Total Acreage** 76.61 **X 100 =** 64.27 **% Impervious Cover**

5. [X] **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. [X] 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
100 % Industrial	126,695 Gallons/day
_____% Commingled	_____Gallons/day
TOTAL gallons/day 126,695	

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 05/20/2024

☐ 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.

[X] The sewage collection system will convey the wastewater to the Brushy Creek Regional Wastewater Treatment Plant. The treatment facility is:

[X] Existing.
[ ] Proposed.

16. [X] 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. [X] The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 100 '.

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.
[X] 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 Map No. 48491C0630F, dated December 20, 2019

19. [X] 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.):

[X] There are 1 (#) 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.
[X] 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:

[X] 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. [X] The drainage patterns and approximate slopes anticipated after major grading activities.

23. [X] Areas of soil disturbance and areas which will not be disturbed.

24. [X] Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

25. [X] Locations where soil stabilization practices are expected to occur.

26. [ ] Surface waters (including wetlands).

    [X] N/A

27. [ ] Locations where stormwater discharges to surface water or sensitive features are to occur.

    [X] There will be no discharges to surface water or sensitive features.

28. [X] Legal boundaries of the site are shown.

Administrative Information

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

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

FACTORS AFFECTING SURFACE WATER QUALITY

Surface water quality can be affected by disturbance during construction and by development after construction. Soil disturbance from clearing and grubbing and cut / fill operations can lead to discharge of sediment unless adequate temporary erosion control measures are in place. For this project, the use of silt fence, mulch sock, and inlet protection will prevent sediment from leaving the site. Sediment and debris collected by the control measures will be cleaned from fences, berms, etc. on a routine schedule.

During construction, surface water quality may also be affected by a spill of hydrocarbons or other hazardous substances used in construction. The most likely instances of a spill of hydrocarbons or hazardous substances are:

1. Refueling construction equipment.
2. Performing operator-level maintenance, including adding petroleum, oils, or lubricants.
3. Unscheduled or emergency repairs, such as hydraulic fluid leaks.

Every effort will be taken to be cautious and prevent spills. In the event of a fuel or hazardous substance spill as defined by the Reportable Quantities Table 1 (page 3) of the TCEQ's Small-Business Handbook for Spill Response (RG-285, June 1997), the contractor is required to clean up the spill and notify the TCEQ as required in RG-285. During business hours report spills to the TCEQ's Austin Regional Office at (512) 339-2929, after business hours call 1-800-832-8224, the Environmental Response Hotline or (512) 463-7727, the TCEQ Spill Reporting Hotline, which is also answered 24 hours a day.

After construction is complete, impervious cover for the tract of land is the major reason for degradation of water quality. Impervious cover includes the building, parking lot pavement and concrete sidewalks. Oil and fuel discharge from vehicles is anticipated.

VOLUME AND CHARACTER OF STORMWATER

The total site area of 2525 CR 172 Industrial is 69.56 acres plus an additional 7.05 acres for adjacent roadway improvements on CR 172. The proposed development will result in an impervious cover of 49.24 acres, 64.27% of the site. The impervious areas will consist of buildings, parking surfaces, and sidewalks with the pervious areas consisting of landscape and natural areas.

Under existing conditions, the site is split below the property line by a contour ridgeline sending flow to one point along the western property boundary. This flow then travels across the site, entering into a drainage channel. Flow across the subject site is sheet or shallow concentrated flow at slopes around 2 percent.

Construction on-site will not be located within the Federal Emergency Management Agency's 100-year floodplain according to FIRM 48491C0630F, Williamson County, Texas and incorporated areas, dated December 20, 2019. In proposed conditions, the majority of on-site flow will be captured and conveyed through a proposed storm system. Water will be treated according to TCEQ requirements through StormTrap's Up-Flo Filters water quality treatment system. The underground detention pond will then outfall to an existing drainage channel on the western part of the site. Refer to sheet 82 for more details.

The subject site has no existing detention or water quality ponds. A water quality system and one underground detention pond is proposed on-site. The underground detention and water quality structures are sized per current City of Round Rock and TCEQ design standards. Drainage area maps and calculations are included in the plan set for reference.

Regarding stormwater volume (quantity) of the stormwater runoff which is expected to occur from the proposed project, see table below depicting existing vs proposed runoff volume for all three points of analysis. This increase of runoff is being detained in proposed underground detention pond to at or below existing condition runoff rates for the 2, 10, 25, 50, and 100 year events.

	Storm Event	Volume of Runoff (CF)		
		POA-A	POA-B	POA-C
Existing	2	860,944	433,779	85,312
	10	1,783,437	899,103	174,589
	25	2,517,991	1,269,707	245,363
	50	3,276,709	1,651,112	318,842
	100	3,930,004	1,982,198	381,074
Proposed (Partially Developed)	2	1,081,264	433,779	140,621
	10	2,044,160	899,103	238,811
	25	2,794,697	1,269,707	313,106
	50	3,566,690	1,651,112	388,897
	100	4,221,293	1,982,198	452,230

SUITIBILITY LETTER FOR AUTHORIZED AGENT

(NOT APPLICABLE)

An on-site sewage facility will **not** be used to treat and dispose of the wastewater.

EXCEPTION TO THE REQUIRED GEOLOGIC ASSESSMENT

(NOT APPLICABLE)

All sensitive geologic or manmade features identified in the Geological Assessment are shown and labeled.

SECTION 5:
TEMPORARY STORMWATER SECTION

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: Nicholas C. Brown, P.E.

Date: 06/05/2024

Signature of Customer/Agent:

Regulated Entity Name: 2525 CR 172 Industrial

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

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

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

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

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

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

Sequence of Construction

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

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

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

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: N/A

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

    ☐ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

SPILL RESPONSE REACTIONS

If there is an accidental spill on site, the contractor shall respond with appropriate action. All onsite personnel will be trained to perform and be knowledgeable of the spill response actions. The contractor will be required to contact the owner and in turn the owner will contact the TCEQ in the event of a spill on site. In addition to the following guidance, reference the latest version of TCEQ's Technical Guidance Manual (TGM) RG-348 Section 2.4.16.

Cleanup

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

Minor Spills

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

Semi-Significant Spills

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

Spills should be cleaned up immediately:

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

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

- Notify the TCEQ by telephone as soon as possible and within 24 hours at (512)339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
- For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
- Notification should first be made by telephone and followed up with a written report.

- The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
- Other agencies which may need to be consulted include, but not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

POTENTIAL SOURCES OF CONTAMINATION

Potential Source: Oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicle dripping.

Preventative Measures: Vehicle maintenance will be performed within the construction staging area or a local maintenance shop.

Potential Source: Miscellaneous trash and litter from construction workers and material wrappings.

Preventative Measures: Trash containers will be placed throughout the site to encourage proper disposal of trash.

Potential Source: Silt leaving the site.

Preventative Measures: Contractor will install all temporary best management practices prior to start of construction including the stabilized construction entrance to prevent tracking onto adjoining streets.

Potential Source: Construction Debris.

Preventative Measures: Construction debris will be monitored daily by contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case-by-case basis.

Potential Source: Soil and Mud from Construction Vehicle tires as they leave the site.

Preventative Measures: A stabilized construction exit shall be utilized as vehicles leave the site. Any soil, mud, etc. carried from the project onto public roads shall be cleaned up within 24 hours.

Potential Source: Sediment from soil, sand, gravel and excavated materials stock piled on site.

Preventative Measures: Silt fence shall be installed on the down gradient side of the stock piled materials. Reinforced rock berms shall be installed at all downstream discharge locations.

Potential Source: Portable toilet spill.

Preventative Measures: Toilets on the site will be emptied on a regular basis by the contracted toilet company.

SEQUENCE OF MAJOR ACTIVITIES

The installation of erosion and sedimentation controls shall occur prior to any excavation of materials or major disturbances on the site. The sequence of major construction activities will be as follows. Approximate acreage to be disturbed is listed in parentheses next to each activity.

Intended Schedule or Sequence of Major Activities:

1. Construct Access (60.84 Acres)
2. Installation of Temporary BMPs (69.56 Acres for site + 7.05 Acres for roadway)
3. Initiate Grubbing and Topsoil Stripping of Site (69.56 Acres)
4. Rough Subgrade Preparation (earthwork, grading, street and drainage excavation and embankment) (69.56 Acres)
5. Wet and Dry Utility Construction (60.84 Acres)
6. Final Subgrade Preparation (60.84 Acres)
7. Installation of Base Materials (60.84 Acres)
8. Concrete (foundations, curbs, flatwork) (40.28 Acres)
9. Building Construction (5.59 Acres)
10. Paving Activities (40.28 Acres for site + 7.05 Acres for roadway)
11. Topsoil, Irrigation and Landscaping (69.56 Acres)
12. Site cleanup and Removal of Temporary BMPs (69.56 Acres for site + 7.05 Acres for roadway)

Maximum total construction time is not expected to exceed 18 months.

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

A. No storm water originates up gradient that impacts the site. An upstream off-site area will bypass through an existing channel.

B. Temporary BMPs will be installed prior to soil disturbing construction activity. Silt fencing will be placed along the down-gradient sides of the property to prevent silt from escaping the construction area. A temporary construction entrance will be placed on site to reduce vehicle "tracking" onto adjoining streets. A concrete washout pit will be used to collect all excess concrete during construction.

BMPs for this project will protect surface water or groundwater from turbid water, phosphorus, sediment, oil, and other contaminants, which may mobilize in storm water flows by slowing the flow of runoff to allow sediment and suspended solids to settle out of the runoff.

Practices may also be implemented on site for interim and permanent stabilization. Stabilization practices may include but are not limited to: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, and other similar measures.

C. There are two sensitive features located in on-site, as noted in the geologic assessment. A buffer will be provided for Feature 4 and 5 in all directions. Any excavation within 50 feet of the feature will be avoided. We are not proposing any fill or covering of the sensitive features.

There are no surface streams within the boundaries of the project. The temporary onsite BMPs will be used to treat stormwater runoff before it leaves the project and prevent pollutants from entering into surface streams or any sensitive features down-gradient of the site.

D. The BMPs for this project are designed to allow water to pass through after sedimentation has occurred. Existing flow patterns will be maintained to any naturally occurring sensitive features that are discovered during construction.

Temporary runoff protection measures will be installed according to the recommendations made in Chapter 1 of RG-348. Temporary erosion control will be placed as close to the site of construction soil disturbance as possible to minimize any disturbance with drainage areas. Frequent inspections of erosion controls will be warranted near the environmentally sensitive features, especially after every rainfall.

REQUEST TO TEMPORARY SEAL A FEATURE

(NOT APPLICABLE)

STRUCTURAL PRACTICES

Structural BMPs will be used to limit runoff discharge of pollutants from exposed areas of the site. BMPs will be installed prior to soil disturbing construction activity. Silt fencing will be placed along the down-gradient sides of the property to prevent silt from escaping the construction area. A temporary construction entrance will be placed at the site entry/exit point to reduce tracking onto adjoining streets. A construction staging area will be used onsite to perform all vehicle maintenance and for equipment and material storage. A concrete truck washout pit will be placed on site to provide containment and easier cleanup of waste from concrete operations. The location of all structural temporary BMP's are shown on the erosion control plan sheet and details and specifications are provided on the erosion control details sheet which can be found under Section 4, attachment E.

Description of Temporary BMPs

Temporary Construction Entrance/Exit

The purpose of a temporary gravel construction entrance is to provide a stable entrance/exit condition from the construction site and keep mud and sediment off public roads. A stabilized construction entrance is a stabilized pad of crushed stone located at any point traffic will be entering or leaving the construction site from a public right-of-way, street, alley, sidewalk or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking or flowing of sediment onto public rights-of-way. This practice should be used at all points of construction ingress and egress.

Excessive amounts of mud can also present a safety hazard to roadway users. To minimize the amount of sediment loss to nearby roads, access to the construction site should be limited to as few points as possible and vegetation around the perimeter should be protected where access is not necessary. A rock stabilized construction entrance should be used at all designated access points.

Inspection and Maintenance Guidelines:

(1) 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.
(2) All sediment spilled, dropped, washed, or tracked onto public rights-of-way should be removed immediately by contractor.
(3) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.
(4) When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
(5) All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Silt Fence

The purpose of a silt fence is to intercept and detain water-borne sediment from unprotected areas of a limited extent. Silt fence is used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. This fence should remain in place until the disturbed area is permanently stabilized. Silt fence should not be used where there is a concentration of water in a channel or drainage way. If concentrated

flow occurs after installation, corrective action must be taken such as placing a rock berm in the areas of concentrated flow.

Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time.

Inspection and Maintenance Guidelines:

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

Concrete Washout Area

The purpose of concrete washout areas is to prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting washout offsite, performing onsite washout in a designated area, and training employees and subcontractors.
The following steps will help reduce stormwater pollution from concrete wastes:

- Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
- Avoid mixing excess amounts of fresh concrete.
- Perform washout of concrete trucks in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped onsite, except in designated areas.
- For onsite washout:
- Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
- Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.

Below grade concrete washout facilities are typical. These consist of a lined excavation sufficiently large to hold expected volume of washout material. Above grade facilities are used if excavation is not practical. Temporary concrete washout facility (type above grade) should be constructed as shown on the details at the end of this section, with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.

When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

Rock Berm

The purpose of a rock berm is to serve as a check dam in areas of concentrated flow, to intercept sediment-laden runoff, detain the sediment and release the water in sheet flow. The rock berm should be used when the contributing drainage area is less than 5 acres. Rock berms are used in areas where the volume of runoff is too great for a silt fence to contain. They are less effective for sediment removal than silt fences, particularly for fine particles, but are able to withstand higher flows than a silt fence. As such, rock berms are often used in areas of channel flows (ditches, gullies, etc.). Rock berms are most effective at reducing bed load in channels and should not be substituted for other erosion and sediment control measures further up the watershed.

Inspection and Maintenance Guidelines:

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

Inlet Protection

Storm sewers that are made operational prior to stabilization of the associated drainage areas can convey large amounts of sediment to natural drainage ways. In case of extreme sediment loading, the storm sewer itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets. The following guidelines for inlet protection are based primarily on recommendations by the Virginia Dept. of Conservation and Recreation (1992) and the North Central Texas Council of Governments (NCTCOG, 1993b).

In developments for which drainage is to be conveyed by underground storm sewers (i.e., streets with curbs and gutters), all inlets that may receive storm runoff from disturbed areas should be protected. Temporary inlet protection is a series of different measures that provide protection against silt transport or accumulation in storm sewer systems. This clogging can greatly reduce or completely stop the flow in the pipes. The different measures are used for different site conditions and inlet types.

Care should be taken when choosing a specific type of inlet protection. Field experience has shown that inlet protection that causes excessive ponding in an area of high construction activity may become so inconvenient that it is removed or bypassed, thus transmitting sediment-laden flows unchecked. In such situations, a structure with an adequate overflow mechanism should be utilized.

It should also be noted that inlet protection devices are designed to be installed on construction sites and not on streets and roads open to the public. When used on public streets these devices will cause ponding of runoff, which can cause minor flooding and can present a traffic hazard. An example of appropriate siting would be a new subdivision where the storm drain system is installed before the area is stabilized and the streets open to the general public. When construction occurs adjacent to active streets, the sediment should be controlled on site and not on public thoroughfares. Occasionally,
roadwork or utility installation will occur on public roads. In these cases, inlet protection is an appropriate temporary BMP.

The following inlet protection devices are for drainage areas of one acre or less. Runoff from larger disturbed areas should be routed to a temporary sediment trap or basin.

Filter barrier protection using silt fence is appropriate when the drainage area is less than one acre and the basin slope is less than five percent. This type of protection is not applicable in paved areas.

Block and gravel protection is used when flows exceed 0.5 cubic feet per second and it is necessary to allow for overtopping to prevent flooding. This form of protection is also useful for curb type inlets as it works well in paved areas.

Wire mesh and gravel protection is used when flows exceed 0.5 cubic feet per second and construction traffic may occur over the inlet. This form of protection may be used with both curb and drop inlets.

Excavated impoundment protection around a drop inlet may be used for protection against sediment entering a storm drain inlet. With this method, it is necessary to install weep holes to allow the impoundment to drain completely. If this measure is implemented, the impoundment should be sized such that the volume of excavation is 3,600 cubic feet per acre (equivalent to 1 inch of runoff) of disturbed area entering the inlet.

Inspection and Maintenance Guidelines:

(1) Inspection should be made weekly and after each rainfall. Repair or replacement should be made promptly as needed by the contractor.
(2) Remove sediment when buildup reaches a depth of 3 inches. Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.
(3) Check placement of device to prevent gaps between device and curb.
(4) Inspect filter fabric and patch or replace if torn or missing.
(5) Structures should be removed and the area stabilized only after the remaining drainage area has been properly stabilized.

DRAINAGE AREA MAP

PR-1 is greater than 10 acres and will be disturbed. An existing and developed drainage area map is provided on the next page.

DAU3

Drainage Calculations - SCS Method

DRAINAGE AREA	AREA (Ac.)	IMPERVIOUS COVER (Ac.)	IMPERVIOUS COVER (%)	CN	SHEET FLOW				SHALLOW CONCENTRATED FLOW								TOTAL Tc** (min)	LAG TIME (min)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
					P-2yr24hr 4.01 "IN				Grass Surface				Paved Surface										
					N	L (ft)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)							
EX-A1	68.01	0.14	0.2%	80.04	0.15	100	0.007	13.32	2413	2.1	0.016	19.51	-	-	-	0.00	32.83	19.70	88.04	181.26	252.98	330.22	386.75
EX-A2	48.27	0.00	0.0%	80.00	0.15	100	0.043	6.46	2566	1.9	0.014	22.70	-	-	-	0.00	29.15	17.49	65.50	135.13	188.72	250.05	289.09
EX-B1	58.76	0.00	0.0%	80.00	0.15	100	0.002	21.99	2464	2.1	0.016	20.00	-	-	-	0.00	41.99	25.19	67.32	138.94	194.11	248.33	297.09

INLET PEAK FLOW CALCULATIONS - RATIONAL METHOD

Formulas: **Q = CiA**

Q = Peak Runoff (cfs)
C = Weighted Runoff Coefficient
i = Rainfall intensity (in/hr)
A = Drainage Area (acres)

Hydrologic Runoff Coefficients (Table 2-1 CoRR DCM)

	2 yr	10 yr	25 yr	50 yr	100 yr
Impervious C (Concrete)	0.75	0.83	0.88	0.92	0.97
Pervious C (Developed 2-7%)	0.33	0.38	0.46	0.49	0.53

Peak Flow Calculation - Rational Method — RUNOFF COEFFICIENT (C) — RAINFALL INTENSITY (I)

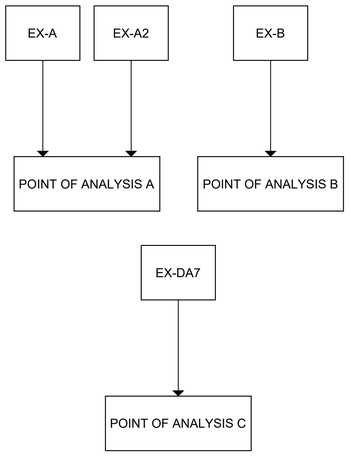
Drainage Area	Area (sf)	Area (Acres)	Impervious Cover (Acres)	% I.C.	C 2 YEAR	C 10 YEAR	C 25 YEAR	C 50 YEAR	C 100 YEAR	Tc (min)	I (in/hr) 2 YEAR	I (in/hr) 10 YEAR	I (in/hr) 25 YEAR	I (in/hr) 50 YEAR	I (in/hr) 100 YEAR	Q (cfs) 2 YEAR	Q (cfs) 10 YEAR	Q (cfs) 25 YEAR	Q (cfs) 50 YEAR	Q (cfs) 100 YEAR
EX-DA7	484387.200	11.120	0.922	8%	0.36	0.42	0.49	0.53	0.57	22.40	3.46	5.02	6.04	6.85	7.70	14.04	23.30	33.24	40.04	48.51

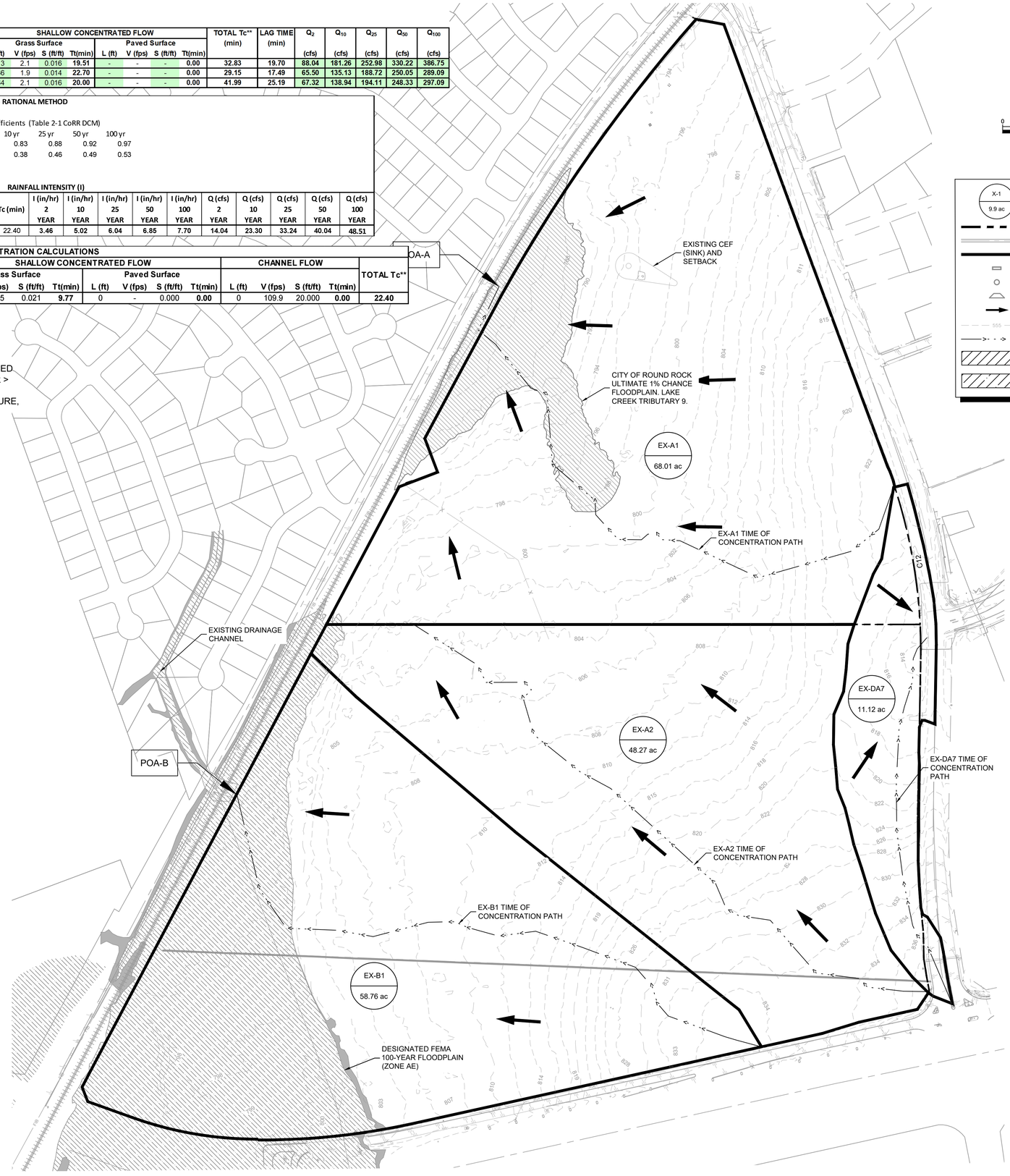
EXISTING TIME OF CONCENTRATION CALCULATIONS

DRAINAGE AREA	SHEET FLOW				SHEET FLOW (PAVEMENT)				SHALLOW CONCENTRATED FLOW								CHANNEL FLOW				TOTAL Tc**
	P-2yr24hr 4.01 IN				P-2yr24hr 4.01 IN				Grass Surface				Paved Surface								
	n	L (ft)	S (ft/ft)	Tt(min)	n	L (ft)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	
EX-DA7	0.150	100	0	**12.63**	0.016	0	0.000	**0.00**	1377	2.35	0.021	**9.77**	0	-	0.000	**0.00**	0	109.9	20.000	**0.00**	**22.40**

NOTES:

1. THE CURVE NUMBER (CN) HAS BEEN DETERMINED FROM TABLE 2-2A OF TECHNICAL RELEASE 55. THE COVER TYPE, HYDROLOGIC CONDITION, AND SOIL GROUP DETERMINED FOR THE PROPOSED CONDITIONS ARE OPEN SPACE ,GOOD CONDITION (GRASS COVER > 75%), AND TYPE D SOIL GROUP WITH A CN OF 80. THE COVER TYPE, HYDROLOGIC CONDITION, AND SOIL GROUP DETERMINED FOR THE EXISTING CONDITIONS ARE PASTURE, GOOD CONDITION, AND TYPE D SOIL GROUP WITH A CN OF 80.
2. EX-DA7 CALCULATED USING RATIONAL METHOD TO MAINTAIN FLOW RATE CONTINUITY WITH SIP-24-00008.





LEGEND

- X-1 / 9.9 ac — AREA DESIGNATOR / AREA IN ACRES
- PROPERTY LINE
- EXISTING STORM SEWER LINE
- EXISTING DRAINAGE DIVIDE
- EXISTING STORM SEWER INLET
- EXISTING STORM SEWER MANHOLE
- EXISTING STORM SEWER HEADWALL
- EXISTING FLOW DIRECTION
- 555 — EXISTING CONTOUR
- TIME OF CONCENTRATION FLOW PATH
- CITY OF ROUND ROCK ULTIMATE 1% CHANCE FLOODPLAIN. LAKE CREEK TRIBUTARY 9.
- DESIGNATED FEMA 100-YEAR FLOODPLAIN (ZONE AE)

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
8/14/2024

KHA PROJECT 069284918
DATE: AUGUST 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

EXISTING DRAINAGE AREA MAP

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
86 OF 191

SDP24-00001

DAU3

Drainage Calculations - SCS Method

DRAINAGE AREA	AREA (Ac.)	IMPERVIOUS COVER (Ac.)	IMPERVIOUS COVER (%)	CN	SHEET FLOW P-2yr24hr 4.01 IN				SHALLOW CONCENTRATED FLOW								PIPE FLOW				TOTAL Tc** (min)	LAG TIME (min)	Q_2	Q_{10}	Q_{25}	Q_{50}	Q_{100}
									Paved Surface				Grass Surface				Pipe Flow										
					N	L (ft)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)			(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
PR-1	47.50	39.69	83.6%	95.04	0.15	100	0.007	13.32	194	3.8031	0.035	0.85	451	1.2704	0.006	5.92	1582	6.0	-	4.39	24.48	14.69	109.60	183.35	238.29	306.80	340.33
BY-1	14.76	0.00	0.0%	80.00	0.15	100	0.012	10.74	-	-	-	0.00	1665	2.2954	0.020	12.09	-	-	-	-	22.83	13.70	22.06	45.69	63.93	86.42	97.97
BY-2	1.49	0.00	0.0%	80.00	0.15	100	0.020	8.75	-	-	-	0.00	270	2.4995	0.024	1.80	-	-	-	-	10.55	6.33	2.86	5.85	8.14	11.69	12.41
BY-3	52.37	0.00	0.0%	80.00	0.15	100	0.043	6.44	-	-	-	0.00	4097	1.8506	0.013	36.90	-	-	-	-	43.34	26.01	58.72	121.49	169.88	217.68	260.25
B-1	58.76	0.00	0.0%	80.00	0.15	100	0.002	21.99	-	-	-	0.00	2464	2.0532	0.016	20.00	-	-	-	-	41.99	25.19	67.32	138.94	194.11	248.33	297.09

Storm Event	Existing Flows (cfs)			Developed Flows (cfs)							POA-A Delta
	EX-A1	EX-A2	POA-A	PR-1	BY-1	BY-2	BY-3	POND 1 (IN)	POND 1 (OUT)	POA-A	
2	88.04	65.5	152.51	109.60	22.06	2.86	58.72	109.60	60.61	134.74	17.77
10	181.26	135.13	315.04	183.35	45.69	5.85	121.49	183.35	111.91	265.97	49.07
25	252.98	188.72	440.66	238.29	63.93	8.14	169.88	238.29	152.04	368.79	71.87
50	330.22	250.05	577.32	306.80	86.42	11.69	217.68	306.80	194.42	472.60	104.72
100	386.75	289.09	675.16	340.33	97.97	12.41	260.25	340.33	229.19	563.81	111.35

Storm Event	Existing Flows (cfs)		Developed Flows (cfs)		POA-B Delta
	EX-B1	POA-B	B-1	POA-B	
2	67.32	67.32	67.32	67.32	0
10	138.94	138.94	138.94	138.94	0
25	194.11	194.11	194.11	194.11	0
50	248.33	248.33	248.33	248.33	0
100	297.09	297.09	297.09	297.09	0

INLET PEAK FLOW CALCULATIONS - RATIONAL METHOD

Formulas: **Q = CiA**

Q = Peak Runoff (cfs)
C = Weighted Runoff Coefficient
i = Rainfall intensity (in/hr)
A = Drainage Area (acres)

Hydrologic Runoff Coefficients (Table 2-1 CoRR DCM)

	2 yr	10 yr	25 yr	50 yr	100 yr
Impervious C (Concrete)	0.75	0.83	0.88	0.92	0.97
Pervious C (Developed 2-7%)	0.33	0.38	0.46	0.49	0.53

Peak Flow Calculation - Rational Method

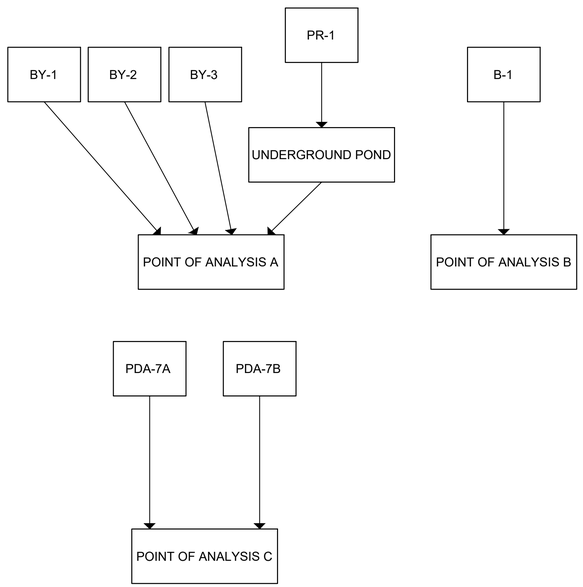
Drainage Area	Area (sf)	Area (Acres)	Impervious Cover (Acres)	% I.C.	RUNOFF COEFFICIENT (C) C 2 YEAR	C 10 YEAR	C 25 YEAR	C 50 YEAR	C 100 YEAR	Tc (min)	RAINFALL INTENSITY (I) I (in/hr) 2 YEAR	I (in/hr) 10 YEAR	I (in/hr) 25 YEAR	I (in/hr) 50 YEAR	I (in/hr) 100 YEAR	Q (cfs) 2 YEAR	Q (cfs) 10 YEAR	Q (cfs) 25 YEAR	Q (cfs) 50 YEAR	Q (cfs) 100 YEAR
PDA-7A	**386416.98**	8.871	7.097	**80%**	**0.67**	**0.74**	**0.80**	**0.83**	**0.88**	23.20	**3.38**	**4.91**	**5.90**	**6.69**	**7.52**	**19.97**	**32.23**	**41.66**	**49.50**	**58.84**
PDA-7B	**92305.33**	2.119	0.900	**42%**	**0.51**	**0.57**	**0.64**	**0.67**	**0.72**	14.53	**4.30**	**6.28**	**7.58**	**8.63**	**9.73**	**4.63**	**7.60**	**10.25**	**12.30**	**14.78**

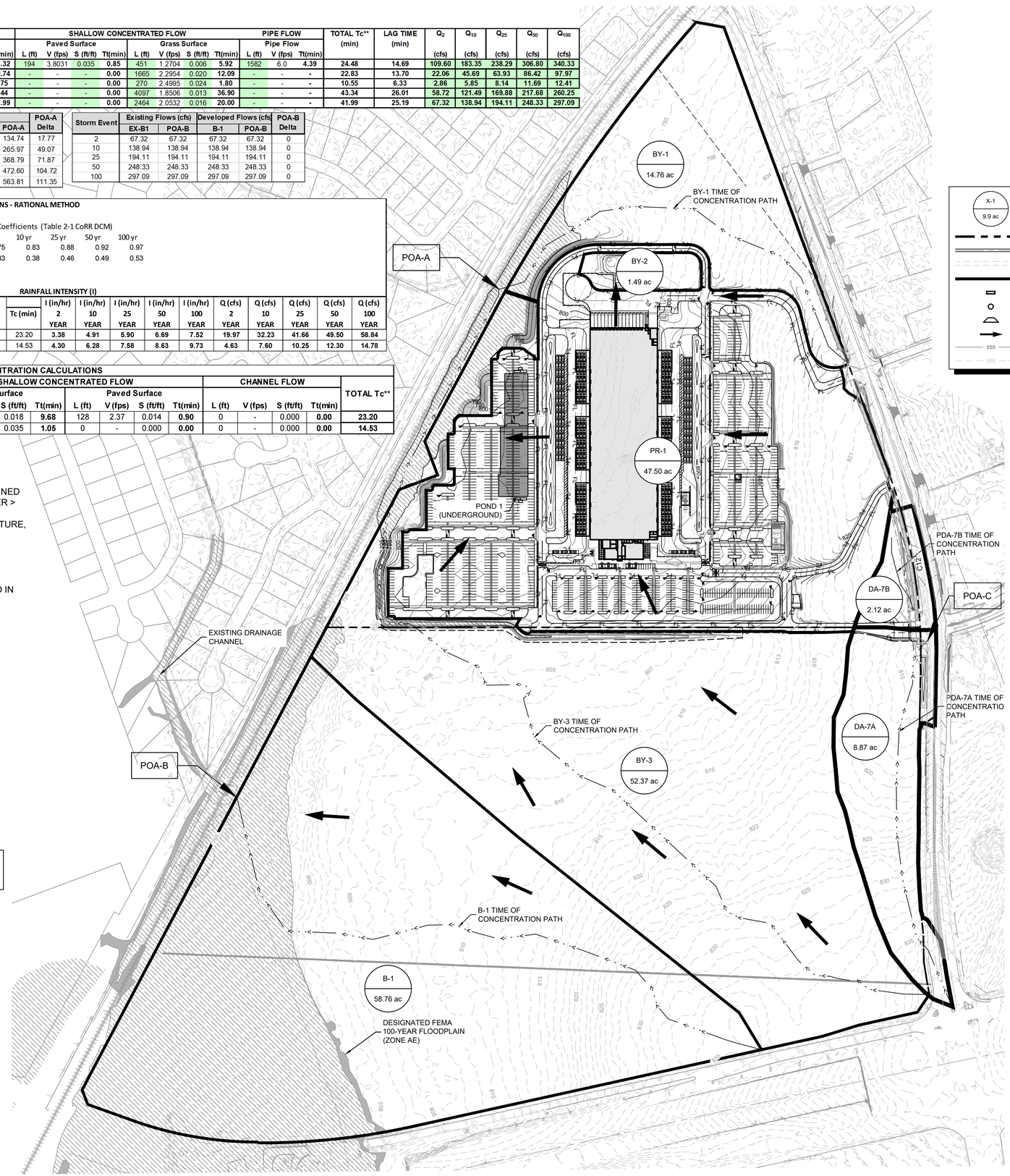
PROPOSED TIME OF CONCENTRATION CALCULATIONS

DRAINAGE AREA	SHEET FLOW P-2yr24hr 4.01 IN				SHEET FLOW (PAVEMENT) P-2yr24hr 4.01 IN				SHALLOW CONCENTRATED FLOW Grass Surface				SHALLOW CONCENTRATED FLOW Paved Surface				CHANNEL FLOW				TOTAL Tc**
	n	L (ft)	S (ft/ft)	Tt(min)	n	L (ft)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	
PDA-7A	0.150	100	0.008	**12.63**	0.016	0	0.000	**0.00**	1249	2.15	0.018	**9.68**	128	2.37	0.014	**0.90**	0	-	0.000	**0.00**	**23.20**
PDA-7B	0.150	100	0.007	**13.48**	0.016	0	0.000	**0.00**	191	3.03	0.035	**1.05**	0	-	0.000	**0.00**	0	-	0.000	**0.00**	**14.53**

NOTES:

1. THE CURVE NUMBER (CN) HAS BEEN DETERMINED FROM TABLE 2-2A OF TECHNICAL RELEASE 55. THE COVER TYPE, HYDROLOGIC CONDITION, AND SOIL GROUP DETERMINED FOR THE PROPOSED CONDITIONS ARE OPEN SPACE ,GOOD CONDITION (GRASS COVER > 75%), AND TYPE D SOIL GROUP WITH A CN OF 80. THE COVER TYPE, HYDROLOGIC CONDITION, AND SOIL GROUP DETERMINED FOR THE EXISTING CONDITIONS ARE PASTURE, GOOD CONDITION, AND TYPE D SOIL GROUP WITH A CN OF 80.
2. DA-7A WAS DETERMINED WITH 80% MAXIMUM IMPERVIOUS COVER PER SIP-24-00008.
3. DA-7A AND DA-7B CALCULATED USING RATIONAL METHOD TO MAINTAIN FLOW RATE CONTINUITY WITH SIP-24-00008.
4. REFER TO SIP-24-00008 FOR CONTINUATION OF FLOW FROM DA-7A AND DA-7B.
5. REFER TO SIP-24-00016 FOR DEVELOPED CONDITIONS WITH CONSTRUCTION OF POND IN LOT 2.





N W E S

0 200' 400'
GRAPHIC SCALE 200'

LEGEND

- X-1 / 9.9 ac — AREA DESIGNATOR / AREA IN ACRES
- PROPERTY LINE
- STORM SEWER LINE
- EXISTING STORM SEWER LINE
- DRAINAGE DIVIDE
- STORM SEWER INLET
- STORM SEWER MANHOLE
- STORM SEWER HEADWALL
- FLOW DIRECTION
- 555 — CONTOUR
- 555 — EXISTING CONTOUR

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN 107175 LICENSED PROFESSIONAL ENGINEER
8/14/2024

KHA PROJECT 069284918
DATE AUGUST 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

DEVELOPED DRAINAGE AREA MAP

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
87 OF 191

SDP24-00001

TEMPORARY SEDIMENT POND(S) PLANS AND CALCULATIONS

A sedimentation basin is required, where feasible, for a common drainage location that serves an area with ten (10) or more acres disturbed at one time.

A sedimentation basin may be temporary or permanent and must provide sufficient storage to contain a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained. When calculating the volume of runoff from a 2-year, 24-hour storm event, it is not required to include the flows from offsite areas and flow from onsite areas that are either undisturbed or have already undergone permanent stabilization if these flows are diverted around both the disturbed areas of the site and the sediment basin.

Where rainfall data is not available or a calculation cannot be performed, the sedimentation basin must provide at least 3,600 cubic feet of storage per acre drained until final stabilization of the site.

If a sedimentation basin is not feasible, then the permittee shall provide equivalent control measures until final stabilization of the site. In determining whether installing a sediment basin is feasible, the permittee may consider factors such as site soils, slope, available area, public safety, precipitation patterns, site geometry, site vegetation, infiltration capacity, geotechnical factors, depth to groundwater, and other similar considerations. The permittee shall document the reason that the sediment basins are not feasible, and shall utilize equivalent control measures, which may include a series of smaller sediment basins.

Sites With Drainage Areas Less than Ten Acres

Sediment traps and sediment basins may be used to control solids in storm water runoff for drainage locations serving less than ten (10) acres.

Alternatively, a sediment basin that provides storage for a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained may be utilized. Where rainfall data is not available or a calculation cannot be performed, a temporary or permanent sediment basin providing 3,600 cubic feet of storage per acre drained may be provided.

Proposed Sedimentation Basin Calculations

For 2525 CR 172 Industrial, the proposed onsite underground detention pond will serve as a storage for on-site drainage. The basins will be designed to contain the 3,600 cubic feet per acre of disturbed area draining to the pond.

Temporary Sedimentation:

An underground detention pond will serve as storage for on-site drainage during the construction phase (as shown on sheets 82-85 of the site plan drawings). Drainage area PR-1 includes 39.69 acres of impervious cover and generates a maximum volume of 429,981 ft^3. The developed underground detention pond will not exceed generated volume at 500,531 ft^3, thus, the constructed underground detention pond will be adequately sized for sedimentation proposed for the drainage area.

INSPECTION AND MAINTENANCE FOR BMPS

Personnel Responsible for Inspections

The agent that performs the inspections should be knowledgeable of this general permit and familiar with the construction site. The contractor is to provide an inspector with a CPESC, CESSWI, or CISEC certification. Documentation of the inspector's qualifications is to be included in the attached Inspector Qualifications Log.

Inspection Schedule
The primary operator is required to choose one of the two inspections listed below.

☐ **Option 1:** Once every seven calendar days. If this alternative schedule is developed, then the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.
☐ **Option 2:** Once every 14 calendar days and within 24 hours of the end of a storm event of two inches or greater.

The inspections may occur on either schedule provided that documentation reflects the current schedule and that any changes to the schedule are conducted in accordance with the following provisions: the schedule may be changed a maximum of one time each month, the schedule change must be implemented at the beginning of a calendar month, and the reason for the schedule change must be documented (e.g., end of “dry” season and beginning of “wet” season).

If option 2 is the chosen frequency of inspections a rain gauge must be properly maintained on site or the storm event information from a weather station that is representative of the site location. For any day of rainfall during normal business hours that measures 0.25 inches or greater, proper documentation of the total rainfall measured for that day must be recorded.
Personnel provided by the permittee must inspect:

- disturbed areas of the construction site that have not been finally stabilized;
- areas used for storage of materials that are exposed to precipitation;
- structural controls (for evidence of, or the potential for, pollutants entering the drainage system);
- sediment and erosion control measures identified in the SWP3 (to ensure they are operating correctly); and
- locations where vehicles enter or exit the site (for evidence of off-site sediment tracking).

Reductions in Inspection Frequency
Where sites have been finally or temporarily stabilized or where runoff is unlikely due to winter conditions (e.g. site is covered with snow, ice, or frozen ground exists), inspections must be conducted at least once every month. In arid, semi-arid, or drought-stricken areas, inspections must be conducted at least once every month and within 24 hours after the end of a storm event of 0.5 inches or greater. A record of the total rainfall measured, as well as the approximate beginning and ending dates of winter or drought conditions resulting in monthly frequency of inspections in the attached Rain Gauge Log.

In the event of flooding or other uncontrollable situations which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable.

Inspection Report Forms

Use the Inspection Report Forms given as a checklist to ensure that all required areas of the construction site are addressed. There is space to document the inspector's name as well as when the inspections regularly take place. The tables will document that the required area was inspected. (If there were any areas of concern, briefly describe them in this space with a more detailed description in the narrative section. Use the last table to document any discharges found during the inspections).

Describe how effective the installed BMPs are performing. Describe any BMP failures that were noted during the investigation and describe any maintenance required due to the failure. If new BMPs are needed as the construction site changes, the inspector can use the space at the bottom of the section to list BMPs to be implemented before the next inspection.

Describe the inspector's qualifications, how the inspection was conducted, and describe any areas of non-compliance in detail. If an inspection report does not identify any incidents of non-compliance, then it must contain a certifying signature stating that the facility or site is in compliance. The report must be signed by a person and in a manner required by 30 TAC 305.128. There is space at the end of the form to allow for this certifying signature.

Whenever an inspection shows that BMP modifications are needed to better control pollutants in runoff, the changes must be completed within seven calendar days following the inspection. If existing BMPs are modified or if additional BMPs are needed, you must describe your implementation schedule, and wherever possible, make the required BMP changes before the next storm event.

The Inspection Report Form functions as the required report and must be signed in accordance with TCEQ rules at 30 TAC 305.128.

Corrective Action

Personnel Responsible for Corrective Actions

Both Primary and Secondary Operators are responsible for maintaining all necessary Corrective Actions. If an individual is specifically identified as the responsible party for modifying the contact information for that individual should be documented in the attached Inspector Qualifications Log.

Corrective Action Forms

The Temporary BMPs must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions must be completed within seven (7) calendar days following the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in the attached forms and wherever possible those changes implemented before the next storm event. If implementation before the next anticipated storm event is impracticable, these changes must be implemented as soon as practicable. Actions taken as a result of inspections must be properly documented by completing the corrective action forms given.

Kimley»Horn

Inspector Qualifications Log*

Inspector Name: ______________________________
Qualifications (Check as appropriate and provide description):
□ Training Course ______________________________
□ Supervised Experience ______________________________
□ Other ______________________________

Inspector Name: ______________________________
Qualifications (Check as appropriate and provide description):
□ Training Course ______________________________
□ Supervised Experience ______________________________
□ Other ______________________________

Inspector Name: ______________________________
Qualifications (Check as appropriate and provide description):
□ Training Course ______________________________
□ Supervised Experience ______________________________
□ Other ______________________________

Inspector Name: ______________________________
Qualifications (Check as appropriate and provide description):
□ Training Course ______________________________
□ Supervised Experience ______________________________
□ Other ______________________________

Inspector Name: ______________________________
Qualifications (Check as appropriate and provide description):
□ Training Course ______________________________
□ Supervised Experience ______________________________
□ Other ______________________________

Inspector Name: ______________________________
Qualifications (Check as appropriate and provide description):
□ Training Course ______________________________
□ Supervised Experience ______________________________
□ Other ______________________________

* The agent that performs the inspections should be knowledgeable of this general permit and familiar with the construction site. The contractor is to provide an inspector with a CPESC, CESSWI, or CISEC certification.

Kimley»Horn

Amendment Log

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

Construction Activity Sequence Log

Name of Operator	Projected dates Month/year	Activity Disturbing Soil clearing, excavation, etc.	Location on-site where activity will be conducted	Acreage being disturbed

*Construction activity sequences for linear projects may be conducted on a rolling basis. As a result, construction activities may be at different stages at different locations in the project area. The Contractor is required to complete and update the schedule and adjust as necessary.

Kimley»Horn

Stormwater Control Installation and Removal Log

Stormwater Control	Location On-Site	Installation Date	Removal Date

Kimley»Horn

Stabilization Activities Log

Date Activity Initiated	Description of Activity	Description of Stabilization Measure and Location	Date Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures Initiated

Stabilization and erosion control practices may include, but are not limited to: establishing temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, and protecting existing trees and vegetation. List practices used where they are located, when they will be implemented, and whether they are temporary (interim) or permanent.

Kimley»Horn

Inspection Frequency Log

Date	Frequency Schedule and Reason for Change

Kimley»Horn

Rain Gauge Log

Date	Location of Rain Gauge	Gauge Reading

Kimley»Horn

General Information					
Name of Project		Tracking No.		Inspection Date	
Inspector Name, Title & Contact Information					
Present Phase of Construction					
Inspection Location (if multiple inspections are required, specify location where this inspection is being conducted)					

Inspection Frequency

Standard Frequency: ☐ Weekly ☐ Every 14 days and within 24 hours of a 0.25" rain

Increased Frequency: ☐ Every 7 days and within 24 hours of a 0.25" rain

Reduced Frequency:

- ☐ Once per month (for stabilized areas)
- ☐ Once per month and within 24 hours of a 0.25" rain (for arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought)
- ☐ Once per month (for frozen conditions where earth-disturbing activities are being conducted)

Was this inspection triggered by a 0.25" storm event? ☐ Yes ☐ No

If yes, how did you determined whether a 0.25" storm event has occurred?

☐ Rain gauge on site ☐ Weather station representative of site. Specify weather station source:

Total rainfall amount that triggered the inspection (in inches)**:**

Unsafe Conditions for Inspection

Did you determine that any portion of your site was unsafe for inspection? ☐ Yes ☐ No

If "yes", complete the following:

- Describe the conditions that prevented you from conducting the inspection in this location:

- Location(s) where conditions were found:

Condition and Effectiveness of Erosion and Sediment (E&S) Controls				
Type/Location of E&S Control	**Repairs or Other Maintenance Needed?**	**Corrective Action Required?**	**Date on Which Maintenance or Corrective Action First Identified?**	**Notes**
1.	☐Yes ☐No	☐Yes ☐No		
2.	☐Yes ☐No	☐Yes ☐No		
3.	☐Yes ☐No	☐Yes ☐No		
4.	☐Yes ☐No	☐Yes ☐No		
5.	☐Yes ☐No	☐Yes ☐No		
6.	☐Yes ☐No	☐Yes ☐No		
7.	☐Yes ☐No	☐Yes ☐No		
8.	☐Yes ☐No	☐Yes ☐No		
9.	☐Yes ☐No	☐Yes ☐No		
10.	☐Yes ☐No	☐Yes ☐No		

Condition and Effectiveness of Pollution Prevention (P2) Practices				
Type/Location of P2 Practices	**Repairs or Other Maintenance Needed?**	**Corrective Action Required?**	**Identification Date**	**Notes**
1.	☐Yes ☐No	☐Yes ☐No		
2.	☐Yes ☐No	☐Yes ☐No		
3.	☐Yes ☐No	☐Yes ☐No		
4.	☐Yes ☐No	☐Yes ☐No		
5.	☐Yes ☐No	☐Yes ☐No		
6.	☐Yes ☐No	☐Yes ☐No		
7.	☐Yes ☐No	☐Yes ☐No		
8.	☐Yes ☐No	☐Yes ☐No		
9.	☐Yes ☐No	☐Yes ☐No		
10.	☐Yes ☐No	☐Yes ☐No		

Stabilization of Exposed Soil			
Stabilization Area	**Stabilization Method**	**Have You Initiated Stabilization?**	**Notes**
1.		☐ YES ☐ NO If yes, provide date:	
2.		☐ YES ☐ NO If yes, provide date:	
3.		☐ YES ☐ NO If yes, provide date:	
4.		☐ YES ☐ NO If yes, provide date:	
5.		☐ YES ☐ NO If yes, provide date:	

Description of Discharges	
Was a stormwater discharge or other discharge occurring from any part of your site at the time of the inspection? ☐ Yes ☐ No **If "yes", provide the following information for each point of discharge:**	
Discharge Location	**Observations**
1.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
2.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:
3.	Describe the discharge: At points of discharge and the channels and banks of surface waters in the immediate vicinity, are there any visible signs of erosion and/or sediment accumulation that can be attributed to your discharge? ☐ Yes ☐ No If yes, describe what you see, specify the location(s) where these conditions were found, and indicate whether modification, maintenance, or corrective action is needed to resolve the issue:

Contractor or Subcontractor Certification and Signature
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." **Signature of Contractor or Subcontractor:** _____ **Date:** **Printed Name and Affiliation:** _____
Certification and Signature by Permittee
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." **Signature of Permittee or "Duly Authorized Representative":** _____ **Date:** **Printed Name and Affiliation:** _____

Kimley»Horn

Section A – Initial Report (Complete this section within 24 hours of discovering the condition that triggered corrective action)					
Name of Project		Tracking No.		Today's Date	
Date Problem First Discovered			Time Problem First Discovered		
Name and Contact Information of Individual Completing this Form					

What site conditions triggered the requirement to conduct corrective action:

☐ A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or 3
☐ The stormwater controls that have been installed and maintained are not effective enough for the discharge to meet applicable water quality standards
☐ A prohibited discharge has occurred or is occurring

Provide a description of the problem:

Deadline for completing corrective action (*Enter date that is either: (1) no more than 7 calendar days after the date you discovered the problem, or (2) if it is infeasible to complete work within the first 7 days, enter the date that is as soon as practicable following the 7th day)*:

If your estimated date of completion falls after the 7-day deadline, explain (1) why you believe it is infeasible to complete work within 7 days, and (2) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe:

Section B – Corrective Action Progress (Complete this section no later than 7 calendar days after discovering the condition that triggered corrective action)	
Section B.1 – Why the Problem Occurred	
Cause(s) of Problem (Add an additional sheet if necessary)	How This Was Determined and the Date You Determined the Cause
1.	1.
2.	2.
3.	3.

Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem			
List of Stormwater Control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Completion Date	Plan Updates Necessary?	Notes
1.		☐Yes ☐No Date:	
2.		☐Yes ☐No Date:	
3.		☐Yes ☐No Date:	

Section A – Initial Report
(Complete this section within 24 hours of discovering the condition that triggered corrective action)

Name of Project		Tracking No.		Today's Date	
Date Problem First Discovered			Time Problem First Discovered		
Name and Contact Information of Individual Completing this Form					

What site conditions triggered the requirement to conduct corrective action:

☐ A required stormwater control was never installed, was installed incorrectly, or not in accordance with the requirements in Part 2 and/or 3
☐ The stormwater controls that have been installed and maintained are not effective enough for the discharge to meet applicable water quality standards
☐ A prohibited discharge has occurred or is occurring

Provide a description of the problem:

Deadline for completing corrective action (*Enter date that is either: (1) no more than 7 calendar days after the date you discovered the problem, or (2) if it is infeasible to complete work within the first 7 days, enter the date that is as soon as practicable following the 7th day)*:

If your estimated date of completion falls after the 7-day deadline, explain (1) why you believe it is infeasible to complete work within 7 days, and (2) why the date you have established for making the new or modified stormwater control operational is the soonest practicable timeframe:

Section B – Corrective Action Progress

(Complete this section no later than 7 calendar days after discovering the condition that triggered corrective action)

Section B.1 – Why the Problem Occurred

Cause(s) of Problem (Add an additional sheet if necessary)	How This Was Determined and the Date You Determined the Cause
1.	1.
2.	2.
3.	3.

Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem

List of Stormwater Control Modification(s) Needed to Correct Problem (Add an additional sheet if necessary)	Completion Date	Plan Updates Necessary?	Notes
1.		☐Yes ☐No Date:	
2.		☐Yes ☐No Date:	
3.		☐Yes ☐No Date:	

Contractor or Subcontractor Certification and Signature

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

Signature of Contractor or Subcontractor: _____ **Date:**

Printed Name and Affiliation: _____

Certification and Signature by Permittee

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

Signature of Permittee or
“Duly Authorized Representative”: _____ **Date:**

Printed Name and Affiliation: _____

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Construction practices shall disturb the minimal amount of existing ground cover as required for land clearing, grading, and construction activity for the shortest amount of time possible to minimize the potential of erosion and sedimentation from the site. Existing vegetation shall be maintained and left in place until it is necessary to disturb for construction activity. For this project the following stabilization practices will be implemented:

1. Hydraulic Mulch and Seeding: Disturbed areas subject to erosion shall be stabilized with hydraulic mulch and/or seeded and watered to provide interim stabilization. For areas that are not to be sodded as per the project landscaping plan, vegetative cover will be established to provide permanent stabilization.
2. Sodding and Wood Mulch: As per the project landscaping plan, sodding and wood mulch will be applied to landscaped areas to provide permanent stabilization prior to project completion.

Records of the following shall be maintained:

a) The dates when major grading activities occur;

b) The dates when construction activities temporarily or permanently cease on a portion of the site; and

c) The dates when stabilization measures are initiated.

Stabilization measures must be initiated as soon as practical in portions of the site where construction activities have temporarily or permanently ceased, and except as provided in the following, must be initiated no more that fourteen (14) days after the construction activity in that portion of the site has temporarily or permanently ceased:

Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practical.

Where construction activity on a portion of the site is temporarily ceased and earth disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures do not have to be initiated on that portion of the site.

In arid areas (areas with an average rainfall of 0-10 inches), semiarid areas (areas with an average annual rainfall of 10 to 20 inches), and areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practical.

Maintenance

Below are some maintenance practices to be used to maintain erosion and sediment controls:

- All measures will be maintained in good working order. The operator should correct any damage or deficiencies as soon as practicable after the inspection, but in no case later than seven (7) calendar days after the inspection.

- BMP Maintenance (as applicable)
- Sediment must be removed from sediment traps and sedimentation ponds no later than the time that design capacity has been reduced by 50%. For perimeter controls such as silt fences, berms, etc., the trapped sediment must be removed before it reaches 50% of the above-ground height.
- Silt fence will be inspected for depth of sediment, tears, to see of the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- Drainage swale will be inspected and repaired as necessary.
- Inlet control will be inspected and repaired as necessary.
- Check dam will be inspected and repaired as necessary.
- Straw bale dike will be inspected and repaired as necessary.
- Diversion dike will be inspected and any breaches promptly repaired.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
- If sediment escapes the site, accumulations must be removed at a frequency that minimizes off-site impacts, and prior to the next rain event, if feasible. If the permittee does not own or operate the off-site conveyance, then the permittee must to work with the owner or operator of the property to remove the sediment.
- Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

To maintain the above practices, the following will be performed:

- Maintenance and repairs will be conducted before the next anticipated storm event or as necessary to maintain the continued effectiveness of storm water controls. Following an inspection, deficiencies should be corrected no later than seven (7) calendar days after the inspection.

SECTION 6:
PERMANENT STORMWATER SECTION

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(Ii), (E), and (5), Effective June 1, 1999

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

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

Signature

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

Print Name of Customer/Agent: Nicholas C. Brown, P.E.

Date: 06/05/2024

Signature of Customer/Agent

Regulated Entity Name: 2525 CR 172 Industrial

Permanent Best Management Practices (BMPs)

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

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

   [ ] N/A

2. [X] 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.

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

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

☐ N/A

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

   ☐ N/A

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

   ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
   ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
   ☒ The site will not be used for low density single-family residential development.

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

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

6. ☒ **Attachment B - BMPs for Upgradient Stormwater**.

☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

7. ☒ **Attachment C - BMPs for On-site Stormwater**.

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

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

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

   ☐ N/A

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

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

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

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

    ☒ Design calculations (TSS removal calculations)
    ☒ TCEQ construction notes
    ☒ All geologic features
    ☒ All proposed structural BMP(s) plans and specifications

    ☐ N/A

11. [X] **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:

    [X] Prepared and certified by the engineer designing the permanent BMPs and measures
    [X] Signed by the owner or responsible party
    [X] Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    [X] 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.

    [X] 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.

    [X] N/A

Responsibility for Maintenance of Permanent BMP(s)

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

14. [X] 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. [X] 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

20% OR LESS IMPERVIOUS COVER WAIVER

This site has more than 20% impervious cover. Therefore, a waiver will not be submitted for this project.

BMPS FOR UPGRADIENT STORMWATER

Upgradient storm water exists south of the site based on current topography maps and field observations. 75.26 acres of offsite up-gradient water enters the site from the south and drains to an existing channel near POA-A and POA-B. Please refer to the Existing and Developed Drainage Area Maps that are provided at the end of this report in Section 8.

BMPS FOR ON-SITE STORMWATER

2525 CR 172 Industrial has a total of 2 on-site basins. The overall required removal for this development is Lm = 30,064 LBS. The system has been designed to provide 30,169 LBS of TSS removal. The basins are detailed and shown on the construction drawings (Water Quality Plan, Sheet 85). Up-Flo Filter 8ft X 18.5ft will provide 14,437 LBS of TSS removal. Up-Flo Filter 8ft X 24ft will provide 15,732 LBS of TSS removal. All TSS calculations are shown on the in Section 8.

After construction, all disturbed areas on the site will be re-vegetated and runoff from the proposed improvements will be captured by the proposed storm system and conveyed through the proposed BMP's.

Construction plans, calculations and specifications are provided in Section 8 which is located at the end of this report.

BMPS FOR SURFACE STREAMS

There are two sensitive features located in on-site, as noted in the geologic assessment. A buffer will be provided for Feature 4 and 5 in all directions. Any excavation within 50 feet of the feature will be avoided. We are not proposing any fill or covering of the sensitive features.

Temporary erosion control will be placed as close to the site of construction soil disturbance as possible to minimize any disturbance. Frequent inspections of erosion controls will be warranted near the sensitive features, especially after rainfall.

REQUEST TO SEAL FEATURES

(NOT APPLICABLE)

The permanent sealing of or diversion of flow from a naturally-occurring “sensitive” or “possibly sensitive” feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-occurring “sensitive” or “possibly sensitive” features on this site.

CONSTRUCTION PLANS

Calculations for the load removal requirements for the project and the load removal provided by the permanent BMP's are provided as an exhibit in Section 8 which have been preliminary approved by a professional engineer licensed in the state of Texas. The load removal requirements are derived from the equations from the technical guidance manual based upon project area and increase in impervious cover. All stormwater runoff from impervious areas will be treated by the proposed permanent BMP's to provide the overall required removal of the increase in Total Suspended Solids. Provided within the calculations is a summary of the amount of pollutant load required to be removed from the drainage areas and the amount of removal provided by the permanent BMP's.

Construction plans, details, specifications, calculations, and construction notes are provided in Section 8 which is attached at the end of this report.

INSPECTION AND MAINTENANCE FOR BMPS

The inspection and maintenance plan outlines the procedures necessary to maintain the performance of the Permanent Best Management Practices for this project. It should be noted that the plan provides guidelines that may have to be adjusted dependent on site specific and weather-related conditions.

It is the responsibility of the owner to provide the inspections and maintenance as outlined in the plan for the duration of the project. The owner will maintain this responsibility until it is assumed or transferred to another entity in writing. If the property is leased or sold, the responsibility for the maintenance will be required to be transferred through the lease agreement, binding covenants, closing documents, or other binding legal instrument.

Disposal of accumulated silt shall be accomplished following Texas Commission on Environmental Quality guidelines and specifications.

Maintenance records shall be kept on the installation, maintenance, or removal of items necessary for the proper operation of the facilities. All inspections shall be documented in the Inspection Frequency Log, attached.

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

Responsible Party: Amazon.com Services, LLC
Mailing Address: 101 Platform Way N
City, State: Nashville, TN Zip: 37203

Telephone: (901) 438-4156 Fax:

I, the owner, have read and understand the requirements of the attached Inspection and Maintenance Plan for the proposed Permanent Best Management Practices for my project. I acknowledge that I will maintain responsibility for the implementation and execution of the plan until the responsibility is transferred to or assumed by another party in writing through a binding legal instrument.

Signature of Responsible Party David Barnett Digitally signed by David Barnett DN: C=US, E=barnettj@amazon.com, O="Amazon ", OU=Amazon, CN=David Barnett Date: 2024.05.30 07:58:22-05'00' Date 5/30/24

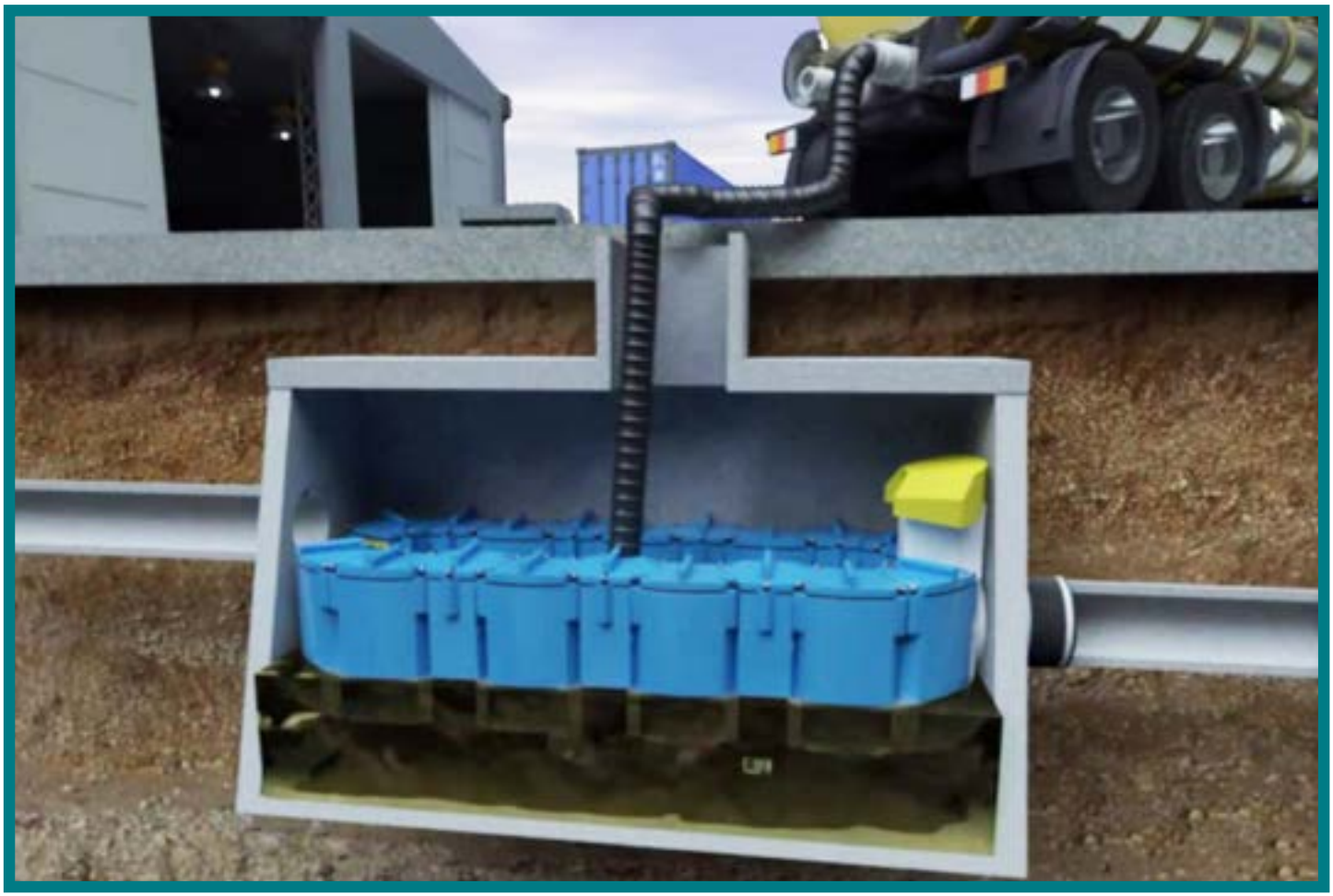
This Maintenance Plan is based on City of Round Rock Standard Specifications and City of Austin Environmental Criteria Manual.

By: Date: 5/29/2024
Nicholas C. Brown, P.E.

INSPECTION AND MAINTENANCE FOR BMPS

Up-Flo Filter (See next pages)

Hydro International®



Operation and Maintenance Manual

Stormwater Solutions

Up-Flo® Filter

Filtration System for Stormwater Treatment

94 Hutchins Drive
Portland, ME 04102

Tel: (207) 756-6200
Fax: (207) 756-6212
stormwaterinquiry@hydro-int.com

www.hydro-int.com

Table of Contents

IMPORTANT - ORDER REPLACEMENT PARTS FOR MAINTENANCE - IMPORTANT

Annual maintenance requires replacement of the Media Packs and the Drain Down Filter. Contact Hydro International to order replacements. Allow 2-4 weeks for delivery.

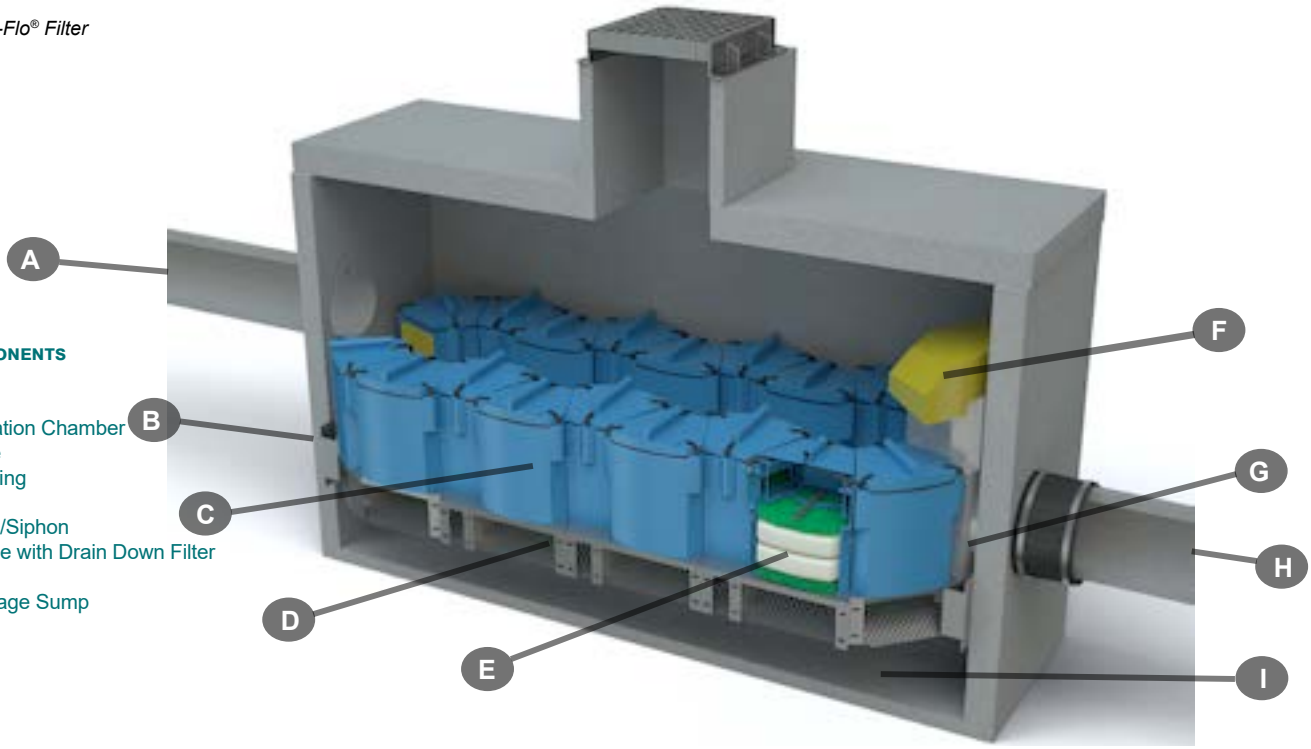
Office hours Monday thru Friday 8:00 A.M. to 5:00 P.M. EST
Toll free: 1-888-382-7808
Phone: 207-756-6200
Fax: 207-756-6212
Email: services@hydro-int.com

Overview & Product Description

The Up-Flo® Filter is a modular high-rate stormwater filtration device designed to capture trash, oil, sediment and remove fine pollutants such as dissolved and particulate metals and nutrients from stormwater runoff. Designed with efficiency, longevity and upkeep in mind, this high performance, low maintenance filter option that offers higher loading rates and longer media life for higher quality stormwater for longer periods between servicings.

In general, a minimum of two inspections are required per year to monitor sediment and gross pollutant accumulations. In order to achieve an annual TSS removal rate of 80% for the Up-Flo® Filter, the minimum maintenance frequency specified in the maintenance section for replacement of the Media Pack and removal of accumulated sediment from the sump is mandatory.

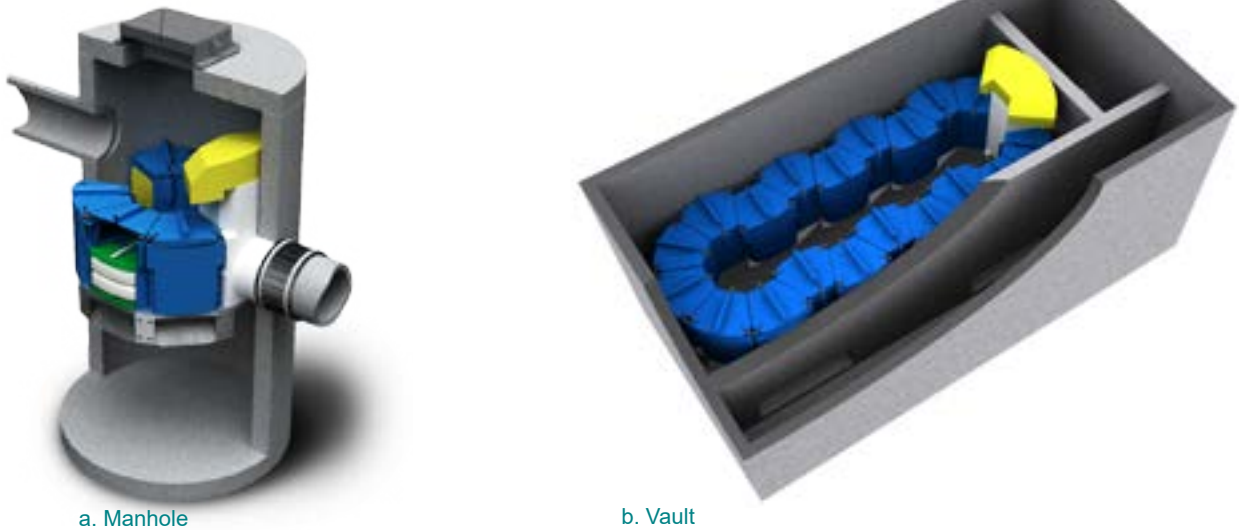
Fig.1 *The Up-Flo® Filter*



System Components

A. Inlet Pipe
B. Precast Filtration Chamber
C. Filter Module
D. 4mm Screening
E Media bag
F. Bypass Hood/Siphon
G. Outlet Module with Drain Down Filter
H. Outlet pipe
I. Pollutant Storage Sump

Product Configurations



a. Manhole

b. Vault

Fig.2 *The Up-Flo® Filter is installed in a) 4-ft (1.2m) round manholes or b) in rectangular precast vaults. Both configurations have a wide central opening in the Up-Flo® Filter.*

Operation

Introduction

The Up-Flo® Filter operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirements and is fabricated with durable non-corrosive components. Personnel are not required to operate the unit and maintenance is limited to periodic inspections, sediment and floatables removal, Media Pack replacement and Drain Down Filter replacement.

Pollutant Capture

The Up-Flo® Filter is designed to operate as a "treatment train" by incorporating multiple treatment technologies into a single device. Trash and gross debris are removed by sedimentation and screening before they are introduced to the filtration media, preventing surface blinding of the filter media. The Up-Flo® Filter is a wet-sump device. Between storm events, oil and floatables are stored on the water surface separate from the sediment storage volume in the sump (see **Fig.1**). The high-capacity bypass siphon acts as a floatables baffle to prevent washout of captured floatable pollutants during high intensity events.

Reduced Clogging

The Up-Flo® Filter has been designed to minimize the occurrence of clogging and blinding and employs a unique Drain Down Filter that allows the water level in the chamber to drop below the filter media between events. The Drain Down Filter mechanism creates a reverse flow that flushes captured pollutants off the surface of the Media Bag, helping to prevent blinding. By allowing the water to drain out, the Drain Down Filter also reduces the weight of the Media Bags. This makes the bags easier and safer to remove during maintenance operations.

Overflow Protection

The Angled Screens are designed to prevent ragging and blinding and are situated below the Filter Modules, sheltering them from the direct path of the influent. Coarse debris settles in the sump before the runoff flows up through the screens, protecting them from blinding. In the unlikely event of a blockage, the high capacity siphonic Bypass Hood is designed to convey high enough flow to minimize the risk of large storm creating upstream flooding.

Best Practices

Good housekeeping upstream of the Up-Flo® Filter can significantly extend Media Bag life. For example, sweeping paved surfaces, collecting leaves and grass trimmings, and protecting bare ground from erosion will reduce loading to the system. Media Packs should not be installed in the Filter Modules until construction activities are complete and site stabilization is effective.

Damage Due to Lack of Maintenance

Delayed maintenance would result in clogged Media Bags and/or blinded Angled Screens. In that situation, the Up-Flo® Filter would go into bypass and there would be no treatment of the incoming stormwater. Because the Bypass Weir can easily convey all of the flow to the Outlet Module, there would be no lasting damage to the system. Replacement of the Media Bags and removal of sediment from the sump would restore the Up-Flo® Filter to its original treatment efficiency. Establishing and adhering to a regular maintenance schedule ensures optimal performance of the system.

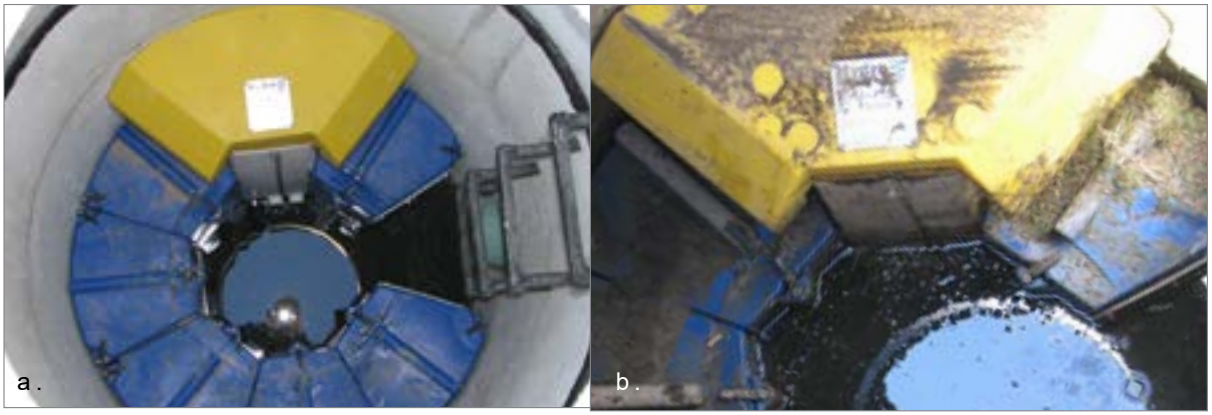


Fig.3 a) The water level in a properly functioning Up-Flo® Filter will drain down to the base of the Filter Modules. b) When the Drain Down Filter becomes clogged, the base of the Filter Modules will be submerged in standing water. Note, above right, that the Drain Down Filter is submerged in standing water.

Inspection & Maintenance

Overview

The Up-Flo® Filter protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the proper functioning of the Up-Flo® Filter.

Maintenance activities can be categorized as those that may be performed from outside the Up-Flo® vessel and those that are performed inside the vessel. Maintenance performed from outside the modules includes removal of floatables and oils that have accumulated on the water surface and removal of sediment from the sump. Maintenance performed inside the vessel includes removal and replacement of Media Bags, Flow Distribution Media and the Drain Down Filter. A vactor truck is required for removal of oils, water, sediment, and to completely pump out the vessel to allow for maintenance inside. If you are not using Hydro Internatioanl or a trained servcie provider you must follow OSHA Confined Space Entry procedures when entering the Up-Flo® vessel.

The Up-Flo® Filter design has a wide central opening between the Filter Modules for easy access to all of the components (see **Fig.3**). In the case of inspection and floatables removal, a vactor truck is not required. Otherwise, a vactor truck is normally required for oil removal, removal of sediment from the sump, and replacement of the Media Packs and Drain Down Filter. In most cases, entry into the Up-Flo® Filter vessel is required for replacement of the Media Packs and Drain Down Filter.

The minimum required frequency for replacement of the Media Pack is annually, whereas the minimum required frequency for removal of accumulated sediment from the sump is dependent on the Up-Flo® Filter configuration. Configurations with a larger sediment storage volume per module will require less frequent removal of accumulated sediment. Regardless, whenever sediment depth in the sump is found to be greater than 16 inches, sediment removal is required.

Fig.4 a) A new Media Bag of Hydro Filter Sand. b) A spent media bag of Hydro Filter Sand.

At a minimum, media bags must be replaced at least once a year.

Make Sure your System was Installed Correctly

First Year Inspection and Maintenance

The frequency of inspection and maintenance can be determined in the field after installation. The frequency of ongoing maintenance needs is based on site characteristics such as contributing area, types of surfaces (e.g., paved and/or landscaped), site activities (e.g., short-term or long-term parking), and other site maintenance (e.g., sanding and sweeping). At a minimum, inspection and maintenance should be conducted at intervals of no more than six months during the first year of operation. Maintenance personnel should observe and record pollutant accumulations during the first year of service in order to benchmark the maintenance intervals that will later be established for the site. Pollutant accumulations should be measured or monitored using the following procedures:

- Measurement of sediment depth in the sump: A minimum of 8 inches (20 cm) should separate the Drain Down Filter inlet from stored sediment in the sump in order to minimize sediment migration into the Drain Down Filter. A simple probe, such as the Sludge-Judge®, can be used to determine the depth of the solids in the sump. In a typical 4-ft (1.2m) diameter manhole installation, the sediment depth should be no more than 16 inches (41 cm).

- Maintenance personnel should then enter the structure, remove the Media Pack from one of the Filter Modules, and weigh the Media Bags. Media Bags with a wet weight of approximately 40 lbs (18 kg) or more are an indication that the filter media has become full and that the Media Packs in all of the Filter Modules will require replacement (Fig.4). Minimum filtration rate is generally reached when the Media Bags have accumulated approximately 20 lbs (9 kg) of sediment. Determining the amount of accumulated sediment will be accomplished by removing both of the Media Bags from one of the Media Packs and weighing the bags separately. Since a new Media Bag weighs approximately 30 lbs (14 kg) wet, the difference in weight will approximately equal the weight of solids that have accumulated in the bag. A spent Media Bag weighs approximately 50 lbs (23 kg) wet.

- Measurement of oil layer on water surface: Since water in the Up-Flo® vessel drains down to an elevation below the bottom of the Filter Modules when the system is idle, the amount of accumulated oil must be minimized so that oil is not entrained in the Media Pack when stormwater begins to fill the vessel at the start of a storm event. Oil accumulation should be limited to 1.5 inches (4 cm) or less. Probes can be used to measure oil thickness.

- Monitoring for Drain Down Filter clogging: The water level in the Up-Flo® Filter should be monitored to ensure that the Drain Down Filter is operating properly. The Drain Down Filter is designed to lower the water level in the Up-Flo® vessel to an elevation below the bottom of the Filter Modules between storm events. Periodically conduct an inspection one to two days after a storm event during the first year of operation. Approximately 36 hours after a 1-in (2.5-cm) rainfall, the water level inside the vessel should have dropped to a point where it is equal with the base of the Filter Modules. If the water level has not reached that point, then the Drain Down Filter has either become clogged or blinded by trash or debris (Fig.5 a and b). If there is no evidence of trash or debris around the Drain Down Filter inlet, then it has likely become clogged with particles.

- Monitoring for slime and debris covering the Flow Distribution Media or Angled Screens: After removal of the Media Bags, the bottom Flow Distribution Media should be removed and inspected to determine if it is coated with slime or debris. Similarly, the Angled Screen should be inspected for blockages and ragging.

Find out how Frequently your System Needs Maintenance

Monitoring for floatables on the water surface: Similar to oil, the amount of accumulated floatables must be minimized to prevent trash and loose debris from becoming trapped on the Angled Screens when stormwater begins to fill the Up-Flo® vessel at the start of a storm event. Visual inspection is adequate to determine the amount of floatables. Floatables should be removed before they form a mat on the surface of the water.

The solids loading rate in the sump will be calculated by measuring the sediment depth in the sump and dividing the depth by the correlating interval of time since the sump was last cleaned. Similarly, starting with fresh Media Bags, the solids loading rate in the Media Packs will be calculated by weighing the Media Bags and dividing the weights by the correlating interval of time since they were installed. The wet weight of the heaviest bag will be used to determine the loading rate. As previously mentioned, a spent Media Bag weighs approximately 50 lbs (23 kg) wet. The spent Media Bag weight estimate was based on calculations of sediment loading in an Up-Flo® Filter that was run to exhaustion during laboratory testing.

The rate of oil accumulation will be calculated by measuring the thickness of the oil layer and dividing the thickness by the correlating interval of time since the sump was last cleaned. Ordinarily, oil thickness will not be measurable unless a spill has occurred. Consequently, any oil will typically be removed along with water when cleaning the sump.

Monitoring the Drain Down Filter for clogging, monitoring the Flow Distribution Media and Angled Screens for slime and debris, and monitoring the accumulation of floatables will provide an estimate of how long the Up-Flo® Filter can operate before its performance can become impaired by one of these factors.

Routine Inspection and Maintenance

After completion of the first year of operation, determining and then following the established inspection and maintenance intervals will keep pollutant loadings within their respective limits. Removal of oils and floatables, replacement of the Drain Down Filter, replacement of Flow Distribution Media (see Fig.9, pg 11), and cleaning of Angled Screens will occur at the same frequency as cleaning of the sump and replacement of Media Bags unless the first year of operation indicates otherwise. Keeping to the established maintenance intervals will keep treatment flow rates at, or above, the design flow rate. Typically, annual maintenance is adequate.

In addition to scheduled maintenance, occasional checks for Up-Flo® Filter clogging can be performed by removing the manhole cover during a storm, monitoring the water level in the manhole or vault, and determining whether the filter is in bypass. A properly-sized filter (on-line or off-line) that is in bypass during a storm that is producing runoff at, or below, the filter's design filtration rate needs maintenance.

Inspection & Maintenance

Routine Inspection

Inspection is a simple process that requires monitoring pollutant accumulations. Maintenance crews should be familiar with the Up-Flo® Filter and its components prior to inspection.

The following instructions are intended for non-Hydro maintenance service providers and/or those intending to maintain thier own Up-Flo® Filter:

Scheduling

- Inspection may be conducted during any season of the year but should occur shortly after a predicted rainfall to ensure components are operating properly.

Necessary Equipment

- Safety Equipment and Personal Protective Equipment (traffic cones, work gloves, etc.)
- Scale to measure the weight of the Media Bags
- Crow bar to remove grate or lid
- Pole with skimmer or net
- Sediment probe (such as a Sludge-Judge®)
- Hydro International Up-Flo® Filter Maintenance Log
- Trash bags for removed floatables

Routine Inspection Procedures

1. Set up any necessary safety equipment (such as traffic cones) to provide access to the Up-Flo® Filter. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole or vault.
3. Without entering the vessel, look down into the chamber to inspect the inside and to determine whether the high-water level indicator has been activated. Make note of any irregularities. See Fig.6 for a typical Inspection View.
4. Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the chamber.
5. Using a sediment probe such as a Sludge-Judge®, measure the depth of sediment that has collected in the sump of the vessel.
   Maximum sediment depth is 16 inches (41 cm).
6. If the high-water level indicator has been activated after two consecutive storms, remove the Filter Module lid by turning the cam latch and remove the Filter Media Pack (*refer to page 11 Replacement Procedures*). Weigh the Media Bags from one or two modules. Media Bags should be replaced if the wet weight exceeds 40 lbs (18 kg).
7. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or a high standing water level (see Fig.6 for the standard standing water level).
8. Securely replace the grate or lid.
9. Remove safety equipment.
10. Contact Hydro International at (800) 848-2706 to discuss any irregularities noted during inspection.

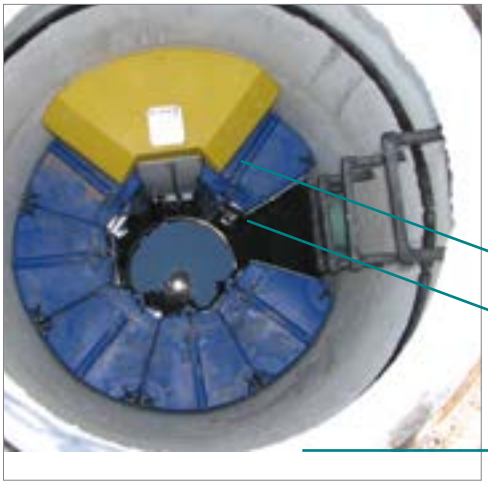


Fig.6 Inspection view of the Up-Flo® Filter.

Routine Maintenance

Maintenance activities are grouped into two categories:

- *Activities **Not Requiring** Man Entry Into the Up-Flo® Filter*
  These activities include floatables removal, oil removal and removal of sediment from the sump.
- *Activities **Requiring** Man Entry Into the Up-Flo® Filter*
  Media Pack replacement and Drain Down Filter replacement.

Maintenance intervals are determined from monitoring the Up-Flo® Filter during its first year of operation. Depending on the site, some maintenance activities may have to be performed on a more frequent basis than others. In the case of floatables removal, a vactor truck is not required. Floatables and loose debris can be netted with a skimmer and pole.

A vactor truck is normally required for oil removal, removal of sediment from the sump, and to dewater the vessel for replacement of the Media Packs and Drain Down Filter (Fig.7). All inspection and maintenance activities would be recorded in an Inspection and Maintenance Log.

Completion of all the maintenance activities for a typical 4-ft (1.2m) diameter manhole installation takes less than one hour. Approximately 360 gallons of water and up to 0.6 yd^3 (0.5 m^3) of sediment may be removed in the process. In an installation equipped with six Filter Modules, 12 Media Bags (2 bags per module) would be removed and replaced. Assuming a spent Media Bag weight of 50 lbs (23 kg), up to 600 lbs (272 kg) of spent Media Bags would be removed. All consumables, including Media Bags, Flow Distribution Media, and replacement Drain Down Filters are supplied by Hydro International.

The access port located at the top of the manhole provides unobstructed access for a vactor hose and/or skimmer pole to be lowered to the base of the sump.

Maintenance Activities Not Requiring Man Entry

These activities include floatables removal, oil removal and removal of sediment from the sump.

Scheduling

- Floatables and sump cleanout may typically be done during any season of the year - before and after rainy season
- Floatables and sump cleanout should occur as soon as possible following a contaminated spill in the contributing drainage area

Recommended Equipment

- Safety Equipment (traffic cones, etc)
- Crow bar to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge-Judge®)
- Vactor truck (flexible hose preferred)
- Pressure nozzle attachment or other screen-cleaning device

Fig.7 Sediment is removed from the sump with a vactor hose. Man entry is not required for this step.

No Man Entry Required: Floatables, Oil and Sediment:

1. Set up any necessary safety equipment (such as traffic cones) around the access of the Up-Flo® Filter. Safety equipment should notify passing pedestrian and road traffic that work is being done.

2. Remove the grate or lid to the manhole or vault.

3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.

4. If the standing water level in the sump is above the base of the Filter Modules (see Fig.8), tug the Pull Chain(s) to release the Drain Down Filter plug(s). Allow the excess water to drain out of the chamber.

5. Use the skimmer pole to fit the Drain Down Filter plug back into the open port.

6. Once all floatables and oil have been removed, drop the vactor hose to the base of the sump. Vactor out the sediment and gross debris from the sump floor. Up to 0.3 yd^3 (0.2 m^3) of sediment and 360 gallons (1,363 L) of water will be removed from a typical manhole Up-Flo® Filter during this process.

7. Retract the vactor hose from the vessel.

8. Inspect the Angled Screens for blockages and ragging. If present, remove the obstruction or ragging materials from the surface using a hose or other screen-cleaning device.

9. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables, oils, and gross debris removed, and the depth of sediment measured. Note any apparent irregularities such as damaged components or blockages.

10. Securely replace the grate or lid. Remove safety equipment.

11. Dispose of sediment and gross debris following local regulations.

12. Dispose of oil and sump water at a licensed water treatment facility or following local regulations.

13. Contact Hydro International at (800) 848-2706 to discuss any irregularities noted during cleanout.

Maintenance Activities Requiring Man Entry

These activities include replacement of the Media Packs and Drain Down Filter.

Unless the Up-Flo® Filter has been installed as a very shallow unit, it is necessary to have an OSHA-confined space entry trained person enter the vessel to replace Media Packs.

The access port located at the top of the manhole or vault provides access to the Up-Flo® vessel for maintenance personnel to enter the vessel and remove and replace Media Packs. The same access would be used for maintenance personnel working from the surface to net or skim debris and floatables or to vactor out sediment, oil, and water. Unless the Up-Flo® Filter has been installed in a very shallow configuration, it is necessary to have personnel with OSHA Confined Space Entry training performing the maintenance that occurs inside the vessel.

Scheduling

- Call Hydro International to order replacement Media Packs and Drain Down Filter prior to scheduling maintenance.

- Because Media Pack replacement requires entry into the Up-Flo® chamber, maintenance events should be scheduled during dry weather.

- Media Pack replacement should occur immediately after a contaminated spill in the contributing drainage area.

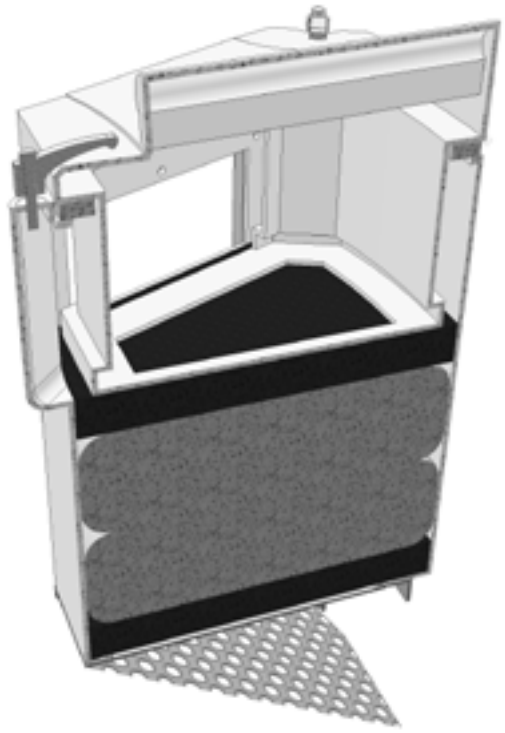


Fig.8 Cutaway view of the Filter Module

Recommended Equipment

- Safety Equipment (traffic cones, etc.)
- Crow bar to remove grate or lid
- Pole with skimmer or net (if floatables removal is not to be done with vactor hose)
- Sediment probe (such as a Sludge-Judge®)
- Vactor truck (flexible hose preferred)
- OSHA Confined Space Entry Equipment
- Up-Flo® Filter Replacement Media Packs (available from Hydro International)
- Hydro International Up-Flo® Filter Maintenance Log
- Screwdriver (flat head)
- Replacement Drain Down Filter components supplied by Hydro International

Man Entry Required: Media Pack and Drain Down Filter

1. Follow Floatables and Sump Cleanout Procedures, 1 – 13.
2. Following OSHA Confined Space Entry procedures, enter the Up-Flo® Filter Chamber.
3. Open the Filter Module by turning the three cam latches on the front and sides of the module. Remove the lid (1) to gain access to the Media Pack (Fig.9).
4. Remove and discard the spent Media Pack. The Media Pack contents include:
    - A top layer of (A) Flow Distributing Sheets
    - Two (2) Media Bags (B) equipped with nylon handles.
    - A bottom layer of (A) Flow Distributing Media.
5. Insert a new Media Pack, supplied by Hydro International.
    - First, insert a bottom layer of green Flow Distributing Media. Be sure that the media sits snugly and level at the bottom of the Filter Module.
    - Next, insert the first of two (2) replacement Media Bags. Smooth the bag out with your hands to make sure that the bag extends snugly to the walls and corners of the Filter Module.
    - Insert the second Media Bag, following the same procedure.
    - Insert the top layer of green Flow Distributing Media.

1. Filter Module Cover and Media Restraint

2. Replaceable Media Pack:
    a) Flow distribution sheets
    b) Filter Media Bags

3. Cam Latch

4. Conveyance Channel

5. Filter Module

6. Support Bracket / Angled Screen

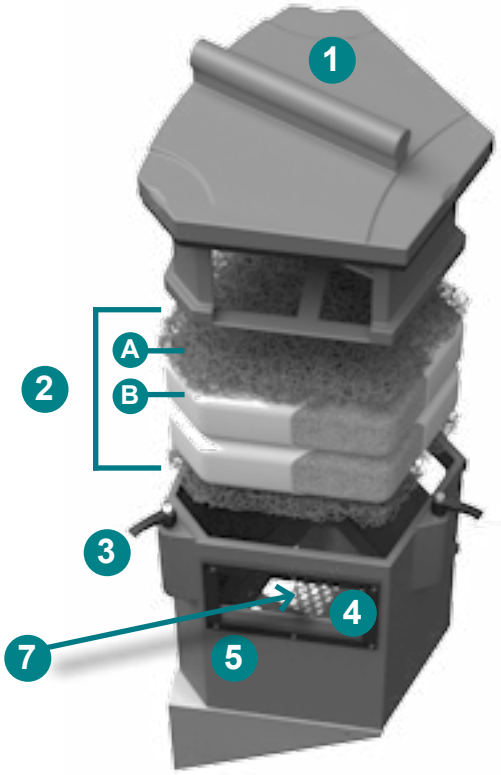


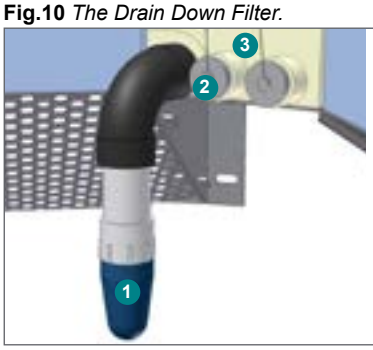
Fig.9 The Filter Module houses the Media Restraint and the Media Pack.

Be sure that the piece fits snugly against the walls and corners of the Filter Module.

- Put the lid on and secure the three latches. Check to make sure that the latches are closed properly.

6. Use a screwdriver to unscrew the Drain Down Filter from the face of the Outlet Module (see Fig.10). DO NOT DISCARD THIS PIECE.
7. Install new Drain Down Filter supplied by Hydro International.
8. Exit the Up-Flo® Filter chamber and securely replace the grate __or lid.
9. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables, oil and gross debris removed, and the depth of sediment measured. Note the number of Media Packs replaced. Note any irregularities such as damaged components or blockages.

Fig.10 *The Drain Down Filter.*



1. Drain Down Filter
2. Drain Down Plug
3. Pull Chain for Drain Down

10. Remove safety equipment.
11. Dispose of spent media packs at your local landfill, following local regulations.
12. Return the spent Drain Down Filter to Hydro International.
13. Contact Hydro International to discuss any irregularities noted during annual maintenance.

Solids Disposal

Sediment, floatables, gross debris, and spent Media Bags can generally be disposed of at the local landfill in accordance with local regulations. The toxicity of the residues captured will depend on the activities in the contributing drainage area, and testing of the residues may be required if they are considered potentially hazardous.

Sump water can generally be disposed of at a licensed water treatment facility but the local sewer authority should be contacted for permission prior to discharging the liquid. Significant accumulations of oil removed separately from sump water should be transported to a licensed hazardous waste treatment facility for treatment or disposal. **In all cases, local regulators should be contacted about disposal requirements.**

Maintenance at a Glance

Activity	Frequency
Inspection	- Regularly during first year of installation - Every 6 months after the first year of installation
Floatables/Oils Removal	- Twice per year or as needed - Following a contaminated spill in the drainage area
Sediment Removal	- Every six to 12 months, depending on the Up-Flo® Filter Configuration - The maximum allowable sediment depth in any Up-Flo Filter configuration is 16 inches (41 cm) - Following a contaminated spill in the drainage area
Media Pack Replacement	- Once per year - Replacement is required anytime inspection reveals that the high-water level indicator has been activated after two consecutive storms and the subsequent weighing of the Media Bags shows a wet weight greater than 40 lbs - Following a contaminated spill in the drainage area
Drain Down Filter Replacement	- Once per year with Media Pack replacement - Replacement is required anytime inspection reveals that the water level inside the vessel has not reached a level equal with the base of the Filter Modules approximately 36 hours after a 1-inch (2.5 cm) rainfall - As needed, in the event of continuous base flow conditions

Up-Flo® Filter Installation Log

SITE REFERENCE NAME OR NUMBER FOR THIS UP-FLO® FILTER LOCATION:	
SITE NAME:	
SITE LOCATION:	
OWNER:	**SITE CONTRACTOR:**
CONTACT NAME:	**CONTACT NAME:**
COMPANY NAME:	**COMPANY NAME:**
ADDRESS:	**ADDRESS:**
TELEPHONE:	**TELEPHONE:**
FAX:	**FAX:**

INSTALLATION DATE: / /

CONFIGURATION (CIRCLE ONE): **MANHOLE** **VAULT SYSTEM**

TOTAL NUMBER OF UP-FLO® FILTER MODULES: _____

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Up-Flo® Filter Inspection Log

Site Name: _____ Owner Change since last inspection? Y N

Location: _____

Owner Name: _____

Address: _____ Phone Number: _____

Site Status: _____

Date: _____ Time: _____ Site conditions*: _____

(Stable, Under Construction, Needing Maintenance, etc.)

Inspection Frequency Key: A=annual; M=monthly; S=after major storms

Inspection Items	Inspection Frequency	Inspected? (Yes/No)	Maintenance Needed? (Yes/No)	Comments/Description
Debris Removal				
Adjacent area free of debris?	M			
Inlets and Outlets free of debris?	M			
Facility (internally) free of debris?	M			
Vegetation				
Surrounding area fully stabilized? (no evidence of eroding material into Up-Flo® Filter)	A			
Grass mowed?	M			
Water retention where required				
Water holding chamber(s) at normal pool?	A			
Evidence of erosion?	A			
Sediment Deposition				
Filtration Chamber free of sediments?	A			
Sedimentation sump not more than 50% full?	A			
Structural Components				
Any evidence of structural deterioration?	A			
Grates in good condition?	A			
Spalling or cracking of structural parts?	A			
Outlet/Overflow Spillway	A			
Other				
Noticeable odors?	A			
Any evidence of filter(s) clogging?	M			
Evidence of flow bypassing facility?	A			

Inspector Comments: _____

_____

_____

_____

Overall Condition of Up-Flo® Filter**: ☐ Acceptable ☐ Unacceptable

***"Acceptable" would mean properly functioning; "unacceptable" would mean damaged or required further maintenance.*

If any of the above Inspection Items are checked "Yes" for "Maintenance Needed", list Maintenance actions and their completion dates below or on the Maintenance Log provided on page 15 of the Up-Flo® Filter Operation & Maintenance Manual:

Maintenance Action Needed	Due Date

The next routine inspection is schedule for approximately: (date) _____

Inspected by: (signature) _____

Inspected by: (printed) _____

Up-Flo® Filter Maintenance Log

Site Name: _____ Owner Change since last inspection? Y N

Location: _____

Owner Name: _____

Address: _____ Phone Number: _____

Site Status: _____

Date: _____ Time: _____ Site conditions: _____
**(Stable, Under Construction, Needing Maintenance, etc.)*

Estimated volume of oil/floatable trash removed: _____

Sediment depth measured in sump prior to removal: _____

Number of Filter Modules fitted with new media packs: _____

Inspector Comments: _____

_____

_____

_____

Overall Condition of Up-Flo® Filter: ☐ Acceptable ☐ Unacceptable
***"Acceptable" would mean properly functioning; "unacceptable" would mean damaged or required further maintenance.*

Maintained by: (signature) _____

Maintained by: (printed) _____

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Stormwater Solutions

94 Hutchins Drive
Portland, ME 04102

Tel: (207) 756-6200
Fax: (207) 756-6212
stormwaterinquiry@hydro-int.com

www.hydro-int.com

Turning Water Around...®

PILOT-SCALE FIELD TESTING PLAN

The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site; therefore pilot-scale field testing is not required.

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Surface streams do not exist on site. Therefore, 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 not provided at the end of this form. All disturbed areas will be re-vegetated as soon as practical.

SECTION 7:
ADDITIONAL FORMS

AGENT AUTHORIZATION FORM (TCEQ-0599)

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

I David Barnett,
Print Name

Senior Pre-Construction Manager,
Title - Owner/President/Other

of Amazon.com Services, LLC,
Corporation/Partnership/Entity Name

have authorized Nicholas C. Brown
Print Name of Agent/Engineer

of Kimley-Horn and Associates
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:

David Barnett
Applicant's Signature

4/25/24
Date

THE STATE OF Tennessee §

County of Shelby §

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

GIVEN under my hand and seal of office on this 25th day of April, 2024.

ELIZABETH PARR
STATE OF TENNESSEE NOTARY PUBLIC
SHELBY COUNTY

Elizabeth Parr
NOTARY PUBLIC

Elizabeth Parr
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 12/02/2025

APPLICATION FEE FORM (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: 2525 CR 172 Industrial

Regulated Entity Location: 2525 CR 172, Round Rock, TX 78681

Name of Customer: David Barnett

Contact Person: Nicholas C. Brown Phone: 512-418-1771

Customer Reference Number (if issued):CN N/A

Regulated Entity Reference Number (if issued):RN N/A

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde

☐ Comal ☐ Kinney

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

☒ Austin Regional Office

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

☐ San Antonio Regional Office

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

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	0 Acres	$ 0
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	0 Acres	$ 0
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	76.61 Acres	$ 8,000
Sewage Collection System	0 L.F.	$ 0
Lift Stations without sewer lines	0 Acres	$ 0
Underground or Aboveground Storage Tank Facility	0 Tanks	$ 0
Piping System(s)(only)	0 Each	$ 0
Exception	0 Each	$ 0
Extension of Time	0 Each	$ 0

Signature: _____ Date: 06/05/2024

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

CHECK PAYABLE TO THE "TEXAS COMMISSION ON ENVIRONMENTAL QUALITY"

CORE DATA FORM (TCEQ-10400)

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

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

SECTION II: Customer Information

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

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

Amazon.com Services LLC

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0802761221	32054385284	820544687	

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:	David Barnett - Sr Pre-Construction Manager						
	Amazon Tower 1, 101 Platform Way N.						
	City	Nashville	**State**	TN	**ZIP**	37203	**ZIP + 4**

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	barnettu@amazon.com

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

(901) 438-4156		( ) -

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.)*

2525 CR172 Industrial

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	2525 CR 172							
	City	Round Rock	**State**	TX	**ZIP**	78681	**ZIP + 4**	
24. County	Williamson							

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

25. Description to Physical Location:					
26. Nearest City			**State**	**Nearest ZIP Code**	
Round Rock			TX	78581	

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:	30.484519		**28. Longitude (W) In Decimal:**	-97.697140	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
4225		23621	

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

warehouse distribution

34. Mailing Address:	**David Barnett - Sr Pre-Construction Manager**							
	Amazon Tower 1, 101 Platform Way N							
	City	**Nashville**	**State**	**TN**	**ZIP**	**37203**	**ZIP + 4**	
35. E-Mail Address:	**barnettu@amazon.com**							

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

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:

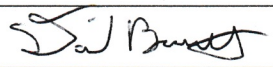
SECTION IV: Preparer Information

40. Name:	Nick Brown, PE	**41. Title:**	Senior Project Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 418-1771		( ) -	Nick.Brown@kimley-horn.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:	Amazon.com Services, LLC	**Job Title:**	Sr Pre-Construction Manager
Name *(In Print):*	David Barnett	**Phone:**	(901) 438- **4156**
Signature:		**Date:**	4/25/24

SECTION 8:
EXHIBITS

REVISIONS/CORRECTIONS			
NO.	DESCRIPTION	CITY OF ROUND ROCK APPROVAL SIGNATURE	APPROVAL DATE

CIVIL SITE DEVELOPMENT IMPROVEMENTS
FOR
2525 CR 172 INDUSTRIAL
2525 CR 172, ROUND ROCK, TX 78681
SDP24-00001

GENERAL PLAN NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS THE CITY OF ROUND ROCK MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. APPROVAL OF THESE PLANS BY THE CITY OF ROUND ROCK INDICATES COMPLIANCE WITH APPLICABLE CITY REGULATIONS ONLY. APPROVAL BY OTHER GOVERNMENTAL ENTITIES MAY BE REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR DETERMINING WHAT ADDITIONAL APPROVALS MAY BE NECESSARY.
3. A PORTION OF THIS SITE IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN. FIRM PANEL NO. 48453C0595H, WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS (EFFECTIVE DATE DECEMBER 20, 2019).
4. WATER AND WASTEWATER SERVICE WILL BE PROVIDED BY THE CITY OF ROUND ROCK, CONDITIONED UPON ALL FEES AND CHARGES ARE PAID.
5. THERE ARE KNOWN CRITICAL ENVIRONMENTAL FEATURES ON THIS SITE.
6. NO STRUCTURES CAN BE BUILT WITHIN WATER & WASTEWATER EASEMENTS.
7. 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.
8. AS PART OF THIS SITE PLAN, THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO BE ON SITE AT ALL TIMES.
9. THIS SITE IS LOCATED IN THE EDWARDS AQUIFER RECHARGE ZONE. WATER QUALITY MEASURES ARE PROVIDED.
10. THIS SITE PROPOSES ON SITE DETENTION TO THE 100 YEAR STORM EVENT.

