WATER POLLUTION ABATEMENT PLAN
WITH
SEWAGE COLLECTION SYSTEM APPLICATION

FOR

NEW HOPE RETAIL

4631 E New Hope Dr
Leander, Texas 78641

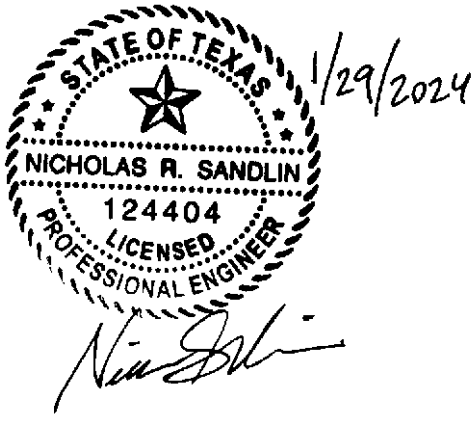
Prepared For:

NEW HOPE RE, LLC
901 AMBROSE DR
PFLUGERVILLE, TEXAS 78660

Prepared By:

Sandlin Services, LLC
TBPE Firm # 21356
P: (806) 679-7303

January 29, 2024



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Agent Authorization Form (TCEQ-0599)

Application Fee Form (TCEQ-0574)

Core Data Form (TCEQ-10400)

Edwards Aquifer Application Cover Page (TCEQ-20705)

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

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

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

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.

4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: NEW HOPE RETAIL						**2. Regulated Entity No.:**			
3. Customer Name: NEW HOPE RE, LLC						**4. Customer No.:**			
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):**		2.1	
9. Application Fee:	$4,650		**10. Permanent BMP(s):**			ONE EXISTING WET POND			
11. SCS (Linear Ft.):	197		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			Turkey Creek-Brushy 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.)	___	___	_1_
Region (1 req.)	___	___	_1_
County(ies)	___	___	_1_
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 _1_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. NICK SANDLIN, P.E. (SANDLIN SERVICES, LLC)
Print Name of Customer/Authorized Agent
 **1/29/2024** 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):	

General Information Form
(TCEQ-0587)

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.

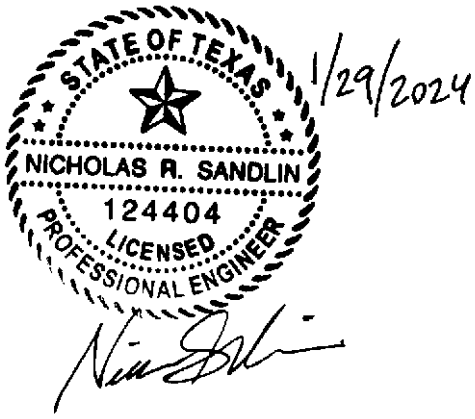
Signature

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: NICK SANDLIN, P.E. (SANDLIN SERVICES, LLC)

Date: 1/29/2024

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: NEW HOPE RETAIL
2. County: WILLIAMSON
3. Stream Basin: BRAZOS RIVER
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

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

7. Customer (Applicant):

   Contact Person: RAHIM KARIMALI
   Entity: NEW HOPE RE, LLC
   Mailing Address: 901 AMBROSE DR
   City, State: PFLUGERVILLE, TEXAS Zip: 78660
   Telephone: 512-925-9610 FAX: _____
   Email Address: rahimkali29@gmail.com

8. Agent/Representative (If any):

   Contact Person: NICK SANDLIN, P.E.
   Entity: SANDLIN SERVICES, LLC
   Mailing Address: 8500 N MOPAC EXPY STE 820
   City, State: AUSTIN, TX Zip: 78759
   Telephone: 806-679-7303 FAX: _____
   Email Address: operations@sandlinservices.com

9. Project Location:

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

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

    4631 E New Hope Dr, Leander, TX 78641

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: 4/20/2023

14. ☒ **Attachment C – Project Description**. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

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

15. Existing project site conditions are noted below:

- ☐ Existing commercial site
- ☐ Existing industrial site
- ☒ Existing residential site
- ☐ Existing paved and/or unpaved roads
- ☐ Undeveloped (Cleared)
- ☐ Undeveloped (Undisturbed/Uncleared)
- ☐ Other: _____

Prohibited Activities

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

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

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

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

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

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

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

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

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

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

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

Administrative Information

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

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

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

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

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

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

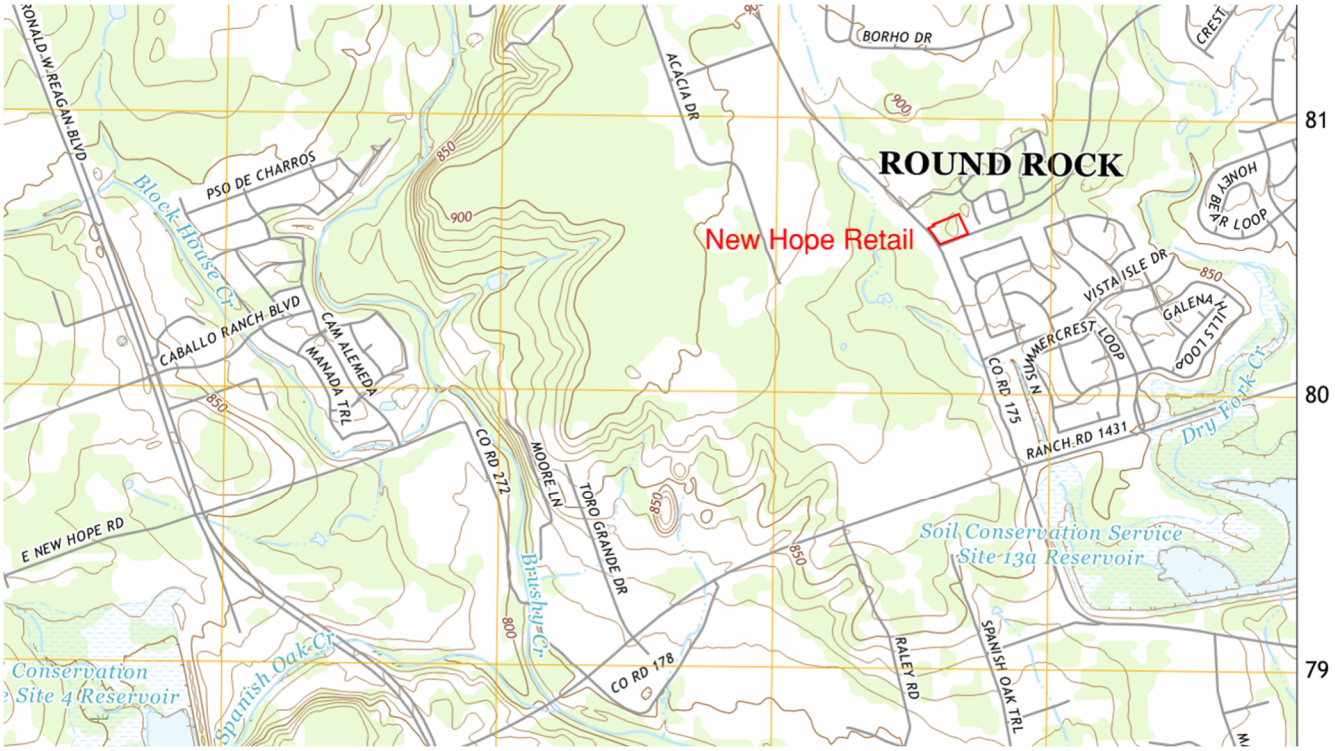
General Information Form
(TCEQ-0587)

Attachment A:
Road Map

Source: Google Earth Pro accessed 06/07/2023

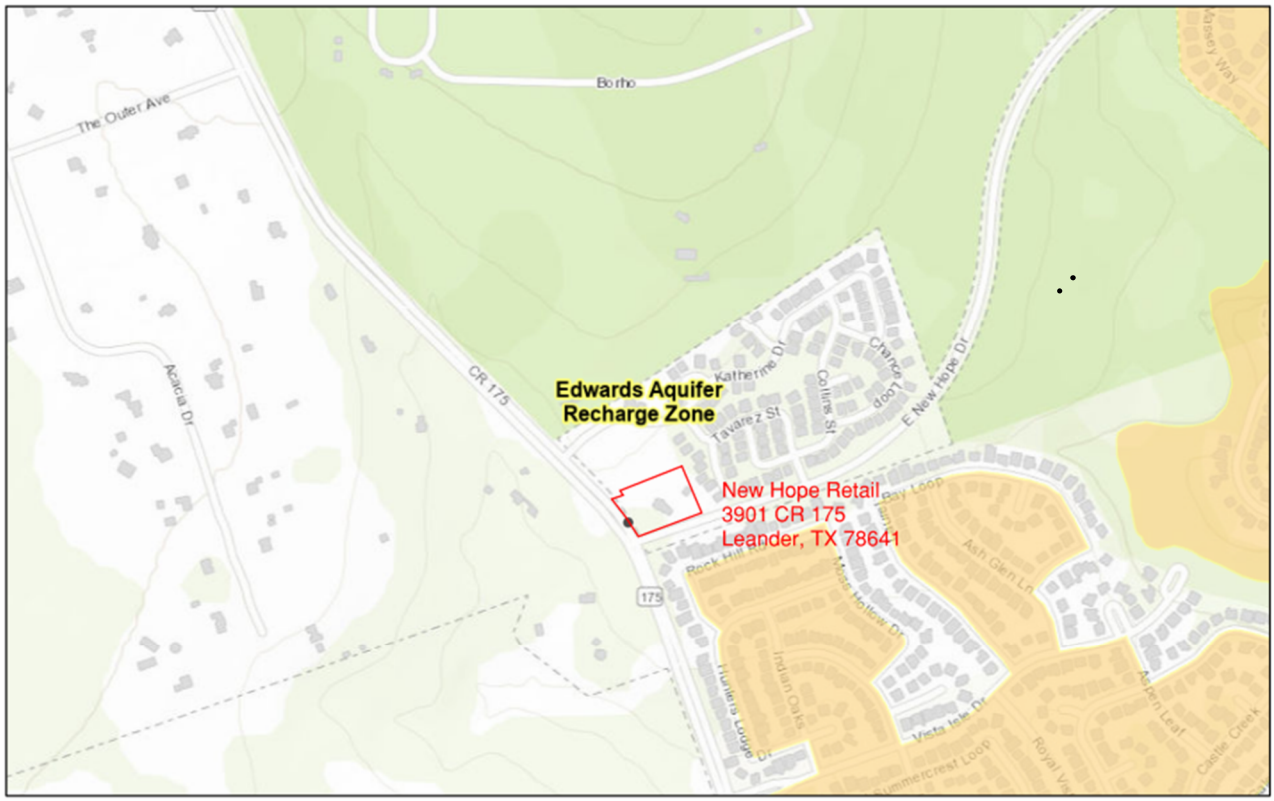
General Information Form
(TCEQ-0587)

Attachment B:
USGS Quadrangle Map
Edwards Aquifer Recharge Zone Map
FEMA FIRM Map



Source: Portion of USGS Quadrangle Map (TX_Leander_20220811_TM_geo)

EDWARDS AQUIFER ZONE MAP
New Hope Retail
3901 County Road 175
Leander, Texas 78641
Source: TCEQ Edwards Aquifer Viewer
Prepared: June 7, 2023



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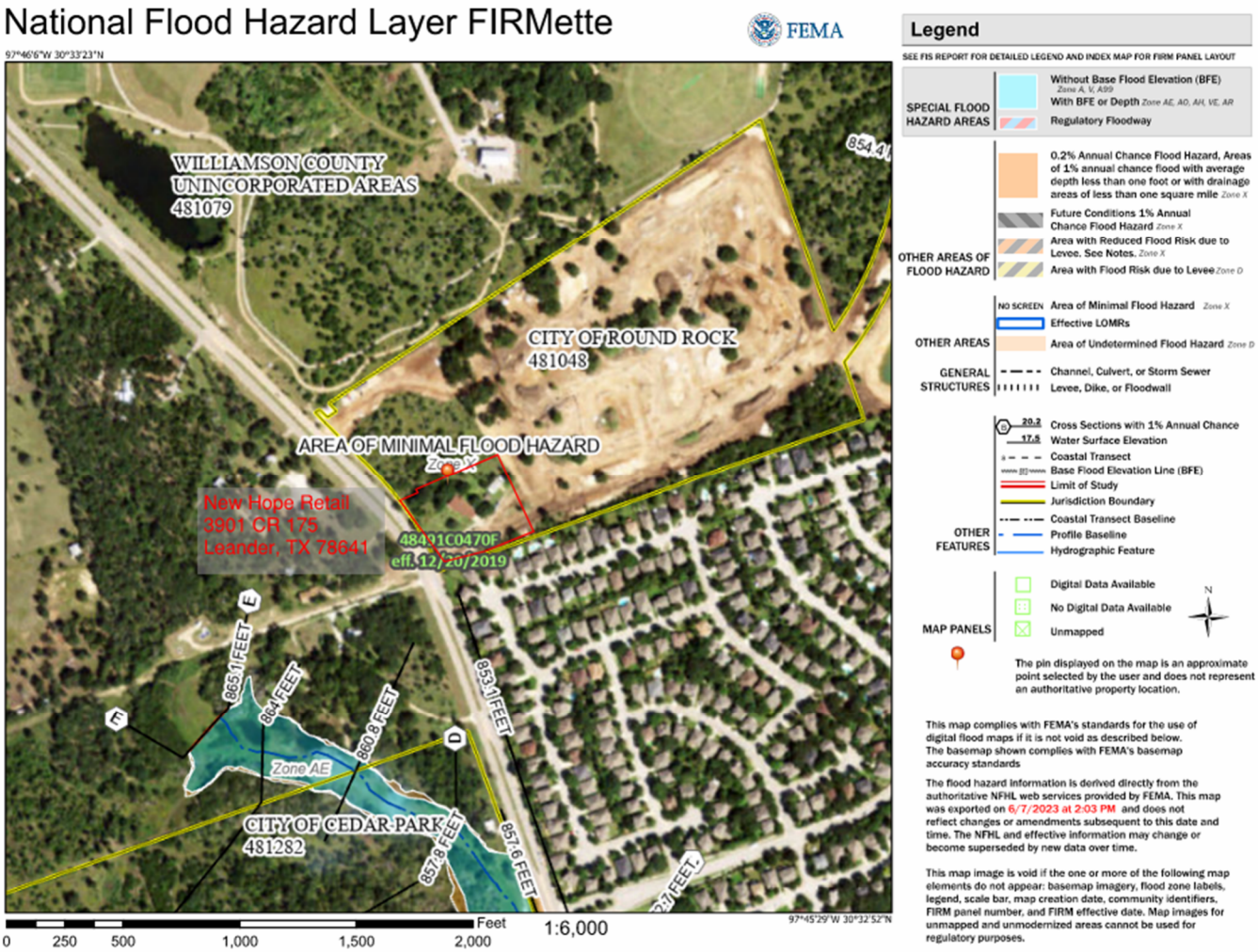
Edwards Aquifer Label
City/Place
TX Counties
7.5 Minute Quad Grid
TCEQ_EDWARDS_OFFICIAL_MAPS

1:9,028
0 0.05 0.1 0.2 mi
0 0.1 0.2 0.4 km

Austin Community College, City of Austin, County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/
Web AppBuilder for ArcGIS
Austin Community College, City of Austin, County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | TCEQ |

FEMA FIRM MAP PANEL

Source: Portion of FEMA FIRM Map Panel 48491C0470F (effective 12/20/2019)



Source: FEMA FIRMETTE Map Panel 48491C0470F (effective 12/20/2019)

General Information Form (TCEQ-0587)

Attachment C: Project Description

Proposed Development

The 2.1 AC (91,639 SF) project site is located at 4631 E New Hope Dr, Leander, Texas 78641. The property, previously located inside the Extraterritorial Jurisdiction (ETJ) of Round Rock, Texas, was annexed into the City of Round Rock, Texas in Williamson, County (Ordinance O-215-2601: WC Document No 215056526). The project site has an existing farmhouse and associated structures that will be removed. Proposed development includes two (2) retail buildings with associated, paving, drainage, utility and water quality infrastructure. The property is within the Edwards Aquifer Recharge Zone. The proposed commercial development will use existing stormwater drainage infrastructure to an existing water quality pond within the neighboring residential development. The proposed commercial development is a phase of the existing PUD 101 (Gardens at Mayfield Ranch) WPAP. A standalone WPAP is shown here instead of a MOD since the owners of the commercial tracts differ from the owner of the overall BMP. The current plans and easement that the BMP lies within account for and legally allow the impervious cover to drain to the existing BMP. The WPAP will not propose additional BMPs for permanent stormwater quality control as the existing BMP has capacity per the water quality calculations within the Site Construction Plans.

This property is a recorded legal lot under Doc. No. 2019081619 Replat Lot 1 Gardens at Mayfield.

Legal description of the property is GARDENS AT MAYFIELD (LT 1 REPLAT), BLOCK A, Lot 1B, acres 2.1 (Replat Lot 1 Document No. 2019081619).

Site Description and History

The 2.1 AC project site is located at 3901 CR 175, Leander, Texas 78641. The property is currently owned by NEW HOPE RE LLC (Document #2019094395 dated 09/26/2019.

Total land area (2.1 AC) is on land with 0% - 15% slopes. Elevation is between 935 FT and 940 FT. Vegetation on-site is primarily cedar and grasses.

Access

Proposed and existing access to the site is along County Road 175 and E New Hope Dr.

Impervious Cover (IC)

Total existing area of impervious cover is approximately 0.3 acres.

Total proposed Project Site IC is 1.59 AC, or 75.4% of the project site. Existing and proposed areas of impervious cover will be treated as shown in the permanent stormwater section.

Watershed and FEMA Floodplain Information

The project site is within the Turkey Creek-Brushy Creek Watershed, which drains to the Brazos River Basin. No surface streams run across the property.

The project site is not located within the boundaries of the 100-year floodplain of any waterway that is within the limits of the study of the Federal Emergency Insurance Administration (FEMA) FIRM Panel #48491C0470F (Effective 12/20/2019).

Additional stormwater drainage BMPs will not be needed, per our Calculations in this plan and as confirmed with City of Round Rock and Williamson County (Pond owners), as the drainage for this site will convey through the neighboring residential development to an existing detention/water quality pond previously approved and constructed to convey developed, undetained flows from impervious cover added within this commercial subdivision. As shown within the included TSS removal calculations, treatment for the proposed impervious cover resulting from this development is within the capacity of the existing water quality pond.

Temporary Best Management Practices (BMPs)

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.

Prior to soil disturbing construction activity, temporary BMPs will be installed. Silt fencing will be installed along the down-gradient sides of the property to intercept and detain waterborne sediment from unprotected areas. The silt fence shall remain in place until the disturbed area is permanently stabilized.

Permanent Best Management Practices (BMPs)

Permanent BMPs were previously designed and approved to convey and contain stormwater drainage and water quality from the developed project site. Stormwater infrastructure for conveyance through the neighboring residential development to an existing detention/water quality pond has already been constructed and accepted. Stormwater infrastructure was installed and was designed to convey developed, undetained flows from impervious cover added within this commercial subdivision. Stormwater flows from this site will pass through to this pond.

After construction activities are complete, the Existing permanent BMPs will be maintained as described in Attachment G of the Permanent Stormwater Section. Permanent seeding, sodding or mulching will be utilized as described in Attachment J of the Temporary Stormwater Section. Permanent BMPs for trash, herbicide/pesticide use, and general maintenance of the BMPs are also described in Attachment G of the

Permanent Stormwater Section. With this Construction, the BMP shall be confirmed to be in good condition and functioning properly.

Offsite Areas

No offsite areas are anticipated to be affected by pre and post construction activities at the site. Temporary BMPs will minimize any anticipated effects of the proposed construction activities. Permanent BMPs will address any anticipated stormwater issues at the developed site. See Existing Approved WPAP for more details as well as our referenced Construction Plans

Areas to be Demolished

Existing structures on the commercial tract will be demolished to allow for the access road from New Hope Drive per the existing joint access easement in place.

Geologic Assessment Form
(TCEQ-0585)

EXCEPTION REQUESTED TO THE GEOLOGIC ASSESSMENT

REGULATED ENTITY NAME: NEW HOPE RETAIL

TYPE OF PROJECT: WPAP & SCS

LOCATION OF PROJECT: RECHARGE ZONE

Sandlin Services, LLC is respectfully requesting an exception from the required Geologic Assessment at the Commercial Project Located within the Approved Existing WPAP & SCS plan. An existing GA completed with this project exists and from our records shows no sensitive features on the obtainable data. To my knowledge, the document we are referencing and noted in this form accurately reflects the information concerning the proposed regulated activities and methods to protect the Edwards aquifer. Please feel free to contact us with any questions about the existing Geologic Assessment included within the Existing Approved WPAP 11003222. The previously approved Geologic Assessment is included in the following sheets.

Geologic Assessment
TCEQ-0585

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: Chad M. Copeland, P.G.

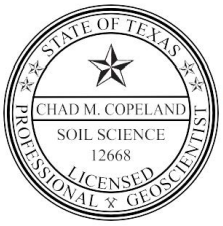
Telephone: 512-335-1785x124

Fax: 512-335-0527

Date: 8/2/2022, 8/3/2022 & 8/16/2022

Representing: Ranger Environmental Services, LLC (TBPG Firm No. 50140) (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



08/18/2022

Regulated Entity Name: Mayfield Office Park

Project Information

1. Date(s) Geologic Assessment was performed: 8/3/2022
2. Type of Project:
   - ☒ WPAP
   - ☐ SCS
   - ☐ AST
   - ☐ UST
3. Location of Project:
   - ☒ Recharge Zone
   - ☐ Transition Zone
   - ☐ Contributing Zone within the Transition Zone

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

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

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)

Soil Name	Group*	Thickness(feet)
Crawford clay (1-3% slopes) (CfB)	D	1.67-3.33
Eckrant stony clay (0-3% slopes) (EeB)	D	0.33-1.67

** 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" = 30 '
   Site Geologic Map Scale: 1" = 30 '
   Site Soils Map Scale (if more than 1 soil type): 1" = ~320'

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.