ZONING: PUD 153; O-2024-008

SUBDIVISION CASE NO.: FP24-000001

PREVIOUS RELATED SITE DEVELOPMENT CASE NO.: N/A

WATERSHED: LAKE CREEK

PRESSURE ZONE: ZONE 2; ELEV. 971

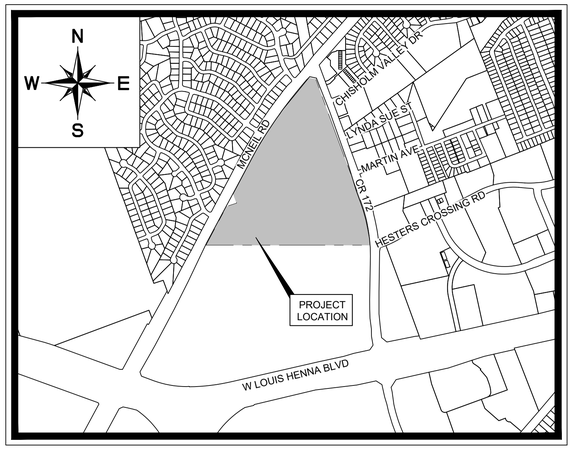
SUBMITTAL DATE: 04/06/2024

TCEQ SUBMITTAS:
WPAP: CASE NUMBER____: APPROVED____
SCS: CASE NUMBER____: APPROVED____

IMPERVIOUS COVER		
EXISTING	0	SF
BUILDING FOOTPRINT	225,348	SF
PARKING, PRIVATE SIDEWALK & ROAD, CURB & GUTTER, ETC.	1,503,930	SF
PUBLIC SIDEWALKS	0	SF
TOTAL	1,729,278	SF
DISTURBED AREA		
TOTAL DISTURBED AREA (LOC)	60.7281	AC

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.69
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'



VICINITY MAP
SCALE: 1" = 1,000'

COA GRID: L40, L41
MAPSCO: 406N, 406P, 406S, 406T

LEGAL DESCRIPTION
A 149.32 ACRE TRACT OF LAND SITUATED IN THE JACOB M. HARRELL SURVEY, ABSTRACT 284, WILLIAMSON COUNTY, TEXAS; AND BEING A PORTION OF A CALLED 184.435 ACRES TRACT OF LAND DESCRIBED TO AMAZON.COM SERVICES LLC, AS SHOWN ON INSTRUMENT RECORDED IN DOCUMENT NO. 2021166943 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.T)

LISTS OF CONTACTS:

ARCHITECT
SARAH VOSS, PROJECT MANAGER
PDMS DESIGN GROUP
2225 E. RANDOL MILL RD., SUITE 300
ARLINGTON, TEXAS 76011
(817) 701-4828

LANDSCAPE ARCHITECT
MORGAN DEPINE
KIMLEY-HORN
5301 SOUTHWEST PKWY, BLDG 2, STE 200
AUSTIN, TEXAS 78735
(512) 646-2237

OWNER/DEVELOPER
DAVID BARNETT
AMAZON TOWER 1
101 PLATFORM WAY N
NASHVILLE, TN 37203
(901)438-4156

SURVEYOR
MICHAEL A. MONTGOMERY II, RPLS
KIMLEY-HORN
10814 JOLLYVILLE ROAD, BLDG, STE 200
AUSTIN, TEXAS 78759
(512) 418-1771

WATER & SANITARY SEWER
CITY OF ROUND ROCK
3400 SUNRISE ROAD
ROUND ROCK, TEXAS 78665
(512) 218-5555

FIRE
WILLIAMSON COUNTY ESD #9
402 A WEST PALM VALLEY BLVD
SUITE 360
ROUND ROCK, TX 78664
(512) 479-9267

GAS
ATMOS ENERGY
MARTIN PEREZ
3110 N INTERSTATE HWY 35
ROUND ROCK, TX 78681
(512) 415-8426

ELECTRIC
ONCOR ELECTRIC DELIVERY
JUSTIN JACKS
350 TEXAS AVENUE
ROUND ROCK, TX 78664
(512) 244-5616

STORM SEWER
CITY OF ROUND ROCK
3400 SUNRISE ROAD
ROUND ROCK, TEXAS 78665
(512) 218-5555

DEVELOPMENT SERVICES
CITY OF ROUND ROCK
301 W. BAGDAD AVE #210
ROUND ROCK, TX 78664
(512) 218-5428

PREPARED BY:
Kimley»Horn
10814 JOLLYVILLE ROAD, AVALLON IV, SUITE 200
AUSTIN, TEXAS 78759
CERTIFICATE OF REGISTRATION #928
Tel. No. (512) 418-1771
Fax No. (512) 418-1791

JUNE 2024

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF ROUND ROCK MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

ACCEPTED FOR CONSTRUCTION:

CITY OF ROUND ROCK, TEXAS — DATE
PLANNING AND DEVELOPMENT SERVICES DEPARTMENT

STATE OF TEXAS
COUNTY OF WILLIAMSON

I, NICHOLAS C. BROWN, DO HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS SHOWN HEREIN HAVE BEEN DESIGNED IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORMWATER DRAINAGE POLICY ADOPTED BY THE CITY OF ROUND ROCK, TEXAS.

NICHOLAS C. BROWN, P.E. — DATE
LICENSED PROFESSIONAL ENGINEER NO. 107175

No.	REVISIONS	DATE	BY

2525 CR 172 INDUSTRIAL - ----

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

COVER SHEET

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
1 OF 204

SDP24-00001

SHEET INDEX

Sheet Number	Sheet Title
1	COVER SHEET
2	SHEET INDEX
3	FINAL PLAT (SHEET 1 OF 4)
4	FINAL PLAT (SHEET 2 OF 4)
5	FINAL PLAT (SHEET 3 OF 4)
6	FINAL PLAT (SHEET 4 OF 4)
7	GENERAL NOTES
8	KH GENERAL NOTES
9	EXISTING CONDITIONS AND DEMOLITION PLAN
10	TREE LIST 1 OF 2
11	TREE LIST 2 OF 2
12	OVERALL EROSION CONTROL PLAN
13	EROSION CONTROL PLAN A
14	EROSION CONTROL PLAN B
15	EROSION CONTROL PLAN C
16	EROSION CONTROL PLAN D
17	EROSION CONTROL PLAN E
18	EROSION CONTROL PLAN F
19	EROSION CONTROL PLAN G
20	EROSION CONTROL PLAN H
21	OVERALL SITE PLAN
22	SITE PLAN A
23	SITE PLAN B
24	SITE PLAN C
25	SITE PLAN D
26	SITE PLAN E
27	SITE PLAN F
28	SITE PLAN G
29	SITE PLAN H
30	OVERALL FIRE PROTECTION PLAN
31	FIRE PROTECTION PLAN A
32	FIRE PROTECTION PLAN B
33	FIRE PROTECTION PLAN C
34	FIRE PROTECTION PLAN D
35	PAVING PLAN
36	OVERALL WATER PLAN
37	PUBLIC WATER PLAN AND PROFILE
38	PRIVATE WATER PLAN A
39	PRIVATE WATER PLAN B
40	PRIVATE WATER PLAN C
41	PRIVATE WATER PLAN D
42	PRIVATE WATER PLAN E
43	OVERALL WASTEWATER PLAN
44	PRIVATE WASTEWATER PLAN A
45	PRIVATE WASTEWATER PLAN B
46	LIFT STATION NOTES
47	LIFT STATION SITE PLAN
48	LIFT STATION PLAN AND SECTION
49	LIFT STATION DETAILS I
50	LIFT STATION DETAILS II
51	LIFT STATION DETAILS III
52	CONTROL PANEL DETAIL
53	LIFT STATION ELECTRICAL PLANS I
54	LIFT STATION ELECTRICAL PLANS II
55	LIFT STATION STRUCTURAL DETAIL
56	OVERALL STORM PLAN
57	PUBLIC STORM PLAN AND PROFILE A
58	PUBLIC STORM PLAN AND PROFILE B
59	PRIVATE STORM PLAN A
60	PRIVATE STORM PLAN B
61	PRIVATE STORM PLAN C
62	PRIVATE STORM PLAN D
63	PRIVATE STORM PLAN E
64	PRIVATE STORM PLAN F
65	PRIVATE STORM PLAN G
66	PRIVATE STORM PLAN H
67	PRIVATE STORM PLAN I
68	PRIVATE STORM PLAN J
69	PRIVATE STORM PLAN K
70	PRIVATE STORM PLAN L
71	PRIVATE STORM PLAN M
72	PRIVATE STORM PLAN N
73	OVERALL GRADING PLAN
74	GRADING PLAN A
75	GRADING PLAN B
76	GRADING PLAN C
77	GRADING PLAN D
78	GRADING PLAN E
79	GRADING PLAN F
80	GRADING PLAN G
81	GRADING PLAN H
82	DETENTION POND PLAN AND DETAILS
83	DETENTION POND DETAILS (SHEET 1 OF 2)
84	DETENTION POND DETAILS (SHEET 2 OF 2)
85	WATER QUALITY PLAN (UP-FLO FILTER)
86	EXISTING DRAINAGE AREA MAP
87	DEVELOPED DRAINAGE AREA MAP
88	INLET DRAINAGE AREA MAP
89	DRAINAGE CALCULATIONS
90	EROSION CONTROL DETAILS
91	SITE PLAN DETAILS
92	PAVING DETAILS
93	WATER DETAILS
94	WASTEWATER DETAILS
95	STORM DETAILS
96	LANDSCAPE PLANS L-0.01
97	LANDSCAPE PLANS L-1.00
98	LANDSCAPE PLANS L-1.01
99	LANDSCAPE PLANS L-1.02
100	LANDSCAPE PLANS L-1.03
101	LANDSCAPE PLANS L-1.04
102	LANDSCAPE PLANS L-1.05
103	LANDSCAPE PLANS L-1.06
104	LANDSCAPE PLANS L-1.07
105	LANDSCAPE PLANS L-1.08
106	LANDSCAPE PLANS L-1.09
107	LANDSCAPE PLANS L-2.00
108	LANDSCAPE PLANS L-2.01
109	LANDSCAPE PLANS T-0.01
110	LANDSCAPE PLANS T-0.02
111	LANDSCAPE PLANS T-1.00
112	LANDSCAPE PLANS T-1.01
113	LANDSCAPE PLANS T-1.02
114	LANDSCAPE PLANS T-1.03
115	LANDSCAPE PLANS T-1.04
116	LANDSCAPE PLANS T-1.05
117	LANDSCAPE PLANS T-1.06
118	LANDSCAPE PLANS T-1.07
119	LANDSCAPE PLANS T-1.08
120	LANDSCAPE PLANS T-1.09
121	RHOTOMETRIC PLAN
122	RETAINING WALL (1)
123	RETAINING WALL (2)
124	RETAINING WALL (3)
125	RETAINING WALL (4)
126	RETAINING WALL (5)
127	RETAINING WALL (6)
128	RETAINING WALL (7)
129	RETAINING WALL (8)
130	RETAINING WALL (9)
131	RETAINING WALL (10)
132	RETAINING WALL (11)
133	RETAINING WALL (12)
134	RETAINING WALL (13)
135	RETAINING WALL (14)
136	RETAINING WALL (15)
137	RETAINING WALL (16)
138	RETAINING WALL (17)
139	RETAINING WALL (18)
140	RETAINING WALL (19)
141	RETAINING WALL (20)
142	RETAINING WALL (21)
143	RETAINING WALL (22)
144	RETAINING WALL (23)
145	RETAINING WALL (24)
146	RETAINING WALL (25)
147	RETAINING WALL (26)
148	RETAINING WALL (27)
149	RETAINING WALL (28)
150	RETAINING WALL (29)
151	SIGNAGE AND STRIPING PLAN A
152	SIGNAGE AND STRIPING PLAN B
153	SIGNAGE AND STRIPING PLAN C
154	SIGNAGE AND STRIPING PLAN D
155	SIGNAGE AND STRIPING PLAN E
156	SIGNAGE AND STRIPING PLAN F
157	SIGNAGE AND STRIPING PLAN G
158	SIGNAGE AND STRIPING PLAN H
159	SIGNAGE AND STRIPING DETAILS 1
160	SIGNAGE AND STRIPING DETAILS 2
161	SIGNAGE AND STRIPING DETAILS 3
162	SIGNAGE AND STRIPING DETAILS 4
163	SIGNAGE AND STRIPING DETAILS 5
164	SIGNAGE AND STRIPING DETAILS 6
165	SIGNAGE AND STRIPING DETAILS 7
166	EV PLAN G1.0
167	EV PLAN G2.0
168	EV PLAN G3.0
169	EV PLAN G3.1
170	EV PLAN G3.2
171	EV PLAN G4.0
172	EV PLAN G4.1
173	EV PLAN G4.2
174	EV PLAN G4.3
175	EV PLAN G4.4
176	EV PLAN G5.0
177	EV PLAN G5.1
178	EV PLAN G5.2
179	EV PLAN G5.3
180	EV PLAN G6.0
181	EV PLAN C1.0
182	EV PLAN C2.0
183	EV PLAN E2.1
184	EV PLAN C2.2
185	EV PLAN C3.0
186	EV PLAN C4.0
187	EV PLAN C4.1
188	EV PLAN C4.2
189	EV PLAN E1.0
190	EV PLAN E1.1
191	EV PLAN E1.2
192	EV PLAN E1.3
193	EV PLAN E1.4
194	EV PLAN E2.0
195	EV PLAN E3.0
196	EV PLAN E3.1
197	EV PLAN E4.0
198	EV PLAN E4.1
199	EV PLAN E5.0
200	EV PLAN E5.1
201	EV PLAN E5.2
202	EV PLAN E5.3
203	EV PLAN E6.0
204	EV PLAN E7.0

SHEETS REMOVED SINCE THEY ARE NOT APPLICABLE TO TCEQ REVIEW.

No.	REVISIONS	DATE	BY

2525 CR 172 INDUSTRIAL - ----

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

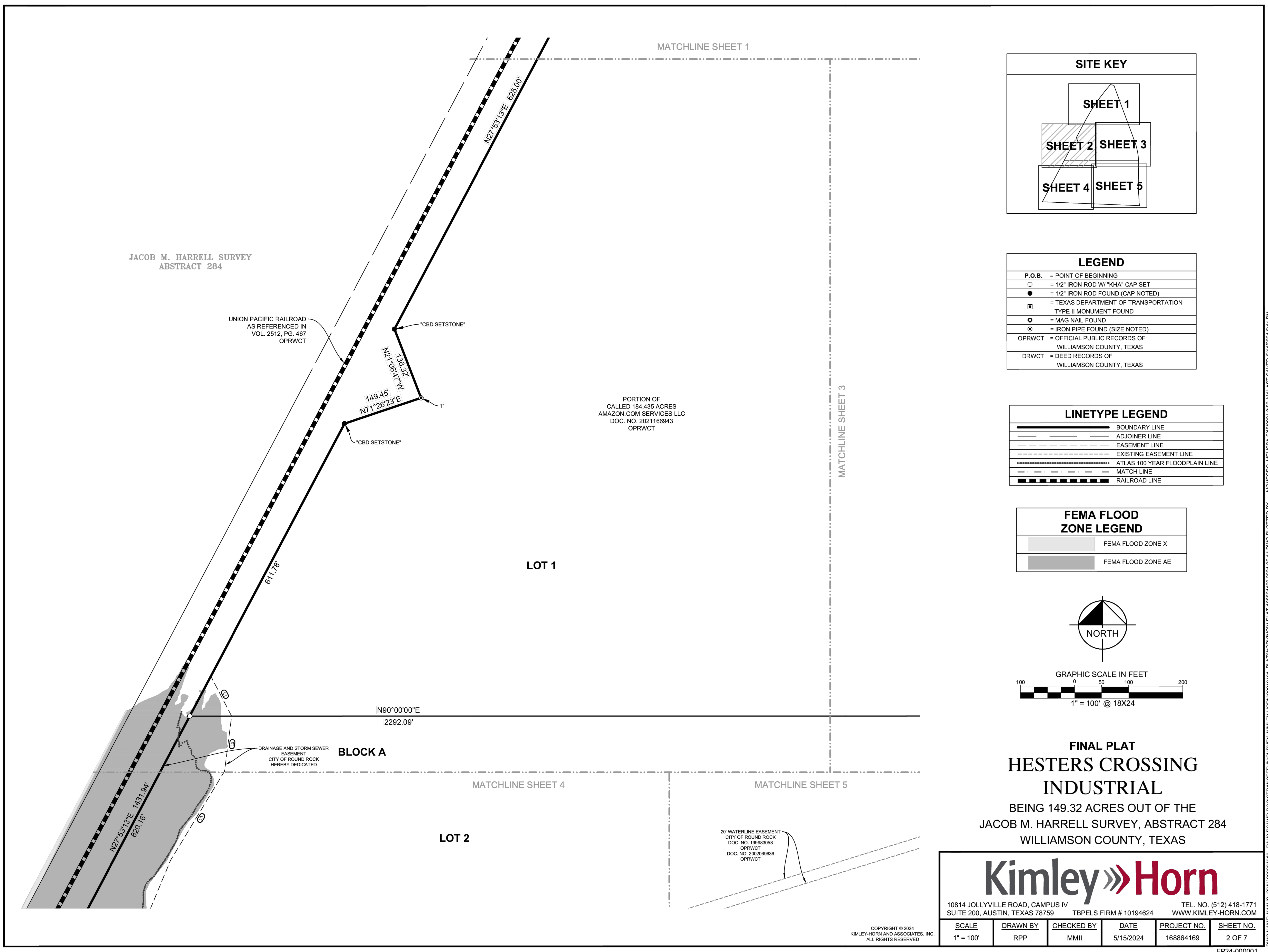
SHEET INDEX

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

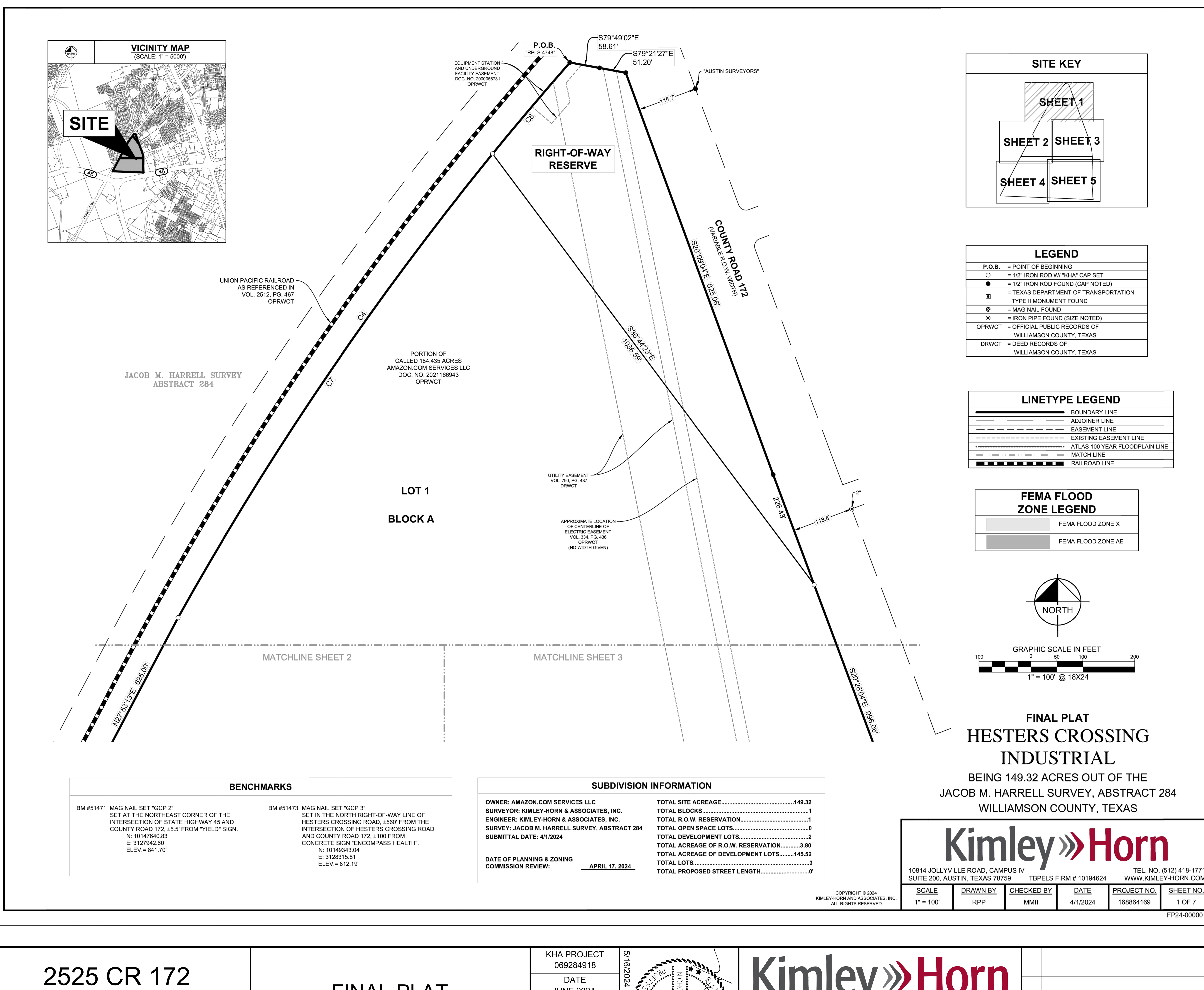
SHEET NUMBER
2 OF 204

SDP24-00001

Plotted By: Merkel, Emily Date: June 07, 2024 01:01:26pm File Path: K:\AUS_Civil\069284910 - DAU3 Round Rock\Cad\PlanSheets-SDP\C-Final Plat.dwg



MATCHLINE SHEET 1
MATCHLINE SHEET 3
MATCHLINE SHEET 4
MATCHLINE SHEET 5
JACOB M. HARRELL SURVEY
ABSTRACT 284
UNION PACIFIC RAILROAD AS REFERENCED IN VOL. 2512, PG. 467 OPRWCT
"CBD SETSTONE"
N27°53'13"E 625.00'
N21°06'47"W 136.32'
N71°26'23"E 149.45'
611.76'
PORTION OF CALLED 184.435 ACRES AMAZON.COM SERVICES LLC DOC. NO. 2021166943 OPRWCT
LOT 1
N90°00'00"E 2292.09'
BLOCK A
DRAINAGE AND STORM SEWER EASEMENT CITY OF ROUND ROCK HEREBY DEDICATED
N27°53'13"E 1431.94'
820.16'
LOT 2
20' WATERLINE EASEMENT CITY OF ROUND ROCK DOC. NO. 198965058 OPRWCT DOC. NO. 2002069636 OPRWCT
SITE KEY
SHEET 1
SHEET 2
SHEET 3
SHEET 4
SHEET 5
LEGEND
P.O.B. = POINT OF BEGINNING
= 1/2" IRON ROD W/ "KHA" CAP SET
= 1/2" IRON ROD FOUND (CAP NOTED)
= TEXAS DEPARTMENT OF TRANSPORTATION TYPE II MONUMENT FOUND
= MAG NAIL FOUND
= IRON PIPE FOUND (SIZE NOTED)
OPRWCT = OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
DRWCT = DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
LINETYPE LEGEND
BOUNDARY LINE
ADJOINER LINE
EASEMENT LINE
EXISTING EASEMENT LINE
ATLAS 100 YEAR FLOODPLAIN LINE
MATCH LINE
RAILROAD LINE
FEMA FLOOD ZONE LEGEND
FEMA FLOOD ZONE X
FEMA FLOOD ZONE AE
NORTH
GRAPHIC SCALE IN FEET
100 0 50 100 200
1" = 100' @ 18X24
FINAL PLAT
HESTERS CROSSING INDUSTRIAL
BEING 149.32 ACRES OUT OF THE JACOB M. HARRELL SURVEY, ABSTRACT 284 WILLIAMSON COUNTY, TEXAS
Kimley»Horn
10814 JOLLYVILLE ROAD, CAMPUS IV SUITE 200, AUSTIN, TEXAS 78759
TBPELS FIRM # 10194624
TEL. NO. (512) 418-1771 WWW.KIMLEY-HORN.COM
SCALE 1" = 100'
DRAWN BY RPP
CHECKED BY MMII
DATE 5/15/2024
PROJECT NO. 168864169
SHEET NO. 2 OF 7
COPYRIGHT © 2024 KIMLEY-HORN AND ASSOCIATES, INC. ALL RIGHTS RESERVED
FP24-000001



VICINITY MAP
(SCALE: 1" = 5000')
SITE
P.O.B.
"RPLS 4748"
S79°49'02"E 58.61'
S79°21'27"E 51.20'
"AUSTIN SURVEYORS"
EQUIPMENT STATION AND UNDERGROUND FACILITY EASEMENT DOC. NO. 2000056731 OPRWCT
RIGHT-OF-WAY RESERVE
115.7'
COUNTY ROAD 172
(VARIABLE R.O.W. WIDTH)
S20°09'04"E 825.06'
S36°44'23"E 1036.59'
UNION PACIFIC RAILROAD AS REFERENCED IN VOL. 2512, PG. 467 OPRWCT
C8
C4
C7
JACOB M. HARRELL SURVEY
ABSTRACT 284
PORTION OF CALLED 184.435 ACRES AMAZON.COM SERVICES LLC DOC. NO. 2021166943 OPRWCT
UTILITY EASEMENT VOL. 790, PG. 467 DRWCT
APPROXIMATE LOCATION OF CENTERLINE OF ELECTRIC EASEMENT VOL. 334, PG. 436 OPRWCT (NO WIDTH GIVEN)
LOT 1
BLOCK A
226.43'
118.8'
S20°26'04"E 996.06'
N27°53'13"E 625.00'
MATCHLINE SHEET 2
MATCHLINE SHEET 3
SITE KEY
SHEET 1
SHEET 2
SHEET 3
SHEET 4
SHEET 5
LEGEND
P.O.B. = POINT OF BEGINNING
= 1/2" IRON ROD W/ "KHA" CAP SET
= 1/2" IRON ROD FOUND (CAP NOTED)
= TEXAS DEPARTMENT OF TRANSPORTATION TYPE II MONUMENT FOUND
= MAG NAIL FOUND
= IRON PIPE FOUND (SIZE NOTED)
OPRWCT = OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
DRWCT = DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
LINETYPE LEGEND
BOUNDARY LINE
ADJOINER LINE
EASEMENT LINE
EXISTING EASEMENT LINE
ATLAS 100 YEAR FLOODPLAIN LINE
MATCH LINE
RAILROAD LINE
FEMA FLOOD ZONE LEGEND
FEMA FLOOD ZONE X
FEMA FLOOD ZONE AE
NORTH
GRAPHIC SCALE IN FEET
100 0 50 100 200
1" = 100' @ 18X24
BENCHMARKS
BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN. N: 10147640.83 E: 3127942.60 ELEV.= 841.70'
BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH". N: 10149343.04 E: 3128315.81 ELEV.= 812.19'
SUBDIVISION INFORMATION
OWNER: AMAZON.COM SERVICES LLC
SURVEYOR: KIMLEY-HORN & ASSOCIATES, INC.
ENGINEER: KIMLEY-HORN & ASSOCIATES, INC.
SURVEY: JACOB M. HARRELL SURVEY, ABSTRACT 284
SUBMITTAL DATE: 4/1/2024
DATE OF PLANNING & ZONING COMMISSION REVIEW: APRIL 17, 2024
TOTAL SITE ACREAGE....149.32
TOTAL BLOCKS....1
TOTAL R.O.W. RESERVATION....1
TOTAL OPEN SPACE LOTS....0
TOTAL DEVELOPMENT LOTS....2
TOTAL ACREAGE OF R.O.W. RESERVATION....3.80
TOTAL ACREAGE OF DEVELOPMENT LOTS....145.52
TOTAL LOTS....3
TOTAL PROPOSED STREET LENGTH....0'
FINAL PLAT
HESTERS CROSSING INDUSTRIAL
BEING 149.32 ACRES OUT OF THE JACOB M. HARRELL SURVEY, ABSTRACT 284 WILLIAMSON COUNTY, TEXAS
Kimley»Horn
10814 JOLLYVILLE ROAD, CAMPUS IV SUITE 200, AUSTIN, TEXAS 78759
TBPELS FIRM # 10194624
TEL. NO. (512) 418-1771 WWW.KIMLEY-HORN.COM
SCALE 1" = 100'
DRAWN BY RPP
CHECKED BY MMII
DATE 4/1/2024
PROJECT NO. 168864169
SHEET NO. 1 OF 7
COPYRIGHT © 2024 KIMLEY-HORN AND ASSOCIATES, INC. ALL RIGHTS RESERVED
FP24-000001

NOTES
1. PROPOSED FINAL PLAT SHOWN FOR REFERENCE.

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

FINAL PLAT (SHEET 1 OF 4)

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

5/16/2024
NICHOLAS C. BROWN 107175 LICENSED PROFESSIONAL ENGINEER

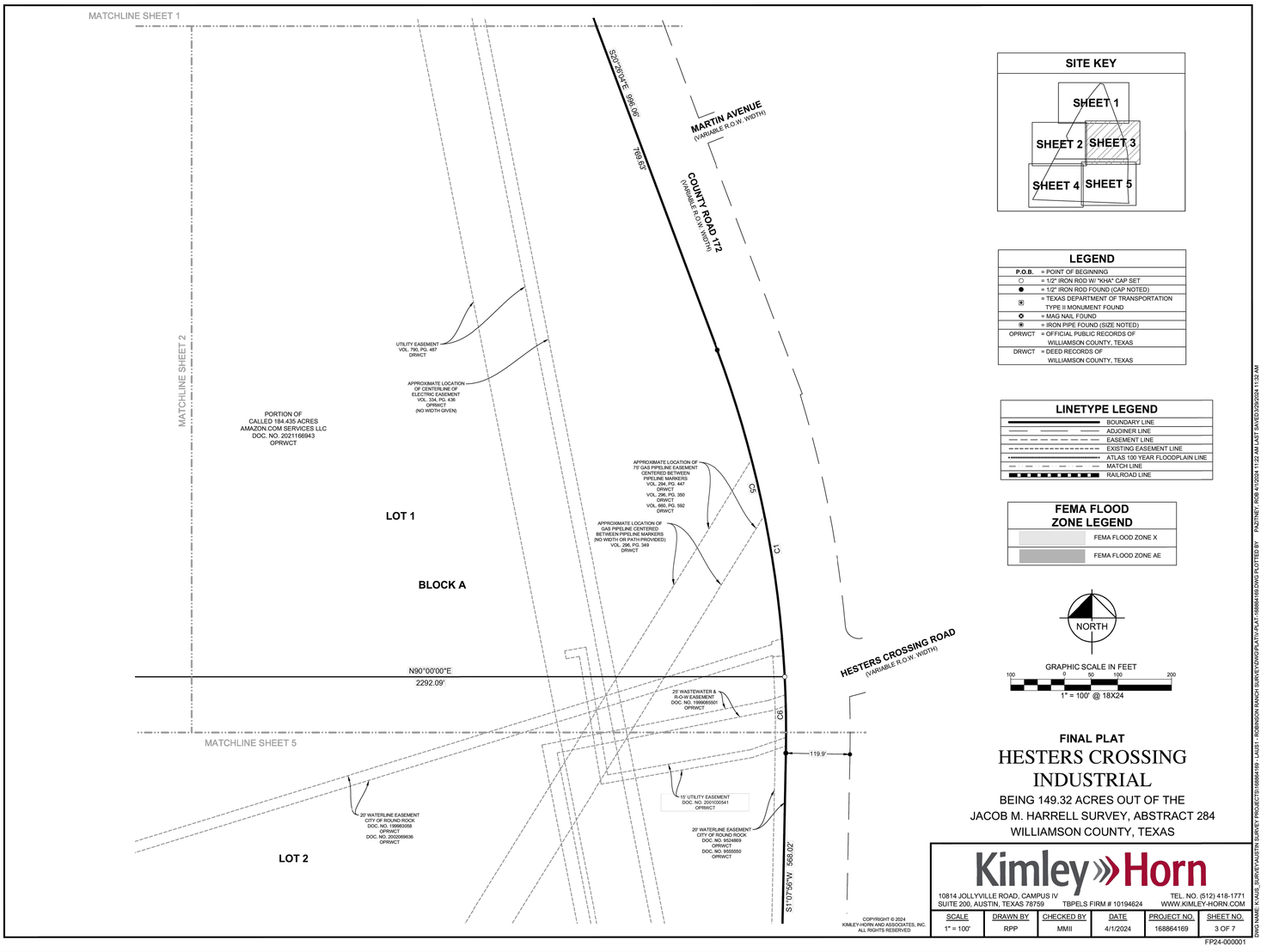
Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

No.	REVISIONS	DATE	BY

SHEET NUMBER

SDP24-00001



SITE KEY

LEGEND

P.O.B.	= POINT OF BEGINNING
○	= 1/2" IRON ROD W/ "KHA" CAP SET
●	= 1/2" IRON ROD FOUND (CAP NOTED)
⊡	= TEXAS DEPARTMENT OF TRANSPORTATION TYPE II MONUMENT FOUND
◇	= MAG NAIL FOUND
◉	= IRON PIPE FOUND (SIZE NOTED)
OPRWCT	= OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
DRWCT	= DEED RECORDS OF WILLIAMSON COUNTY, TEXAS

LINETYPE LEGEND

- BOUNDARY LINE
- ADJOINER LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ATLAS 100 YEAR FLOODPLAIN LINE
- MATCH LINE
- RAILROAD LINE

FEMA FLOOD ZONE LEGEND

- FEMA FLOOD ZONE X
- FEMA FLOOD ZONE AE

NORTH

GRAPHIC SCALE IN FEET
100 0 50 100 200
1" = 100' @ 18X24

FINAL PLAT

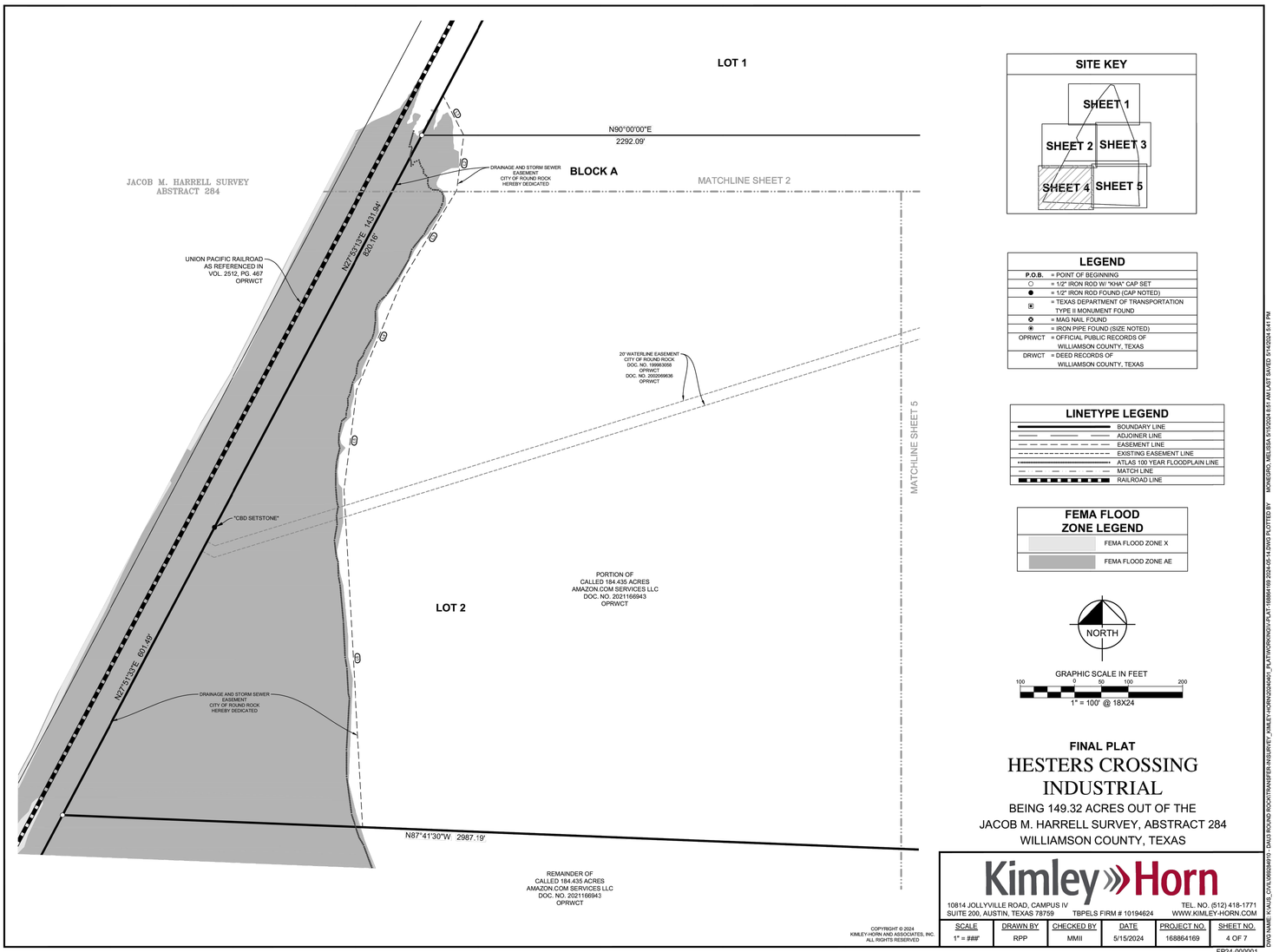
HESTERS CROSSING INDUSTRIAL

BEING 149.32 ACRES OUT OF THE
JACOB M. HARRELL SURVEY, ABSTRACT 284
WILLIAMSON COUNTY, TEXAS

Kimley»Horn
10814 JOLLYVILLE ROAD, CAMPUS IV
SUITE 200, AUSTIN, TEXAS 78759
TEL. NO. (512) 418-1771
TBPELS FIRM # 10194624
WWW.KIMLEY-HORN.COM

SCALE	DRAWN BY	CHECKED BY	DATE	PROJECT NO.	SHEET NO.
1" = 100'	RPP	MMII	4/1/2024	168864169	3 OF 7

FP24-000001



SITE KEY

LEGEND

P.O.B.	= POINT OF BEGINNING
○	= 1/2" IRON ROD W/ "KHA" CAP SET
●	= 1/2" IRON ROD FOUND (CAP NOTED)
⊡	= TEXAS DEPARTMENT OF TRANSPORTATION TYPE II MONUMENT FOUND
◇	= MAG NAIL FOUND
◉	= IRON PIPE FOUND (SIZE NOTED)
OPRWCT	= OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
DRWCT	= DEED RECORDS OF WILLIAMSON COUNTY, TEXAS

LINETYPE LEGEND

- BOUNDARY LINE
- ADJOINER LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ATLAS 100 YEAR FLOODPLAIN LINE
- MATCH LINE
- RAILROAD LINE

FEMA FLOOD ZONE LEGEND

- FEMA FLOOD ZONE X
- FEMA FLOOD ZONE AE

NORTH

GRAPHIC SCALE IN FEET
100 0 50 100 200
1" = 100' @ 18X24

FINAL PLAT

HESTERS CROSSING INDUSTRIAL

BEING 149.32 ACRES OUT OF THE
JACOB M. HARRELL SURVEY, ABSTRACT 284
WILLIAMSON COUNTY, TEXAS

Kimley»Horn
10814 JOLLYVILLE ROAD, CAMPUS IV
SUITE 200, AUSTIN, TEXAS 78759
TEL. NO. (512) 418-1771
TBPELS FIRM # 10194624
WWW.KIMLEY-HORN.COM

SCALE	DRAWN BY	CHECKED BY	DATE	PROJECT NO.	SHEET NO.
1" = ###'	RPP	MMII	5/15/2024	168864169	4 OF 7

FP24-000001

NOTES
1. PROPOSED FINAL PLAT SHOWN FOR REFERENCE.

SDP24-00001

SHEET NUMBER 4 OF 204

2525 CR 172 INDUSTRIAL

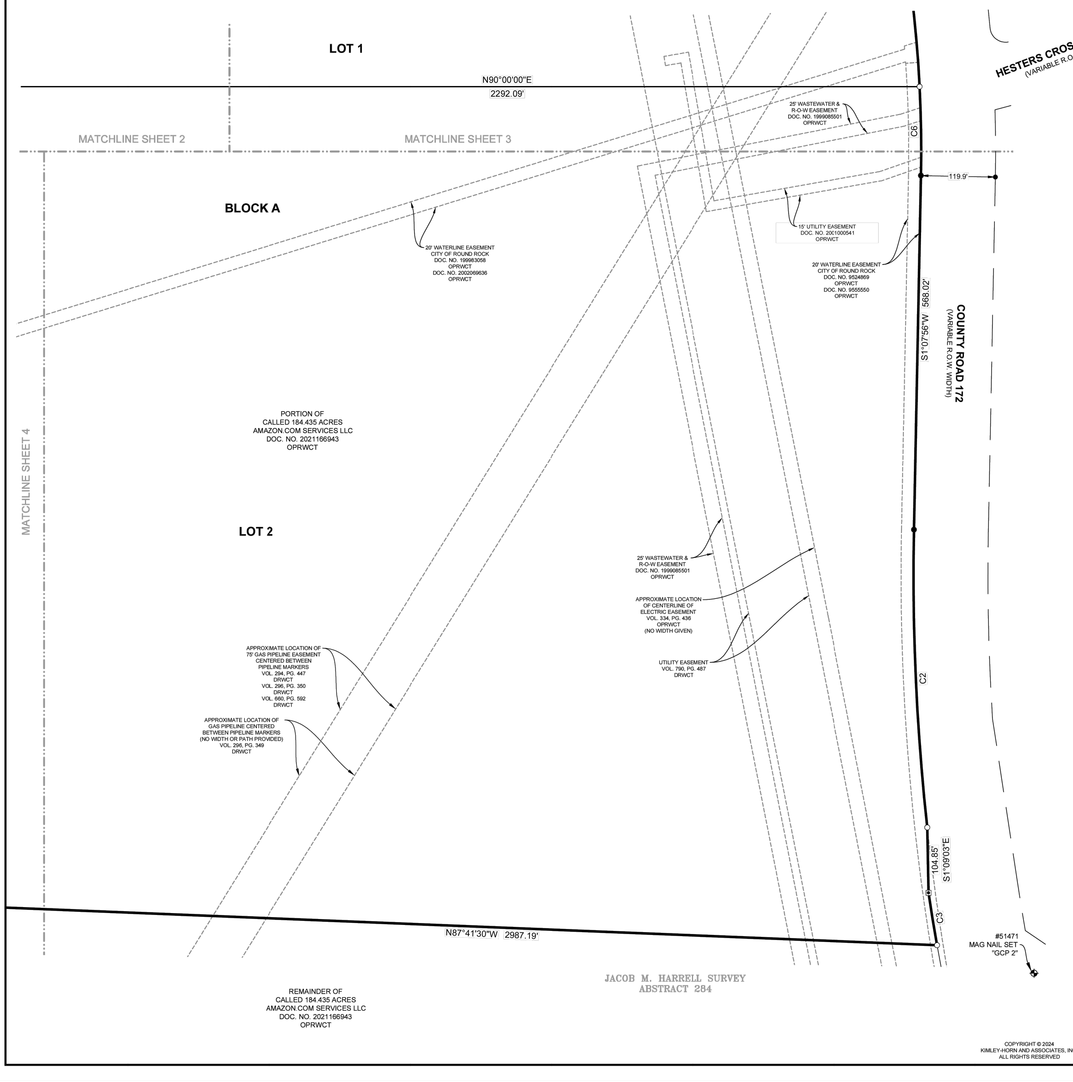
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

FINAL PLAT
(SHEET 2 OF 4)

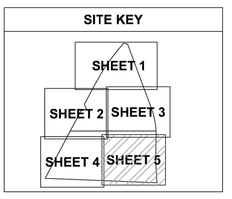
KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

5/16/2024

No.	REVISIONS	DATE	BY



SITE KEY



LEGEND

P.O.B.	= POINT OF BEGINNING
○	= 1/2" IRON ROD W/ "KHA" CAP SET
●	= 1/2" IRON ROD FOUND (CAP NOTED)
▣	= TEXAS DEPARTMENT OF TRANSPORTATION TYPE II MONUMENT FOUND
◇	= MAG NAIL FOUND
⊗	= IRON PIPE FOUND (SIZE NOTED)
OPRWCT	= OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
DRWCT	= DEED RECORDS OF WILLIAMSON COUNTY, TEXAS

LINETYPE LEGEND

- BOUNDARY LINE
- ADJOINER LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ATLAS 100 YEAR FLOODPLAIN LINE
- MATCH LINE
- RAILROAD LINE

FEMA FLOOD ZONE LEGEND

- FEMA FLOOD ZONE X
- FEMA FLOOD ZONE AE

NORTH

GRAPHIC SCALE IN FEET
100 0 50 100 200
1" = 100' @ 18X24

FINAL PLAT

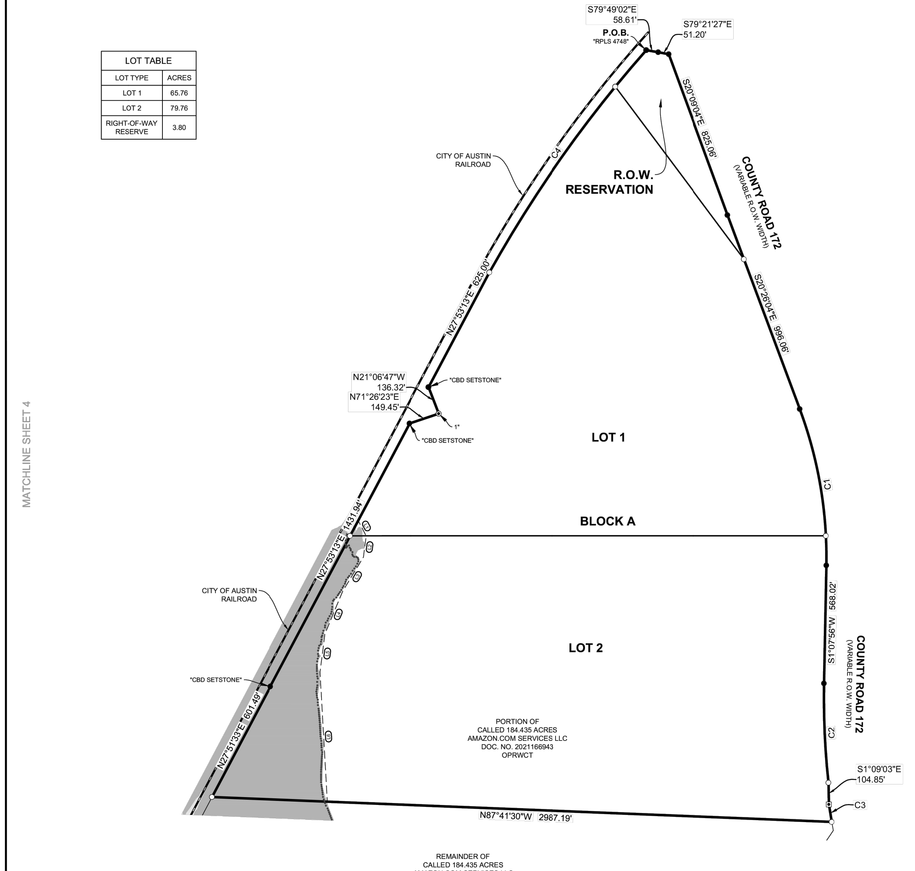
HESTERS CROSSING INDUSTRIAL

BEING 149.32 ACRES OUT OF THE
JACOB M. HARRELL SURVEY, ABSTRACT 284
WILLIAMSON COUNTY, TEXAS

Kimley»Horn
10814 JOLLYVILLE ROAD, CAMPUS IV
SUITE 200, AUSTIN, TEXAS 78759
TEL. NO. (512)-418-1771
TBPELS FIRM # 10194624
WWW.KIMLEY-HORN.COM

SCALE	DRAWN BY	CHECKED BY	DATE	PROJECT NO.	SHEET NO.
1" = ###	RPP	MMII	4/1/2024	168864169	5 OF 7

FP24-000001



LOT TABLE	
LOT TYPE	ACRES
LOT 1	65.76
LOT 2	79.76
RIGHT-OF-WAY RESERVE	3.80

LINE TABLE		
NO.	BEARING	LENGTH
L1	S27°31'53"E	82.94'
L2	S07°19'01"W	102.74'
L3	S31°09'26"W	193.03'
L4	S22°36'18"W	221.16'
L5	S07°19'02"W	185.64'
L6	S03°12'18"E	624.67'

CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	21°34'00"	2040.19'	767.95'	S09°39'04"E	763.42'
C2	7°22'00"	3720.44'	478.46'	S02°33'22"E	478.13'
C3	1°34'56"	3080.81'	85.10'	S09°12'07"E	85.10'
C4	12°09'25"	6183.54'	1312.02'	N35°13'07"E	1309.56'
C5	17°33'37"	2040.19'	625.29'	S11°39'16"E	622.85'
C6	4°00'23"	2040.19'	142.65'	S00°52'16"E	142.63'
C7	10°01'21"	6183.54'	1081.65'	N34°09'04"E	1080.27'
C8	2°08'05"	6183.54'	230.37'	N40°13'47"E	230.36'

LEGEND

P.O.B.	= POINT OF BEGINNING
○	= 1/2" IRON ROD W/ "KHA" CAP SET
●	= 1/2" IRON ROD FOUND (CAP NOTED)
▣	= TEXAS DEPARTMENT OF TRANSPORTATION TYPE II MONUMENT FOUND
◇	= MAG NAIL FOUND
⊗	= IRON PIPE FOUND (SIZE NOTED)
OPRWCT	= OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
DRWCT	= DEED RECORDS OF WILLIAMSON COUNTY, TEXAS

LINETYPE LEGEND

- BOUNDARY LINE
- ADJOINER LINE
- EASEMENT LINE
- EXISTING EASEMENT LINE
- ATLAS 100 YEAR FLOODPLAIN LINE
- MATCH LINE
- RAILROAD LINE

FEMA FLOOD ZONE LEGEND

- FEMA FLOOD ZONE X
- FEMA FLOOD ZONE AE

NORTH

GRAPHIC SCALE IN FEET
300 0 150 300 600
1" = 300' @ 18X24

FINAL PLAT

HESTERS CROSSING INDUSTRIAL

BEING 149.32 ACRES OUT OF THE
JACOB M. HARRELL SURVEY, ABSTRACT 284
WILLIAMSON COUNTY, TEXAS

Kimley»Horn
10814 JOLLYVILLE ROAD, CAMPUS IV
SUITE 200, AUSTIN, TEXAS 78759
TEL. NO. (512)-418-1771
TBPELS FIRM # 10194624
WWW.KIMLEY-HORN.COM

SCALE	DRAWN BY	CHECKED BY	DATE	PROJECT NO.	SHEET NO.
1" = 300'	RPP	MMII	4/1/2024	168864169	6 OF 7

FP24-000001

NOTES
1. PROPOSED FINAL PLAT SHOWN FOR REFERENCE

SDP24-00001

SHEET NUMBER 5 OF 204

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

FINAL PLAT
(SHEET 3 OF 4)

KHA PROJECT 069284918	
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

5/16/2024

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

No.	REVISIONS	DATE	BY

SURVEYOR'S NOTES:

1. BASIS OF BEARINGS IS THE TEXAS COORDINATE SYSTEM OF 1983, CENTRAL ZONE (4203). ALL COORDINATES AND DISTANCES SHOWN HEREON HAVE BEEN SCALED FROM POINT (#51448), COORDINATES BEING N: 10148706.780, E: 3126529.818, WITH A SCALE FACTOR OF 1.0001119033. THE UNIT OF LINEAR MEASUREMENT IS U.S. SURVEY FEET.
2. ALL LOTS LOCATED IN THIS SUBDIVISION WILL BE MONUMENTED WITH A 1/2" IRON ROD WITH A SURVEYOR'S CAP STAMPED "KHA" OR A MAG NAIL WITH WASHER STAMPED "KHA" PRIOR TO LOT SALES, UNLESS OTHERWISE STATED.

PLAT NOTES

1. NO OBJECTS, INCLUDING BUT NOT LIMITED TO BUILDINGS, FENCES, LANDSCAPING OR OTHER STRUCTURES MAY BE PLACED IN DRAINAGE EASEMENTS, EXCEPT AS APPROVED BY WILLIAMSON COUNTY AND THE CITY OF ROUND ROCK.
2. THIS PLAT CONFORMS TO THE PRELIMINARY PLAT APPROVED BY THE PLANNING AND ZONING COMMISSION ON JUNE 5, 2024.
3. A PORTION OF THIS TRACT IS ENCROACHED BY THE ULTIMATE 1% ANNUAL CHANCE FLOODPLAIN, ALL SLAB ELEVATIONS SHALL BE A MINIMUM TWO (2) FEET ABOVE THE 1% ANNUAL CHANCE FLOODPLAIN.
4. NO FENCES, STRUCTURES, STORAGE, OR FILL SHALL BE PLACED WITHIN THE LIMITS OF THE ULTIMATE 1% ANNUAL CHANCE FLOODPLAIN; UNLESS APPROVED BY THE CITY ENGINEER. FILL MAY ONLY BE PERMITTED BY THE CITY ENGINEER AFTER APPROVAL OF THE PROPER ANALYSIS.
5. A PORTION OF THIS TRACT IS ENCROACHED BY SPECIAL FLOOD HAZARD AREAS INUNDATED BY THE 1% ANNUAL CHANCE FLOODPLAIN AS IDENTIFIED BY THE U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY BOUNDARY MAP (FLOOD INSURANCE RATE MAP) COMMUNITY PANEL NUMBER 4810790630, MAP NO. 48491C0630F, EFFECTIVE DATE DECEMBER 20, 2019 FOR WILLIAMSON COUNTY, TEXAS.
6. BUILDING SETBACKS SHALL BE IN ACCORDANCE WITH PART III, ZONING AND DEVELOPMENT CODE, CHAPTER 2, ZONING DISTRICTS AND USE REGULATIONS, CITY OF ROUND ROCK, TEXAS, 2018, AS AMENDED.
7. SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PART III, ZONING AND DEVELOPMENT CODE, SECTION 6-26, CITY OF ROUND ROCK, TEXAS, 2018, AS AMENDED.
8. WITH THE EXCEPTION OF PROPERTIES LOCATED WITHIN THE MU-1 AND MU-2 ZONING DISTRICTS, A TEN FOOT (10') PUE AND SIDEWALK EASEMENT ABUTTING AND ALONG THE STREET SIDE PROPERTY LINE IS HEREBY CONVEYED FOR ALL STREET SIDE PROPERTY LOTS SHOWN HEREON. ANY PRIVATE IMPROVEMENTS WITHIN THE PUE OR RIGHT-OF-WAY SHALL REQUIRE WRITTEN APPROVAL FROM THE UTILITIES DIRECTOR PRIOR TO INSTALLATION.
9. NO OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO FENCING OR STORAGE, SHALL BE PERMITTED IN ANY DRAINAGE EASEMENTS SHOWN HEREON.

SURVEYOR'S CERTIFICATION:

THAT I, MICHAEL A. MONTGOMERY II, DO HEREBY CERTIFY THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ACCURATE N-THE-GROUND SURVEY OF THE LAND AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH CHAPTER 4 – SUBDIVISION DESIGN AND CONSTRUCTION, PART III – ZONING AND DEVELOPMENT CODE, CODE OF ORDINANCES, CITY OF ROUND ROCK, 2018 EDITION AS AMENDED.

PLAT COMPLETION DATE: MARCH 5, 2024.

____
MICHAEL A. MONTGOMERY II, R.P.L.S.
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 6890

LEGAL DESCRIPTION:
149.32 ACRES

BEING A 149.32 ACRE TRACT OF LAND SITUATED IN THE JACOB M. HARRELL SURVEY, ABSTRACT 284, WILLIAMSON COUNTY, TEXAS; AND BEING A PORTION OF A CALLED 184.435 ACRES TRACT OF LAND DESCRIBED TO AMAZON.COM SERVICES LLC, AS SHOWN ON INSTRUMENT RECORDED IN DOCUMENT NO. 2021166943 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.T); AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "RPLS 4748" FOUND IN THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF UNION PACIFIC RAILROAD, A 100-FT WIDTH RIGHT-OF-WAY, IN THE SOUTHWESTERLY RIGHT-OF-WAY OF COUNTY ROAD 172, A VARIABLE WIDTH RIGHT-OF-WAY, FOR THE NORTH CORNER OF SAID 184.435 ACRES TRACT;

THENCE, DEPARTING SAID SOUTHEASTERLY RIGHT-OF-WAY LINE OF UNION PACIFIC RAILROAD, WITH THE SOUTHWESTERLY RIGHT-OF-WAY OF SAID COUNTY ROAD 172, SAME BEING THE NORTH BOUNDARY LINE OF SAID 184.435 ACRES TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. SOUTH 79°49'02" EAST, A DISTANCE OF 58.61 FEET TO A 1/2-INCH IRON ROD FOUND;
2. SOUTH 79°21'27" EAST, A DISTANCE OF 51.20 FEET TO A 1/2-INCH IRON ROD FOUND;

THENCE, CONTINUING WITH THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF SAID COUNTY ROAD 172, SAME BEING THE EAST BOUNDARY LINE OF SAID 184.435 ACRES THE FOLLOWING SEVEN (7) COURSES AND DISTANCES:

1. SOUTH 20°09'04" EAST, A DISTANCE OF 825.06 FEET TO A 1/2-INCH IRON ROD FOUND;
2. SOUTH 20°26'04" EAST, A DISTANCE OF 996.06 FEET TO A 1/2-INCH IRON ROD FOUND FOR THE BEGINNING OF A CURVE;
3. WITH SAID CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 21°34'00", A RADIUS OF 2040.19 FEET, A CHORD BEARING AND DISTANCE OF SOUTH 09°39'04" EAST, 763.42 FEET, AND A TOTAL ARC LENGTH OF 767.95 FEET TO A 1/2-INCH IRON ROD FOUND;
4. SOUTH 01°07'56" WEST, A DISTANCE OF 568.02 FEET TO A 1/2-INCH IRON ROD FOUND FOR THE BEGINNING OF A CURVE;
5. WITH SAID CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 07°22'06", A RADIUS OF 3720.44 FEET, A CHORD BEARING AND DISTANCE OF SOUTH 02°33'22" EAST, 478.13 FEET, AND A TOTAL ARC LENGTH OF 478.46 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "KHA" SET;
6. SOUTH 01°09'03" EAST, A DISTANCE OF 104.85 FEET TO A TEXAS DEPARTMENT OF TRANSPORTATION TYPE II MONUMENT FOUND FOR THE BEGINNING OF A CURVE;
7. WITH SAID CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 01°34'58", A RADIUS OF 3080.81 FEET, A CHORD BEARING AND DISTANCE OF SOUTH 09°12'07" EAST, 85.10 FEET, AND A TOTAL ARC LENGTH OF 85.10 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "KHA" SET IN SAID SOUTHWESTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD 172;

THENCE, DEPARTING SAID SOUTHWESTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD 172 AND SAID EAST BOUNDARY LINE OF THE 184.435 ACRES TRACT, OVER AND ACROSS SAID 184.435 ACRES TRACT NORTH 87°41'30" WEST, A DISTANCE OF 2987.19 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "KHA" SET IN THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF UNION PACIFIC RAILROAD, SAME BEING THE WEST BOUNDARY LINE OF SAID 184.435 ACRES TRACT;

THENCE, WITH SAID SOUTHEASTERLY RIGHT-OF-WAY LINE OF UNION PACIFIC RAILROAD AND SAID WEST BOUNDARY LINE OF THE 184.435 ACRES TRACT, THE FOLLOWING SIX (6) COURSES AND DISTANCES:

1. NORTH 27°51'33" EAST, A DISTANCE OF 601.49 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "CBD SETSTONE" FOUND;
2. NORTH 27°53'13" EAST, A DISTANCE OF 1431.94 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "CBD SETSTONE" FOUND;
3. NORTH 71°26'23" EAST, A DISTANCE OF 149.45 FEET TO A 1-INCH IRON PIPE FOUND;
4. NORTH 21°06'47" WEST, A DISTANCE OF 136.32 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "CBD SETSTONE" FOUND;
5. NORTH 27°53'13" EAST, A DISTANCE OF 625.00 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "KHA" SET FOR THE BEGINNING OF A CURVE;
6. WITH SAID CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 12°09'25", A RADIUS OF 6183.54 FEET, A CHORD BEARING AND DISTANCE OF NORTH 35°13'07" EAST, 1309.56 FEET, AND A TOTAL ARC LENGTH OF 1312.02 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 149.32 ACRES OF LAND, MORE OR LESS, IN WILLIAMSON COUNTY, TEXAS. THIS DOCUMENT WAS PREPARED IN THE OFFICE OF KIMLEY-HORN INC. IN AUSTIN, TEXAS.

EASEMENT NOTE:

THE PERPETUAL EASEMENT, RIGHT-OF-WAY, RIGHTS, AND PRIVILEGES HEREIN GRANTED SHALL BE USED FOR THE PURPOSES OF LOCATION, PLACEMENT, RELOCATION, CONSTRUCTION, OPERATION, ENLARGEMENT, MAINTENANCE, ALTERATION, REPAIR, REBUILDING, REMOVAL, AND PATROL OF UTILITIES AND ASSOCIATED FACILITIES INCLUDING BUT NOT LIMITED TO: PIPES, VALVES, VAULTS, MANHOLES, CHANNELS, INLETS, STRUCTURES, ACCESS FACILITIES, CONDUITS, APPURTENANCES, AND ANY NECESSARY ACCESSORIES THERETO (COLLECTIVELY THE "FACILITIES").

THIS CONVEYANCE IS MADE AND ACCEPTED SUBJECT TO ANY AND ALL CONDITIONS AND RESTRICTIONS, IF ANY, RELATING TO THE HEREIN ABOVE DESCRIBED PROPERTY TO THE EXTENT, AND ONLY TO THE EXTENT, THAT THE SAME MAY STILL BE IN FORCE AND EFFECT AND SHOWN OF RECORD IN THE OFFICE OF THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS OR TRAVIS COUNTY, TEXAS.

EXCEPT AS OTHERWISE NOTED, THE EASEMENT, RIGHTS, AND PRIVILEGES HEREIN GRANTED SHALL BE PERPETUAL, PROVIDED HOWEVER THAT SAID EASEMENT, RIGHTS, AND PRIVILEGES SHALL CEASE AND REVERT TO GRANTORS IN THE EVENT THE UTILITIES ARE ABANDONED OR SHALL CEASE TO BE IN OPERATION, FOR A PERIOD OF FIVE (5) CONSECUTIVE YEARS.

THE PERPETUAL EASEMENT, RIGHT-OF-WAY, RIGHTS, AND PRIVILEGES GRANTED HEREIN ARE EXCLUSIVE, AND GRANTOR COVENANTS NOT TO CONVEY ANY OTHER EASEMENT OR CONFLICTING RIGHTS WITHIN THE PREMISES COVERED BY THIS GRANT, WITHOUT THE EXPRESS WRITTEN CONSENT OF GRANTEE, WHICH CONSENT SHALL NOT BE UNREASONABLY WITHHELD. GRANTEE SHALL HAVE THE RIGHT TO REVIEW ANY PROPOSED EASEMENT OR CONFLICTING USE TO DETERMINE THE EFFECT, IF ANY, ON THE FACILITIES CONTEMPLATED HEREIN. PRIOR TO GRANTING ITS CONSENT FOR OTHER EASEMENTS, GRANTEE MAY REQUIRE REASONABLE SAFEGUARDS TO PROTECT THE INTEGRITY OF THE FACILITIES THEREON.

GRANTOR FURTHER GRANTS TO GRANTEE:
(a) THE RIGHT TO INSTALL ADDITIONAL FACILITIES ON THE EASEMENT TRACT;
(b) THE RIGHT TO GRADE THE EASEMENT FOR THE FULL WIDTH THEREOF AND TO EXTEND THE CUTS AND FILLS FOR SUCH GRADING INTO AND ONTO THE LAND ALONG AND OUTSIDE THE EASEMENT TO SUCH EXTENT AS GRANTEE MAY FIND REASONABLY NECESSARY;
(c) THE RIGHT OF INGRESS TO AND EGRESS FROM THE EASEMENT OVER AND ACROSS GRANTOR'S PROPERTY BY MEANS OF ROADS AND LANES THEREON, IF SUCH EXIST; OTHERWISE BY SUCH ROUTE OR ROUTES AS SHALL OCCASION THE LEAST PRACTICABLE DAMAGE AND INCONVENIENCE TO GRANTOR; PROVIDED THAT SUCH RIGHT OF INGRESS AND EGRESS SHALL NOT EXTEND TO ANY PORTION OF GRANTOR'S PROPERTY WHICH IS ISOLATED FROM THE EASEMENT BY ANY PUBLIC HIGHWAY OR ROAD NOW CROSSING OR HEREAFTER CROSSING THE PROPERTY; THE FOREGOING RIGHT OF INGRESS AND EGRESS INCLUDES THE RIGHT OF THE GRANTEE AND ASSIGNED EMPLOYEES OF GRANTEE TO DISASSEMBLE, REMOVE, TAKE DOWN, AND CLEAR AWAY ANY FENCE, BARRICADE, OR OTHER STRUCTURE WHICH OBSTRUCTS, PREVENTS, OR HINDERS GRANTEE'S INGRESS TO AND EGRESS FROM THE GRANTOR'S PROPERTY, AND SHOULD GRANTEE DEEM IT NECESSARY TO SO DISASSEMBLE, REMOVE, TAKE DOWN, OR CLEAR AWAY ANY SUCH FENCE, BARRICADE, OR OTHER STRUCTURE, GRANTEE SHALL, AS SOON AS IS REASONABLY FEASIBLE, REPLACE OR RESTORE GRANTOR'S PROPERTY TO AS SIMILAR A CONDITION AS REASONABLY PRACTICABLE AS EXISTED IMMEDIATELY PRIOR TO GRANTEE'S ACTIONS PURSUANT TO THIS PROVISION, UNLESS SAID FENCE, BARRICADE, OR OTHER STRUCTURE IS INCONSISTENT WITH THE RIGHTS CONVEYED TO GRANTEE HEREIN;
(d) THE RIGHT OF GRADING FOR, CONSTRUCTION, MAINTAINING AND USING SUCH ROADS ON AND ACROSS THE PROPERTY AS GRANTEE MAY DEEM NECESSARY IN THE EXERCISE OF THE RIGHT OF INGRESS AND EGRESS OR TO PROVIDE ACCESS TO PROPERTY ADJACENT TO THE EASEMENT;
(e) THE RIGHT FROM TIME TO TIME TO TRIM AND TO CUT DOWN AND CLEAR AWAY ANY AND ALL TREES AND BRUSH NOW OR HEREAFTER ON THE EASEMENT AND TO TRIM AND TO CUT DOWN AND CLEAR AWAY ANY TREES ON EITHER SIDE OF THE EASEMENT WHICH NOW OR HEREAFTER IN THE OPINION OF GRANTEE MAY BE A HAZARD TO ANY PIPELINE; VALVES, APPLIANCES, FITTINGS, OR OTHER IMPROVEMENTS BY REASON OF THE DANGER OF FALLING THEREON OR ROOT INFILTRATION THEREIN, OR WHICH MAY OTHERWISE INTERFERE WITH THE EXERCISE OF GRANTEE'S RIGHTS HEREUNDER; PROVIDED HOWEVER, THAT ALL TREES WHICH GRANTEE IS HEREBY AUTHORIZED TO CUT AND REMOVE, IF VALUABLE FOR TIMBER OR FIREWOOD, SHALL CONTINUE TO BE THE PROPERTY OF GRANTOR, BUT ALL TOPS, LOPS, BRUSH AND REFUSE WOOD SHALL BE BURNED OR REMOVED BY GRANTEE;
(f) THE RIGHT TO MARK THE LOCATION OF THE EASEMENT BY SUITABLE MARKERS SET IN THE GROUND; PROVIDED THAT SUCH MARKERS SHALL BE PLACED IN FENCES OR OTHER LOCATIONS WHICH WILL NOT INTERFERE WITH ANY REASONABLE USE GRANTOR SHALL MAKE OF THE EASEMENT;

GRANTEE HEREBY COVENANTS AND AGREES:
(a) GRANTEE SHALL NOT FENCE THE EASEMENT;
(b) GRANTEE SHALL PROMPTLY BACKFILL ANY TRENCH MADE BY IT ON THE EASEMENT AND REPAIR ANY DAMAGE IT SHALL DO TO GRANTORS PRIVATE ROADS OR LANES ON THE LANDS;
(c) TO THE EXTENT ALLOWED BY LAW, GRANTEE SHALL INDEMNIFY GRANTOR AGAINST ANY LOSS AND DAMAGE WHICH SHALL BE CAUSED BY THE EXERCISE OF THE RIGHTS OF INGRESS AND EGRESS OR BY ANY WRONGFUL OR NEGLIGENT ACT OR OMISSION OF GRANTEE'S AGENTS OR EMPLOYEES IN THE COURSE OF THEIR EMPLOYMENT.

IT IS UNDERSTOOD AND AGREED THAT ANY AND ALL EQUIPMENT PLACED UPON SAID PROPERTY SHALL REMAIN THE PROPERTY OF GRANTEE.

GRANTOR HEREBY DEDICATES THE EASEMENT FOR THE PURPOSES STATED HEREIN.

TO HAVE AND TO HOLD THE RIGHTS AND INTERESTS DESCRIBED UNTO GRANTEE AND ITS SUCCESSORS AND ASSIGNS, FOREVER, TOGETHER WITH ALL AND SINGULAR ALL USUAL AND CUSTOMARY RIGHTS THERETO IN ANYWISE BELONGING, AND TOGETHER WITH THE RIGHT AND PRIVILEGE AT ANY AND ALL TIMES TO ENTER SAID PREMISES, OR ANY PART THEREOF, FOR THE PURPOSE OF CONSTRUCTING OR MAINTAINING SAID UTILITIES AND FOR MAKING CONNECTIONS THEREWITH, AND GRANTOR DOES HEREBY BIND ITSELF, IT'S SUCCESSORS AND ASSIGNS AND LEGAL REPRESENTATIVES, TO WARRANT AND FOREVER DEFEND, ALL AND SINGULAR, THE SAID EASEMENT AND RIGHTS AND INTERESTS UNTO THE CITY OF ROUND ROCK, TEXAS, ITS SUCCESSORS AND ASSIGNS, AGAINST EVERY PERSON WHOMSOEVER LAWFULLY CLAIMING OR TO CLAIM THE SAME OR ANY PART THEREOF.

STATE OF TEXAS §
COUNTY OF WILLIAMSON §

THAT AMAZON.COM SERVICES LLC, AS THE OWNER OF A CALLED 184.435 ACRE TRACT OF LAND DESCRIBED IN DOCUMENT NUMBER 202116643, OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CERTIFY THAT THERE ARE NO LIEN HOLDERS AND DEDICATE TO THE PUBLIC FOREVER USE OF THE STREETS, ALLEYS, EASEMENTS AND ALL OTHER LANDS INTENDED FOR PUBLIC DEDICATION AS SHOWN HEREON TO BE KNOWN AS AMAZON.

AMAZON.COM SERVICES LLC

____

NAME: ________________

TITLE: ________________

THE STATE OF TEXAS §
COUNTY OF WILLIAMSON §

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THE ____DAY OF _______, 20___, BY, ____________________,

AS ____________________, OF ____________________, A ____________________,

ON BEHALF OF SAID OF SAID ____________________.

NOTARY PUBLIC, STATE OF TEXAS

PRINTED NAME: ____________________

MY COMMISSION EXPIRES: ____________________

APPROVED THIS 5 DAY OF JUNE, 2024, BY THE CITY PLANNING AND ZONING COMMISSION OF THE CITY OF ROUND ROCK, TEXAS, AND AUTHORIZED TO BE FILED FOR RECORD BY THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

THE PROPERTY COVERED BY THIS PLAT IS WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF ROUND ROCK.

____
ROB WENDT, CHAIRMAN
CITY OF ROUND ROCK PLANNING & ZONING COMMISSION

ENGINEER'S CERTIFICATION:

THAT I, NICHOLAS C. BROWN, P.E., DO HEREBY CERTIFY THAT THE INFORMATION CONTAINED ON THIS PLAT COMPLIES WITH CHAPTER 4 – SUBDIVISION DESIGN AND CONSTRUCTION, PART III ZONING AND DEVELOPMENT CODE, CODE OF ORDINANCES, CITY OF ROUND ROCK, 2018 EDITION AS AMENDED, AND THE DESIGN AND CONSTRUCTION STANDARDS ADOPTED BY THE CITY OF ROUND ROCK, TEXAS.

5/15/2024

NICHOLAS C. BROWN, P.E.
REGISTERED PROFESSIONAL ENGINEER NO. 107175
10814 JOLLYVILLE ROAD
CAMPUS IV, SUITE 200
AUSTIN, TEXAS 78759

STATE OF TEXAS — NICHOLAS C. BROWN — 107175 — LICENSED PROFESSIONAL ENGINEER

I, NANCY RISTER,CLERK OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING AND ITS CERTIFICATION OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON
THE _____ DAY OF ________________, 20__ A.D., AT _______ O'CLOCK __.M., AND DULY RECORDED ON
THE _____ DAY OF ________________, 20__ A.D., AT _______ O'CLOCK __.M., IN THE PLAT RECORDS OF SAID COUNTY AND STATE IN DOCUMENT NO. _____________ OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

WITNESS MY HAND AND OFFICIAL SEAL OF OFFICE OF THE COUNTY CLERK, THIS THE ____ DAY OF ________________, 20__ A.D.

NANCY RISTER, COUNTY CLERK,
WILLIAMSON COUNTY, TEXAS

____
DEPUTY

FINAL PLAT
HESTERS CROSSING INDUSTRIAL
BEING 149.32 ACRES OUT OF THE
JACOB M. HARRELL SURVEY, ABSTRACT 284
WILLIAMSON COUNTY, TEXAS

Kimley»Horn
10814 JOLLYVILLE ROAD, CAMPUS IV
SUITE 200, AUSTIN, TEXAS 78759 TBPELS FIRM # 10194624
TEL. NO. (512) 418-1771
WWW.KIMLEY-HORN.COM

SCALE	DRAWN BY	CHECKED BY	DATE	PROJECT NO.	SHEET NO.
N/A	RPP	MMII	5/14/2024	168864169	7 OF 7

FP24-000001

DWG NAME: K:\AUS_CIVIL\069284910 - DAU3 ROUND ROCK\TRANSFER-INSURVEY_KIMLEY-HORN\20240401_PLAT\V-PLAT-168864169 2024-04-01.DWG PLOTTED BY MONEGRO, MELISSA 5/14/2024 5:41 PM LAST SAVED 4/1/2024 3:09 PM

NOTES
1. PROPOSED FINAL PLAT SHOWN FOR REFERENCE.

2525 CR 172 INDUSTRIAL CITY OF ROUND ROCK WILLIAMSON COUNTY, TEXAS	**FINAL PLAT** **(SHEET 4 OF 4)**	KHA PROJECT 069284918 DATE JUNE 2024 SCALE: AS SHOWN DESIGNED BY: MM DRAWN BY: MM CHECKED BY: NCB

5/16/2024

STATE OF TEXAS — NICHOLAS C. BROWN — 107175 — LICENSED PROFESSIONAL ENGINEER

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

No.	REVISIONS	DATE	BY

SHEET NUMBER
6 OF 204

GENERAL NOTES:

CITY OF ROUND ROCK

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK STANDARD SPECIFICATIONS MANUAL.

2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT HIS EXPENSE.

3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS ARE APPROPRIATE.

4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.

5. THE CONTRACTOR SHALL GIVE THE CITY OF ROUND ROCK 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE 512-218-5428 (PLANNING AND DEVELOPMENT SERVICES DEPARTMENT).

6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.

7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF ROUND ROCK, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.

8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF ROUND ROCK ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT PRIOR TO FINAL ACCEPTANCE.

9. THE ROUND ROCK CITY COUNCIL SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.

10. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.

11. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.

12. AVAILABLE BENCHMARKS (CITY OF ROUND ROCK DATUM) WITH VERTICAL DATUM INFORMATION THAT MAY BE UTILIZED FOR THE CONSTRUCTION OF THIS PROJECT ARE DESCRIBED AS FOLLOWS:

VERTICAL DATUM: NAVD88
GEOID: 18

BM #51471 MAG NAIL SET “GCP 2”
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTRY ROAD 172, +/-5.5' FROM “YIELD” SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET “GCP 3”
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING RAOD, +/-560' FROM THE INTERSECTION FO HESTERS CROSSING ROAD AND COUNTY ROAD 172, +/-100' FROM CONCRETE SIGN “ENCOMPASS HEALTH”.
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT (WILL BE PROVIDED BY THE CONTRACTOR; ARE ON SHEET , ETC.).

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

3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY OF ROUND ROCK.

STREET AND DRAINAGE NOTES:

1. ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING. TELEPHONE 218-5555 (INSPECTIONS).

2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.

3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.

4. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF ROUND ROCK ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT.

5. BARRICADES BUILT TO CITY OF ROUND ROCK STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.

6. ALL R.C.P. SHALL BE MINIMUM CLASS III.

7. THE SUBGRADE MATERIAL FOR THE STREETS SHOWN HEREIN WAS TESTED BY ECS SOUTHWEST, LLP ON THIS DATE: MARCH 22, 2024 AND THE PAVING SECTIONS DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF ROUND ROCK DESIGN CRITERIA. THE PAVING SECTIONS ARE TO BE CONSTRUCTED AS FOLLOWS:

PAVEMENT SECTION	PORTLAND CEMENT	ASPHALT SURFACE	ASPHALT BASE COURSE	LIME STAB. THICKNESS
STANDARD DUTY (RIGID)	5 IN			4 IN
STANDARD DUTY (ASPHALT)		2 IN	3 IN	15 IN
HEAVY-DUTY (RIGID)	8 IN			6 IN
HEAVY-DUTY (ASPHALT)		2 IN	4 IN	19 IN
EXTRA HEAVY-DUTY	8 IN			6 IN

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

8. WHERE PI'S ARE OVER 20, SUBGRADES MUST BE STABILIZED UTILIZING A METHOD ACCEPTABLE TO THE CITY ENGINEER. THE GEOTECHNICAL ENGINEER SHALL RECOMMEND AN APPROPRIATE SUBGRADE STABILIZATION IF SULFATES ARE DETERMINED TO BE PRESENT.

WATER AND WASTEWATER NOTES:

1. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 200), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9).

2. PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 150), SDR 26 HIGHER PRESSURE RATED (150+ PSI), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241 OR D3034, MAX. DR-26), DUCTILE IRON (AWWA C-100, MIN. CLASS 200).

3. UNLESS OTHERWISE ACCEPTED BY THE CITY ENGINEER, DEPTH OF COVER FOR ALL LINES OUT OF THE PAVEMENT SHALL BE 42" MIN., AND DEPTH OF COVER FOR ALL LINES UNDER PAVEMENT SHALL BE A MIN. OF 30" BELOW SUBGRADE.

4. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C-100, MIN. CLASS 200).

5. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE AND SEALED WITH DUCT TAPE OR EQUAL ACCEPTED BY THE CITY ENGINEER.

6. THE CONTRACTOR SHALL CONTACT THE CITY OF ROUND ROCK INSPECTOR TO COORDINATE UTILITY TIE-INS AND NOTIFY HIM AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING LINES.

7. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF THE PAVEMENT SHALL HAVE BOLTED COVERS. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE ALLOWED.

8. THE CONTRACTOR MUST OBTAIN A BULK WATER PERMIT OR PURCHASE AND INSTALL A WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO USE WATER.

9. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE SCHEDULED WITH THE CITY OF ROUND ROCK INSPECTOR.

10. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM STERILIZATION OF ALL POTABLE WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING TEST GAUGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTING MATERIAL), AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY CITY OF ROUND ROCK PERSONNEL. WATER SAMPLES WILL BE COLLECTED BY THE CITY OF ROUND ROCK TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM. WHERE MEANS OF FLUSHING IS NECESSARY, THE CONTRACTOR, AT HIS EXPENSE, SHALL PROVIDE FLUSHING DEVICES AND REMOVE SAID DEVICES PRIOR TO FINAL ACCEPTANCE BY THE CITY OF ROUND ROCK.

11. SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTOR'S REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF ROUND ROCK NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE CITY. THE CONTRACTOR SHALL SUPPLY A CHECK OR MONEY ORDER, PAYABLE TO THE CITY OF ROUND ROCK, TO COVER THE FEE CHARGED FOR TESTING EACH WATER SAMPLE. CITY OF ROUND ROCK FEE AMOUNTS MAY BE OBTAINED BY CALLING THE PLANNING AND DEVELOPMENT SERVICES DEPARTMENT AT 512-218-5428.

12. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY CITY OF ROUND ROCK PERSONNEL.

13. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY OF INSPECTOR AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.

14. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF ROUND ROCK.

15. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.

16. ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:

WATER SERVICE	"W" ON TOP OF CURB (BLUE COLOR)
WASTEWATER SERVICE	"S" ON TOP OF CURB
VALVE	"V" ON FACE OF CURB

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

17. CONTACT CITY OF ROUND ROCK PLANNING AND DEVELOPMENT SERVICES DEPARTMENT AT 512-218-5428 FOR ASSISTANCE IN OBTAINING EXISTING WATER AND WASTEWATER LOCATIONS.

18. THE CITY OF ROUND ROCK FIRE DEPARTMENT SHALL BE NOTIFIED 48 HOURS PRIOR TO TESTING OF ANY BUILDING SPRINKLER PIPING IN ORDER THAT THE FIRE DEPARTMENT MAY MONITOR SUCH TESTING.

19. SAND, AS DESCRIBED IN SPECIFICATION ITEM 510 PIPE, SHALL NOT BE USED AS BEDDING FOR WATER AND WASTEWATER LINES. ACCEPTABLE BEDDING MATERIALS ARE PIPE BEDDING STONE, PEA GRAVEL AND IN LIEU OF SAND, A NATURALLY OCCURRING OR MANUFACTURED STONE MATERIAL CONFORMING TO ASTM C33 FOR STONE QUALITY AND MEETING THE FOLLOWING GRADATION SPECIFICATION:

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

20. THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING UTILITY LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 A.M. AND 6 A.M.

21. ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 217, AS APPLICABLE. WHENEVER TCEQ AND CITY OF ROUND ROCK SPECIFICATIONS CONFLICT, THE MORE STRINGENT SHALL APPLY.

TRAFFIC MARKING NOTES:

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.

2. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK EROSION AND SEDIMENTATION CONTROL ORDINANCE.

2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.

3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF ROUND ROCK FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.

4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.

5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

CONSTRUCTION SUMMARY

Pipe Size	WATER	
	TYPE	LENGTH (LF)
2"	SERVICE	19
4"	DI	30
12"	DI	313

CURB AND GUTTER	
Total	
403	LF

VALVES	
Size	Total
4"	1
12"	6

THESE PLAN AND GENERAL NOTES REFER TO:

GEOTECHNICAL REPORT BY ECS SOUTHWEST, LLP, ECS PROJECT NUMBER 17:6399-A

DATED: MARCH 22, 2024

INCLUDING ALL REVISIONS AND ADDENDA TO THIS REPORT THAT MAY HAVE BEEN RELEASED AFTER THE NOTED DATE.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley-Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
5/28/2024

KHA PROJECT	DATE	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
069284918	JUNE 2024	AS SHOWN	MM	MM	NCB

GENERAL NOTES

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SDP24-00001

KH GENERAL NOTES

OVERALL:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY (OR TOWN) STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION AND DETAIL SHALL BE FOLLOWED.
2. THE CONTRACTOR SHALL COMPLY WITH CITY (OR TOWN) "GENERAL NOTES" FOR CONSTRUCTION, IF EXISTING AND REQUIRED BY THE CITY. FOR INSTANCES WHERE THEY CONFLICT WITH THESE KH GENERAL NOTES, THEN THE MORE RESTRICTIVE SHALL APPLY.
3. THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE AUTHORITIES' SPECIFICATIONS AND REQUIREMENTS.
4. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS.
5. THE EXISTING CONDITIONS SHOWN ON THESE PLANS WERE PROVIDED BY THE TOPOGRAPHIC SURVEY PREPARED BY THE PROJECT SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS.
6. THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS REPRESENTS EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER IMMEDIATELY.
7. IF THE CONTRACTOR DOES NOT ACCEPT THE EXISTING TOPOGRAPHIC SURVEY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY AT THEIR OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL LAND SURVEYOR TO THE OWNER AND ENGINEER FOR REVIEW.
8. CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING AND STAKING.
9. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL, INCLUDING BENCHMARKS PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS. PROPERTY LINES AND CORNERS SHALL BE HELD AS THE HORIZONTAL CONTROL.
10. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ARCHITECT, ENGINEER, AND IF APPLICABLE THE CITY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE CITY, ENGINEER, AND OWNER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
11. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK TO HAVE THEM LOCATE THEIR EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
13. CONTRACTOR SHALL CALL TEXAS 811 AN ADEQUATE AMOUNT OF TIME PRIOR TO COMMENCING CONSTRUCTION OR ANY EXCAVATION.
14. CONTRACTOR SHALL USE EXTREME CAUTION AS THE SITE CONTAINS VARIOUS KNOWN AND UNKNOWN PUBLIC AND PRIVATE UTILITIES.
15. THE LOCATIONS, ELEVATIONS, DEPTH, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY MAPS AND PLANS, AND ARE CONSIDERED APPROXIMATE AND INCOMPLETE. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO VERIFY THE PRESENCE, LOCATION, ELEVATION, DEPTH, AND DIMENSION OF EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A DEVELOPED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY.
16. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY ADJUSTMENTS AND RELOCATIONS OF EXISTING UTILITIES THAT CONFLICT WITH THE DEVELOPED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, ADJUSTING EXISTING MANHOLES TO MATCH DEVELOPED GRADE, RELOCATING EXISTING POLES AND GUY WIRES THAT ARE LOCATED IN DEVELOPED DRIVEWAYS, ADJUSTING THE HORIZONTAL OR VERTICAL ALIGNMENT OF EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE DEVELOPED GRADE OR CROSSING WITH A DEVELOPED UTILITY, AND ANY OTHERS THAT MAY BE ENCOUNTERED THAT ARE UNKNOWN AT THIS TIME AND NOT SHOWN ON THESE PLANS.
17. CONTRACTOR SHALL ARRANGE FOR OR PROVIDE, AT ITS EXPENSE, ALL GAS, TELECOMMUNICATIONS, CABLE, OVERHEAD AND UNDERGROUND POWER LINE, AND UTILITY POLE ADJUSTMENTS NEEDED.
18. CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF FRANCHISE UTILITIES THAT ARE NECESSARY FOR ON-SITE AND OFF-SITE CONSTRUCTION, AND SERVICE TO THE DEVELOPED DEVELOPMENT.
19. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES DUE TO THE CONTRACTORS' FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
20. BRACING OF UTILITY POLES MAY BE REQUIRED BY THE UTILITY COMPANIES WHEN TRENCHING OR EXCAVATING IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR, WITH NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE PAY ITEM.
21. CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL AND UTILITY OWNER REGULATIONS PERTAINING TO WORK SETBACKS FROM POWER LINES.
22. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS, APPROVALS, AND BONDS PRIOR TO CONSTRUCTION.
23. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.
24. ALL SHOP DRAWINGS AND OTHER DOCUMENTS THAT REQUIRE ENGINEER REVIEW SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF CONSTRUCTION OF THAT ITEM, SO THAT NO LESS THAN 10 BUSINESS DAYS FOR REVIEW AND RESPONSE IS AVAILABLE.
25. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES, AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO USE OF THE FACILITY AND THE FINAL CONNECTION OF SERVICES.
26. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
27. CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES.
28. ALL SYMBOLS SHOWN ON THESE PLANS (E.G. FIRE HYDRANT, METERS, VALVES, INLETS, ETC.…) ARE FOR PRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE. CONTRACTOR SHALL COORDINATE FINAL SIZES AND LOCATIONS WITH APPROPRIATE CITY INSPECTOR.
29. THE SCOPE OF WORK FOR THE CIVIL IMPROVEMENTS SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. REFERENCE THE BUILDING PLANS (E.G. ARCHITECTURAL, STRUCTURAL, MEP) FOR AREAS WITHIN 5-FEET OF THE BUILDING AND WITHIN THE BUILDING FOOTPRINT.
30. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL FINAL BUILDING DIMENSIONS.
31. THE DEVELOPED BUILDING FOOTPRINT(S) SHOWN IN THESE PLANS WAS PROVIDED TO KIMLEY-HORN AND ASSOCIATES, INC. (KH) BY THE PROJECT ARCHITECT AT THE TIME THESE PLANS WERE PREPARED. IT MAY NOT BE THE FINAL CORRECT VERSION BECAUSE THE BUILDING DESIGN WAS ONGOING. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING THE FINAL CORRECT VERSION OF THE BUILDING FOOTPRINT WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO LAYOUT. DIMENSIONS AND/OR COORDINATES SHOWN ON THESE PLANS WERE BASED ON THE ABOVE STATED ARCHITECTURAL FOOTPRINT, AND ARE THEREFORE A PRELIMINARY LOCATION OF THE BUILDING. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY WHAT PART OF THE BUILDING THE ARCHITECT'S FOOTPRINT REPRESENTS (E.G. SLAB, OUTSIDE WALL, MASONRY LEDGE, ETC.….) AND TO CONFIRM ITS FINAL POSITION ON THE SITE BASED ON THE FINAL ARCHITECTURAL FOOTPRINT, CIVIL DIMENSION CONTROL PLAN, SURVEY BOUNDARY AND/OR PLAT. ANY DIFFERENCES FOUND SHALL BE REPORTED TO KH IMMEDIATELY.
32. ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA.
33. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIALS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL MATERIALS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND COMPLY WITH CITY STANDARD SPECIFICATIONS AND GEOTECHNICAL REPORT. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING MATERIALS. OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR MATERIALS TESTING.
34. ALL COPIES OF MATERIALS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY.
35. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
36. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE DEVELOPED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
37. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS OUTSIDE OF THE WORK AREA WILL BE ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR.
38. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, UTILITIES, MANHOLES, POLES, GUY WIRES, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, COMMUNICATION BOXES/PEDESTALS, AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR ANY DAMAGES AT NO COST TO THE OWNER.
39. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY OR PUBLIC IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCES, WALLS, SIGNS, PAVEMENT, CURBS, UTILITIES, SIDEWALKS, GRASS, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS, ETC.… TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.
40. ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY SITE CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER, INCLUDING AS NECESSARY GRADING, LANDSCAPING, CULVERTS, AND PAVEMENT.
41. THE CONTRACTOR SHALL SALVAGE ALL EXISTING POWER POLES, SIGNS, WATER VALVES, FIRE HYDRANTS, METERS, ETC... THAT ARE TO BE RELOCATED DURING CONSTRUCTION.
42. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
43. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
44. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.
45. SITE SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
46. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE ENGINEER'S SEAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL REQUIRED SAFETY PROCEDURES AND PROGRAMS.
47. SIGNS RELATED TO SITE OPERATION OR SAFETY ARE NOT INCLUDED IN THESE PLANS.
48. CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS.
49. LIGHT POLES, SIGNS, AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN ACCESSIBLE ROUTES.
50. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
51. TOP RIM ELEVATIONS OF ALL EXISTING AND DEVELOPED MANHOLES SHALL BE COORDINATED WITH TOP OF PAVEMENT OR FINISHED GRADE AND SHALL BE ADJUSTED TO BE FLUSH WITH THE ACTUAL FINISHED GRADE AT THE TIME OF PAVING.
52. CONTRACTOR SHALL ADJUST ALL EXISTING AND DEVELOPED VALVES, FIRE HYDRANTS, AND OTHER UTILITY APPURTENANCES TO MATCH ACTUAL FINISHED GRADES AT THE TIME OF PAVING.
53. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND PHASING, AND SHALL CONTACT THE APPROPRIATE CITY OFFICIALS, INCLUDING BUILDING OFFICIAL, ENGINEERING INSPECTOR, AND FIRE MARSHALL TO LEARN OF ANY REQUIREMENTS.
54. CONTRACTOR IS RESPONSIBLE FOR PREPARATION, SUBMITTAL, AND APPROVAL BY THE CITY OF A TRAFFIC CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION, AND THEN THE IMPLEMENTATION OF THE PLAN.
55. CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS.
56. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.

EROSION CONTROL:

1. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS, LAWS, AND ORDINANCES THAT APPLY TO THE CONSTRUCTION SITE LAND DISTURBANCE.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE "TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000".
3. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE.
4. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT.
5. CONTRACTOR IS SOLELY RESPONSIBLE FOR INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL EROSION CONTROL DEVICES, BEST MANAGEMENT PRACTICES (BMPS), AND FOR UPDATING THE EROSION CONTROL PLAN DURING CONSTRUCTION AS FIELD CONDITIONS CHANGE.
6. CONTRACTOR SHALL DOCUMENT THE DATES OF INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL FOR EACH BMP EMPLOYED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE.
7. AS STORM SEWER INLETS ARE INSTALLED ON-SITE, TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED AT EACH INLET PER APPROVED DETAILS.
8. THE EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE AREA IT PROTECTS HAS BEEN PERMANENTLY STABILIZED.
9. CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL DEVICES NEEDED DUE TO PROJECT PHASING.
10. CONTRACTOR SHALL OBSERVE THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES AND MAKE FIELD ADJUSTMENTS AND MODIFICATIONS AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE SITE. IF THE EROSION CONTROL DEVICES DO NOT EFFECTIVELY CONTROL EROSION AND PREVENT SEDIMENTATION FROM WASHING OFF THE SITE, THEN THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
11. OFF-SITE SOIL BORROW, SPOIL, AND STORAGE AREAS (IF APPLICABLE) ARE CONSIDERED AS PART OF THE PROJECT SITE AND MUST ALSO COMPLY WITH THE EROSION CONTROL REQUIREMENTS FOR THIS PROJECT. THIS INCLUDES THE INSTALLATION OF BMP'S TO CONTROL EROSION AND SEDIMENTATION AND THE ESTABLISHMENT OF PERMANENT GROUND COVER ON DISTURBED AREAS PRIOR TO FINAL APPROVAL OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP AND EROSION CONTROL PLAN TO INCLUDE BMPS FOR ANY OFF-SITE THAT ARE NOT ANTICIPATED OR SHOWN ON THE EROSION CONTROL PLAN.
12. ALL STAGING, STOCKPILES, SPOIL, AND STORAGE SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. PROTECTIVE MEASURES SHALL BE PROVIDED IF NEEDED TO ACCOMPLISH THIS REQUIREMENT, SUCH AS COVERING OR ENCIRCLING THE AREA WITH AN APPROPRIATE BARRIER.
13. CONTRACTORS SHALL INSPECT ALL EROSION CONTROL DEVICES, BMPS, DISTURBED AREAS, AND VEHICLE ENTRY AND EXIT AREAS WEEKLY AND WITHIN 24 HOURS OF ALL RAINFALL EVENTS OF 0.5 INCHES OR GREATER, AND KEEP A RECORD OF THIS INSPECTION IN THE SWPPP BOOKLET IF APPLICABLE, TO VERIFY THAT THE DEVICES AND EROSION CONTROL PLAN ARE FUNCTIONING PROPERLY.
14. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS IN ACCORDANCE WITH CITY SPECIFICATIONS. CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION TRAFFIC USES THE STABILIZED ENTRANCE AT ALL TIMES FOR ALL INGRESS/EGRESS.
15. SITE ENTRY AND EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING AND FLOWING OF SEDIMENT AND DIRT ONTO OFF-SITE ROADWAYS. ALL SEDIMENT AND DIRT FROM THE SITE THAT IS DEPOSITED ONTO AN OFF-SITE ROADWAY SHALL BE REMOVED IMMEDIATELY.
16. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SILT AND DEBRIS FROM THE AFFECTED OFF-SITE ROADWAYS THAT ARE A RESULT OF THE CONSTRUCTION, AS REQUESTED BY OWNER AND CITY. AT A MINIMUM, THIS SHOULD OCCUR ONCE PER DAY FOR THE OFF-SITE ROADWAYS.
17. WHEN WASHING OF VEHICLES IS REQUIRED TO REMOVE SEDIMENT PRIOR TO EXITING THE SITE, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP BMP.
18. CONTRACTOR SHALL INSTALL A TEMPORARY SEDIMENT BASIN FOR ANY ON-SITE DRAINAGE AREAS THAT ARE GREATER THAN 10 ACRES, PER TCEQ AND CITY STANDARDS. IF NO ENGINEERING DESIGN HAS BEEN PROVIDED FOR A SEDIMENTATION BASIN ON THESE PLANS, THEN THE CONTRACTOR SHALL ARRANGE FOR AN APPROPRIATE DESIGN TO BE PROVIDED.
19. ALL FINES IMPOSED FOR SEDIMENT OR DIRT DISCHARGED FROM THE SITE SHALL BE PAID BY THE RESPONSIBLE CONTRACTOR.
20. WHEN SEDIMENT OR DIRT HAS CLOGGED THE CONSTRUCTION ENTRANCE VOID SPACES BETWEEN STONES OR DIRT IS BEING TRACKED ONTO A ROADWAY, THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH-DOWN OPERATION SHALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BMP TO CONTROL SEDIMENTATION. PERIODIC RE-GRADING OR NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE.
21. TEMPORARY SEEDING OR OTHER APPROVED STABILIZATION SHALL BE INITIATED WITHIN 14 DAYS OF THE LAST DISTURBANCE OF ANY AREA, UNLESS ADDITIONAL CONSTRUCTION IN THE AREA IS EXPECTED WITHIN 21 DAYS OF THE LAST DISTURBANCE.
22. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING CONSTRUCTION, ALWAYS CLEANING UP DIRT, LOOSE MATERIAL, AND TRASH AS CONSTRUCTION PROGRESSES.
23. UPON COMPLETION OF FINE GRADING, ALL SURFACES OF DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED. STABILIZATION IS ACHIEVED WHEN THE AREA IS EITHER COVERED BY PERMANENT IMPERVIOUS STRUCTURES, SUCH AS BUILDINGS, SIDEWALK, PAVEMENT, OR A UNIFORM PERENNIAL VEGETATIVE COVER.
24. AT THE CONCLUSION OF THE PROJECT, ALL INLETS, DRAIN PIPE, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE CONSTRUCTION SHALL BE DREDGED, AND THE SEDIMENT GENERATED BY THE PROJECT SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS.
25. ANY SEQUENCE OF CONSTRUCTION SHOWN HEREON IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE DEVELOPED IMPROVEMENTS INCLUDED IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS.

STORM WATER DISCHARGE AUTHORIZATION:

1. CONTRACTOR SHALL COMPLY WITH ALL TCEQ AND EPA STORM WATER POLLUTION PREVENTION REQUIREMENTS.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000.
3. THE CONTRACTOR SHALL ENSURE THAT ALL PRIMARY OPERATORS SUBMIT A NOI TO TCEQ AT LEAST SEVEN DAYS PRIOR TO COMMENCING CONSTRUCTION (IF APPLICABLE), OR IF UTILIZING ELECTRONIC SUBMITTAL, PRIOR TO COMMENCING CONSTRUCTION. ALL PRIMARY OPERATORS SHALL PROVIDE A COPY OF THE SIGNED NOI TO THE OPERATOR OF ANY MS4 (TYPICALLY THE CITY) RECEIVING DISCHARGE FROM THE SITE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE, INCLUDING POSTING SITE NOTICE, INSPECTIONS, DOCUMENTATION, AND SUBMISSION OF ANY INFORMATION REQUIRED BY THE TCEQ AND EPA (E.G. NOI).
5. ALL CONTRACTORS AND SUBCONTRACTORS PROVIDING SERVICES RELATED TO THE SWPPP SHALL SIGN THE REQUIRED CONTRACTOR CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSIBILITIES AS SPECIFIED IN THE SWPPP.
6. A COPY OF THE SWPPP, INCLUDING NOI, SITE NOTICE, CONTRACTOR CERTIFICATIONS, AND ANY REVISIONS, SHALL BE SUBMITTED TO THE CITY BY THE CONTRACTOR AND SHALL BE RETAINED ON-SITE DURING CONSTRUCTION.
7. A NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO TCEQ BY ANY PRIMARY OPERATOR WITHIN 30 DAYS AFTER ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY STRUCTURES, A TRANSFER OF OPERATIONAL CONTROL HAS OCCURRED, OR THE OPERATOR HAS OBTAINED ALTERNATIVE AUTHORIZATION UNDER A DIFFERENT PERMIT. A COPY OF THE NOT SHALL BE PROVIDED TO THE OPERATOR OF ANY MS4 RECEIVING DISCHARGE FROM THE SITE.

DEMOLITION:

1. KH IS NOT RESPONSIBLE FOR THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR TO IMPLEMENT THIS DEMOLITION PLAN. THIS PRELIMINARY DEMOLITION PLAN SIMPLY INDICATES THE KNOWN OBJECTS ON THE SUBJECT TRACT THAT ARE TO BE DEMOLISHED AND REMOVED FROM THE SITE.
2. KH DOES NOT WARRANT OR REPRESENT THAT THE PLAN, WHICH WAS PREPARED BASED ON SURVEY AND UTILITY INFORMATION PROVIDED BY OTHERS, SHOWS ALL IMPROVEMENTS AND UTILITIES, THAT THE IMPROVEMENTS AND UTILITIES ARE SHOWN ACCURATELY, OR THAT THE UTILITIES SHOWN CAN BE REMOVED. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ITS OWN SITE RECONNAISSANCE TO SCOPE ITS WORK AND TO CONFIRM WITH THE OWNERS OF IMPROVEMENTS AND UTILITIES THE ABILITY AND PROCESS FOR THE REMOVAL OF THEIR FACILITIES.
3. THIS PLAN IS INTENDED TO GIVE A GENERAL GUIDE TO THE CONTRACTOR, NOTHING MORE. THE GOAL OF THE DEMOLITION IS TO LEAVE THE SITE IN A STATE SUITABLE FOR THE CONSTRUCTION OF THE DEVELOPED DEVELOPMENT. REMOVAL OR PRESERVATION OF IMPROVEMENTS, UTILITIES, ETC. TO ACCOMPLISH THIS GOAL ARE THE RESPONSIBILITY OF THE CONTRACTOR.
4. CONTRACTOR IS STRONGLY CAUTIONED TO REVIEW THE FOLLOWING REPORTS DESCRIBING SITE CONDITIONS PRIOR TO BIDDING AND IMPLEMENTING THE DEMOLITION PLAN:
   - a. ENVIRONMENTAL SITE ASSESSMENT PROVIDED BY THE OWNER,
   - b. ASBESTOS BUILDING INSPECTION REPORT(S) PROVIDED BY THE OWNER,
   - c. GEOTECHNICAL REPORT PROVIDED BY THE OWNER.
   - d. OTHER REPORTS THAT ARE APPLICABLE AND AVAILABLE.
5. CONTRACTOR SHALL CONTACT THE OWNER TO VERIFY WHETHER ADDITIONAL REPORTS OR AMENDMENTS TO THE ABOVE CITED REPORTS HAVE BEEN PREPARED AND TO OBTAIN/REVIEW/AND COMPLY WITH THE RECOMMENDATION OF SUCH STUDIES PRIOR TO STARTING ANY WORK ON THE SITE.
6. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING THE DEMOLITION OF OBJECTS ON THE SITE AND THE DISPOSAL OF THE DEMOLISHED MATERIALS OFF-SITE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REVIEW THE SITE, DETERMINE THE APPLICABLE REGULATIONS, RECEIVE THE REQUIRED PERMITS AND AUTHORIZATIONS, AND COMPLY.
7. KH DOES NOT REPRESENT THAT THE REPORTS AND SURVEYS REFERENCED ABOVE ARE ACCURATE, COMPLETE, OR COMPREHENSIVE SHOWING ALL ITEMS THAT WILL NEED TO BE DEMOLISHED AND REMOVED.
8. SURFACE PAVEMENT INDICATED MAY OVERLAY OTHER HIDDEN STRUCTURES, SUCH AS ADDITIONAL LAYERS OF PAVEMENT, FOUNDATIONS OR WALLS, THAT ARE ALSO TO BE REMOVED.

GRADING:

1. THE CONTRACTOR AND GRADING SUBCONTRACTOR SHALL VERIFY THE SUITABILITY OF EXISTING AND DEVELOPED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE CIVIL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL OBTAIN ANY REQUIRED GRADING PERMITS FROM THE CITY.
3. UNLESS OTHERWISE NOTED, DEVELOPED CONTOURS AND SPOT ELEVATIONS SHOWN IN PAVED AREA REFLECT TOP OF PAVEMENT SURFACE. IN LOCATIONS ALONG A CURB LINE, ADD 6-INCHES (OR THE HEIGHT OF THE CURB) TO THE PAVING GRADE FOR TOP OF CURB ELEVATION.
4. DEVELOPED SPOT ELEVATIONS AND CONTOURS OUTSIDE THE PAVEMENT ARE TO TOP OF FINISHED GRADE.
5. DEVELOPED CONTOURS ARE APPROXIMATE. DEVELOPED SPOT ELEVATIONS AND DESIGNATED GRADIENT ARE TO BE USED IN CASE OF DISCREPANCY.
6. ALL FINISHED GRADES SHALL TRANSITION UNIFORMLY BETWEEN THE FINISHED ELEVATIONS SHOWN.
7. CONTOURS AND SPOT GRADES SHOWN ARE ELEVATIONS OF TOP OF THE FINISHED SURFACE. WHEN PERFORMING THE GRADING OPERATIONS, THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE ELEVATION HOLD-DOWN ALLOWANCE FOR THE THICKNESS OF PAVEMENT, SIDEWALK, TOPSOIL, MULCH, STONE, LANDSCAPING, RIP-RAP AND ALL OTHER SURFACE MATERIALS THAT WILL CONTRIBUTE TO THE TOP OF FINISHED GRADE. FOR EXAMPLE, THE LIMITS OF EARTHWORK IN PAVED AREAS IS THE BOTTOM OF THE PAVEMENT SECTION.
8. NO REPRESENTATIONS OF EARTHWORK QUANTITIES OR SITE BALANCE ARE MADE BY THESE PLANS. THE CONTRACTOR SHALL PROVIDE THEIR OWN EARTHWORK CALCULATION TO DETERMINE THEIR CONTRACT QUANTITIES AND COST. ANY SIGNIFICANT VARIANCE FROM A BALANCED SITE SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CIVIL ENGINEER.
9. ALL GRADING AND EARTHWORK SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA.
10. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED. UNUSABLE EXCAVATED MATERIAL AND ALL WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE REMOVED FROM THE SITE AND APPROPRIATELY DISPOSED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.
11. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF GRADING. REFERENCE EROSION CONTROL PLAN, DETAILS, GENERAL NOTES, AND SWPPP FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
12. BEFORE ANY EARTHWORK IS PERFORMED, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF THE PROJECT'S PROPERTY LINE AND SITE IMPROVEMENTS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
13. CONTRACTOR TO DISPOSE OF ALL EXCESS EXCAVATION MATERIALS IN A MANNER THAT ADHERES TO LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. THE CONTRACTOR SHALL KEEP A RECORD OF WHERE EXCESS EXCAVATION WAS DISPOSED, ALONG WITH THE RECEIVING LANDOWNER'S APPROVAL TO DO SO.
14. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF TOPSOIL AT THE COMPLETION OF FINE GRADING. CONTRACTOR SHALL REFER TO LANDSCAPE ARCHITECTURE PLANS FOR SPECIFICATIONS AND REQUIREMENTS FOR TOPSOIL.
15. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
16. NO EARTHWORK FILL SHALL BE PLACED IN ANY EXISTING DRAINAGE WAY, SWALE, CHANNEL, DITCH, CREEK, OR FLOODPLAIN FOR ANY REASON OR ANY LENGTH OF TIME, UNLESS THESE PLANS SPECIFICALLY INDICATE THIS IS REQUIRED.
17. TEMPORARY CULVERTS MAY BE REQUIRED IN SOME LOCATIONS TO CONVEY RUN-OFF.
18. REFER TO DIMENSION CONTROL PLAN, AND PLAT FOR HORIZONTAL DIMENSIONS.
19. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND CONDITION FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
20. CONTRACTOR IS RESPONSIBLE FOR ALL SOILS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL SOILS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND SHALL COMPLY WITH CITY STANDARD SPECIFICATIONS AND THE GEOTECHNICAL REPORT. SOILS TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING SOILS. THE OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR SOILS TESTING.
21. ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY.
22. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE SOILS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
23. THE SCOPE OF WORK FOR CIVIL IMPROVEMENT SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT AND STRUCTURAL PLANS AND SPECIFICATIONS FILL, CONDITIONING, AND PREPARATION IN THE BUILDING PAD.
24. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE DEVELOPED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
25. CONTRACTOR SHALL ENSURE THAT SUFFICIENT POSITIVE SLOPE AWAY FROM THE BUILDING PAD IS ACHIEVED FOR ENTIRE PERIMETER OF THE DEVELOPED BUILDING(S) DURING GRADING OPERATIONS AND IN THE FINAL CONDITION. IF THE CONTRACTOR OBSERVES THAT THIS WILL NOT BE ACHIEVED, THE CONTRACTOR SHALL CONTACT THE ENGINEER TO REVIEW THE LOCATION.
26. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR BY OTHER MEANS APPROVED BY THE CITY, AT NO ADDITIONAL COST TO THE OWNER.
27. CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS NEEDED FOR GRADING OPERATIONS AND TO ACCOMMODATE DEVELOPED GRADE, INCLUDING THE UNKNOWN UTILITIES NOT SHOWN ON THESE PLANS. CONTRACTOR SHALL REFER TO THE GENERAL NOTES "OVERALL" SECTION THESE PLANS FOR ADDITIONAL INFORMATION.
28. EXISTING TREE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES FOUND IN THE FIELD THAT AFFECT THE GRADING PLAN TO THE CIVIL ENGINEER.
29. CONTRACTOR SHALL FIELD VERIFY ALL PROTECTED TREE LOCATIONS, INDIVIDUAL PROTECTED TREE CRITICAL ROOT ZONES, AND DEVELOPED SITE GRADING, AND NOTIFY THE CIVIL ENGINEER AND LANDSCAPE ARCHITECT OF ANY CONFLICTS WITH THE TREE PRESERVATION PLAN BY THE LANDSCAPE ARCHITECT PRIOR TO COMMENCING THE WORK.
30. TREE PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY STANDARD TREE PROTECTION DETAILS AND THE APPROVED TREE PRESERVATION PLANS BY THE LANDSCAPE ARCHITECT.
31. CONTRACTOR SHALL REFER TO THE LANDSCAPING AND TREE PRESERVATIONS PLANS FOR ALL INFORMATION AND DETAILS REGARDING EXISTING TREES TO BE REMOVED AND PRESERVED.
32. NO TREE SHALL BE REMOVED UNLESS A TREE REMOVAL PERMIT HAS BEEN ISSUED BY THE CITY, OR CITY HAS OTHERWISE CONFIRMED IN WRITING THAT ONE IS NOT NEEDED FOR THE TREE(S).
33. NO TREE SHALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE OWNER OR OWNER'S REPRESENTATIVE. EXISTING TREES SHALL BE PRESERVED WHENEVER POSSIBLE AND GRADING IMPACT TO THEM HELD TO A MINIMUM.
34. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING AND INADEQUATE SLOPE FOR DRAINAGE. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORMWATER RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY AREAS OF POOR DRAINAGE ARE DISCOVERED.
35. CONTRACTOR FIELD ADJUSTMENT OF DEVELOPED SPOT GRADES IS ALLOWED, IF THE APPROVAL OF THE CIVIL ENGINEER IS OBTAINED.