ATTACHMENT A

Geological Assessment Table
TCEQ-0585 Table

GEOLOGIC ASSESSMENT TABLE			PROJECT NAME: Mayfield Office Park																
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	
G-1	30.552851	-97.764019	SC	20	Ked	3.5	3.5	4.0	N09°E				C/O	35	55		X		X	Hilltop
G-2	30.552832	-97.764018	SC	20	Ked	1.0	1.0	1.0	N09°E				C/O	35	55		X		X	Hilltop
G-3	30.552066	-97.762856	MB	30	Ked	0.5								5	35	X			X	Hilltop

* DATU WGS84

2A TYP	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

Sheet ___1___ of ___1___

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

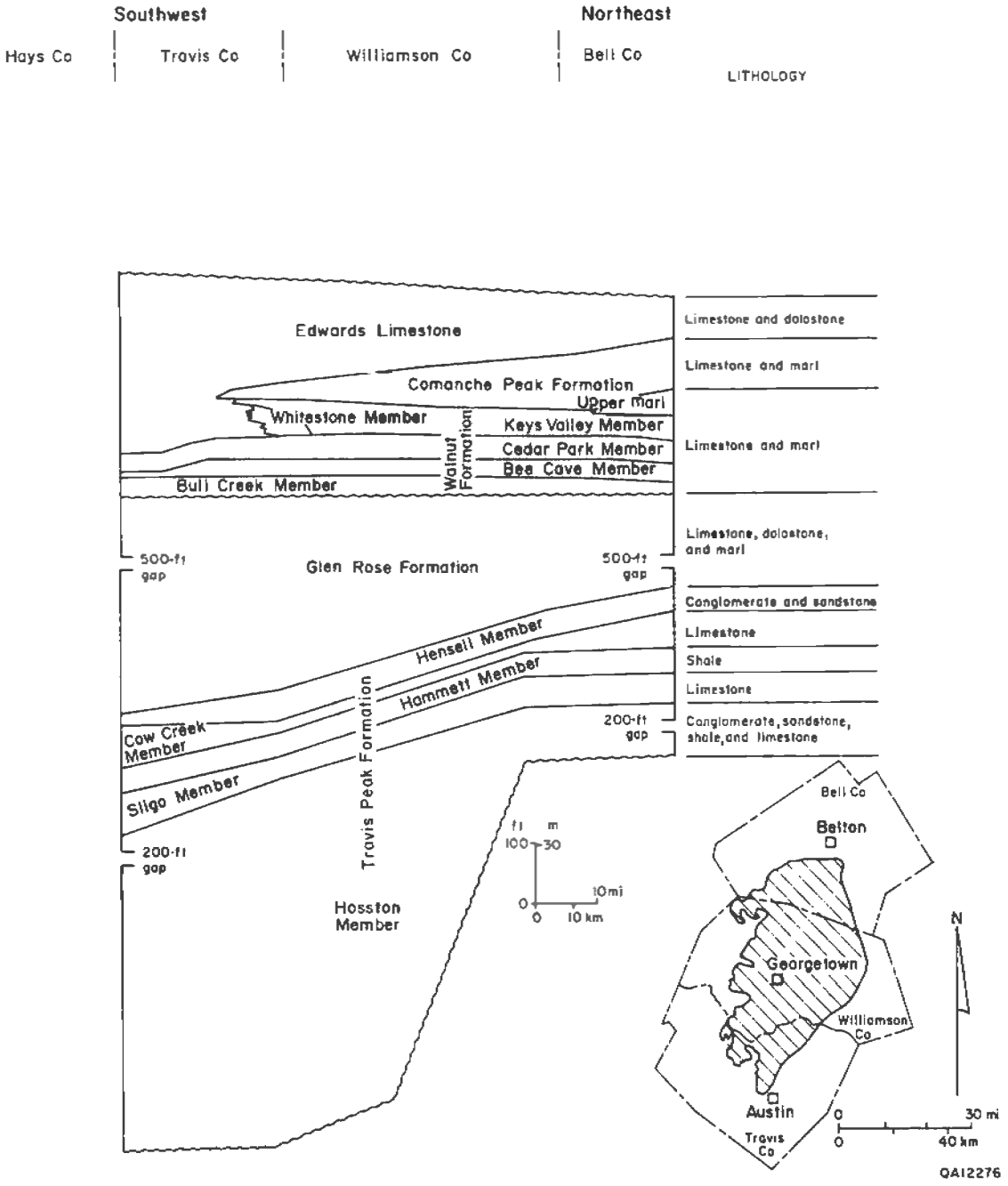
STATE OF TEXAS
CHAD M. COPELAND
SOIL SCIENCE
12668
LICENSED
PROFESSIONAL GEOSCIENTIST

08/18/2022

ATTACHMENT B

Stratigraphic Column

Stratigraphic column of Cretaceous rocks of the northern segment of the Edwards aquifer, Austin region.



RANGER ENVIRONMENTAL SERVICES, INC.

Mayfield Office Park

RANGER REFERENCE 6577

*FIGURE ADAPTED AND EDITED BY RANGER ENVIRONMETAL SERVICES

*ORIGINAL SOURCE: Senger, R., Collins E., Kreitler C. (1990). Hydrology of the Northern Segment of the Edwards Aquifer, Austin Region. The University of Texas at Austin, Texas 78713. Bureau of Economic Geology.

ATTACHMENT C

Site Geology

RANGER
ENVIRONMENTAL SERVICES, INC.

GEOLOGIC ASSESSMENT
Mayfield Office Park
3835 County Road 175
Leander, Texas
Williamson County
August 2022

INTRODUCTION

Ranger Environmental Services, Inc. (Ranger) was contracted to conduct a Geologic Assessment of the referenced property. This location lies within the designated Edwards Aquifer Recharge Zone. The site was noted to support a residential dwelling, a water well pump house and a shop. Since the subject site is located over the Edwards Aquifer Recharge Zone, site development should adhere to the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program Rules in accordance with Title 30 of the Texas Administrative Code, Section 213 (30 TAC§ 213).

PROJECT DESCRIPTION

The subject site consists of two lots (Lot 1A, Block A and Lot 1B, Block A), and is approximately 4.99 acres, more or less, located at 3835 County Road 175, Leander, in Williamson County, Texas at approximately N 30.552066 and approximately W 97.762856.

The site is located at the corner of County Road 175 and East New Hope Drive in Leander, Texas. The site is adjacent and part of a residential development. Portions of Lot 1A were noted to be cleared.

METHODOLOGY

This assessment follows general guidelines contained in Texas Commission on Environmental Quality (TCEQ) guidance "*Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones"* (TCEQ Guidance 0585). The site is located on an area of the recharge zone that may contain karst features within the outcropping limestone. Karst features may be expressed as surface features but more commonly tend to persist with depth.

A field geologic assessment was conducted by Chad M. Copeland, P.G. and Daniel E. Airey, P.G. on August 2, 2022, August 3, 2022 and August 16, 2022. The site is supports a residential dwelling, water well pump house and shop.

The walking geologic survey was conducted on 50-foot center transects, where possible. No intrusive testing was conducted. If present, features identified in the field were photographed and

recorded with a hand held global positioning system (GPS). Features include, but were not limited to, caves, solution cavities, solution-enlarged fractures, faults, manmade features in bedrock, swallow holes, sinkholes, non-karst closed depressions, and zone clustered or aligned features. The geologic assessment table, stratigraphic column, geologic, soils and topographic maps are included herein.

RESEARCH INFORMATION

Prior to conducting the geologic survey, Ranger conducted a review of existing geologic data and maps to prepare for the field survey. Reviewed references included, but are not limited to:

- Barnes, V.E. 1974. *Geologic Atlas of Texas, Austin Sheet*. The University of Texas at Austin, Bureau of Economic Geology.
- Senger, R.K., E.W. Collins and C.W. Kreitler. 1990. Hydrogeology of the Northern Segment of the Edwards Aquifer, Austin Region, Report of Investigations 192. The University of Texas at Austin, Bureau of Economic Geology.
- Texas Commission on Environmental Quality. 1999. Complying with the Edwards Aquifer Rules: Administrative Guidance.
- Texas Commission on Environmental Quality. Revised 2004. Instructions to Geologist for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones.
- Sellards, E.H., W.S. Adkins and F.B. Plummer. 1932. The University of Texas Bulletin No. 3232. The Geology of Texas. Volume 1, Stratigraphy.
- U.S. Department of Agriculture National Resources Conversation Services (www.nrcs.usda.gov).
- Texas Commission on Environmental Quality (www.tceq.state.tx.us).
- FEMA Flood Plain Maps.
- Center for Geospatial Technology, Texas Tech University, obtained from the Texas Geologic Atlas of Texas.
- USGS Topographic Maps – Terrain Navigator Pro 2015.
- ERIS

SITE GEOLOGY

The subject site is underlain by Cretaceous sedimentary strata. In general, the Cretaceous strata dip regionally one degree towards the east-southeast. The area lies within the Balcones Fault Zone, a geologic province characterized in this region by north-northeast trending en echelon normal faults with the downthrown side most commonly to the east of the fault planes.

The Balcones Fault Zone trend closely follows the structural trend of the late Paleozoic Ouachita fold and thrust belt. Faulting may have been initiated in the Late Cretaceous with the majority of movement taking place during the late Oligocene and early Miocene. Minor isostatic adjustments resulting from sediment loading in the Gulf of Mexico continue to the present.

Referencing the Geologic Atlas of Texas, Austin Sheet, and The University of Texas Bulletin No. 3232, The Geology of Texas, Volume 1 the local stratigraphic units that outcrop at the site is the Edwards Limestone (Ked).

The Lower Cretaceous Edwards Limestone is a member of the Fredericksburg Group and is massive to thinly bedded limestones and dolostones. The Edwards Limestone is generally light gray, crystalline to coarse-grained, cavernous and includes calcareous shell detritus. Chert and rudistids are present within the Edwards Limestone and can serve as markers to differentiate the Edwards Limestone from the underlying Comanche Peak Formation and the unconformable and overlying Georgetown Formation.

In the Austin area, the Edwards Limestone has a maximum thickness of approximately 300 feet and thins to the north. Recharge to groundwater within the Edwards Limestone is primarily through precipitation. The regional groundwater system is characterized by varied porosity and permeability as associated with the vast solution cavities and fracture zones within the Edwards Limestone. Large amounts of groundwater can move from the recharge area through the local system in a short period of time.

Where surface expression of limestone was observed, the limestone was noted to be hard, dense and slightly vuggy. No actual faults or fractures were observed during the site geologic inspection.

SITE SPECIFIC GEOLOGIC FEATURES

The following geologic features, as defined in Texas Commission on Environmental Quality (TCEQ) guidance "*Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones*" (TCEQ Guidance 0585), were observed at the site:

G-1 Solution Cavity (SC) ***Sensitive Feature***

A solution cavity was observed on the northern portion of the property at the approximate GPS coordinates, N 30.552851, W 97.764019. The feature dimensions were documented to be approximately 3.5' (width and length) and 4' (depth). The exposed limestone was noted to be vuggy, crystalline in part, tan to off-white, micritic, extremely hard, and with some iron inclusions. The base of the feature was noted to have loose soil with leaves, sticks and other vegetative litter. A minor topographic subsidence was noted radially around the feature. The probability of rapid infiltration was noted to be high. The catchment area was noted to be greater than 1.6 acres.

G-2 Solution Cavity (SC) ***Sensitive Feature***

A solution cavity was observed on the northern portion of the property at the approximate GPS coordinates, N 30.552832, W 97.764018. G-2 was noted to be southwest of G-1. The feature dimensions were documented to be approximately 1' (width and length) and 1' (depth). The exposed limestone was noted to be vuggy, crystalline in part, tan to off-white, micritic, extremely hard, and with some iron inclusions. The base of the feature was noted to have loose soil with leaves, sticks and other vegetative litter. A minor topographic

subsidence was noted radially around the feature. The probability of rapid infiltration was noted to be high. The catchment area was noted to be greater than 1.6 acres.

It should be noted, G-1 and G-2 were located on a N09°E trend. Although with multiple apertures, features G-1 and G-2 could be classified as a Zone, within this report they are treated as separate features.

G-3 Water Well (MB) ***Not a Sensitive Feature***

What appeared to be a water well was observed behind the residential dwelling adjacent to a pump house structure. The water well was buried beneath freshly placed soil. Upon inspection and after removal of a thin layer of soil, a cap was observed on the water well. No pump or downhole equipment was observed. The water well casing (PVC) diameter was observed to be 0.5'. Utilizing a measuring tape, the water well was noted to be greater than 60' deep. The fact that the water well was capped, the probability of rapid infiltration is low. The catchment area was noted to be greater than 1.6 acres.

SOIL DESCRIPTION

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) *Web Soil Survey*, the soils at the site were noted to be:

- Crawford clay, 1 to 3 percent slopes (CfB)
- Eckrant stony clay, 0 to 3 percent slopes, stony (EeB)

Please see attached USDA NRCS Custom Soil Resource Report.

TOPOGRAPHY AND DRAINAGE

The topography at the site was noted to be relatively flat. Surface flow is likely to be towards the south/southeast.

CONCLUSIONS AND RECOMMENDATIONS

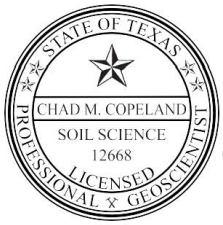
Ranger Environmental Services, Inc. conducted a Geologic Assessment of the site in accordance with 30 TAC§ 213. Ranger concludes that sensitive features as defined by the TCEQ (30 TAC§ 213) were observed at the site.

This assessment does not address the possible presence of subsurface conditions that may be exposed during future construction and/or development. Should solution features or conditions be exposed during site construction activities that indicate a potential for hydraulic interconnectedness between the surface and the Edwards Aquifer, operations in the vicinity of the feature should be halted and the Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program should be contacted immediately in accordance with 30 TAC §213.5(f)(2).

LIMITATIONS

It should be noted that only areas readily accessible were inspected. There may be geologic features present that were not identified as part of this study. This non-intrusive visual field assessment cannot wholly eliminate the possibility of sensitive features at the site.

Prepared by:



08/18/2022

Chad M. Copeland, P.G.

Geologic Feature G-1: The view of the solution cavity is towards the northwest.

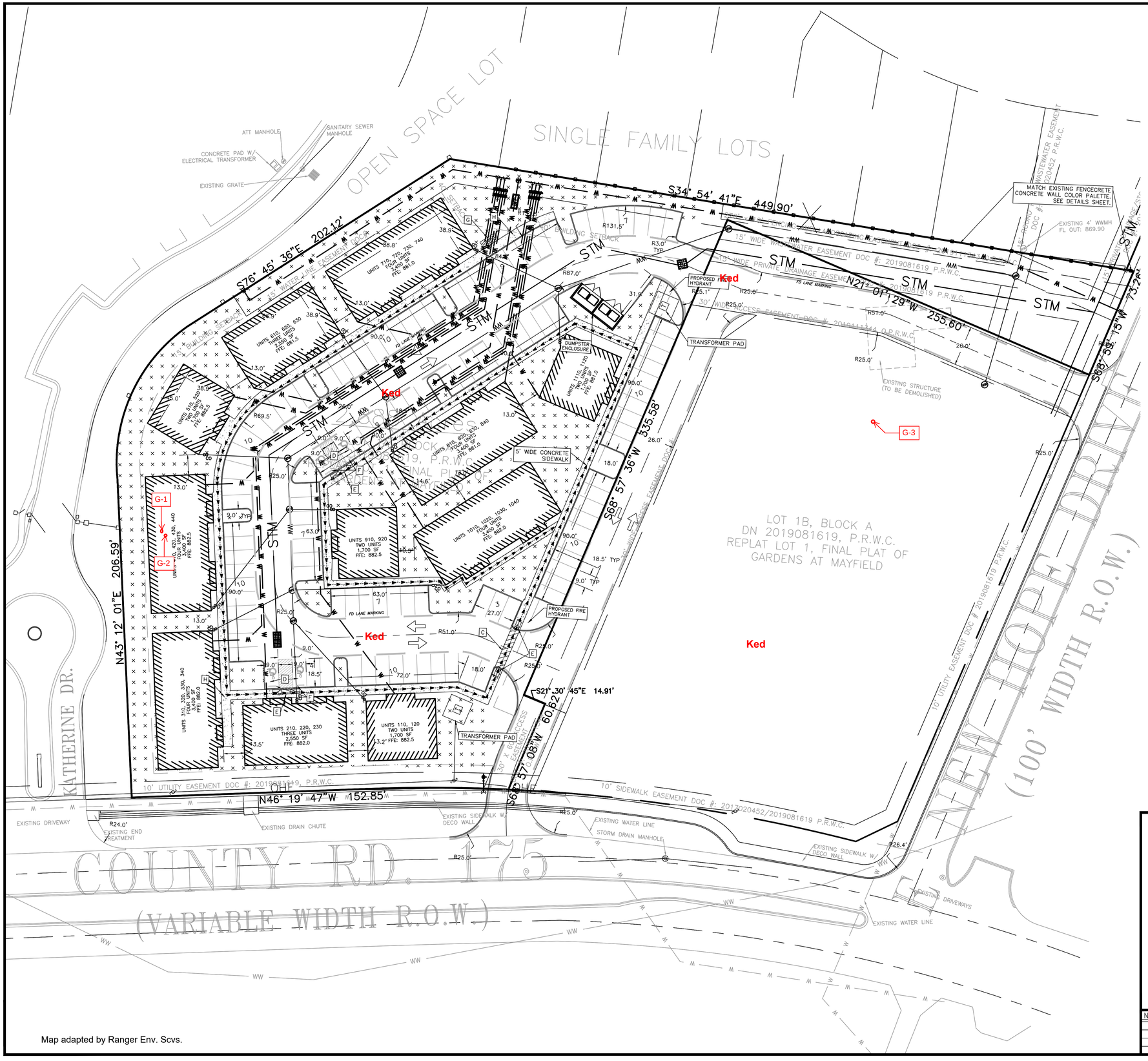
Geologic Feature G-2: The view of the solution cavity is towards the west.

Geologic Features G-1 and G-2: The view of G-1 and G-2 is towards the north/northeast on an approximate N09°E trend. The photo documents the close proximity of the two features.

Geologic Feature G-3: The water well without the cap.

ATTACHMENT D

Site Geologic Map(s)



Map adapted by Ranger Env. Scvs.

ZONING SETBACKS

ZONE: C1A – GENERAL COMM
MIN. FRONT YARD SETBACK: 15
MIN. REAR SETBACK: 15
MIN. SIDE SETBACK: 15
SF ADJACENT SETBACK: 40

MAX IMPERVIOUS COVERAGE: 85%

MAX BUILDING HEIGHT: 5 STORIES

0 15' 30' 60'
SCALE: 1" = 30'

IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

CITY OF ROUND ROCK NOTES:

B. LIGHTING
A. EXTERIOR LIGHTING SHALL BE USED TO PROVIDE ILLUMINATION FOR SECURITY AND SAFETY OF ENTRY DRIVES, PARKING AREAS, SERVICE AND LOADING AREAS AND PATHWAYS AND COURTYARDS. ALL EXTERIOR LIGHT FIXTURES SHOULD BE DESIGNED AND COORDINATED AS COMPATIBLE FIXTURES WHICH RELATE TO THE ARCHITECTURAL CHARACTER OF THE BUILDINGS ON A SITE.
B. EXTERNAL LIGHTING SHALL BE ARRANGED AND CONTROLLED, THROUGH THE USE OF SHIELDING AND OTHER MEASURES, SO AS TO DEFLECT LIGHT AWAY FROM ANY RESIDENTIAL AREAS.
C. BUILDING ILLUMINATION
I. THE DESIGN AND MATERIALS OF LIGHTING FIXTURES SHALL BE CONSISTENT WITH THE CHARACTER OF THE AREA. FULLY RECESSED DOWN-LIGHTS, GOOSENECK LIGHTS OR OTHER FIXTURES APPROPRIATE TO THE STYLE OF A BUILDING SHALL BE USED.
II. ILLUMINATION OF A FACADE TO HIGHLIGHT ARCHITECTURAL DETAILS IS PERMITTED. FIXTURES SHALL BE SMALL, SHIELDED AND DIRECTED TOWARD THE BUILDING RATHER THAN TOWARD THE STREET, SO AS TO MINIMIZE GLARE FOR PEDESTRIANS AND DRIVERS. FLASHING, SCROLLING OR NEON LIGHTING SHALL BE PROHIBITED.
D. SITE LIGHTING DESIGN REQUIREMENTS
I. FIXTURE (LUMINAIRE)
THE LIGHT SOURCE SHALL BE COMPLETELY CONCEALED (RECESSED) WITHIN AN OPAQUE HOUSING AND SHALL NOT BE VISIBLE FROM ANY STREET OR RESIDENTIAL DEVELOPMENT
II. LIGHT SOURCE (LAMP)
INCANDESCENT, LED (LIGHT EMITTING DIODE), FLUORESCENT, METAL HALIDE OR COLOR-CORRECTED HIGH-PRESSURE SODIUM MAY BE USED. OTHER LAMP TYPES MAY BE USED, SUBJECT TO THE APPROVAL OF THE CITY. THE SAME TYPE OF LAMP SHALL BE USED FOR THE SAME OR SIMILAR TYPES OF LIGHTING ON ANY ONE SITE THROUGHOUT A DEVELOPMENT.
III. MOUNTING
FIXTURES SHALL BE MOUNTED IN SUCH A MANNER THAT THE CONE OF LIGHT DOES NOT CROSS ANY PROPERTY LINE OF THE SITE.
IV. HEIGHT OF FIXTURE
THE HEIGHT OF A FIXTURE SHALL NOT EXCEED TWENTY (20) FEET.
V. LIGHTING WITHIN ANY LOT THAT UNNECESSARILY ILLUMINATES AND SUBSTANTIALLY INTERFERES WITH THE USE OR ENJOYMENT OF ANY OTHER LOT IS NOT PERMITTED. LIGHTING UNNECESSARILY ILLUMINATES ANOTHER LOT IF IT CLEARLY EXCEEDS THE REQUIREMENTS OF THIS SECTION, OR IF THE STANDARD COULD REASONABLY BE ACHIEVED IN A MANNER THAT WOULD NOT SUBSTANTIALLY INTERFERE WITH THE USE OR ENJOYMENT OF NEIGHBORING PROPERTIES.
VI. LIGHTING SHALL NOT BE ORIENTED SO AS TO DIRECT GLARE OR EXCESSIVE ILLUMINATION ONTO THE STREET IN A MANNER THAT MAY DISTRACT OR INTERFERE WITH THE VISION OF DRIVERS ON SUCH STREETS.
VII. IF THE COM PARCEL IS ADJACENT TO A RESIDENTIAL DISTRICT, FOOT CANDLE READINGS AT THE PROPERTY LINE ADJACENT TO A RESIDENTIAL USE SHALL NOT EXCEED 1.0.

9. FENCING
A. FENCING SHALL BE CONSTRUCTED OF THE FOLLOWING MATERIALS: BRICK, STONE, REINFORCED CONCRETE, CONCRETE PANEL, WROUGHT IRON, AND OTHER DECORATIVE MASONRY MATERIALS. FENCE POSTS SHALL BE CONSTRUCTED OF RUST RESISTANT METAL PARTS, CONCRETE BASED MASONRY OR CONCRETE PILLARS OF SOUND STRUCTURAL INTEGRITY.
B. ALL FENCES ADJACENT TO RESIDENTIAL USES SHALL PROVIDE A FINISHED FACE ABUTTING THE RESIDENTIAL USE, UNLESS OTHERWISE NOTED.
C. ALL FENCING AND WALLS ON COM COMMERCIAL DEVELOPMENTS THAT ARE VISIBLE FROM THE STREET SHALL BE CONSTRUCTED OF A MATERIAL COMPARABLE TO THE MASONRY WALL MATERIALS UTILIZED WITHIN THE RES RESIDENTIAL PORTIONS OF THE COMMUNITY.

NOTE:

1. A SEPARATE SIGN PERMIT IS REQUIRED FOR ALL FREE STANDING SIGNS AND WALL MOUNTED SIGNS.
2. ALL SITE LIGHTING IS WALL PACK, SEE PHOTOMETRIC PLAN. FREE STANDING LIGHTS ARE NOT PROPOSED
3. REFER TO SIGNS BELOW AND PHOTOMETRIC PLAN FOR APPROXIMATE LOCATION
4. FOUNDATION TREATMENT WILL BE PROVIDED WITH LANDSCAPING PER CITY OF ROUND ROCK REQUIREMENTS.
5. TREE MITIGATION WILL BE PROVIDED FOR THE SHOWN TREES. MITIGATION WILL BE PROVIDED WITH PLANTED TREES IN THE CENTER OF EXISTING END ISLANDS OF THE ADJACENT PARKING.
6. ANY GROUND MOUNTED EQUIPMENT SHALL BE IN CONFORMANCE WITH SEC. 8-40 (SECTION 2-72(D)7) ALTHOUGH NOT ANTICIPATED FOR THIS PROJECT.
7. PER SEC. 2-72(E) A MINIMUM OF FIVE DIFFERENT BUILDING ARTICULATIONS AND ONE SPECIAL DESIGN FEATURE ARE REQUIRED. SEE BUILDING FOOTPRINT.
8. MATERIALS, ARTICULATION, AND DESIGN FEATURES SHALL COMPLY WITH ROUND ROCK PUD REQUIREMENTS.
9. PER SECTION 8-1 ROOF-MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW. SCREENING SHALL UTILIZE THE SAME OR SIMILAR MATERIALS AS THE PRINCIPAL STRUCTURE.
10. DETENTION POND, DUMPSTER ENCLOSURES, AND GROUND-LEVEL UTILITIES MUST BE SCREENED PER SECTION 8-40.

CITY OF ROUND ROCK SITE DATA	
	PROPOSED
TOTAL SITE AREA	2.89 AC / 125,822 SF
EXISTING ZONING	PUD 101
IMPERVIOUS COVER	78,721 SF/125,822 SF = 62.6%
BUILDING HEIGHT	1 STORY – 18 FT
FOUNDATION TYPE	CONCRETE SLAB

PROJECT CASE: SDP2205-0007

G-x - Geologic Feature
Ked - Edwards Formation

STATE OF TEXAS
CHAD M. COPELAND
SOIL SCIENCE
12668
LICENSED
PROFESSIONAL SOIL SCIENTIST

08/18/2022

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER

7/12/2022

THIS PLAN SET FOR REVIEW ONLY NOT FOR CONSTRUCTION

SITE PLAN LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER
- STREET CENTERLINE
- FENCE
- STRUCTURAL RETAINING WALL (BY OTHERS)
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PARKING SPACES
- TRANSFORMER PAD
- SITE WALLS
- PHASING

TAS ACCESSIBLE ROUTE
TAS ACCESSIBLE ROUTES MAY NOT EXCEED A CROSS SLOPE OF 1:50 (2%) OR EXCEED A RUNNING SLOPE OF 1:20 (5%) UNLESS DESIGNED AS A RAMP. THE MAXIMUM RUNNING SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12 (8.33%). THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 INCHES. REFER TO GRADING SHEET(S).

- EX. WATER LINE / PR. WATER LINE
- EX. WASTEWATER / PR. WASTEWATER
- EX. STORM SEWER LINE / PR. STORM SEWER LINE
- EX. FIRE HYDRANT / PR. FIRE HYDRANT
- EX. WATER METER / PR. WATER METER
- EX. WASTEWATER MANHOLE / PR. WASTEWATER MANHOLE
- FITTINGS AS NOTED / FLOW ARROW
- GATE VALVE AS NOTED / ELECTRIC TRANSFORMER
- WW CLEAN OUT / UTILITY POLE
- BFP BACK FLOW PREVENTER / FIRE LINE

SITE LEGEND

- A 6" CURB & GUTTER. SEE DETAIL SHEET.
- B CASTELLATED CURB. SEE DETAIL SHEET.
- C PEDESTRIAN CROSSWALK.
- D HANDICAP SPACE W/SIGN. SEE DETAIL SHEET.
- E PEDESTRIAN ADA RAMP OR AT GRADE ADA DOME PAVERS. SEE DETAIL SHEET.
- F CONCRETE WHEEL STOP. SEE DETAIL SHEET.
- G STANDARD CITY BIKE RACKS. SEE DETAIL SHEET.
- H 6' WIDE CONCRETE SIDEWALK. SEE DETAIL SHEET.

PARKING TABLE	
TOTAL BUILDING AREA	0.66 AC/28,900 SF
PARKING RATIO – OFFICE	1 SPACE: 250 SF
PARKING REQUIRED	28,900 / 250 = 116 SPACES
PARKING PROVIDED	116 SPACES W/ 4 ADA & 2 VAN

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

SITE PLAN

MAYFIELD OFFICE PARK

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 8 OF 41

NOTES:
1.ALL PROPERTY BOUNDARIES ARE APPROXIMATE AND NOT TO BE USED FOR CONSTRUCTION PURPOSES.
2.IMAGERY IS UTILIZED AS A POINT OF REFERENCE; SITE DETAILS AND SCALE ARE APPROXIMATE.
3.AERIAL IMAGES ARE ARCHIVED AND MAY NOT REFLECT CURRENT CONDITIONS.Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

RANGER ENVIRONMENTAL SERVICES, INC.

0 50 100 200 300 400 Feet

1:2,000

Geologic Site Map
Gardens at Mayfield
Leander, Williamson County, Texas

NOTES:
1.ALL PROPERTY BOUNDARIES ARE APPROXIMATE AND NOT TO BE USED FOR CONSTRUCTION PURPOSES.
2.IMAGERY IS UTILIZED AS A POINT OF REFERENCE; SITE DETAILS AND SCALE ARE APPROXIMATE.
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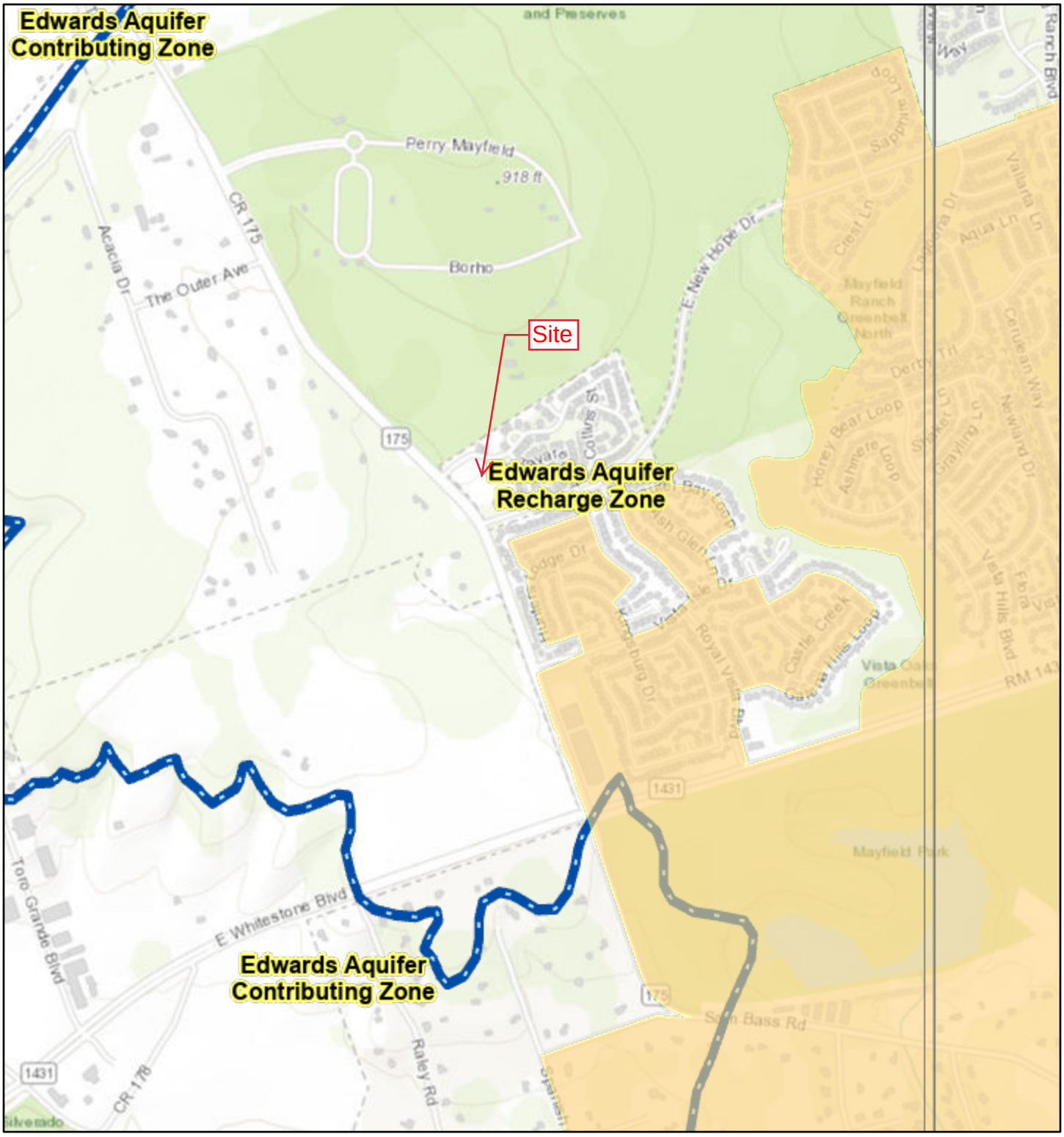
RANGER ENVIRONMENTAL SERVICES, INC.

0 50 100 200 300 400 Feet

1:2,000

Edwards Aquifer Map
Gardens at Mayfield
Leander, Williamson County, Texas

Edwards Aquifer Viewer Custom Print



8/16/2022, 12:32:04 PM

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

- Edwards Aquifer Label
- Edwards Aquifer Boundary
- Edwards Aquifer Boundary central line
- City/Place
- TX Counties
- 7.5 Minute Quad Grid
- TCEQ_EDWARDS_OFFICIAL_MAPS

Austin Community College, City of Austin, County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA, TCEQ

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

Gardens at Mayfield

August 2, 2022

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.

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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

NOTES:
1.ALL PROPERTY BOUNDARIES ARE APPROXIMATE AND NOT TO BE USED FOR CONSTRUCTION PURPOSES.
2.IMAGERY IS UTILIZED AS A POINT OF REFERENCE; SITE DETAILS AND SCALE ARE APPROXIMATE.
3.AERIAL IMAGES ARE ARCHIVED AND MAY NOT REFLECT CURRENT CONDITIONS.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 May, 2020.

RANGER ENVIRONMENTAL SERVICES, INC.

0 75 150 300 450 600 Feet

1:3,000

Topographic Map (Leander Quadrangle)
Gardens at Mayfield
Leander, Williamson County, Texas

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 Scale: 1:1,440 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

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 22, Sep 10, 2021

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

Date(s) aerial images were photographed: Nov 17, 2020—Dec 3, 2020

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
CfB	Crawford clay, 1 to 3 percent slopes	4.7	94.2%
EeB	Eckrant stony clay, 0 to 3 percent slopes, stony	0.3	5.8%
Totals for Area of Interest		**5.0**	**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

CfB—Crawford clay, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2rspf
Elevation: 400 to 1,100 feet
Mean annual precipitation: 26 to 34 inches
Mean annual air temperature: 64 to 68 degrees F
Frost-free period: 230 to 250 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Crawford

Setting

Landform: Plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 6 inches: clay
Bss - 6 to 27 inches: clay
R - 27 to 30 inches: bedrock

Properties and qualities

Slope: 1 to 3 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: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: R081CY358TX - Deep Redland 29-35 PZ
Hydric soil rating: No

Minor Components

Georgetown

Percent of map unit: 4 percent
Landform: Plains
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R081CY361TX - Redland 29-35 PZ
Hydric soil rating: No

Fairlie

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R086AY011TX - Southern Blackland
Hydric soil rating: No

Denton

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R081CY357TX - Clay Loam 29-35 PZ
Hydric soil rating: No

Purves

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

Unnamed

Percent of map unit: 1 percent
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

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

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0 75 150 300 450 600 Feet

1:3,000

Topographic Map (Leander Quadrangle)
Gardens at Mayfield
Leander, Williamson County, Texas

Water Pollution Abatement Plan Application Form (TCEQ-0584)

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.

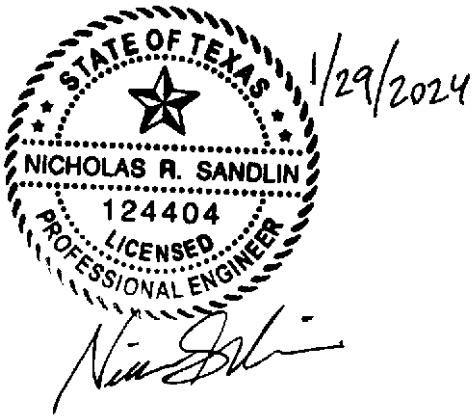
Signature

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: NICK SANDLIN, P.E. (SANDLIN SERVICES, LLC)

Date: 1/29/2024

Signature of Customer/Agent:



Regulated Entity Name: NEW HOPE RETAIL

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):2.1 AC

3. Estimated projected population:28

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	12,850	÷ 43,560 =	0.295
Parking	8,860	÷ 43,560 =	0.203
Other paved surfaces	47,346	÷ 43,560 =	1.087
Total Impervious Cover	69,056	÷ 43,560 =	1.585

Total Impervious Cover 1.585 **÷ Total Acreage** 2.1 **X 100 =** 75.4**% Impervious Cover**

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

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

For Road Projects Only

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

7. Type of project:

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

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

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

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

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

10. Length of pavement area: _____ feet.

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

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

100% Domestic	9,863 Gallons/day
_____% Industrial	_____ Gallons/day
_____% Commingled	_____ Gallons/day
TOTAL gallons/day 9,863	

15. Wastewater will be disposed of by:

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

- ☐ **Attachment C - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.
- ☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☒ Sewage Collection System (Sewer Lines):

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

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

☒ The sewage collection system will convey the wastewater to the Brushy Creek East WWTP (City of Round Rock Wastewater) (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = 40'.

18. 100-year floodplain boundaries:

☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
☒ No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM MAP PANEL 48491C0470F (Effective date: 12/20/2019)

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

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

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

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

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

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

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

☐ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☒ No sensitive geologic or manmade features were identified in the Geologic Assessment.

☒ **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

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

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

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

Administrative Information

29. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Attachment A: Factors Affecting Surface Water Quality

The proposed commercial development has 2 buildings with associated driveways, parking and civil infrastructure. The use of this impervious cover generates TSS which affects surface water quality. No springs or streams are located onsite and the conveyance of the captured stormwater to the existing BMP mitigates these factors that affect surface water quality. Please see construction plans for detailed calculations and infrastructure proposed.

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Attachment B: Volume and Character of Stormwater

The approved master planned development WPAP and water quality calculations account for 80% of the impervious cover for the project site. The impervious cover calculations of less than 80% shown in the site construction plans indicate that the proposed development is in accordance with the established WPAP. On-site stormwater enters a private stormwater system that leads to an existing storm network conveying flows to the existing downstream water quality basin. Please refer to the existing and proposed drainage area maps within the construction plans for the flows exiting the project site.

Water Pollution Abatement Plan Application Form (TCEQ-0584)

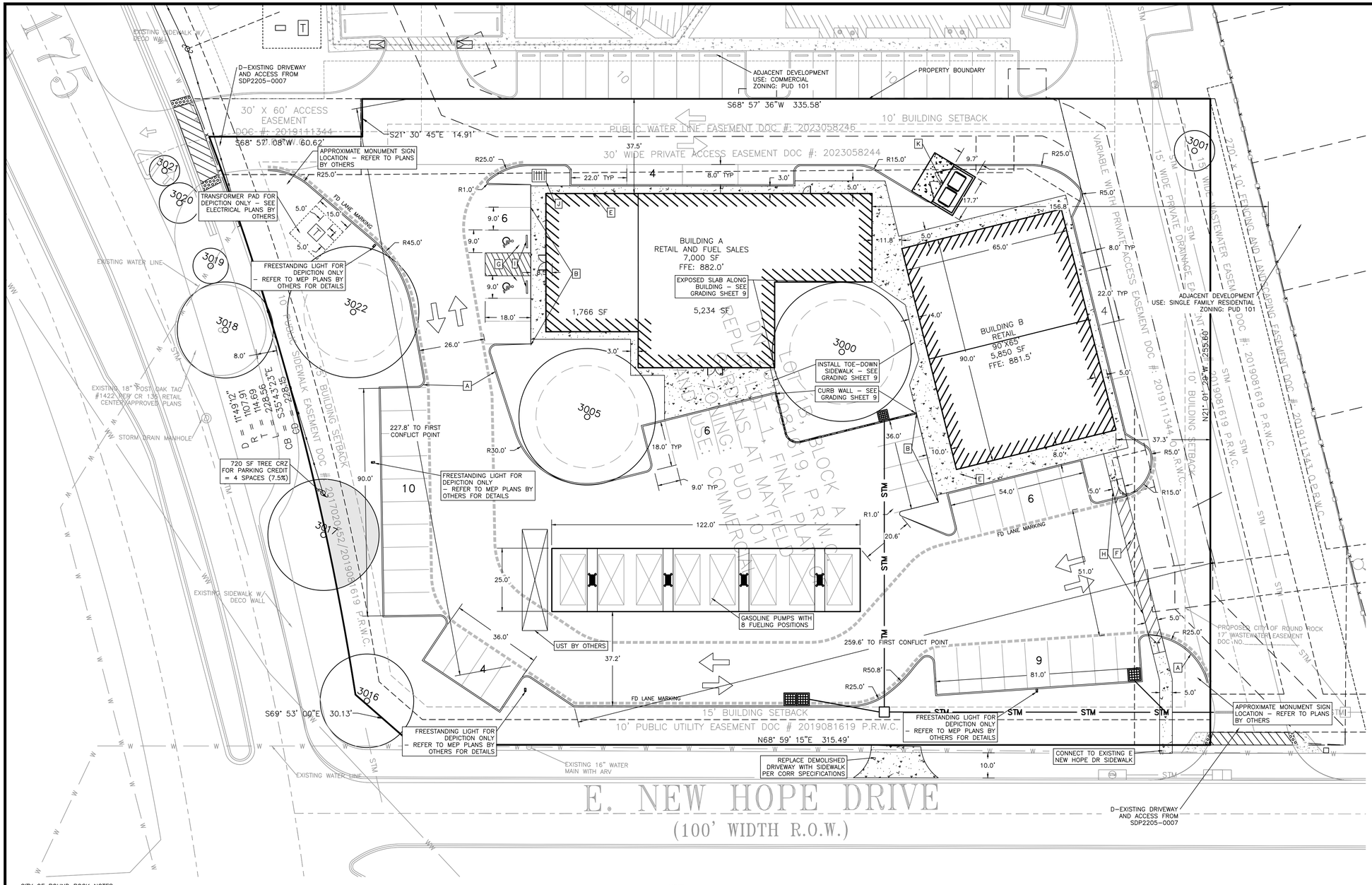
Attachment C:
Suitability Letter from authorized Agent
N/A – OSSF is not proposed

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Attachment D:
Exception to the Required Geologic Assessment
SEE AFOREMENTIONED NARRATIVE LETTER REQUESTING THE EXCEPTION BASED ON THE EXISTING GEOLOGIC ASSESSMENT

Water Pollution Abatement Plan Application Form (TCEQ-0584)

Site Plan



0 10' 20' 40'
SCALE: 1" = 20'

IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED PROFESSIONAL ENGINEER
1/29/2024

SITE PLAN LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER
- STREET CENTERLINE
- STRUCTURAL RETAINING WALL (BY OTHERS)
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PARKING SPACES
- TRANSFORMER PAD
- SITE WALLS
- PHASING

TAS ACCESSIBLE ROUTE
TAS ACCESSIBLE ROUTES MAY NOT EXCEED A CROSS SLOPE OF 1:50 (2%) OR EXCEED A RUNNING SLOPE OF 1:20 (5%) UNLESS DESIGNED AS A RAMP. THE MAXIMUM RUNNING SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12 (8.33%). THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 INCHES. REFER TO GRADING SHEET(S).

- EX. WATER LINE / PR. WATER LINE
- EX. WASTEWATER / PR. WASTEWATER
- EX. STORM SEWER LINE / PR. STORM SEWER LINE
- EX. FIRE HYDRANT / PR. FIRE HYDRANT
- EX. WATER METER / PR. WATER METER
- EX. WASTEWATER MANHOLE / PR. WASTEWATER MANHOLE
- FITTINGS AS NOTED
- GATE VALVE AS NOTED
- WW CLEAN OUT
- BFP BACK FLOW PREVENTER
- FLOW ARROW
- EX. UTILITY POLE

SITE LEGEND

- A 6" CURB & GUTTER. SEE DETAIL SHEET.
- B RIBBON CURB. SEE DETAIL SHEET.
- C CASTELLATED CURB. SEE DETAIL SHEET.
- D STANDARD CITY TYPE II DRIVEWAY. SEE DETAIL SHEET
- E CONCRETE SIDEWALK. SEE DETAIL SHEET.
- F PEDESTRIAN CROSSWALK.
- G HANDICAP SPACE W/SIGN. SEE DETAIL SHEET.
- H PEDESTRIAN ADA RAMP OR AT GRADE ADA DOME PAVERS. SEE DETAIL SHEET.
- I CONCRETE WHEEL STOP. SEE DETAIL SHEET.
- J STANDARD CITY BIKE RACK. SEE DETAIL SHEET.
- K DUMPSTER ENCLOSURE WITH CONCRETE PAD PER GEOTECHNICAL REPORT AND CITY STANDARDS

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

CITY OF ROUND ROCK NOTES:

1. LIGHTING
   - A. EXTERIOR LIGHTING SHALL BE USED TO PROVIDE ILLUMINATION FOR SECURITY AND SAFETY OF ENTRY DRIVES, PARKING AREAS, SERVICE AND LOADING AREAS AND PATHWAYS AND COURTYARDS. ALL EXTERIOR LIGHT FIXTURES SHOULD BE DESIGNED AND COORDINATED AS COMPATIBLE FIXTURES WHICH RELATE TO THE ARCHITECTURAL CHARACTER OF THE BUILDINGS ON A SITE.
   - B. EXTERNAL LIGHTING SHALL BE ARRANGED AND CONTROLLED, THROUGH THE USE OF SHIELDING AND OTHER MEASURES, SO AS TO DEFLECT LIGHT AWAY FROM ANY RESIDENTIAL AREAS.
   - C. BUILDING ILLUMINATION
     - I. THE DESIGN AND MATERIALS OF LIGHTING FIXTURES SHALL BE CONSISTENT WITH THE CHARACTER OF THE AREA. FULLY RECESSED DOWN-LIGHTS, GOOSENECK LIGHTS OR OTHER FIXTURES APPROPRIATE TO THE STYLE OF A BUILDING SHALL BE USED.
     - II. ILLUMINATION OF A FACADE TO HIGHLIGHT ARCHITECTURAL DETAILS IS PERMITTED. FIXTURES SHALL BE SMALL, SHIELDED AND DIRECTED TOWARD THE BUILDING RATHER THAN TOWARD THE STREET, SO AS TO MINIMIZE GLARE FOR PEDESTRIANS AND DRIVERS. FLASHING, SCROLLING OR NEON LIGHTING SHALL BE PROHIBITED.
   - D. SITE LIGHTING DESIGN REQUIREMENTS
     - I. FIXTURE (LUMINAIRE)
       THE LIGHT SOURCE SHALL BE COMPLETELY CONCEALED (RECESSED) WITHIN AN OPAQUE HOUSING AND SHALL NOT BE VISIBLE FROM ANY STREET OR RESIDENTIAL DEVELOPMENT
     - II. LIGHT SOURCE (LAMP)
       INCANDESCENT, LED (LIGHT EMITTING DIODE), FLUORESCENT, METAL HALIDE OR COLOR-CORRECTED HIGH-PRESSURE SODIUM MAY BE USED. OTHER LAMP TYPES MAY BE USED, SUBJECT TO THE APPROVAL OF THE CITY. THE SAME TYPE OF LAMP SHALL BE USED FOR THE SAME OR SIMILAR TYPES OF LIGHTING ON ANY ONE SITE THROUGHOUT A DEVELOPMENT.
     - III. MOUNTING
       FIXTURES SHALL BE MOUNTED IN SUCH A MANNER THAT THE CONE OF LIGHT DOES NOT CROSS ANY PROPERTY LINE OF THE SITE.
     - IV. HEIGHT OF FIXTURE
       THE HEIGHT OF A FIXTURE SHALL NOT EXCEED TWENTY (20) FEET.
     - V. LIGHTING WITHIN ANY LOT THAT UNNECESSARILY ILLUMINATES AND SUBSTANTIALLY INTERFERES WITH THE USE OR ENJOYMENT OF ANY OTHER LOT IS NOT PERMITTED. LIGHTING UNNECESSARILY ILLUMINATES ANOTHER LOT IF IT CLEARLY EXCEEDS THE REQUIREMENTS OF THIS SECTION, OR IF THE STANDARD COULD REASONABLY BE ACHIEVED IN A MANNER THAT WOULD NOT SUBSTANTIALLY INTERFERE WITH THE USE OR ENJOYMENT OF NEIGHBORING PROPERTIES.
     - VI. LIGHTING SHALL NOT BE ORIENTED SO AS TO DIRECT GLARE OR EXCESSIVE ILLUMINATION ONTO THE STREET IN A MANNER THAT MAY DISTRACT OR INTERFERE WITH THE VISION OF DRIVERS ON SUCH STREETS.
     - VII. IF THE COM PARCEL IS ADJACENT TO A RESIDENTIAL DISTRICT, FOOT CANDLE READINGS AT THE PROPERTY LINE ADJACENT TO A RESIDENTIAL USE SHALL NOT EXCEED 1.0.