RETAINING WALLS:

1. RETAINING WALLS SHOWN ARE FOR SITE GRADING PURPOSES ONLY, AND INCLUDE ONLY LOCATION AND SURFACE SPOT ELEVATIONS AT THE TOP AND BOTTOM OF THE WALL.
2. RETAINING WALL TYPE OR SYSTEM SHALL BE SELECTED BY THE OWNER.
3. RETAINING WALL DESIGN SHALL BE PROVIDED BY OTHERS AND SHALL FIT IN THE WALL ZONE OR LOCATION SHOWN ON THESE PLANS. STRUCTURAL DESIGN AND PERMITTING OF RETAINING WALLS, RAILINGS, AND OTHER WALL SAFETY DEVICES SHALL BE PERFORMED BY A LICENSED ENGINEER AND ARE NOT PART OF THIS PLAN SET.
4. RETAINING WALL DESIGN SHALL MEET THE INTENT OF THE GRADING PLAN AND SHALL ACCOUNT FOR ANY INFLUENCE ON ADJACENT BUILDING FOUNDATIONS, UTILITIES, PROPERTY LINES AND OTHER CONSTRUCTABILITY NOTES.
5. RETAINING WALL ENGINEER SHALL CONSULT THESE PLANS AND THE GEOTECHNICAL REPORT FOR POTENTIAL CONFLICTS.

PAVING:

1. ALL PAVING MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, THE CITY STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION/DETAIL SHALL BE FOLLOWED.
2. ALL PRIVATE ON-SITE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING ALL ADDENDA.
3. ALL FIRELANE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARDS AND DETAILS. IF THESE ARE DIFFERENT THAN THOSE IN THE GEOTECHNICAL REPORT, THEN THE MORE RESTRICTIVE SHALL BE FOLLOWED.
4. ALL PUBLIC PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
5. CONTRACTOR IS RESPONSIBLE FOR ALL PAVING AND PAVING SUBGRADE TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL PAVING AND PAVING SUBGRADE TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING PAVING AND SUBGRADE. OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR PAVING AND PAVING SUBGRADE TESTING.
6. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE PAVING AND PAVING SUBGRADE, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
7. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE DEVELOPED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
8. CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BASED ON THE CITY STANDARD CONSTRUCTION DETAIL AND SPECIFICATIONS.
9. PRIVATE CURB RAMPS ON THE SITE (I.E. OUTSIDE PUBLIC STREET RIGHT-OF-WAY) SHALL CONFORM TO ADA AND TAS STANDARDS AND SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP, NOT INCLUDING FLARES.
10. ALL ACCESSIBLE RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA AND TAS STANDARDS, LATEST EDITION.
11. ANY COMPONENTS OF THE PROJECT SUBJECT TO RESIDENTIAL USE SHALL ALSO CONFORM TO THE FAIR HOUSING ACT, AND COMPLY WITH THE FAIR HOUSING ACT DESIGN MANUAL BY THE US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
12. CONTRACTOR SHALL CONSTRUCT DEVELOPED PAVEMENT TO MATCH EXISTING PAVEMENT WITH A SMOOTH, FLUSH, CONNECTION.
13. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS FOR FIRE LANES, PARKING STALLS, HANDICAPPED PARKING SYMBOLS, AND MISCELLANEOUS STRIPING WITHIN PARKING LOT AND AROUND BUILDING AS SHOWN ON THE PLANS. ALL PAINT AND PAVEMENT MARKINGS SHALL ADHERE TO CITY AND OWNER STANDARDS.
14. REFER TO GEOTECHNICAL REPORT FOR PAVING JOINT LAYOUT PLAN REQUIREMENTS FOR PRIVATE PAVEMENT.
15. REFER TO CITY STANDARD DETAILS AND SPECIFICATIONS FOR JOINT LAYOUT PLAN REQUIREMENTS FOR PUBLIC PAVEMENT.
16. ALL REINFORCING STEEL SHALL CONFORM TO THE GEOTECHNICAL REPORT, CITY STANDARDS, AND ASTM A-615, GRADE 60, AND SHALL BE SUPPORTED BY BAR CHAIRS. CONTRACTOR SHALL USE THE MORE STRINGENT OF THE CITY AND GEOTECHNICAL STANDARDS.
17. ALL JOINTS SHALL EXTEND THROUGH THE CURB.
18. THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET.
19. CONTRACTOR SHALL SUBMIT A JOINTING PLAN TO THE ENGINEER AND OWNER PRIOR TO BEGINNING ANY OF THE PAVING WORK.
20. ALL SAWCUTS SHALL BE FULL DEPTH FOR PAVEMENT REMOVAL AND CONNECTION TO EXISTING PAVEMENT.
21. FIRE LANES SHALL BE MARKED AND LABELED AS A FIRELANE PER CITY STANDARDS.
22. UNLESS THE PLANS SPECIFICALLY DICTATE TO THE CONTRARY, ON-SITE AND OTHER DIRECTIONAL SIGNS SHALL BE ORIENTED SO THEY ARE READILY VISIBLE TO THE ONCOMING TRAFFIC FOR WHICH THEY ARE INTENDED.
23. CONTRACTOR IS RESPONSIBLE FOR INSTALLING NECESSARY CONDUIT FOR LIGHTING, IRRIGATION, ETC. PRIOR TO PLACEMENT OF PAVEMENT. ALL CONSTRUCTION DOCUMENTS (CIVIL, MEP, LANDSCAPE, IRRIGATION, AND ARCHITECT) SHALL BE CONSULTED.
24. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA, TAS, AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION.
25. CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAVEMENT TO VERIFY THAT ADA/TAS SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA AND TAS SLOPE COMPLIANCE ISSUES.

STORM DRAINAGE:

1. ALL STORM SEWER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
2. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER.
3. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING STORM SEWER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY STORM SEWER, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED.
4. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
5. FLOW LINE, TOP-OF-CURB, RIM, THROAT, AND GRATE ELEVATIONS OF DEVELOPED INLETS SHALL BE VERIFIED WITH THE GRADING PLAN AND FIELD CONDITIONS PRIOR TO THEIR INSTALLATION.
6. ALL PUBLIC STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
7. ALL PRIVATE STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
8. ALL PVC TO RCP CONNECTIONS AND ALL STORM PIPE CONNECTIONS ENTERING STRUCTURES OR OTHER STORM PIPES SHALL HAVE A CONCRETE COLLAR AND BE GROUTED TO ASSURE THE CONNECTION IS WATERTIGHT.
9. ALL PUBLIC STORM SEWER LINES SHALL BE MINIMUM CLASS III RCP. PRIVATE STORM SEWER LINES 18-INCHES AND GREATER SHALL BE CLASS III RCP OR OTHER APPROVED MATERIAL.
10. WHERE COVER EXCEEDS 20-FEET OR IS LESS THAN 2-FEET, CLASS IV RCP SHALL BE USED.
11. IF CONTRACTOR PROPOSES TO USE HDPE OR PVC IN LIEU OF RCP FOR PRIVATE STORM SEWER, CONTRACTOR SHALL SUBMIT TECHNICAL DATA TO THE OWNER, ENGINEER AND CITY ENGINEER/INSPECTOR FOR APPROVAL PRIOR TO ORDERING THE MATERIAL. ANY DEVELOPED HDPE AND PVC SHALL BE WATERTIGHT.
12. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL STORM SEWER LINES.
13. EMBEDMENT FOR ALL STORM SEWER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS.
14. ALL WYE CONNECTIONS AND PIPE BENDS ARE TO BE PREFABRICATED AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.
15. USE 4 FOOT JOINTS WITH BEVELED ENDS IF RADIUS OF STORM SEWER IS LESS THAN 100 FEET.
16. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
17. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.

POND NOTES:

1. ANY PONDS THAT ARE INTENDED TO HOLD WATER INDEFINITELY SHALL BE CONSTRUCTED WATERTIGHT.
2. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR POND LINER SPECIFICATIONS.
3. A GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE ALL POND LINER MATERIAL, PLACEMENT PROCEDURES, AND PROVIDE TESTING TO ENSURE THE POND LINER MATERIAL PLACED IS WATERTIGHT.
4. STORM SEWER PIPES AND HEADWALLS THAT CONNECT TO A POND INTENDED TO HOLD WATER INDEFINITELY SHALL BE INSTALLED WITH WATERTIGHT JOINTS TO AT LEAST 1-FOOT ABOVE THE NORMAL POOL WATER SURFACE ELEVATION.
5. ANY GRAVEL OR OTHER PERVIOUS EMBEDMENT AROUND PIPES OR OUTFALL STRUCTURES NEAR THE POND SHALL BE ELIMINATED FOR AT LEAST 20-FEET FROM THE POND SO NO ROUTE FOR WATER TO LEAK THROUGH THE EMBEDMENT MATERIAL IS PROVIDED. BACKFILL IN THESE AREAS SHALL BE OF IMPERVIOUS MATERIAL.
6. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE WATER LEVEL FOLLOWING COMPLETION AND FILLING OF THE POND SHALL BE MONITORED BY THE CONTRACTOR FOR AT LEAST 60 DAYS TO OBSERVE WATER INFLOW, OUTFLOW, AND CALCULATE EVAPORATION TO VERIFY THAT THE POND IS WATERTIGHT.
7. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY: THE POND WATER LEVEL SHALL ALSO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION SO THAT IT REMAINS FULL TO ITS DESIGN WATER LEVEL, AND IS NOT LOWERED, AS THIS MAY DRY-OUT THE POND LINER AND RISK ITS WATERTIGHT PROPERTIES.

WATER AND WASTEWATER:

1. ALL WATER AND WASTEWATER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
2. CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING WATER AND WASTEWATER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY WATER OR WASTEWATER CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED.
3. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITY SERVICES ENTERING THE BUILDING.
4. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF ALL UTILITY CROSSINGS PRIOR TO THE INSTALLATION OF ANY PIPE.
5. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE WATER AND WASTEWATER IMPROVEMENTS.
6. ALL PUBLIC WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
7. ALL PRIVATE WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
8. FIRE SPRINKLER LINES SHALL BE DESIGNED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR, AND COMPLY TO THE APPLICABLE CODES AND INSPECTIONS REQUIRED. THESE PLANS WERE PREPARED WITHOUT THE BENEFIT OF THE FIRE SPRINKLER DESIGN. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES.
9. EMBEDMENT FOR ALL WATER AND WASTEWATER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS.
10. CONTRACTOR SHALL TAKE REQUIRED SANITARY PRECAUTIONS, FOLLOWING ANY CITY, TCEQ, AND AWWA STANDARDS, TO KEEP WATER PIPE AND FITTINGS CLEAN AND CAPPED AT TIMES WHEN INSTALLATION IS NOT IN PROGRESS.
11. CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL WATER AND WASTEWATER LINES.
12. ALL WATER AND WASTEWATER SERVICES SHALL TERMINATE 5-FEET OUTSIDE THE BUILDING, UNLESS NOTED OTHERWISE.
13. CONTRACTOR SHALL COMPLY WITH CITY REQUIREMENTS FOR WATER AND WASTEWATER SERVICE DISRUPTIONS AND THE AMOUNT OF PRIOR NOTICE THAT IS REQUIRED, AND SHALL COORDINATE DIRECTLY WITH THE APPROPRIATE CITY DEPARTMENT.
14. CONTRACTOR SHALL SEQUENCE WATER AND WASTEWATER CONSTRUCTION TO AVOID INTERRUPTION OF SERVICE TO SURROUNDING PROPERTIES.
15. CONTRACTOR SHALL MAINTAIN WATER SERVICE AND WASTEWATER SERVICE TO ALL CUSTOMERS THROUGHOUT CONSTRUCTION (IF NECESSARY, BY USE OF TEMPORARY METHODS APPROVED BY THE CITY AND OWNER). THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
16. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL WATER AND WASTEWATER LINES CROSSING THE PROJECT. THE CONTRACTOR SHALL REPAIR ALL DAMAGED LINES IMMEDIATELY. ALL REPAIRS OF EXISTING WATER MAINS, WATER SERVICES, SEWER MAINS, AND SANITARY SEWER SERVICES ARE SUBSIDIARY TO THE WORK, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
17. VALVE ADJUSTMENTS SHALL BE CONSTRUCTED SUCH THAT THE COVERS ARE AT FINISHED SURFACE GRADE OF THE DEVELOPED PAVEMENT.
18. THE ENDS OF ALL EXISTING WATER MAINS THAT ARE CUT, BUT NOT REMOVED, SHALL BE PLUGGED AND ABANDONED IN PLACE. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
19. ALL FIRE HYDRANTS, VALVES, TEES, BENDS, WYES, REDUCERS, FITTINGS, AND ENDS SHALL BE MECHANICALLY RESTRAINED AND/OR THRUST BLOCKED TO CITY STANDARDS.
20. CONTRACTOR SHALL INSTALL A FULL SEGMENT OF WATER OR WASTEWATER PIPE CENTERED AT ALL UTILITY CROSSINGS SO THAT THE JOINTS ARE GREATER THAN 9-FEET FROM THE CROSSING.
21. ALL CROSSINGS AND LOCATIONS WHERE WASTEWATER IS LESS THAN 9-FEET FROM WATER, WASTEWATER CONSTRUCTION AND MATERIALS SHALL COMPLY WITH TCEQ CHAPTER 217.53.
22. ALL CROSSING AND LOCATIONS WHERE WATER IS LESS THAN 9-FEET FROM WASTEWATER, WATER CONSTRUCTION AND MATERIALS SHALL COMPLY WITH TCEQ CHAPTER 290.44.
23. ALL WATER AND WASTEWATER SHALL BE TESTED IN ACCORDANCE WITH THE CITY, AWWA, AND TCEQ STANDARDS AND SPECIFICATIONS. AT A MINIMUM, THIS SHALL CONSIST OF THE FOLLOWING:
   - a. ALL WATERLINES SHALL BE HYDROSTATICALLY TESTED AND CHLORINATED BEFORE BEING PLACED INTO SERVICE. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THEIR REQUIRED PROCEDURES AND SHALL ALSO COMPLY WITH TCEQ REGULATIONS.
   - b. WASTEWATER LINES AND MANHOLES SHALL BE PRESSURE TESTED. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THEIR REQUIRED PROCEDURES AND SHALL ALSO COMPLY WITH TCEQ REGULATIONS. AFTER COMPLETION OF THESE TESTS, A TELEVISION INSPECTION SHALL BE PERFORMED AND PROVIDED TO THE CITY AND OWNER ON A DVD.
24. CONTRACTOR SHALL INSTALL DETECTABLE WIRING OR MARKING TAPE A MINIMUM OF 12" ABOVE WATER AND WASTEWATER LINES. MARKER DECALS SHALL BE LABELED "CAUTION - WATER LINE", OR "CAUTION - SEWER LINE". DETECTABLE WIRING AND MARKING TAPE SHALL COMPLY WITH CITY STANDARDS, AND SHALL BE INCLUDED IN THE COST OF THE WATER AND WASTEWATER PIPE.
25. DUCTILE IRON PIPE SHALL BE PROTECTED FROM CORROSION BY A LOW-DENSITY POLYETHYLENE LINER WRAP THAT IS AT LEAST A SINGLE LAYER OF 8-MIL. ALL DUCTILE IRON JOINTS SHALL BE BONDED.
26. WATERLINES SHALL BE INSTALLED AT NO LESS THAN THE MINIMUM COVER REQUIRED BY THE CITY.
27. CONTRACTOR SHALL PROVIDE CLEAN-OUTS FOR PRIVATE SANITARY SEWER LINES AT ALL CHANGES IN DIRECTION AND 100-FOOT INTERVALS, OR AS REQUIRED BY THE APPLICABLE PLUMBING CODE. CLEAN-OUTS REQUIRED IN PAVEMENT OR SIDEWALKS SHALL HAVE CAST IRON COVERS FLUSH WITH FINISHED GRADE.
28. CONTRACTOR SHALL PROVIDE BACKWATER VALVES FOR PLUMBING FIXTURES AS REQUIRED BY THE APPLICABLE PLUMBING CODE (E.G. FLOOR ELEVATION OF FIXTURE UNIT IS BELOW THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER). CONTRACTOR SHALL REVIEW BOTH MEP AND CIVIL PLANS TO CONFIRM WHERE THESE ARE REQUIRED.
29. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
30. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.

ABBREVIATIONS AND DEFINITIONS:

A	AREA
ADA	AMERICANS WITH DISABILITIES ACT
AWWA	AMERICAN WATER WORKS ASSOCIATION
B-B	BACK TO BACK
BC	BEGIN CURVE
BC	BACK OF CURB
BCR	BEGIN CURB RETURN
BMP	BEST MANAGEMENT PRACTICE
BOC	BACK OF CURB
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
BW	BOTTOM OF WALL
CFS	CUBIC FEET PER SECOND
CITY	CITY, TOWN, OR OTHER APPLICABLE LOCAL GOVERNMENT JURISDICTION
C/L	CENTERLINE
CL	CENTERLINE
CONC	CONCRETE
CY	CUBIC YARD
DEMO	DEMOLITION
DG	DECOMPOSED GRANITE
DTL	DETAIL
EA	EACH
EC	END CURVE
ECR	END CURB RETURN
EG	EXISTING GROUND
EL	ELEVATION
ELEC	ELECTRICAL / ELECTRICITY
ELEV	ELEVATION
EPA	UNITES STATES ENVIRONMENTAL PROTECTION AGENCY
ESMT	EASEMENT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EX.	EXISTING
F-F	FACE TO FACE
FG	FINISHED GROUND
FH	FIRE HYDRANT
FL	FLOW LINE
FOC	FACE OF CURB
FT	FEET
HGL	HYDRAULIC GRADE LINE
KH	KIMLEY-HORN AND ASSOCIATES, INC.
KHA	KIMLEY-HORN AND ASSOCIATES, INC.
LAT	LATERAL
LF	LINEAR FEET
LT	LEFT
MAX	MAXIMUM
ME	MATCH EXISTING ELEVATION
MH	MANHOLE
MIN	MINUTE / MINIMUM
NO	NUMBER
NOI	NOTICE OF INTENT, REF. TCEQ GENERAL PERMIT
NOT	NOTICE OF TERMINATION, REF. TCEQ GENERAL PERMIT
NTS	NOT TO SCALE
OC	ON CENTER
OFF	OFFSET
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE / POINT OF COMPOUND CURVATURE
PGL	DEVELOPED GRADE LINE
PI	POINT OF INFLECTION
PROP	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INFLECTION
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RT	RIGHT
SF	SQUARE FEET
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SY	SQUARE YARD
TAS	ARCHITECTURAL BARRIERS TEXAS ACCESSIBILITY STANDARDS
TC	TOP OF CURB
TCEQ	TEXAS COMMISSION OF ENVIRONMENTAL QUALITY
TEMP	TEMPORARY
TXDOT	TEXAS DEPARTMENT OF TRANSPORTATION
TXMUTCD	TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
TW	TOP OF WALL
TYP	TYPICAL
VC	VERTICAL CURVE
WTR	WATER
WW	WASTEWATER

UTILITY CONTACTS:

1. TELECOM COMPANY, **REFERENCE COVER**
2. CABLE COMPANY, **REFERENCE COVER**
3. ELECTRIC COMPANY, **REFERENCE COVER**
4. GAS COMPANY, **REFERENCE COVER**
5. UTILITY DISTRICT, **REFERENCE COVER**
6. CITY WATER/UTILITIES DEPARTMENT, **REFERENCE COVER**

THESE PLAN AND GENERAL NOTES REFER TO:

GEOTECHNICAL ENGINEERING REPORT

(FIRM) ECS SOUTHWEST, LLP

ECS PROJECT NUMBER 17:6399-A

(DATE) MARCH 22, 2024

INCLUDING ALL REVISIONS AND ADDENDA TO THIS REPORT THAT MAY HAVE BEEN RELEASED AFTER THE NOTED DATE.

IN THE EVENT OF CONFLICT, CITY OF ROUND ROCK NOTES SHALL SUPERCEDE.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN 107175
2/21/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

KH GENERAL NOTES

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
8 OF 204

SDP24-00001

N
W E
S

0 100' 200'
GRAPHIC SCALE 100'

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- W — WATER LINE
- WW — WASTEWATER LINE
- STORM SEWER LINE
- GAS — GAS
- GUARD RAIL
- OHE — OVERHEAR ELECTRIC
- BENCHMARK
- FIRE HYDRANT
- WATER METER
- WATER MANHOLE
- WATER VAULT
- WATER VALVE
- IRRIGATION VALVE
- WASTEWATER CLEANOUT
- WASTEWATER MANHOLE
- STORM SEWER GRATE INLET
- STORM SEWER MANHOLE
- GAS METER
- GAS SIGN
- GAS VALVE
- TELEPHONE BOX
- TELEPHONE MANHOLE
- ELECTRIC BOX
- ELECTRIC METER
- ELECTRIC MANHOLE
- UTILITY POLE
- GUY ANCHOR
- TRAFFIC SIGNAL
- SIGN
- DEMOLITION AREA: ITEMS TO BE REMOVED AS NOTED
- UPRR ROW
- LIMITS OF CONSTRUCTION AREA
- XXXXX — EXISTING TREE TO REMAIN
- MONARCH TREE
- MONARCH TREE TO BE REMOVED
- XXXXX — EXISTING TREE TO BE REMOVED

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
5/29/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

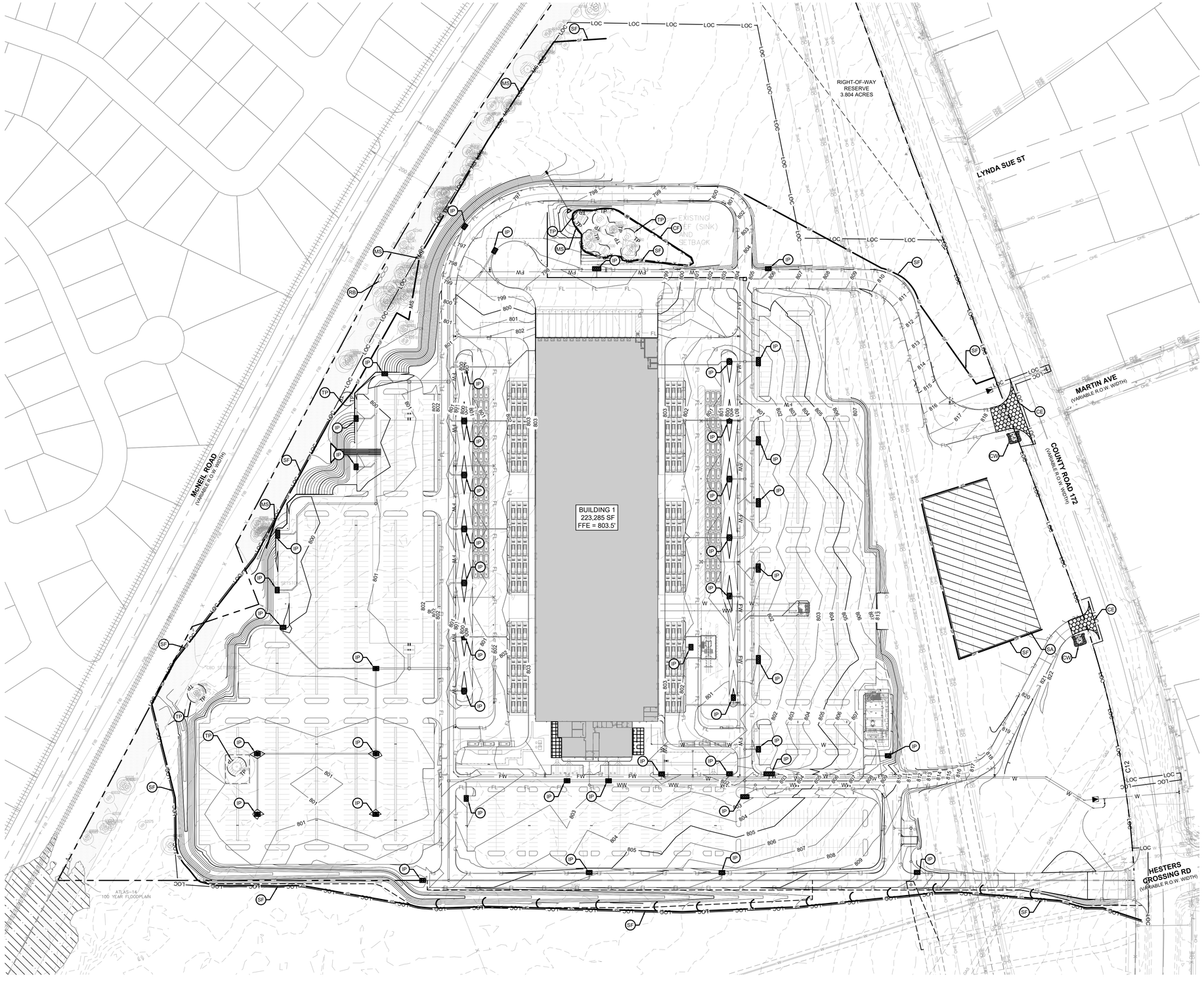
EXISTING CONDITIONS AND DEMOLITION PLAN

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
9 OF 204

SDP24-00001



N

W E

S

0 100' 200'

GRAPHIC SCALE 100'

LEGEND

		PROPERTY LINE
LOC		LIMITS OF CONSTRUCTION
XXX		EXISTING MAJOR CONTOUR
XXX		EXISTING MINOR CONTOUR
XXX		MAJOR CONTOUR
XXX		MINOR CONTOUR
	CE	CONSTRUCTION ENTRANCE
	SA	STAGING AREA
	CW	CONCRETE WASHOUT
	IP	INLET PROTECTION
TP	TP	TREE PROTECTION
	RB	ROCK BERM
SF	SF	SILT FENCE
MS	MS	MULCH SOCK
X X X X	CF	CHAIN LINK FENCE
XXXXX		EXISTING TREE TO REMAIN
		MONARCH TREE
		MONARCH TREE TO BE REMOVED
XXXXX		EXISTING TREE TO BE REMOVED

NOTES

1. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CITY OF ROUND ROCK SPECIFICATIONS.
3. PERIMETER CONSTRUCTION FENCE SHALL FOLLOW LIMITS OF CONSTRUCTION.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918			
DATE	JUNE 2024	DESIGNED BY:	MM
SCALE:	AS SHOWN	DRAWN BY:	MM
		CHECKED BY:	NCB

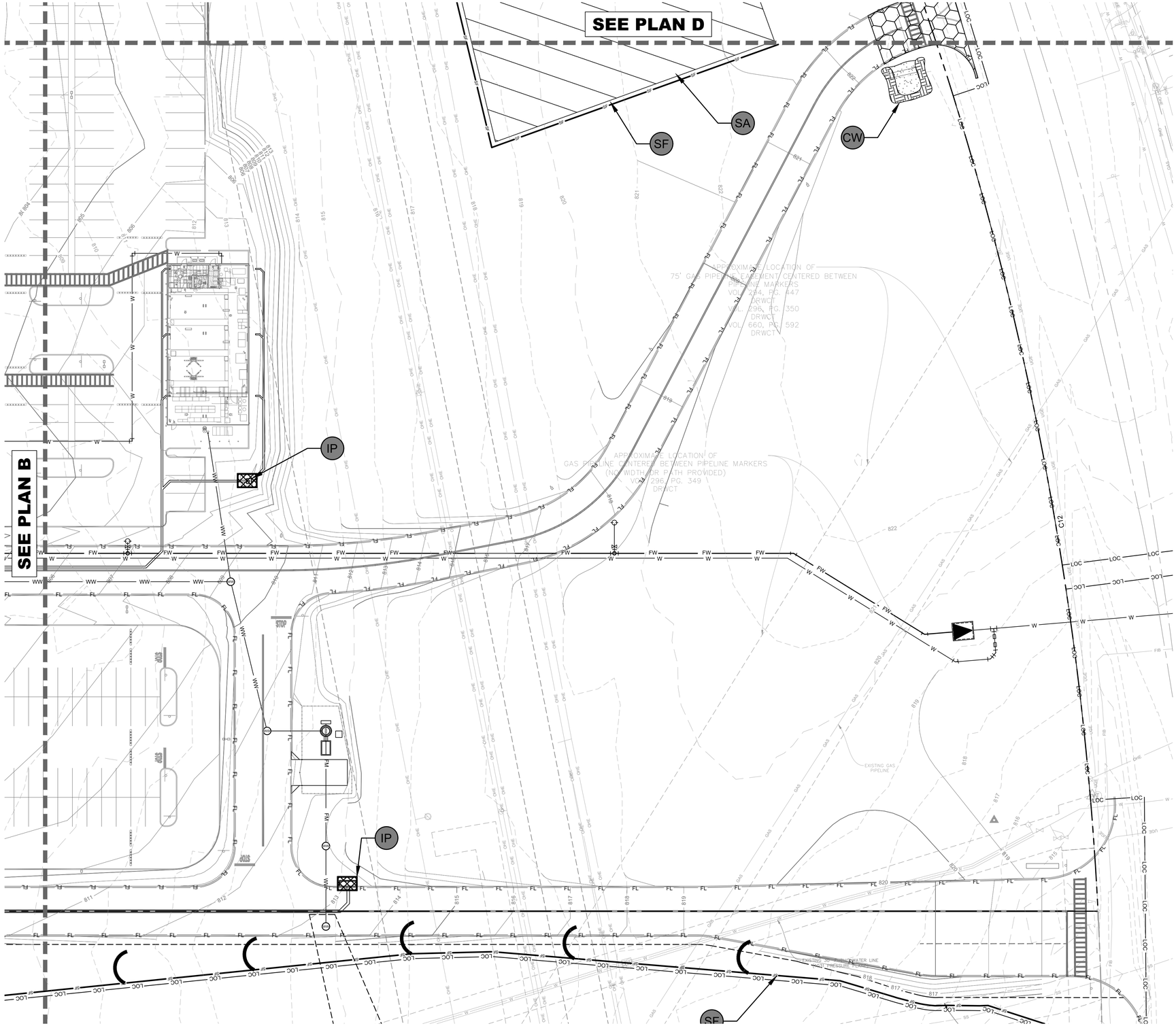
OVERALL EROSION CONTROL PLAN

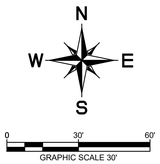
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
12 OF 204

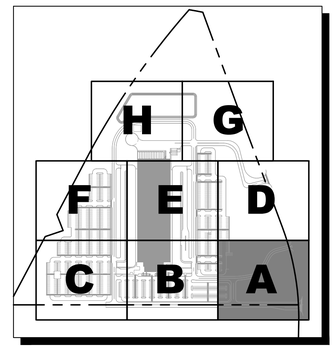
SDP24-00001





LEGEND

	PROPERTY LINE
LOC	LIMITS OF CONSTRUCTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
CE	CONSTRUCTION ENTRANCE
SA	STAGING AREA
CW	CONCRETE WASHOUT
IP	INLET PROTECTION
TP	TREE PROTECTION
RB	ROCK BERM
SF	SILT FENCE
MS	MULCH SOCK
CF	CHAIN LINK FENCE
XXXXX	EXISTING TREE TO REMAIN
	MONARCH TREE
	MONARCH TREE TO BE REMOVED
XXXXX	EXISTING TREE TO BE REMOVED



KEYMAP
N.T.S

NOTES
1. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CITY OF ROUND ROCK SPECIFICATIONS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

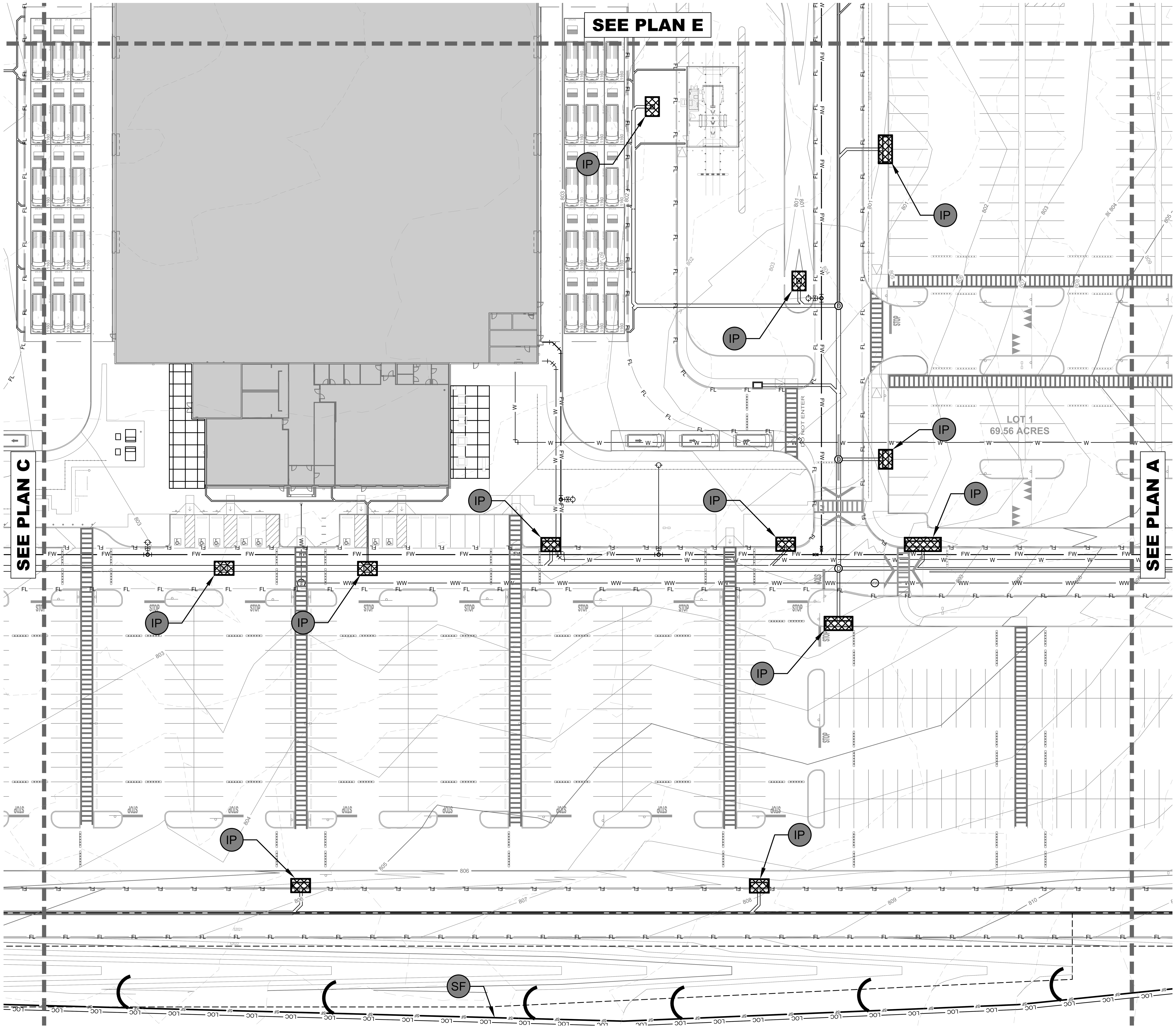
EROSION CONTROL PLAN A

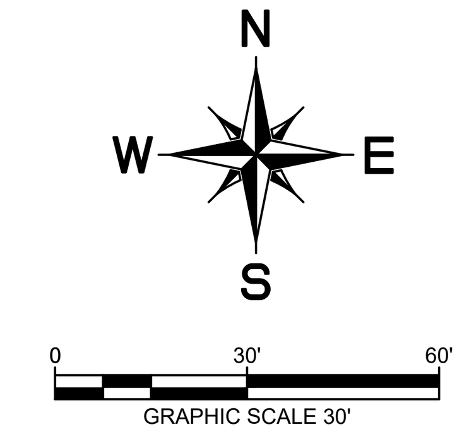
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
13 OF 204

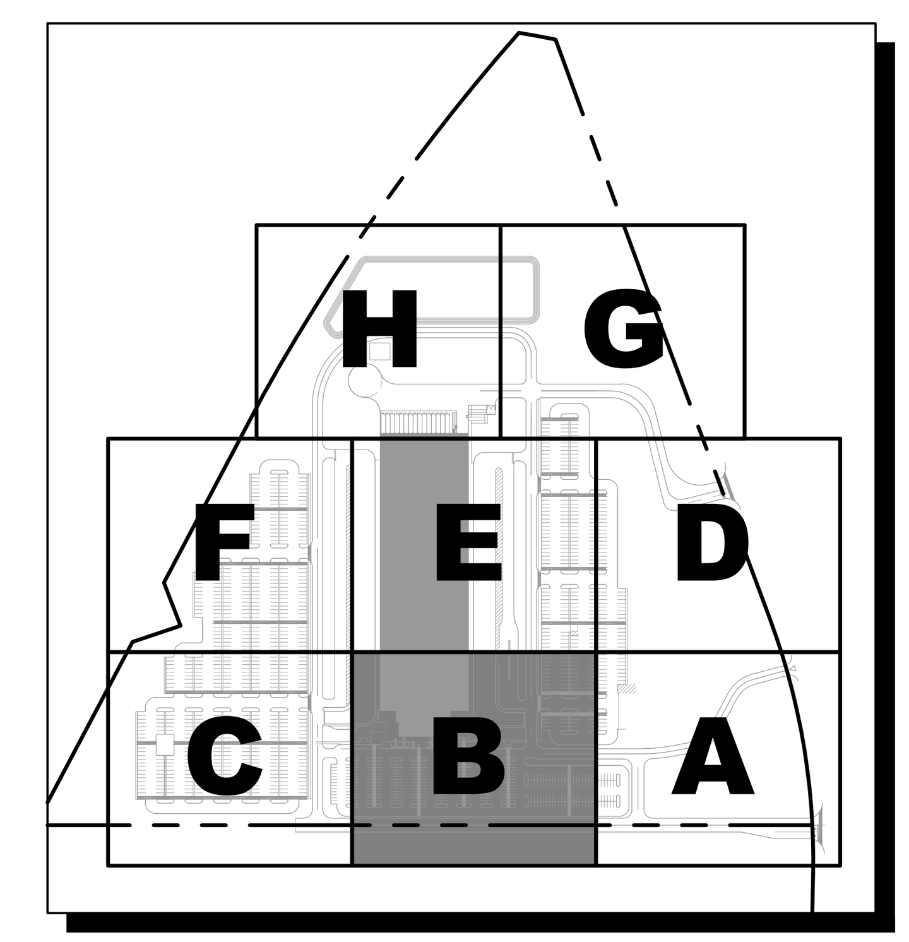
SDP24-00001





LEGEND

Symbol	Description
	PROPERTY LINE
LOC	LIMITS OF CONSTRUCTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
CE	CONSTRUCTION ENTRANCE
SA	STAGING AREA
CW	CONCRETE WASHOUT
IP	INLET PROTECTION
TP	TREE PROTECTION
RB	ROCK BERM
SF	SILT FENCE
MS	MULCH SOCK
CF	CHAIN LINK FENCE
XXXXX	EXISTING TREE TO REMAIN
	MONARCH TREE
	MONARCH TREE TO BE REMOVED
	EXISTING TREE TO BE REMOVED



KEYMAP
N.T.S

NOTES
1. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CITY OF ROUND ROCK SPECIFICATIONS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

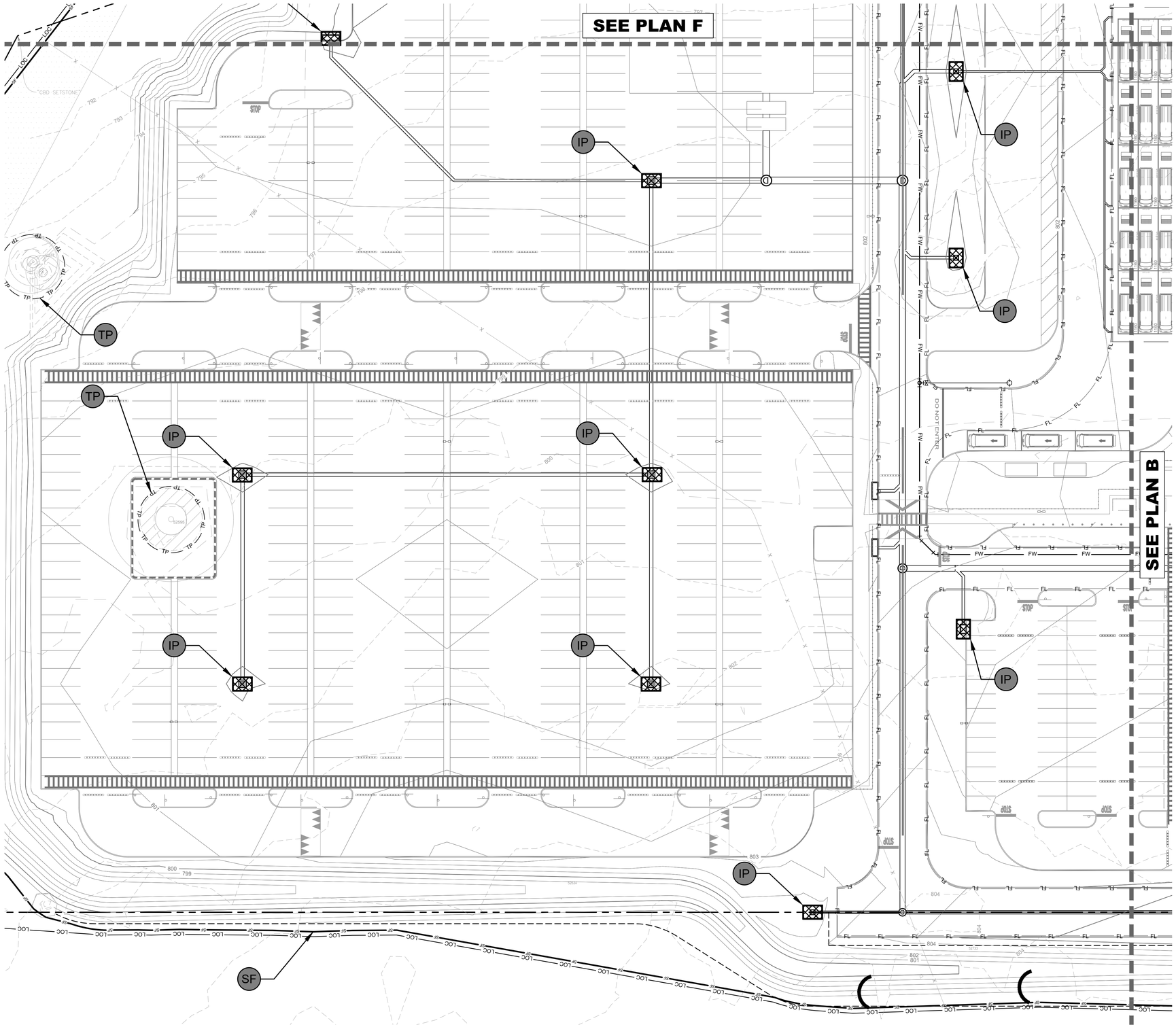
Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

EROSION CONTROL PLAN B

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS



N

W E

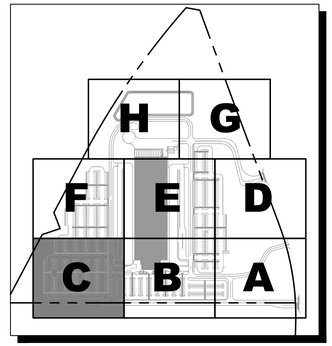
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

		PROPERTY LINE
LOC		LIMITS OF CONSTRUCTION
XXX		EXISTING MAJOR CONTOUR
XXX		EXISTING MINOR CONTOUR
XXX		MAJOR CONTOUR
XXX		MINOR CONTOUR
	CE	CONSTRUCTION ENTRANCE
	SA	STAGING AREA
	CW	CONCRETE WASHOUT
	IP	INLET PROTECTION
TP	TP	TREE PROTECTION
	RB	ROCK BERM
SF	SF	SILT FENCE
MS	MS	MULCH SOCK
x x x x x	CF	CHAIN LINK FENCE
XXXXX		EXISTING TREE TO REMAIN
		MONARCH TREE
XXXXX		MONARCH TREE TO BE REMOVED
XXXXX		EXISTING TREE TO BE REMOVED



KEYMAP
N.T.S

NOTES
1. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CITY OF ROUND ROCK SPECIFICATIONS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

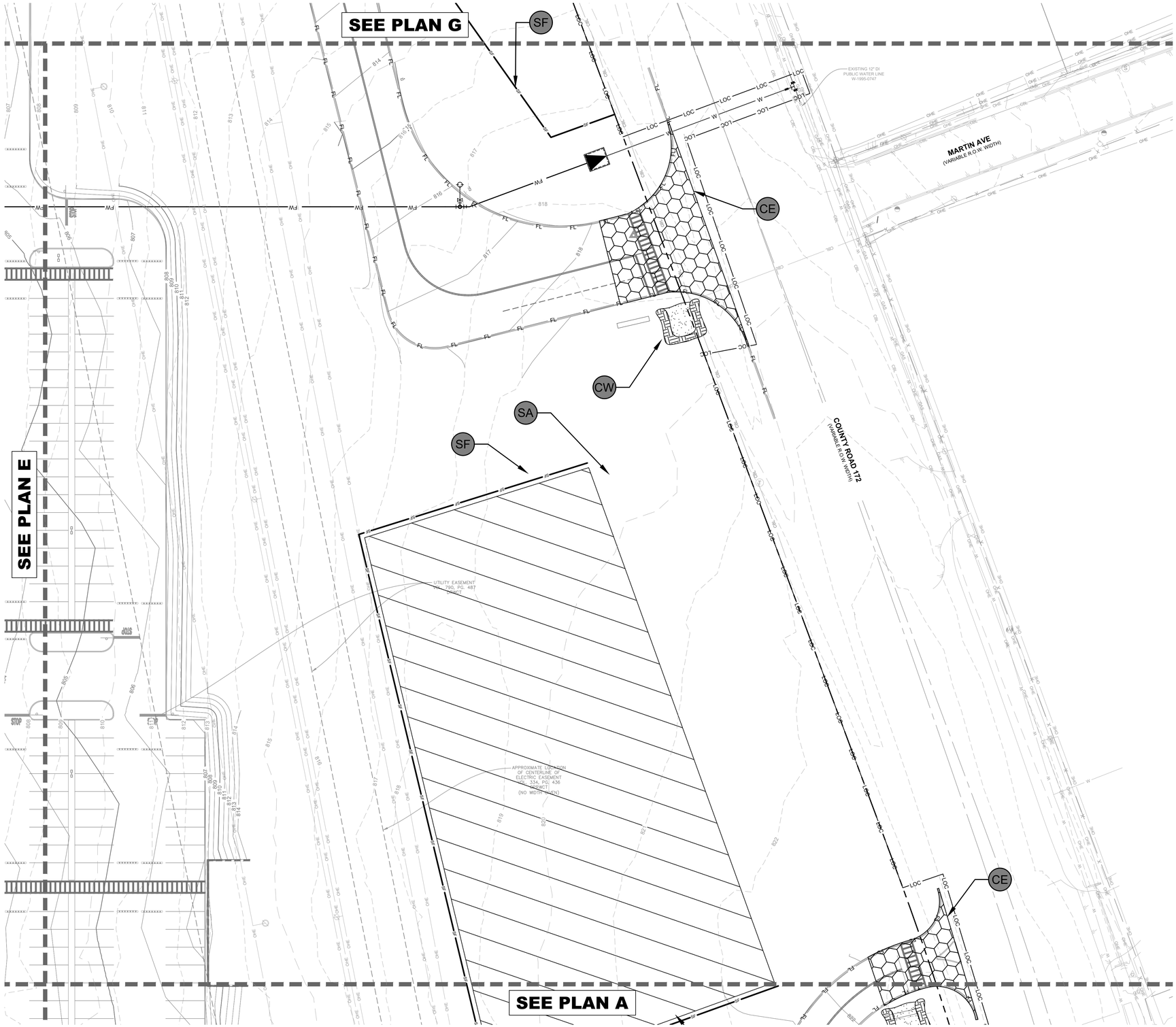
EROSION CONTROL PLAN C

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
15 OF 204

SDP24-00001



N

W E

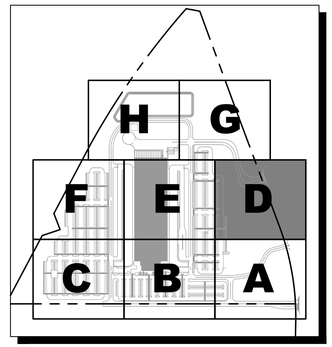
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
LOC	LIMITS OF CONSTRUCTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
CE	CONSTRUCTION ENTRANCE
SA	STAGING AREA
CW	CONCRETE WASHOUT
IP	INLET PROTECTION
TP	TREE PROTECTION
RB	ROCK BERM
SF	SILT FENCE
MS	MULCH SOCK
CF	CHAIN LINK FENCE
XXXXX	EXISTING TREE TO REMAIN
	MONARCH TREE
	MONARCH TREE TO BE REMOVED
XXXXX	EXISTING TREE TO BE REMOVED



KEYMAP
N.T.S

NOTES
1. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CITY OF ROUND ROCK SPECIFICATIONS.

BENCHMARKS

BM #51471	MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN. N: 10147640.83 E: 3127942.60 ELEV.= 841.70'
BM #51473	MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH". N: 10149343.04 E: 3128315.81 ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER

6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

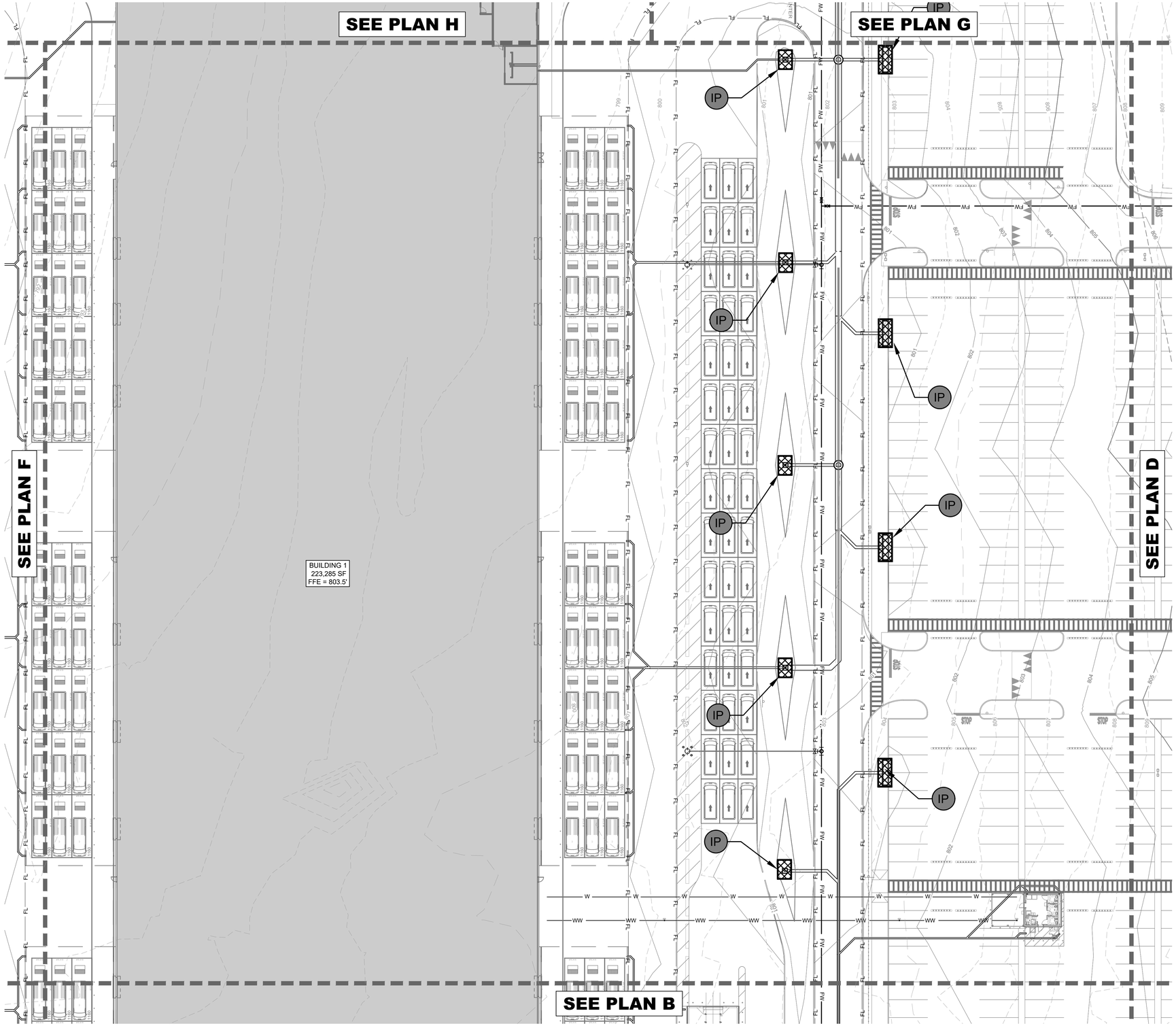
EROSION CONTROL PLAN D

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
16 OF 204

SDP24-00001



N

W E

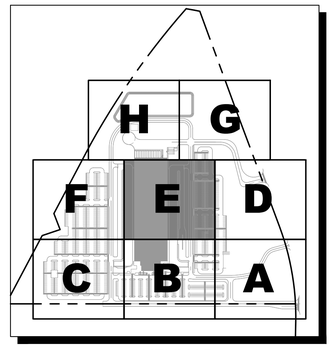
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
LOC	LIMITS OF CONSTRUCTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
CE	CONSTRUCTION ENTRANCE
SA	STAGING AREA
CW	CONCRETE WASHOUT
IP	INLET PROTECTION
TP	TREE PROTECTION
RB	ROCK BERM
SF	SILT FENCE
MS	MULCH SOCK
CF	CHAIN LINK FENCE
XXXXX	EXISTING TREE TO REMAIN
	MONARCH TREE
	MONARCH TREE TO BE REMOVED
XXXXX	EXISTING TREE TO BE REMOVED



KEYMAP

N.T.S

NOTES

1. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CITY OF ROUND ROCK SPECIFICATIONS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER

6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

EROSION CONTROL PLAN E

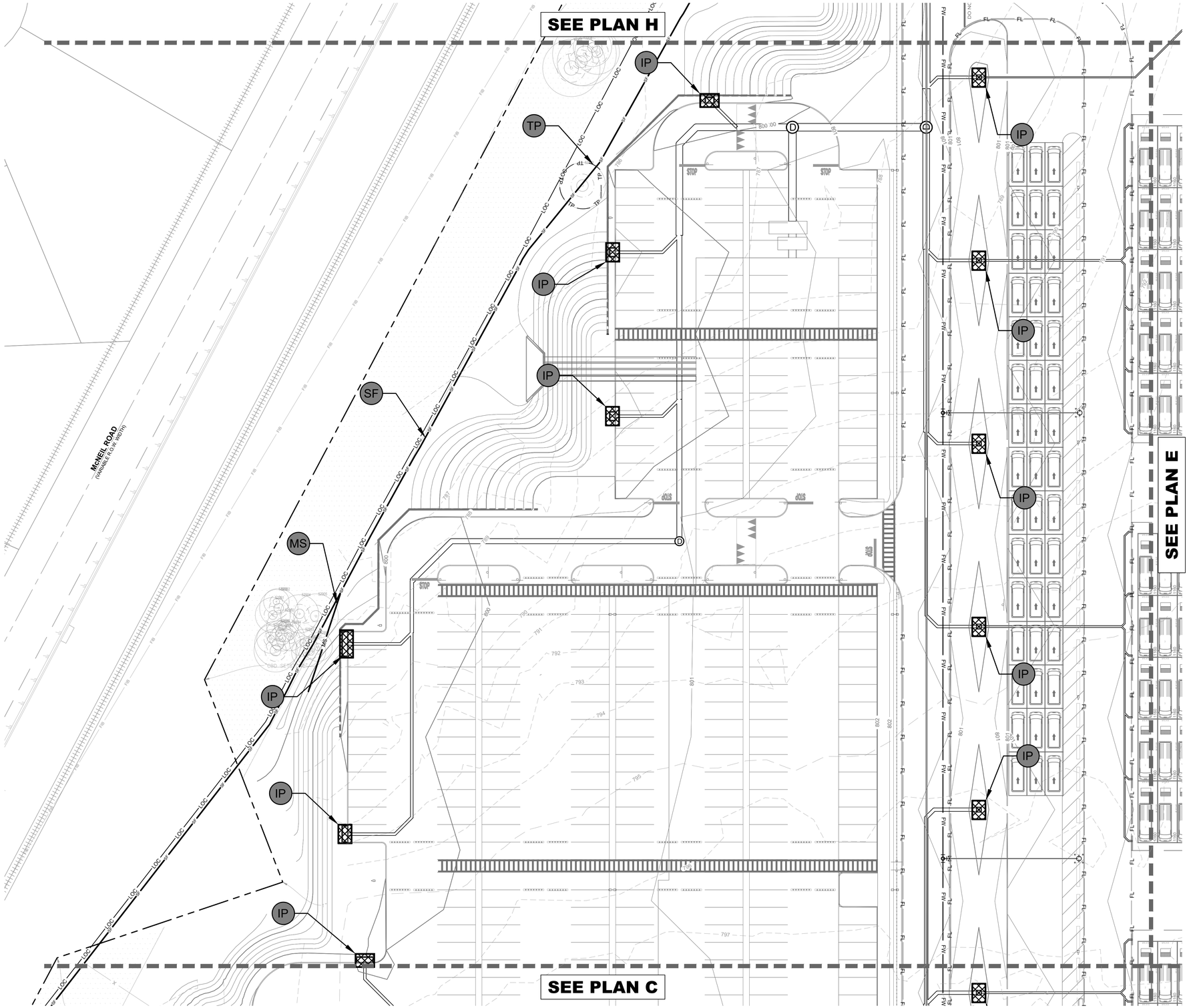
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER

17 OF 204

SDP24-00001



N

W E

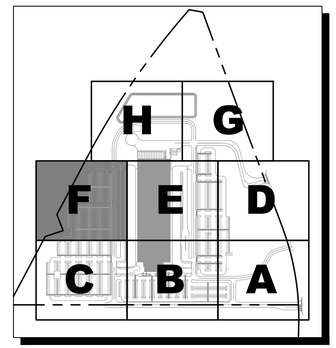
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
LOC	LIMITS OF CONSTRUCTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
CE	CONSTRUCTION ENTRANCE
SA	STAGING AREA
CW	CONCRETE WASHOUT
IP	INLET PROTECTION
TP	TREE PROTECTION
RB	ROCK BERM
SF	SILT FENCE
MS	MULCH SOCK
CF	CHAIN LINK FENCE
XXXXX	EXISTING TREE TO REMAIN
	MONARCH TREE
	MONARCH TREE TO BE REMOVED
XXXXX	EXISTING TREE TO BE REMOVED



KEYMAP

N.T.S

NOTES

1. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CITY OF ROUND ROCK SPECIFICATIONS.

BENCHMARKS

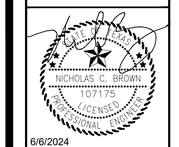
BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928



6/6/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

EROSION CONTROL PLAN F

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
18 OF 204

SDP24-00001

RIGHT-OF-WAY RESERVE 3.804 ACRES

LYNDA SUE ST

116.8'

SEE PLAN H

SEE PLAN E

SEE PLAN D

IP

SF

STOP

DO NOT ENTER

N

W E

S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

PROPERTY LINE	
LOC	LIMITS OF CONSTRUCTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
CE	CONSTRUCTION ENTRANCE
SA	STAGING AREA
CW	CONCRETE WASHOUT
IP	INLET PROTECTION
TP	TREE PROTECTION
RB	ROCK BERM
SF	SILT FENCE
MS	MULCH SOCK
CF	CHAIN LINK FENCE
XXXXX	EXISTING TREE TO REMAIN
	MONARCH TREE
	MONARCH TREE TO BE REMOVED
XXXXX	EXISTING TREE TO BE REMOVED

H G
F E D
C B A

KEYMAP
N.T.S

NOTES
1. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CITY OF ROUND ROCK SPECIFICATIONS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN 107175 LICENSED PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

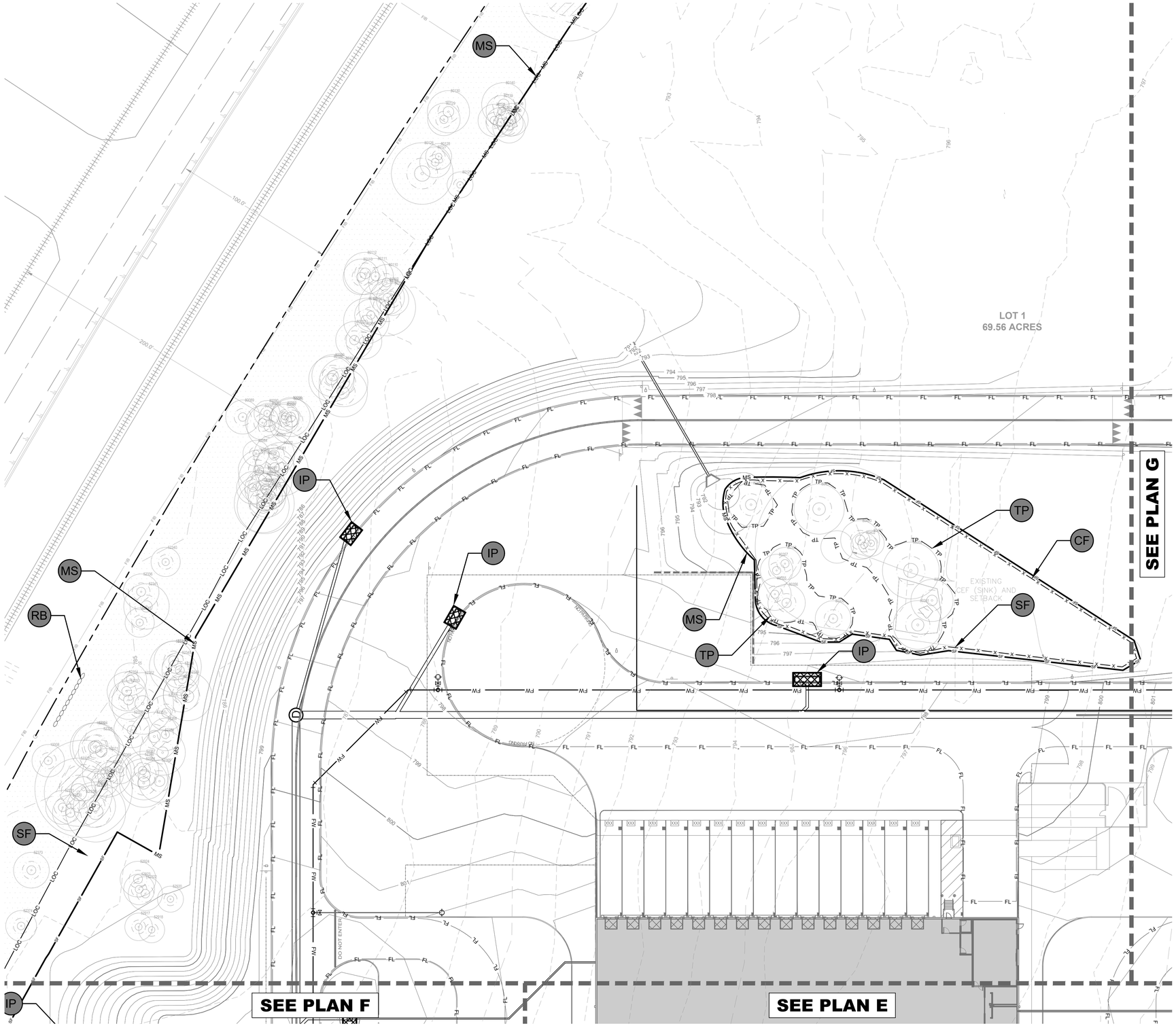
EROSION CONTROL PLAN G

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
19 OF 204

SDP24-00001



N

W E

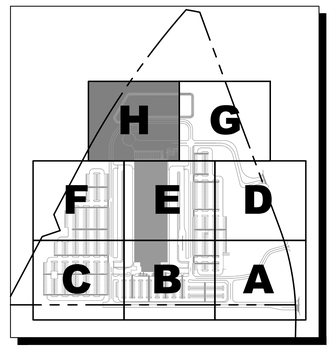
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
LOC	LIMITS OF CONSTRUCTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
CE	CONSTRUCTION ENTRANCE
SA	STAGING AREA
CW	CONCRETE WASHOUT
IP	INLET PROTECTION
TP	TREE PROTECTION
RB	ROCK BERM
SF	SILT FENCE
MS	MULCH SOCK
CF	CHAIN LINK FENCE
XXXXX	EXISTING TREE TO REMAIN
	MONARCH TREE
	MONARCH TREE TO BE REMOVED
XXXXX	EXISTING TREE TO BE REMOVED



KEYMAP
N.T.S

NOTES
1. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.
2. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CITY OF ROUND ROCK SPECIFICATIONS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER

6/6/2024

KHA PROJECT	069284910
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

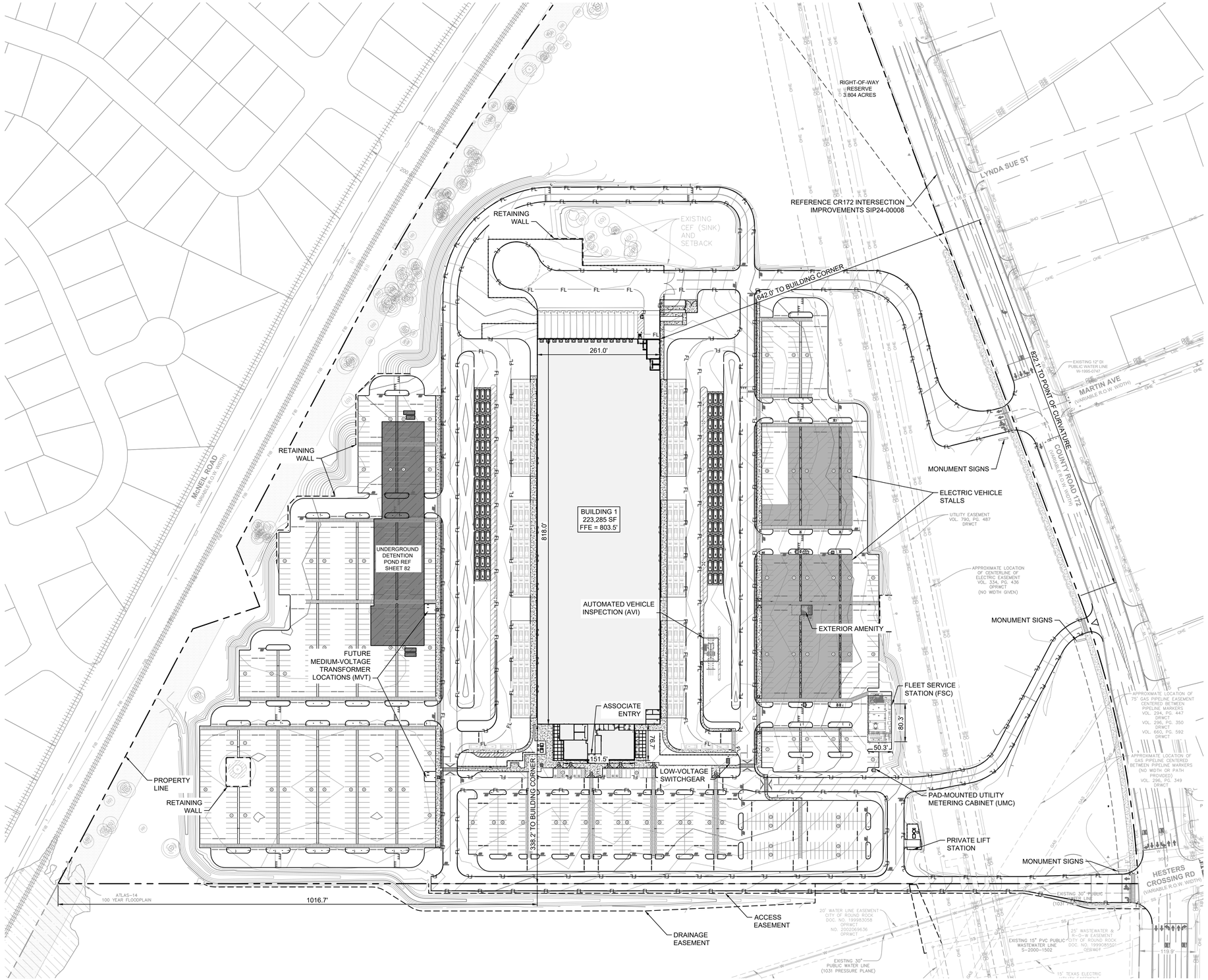
EROSION CONTROL PLAN H

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
20 OF 204

SDP24-00001



N
W E
S

0 100' 200'
GRAPHIC SCALE 100'

LEGEND

- PROPERTY LINE
- ADA ACCESSIBLE ROUTE
- BUILDING SETBACK
- UPRR ROW
- FIRE LANE MARKING STRIPING
- ELECTRIC VEHICLE PARKING
- UNDERGROUND DETENTION POND
- XXXXX — EXISTING TREE TO REMAIN

NOTES:

1. MONUMENT SIGNS SHOWN FOR PLANNING PURPOSES ONLY. A SEPARATE SIGN PERMIT IS REQUIRED.

PROVIDED PARKING	
TYPE	AMOUNT
9'X18' (ASSOCIATE STALLS)	356
9'X18' (ADA ASSOCIATE STALLS)	8
11'X24' (VAN STALLS)	908
LOADING	15
TOTAL	1287
REQUIRED	132

PARKING CATEGORY BY BUILDING	
BUILDING 1	
TOTAL BUILDING AREA (SQFT)	222,708
INDOOR STORAGE AREA (90%) (SQFT)	210826
OFFICE (SQFT)	11,882
PROVIDED PARKING	356
REQUIRED PARKING	132
1 STALL PER 2500 SQFT OF STORAGE	84
1 STALL PER 25 SQFT OF OFFICE	48

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

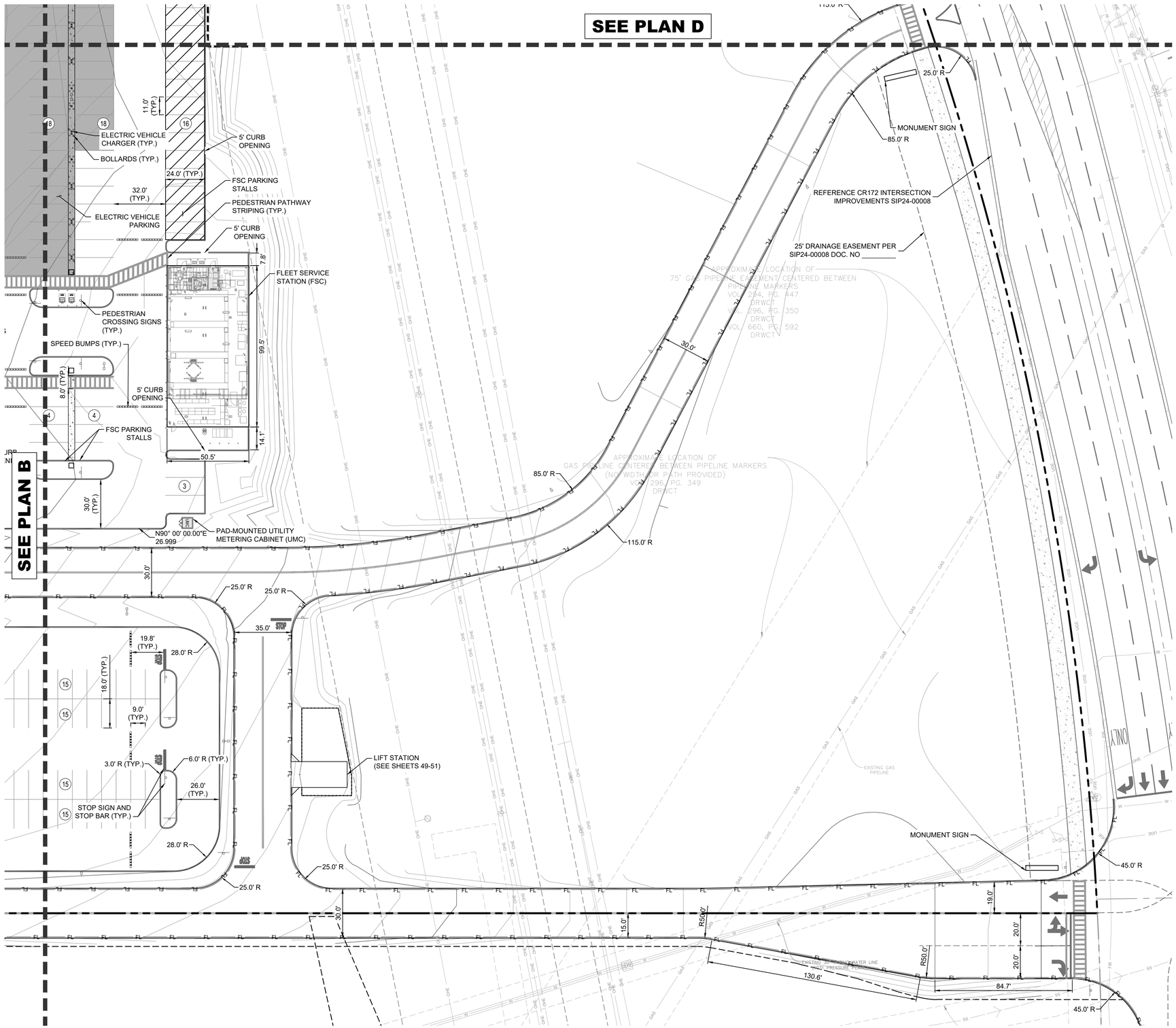
OVERALL SITE PLAN

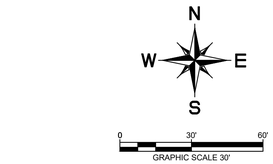
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
21 OF 204

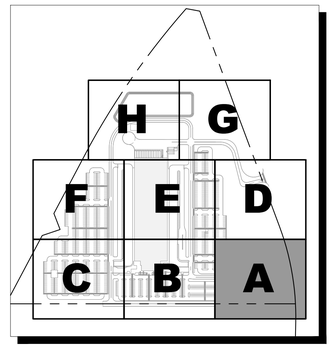
SDP24-00001





LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- FIRE LANE MARKING STRIPING
- SITE LIGHTING
- ELECTRIC VEHICLE PARKING
- UNDERGROUND DETENTION POND
- XX — PARKING STALL COUNT (REGULAR)
- XX HC — PARKING STALL COUNT (HANDICAP)
- XXXXX — EXISTING TREE TO REMAIN



KEYMAP
N.T.S

NOTES:

1. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 13'-6" VERTICAL CLEARANCE.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS "FIRE ZONE/TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. SEC. 901.4.2
3. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 3108(c) AND ANSI A1171-1986-4.6.2.
4. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. ALL RADII TO BE 3' UNLESS OTHERWISE NOTED.
7. SEE OVERALL SITE PLAN ON SHEET 21 FOR ADDITIONAL NOTES.
8. RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT [IBC 105.2].
9. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.
10. MONUMENT SIGNS SHOWN FOR PLANNING PURPOSES ONLY. A SEPARATE SIGN PERMIT IS REQUIRED.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

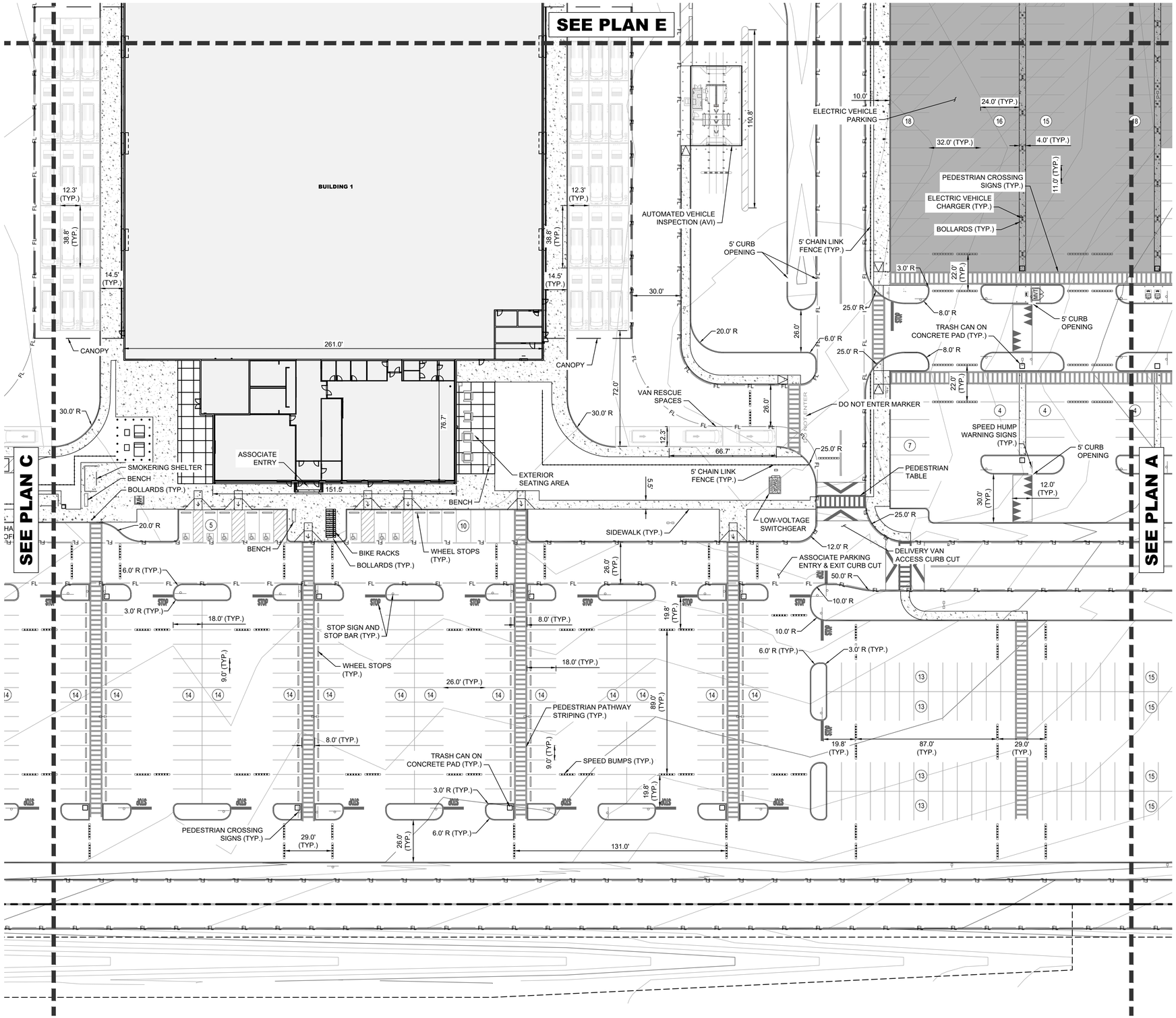
SITE PLAN A

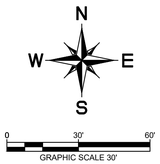
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
22 OF 204

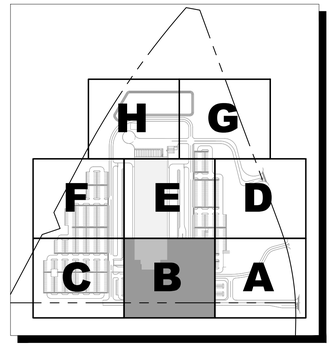
SDP24-00001





LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- FIRE LANE MARKING STRIPING
- SITE LIGHTING
- ELECTRIC VEHICLE PARKING
- UNDERGROUND DETENTION POND
- PARKING STALL COUNT (REGULAR)
- PARKING STALL COUNT (HANDICAP)
- EXISTING TREE TO REMAIN



KEYMAP
N.T.S

NOTES:

1. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 13'-6" VERTICAL CLEARANCE.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS "FIRE ZONE/TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. SEC. 901.4.2
3. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 3108(c) AND ANSI A1171-1986-4.6.2.
4. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. ALL RADII TO BE 3' UNLESS OTHERWISE NOTED.
7. SEE OVERALL SITE PLAN ON SHEET 21 FOR ADDITIONAL NOTES.
8. RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT [IBC 105.2].
9. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

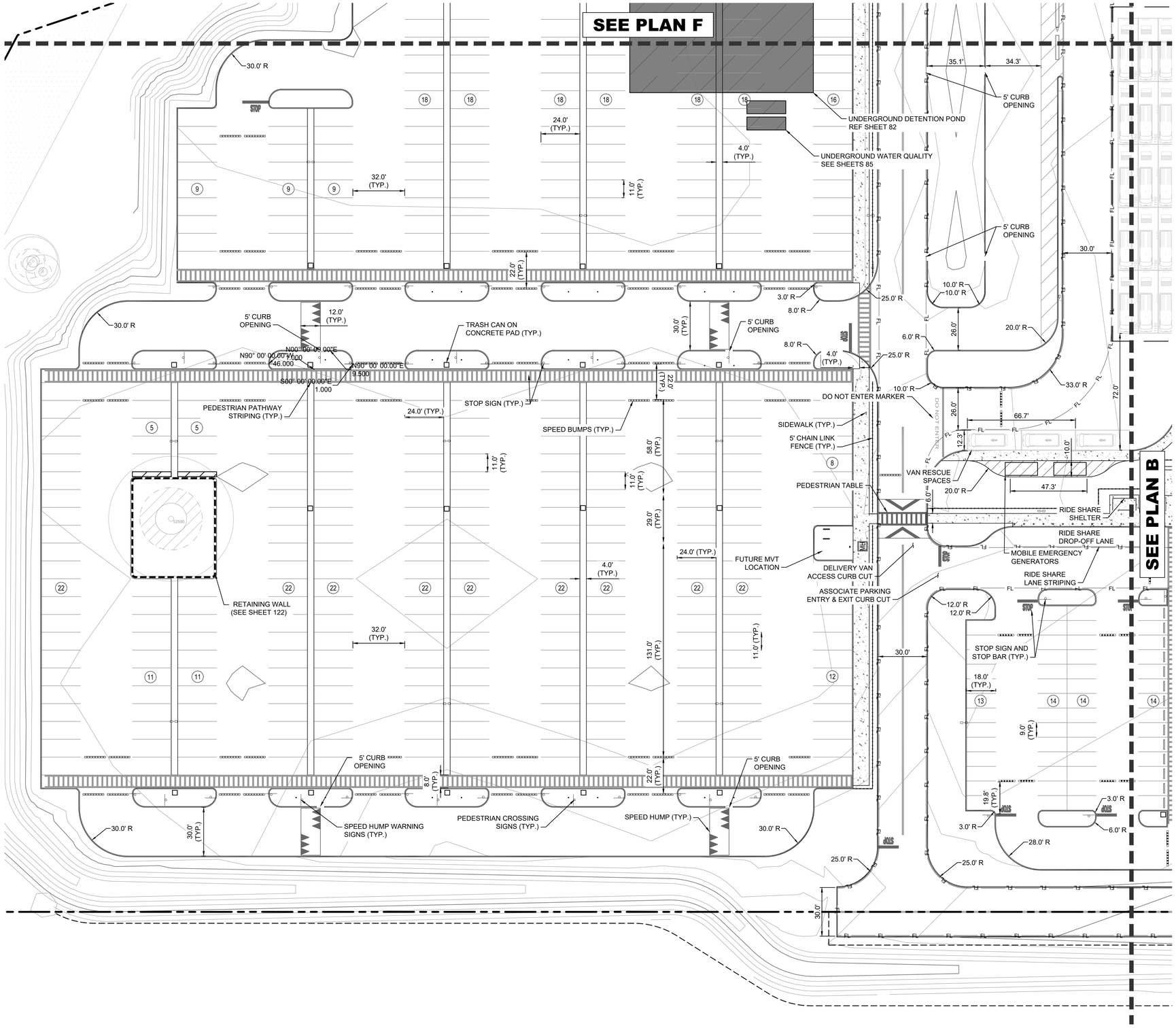
KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

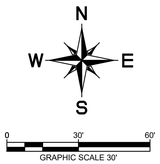
SITE PLAN B

2525 CR 172
INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
23 OF 204

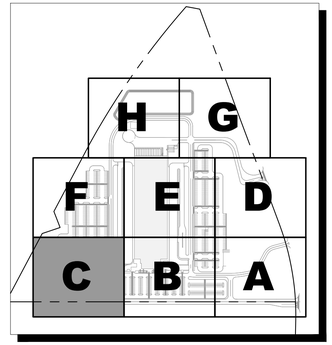
SDP24-00001





LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- FIRE LANE MARKING STRIPING
- SITE LIGHTING
- ELECTRIC VEHICLE PARKING
- UNDERGROUND DETENTION POND
- PARKING STALL COUNT (REGULAR) — XX
- PARKING STALL COUNT (HANDICAP) — XX HC
- EXISTING TREE TO REMAIN — XXXXX



KEYMAP
N.T.S

NOTES:

1. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 13'-6" VERTICAL CLEARANCE.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS "FIRE ZONE/TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. SEC. 901.4.2
3. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 3108(c) AND ANSI A1171-1986-4.6.2.
4. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. ALL RADII TO BE 3' UNLESS OTHERWISE NOTED.
7. SEE OVERALL SITE PLAN ON SHEET 21 FOR ADDITIONAL NOTES.
8. RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT [IBC 105.2].
9. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/7/2024

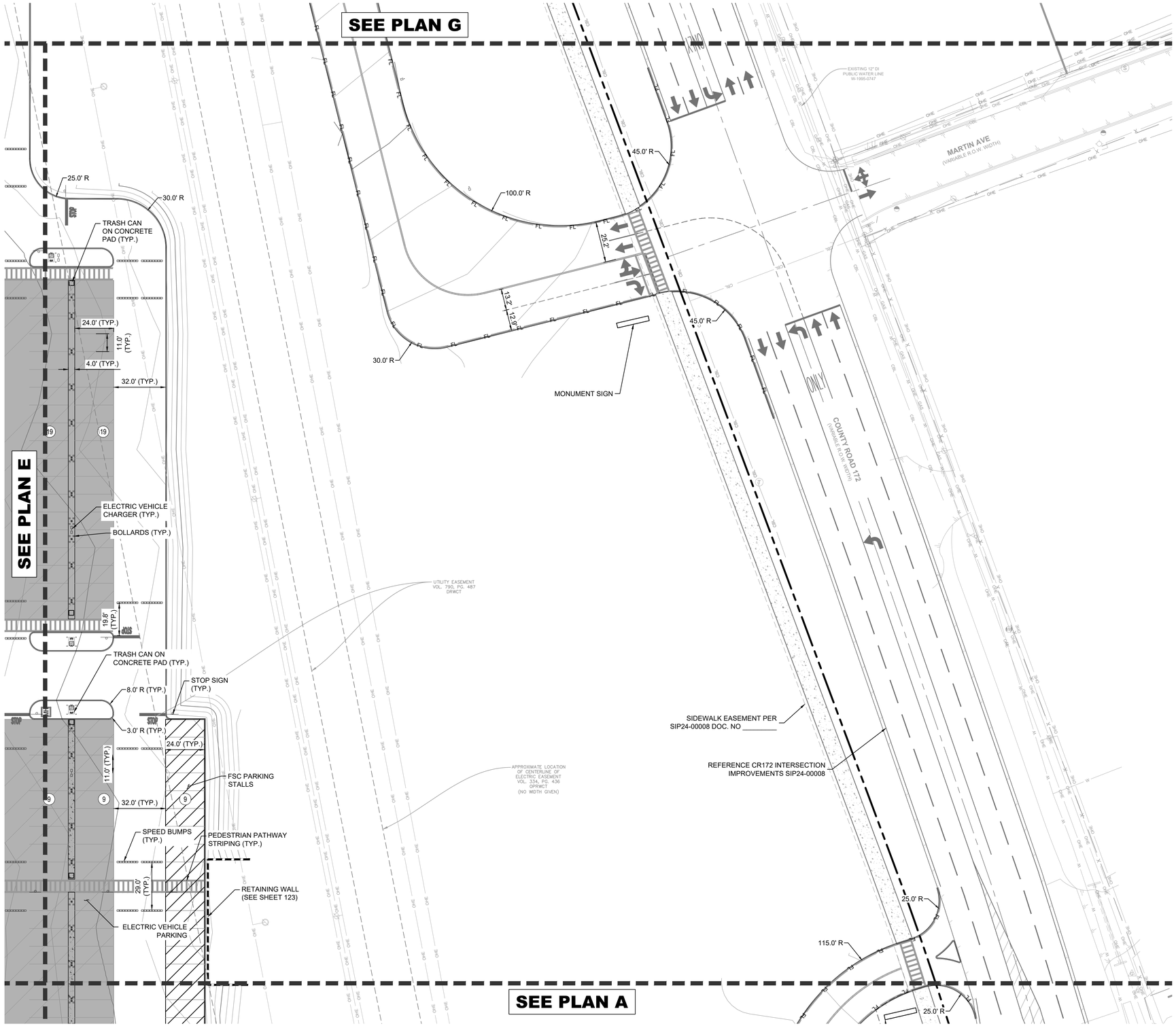
KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

SITE PLAN C

2525 CR 172
INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
24 OF 204

SDP24-00001



N

W E

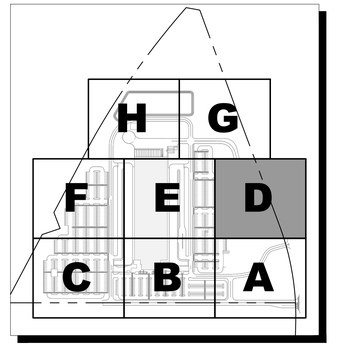
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- FIRE LANE MARKING STRIPING
- SITE LIGHTING
- ELECTRIC VEHICLE PARKING
- UNDERGROUND DETENTION POND
- (XX) PARKING STALL COUNT (REGULAR)
- (XX) HC PARKING STALL COUNT (HANDICAP)
- XXXXX EXISTING TREE TO REMAIN



KEYMAP

N.T.S

NOTES:

1. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 13'-6" VERTICAL CLEARANCE.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS "FIRE ZONE/TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. SEC. 901.4.2
3. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 3108(c) AND ANSI A1171-1986-4.6.2.
4. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. ALL RADII TO BE 3' UNLESS OTHERWISE NOTED.
7. SEE OVERALL SITE PLAN ON SHEET 21 FOR ADDITIONAL NOTES.
8. RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT [IBC 105.2].
9. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.
10. MONUMENT SIGNS SHOWN FOR PLANNING PURPOSES ONLY. A SEPARATE SIGN PERMIT IS REQUIRED.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER

6/7/2024

KHA PROJECT	069284918
DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

SITE PLAN D

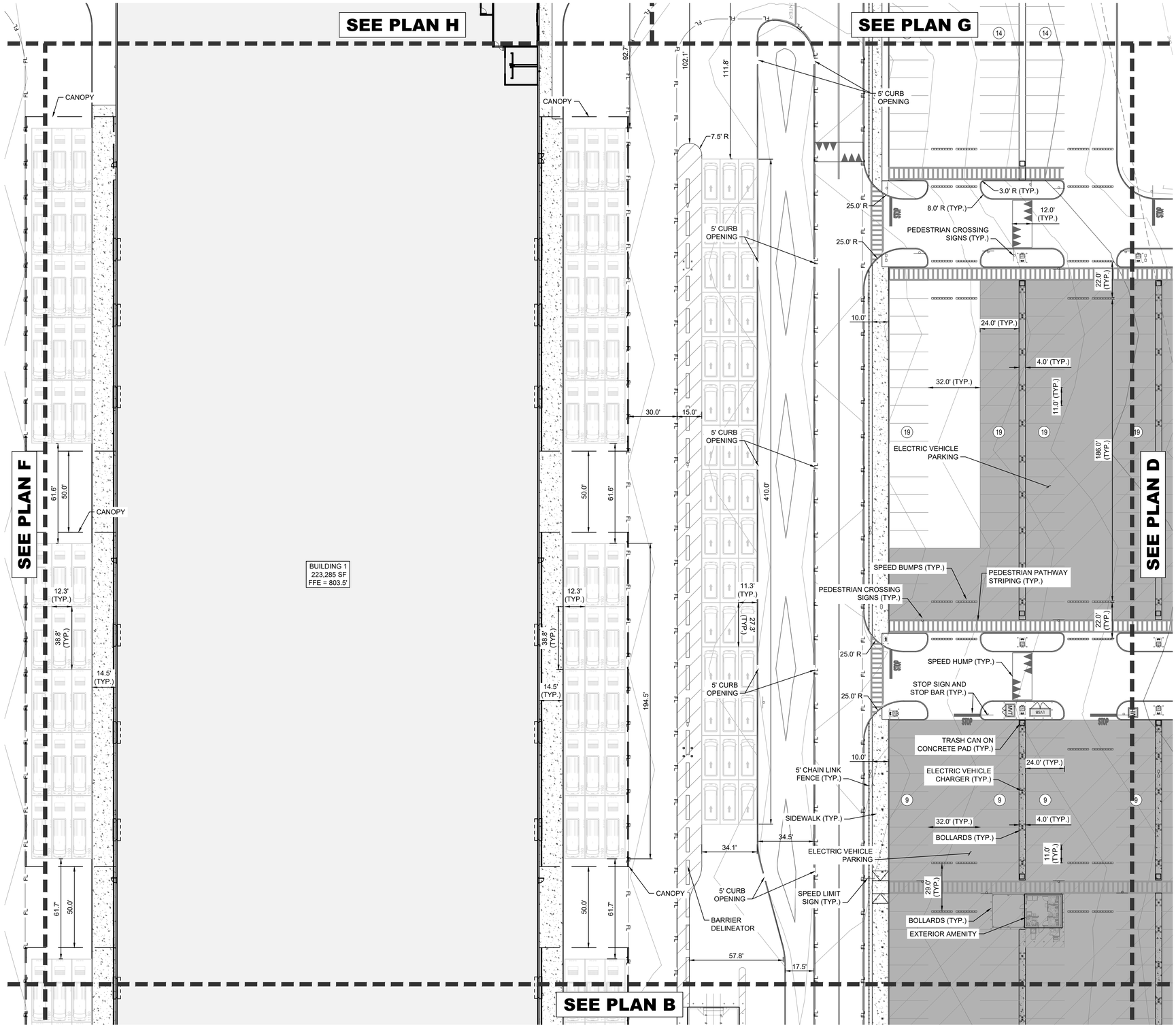
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER

25 OF 204

SDP24-00001

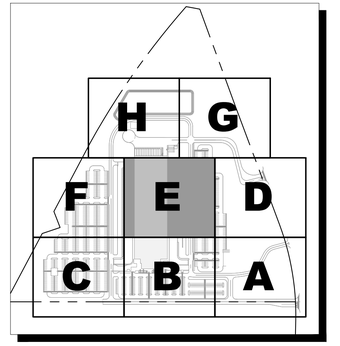


N
W E
S

0 30' 60'
GRAPHIC SCALE 30'

LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- FIRE LANE MARKING STRIPING
- SITE LIGHTING
- ELECTRIC VEHICLE PARKING
- UNDERGROUND DETENTION POND
- XX — PARKING STALL COUNT (REGULAR)
- XX HC — PARKING STALL COUNT (HANDICAP)
- XXXXX — EXISTING TREE TO REMAIN



KEYMAP
N.T.S

NOTES:

1. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 13'-6" VERTICAL CLEARANCE.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS "FIRE ZONE/TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. SEC. 901.4.2
3. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 3108(c) AND ANSI A1171-1986-4.6.2.
4. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. ALL RADII TO BE 3' UNLESS OTHERWISE NOTED.
7. SEE OVERALL SITE PLAN ON SHEET 21 FOR ADDITIONAL NOTES.
8. RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT [IBC 105.2].
9. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

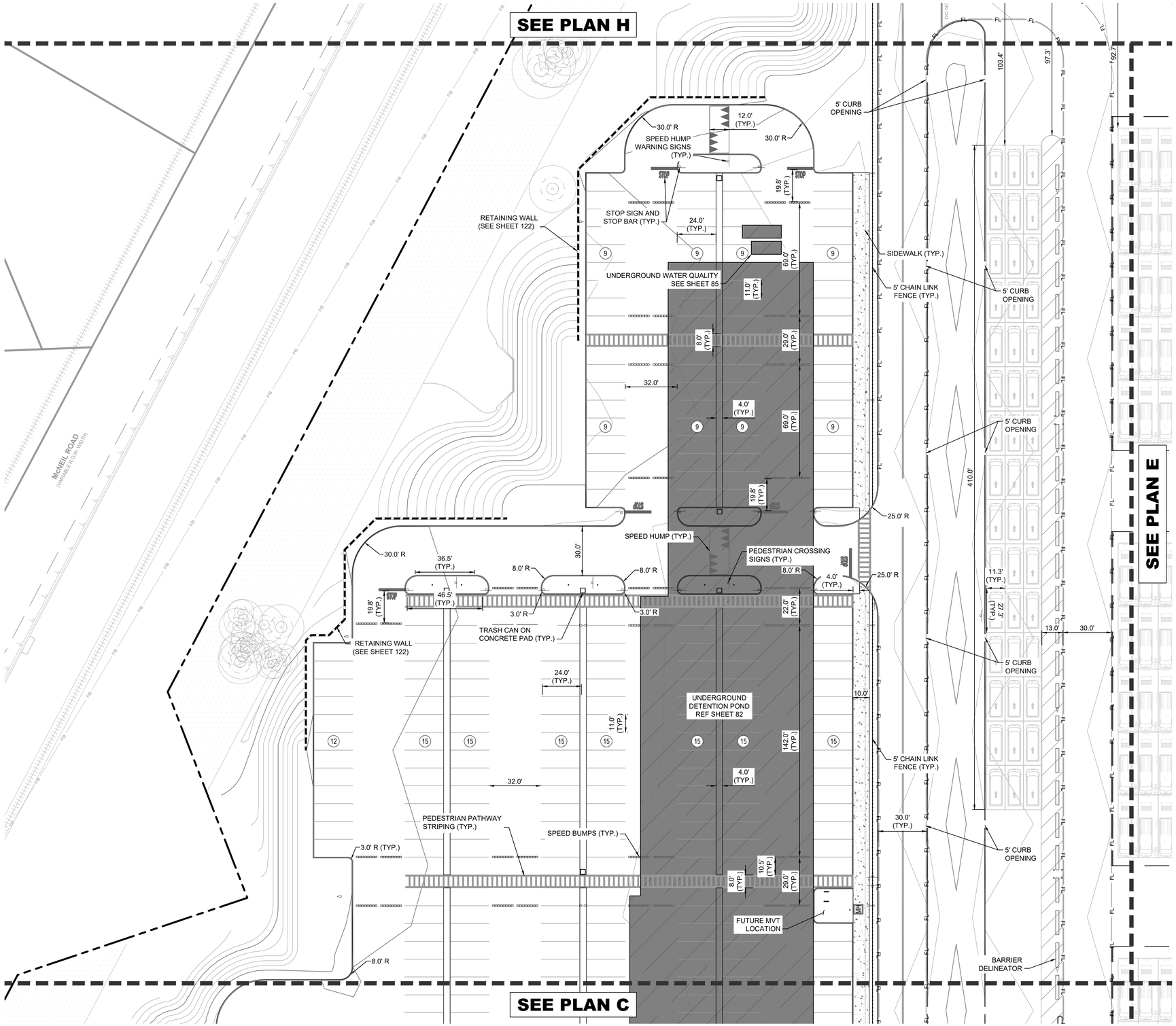
SITE PLAN E

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

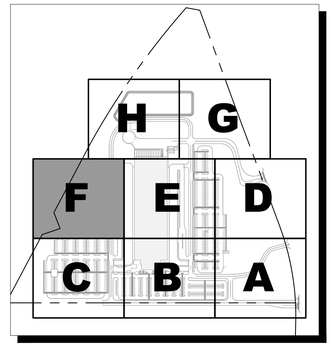
SHEET NUMBER
26 OF 204

SDP24-00001



LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- FIRE LANE MARKING STRIPING
- SITE LIGHTING
- ELECTRIC VEHICLE PARKING
- UNDERGROUND DETENTION POND
- PARKING STALL COUNT (REGULAR) — XX
- PARKING STALL COUNT (HANDICAP) — XX HC
- EXISTING TREE TO REMAIN — XXXXX



KEYMAP
N.T.S

NOTES:

1. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 13'-6" VERTICAL CLEARANCE.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS "FIRE ZONE/TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. SEC. 901.4.2
3. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 3108(c) AND ANSI A1171-1986-4.6.2.
4. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. ALL RADII TO BE 3' UNLESS OTHERWISE NOTED.
7. SEE OVERALL SITE PLAN ON SHEET 21 FOR ADDITIONAL NOTES.
8. RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT [IBC 105.2].
9. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

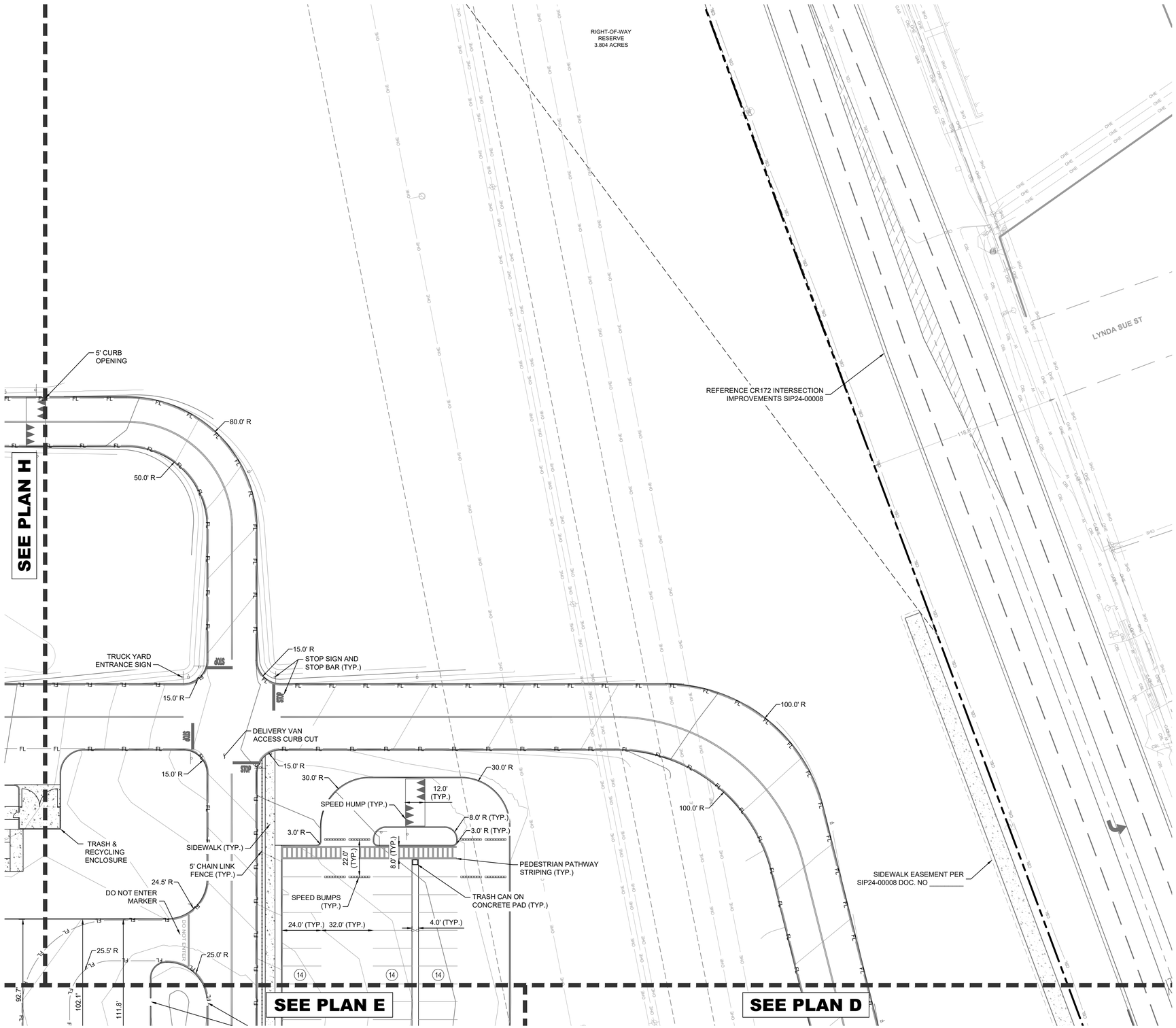
SITE PLAN F

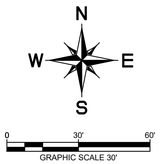
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
27 OF 204

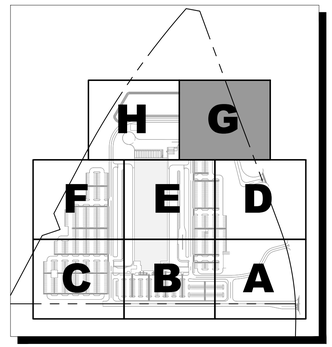
SDP24-00001





LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- FIRE LANE MARKING STRIPING
- SITE LIGHTING
- ELECTRIC VEHICLE PARKING
- UNDERGROUND DETENTION POND
- (XX) PARKING STALL COUNT (REGULAR)
- (XX) HC PARKING STALL COUNT (HANDICAP)
- XXXXX EXISTING TREE TO REMAIN



KEYMAP
N.T.S

NOTES:

1. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 13'-6" VERTICAL CLEARANCE.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS "FIRE ZONE/TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. SEC. 901.4.2
3. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 3108(c) AND ANSI A117.1-1986-4.6.2.
4. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. ALL RADII TO BE 3' UNLESS OTHERWISE NOTED.
7. SEE OVERALL SITE PLAN ON SHEET 21 FOR ADDITIONAL NOTES.
8. RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT [IBC 105.2].
9. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

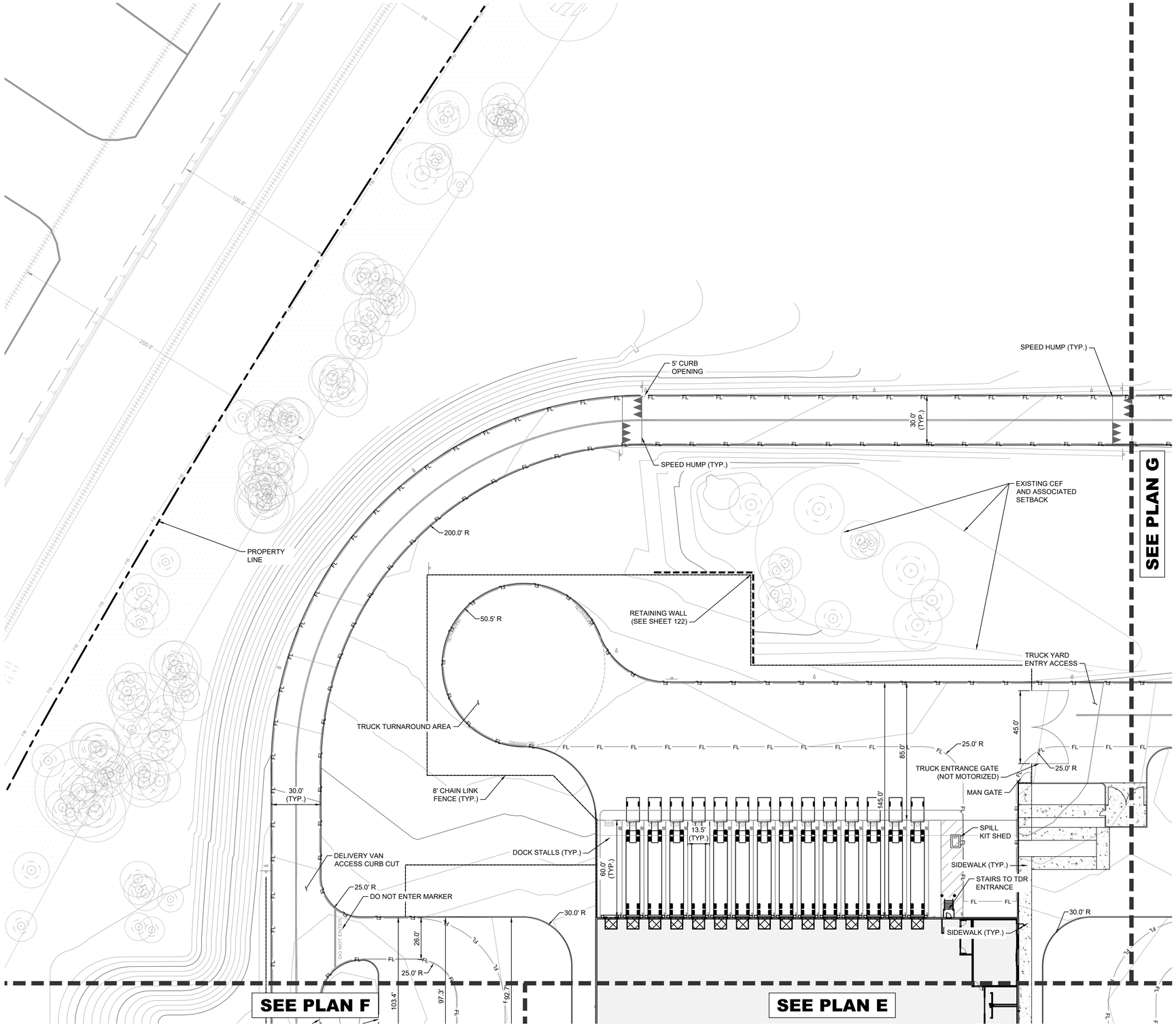
KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

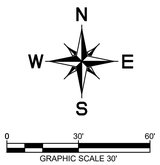
SITE PLAN G

2525 CR 172
INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
28 OF 204

SDP24-00001



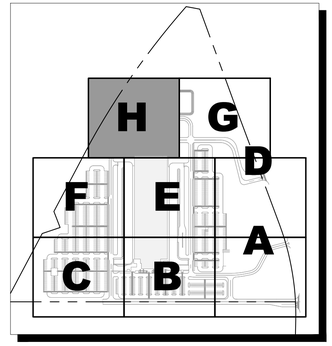


0 30' 60'

GRAPHIC SCALE 30'

LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- FIRE LANE MARKING STRIPING
- SITE LIGHTING
- ELECTRIC VEHICLE PARKING
- UNDERGROUND DETENTION POND
- XX — PARKING STALL COUNT (REGULAR)
- XX HC — PARKING STALL COUNT (HANDICAP)
- XXXXX — EXISTING TREE TO REMAIN



KEYMAP

N.T.S

NOTES:

1. ALL FIRE DEPARTMENT ACCESS DRIVES/ROADS TO HAVE A MINIMUM 13'-6" VERTICAL CLEARANCE.
2. ESTABLISH FIRE ZONES AS SHOWN ON SITE BY PAINTING CURB RED. STENCIL THE WORDS "FIRE ZONE/TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST 3 INCHES HIGH AT 35-FOOT INTERVALS ALONG THE CURB. ALSO, SIGNS SHALL BE POSTED AT BOTH ENDS OF A FIRE ZONE. ALTERNATE MARKING OF THE FIRE LANES MAY BE APPROVED BY THE FIRE CHIEF, PROVIDED THE FIRE LANES ARE CLEARLY IDENTIFIED AT BOTH ENDS AND AT INTERVALS NOT TO EXCEED 35 FEET. SEC. 901.4.2
3. EVERY HANDICAP ACCESSIBLE PARKING SPACE SHALL BE IDENTIFIED BY A SIGN CENTERED 5 FEET ABOVE THE PARKING SURFACE, AT THE HEAD OF THE PARKING SPACE. THE SIGN MUST INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND STATE RESERVED, OR EQUIVALENT LANGUAGE. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE AND SHALL MEET THE CRITERIA SET FORTH IN UBC, 3108(c) AND ANSI A1171-1986-4.6.2.
4. CONTRACTOR TO HAVE STAKING VERIFIED BY OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. ALL RADII TO BE 3' UNLESS OTHERWISE NOTED.
7. SEE OVERALL SITE PLAN ON SHEET 21 FOR ADDITIONAL NOTES.
8. RETAINING WALLS OVER FOUR FEET IN HEIGHT MEASURED FROM THE BOTTOM OF FOOTING TO THE TOP OF THE WALL SHALL BE ENGINEERED AND REQUIRE A SEPARATE BUILDING PERMIT [IBC 105.2].
9. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIALS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT 069284918			
DATE: JUNE 2024	SCALE: AS SHOWN	DESIGNED BY: MM	DRAWN BY: MM	CHECKED BY: NCB

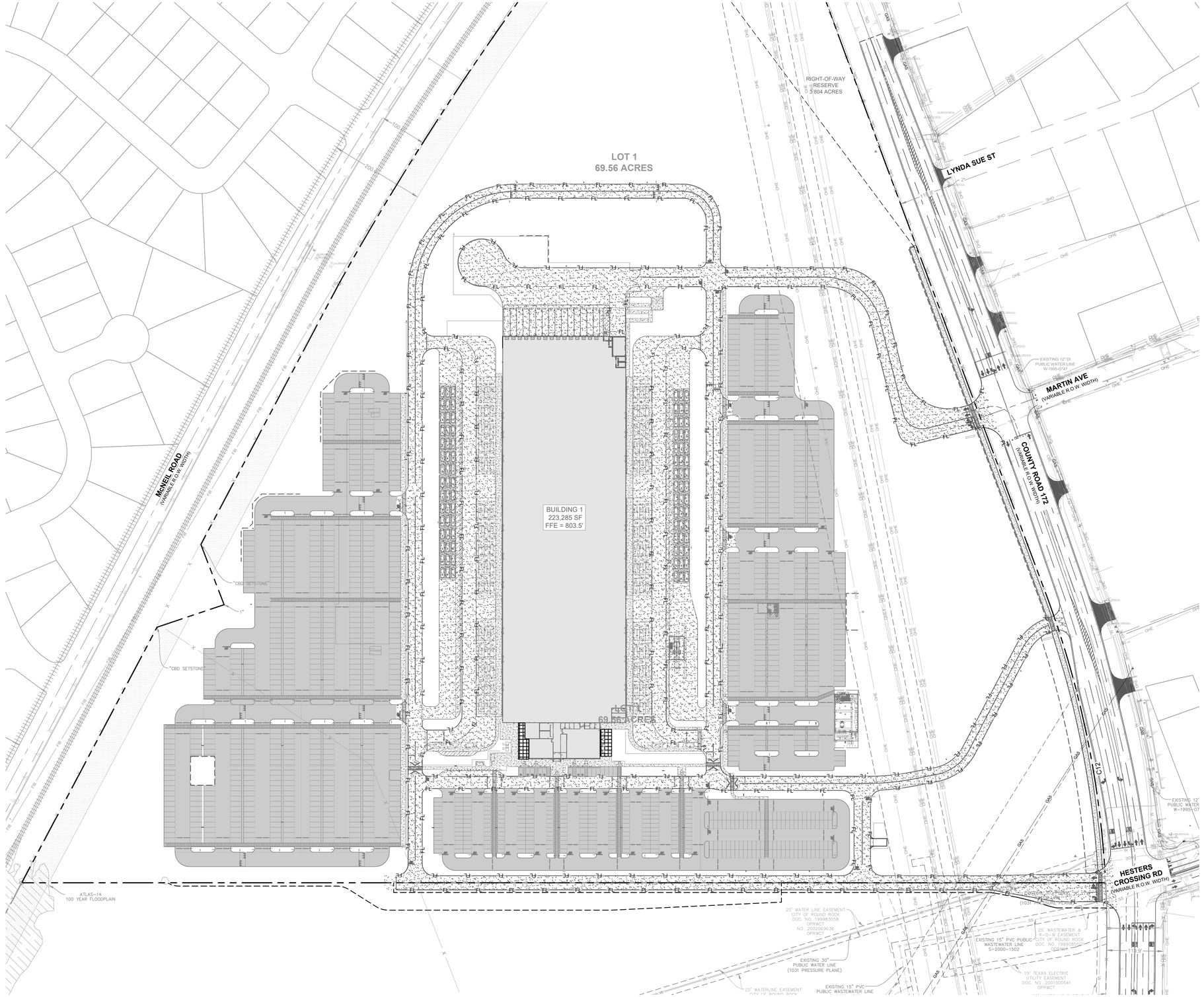
SITE PLAN H

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
29 OF 204

SDP24-00001



N
W E
S

0 100' 200'
GRAPHIC SCALE 100'

LEGEND

- PROPERTY LINE
- FL — FIRE LANE
- DECORATIVE PAVEMENT
- STANDARD DUTY CONCRETE PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- SIDEWALK PER CORR DETAIL ST-01.1

GEOTECH NOTES:

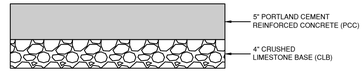
1. CONTRACTOR TO REFERENCE DIV 03 CONCRETE IN THE AMZL DESIGN CRITERIA FOR LOW CARBON CONCRETE.
2. FIRE LANES WILL BE HEAVY DUTY CONCRETE PAVEMENT. REFER TO THE GEOTECH REPORT NOTED BELOW FOR LOAD CAPACITY.
3. REFER TO SHEET 92 FOR ADDITIONAL PAVEMENT DETAILS.