2. FENCING
   - A. FENCING SHALL BE CONSTRUCTED OF THE FOLLOWING MATERIALS: BRICK, STONE, REINFORCED CONCRETE, CONCRETE PANEL, WROUGHT IRON, AND OTHER DECORATIVE MASONRY MATERIALS. FENCE POSTS SHALL BE CONSTRUCTED OF RUST RESISTANT METAL PARTS, CONCRETE BASED MASONRY OR CONCRETE PILLARS OF SOUND STRUCTURAL INTEGRITY.
   - B. ALL FENCES ADJACENT TO RESIDENTIAL USES SHALL PROVIDE A FINISHED FACE ABUTTING THE RESIDENTIAL USE, UNLESS OTHERWISE NOTED.
   - C. ALL FENCING AND WALLS ON COM COMMERCIAL DEVELOPMENTS THAT ARE VISIBLE FROM THE STREET SHALL BE CONSTRUCTED OF A MATERIAL COMPARABLE TO THE MASONRY WALL MATERIALS UTILIZED WITHIN THE RES RESIDENTIAL PORTIONS OF THE COMMUNITY.

NOTE:

1. A SEPARATE SIGN PERMIT IS REQUIRED FOR ALL FREE STANDING SIGNS AND WALL MOUNTED SIGNS.
2. SEE PHOTOMETRIC PLAN FOR SITE LIGHTING.
3. REFER TO SIGNS BELOW AND PHOTOMETRIC PLAN FOR APPROXIMATE LOCATION
4. FOUNDATION TREATMENT WILL BE PROVIDED WITH LANDSCAPING PER CITY OF ROUND ROCK REQUIREMENTS.
5. TREE MITIGATION WILL BE PROVIDED FOR THE SHOWN TREES. MITIGATION WILL BE PROVIDED WITH PLANTED TREES IN THE CENTER OF EXISTING END ISLANDS OF THE ADJACENT PARKING.
6. ANY GROUND MOUNTED EQUIPMENT SHALL BE IN CONFORMANCE WITH SEC. 8-40 (SECTION 2-72(D)7) ALTHOUGH NOT ANTICIPATED FOR THIS PROJECT.
7. PER SEC. 2-72(E) A MINIMUM OF FIVE DIFFERENT BUILDING ARTICULATIONS AND ONE SPECIAL DESIGN FEATURE ARE REQUIRED. SEE BUILDING FOOTPRINT.
8. MATERIALS, ARTICULATION, AND DESIGN FEATURES SHALL COMPLY WITH ROUND ROCK PUD REQUIREMENTS.
9. PER SECTION 8-1 ROOF-MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW. SCREENING SHALL UTILIZE THE SAME OR SIMILAR MATERIALS AS THE PRINCIPAL STRUCTURE.
10. DETENTION POND, DUMPSTER ENCLOSURES, AND GROUND-LEVEL UTILITIES MUST BE SCREENED PER SECTION 8-40.
11. SIDEWALK SHALL BE REMOVED AND REPLACED TO NEAREST EXPANSION JOINT. SAW CUTTING IS NOT PERMITTED.
12. CONVEYANCE TO REGIONAL DETENTION AND WATER QUALITY FACILITIES TO BE PROVIDED. DEVELOPED CONDITIONS FALL WITHIN ORIGINAL DESIGN ASSUMPTIONS FOR WATER QUALITY IN THE GARDENS AT MAYFIELD MASTER PLANS (SDP1505-0002) BY GRAY ENGINEERING, APPROVED 5-12-17.
13. REFER TO THE GARDENS AT MAYFIELD SITE PLAN 3801 C.R. 175 FOR INFORMATION ON OFF-SITE DRAINAGE AND WATER QUALITY CONDITIONS.

CORR ZONING SETBACKS

ZONE: C1A - GENERAL COMM
MIN. FRONT YARD SETBACK: 15
MIN. REAR SETBACK: 10
MIN. SIDE SETBACK: 10

MAX BUILDING HEIGHT: 2 STORIES

PARKING TABLE	
TOTAL BUILDING AREA	12,850 SF
PARKING RATIO - RETAIL	1 SPACE: 250 SF
PARKING REQUIRED	12,850 / 250 = 52 - 5 SPACES (10% TREE CREDIT) = 47 SPACES
PARKING PROVIDED	53 SPACES INCL. 2 ADA & 1 VAN

CITY OF ROUND ROCK SITE DATA	
	PROPOSED
TOTAL SITE AREA	2.1 AC / 91,639 SF
EXISTING ZONING	PUD 101
IMPERVIOUS COVER	69,056 SF/91,639 SF = 75.4%
BUILDING HEIGHT	1 STORY - 18 FT
FOUNDATION TYPE	CONCRETE SLAB

PROJECT CASE: #SDP23-00007

SANDLIN
ENGINEERING | CONSULTING
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

SITE PLAN

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 8 OF 25

G:\phased drives\pendlin services llc\pendlin services projects\land development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR SITE.dwg-SITE PLAN Plotted Jan 30, 2024 at 1:24pm by Engineer | Last Saved by: Engineer

Organized Sewage Collection System Application

Texas Commission on Environmental Quality

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

Regulated Entity Name: NEW HOPE RETAIL

1. ☒ **Attachment A – SCS Engineering Design Report**. This Engineering Design Report is provided to fulfill the requirements of 30 TAC Chapter 217, including 217.10 of Subchapter A, §§217.51 – 217.70 of Subchapter C, and Subchapter D as applicable, and is required to be submitted with this SCS Application Form.

Customer Information

2. The entity and contact person responsible for providing the required engineering certification of testing for this sewage collection system upon completion (including private service connections) and every five years thereafter to the appropriate TCEQ region office pursuant to 30 TAC §213.5(c) is:

   Contact Person: RAHIM KARIMALI
   Entity: NEW HOPE RETAIL
   Mailing Address: 901 AMBROSE DR
   City, State: PFLUGERVILLE, TEXAS Zip: 78660
   Telephone: 512-925-9610 Fax: _____
   Email Address: rahimkali29@gmail.com
   The appropriate regional office must be informed of any changes in this information within 30 days of the change.

3. The engineer responsible for the design of this sewage collection system is:

   Contact Person: NICK SANDLIN, P.E.
   Texas Licensed Professional Engineer's Number: 124404
   Entity: SANDLIN SERVICES, LLC
   Mailing Address: 9111 JOLLYVILLE RD, STE 212
   City, State:AUSTIN, TEXAS Zip: 78759
   Telephone:806-679-7303 Fax:_____
   Email Address:operations@sandlinservices.com

Project Information

4. Anticipated type of development to be served (estimated future population to be served, plus adequate allowance for institutional and commercial flows):

   ☐ Residential: Number of single-family lots: _____
   ☐ Multi-family: Number of residential units: _____
   ☒ Commercial
   ☐ Industrial
   ☐ Off-site system (not associated with any development)
   ☐ Other: _____

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

100% Domestic	9,863 gallons/day
_____% Industrial	_____ gallons/day
_____% Commingled	_____ gallons/day

   Total gallons/day: 9,863

6. Existing and anticipated infiltration/inflow is 1,575 gallons/day. This will be addressed by: The Construction Plan Requirements and Sealed Joints.

7. A Water Pollution Abatement Plan (WPAP) is required for construction of any associated commercial, industrial or residential project located on the Recharge Zone.

   ☐ The WPAP application for this development was approved by letter dated _____. A copy of the approval letter is attached.
   ☒ The WPAP application for this development was submitted to the TCEQ on 1/29/2024, but has not been approved.
   ☐ A WPAP application is required for an associated project, but it has not been submitted.
   ☐ There is no associated project requiring a WPAP application.

8. Pipe description:

Table 1 - Pipe Description

Pipe Diameter(Inches)	*Linear Feet (1)*	*Pipe Material (2)*	*Specifications (3)*
6	197	PVC SDR-26	ASTM D3034

Total Linear Feet: 197

(1) Linear feet - Include stub-outs and double service connections. Do not include private service laterals.
(2) Pipe Material - If PVC, state SDR value.
(3) Specifications - ASTM / ANSI / AWWA specification and class numbers should be included.

9. The sewage collection system will convey the wastewater to the Brushy Creek East WWTP (City of Round Rock Wastewater) (name) Treatment Plant. The treatment facility is:

   ☒ Existing
   ☐ Proposed

10. All components of this sewage collection system will comply with:

   ☒ The City of Round Rock standard specifications.
   ☐ Other. Specifications are attached.

11. ☒ No force main(s) and/or lift station(s) are associated with this sewage collection system.

   ☐ A force main(s) and/or lift station(s) is associated with this sewage collection system and the **Lift Station/Force Main System Application** form (TCEQ-0624) is included with this application.

Alignment

12. ☒ There are no deviations from uniform grade in this sewage collection system without manholes and with open cut construction.

13. ☒ There are no deviations from straight alignment in this sewage collection system without manholes.

   ☐ **Attachment B - Justification and Calculations for Deviation in Straight Alignment without Manholes**. A justification for deviations from straight alignment in this sewage collection system without manholes with documentation from pipe manufacturer allowing pipe curvature is attached.

   ☐ For curved sewer lines, all curved sewer line notes (TCEQ-0596) are included on the construction plans for the wastewater collection system.

Manholes and Cleanouts

14. ☒ Manholes or clean-outs exist at the end of each sewer line(s). These locations are listed below: (Please attach additional sheet if necessary)

Table 2 - Manholes and Cleanouts

Line	*Shown on Sheet*	*Station*	*Manhole or Clean-out?*
A	2 Of 4	1+00	Manhole
A	2 Of 4	1+64.13	Manhole
A	2 Of 4	1+73.11	Manhole
A	2 Of 4	2+87.86	Manhole
A	2 Of 4	2+96.84	Manhole
	Of		
	Of		

Line	*Shown on Sheet*	*Station*	*Manhole or Clean-out?*
	Of		
	Of		
	Of		

15. ☒ Manholes are installed at all Points of Curvature and Points of Termination of a sewer line.

16. ☒ The maximum spacing between manholes on this project for each pipe diameter is no greater than:

Pipe Diameter (inches)	Max. Manhole Spacing (feet)
6 - 15	500
16 - 30	800
36 - 48	1000
≥54	2000

☐ **Attachment C – Justification for Variance from Maximum Manhole Spacing**. The maximum spacing between manholes on this project (for each pipe diameter used) is greater than listed in the table above. A justification for any variance from the maximum spacing is attached, and must include a letter from the entity which will operate and maintain the system stating that it has the capability to maintain lines with manhole spacing greater than the allowed spacing.

17. ☐ All manholes will be monolithic, cast-in-place concrete.

☒ The use of pre-cast manholes is requested for this project. The manufacturer's specifications and construction drawings, showing the method of sealing the joints, are attached.

Site Plan Requirements

Items 18 - 25 must be included on the Site Plan.

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

Site Plan Scale: 1" = 40'.

19. ☒ The Site Plan must include the sewage collection system general layout, including manholes with station numbers, and sewer pipe stub outs (if any). Site plan must be overlain by topographic contour lines, using a contour interval of not greater than ten feet and showing the area within both the five-year floodplain and the 100-year floodplain of any drainage way.

20. Lateral stub-outs:

☐ The location of all lateral stub-outs are shown and labeled.
☒ No lateral stub-outs will be installed during the construction of this sewer collection system.

21. Location of existing and proposed water lines:

☒ The entire water distribution system for this project is shown and labeled.
☒ If not shown on the Site Plan, a Utility Plan is provided showing the entire water and sewer systems.
☐ There will be no water lines associated with this project.

22. 100-year floodplain:

☒ After construction is complete, no part of this project will be in or cross a 100-year floodplain, either naturally occurring or manmade. (Do not include streets or concrete-lined channels constructed above of sewer lines.)
☐ After construction is complete, all sections located within the 100-year floodplain will have water-tight manholes. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 3 - 100-Year Floodplain

Line	*Sheet*	*Station*
	of	to
	of	to
	of	to
	of	to

23. 5-year floodplain:

☒ After construction is complete, no part of this project will be in or cross a 5-year floodplain, either naturally occurring or man-made. (Do not include streets or concrete-lined channels constructed above sewer lines.)
☐ After construction is complete, all sections located within the 5-year floodplain will be encased in concrete or capped with concrete. These locations are listed in the table below and are shown and labeled on the Site Plan. (Do not include streets or concrete-lined channels constructed above sewer lines.)

Table 4 - 5-Year Floodplain

Line	*Sheet*	*Station*
	of	to
	of	to
	of	to
	of	to

24. ☒ Legal boundaries of the site are shown.

25. ☒ The ***final plans and technical specifications*** are submitted for the TCEQ's review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.

Items 26 - 33 must be included on the Plan and Profile sheets.

26. ☐ All existing or proposed water line crossings and any parallel water lines within 9 feet of sewer lines are listed in the table below. These lines must have the type of pressure rated pipe to be installed shown on the plan and profile sheets. Any request for a variance from the required pressure rated piping at crossings must include a variance approval from 30 TAC Chapter 290.

☒ There will be no water line crossings.
☒ There will be no water lines within 9 feet of proposed sewer lines.

Table 5 - Water Line Crossings

Line	*Station or Closest Point*	*Crossing or Parallel*	*Horizontal Separation Distance*	*Vertical Separation Distance*

27. Vented Manholes:

☒ **No part** of this sewer line is within the 100-year floodplain and vented manholes are not required by 30 TAC Chapter 217.
☐ **A portion** of this sewer line is within the 100-year floodplain and vented manholes will be provided at less than 1500 foot intervals. These water-tight manholes are listed in the table below and labeled on the appropriate profile sheets.
☐ **A portion** of this sewer line is within the 100-year floodplain and an alternative means of venting shall be provided at less than 1500 feet intervals. A description of the alternative means is described on the following page.
☐ **A portion** of this sewer line is within the 100-year floodplain; however, there is no interval longer than 1500 feet located within. No vented manholes will be used.

Table 6 - Vented Manholes

Line	*Manhole*	*Station*	*Sheet*

Line	*Manhole*	*Station*	*Sheet*

28. Drop manholes:

☒ There are no drop manholes associated with this project.
☐ Sewer lines which enter new or existing manholes or "manhole structures" higher than 24 inches above the manhole invert are listed in the table below and labeled on the appropriate profile sheets. These lines meet the requirements of 30 TAC §217.55(l)(2)(H).

Table 7 - Drop Manholes

Line	*Manhole*	*Station*	*Sheet*

29. Sewer line stub-outs (For proposed extensions):

☐ The placement and markings of all sewer line stub-outs are shown and labeled.
☒ No sewer line stub-outs are to be installed during the construction of this sewage collection system.

30. Lateral stub-outs (For proposed private service connections):

☒ The placement and markings of all lateral stub-outs are shown and labeled.
☐ No lateral stub-outs are to be installed during the construction of this sewage collection system.

31. Minimum flow velocity (From Appendix A)

☒ Assuming pipes are flowing full; all slopes are designed to produce flows equal to or greater than 2.0 feet per second for this system/line.

32. Maximum flow velocity/slopes (From Appendix A)

☒ Assuming pipes are flowing full, all slopes are designed to produce maximum flows of less than or equal to 10 feet per second for this system/line.
☐ **Attachment D – Calculations for Slopes for Flows Greater Than 10.0 Feet per Second.** Assuming pipes are flowing full, some slopes produce flows which are greater than 10 feet per second. These locations are listed in the table below. Calculations are attached.

Table 8 - Flows Greater Than 10 Feet per Second

Line	*Profile Sheet*	*Station to Station*	*FPS*	*% Slope*	*Erosion/Shock Protection*

33. Assuming pipes are flowing full, where flows are ≥ 10 feet per second, the provisions noted below have been made to protect against pipe displacement by erosion and/or shock under 30 TAC §217.53(l)(2)(B).

☐ Concrete encasement shown on appropriate Plan and Profile sheets for the locations listed in the table above.
☐ Steel-reinforced, anchored concrete baffles/retards placed every 50 feet shown on appropriate Plan and Profile sheets for the locations listed in the table above.
☒ N/A

Administrative Information

34. ☒ The final plans and technical specifications are submitted for TCEQ review. Each sheet of the construction plans and specifications are dated, signed, and sealed by the Texas Licensed Professional Engineer responsible for the design on each sheet.

35. ☒ Standard details are shown on the detail sheets, which are dated, signed, and sealed by the Texas Licensed Professional Engineer, as listed in the table below:

Table 9 - Standard Details

Standard Details	*Shown on Sheet*
Lateral stub-out marking **[Required]**	3 of 4
Manhole, showing inverts comply with 30 TAC §217.55(l)(2) **[Required]**	2 of 4
Alternate method of joining lateral to existing SCS line for potential future connections **[Required]**	3 of 4
Typical trench cross-sections **[Required]**	4 of 4
Bolted manholes **[Required]**	4 of 4
Sewer Service lateral standard details **[Required]**	4 of 4
Clean-out at end of line **[Required, if used]**	4 of 4
Baffles or concrete encasement for shock/erosion protection **[Required, if flow velocity of any section of pipe >10 fps]**	of
Detail showing Wastewater Line/Water Line Crossing **[Required, if crossings are proposed]**	of
Mandrel detail or specifications showing compliance with 30 TAC §217.57(b) and (c) **[Required, if Flexible Pipe is used]**	of

Standard Details	*Shown on Sheet*
Drop manholes **[Required, if a pipe entering a manhole is more than 24 inches above manhole invert]**	of

36. ☒ All organized sewage collection system general construction notes (TCEQ-0596) are included on the construction plans for this sewage collection system.

37. ☒ All proposed sewer lines will be sufficiently surveyed/staked to allow an assessment prior to TCEQ executive director approval. If the alignments of the proposed sewer lines are not walkable on that date, the application will be deemed incomplete and returned.

    ☒ Survey staking was completed on this date: 4/20/2023 - please call when TCEQ schedules a visit

38. ☒ 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.

39. ☒ Any modification of this SCS application will require TCEQ approval, prior to construction, and may require submission of a revised application, with appropriate fees.

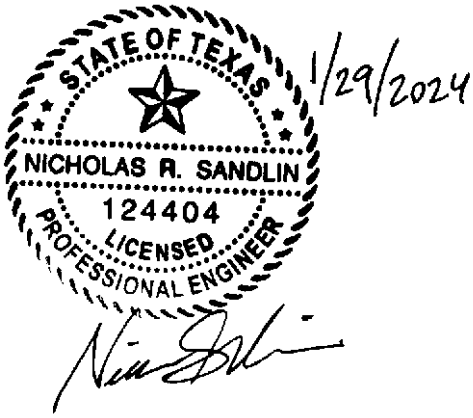
Signature

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 **Organized Sewage Collection System Application** is hereby submitted for TCEQ review and executive director approval. The system was designed in accordance with the requirements of 30 TAC §213.5(c) and 30 TAC §217 and prepared by:

Print Name of Licensed Professional Engineer: NICK SANDLIN, P.E. (SANDLIN SERVICES, LLC)

Date: 1/29/2024

Place engineer's seal here:



Signature of Licensed Professional Engineer:

Appendix A-Flow Velocity Table

Flow Velocity (Flowing Full) All gravity sewer lines on the Edwards Aquifer Recharge Zone shall be designed and constructed with hydraulic slopes sufficient to give a velocity when flowing full of not less than 2.0 feet per second, and not greater than 10 feet per second. The grades shown in the following table are based on Manning's formula and an n factor of 0.013 and shall be the minimum and maximum acceptable slopes unless provisions are made otherwise.

Table 10 - Slope Velocity

Pipe Diameter(Inches)	*% Slope required for minimum flow velocity of 2.0 fps*	*% Slope which produces flow velocity of 10.0 fps*
6	0.50	12.35
8	0.33	8.40
10	0.25	6.23
12	0.20	4.88
15	0.15	3.62
18	0.11	2.83
21	0.09	2.30
24	0.08	1.93
27	0.06	1.65
30	0.055	1.43
33	0.05	1.26
36	0.045	1.12
39	0.04	1.01
>39	*	*

**For lines larger than 39 inches in diameter, the slope may be determined by Manning's formula (as shown below) to maintain a minimum velocity greater than 2.0 feet per second when flowing full and a maximum velocity less than 10 feet per second when flowing full.*

$$v = \frac{1.49}{n} \times R_h^{0.67} \times \sqrt{S}$$

Figure 1 - Manning's Formula

Where:

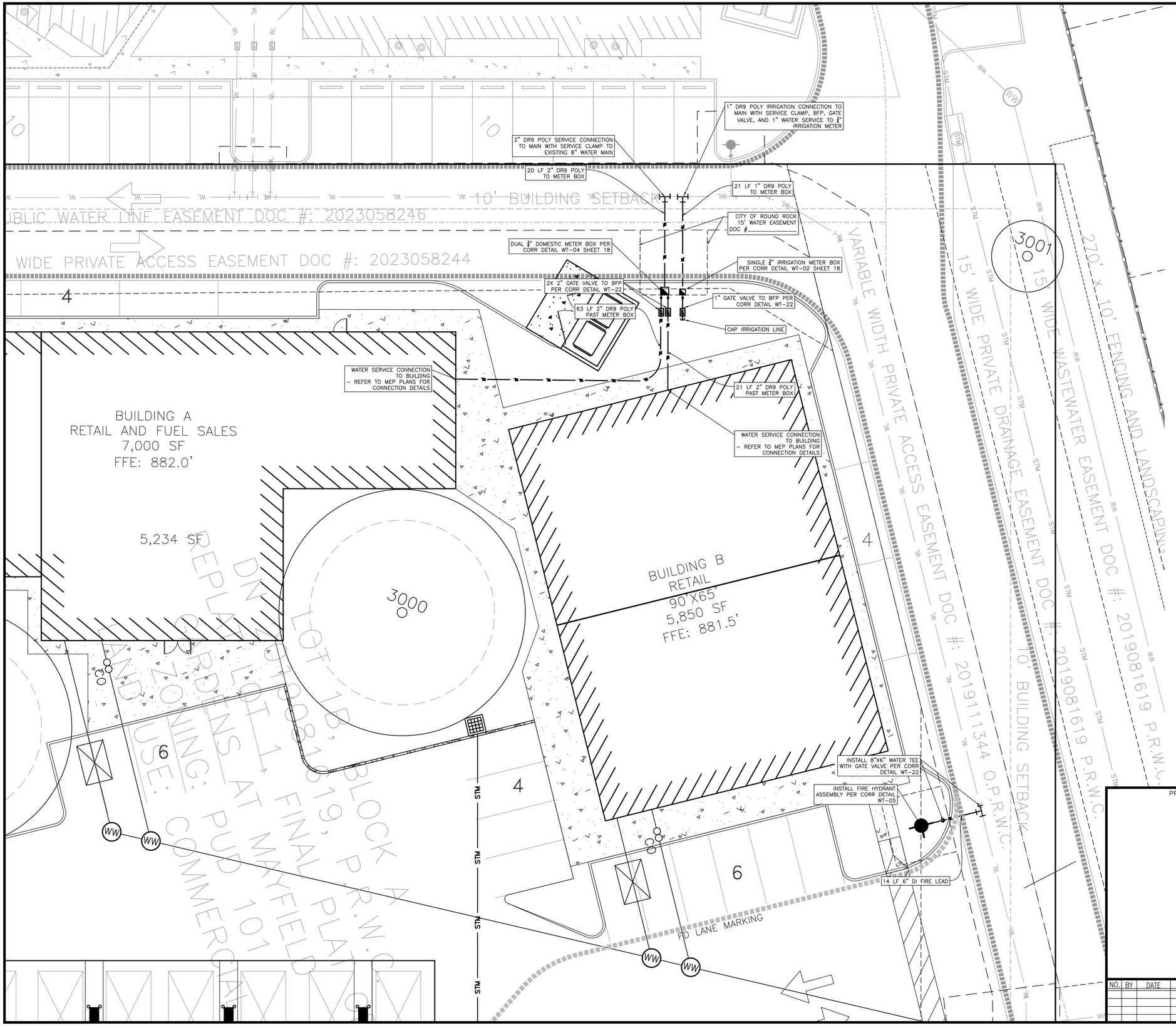
v = velocity (ft/sec)
n = Manning's roughness coefficient (0.013)
Rh = hydraulic radius (ft)
S = slope (ft/ft)

Organized Sewage Collection System Plan (TCEQ-0582)

Attachment A: SCS Engineering Design Report and Site Plan

Wastewater System Summary

To service the 2 proposed commercial buildings, a public wastewater stub is to be utilized. The line as shown in the construction plans contains on-site service laterals that extend individually from the buildings into manholes. Flows from this site enter the system and lead to the Brushy Creek East Regional Wastewater Treatment Plant at 3939 E. Palm Valley Blvd., Round Rock, TX 78665.



IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

UTILITY LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- EXISTING CONTOURS (750)
- PROPOSED CONTOURS (750)
- EX. WATER LINE (W) / PR. WATER LINE (W)
- EX. WASTEWATER (WW) / PR. WASTEWATER (WW)
- EX. STORM SEWER LINE (STM) / PR. STORM SEWER LINE (STM)
- EX. FIRE HYDRANT / PR. FIRE HYDRANT
- EX. WATER METER (WM) / PR. WATER METER
- EX. WASTEWATER MANHOLE (WW) / PR. WASTEWATER MANHOLE
- FITTINGS AS NOTED
- FLOW ARROW
- GATE VALVE AS NOTED
- ELECTRIC TRANSFORMER (T)
- WW CLEAN OUT
- UTILITY POLE
- BFP BACK FLOW PREVENTER
- FIRE LINE (F)
- EXISTING TREE (TO REMAIN) (100)
- EXISTING TREE (TO BE REMOVED) (100)

NOTES:

1. WARNING:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2. IMPORTANT:
A MINIMUM 24" SEPARATION DISTANCE IS REQUIRED AT ALL WATER AND WASTEWATER CROSSINGS. CENTER ONE JOINT OF WATER PIPE PERPENDICULAR TO WASTEWATER PIPE AT EACH CROSSING IN ACCORDANCE WITH TAC 290.44(e)(4)(B)(i). NOTIFY ENGINEER IMMEDIATELY IF NOT ABLE TO MAINTAIN.

3. IMPORTANT:
WHERE A NINE FOOT SEPARATION DISTANCE BETWEEN WATER AND WASTEWATER CANNOT BE ACHIEVED, PVC WITH MINIMUM PRESSURE RATING OF 150 PSI SHALL BE USED, A MINIMUM SEPARATION DISTANCE OF 6 INCHES BETWEEN OUTSIDE DIAMETERS OF PIPES SHALL BE ACHIEVED, WASTEWATER SHALL BE BELOW WATER, AND JOINTS SHALL BE LOCATED AS FAR AS POSSIBLE FROM THE INTERSECTION, IN ACCORDANCE WITH TAC TITLE 30 217.53(d).

4. IF THE MAXIMUM STATIC PRESSURE EXCEEDS EIGHTY (80) PSI, A PRV WILL BE REQUIRED ON THE PROPERTY OWNER'S SIDE OF THE WATER METER AND SHALL BE SHOWN ON THE PLAN VIEW IN ACCORDANCE WITH DACS UTILITY CRITERIA MANUAL SECTION 1 1.6.2(A)(1)(F).

5. DOMESTIC SERVICE CONNECTIONS SHALL CONFORM TO CORR STANDARD DETAIL, BASED ON METER SIZE, WITH REGARDS TO CONSTRUCTION AND MATERIAL

6. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRICAL, 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"

7. ALL PIPE FITTINGS SHALL BE JOINT-RESTRAINED. ALL SEGMENTS OF PIPE LOCATED IN ENCASEMENT SHALL BE FULLY RESTRAINED.

8. ALL FITTINGS SHALL HAVE THRUST BLOCKING PER CORR WT-25.

9. ALL VALVES SHOWN ARE _____ BRAND.

10. ALL FIRE SERVICE LEADS SHALL BE DUCTILE IRON.

11. ALL PVC WATER MAINS SHALL BE CONSTRUCTED OF C-900 DR-14.

12. WATER METER SHALL BE LOCATED OUTSIDE VEHICULAR & PEDESTRIAN TRAFFIC AREAS OUTSIDE OF WALKWAYS IN LANDSCAPING.

13. DRY UTILITY ALIGNMENTS BY OTHERS ARE PRELIMINARY AND THE PERMIT IS TO BE REVISED PENDING APPROVAL BY THE FRANCHISED UTILITY.

14. MAXIMUM DESIGN VELOCITY OF COMBINED FIRE FLOW AND PEAK HOUR FLOW IS 9.69 FEET PER SECOND.

TEXAS 811 BEFORE YOU DIG

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

WATER DISTRIBUTION PLAN

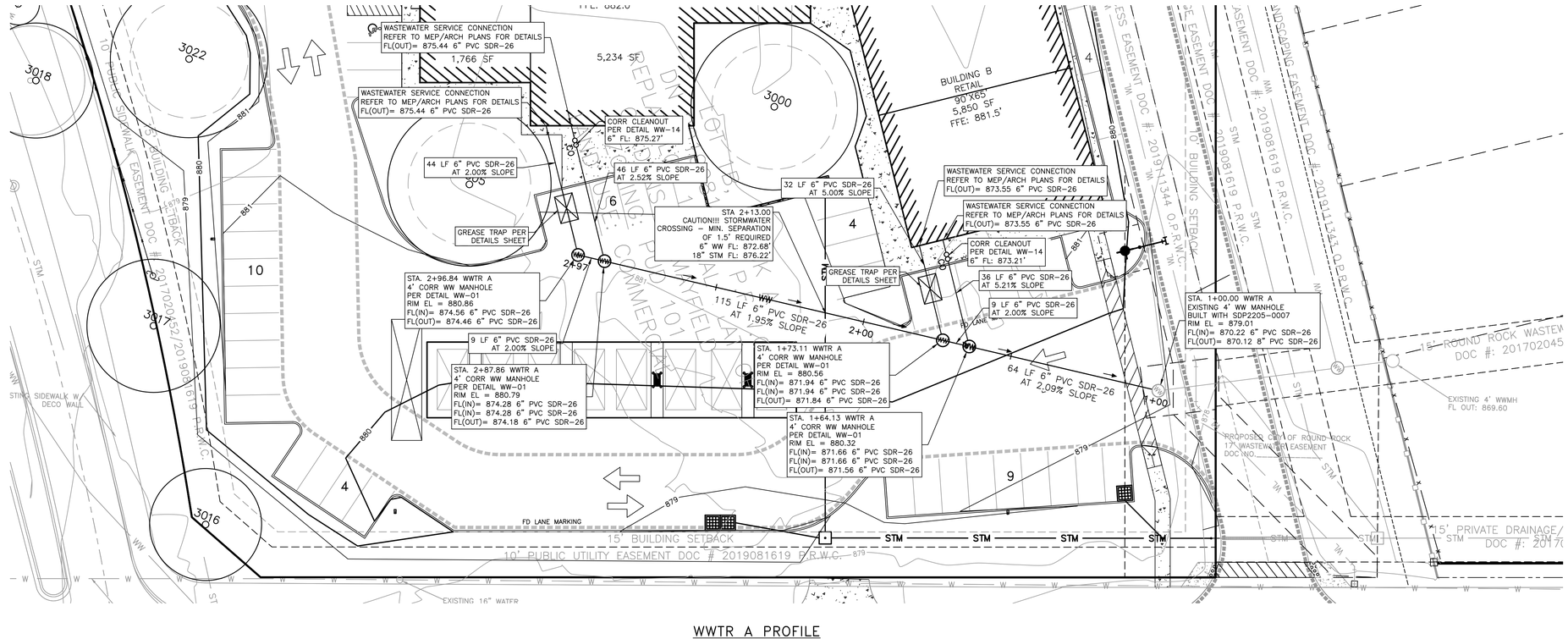
NEW HOPE RETAIL

4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 15 OF 25

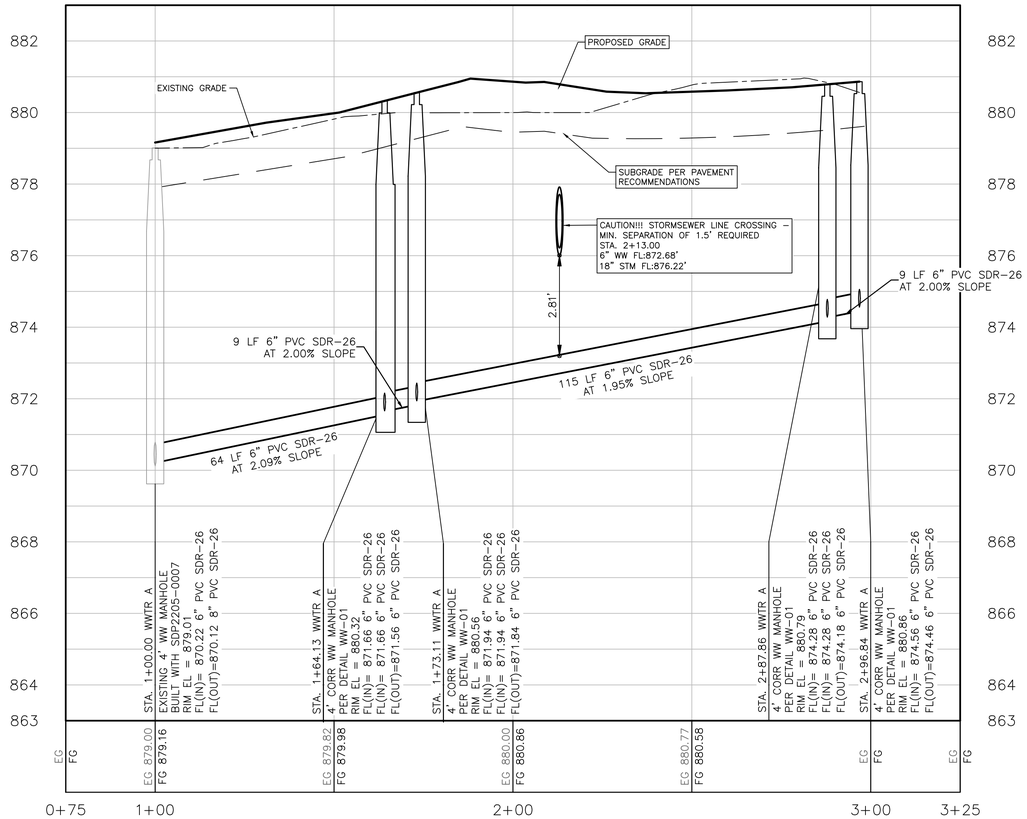
G:\shared drives\sandlin services llc\sandlin services projects\land development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR WATR.dwg-WATER DISTRIBUTION PLAN Plotted Jan 30, 2024 at 1:25pm by Engineer | Last Saved by: Engineer



IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

WWTR A PROFILE

1" = 20' HORZ. – 1" = 2' VERT.



STATE OF TEXAS
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PROFESSIONAL ENGINEER
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UTILITY LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
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- FITTINGS AS NOTED
- FLOW ARROW
- GATE VALVE AS NOTED
- ELECTRIC TRANSFORMER
- WW CLEAN OUT
- UTILITY POLE
- BFP BACK FLOW PREVENTER
- FIRE LINE
- 100 EXISTING TREE (TO REMAIN)
- 100 EXISTING TREE (TO BE REMOVED)

NOTES:

1. WARNING:
   CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. IMPORTANT:
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3. IMPORTANT:
   WHERE A NINE FOOT SEPARATION DISTANCE BETWEEN WATER AND WASTEWATER CANNOT BE ACHIEVED, PVC WITH MINIMUM PRESSURE RATING OF 150 PSI SHALL BE USED, A MINIMUM SEPARATION DISTANCE OF 6 INCHES BETWEEN OUTSIDE DIAMETERS OF PIPES SHALL BE ACHIEVED, WASTEWATER SHALL BE BELOW WATER, AND JOINTS SHALL BE LOCATED AS FAR AS POSSIBLE FROM THE INTERSECTION, IN ACCORDANCE WITH TAC TITLE 30 217.53(d).
4. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRICAL, 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"
5. ALL MANHOLES SHALL BE COATED AND VACUUM TESTED.
6. ALL WASTEWATER MAINS AND LATERALS ARE TO BE CONSTRUCTED OF SDR-26 PIPE WITH ASTM D3034 SPECIFICATION PER DACS UTILITY CRITERIA MANUAL SECTION 1.6.3(C)(1).
7. ALL SEGMENTS OF PIPE LOCATED IN ENCASEMENT SHALL BE FULLY RESTRAINED.
8. DRY UTILITY ALIGNMENTS BY OTHERS ARE PRELIMINARY AND THE PERMIT IS TO BE REVISED PENDING APPROVAL BY THE FRANCHISED UTILITY.

TEXAS 811 DIG RIGHT BEFORE YOU DIG

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

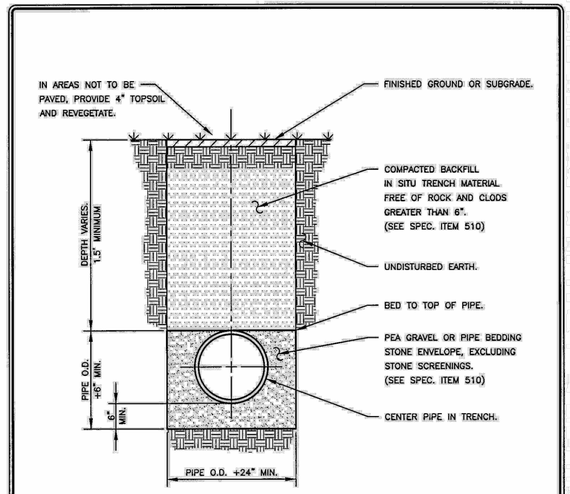
ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

WASTEWATER COLLECTION PLAN

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

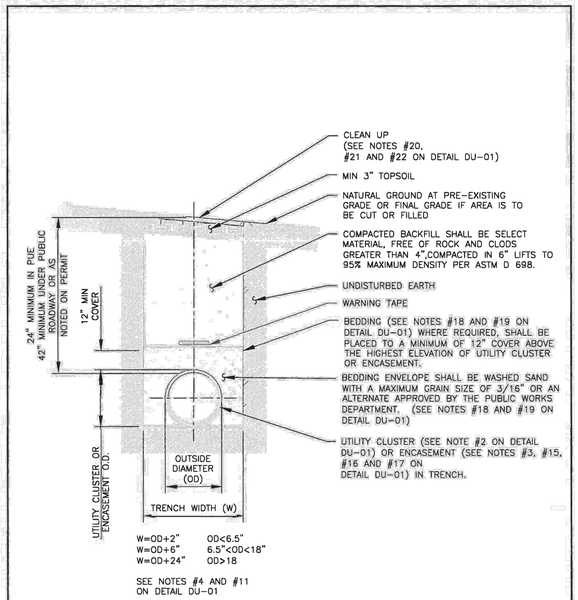
SHEET 16 OF 25



NOTE:

ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 08-21-03 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK STORM SEWER LINE BEDDING DETAIL (NON-PAVED SURFACE)	DRAWING NO: D-02



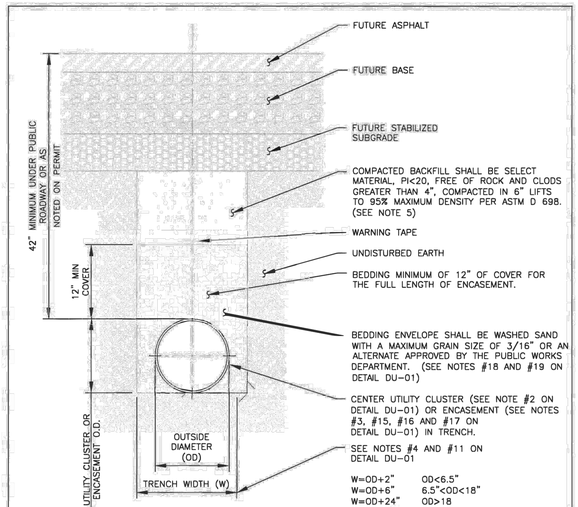
W=OD+2" OD<6.5"
W=OD+6" 6.5"<OD<18"
W=OD+24" OD>18

SEE NOTES #4 AND #11 ON DETAIL DU-01

FOR ADDITIONAL GENERAL NOTES, SEE DETAIL DU-01

SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK UNPAVED AREA TRENCH (UAT) DETAIL	DRAWING NO: DU-02 SHEET 1 of 1



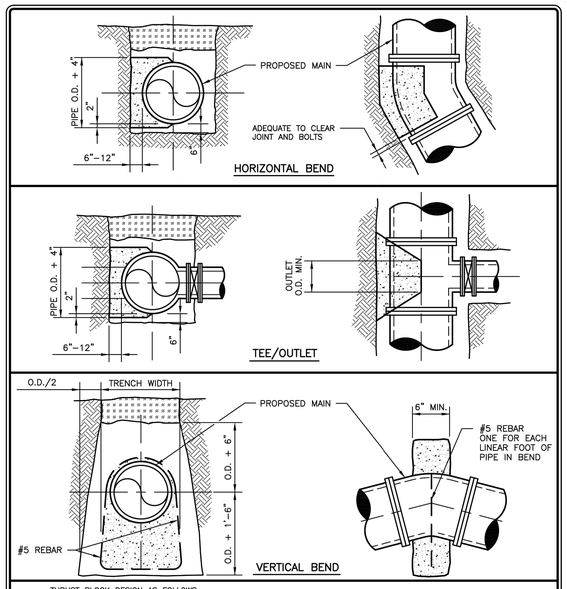
W=OD+2" OD<6.5"
W=OD+6" 6.5"<OD<18"
W=OD+24" OD>18

NOTES:

1. THIS DETAIL IS APPLICABLE WHERE FUTURE PAVEMENT IS SCHEDULED TO BE INSTALLED WITHIN TWO YEARS.
2. ALL TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
3. ENCASEMENT MUST EXTEND 10' PAST THE PROPOSED BACK OF CURB.
4. WORK ON INSTALLATION MUST BE COMPLETE THROUGH CLEAN UP BEFORE WORK RELATED TO PAVEMENT INSTALLATION IS SCHEDULED TO START, EXCEPT IN THE CASES THAT THE ROAD CONTRACTOR HAS AGREED TO ROUGH CUT BEFORE UTILITY TRENCHING OR THE SAME CONTRACTOR IS PERFORMING BOTH UTILITY AND ROAD WORK.
5. SPOILS MAY BE USED IF THEY MEET SELECT MATERIAL STANDARDS. THE INSPECTOR MAY STOP BACKFILL OPERATIONS UNTIL THE CONTRACTOR OBTAINS LAB TEST RESULTS IF THERE IS ANY QUESTION OF ACCEPTABILITY.
6. FOR ADDITIONAL GENERAL NOTES, SEE DETAIL DU-01.

SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK PROPOSED PAVEMENT AREA TRENCH (PPAT) DETAIL	DRAWING NO: DU-04 SHEET 1 of 1

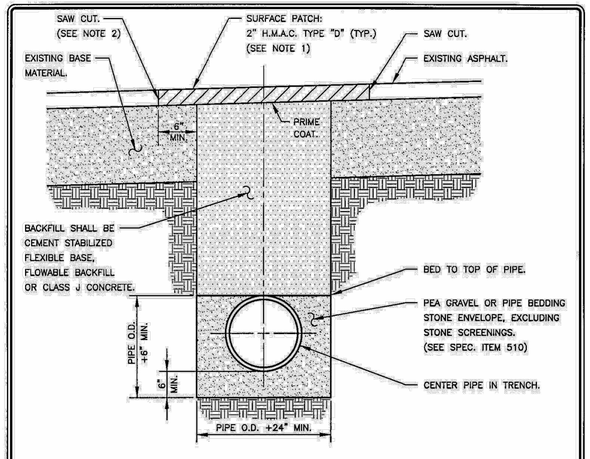


THRUST BLOCK DESIGN AS FOLLOWS:

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 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.

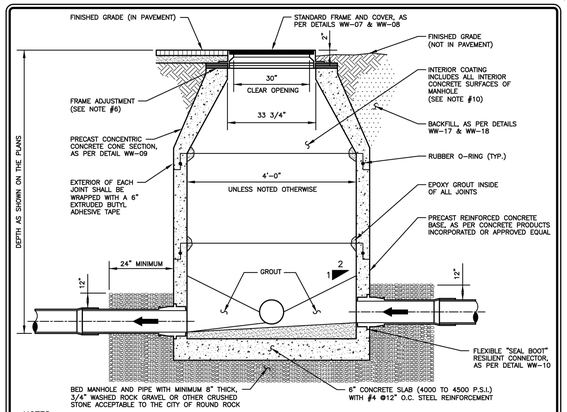
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT APPROVED 03-01-18 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	CITY OF ROUND ROCK THRUST BLOCK DETAIL	DRAWING NO: WT-25



NOTES:

1. H.M.A.C. SHOWN IN THIS DETAIL IS SEPARATE FROM ANY ADDITIONAL THICKNESS CREATED BY ANY OVERLAY ITEM IN CONTRACT.
2. THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING PAVEMENT A MINIMUM OF 6" BEYOND EITHER THE EDGE OF THE STORM SEWER TRENCH OR THE POINT WHERE EXISTING PAVEMENT IS DAMAGED DUE TO TRENCHING OPERATIONS, WHICHEVER IS GREATER.
3. INSTALLATION OF BACKFILL, SAW CUTTING AND REMOVAL OF EXISTING PAVEMENT AND SURFACE PATCH, SHALL NOT BE PAID FOR SEPARATELY. COSTS FOR THESE ITEMS SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
4. THE CONTRACTOR SHALL PROVIDE STEEL PLATES TO SPAN THE TRENCH AS NECESSARY OR TO ALLOW BACKFILL TO CURE. SUCH PLATES SHALL BE SUITABLE FOR VEHICLE PASSAGE OVER THE TRENCH AND SHALL BE SATISFACTORILY ANCHORED IN PLACE. COSTS FOR THIS ITEM SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
5. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

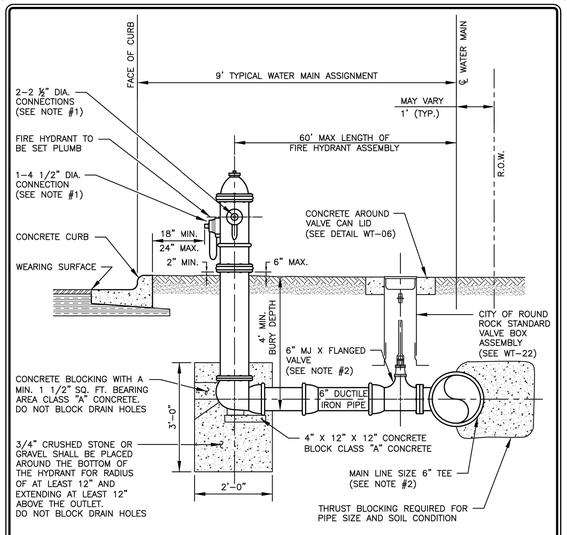
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 08-21-03 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK STORM SEWER LINE BEDDING DETAIL (EXISTING PAVED SURFACE)	DRAWING NO: D-01



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, SPRAYMALL, 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 APPROVED 03-01-18 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	CITY OF ROUND ROCK PRECAST CONCRETE WASTEWATER MANHOLE DETAIL	DRAWING NO: WW-01



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 U&ES DEPARTMENT APPROVED 03-01-18 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	CITY OF ROUND ROCK FIRE HYDRANT ASSEMBLY DETAIL	DRAWING NO: WT-05

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED PROFESSIONAL ENGINEER
1/29/2024

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WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

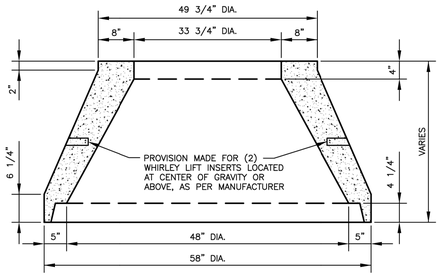
UTILITY DETAILS (2 OF 3)

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 19 OF 25

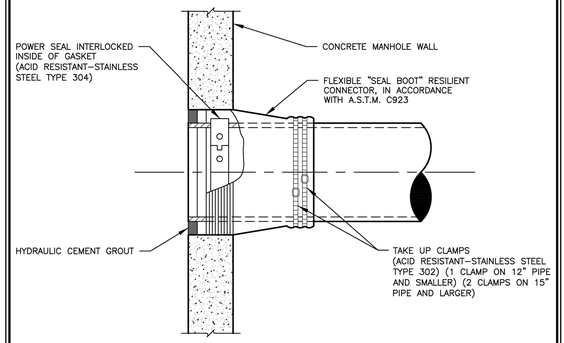
G:\shared drives\sandlin services llc\sandlin services projects\land development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR DTLS.dwg-UTILITY DETAILS (2 OF 3) Plotted Jan 30, 2024 at 1:26pm by Engineer | Last Saved by: Engineer



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.