REFER TO GEOTECHNICAL REPORT BY: **ECS SOUTHWEST, LLP**

GEOTECH PROJECT NUMBER: **17:6399-A**

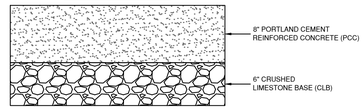
DATED: MARCH 22, 2024

STANDARD-DUTY RIGID PAVEMENT SECTION



NTS

HEAVY-DUTY RIGID PAVEMENT SECTION



NTS

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
5/22/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

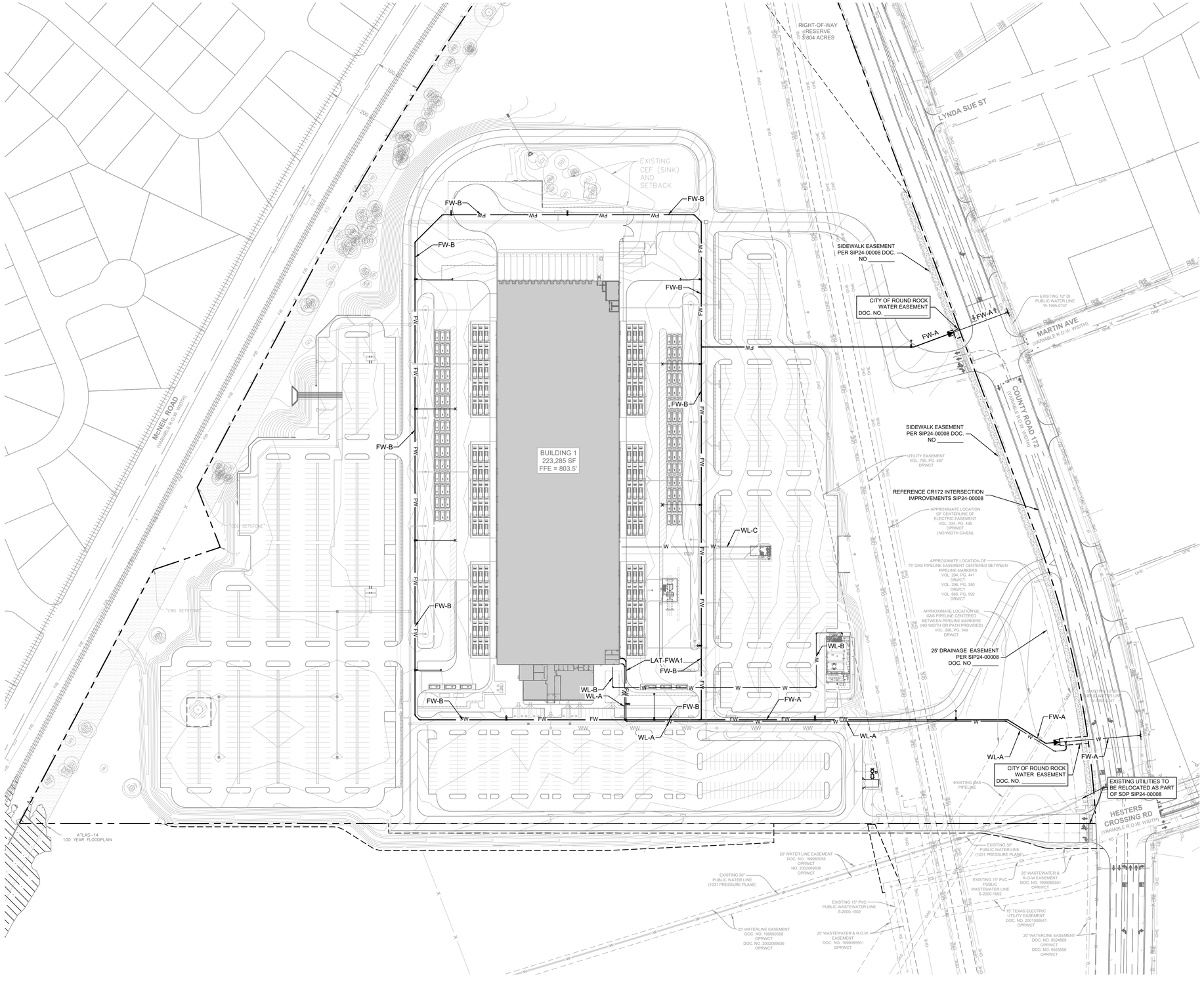
PAVING PLAN

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
35 OF 204

SDP24-00001



N
W E
S

0 100' 200'
GRAPHIC SCALE 100'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
W	WATER LINE
FW	FIRE WATER LINE
RW	RECLAIMED WATER LINE
	FIRE HYDRANT
	WATER GATE VALVE
	WATER BACKFLOW PREVENTOR
	WATER METER
	FIRE DEPARTMENT CONNECTION
FM	FORCE MAIN
WW	WASTEWATER LINE
WW	WASTEWATER MANHOLE
	WASTEWATER CLEANOUT
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
D	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
W	EXISTING WATER LINE
SS	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
WW	EXISTING WASTEWATER MANHOLE

NOTES
1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL PIPE FITTINGS SHALL HAVE THRUST BLOCKING PER CORR WT-25.
3. ALL VALVES SHOWN ARE _____ BRAND.
4. ALL FIRE SERVICE LEADS SHALL BE DUCTIRE IRON.
5. ALL PVC WATER MAINS SHALL BE CONSTRUCTED OF C-900 DR-14.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
5/29/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

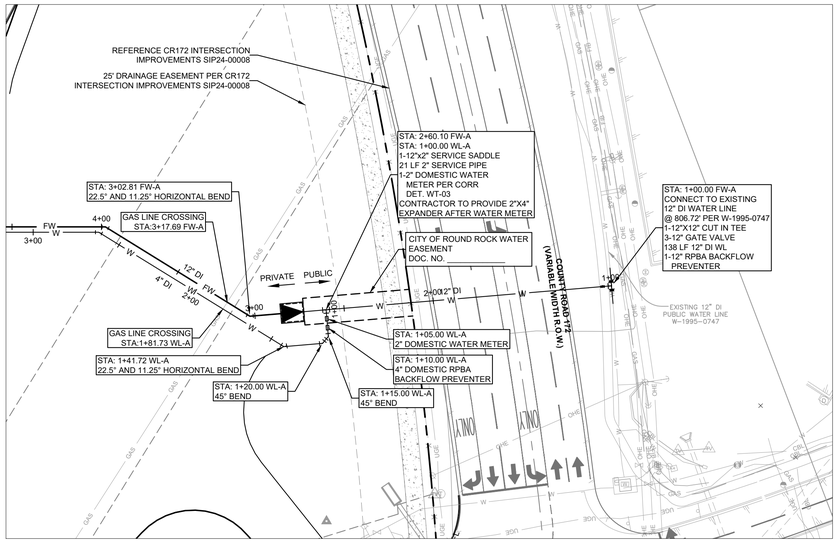
OVERALL WATER PLAN

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

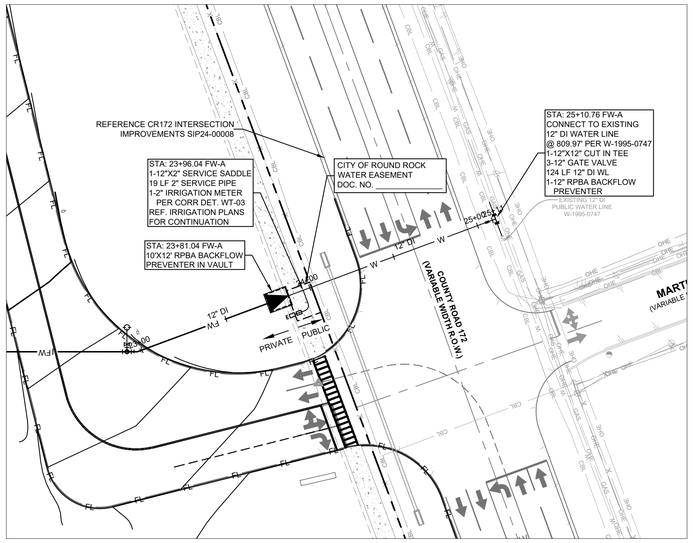
SHEET NUMBER
36 OF 204

SDP24-00001

PUBLIC WATER LINE CONNECTION
(SOUTH ON CR 172)



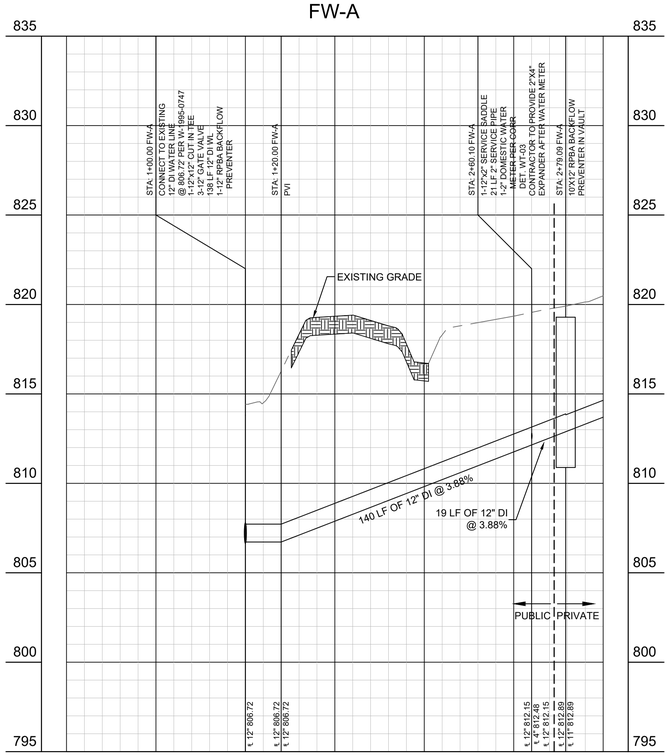
PUBLIC WATER LINE CONNECTION
(NORTH ON CR 172)



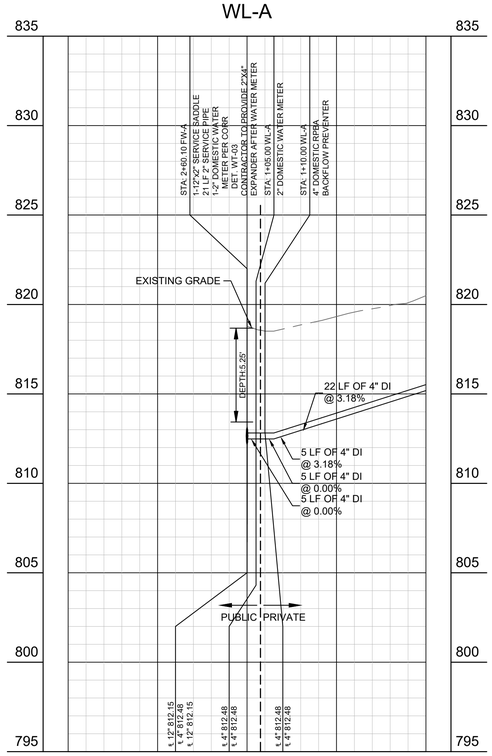
LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER LINE
- FIRE WATER LINE
- RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FORCE MAIN
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE

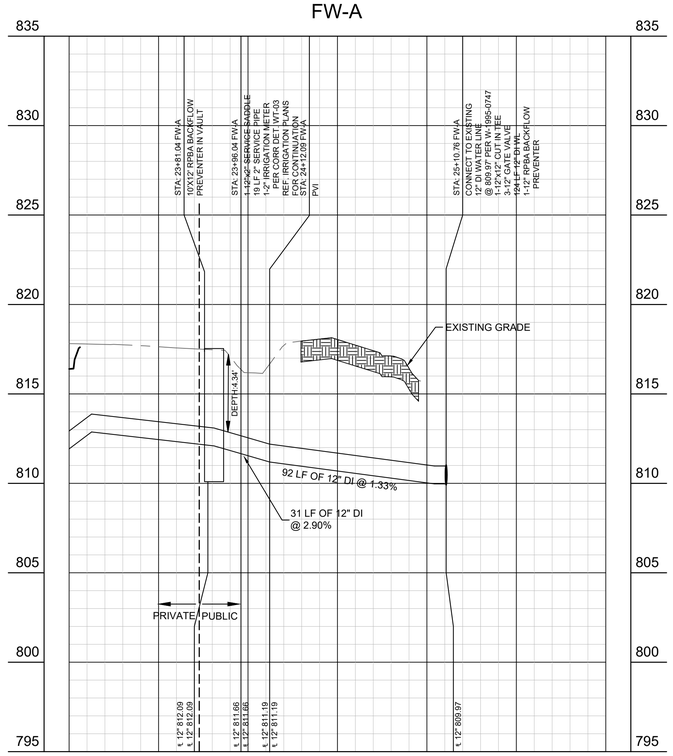
PUBLIC WATER LINE CONNECTION PROFILE
(SOUTH ON CR 172)



PUBLIC DOMESTC METER PROFILE
(SOUTH ON CR 172)



PUBLIC WATER LINE CONNECTION PROFILE
(NORTH ON CR 172)



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

NOTES
1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL PIPE FITTINGS SHALL HAVE THRUST BLOCKING PER CORR WT-25.
3. ALL VALVES SHOWN ARE _____ BRAND.
4. ALL FIRE SERVICE LEADS SHALL BE DUCTIRE IRON.
5. ALL PVC WATER MAINS SHALL BE CONSTRUCTED OF C-900 DR-14.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

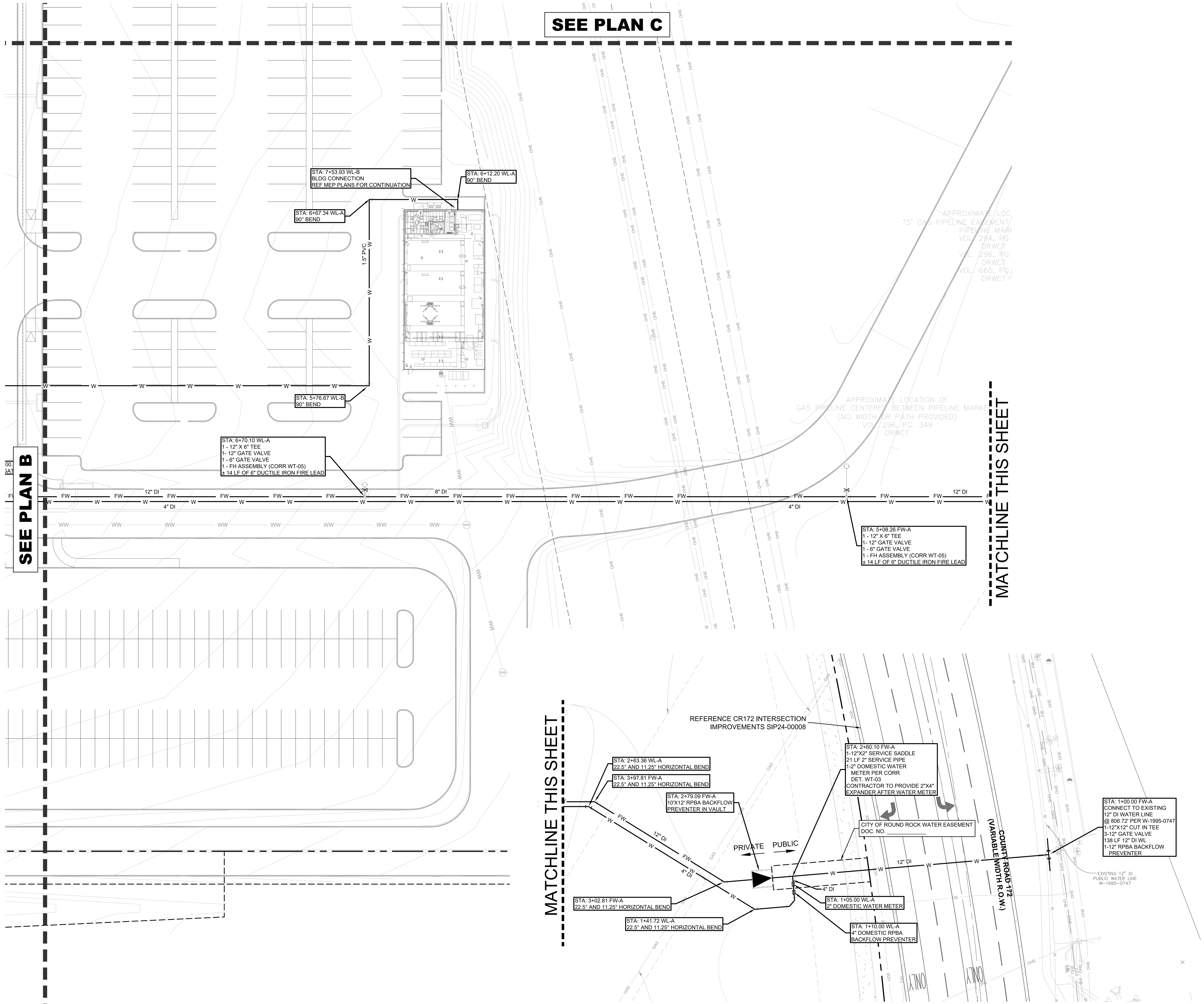
PUBLIC WATER PLAN AND PROFILE

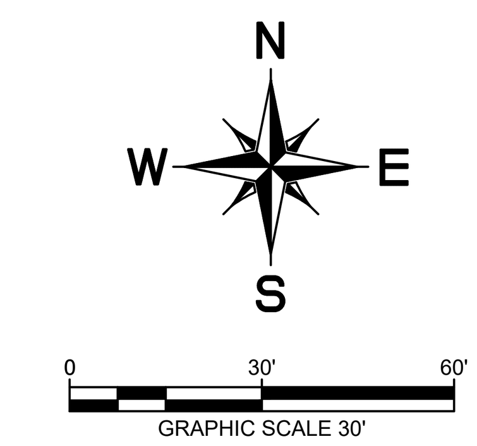
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
37 OF 204

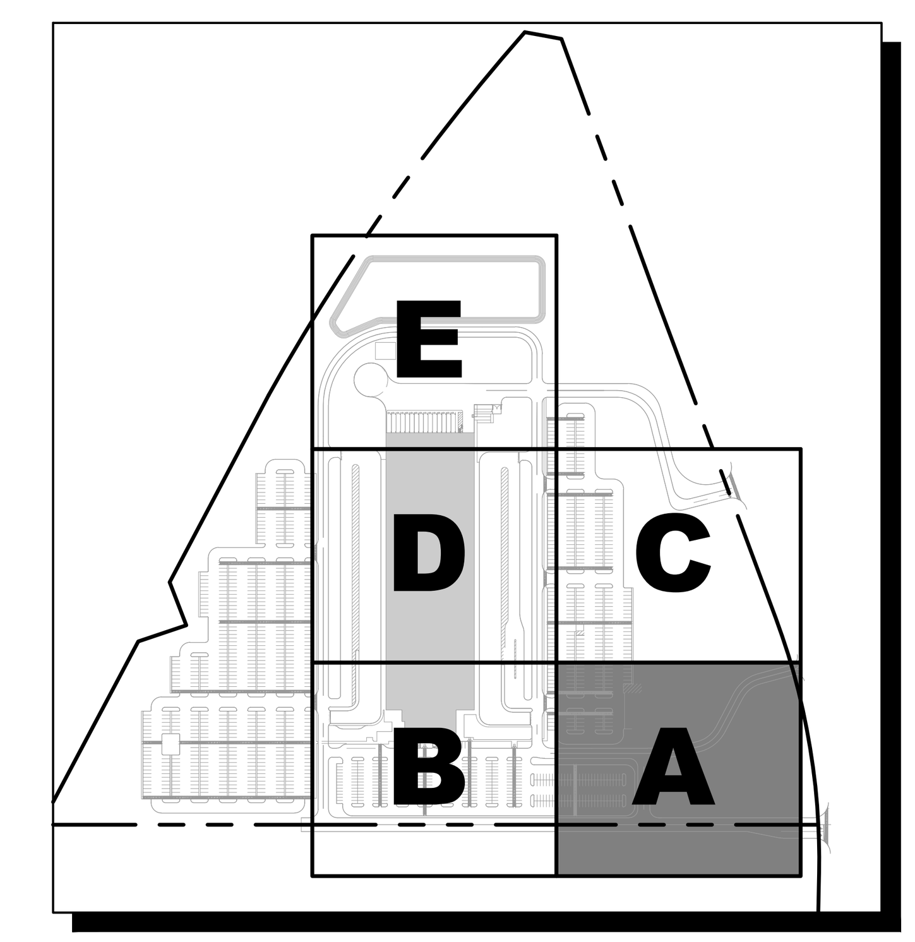
SDP24-00001





LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER LINE
- FIRE WATER LINE
- RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FORCE MAIN
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES

1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL PIPE FITTINGS SHALL HAVE THRUST BLOCKING PER CORR WT-25.
3. ALL VALVES SHOWN ARE _____ BRAND.
4. ALL FIRE SERVICE LEADS SHALL BE DUCTIRE IRON.
5. ALL PVC WATER MAINS SHALL BE CONSTRUCTED OF C-900 DR-14.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

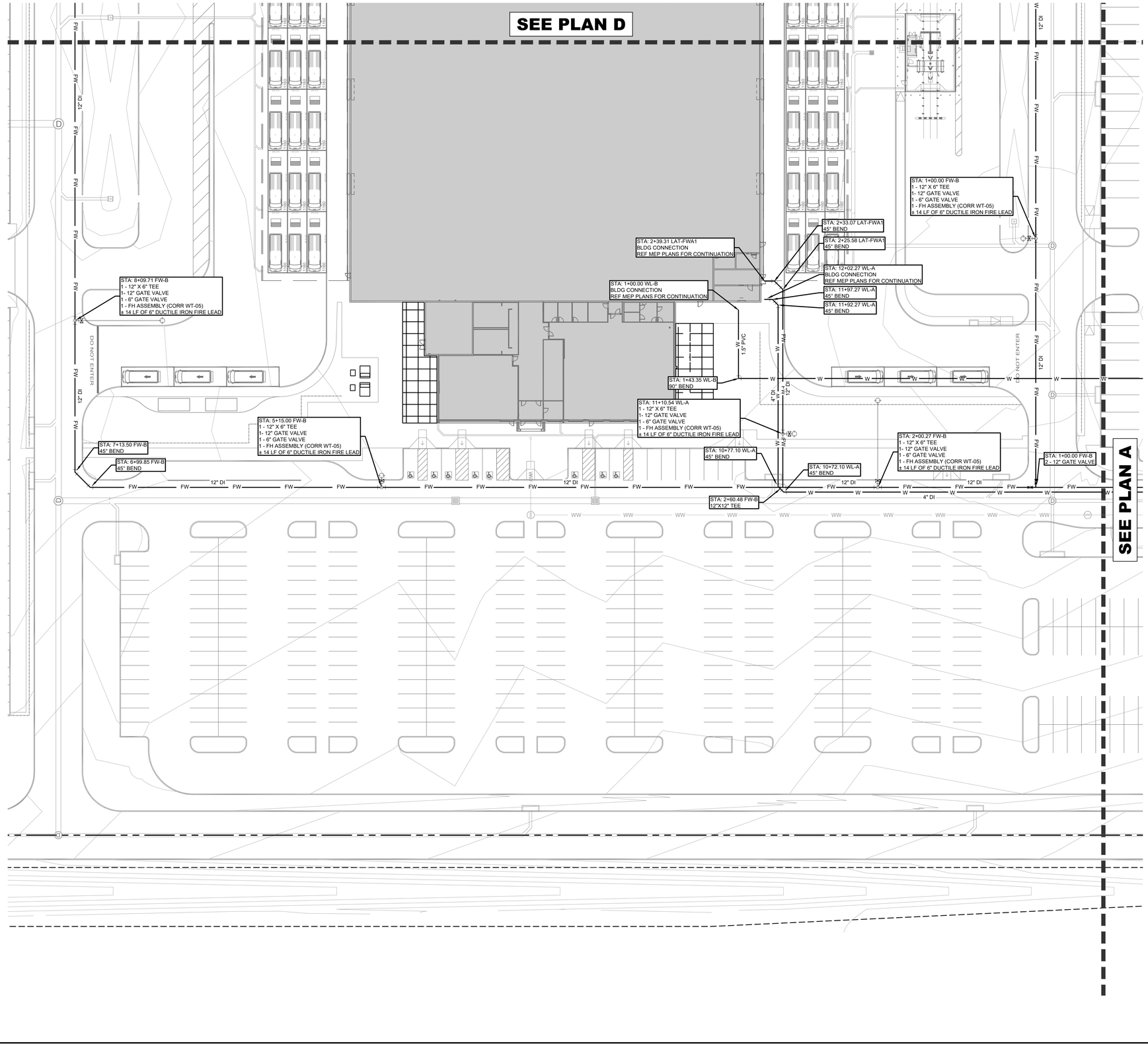
PRIVATE WATER PLAN A

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
38 OF 204

SDP24-00001



N

W E

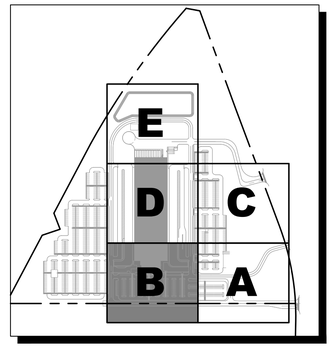
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
W	WATER LINE
FW	FIRE WATER LINE
RW	RECLAIMED WATER LINE
	FIRE HYDRANT
	WATER GATE VALVE
	WATER BACKFLOW PREVENTOR
	WATER METER
	FIRE DEPARTMENT CONNECTION
FM	FORCE MAIN
WW	WASTEWATER LINE
WW	WASTEWATER MANHOLE
	WASTEWATER CLEANOUT
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
D	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
W	EXISTING WATER LINE
SS	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
WW	EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL PIPE FITTINGS SHALL HAVE THRUST BLOCKING PER CORR WT-25.
3. ALL VALVES SHOWN ARE _____ BRAND.
4. ALL FIRE SERVICE LEADS SHALL BE DUCTIRE IRON.
5. ALL PVC WATER MAINS SHALL BE CONSTRUCTED OF C-900 DR-14.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

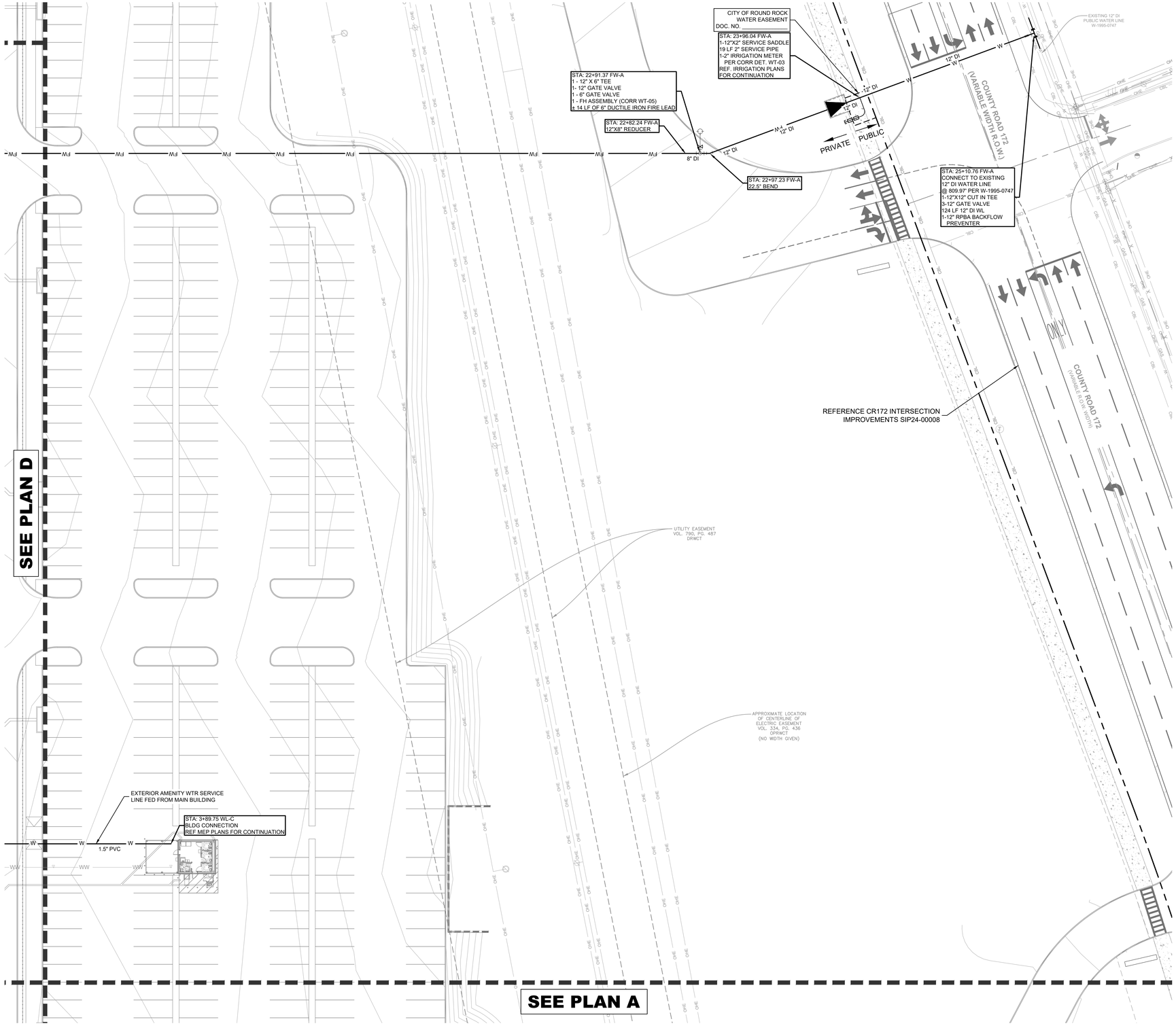
PRIVATE WATER PLAN B

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

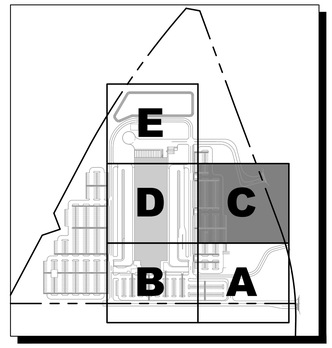
SHEET NUMBER
39 OF 204

SDP24-00001



LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
W	WATER LINE
FW	FIRE WATER LINE
RW	RECLAIMED WATER LINE
	FIRE HYDRANT
	WATER GATE VALVE
	WATER BACKFLOW PREVENTOR
	WATER METER
	FIRE DEPARTMENT CONNECTION
FM	FORCE MAIN
WW	WASTEWATER LINE
WW	WASTEWATER MANHOLE
	WASTEWATER CLEANOUT
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
D	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
W	EXISTING WATER LINE
SS	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
WW	EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL PIPE FITTINGS SHALL HAVE THRUST BLOCKING PER CORR WT-25.
3. ALL VALVES SHOWN ARE BRAND.
4. ALL FIRE SERVICE LEADS SHALL BE DUCTIRE IRON.
5. ALL PVC WATER MAINS SHALL BE CONSTRUCTED OF C-900 DR-14.

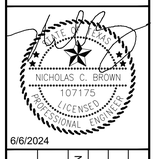
BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928



6/6/2024

KHA PROJECT 069284918	DATE JUNE 2024	SCALE: AS SHOWN	DESIGNED BY: MM	DRAWN BY: MM	CHECKED BY: NCB

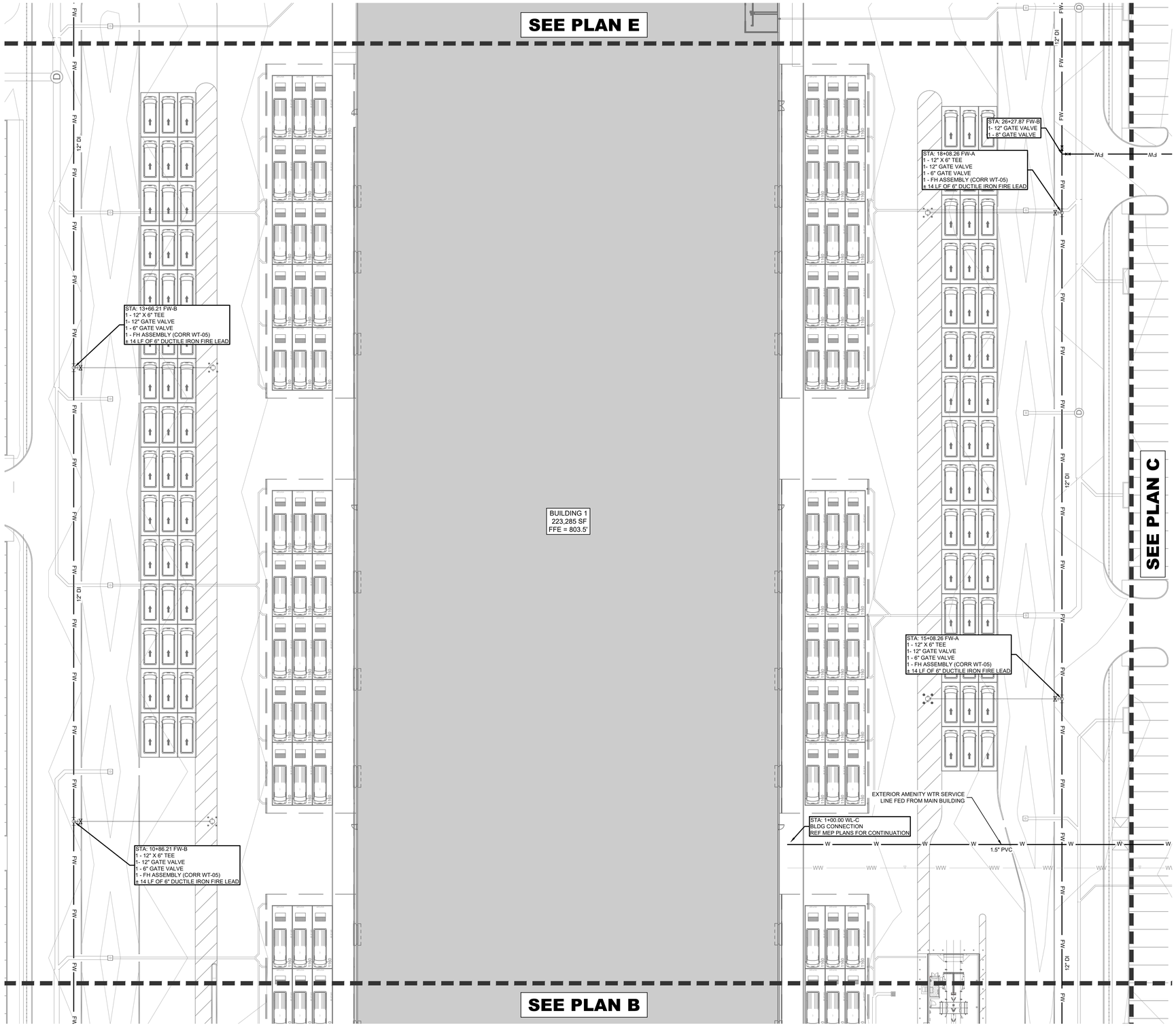
PRIVATE WATER PLAN C

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
40 OF 204

SDP24-00001



N

W E

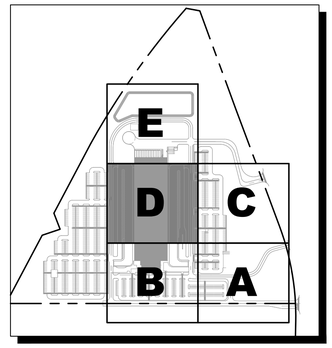
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
W	WATER LINE
FW	FIRE WATER LINE
RW	RECLAIMED WATER LINE
	FIRE HYDRANT
	WATER GATE VALVE
	WATER BACKFLOW PREVENTOR
	WATER METER
	FIRE DEPARTMENT CONNECTION
FM	FORCE MAIN
WW	WASTEWATER LINE
WW	WASTEWATER MANHOLE
CO	WASTEWATER CLEANOUT
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
D	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
W	EXISTING WATER LINE
SS	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
WW	EXISTING WASTEWATER MANHOLE



KEYMAP

N.T.S

NOTES

1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL PIPE FITTINGS SHALL HAVE THRUST BLOCKING PER CORR WT-25.
3. ALL VALVES SHOWN ARE BRAND.
4. ALL FIRE SERVICE LEADS SHALL BE DUCTIRE IRON.
5. ALL PVC WATER MAINS SHALL BE CONSTRUCTED OF C-900 DR-14.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER

6/6/2024

KHA PROJECT 069284918			
DATE: JUNE 2024	SCALE:	AS SHOWN	
	DESIGNED BY:	MM	
	DRAWN BY:	MM	
	CHECKED BY:	NCB	

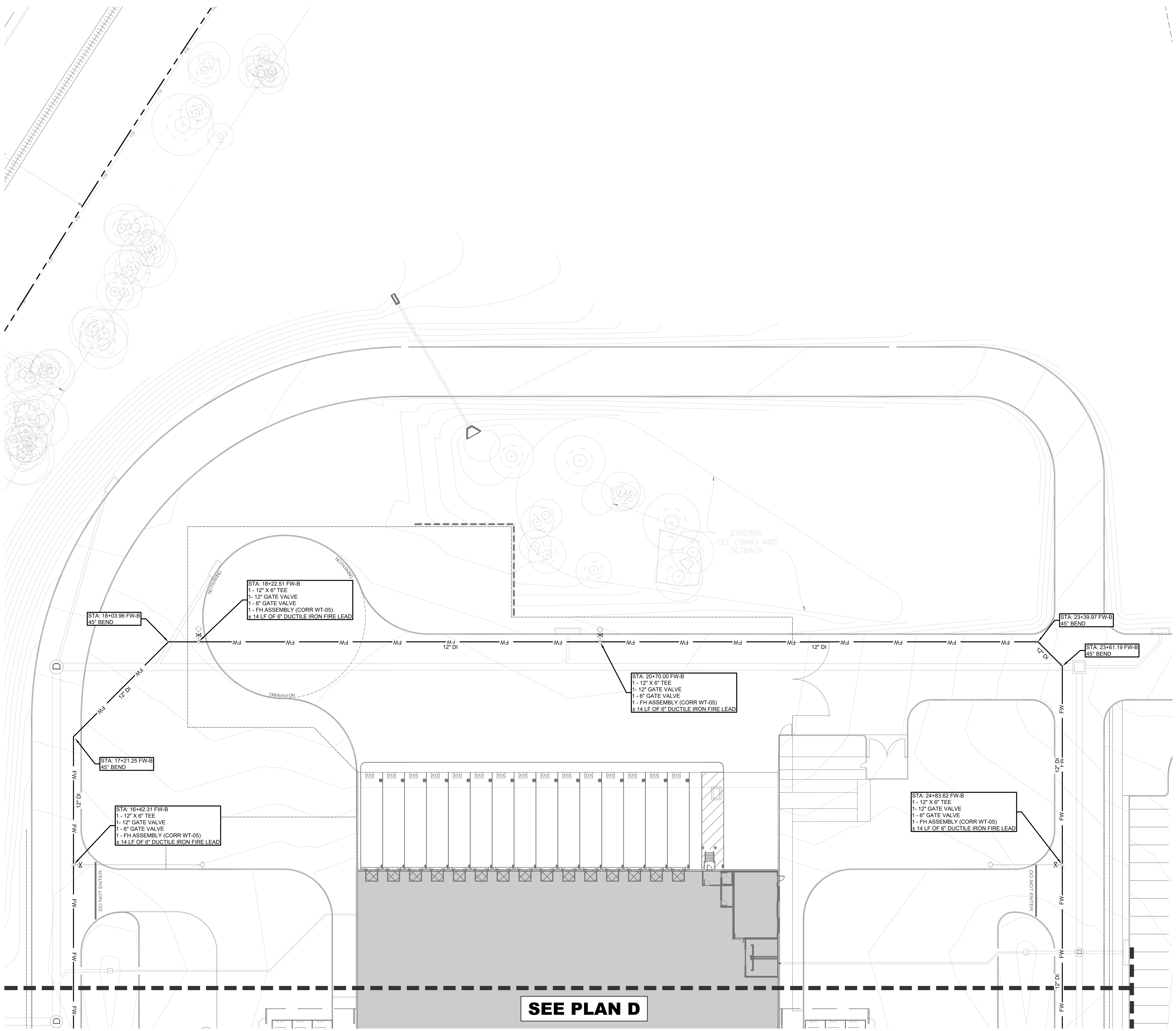
PRIVATE WATER PLAN D

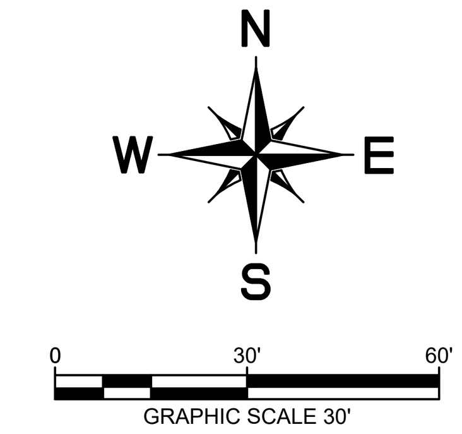
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
41 OF 204

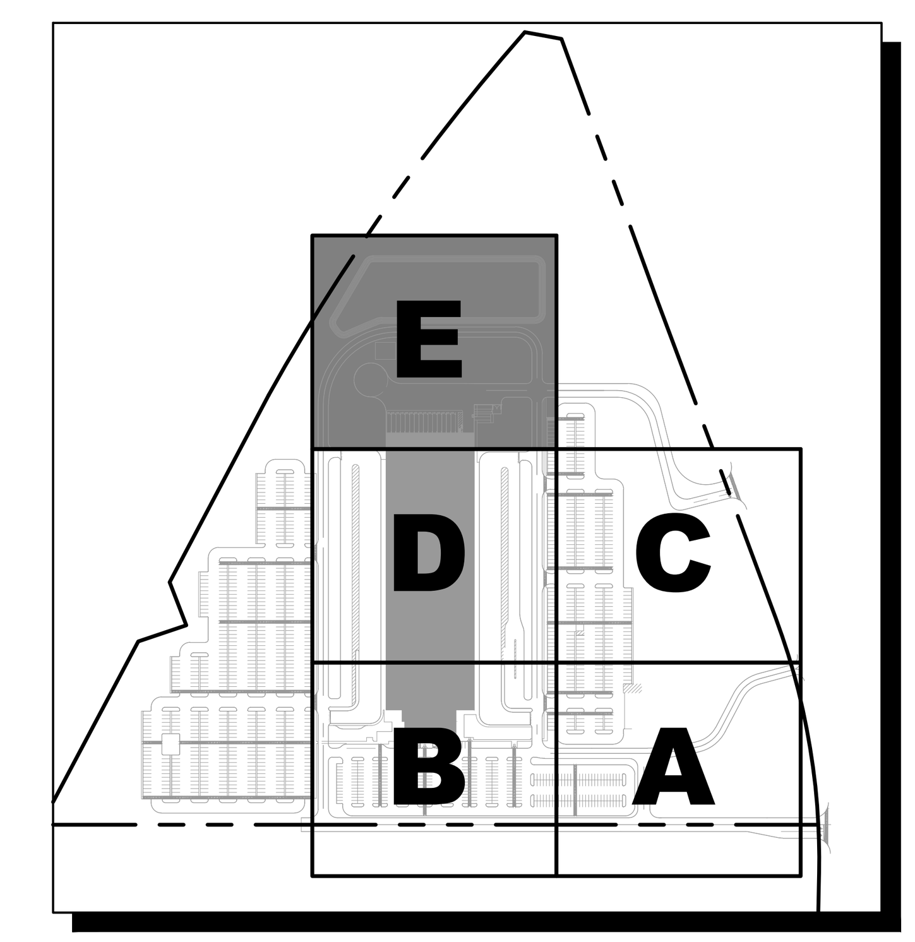
SDP24-00001





LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER LINE
- FIRE WATER LINE
- RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FORCE MAIN
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL PIPE FITTINGS SHALL HAVE THRUST BLOCKING PER CORR WT-25.
3. ALL VALVES SHOWN ARE _____ BRAND.
4. ALL FIRE SERVICE LEADS SHALL BE DUCTIRE IRON.
5. ALL PVC WATER MAINS SHALL BE CONSTRUCTED OF C-900 DR-14.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

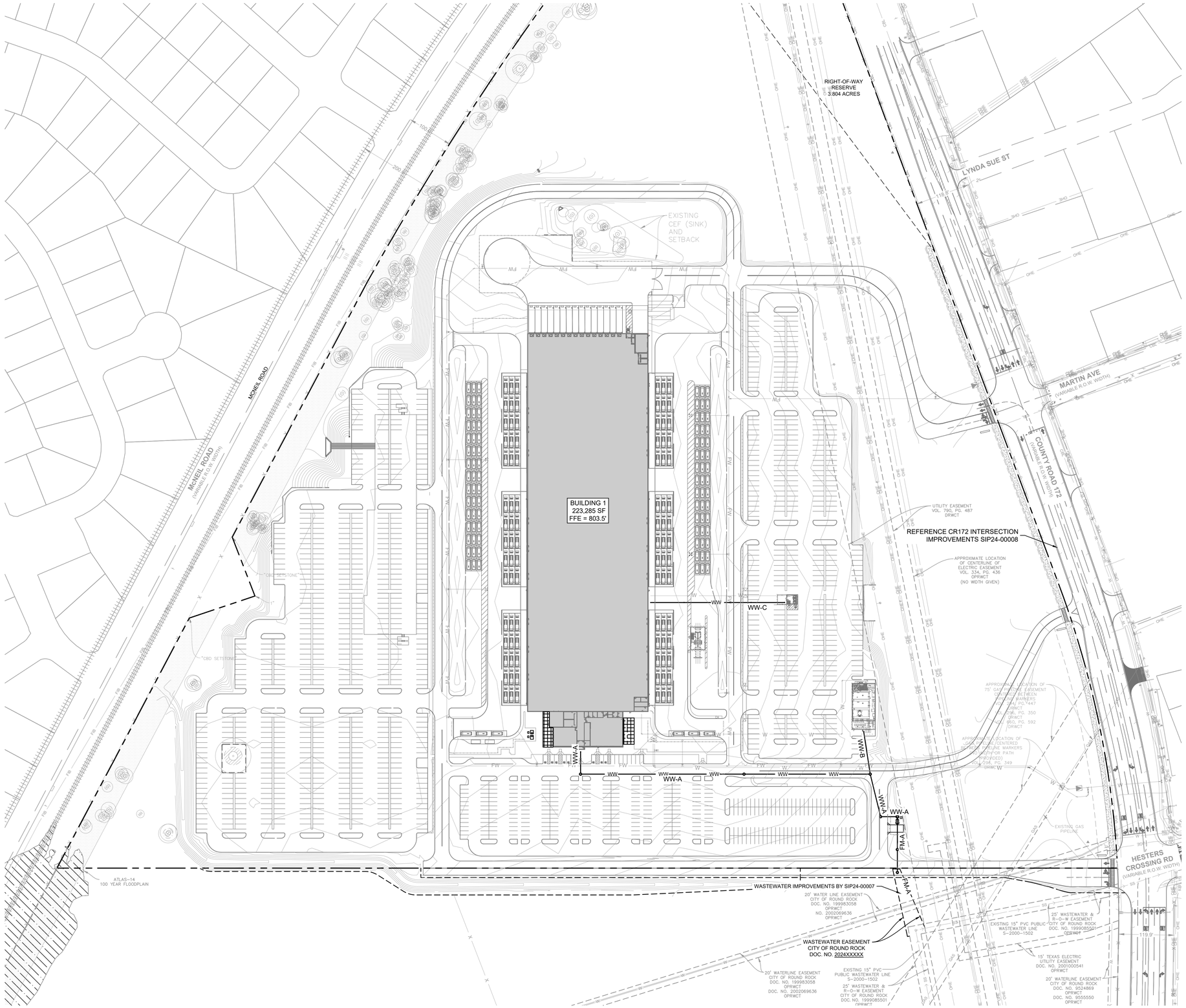
KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

PRIVATE WATER PLAN E

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
42 OF 204

SDP24-00001



N
W E
S

0 100' 200'
GRAPHIC SCALE 100'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	PROPOSED MAJOR CONTOUR
XXX	PROPOSED MINOR CONTOUR
W	PROPOSED WATER LINE
FW	PROPOSED FIRE WATER LINE
RW	PROPOSED RECLAIMED WATER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED WATER GATE VALVE
	PROPOSED WATER BACKFLOW PREVENTOR
	PROPOSED WATER METER
	PROPOSED FIRE DEPARTMENT CONNECTION
FM	PROPOSED FORCE MAIN
WW	PROPOSED WASTEWATER LINE
WW	PROPOSED WASTEWATER MANHOLE
	PROPOSED WASTEWATER CLEANOUT
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM GRATE INLET
	PROPOSED STORM HEADWALL
D	PROPOSED STORM MANHOLE
	PROPOSED STORM JUNCTION BOX
	PROPOSED STORM AREA INLET
	PROPOSED STORM CURB INLET
W	EXISTING WATER LINE
SS	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
WW	EXISTING WASTEWATER MANHOLE

NOTES
1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL MANHOLES SHALL BE COATED AND VACUMM TESTED.
3. ALL WASETEWATER LINES ARE TO BE CONSTRUCTED OF SDR 26
4. ALL SEGMENTS OF PIPE LOCATED IN ENCASEMENT SHALL BE FULLY RESTRAINED.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER

6/6/2024

KHA PROJECT 060284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

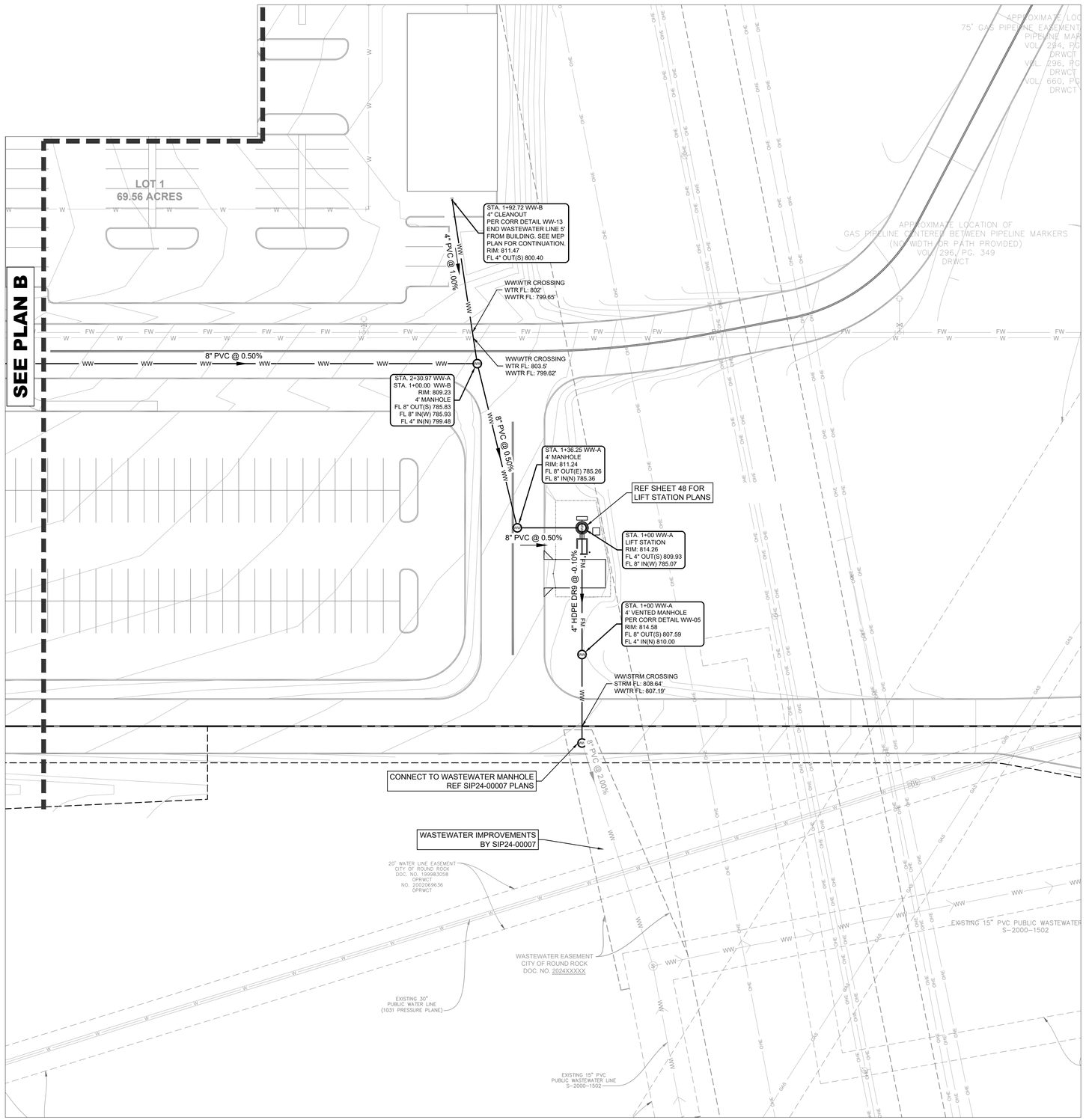
OVERALL WASTEWATER PLAN

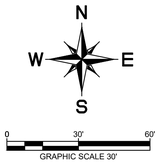
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
43 OF 204

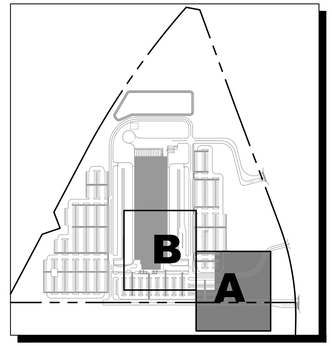
SDP24-00001





LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	PROPOSED MAJOR CONTOUR
XXX	PROPOSED MINOR CONTOUR
W	PROPOSED WATER LINE
FW	PROPOSED FIRE WATER LINE
RW	PROPOSED RECLAIMED WATER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED WATER GATE VALVE
	PROPOSED WATER BACKFLOW PREVENTOR
	PROPOSED WATER METER
	PROPOSED FIRE DEPARTMENT CONNECTION
FM	PROPOSED FORCE MAIN
WW	PROPOSED WASTEWATER LINE
WW	PROPOSED WASTEWATER MANHOLE
	PROPOSED WASTEWATER CLEANOUT
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM GRATE INLET
	PROPOSED STORM HEADWALL
D	PROPOSED STORM MANHOLE
	PROPOSED STORM JUNCTION BOX
	PROPOSED STORM AREA INLET
	PROPOSED STORM CURB INLET
W	EXISTING WATER LINE
SS	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
WW	EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL MANHOLES SHALL BE COATED AND VACUMM TESTED.
3. ALL WASETEWATER LINES ARE TO BE CONSTRUCTED OF SDR 26
4. ALL SEGMENTS OF PIPE LOCATED IN ENCASEMENT SHALL BE FULLY RESTRAINED.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

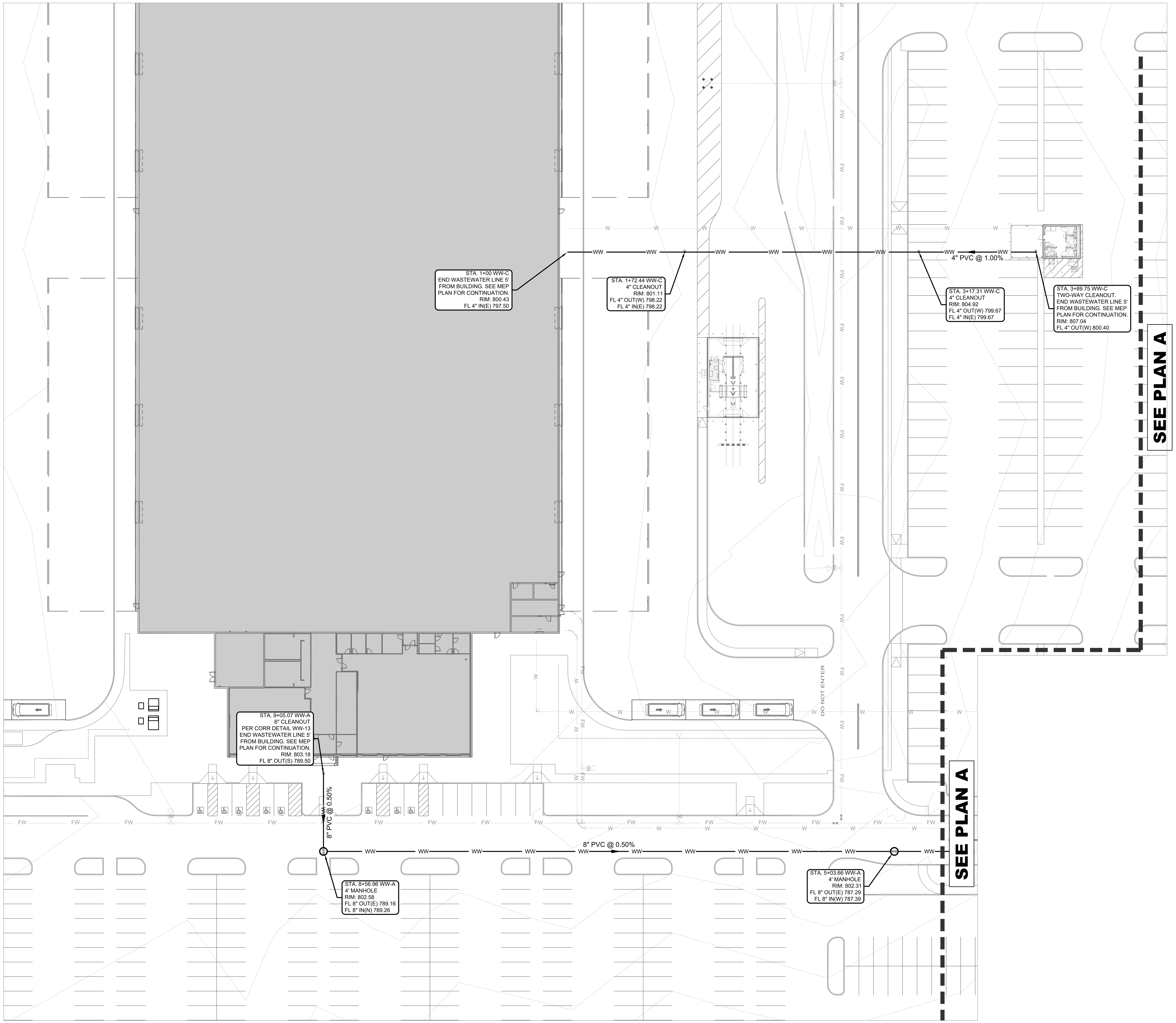
PRIVATE WASTEWATER PLAN A

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
44 OF 204

SDP24-00001

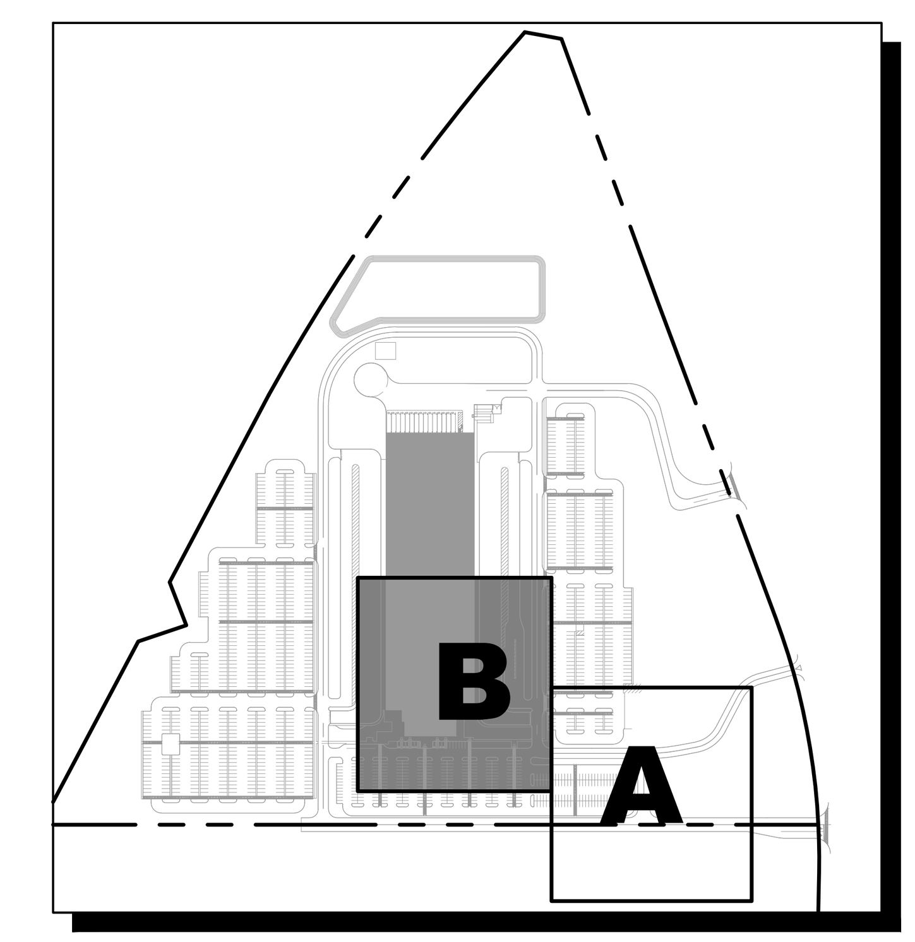


N
W E
S

0 30' 60'
GRAPHIC SCALE 30'

LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER LINE
- PROPOSED FIRE WATER LINE
- PROPOSED RECLAIMED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER GATE VALVE
- PROPOSED WATER BACKFLOW PREVENTOR
- PROPOSED WATER METER
- PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED FORCE MAIN
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM GRATE INLET
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRIC, CABLE AND TELECOMMUNICATIONS SHALL TRAVERSE UNDERNEATH CITY INFRASTRUCTURE. THIS INCLUDES, BUT IS NOT LIMITED TO WATER LINES, WASTEWATER LINES AND STORM SEWER, WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18".
2. ALL MANHOLES SHALL BE COATED AND VACUMM TESTED.
3. ALL WASETEWATER LINES ARE TO BE CONSTRUCTED OF SDR 26
4. ALL SEGMENTS OF PIPE LOCATED IN ENCASEMENT SHALL BE FULLY RESTRAINED.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

PRIVATE WASTEWATER PLAN B

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SDP24-00001

GENERAL NOTES

1. CONFIGURATIONS AND DIMENSIONS SHOWN ARE BASED ON THE EQUIPMENTS SPECIFIED. THE CONTRACTOR SHALL VERIFY THE LAYOUT AND ALL DIMENSIONS PRIOR TO FABRICATION.
2. ALL COUPLINGS SHALL BE EPOXY COATED STEEL AND SHALL BE DRESSER, SMITH-BLAIR, OR EQUAL. COUPLINGS SHALL BE RESTRAINED WITH A THRUST HARNESS DESIGNED IN ACCORDANCE WITH AWWA M-11.
3. ALL PIPING WITHIN WET WELL AND VALVE VAULT SHALL BE SPECIAL THICKNESS CLASS 53 EPOXY LINED (PROTECTO 401) DUCTILE IRON PIPE.
4. ALL BURIED PIPE SHALL BE POLYWRAPPED DUCTILE IRON PRESSURE CLASS 350 PUSH JOINT PIPE WITH JOINT RESTRAINT GASKETS.
5. ALL METALS WITHIN THE WET WELL, INCLUDING FLANGE BOLTS, SHALL BE STAINLESS STEEL, UNLESS OTHERWISE INDICATED.
6. THE EDGE OF EXPOSED CONCRETE SLABS SHALL RECEIVE A 3/4" CHAMFER.
7. REINFORCED STEEL SHALL BE GRADE 60.
8. ALL VENTS SHALL HAVE SCREENS INSTALLED OVER OPENINGS AND SHALL BE 304 STAINLESS STEEL - 16 MESH. OPENINGS SHALL BE A MINIMUM OF 12" ABOVE THE SLAB.
9. THE HIGH LEVEL ALARM SHALL ACTIVATE A FLASHING RED LIGHT TO BE MOUNTED ON THE ROOF OF THE ELECTRICAL SHELTER. THE CONTRACTOR SHALL INSTALL METAL INFORMATION SIGN AT OR NEAR THE LIFT STATION ENTRY GATE, VISIBLE TO THE PUBLIC.
10. ALL PENETRATIONS SHALL BE SEALED WATER AND GAS TIGHT PER APPROVED METHODS.
11. FORCEMAIN TO CONTINUE AT THE SHOWN FLOWLINE UNTIL IT CONNECTS WITH THE FORCEMAIN SHOWN ON SHEET 44.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OF THE NECESSARY WASTEWATER CONNECTIONS TO THE SITE. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS PRIOR TO CONNECTING TO ANY EXISTING LINE. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION.
13. CONTRACTOR SHALL USE KENNEDY VALVE CO. KS-RW GATYE VALVES OR APPROVED EQUAL IN ACCORDANCE WITH AWWA C517.
14. CONTRACTOR SHALL USE VAL-MATIC SWING-FLEX CHECK VALVE OR APPROVED EQUAL IN ACCORDANCE WITH AWWA C508. CHECK VALVES SHOULD BE SUITABLE FOR DIRECT BURY.
15. A CHECK VALVE MUST BE A SWING TYPE VALVE WITH AN EXTERNAL LEVER OR EXTERNAL POSITION INDICATOR TO SHOW ITS OPEN AND CLOSED POSITIONS.
16. AN ISOLATION VALVE MUST INCLUDE AN EXTERNAL POSITION INDICATOR TO SHOW ITS OPEN AND CLOSED POSITIONS, UNLESS A FULL-CLOSING VALVE IS A RISING-STEM GATE VALVE.
17. CONTRACTOR SHALL USE ARI D-020 COMBINATION AIR VALVE OR APPROVED EQUAL.
18. CONFIGURATIONS AND DIMENSIONS SHOWN ARE BASED ON THE EQUIPMENT SPECIFIED. THE CONTRACTOR SHALL VERIFY THE LAYOUT AND ALL DIMENSIONS PRIOR TO CONSTRUCTION.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE STRUCTURAL DESIGN FOR BRACING THE J-VENT SYSTEM.
20. INSTALL ISOLATION KITS BETWEEN DISSIMILAR METAL PIPING.
21. CONTRACTOR SHALL FOLLOW THE INSTALLATION INSTRUCTIONS PROVIDED BY THE SUPPLIER/MANUFACTURER.
22. UPON RECEIPT OF THE LIFT STATION SHIPMENT, INSPECT THE ENTIRE SHIPMENT FOR DAMAGE BEFORE THE LIFT STATION IS TAKEN OFF THE TRUCK. IF THERE IS DAMAGE, NOTE AS SPECIFICALLY AS POSSIBLE INCLUDING CLEAR PHOTOS OF DAMAGE ON THE BILL OF LADING AS TO ANY DAMAGE, THEN OFFLOAD. CONTACT THE SHIPPER AT ONCE AND HAVE THE BILL OF LADING WITH YOU.
23. CHECK VALVE, COUPLING, GATE VALVE AND AIR RELEASE VALVES (BALL VALVES MAY BE USED DEPENDING ON TYPE OF PUMPS).
24. PUMPS TO BE SELECTED BASED ON APPLICATION, FLOW, AND HEAD CONDITIONS OF FORCE MAIN.
25. SELECT BACKFILL MATERIAL FREE OF VOIDS, SHARP OBJECTS, OR OTHER DEBRIS.

PIPE AND FITTINGS

1. FORCE MAIN
   1.1. 4" HDPE DR9 FORCE MAIN WITH PRESSURE RATING OF 200 PSI SHALL BE USED.
2. LIFT STATION PIPING
   2.1. DIP PIPE SHALL BE IN ACCORDANCE WITH AWWA C111 AND AWWA C150.
   2.2. FITTINGS AND PIPE SHALL BE FLANGED
      2.2.1. FITTINGS IN ACCORDANCE WITH AWWA C153 AND AWWA C110.
      2.2.2. FLANGES: AWWA/ANSI C115/A21.15, ASME B16.1, CLASS 125
      2.2.3. BOLTS AND NUTS SHALL BE 316 STAINLESS.
   2.3. PIPE AND FITTINGS SHALL BE LINED WITH PROTECTO 401.
   2.4. PROVIDE POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH AWWA FOR BURIED DIP.

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR LIFT STATION EQUIPMENT, PIPING AND APPURTENANCES. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER FOR REVIEW PRIOR TO INSTALLATION, ALLOWING SUFFICIENT TIME FOR THE OWNER'S REVIEW AND RESPONSE.
2. CONTRACTOR SHALL SUBMIT DIMENSIONAL LAYOUT DRAWINGS AND PRODUCT DATA, CERTIFIED CORRECT FOR CONSTRUCTION, FOR REVIEW BY THE OWNER.
3. THE CONTRACTOR WILL MAKE SPECIFIC MENTION OF THOSE ITEMS THAT VARY FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS IN THE LETTER OF TRANSMITTAL.
4. THE CONTRACTOR WILL ASSIGN A SEQUENTIAL NUMBER TO EACH SUBMITTAL (1, 2, 3, ETC.). RE-SUBMITTALS WILL BE IDENTIFIED WITH THEIR ORIGINAL NUMBER FOLLOWED BY A SEQUENTIAL LETTER (A, B, C, ETC.). FOR EXAMPLE, SUBMITTAL 12-C IS THE THIRD RE-SUBMITTAL OF THE OF THE TWELFTH ITEM FOR THE PROJECT.
5. THE CONTRACTOR WILL NOT DELIVER TO THE SITE, STORE, OR INCORPORATE INTO THE WORK, ANY MATERIALS OR EQUIPMENT FOR WHICH APPROVED SUBMITTALS HAVE NOT BEEN OBTAINED.
6. OWNER'S REVIEW, APPROVAL, OR OTHER APPROPRIATE ACTION REGARDING CONTRACTOR'S SUBMISSIONS WILL BE ONLY TO CHECK CONFORMITY WITH THE DESIGN CONCEPT OF THE PROJECT AND FOR COMPLIANCE WITH THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS AND SHALL NOT EXTEND TO MEANS, METHODS, TECHNIQUES, DEQUENCES OR PROCEDURES OF CONSTRUCTION (EXCEPT WHERE A SPECIFIC MEANS, METHOD, TECHNIQUE, SEQUENCE OR PROCEDURE OF CONSTRUCTION IS INDICATED IN OR REQUIRED BY THE CONTRACT DOCUMENTS) OR TO SAFETY PRECAUTIONS OR PROGRAMS INCIDENT THERETO. THE REVIEW AND APPROVAL OF A SEPARATE COMPONENT ITEM WILL NOT INDICATE APPROVAL OF THE ASSEMBLY INTO WHICH THE ITEM IS FUNCTIONALLY INTEGRATED. CONTRACTOR SHALL MAKE CORRECTIONS REQUIRED BY OWNER, AND SHALL RETURN THE REQUIRED NUMBER OF CORRECTED COPIES OF SHOP DRAWINGS TO THE OWNER. CONTRACTOR MAY BE REQUIRED TO RESUBMIT AS REQUIRED REVISED SHOP DRAWINGS OR SAMPLES FOR FURTHER REVIEW AND APPROVAL. CONTRACTOR SHALL DIRECT SPECIFIC ATTENTION IN WRITING TO ANY NEW REVISIONS NOT SPECIFIED BY CONTRACTOR ON PREVIEW CONTRACTOR SUBMISSIONS.

LIFT STATION AND SUBMERSIBLE SEWAGE PUMPS

1. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, ELECTRICAL EQUIPMENT AND INCIDENTALS REQUIRED TO PROVIDE A LIFT STATION AS PROVIDED BY **MANSFIELD PUMP COMPANY. (JAMES MANSFIELD, 512-745-7647)** THE CONTRACTOR'S RESPONSIBILITIES ARE AS FOLLOWS: RECEIVING THE LIFT STATION AND OFF LOADING, EXCAVATION AND SETTING, ALL PLUMBING CONNECTIONS, ALL ELECTRICAL CONDUITS FROM THE WET WELL TO CONTROL PANEL, PROVIDE PROPER BACKFILL AND COMPACTION PROCEDURES. THE CONTRACTOR WILL BE REQUIRED TO LOWER THE PUMPS INTO PLACE AND CHECK FOR PROPER ROTATION. A STARTUP PROCEDURE FORM WILL BE PROVIDED AND IT MUST BE FILLED OUT AND RETURNED TO THE LIFT STATION SUPPLIER PRIOR TO THE OWNER'S POSSESSION DATE.
2. THE PUMP SHALL HAVE A FLANGED DISCHARGE ADAPTABLE TO 3" VERTICAL DISCHARGE AND BE CAPABLE OF HANDLING SANITARY SEWAGE AND ENABLING IT TO BE PUMPED OVER LONG DISTANCES OR HIGH VERTICAL LIFTS IN PIPELINES AS SMALL AS 3.00" IN DIAMETER.
3. THE CENTRIFUGAL PUMP SHALL BE EQUAL TO THE SERIES EBG-33. A PUMP SUBMERSIBLE TYPE AS MANUFACTURED BY GRUNDFOS WITH 4" IMPELLER OR APPROVED EQUAL. THE PUMP SHALL BE EXPLOSION-PROOF. THE CASTINGS SHALL BE CONSTRUCTED OF CAST IRON.
4. SUBMERSIBLE SEWAGE PUMP MATERIALS:
   4.1. PUMP CASE: CAST IRON, ASTM A48, CLASS 30
   4.2. MOTOR HOUSING: CAST IRON, ASTM A48, CLASS 30
   4.3. IMPELLER: CAST BRASS
   4.4. INTERMEDIATE HOUSING (BACKPLATE): CAST IRON, ASTM A48, CLASS 35B
   4.5. DISCHARGE BASE ELBOW: CAST IRON, ASTM A48, CLASS 35B
   4.6. PUMP/MOTOR SHAFT: ENTIRE SHAFT IS TO BE ASTM A276 TYPE 420 STAINLESS STEEL
   4.7. O-RINGS: NITRILE RUBBER (NBR)
   4.8. FASTENERS (INCLUDING IMPELLER FASTENER): 304 STAINLESS STEEL
   4.9. LOWER SEAL FACES: SILICON CARBIDE/SILICON CARBIDE
   4.10. UPPER SEAL FACES: SILICON CARBIDE STATIONARY/CARBON ROTATING
   4.11. GUIDE RAILS/CABLES AND MOUNTING BRACKETS: STAINLESS STEEL, ASTM A276 TYPE 316 (CABLES SHALL BE NYLON COATED)
   4.12. LIFTING CHAIN OR CABLE: STAINLESS STEEL, ASTM A276 TYPE 316
   4.13. OIL-ALL USES (SEAL LUBRICATION, ETC): ECOLOGICALLY SAFE, PARIFIN OR MINERAL BASE
   4.14. POWER/CONTROL CABLE JACKET: CHLOROPRENE WITH NON-WICKING FILLERS
5. THE MOTOR HOUSING SHALL BE FINNED AND AIR-FILLED TO DISSIPATE HEAT AND ENABLE THE UNIT TO OPERATE UNSUBMERGED WITHOUT DAMAGE TO THE MOTOR. ALL EXTERNAL-MATING PARTS SHALL BE MACHINED AND SEALED WITH A BUNA-N SQUARE RING. ALL FASTENERS EXPOSED TO THE LIQUID SHALL BE 300 SERIES STAINLESS STEEL. THE MOTOR SHALL BE PROTECTED ON THE TOP SIDE WITH AN ATTACHED SEALED JUNCTION BOX CHAMBER WHICH IN THE EVENT OF CORD DAMAGE WILL PREVENT MOISTURE WICKING INTO THE MOTOR HOUSING. THE MOTOR SHALL BE PROTECTED ON THE LOWER SIDE WITH A TANDEM MECHANICAL SEAL ARRANGEMENT WITH EACH SEAL HAVING A SEPARATE SPRING ASSEMBLY THE UPPER AND LOWER BALL BEARINGS SHALL BE CAPABLE OF HANDLING ALL THRUST LOADS. THE PUMP HOUSING HAVING A SEPARATE SPRING ASSEMBLY. THE UPPER AND LOWER BALL BEARINGS SHALL BE CAPABLE OF HANDLING ALL THRUST LOADS. THE PUMP HOUSING SHALL BE OF THE CONCENTRIC DESIGN THEREBY EQUALIZING THE PRESSURE FORCES INSIDE THE HOUSING, WHICH WILL EXTEND THE SERVICE LIFE OF THE SEALS AND BEARINGS. THE TOP CAP SHALL HAVE CAST IN LIFTING LUGS. THE MOTOR SHALL BE PROTECTED BY A MOISTURE DETECTION SYSTEM, WHICH WILL ACTIVATE AN ALARM CIRCUIT IF LIQUID IS EVER PRESENT IN THE UPPER JUNCTION CHAMBER OR LOWER SEAL CAVITY. THERMAL SENSORS LOCATED IN THE OIL-FILLED MOTOR HOUSING SHALL PROVIDE TEMPERATURE PROTECTION. PROVIDE THE AUTOMATIC REVERSING FEATURE, AVAILABLE FOR 3 PHASE MODELS, THAT ENABLE THE PUMP TO ROTATE IN BOTH CW AND CCW DIRECTION.
6. THE PUMP SHALL BE SUPPLIED WITH 49.2' MULTI-CONDUCTOR POWER CORD. IT SHALL BE SO TYPE CORD CAPABLE OF CONTINUED EXPOSURE TO THE PUMPED LIQUID. POWER CORD SHALL BE SIZED FOR THE RATED FULL LOAD AMP RATING OF THE PUMP IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
7. THE MOTOR SHALL BE FM LISTED FOR CLASS 1 DIVISION 1 GROUPS C&D, HAVE A CLASS F OR BETTER RATED DESIGN RATED FOR CONTINUOUS DUTY. THERMAL SENSORS LOCATED IN THE MOTOR HOUSING SHALL PROVIDE TEMPERATURE PROTECTION.
8. FURNISH UPPER AND LOWER BALL BEARINGS TO PROVIDE B10 LIFE OF, A MINIMUM 100,000 HOURS AT ALL ANTICIPATED AXIAL AND RADIAL LOADINGS.
9. PUMP SHALL HAVE A DUAL MECHANICAL SEAL CONFIGURATION WITH THE SEALS MOUNTED IN TANDEM. EACH SEAL ASSEMBLY WITH ITS OWN SPRING. PROVIDE SEALS THAT DO NOT REQUIRE ROUTINE MAINTENANCE OR ADJUSTMENT, BUT CAPABLE OF BEING REPLACED.
10. THE IMPELLER SHALL BE A NON-CLOG TYPE IMPELLER, CAPABLE OF PASSING 3" SPHERICAL SOLID. STATICALLY AND DYNAMICALLY BALANCED IMPELLERS ARE REQUIRED.
11. COMPONENTS REQUIRED FOR THE REPAIR OF THE PUMP SHALL BE READILY AVAILABLE WITHIN 24 HOURS. COMPONENTS SUCH AS MECHANICAL SEALS AND BEARINGS SHALL NOT BE OF A PROPRIETARY DESIGN AND BE AVAILABLE FROM LOCAL INDUSTRIAL SUPPLY HOUSES. SPECIAL TOOLS SHALL NOT BE REQUIRED TO SERVICE THE PUMP. A NETWORK OF SERVICE STATIONS SHALL BE AVAILABLE NATIONWIDE IN THOSE CASES WHERE SERVICE REQUIREMENTS ARE BEYOND THE COPE OF IN-HOUSE SERVICE MECHANICS.
12. THE TWO YEAR PRO-RATED WARRANTY FOR PERMANENT WASTEWATER LIFT STATIONS SHALL BE IN WRITING IN A PUBLISHED SERVICE BULLETIN. LABOR CHARGES FROM AN AUTHORIZED SERVICE STATION FOR REPAIRS WILL BE INCLUDED IN THIS WARRANTY AGREEMENT DURING THE FIRST 12 MONTHS OF OPERATION.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
TARA R. RAGOE
141851
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

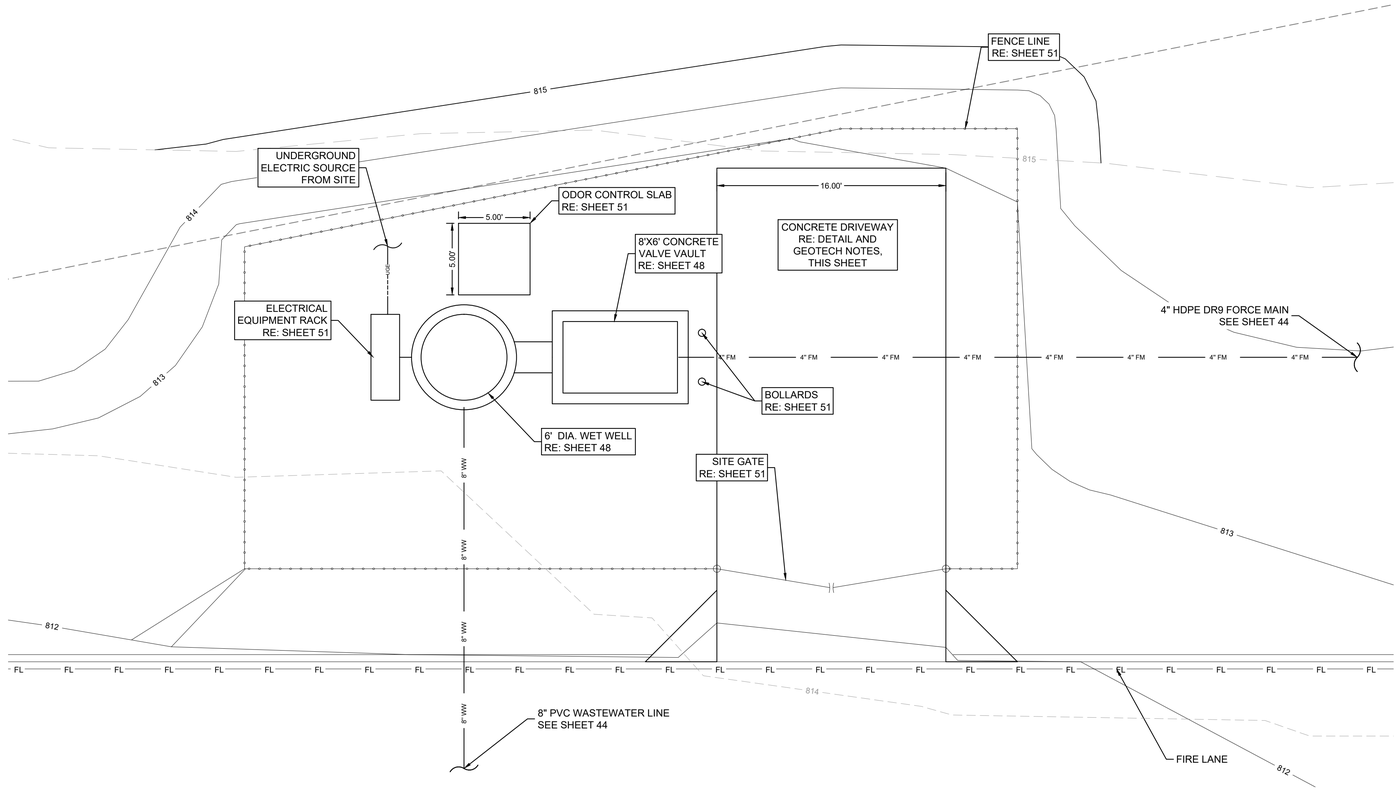
KHA PROJECT	069284918
DATE	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	ATN
DRAWN BY:	ATN
CHECKED BY:	TRR

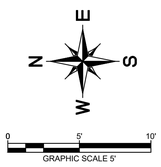
LIFT STATION NOTES

2525 CR 172
INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
46 OF 204

SDP24-00001





LEGEND

PROP. CONTOURS	815
EXIST. CONTOURS	815
8" WASTEWATER LINE	8" WW
4" FORCE MAIN	4" FM
FIRE LANE	FL FL
EXIST. EASEMENT	
PROP. FENCE LINE	

GEOTECH NOTES:

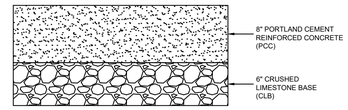
1. CONTRACTOR TO REFERENCE DIV 03 CONCRETE IN THE AMZL DESIGN CRITERIA FOR LOW CARBON CONCRETE.
2. FIRE LANES WILL BE HEAVY DUTY CONCRETE PAVEMENT. REFER TO THE GEOTECH REPORT NOTED BELOW FOR LOAD CAPACITY.
3. REFER TO SHEET 92 FOR ADDITIONAL PAVEMENT DETAILS.

REFER TO GEOTECHNICAL REPORT BY: **ECS SOUTHWEST, LLP**

GEOTECH PROJECT NUMBER: **17:6399-A**

DATED: MARCH 22, 2024

HEAVY-DUTY RIGID
PAVEMENT SECTION



NTS

SITE PLAN NOTES

1. ALL MECHANICAL JOINTS SHALL HAVE MEGA LUG THRUST RESTRAINTS.
2. FOR ALL ELECTRICAL WORK REFER TO ELECTRICAL SHEETS.
3. BURIED DUCTILE IRON PIPES, VALVES, AND FITTINGS SHALL BE ENCASED WITH POLYETHYLENE WRAP 8 MILS THICK.
4. FOR ALL STRUCTURAL WORK REFER TO STRUCTURAL SHEETS (51 & 55).

GRADING PLAN NOTES

1. SEE DEVELOPMENT GRADING PLAN SHEETS FOR EXISTING GRADE TIE IN ELEVATIONS.
2. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES AND PROVIDE AND MAINTAIN EROSION PROTECTION IN AND ADJACENT TO THE CONSTRUCTION LIMITS.
3. CONTRACTOR SHALL GRADE THE SITE TO PROVIDE POSITIVE DRAINAGE AROUND ALL STRUCTURES AND SLABS.
4. NATURAL GROUND SHALL BE 6-INCHES BELOW ALL STRUCTURE SLABS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
TARA R. RADDE
141851
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918
DATE MAY 2024
SCALE: AS SHOWN
DESIGNED BY: ATN
DRAWN BY: ATN
CHECKED BY: TRR

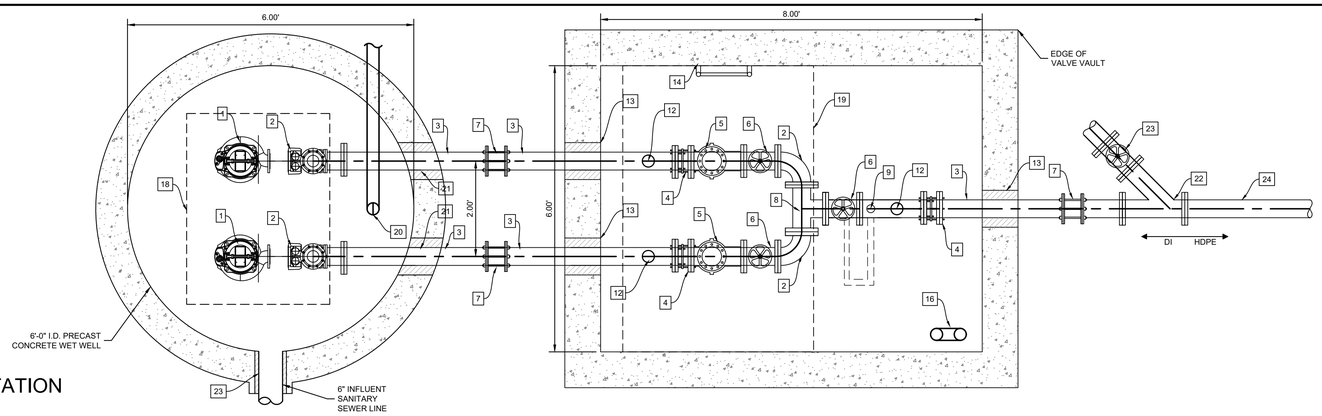
LIFT STATION SITE PLAN

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

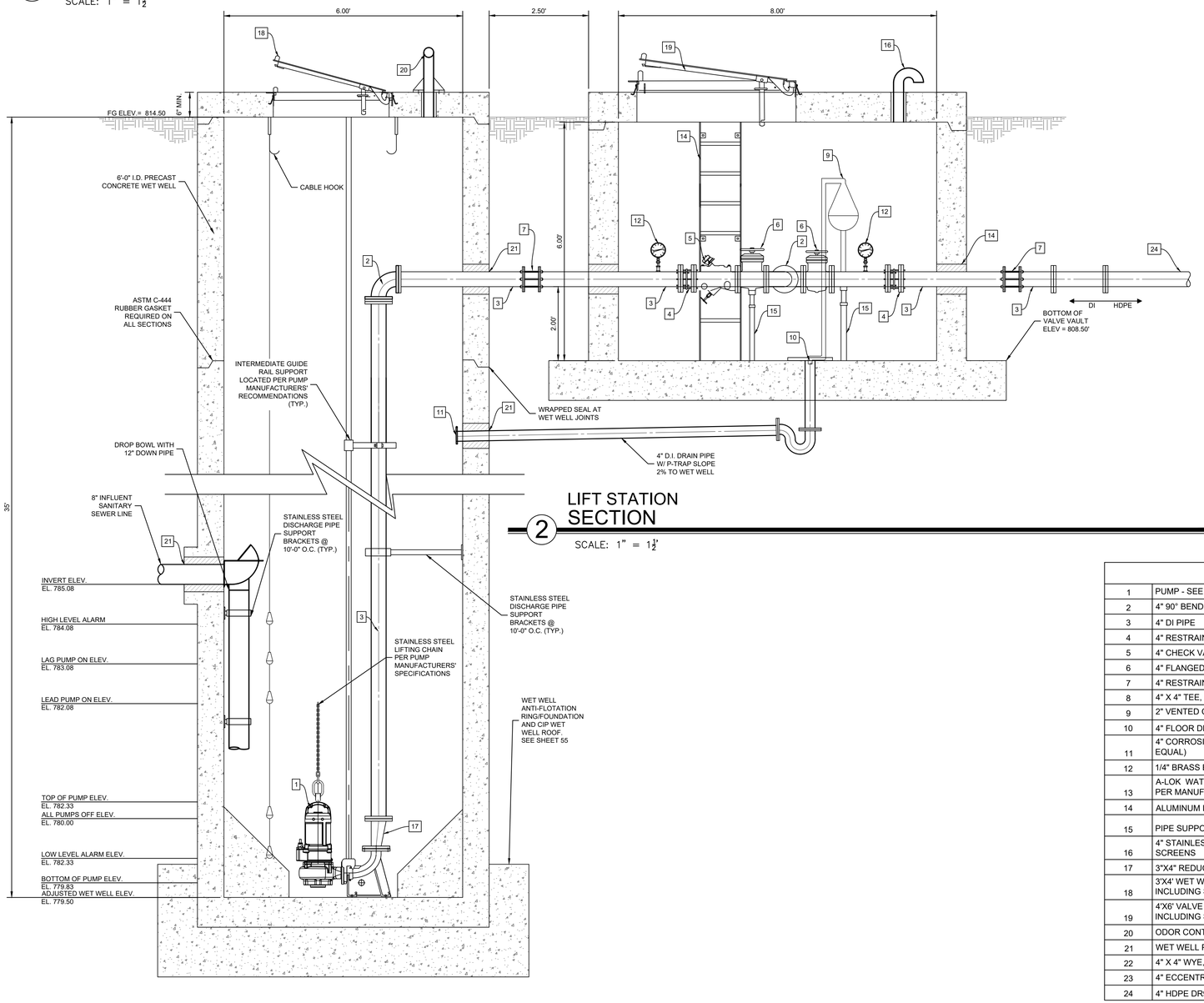
SHEET NUMBER
47 OF 204

SDP24-00001



LIFT STATION PLAN

1 SCALE: 1" = 1½'



LIFT STATION SECTION

2 SCALE: 1" = 1½'

PUMP PERFORMANCE DATA	
PUMP SELECTION	EBG-33
NUMBER OF PUMPS	2
MOTOR HORSE POWER	3 HP
IMPELLER DIA.	4 IN
PUMP MOTOR VOLTAGE	60 Hz, 3 Phase, 460 Volts
FLOW @ OPERATING POINT	99 GPM
TOTAL HEAD @ OPERATING POINT	32.46' TDH

LIFT STATION INFORMATION	
SERVICE AREA TOTAL (ACRES)	69.56
SERVICE AREA SIZE (LUEs)	60
PEAK DRY WEATHER FLOW (GPM)	48
PEAK WET WEATHER FLOW (DESIGN FLOW) (GPM)	84.22914
WET WELL DIAMETER (FT)	6
ACTIVE VOLUME (GAL)	516.71
MINIMUM PUMP CYCLE TIME (MIN)	46.97
FORCE MAIN SIZE (IN)	4
FORCE MAIN LENGTH (LF)	98
FLOW VELOCITY (FPS)	3.04

MATERIAL LIST	
1	PUMP - SEE "PUMP PERFORMANCE DATA", THIS SHEET
2	4" 90° BEND, FL
3	4" DI PIPE
4	4" RESTRAINED DISMANTLING JOINT WITH S.S. HARDWARE
5	4" CHECK VALVE W/ VISUAL INDICATOR AND BACKFLOW ACTUATOR
6	4" FLANGED ECCENTRIC PLUG VALVE WITH HANDWHEEL OPERATOR
7	4" RESTRAINED COUPLING ADAPTER
8	4" X 4" TEE, FL
9	2" VENTED COMBINATION AIR RELEASE VALVE (ARI D-025L OR EQUAL)
10	4" FLOOR DRAIN
11	4" CORROSION RESISTANT FLAP VALVE (STAINLESS STEEL, RUBBER, OR EQUAL)
12	1/4" BRASS BALL VALVE & PRESSURE GAUGE, SEE SHEET 50.
13	A-LOK WATER-STOP CONNECTOR OR APPROVED EQUAL. INSTALL GROUT PER MANUFACTURER'S RECOMMENDATIONS, SEE SHEET 49.
14	ALUMINUM LADDER WITH RETRACTABLE HAND RAIL.
15	PIPE SUPPORT, SEE SHEET 49.
16	4" STAINLESS STEEL GOOSE NECK VENT WITH 304 STAINLESS STEEL SCREENS
17	3"X4" REDUCER
18	3'X4' WET WELL ALUMINUM ACCESS COVER WITH THREE DOORS INCLUDING SAFE HATCH, H-20 LOAD RATING (FLYGT OR EJIW)
19	4'X6' VALVE VAULT ALUMINUM ACCESS COVER WITH THREE DOORS INCLUDING SAFE HATCH, H-20 LOAD RATING (FLYGT OR EJIW)
20	ODOR CONTROL AERATOR , SEE SHEET 51
21	WET WELL PENETRATION, SEE SHEET 49
22	4" X 4" WYE, MJ
23	4" ECCENTRIC PLUG VALVE, MJ
24	4" HDPE DR9 PIPE

KEYNOTES:

1. PUMP SUPPLIER SHALL PROVIDE DIMENSIONS OF THE GUIDE RAILS TO ENSURE COMPATIBILITY WITH SUPPLIED EQUIPMENT. THE PUMP SHALL BE EASILY REMOVED FOR INSPECTION OR SERVICE. PERSONNEL SHALL HAVE NO REASON TO ENTER THE WET WELL. GUIDE RAILS SHALL BE SUPPORTED EVERY 10 FEET WITH STAINLESS STEEL SUPPORTS.
2. THE GUIDE BRACKETS SHALL BE CONSTURCTED OF 316 STAINLESS STEEL. GUIDE BRACKETS FOR EACH PUMP MUST BE SUPPLIED BY THE PUMP MANUFACTURER TO ENSURE COMPATIBILITY WITH SUPPLIED EQUIPMENT.
3. EACH PUMPING UNIT SHALL BE PROVIDED WITH A STAINLESS STEEL LIFTING CHAIN OR CABLE. LIFTING CHAIN SHALL EXTEND AT LEAST 3-4 FEET ABOVE WET WELL.
4. ALL HARDWARE IN THE WET WELL SHALL BE 316 STAINLESS STEEL.
5. PUMP DISCHARGE LINES SHALL HAVE 1/4 INCH TAPS WITH STAINLESS STEEL OR BRONZE BALL VALVES.
6. ALL DISCHARGE LINES SHALL HAVE ADEQUATE THRUST SUPPORT MEMBERS AT EACH FITTING. WHERE POSSIBLE, LONG RADIUS 90 DEGREE BENDS SHALL BE USED.
7. THE DISCHARGE LINE FROM EACH PUMP SHALL BE FITTED WITH A CHECK VALVE AND A ECCENTRIC PLUG VALVE, WITH THE CHECK VALVE ON THE PUMP SIDE OF THE ECCENTRIC PLUG VALVE. WHEN NECESSARY, AIR RELEASE VALVE(S) SHALL BE INSTALLED DOWNSTREAM OF THE ECCENTRIC PLUG VALVES.
8. THE VALVE VAULT SHALL BE SIZED LARGE ENOUGH TO PROVIDE AT LEAST 1 FOOT OF CLEARANCE AROUND ALL VALVES AND ALL FLANGES. THE LID OF THE VAULT SHALL BE A MINIMUM OF 42 INCHES BY 42 INCHES AND SHALL BE ABLE TO BE PADLOCKED. THE VAULT SHALL BE INTERNALLY COATED WITH SPL WW-511 COATING, AND EXTERNALLY COATED WITH A COAL TAR EPOXY.
9. THE VALVE VAULT SHALL HAVE A DRAIN TO THE WET WELL. THE DRAIN SHALL HAVE A 4 INCH MINIMUM DIAMETER AND BE FITTED WITH A FLAP VALVE OR BACK-FLOW PREVENTER AND A TRAP TO PREVENT GASES OR WATER FROM ENTERING THE VALVE VAULT. THE OPENING TO THE DRAIN SHALL BE COVERED WITH A STAINLESS STEEL SCREEN.
10. ALL VENTS SHALL BE COATED INSIDE AND OUT PER CITY OF ROUND ROCK STANDARD SPECIFICATIONS. THE WET WELL VENT SHALL BE A TEE FITTED WITH STAINLESS STEEL SCREENS 10 FEET ABOVE WET WELL COVER.

GENERAL NOTES

1. THE WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE CITY OF ROUND ROCK SUBMERSIBLE LIFT STATION SPECIFICATIONS.
2. CONFIGURATIONS AND DIMENSIONS SHOWN ARE BASED ON THE EQUIPMENTS SPECIFIED. THE CONTRACTOR SHALL VERIFY THE LAYOUT AND ALL DIMENSIONS PRIOR TO FABRICATION.
3. ALL COUPLINGS SHALL BE EPOXY COATED STEEL AND SHALL BE DRESSER, SMITH-BLAIR, OR EQUAL. COUPLINGS SHALL BE RESTRAINED WITH A THRUST HARNESS DESIGNED IN ACCORDANCE WITH AWWA M-11.
4. CONTRACTOR SHALL COORDINATE VALVE VAULT ACCESS HATCH LOCATION WITH LADDER MANUFACTURER PRIOR TO FABRICATION.
5. CONTRACTOR SHALL VERIFY WET WELL ACCESS HATCH LOCATION AND DIMENSION WITH PUMP MANUFACTURER PRIOR TO FABRICATION.
6. PROVIDE 316 STAINLESS STEEL ANCHOR BOLTS FOR PUMP BASE MOUNTING TO SLAB.
7. INSTALL ISOLATION KITS BETWEEN DISSIMILAR METAL PIPING.
8. ALL PIPING WITHIN WET WELL AND VALVE VAULT SHALL BE SPECIAL THICKNESS CLASS 53 EPOXY LINED (PROTECTO 401) DUCTILE IRON PIPE.
9. ALL BURIED PIPE SHALL BE POLYWRAPPED DUCTILE IRON PRESSURE CLASS 350 PUSH JOINT PIPE WITH JOINT RESTRAINT GASKETS.
10. ALL METALS WITHIN THE WET WELL, INCLUDING FLANGE BOLTS, SHALL BE STAINLESS STEEL, UNLESS OTHERWISE INDICATED.
11. CONCRETE FOR FOUNDATION SHALL BE CLASS S. CONCRETE SHALL HAVE A MIN COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
12. THE EDGE OF EXPOSED CONCRETE SLABS SHALL RECEIVE A 3/4" CHAMFER.
13. REINFORCED STEEL SHALL BE GRADE 60.
14. ALL VENTS SHALL HAVE SCREENS INSTALLED OVER OPENINGS AND SHALL BE 304 STAINLESS STEEL - 16 MESH. OPENINGS SHALL BE A MINIMUM OF 12" ABOVE THE SLAB.
15. THE HIGH LEVEL ALARM SHALL ACTIVATE A FLASHING RED LIGHT TO BE MOUNTED ON THE ROOF OF THE ELECTRICAL SHELTER. THE CONTRACTOR SHALL INSTALL METAL INFORMATION SIGN AT OR NEAR THE LIFT STATION ENTRY GATE, VISIBLE TO THE PUBLIC.
16. ALL PENETRATIONS SHALL BE SEALED WATER AND GAS TIGHT PER APPROVED METHODS.
17. BACK FILLING OF THE WET WELL SHALL COMPLY WITH CITY OF ROUND ROCK STANDARD SPECIFICATIONS.
18. ALL INTERIOR SURFACES OF CONCRETE WET WELL SHALL BE COATED WITH AN 80 MIL (MIN.) COAT OF RAVEN 400 SERIES HIGH BUILD EPOXY LINER OR APPROVED EQUAL.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
TARA R. RADDE
141851
LICENSED PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918
DATE MAY 2024
SCALE: AS SHOWN
DESIGNED BY: ATN
DRAWN BY: ATN
CHECKED BY: TRR

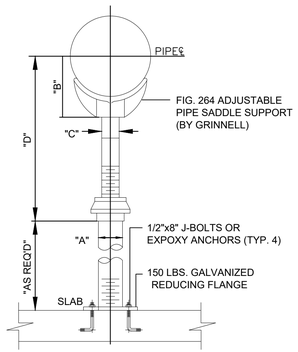
LIFT STATION PLAN AND SECTION

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

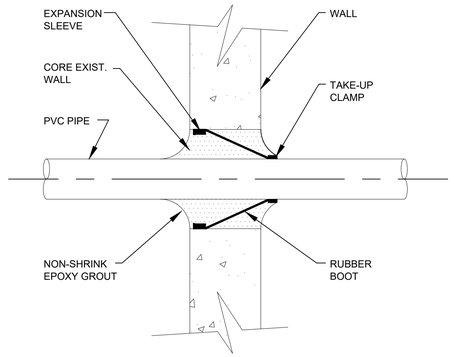
SHEET NUMBER
48 OF 204

SDP24-00001

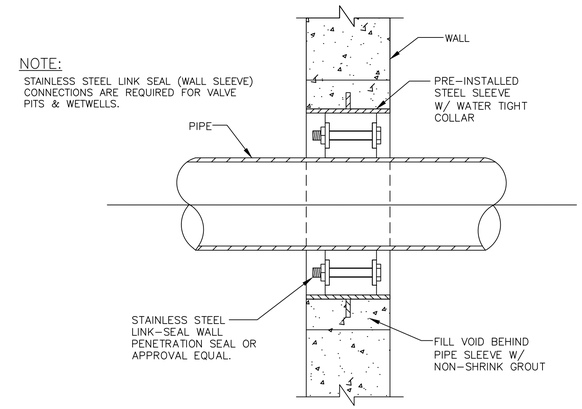


WGT APPROX. LBS EACH						D	
PIPE SIZE	COMPLETE	SADDLE ONLY	A	A	A	MINIMUM	MAXIMUM
2 1/2	9.0	4.8	2 1/2	3 1/2	1 1/2	8	13
3	9.2	5.0	2 1/2	3 3/4	1 1/2	8 1/4	13 1/4
3 1/2	9.4	5.2	2 1/2	4	1 1/2	8 1/2	13 1/2
4	15.0	7.6	3	4 1/4	2 1/2	9 1/4	14
5	16.7	8.3	3	4 7/8	2 1/2	10	14 3/4
6	17.7	10.3	3	5 1/2	2 1/2	10 1/2	15 1/4
8	20.2	12.8	3	6 7/8	2 1/2	11 3/4	16 1/2
10	25.2	17.8	3	5 1/2	2 1/2	13 1/2	18 1/4
12	29.0	21.6	3	9 15/16	2 1/2	15	19 3/4
14	49.2	38.0	4	10 15/16	3	16 1/4	20 3/4
16	53.2	42.0	4	12 3/8	3	17 3/4	22 1/4
18	70.8	51.0	6	13 7/8	3 1/2	19 1/2	24
20	104.8	85.0	6	15 3/8	3 1/2	21	25 1/2
24	137.0	110.0	6	17 15/16	4	23 3/4	28 1/2
30	170.0	150.0	6	21 5/16	4	27	31 1/2
32	181.0	161.1	6	22 1/2	4	28 1/8	32 3/4
36	249.0	229.0	6	24 1/4	4	30 1/4	34 3/4

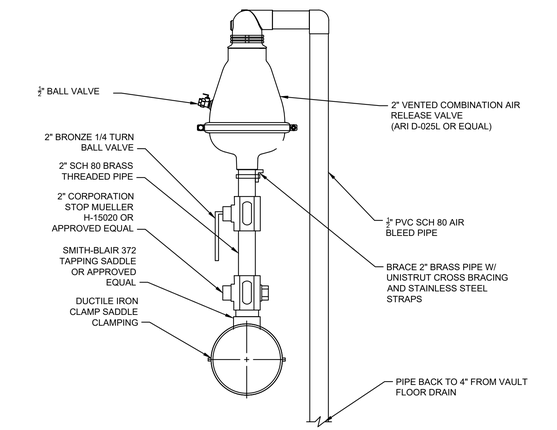
1 ADJUSTABLE PIPE SUPPORT DETAIL
N.T.S



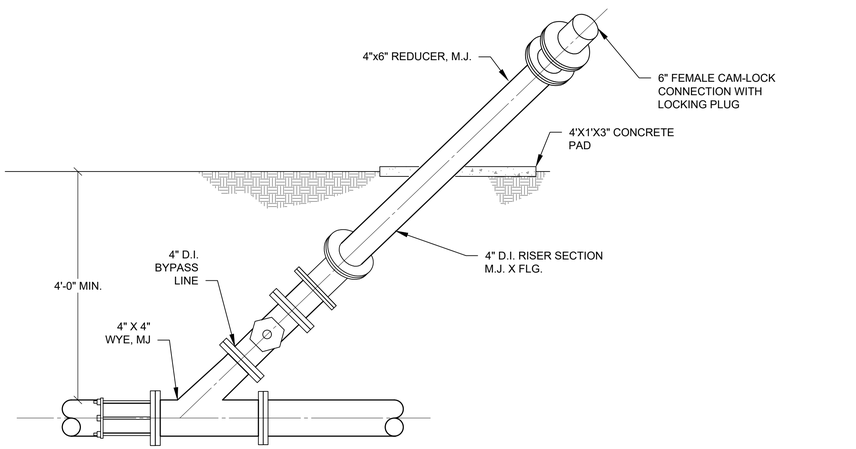
2 COA WW-146-D WET WELL PENETRATION DETAIL
N.T.S



3 VAULT PIPE PENETRATION DETAIL
N.T.S



4 AIR RELEASE VALVE DETAIL
N.T.S



5 BYPASS STUB UP CONNECTION DETAIL
N.T.S

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
TARA R. RADDE
141851
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

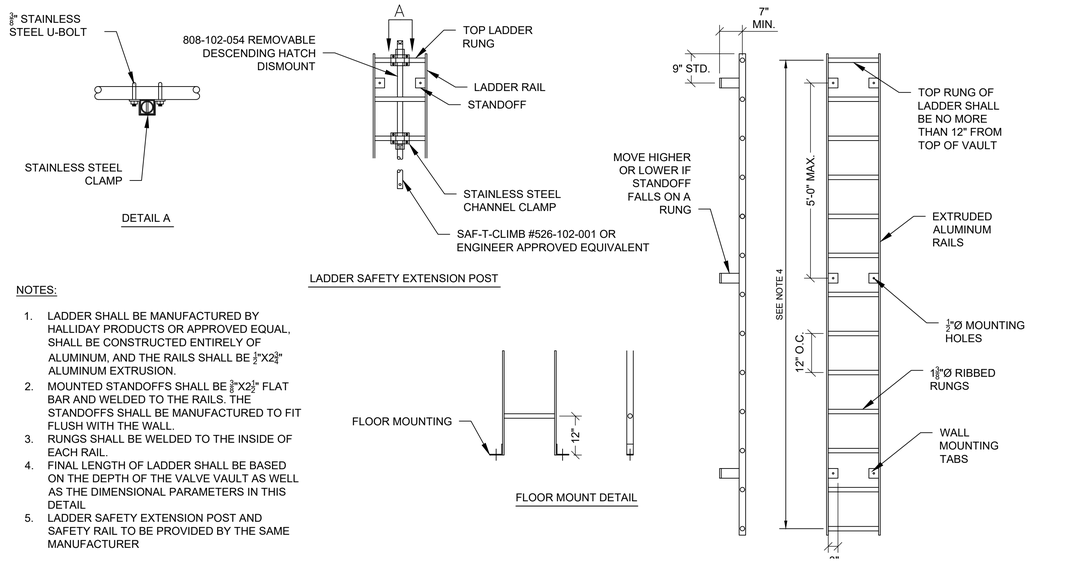
KHA PROJECT	060284918
DATE	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	ATN
DRAWN BY:	ATN
CHECKED BY:	TRR

LIFT STATION DETAILS I

2525 CR 172
INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
49 OF 204

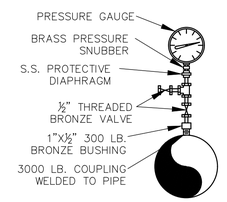
SDP24-00001



NOTES:

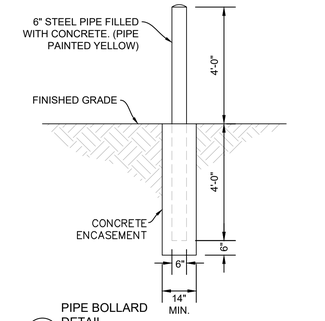
1. LADDER SHALL BE MANUFACTURED BY HALLIDAY PRODUCTS OR APPROVED EQUAL, SHALL BE CONSTRUCTED ENTIRELY OF ALUMINUM, AND THE RAILS SHALL BE ½"X2¾" ALUMINUM EXTRUSION.
2. MOUNTED STANDOFFS SHALL BE ⅜"X2½" FLAT BAR AND WELDED TO THE RAILS. THE STANDOFFS SHALL BE MANUFACTURED TO FIT FLUSH WITH THE WALL.
3. RUNGS SHALL BE WELDED TO THE INSIDE OF EACH RAIL.
4. FINAL LENGTH OF LADDER SHALL BE BASED ON THE DEPTH OF THE VALVE VAULT AS WELL AS THE DIMENSIONAL PARAMETERS IN THIS DETAIL
5. LADDER SAFETY EXTENSION POST AND SAFETY RAIL TO BE PROVIDED BY THE SAME MANUFACTURER

1 LADDER DETAIL
N.T.S



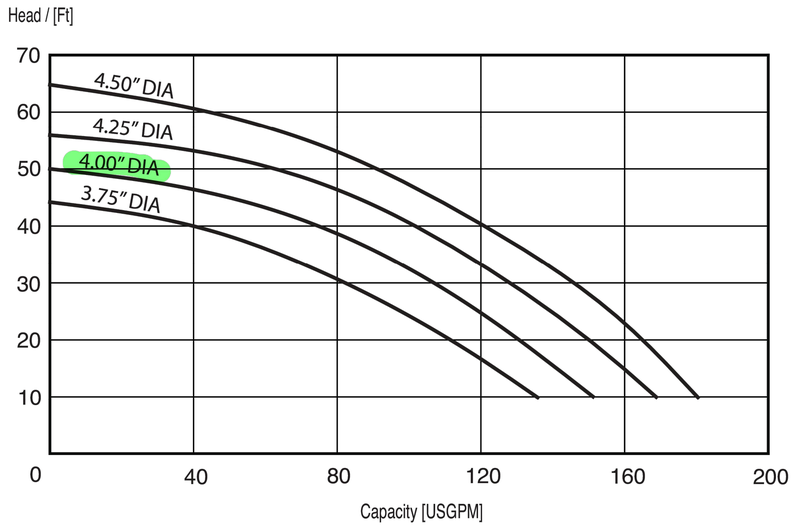
NOTES:
1. PRESSURE GAUGES SHALL HAVE 4-INCH DIAMETER FACES AND BE CALIBRATED FROM 0 TO 150 PSI.
2. GAUGE SHALL BE FILLED WITH GLYCOL AND INSTALLED WITH A PRESSURE SNUBBER AND SHALL BE OF STAINLESS STEEL CONSTRUCTION.
3. INSTALL GAUGE WITH A 0.25-INCH NPT CONNECTION AND INCLUDE A CORPORATION STOP AND AIR BLEED.
4. VALVES TO BE RATED AT 200 PSI MIN.
5. ALL WELDED COUPLINGS SHALL BE RATED FOR 3000 LBS.
6. GAUAGE SHALL BE TRERICE MANUFACTURED OR APPROVED EQUAL.

2 PRESSURE GAUGE DETAIL
N.T.S



3 PIPE BOLLARD DETAIL
N.T.S

EBG-31 EBG-33 (3HP) **Synchronous Speed: 3450 RPM** **2½ / 3 inch Discharge**

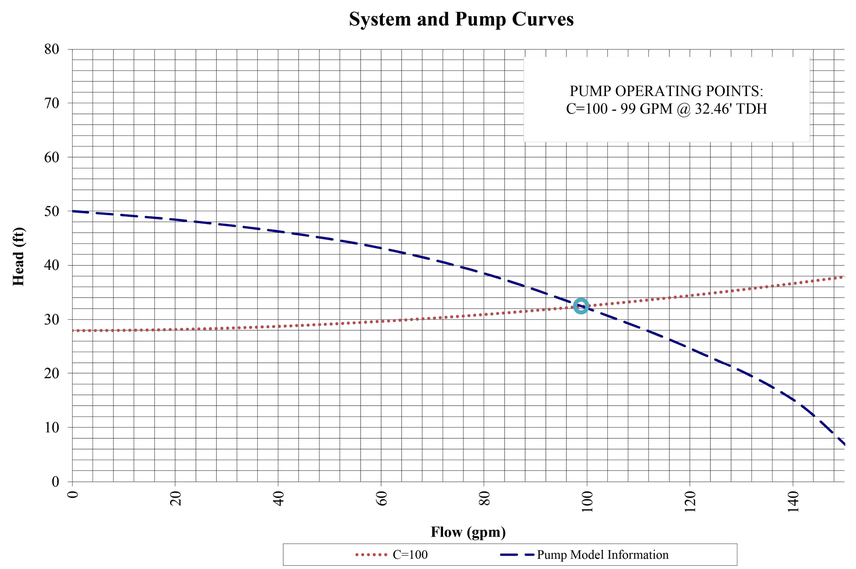


Note: Full diameter impeller included in price of pump. Consult factory for reduced diameter impeller and pricing.

EBARA Fluid Handling
www.pumpsebara.com
(t) 803 327 5005 • (f) 803 327 5097

1-197
rev. 05/15

4 PUMP INFORMATION



5 SYSTEM AND PUMP CURVE

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
TARA R. RADDE
141851
LICENSED PROFESSIONAL ENGINEER
6/6/2024

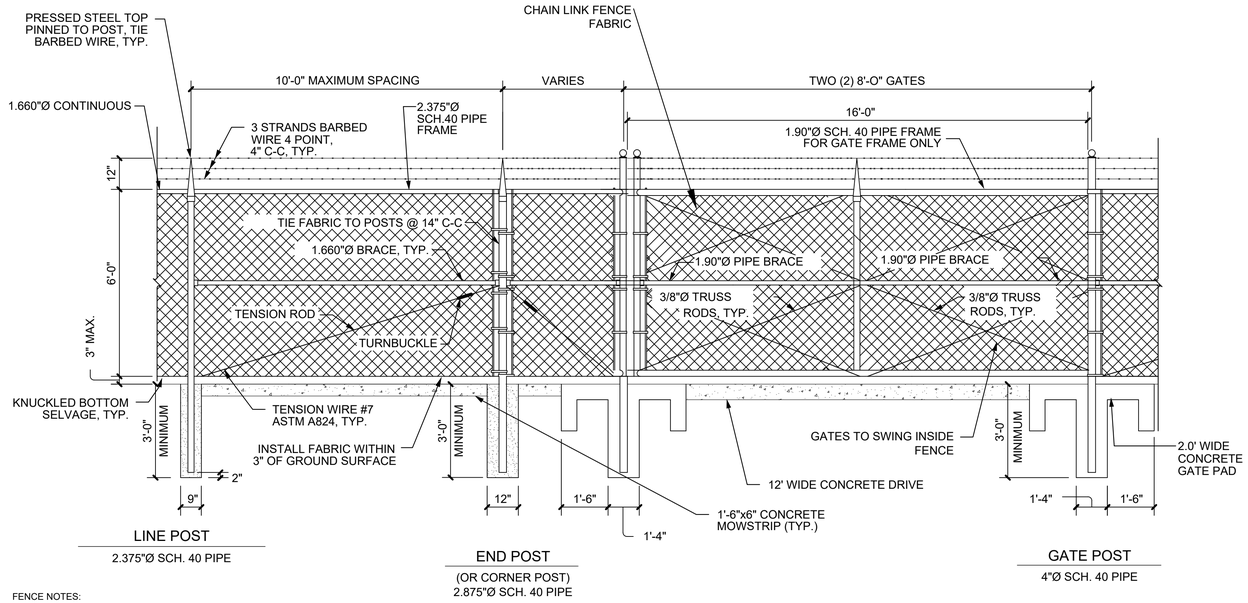
KHA PROJECT 069284918
DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: ATN
DRAWN BY: ATN
CHECKED BY: TRR

LIFT STATION DETAILS II

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
50 OF 204

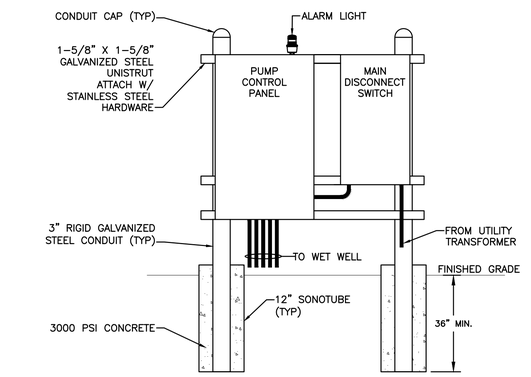
SDP24-00001



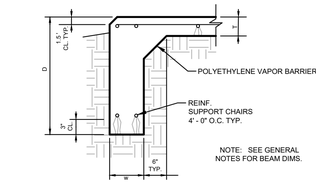
FENCE NOTES:

1. PIPE SIZES SHOWN ARE SCH. 40 PER ASTM F669.
2. PROVIDE FITTINGS FOR LOCKING GATE AND HEAVY DUTY PADLOCK KEYED TO THE OWNER'S MASTER.
3. BARBED WIRE SHOULD EXTEND OUTWARD FROM THE TOP OF FENCE AT A 45 DEGREE ANGLE WITH THE SMOOTH SIDE OF THE FENCE ON THE OUTSIDE WALL.

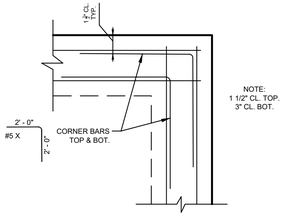
1 CHAIN LINK FENCE/GATE DETAIL
N.T.S



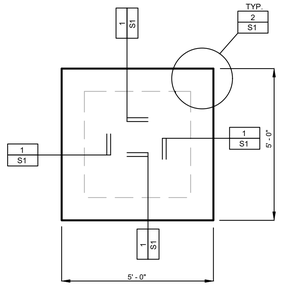
2 ELECTRICAL EQUIPMENT RACK DETAIL
N.T.S



1 S1 TYP. BEAM DETAIL



2 S1 TYP. BEAM INTERSECTION DETAIL

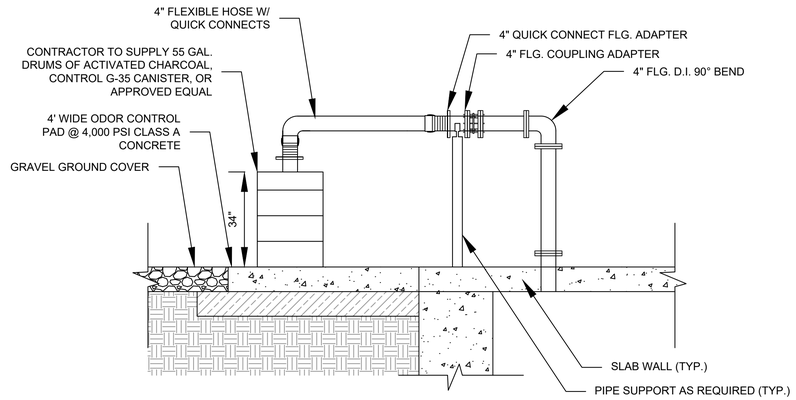


4 S1 ODOR CONTROL PAD FOUNDATION

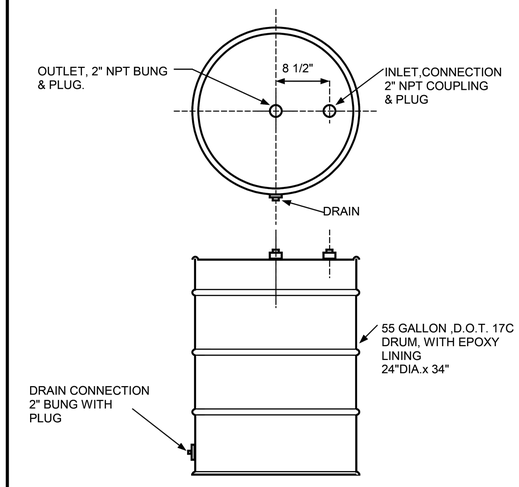
NOTE:

6" SLAB : REINFORCED WITH #4 @ 12" O.C. EACH WAY TOP AND BOTTOM
EXTERIOR BEAMS: 12" WIDE X 18" DEEP REINFORCED WITH 2-#5 TOP AND BOTTOM U.N.O.

3 ODOR CONTROL PAD FOUNDATION DETAIL
N.T.S



4 ODOR CONTROL DETAIL
N.T.S



CARBTROL CORPORATION		39 RIVERSIDE AVENUE WESTPORT CONN. 06880 (203) 226-5642
SCALE ----	PN-00101 PN-00102	BY R
DATE 10-1-85		REV 9-2-20
CARBTROL G-1		
ARRANGEMENT	S	DWG 1113/2

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
TARA R. RADDE
141851
LICENSED PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284916
DATE MAY 2024
SCALE: AS SHOWN
DESIGNED BY: ATN
DRAWN BY: ATN
CHECKED BY: TRR

LIFT STATION DETAILS III

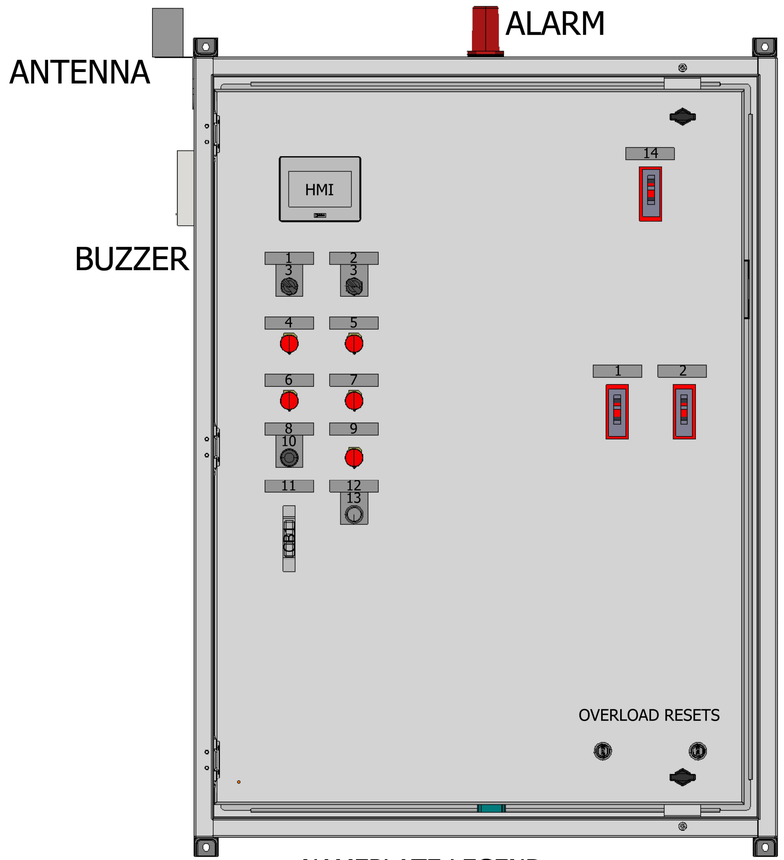
2525 CR 172
INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
51 OF 204

SDP24-00001

NEMA 4X STAINLESS STEEL ENCLOSURE
48"H x 36"W x 12"DP
OUTER DOOR NOT SHOWN

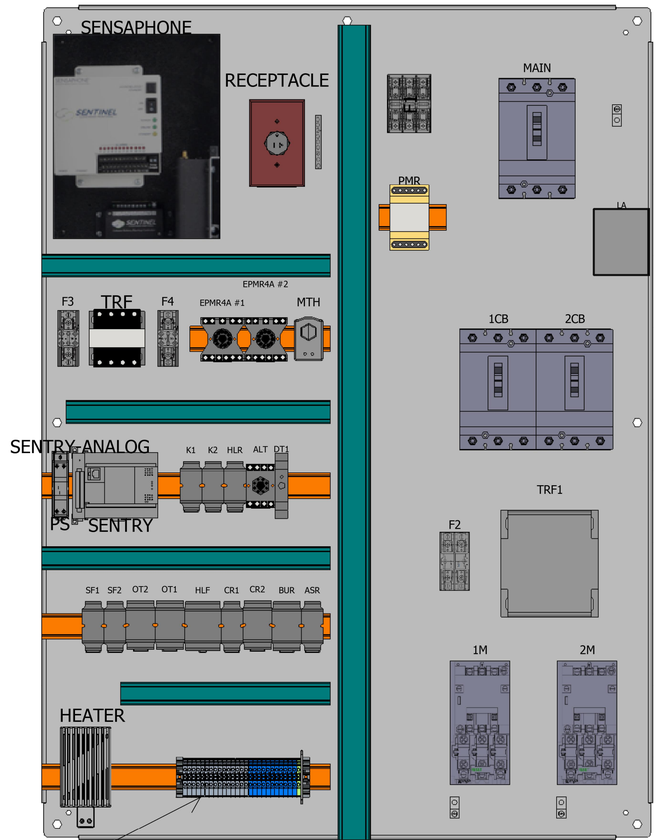
FRONT

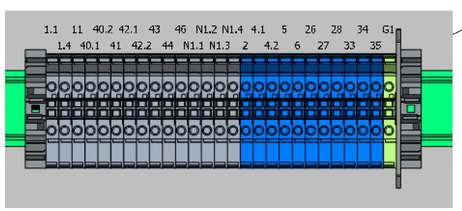


NAMEPLATE LEGEND

1. PUMP 1
2. PUMP 2
3. HAND OFF AUTO
4. PUMP 1 OVERTEMP
5. PUMP 2 OVERTEMP
6. PUMP 1 SEAL FAIL
7. PUMP 2 SEAL FAIL
8. ALARM
9. BACKUP ON
10. SILENCE
11. CONTROL
12. BACKUP
13. RESET
14. MAIN

BACK PANEL





LAMINATED DRAWING REQUIRED

USEMCO INCORPORATED	
1602 REZIN RD, TOMAH, WI 54660	
PHONE: (608) 372-5911 FAX: (608) 372-5016 WWW.USEMCO.COM	
CUSTOMER: MANSFIELD PUMPCOMPANY	PROJECT DESCRIPTION: 2525 CR 172 INDUSTRIAL

REV. NO.	REVISION	NAME	DATE

	NAME	DATE
DESIGNED BY:	nchawla	05/16/24
DRAWN BY:	NIKESH CHAWLA	05/17/24
CHECKED BY:		05/17/24

PAGE DESCRIPTION: PANEL LAYOUT

PREVIOUS PAGE	&/3	TOTAL NO. OF PAGES	1
PAGE NO.	1	DWG NO.	&PNL/1
NEXT PAGE	&EMC/1	JOB NO.	CP20205

1 ELECTRICAL PANEL DETAIL
N.T.S

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
TARA R. RAGGE
141851
LICENSED PROFESSIONAL ENGINEER
6/6/2024

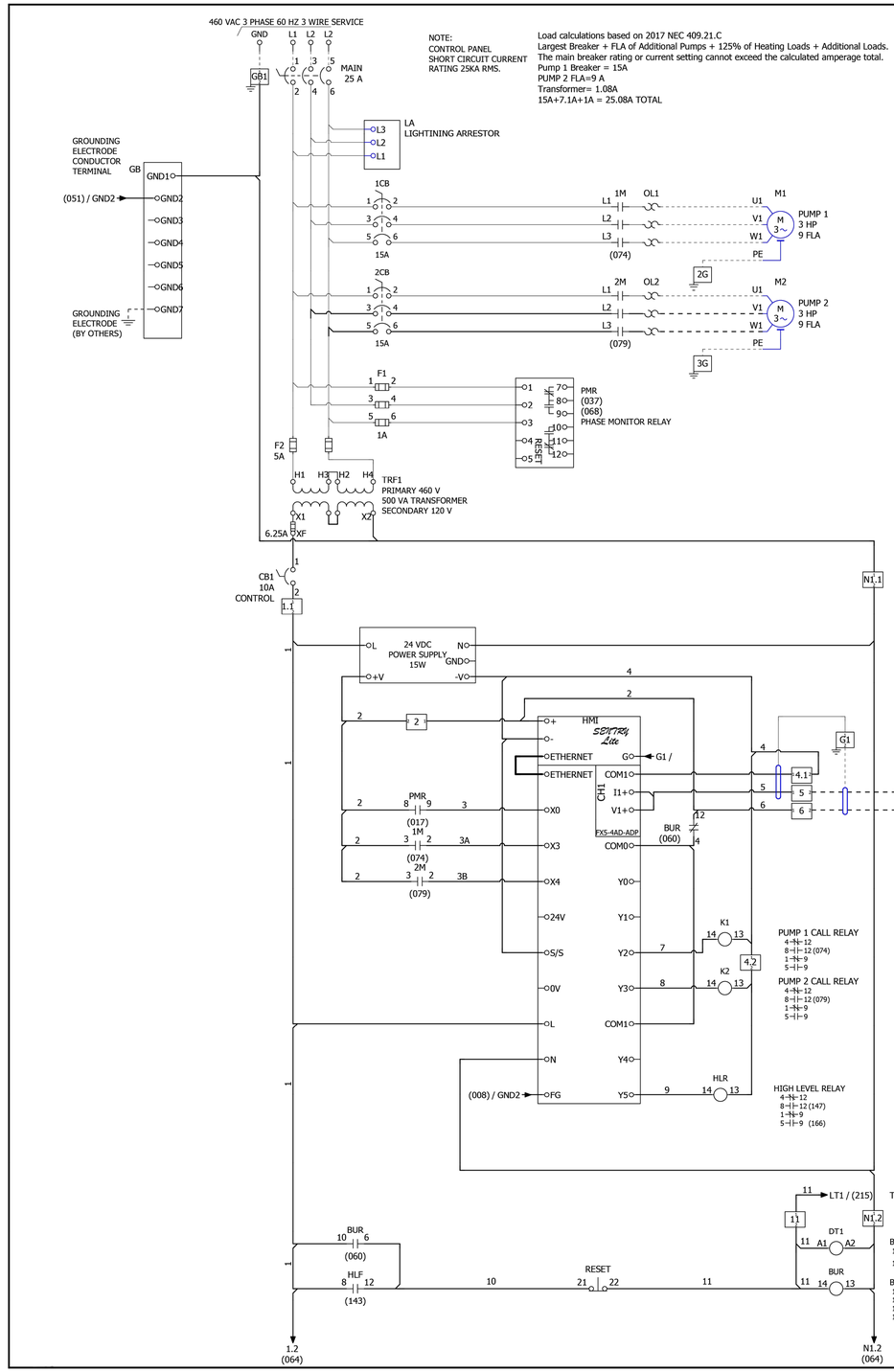
KHA PROJECT 069284918	DATE: MAY 2024	SCALE: AS SHOWN	DESIGNED BY: ATN	DRAWN BY: ATN	CHECKED BY: TRR

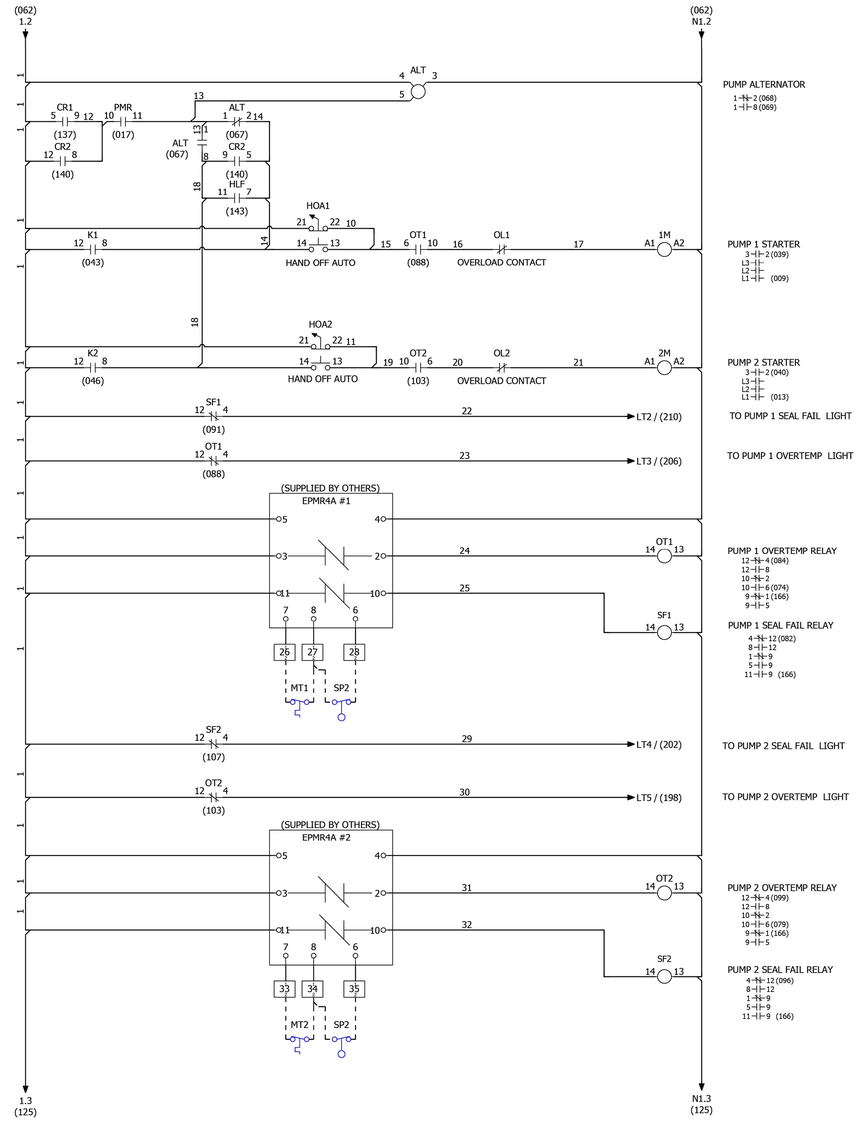
CONTROL PANEL DETAIL

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
52 OF 204

SDP24-00001





COLOR CODING		
BLACK	—	LINE AND LOAD
RED	—	AC CONTROL
BLUE	—	DC CONTROL
WHITE	—	NEUTRAL
GREEN	—	GROUND
YELLOW	—	INTERCONNECTING
LT. BLUE	—	INTRINSICALLY SAFE

USEMCO INCORPORATED

1602 REZIN RD, TOMAH, WI 54660
PHONE: (608) 372-5911 FAX: (608) 372-5016 WWW.USEMCO.COM

USEMCO — Universal Sanitary Equipment Manufacturing Company

CUSTOMER: MANSFIELD PUMPCOMPANY

PROJECT DESCRIPTION: 2525 CR 172 INDUSTRIAL

REV. NO.	REVISION	NAME	DATE

	NAME	DATE
DESIGNED BY:	nchawla	05/16/24
DRAWN BY:	NIKESH CHAWLA	05/17/24
CHECKED BY:		05/17/24

PAGE DESCRIPTION: SCHEMATIC

PREVIOUS PAGE &PNL/1 | TOTAL NO. OF PAGES 2 | NEXT PAGE 2 | PAGE NO. 1 | DWG # &EMC/1 | JOB # CP20205

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS — TARA R. RADDE — 141851 — LICENSED PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918 | DATE MAY 2024 | SCALE: AS SHOWN | DESIGNED BY: ATN | DRAWN BY: ATN | CHECKED BY: TRR

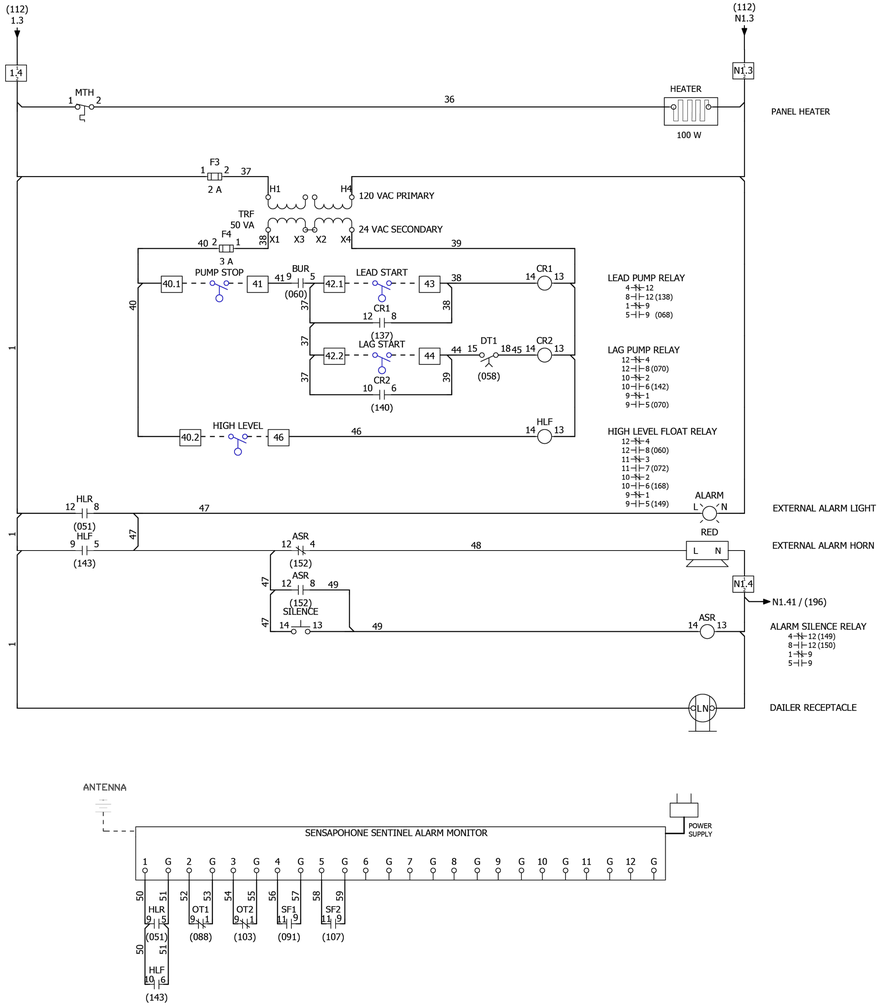
LIFT STATION ELECTRICAL PLANS I

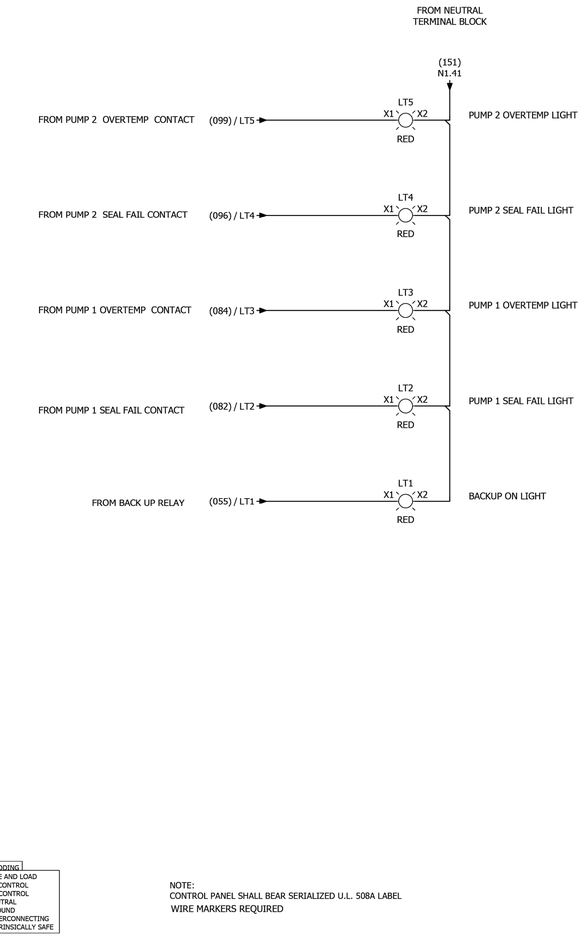
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
53 OF 204

SDP24-00001





COLOR CODING		
BLACK	—	LINE AND LOAD
RED	—	AC CONTROL
BLUE	—	DC CONTROL
WHITE	—	NEUTRAL
GREEN	—	GROUND
YELLOW	—	INTERCONNECTING
LT. BLUE	—	INTRINSICALLY SAFE

NOTE:
CONTROL PANEL SHALL BEAR SERIALIZED U.L. 508A LABEL
WIRE MARKERS REQUIRED

USEMCO INCORPORATED

1602 REZIN RD, TOMAH, WI 54660
PHONE: (608) 372-5911 FAX: (608) 372-5016 WWW.USEMCO.COM

USEMCO Universal Sanitary Equipment Manufacturing Company

CUSTOMER: MANSFIELD PUMPCOMPANY

PROJECT DESCRIPTION: 2525 CR 172 INDUSTRIAL

REV. NO.	REVISION	NAME	DATE

	NAME	DATE
DESIGNED BY:	nchawla	05/16/24
DRAWN BY:	NIKESH CHAWLA	05/17/24
CHECKED BY:		05/17/24

PAGE DESCRIPTION: SCHEMATIC

PREVIOUS PAGE 1 | TOTAL NO. OF PAGES 2 | NEXT PAGE | PAGE NO. 2 | DWG # &EMC/2 | JOB # CP20205

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
TARA R. RADDE
141851
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	060284918
DATE	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	ATN
DRAWN BY:	ATN
CHECKED BY:	TRR

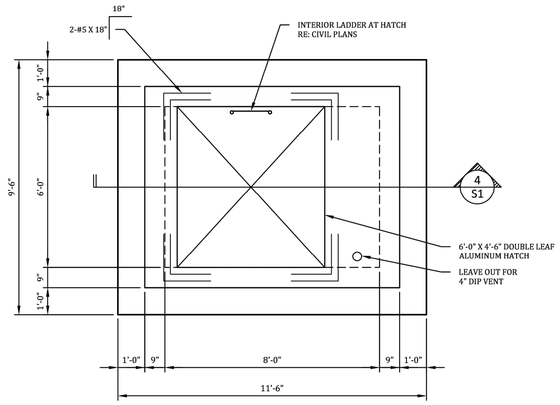
LIFT STATION ELECTRICAL PLANS II

2525 CR 172 INDUSTRIAL

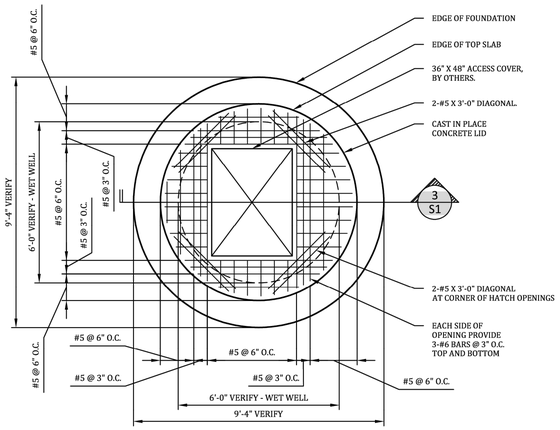
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
54 OF 204

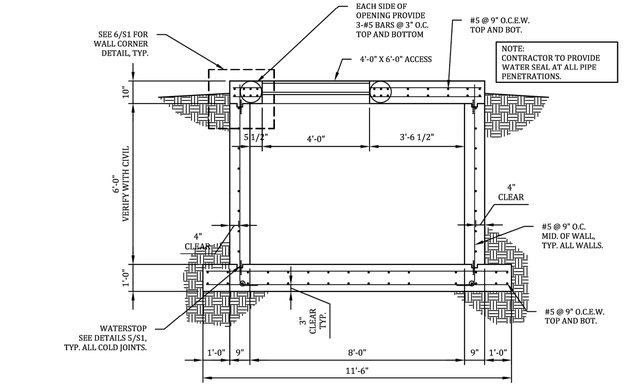
SDP24-00001



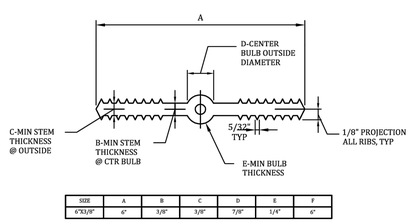
2 S1 VALVE VAULT PLAN VIEW - DIM CONTROL



1 S1 WET WELL PLAN VIEW AND CAP REINF. AND DIM CONTROL



4 S1 VALVE VAULT CROSS SECTION

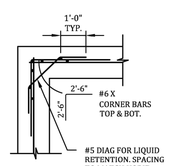


SIZE	A	B	C	D	E	F
6"X3/8"	6"	3/8"	3/8"	7/8"	1/4"	6"

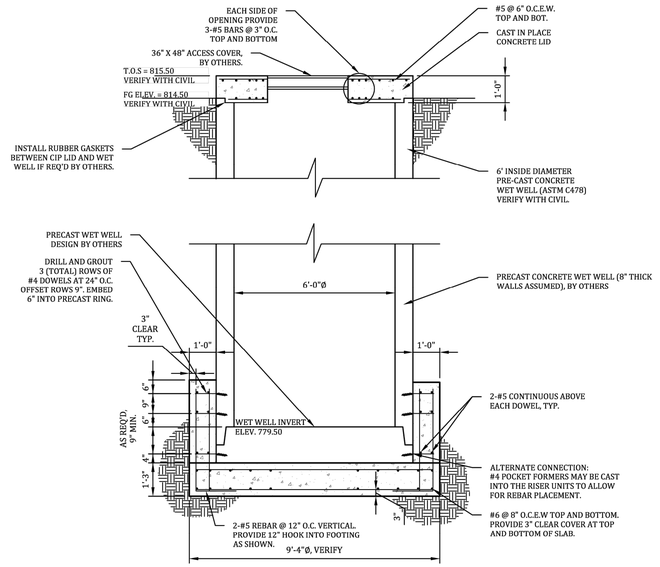
NOTES:

1. DIM REQUIREMENTS INDICATED SHOULD BE GIVEN TO SUPPLIERS PRIOR TO PLACING ORDERS.
2. NON-ROUND CENTER BULBS SHALL HAVE A MIN OUTSIDE DIM OF "D".
3. SPLICING AT CORNERS AND INTERSECTIONS SHALL BE MADE PER MANUFACTURER RECOMMENDATIONS TO PROVIDE CONTINUOUS WATERTIGHT SEAL.

5 S1 WATER STOP DETAIL



6 S1 WALL CORNER REINFORCING



NOTES:

1) WET WELL ANTI-FLOTATION RING HAS BEEN DESIGNED FOR 35'-0" WET WELL DEPTH PER KIMLEY HORN PLANS DATED MAY 22, 2024.
2) ALL GROUTING IS TO BE DONE USING HILTI HIT-RE 500 V3 EPOXY MORTAR. ALL REBAR TO BE EPOXY-COATED.
3) CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY ENGINEER OF DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION. AN 8" WET WELL WALL THICKNESS IS ASSUMED IN GEOMETRY OF ANTI-FLOTATION RING/FOUNDATION AND CIP WET WELL ROOF.

NOTE:
COORDINATE ALL PENETRATIONS AND ANCHORING WITH THE CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS.

3 S1 WET WELL ANTI-FLOTATION RING/FOUNDATION AND CIP WET WELL ROOF CROSS SECTION

CONTRACTOR TO VERIFY ALL DIMENSIONS WITH EQUIPMENT SIZES PRIOR TO CONSTRUCTION

GENERAL NOTES

CONCRETE MIX DESIGN:

1. ALL CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH f'c=3600 psi, TxDOT CLASS C CONCETE, AT 28 DAYS. PROVIDE 5" SLUMP. ADDING WATER AT SITE IS NOT PERMITTED.

2. THE CONCRETE MIX DESIGNS SHALL BE PROPORTIONED TO MINIMIZE THE ADVERSE EFFECTS OF CLIMATE AT THE TIME OF YEAR THE CONCRETE IS PLACED. USE OF WORKABILITY ADMIXTURES AND AIR ENTRAINMENT IS PERMITTED AND MUST BE NOTED ON MIX DESIGNS.

3. USE OF CALCIUM CHLORIDE ADMIXTURES IS NOT PERMITTED.

4. THE BUILDER/CONTRACTOR IS RESPONSIBLE FOR MAKING CONCRETE COMPRESSIVE STRENGTH CYLINDER TESTS AS REQUIRED BY A.C.I. 318-14.

CONCRETE REINFORCEMENT:

1. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL CONFORMING TO A.S.T.M. A-615 GRADE 60. REINFORCEMENT SHALL BE FREE OF RUST AND DELETERIOUS MATERIALS.

CONSTRUCTION:

1. SUFFICIENT SUPPORT BARS AND CHAIRS SHALL BE PROVIDED TO MAINTAIN PROPER REINFORCEMENT PROFILE THROUGHOUT CONCRETE PLACEMENT. BARS SHALL BE SUPPORTED ON CHAIRS AND TIED AT ALL INTERSECTIONS. USE 4'-0" MAXIMUM SPACING FOR SUPPORT CHAIRS.

2. INSURE PROPER VIBRATION OF CONCRETE AROUND ALL REINFORCEMENT.

3. TRENCHES FOR DEEP PLUMBING LINES SHOULD NOT BE LOCATED DIRECTLY UNDER (PARALLEL TO) BEAMS.

4. ALL SLABS AND BEAMS SHALL BE PROPERLY GRADED AND LEVELED. A THIN (1"±) LAYER OF SAND MAY BE USED UNDER THE SLAB.

5. A POLYETHYLENE VAPOR BARRIER SHALL BE PLACED BETWEEN THE CONCRETE AND SOIL. A THIN LAYER OF LEVELING SAND MAY BE PLACED ON TOP OF THE POLYETHYLENE.

6. CONTRACTOR NOTE: BEFORE PROCEEDING WITH ANY WORK OR ORDERING OF MATERIALS, THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL VERIFY ALL MEASUREMENTS AND LOCATION OF BUILDING COMPONENTS AND THEIR INTERRELATIONSHIP AT THE BUILDING SITE AND FOR THEIR CORRECTNESS.

DESIGN:

1. THE REINFORCED CONCRETE DESIGN OF THIS FOUNDATION STRUCTURE HAS BEEN ANALYZED USING STANDARD ENGINEERING PRACTICES.

2. THE REINFORCED CONCRETE SLAB-ON-GRADE DESIGN SHOWN REFLECTS THE MINIMUM REQUIREMENTS NEEDED TO ALLOW THIS STRUCTURE SYSTEM TO ADEQUATELY PERFORM IN CONJUNCTION WITH THE SOIL PARAMETERS NOTED BELOW. THE INTENT IS NOT TO LIMIT SOIL MOVEMENT, BUT INSTEAD TO LIMIT EXCESSIVE FOUNDATION FLEXURE SO THAT DIFFERENTIAL MOVEMENT WILL NOT CAUSE UNREASONABLE DISTRESS.

3. FOUNDATION MAINTENANCE: DRAINAGE AWAY FROM THE FOUNDATION SHALL BE MAINTAINED AT ALL TIMES SO THAT GROUND WATER WILL NOT COLLECT ADJACENT TO OR UNDER THE SLAB. THE INTENT IS TO MAINTAIN AN EVEN SOIL MOISTURE CONTENT AROUND THE BUILDING SO THAT DIFFERENTIAL SOIL MOVEMENT IS LIMITED.

4. HEAVY VEGETATION SUCH AS TREES WITHIN 10-15 FEET OF THE PERIMETER OF THE FOUNDATION MAY CAUSE EXCESSIVE WATER REMOVAL FROM THE SOIL NEAR OR UNDER THE FOUNDATION. SUCH UNANTICIPATED PARAMETERS ARE NOT CONSIDERED UNLESS REPORTED BY THE CONTRACTOR TO FALKOFSKE ENGINEERING, INC. IN WRITING PRIOR TO DESIGN.

5. GEO-TECHNICAL INVESTIGATION PROVIDED BY: ROCK ENGINEERING & TESTING LABORATORY, INC.

REPORT NO. G221847
DATED: 12/23/21

ALLOWABLE SOIL BEARING PRESSURE	(BEARING IN CLAY)	Qa = 3,000 psf
ALLOWABLE SOIL BEARING PRESSURE	(BEARING IN BEDROCK)	Qa = 15,000 psf
MINIMUM DEPTH OF FOUNDATION INTO BEARING SOIL		12"
PLASTICITY INDEX		PI = 28

6. ALL FILL AREAS AND MATERIALS SHALL BE PLACED, COMPACTED, AND TESTED PER THE GEO-TECHNICAL ENGINEERS RECOMMENDATIONS.

7. BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE

INSPECTIONS:

1. INSPECTIONS ARE TO BE AS REQUIRED BY LOCAL BUILDING DEPARTMENT.

2. FALKOFSKE ENGINEERING INC. SHALL BE CALLED FOR CONSTRUCTION REVIEW OF FOUNDATION BEAMS AND REINFORCEMENT PRIOR TO PLACING CONCRETE.

CONTRACTORS OPTION:
The use of precast concrete bar supports (commonly called "Dobies") to support slab reinforcement or beam reinforcement for concrete slab on grade foundations is acceptable. It is important that the precast concrete bar supports are in fact made of concrete with an allowable f'c of 3000 psi. If the pads purchased are from the Aztec Concrete Accessories, Inc. which produces them, then they are pre-approved by Falkofske Engineering, Inc.

As referenced by Aztec Concrete Accessories, Inc., the Concrete Reinforcing Steel Institute (CRSI) references the use of concrete bar supports in the Manual of Standard Practice. The Manual of Standard Practice shows the use of wire dobies, plain dobies, combination (those with grooves), and dowel dobies (those with a hole for dowel bar support). The ACI also references the use of dobies as a standard practice, and the CRSI Manual of Standard Practice as a source for placing layouts.

It is our opinion that precast concrete bar supports do a much better job of supporting slab reinforcement than plastic chairs which is typical in the today's Slab on Grade foundation construction.

Brick veneer of either clay brick or concrete brick shall not be used in any Falkofske Engineering, Inc. foundation design.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
ERIK GARCIA
147076
LICENSED
PROFESSIONAL ENGINEER
06-05-2024

KHA PROJECT 062284918			
DATE: JUNE 5, 2024	SCALE:	3/8" = 1'-0"	
	DESIGNED BY:	EG	EG
	DRAWN BY:	EG	TJW
	CHECKED BY:	TJW	

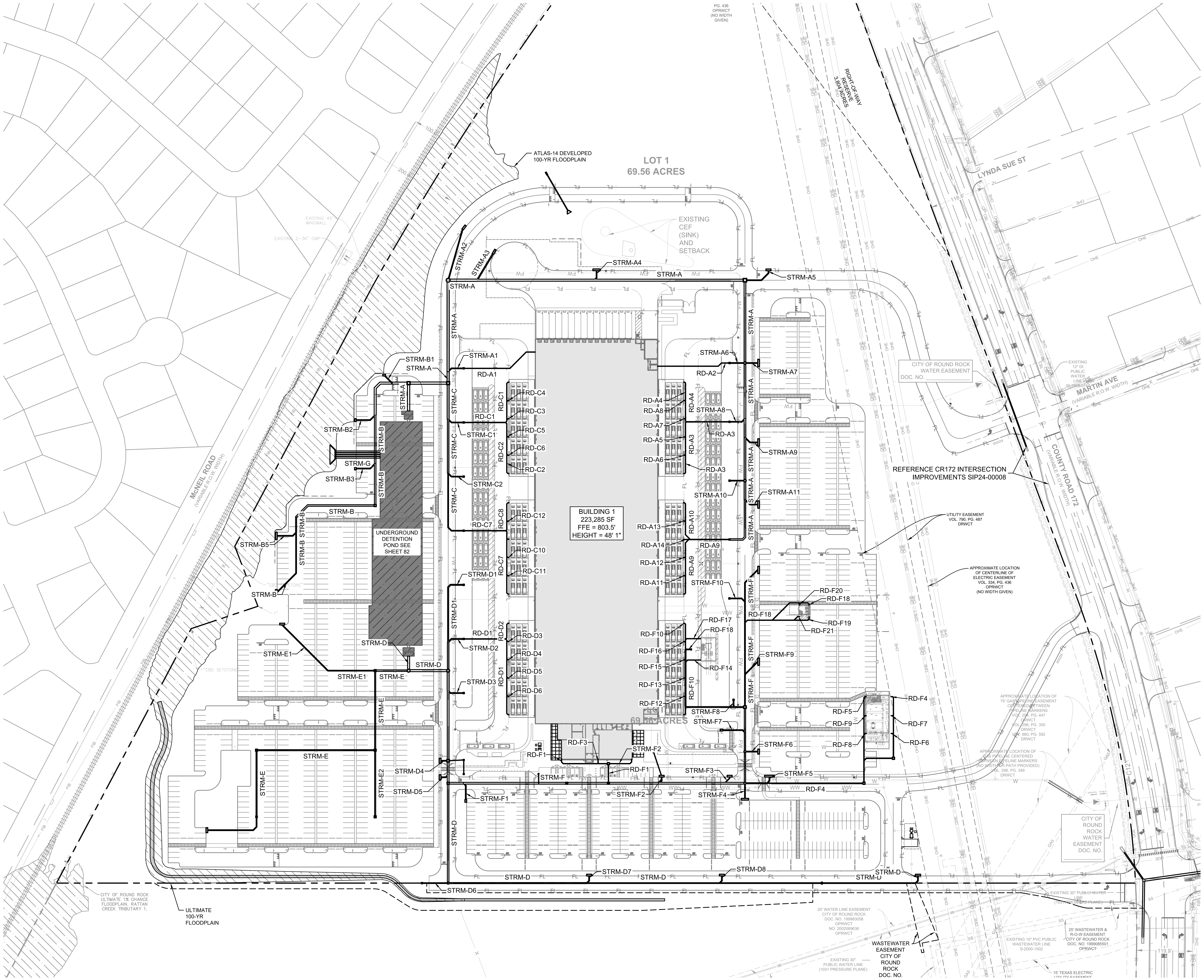
Structural Engineering Consultants
TX Reg. Engineering Firm F-4038
722 North Fielder Road
Arlington, Texas 76012
(817) 261-8300
FEI Job No. 1108.23

FALKOFSKE ENGINEERING

2525 CR 172
INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
55 OF 204

SDP24-00001



N
W E
S

GRAPHIC SCALE 100'

0 100' 200'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	PROPOSED MAJOR CONTOUR
XXX	PROPOSED MINOR CONTOUR
W	PROPOSED WATER LINE
FW	PROPOSED FIRE WATER LINE
RW	PROPOSED RECLAIMED WATER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED WATER GATE VALVE
	PROPOSED WATER BACKFLOW PREVENTOR
	PROPOSED WATER METER
	PROPOSED FIRE DEPARTMENT CONNECTION
FM	PROPOSED FORCE MAIN
WW	PROPOSED WASTEWATER LINE
WW	PROPOSED WASTEWATER MANHOLE
CO	PROPOSED WASTEWATER CLEANOUT
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM GRATE INLET
	PROPOSED STORM HEADWALL
	PROPOSED STORM MANHOLE
	PROPOSED STORM JUNCTION BOX
	PROPOSED STORM AREA INLET
	PROPOSED STORM CURB INLET
W	EXISTING WATER LINE
	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
	EXISTING WASTEWATER MANHOLE

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

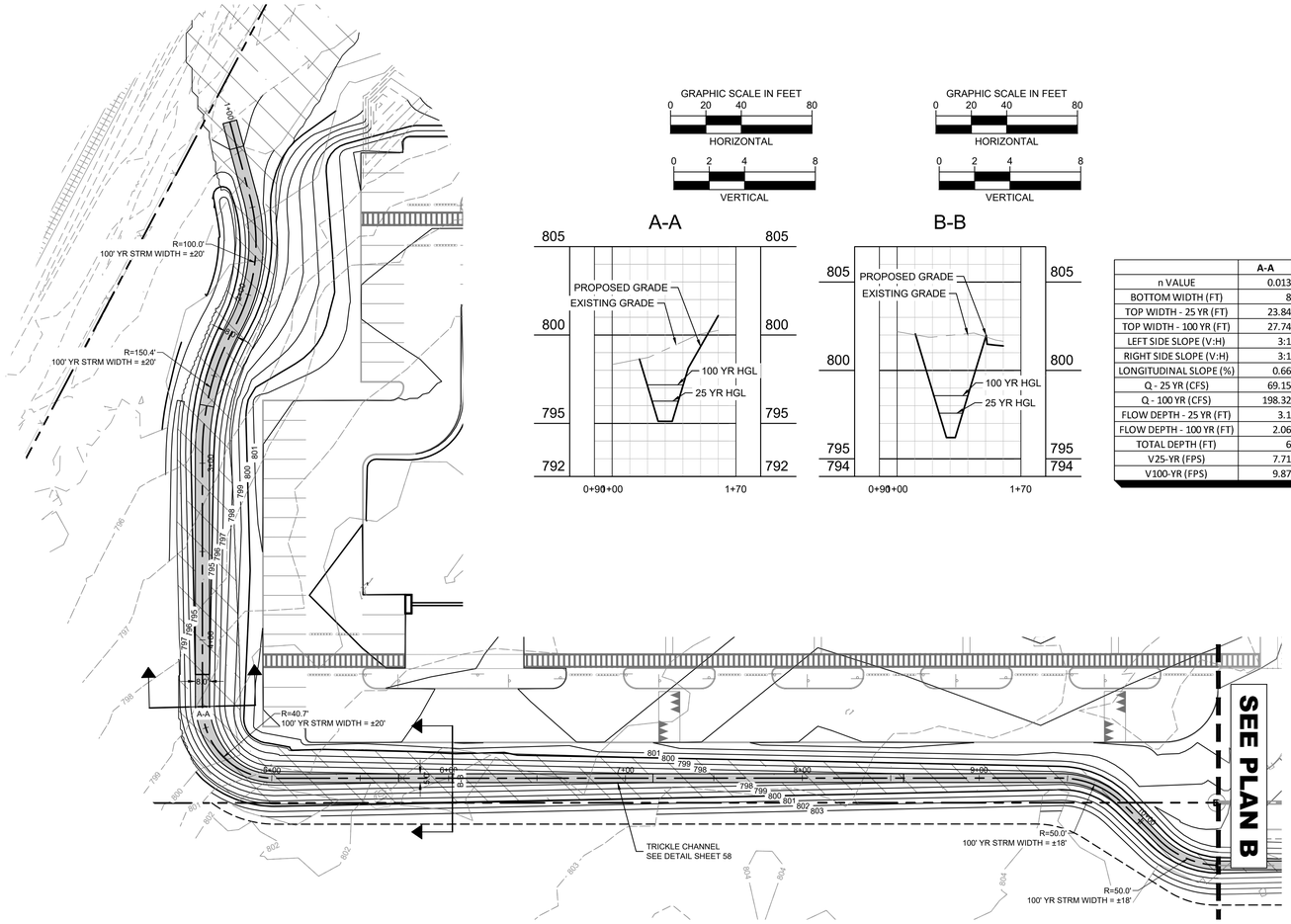
OVERALL STORM PLAN

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
56 OF 203

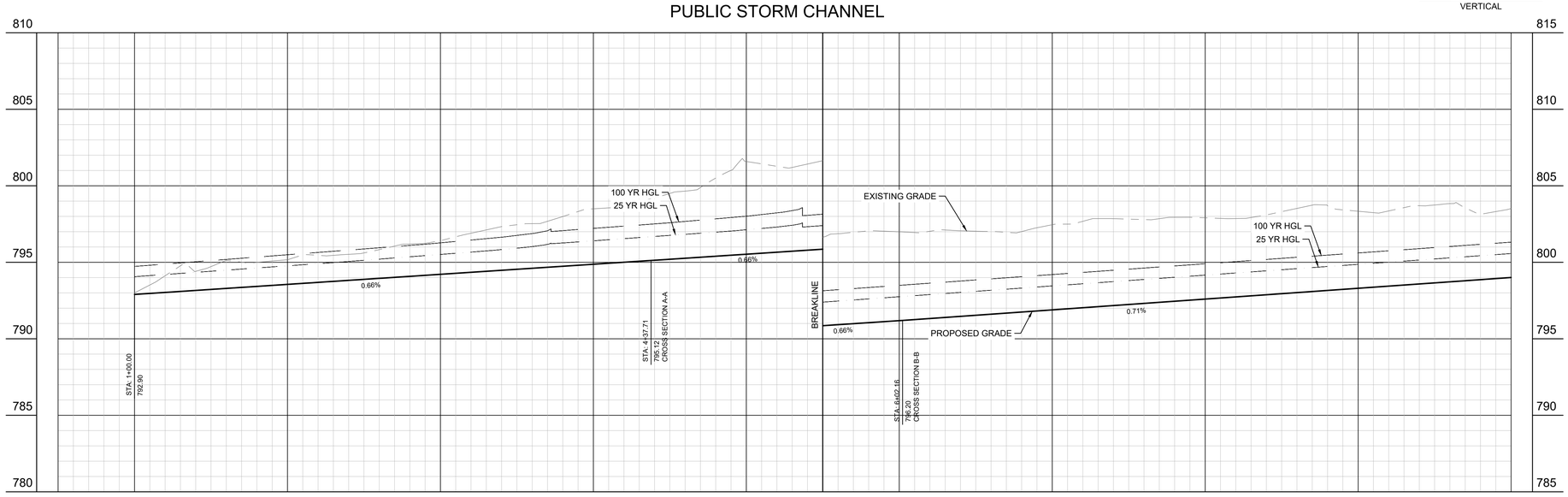
SDP24-00001



GRAPHIC SCALE IN FEET
0 20 40 80
HORIZONTAL
0 2 4 8
VERTICAL

	A-A	B-B	C-C
n VALUE	0.013	0.013	0.013
BOTTOM WIDTH (FT)	8	5	5
TOP WIDTH - 25 YR (FT)	23.84	23.84	23.84
TOP WIDTH - 100 YR (FT)	27.74	27.74	27.74
LEFT SIDE SLOPE (V:H)	3:1	3:1	3:1
RIGHT SIDE SLOPE (V:H)	3:1	3:1	3:1
LONGITUDINAL SLOPE (%)	0.66	0.66	0.71
Q - 25 YR (CFS)	69.15	69.85	73.75
Q - 100 YR (CFS)	198.32	199.67	207.32
FLOW DEPTH - 25 YR (FT)	3.1	1.38	1.42
FLOW DEPTH - 100 YR (FT)	2.06	2.37	2.42
TOTAL DEPTH (FT)	6	6	6
V25-YR (FPS)	7.71	8.04	5.60
V100-YR (FPS)	9.87	10.64	6.99

PUBLIC STORM CHANNEL

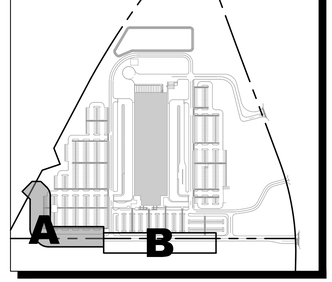


N
W E
S

0 40' 80'
GRAPHIC SCALE 40'

LEGEND

- PROPERTY LINE
- XXX EXISTING MAJOR CONTOUR
- XXX EXISTING MINOR CONTOUR
- XXX PROPOSED MAJOR CONTOUR
- XXX PROPOSED MINOR CONTOUR
- W PROPOSED WATER LINE
- FW PROPOSED FIRE WATER LINE
- RW PROPOSED RECLAIMED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER GATE VALVE
- PROPOSED WATER BACKFLOW PREVENTOR
- PROPOSED WATER METER
- PROPOSED FIRE DEPARTMENT CONNECTION
- FM PROPOSED FORCE MAIN
- WW PROPOSED WASTEWATER LINE
- WW PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM GRATE INLET
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- W EXISTING WATER LINE
- SS EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- WW EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR THE BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE PROPOSED TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
7/19/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

PUBLIC STORM PLAN AND PROFILE A

2525 CR 172 INDUSTRIAL

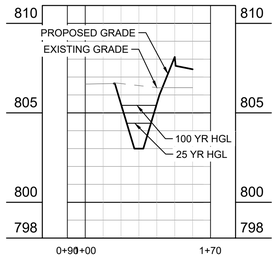
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

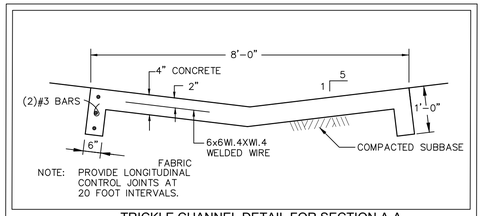
SHEET NUMBER
57 OF 203

SDP24-00001

GRAPHIC SCALE IN FEET
0 20 40 80
HORIZONTAL
0 2 4 8
VERTICAL

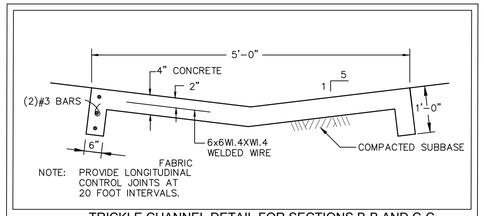
C-C





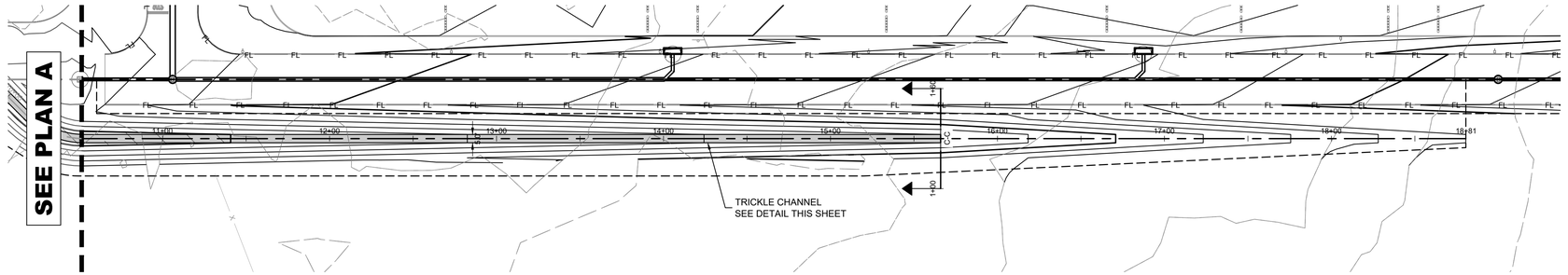
NOTE: PROVIDE LONGITUDINAL CONTROL JOINTS AT 20 FOOT INTERVALS.

TRICKLE CHANNEL DETAIL FOR SECTION A-A
N.T.S.



NOTE: PROVIDE LONGITUDINAL CONTROL JOINTS AT 20 FOOT INTERVALS.

TRICKLE CHANNEL DETAIL FOR SECTIONS B-B AND C-C
N.T.S.



N
W E
S

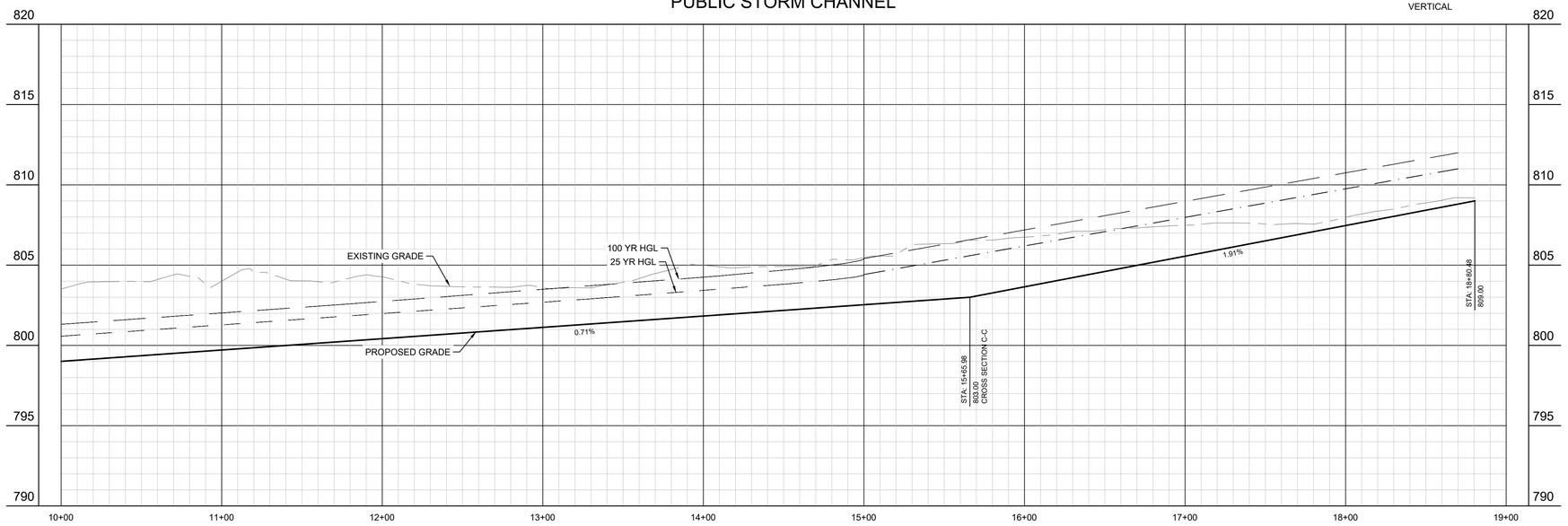
0 40' 80'
GRAPHIC SCALE 40'

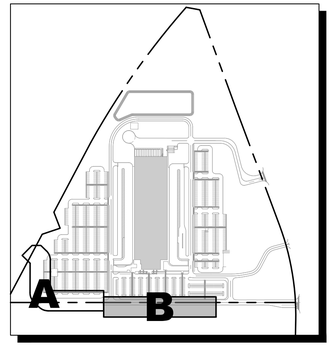
LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	PROPOSED MAJOR CONTOUR
XXX	PROPOSED MINOR CONTOUR
W	PROPOSED WATER LINE
FW	PROPOSED FIRE WATER LINE
RW	PROPOSED RECLAIMED WATER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED WATER GATE VALVE
	PROPOSED WATER BACKFLOW PREVENTOR
	PROPOSED WATER METER
	PROPOSED FIRE DEPARTMENT CONNECTION
FM	PROPOSED FORCE MAIN
WW	PROPOSED WASTEWATER LINE
WW	PROPOSED WASTEWATER MANHOLE
	PROPOSED WASTEWATER CLEANOUT
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM GRATE INLET
	PROPOSED STORM HEADWALL
	PROPOSED STORM MANHOLE
	PROPOSED STORM JUNCTION BOX
	PROPOSED STORM AREA INLET
	PROPOSED STORM CURB INLET
W	EXISTING WATER LINE
SS	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
WW	EXISTING WASTEWATER MANHOLE

GRAPHIC SCALE IN FEET
0 20 40 80
HORIZONTAL
0 2 4 8
VERTICAL

PUBLIC STORM CHANNEL





KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR THE BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE PROPOSED TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
7/19/2024

KHA PROJECT 069284918		DESIGNED BY:	MM
DATE	JUNE 2024	DRAWN BY:	MM
SCALE:	AS SHOWN	CHECKED BY:	NCB

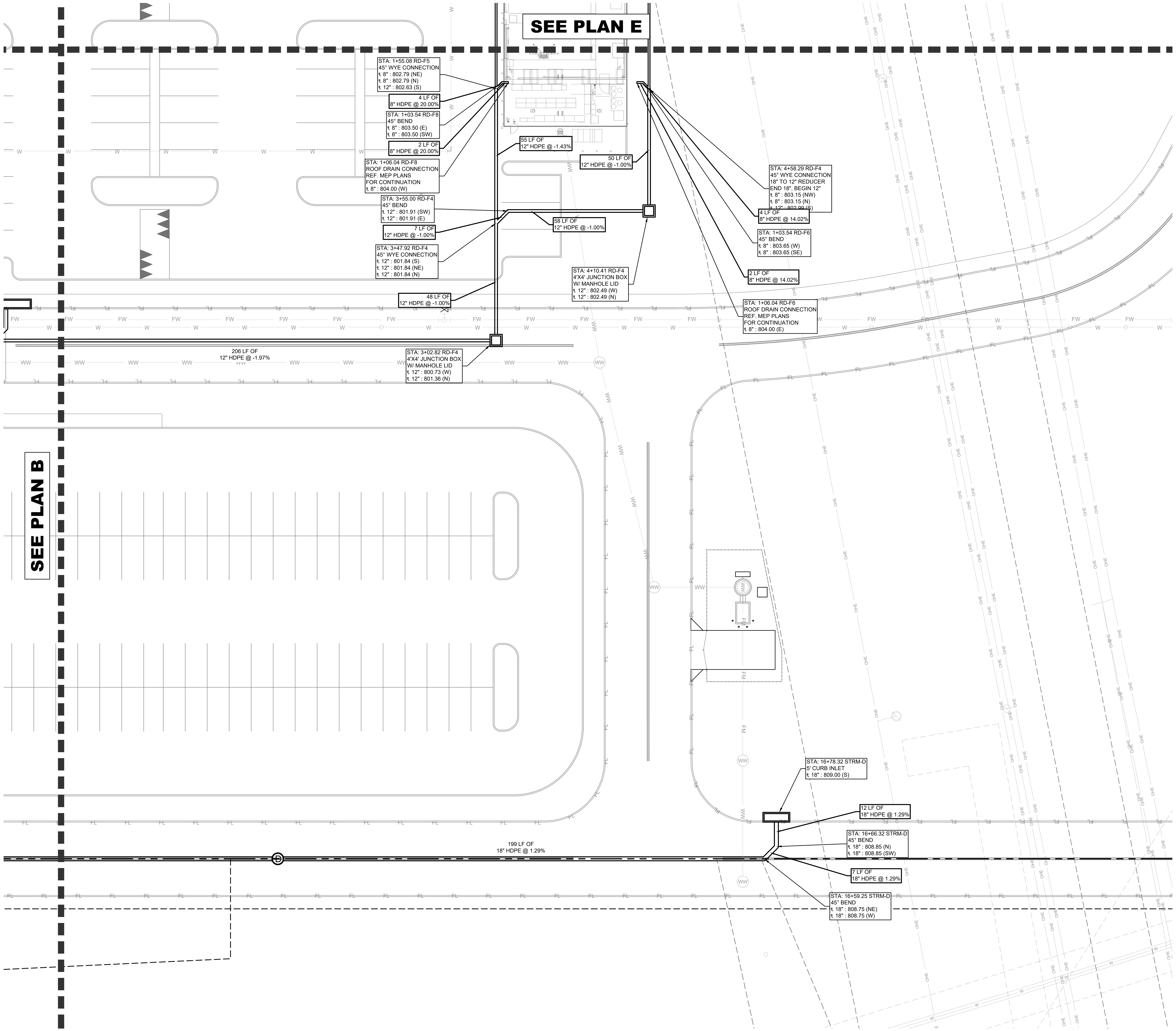
PUBLIC STORM PLAN AND PROFILE B

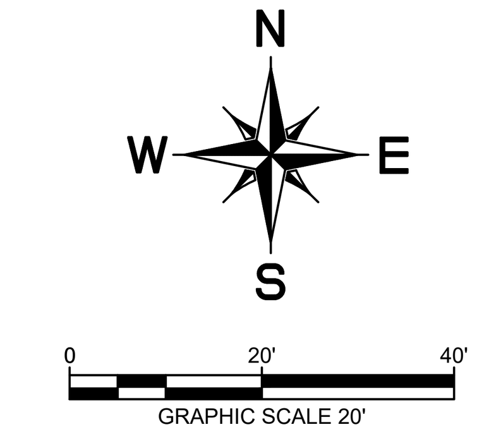
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
58 OF 203

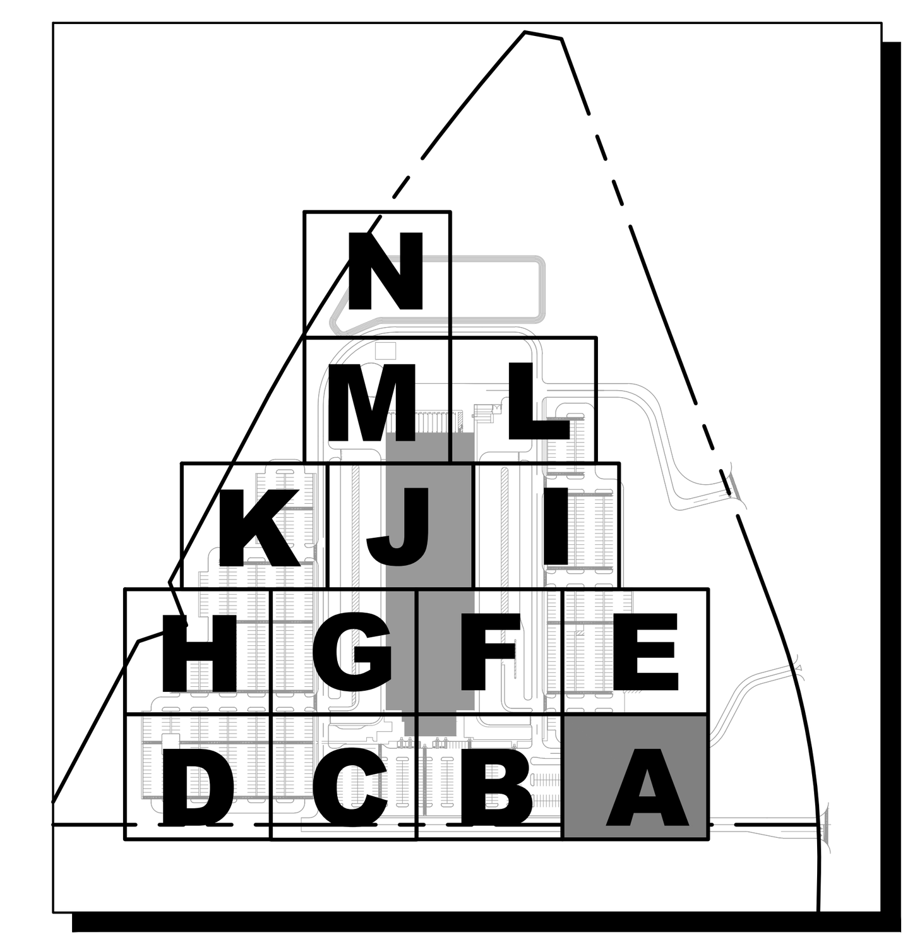
SDP24-00001





LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER LINE
- FIRE WATER LINE
- RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FORCE MAIN
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

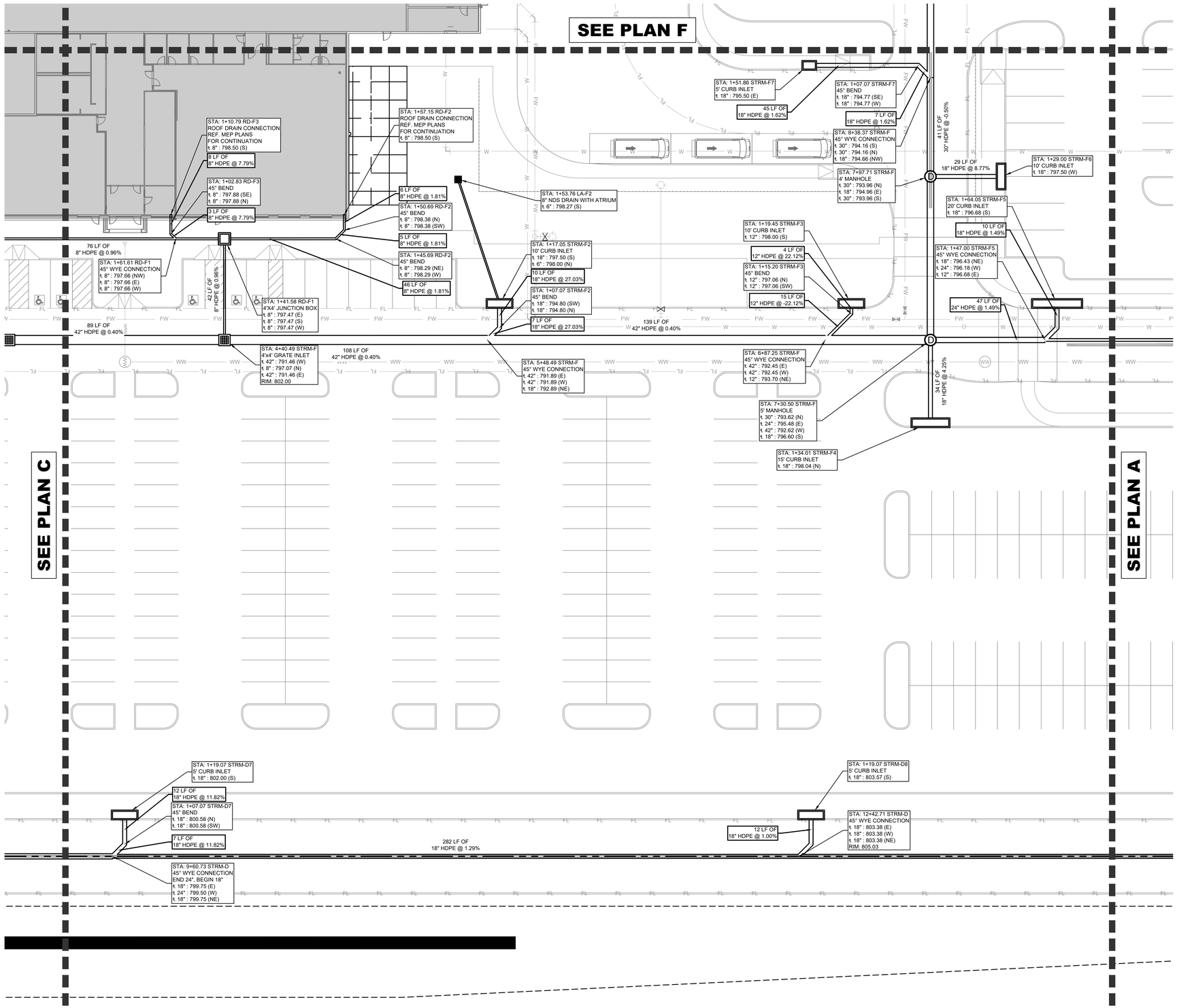
PRIVATE STORM PLAN A

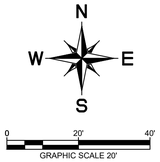
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
59 OF 203

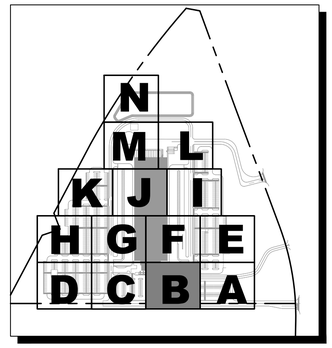
SDP24-00001





LEGEND

- PROPERTY LINE
- XXX — EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- XXX — MAJOR CONTOUR
- XXX — MINOR CONTOUR
- W — WATER LINE
- FW — FIRE WATER LINE
- RW — RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FM — FORCE MAIN
- WW — WASTEWATER LINE
- WASTEWATER MANHOLE
- CO — WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- W — EXISTING WATER LINE
- SS — EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- WW — EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 941.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT 069284918	DATE JUNE 2024	SCALE: AS SHOWN	DESIGNED BY: MM	DRAWN BY: MM	CHECKED BY: NCB

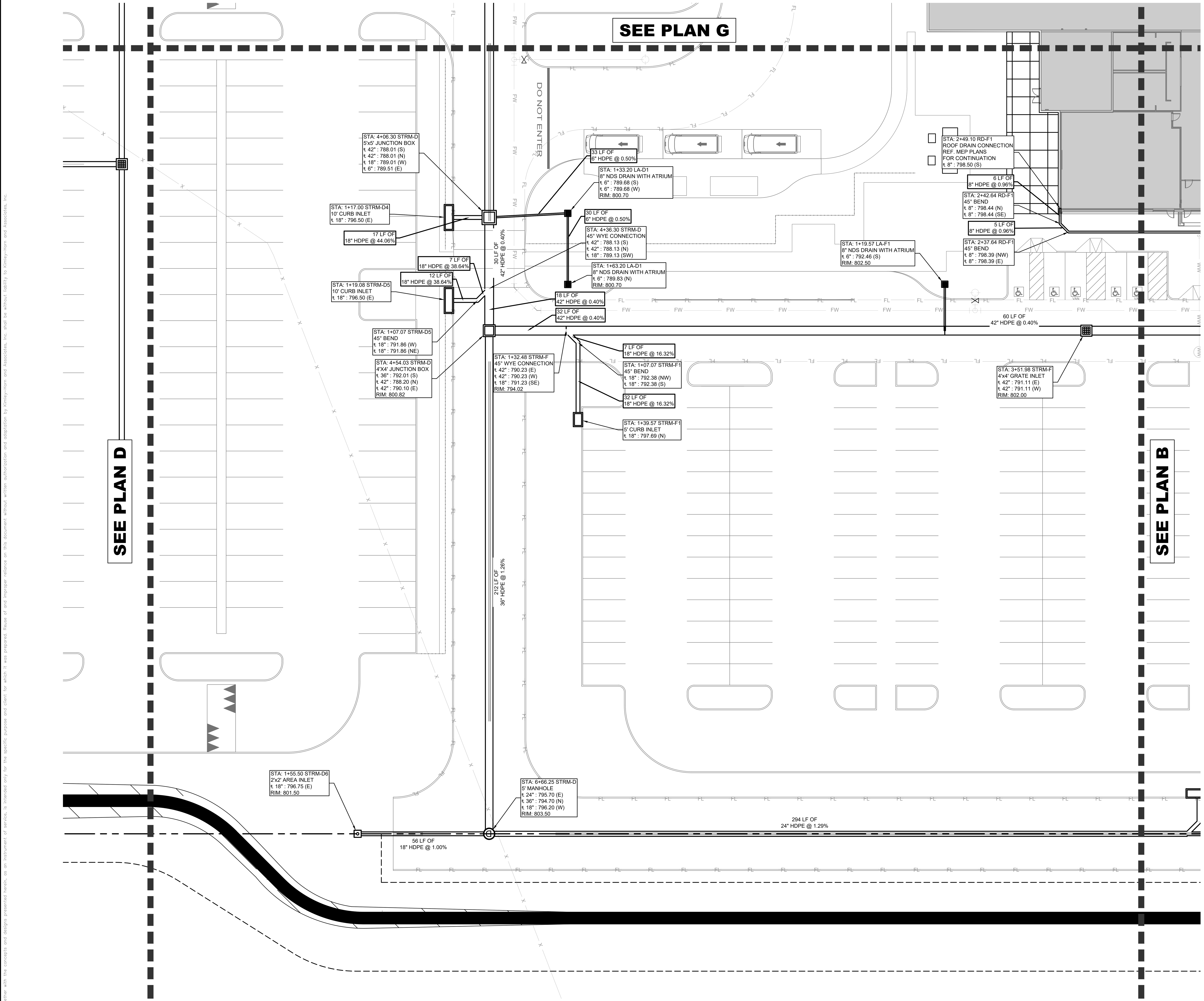
PRIVATE STORM PLAN B

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
60 OF 203

SDP24-00001

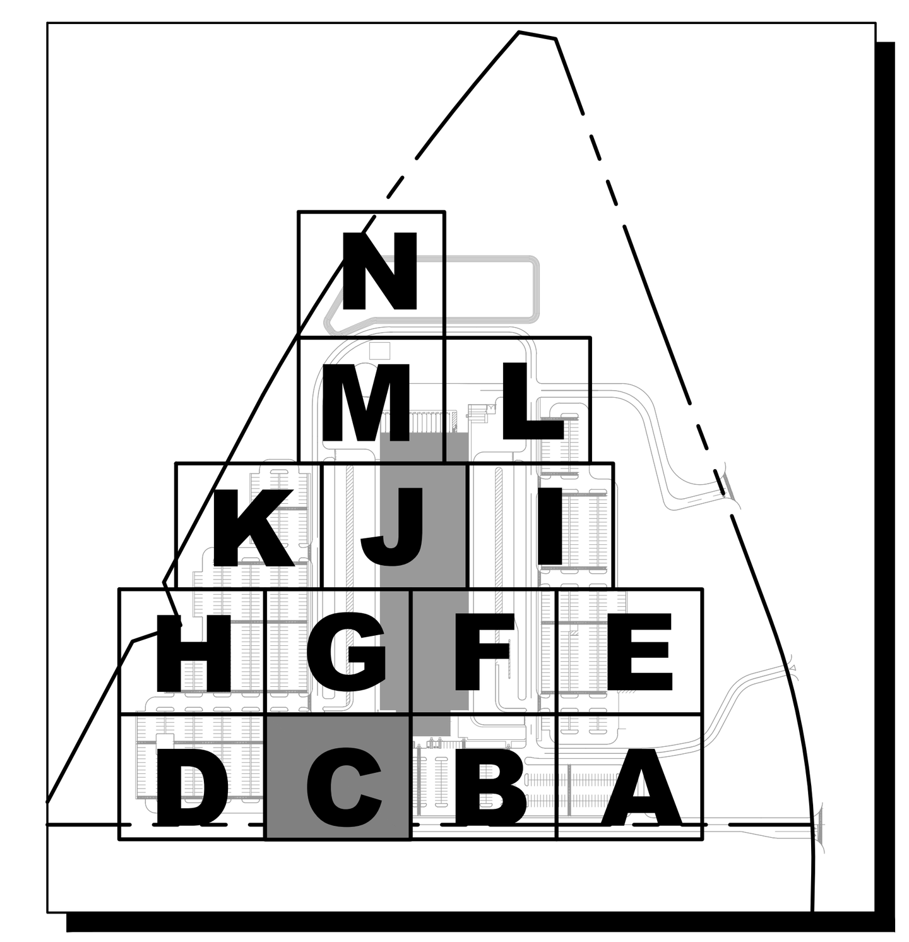


N
W E
S

GRAPHIC SCALE 20'
0 20' 40'

LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER LINE
- FIRE WATER LINE
- RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FORCE MAIN
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

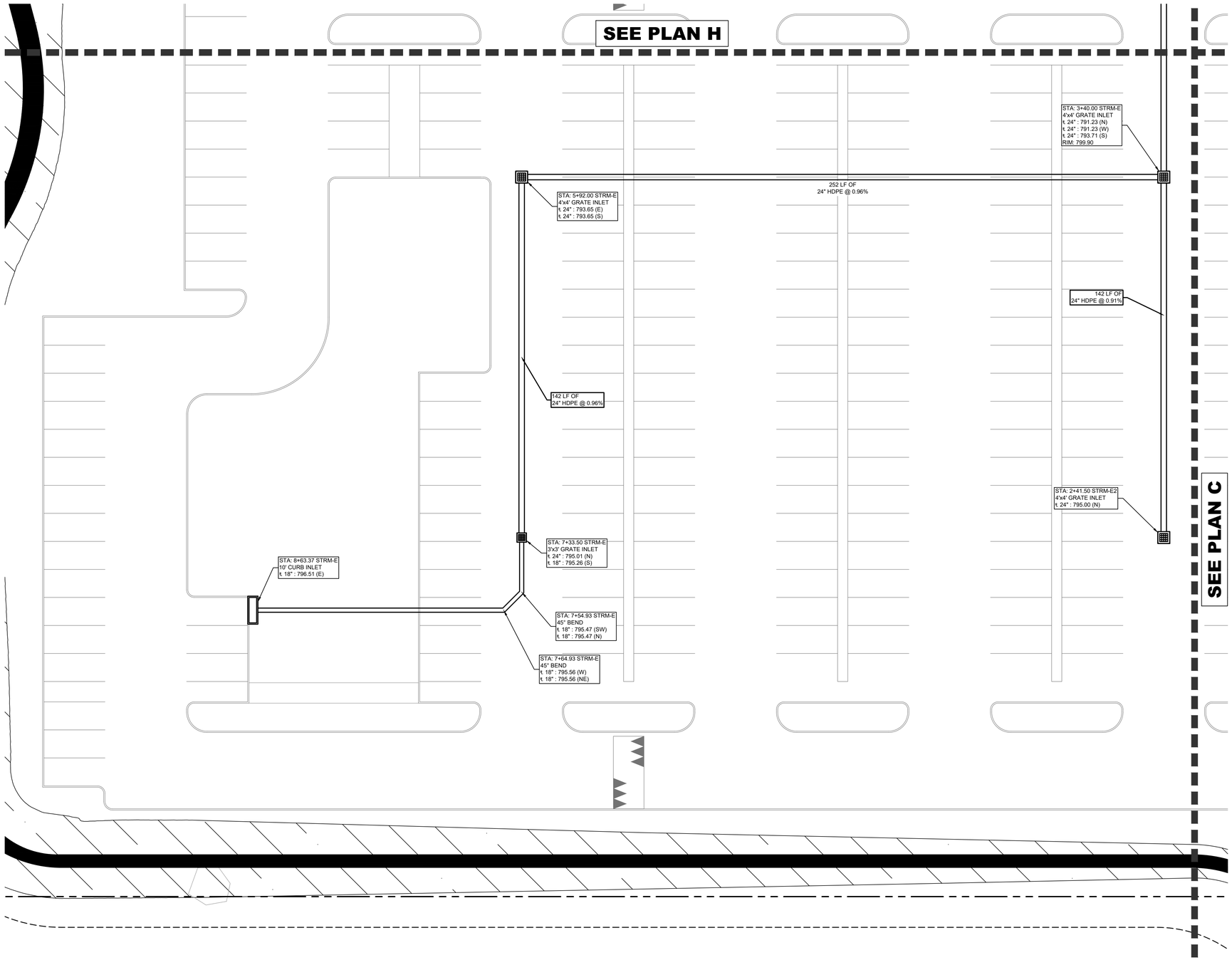
KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

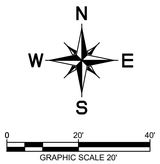
PRIVATE STORM PLAN C

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
61 OF 203

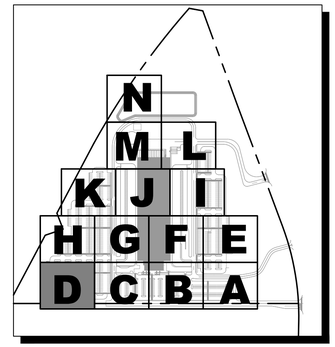
SDP24-00001





LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
W	WATER LINE
FW	FIRE WATER LINE
RW	RECLAIMED WATER LINE
	FIRE HYDRANT
	WATER GATE VALVE
	WATER BACKFLOW PREVENTOR
	WATER METER
	FIRE DEPARTMENT CONNECTION
FM	FORCE MAIN
WW	WASTEWATER LINE
WW	WASTEWATER MANHOLE
CO	WASTEWATER CLEANOUT
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
D	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
W	EXISTING WATER LINE
ss	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
WW	EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

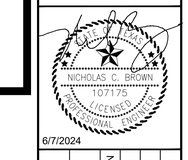
BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928



6/7/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

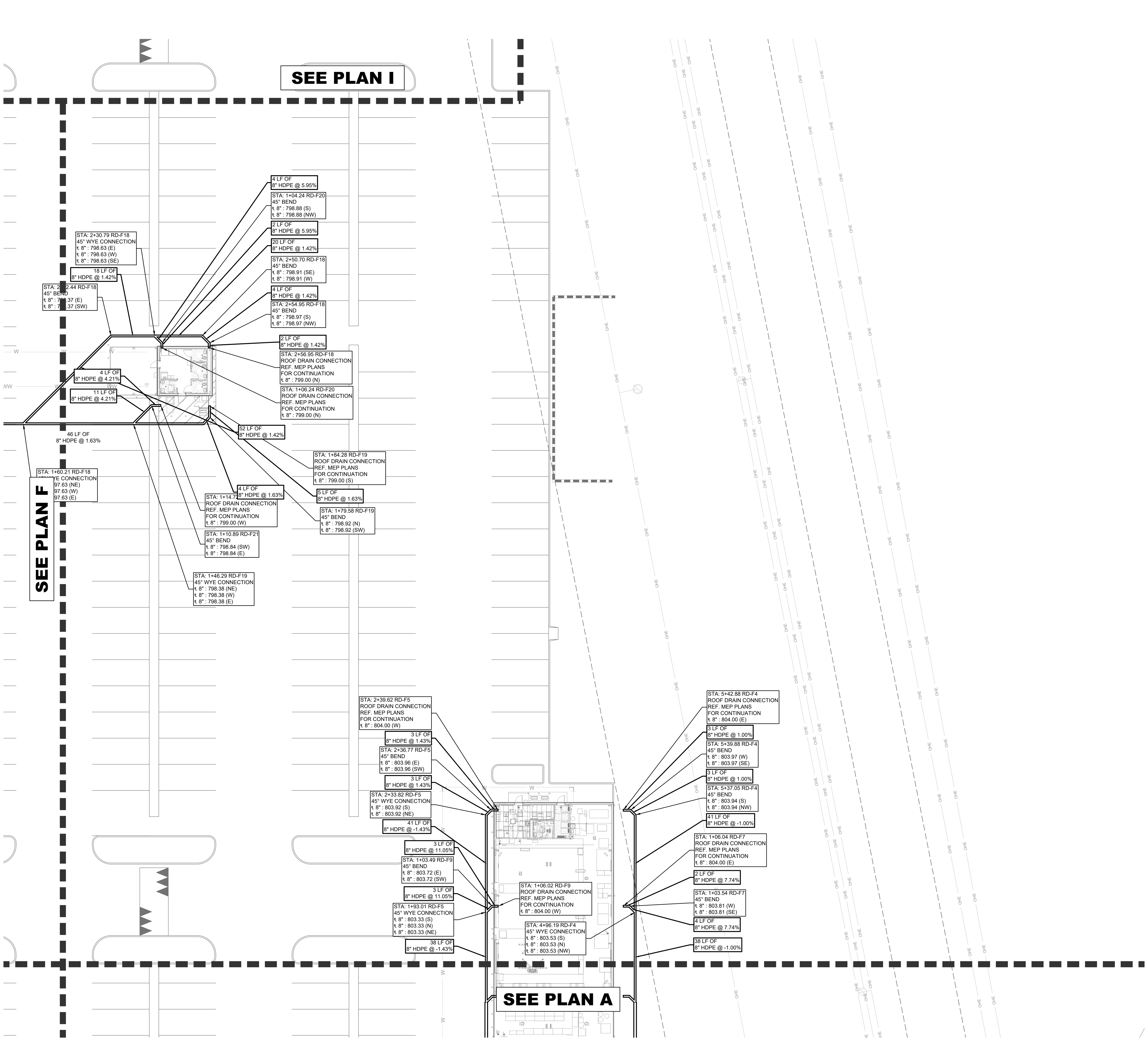
PRIVATE STORM PLAN D

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

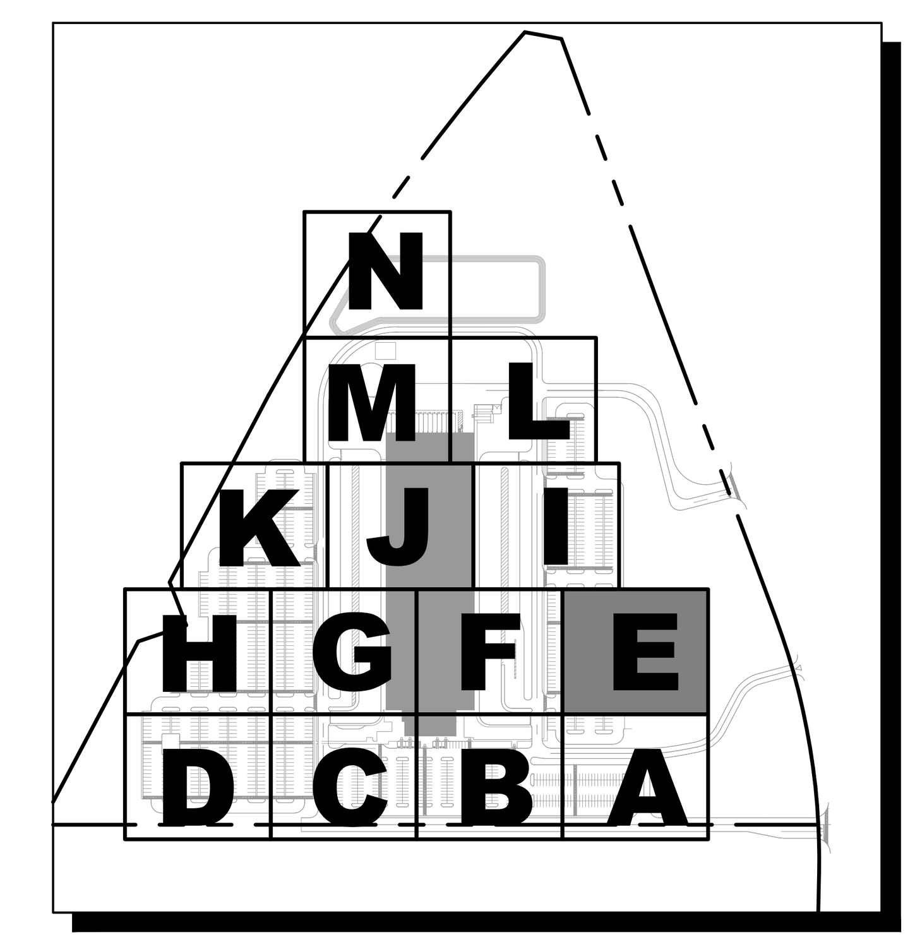
SHEET NUMBER
62 OF 203

SDP24-00001



LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
W	WATER LINE
FW	FIRE WATER LINE
RW	RECLAIMED WATER LINE
	FIRE HYDRANT
	WATER GATE VALVE
	WATER BACKFLOW PREVENTOR
	WATER METER
	FIRE DEPARTMENT CONNECTION
FM	FORCE MAIN
WW	WASTEWATER LINE
	WASTEWATER MANHOLE
CO	WASTEWATER CLEANOUT
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
W	EXISTING WATER LINE
	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
	EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

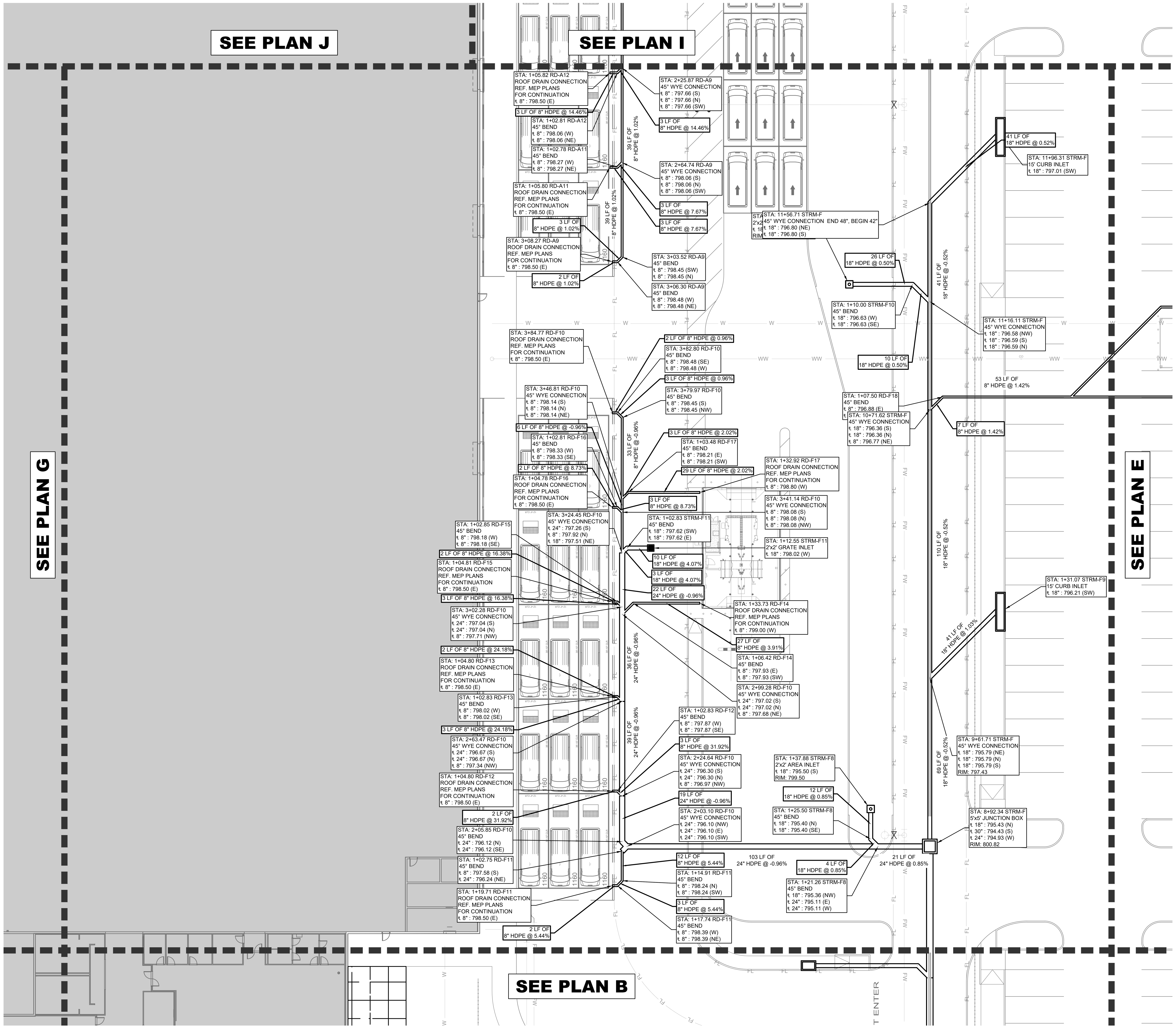
PRIVATE STORM PLAN E

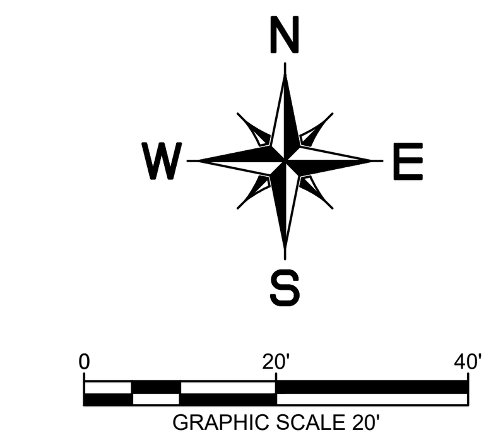
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
63 OF 203