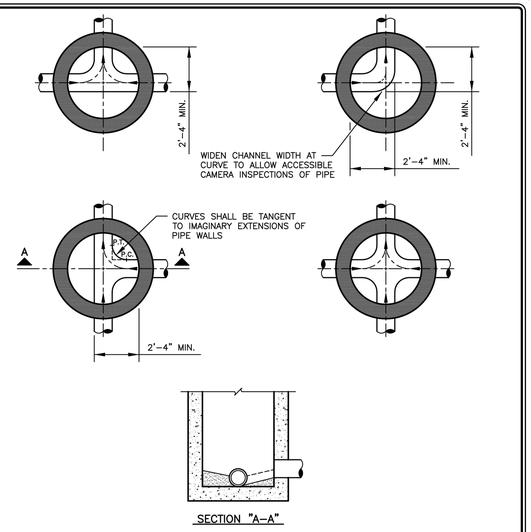
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-09
APPROVED 03-01-18 DATE	PRECAST 48" CONCENTRIC CONCRETE CONE SECTION DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTE:

1. FLEXIBLE "SEAL BOOT" RESILIENT CONNECTOR TO BE A MINIMUM OF 12 INCHES (12") FROM A MANHOLE JOINT.

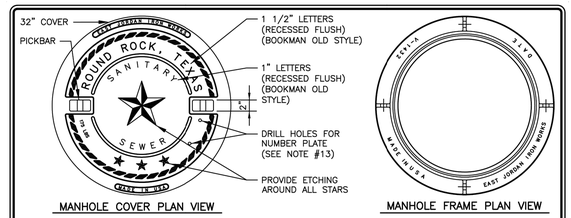
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-10
APPROVED 03-01-18 DATE	FLEXIBLE "SEAL BOOT" RESILIENT CONNECTOR DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



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.

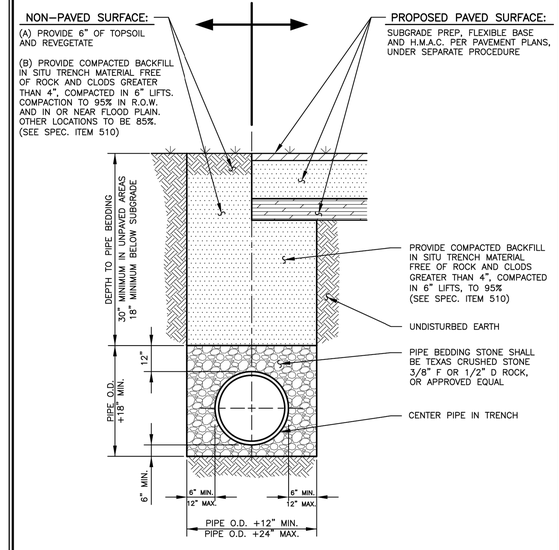
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-11
APPROVED 03-01-18 DATE	WASTEWATER FLOW PATTERNS FOR INVERT CHANNELS DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. 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.

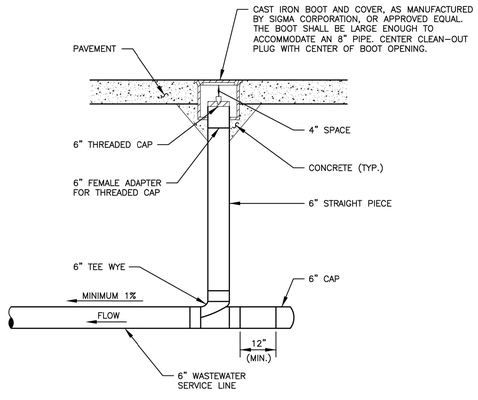
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-08
APPROVED 03-01-18 DATE	NON–BOLTED WASTEWATER MANHOLE COVER AND FRAME DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTE:

ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

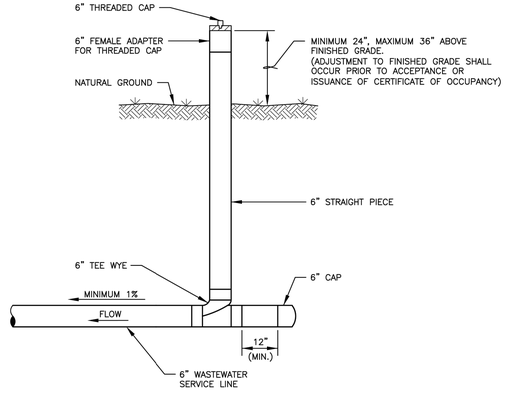
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-18
APPROVED 03-01-18 DATE	WASTEWATER LINE BEDDING AND SURFACE REPAIR DETAIL (NON–PAVED & PROPOSED PAVED SURFACE)	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. 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)		



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)		

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23–00007

ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

UTILITY DETAILS (3 OF 3)

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION	SHEET
				20 OF 25

G:\shared drives\sandlin services llc\sandlin services projects\2nd development division\01–0105–001 new hope retail\CAD\construction sheets\5 NHR DTLS.dwg–UTILITY DETAILS (3 OF 3) Plotted Jan 30, 2024 at 1:26pm by Engineer | Last Saved by: Engineer

Engineering Design Report
per TAC Rule 217.10(e)

For

New Hope Retail

By:
Nicholas Sandlin, PE
TX #124404
Sandlin Services, LLC
TBPELS Firm # 21356

January 29, 2024

The Project known as New Hope Retail is a 2.1-acre site plan proposing two retail buildings. The site currently contains a farmhouse and associated structures. The tract is within the City of Round Rock. It lies over the Edwards Aquifer Recharge Zone.

This report addresses the requirements of TAC rule 217.10(e). The proposed sanitary sewer system will connect to an existing system that will gravity flow to the Brushy Creek East WWTP. The capacity of the plant will treat the estimated LUE's proposed. The treatment plant and wastewater system is owned, operated, and maintained by the City of Round Rock.

(1) Maps of current, proposed, and future service areas have been included within the Construction Plans:

a. Proposed Service Area – the proposed service area is the 2.1 acres of land known as New Hope Retail. The proposed system consists of approximately 197 linear feet of 6-inch SDR 26 PVC pipe, and 4 service connections with private laterals.

Wastewater Pipe Quantities Table			
	Pipe Diameter (in)	Linear Feet	Pipe Material
Wastewater Line	6	197	PVC SDR-26

(2) Topographic Features of current, proposed, and future service areas:

The project site is within the Turkey Creek-Brushy Creek Watershed, which drains to the Brazos River Basin. No surface streams run across the property. Drainage is generally to the east to the existing Regional Water Quality Pond.

(3) Description of Design Flow Determination:

The design flows for the sanitary sewer collection system lines are calculated by the Living Unit Equivalent (LUE) method prescribed by the City of Round Rock. One LUE consists of 3.5 individuals which produce an average flow of 75 gallons per day in accordance with Table B.1 of TCEQ Chapter 217.32 and the City of Round Rock design guidelines. An LUE is intended to represent one single family residence with typical wastewater usage rates for the City's service area.

The LUEs were calculated by totaling the number of services to residential lots that contribute to the particular pipe section or the upstream manhole. The population was derived by multiplying the number of LUEs by the given 3.5 individuals per household factor. The average flow was determined by multiplying the "population" by the factor of 75 gallons per person per day (flow is in units of gallons per day). The peak dry flow has been calculated by multiplying the average flow by a peaking factor of 4.0 as prescribed by TCEQ Chapter 217.32(a)(2). The derivation of the peak wet flow is described in "Section (7) Inflow and Infiltration". The "Full-Flow Capacity" has been calculated because all pipes are 6-inch PVC SDR 26, the only other variable that affects pipe capacity is the slope of the pipe, and the proposed system has pipes of slopes ranging from 2.00% to 5.21%. The full-flow capacity greatly exceeds the designed peak flows which will ensure conveyance through a 50-year life cycle.

(4) Minimum and Maximum Grades for each size and type of Pipe:

The minimum and maximum slopes of the pipes within the proposed system can be found in the plan sheets. All pipes are 6-inch, and the minimum and maximum pipe slopes are 2.00% and 5.21%, respectively.

In accordance with "Appendix A" of the TCEQ form #TCEQ-0582, a 6-inch pipe shall have a minimum slope of 0.50% and a maximum slope of 12.35% which complies with the proposed design.

(5) Minimum and Maximum Velocities in the System:

The design velocities for both peak dry flow and peak wet flow have been calculated by solving for the depth of flow through the pipe using an interpolative process. In accordance with "Appendix A" of the TCEQ form #TCEQ-00582, when assuming full-flow conditions, a 6-inch pipe shall be designed with slopes between 0.50% and 12.35% to produce a minimum flow velocity of 2.0 $^{ft}/_{s}$ and a maximum of 10.0 $^{ft}/_{s}$. The design slopes and velocities for the pipes in the proposed system falls within these criteria.

(6) Proposed System's Effect on Existing System's Capacity

The proposed system will connect to the existing 4' manhole along the east property line. None of the existing infrastructure will be affected.

(7) Inflow and Infiltration

Inflow and infiltration flows were calculated for the wastewater line portions of the proposed system per the City of Austin Utilities Criteria Manual as recognized by the City of Round Rock. The Inflow and infiltration rate is 750 gallons per day per acre of drainage basin. On this 2.1 AC site, the estimated inflow and infiltration rate is 1,575 gallons per day. This is a very conservative estimate for modern materials and construction methods. For each section of pipe on the proposed system a drainage area was determined as seen in **Exhibit 2**. The calculated inflow and infiltration rates were used to determine the peak wet flow rates by adding them to the peak dry flows.

(8) Ability of Existing and Proposed Trunk and Interceptor wastewater collection systems

The existing downstream system has the capacity to accommodate the peak flow for this development. Most of the existing elements of this portion of the collection system will be gravity fed until it reaches the existing Wastewater treatment plant.

(9) Capability of receiving treatment facility to receive and treat the anticipated peak flow

The proposed system will contribute to an existing wastewater collection system that is routed to the Brushy Creek East WWTP. This treatment facility has been designed to accommodate the increase in flow from the proposed development.

(10) Engineering Analysis of Structural Design, Minimization of Odor-Causing Conditions, and Pipe Design Requirements of TAC §217.55

Structural Analysis for Flexible Pipe per TAC §217.53(k)(2)

(A) Live Load Calculations:

The Uni-Bell Handbook, page 210, Table 6.6 Live Loads on Pipe, is referenced to determine live load based on burial depth and classification of vehicular traffic. Accordingly, a live load of 2.78 psi will be the maximum live load the pipe will experience at any point, based on a minimum burial depth of four feet and the highway classification H20.

The following structural analysis of flexible pipe considers both the maximum live load (at 4 feet minimum depth) and the maximum earth load (at 8 feet maximum depth) simultaneously when calculating deflection. Therefore, the analysis is conservative.

(B) Allowable Buckling Pressure Determinations:

For the purposes of this application, the buckling analysis has been performed using the method outlined below. The method of calculating allowable buckling pressure provided below is only valid for lines which are installed at depths of 2 feet ≤ H ≤ 80 feet.

(Equation 1) FS = 2.5 for $\frac{h}{D_0} > 2$

(Equation 2) $$R_w = 1 - 0.33(h_w/h)$$

(Equation 3) $$B' = \frac{1}{1+4*e^{-0.065*H}}$$

(Equation 4) $$I = (t^3/12)*(inches^4/Linch)$$

(Equation 5) $$q_a = \frac{1}{FS}\left(32R_W B' E_b \frac{EI}{D_0^3}\right)^{1/2}$$

Or, where FS = 2.5, $q_a = 0.4\sqrt[3]{32 R_W B' E_b \frac{EI}{D_O^3}}$

h = maximum height of soil surface above top pipe (in)
6" PVC SDR 26, h = 202.8 in

D_O = outside diameter of the pipe (in)
6" PVC SDR 26, D_O = 6.625 in

FS = design factor of safety
See Equation 1
6" PVC SDR 26, FS = 2.5

h_w = height of ground water surface above top of pipe (in)
6" PVC SDR 26, h_w = 0 in

R_w = water buoyancy factor. If h_w=0, R_w=1. If $0 \le h_w \le h$ (groundwater elevation is between the top of the pipe and the ground surface), calculate R_w with Equation 2.
See Equation 2
6" PVC SDR 26, R_w = 1

H = depth of burial from ground surface to crown of pipe (ft)
6" PVC SDR 26, H = 8 ft

B' = empirical coefficient of elastic support
See Equation 3
6" PVC SDR 26, B' = 0.324

t = pipe wall thickness (in)
6" PVC SDR 26, t = 0.316 in

I = moment of inertia of pipe wall cross-section per linear inch of pipe ($inch^4$/lineal inch = $inch^3$). For solid wall pipe, moment of inertia can be calculated with Equation 4. If the pipe used is not solid wall pipe (for example a pipe with a ribbed cross section), the proper moment of inertia formula must be obtained from the manufacturer.
See Equation 4
6" PVC SDR 26, I = 0.0026 cubic inches

E_b = modulus of soil reaction for the bedding material (psi)
6" PVC SDR 26, E_b = 2,000 psi

Reference: USDA NRCS Part 636 Structural Engineering National Engineering Handbook

E = modulus of elasticity of pipe material (psi)
6" PVC SDR 26, E = 400,000 psi

Reference: USDA NRCS Part 636 Structural Engineering National Engineering Handbook

q_a = allowable buckling pressure (psi)

See Equation 5
6" PVC SDR 26, q_a = 43.57 psi

a) Calculate pressure applied to pipe under installed conditions:

(Equation 6) $$W_c = \gamma_s * H * (D+t)/144$$

(Equation 7) $$q_p = \gamma_w * h_w + R_w * (W_c/D) + L_l$$

γ_s = specific weight of soil in pounds per cubic foot (pcf)
γ_s = 139 pcf

Reference: Table 3.1 – Dense angular-grained silty sand and Table 3.2 - $\gamma_{sat} = \gamma_d + (\frac{e}{1+e})\gamma_w$*, Page 57 of Das Braja, Principles of Geotechnical Engineering Sixth Edition, Nelson: Toronto, Ontario, Canada, 2006.*

H = depth of burial from ground surface to crown of pipe (ft)
6" PVC SDR 26, H = 8 ft

D = mean pipe diameter (in)
6" PVC SDR 26, D = 6 in

t = pipe wall thickness (in)
6" PVC SDR 26, t = 0.316 in

W_c = vertical soil load on the pipe per unit length in pounds per linear inch (lb/in)
See Equation 6
6" PVC SDR 26, W_c = 48.77 lb/in

γ_w = 0.0361 pounds per cubic inch (pci), specific weight of water

h_w = height of ground water surface above top of pipe (in)
6" PVC SDR 26, h_w = 0 in

R_w = water buoyancy factor. If h_w=0, R_w=1. If $0 \le h_w \le h$ (groundwater elevation is between the top of the pipe and the ground surface), calculate R_w with Equation 2.
See Equation 2
6" PVC SDR 26, R_w = 1

L_l = Live Load (psi)
6" PVC SDR 26, L_l = 2.78 psi

Reference: Uni-Bell Handbook, page 210, Table 6.6 Live Loads on Pipe, for highway H20 live load. The minimum depth of burial from ground surface to crown of pipe is four feet, which requires a live load of 2.78 psi.

q_p = pressure applied to pipe under installed conditions (psi)

See Equation 7
6" PVC SDR 26, q_p = 10.91 psi

If $q_a \geq q_p$, the specified pipe is acceptable f. If $q_a \leq q_p$, the wall thickness of the pipe must be increased and/or a pipe with a larger modulus of elasticity must be used. In which case, appropriate modifications must be made and the buckling analysis must be repeated, showing that for the upgraded pipe, $q_a \geq q_p$. Reported below in Table 1 are q_a and q_p values for the type and size of the proposed pipe material. All pipe proposed for this project meets the requirement of $q_a \geq q_p$.

Table 1 – Allowable Buckling Pressure and Pressure Applied to Pipe under Installed Conditions

6-inch PVC SDR 26		
q_a=	43.57	psi
q_p=	10.91	psi

(C) Prism Load Calculations:

The prism load, L_p, value, calculated below, is utilized in Section (F) to calculate vertical deflection.

(Equation 8) $$L_p = \frac{\gamma_s \times H}{144}$$

γ_s = specific weight of soil (pcf)
γ_s = 139 pcf

Reference: Table 3.1 – Dense angular-grained silty sand and Table 3.2 - $\gamma_{sat} = \gamma_d + (\frac{e}{1+e})\gamma_w$*, Page 57 of Das Braja, Principles of Geotechnical Engineering Sixth Edition, Nelson: Toronto, Ontario, Canada, 2006.*

H = depth of burial from ground surface to crown of pipe (ft)
6" PVC SDR 26, H = 8 ft

L_p = prism load (psi)
If prism load is calculated using Marston's load formula, or other formulas less conservative than the one provided above, the load should be multiplied by a deflection lag factor D_L = 1.5 to account for long term deflection of the pipe as the bedding consolidates.
See Equation 8
6" PVC SDR 26, L_p = 7.72 psi

(D) Wall Crushing Determinations:

Wall crushing determinations are necessary for rigid pipe only. The proposed pipe material is flexible. Also, no section of the proposed pipe will be installed in rigid encasement. The calculations for determining a maximum depth that the pipe may be buried before wall crushing will occur for rigid pipe, based on TCEQ-10243, are provided below as supplemental information, rather than directly applicable information. Analysis was determined per linear foot of pipe section.

(Equation 9) $$H = \frac{24 * P_c * A}{\gamma_s * D_o}$$

24	=	conversions and coefficients
Pc	=	compressive stress or hydrostatic design basis (HDB); For typical PVC pipes, assume 4,000 psi
A	=	surface area of the pipe wall cross-section (in^2/ft) 6" PVC SDR 26, A = 6.20 in^2/ft
γ_s	=	specific weight of soil (pcf) γ_s = 139 pcf

Reference: Table 3.1 – Dense angular-grained silty sand and Table 3.2 - $\gamma_{sat} = \gamma_d + (\frac{s}{1+s})\gamma_w$, *Page 57 of Das Braja, Principles of Geotechnical Engineering Sixth Edition, Nelson: Toronto, Ontario, Canada, 2006.*

D_O	=	outside diameter of the pipe (in) 6" PVC SDR 26, D_O = 6.625 in
H	=	maximum allowable depth of burial from ground surface to crown of pipe (ft) See Equation 9 6" PVC SDR 26, H = 646 ft

The maximum proposed depth is approximately 8 feet for 6" PVC SDR 26, which is well less than the maximum allowable burial depth provided above.

(E) Strain Prediction:

There are no special conditions of this installation which would create significant potential for a strain related failure. Tensile strength data is provided by manufacturers and is based on ASTM standards. Harrison Machine & Plastic Corporation specifies PVC cell class 12454 pipe with a tensile strength of 7,450 psi based on ASTM-D-1784.

(F) Long Term Pipe Deflection:

The ratio of bedding modulus to in-situ soil modulus is $E_b/E' =$ 2,000 psi / 1,500 psi = 1.33 (justification for these values is provided in Section (G)(i)). Since this ratio is greater than 1.25, a zeta factor must be calculated. Zeta is a factor which corrects for the effect of in-situ soil on pipe stability. If the ratio of bedding modulus to soil modulus is less than or equal to 1.25, a zeta value of one can be assumed. The following are direct calculations for zeta based on equations provided by TCEQ in various documents including TCEQ-10243 dated 10/01/04.

(Equation 10)
$$f = \frac{b/d_a - 1}{1.154 + 0.444 \times (b/d_a - 1)}$$

(Equation 11)

$$zeta = \frac{1.44}{f + (1.44 - f) \times (E_b / E_n')}$$

b = trench width (in)
6" PVC SDR 26, b = 18.625 in

Reference: City of Round Rock Trench and Embedment Detail Under Proposed Roadway.

d_a = outside pipe diameter (in)
6" PVC SDR 26, d_a = 6.625 in

f = pipe / trench width coefficient
See Equation 10
6" PVC SDR 26, f = 0.925

E_b = modulus of soil reaction for bedding material (psi)
6" PVC SDR 26, E_b = 2,000 psi

Reference: USDA NRCS Part 636 Structural Engineering National Engineering Handbook

E'_n = modulus of soil reaction for in-situ soils (psi)
6" PVC SDR 26, E'_n = 1,500 psi

Reference: Principles of Geotechnical Engineering Sixth Edition by Braja Das, page 306, Table 10.2.

zeta = Leonhardt's Zeta factor
See Equation 11
6" PVC SDR 26, zeta = 0.893

Pipe Stiffness (P_s) is based on manufacturer's data and national reference standards. The J-M Eagle pipe catalog is referenced in Section G as justification for a pipe stiffness value of 115 psi and is in compliance with ASTM 3034 standards. Pipe stiffness may also be calculated by Equation 12 and 13 as referenced in TCEQ documents, including TCEQ-10243 and the Texas Administrative Code, Chapter 217.

(Equation 12)

$$P_s = \frac{EI}{0.149 * r^3}$$ or

(Equation 13)

$$P_s = 0.80 * RSC * \left(\frac{8.337}{D}\right)$$

where RSC = Ring Stiffness Coefficient based on manufacturer's data and
D = mean diameter in inches

E = modulus of elasticity of the pipe material (psi)
6" PVC SDR 26, E_b = 400,000 psi

Reference: USDA NRCS Part 636 Structural Engineering National Engineering Handbook

I = moment of inertia of pipe wall cross-section per linear inch of pipe (inch4/lineal inch = inch3). For solid wall pipe, moment of inertia can be calculated with Equation 4. If the pipe used is not solid wall pipe (for example a pipe with a ribbed cross section), the proper moment of inertia formula must be obtained from the manufacturer. $I = (t^3/12) * (inches4 / Linch)$

6" PVC SDR 26, I = 0.0026 cubic inches

r = mean radius (in)
6" PVC SDR 26, r = 3 in

P_s = pipe stiffness (psi)
See Equation 12
6" PVC SDR 26, Ps = 258.5 psi

In a conservative effort, the following calculations will utilize the manufacture's pipe stiffness value of 115 psi.

Because the terms in the denominator of the Modified Iowa Formula (Equation 15) are added, it is theoretically possible to have zero pipe stiffness and still predict flexible pipe deflections less than 5%. In order to ensure that the stiffness being provided to the installation has a reasonable contribution from pipe stiffness, and does not rely solely on the stiffness provided by the soil stiffness factor (SSF), the ratio of pipe stiffness to soil stiffness factor (P_s/SSF) must be calculated. If P_s/SSF < 0.15, a higher stiffness pipe must be chosen.

(Equation 14) $$\frac{P_s}{SSF} = \frac{P_s}{0.061 \times zeta \times E_b}$$

P_s = pipe stiffness (psi) – per national reference standards
6" PVC SDR 26, P_s = 115 psi

zeta = Leonhardt's Zeta factor
See Equation 11
6" PVC SDR 26, zeta = 0.893

E_b = modulus of soil reaction for bedding material (psi)
6" PVC SDR 26, E_b = 2,000 psi

Reference: USDA NRCS Part 636 Structural Engineering National Engineering Handbook

SSF = Soil Stiffness Factor
See Equation 14
6" PVC SDR 26, SSF = 106.23 psi

P_s / SSF= stiffness ratio
See Equation 14
6" PVC SDR 26, P_s /SSF = 1.06

Therefore, since Ps/SSF > 0.15, the stiffness being provided to the installation has a reasonable contribution from pipe stiffness and does not rely solely on the stiffness provided by the soil stiffness factor.

Finally, predicted deflection must be calculated. For the purposes of this application, predicted deflection shall be calculated using the method outlined below. Maximum allowable deflection is 5%, as determined by the deflection analysis and verified by a mandrel test. Some conservatism should be employed in determining allowable predicted deflections. This conservatism is necessary to allow for variability in in the quality of installation.

(Equation 15)
$$\Delta Y / D(\%) = \frac{K \times (L_p + L_l) \times 100}{(0.149 \times P_s) + (0.061 \times zeta \times E_b)}$$

K = Bending angle constant, assumed to be 0.110 unless otherwise justified
6" PVC SDR 26, K = 0.110

L_p = Prism Load (psi)
See Equation 8
6" PVC SDR 26, L_p = 7.72 psi

L_l = Live Load (psi)
6" PVC SDR 26, L_l = 2.78 psi

Reference: Uni-Bell Handbook, page 210, Table 6.6 Live Loads on Pipe, for highway H20 live load. The minimum depth of burial from ground surface to crown of pipe is four feet, which requires a live load of 2.78 psi.

P_s = pipe stiffness (psi) – per national reference standards
6" PVC SDR 26, P_s = 115 psi

zeta = Leonhardt's Zeta factor
See Equation 11
6" PVC SDR 26, zeta = 0.893

E_b = modulus of soil reaction for bedding material (psi)
6" PVC SDR 26, E_b = 2,000 psi

Reference: USDA NRCS Part 636 Structural Engineering National Engineering Handbook

ΔY/D% = Percent predicted vertical deflection under load
Or, change in vertical pipe diameter under load
See Equation 15
8" PVC SDR 26, ΔY/D = 1.09%

The predicted deflection is approximately 1.09% for 6" PVC SDR 26, which is less than the maximum allowable deflection of 5%. Therefore, the specified pipe size and material are structurally justified for the proposed use.

(G) Justification for Parameters and Assumptions:

(i) Determination of Modulus of Soil Reaction for Bedding and In-Situ Material:
The parameters representing soil conditions are based on the geotechnical report specific to this project, national standards and references, as well as engineering judgment. Reference to the United States Department of Agriculture Natural Resources Conservation Service's

National Engineering Handbook, Part 636 Structural Engineering Table 52-2, as provided below, was made in order to specify the modulus of soil reaction for bedding. Per City of Round Rock Standards, the degree of compaction of bedding must be 95%.

Table 2 - USDA NRCS National Engineering Handbook, Part 636 Structural Engineering

Table 52–2 Average values of the modulus of soil reaction for the Modified Iowa Equation

Soil type – pipe bedding material (Unified Soil Classification – ASTM D2487)	E' for degree of compaction of bedding, lb/in² 1/			
	Dumped	Slight, < 85% proctor, < 40% relative density	Moderate, 85-95% proctor, 40-70% relative density	High, > 95% proctor, > 70% relative density
Fine-grained soil (LL>50) 2/ Soil with medium to high plasticity CH, MH, CH-MH	No data available, use E' = 0 or consult with a geotechnical engineer			
Fine-grained soil (LL<50) soil with medium to no plasticity CL, ML, ML-CL, with less than 25% coarse-grained particles	50	200	400	1,000
Fine-grained soil (LL<50) soil with medium to no plasticity CL, ML, ML-CL, with more than 25% coarse-grained particles. Coarse-grained soil with fines GM, GC, SM, SC contains more than 12% fines	100	400	1,000	2,000
Coarse-grained soil with little or no fines GW, GP, SW, SP contains less than 12% fines	200	1,000	2,000	3,000
Crushed rock	1,000	3,000	3,000	3,000

1/ Source ASCE Journal of Geotechnical Engineering Division, January 1977
2/ LL = liquid limit

The modulus of soil reaction for in-situ materials is developed with reference to the geotechnical report and the text, Principles of Geotechnical Engineering Sixth Edition by Braja Das, specifically, page 306, Table 10.2.

(ii) Pipe Diameters and Materials:
Pipe dimensions such as inside, outside and average diameters, thickness, and stiffness are based on pipe catalogs from manufacturers. Specifically, the J-M Eagle pipe catalog, referenced to ASTM 3034 standards, was referenced.

(iii) Modulus of Elasticity:
The modulus of elasticity values for the project pipe material, 8-inch PVC SDR 26, is based on values provided by the United States Department of Agriculture Natural Resources Conservation Service's National Engineering Handbook, Part 636 Structural Engineering, Page 52-11 and 52-12.

(iv) Tensile Strength:
Tensile strength data is provided by manufacturers and is based on ASTM standards. Harrison Machine & Plastic Corporation specifies PVC cell class 12454 pipe with a tensile strength of 7,450 psi based on ASTM-D-1784.

(v) Conversion of Pipe or Ring Stiffness Constant to Pipe Stiffness:
Pipe stiffness and Ring Stiffness constant are based on pipe catalogs from manufacturers. Specifically, the J-M Eagle pipe catalog was used, which complies with ASTM 3034 standards.

(vi) Leonhardt's Zeta Factor:
Leonhardt's Zeta Factor and other equations (Equations 1-15) are referenced in TCEQ form TCEQ-10243 dated 10/01/04 and the Texas Administrative Code Title 30 Chapter 217

available via the TCEQ website. In addition, some formulas may be found in the USDA NRCS National Engineering Handbook Part 636 Structural Engineering.

(vii) Trench Width:
Trench width is in accordance with the City of Round Rock standard details and specifications. The minimum trench width shall be 18. The proceeding calculations confirm the soundness of the design.

(viii) Depth of Cover:
The depth of cover ranges from approximately 4.00 feet to 16.9 feet below finished grade as provided in the construction plans.

(ix) Water Table Elevation:
Groundwater conditions will be monitored during construction.

(x) Unit Weight of Soil:
The unit weight of soil is developed with reference to the geotechnical report and the text: Principles of Geotechnical Engineering Sixth Edition by Braja Das, specifically, Table 3.1 and Table 3.2 on page 57. Table 3.1 provides the dry unit weight for dense angular-grained silty sand while Table 3.2 provides the saturated unit weight based on the following equation, $\gamma_{sat} = \gamma_d + (\frac{e}{1+e})\gamma_w$. The saturated unit weight is used in a conservative effort.

Odor Control per TAC §217.53(h)

No odor issues are to be anticipated, however, if odor becomes a nuisance after operation, measures such as ventilation can be applied as necessary. Based on estimated flows upon operation through a 50-year expected life cycle odor production is estimated to be insignificant.

Pipe Design Requirements per TAC §217.55

a. Manholes are included in the wastewater system at:
   i. All points of change in alignment, grade, or size;
   ii. At the intersections of three or more pipes; and
   iii. At the end of all pipes that may be extended at a future date.
   iv. There are future extensions of the system from Mayfield Office Park; therefore, manholes located at the ends of the system include stubs and plugs.
   v. Clean-outs with water tight plugs are not used within the public Right-of-Way. They are used at all terminal points of the private wastewater system.
   vi. Per the TCEQ Organized Sewage Collection System General Notes located within the plan set, all cleanout installations must pass the testing requirements outlined for gravity collection pipes in TAC §217.57.
b. Types (Materials):
   i. Manholes shall be made of either pre-cast or cast-in-place concrete bases and sections. The grade adjustment rings shall be made only of concrete.
   ii. The use of bricks to adjust manholes is prohibited by notes on the wastewater layout sheets and by a note within the TCEQ General Notes
c. Spacing:
   i. The maximum manhole spacing allowed is 500 linear feet for all proposed pipe sizes in this design. The maximum designed manhole spacing is 480 LF
   ii. There are no tunnels proposed with this plan.
d. Diameter/Size:
e. All manholes shall be 48" inside diameter per City of Round Rock Standard Detail
f. Manhole Covers:
   i. All manholes shall have a 30" cover that is heavy duty load rated and stamped "Sanitary Sewer" per City of Round Rock Standard Detail.
   ii. No manholes are to be located within the 100-year floodplain.
   iii. Manholes are to be constructed of cast iron. For more detail reference East Jordan Iron Works, Inc. Catalog No. 1480A V-1420/1480Z1.
g. Manhole Inverts:
   i. Manhole inverts shall be constructed for smooth flow in accordance with the City of Round Rock Standard Detail.
   ii. Inflow pipes greater than 24" above the flow line out will be required to be drop manholes.
h. Manhole Steps:
   i. Manhole steps are not included within the standard manhole details per the City of Round Rock

i. Connections:
    i. Rubber, water-tight gaskets are required for connections of wastewater pipes to manholes per City of Round Rock Standard Detail.
j. Venting:
    i. No gasketed and/or bolted manholes are proposed and no manhole separations exceed 1,500 feet; therefore, special ventilation will not be required.
k. Cleanouts:
    i. There are no proposed cleanouts for the proposed development of Mayfield Office Park

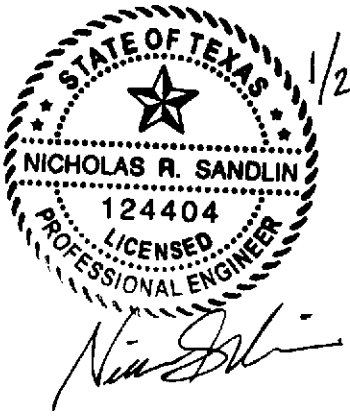
l. All manholes are all located in the pavement areas within the right-of-ways on the proposed development.

(11) Description of areas not initially served by this project, the projected means of providing service to said areas

As previously stated, the system is designed to serve the proposed development. The overall development includes future service areas outside of the proposed service area, as depicted in Exhibit 1, the Service Area Map. Portions of the future service area will connect to the proposed system via wastewater line 'E' at a later date.

(12) Safety considerations incorporated into the project design:

The design includes safety features commensurate with standard engineering practice and the standards and specifications of the Texas Commission on Environmental Quality, the City of Round Rock, and OSHA practices.
I certify that to the best of my knowledge, the proposed wastewater collection system for Mayfield Office Park is in compliance with *"Chapter 217 – Design Criteria for Domestic Wastewater Systems"*. No variances from the listed criteria will be necessary for the proposed system as it was designed and approved. Please let me know if there is any additional information that will be required.



1/29/2024

Nicholas R. Sandlin, PE TBPELS #124404

Temporary Stormwater Section
(TCEQ-0602)

Temporary Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: NICK SANDLIN, P.E. (SANDLIN SERVICES, LLC)

Date: 1/29/2024

Signature of Customer/Agent:

Regulated Entity Name: NEW HOPE RETAIL

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: Gasoline/Diesel

   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.

☒ 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: Brushy Creek segment 1244A

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.

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

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

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

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

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

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

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

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

8. ☒ **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.

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

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

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

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

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

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

10. ☐ **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

11. ☒ **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.

12. ☒ 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.

13. ☒ 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).

14. ☒ 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.

15. ☒ 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.

16. ☒ **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.

17. ☒ 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.

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

Administrative Information

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

20. ☒ 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.

21. ☒ 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.

Temporary Stormwater Section (TCEQ-0602)

Attachment A: Spill Response Actions

Spill Response Actions

In the event of an accidental spill, immediate action shall be undertaken by the General Contractor to contain and remove the spilled material. All hazardous materials, including contaminated soil and liquid concrete waste (if applicable), shall be disposed of by the Contractor in the manner specified by Federal, State and Local regulations and by the manufacturer of such products. As soon as possible, the spill shall be reported to the appropriate agencies. As required under the provisions of the Clean Water Act, any spill or discharge entering waters of the United States shall be properly reported. The General Contractor shall prepare a written record of any spill and associated clean-up activities of petroleum products or hazardous materials in excess of 1 gallon or reportable quantities, whichever is less. The General Contractor shall provide notice to the Owner immediately upon identification of a reportable spill.

All spills of petroleum products or hazardous materials in excess of Reportable Quantities as defined by EPA or the State or Local agency regulations, shall be immediately reported within 24 hours to the EPA National Response Center (1-800-424-8802), TCEQ (1-800-832-8224), and local Fire Department (911).

The reportable quantity for hazardous materials can be found in 40 CFR 302:

Reportable Quantities		
Material	**Media Released to**	**Reportable Quantities**
Engine Oil, Fuel, Hydraulic & Brake Fluid	Land	25 gallons
Engine Oil, Fuel, Hydraulic & Brake Fluid	Water	Visible sheen
Antifreeze	Land	100 lbs (13 gal.)
Battery Acid	Land, Water	100 lbs
Refrigerant	Air	1 lb
Gasoline	Air, Land, Water	100 lbs
Engine Degreasers	Air, Land, Water	100 lbs

Please visit https://www.tceq.texas.gov/response/spills/spill_rq.html for more information

In order to minimize the potential for a spill of petroleum product or hazardous materials to come in contact with stormwater, the following steps shall be implemented.

a) All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids paints, paint solvents, additives for soil stabilization,

concrete curing compounds and additives, etc.) shall be stored in a secure location, under cover and in appropriate, tightly sealed containers when not in use.

b) The minimum practical quantity of all such materials shall be kept on the job site and scheduled for delivery as close to time of use as practical. Post Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

c) A spill control and containment kit (containing for example: absorbent material such as kitty litter or sawdust, acid neutralizing agent, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) shall be provided on the construction site and construction employees shall be trained in when and how to use spill containment materials.

d) The contractor personnel will immediately clean up any oil, fuel or hydraulic fluid if observed being released from equipment or vehicles. Vehicles or equipment will cease operation until required repairs are made to the equipment.

e) All of the product in a container shall be used before the container is disposed of. All such containers shall be triple rinsed with water prior to disposal. The rinse water used in these containers shall be disposed of in a manner in compliance with State and Federal regulations and shall not be allowed to mix with stormwater discharges.

f) All products shall be stored in and used from the original container with the original product label.

g) All products shall be used in strict compliance with instructions on the product label.

h) The disposal of the excess or used products shall be in strict compliance with instructions on the products label.

Spill Prevention and Control

Education

1.) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.

2.) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

3.) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

4.) Establish a continuing education program to indoctrinate new employees.

5.) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

1.) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

2.) Store hazardous materials and wastes in covered containers and protect from vandalism.

3.) Place a stockpile of spill cleanup materials where it will be readily accessible.

4.) Train employees in spill prevention and cleanup.

5.) Designate responsible individuals to oversee and enforce control measures.

6.) Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise cleanup activities.

7.) Do not bury or wash spills with water.

8.) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

9.) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

10.) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

11.) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

12.) Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

1.) Clean up leaks and spills immediately.

2.) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

3.) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

1.) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.

2.) Use absorbent materials on small spills rather than hosing down or burying the spill.

3.) Absorbent materials should be promptly removed and disposed of properly.

4.) Follow the practice below for a minor spill:

5.) Contain the spread of the spill.

6.) Recover spilled materials.

7.) Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

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

1.) Contain spread of the spill.

2.) Notify the project foreman immediately.

3.) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.

4.) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

5.) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

For significant or hazardous spills that are in reportable quantities:

1.) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512- 339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.

2.) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.

3.) Notification should first be made by telephone and followed up with a written report.

4.) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.

5.) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tnrcc.state.tx.us/enforcement/emergency_response.html.

Vehicle and Equipment Maintenance

1.) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

2.) Regularly inspect onsite vehicles and equipment for leaks and repair immediately.

3.) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.

4.) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.

5.) Place drip pans or absorbent materials under paving equipment when not in use.

6.) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.

7.) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

8.) Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.

9.) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

1.) If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.

2.) Discourage "topping off" of fuel tanks.

Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

SPILL REPORT FORM

Notes to General Contractor:

- Control and contain the spill.
- Contact the appropriate regulatory agencies if the spill exceeds the applicable reportable quantity.
- Clean up the spill and dispose of waste according to federal, state and local regulations.
- Complete the Spill Report Form in full for each spill that exceeds the applicable reportable quantity and submit to the Owner.
- Call the Owner.
- Resolve as appropriate and as required by regulatory authorities.

SPILL REPORT FORM

DATE:
PROJECT:
PROJECT ADDRESS:

Spill Reported By: _____

Date / Time of Spill: _____

Describe spill location and events leading to spill: _____

_____

Material Spilled: _____

Source of Spill: _____

Amount Spilled: _____

Amount Spilled to Waterway (Name Waterway): _____

Containment or Clean up Action: _____

_____

Approximate depth (yards) of soil excavation: _____

List injuries or Personal Contamination: _____

Action to be taken to prevent future spills:
_____

Agencies notified of spill:
_____

_____

_____ _____
Contractor Signature and Printed Name **Date**

AFTER NOTIFYING GOVERNING AUTHORITIES, IMMEDIATELY COMPLETE THIS FORM AND CONTACT THE OWNER IF THE SPILL EXCEEDS THE REPORTABLE QUANTITY FOR THE GOVERNING AGENCY

Temporary Stormwater Section
(TCEQ-0602)

Attachment B:
Potential Sources of Contamination

Potential Sources of Contamination and Preventive Measures:

Potential Source: Concrete and concrete products used on-site during construction.
Preventive Measures: Concrete washout structure will be used if necessary.

Potential Source: Oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicle dripping.
Preventative Measures: Vehicle maintenance will be performed at 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. And 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 stockpiled on site.
Preventative Measures: Silt fence shall be installed on the down gradient side of the stockpiled 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.

Temporary Stormwater Section (TCEQ-0602)

Attachment C: 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 (AC) expected to be disturbed is listed in parentheses next to each activity.

Intended Schedule or Sequence of Major Activities:

1. Submit written notice of construction to TCEQ regional office at least 48 hours prior to the start of any regulated activities. (See Permanent Stormwater Section – Attachment F)

2. A pre-construction conference prior to commencement of construction. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.

3. Contractors must follow requirements as outlined in TCEQ General Construction Notes for the Water Pollution Abatement Plan (WPAP). WPAP Construction Notes are included on the Construction Plan sheets (See Permanent Stormwater Section – Attachment F).

4. Prior to beginning any construction activity, all temporary erosion and sedimentation BMPs and control measures must be properly installed and maintained in accordance with the approved plans and manufacturers specifications (1.96 AC).

5. Evaluate temporary erosion control installation. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

6. Review construction schedule and the Water Pollution Abatement Plan (WPAP) requirements.

7. Complete Permanent BMP construction and install landscaping (1.96 AC).

8. Topsoil, Irrigation and Landscaping: Revegetate all disturbed areas according to plan.

9. Site cleanup and removal of temporary erosion/sedimentation BMP controls. (1.96 AC)

Maximum total construction time is not expected to exceed 6 months.

Temporary Stormwater Section
(TCEQ-0602)

Attachment D:
Temporary Best Management Practices and Measures

1. There are approximately 0.0 AC of storm water that originate up gradient from the site and flow across the site through an onsite BMP. No upstream stormwater exists.

2. Temporary BMPs will be installed prior to soil disturbing construction activity. Silt fencing will be placed along the down-gradient sides of the property and limits of construction to prevent silt from escaping the construction area during permanent BMP construction.

3. A gravel construction entrance exists on site to reduce vehicle "tracking" onto adjoining streets. A concrete washout pit may be used to collect all excess concrete during construction, if needed.

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

5. 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.

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

Temporary Stormwater Section
(TCEQ-0602)

Attachment E:
Request to Temporarily Seal a Feature
(NOT APPLICABLE)

Temporary Stormwater Section (TCEQ-0602)

Attachment F: 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 BMPs are shown within the Site Plans.

Description of Temporary BMPs

Construction Entrance/Exit:
The purpose of a 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. This practice should be used at all point 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 exists and will be used at all designated access points.

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.

Triangular Sediment Filter Dikes
Triangular sediment filter dikes (18"x18"x18" filter material with 6" square folded wire mesh frame) will be installed downgradient of the AST construction area with filter cloth placed over any existing stormwater

collection drains. The dike and filter cloth will be held in place with cloth sandbags. The facility existing topography will not change as the AST will be placed on existing crushed rock.

Concrete Washout Area (if applicable)

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.

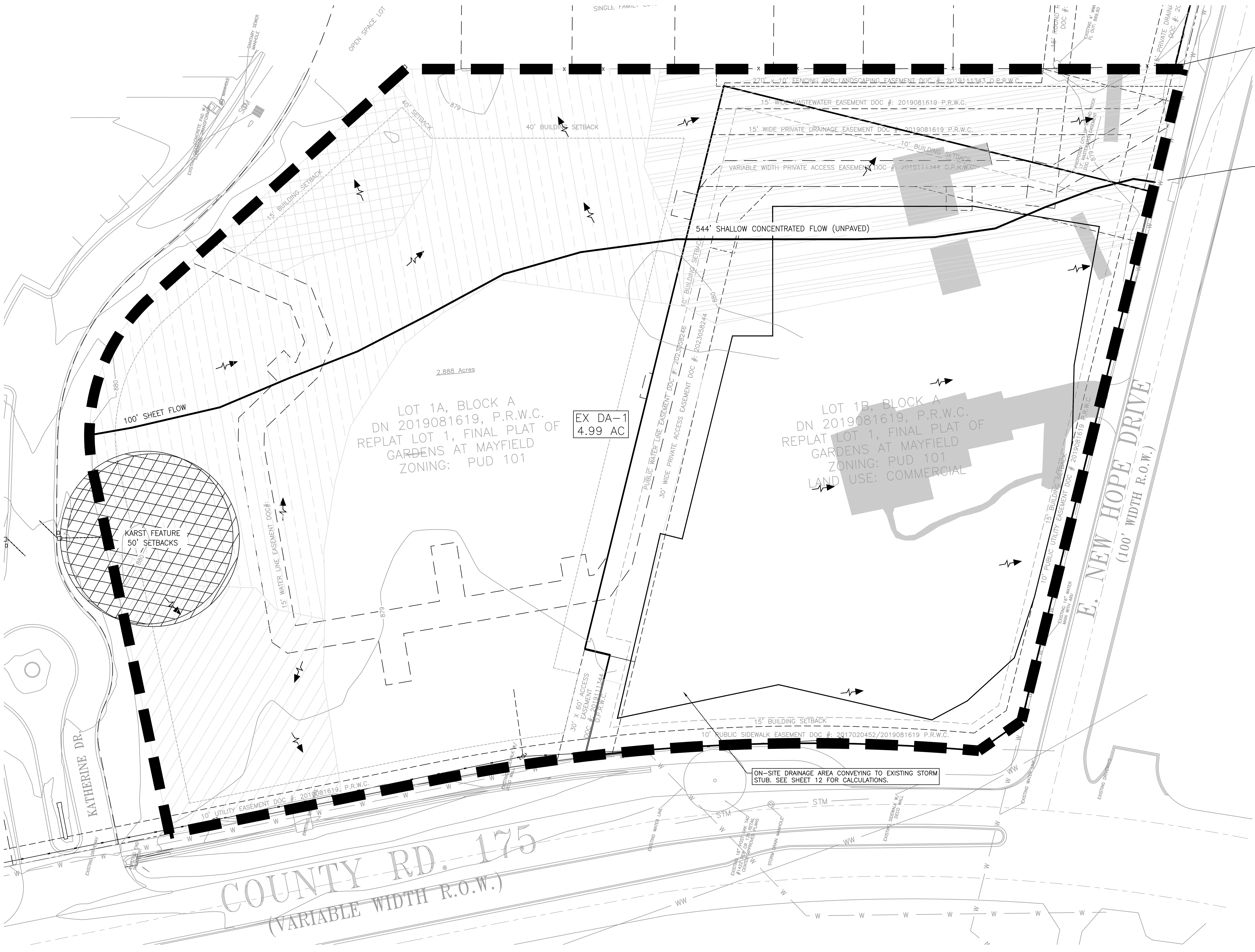
Temporary Stormwater Section (TCEQ-0602)

Attachment G: Drainage Area Map

Time of Concentration Calculations					Sheet Flow				Shallow Conc. Flow				Channel Flow									Total	
Existing Flows			Area	Area	L	n	S	T_t	L	Surface Type	S	T_t	L	Manning's 'n'	S	Wetted Perimeter	Cross-Sectional Area	Hydraulic Radius	Vavg	T_t	T_c	
From		To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(ft)	(ft^2)	(sf)	(ft/s)	(min)	(min)	lag time
EX DA-1		AP1 - Exist Curb Inlet	4.99	217,364	100	0.240	0.005	23.96	544	Unpaved	0.005	7.95	-	-	-	-	-	-	-	0.00	**31.91**	19.15

EXISTING			IMPERVIOUS			GRASS		
Drainage Area	Total Area (Ac)	Total Area (sf)	Area Impervious (sf)	Area Impervious (Ac)	Area Impervious (%)	Area Grass (sf)	Area Grass (Ac)	Area Grass (%)
EX DA-1	4.99	217,364	9,375	0.22	4.3%	207,989	4.77	95.7%

Drainage Basin Characteristics - Existing Conditions									
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q50 (cfs)	Q100 (cfs)
EX DA-1	4.99	4.3%	82	31.91	9.53	17.06	22.07	26.08	30.26



Analysis Point 2: Existing 36" Storm Stub		
Flow from Approved Plans		
25 YR	33.79	CFS
100 YR	41.33	CFS
NOTE: SEE GARDENS AT MAYFIELD PLANS FOR CALCULATIONS		

Analysis Point 1: Southeast ROW		
2 YR	9.53	CFS
10 YR	17.06	CFS
25 YR	22.07	CFS
50 YR	26.08	CFS
100 YR	30.26	CFS

NOTE: THE HATCHED DELINEATIONS AND FLOW ARROWS ARE BASED ON THE SURVEY CONDUCTED BY CARRIZALES LAND SURVEYING, LLC, JOB #22-081, ON 4-19-22. HOWEVER, THE DRAINAGE AREA DELINEATION AND CALCULATIONS ARE SHOWN AS TO STAY ALIGNED WITH THE APPROVED MASTER PLAN DEVELOPMENT DRAINAGE ANALYSIS: THE GARDENS AT MAYFIELD (SDP1505-0002), APPROVED 5-12-17. PROPOSED ON-SITE IMPERVIOUS COVER IS TO CONVEY FLOWS TO THE EXISTING 36" STORM STUB, THEREBY REDUCING THE EXISTING FLOWS TO THE ADJACENT PROPERTIES. PLEASE SEE SHEET 14 FOR EXISTING STORM SEWER CONTINUATION AND SHEET 12 FOR PROPOSED DRAINAGE AREAS AND CALCULATIONS.