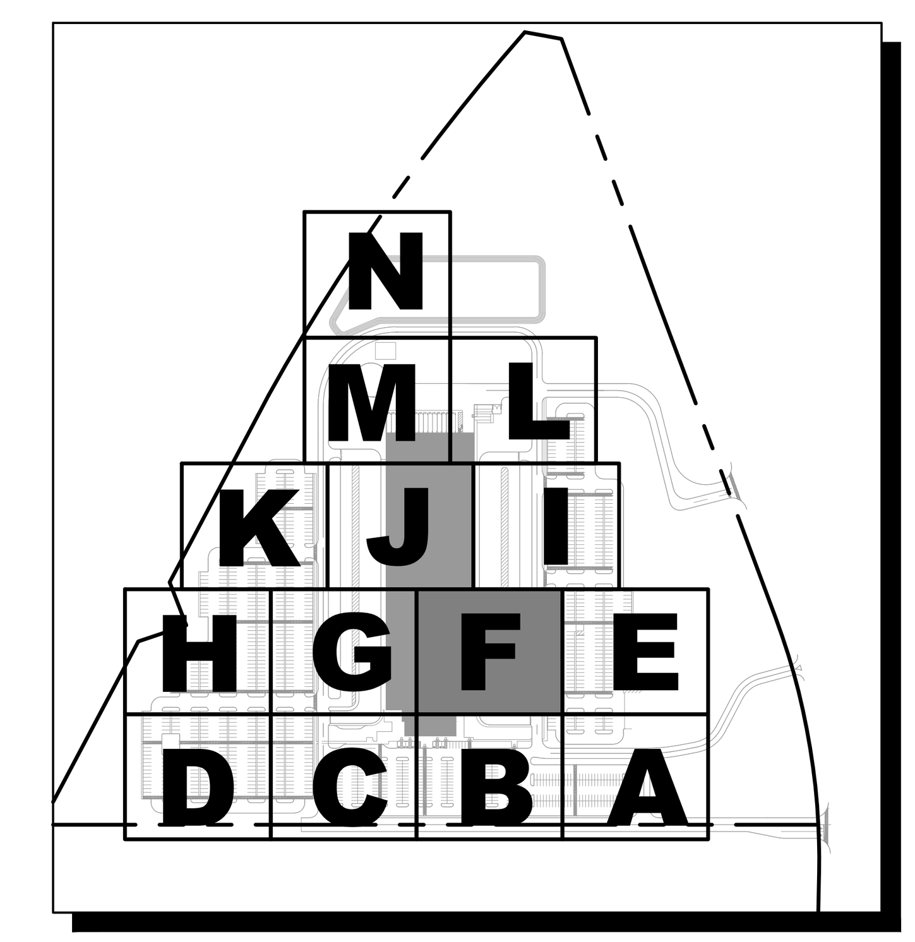
SDP24-00001





LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER LINE
- FIRE WATER LINE
- RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FORCE MAIN
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

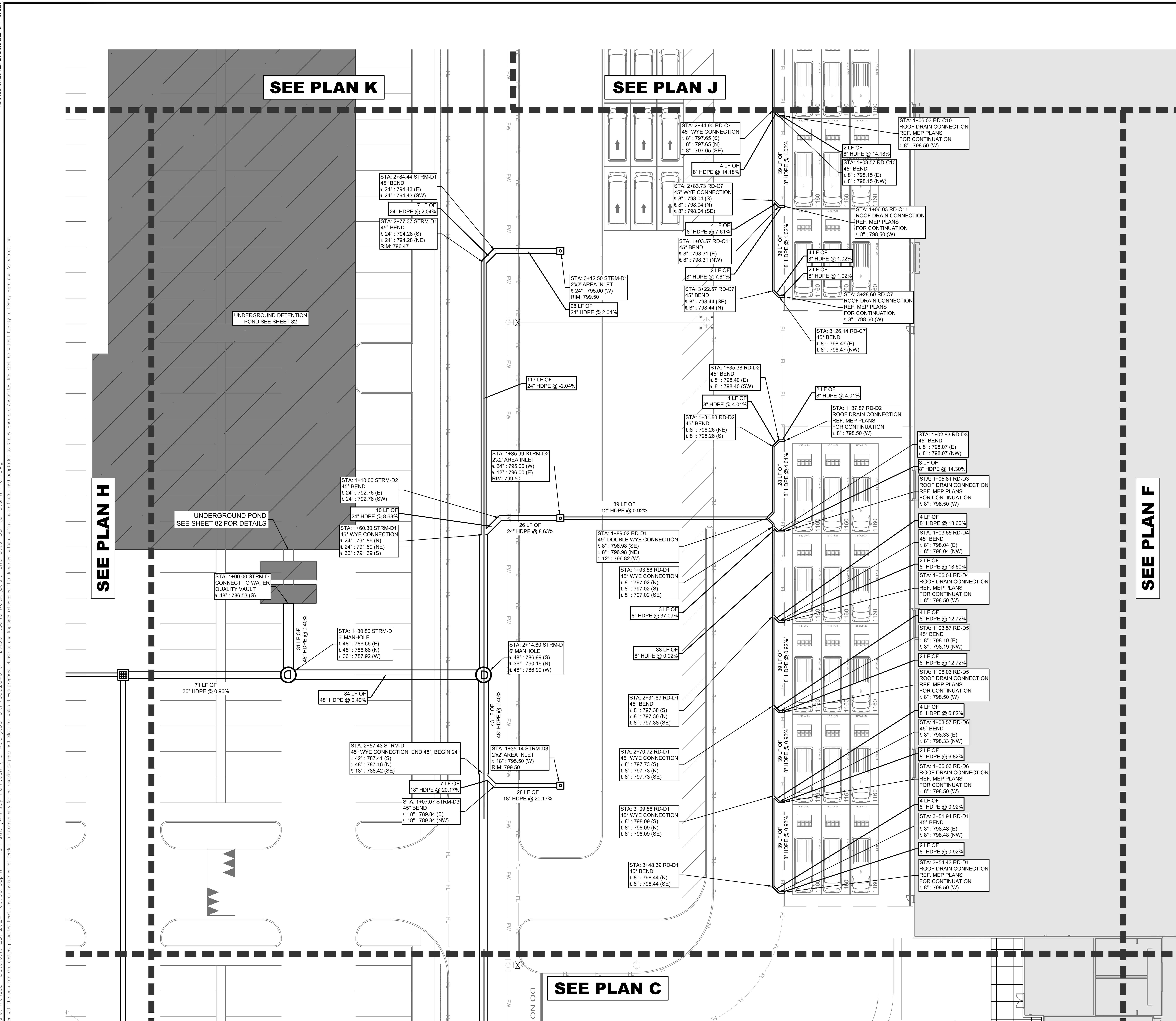
PRIVATE STORM PLAN F

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
64 OF 203

SDP24-00001

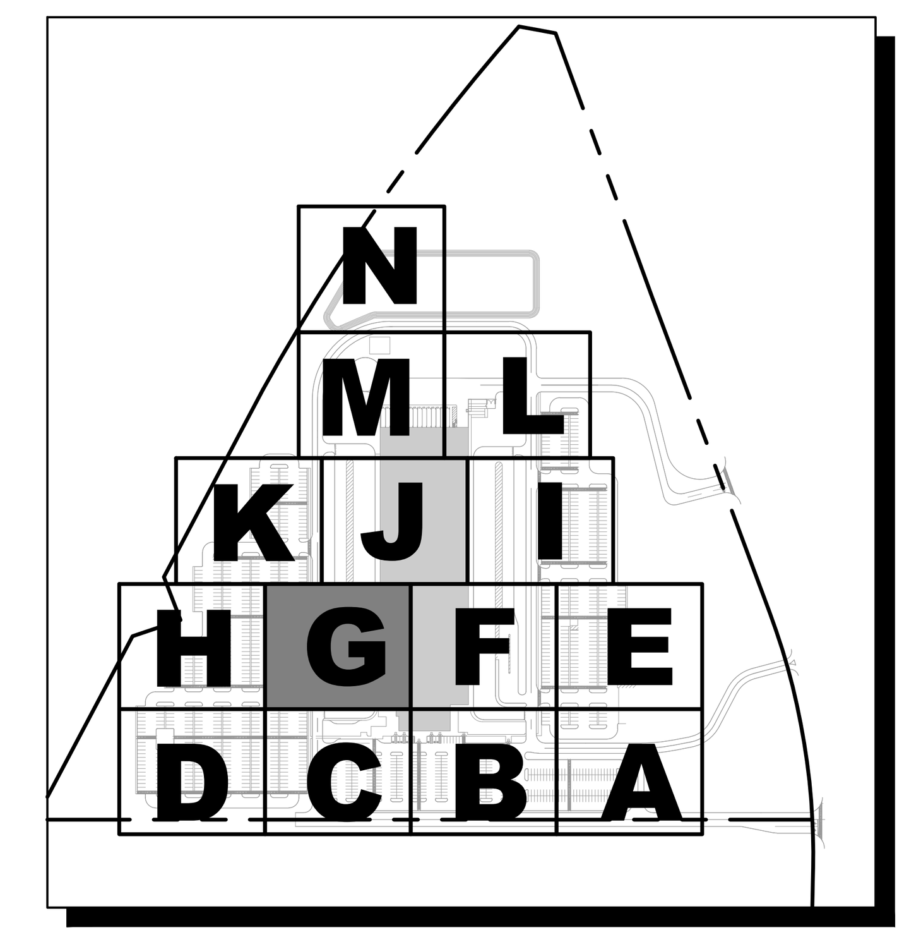


N
W
E
S

GRAPHIC SCALE 20'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
W	WATER LINE
FW	FIRE WATER LINE
RW	RECLAIMED WATER LINE
	FIRE HYDRANT
	WATER GATE VALVE
	WATER BACKFLOW PREVENTOR
	WATER METER
	FIRE DEPARTMENT CONNECTION
FM	FORCE MAIN
WW	WASTEWATER LINE
	WASTEWATER MANHOLE
	WASTEWATER CLEANOUT
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
W	EXISTING WATER LINE
	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
	EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

REVISIONS | No. | DATE | BY

Kimley-Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/7/2024

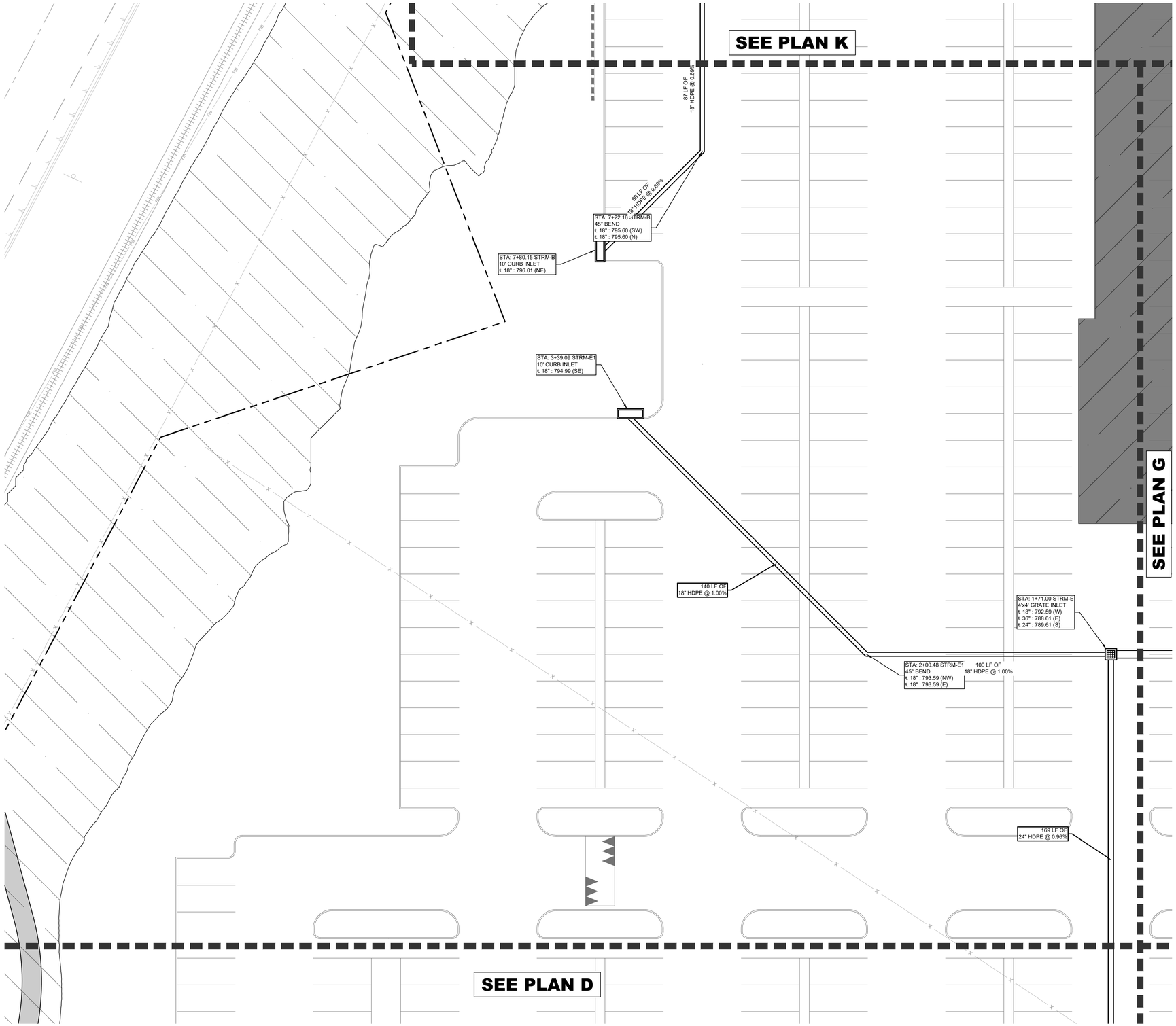
KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

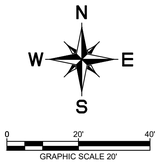
PRIVATE STORM PLAN G

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
65 OF 203

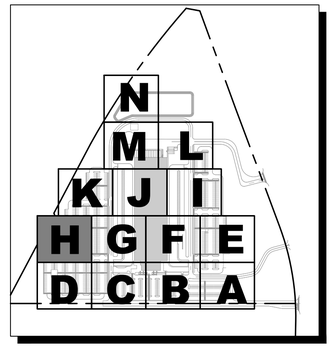
SDP24-00001





LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
W	WATER LINE
FW	FIRE WATER LINE
RW	RECLAIMED WATER LINE
	FIRE HYDRANT
	WATER GATE VALVE
	WATER BACKFLOW PREVENTOR
	WATER METER
	FIRE DEPARTMENT CONNECTION
FM	FORCE MAIN
WW	WASTEWATER LINE
WW	WASTEWATER MANHOLE
CO	WASTEWATER CLEANOUT
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
W	EXISTING WATER LINE
SS	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
WW	EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

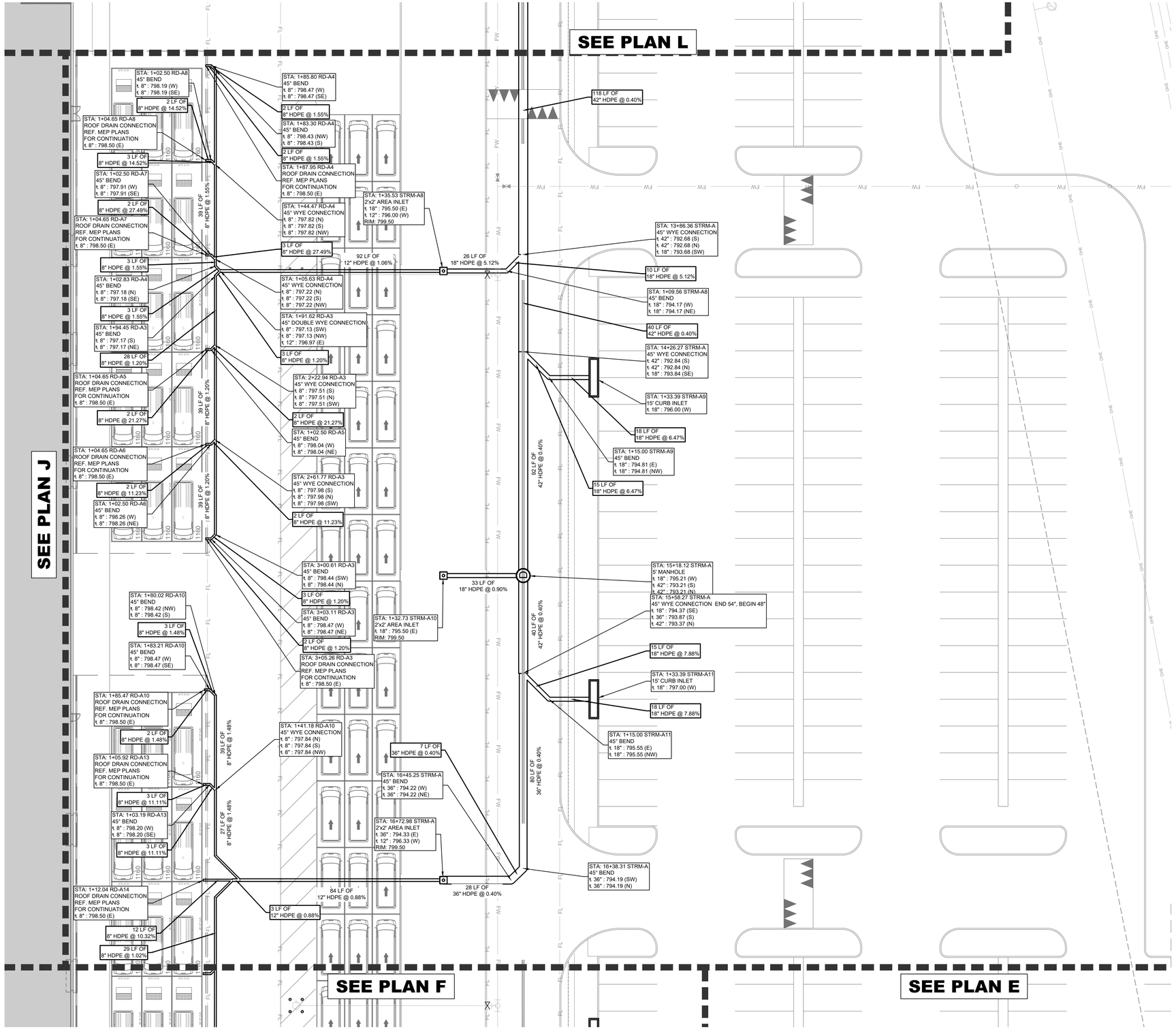
PRIVATE STORM PLAN H

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
66 OF 203

SDP24-00001



N

W E

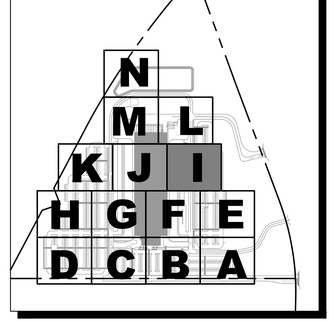
S

0 20' 40'

GRAPHIC SCALE 20'

LEGEND

- PROPERTY LINE
- XXX — EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- XXX — MAJOR CONTOUR
- XXX — MINOR CONTOUR
- W — WATER LINE
- FW — FIRE WATER LINE
- RW — RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FM — FORCE MAIN
- WW — WASTEWATER LINE
- WW — WASTEWATER MANHOLE
- CO — WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- W — EXISTING WATER LINE
- SS — EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- WW — EXISTING WASTEWATER MANHOLE



KEYMAP

N.T.S

NOTES

1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

PRIVATE STORM PLAN I

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
67 OF 203

SDP24-00001

SEE PLAN M

SEE PLAN K

SEE PLAN I

SEE PLAN G

SEE PLAN F

STA: 2+76.72 RD-C1
45° BEND
t. 8" : 798.47 (E)
t. 8" : 798.47 (SW)

4 LF OF
8" HDPE @ 1.30%

STA: 2+73.16 RD-C1
45° BEND
t. 8" : 798.42 (NE)
t. 8" : 798.42 (S)

STA: 1+03.57 RD-C4
45° BEND
t. 8" : 798.26 (E)
t. 8" : 798.26 (SW)

4 LF OF
8" HDPE @ 9.67%

STA: 2+34.33 RD-C1
45° WYE CONNECTION
t. 8" : 797.92 (N)
t. 8" : 797.92 (S)
t. 8" : 797.92 (NE)

4 LF OF
8" HDPE @ 18.02%

STA: 1+95.49 RD-C1
45° WYE CONNECTION
t. 8" : 797.41 (N)
t. 8" : 797.41 (S)
t. 8" : 797.41 (NE)

28 LF OF
18" HDPE @ 7.43%

89 LF OF
12" HDPE @ 1.30%

STA: 1+35.99 STRM-C1
2'x2' AREA INLET
t. 18" : 795.50 (W)
t. 12" : 796.00 (E)
RIM: 799.50

4 LF OF
8" HDPE @ 1.04%

26 LF OF
8" HDPE @ 1.04%

STA: 1+29.41 RD-C2
45° WYE CONNECTION
t. 8" : 797.63 (S)
t. 8" : 797.63 (N)
t. 8" : 797.63 (SE)

4 LF OF
8" HDPE @ 14.33%

STA: 1+03.64 RD-C5
45° BEND
t. 8" : 798.15 (E)
t. 8" : 798.15 (NW)

STA: 1+68.24 RD-C2
45° WYE CONNECTION
t. 8" : 798.03 (S)
t. 8" : 798.03 (N)
t. 8" : 798.03 (SE)

STA: 1+03.57 RD-C6
45° BEND
t. 8" : 798.31 (E)
t. 8" : 798.31 (NW)

4 LF OF
8" HDPE @ 1.04%

STA: 1+35.99 STRM-C2
2'x2' AREA INLET
t. 18" : 794.34 (W)
RIM: 799.50

26 LF OF
18" HDPE @ 1.00%

2 LF OF
8" HDPE @ 2.17%

STA: 1+61.33 RD-C8
45° BEND
t. 8" : 798.41 (E)
t. 8" : 798.41 (SW)

4 LF OF
8" HDPE @ 2.17%

STA: 1+57.76 RD-C8
45° BEND
t. 8" : 798.34 (NE)
t. 8" : 798.34 (S)

39 LF OF
8" HDPE @ 2.17%

STA: 1+18.93 RD-C8
45° WYE CONNECTION
t. 8" : 797.49 (N)
t. 8" : 797.49 (S)
t. 8" : 797.49 (NE)

26 LF OF
18" HDPE @ 1.01%

90 LF OF
12" HDPE @ 1.02%

STA: 1+89.59 RD-C7
45° DOUBLE WYE CONNECTION
t. 8" : 797.08 (SE)
t. 8" : 797.08 (NE)
t. 12" : 796.91 (W)

STA: 4+42.55 STRM-C
2'x2' AREA INLET
t. 18" : 795.50 (W)
t. 12" : 796.00 (E)
RIM: 799.50

STA: 1+92.34 RD-C7
45° BEND
t. 8" : 797.11 (NW)
t. 8" : 797.11 (S)

14 LF OF
8" HDPE @ 1.02%

STA: 2+06.07 RD-C7
45° WYE CONNECTION
t. 8" : 797.25 (S)
t. 8" : 797.25 (N)
t. 8" : 797.25 (SE)

39 LF OF
8" HDPE @ 1.30%

39 LF OF
8" HDPE @ 1.04%

39 LF OF
8" HDPE @ 1.02%

STA: 2+79.25 RD-C1
ROOF DRAIN CONNECTION
REF. MEP PLANS
FOR CONTINUATION
t. 8" : 798.50 (W)

3 LF OF
8" HDPE @ 1.30%

2 LF OF
8" HDPE @ 9.67%

STA: 1+06.04 RD-C4
ROOF DRAIN CONNECTION
REF. MEP PLANS
FOR CONTINUATION
t. 8" : 798.50 (W)

STA: 1+03.55 RD-C3
45° BEND
t. 8" : 798.05 (E)
t. 8" : 798.05 (SW)

2 LF OF
8" HDPE @ 18.02%

STA: 1+06.05 RD-C3
ROOF DRAIN CONNECTION
REF. MEP PLANS
FOR CONTINUATION
t. 8" : 798.50 (W)

9 LF OF
8" HDPE @ 1.30%

4 LF OF
8" HDPE @ 1.30%

STA: 1+03.54 RD-C2
45° BEND
t. 8" : 797.36 (S)
t. 8" : 797.36 (NW)

STA: 1+06.07 RD-C5
ROOF DRAIN CONNECTION
REF. MEP PLANS
FOR CONTINUATION
t. 8" : 798.50 (W)

2 LF OF
8" HDPE @ 14.33%

4 LF OF
8" HDPE @ 7.72%

2 LF OF
8" HDPE @ 7.72%

STA: 1+06.04 RD-C6
ROOF DRAIN CONNECTION
REF. MEP PLANS
FOR CONTINUATION
t. 8" : 798.50 (W)

STA: 2+07.08 RD-C2
45° BEND
t. 8" : 798.44 (SE)
t. 8" : 798.44 (N)

STA: 2+13.12 RD-C2
ROOF DRAIN CONNECTION
REF. MEP PLANS
FOR CONTINUATION
t. 8" : 798.50 (W)

2 LF OF
8" HDPE @ 1.04%

STA: 1+92.58 RD-C1
45° BEND
t. 8" : 797.37 (N)
t. 8" : 797.37 (SW)

STA: 1+89.02 RD-C1
45° BEND
t. 8" : 797.33 (NE)
t. 8" : 797.33 (SE)
t. 12" : 797.16 (W)

STA: 1+63.79 RD-C8
ROOF DRAIN CONNECTION
REF. MEP PLANS
FOR CONTINUATION
t. 8" : 798.47 (W)

STA: 1+03.57 RD-C12
45° BEND
t. 8" : 798.16 (E)
t. 8" : 798.16 (SW)

2 LF OF
8" HDPE @ 18.75%

STA: 1+06.03 RD-C12
ROOF DRAIN CONNECTION
REF. MEP PLANS
FOR CONTINUATION
t. 8" : 798.62 (W)

4 LF OF
8" HDPE @ 18.75%

16 LF OF
8" HDPE @ 2.17%

STA: 1+02.75 RD-C8
45° BEND
t. 8" : 797.14 (N)
t. 8" : 797.14 (SW)

3 LF OF
8" HDPE @ 2.17%

3 LF OF
8" HDPE @ -1.02%

STA: 1+06.03 RD-C9
ROOF DRAIN CONNECTION
REF. MEP PLANS
FOR CONTINUATION
t. 8" : 798.50 (W)

STA: 1+03.57 RD-C9
45° BEND
t. 8" : 797.99 (E)
t. 8" : 797.99 (NW)

BUILDING 1
223,285 SF
FFE = 803.5'
HEIGHT = 48' 1"

N

W E

S

0 20' 40'

GRAPHIC SCALE 20'

LEGEND

- PROPERTY LINE
- XXX EXISTING MAJOR CONTOUR
- XXX EXISTING MINOR CONTOUR
- XXX MAJOR CONTOUR
- XXX MINOR CONTOUR
- W WATER LINE
- FW FIRE WATER LINE
- RW RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FM FORCE MAIN
- WW WASTEWATER LINE
- WW WASTEWATER MANHOLE
- CO WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- W EXISTING WATER LINE
- SS EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- WW EXISTING WASTEWATER MANHOLE

N
M L
K J I
H G F E
D C B A

KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.63
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±580' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

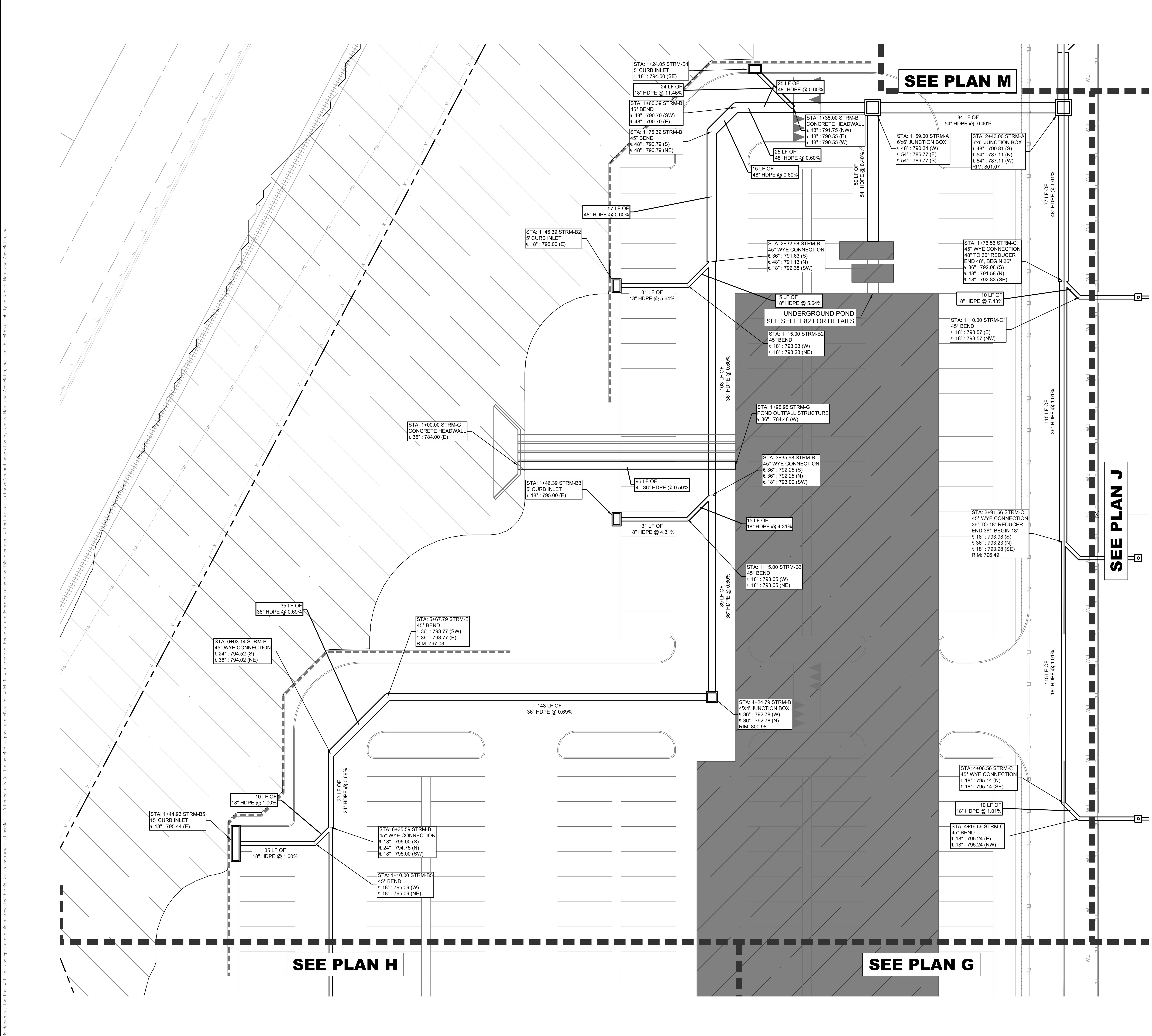
KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

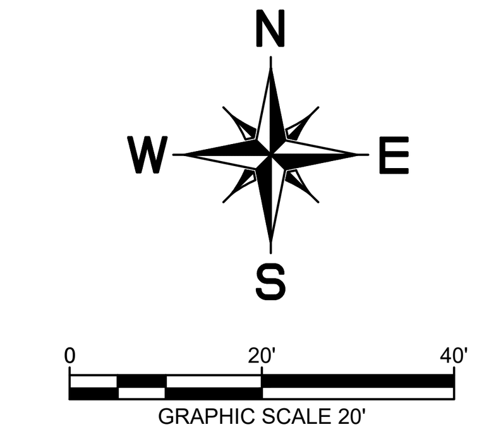
PRIVATE STORM PLAN J

2525 CR 172
INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
68 OF 203

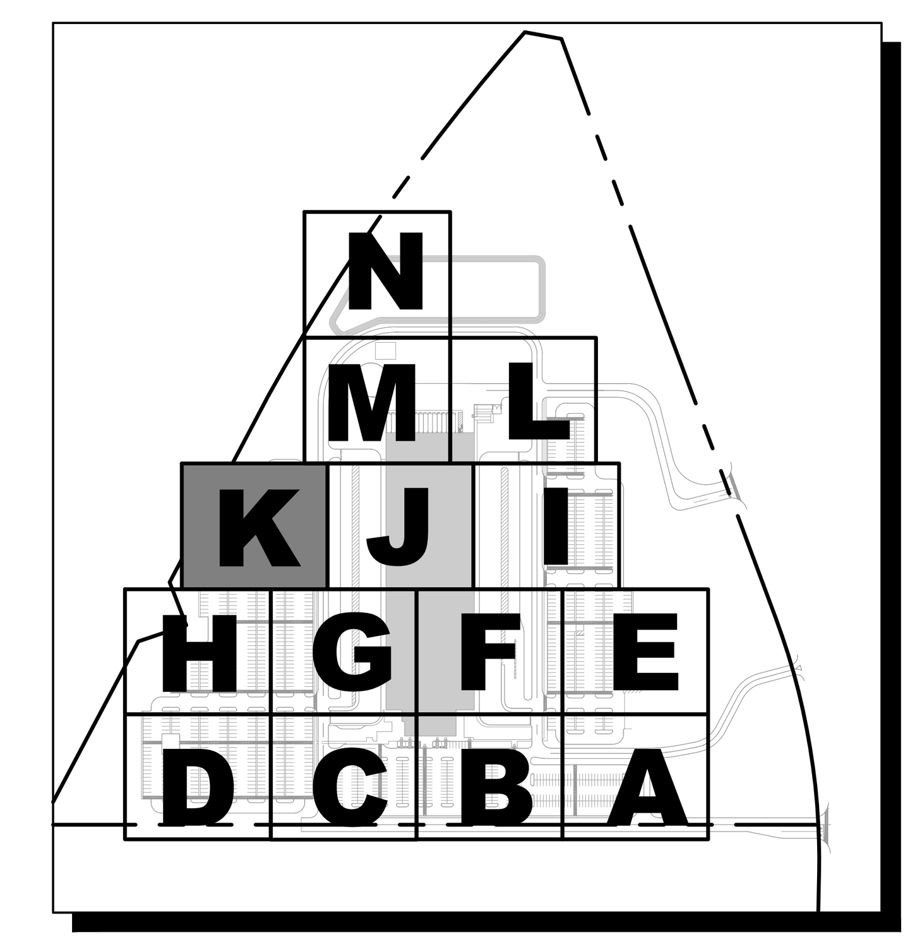
SDP24-00001





LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
W	WATER LINE
FW	FIRE WATER LINE
RW	RECLAIMED WATER LINE
	FIRE HYDRANT
	WATER GATE VALVE
	WATER BACKFLOW PREVENTOR
	WATER METER
	FIRE DEPARTMENT CONNECTION
FM	FORCE MAIN
WW	WASTEWATER LINE
	WASTEWATER MANHOLE
CO	WASTEWATER CLEANOUT
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
W	EXISTING WATER LINE
ss	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
	EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107775
LICENSED PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

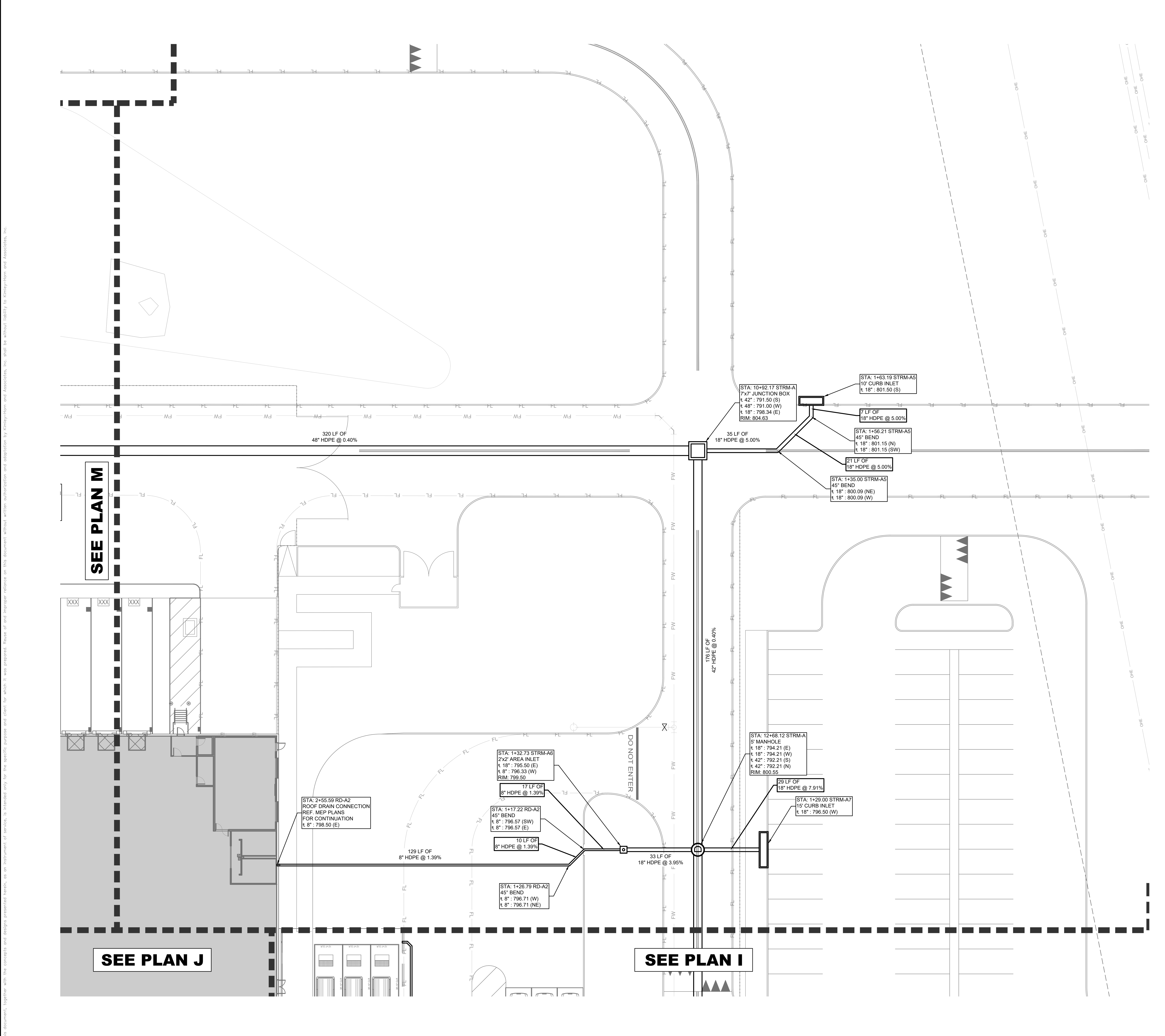
PRIVATE STORM PLAN K

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

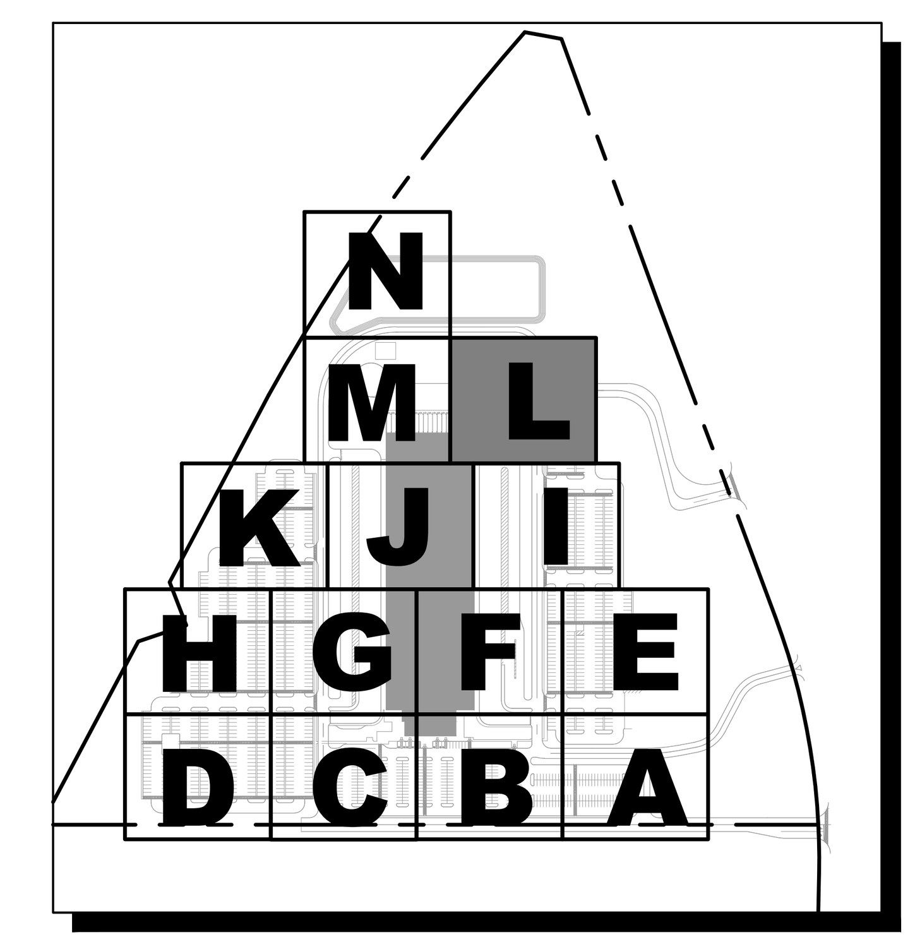
SHEET NUMBER
69 OF 203

SDP24-00001



LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER LINE
- FIRE WATER LINE
- RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FORCE MAIN
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

PRIVATE STORM PLAN L

2525 CR 172 INDUSTRIAL

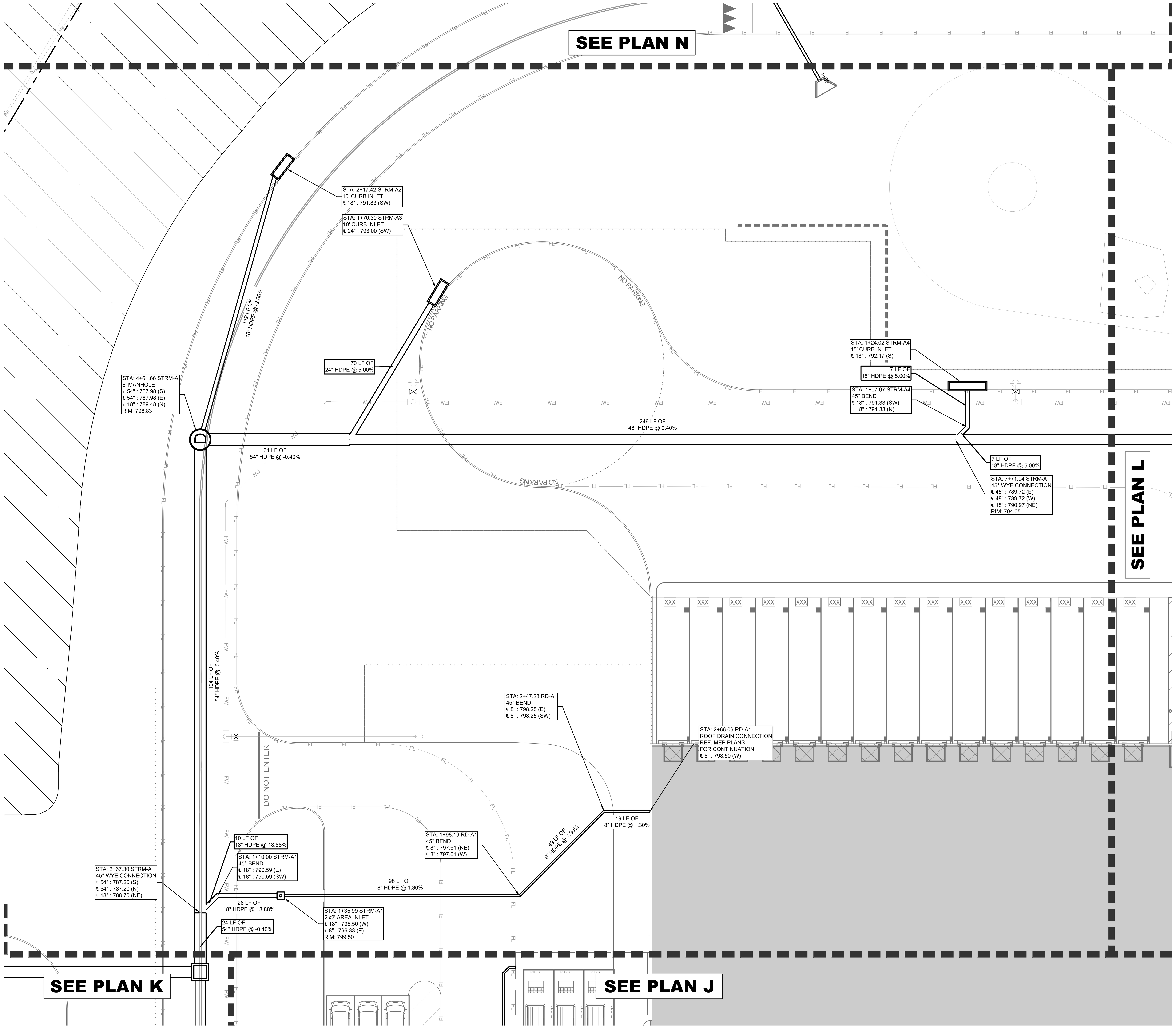
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER

SDP24-00001

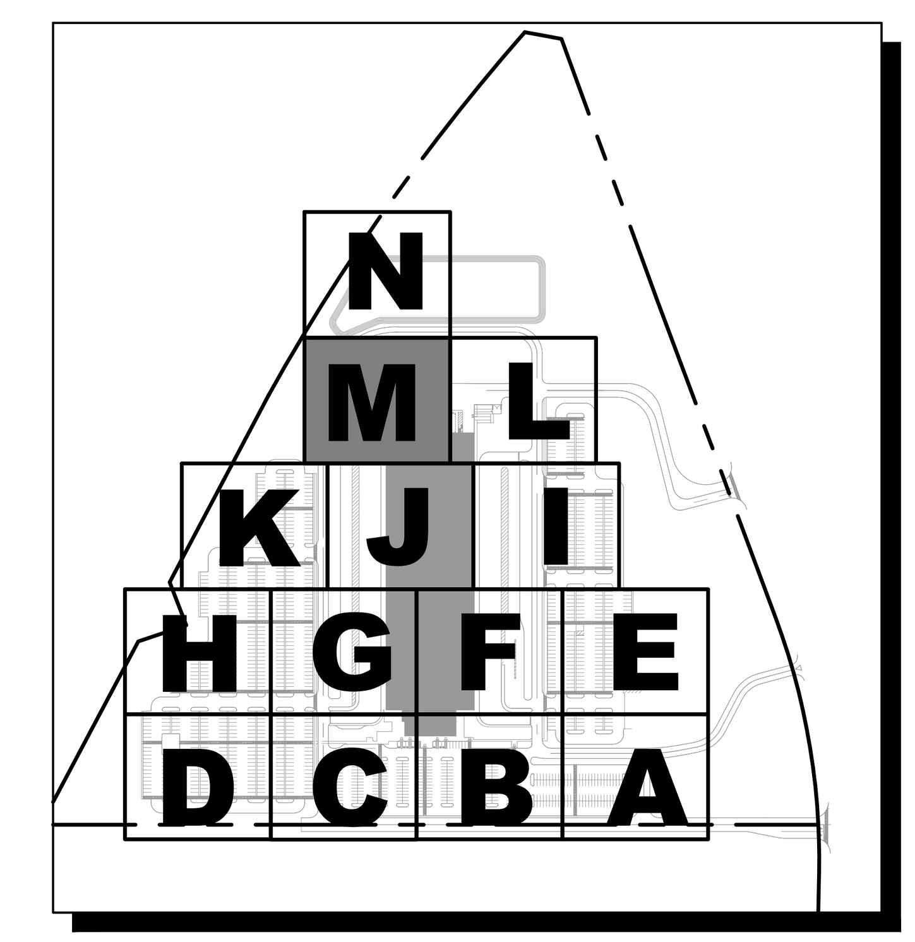
N
W E
S

0 20' 40'
GRAPHIC SCALE 20'



LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER LINE
- FIRE WATER LINE
- RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FORCE MAIN
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

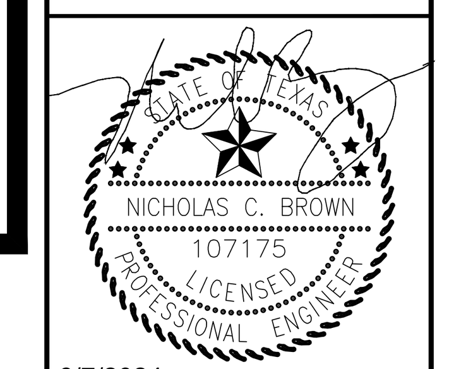
BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley-Horn
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928



6/7/2024

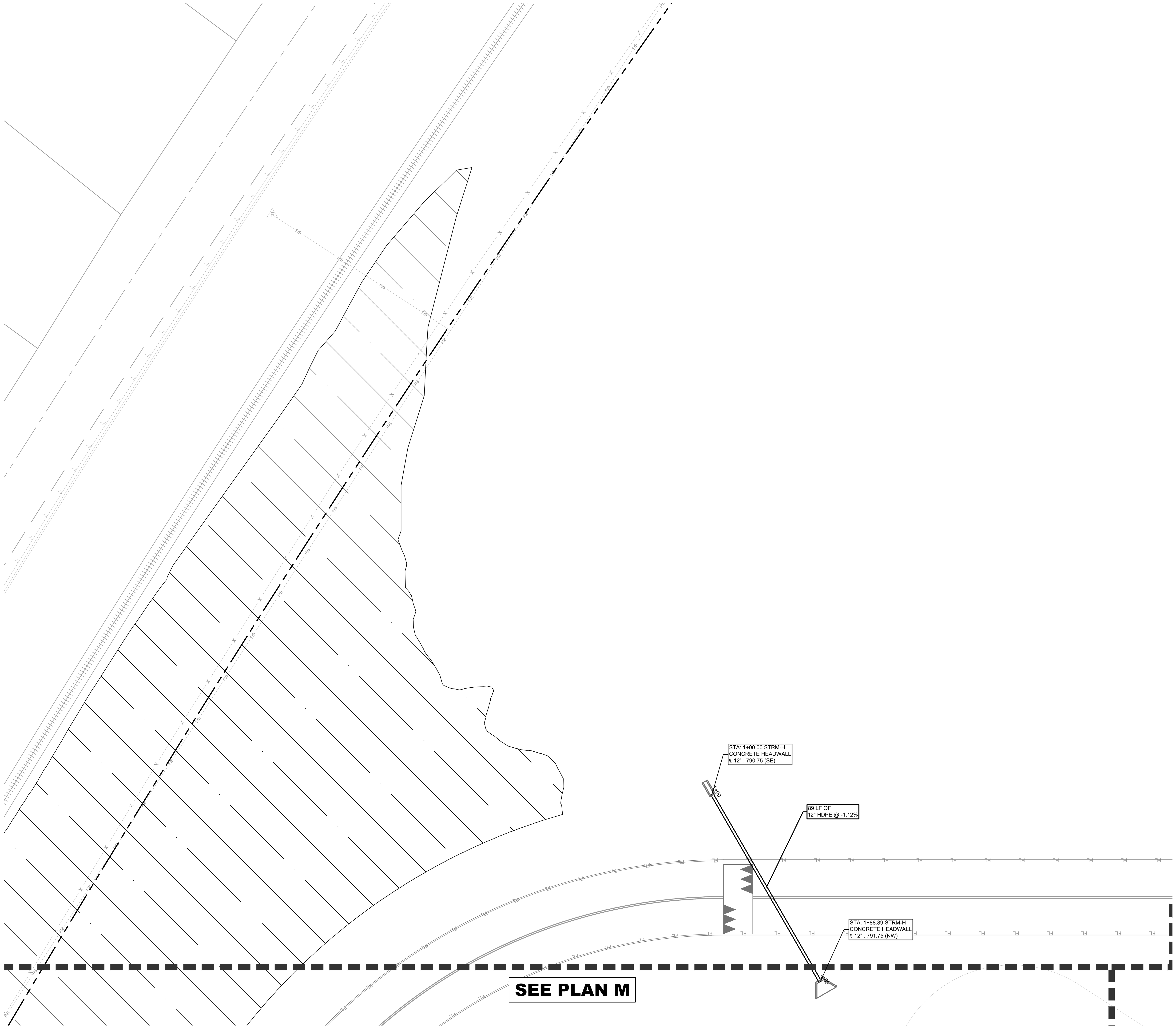
KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

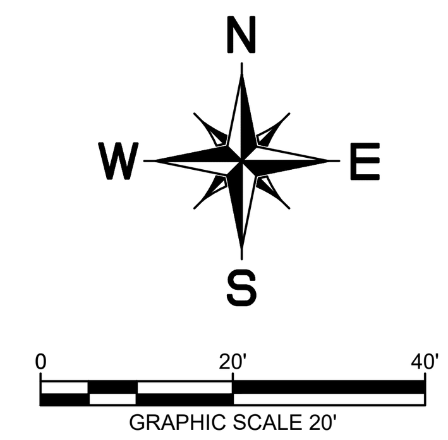
PRIVATE STORM PLAN
M

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
71 OF 203

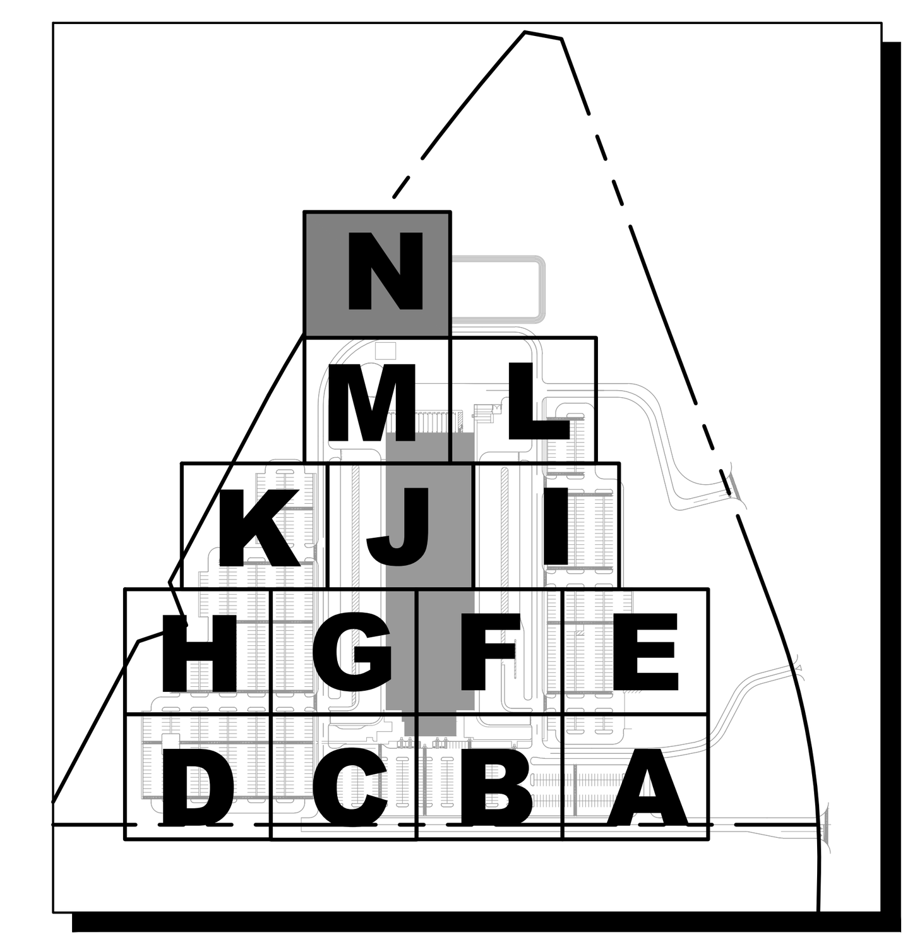
SDP24-00001





LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- MAJOR CONTOUR
- MINOR CONTOUR
- WATER LINE
- FIRE WATER LINE
- RECLAIMED WATER LINE
- FIRE HYDRANT
- WATER GATE VALVE
- WATER BACKFLOW PREVENTOR
- WATER METER
- FIRE DEPARTMENT CONNECTION
- FORCE MAIN
- WASTEWATER LINE
- WASTEWATER MANHOLE
- WASTEWATER CLEANOUT
- STORM DRAIN LINE
- STORM GRATE INLET
- STORM HEADWALL
- STORM MANHOLE
- STORM JUNCTION BOX
- STORM AREA INLET
- STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE



KEYMAP
N.T.S

NOTES
1. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE SIZE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS.
2. CITY OF ROUND ROCK STANDARD DETAIL FOR FORTM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
3. ALL ROOF DRAINS WILL BE CONNECTED TO THE EXTERIOR UNDERGROUND STORM SEWER SYSTEM BY CONNECTION WITH DOWNSPOUT BOOTS AND DIRECT UNDERGROUND TIE-IN. NO ROOF DRAINS ARE TO DISCHARGE AS SPLASH-TO-GRADE DESIGNS.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/7/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

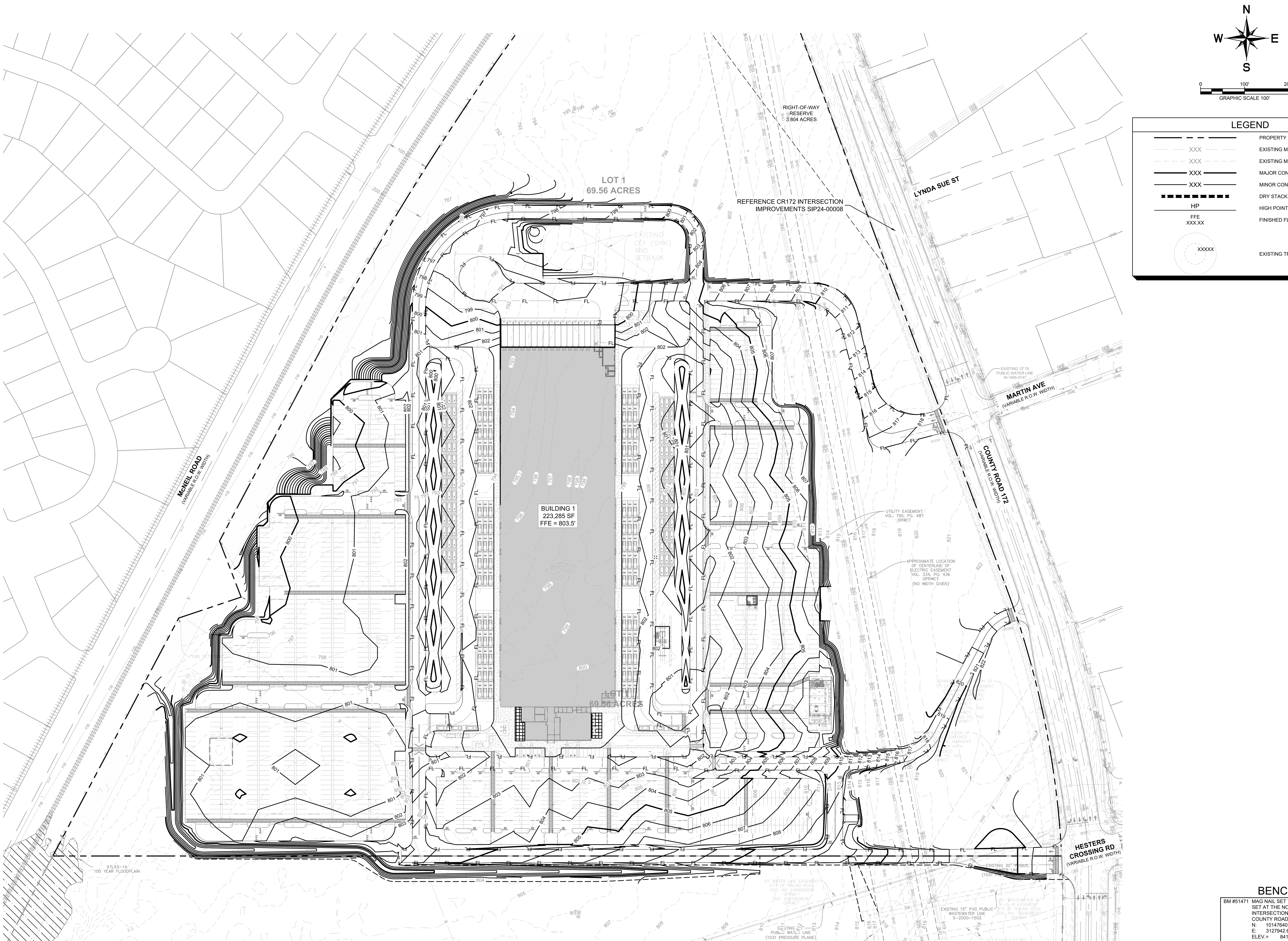
PRIVATE STORM PLAN N

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
72 OF 203

SDP24-00001



LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	DRY STACK WALL
HP	HIGH POINT
FFE XXX.XX	FINISHED FLOOR ELEVATION
XXXXX	EXISTING TREE TO REMAIN

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

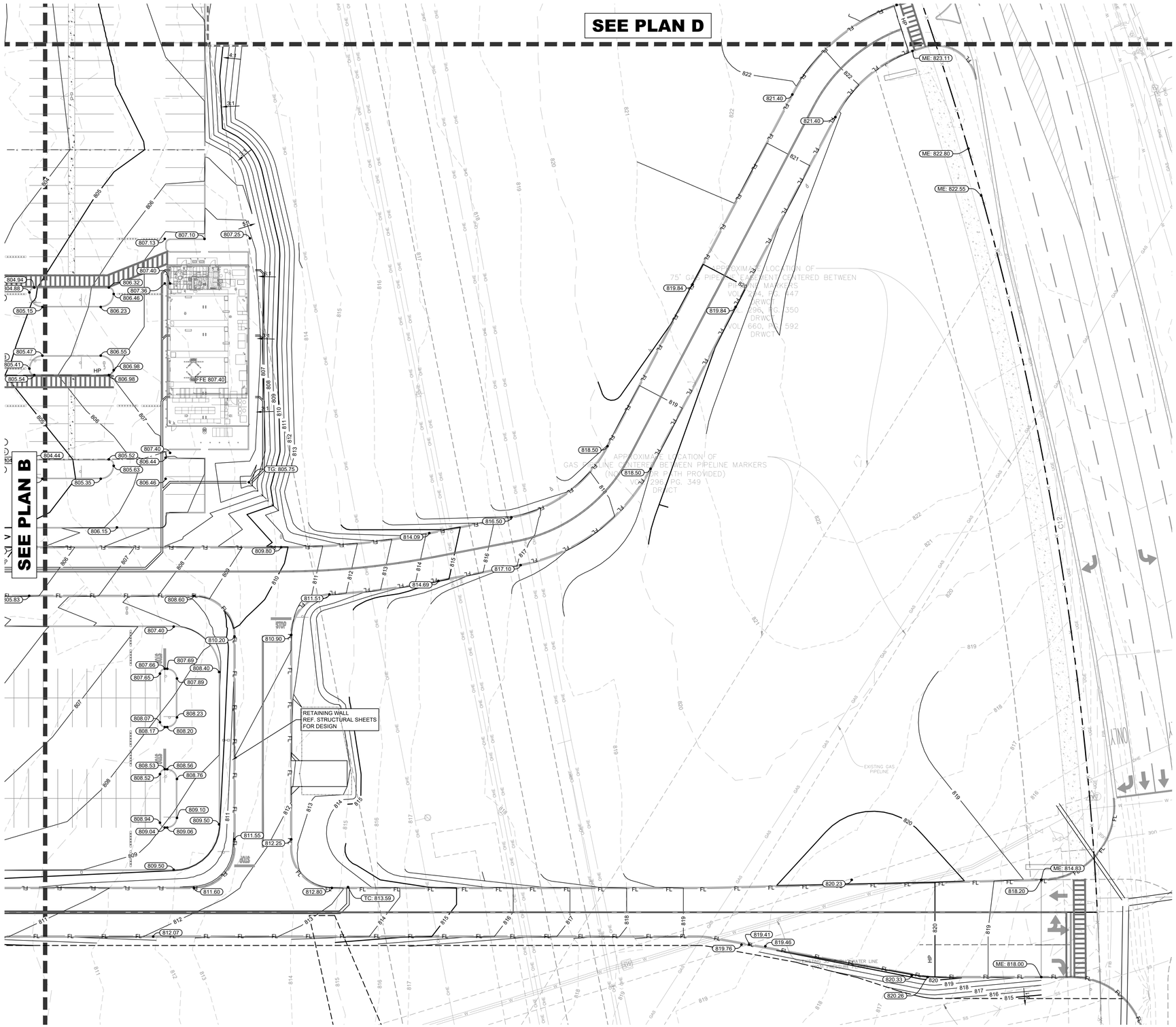
OVERALL GRADING PLAN

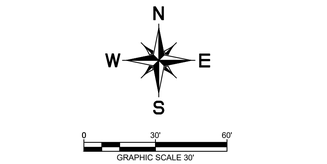
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
73 OF 204

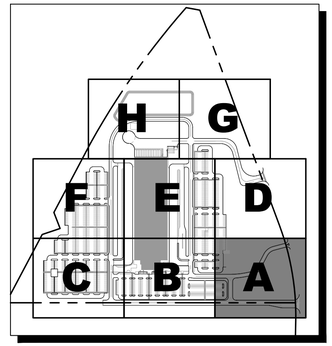
SDP24-00001





LEGEND

PROPERTY LINE	
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	DRY STACK WALL
HP	HIGH POINT
FFE XXX.XX	FINISHED FLOOR ELEVATION
995.70	TOP OF PAVEMENT ELEVATION
TW: 995.84	GRADE AT TOP OF WALL
BW: 996.0	GRADE AT BOTTOM OF WALL
EW: 996.03	GRADE AT END OF WALL
TG: 996.21	TOP OF GRATE ELEVATION
EX 996.21	EXISTING GRADE
ME 996.21	MATCH EXISTING GRADE
XXXXX	EXISTING TREE TO REMAIN



KEYMAP
N.T.S

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

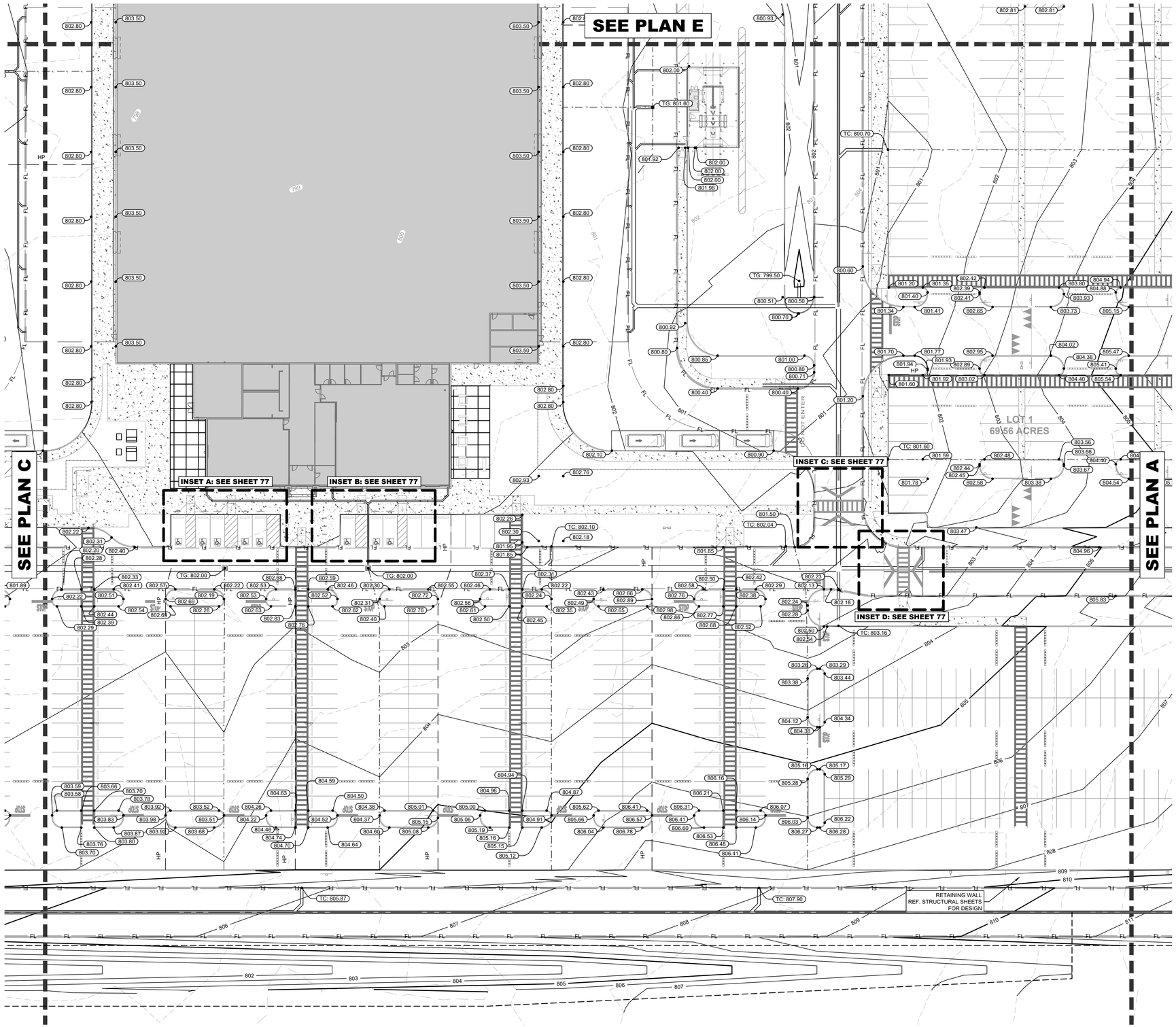
GRADING PLAN A

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
74 OF 204

SDP24-00001



N

W E

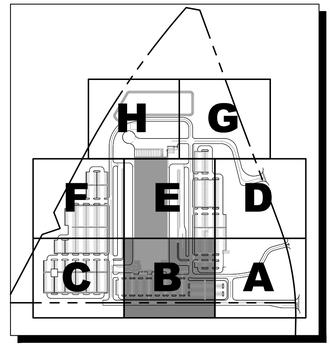
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	DRY STACK WALL
HP	HIGH POINT
FFE XXX.XX	FINISHED FLOOR ELEVATION
995.70	TOP OF PAVEMENT ELEVATION
TW: 995.84	GRADE AT TOP OF WALL
BW: 996.0	GRADE AT BOTTOM OF WALL
EW: 996.03	GRADE AT END OF WALL
TG: 996.21	TOP OF GRATE ELEVATION
EX 996.21	EXISTING GRADE
ME 996.21	MATCH EXISTING GRADE
XXXXX	EXISTING TREE TO REMAIN



KEYMAP
N.T.S

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER

6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

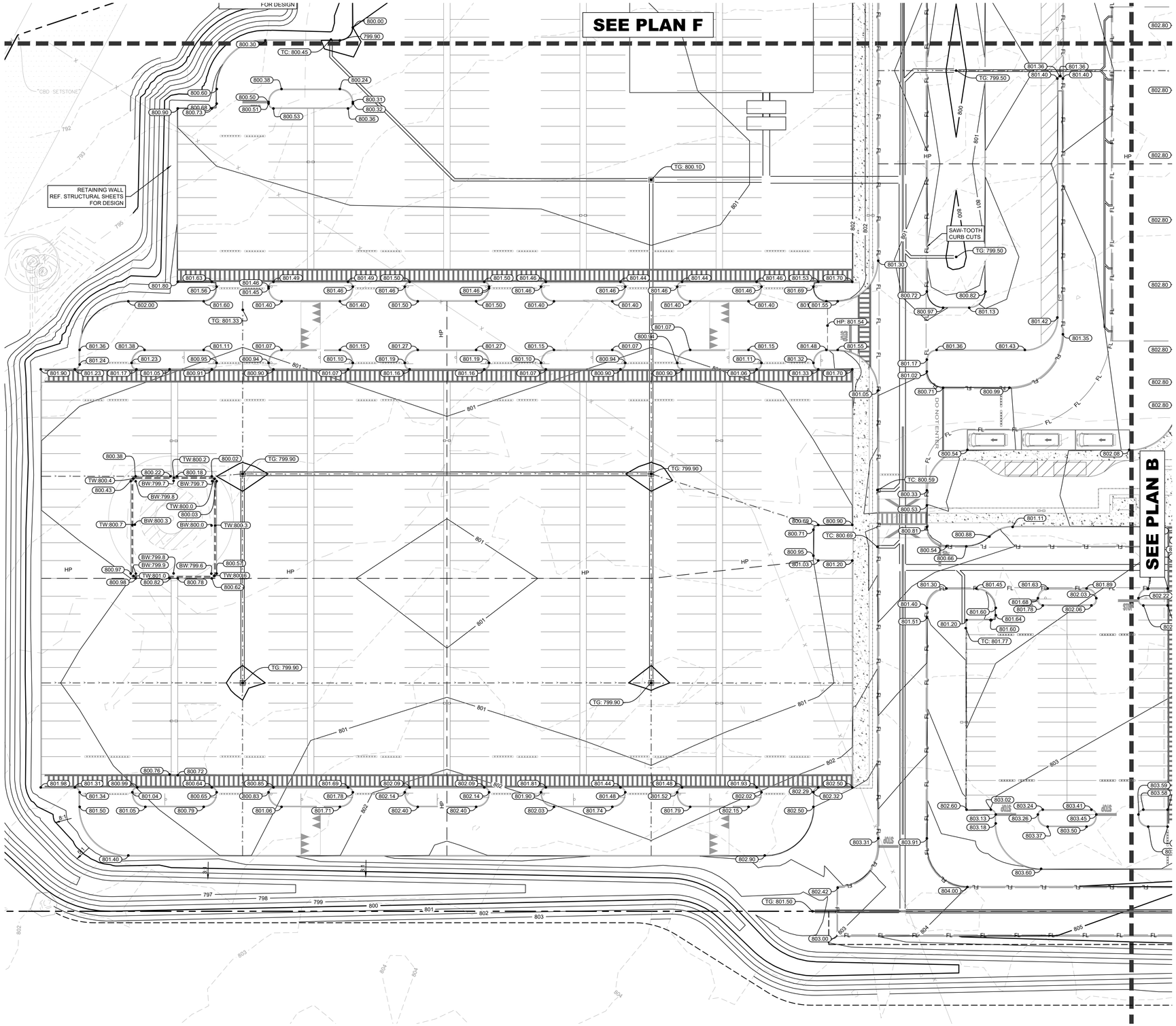
GRADING PLAN B

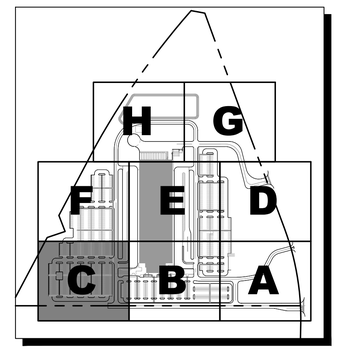
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
75 OF 204

SDP24-00001





KEYMAP
N.T.S

N
W
E
S

0 30' 60'
GRAPHIC SCALE 30'

LEGEND

PROPERTY LINE	
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
DRY STACK WALL	
HP	HIGH POINT
FFE XXX.XX	FINISHED FLOOR ELEVATION
995.70	TOP OF PAVEMENT ELEVATION
TW: 995.84	GRADE AT TOP OF WALL
BW: 996.0	GRADE AT BOTTOM OF WALL
EW: 996.03	GRADE AT END OF WALL
TG: 996.21	TOP OF GRATE ELEVATION
EX 996.21	EXISTING GRADE
ME 996.21	MATCH EXISTING GRADE
XXXXX	EXISTING TREE TO REMAIN

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284910
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

GRADING PLAN C

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
76 OF 204

SDP24-00001

SEE PLAN G

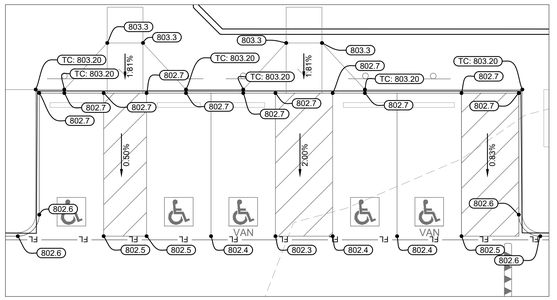
SEE PLAN E

SEE PLAN A

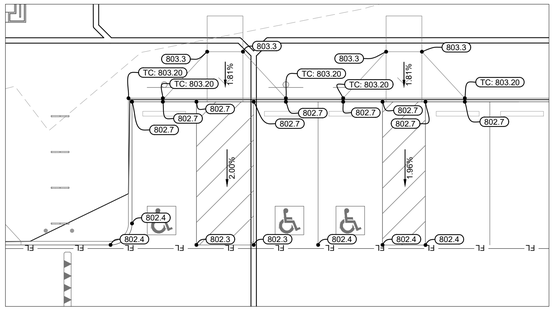
REFERENCE CR172 INTERSECTION IMPROVEMENTS PER SIP24-00008

UTILITY EASEMENT VOL. 790, PG. 487 DRWCT

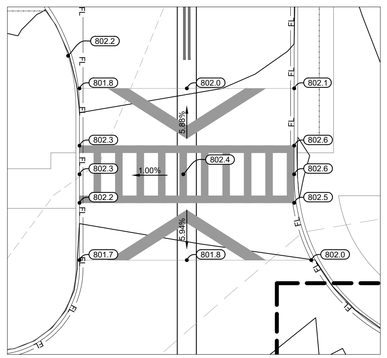
APPROXIMATE LOCATION OF CENTERLINE OF ELECTRIC EASEMENT VOL. 334, PG. 436 OPRWCT (NO WIDTH GIVEN)



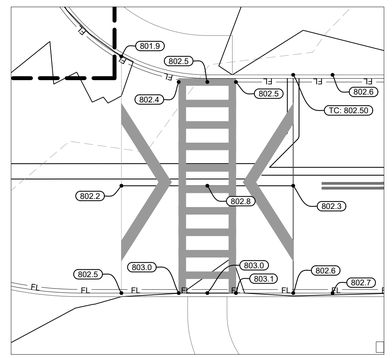
INSET A



INSET B



INSET C



INSET D

KEYMAP
N.T.S

ME: 822.71
ME: 823.11

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

N
W E
S
0 30' 60'
GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	DRY STACK WALL
HP	HIGH POINT
FFE XXX.XX	FINISHED FLOOR ELEVATION
995.70	TOP OF PAVEMENT ELEVATION
TW: 995.84	GRADE AT TOP OF WALL
BW: 996.0	GRADE AT BOTTOM OF WALL
EW: 996.03	GRADE AT END OF WALL
TG: 996.21	TOP OF GRATE ELEVATION
EX 996.21	EXISTING GRADE
ME 996.21	MATCH EXISTING GRADE
XXXXX	EXISTING TREE TO REMAIN

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

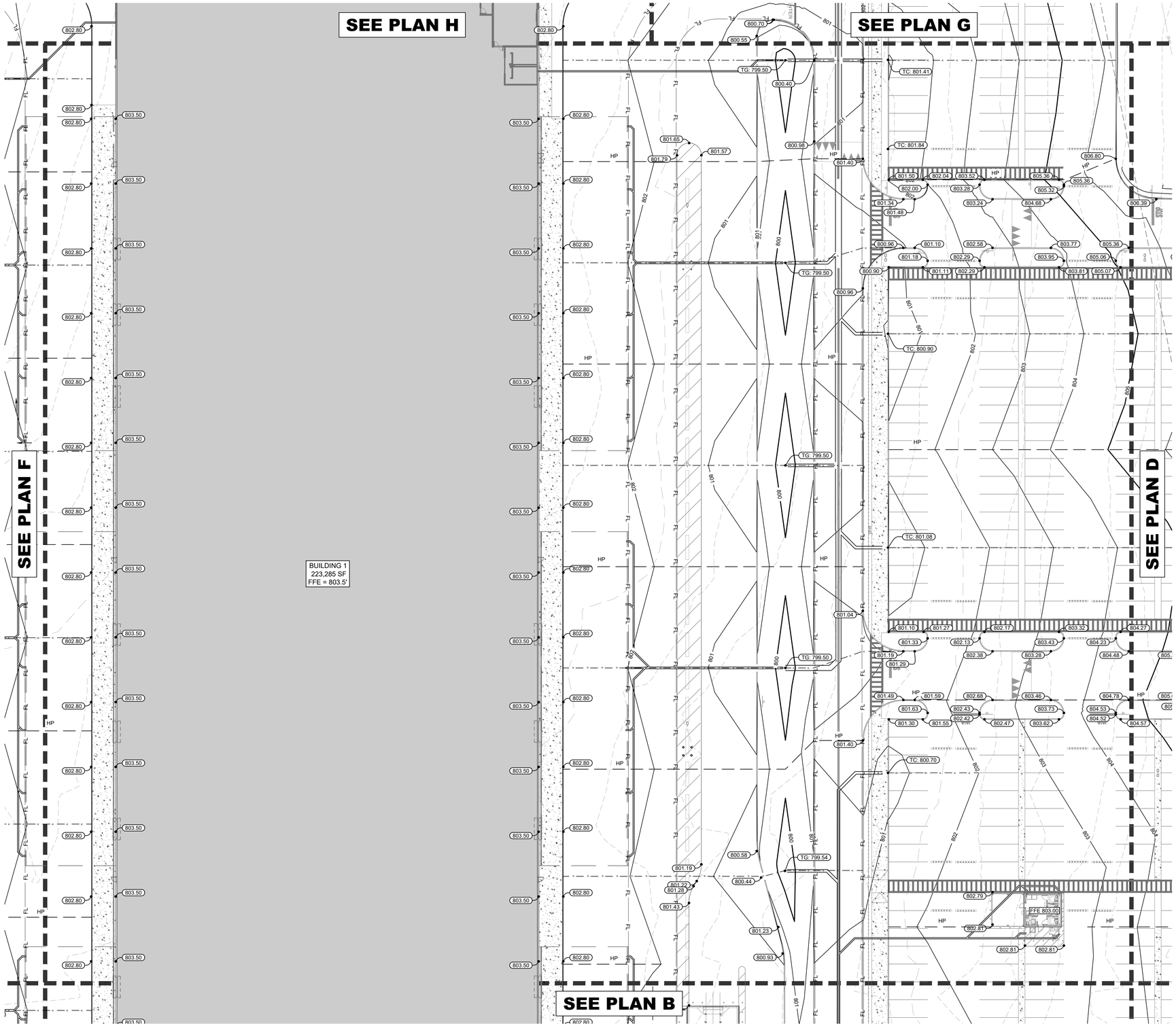
GRADING PLAN D

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
77 OF 204

SDP24-00001



N

W E

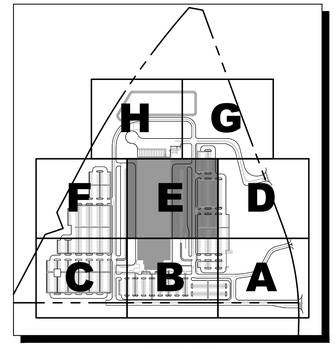
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	DRY STACK WALL
HP	HIGH POINT
FFE XXX.XX	FINISHED FLOOR ELEVATION
995.70	TOP OF PAVEMENT ELEVATION
TW: 995.84	GRADE AT TOP OF WALL
BW: 996.0	GRADE AT BOTTOM OF WALL
EW: 996.03	GRADE AT END OF WALL
TG: 996.21	TOP OF GRATE ELEVATION
EX 996.21	EXISTING GRADE
ME 996.21	MATCH EXISTING GRADE
XXXXX	EXISTING TREE TO REMAIN



KEYMAP
N.T.S

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER

6/6/2024

KHA PROJECT 069284918	DATE: JUNE 2024	SCALE: AS SHOWN	
		DESIGNED BY:	MM
		DRAWN BY:	MM
		CHECKED BY:	NCB

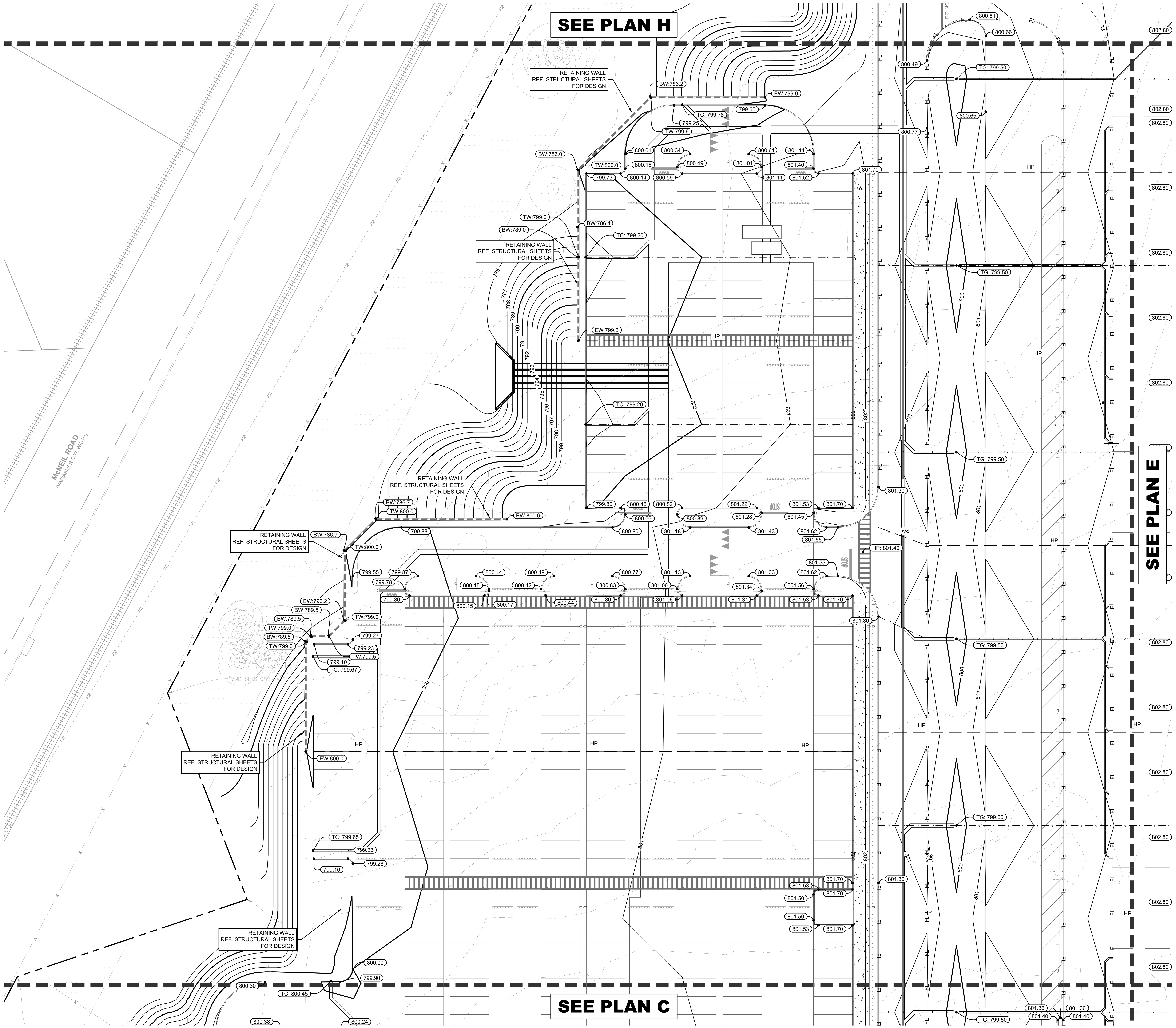
GRADING PLAN E

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
78 OF 204

SDP24-00001

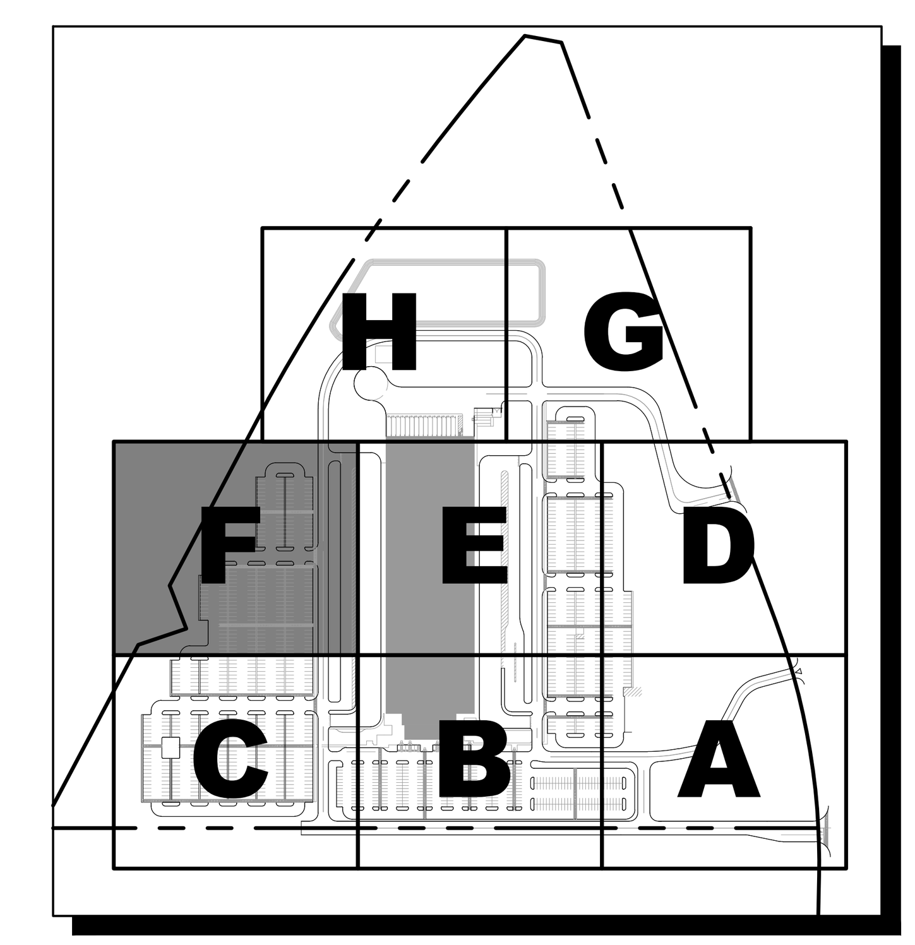


N
W
E
S

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	DRY STACK WALL
HP	HIGH POINT
FFE XXX.XX	FINISHED FLOOR ELEVATION
995.70	TOP OF PAVEMENT ELEVATION
TW: 995.84	GRADE AT TOP OF WALL
BW: 996.0	GRADE AT BOTTOM OF WALL
EW: 996.03	GRADE AT END OF WALL
TG: 996.21	TOP OF GRATE ELEVATION
EX 996.21	EXISTING GRADE
ME 996.21	MATCH EXISTING GRADE
XXXXX	EXISTING TREE TO REMAIN



KEYMAP
N.T.S

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

GRADING PLAN F

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
79 OF 204

SDP24-00001

RIGHT-OF-WAY RESERVE 3.804 ACRES

LYNDA SUE ST

SEE PLAN H

SEE PLAN E

SEE PLAN D

N

W E

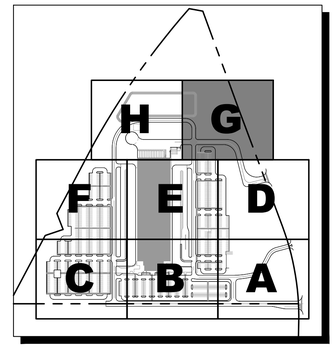
S

0 30' 60'

GRAPHIC SCALE 30'

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	DRY STACK WALL
HP	HIGH POINT
FFE XXX.XX	FINISHED FLOOR ELEVATION
995.70	TOP OF PAVEMENT ELEVATION
TW: 995.84	GRADE AT TOP OF WALL
BW: 996.0	GRADE AT BOTTOM OF WALL
EW: 996.03	GRADE AT END OF WALL
TG: 996.21	TOP OF GRATE ELEVATION
EX 996.21	EXISTING GRADE
ME 996.21	MATCH EXISTING GRADE
XXXXX	EXISTING TREE TO REMAIN



KEYMAP
N.T.S

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

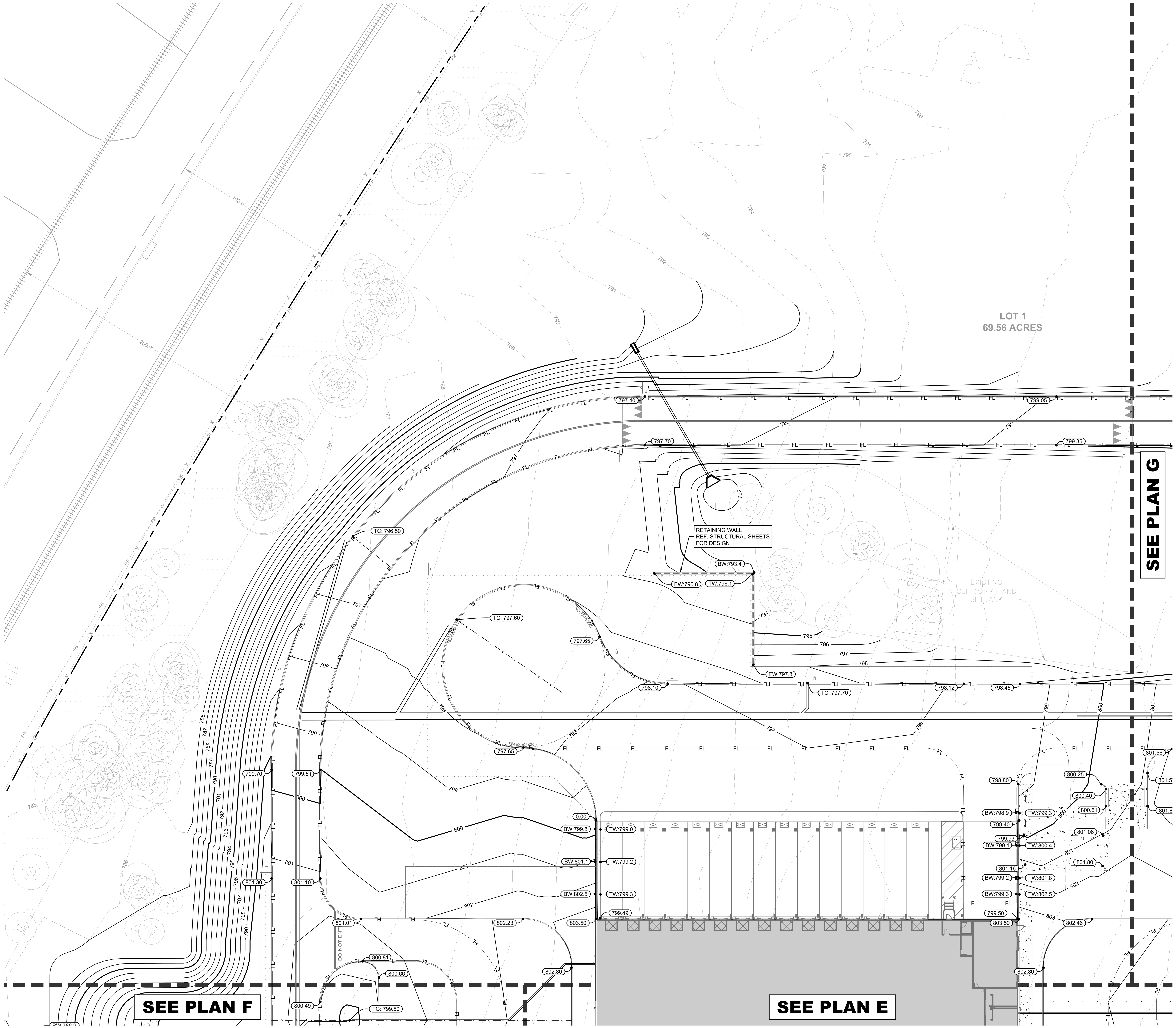
GRADING PLAN G

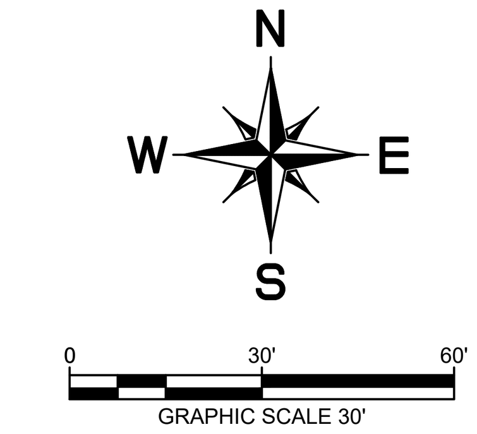
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
80 OF 204

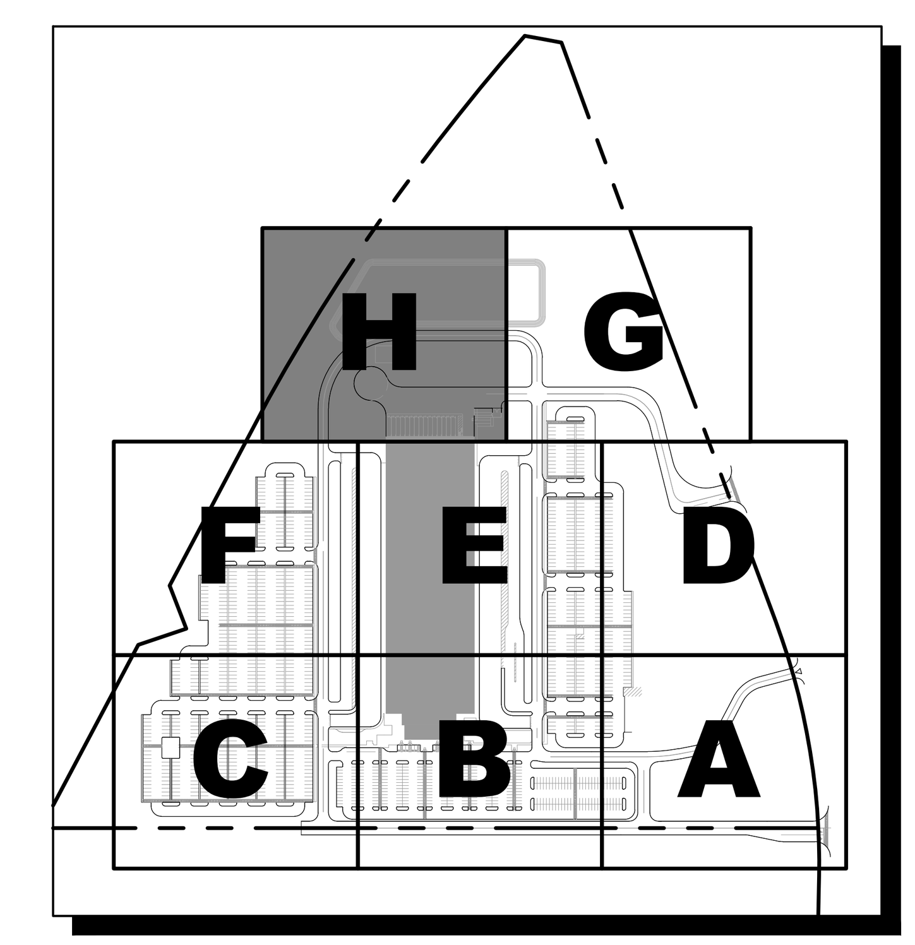
SDP24-00001





LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	DRY STACK WALL
HP	HIGH POINT
FFE XXX.XX	FINISHED FLOOR ELEVATION
995.70	TOP OF PAVEMENT ELEVATION
TW: 995.84	GRADE AT TOP OF WALL
BW: 996.0	GRADE AT BOTTOM OF WALL
EW: 996.03	GRADE AT END OF WALL
TG: 996.21	TOP OF GRATE ELEVATION
EX 996.21	EXISTING GRADE
ME 996.21	MATCH EXISTING GRADE
XXXXX	EXISTING TREE TO REMAIN



KEYMAP
N.T.S

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/6/2024

KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

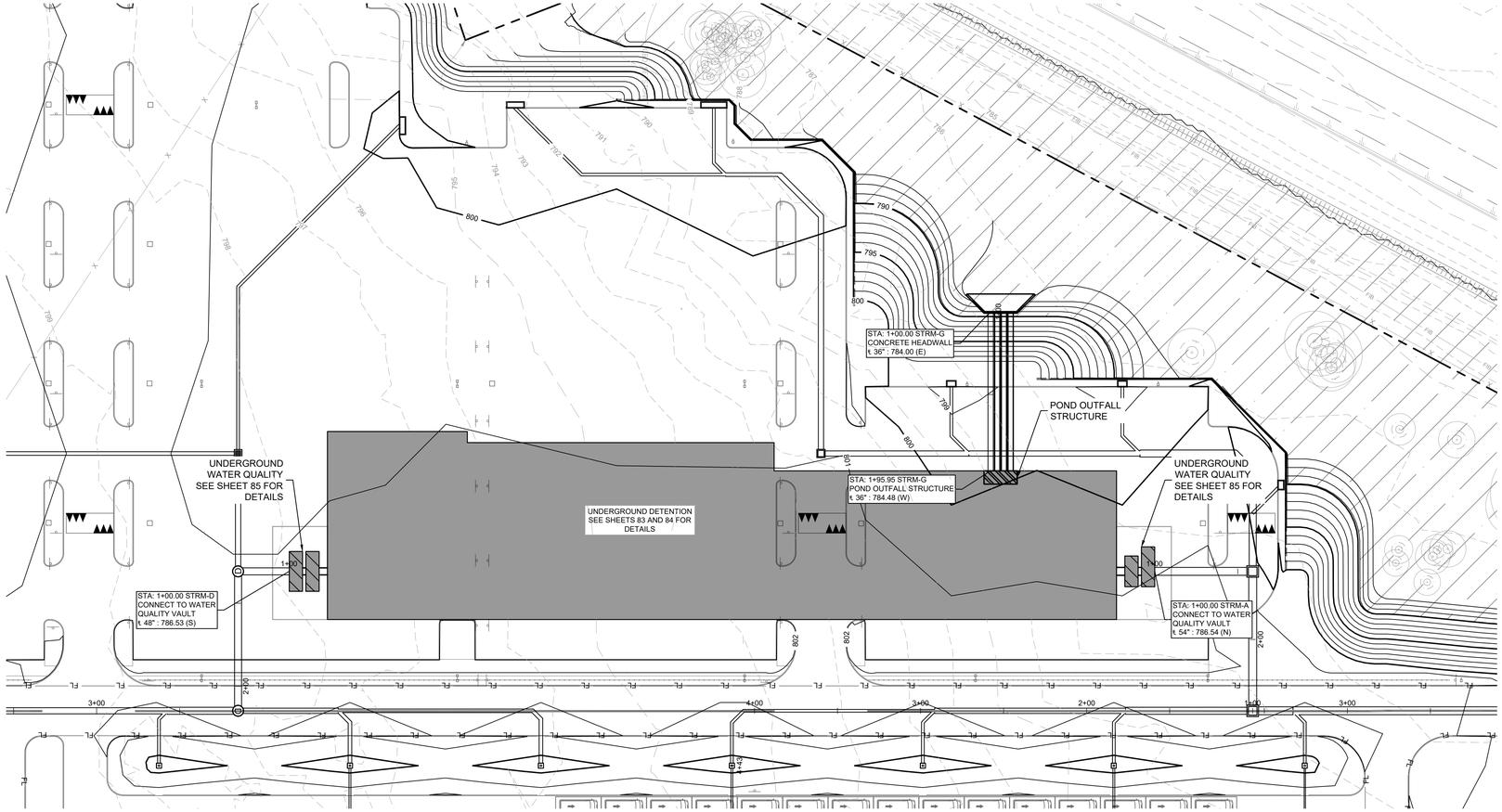
GRADING PLAN H

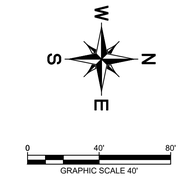
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER

SDP24-00001





Detention Pond 1 Analysis

STAGE STORAGE TABLE

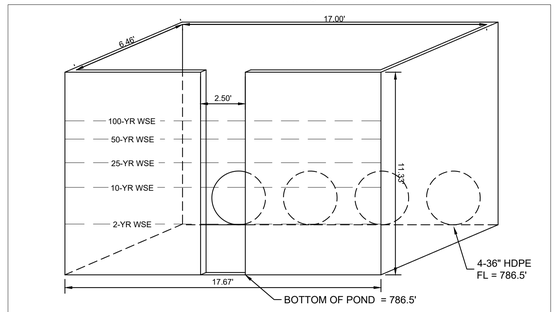
Elevation	Area (SF)	Storage Volume (CF)	Cummulative Storage (CF)
786.50	44,177.53	0	0
787.00	44,177.53	22,089	22,089
787.50	44,177.53	22,089	44,178
788.00	44,177.53	22,089	66,266
788.50	44,177.53	22,089	88,355
789.00	44,177.53	22,089	110,444
789.50	44,177.53	22,089	132,533
790.00	44,177.53	22,089	154,621
790.50	44,177.53	22,089	176,710
791.00	44,177.53	22,089	198,799
791.50	44,177.53	22,089	220,888
792.00	44,177.53	22,089	242,976
792.50	44,177.53	22,089	265,065
793.00	44,177.53	22,089	287,154
793.50	44,177.53	22,089	309,243
794.00	44,177.53	22,089	331,331
794.50	44,177.53	22,089	353,420
795.00	44,177.53	22,089	375,509
795.50	44,177.53	22,089	397,598
796.00	44,177.53	22,089	419,687
796.50	44,177.53	22,089	441,775
797.00	44,177.53	22,089	463,864
797.50	44,177.53	22,089	485,953
797.83	44,177.53	14,579	500,531

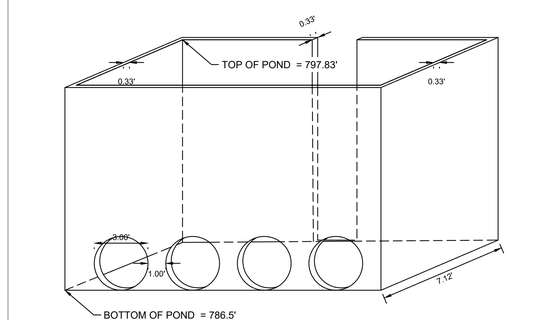
ROUTING TABLE

Scenario	Computed Peak Outflow (cfs)	Max Water Surface Elevation (ft)	Maximum Storage (ac-ft)	Maximum Storage (cf)
2 YR	60.61	790.53	4.067	177,159
10 YR	111.91	792.56	6.121	266,631
25 YR	152.04	793.93	7.509	327,092
50 YR	194.42	795.26	8.846	385,332
100 YR	229.19	796.27	9.871	429,981

Pond Pack V8i was used to calculate the computed peak outflow from the detention pond.

POND OUTFALL STRUCTURE DETAIL
N.T.S





No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
7/25/2024

KHA PROJECT	069284918
DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

DETENTION POND PLAN AND DETAILS

2525 CR 172 INDUSTRIAL

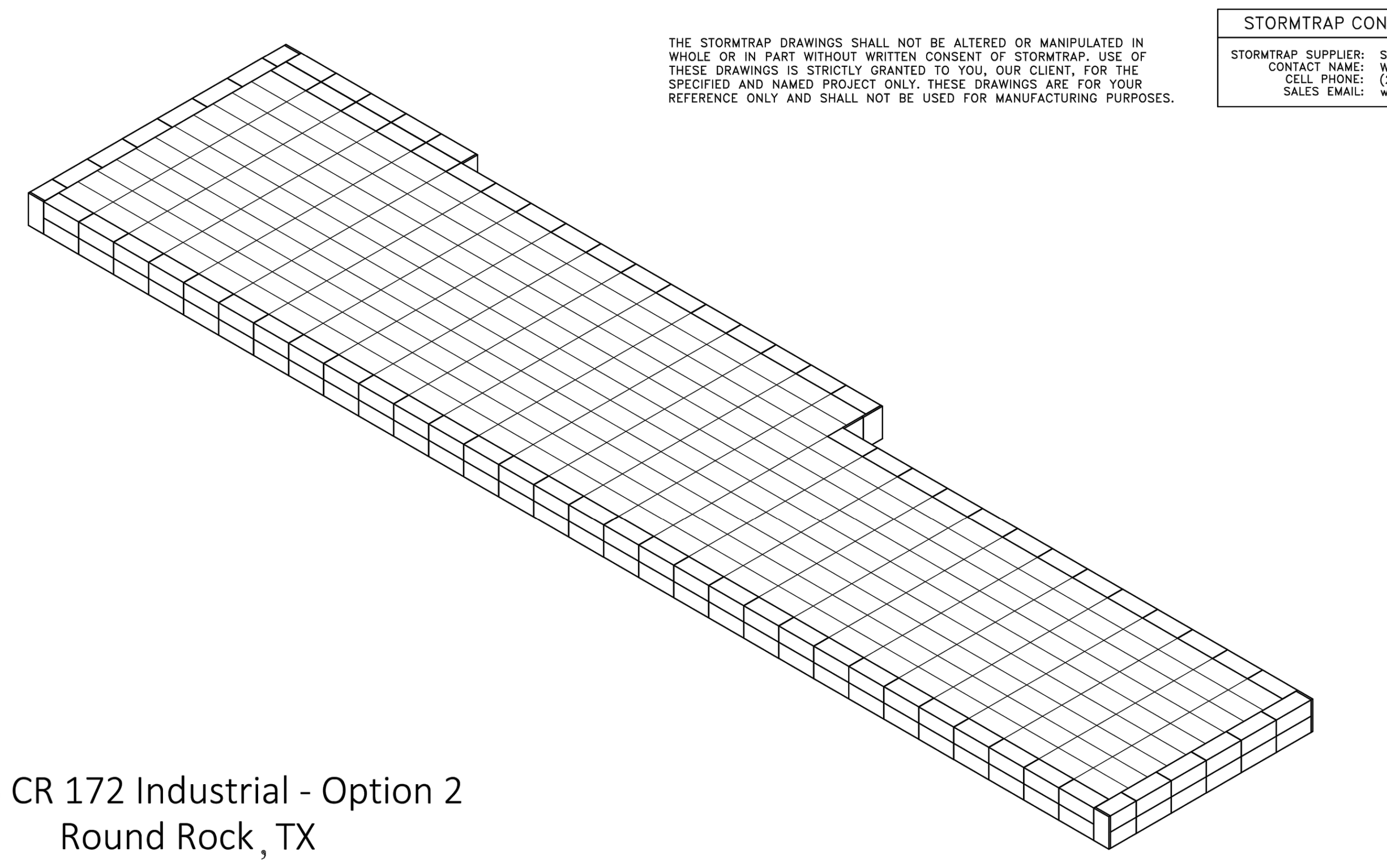
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
82 OF 203

SDP24-00001

StormTrap®

MODULAR CONCRETE STORMWATER MANAGEMENT



2525 CR 172 Industrial - Option 2
Round Rock, TX

THE STORMTRAP DRAWINGS SHALL NOT BE ALTERED OR MANIPULATED IN WHOLE OR IN PART WITHOUT WRITTEN CONSENT OF STORMTRAP. USE OF THESE DRAWINGS IS STRICTLY GRANTED TO YOU, OUR CLIENT, FOR THE SPECIFIED AND NAMED PROJECT ONLY. THESE DRAWINGS ARE FOR YOUR REFERENCE ONLY AND SHALL NOT BE USED FOR MANUFACTURING PURPOSES.

SHEET INDEX

STORMTRAP CONTACT INFORMATION

STORMTRAP SUPPLIER: STORMTRAP
CONTACT NAME: Will Stafford
CELL PHONE: (214) 662-3855
SALES EMAIL: wstafford@stormtrap.com

StormTrap®
PATENTS LISTED AT: [HTTP://STORMTRAP.COM/PATENT]
1287 WINDHAM PARKWAY
ROMEOVILLE, IL 60446
P:815-941-4549 / F:331-318-5347

ENGINEER INFORMATION: Kimley-Horn & Associates – North Austin, TX; Austin, TX
PROJECT INFORMATION: 2525 CR 172 Industrial – Option 2; Round Rock, TX
CURRENT ISSUE DATE: 6/6/2024
ISSUED FOR: PRELIMINARY

REV.	DATE:	ISSUED FOR:	DWN BY:
△	6/6/2024	PRELIMINARY	JPH
1	05/24/2024	PRELIMINARY	JH

SCALE: NTS
SHEET TITLE: COVER SHEET
SHEET NUMBER: 0.0

GENERAL NOTES:

1. STRUCTURE PROXIMITY LOADING DISCLAIMER:

STORMTRAP MODULES AND FOUNDATION ARE NOT DESIGNED TO ACCEPT ANY ADDITIONAL LOADING FROM ANY NEARBY STRUCTURES NEXT TO OR OVER THE TOP OF STORMTRAP. EXAMPLES OF NEARBY STRUCTURES MAY INCLUDE BUT ARE NOT LIMITED TO BUILDINGS, FOUNDATION ELEMENTS, RETAINING WALLS, LIGHT POLES, BOLLARDS, SIGNPOSTS, FENCES. ADDITIONALLY, STORMTRAP IS NOT RESPONSIBLE FOR INSTALLATION CONFLICTS ARISING FROM ANY OF THESE NEARBY STRUCTURES. IF ADDITIONAL LOADING CONSIDERATIONS ARE REQUIRED FOR STRUCTURAL DESIGN OF STORMTRAP, PLEASE CONTACT STORMTRAP IMMEDIATELY. FOR LIGHT POLES SHOWN OVER THE TOP OF THE SYSTEM, STORMTRAP WILL PROVIDE A 5'-0" LATERAL DISTANCE CAVITY AROUND THE LIGHT POLE TO ACCOMMODATE IT. THE EOR TO TAKE RESPONSIBILITY FOR ENSURING THE LIGHT POLE IS NOT INFLICTING ANY LOADING ON THE STORMTRAP MODULES AND FOUNDATION.

2. TREE LOADING DISCLAIMER:

THE NUMBER OF TREES OR WEIGHT OF TOTAL PLANT MATERIAL PRESENT ON TOP OF A SINGLE STORMTRAP MODULE SHALL NOT EXCEED 16,000 LBS. THE REQUIREMENTS LISTED HERE APPLY AT BOTH THE TIME OF INSTALLATION AND FOR THE LIFE OF THE TREES AND PLANTS IN QUESTION. THE EOR AND LANDSCAPE ARCHITECT ARE RESPONSIBLE FOR ENSURING THAT TREE AND OTHER PLANT ROOTS DO NOT INTERFERE WITH OR COMPROMISE THE FUNCTIONAL AND STRUCTURAL INTEGRITY OF STORMTRAP'S UNDERGROUND MODULES. APPROPRIATE MEASURES SHOULD BE TAKEN TO PREVENT ROOT GROWTH INTO THE STORMTRAP SYSTEM FROM ADJACENT OR OVERHEAD TREES. FURTHERMORE, THE ROOTS OF THE TREES MUST BE CONTAINED TO PREVENT FUTURE DAMAGE TO THE STORMTRAP SYSTEM. STORMTRAP ACCEPTS NO LIABILITY FOR DAMAGES CAUSED BY TREES OR OTHER VEGETATION PLACED AROUND OR ON TOP OF THE SYSTEM.

SHEET TITLE: GENERAL NOTES
SHEET NUMBER: 1.0

STRUCTURAL DESIGN LOADING CRITERIA

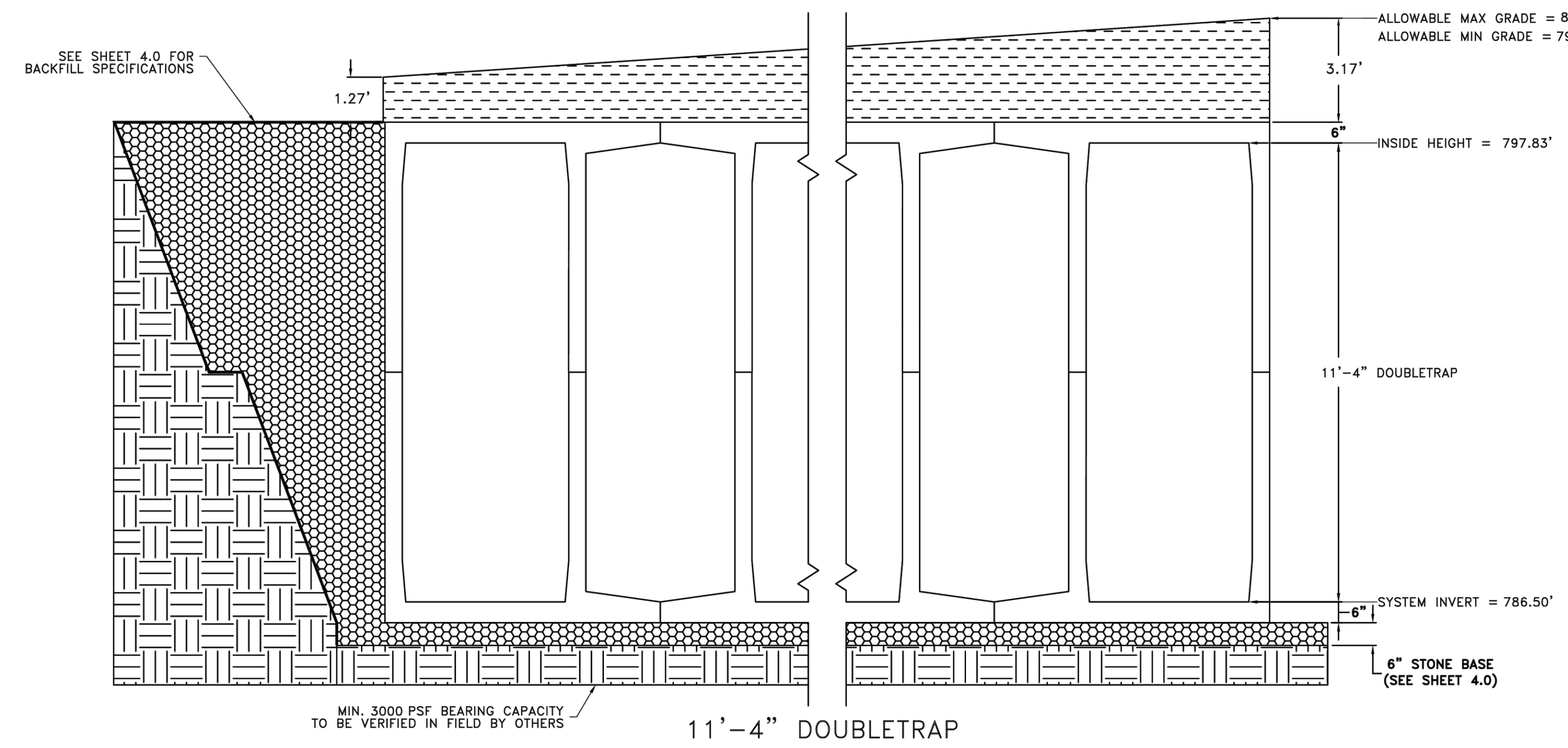
LIVE LOADING:	AASHTO HS-20 HIGHWAY LOADING
GROUND WATER TABLE:	BELOW INVERT OF SYSTEM
SOIL BEARING PRESSURE:	3000 PSF
SOIL DENSITY:	120 PCF
EQUIVALENT UNSATURATED LATERAL ACTIVE EARTH PRESSURE:	35 PSF / FT.
EQUIVALENT SATURATED LATERAL ACTIVE EARTH PRESSURE:	80 PSF/FT. (IF WATER TABLE PRESENT)
APPLICABLE CODES:	ASTM C857 ACI-318
BACKFILL TYPE:	SEE SHEET 4.0 FOR BACKFILL OPTIONS

STORMTRAP SYSTEM INFORMATION

UNIT HEADROOM:	11'-4" DOUBLETRAP
TOTAL STORAGE PROV:	500531.43 CUBIC FEET

SITE SPECIFIC DESIGN CRITERIA

1. STORMTRAP UNITS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO SHOP DRAWINGS APPROVED BY THE INSTALLING CONTRACTOR AND ENGINEER OF RECORD. THE SHOP DRAWINGS SHALL INDICATE SIZE AND LOCATION OF ROOF OPENINGS AND INLET/OUTLET PIPE TYPES, SIZES, INVERT ELEVATIONS AND SIZE OF OPENINGS.
2. COVER RANGE: MIN. 1.27' MAX. 3.17' CONSULT STORMTRAP FOR ADDITIONAL COVER OPTIONS.
3. ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY ARE REQUIRED TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO STORMTRAP INSTALLATION.
4. FOR STRUCTURAL CALCULATIONS THE GROUND WATER TABLE IS ASSUMED TO BE BELOW INVERT OF SYSTEM IF WATER TABLE IS DIFFERENT THAN ASSUMED, CONTACT STORMTRAP.
5. SYSTEM DESIGN MAY ALLOW FOR INCIDENTAL LEAKAGE AND WILL NOT BE SUBJECT TO LEAKAGE TESTING.



11'-4" DOUBLETRAP

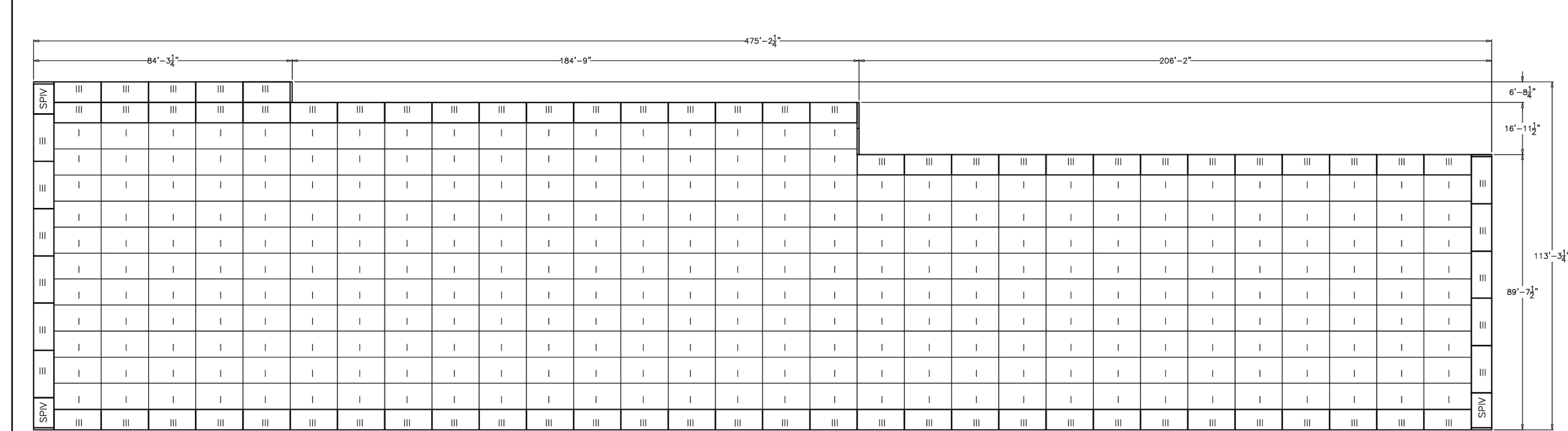
SHEET TITLE: DOUBLETRAP DESIGN CRITERIA
SHEET NUMBER: 1.1

BILL OF MATERIALS

QTY.	UNIT TYPE	DESCRIPTION	TOP WEIGHT	BASE WEIGHT
608	I	11'-4" DOUBLETRAP	15900	15698
0	II	11'-4" DOUBLETRAP	0	0
152	III	11'-4" DOUBLETRAP	16254	16153
0	IV	11'-4" DOUBLETRAP	0	0
0	VII	11'-4" DOUBLETRAP	0	0
0	VII-1	11'-4" DOUBLETRAP	0	0
0	VII-2	11'-4" DOUBLETRAP	0	0
0	VII-3	11'-4" DOUBLETRAP	0	0
0	VII-4	11'-4" DOUBLETRAP	0	0
0	SPIII	11'-4" DOUBLETRAP	VARIES	VARIES
6	SPIV	11'-4" DOUBLETRAP	VARIES	VARIES
2	T2 PANEL	8" THICK PANEL	10380	
5	T4 PANEL	8" THICK PANEL	8170	
0	T7 PANEL	8" THICK PANEL	0	
74	JOINT WRAP	150' PER ROLL		
184	JOINT TAPE	14.5' PER ROLL		
TOTAL PIECES = 766				
TOTAL PANELS = 7				
HEAVIEST PICK WEIGHT = 16254				

DESIGN CRITERIA
ALLOWABLE MAX GRADE = 801.50'
ALLOWABLE MIN GRADE = 799.60'
INSIDE HEIGHT ELEVATION = 797.83'
SYSTEM INVERT = 786.50'

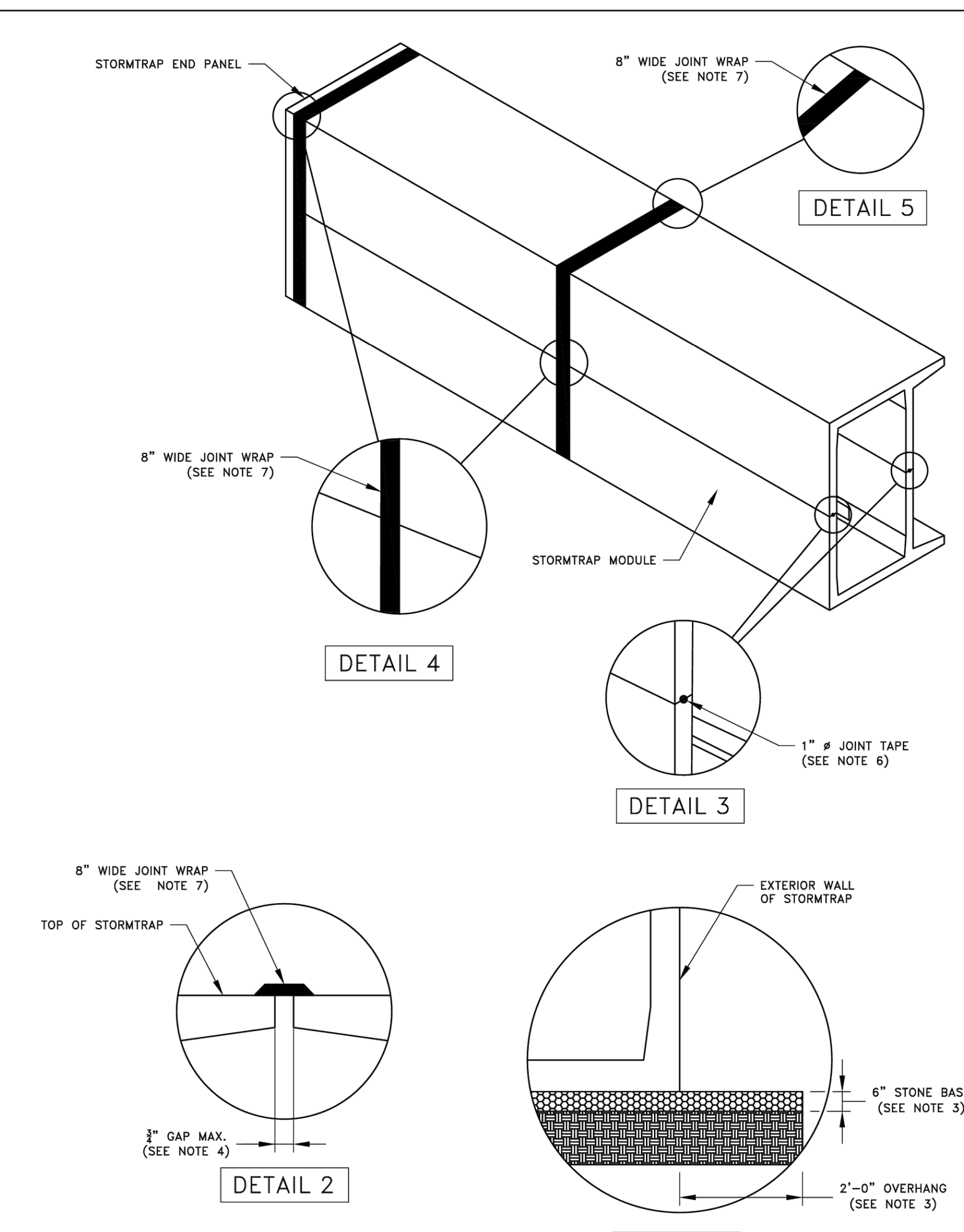
NOTES:
1. DIMENSIONING OF STORMTRAP SYSTEM SHOWN BELOW ALLOW FOR A 3/4" GAP BETWEEN EACH MODULE.
2. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY OTHERS.
3. SEE SHEET 3.0 FOR INSTALLATION SPECIFICATIONS.
4. SP – INDICATES A MODULE WITH MODIFICATIONS.
5. P – INDICATES A MODULE WITH A PANEL ATTACHMENT.
6. CONTRACTORS RESPONSIBILITY TO ENSURE CONSISTENCY/ACCURACY TO FINAL ENGINEER OF RECORD PLAN SET.
7. IN ORDER FOR STORMTRAP TO GENERATE APPROVAL DRAWINGS, CIVIL ENGINEERING DRAWINGS MUST BE PROVIDED TO STORMTRAP AND SHALL INCLUDE ALL PIPE SIZES, PIPE MATERIAL, PIPE INVERT ELEVATIONS, ACCESS OPENING SIZE AND SHAPE. IN ADDITION, FINAL GRADING PLANS SHALL ALSO INCLUDE MINIMUM AND MAXIMUM GRADES OVER THE TOP OF THE STORMTRAP SYSTEM.



SHEET TITLE: DOUBLETRAP SYSTEM LAYOUT
SHEET NUMBER: 2.0

STORMTRAP INSTALLATION SPECIFICATION

1. STORMTRAP SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C891 (STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES). THE FOLLOWING ADDITIONS AND/OR EXCEPTIONS ARE PROVIDED FOR EMPHASIS. THE MENTION OF THESE ITEMS DOES NOT PRECLUDE THE INSTALLING CONTRACTOR FROM FOLLOWING ASTM C891 IN ITS ENTIRETY AND IMPLEMENTING ALL APPROPRIATE MEASURES. THE INSTALLING CONTRACTOR OWNS AND IS RESPONSIBLE FOR THE STORMTRAP SYSTEM UPON REMOVAL OF THE MODULES FROM THE DELIVERY TRUCK THROUGH 'FINAL CONSTRUCTION'. FINAL CONSTRUCTION IS ACHIEVED WHEN ALL MODULES ARE SET, FULLY BACKFILLED, AND WHEN FINAL FINISHED GRADES ARE REACHED. THE CONTRACTOR IS RESPONSIBLE FOR ANY COUNTERMEASURES NECESSARY TO RESIST UPLIFT/BUOYANCY BEFORE 'FINAL CONSTRUCTION' IS ACHIEVED.
2. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ENSURE THAT PROPER/ADEQUATE EQUIPMENT IS USED TO SET/INSTALL THE MODULES.
3. STORMTRAP MODULES CAN BE PLACED ON A LEVEL, 6" FOUNDATION OF ¾" AGGREGATE EXTENDING 2'-0" PAST THE OUTSIDE OF THE SYSTEM (SEE DETAIL 1) AND SHALL BE PLACED ON PROPERLY COMPACTED SOILS (SEE SHEET 1.1 FOR SOIL BEARING CAPACITY REQUIREMENTS), AND IN ACCORDANCE WITH ASTM C891 STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST UTILITY STRUCTURES.
4. THE STORMTRAP MODULES SHALL BE PLACED SUCH THAT THE MAXIMUM SPACE BETWEEN ADJACENT MODULES DOES NOT EXCEED ¾" (SEE DETAIL 2). IF THE SPACE EXCEEDS ¾", THE MODULES SHALL BE RESET WITH APPROPRIATE ADJUSTMENT MADE TO LINE AND GRADE TO BRING THE SPACE INTO SPECIFICATION.
5. STORMTRAP MODULES ARE NOT WATERTIGHT. IF A WATERTIGHT SOLUTION IS REQUIRED, CONTACT STORMTRAP FOR RECOMMENDATIONS. THE WATERTIGHT APPLICATION IS TO BE PROVIDED AND IMPLEMENTED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE SELECTED WATERTIGHT SOLUTION PERFORMS AS SPECIFIED BY THE MANUFACTURER.
6. THE HORIZONTAL JOINT BETWEEN THE TOP AND BASE LEG CONNECTIONS OF ALL PERIMETER STORMTRAP MODULES SHALL BE SEALED WITH PREFORMED MASTIC JOINT TAPE ACCORDING TO ASTM C891, 8.8 AND 8.12. (SEE DETAIL 3). THE MASTIC JOINT TAPE DOES NOT PROVIDE A WATERTIGHT SEAL.
7. ALL EXTERIOR ROOF AND EXTERIOR VERTICAL WALL JOINTS BETWEEN ADJACENT STORMTRAP MODULES SHALL BE SEALED WITH 8" WIDE PRE-FORMED, COLD-APPLIED, SELF-ADHERING ELASTOMERIC RESIN, BONDED TO A WOVEN , HIGHLY PUNCTURE RESISTANT POLYMER WRAP, CONFORMING TO ASTM C891 AND SHALL BE INTEGRATED WITH PRIMER SEALANT AS APPROVED BY STORMTRAP (SEE DETAILS 2, 4, & 5). THE JOINT WRAP DOES NOT PROVIDE A WATERTIGHT SEAL. THE SOLE PURPOSE OF THE JOINT WRAP IS TO PROVIDE A SILT AND SOIL TIGHT SYSTEM. THE ADHESIVE EXTERIOR JOINT WRAP SHALL BE INSTALLED ACCORDING TO THE FOLLOWING INSTALLATION INSTRUCTIONS:
   7.1. USE A BRUSH OR WET CLOTH TO THOROUGHLY CLEAN THE OUTSIDE SURFACE AT THE POINT WHERE JOINT WRAP IS TO BE APPLIED.
   7.2. A RELEASE PAPER PROTECTS THE ADHESIVE SIDE OF THE JOINT WRAP. PLACE THE ADHESIVE TAPE (ADHESIVE SIDE DOWN) AROUND THE STRUCTURE, REMOVING THE RELEASE PAPER AS YOU GO. PRESS THE JOINT WRAP FIRMLY AGAINST THE STORMTRAP MODULE SURFACE WHEN APPLYING.
8. IF THE CONTRACTOR NEEDS TO CANCEL ANY SHIPMENTS, THEY MUST DO SO 48 HOURS PRIOR TO THEIR SCHEDULED ARRIVAL AT THE JOB SITE. IF CANCELED AFTER THAT TIME, PLEASE CONTACT THE PROJECT MANAGER.
9. IF THE STORMTRAP MODULE(S) IS DAMAGED IN ANY WAY PRIOR, DURING, OR AFTER INSTALL, STORMTRAP MUST BE CONTACTED IMMEDIATELY TO ASSESS THE DAMAGE AND TO DETERMINE WHETHER OR NOT THE MODULE(S) WILL NEED TO BE REPLACED. IF ANY MODULE ARRIVES AT THE JOBSITE DAMAGED DO NOT UNLOAD IT; CONTACT STORMTRAP IMMEDIATELY. ANY DAMAGE NOT REPORTED BEFORE THE TRUCK IS UNLOADED WILL BE THE CONTRACTOR'S RESPONSIBILITY.
10. STORMTRAP MODULES CANNOT BE ALTERED IN ANY WAY AFTER MANUFACTURING WITHOUT WRITTEN CONSENT FROM STORMTRAP.



SHEET TITLE: DOUBLETRAP INSTALLATION SPECIFICATION
SHEET NUMBER: 3.0

REVISIONS
No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS — NICHOLAS C. BROWN — 107175 — LICENSED PROFESSIONAL ENGINEER
7/25/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

DETENTION POND DETAILS (SHEET 1 OF 2)

2525 CR 172 INDUSTRIAL

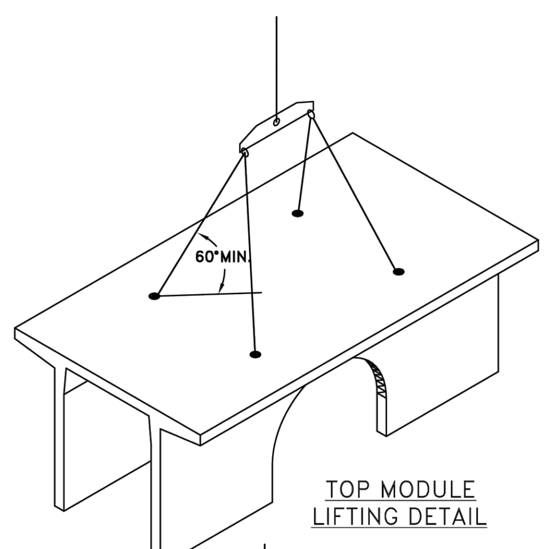
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
83 OF 203

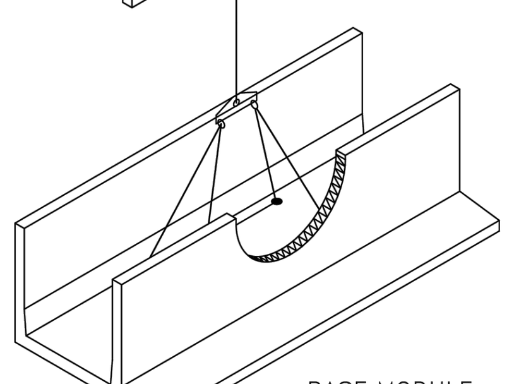
SDP24-00001

STORMTRAP MODULE LIFTING SPECIFICATION

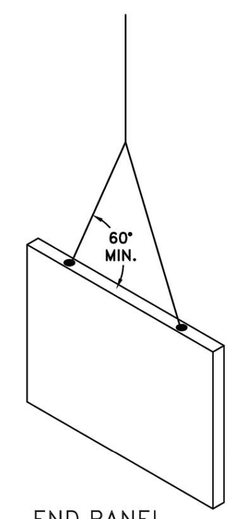
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL (4) CHAINS/CABLES ARE SECURED PROPERLY TO THE LIFTING ANCHORS AND IN EQUAL TENSION WHEN LIFTING THE STORMTRAP MODULE.
2. MINIMUM 7'–0" CHAIN/CABLE LENGTH TO BE USED TO LIFT STORMTRAP MODULES (SUPPLIED BY CONTRACTOR).
3. CONTRACTOR TO ENSURE MINIMUM LIFTING ANGLE IS 60° FROM TOP SURFACE OF STORMTRAP MODULE. SEE DETAIL.
4. IT IS UNDERSTOOD AND AGREED THAT AT ALL TIMES DURING WHICH HOISTING AND RIGGING EQUIPMENT IS BEING SUPPLIED TO THE PURCHASER, OPERATOR OF SUCH EQUIPMENT SHALL BE IN CHARGE OF HIS ENTIRE EQUIPMENT AND SHALL AT ALL TIMES BE THE JUDGE OF THE SAFETY AND PROPERTY OF ANY SUGGESTION TO HIM FROM THE SELLER, ITS AGENTS OR EMPLOYEES. PURCHASER AGREES TO SAVE, INDEMNIFY AND HOLD HARMLESS SELLER FROM ALL LOSS, CLAIMS, DEMANDS OR CAUSES OF ACTION, WHICH MAY ARISE FROM THE EXISTENCE OR OPERATION OF SAID EQUIPMENT.



TOP MODULE LIFTING DETAIL



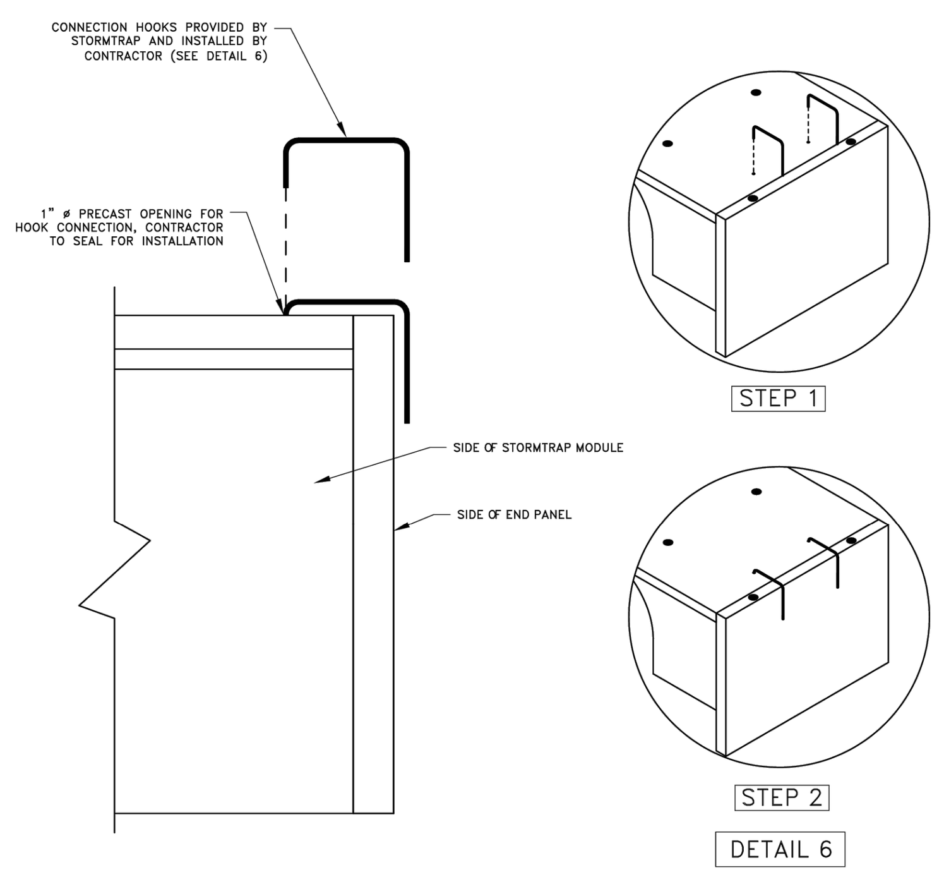
BASE MODULE LIFTING DETAIL



END PANEL LIFTING DETAIL

END PANEL ERECTION/INSTALLATION SPECIFICATION

1. END PANELS WILL BE SUPPLIED TO CLOSE OFF OPEN ENDS OF ROWS.
2. PANELS SHALL BE INSTALLED IN A TILT UP FASHION DIRECTLY ADJACENT TO OPEN END OF MODULE (REFER TO SHEET 2.0 FOR END PANEL LOCATIONS).
3. CONNECTION HOOKS WILL BE SUPPLIED WITH END PANELS TO SECURELY CONNECT PANEL TO ADJACENT STORMTRAP MODULE (SEE PANEL CONNECTION ELEVATION VIEW).
4. ONCE CONNECTION HOOK IS ATTACHED, LIFTING CLUTCHES MAY BE REMOVED.
5. JOINT WRAP SHALL BE PLACED AROUND PERIMETER JOINT PANEL (SEE SHEET 3.0).



PANEL CONNECTION ELEVATION VIEW

StormTrap | ENGINEER INFORMATION: Kimley-Horn & Associates – North Austin, TX; Austin, TX | PROJECT INFORMATION: 2525 CR 172 Industrial – Option 2; Round Rock, TX | CURRENT ISSUE DATE: 6/6/2024 | ISSUED FOR: PRELIMINARY

REV.	DATE:	ISSUED FOR:	DWN BY:
△	6/6/2024	PRELIMINARY	JPH
1	05/24/2024	PRELIMINARY	JH

SCALE: NTS

SHEET TITLE: DOUBLETRAP INSTALLATION SPECIFICATION

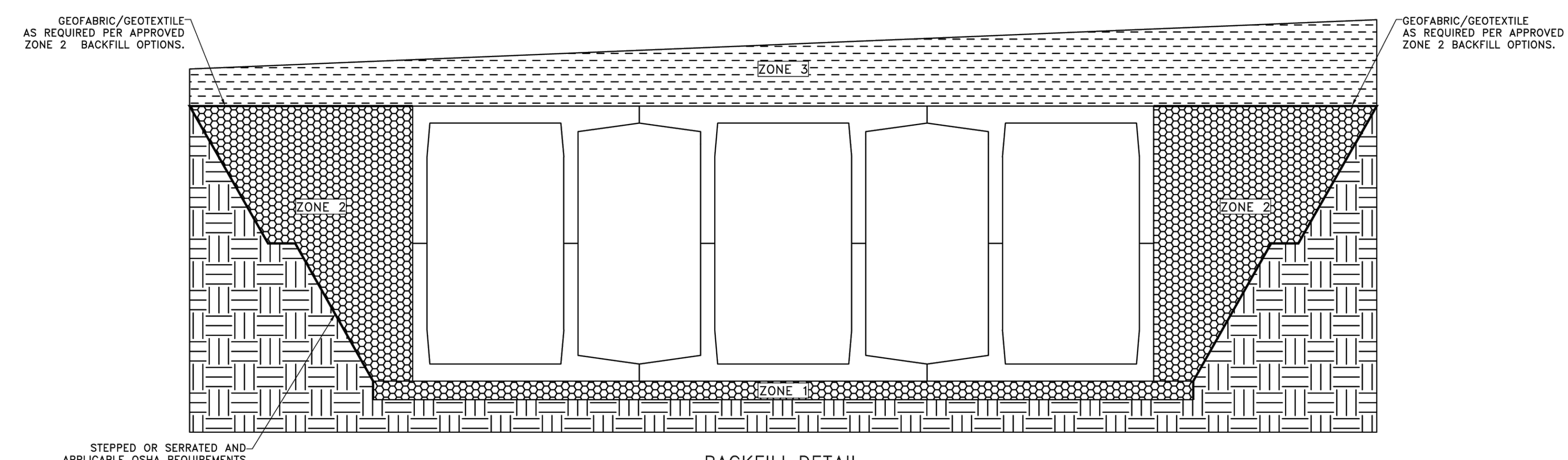
SHEET NUMBER: 3.1

ZONE CHART		
ZONES	ZONE DESCRIPTIONS	REMARKS
ZONE 1	FOUNDATION AGGREGATE	#5 (¾") STONE ANGULAR AGGREGATE (SEE NOTE 4)
ZONE 2	BACKFILL	UNIFIED SOILS CLASSIFICATION (GW, GP, SW, SP) OR SEE BELOW FOR APPROVED BACKFILL OPTIONS
ZONE 3	FINAL COVER OVERTOP	MATERIALS NOT TO EXCEED 120 PCF

APPROVED ZONE 2 BACKFILL OPTIONS	
OPTION	REMARKS
¾" STONE AGGREGATE	THE STONE AGGREGATE SHALL CONSIST OF CLEAN AND FREE DRAINING ANGULAR MATERIAL. THE SIZE OF THIS MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH 0% TO 5% PASSING THE #8 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOFABRIC AROUND THE PERIMETER OF THE BACKFILL (ASTM SIZE #57) AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
SAND	IMPORTED PURE SAND IS PERMITTED TO BE USED AS BACKFILL IF IT IS CLEAN AND FREE DRAINING. THE SAND USED FOR BACKFILLING SHALL HAVE LESS THAN 40% PASSING #40 SIEVE AND LESS THAN 5% PASSING #200 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOFABRIC AROUND THE PERIMETER OF THE SAND BACKFILL.
CRUSHED CONCRETE AGGREGATE	CLEAN, FREE DRAINING CRUSHED CONCRETE AGGREGATE MATERIAL CAN BE USED AS BACKFILL FOR STORMTRAP'S MODULES. THE SIZE OF THIS MATERIAL SHALL HAVE 100% PASSING THE 1" SIEVE WITH 0% TO 5% PASSING THE #8 SIEVE. THIS MATERIAL SHALL BE SEPARATED FROM NATIVE MATERIAL USING GEOFABRIC AROUND THE PERIMETER OF THE BACKFILL.
ROAD PACK	STONE AGGREGATE 100% PASSING THE 1-1/2" SIEVE WITH LESS THAN 12% PASSING THE #200 SIEVE (ASTM SIZE #467). GEOFABRIC AS PER GEOTECHNICAL ENGINEER RECOMMENDATION.

STORMTRAP ZONE INSTALLATION SPECIFICATION/PROCEDURE

1. THE FILL PLACED AROUND THE STORMTRAP MODULES MUST BE DEPOSITED ON BOTH SIDES AT THE SAME TIME AND TO APPROXIMATELY THE SAME ELEVATION. AT NO TIME SHALL THE FILL BEHIND ONE SIDE WALL BE MORE THAN 2'–0" HIGHER THAN THE FILL ON THE OPPOSITE SIDE. BACKFILL SHALL EITHER BE COMPACTED AND/OR VIBRATED TO ENSURE THAT BACKFILL AGGREGATE/STONE MATERIAL IS WELL SEATED AND PROPERLY INTER LOCKED. CARE SHALL BE TAKEN TO PREVENT ANY WEDGING ACTION AGAINST THE STRUCTURE, AND ALL SLOPES WITHIN THE AREA TO BE BACKFILLED MUST BE STEPPED OR SERRATED TO PREVENT WEDGING ACTION. CARE SHALL ALSO BE TAKEN AS NOT TO DISRUPT THE JOINT WRAP FROM THE JOINT DURING THE BACKFILL PROCESS. BACKFILL MUST BE FREE-DRAINING MATERIAL. SEE ZONE 2 BACKFILL CHART ON THIS PAGE FOR APPROVED BACKFILL OPTIONS. IF NATIVE EARTH IS SUSCEPTIBLE TO MIGRATION, CONFIRM WITH GEOTECHNICAL ENGINEER AND PROVIDE PROTECTION AS REQUIRED (PROVIDED BY OTHERS). ALL MODULES MUST BE SET AND ALL SIDES MUST BE FULLY BACKFILLED BEFORE TRAVEL OVERTOP THE SYSTEM IS PERMITTED. SEE NOTE 2 FOR EXCEPTIONS AND LIMITATIONS.
2. THE FILL PLACED OVERTOP THE SYSTEM SHALL BE PLACED IN MINIMUM 6" LIFTS. AT NO TIME SHALL MACHINERY OR VEHICLES GREATER THAN THE DESIGN LIVE LOAD LISTED ON SHEET 1.0 TRAVEL OVERTOP THE SYSTEM. IF TRAVEL OVER THE SYSTEM OCCURS BEFORE THE MINIMUM DESIGN COVER IS ACHIEVED, IT MAY BE NECESSARY TO REDUCE THE ULTIMATE LOAD/BURDEN OF THE OPERATING MACHINERY SO AS TO NOT EXCEED THE DESIGN CAPACITY OF THE SYSTEM. VEHICLES AND MACHINERY USED TO PLACE FILL MATERIAL ON TOP OF THE SYSTEM SHALL TRAVEL PARALLEL TO THE LONGITUDINAL AXIS OF THE STORMTRAP MODULES WHENEVER POSSIBLE.
3. THE VIBRATORY FUNCTION OF ANY ROLLER, COMPACTOR, VEHICLE, ETC. SHALL NOT BE USED OVERTOP THE SYSTEM WITHOUT PRIOR APPROVAL FROM STORMTRAP. IN SOME CASES, HAND COMPACTION MAY BE NECESSARY TO ENSURE THAT THE ALLOWABLE DESIGN LOADING IS NOT EXCEEDED.
4. STONE AGGREGATE FOUNDATION IN ZONE 1 IS RECOMMENDED FOR LEVELING PURPOSES ONLY (OPTIONAL).



BACKFILL DETAIL

StormTrap | ENGINEER INFORMATION: Kimley-Horn & Associates – North Austin, TX; Austin, TX | PROJECT INFORMATION: 2525 CR 172 Industrial – Option 2; Round Rock, TX | CURRENT ISSUE DATE: 6/6/2024 | ISSUED FOR: PRELIMINARY

REV.	DATE:	ISSUED FOR:	DWN BY:
△	6/6/2024	PRELIMINARY	JPH
1	05/24/2024	PRELIMINARY	JH

SCALE: NTS

SHEET TITLE: DOUBLETRAP BACKFILL SPECIFICATION

SHEET NUMBER: 4.0

ACCESS OPENING SPECIFICATION

1. A TYPICAL ACCESS OPENING FOR THE STORMTRAP SYSTEM ARE 2'–0" IN DIAMETER. ACCESS OPENINGS LARGER THAN 4'–0" IN DIAMETER NEED TO BE APPROVED BY STORMTRAP. ALL OPENINGS MUST RETAIN AT LEAST 2'–0" OF CLEARANCE FROM THE END OF THE STORMTRAP MODULE UNLESS NOTED OTHERWISE. ALL ACCESS OPENINGS TO BE LOCATED ON INSIDE LEG UNLESS OTHERWISE SPECIFIED. SEE SHEET 2.0 FOR SIZES AND LOCATIONS.
2. UNLESS OTHERWISE SPECIFIED, PLASTIC COATED STEEL STEPS PRODUCED BY M.A. INDUSTRIES PART #PS3-PFC OR APPROVED EQUAL (SEE STEP DETAIL) ARE PROVIDED INSIDE ANY MODULE WHERE DEEMED NECESSARY. THE HIGHEST STEP IN THE MODULE IS TO BE PLACED A DISTANCE OF 1'–0" FROM THE INSIDE EDGE OF THE STORMTRAP MODULES. ALL ENSUING STEPS SHALL BE PLACED AT A DISTANCE BETWEEN 10" MIN AND 14" MAX BETWEEN THEM. STEPS MAY BE MOVED OR ALTERED TO AVOID OPENINGS OR OTHER IRREGULARITIES IN THE MODULE.
3. STORMTRAP LIFTING INSERTS MAY BE RELOCATED TO AVOID INTERFERENCE WITH ACCESS OPENINGS OR THE CENTER OF GRAVITY OF THE MODULE AS NEEDED.
4. STORMTRAP ACCESS OPENINGS MAY BE RELOCATED TO AVOID INTERFERENCE WITH INLET AND/OR OUTLET PIPE OPENINGS SO PLACEMENT OF STEPS IS ATTAINABLE.
5. ACCESS OPENINGS SHOULD BE LOCATED IN ORDER TO MEET THE APPROPRIATE MUNICIPAL REQUIREMENTS. STORMTRAP RECOMMENDS AT LEAST TWO ACCESS OPENINGS PER SYSTEM FOR ACCESS AND INSPECTION.
6. USE PRECAST ADJUSTING RINGS AS NEEDED TO MEET GRADE. STORMTRAP RECOMMENDS FOR COVER OVER 2' TO USE PRECAST BARREL OR CONE SECTIONS. (PROVIDED BY OTHERS)

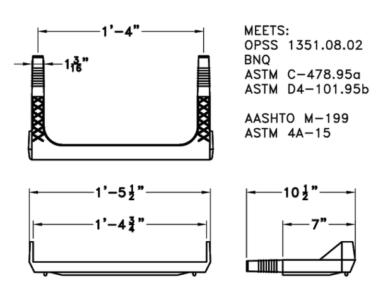
PIPE OPENING SPECIFICATION

1. MINIMUM EDGE DISTANCE FOR AN OPENING ON THE OUTSIDE WALL SHALL BE NO LESS THAN 1'–0".
2. CONNECTING PIPES MAY BE INSTALLED WITH A 1'–0" CONCRETE COLLAR AND AN AGGREGATE CRADLE (AS REQUIRED) FOR AT LEAST ONE PIPE LENGTH (SEE PIPE CONNECTION DETAIL). A STRUCTURAL GRADE CONCRETE OR HIGH STRENGTH, NON-SHRINK GROUT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI MAY BE USED.
3. THE ANNULAR SPACE BETWEEN THE PIPE AND THE HOLE SHALL BE FILLED WITH HIGH STRENGTH NON-SHRINK GROUT.

PIPE INSTALLATION INSTRUCTIONS

1. CLEAN AND LIGHTLY LUBRICATE ALL OF THE PIPE TO BE INSERTED INTO STORMTRAP.
2. IF PIPE IS CUT, CARE SHOULD BE TAKEN TO ALLOW NO SHARP EDGES. BEVEL AND LUBRICATE LEAD END OF PIPE.
3. ALIGN CENTER OF PIPE TO CORRECT ELEVATION AND INSERT INTO OPENING.

NOTE: ALL ANCILLARY PRODUCTS/SPECIFICATIONS RECOMMENDED AND SHOWN ON THIS SHEET INCLUDING BUT NOT LIMITED TO CONCRETE COLLARS, AGGREGATE CRADLES, GRADE RINGS, RISER SECTIONS, ETC., ARE RECOMMENDATIONS ONLY AND SUBJECT TO CHANGE PER THE INSTALLING CONTRACTOR AND/OR PER LOCAL MUNICIPAL CODE/REQUIREMENTS.



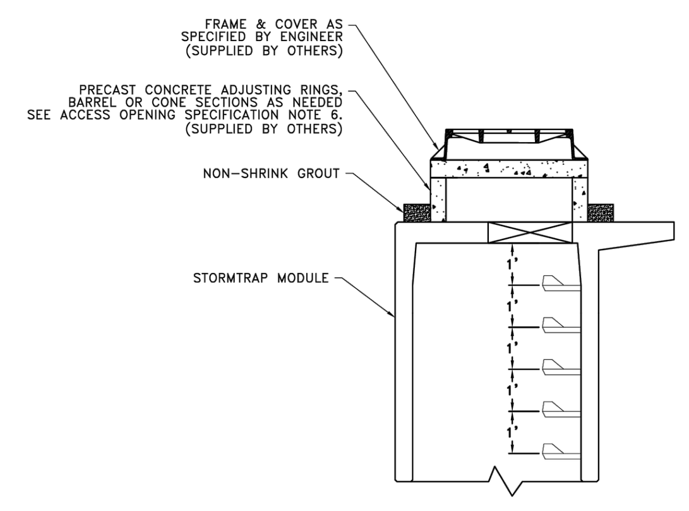
MEETS:
OPSS 1351.08.02
BNQ
ASTM C-478.95a
ASTM D4-101.95b

AASHTO M-199
ASTM 4A-15

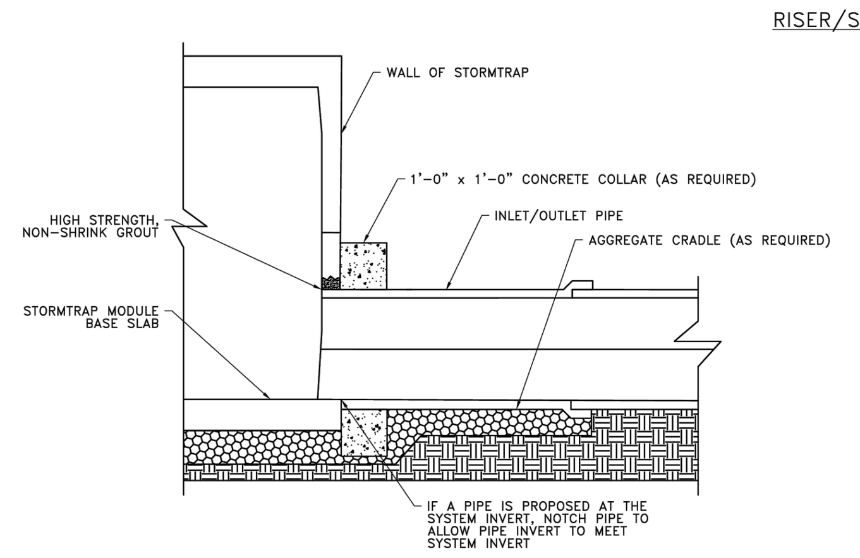
STEP DETAIL

*** NOTICE *** 03-25-2022

DUE TO CURRENT INCONSISTENCIES IN THE 16" STEP SUPPLY, STORMTRAP MAY SUBSTITUTE THE 16" STEP WITH THE CLOSEST ALTERNATIVE LENGTH STEP UNTIL THE SUPPLY CHAIN ISSUE IS RESOLVED.



RISER/STAIR DETAIL



NOTCHED PIPE CONNECTION DETAIL WHEN PIPE INVERT IS AT INVERT OF STORMTRAP SYSTEM

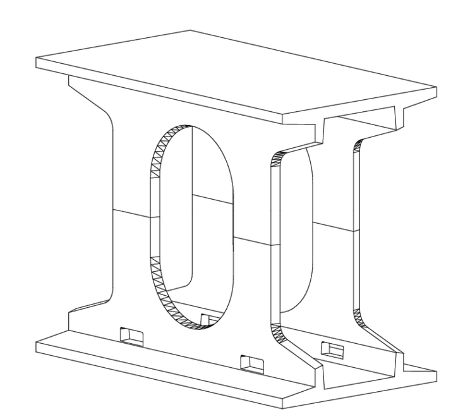
StormTrap | ENGINEER INFORMATION: Kimley-Horn & Associates – North Austin, TX; Austin, TX | PROJECT INFORMATION: 2525 CR 172 Industrial – Option 2; Round Rock, TX | CURRENT ISSUE DATE: 6/6/2024 | ISSUED FOR: PRELIMINARY

REV.	DATE:	ISSUED FOR:	DWN BY:
△	6/6/2024	PRELIMINARY	JPH
1	05/24/2024	PRELIMINARY	JH

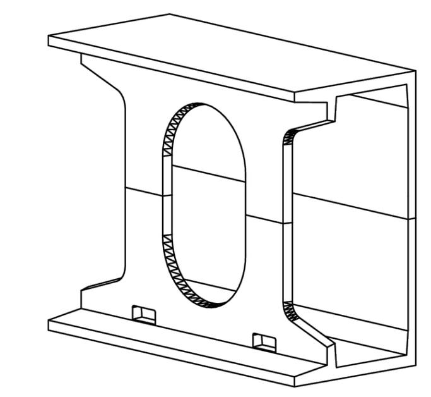
SCALE: NTS

SHEET TITLE: PIPE / ACCESS OPENING SPECIFICATION

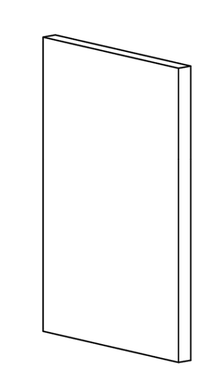
SHEET NUMBER: 5.0



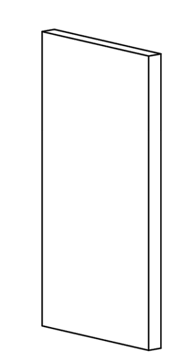
TYPE II



TYPE III



TYPE II END PANEL



TYPE IV END PANEL

NOTES:
1. OPENING LOCATIONS AND SHAPES MAY VARY.
2. SP – INDICATES A MODULE WITH MODIFICATIONS.
3. P – INDICATES A MODULE WITH A PANEL ATTACHMENT.
4. POCKET WINDOW OPENINGS ARE OPTIONAL.

StormTrap | ENGINEER INFORMATION: Kimley-Horn & Associates – North Austin, TX; Austin, TX | PROJECT INFORMATION: 2525 CR 172 Industrial – Option 2; Round Rock, TX | CURRENT ISSUE DATE: 6/6/2024 | ISSUED FOR: PRELIMINARY

REV.	DATE:	ISSUED FOR:	DWN BY:
△	6/6/2024	PRELIMINARY	JPH
1	05/24/2024	PRELIMINARY	JH

SCALE: NTS

SHEET TITLE: DOUBLETRAP MODULE TYPES

SHEET NUMBER: 6.0

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS – NICHOLAS C. BROWN – 107175 – LICENSED PROFESSIONAL ENGINEER
7/25/2024

KHA PROJECT 069284918	DATE JUNE 2024	SCALE: AS SHOWN	DESIGNED BY: MM	DRAWN BY: MM	CHECKED BY: NCB

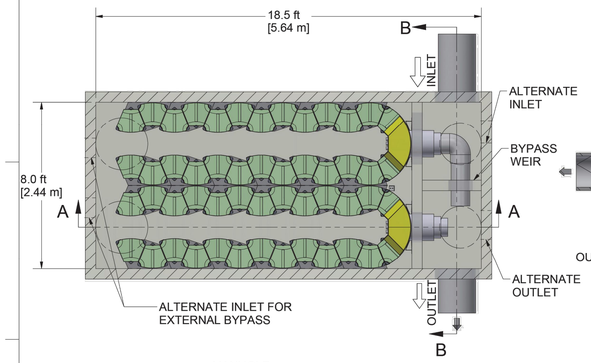
DETENTION POND DETAILS (SHEET 2 OF 2)

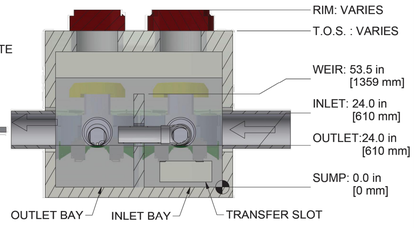
2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

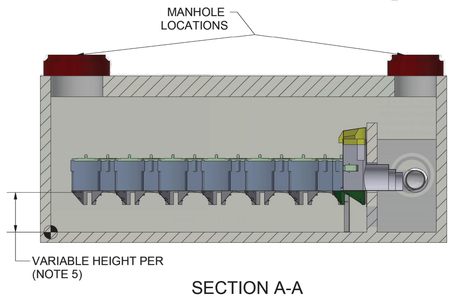
SHEET NUMBER
84 OF 203

SDP24-00001





SECTION B-B



SECTION A-A

CAPACITIES:

- Minimum performance: 80% removal. Washington DOE/NJCAT verified at the peak treatment flow.
- Peak treatment flow:
  .033 CFS (0.9 LPS) (15 GPM) per module (Ribbons)
  .022 CFS (0.6 LPS) (10 GPM) per module (Long Ribbons)
  .056 CFS (1.6 LPS) (25 GPM) per module (CPZ)
- Maximum number of ribbon modules per outlet module: 36
- Maximum number of CPZ modules per outlet module: 18
  (contract Hydro if more are required)

ADDITIONAL DESIGN INFORMATION:

- Normal operating W.S.E. is 26-30" (660-762mm) above the outlet invert
- Media Types Available: Ribbons, CPZ

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

TOLERENCES ARE:
FRACTIONS ± 1/16
DECIMALS
X.X ± .1
X.XX ± .03
X.XXX ± .015
ANGLES ± .5°

PROJECTION

COMMENTS:

1. STRUCTURE WALL AND SLAB THICKNESSES ARE NOT TO SCALE
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING THE STRUCTURE
3. NOT FOR CONSTURCION CONTACT HYDRO FOR SITE SPECIFIC DRAWING
4. NOT ALL SIZES AVAILABLE IN ALL AREAS
5. SUMP DEPTH AVAILABLE IN 24" (610mm) CPZ, RIBBONS AND 36" (914mm) LONG RIBBONS DEPTH

DATE:	SCALE:
3/8/2019	1:40

DRAWN BY:	CHECKED BY:	APPROVED BY
ER	MJ	

Title
UP-FLO FILTER
8ft (2438mm) X 18.5ft (5639mm)

52 MODULES MAX

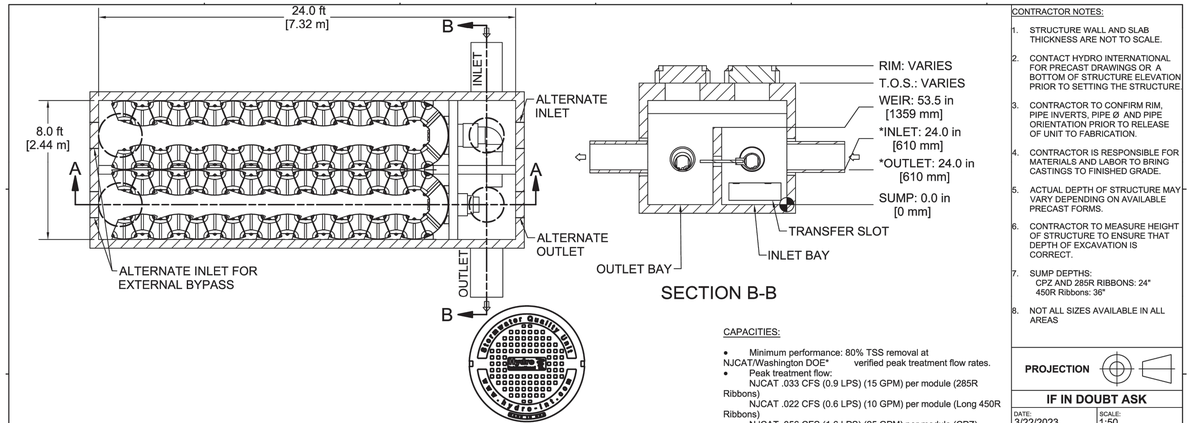
WEIGHT:	MATERIAL:
N/A	

NEXT ASSEMBLY:
8x18.5-1

DRAWING NO:
8x18.5-UFF-1

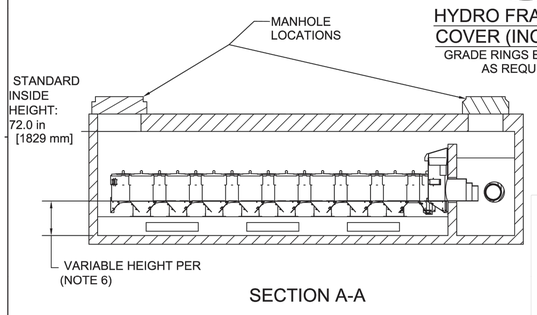
SHEET SIZE:	SHEET:	Rev:
B	1 OF 1	-

Hydro International
94 Hutchins Drive
Portland, ME 04102
Tel: +1 (207) 756-6200
Fax: +1 (207) 756-6212
hydro-int.com



SECTION B-B

HYDRO FRAME AND COVER (INCLUDED)
GRADE RINGS BY OTHERS AS REQUIRED



SECTION A-A

CAPACITIES:

- Minimum performance: 80% TSS removal at NJCAT/Washington DOE* verified peak treatment flow rates.
- Peak treatment flow:
  NJCAT .033 CFS (0.9 LPS) (15 GPM) per module (285R Ribbons)
  NJCAT .022 CFS (0.6 LPS) (10 GPM) per module (Long 450R Ribbons)
  NJCAT .056 CFS (1.6 LPS) (25 GPM) per module (CPZ)
- Maximum number of ribbon modules per outlet module: 36
- Maximum number of CPZ modules per outlet module: 18
  Counts are maximum number of filter modules that can be connected to one outlet module in the largest vaults. Contact Hydro if more are required.
- * See WA DOE GENERAL USE LEVEL DESIGNATION FOR BASIC (TSS) AND PHOSPHORUS TREATMENT report.

ADDITIONAL DESIGN INFORMATION:

- Normal operating W.S.E. is 26-30" (660-762mm) above the outlet invert
- Available Media Types: Ribbons, CPZ
- CPZ Filter will require 9½" minimum drop if downstream from storage.
- Ribbon Filter will require 11 ¾" drop if downstream from storage.
- Pipe size and angles may add" to the vault length (contact Hydro for a site specific drawing)
- For inside vault heights under 72in contact Hydro
- Unit shall conform to HS20-44 load ratings

CONTRACTOR NOTES:

1. STRUCTURE WALL AND SLAB THICKNESS ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR PRECAST DRAWINGS OR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING THE STRUCTURE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE Ø AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.
4. CONTRACTOR IS RESPONSIBLE FOR MATERIALS AND LABOR TO BRING CASTINGS TO FINISHED GRADE.
5. ACTUAL DEPTH OF STRUCTURE MAY VARY DEPENDING ON AVAILABLE PRECAST FORMS.
6. CONTRACTOR TO MEASURE HEIGHT OF STRUCTURE TO ENSURE THAT DEPTH OF EXCAVATION IS CORRECT.
7. SUMP DEPTHS:
   CPZ AND 285R RIBBONS: 24"
   450R Ribbons: 36"
8. NOT ALL SIZES AVAILABLE IN ALL AREAS

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
3/22/2023	1:50

DRAWN BY:	CHECKED BY:	APPROVED BY
EHR	WS	MJ

Title
UP-FLO FILTER
8ft (2438mm) X 24ft (7315mm)

72 MODULES MAX
W/ INTERNAL BYPASS

Patent: www.hydro-int.com/patents

Hydro International
hydro-int.com

©2023 HYDRO INTERNATIONAL

WEIGHT:	MATERIAL:
N/A	

STOCK NUMBER:

DRAWING NO.:
8x24 UFF GA INTERNAL BYPASS

SHEET SIZE:	SHEET:	Rev:
B	1 OF 1	-

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
7/25/2024

KHA PROJECT	DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
069284918	JUNE 2024	AS SHOWN	MM	MM	NCB

WATER QUALITY PLAN (UP-FLO FILTER)

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
85 OF 203

SDP24-00001

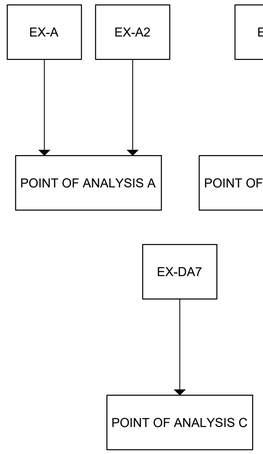
DAU3

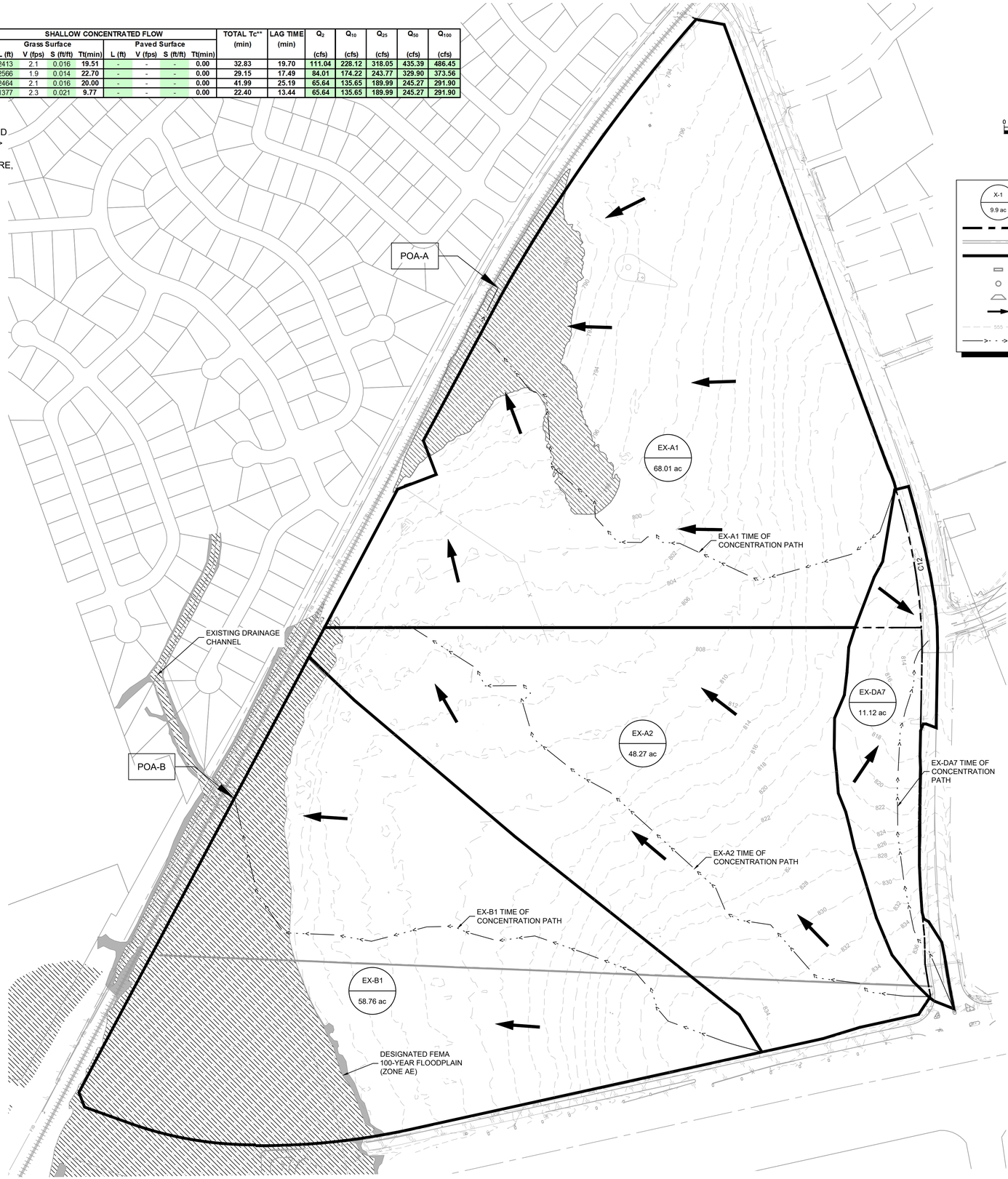
Drainage Calculations - SCS Method

DRAINAGE AREA	AREA (Ac.)	IMPERVIOUS COVER (Ac.)	IMPERVIOUS COVER (%)	CN	SHEET FLOW				SHALLOW CONCENTRATED FLOW								TOTAL Tc** (min)	LAG TIME (min)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
					P-2yr24hr 4.01 IN				Grass Surface				Paved Surface										
					N	L (ft)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)							
EX-A1	68.01	0.14	0.2%	80.04	0.15	100	0.007	13.32	2413	2.1	0.016	19.51	-	-	-	0.00	32.83	19.70	111.04	228.12	318.05	435.39	486.45
EX-A2	48.27	0.00	0.0%	80.00	0.15	100	0.043	6.46	2566	1.9	0.014	22.70	-	-	-	0.00	29.15	17.49	84.01	174.22	243.77	329.90	373.56
EX-B1	58.76	0.00	0.0%	80.00	0.15	100	0.002	21.99	2464	2.1	0.016	20.00	-	-	-	0.00	41.99	25.19	65.64	135.65	189.99	245.27	291.90
EX-DA7	11.12	0.56	5.0%	80.91	0.15	100	0.008	12.63	1377	2.3	0.021	9.77	-	-	-	0.00	22.40	13.44	65.64	135.65	189.99	245.27	291.90

NOTES:

1. THE CURVE NUMBER (CN) HAS BEEN DETERMINED FROM TABLE 2-2A OF TECHNICAL RELEASE 55. THE COVER TYPE, HYDROLOGIC CONDITION, AND SOIL GROUP DETERMINED FOR THE PROPOSED CONDITIONS ARE OPEN SPACE ,GOOD CONDITION (GRASS COVER > 75%), AND TYPE D SOIL GROUP WITH A CN OF 80. THE COVER TYPE, HYDROLOGIC CONDITION, AND SOIL GROUP DETERMINED FOR THE EXISTING CONDITIONS ARE PASTURE, GOOD CONDITION, AND TYPE D SOIL GROUP WITH A CN OF 80.





LEGEND

X-1 / 9.9 ac	AREA DESIGNATOR / AREA IN ACRES
	PROPERTY LINE
	EXISTING STORM SEWER LINE
	EXISTING DRAINAGE DIVIDE
	EXISTING STORM SEWER INLET
	EXISTING STORM SEWER MANHOLE
	EXISTING STORM SEWER HEADWALL
	EXISTING FLOW DIRECTION
555	EXISTING CONTOUR
	TIME OF CONCENTRATION FLOW PATH

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
6/13/2024

KHA PROJECT	060284918
DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

EXISTING DRAINAGE AREA MAP

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
86 OF 203

SDP24-00001

DAU3

Drainage Calculations - SCS Method

DRAINAGE AREA	AREA (Ac.)	IMPERVIOUS COVER (Ac.)	IMPERVIOUS COVER (%)	CN	SHEET FLOW				SHALLOW CONCENTRATED FLOW								PIPE FLOW			TOTAL Tc** (min)	LAG TIME (min)	Q_2	Q_{10}	Q_{25}	Q_{50}	Q_{100}
					P-2yr24hr 4.01 "IN				Paved Surface				Grass Surface				Pipe Flow									
					N	L (ft)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	S (ft/ft)	Tt(min)	L (ft)	V (fps)	Tt(min)			(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
PR-1	47.50	39.69	83.6%	95.04	0.15	100	0.007	13.32	194	3.8031	0.035	0.85	451	1.2704	0.006	5.92	1582	6.0	4.39	24.48	14.69	109.60	183.35	238.29	306.80	340.33
BY-1	14.76	0.00	0.0%	80.00	0.15	100	0.012	10.74	-	-	-	0.00	1665	2.2954	0.020	12.09	-	-	-	22.83	13.70	22.06	45.69	63.93	86.42	97.97
BY-2	1.49	0.00	0.0%	80.00	0.15	100	0.020	8.75	-	-	-	0.00	270	2.4995	0.024	1.80	-	-	-	10.55	6.33	2.86	5.85	8.14	11.69	12.41
BY-3	52.37	0.00	0.0%	80.00	0.15	100	0.043	6.44	-	-	-	0.00	4097	1.8506	0.013	36.90	-	-	-	43.34	26.01	58.72	121.49	169.88	217.69	260.26
B-1	58.76	0.00	0.0%	80.00	0.15	100	0.002	21.99	-	-	-	0.00	2464	2.0532	0.016	20.00	-	-	-	41.99	25.19	67.32	138.94	194.11	248.33	297.09
DA-7A	8.87	8.81	99%	97.88	0.15	100	0.008	12.63	1249	2.7273	0.018	7.63	128	1.9091	0.014	1.12	-	-	-	21.38	12.83	22.52	36.79	47.49	61.36	67.44
DA-7B	2.12	0.74	35%	86.28	0.15	100	0.007	13.48	-	-	-	0.00	191	3.0185	0.035	1.05	-	-	-	14.53	8.72	4.65	8.71	11.75	16.09	17.36

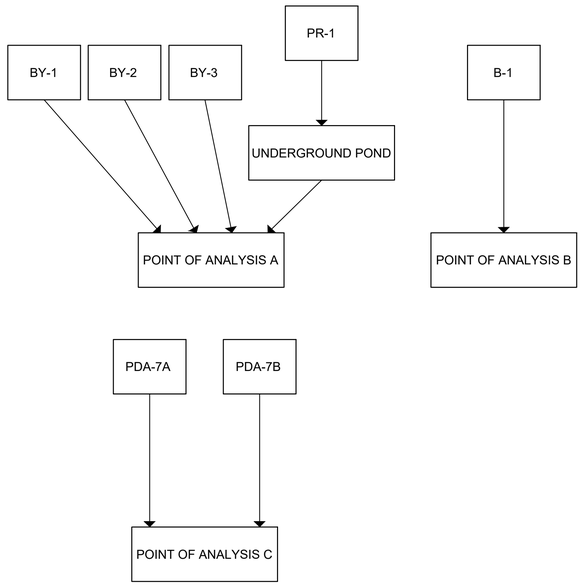
Storm Event	Existing Flows (cfs)			Developed Flows (cfs)							POA-A Delta
	EX-A1	EX-A2	POA-A	PR-1	BY-1	BY-2	BY-3	POND 1 (IN)	POND 1 (OUT)	POA-A	
2	88.04	65.5	152.51	109.60	22.06	2.86	58.72	109.60	60.61	134.71	17.8
10	181.26	135.13	315.04	183.35	45.69	5.85	121.49	183.35	111.91	265.97	49.07
25	252.98	188.72	440.66	238.29	63.93	8.14	169.88	238.29	152.04	368.80	71.86
50	330.22	250.05	577.32	306.80	86.42	11.69	217.69	306.80	194.42	472.61	104.71
100	386.75	289.09	675.16	340.33	97.97	12.41	260.26	340.33	229.19	563.82	111.34

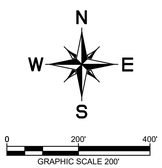
Storm Event	Existing Flows (cfs)		Developed Flows (cfs)		POA-B Delta
	EX-B1	POA-B	B-1	POA-B	
2	67.32	67.32	67.32	67.32	0
10	138.94	138.94	138.94	138.94	0
25	194.11	194.11	194.11	194.11	0
50	248.33	248.33	248.33	248.33	0
100	297.09	297.09	297.09	297.09	0

Storm Event	Existing Flows (cfs)		Developed Flows (cfs)			POA-C Delta
	EX-DA7	POA-C	DA-7A	DA-7B	POA-C	
2	17.45	17.45	22.52	4.65	26.83	-9.38
10	35.58	35.58	36.79	8.71	44.88	-9.3
25	49.48	49.48	47.49	11.75	58.41	-8.93
50	66.78	66.78	61.36	16.09	76.37	-9.59
100	75.36	75.36	67.44	17.36	83.58	-8.22

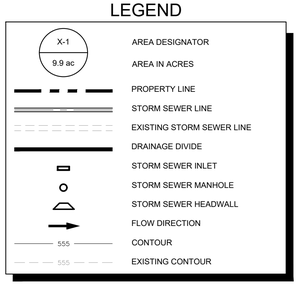
NOTES:

1. THE CURVE NUMBER (CN) HAS BEEN DETERMINED FROM TABLE 2-2A OF TECHNICAL RELEASE 55. THE COVER TYPE, HYDROLOGIC CONDITION, AND SOIL GROUP DETERMINED FOR THE PROPOSED CONDITIONS ARE OPEN SPACE ,GOOD CONDITION (GRASS COVER > 75%), AND TYPE D SOIL GROUP WITH A CN OF 80. THE COVER TYPE, HYDROLOGIC CONDITION, AND SOIL GROUP DETERMINED FOR THE EXISTING CONDITIONS ARE PASTURE, GOOD CONDITION, AND TYPE D SOIL GROUP WITH A CN OF 80.
2. PDA-7B WAS DETERMINED WITH 85% MAXIMUM IMPERVIOUS COVER PER SIP-24-0008.
3. REFER TO SIP-24-0008 FOR CONTINUATION OF FLOW FROM DA-7A AND DA-7B.
4. REFER TO SIP-24-00016 FOR DEVELOPED CONDITIONS WITH CONSTRUCTION OF POND IN LOT 2.





LEGEND



BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

7/18/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

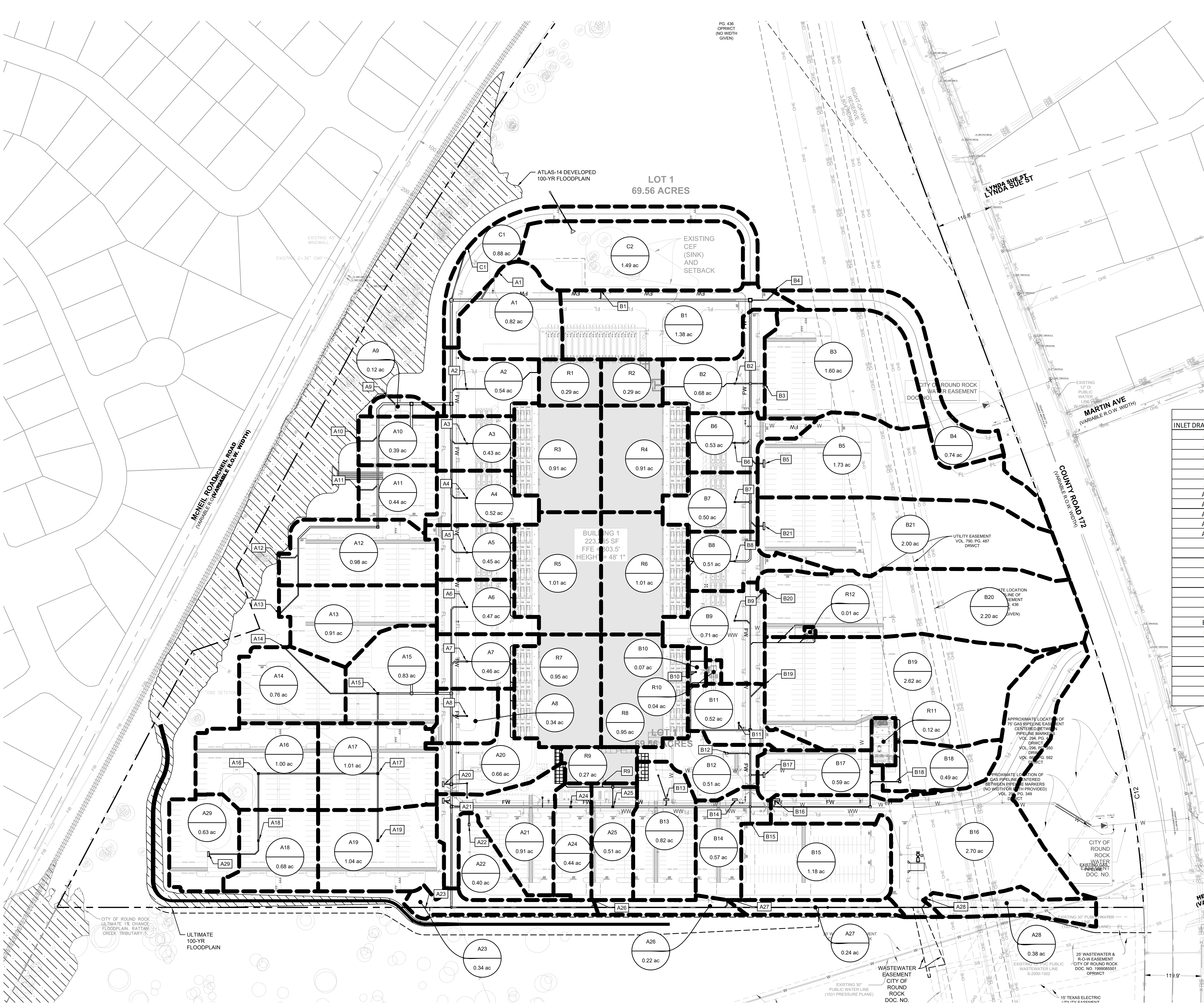
DEVELOPED DRAINAGE AREA MAP

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
87 OF 203

SDP24-00001



LEGEND

Symbol	Description
X-1 / 9.9 ac	AREA DESIGNATOR / AREA IN ACRES
A-1	INLET NUMBER
	PROPERTY LINE
	EXISTING STORM DRAIN LINE
	DRAINAGE DIVIDE
	STORM DRAIN LINE
	STORM GRATE INLET
	STORM HEADWALL
	STORM MANHOLE
	STORM JUNCTION BOX
	STORM AREA INLET
	STORM CURB INLET
	FLOW DIRECTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	TIME OF CONCENTRATION PATH

WATER QUALITY 1		
INLET DRAINAGE AREA	ACREAGE	FLOW (CFS)
A1	0.82	9.11
A2	0.54	7.35
A3	0.43	5.69
A4	0.52	6.95
A5	0.45	5.93
A9	0.12	1.57
A10	0.39	5.79
A11	0.44	6.46
A12	1.16	16.93
A13	0.61	9.06
A15	0.96	14.12
B1	1.38	18.42
B2	0.68	9.14
B3	1.60	17.31
B4	0.74	11.07
B5	1.73	17.28
B6	0.53	7.18
B7	0.50	6.73
B8	0.51	6.86
B21	2.00	16.83
C1	0.88	11.68
C2	1.49	12.07
R1	0.29	4.36
R2	0.29	4.32
R3	0.91	13.50
R4	0.91	13.49
R5	1.01	14.98
R6	1.01	14.95

WATER QUALITY 2		
INLET DRAINAGE AREA	ACREAGE	FLOW (CFS)
R7	0.95	14.06
R8	0.95	14.05
R9	0.27	4.06
R10	0.04	0.55
R11	0.12	1.71
R12	0.01	0.17
A6	0.47	6.34
A7	0.46	6.12
A8	0.34	4.55
A14	0.70	10.36
A16	1.00	14.03
A17	1.01	14.56
A18	0.96	14.13
A19	1.04	14.95
A20	0.66	8.70
A21	0.91	13.06
A22	0.40	4.73
A23	0.34	4.54
A24	0.44	6.25
A25	0.51	7.25
A26	0.22	3.21
A27	0.24	3.62
A28	0.38	5.07
B9	0.71	9.70
B10	0.07	1.04
B11	0.52	7.32
B12	0.51	6.57
B13	0.82	11.86
B14	0.57	7.95
B15	1.18	16.47
B16	2.70	26.08
B17	0.59	8.25
B18	0.49	7.24
B19	2.62	21.09
B20	2.20	16.32

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/11/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

INLET DRAINAGE AREA MAP

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
88 OF 203

SDP24-00001

Kimley»Horn

INLET PEAK FACTOR CALCULATIONS - RATIONAL METHOD

Formulas: **Q=CiA**
Q=Peak Factor Runoff
C=Weighted Runoff Coefficient
i=Rainfall Intensity
A=Drainage Area (acres)

Hydrologic Runoff Coefficients

	2yr	10yr	25yr	50yr	100yr
Impervious C (Concrete)	0.75	0.83	0.88	0.92	0.97
ous C (Undeveloped 2-7%)	0.33	0.42	0.46	0.49	0.53

IDF Coefficients

	2yr	10yr	25yr	50yr	100yr
a	46.99	60.75	64.56	73.59	76.90
b	9.575	8.361	7.382	7.329	6.726
c	0.7517	0.7185	0.6814	0.6732	0.6554

					RUNOFF COEFFICIENT (C)						RAINFALL INTENSITY (I)					PEAK RUNOFF (Q)				
AREA NAME	AREA (AC.)	Pervious Cover (AC.)	Impervious Cover (AC.)	Impervious Cover %	C 2-YEAR	C 10-YEAR	C 25-YEAR	C 50-YEAR	C 100-YEAR	Tc (min)	I 2-YEAR	I 10-YEAR	I 25-YEAR	I 50-YEAR	I 100-YEAR	Q 2-YEAR	Q 10-YEAR	Q 25-YEAR	Q 50-YEAR	Q 100-YEAR
A1	0.82	0.45	0.37	45%	0.52	0.60	0.65	0.68	0.73	5	6.27	9.43	11.62	13.56	15.32	2.66	4.66	6.16	7.58	9.11
A2	0.54	0.10	0.44	81%	0.67	0.75	0.80	0.84	0.89	5	6.27	9.43	11.62	13.56	15.32	2.27	3.84	5.03	6.16	7.35
A3	0.43	0.11	0.33	75%	0.65	0.73	0.78	0.81	0.86	5	6.27	9.43	11.62	13.56	15.32	1.75	2.97	3.89	4.76	5.69
A4	0.52	0.11	0.41	79%	0.66	0.74	0.79	0.83	0.88	5	6.27	9.43	11.62	13.56	15.32	2.14	3.63	4.76	5.82	6.95
A5	0.45	0.11	0.34	76%	0.65	0.73	0.78	0.82	0.86	5	6.27	9.43	11.62	13.56	15.32	1.82	3.09	4.06	4.96	5.93
A9	0.12	0.02	0.09	80%	0.67	0.75	0.80	0.84	0.88	5	6.27	9.43	11.62	13.56	15.32	0.48	0.82	1.07	1.31	1.57
A10	0.39	0.00	0.39	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	1.83	3.05	3.98	4.86	5.79
A11	0.44	0.02	0.42	96%	0.73	0.81	0.86	0.90	0.95	5	6.27	9.43	11.62	13.56	15.32	2.03	3.40	4.44	5.42	6.46
A12	0.98	0.04	0.94	96%	0.73	0.81	0.86	0.90	0.95	5	6.27	9.43	11.62	13.56	15.32	4.50	7.51	9.81	11.98	14.27
A13	0.91	0.00	0.91	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	4.26	7.09	9.27	11.31	13.46
A15	0.83	0.02	0.81	98%	0.74	0.82	0.87	0.91	0.96	5	6.27	9.43	11.62	13.56	15.32	3.84	6.40	8.36	10.21	12.15
B1	1.38	0.30	1.08	78%	0.66	0.74	0.79	0.83	0.87	5	6.27	9.43	11.62	13.56	15.32	5.68	9.61	12.61	15.42	18.42
B2	0.68	0.14	0.54	79%	0.66	0.74	0.79	0.83	0.88	5	6.27	9.43	11.62	13.56	15.32	2.82	4.77	6.26	7.65	9.14
B3	1.60	0.96	0.64	40%	0.50	0.58	0.63	0.66	0.71	5	6.27	9.43	11.62	13.56	15.32	5.00	8.82	11.68	14.37	17.31
B4	0.74	0.00	0.74	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	3.50	5.83	7.62	9.30	11.07
B5	1.73	0.96	0.76	44%	0.52	0.60	0.65	0.68	0.72	7	5.69	8.53	10.50	12.26	13.82	5.07	8.86	11.70	14.39	17.28
B6	0.53	0.10	0.43	81%	0.67	0.75	0.80	0.84	0.89	5	6.27	9.43	11.62	13.56	15.32	2.22	3.75	4.92	6.01	7.18
B7	0.50	0.10	0.40	80%	0.67	0.75	0.80	0.83	0.88	5	6.27	9.43	11.62	13.56	15.32	2.08	3.51	4.61	5.63	6.73
B8	0.51	0.10	0.41	80%	0.67	0.75	0.80	0.83	0.88	5	6.27	9.43	11.62	13.56	15.32	2.12	3.58	4.70	5.75	6.86
B21	2.00	1.26	0.74	37%	0.49	0.57	0.62	0.65	0.69	10	5.02	7.51	9.22	10.79	12.14	4.88	8.59	11.36	14.01	16.83
C1	0.88	0.22	0.67	76%	0.65	0.73	0.78	0.82	0.86	5	6.27	9.43	11.62	13.56	15.32	3.59	6.09	7.99	9.78	11.68
C2	1.49	1.49	0.00	0%	0.33	0.42	0.46	0.49	0.53	5	6.27	9.43	11.62	13.56	15.32	3.08	5.89	7.95	9.88	12.07
R1	0.29	0.00	0.29	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	1.38	2.29	3.00	3.66	4.36
R2	0.29	0.00	0.29	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	1.37	2.28	2.97	3.63	4.32
R3	0.91	0.00	0.91	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	4.27	7.11	9.29	11.34	13.50
R4	0.91	0.00	0.91	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	4.27	7.11	9.29	11.33	13.49
R5	1.01	0.00	1.01	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	4.74	7.89	10.31	12.58	14.98
R6	1.01	0.00	1.01	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	4.73	7.88	10.29	12.56	14.95
R7	0.95	0.00	0.95	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	4.45	7.41	9.68	11.81	14.06
R8	0.95	0.00	0.95	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	4.45	7.40	9.67	11.80	14.05
R9	0.27	0.00	0.27	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	1.28	2.14	2.79	3.41	4.06
R10	0.04	0.00	0.04	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	0.17	0.29	0.38	0.46	0.55
R11	0.12	0.00	0.12	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	0.54	0.90	1.18	1.44	1.71
R12	0.01	0.00	0.01	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	0.05	0.09	0.11	0.14	0.17
A6	0.48	0.11	0.37	78%	0.66	0.74	0.79	0.82	0.87	5	6.27	9.43	11.62	13.56	15.32	1.96	3.31	4.35	5.32	6.35
A7	0.46	0.11	0.35	76%	0.65	0.73	0.78	0.82	0.87	5	6.27	9.43	11.62	13.56	15.32	1.88	3.19	4.19	5.12	6.12
A8	0.34	0.08	0.26	75%	0.65	0.73	0.78	0.81	0.86	5	6.27	9.43	11.62	13.56	15.32	1.40	2.37	3.11	3.81	4.55
A14	0.76	0.01	0.75	98%	0.74	0.82	0.87	0.91	0.96	5	6.27	9.43	11.62	13.56	15.32	3.55	5.91	7.72	9.43	11.23
A16	1.00	0.15	0.85	85%	0.69	0.77	0.82	0.85	0.90	5	6.27	9.43	11.62	13.56	15.32	4.30	7.23	9.47	11.57	13.81
A17	1.01	0.07	0.94	93%	0.72	0.80	0.85	0.89	0.94	5	6.27	9.43	11.62	13.56	15.32	4.57	7.65	10.01	12.22	14.56
A18	0.68	0.03	0.66	96%	0.73	0.81	0.86	0.90	0.95	5	6.27	9.43	11.62	13.56	15.32	3.14	5.24	6.85	8.36	9.96
A19	1.04	0.08	0.96	92%	0.72	0.80	0.85	0.89	0.94	5	6.27	9.43	11.62	13.56	15.32	4.69	7.85	10.28	12.55	14.96
A20	0.66	0.16	0.50	75%	0.65	0.73	0.78	0.81	0.86	5	6.27	9.43	11.62	13.56	15.32	2.67	4.54	5.95	7.28	8.70
A21	0.91	0.07	0.84	93%	0.72	0.80	0.85	0.89	0.94	5	6.27	9.43	11.62	13.56	15.32	4.10	6.86	8.97	10.95	13.06
A22	0.40	0.18	0.22	55%	0.56	0.65	0.69	0.73	0.77	5	6.27	9.43	11.62	13.56	15.32	1.41	2.43	3.21	3.94	4.73
A23	0.34	0.07	0.27	80%	0.67	0.75	0.80	0.83	0.88	5	6.27	9.43	11.62	13.56	15.32	1.40	2.37	3.11	3.80	4.54
A24	0.44	0.03	0.40	93%	0.72	0.80	0.85	0.89	0.94	5	6.27	9.43	11.62	13.56	15.32	1.96	3.28	4.30	5.25	6.25
A25	0.51	0.04	0.47	92%	0.72	0.80	0.85	0.88	0.93	5	6.27	9.43	11.62	13.56	15.32	2.27	3.81	4.98	6.08	7.25
A26	0.22	0.01	0.21	96%	0.74	0.82	0.87	0.90	0.95	5	6.27	9.43	11.62	13.56	15.32	1.01	1.69	2.21	2.69	3.21
A27	0.24	0.00	0.24	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	1.14	1.90	2.49	3.04	3.62
A28	0.38	0.09	0.29	77%	0.65	0.74	0.78	0.82	0.87	5	6.27	9.43	11.62	13.56	15.32	1.56	2.65	3.47	4.25	5.07
A29	0.63	0.27	0.37	58%	0.57	0.66	0.70	0.74	0.79	5	6.27	9.43	11.62	13.56	15.32	2.28	3.94	5.19	6.37	7.64
B9	0.71	0.13	0.58	81%	0.67	0.75	0.80	0.84	0.89	5	6.27	9.43	11.62	13.56	15.32	3.01	5.07	6.65	8.13	9.70
B10	0.07	0.00	0.07	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	0.33	0.55	0.72	0.87	1.04
B11	0.52	0.07	0.46	88%	0.70	0.78	0.83	0.87	0.92	5	6.27	9.43	11.62	13.56	15.32	2.28	3.84	5.02	6.13	7.32
B12	0.51	0.14	0.36	72%	0.63	0.72	0.76	0.80	0.85	5	6.27	9.43	11.62	13.56	15.32	2.01	3.41	4.49	5.49	6.57
B13	0.82	0.06	0.77	93%	0.72	0.80	0.85	0.89	0.94	5	6.27	9.43	11.62	13.56	15.32	3.73	6.23	8.15	9.95	11.86
B14	0.57	0.07	0.50	88%	0.70	0.78	0.83	0.87	0.92	5	6.27	9.43	11.62	13.56	15.32	2.48	4.17	5.46	6.67	7.95
B15	1.18	0.15	1.03	88%	0.70	0.78	0.83	0.87	0.92	5	6.27	9.43	11.62	13.56	15.32	5.14	8.63	11.30	13.81	16.47
B16	2.70	1.87	0.83	31%	0.46	0.55	0.59	0.62	0.66	6	5.97	8.96	11.02	12.87	14.52	7.40	13.21	17.54	21.63	26.08
B17	0.59	0.09	0.51	86%	0.69	0.77	0.82	0.86	0.91	5	6.27	9.43	11.62	13.56	15.32	2.57	4.32	5.66	6.91	8.25
B18	0.49	0.00	0.49	100%	0.75	0.83	0.88	0.92	0.97	5	6.27	9.43	11.62	13.56	15.32	2.29	3.82	4.99	6.08	7.24
B19	2.62	1.37	1.25	48%	0.53	0.62	0.66	0.70	0.74	13	4.50	6.71	8.25	9.66	10.86	6.26	10.84	14.30	17.62	21.09
B20	2.20	1.45	0.75	34%	0.47	0.56	0.60	0.64	0.68	13	4.51	6.73	8.28	9.69	10.89	4.71	8.31	11.00	13.59	16.32

Site Curb Inlet Calculation Table

Weir Equation: $Q=C_WLh^{1.5}(1-C_f)$ | Weir Coef C_W: 3.0 | h (ft): 0.50 | Clogging Factor C_f: 10%

Drainage Area	Q_{25} (cfs)	Q_{100} (cfs)	h (ft)	$L_{Req.}$ (ft)	Inlet Selected	Weir Length (ft.)	Inlet Capacity	Q25 Pass? (Y/N)
A1	6.16 cfs	9.11 cfs	0.50'	6.5'	10' CI	10'	9.55 cfs	YES
A9	1.07 cfs	1.57 cfs	0.50'	1.1'	5' CI	5'	4.77 cfs	YES
A10	3.98 cfs	5.79 cfs	0.50'	4.2'	5' CI	5'	4.77 cfs	YES
A11	4.44 cfs	6.46 cfs	0.50'	4.7'	5' CI	5'	4.77 cfs	YES
A12	9.81 cfs	14.27 cfs	0.50'	10.3'	15' CI	15'	14.32 cfs	YES
A13	9.27 cfs	13.46 cfs	0.50'	9.7'	10' CI	10'	9.55 cfs	YES
B1	12.61 cfs	18.42 cfs	0.50'	13.2'	15' CI	15'	14.32 cfs	YES
B3	11.68 cfs	17.31 cfs	0.50'	12.2'	15' CI	15'	14.32 cfs	YES
B4	7.62 cfs	11.07 cfs	0.50'	8.0'	10' CI	10'	9.55 cfs	YES
B5	11.70 cfs	17.28 cfs	0.50'	12.3'	15' CI	15'	14.32 cfs	YES
B21	11.36 cfs	16.83 cfs	0.50'	11.9'	15' CI	15'	14.32 cfs	YES
C1	7.99 cfs	11.68 cfs	0.50'	8.4'	10' CI	10'	9.55 cfs	YES
A14	7.72 cfs	11.23 cfs	0.50'	8.1'	10' CI	10'	9.55 cfs	YES
A20	5.95 cfs	8.70 cfs	0.50'	6.2'	10' CI	10'	9.55 cfs	YES
A21	8.97 cfs	13.06 cfs	0.50'	9.4'	10' CI	10'	9.55 cfs	YES
A22	3.21 cfs	4.73 cfs	0.50'	3.4'	5' CI	5'	4.77 cfs	YES
A26	2.21 cfs	3.21 cfs	0.50'	2.3'	5' CI	5'	4.77 cfs	YES
A27	2.49 cfs	3.62 cfs	0.50'	2.6'	5' CI	5'	4.77 cfs	YES
A28	3.47 cfs	5.07 cfs	0.50'	3.6'	5' CI	5'	4.77 cfs	YES
A29	5.19 cfs	7.64 cfs	0.50'	5.4'	10' CI	10'	9.55 cfs	YES
B12	4.49 cfs	6.57 cfs	0.50'	4.7'	5' CI	5'	4.77 cfs	YES
B13	8.15 cfs	11.86 cfs	0.50'	8.5'	10' CI	10'	9.55 cfs	YES
B14	5.46 cfs	7.95 cfs	0.50'	5.7'	10' CI	10'	9.55 cfs	YES
B15	11.30 cfs	16.47 cfs	0.50'	11.8'	15' CI	15'	14.32 cfs	YES
B16	17.54 cfs	26.08 cfs	0.50'	18.4'	20' CI	20'	19.09 cfs	YES
B17	5.66 cfs	8.25 cfs	0.50'	5.9'	10' CI	10'	9.55 cfs	YES
B19	14.30 cfs	21.09 cfs	0.50'	15.0'	15' CI	15'	14.32 cfs	YES
B20	11.00 cfs	16.32 cfs	0.50'	11.5'	15' CI	15'	14.32 cfs	YES

Area Inlet Calculation Table

Weir Equation: $Q=C_WLh^{1.5}(1-C_f)$ | Weir Coef C_W: 3.0 | h (ft): Varies | Clogging Factor C_f: 50%

Orifice Equation: $Q=C_Oh_TL(2gd_0)^{0.5}(1-C_f)$ | Orifice Coef C_O: 0.67 | Inlet Throat h_T (ft): 0.50

Gravitational Constant g (ft/s^2): 32.174 | Effective Head d_0: Varies [Orifice Head only applicable where h/h_T>1.4]

Note: Both Weir and Orifice Flow considered once provided h creates submerged condition.

Drainage Area	Q_{25} (cfs)	Q_{100} (cfs)	h (ft)	$L_{Req.}$ (ft) [Weir]	$L_{Req.}$ (ft) [Orifice]	$L_{Req.}$ (ft)	Inlet Selected	Weir Length (ft.)	Inlet Capacity (cfs)	Q25 Pass? (Y/N)
A2	5.03 cfs	7.35 cfs	1.50'	1.8'	3.4'	3.4'	2' X 2'	8'	12.02 cfs	YES
A3	3.89 cfs	5.69 cfs	1.50'	1.4'	2.6'	2.6'	2' X 2'	8'	12.02 cfs	YES
A4	4.76 cfs	6.95 cfs	1.50'	1.7'	3.2'	3.2'	2' X 2'	8'	12.02 cfs	YES
A5	4.06 cfs	5.93 cfs	1.50'	1.5'	2.7'	2.7'	2' X 2'	8'	12.02 cfs	YES
B2	6.26 cfs	9.14 cfs	1.50'	2.3'	4.2'	4.2'	2' X 2'	8'	12.02 cfs	YES
B6	4.92 cfs	7.18 cfs	1.50'	1.8'	3.3'	3.3'	2' X 2'	8'	12.02 cfs	YES
B7	4.61 cfs	6.73 cfs	1.50'	1.7'	3.1'	3.1'	2' X 2'	8'	12.02 cfs	YES
B8	4.70 cfs	6.86 cfs	1.50'	1.7'	3.1'	3.1'	2' X 2'	8'	12.02 cfs	YES
A6	4.35 cfs	6.35 cfs	1.50'	1.6'	2.9'	2.9'	2' X 2'	8'	12.02 cfs	YES
A7	4.19 cfs	6.12 cfs	1.50'	1.5'	2.8'	2.8'	2' X 2'	8'	12.02 cfs	YES
A8	3.11 cfs	4.55 cfs	1.50'	1.1'	2.1'	2.1'	2' X 2'	8'	12.02 cfs	YES
A23	3.11 cfs	4.54 cfs	1.50'	1.1'	2.1'	2.1'	2' X 2'	8'	12.02 cfs	YES
B9	6.65 cfs	9.70 cfs	1.50'	2.4'	4.4'	4.4'	2' X 2'	8'	12.02 cfs	YES
B11	5.02 cfs	7.32 cfs	1.50'	1.8'	3.3'	3.3'	2' X 2'	8'	12.02 cfs	YES
B18	4.99 cfs	7.24 cfs	1.50'	1.8'	3.3'	3.3'	2' X 2'	8'	12.02 cfs	YES

Grate Inlet Calculation Table

Orifice Equation: $Q=C_OA(2gh)^{0.5}(1-C_f)$ | Orifice Coef C_O: 0.67 | Clogging Factor C_f: 50%

Gravitational Constant g (ft/s^2): 32.174 | h (ft): Varies - Parking Areas Typ. 0.5', Loading/Landscape >0.5'

Drainage Area	Q_{25} (cfs)	Q_{100} (cfs)	h (ft)	$A_{Req.}$ (S.F.) [Orifice]	Inlet Selected	Open Area (S.F.)	Inlet Capacity	Q25 Pass? (Y/N)
A15	8.36 cfs	12.15 cfs	0.50'	4.40	4' X 4'	5.69	10.82 cfs	YES
A16	9.47 cfs	13.81 cfs	0.50'	4.98	4' X 4'	5.69	10.82 cfs	YES
A17	10.01 cfs	14.56 cfs	0.50'	5.27	4' X 4'	5.69	10.82 cfs	YES
A18	6.85 cfs	9.96 cfs	0.50'	3.61	3' X 3'	4.52	8.59 cfs	YES
A19	10.28 cfs	14.96 cfs	0.50'	5.41	4' X 4'	5.69	10.82 cfs	YES
A24	4.30 cfs	6.25 cfs	0.50'	2.26	4' X 4'	5.69	10.82 cfs	YES
A25	4.98 cfs	7.25 cfs	0.50'	2.62	4' X 4'	5.69	10.82 cfs	YES
B10	0.72 cfs	1.04 cfs	0.50'	0.38	2' X 2'	2.17	4.13 cfs	YES

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

REVISIONS | No. | DATE | BY

Kimley»Horn

10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

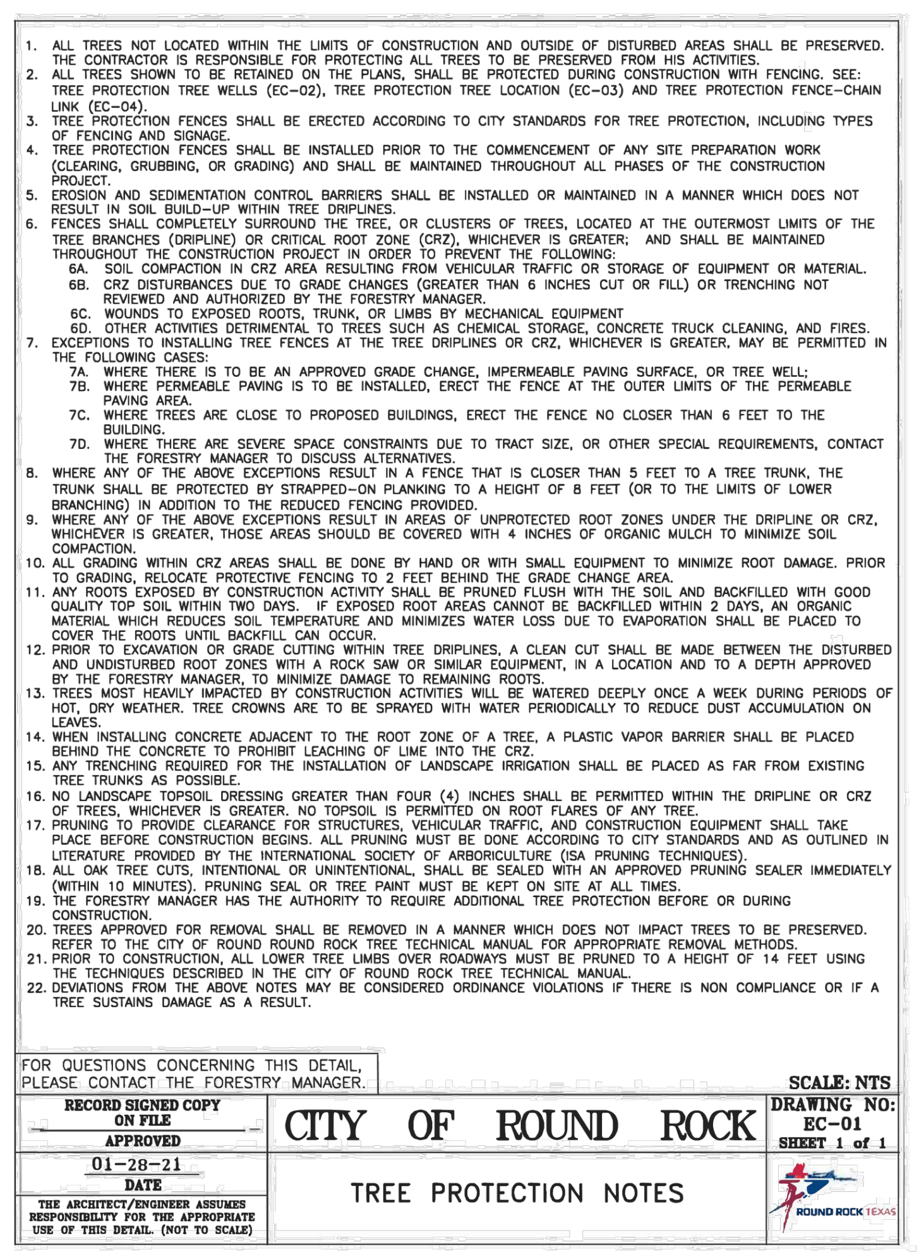
STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
6/11/2024

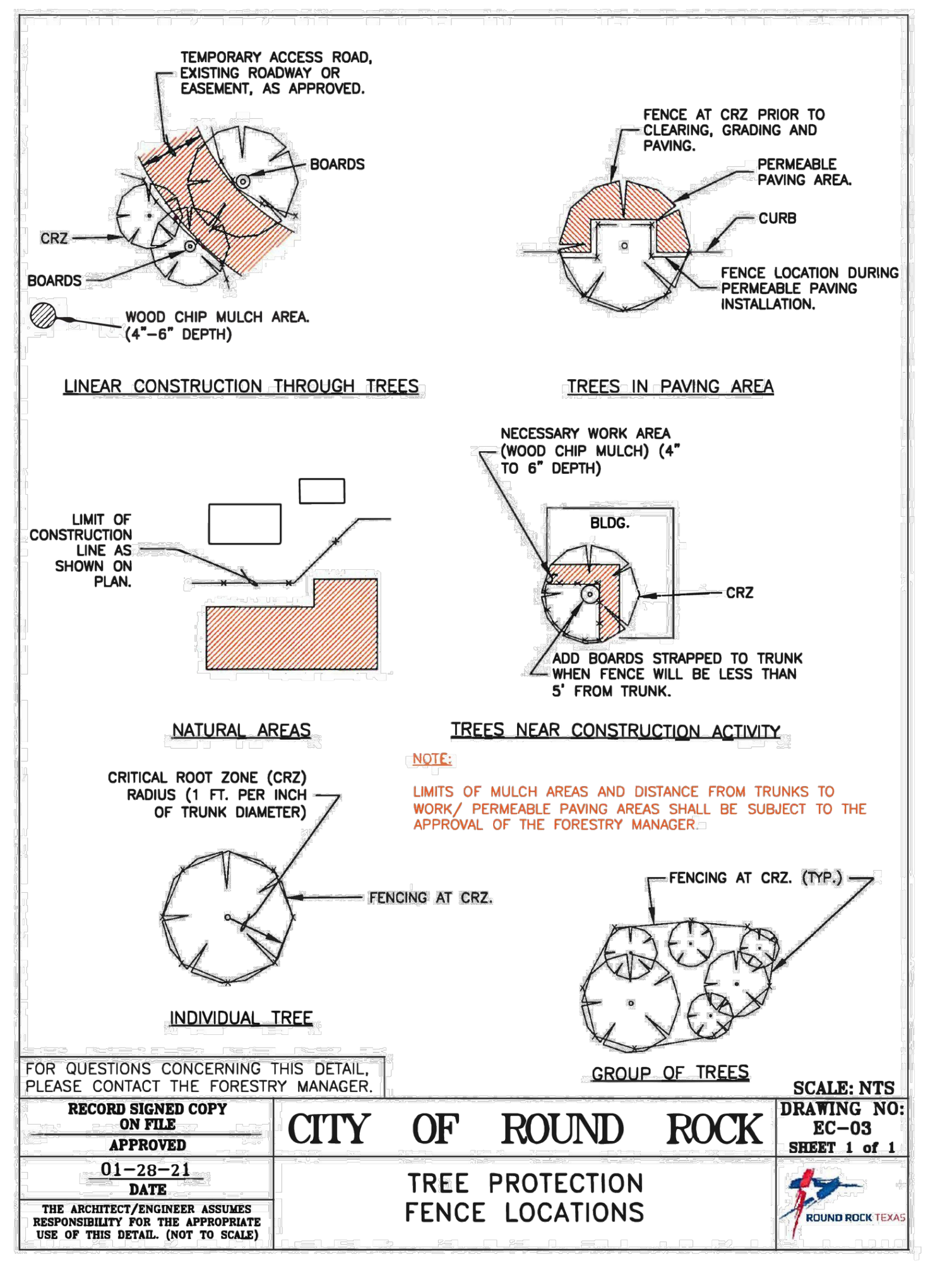
KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

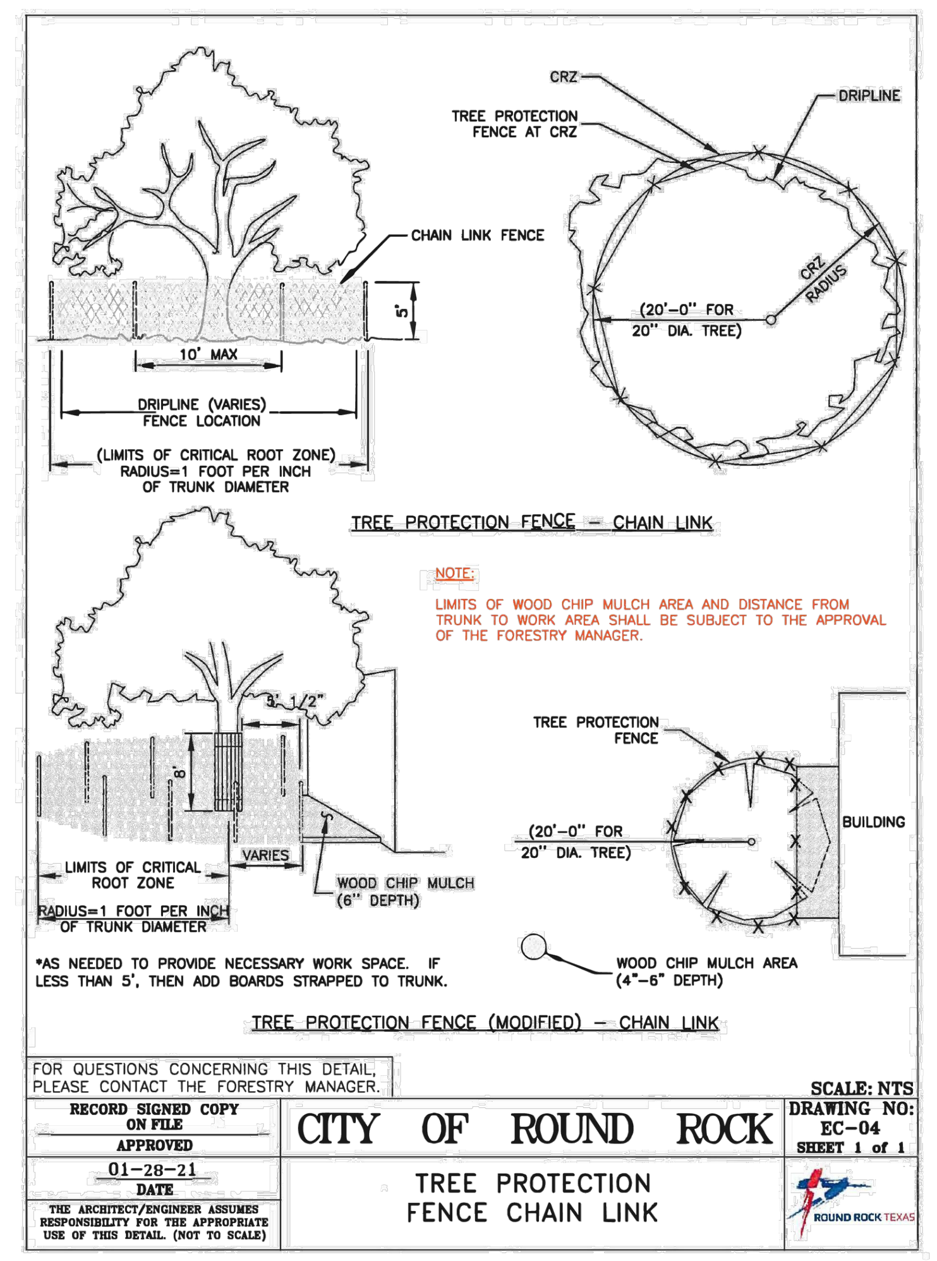
DRAINAGE CALCULATIONS

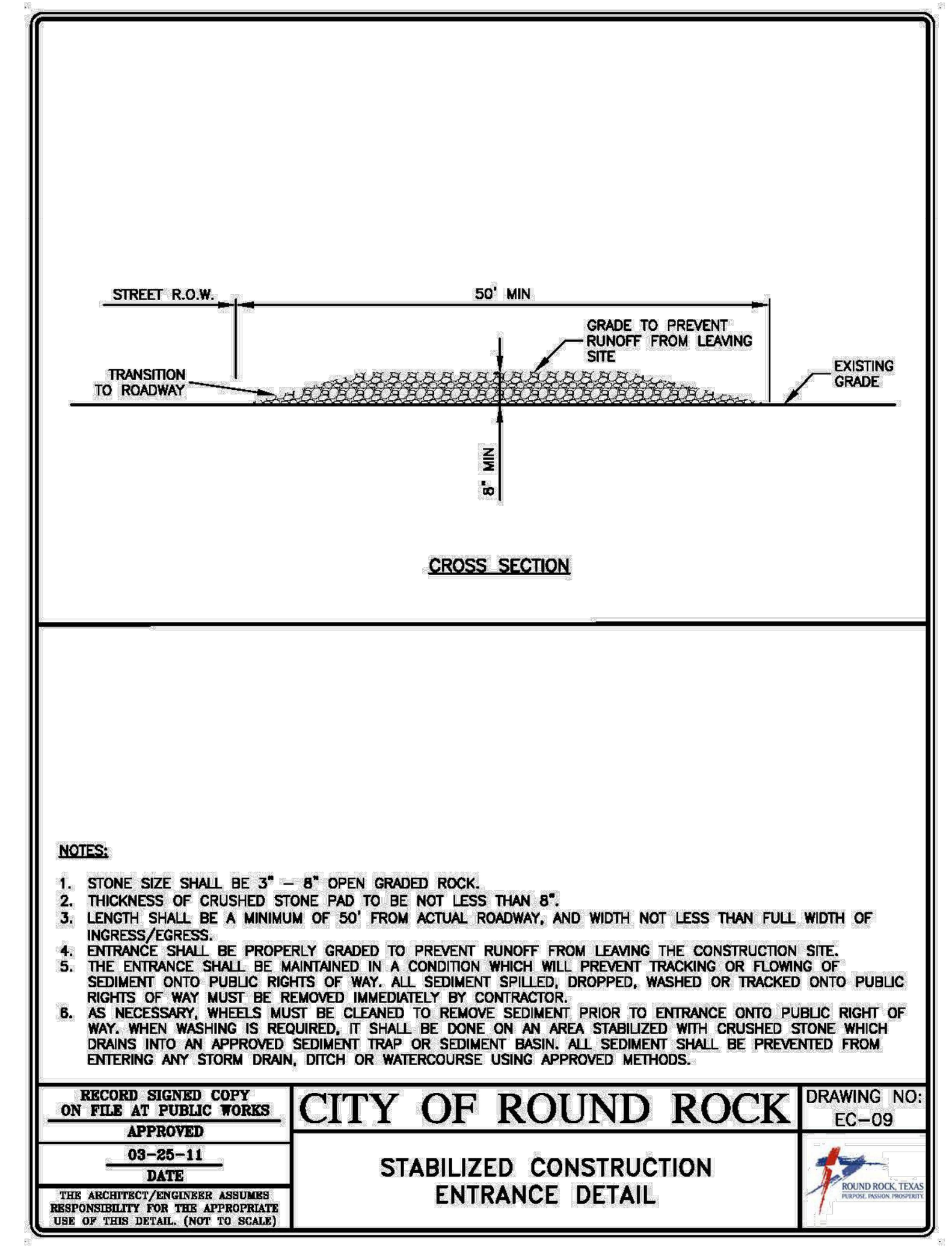
2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

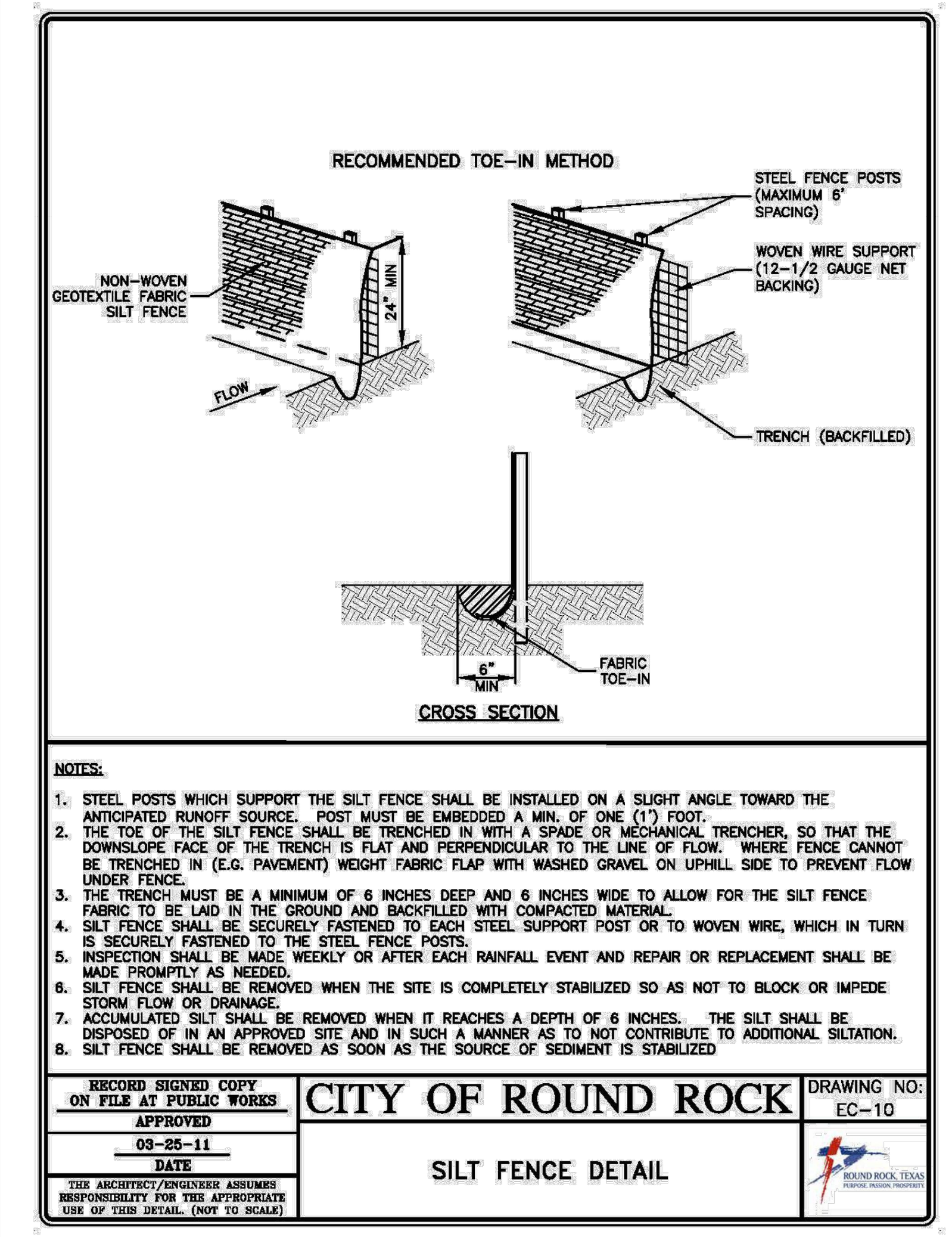
SDP24-00001

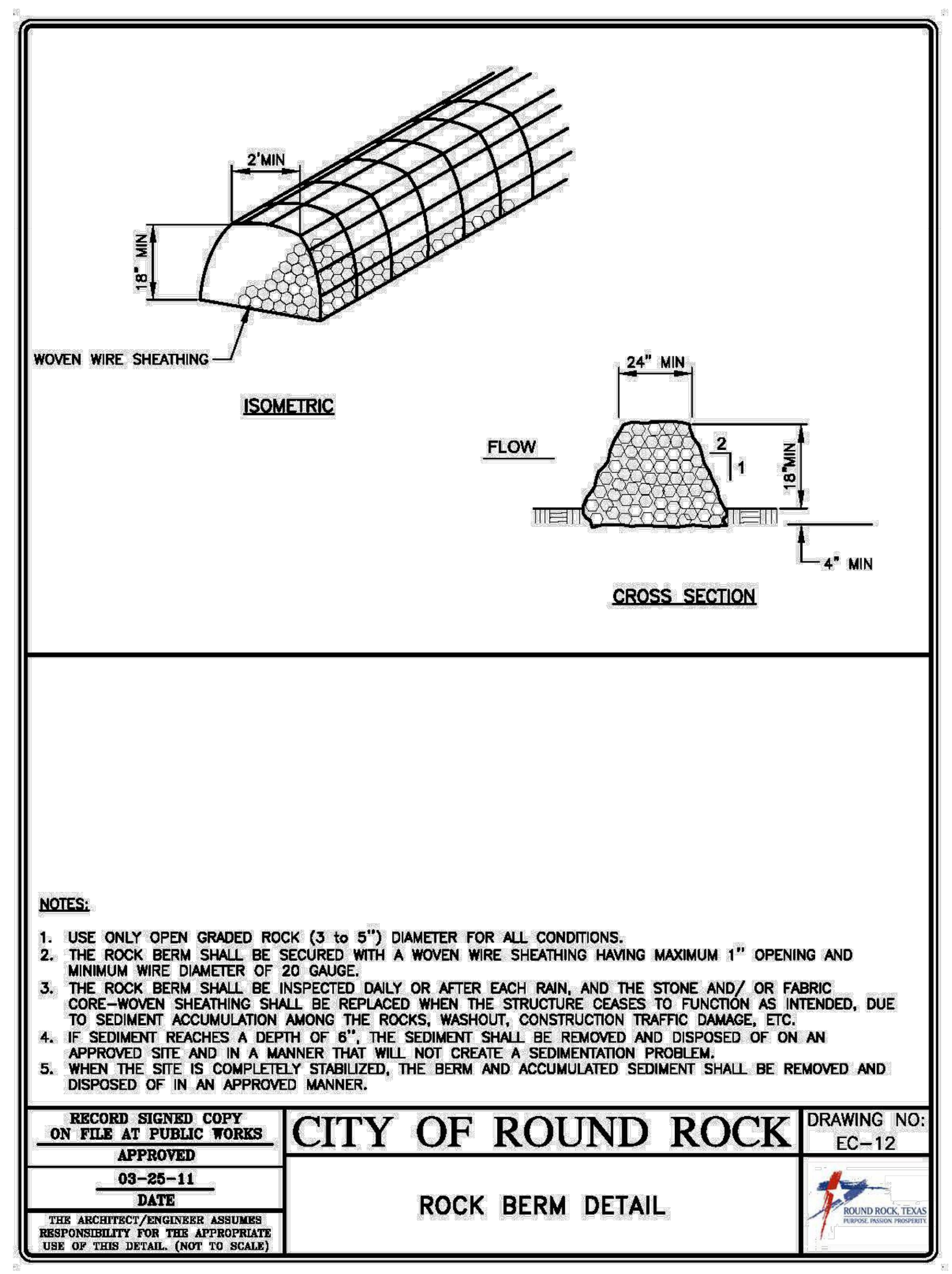


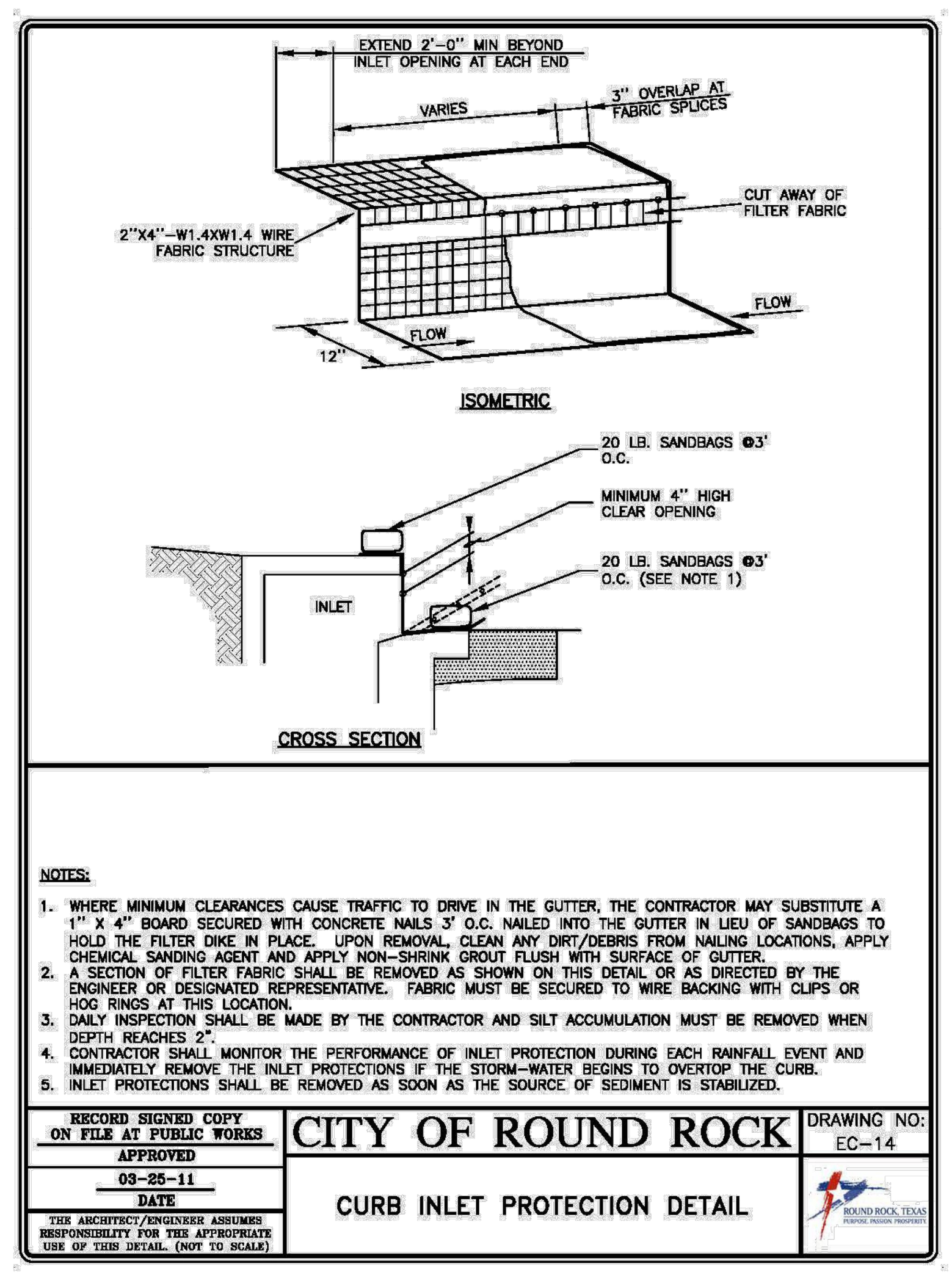


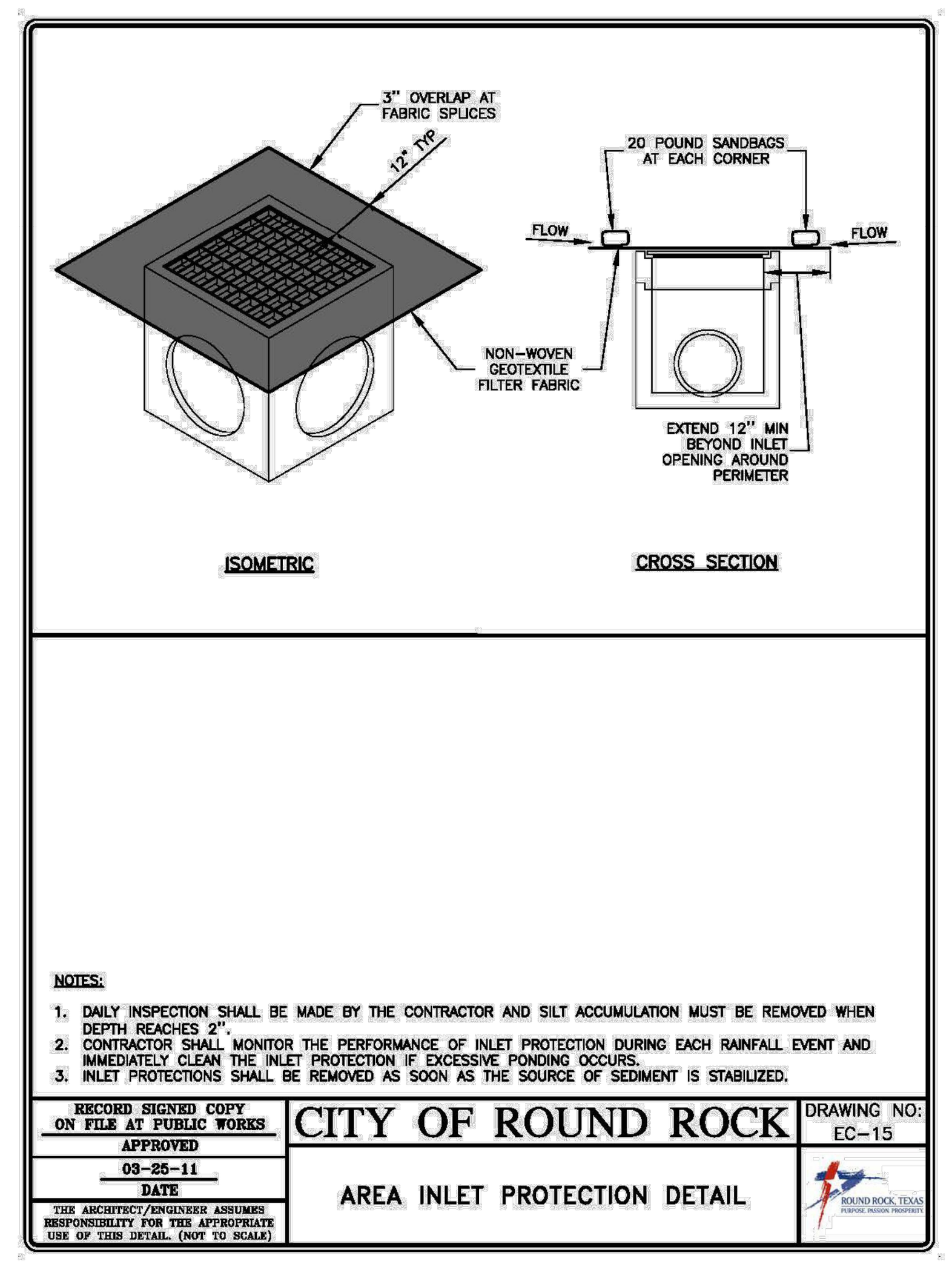


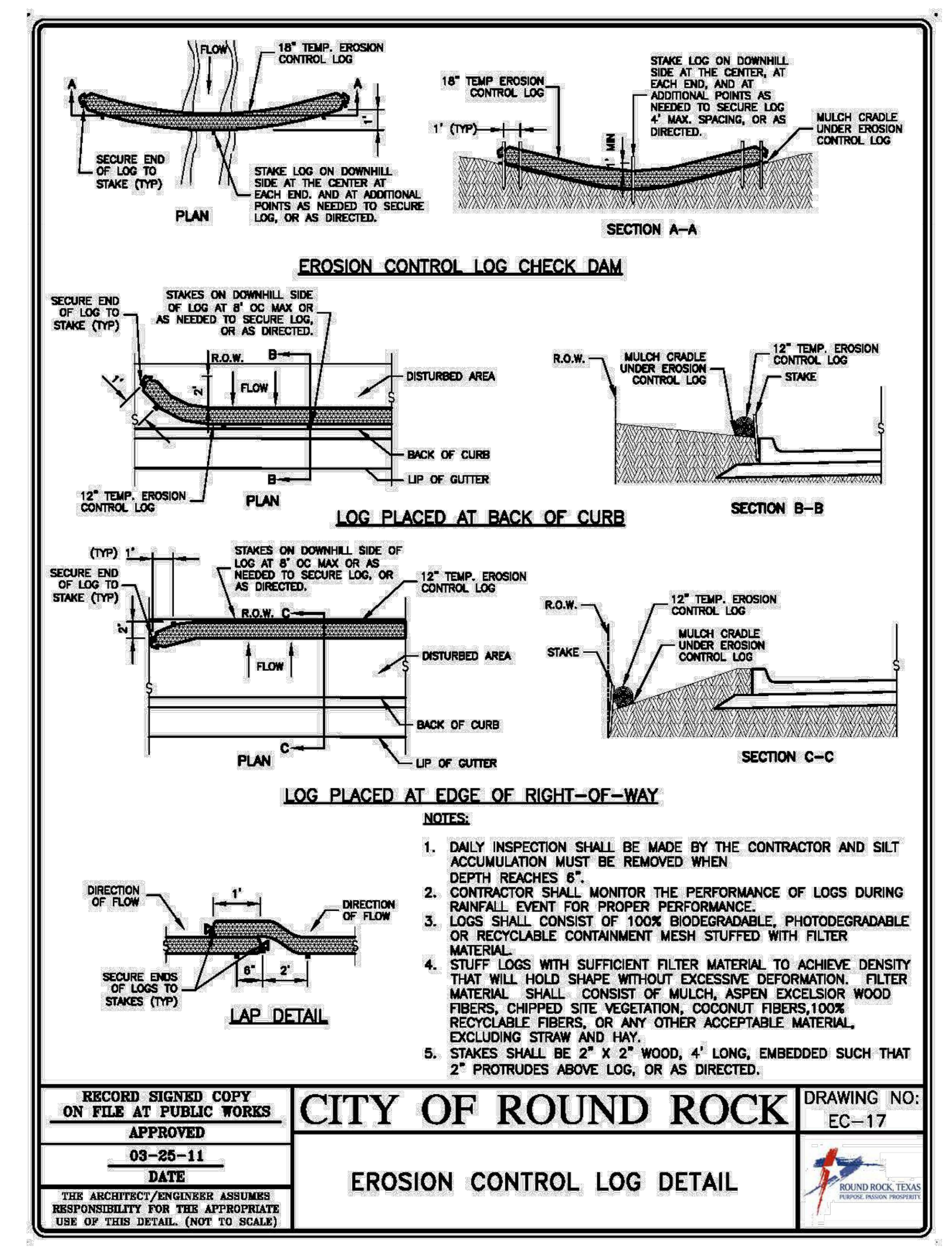












BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS — NICHOLAS C. BROWN — 107175 — LICENSED PROFESSIONAL ENGINEER
4/2/2024

KHA PROJECT 069284918
DATE JUNE 2024
SCALE: AS SHOWN
DESIGNED BY: MM
DRAWN BY: MM
CHECKED BY: NCB

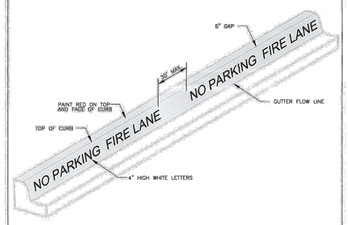
EROSION CONTROL DETAILS

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
90 OF 204

SDP24-00001

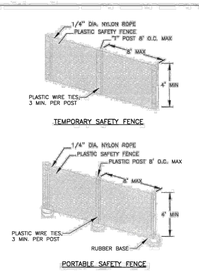


NOTES:

FIRE LANE STRIPING TO BE 6" WIDE RED PAINT WITH "NO PARKING FIRE LANE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 20' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

SCALE: NTS

RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: ST-16
APPROVED 01-28-21	FIRE LANE MARKING DETAIL	SHEET 1 of 1
DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THIS APPROPRIATE USE OF THIS DETAIL.		ROUND ROCK TEXAS



TEMPORARY SAFETY FENCE

PORTABLE SAFETY FENCE

NOTES:

1. SAFETY FENCE SHALL BE USED TO PROTECT ALL EXCAVATIONS IN THE RIGHT-OF-WAY.
2. SAFETY FENCES SHALL BE USED TO SEPARATE CONSTRUCTION ACTIVITIES FROM PEDESTRIANS.
3. ALL SAFETY FENCING SHALL BE PLASTIC, 48" MINIMUM HEIGHT AND ORANGE IN COLOR.
4. SAFETY FENCE USED WITHIN THE ROADWAY SHALL BE REFLECTORIZED WITH A MINIMUM OF TWO (2) STRIPS OF RETROREFLECTIVE MATERIAL, A MINIMUM OF 1" WIDE, THE LENGTH OF THE FENCE OR DELINEATED BY CHANNELIZING DEVICES.
5. SAFETY FENCE USED TO SEPARATE SIDEWALKS FROM CONSTRUCTION ACTIVITIES SHALL HAVE MINIMUM ENCROACHMENT TO THE SIDEWALK.
6. AS A MINIMUM, SAFETY FENCING IS REQUIRED IN AREAS ADJACENT TO EXCAVATIONS GREATER THAN OR EQUAL TO 6'
7. SAFETY FENCING SHALL BE PAID FOR UNDER ITEM 502, "BARRICADES, SIGNS AND TRAFFIC HANDLING".
8. PORTABLE SAFETY FENCE MOUNTS SHALL BE APPROVED BY THE TRANSPORTATION DEPARTMENT PRIOR TO CONSTRUCTION.

SCALE: NTS

RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: ST-25
APPROVED 01-28-21	SAFETY FENCE	SHEET 1 of 1
DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THIS APPROPRIATE USE OF THIS DETAIL.		ROUND ROCK TEXAS

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
NICHOLAS C. BROWN
107175
LICENSED
PROFESSIONAL ENGINEER
4/2/2024

KHA PROJECT	060284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

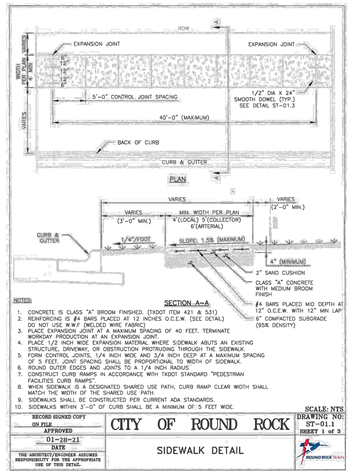
SITE PLAN DETAILS

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
91 OF 204

SDP24-00001

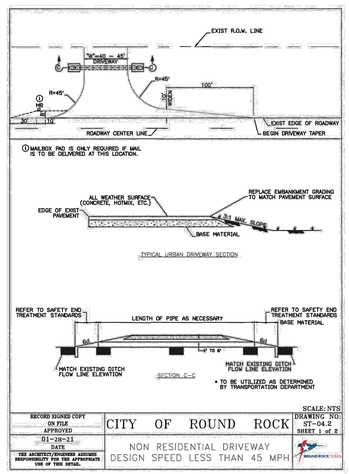


NOTES:

1. CONCRETE IS CLASS "A" BROOM FINISHED. (TXDOT ITEM 421 & 531)
2. REINFORCING IS #4 BARS PLACED AT 12 INCHES O.C.E.W. (SEE DETAIL) DO NOT USE W.W.F. (WELDED WIRE FABRIC)
3. PLACE EXPANSION JOINT AT A MAXIMUM SPACING OF 40 FEET. TERMINATE WORKDAY PRODUCTION AT AN EXPANSION JOINT.
4. PLACE 1/2" INCH WIDE EXPANSION MATERIAL WHERE SIDEWALK ABUTS AN EXISTING STRUCTURE, DRIVEWAY, OR OBSTRUCTION PROTRUDING THROUGH THE SIDEWALK.
5. FORM CONTROL JOINTS, 1/4 INCH WIDE AND 3/4 INCH DEEP AT A MAXIMUM SPACING OF 5 FEET. JOINT SPACING SHALL BE PROPORTIONAL TO WIDTH OF SIDEWALK.
6. ROUND OUTER EDGES AND JOINTS TO A 1/4 INCH RADIUS.
7. CONSTRUCT CURB RAMPS IN ACCORDANCE WITH TXDOT STANDARD "PEDESTRIAN FACILITIES CURB RAMPS".
8. WHEN SIDEWALK IS A DESIGNATED SHARED USE PATH, CURB RAMP CLEAR WIDTH SHALL MATCH THE WIDTH OF THE SHARED USE PATH.
9. SIDEWALKS SHALL BE CONSTRUCTED PER CURRENT ADA STANDARDS.
10. SIDEWALKS WITHIN 3'-0" OF CURB SHALL BE A MINIMUM OF 5 FEET WIDE.

SCALE: NTS

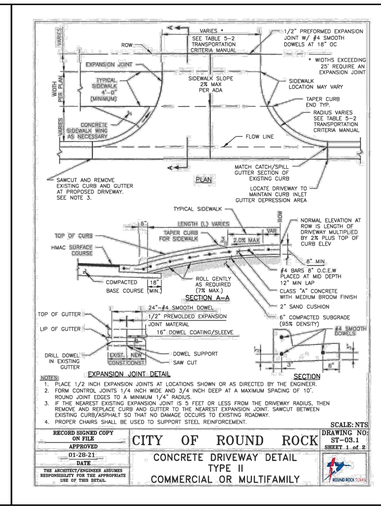
RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: ST-01.1
APPROVED 01-28-21 DATE	SIDEWALK DETAIL	SHEET 1 of 3
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.		ROUND ROCK TEXAS



* TO BE UTILIZED AS DETERMINED BY TRANSPORTATION DEPARTMENT

SCALE: NTS

RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: ST-04.2
APPROVED 01-28-21 DATE	NON RESIDENTIAL DRIVEWAY DESIGN SPEED LESS THAN 45 MPH	SHEET 1 of 2
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.		ROUND ROCK TEXAS



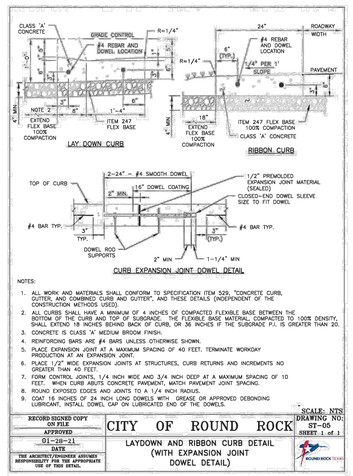
NOTES:

1. PLACE 1/2 INCH EXPANSION JOINTS AT LOCATIONS SHOWN OR AS DIRECTED BY THE ENGINEER.
2. FORM CONTROL JOINTS 1/4 INCH WIDE AND 3/4 INCH DEEP AT A MAXIMUM SPACING OF 10'. ROUND JOINT EDGES TO A MINIMUM 1/4" RADIUS.
3. IF THE NEAREST EXISTING EXPANSION JOINT IS 5 FEET OR LESS FROM THE DRIVEWAY RADIUS, THEN REMOVE AND REPLACE CURB AND GUTTER TO THE NEAREST EXPANSION JOINT. SAWCUT BETWEEN EXISTING CURB/ASPHALT SO THAT NO DAMAGE OCCURS TO EXISTING ROADWAY.
4. PROPER CHAIRS SHALL BE USED TO SUPPORT STEEL REINFORCEMENT.

EXPANSION JOINT DETAIL

SCALE: NTS

RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: ST-03.1
APPROVED 01-28-21 DATE	CONCRETE DRIVEWAY DETAIL TYPE II COMMERCIAL OR MULTIFAMILY	SHEET 1 of 2
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.		ROUND ROCK TEXAS

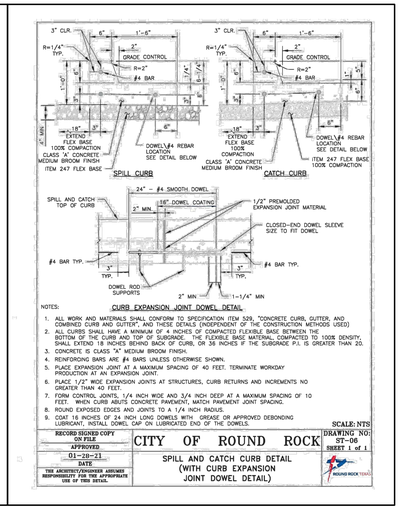


NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO SPECIFICATION ITEM 529, "CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER", AND THESE DETAILS (INDEPENDENT OF THE CONSTRUCTION METHODS USED)
2. ALL CURBS SHALL HAVE A MINIMUM OF 4 INCHES OF COMPACTED FLEXIBLE BASE BETWEEN THE BOTTOM OF THE CURB AND TOP OF SUBGRADE. THE FLEXIBLE BASE MATERIAL, COMPACTED TO 100% DENSITY, SHALL EXTEND 18 INCHES BEHIND BACK OF CURB, OR 36 INCHES IF THE SUBGRADE P.I. IS GREATER THAN 20.
3. CONCRETE IS CLASS 'A' MEDIUM BROOM FINISH.
4. REINFORCING BARS ARE #4 BARS UNLESS OTHERWISE SHOWN.
5. PLACE EXPANSION JOINT AT A MAXIMUM SPACING OF 40 FEET. TERMINATE WORKDAY PRODUCTION AT AN EXPANSION JOINT.
6. PLACE 1/2" WIDE EXPANSION JOINTS AT STRUCTURES, CURB RETURNS AND INCREMENTS NO GREATER THAN 40 FEET.
7. FORM CONTROL JOINTS, 1/4 INCH WIDE AND 3/4 INCH DEEP AT A MAXIMUM SPACING OF 10 FEET. WHEN CURB ABUTS CONCRETE PAVEMENT, MATCH PAVEMENT JOINT SPACING.
8. ROUND EXPOSED EDGES AND JOINTS TO A 1/4 INCH RADIUS.
9. COAT 18 INCHES OF 24 INCH LONG DOWELS WITH GREASE OR APPROVED DEBONDING LUBRICANT, INSTALL DOWEL CAP ON LUBRICATED END OF THE DOWELS.

SCALE: NTS

RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: ST-05
APPROVED 01-28-21 DATE	LAYDOWN AND RIBBON CURB DETAIL (WITH EXPANSION JOINT DOWEL DETAIL)	SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.		ROUND ROCK TEXAS



NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO SPECIFICATION ITEM 529, "CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER", AND THESE DETAILS (INDEPENDENT OF THE CONSTRUCTION METHODS USED)
2. ALL CURBS SHALL HAVE A MINIMUM OF 4 INCHES OF COMPACTED FLEXIBLE BASE BETWEEN THE BOTTOM OF THE CURB AND TOP OF SUBGRADE. THE FLEXIBLE BASE MATERIAL, COMPACTED TO 100% DENSITY, SHALL EXTEND 18 INCHES BEHIND BACK OF CURB, OR 36 INCHES IF THE SUBGRADE P.I. IS GREATER THAN 20.
3. CONCRETE IS CLASS 'A' MEDIUM BROOM FINISH.
4. REINFORCING BARS ARE #4 BARS UNLESS OTHERWISE SHOWN.
5. PLACE EXPANSION JOINT AT A MAXIMUM SPACING OF 40 FEET. TERMINATE WORKDAY PRODUCTION AT AN EXPANSION JOINT.
6. PLACE 1/2" WIDE EXPANSION JOINTS AT STRUCTURES, CURB RETURNS AND INCREMENTS NO GREATER THAN 40 FEET.
7. FORM CONTROL JOINTS, 1/4 INCH WIDE AND 3/4 INCH DEEP AT A MAXIMUM SPACING OF 10 FEET. WHEN CURB ABUTS CONCRETE PAVEMENT, MATCH PAVEMENT JOINT SPACING.
8. ROUND EXPOSED EDGES AND JOINTS TO A 1/4 INCH RADIUS.
9. COAT 18 INCHES OF 24 INCH LONG DOWELS WITH GREASE OR APPROVED DEBONDING LUBRICANT, INSTALL DOWEL CAP ON LUBRICATED END OF THE DOWELS.

SCALE: NTS

RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: ST-06
APPROVED 01-28-21 DATE	SPILL AND CATCH CURB DETAIL (WITH CURB EXPANSION JOINT DOWEL DETAIL)	SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.		ROUND ROCK TEXAS

FIRE LANE MARKING

N.T.S.

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
5/21/2024

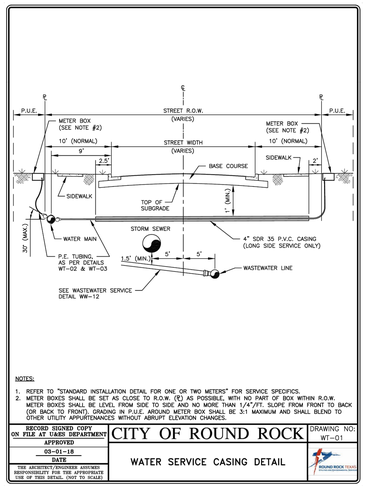
KHA PROJECT	069284918
DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

PAVING DETAILS

2525 CR 172 INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
92 OF 204

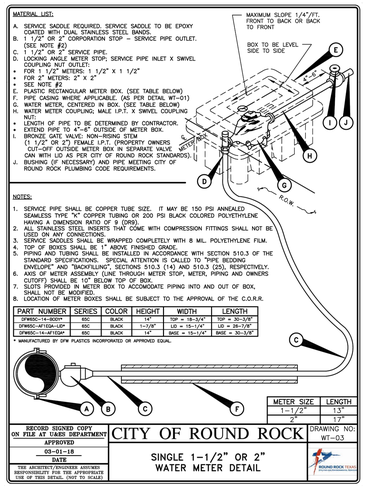
SDP24-00001



NOTES:

1. REFER TO "STANDARD INSTALLATION DETAIL FOR ONE OR TWO METERS" FOR SERVICE SPECIFICS.
2. METER BOXES SHALL BE SET AS CLOSE TO R.O.W. (E) AS POSSIBLE, WITH NO PART OF BOX WITHIN R.O.W. METER BOXES SHALL BE LEVEL FROM SIDE TO SIDE AND NO MORE THAN 1/4"/FT. SLOPE FROM FRONT TO BACK (OR BACK TO FRONT). GRADING IN P.U.E. AROUND METER BOX SHALL BE 3:1 MAXIMUM AND SHALL BLEND TO OTHER UTILITY APPURTENANCES WITHOUT ABRUPT ELEVATION CHANGES.

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WATER SERVICE CASING DETAIL	WT-01
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



MATERIAL LIST:

A. SERVICE SADDLE REQUIRED. SERVICE SADDLE TO BE EPOXY COATED WITH DUAL STAINLESS STEEL BANDS.
B. 1 1/2" OR 2" CORPORATION STOP – SERVICE PIPE OUTLET. (SEE NOTE #2)
C. 1 1/2" OR 2" SERVICE PIPE.
D. 1 1/2" OR 2" CURB STOP; SERVICE PIPE INLET X SWIVEL COUPLING NUT, OUTLET
   - FOR 1 1/2" METERS: 1 1/2" X 1 1/2"
   - FOR 2" METERS: 2" X 2"
   - SEE NOTE #2
E. PLASTIC RECTANGULAR METER BOX. (SEE TABLE BELOW)
F. PIPE CASING WHERE APPLICABLE. (AS PER DETAIL WT-01)
G. WATER METER, CENTERED IN BOX. (SEE TABLE BELOW)
H. WATER METER COUPLING; MALE I.P.T. X SWIVEL COUPLING NUT:
   - LENGTH OF PIPE TO BE DETERMINED BY CONTRACTOR.
   - EXTEND PIPE TO 4"–6" OUTSIDE OF METER BOX.
I. BRONZE GATE VALVE; NON-RISING STEM
   - 1 1/2" OR 2" PLUG VALVE WITH LOCKWING FOR OWNERS CUSTODY OF POTABLE WATER PUT IN SEPARATE VALVE CAN WITH LID AS PER CITY OF ROUND ROCK STANDARDS).
J. BUSHING (IF NECESSARY) AND PIPE MEETING CITY OF ROUND ROCK PLUMBING CODE REQUIREMENTS.

NOTES:

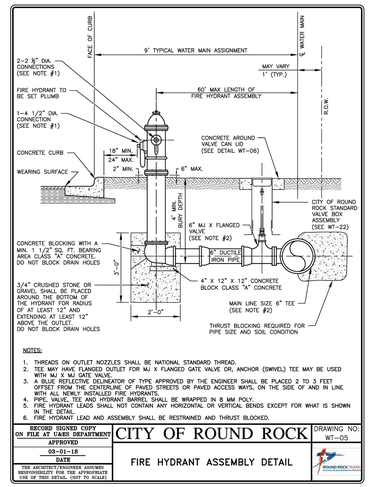
1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT MAY BE 150 PSI ANNEALED SEAMLESS TYPE "K" COPPER TUBING OR 200 PSI BLACK COLORED POLYETHYLENE HAVING A DIMENSION RATIO OF 9 (DR9).
2. ALL STAINLESS STEEL INSERTS THAT COME WITH COMPRESSION FITTINGS SHALL NOT BE USED ON ANY CONNECTIONS.
3. SERVICE SADDLES SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
4. TOP OF BOX SHALL BE 1" ABOVE FINISHED GRADE.
5. PIPING FROM TUBING SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 510.3 OF THE STANDARD SPECIFICATIONS. SPECIAL ATTENTION IS CALLED TO "PIPE BEDDING ENVELOPE" AND "BACKFILLING", SECTIONS 510.3 (14) AND 510.3 (25), RESPECTIVELY.
6. AXIS OF METER ASSEMBLY (LINE THROUGH METER STOP, METER, PIPING AND OWNERS CUTOFF) SHALL BE 10" BELOW TOP OF BOX.
7. SLOTS PROVIDED IN METER BOX TO ACCOMODATE PIPING INTO AND OUT OF BOX, SHALL NOT BE MODIFIED.
8. LOCATION OF METER BOXES SHALL BE SUBJECT TO THE APPROVAL OF THE C.O.R.R.

PART NUMBER	SERIES	COLOR	HEIGHT	WIDTH	LENGTH
DFM55C-14-R00**	65C	BLACK	14"	TOP = 18–3/4"	TOP = 30–3/8"
DFM55C-14T00#-UD*	65C	BLACK	1–1/2"	AT = 15–1/4"	LID = 30–3/8"
DFM55C-14-MT00#*	65C	BLACK	14"	BASE = 15–1/4"	BASE = 30–3/8"

* MANUFACTURED BY DFW PLASTICS INCORPORATED OR APPROVED EQUAL

METER SIZE	LENGTH
1–1/2"	13"
2"	17"

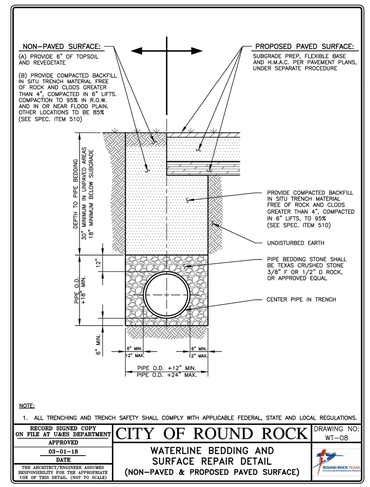
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	SINGLE 1–1/2" OR 2" WATER METER DETAIL	WT-03
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



NOTES:

1. THREADS ON OUTLET NOZZLES SHALL BE NATIONAL STANDARD THREAD.
2. TEE MAY HAVE FLANGED OUTLET FOR MJ X FLANGED GATE VALVE OR, ANCHOR (SWIVEL) TEE MAY BE USED WITH MJ X MJ GATE VALVE.
3. A BLUE REFLECTIVE DELINEATOR OF TYPE APPROVED BY THE ENGINEER SHALL BE PLACED 2 TO 3 FEET OFFSET FROM THE CENTERLINE OF PAVED STREETS OR PAVED ACCESS WAYS, ON THE SIDE OF AND IN LINE WITH ALL NEWLY INSTALLED FIRE HYDRANTS.
4. PIPE, VALVE, TEE AND HYDRANT BARREL SHALL BE WRAPPED IN 8 MM POLY.
5. FIRE HYDRANT LEADS SHALL NOT CONTAIN ANY HORIZONTAL OR VERTICAL BENDS EXCEPT FOR WHAT IS SHOWN IN THE DETAIL.
6. FIRE HYDRANT LEAD AND ASSEMBLY SHALL BE RESTRAINED AND THRUST BLOCKED.

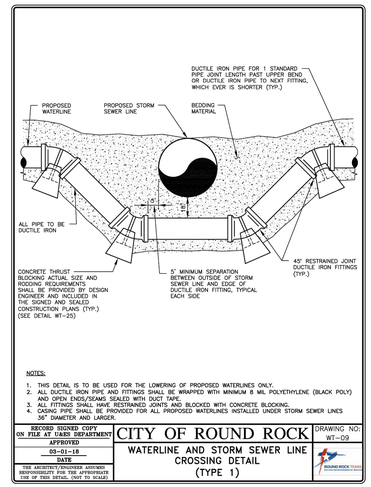
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	FIRE HYDRANT ASSEMBLY DETAIL	WT–05
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



NOTE:

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

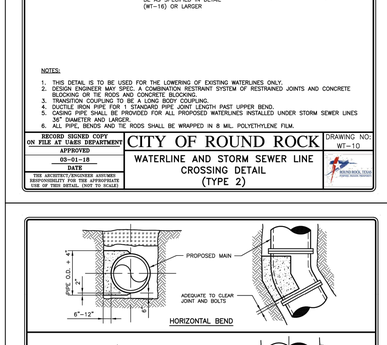
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WATERLINE BEDDING AND SURFACE REPAIR DETAIL (NON–PAVED & PROPOSED PAVED SURFACE)	WT–08
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



NOTES:

1. THIS DETAIL IS TO BE USED FOR THE LOWERING OF PROPOSED WATERLINES ONLY.
2. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8 MIL POLYETHYLENE (BLACK POLY) AND OPEN ENDS/SEAMS SEALED WITH DUCT TAPE.
3. ALL FITTINGS SHALL HAVE RESTRAINED JOINTS AND BLOCKED WITH CONCRETE BLOCKING.
4. CASING PIPE SHALL BE PROVIDED FOR ALL PROPOSED WATERLINES INSTALLED UNDER STORM SEWER LINES 36" DIAMETER AND LARGER.

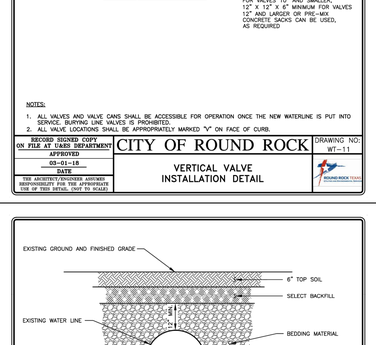
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WATERLINE AND STORM SEWER LINE CROSSING DETAIL (TYPE 1)	WT–09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



NOTES:

1. THIS DETAIL IS TO BE USED FOR THE LOWERING OF EXISTING WATERLINES ONLY.
2. DESIGN ENGINEER MAY SPEC: A COMBINATION RESTRAINT SYSTEM OF RESTRAINED JOINTS AND CONCRETE BLOCKING OR TIE RODS AND CONCRETE BLOCKING.
3. TRANSITION COUPLING TO BE A LONG BODY COUPLING.
4. DUCTILE IRON PIPE FOR 1 STANDARD PIPE JOINT LENGTH PAST UPPER BEND.
5. CASING PIPE SHALL BE PROVIDED FOR ALL PROPOSED WATERLINES INSTALLED UNDER STORM SEWER LINES 36" DIAMETER AND LARGER.
6. ALL PIPE, BENDS AND TIE RODS SHALL BE WRAPPED IN 8 MIL. POLYETHYLENE FILM.

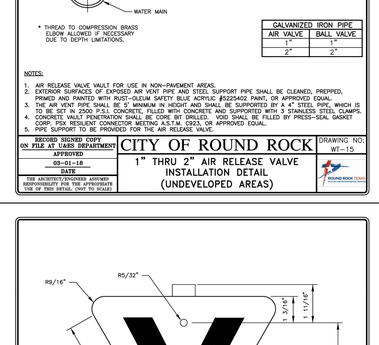
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WATERLINE AND STORM SEWER LINE CROSSING DETAIL (TYPE 2)	WT–10
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



NOTES:

1. ALL VALVES AND VALVE CANS SHALL BE ACCESSIBLE FOR OPERATION ONCE THE NEW WATERLINE IS PUT INTO SERVICE. BURYING LINE VALVES IS PROHIBITED.
2. ALL VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED "V" ON FACE OF CURB.

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	VERTICAL VALVE INSTALLATION DETAIL	WT–11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS

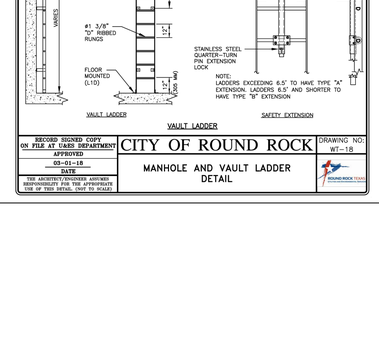


GALVANIZED IRON PIPE	
AIR VALVE	BALL VALVE
1"	1"
2"	2"

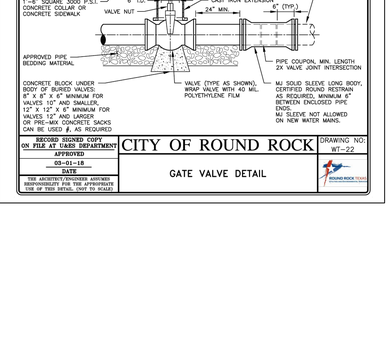
NOTES:

1. AIR RELEASE VALVE VAULT FOR USE IN NON–PAVEMENT AREAS.
2. EXTERIOR SURFACES OF EXPOSED AIR VENT PIPE AND STEEL SUPPORT PIPE SHALL BE CLEANED, PREPPED, PRIMED AND PAINTED WITH RUST–OLEUM SAFETY BLUE ACRYLIC #9225402 PAINT, OR APPROVED EQUAL.
3. THE AIR VENT PIPE SHALL BE 12' MINIMUM IN HEIGHT AND SHALL BE SUPPORTED BY A 4" STEEL PIPE, WHICH IS TO BE SET IN 2500 P.S.I. CONCRETE, FILLED WITH CONCRETE AND SUPPORTED WITH 3 STAINLESS STEEL CLAMPS.
4. CONNECTION OF THE AIR VENT PIPE TO THE VALVE BODY AT THE VOID SHALL BE FILLED BY PRESS–SEAL GASKET CORP. PSX RESILIENT CONNECTOR MEETING A.S.T.M. D923, OR APPROVED EQUAL.
5. PIPE SUPPORT TO BE PROVIDED FOR THE AIR RELEASE VALVE.

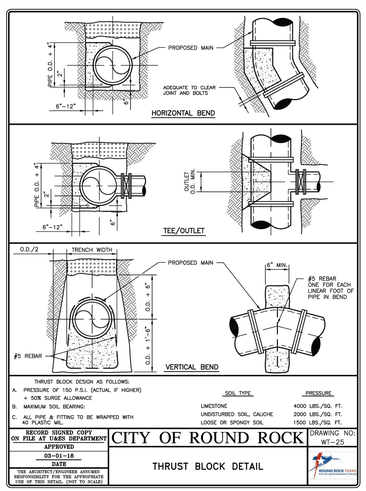
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	1" THRU 2" AIR RELEASE VALVE INSTALLATION DETAIL (UNDEVELOPED AREAS)	WT–18
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	MANHOLE AND VAULT LADDER DETAIL	WT–15
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	GATE VALVE DETAIL	WT–22
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS

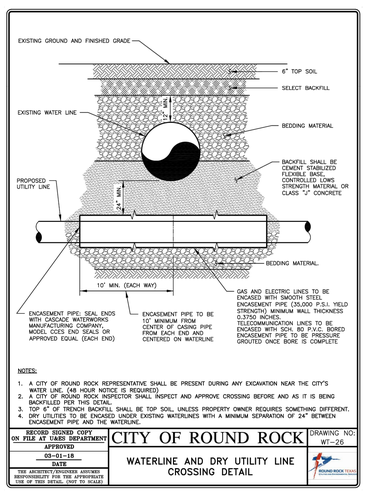


THRUST BLOCK DESIGN AS FOLLOWS:

A. PRESSURE OF 150 P.S.I. (ACTUAL IF HIGHER) + 50% SURGE ALLOWANCE
B. MAXIMUM SOIL BEARING:
C. ALL PIPE & FITTING TO BE WRAPPED WITH 40 MIL PLASTIC MIL

SOIL TYPE	PRESSURE
LIMESTONE	4000 LBS./SQ. FT.
UNDISTURBED SOIL, CALICHE	2000 LBS./SQ. FT.
LOOSE OR SPONGY SOIL	1500 LBS./SQ. FT.

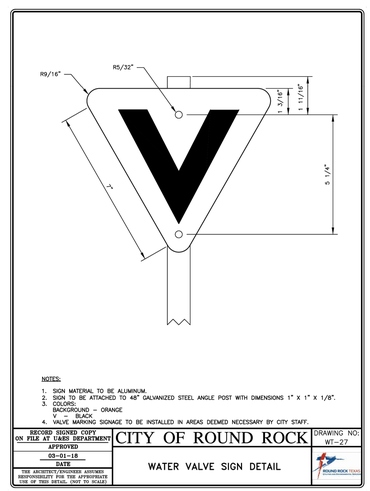
RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	THRUST BLOCK DETAIL	WT–25
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



NOTES:

1. A CITY OF ROUND ROCK REPRESENTATIVE SHALL BE PRESENT DURING ANY EXCAVATION NEAR THE CITY'S WATER LINE. (48 HOUR NOTICE IS REQUIRED).
2. A CITY OF ROUND ROCK INSPECTOR SHALL INSPECT AND APPROVE CROSSING BEFORE AND AS IT IS BEING BACKFILLED PER THIS DETAIL.
3. TOP 6" OF TRENCH BACKFILL SHALL BE TOP SOIL, UNLESS PROPERTY OWNER REQUIRES SOMETHING DIFFERENT.
4. DRY UTILITIES TO BE ENCASED UNDER EXISTING WATERLINES WITH A MINIMUM SEPARATION OF 24" BETWEEN ENCASEMENT PIPE AND THE WATERLINE.

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WATERLINE AND DRY UTILITY LINE CROSSING DETAIL	WT–26
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS



NOTES:

1. SIGN MATERIAL TO BE ALUMINUM.
2. SIGN TO BE ATTACHED TO 48" GALVANIZED STEEL ANGLE POST WITH DIMENSIONS 1" X 1" X 1/8".
3. COLORS:
   BACKGROUND – ORANGE
   V – BLACK
4. VALVE MARKING SIGNAGE TO BE INSTALLED IN AREAS DEEMED NECESSARY BY CITY STAFF.

RECORD SIGNED COPY ON FILE AT UARD DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-01-18 DATE	WATER VALVE SIGN DETAIL	WT–27
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL, COPY TO SCALE		ROUND ROCK TEXAS

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

NICHOLAS C. BROWN
107175
LICENSED PROFESSIONAL ENGINEER
3/28/2024

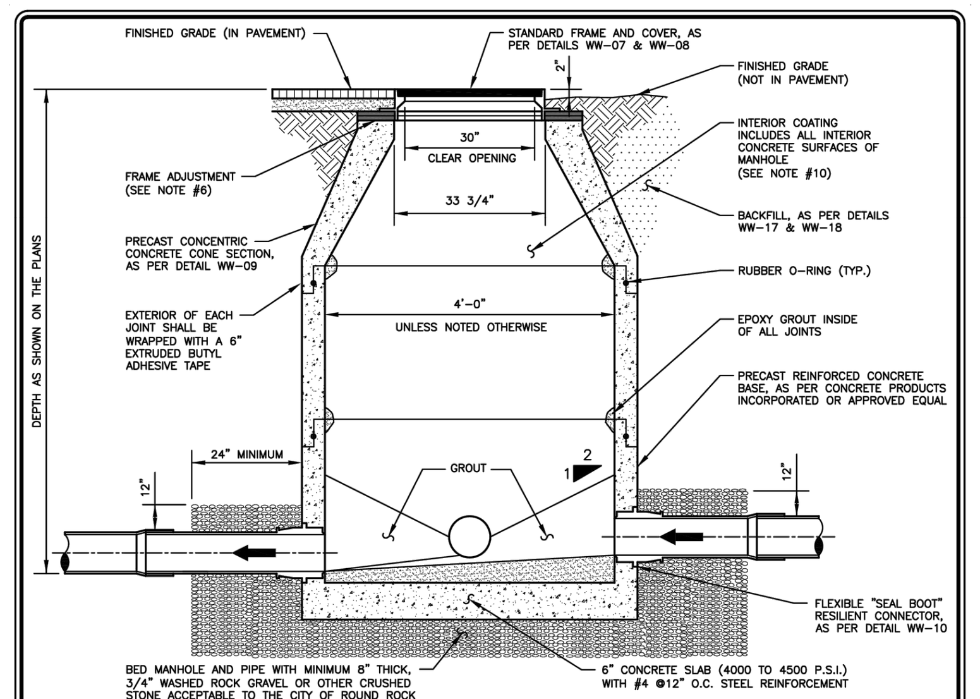
KHA PROJECT	069284918
DATE	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	MM
DRAWN BY:	MM
CHECKED BY:	NCB

WATER DETAILS

2525 CR 172
INDUSTRIAL
CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
93 OF 204

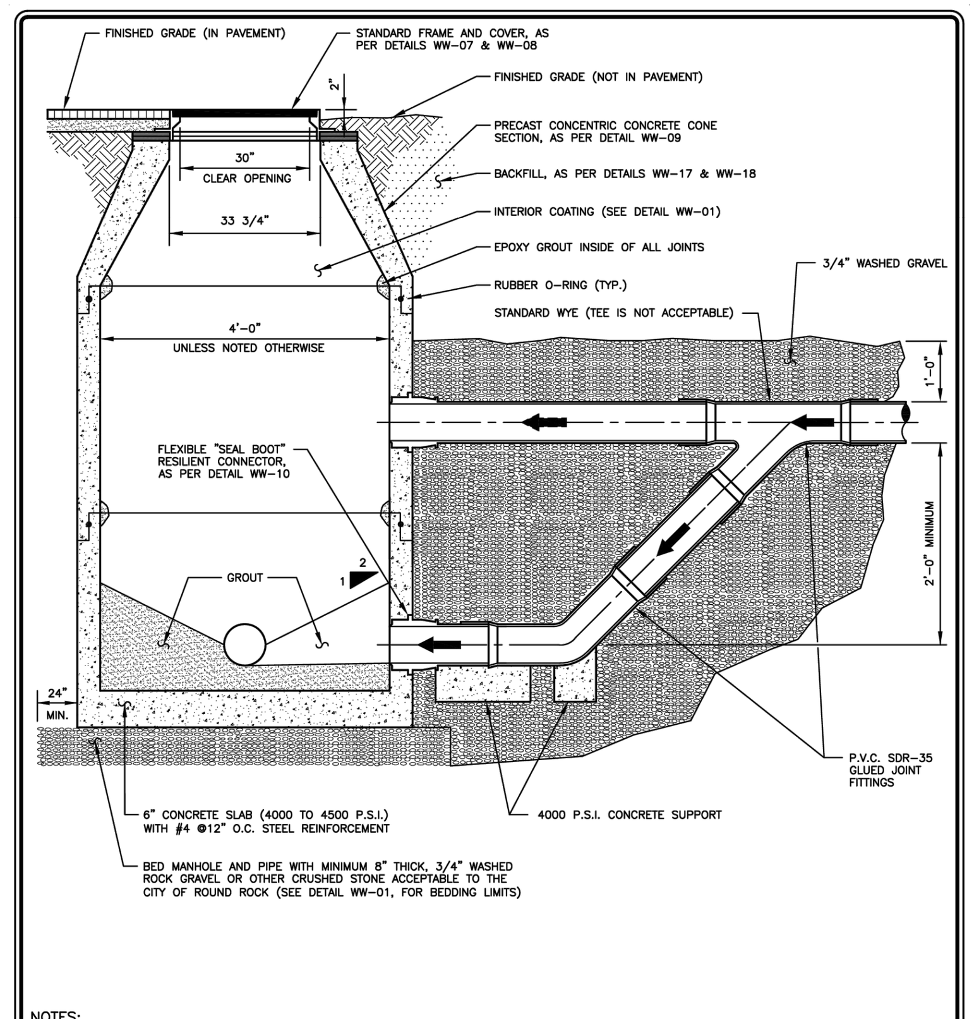
SDP24-00001



NOTES:

1. IF DROP IS SIX INCHES (6") TO TWO FEET (2'-0"), CONSTRUCTION OF DROP SHALL PROVIDE AN OVERSIZED INVERT TO EXTEND UNDER THE DROP CONNECTION.
2. SEE CONSTRUCTION PLANS FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZES AND TYPES.
3. MANHOLES SHALL BE PRECAST A.S.T.M. C478 BELL AND SPIGOT WITH "O" RING JOINTS.
4. MANHOLES TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR H20 TRAFFIC LOADING.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETED, WHEN MANHOLES ARE LOCATED OUTSIDE OF PAVEMENT.
6. FRAME ADJUSTMENT HEIGHT SHALL CONSIST OF FIVE INCHES (5") MINIMUM TO EIGHTEEN INCHES (18") MAXIMUM. GRADE RINGS SHALL BE GROUTED WITH A NON-SHRINK GROUT INSIDE AND OUTSIDE. HDPE GRADE RINGS, MAY NOT BE USED.
7. FOR MANHOLES TO BE VENTED, SEE DETAILS WW-05 AND WW-06.
8. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO THE FLOW STREAM. ALL P.V.C. PIPE SHALL BE REMOVED FROM INVERT.
9. BASE SECTION SHALL BE DESIGNED FOR H20 LOADING, PLUS EARTH LOAD AT 130 PCF.
10. ENTIRE INTERIOR CONCRETE SURFACES OF WASTEWATER MANHOLES TO BE COATED WITH RAVEN 405, SPRAYWALL, OR APPROVED EQUAL, (WITH A UNIFORM THICKNESS OF 124 MILS AND A MINIMUM THICKNESS OF 100 MILS, APPLIED AFTER MANHOLE HAS PASSED THE VACUUM TEST). FOR REHABILITATING MANHOLES 1/2" MINIMUM THICKNESS CALCIUM ALUMINATE CEMENTITIOUS COATING AND OTHER INTERIOR SURFACES MAY BE COATED IF RECOMMENDED BY COATING MANUFACTURER. (IN LIEU OF INTERIOR COATINGS NEW PRECAST MANHOLES CONTAINING CONSHIELD WILL BE ACCEPTED PROVIDING THE MANUFACTURER STENCILS "CONSHIELD" ON THE INSIDE AND OUTSIDE OF ALL MANHOLE SECTIONS.)

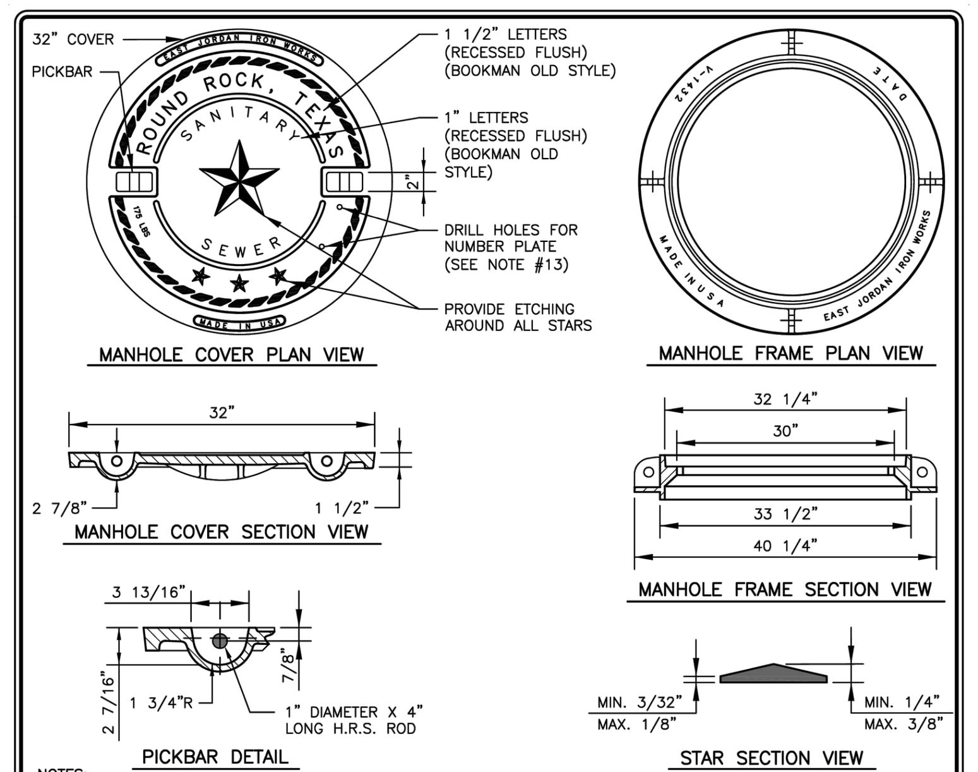
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-01
APPROVED 03-01-18 DATE	PRECAST CONCRETE WASTEWATER MANHOLE DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. SEE NOTES #2 THROUGH #10 ON DETAIL WW-01.
2. DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED MORE THAN TWO FEET (2'-0") ABOVE THE MAIN INVERT CHANNEL.
3. WHEN P.V.C. PIPE IS USED IN SANITARY SEWER LINES, SOLVENT TYPE JOINT P.V.C. FITTINGS TO BE UTILIZED IN THE DROP ASSEMBLY ONLY. FITTINGS TO BE P.V.C. SDR-35 WITH TWO PART WATER RESISTANT GLUE AT ALL JOINTS.

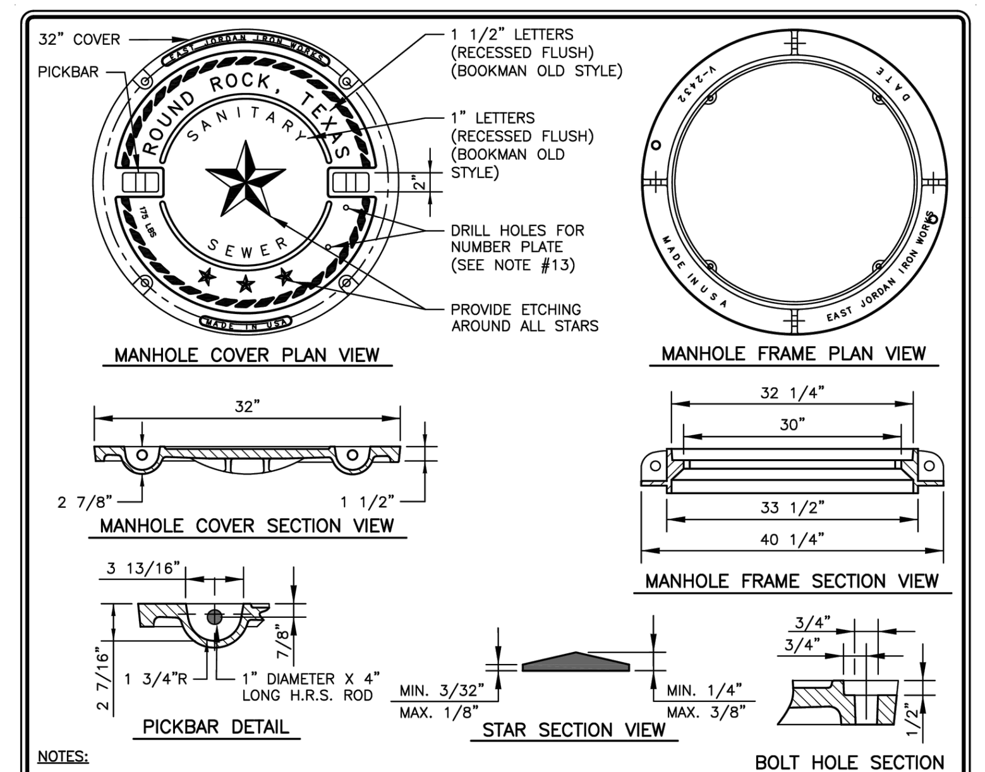
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-02
APPROVED 03-01-18 DATE	PRECAST CONCRETE WASTEWATER MANHOLE WITH DROP CONNECTION DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-1432-3 (PRODUCT NUMBER: 41432059), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432089), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. MANUFACTURER SHALL DRILL 2-3/16" X 1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

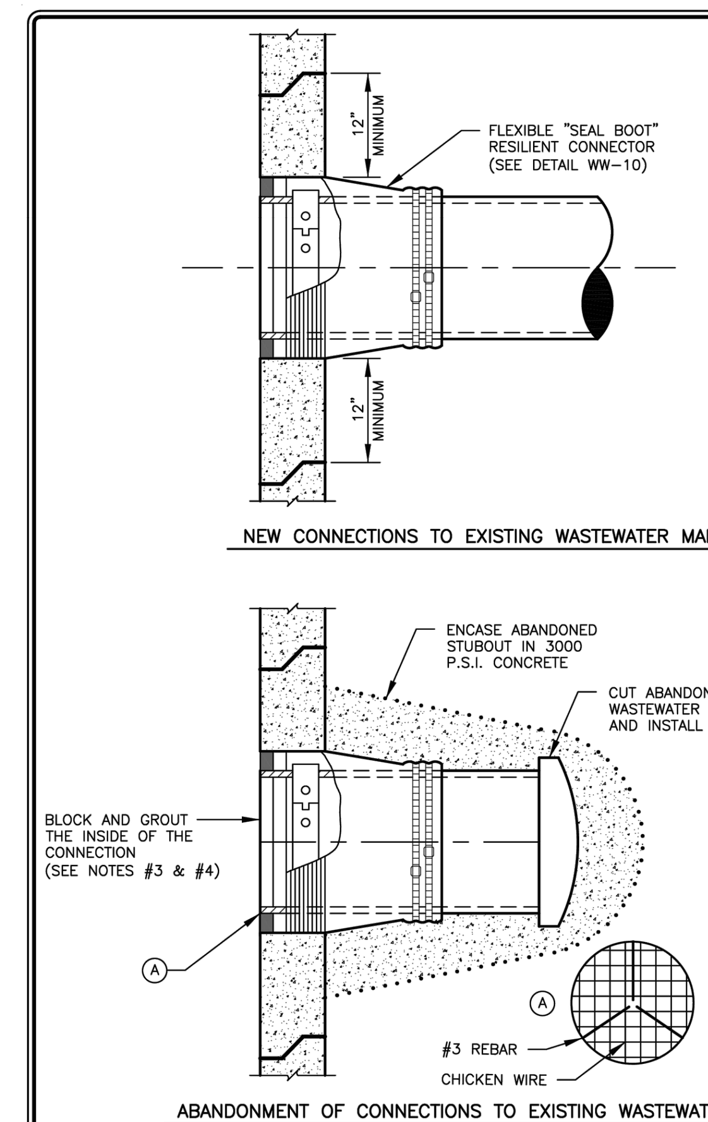
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-08
APPROVED 03-01-18 DATE	NON-BOLTED WASTEWATER MANHOLE COVER AND FRAME DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-2432-3 (PRODUCT NUMBER: 42432033), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432073), AS MANUFACTURED BY EAST JORDAN IRON WORKS INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. BOLTS SHALL BE 5/8"-11NC X 2" LONG HEX STAINLESS STEEL WITH WASHER.
13. MANUFACTURER SHALL DRILL 2-3/16" X 1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-07
APPROVED 03-01-18 DATE	BOLTED WASTEWATER MANHOLE COVER AND FRAME DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



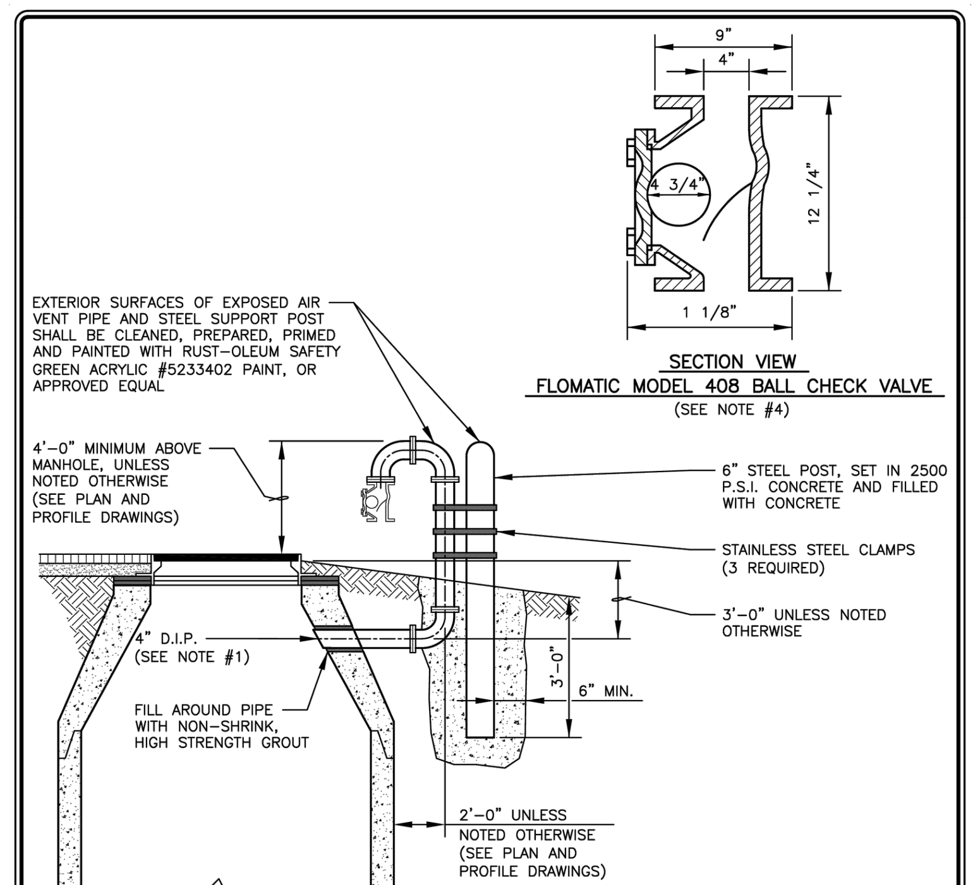
NOTES:

1. EXISTING MANHOLES TO BE VACUUM TESTED PRIOR TO ANY CONNECTIONS.
2. NEW CONNECTIONS TO HAVE MINIMUM VERTICAL AND HORIZONTAL SEPARATION OF 12" ON THE OUTSIDE FACE OF THE MANHOLE FROM ANY EXISTING PENETRATIONS AND/OR MANHOLE JOINTS.
3. CONNECTIONS MADE INTO EXISTING MANHOLES ARE TO BE CORED AND NOT DRILLED/CHISELED.
4. CUT, SHAPE AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW FROM THE NEW WASTEWATER CONNECTION.
5. EXISTING MANHOLES TO BE RECOATED AFTER ANY NEW WASTEWATER CONNECTION IS ADDED.

NOTES:

1. THIS DETAIL IS INTENDED FOR WASTEWATER MANHOLES THAT WILL REMAIN IN SERVICE. FOR WASTEWATER MANHOLES THAT ARE TO BE ABANDONED, REFERENCE DETAIL WW-15.
2. WASTEWATER MANHOLE TO BE RECOATED AFTER GROUT IS INSTALLED.
3. BLOCK THE INLET OF THE MANHOLE WITH CHICKEN WIRE AND 3-#3 REBAR. GROUT THE INSIDE OF THE MANHOLE FLUSH WITH THE MANHOLE WALL.
4. CONNECTIONS 24" AND LARGER REQUIRE BRICK BLOCKING TO BE INSTALLED PRIOR TO GROUTING.

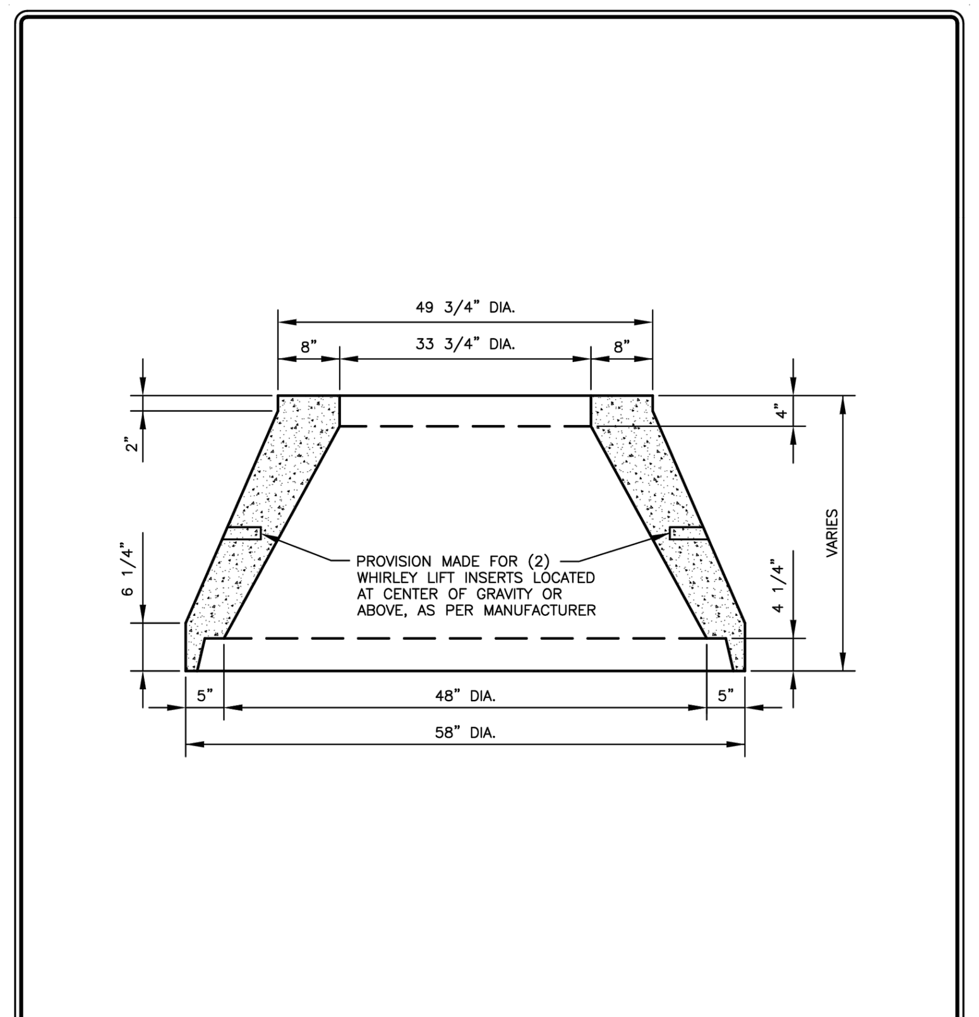
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-21
APPROVED 03-01-18 DATE	EXISTING WASTEWATER MANHOLE CONNECTION DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. AIR VENT PIPE TO BE 4" D.I.P., CLASS 53 WITH FLANGED CONNECTIONS.
2. ALL FITTINGS TO BE 150 PSIG RATED & ANSI/AWWA C110/A21.10.
3. AIR VENT PIPE RISER SHALL BE INSTALLED TO A MINIMUM DEPTH FROM GROUND SURFACE AS POSSIBLE, PREFERABLY LOCATED IN THE CONCENTRIC CONCRETE CONE.
4. MINIMUM ELEVATION AT THE VENT OPENING SHALL BE 1 FOOT (1'-0") ABOVE THE ULTIMATE 100 YEAR FLOOD PLAIN ELEVATION. IF ELEVATION OF VENT OPENING IS LESS THAN 1 FOOT (1'-0") ABOVE THE ULTIMATE 100 YEAR FLOOD PLAIN ELEVATION, A FLOMATIC MODEL 408, PART #2145 BALL CHECK VALVE, OR APPROVED EQUAL, WITH FLOATING TYPE BALL, SHALL BE INSTALLED AT DOWN TURNED OPENING OF VENT. A 16 MESH 304 STAINLESS STEEL INSECT SCREEN SHALL BE PLACED IN THE OPENING.

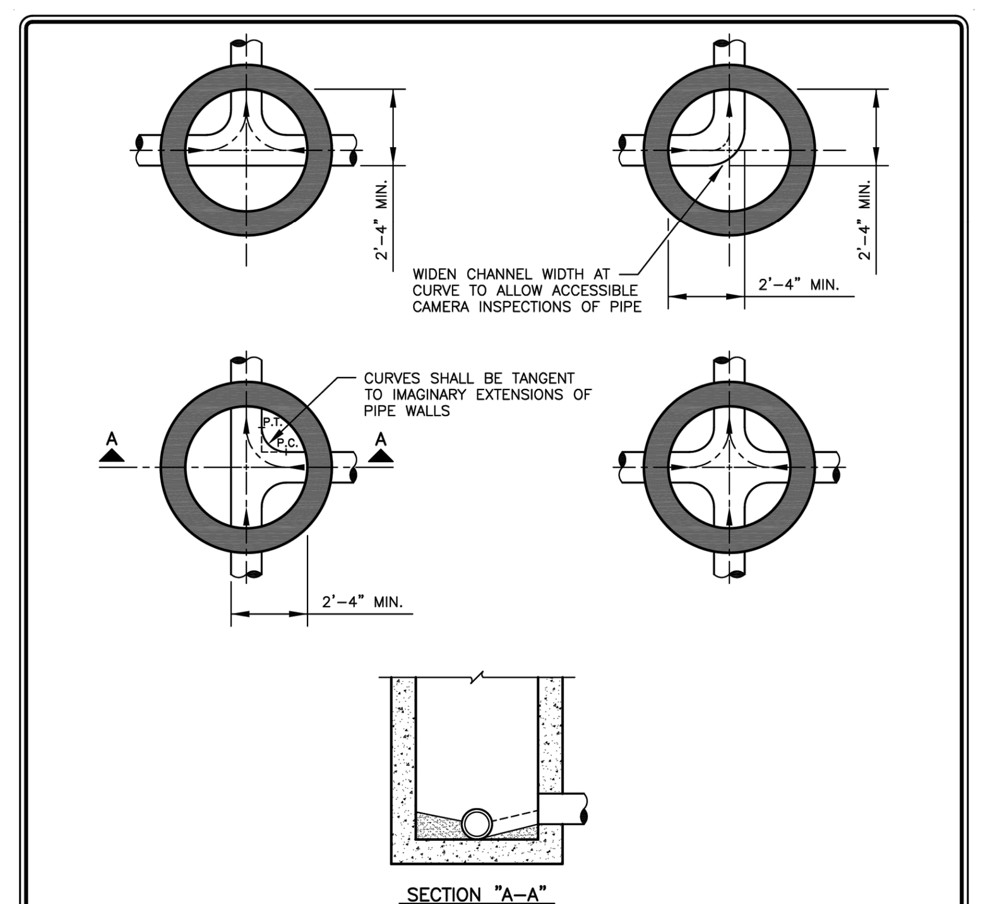
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-06
APPROVED 03-01-18 DATE	MANHOLE VENT FOR ABOVE GROUND INSTALLATION DETAIL (UNDEVELOPED AREAS)	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTE:

CONCENTRIC CONCRETE CONE SECTION SHALL BE MANUFACTURED USING 4000 TO 4500 P.S.I. CONCRETE, 28 DAY STRENGTH AND IN ACCORDANCE WITH A.S.T.M. C478, AS MANUFACTURED BY CONCRETE PRODUCTS INCORPORATED, OR APPROVED EQUAL.

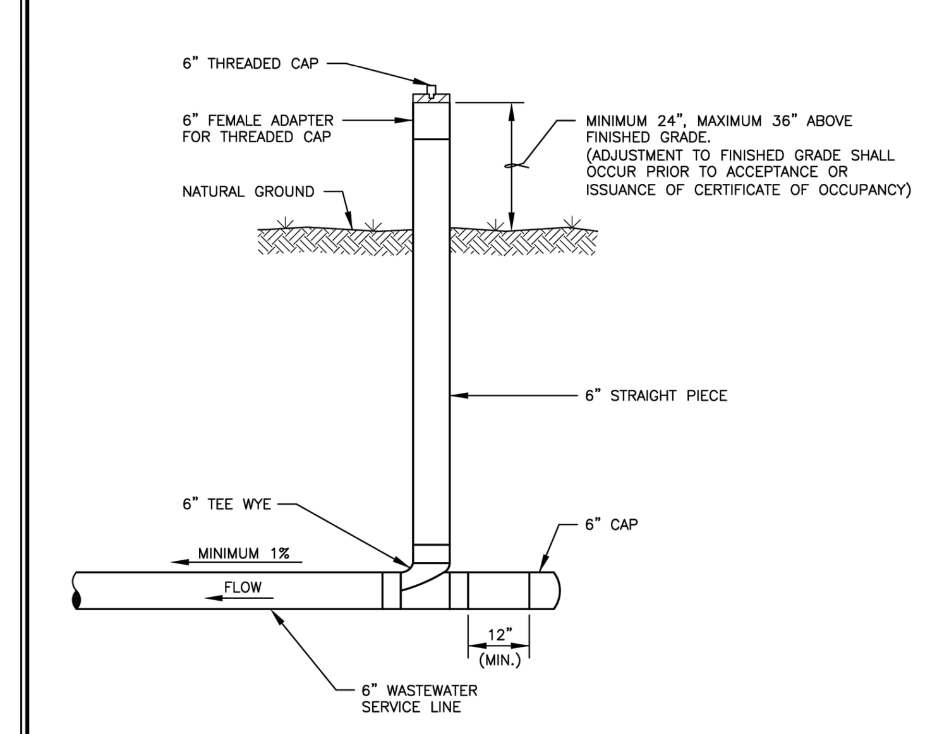
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-09
APPROVED 03-01-18 DATE	PRECAST 48" CONCENTRIC CONCRETE CONE SECTION DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. MINIMUM DROP FROM INLET TO OUTLET OF MANHOLE IS 0.1 FEET AND MAXIMUM DROP IS 2 FEET, UNLESS SPECIAL APPROVAL IS OBTAINED FROM THE CITY OF ROUND ROCK.
2. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
3. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
4. CHANNELS FOR FUTURE CONSTRUCTIONS, SHALL BE CONSTRUCTED WITH PIPE EXTENDING 3' BEYOND EXTERIOR OF MANHOLE WALL, WITH GLUED PLUG.
5. SLOPE MANHOLE BENCH AT 2:1 SLOPE FROM MANHOLE WALL TO CHANNEL.
6. INVERT CHANNEL SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR FOUR INCHES (4") DEEP.

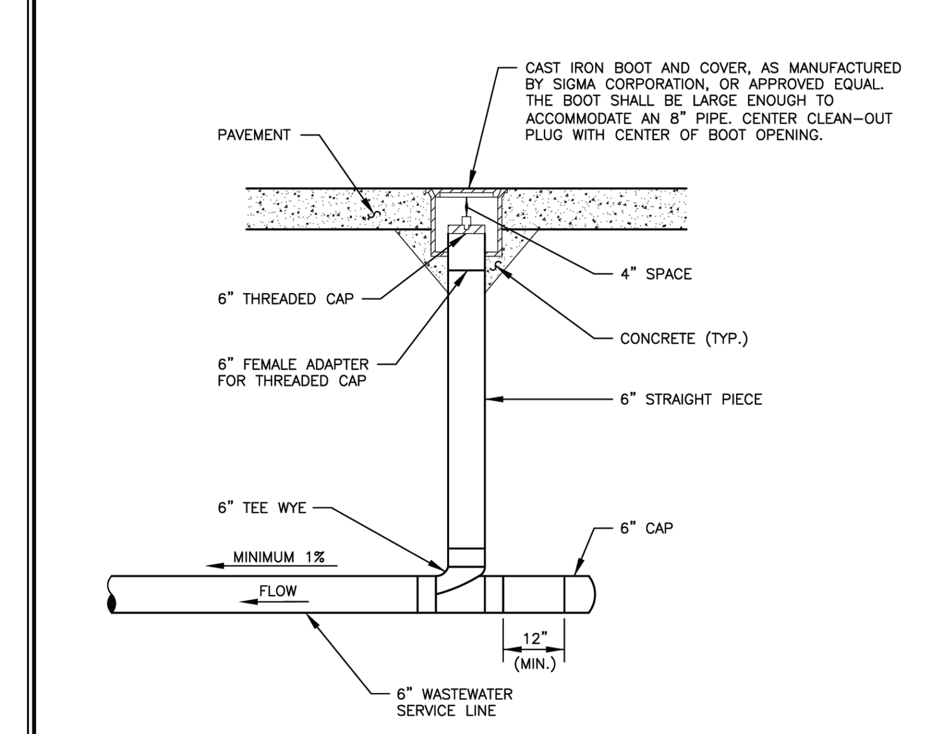
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-11
APPROVED 03-01-18 DATE	WASTEWATER FLOW PATTERNS FOR INVERT CHANNELS DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. ALL PIPE TO BE SDR 26.
2. ALL FITTINGS TO BE SDR 35 SOLVENT WELD FITTINGS.

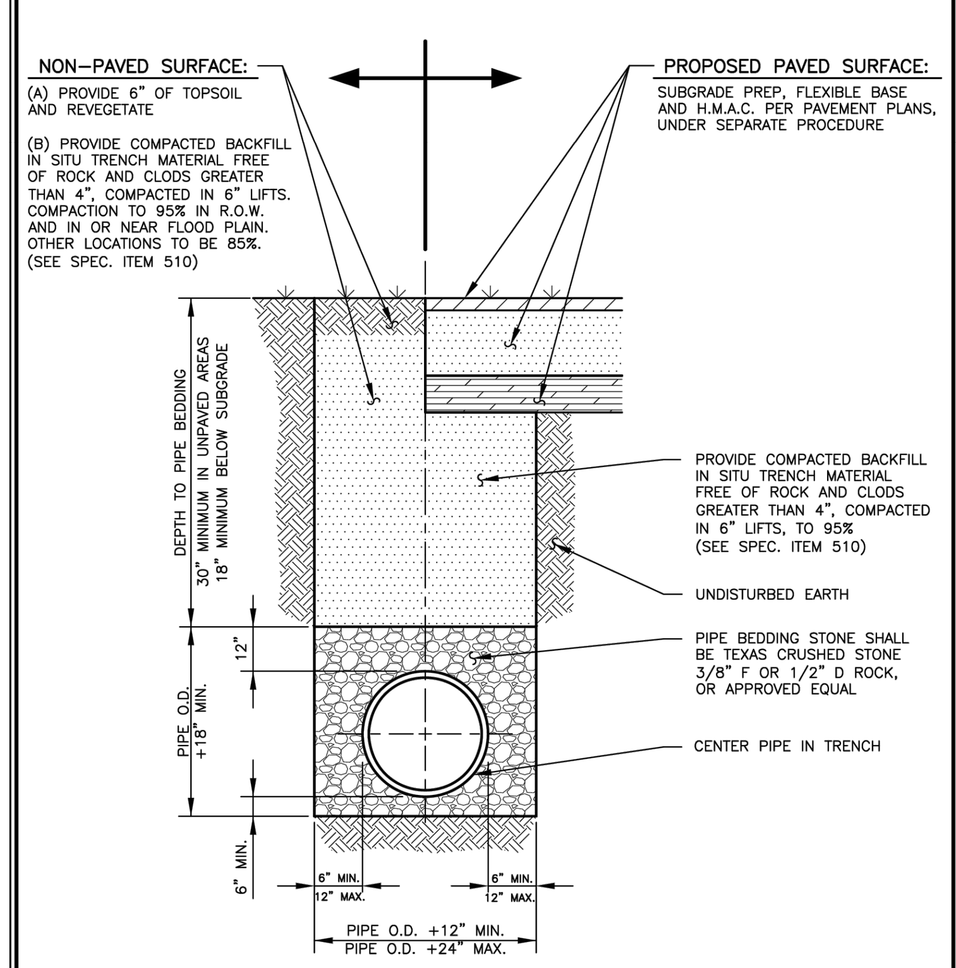
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-14
APPROVED 03-01-18 DATE	WASTEWATER SERVICE CLEAN-OUT DETAIL (NON-PAVED SURFACE)	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. ALL PIPE TO BE SDR 26.
2. ALL FITTINGS TO BE SDR 35 SOLVENT WELD FITTINGS.

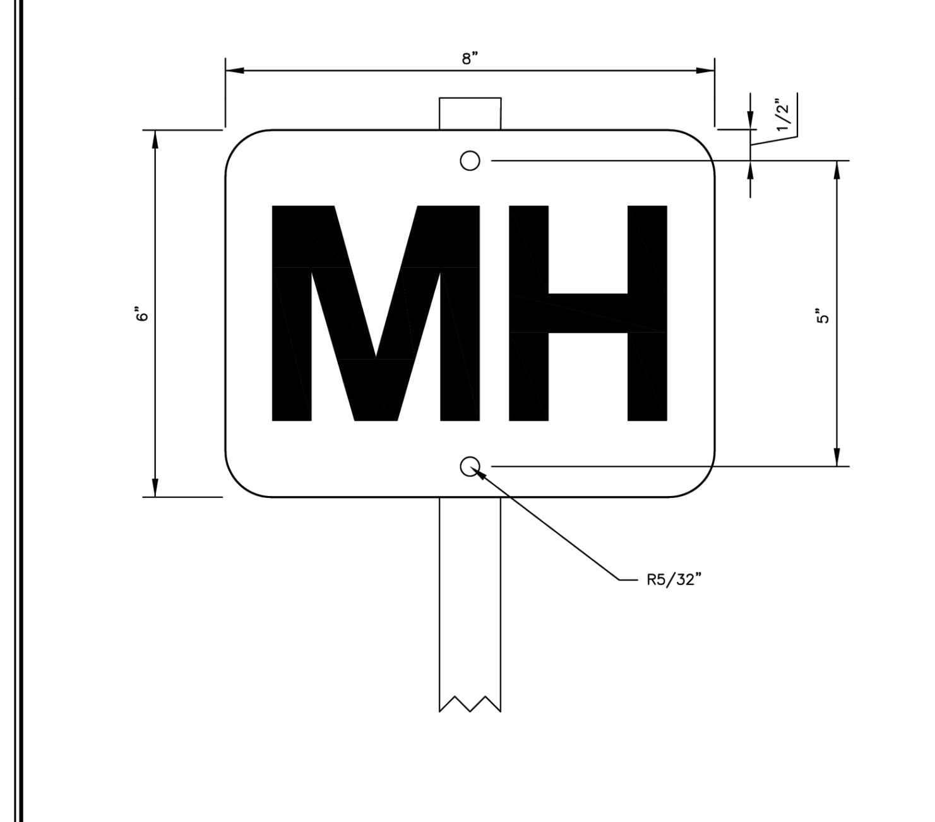
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-13
APPROVED 03-01-18 DATE	WASTEWATER SERVICE CLEAN-OUT DETAIL (PAVED SURFACE)	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTE:

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

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-18
APPROVED 03-01-18 DATE	WASTEWATER LINE BEDDING AND SURFACE REPAIR DETAIL (NON-PAVED & PROPOSED PAVED SURFACE)	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. SIGN MATERIAL TO BE ALUMINUM.
2. SIGN TO BE ATTACHED TO 48" GALVANIZED STEEL ANGLE POST WITH DIMENSIONS 1" X 1" X 1/8".
3. COLORS:
   BACKGROUND – ORANGE
   LETTERING – BLACK
4. MANHOLE MARKING SIGNAGE TO BE INSTALLED IN AREAS DEEMED NECESSARY BY CITY STAFF.

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-19
APPROVED 03-01-18 DATE	MANHOLE MARKER SIGNAGE DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2" SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3" SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS NICHOLAS C. BROWN 107175 LICENSED PROFESSIONAL ENGINEER
2/21/2024

KHA PROJECT	DATE	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
069284918	JUNE 2024	AS SHOWN	MM	MM	NCB

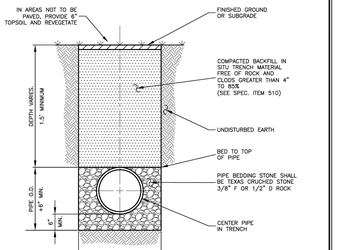
WASTEWATER DETAILS

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
94 OF 204

SDP24-00001

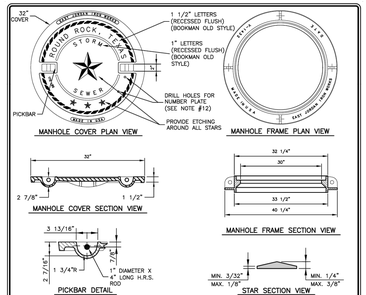


NOTE:

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

RECORD SIGNED COPY ON FILE AT UARS DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: DR-02
APPROVED 04-01-10 DATE	STORM SEWER LINE BEDDING DETAIL (NON-PAVED SURFACE)	ROUND ROCK, TEXAS

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

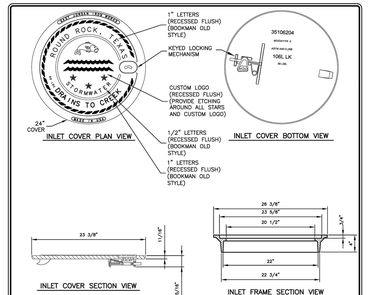


NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-1432-3 (PRODUCT NUMBER: 41432058), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-1432 (PRODUCT NUMBER: 41432062), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVER SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. MANUFACTURER SHALL DRILL 2-3/16"X1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

RECORD SIGNED COPY ON FILE AT UARS DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: DR-06
APPROVED 04-01-10 DATE	NON-BOLTED STORMSEWER MANHOLE COVER AND FRAME DETAIL	ROUND ROCK, TEXAS

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

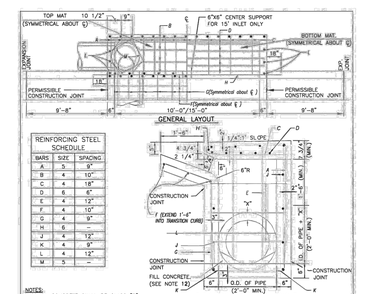


NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. INLET COVER SHALL BE MODEL NUMBER: 106L LK (PRODUCT NUMBER: 35106204), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. INLET FRAME SHALL BE MODEL NUMBER: 106L (PRODUCT NUMBER: 35206004), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. INLET COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: 106L-HL LK (PRODUCT NUMBER: 35206062), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. INLET COVER WEIGHT SHALL BE 85 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
7. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
8. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
9. INLET COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.

RECORD SIGNED COPY ON FILE AT UARS DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: DR-07
APPROVED 04-01-10 DATE	STORM SEWER INLET COVER AND FRAME DETAIL	ROUND ROCK, TEXAS

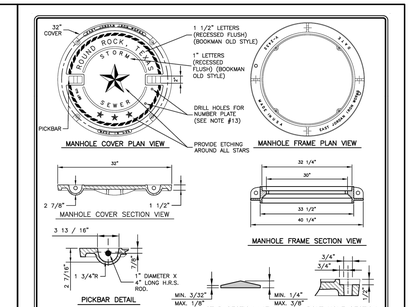
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)



NOTES:

1. ALL CONCRETE SHALL BE CLASS "C".
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.
5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. PAYMENT WILL BE MADE FOR EACH INLET OF THE TYPE SPECIFIED, COMPLETE IN PLACE INCLUDING MANHOLE FRAME AND COVER.
7. CHAMFER ALL EXPOSED EDGES 3/4".
8. MANHOLE FRAME AND COVERS SHALL BE FURNISHED IN ACCORDANCE WITH STANDARD DRAWING DR-07, STORM SEWER INLET COVER AND FRAME DETAIL.
9. THE CONTRACTOR SHALL SUBMIT SPECIFIC PROCEDURES FOR THE CONSTRUCTION OF INLETS, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION.
10. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES, THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES.
11. PAYMENT FOR INLETS AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
12. INVERT OF INLET SHALL BE SLOPED 1.00 WITH FILL CONCRETE.

RECORD SIGNED COPY — ON FILE — APPROVED 01-28-21 DATE	CITY OF ROUND ROCK	SCALE: NTS DRAWING NO: ST-09 SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	STANDARD 10' AND 15' CURB INLET DETAIL	ROUND ROCK TEXAS

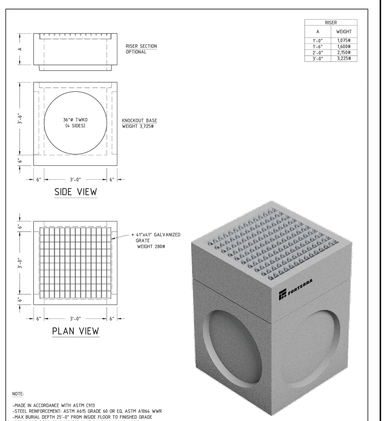


NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-2432-3 (PRODUCT NUMBER: 42432032), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432062), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. BOLTS SHALL BE 5/8"-11NC X 2" LONG HEX STAINLESS STEEL WITH WASHER.
13. MANUFACTURER SHALL DRILL 2-3/16"X1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

RECORD SIGNED COPY ON FILE AT UARS DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: DR-05
APPROVED 04-01-10 DATE	BOLTED STORMSEWER MANHOLE COVER AND FRAME DETAIL	ROUND ROCK, TEXAS

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



NOTE:

-MADE IN ACCORDANCE WITH ASTM C913
-LTCO, REINFORCEMENT: ASTM A615 GRADE 60 OR EQ. ASTM A706A W4R
-MAX BURIAL DEPTH 25'-0" FROM INSIDE FLOOR TO FINISHED GRADE
-PER TxDOT PRECAST BASE DETAIL TYPE "PB" JANUARY 2015.
-STEPS NOT AVAILABLE
-ADA GRATE AVAILABLE.

FORTERRA	REGION, STATE: CENTRAL TX	GRATE INLET - GALVANIZED 3'-0" x 3'-0"
	DATE: 2018 SECT PAGE: 2.4.2	

BENCHMARKS

BM #51471 MAG NAIL SET "GCP 2"
SET AT THE NORTHEAST CORNER OF THE INTERSECTION OF STATE HIGHWAY 45 AND COUNTY ROAD 172, ±5.5' FROM "YIELD" SIGN.
N: 10147640.83
E: 3127942.60
ELEV.= 841.70'

BM #51473 MAG NAIL SET "GCP 3"
SET IN THE NORTH RIGHT-OF-WAY LINE OF HESTERS CROSSING ROAD, ±560' FROM THE INTERSECTION OF HESTERS CROSSING ROAD AND COUNTY ROAD 172, ±100 FROM CONCRETE SIGN "ENCOMPASS HEALTH".
N: 10149343.04
E: 3128315.81
ELEV.= 812.19'

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
10814 JOLLYVILLE ROAD, CAMPUS IV, SUITE 200, AUSTIN, TX 78759
PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

2/21/2024

KHA PROJECT 069284916	DATE JUNE 2024	SCALE: AS SHOWN	DESIGNED BY: MM	DRAWN BY: MM	CHECKED BY: NCB

STORM DETAILS

2525 CR 172 INDUSTRIAL

CITY OF ROUND ROCK
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
95 OF 204

SDP24-00001

Calculations for Texas Commission on Environmental Quality TSS Removal Calculations
Hydro International Up-Flo® Filter - Sizing Spreadsheet Revision 1.0

Project Name:	**CR 172 Industrial**
Date Prepared:	**5.26.24**

1. The Required Load Reduction for the Total Project.

Calculations from RG-348, Pages 3-27 to 3-30
Page 3-29 Equation 3.3:
$L_M = 27.2(A_N \times P)$

Where:

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

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

County =	**Williamson**	
Total project area included in plan =	**50.89**	acres
Predevelopment impervious area within the limits of the plan =	**0.14**	acres
Total post-development impervious area within the limits of the plan =	**34.68**	acres
Total post-development impervious cover fraction =	**0.68**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**30064**	lb
Number of drainage basins / outfalls areas leaving the plan area =	**2**	

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

Drainage Basin/Outfall Area No. =	**UFF1**	
Total drainage basin/outfall area =	**24.10**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.07**	acres
Post-development impervious area within drainage basin/outfall area =	**16.60**	acres

Post-development impervious fraction within drainage basin/outfall area =	**0.69**	
$L_{M\ THIS\ BASIN}$ =	**14,388**	lb

3. Indicate the Proposed BMP Code for this Basin.

Proposed BMP =	**Up-Flo® Filter CPZ**	
Removal efficiency =	**78**	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_I x 34.6 + A_P x 0.54)

Where:

A_C = Total On-Site drainage area in the BMP catchment area

A_I = Impervious area proposed in the BMP catchment area

A_P = Pervious area remaining in the BMP catchment area

L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	**24.10**	acres
A_I =	**16.60**	acres
A_P =	**7.50**	acres
L_R =	**14,437**	lb

5. Calculate Fraction of Annual Runoff to Treat the Drainage Basin / Outfall Area.

Note

Desired $L_{M\ THIS\ BASIN}$ =	**14,437**	lb
F =	**1.00**	

6. Calculate Capture Volume Required by the BMP Type for this Drainage Basin / Outfall Area.

Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth =	**4.00**	inches
Post Development Runoff Coefficient =	**0.49**	

On-site Water Quality Volume =	**173,096**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**34,619**	cubic feet
Total Capture Volume (required water quality volume x 1.20) =	**207,715**	cubic feet

7. Up-Flo® Filter TSS Load Based Sizing.

Minimum Filter Modules based on L_R =	**110**	modules
Maximum Release Rate =	**6.16**	cfs

07/31/2024

Calculations for Texas Commission on Environmental Quality TSS Removal Calculations
Hydro International Up-Flo® Filter - Sizing Spreadsheet Revision 1.0

Project Name:	**CR 172 Industrial**
Date Prepared:	**5.26.24**

1. The Required Load Reduction for the Total Project.

Calculations from RG-348, Pages 3-27 to 3-30
Page 3-29 Equation 3.3:
$L_M = 27.2(A_N \times P)$

Where:

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

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

County =	**Williamson**	
Total project area included in plan =	**50.89**	acres
Predevelopment impervious area within the limits of the plan =	**0.14**	acres
Total post-development impervious area within the limits of the plan =	**34.68**	acres
Total post-development impervious cover fraction =	**0.68**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**30064**	lb
Number of drainage basins / outfalls areas leaving the plan area =	**2**	

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

Drainage Basin/Outfall Area No. =	**UFF2**	
Total drainage basin/outfall area =	**26.79**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.07**	acres
Post-development impervious area within drainage basin/outfall area =	**18.08**	acres

Post-development impervious fraction within drainage basin/outfall area = **0.67**

$L_{M\ THIS\ BASIN}$ = **15,676** lb

3. Indicate the Proposed BMP Code for this Basin.

Proposed BMP = **Up-Flo® Filter CPZ**

Removal efficiency = **78** 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_I x 34.6 + A_P x 0.54)

Where:

A_C = Total On-Site drainage area in the BMP catchment area

A_I = Impervious area proposed in the BMP catchment area

A_P = Pervious area remaining in the BMP catchment area

L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	**26.79**	acres
A_I =	**18.08**	acres
A_P =	**8.71**	acres
L_R =	**15,732**	lb

5. Calculate Fraction of Annual Runoff to Treat the Drainage Basin / Outfall Area.

Note

Desired $L_{M\ THIS\ BASIN}$ = **15,676** lb

F = **1.00**

6. Calculate Capture Volume Required by the BMP Type for this Drainage Basin / Outfall Area.

Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = **4.00** inches

Post Development Runoff Coefficient = **0.48**

On-site Water Quality Volume =	**187,314**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**37,463**	cubic feet
Total Capture Volume (required water quality volume x 1.20) =	**224,776**	cubic feet

7. Up-Flo® Filter TSS Load Based Sizing.

Minimum Filter Modules based on L_R =	**119**	modules
Maximum Release Rate =	**6.66**	cfs

07/31/2024