Table 1: NOAA Atlas 14 Brushy Creek Watershed Centroid Rainfall Depth for selected Durations and Frequencies (inches); AC = Annual Chance

Duration	1-yr	2-yr	5-yr	10-yr	25-yr (4% AC)	50-yr	100-yr (1% AC)	200-yr	500-yr	1000-yr
5-min	0.438	0.520	0.650	0.761	0.921	1.05	1.18	1.32	1.50	1.65
10-min	0.697	0.829	1.040	1.22	1.47	1.68	1.90	2.11	2.38	2.59
15-min	0.879	1.04	1.30	1.52	1.83	2.09	2.35	2.61	2.98	3.25
30-min	1.24	1.47	1.82	2.12	2.55	2.90	3.25	3.63	4.15	4.57
60-min	1.61	1.91	2.39	2.80	3.39	3.85	4.35	4.89	5.66	6.28
2-hr	1.93	2.35	2.99	3.57	4.41	5.11	5.87	6.73	7.99	9.03
3-hr	2.10	2.61	3.36	4.05	5.08	5.94	6.91	8.02	9.65	11.0
6-hr	2.40	3.05	3.98	4.86	6.19	7.32	8.62	10.1	12.3	14.2
12-hr	2.73	3.49	4.58	5.61	7.18	8.53	10.1	11.9	14.6	17.0
24-hr	3.10	3.97	5.20	6.38	8.17	9.70	11.5	13.5	16.7	19.3

NOTE: NOAA ATLAS 14 RAIN DEPTHS UTILIZED FROM ROUND ROCK RAIN AS SHOWN.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

EXISTING DRAINAGE LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- EX. DA-X XX.XX AC — DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW
- TIME OF CONCENTRATION LINE (SHEET FLOW)
- TIME OF CONCENTRATION LINE (SHALLOW CONCENTRATED FLOW)
- 750 — EXISTING CONTOURS
- 755 — PROPOSED CONTOURS

0 15' 30' 60'
SCALE: 1" = 30'

IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

TEXAS 811 BEFORE YOU DIG

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

EXISTING CONDITIONS DRAINAGE AREA MAP

NEW HOPE RETAIL

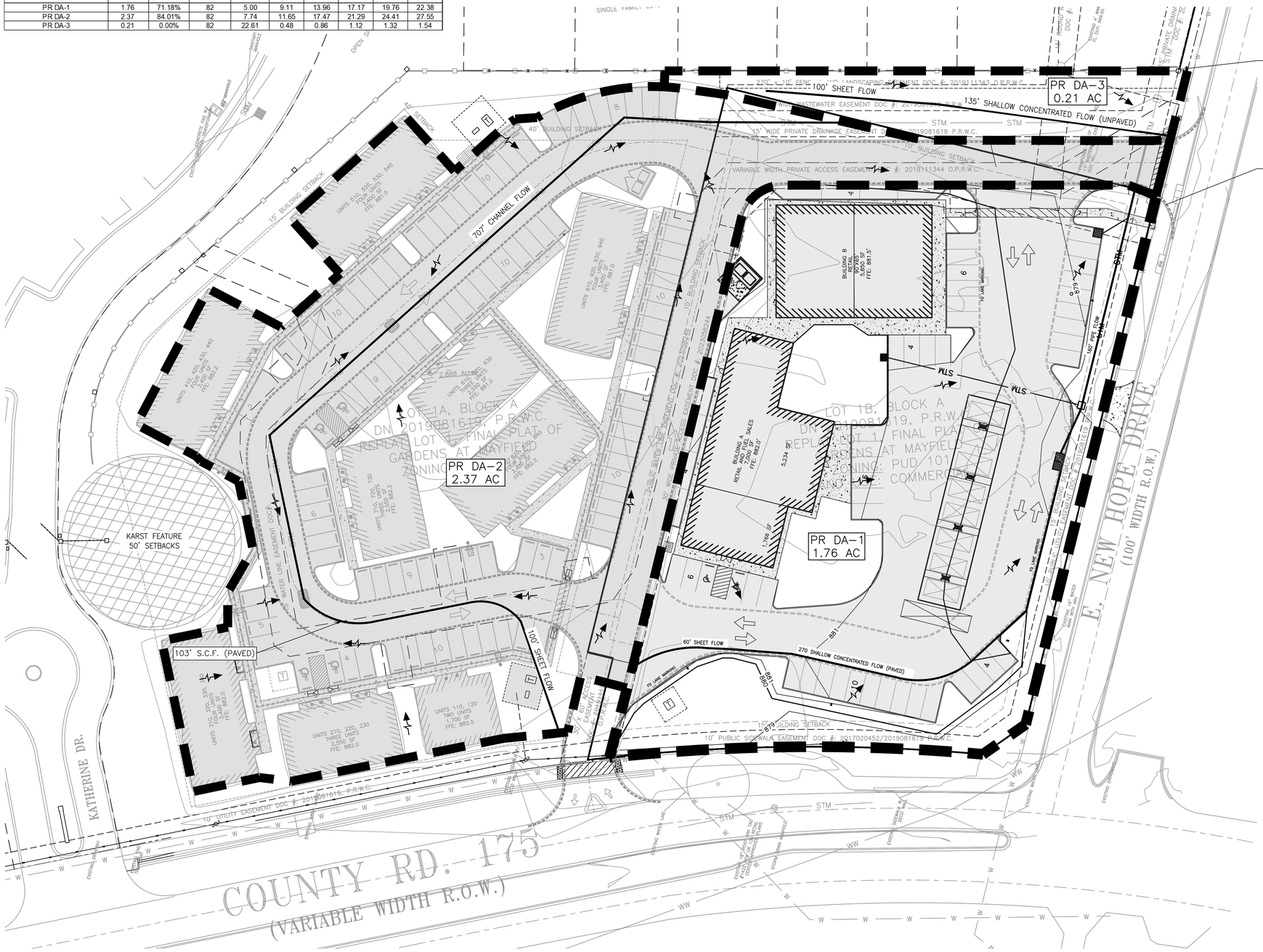
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

Time of Concentration Calculations				Sheet Flow				Shallow Conc. Flow				Channel Flow								Total	
Proposed Flows		Area	Area	L	n	S	T_t	L	Surface Type	S	T_t	L	Manning's 'n'	S	Wetted Perimeter	Cross-Sectional Area	Hydraulic Radius	Vavg	T_t	T_c	
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(ft)	(ft^2)	(ft)	(ft/s)	(min)	(min)	lag time
PR DA-1	AP2 - Exist 36" Storm Stub	1.76	76,744	60	0.018	0.010	1.52	270	Paved	0.010	2.21	160	0.013	0.010	-	10	1.75	16.64	0.16	**5.00**	3.00
PR DA-2	AP2 - Exist 36" Storm Stub	2.37	103,426	100	0.018	0.010	2.29	15	Paved	0.010	0.12	707	0.013	0.008	5	1	0.10	2.21	5.34	**7.74**	4.65
PR DA-3	AP1 - Exist Curb Inlet	0.21	9,351	100	0.240	0.007	20.95	135	Unpaved	0.007	1.67	-	-	-	-	-	-	-	0.00	**22.61**	13.57

PROPOSED			IMPERVIOUS			GRASS		
Drainage Area	Total Area	Total Area	Area Impervious	Area Impervious	Area Impervious	Area Grass	Area Grass	Area Grass
	(Ac)	(sf)	(sf)	(Ac)	(%)	(sf)	(Ac)	(%)
PR DA-1	1.76	76,744	54,625	1.25	71.2%	22,119	0.51	28.8%
PR DA-2	2.37	103,426	86,887	1.99	84.0%	16,539	0.38	16.0%
PR DA-3	0.21	9,351	0	0.00	0.0%	9,351	0.21	100.0%

Drainage Basin Characteristics - Proposed Conditions									
Drainage Area	Area	I.C. (%)	Curve No.	Tc	Q2	Q10	Q25	Q50	Q100
PR DA-1	1.76	71.18%	82	5.00	9.11	13.96	17.17	19.76	22.38
PR DA-2	2.37	84.01%	82	7.74	11.65	17.47	21.29	24.41	27.55
PR DA-3	0.21	0.00%	82	22.61	0.48	0.86	1.12	1.32	1.54



Analysis Point 2: Exist 36" Storm Stub				
	SDP1505-0002 Design Flows		Proposed Flows	
2 YR		CFS	20.46	CFS
10 YR		CFS	30.96	CFS
25 YR	33.79	CFS	37.87	CFS
50 YR	-	CFS	43.49	CFS
100 YR	41.33	CFS	49.16	CFS

Analysis Point 1: Southeast ROW				
	Existing Flows		Proposed Flows	
2 YR	9.53	CFS	0.48	CFS
10 YR	17.06	CFS	0.86	CFS
25 YR	22.07	CFS	1.12	CFS
50 YR	26.08	CFS	1.32	CFS
100 YR	30.26	CFS	1.54	CFS
NOTE: ALL PROPOSED FLOWS TO THIS ANALYSIS POINT ARE LESS THAN EXISTING FLOWS				

NOTE: STORMWATER INCREASES FOR ATLAS 14 RAINFALL RATES WERE MODELED FOR THE DOWNSTREAM GARDENS AT MAYFIELD STORM SEWER NETWORK, PER AS-BUILT RECORD DRAWINGS, WITH THE FULLY DEVELOPED CONDITIONS PER THIS DRAINAGE PLAN. THE RESULTS OF THE MODELED FLOWS CONFIRM THAT THE FLOWRATES ARE CONTAINED WITHIN THE STORM SEWER NETWORK. THIS PLAN AND THE FULLY DEVELOPED ADJACENT LOT HAVE NO ADVERSE IMPACT TO THE SAFETY OF THE PUBLIC DOWNSTREAM OF THIS PROJECT. THE HYDRAULIC GRADE LINE FOR THE 100 YEAR STORM, IS CONTAINED WITHIN THE EXISTING DRAINAGE FACILITIES DIRECTLY DOWNSTREAM AND MEETS THE CITY OF ROUND ROCK DRAINAGE CRITERIA.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

PROPOSED DRAINAGE LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- PR. DA-X XX.XX AC — DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW
- TIME OF CONCENTRATION LINE (SHEET FLOW)
- TIME OF CONCENTRATION LINE (SHALLOW CONCENTRATED FLOW)
- 750 — EXISTING CONTOURS
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0 15' 30' 60'
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PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

DEVELOPED CONDITIONS DRAINAGE AREA MAP

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 12 OF 25

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0105-001 New Hope Retail\CAD\Reference\TITLE BLOCK 24x36.dwg-Model Plotted Jan 30, 2024 at 1:14pm by Engineer | Last Saved by: Engineer

Temporary Stormwater Section
(TCEQ-0602)

Attachment H:
Temporary Sediment Pond(s) Plans and Calculations
(NOT APPLICABLE)

Temporary Stormwater Section
(TCEQ-0602)

Attachment I:
Inspection and Maintenance for BMPs

Inspection and Maintenance Guidelines for Construction BMPs

Silt Fence – Section 1.4.3
(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.

Rock Berms – Section 1.4.5
(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.

Temporary Construction Entrance/Exit – Section 1.4.2
(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.

Personnel Responsible for Inspections

The agent that performs the inspections should be knowledgeable of this general permit, familiar with the construction site, and knowledgeable of the SWPPP for the site. 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.

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, familiar with the construction site, and knowledgeable of the SWPPP for the site. The contractor is to provide an inspector with a CPESC, CESSWI, or CISEC certification.

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.

Stormwater Control Installation and Removal Log

Stormwater Control	Location On-Site	Installation Date	Removal Date

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.

Inspection Frequency Log

Date	Frequency

Rain Gauge Log

Date	Location of Rain Gauge	Gauge Reading

General Information

Name of Project		**Tracking Number**		**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 determine 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 of 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		

Condition and Effectiveness of Pollution Prevention (P_2) Practices				
Type / Location of P_2 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		

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:	

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 Locations	**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:

Section A – Initial Report **(Complete this section within 24 hours of discovering the condition that triggered corrective action.)**		
Name of Project:	Tracking Number:	Today's Date
Date Problem First Discovered:	Time Problem First Discovered:	
Name of Individual Completing this Form:	Contact Information:	

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 Part 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.

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	SWPPP Update Necessary?	Notes
1.		☐ Yes ☐ No Date:	
2.		☐ 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 Number:	Today's Date
Date Problem First Discovered:	Time Problem First Discovered:	
Name of Individual Completing this Form:	Contact Information:	

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 Part 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.

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	SWPPP Update Necessary?	Notes
1.		☐ Yes ☐ No Date:	
2.		☐ 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:

Temporary Stormwater Section
TCEQ-0602)

Attachment J:
Schedule of Interim and Permanent
Soil Stabilization Practices

Interim Vegetative Stabilization

Interim soil stabilization will not be required.

Permanent Vegetative Stabilization

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.

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:

1. The dates when major grading activities occur,

2. The dates when construction activities temporarily or permanently cease on a portion of the site, and

3. 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 than 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.

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.

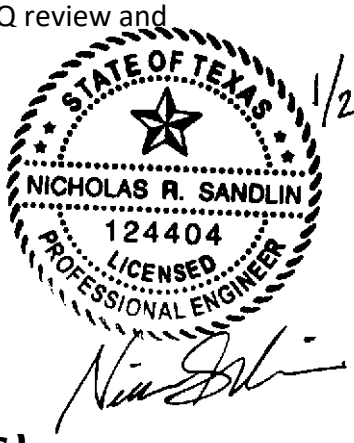
Signature

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: NICK SANDLIN, P.E. (SANDLIN SERVICES)

Date: 1/29/2024

Signature of Customer/Agent



Regulated Entity Name: NEW HOPE RETAIL

Permanent Best Management Practices (BMPs)

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

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

   ☐ N/A

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

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

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

☐ N/A

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

   ☐ N/A

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

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

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

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

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

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

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

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

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

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

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

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

☒ N/A

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

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

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

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

☒ Design calculations (TSS removal calculations)

☒ TCEQ construction notes

☒ All geologic features

☒ All proposed structural BMP(s) plans and specifications

☐ N/A

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

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

    ☐ N/A

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

    ☒ N/A

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

    ☒ N/A

Responsibility for Maintenance of Permanent BMP(s)

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

14. ☐ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

    ☒ N/A

15. ☐ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

    ☒ N/A

Permanent Stormwater Section
(TCEQ-0600)

Attachment A:
20% or Less Impervious Cover Waiver (if requested for multi-family, school, or small business site)

Permanent Stormwater Section
(TCEQ-0600)

Attachment B:
BMPs for Upgradient Stormwater

Per the Construction Plans and Drainage study, no upgradient stormwater for our site exists.

Permanent Stormwater Section
(TCEQ-0600)

Attachment C:
BMPs for On-Site Stormwater

The Commercial project will increase impervious cover (IC) and the volume of potential on-site stormwater. BMPs are designed to capture and mitigate potential onsite stormwater flows.

Runoff from the 2.1 AC developed area will convey to an existing Wet Pond BMP that is designed to capture and detain the required water quality volume. This Wet Pond was Modified with 2017 Construction Plans approved and referenced with this WPAP. Per the attached construction plans, this development is within the 80% allowable impervious cover, as defined with the previously approved plans.

Permanent Stormwater Section
(TCEQ-0600)

Attachment D:
BMPs for Surface Streams
(NOT APPLICABLE)

No surface streams flow across the property.

Permanent Stormwater Section
(TCEQ-0600)

Attachment E:
Request to Seal Features (if sealing a feature)
(NOT APPLICABLE)

Permanent Stormwater Section (TCEQ-0600)

Attachment F: Construction Plans

NEW HOPE RETAIL

SITE DEVELOPMENT IMPROVEMENTS

ADDRESS:

4631 E NEW HOPE DR

LEANDER, TEXAS 78641

SDP23-00007

THIS PROPOSED DEVELOPMENT WILL NOT RESULT IN ANY IDENTIFIABLE ADVERSE IMPACT TO OTHER PROPERTIES. SEE DRAINAGE AREA MAPS AND CALCULATIONS FOR DETAILED ANALYSIS.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

PROJECT CONTACTS

OWNER:

NEW HOPE RE, LLC
901 AMBROSE DR
PFLUGERVILLE, TX 78660
512-925-9610
CONTACT: RAHIM KARIMALA

ENGINEER:

SANDLIN SERVICES, LLC
9111 JOLLYVILLE RD, STE 212
AUSTIN, TEXAS 78727
806-679-7303
CONTACT: NICHOLAS SANDLIN, P.E.

LANDSCAPE ARCHITECT:

BLAIR LANDSCAPE ARCHITECTURE
100 CONGRESS AVE. SUITE 2000,
AUSTIN, TX 78701
512-522-8979
CONTACT: WILL BLAIR

LAND SURVEYOR:

ALL STAR LAND SURVEYING
9020 ANDERSON MILL RD
AUSTIN, TEXAS 78729
512-249-8149

ARCHITECT:

FOUR NEXUS STUDIO, LLC
11940 JOLLYVILLE ROAD, SUITE 105-N
AUSTIN, TEXAS 78759
217-710-7149
CONTACT: PATRICK LONDRIGAN, AIA

SURVEY AND BENCHMARK

ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE FOLLOWING BENCHMARKS AND INFORMATION.

TEMPORARY BENCHMARK (TBM) – TRIANGLE CUT IN CURB
ELEVATION = 878.56'
NAVD 1988 DATUM
GEOID18

BEARINGS ARE BASED ON THE TEXAS STATE PLAN COORDINATE SYSTEM OF 1983, TEXAS CENTRAL ZONE (NAD 83)

LEGAL DESCRIPTION

S12114 – GARDENS AT MAYFIELD (LT 1 REPLAT), BLOCK A, LOT 1B, ACRES 2.1

SEE PLAT SHEET

ZONING AND USE

JURISDICTION:	CITY OF ROUND ROCK (FULL PURPOSE)
ZONING:	PUD 101
EXISTING LAND USE:	RESIDENTIAL
PROPOSED LAND USE:	RETAIL

WATERSHED

WATERSHED: TURKEY CREEK – BRUSHY CREEK

EDWARDS AQUIFER

THIS PROJECT LIES WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE AS DEFINED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)

FLOODPLAIN NOTE

THE 100-YEAR FLOODPLAIN AS DEFINED BY THE CITY REGULATION, IS CONTAINED WITHIN THE DRAINAGE EASEMENT(S) SHOWN HEREON, NO PORTION OF THIS TRACT IS WITHIN THE BOUNDARIES OF THE 100-YEAR FLOODPLAIN OF ANY WATERWAY THAT IS WITHIN THE LIMITS OF THE STUDY OF THE FEDERAL INSURANCE ADMINISTRATION FIRM PANEL #48491C0470F, AND INCORPORATED AREAS EFFECTIVE DATED DECEMBER 20, 2019 FOR WILLIAMSON COUNTY, TEXAS.

UTILITIES

WATER:	CITY OF ROUND ROCK
WASTEWATER:	CITY OF ROUND ROCK

FIRE DEMAND

FIRE FLOW:	2,250 GPM FOR DURATION OF 2 HOURS
LARGEST BUILDING FIRE AREA:	7,000 SF
BUILDING CONSTRUCTION:	TYPE V-B
HYDRANTS REQUIRED:	2 (2 EXISTING)
CODE OF RECORD:	2015 INTERNATIONAL FIRE CODE
BUILDING OCCUPANCY:	M – MERCANTILE

IMPERVIOUS COVER TABLE

	EXISTING	PROPOSED
TOTAL SITE AREA	2.1 AC / 91,639 SF	2.1 AC / 91,639 SF
IMPERVIOUS COVER	12,529 SF/91,639 SF = 13.7%	69,056 SF/91,639 SF = 75.4%
GROSS FLOOR AREA	–	12,850 SF
BUILDING HEIGHT	–	1 STORY – 18 FT

NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE 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. THIS SITE IS LOCATED WITHIN THE CITY OF ROUND ROCK IN WILLIAMSON COUNTY.
3. 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.
4. ACCORDING TO THE NATIONAL FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO 48491C0470F, DATED 12/20/2019, NO PORTION OF THIS TRACT LIES WITHIN FEMA FLOODPLAIN
5. THE CONTRACTOR OR SURVEYOR WILL OBTAIN A DIGITAL COPY OF THE CAD FILES THAT REPRESENT THESE IMPROVEMENTS; SANDLIN SERVICES, LLC AND IT'S ASSOCIATES TAKE NO RESPONSIBILITY FOR THE LOCATION OF THESE IMPROVEMENTS IN ANY COORDINATE SYSTEM. DIGITAL FILES USED TO PRODUCE THESE PLANS WERE PARTIALLY CREATED BY PARTIES OTHER THAN SANDLIN SERVICES, LLC AND ARE NOT INTENDED FOR USE IN CONSTRUCTION STAKING. VERTICAL AND HORIZONTAL DATA SHALL BE INDEPENDENTLY VERIFIED BY CONTRACTOR'S R.P.L.S.
6. SANDLIN SERVICES, LLC HAS ENDEAVORED TO DESIGN THESE PLANS COMPLIANT WITH ADA/TDLR AND OTHER ACCESSIBILITY REQUIREMENTS. HOWEVER, THE CONTRACTOR SHALL NOT BE RELIEVED OF ANY RESPONSIBILITY FOR CONSTRUCTING THESE IMPROVEMENTS COMPLIANT WITH ALL APPLICABLE ACCESSIBILITY STANDARDS. IF THE CONTRACTOR NOTICES ANY DISCREPANCIES BETWEEN THESE PLANS AND ACCESSIBILITY LAWS/RULES, HE IS TO STOP WORK IN THE AREA OF CONFLICT AND NOTIFY THE ENGINEER IMMEDIATELY FOR A RESOLUTION AND/OR REVISION TO THESE PLANS. SANDLIN SERVICES, LLC SHALL NOT BE HELD RESPONSIBLE FOR CONSTRUCTING THIS SITE COMPLIANT WITH ACCESSIBILITY LAWS/RULES REGARDLESS OF WHAT IS SHOWN IN THESE PLANS.
7. THIS SITE IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE. A TCEQ WPAP PERMIT IS REQUIRED.
8. WPAP #: XXXX, SCS #: XXXX
9. SEE TREE LIST FOR TREES LOCATED ONSITE.
10. ANY PROTECTED TREE REMOVED MUST BE MITIGATED ON AN INCH PER INCH BASIS.
11. ANY STREET CLOSURE REQUIRES PRIOR APPROVAL FROM CITY OF ROUNDROCK TRANSPORTATION DEPARTMENT, AND TRAFFIC CONTROL WITH SCHEDULED DURATION GRATER THAN 5 DAYS REQUIRES POSTING FISCAL.
12. CONVEYANCE TO REGIONAL DETENTION AND WATER QUALITY FACILITIES TO BE PROVIDED. DEVELOPED CONDITIONS FALL WITHIN ORIGINAL DESIGN ASSUMPTIONS FOR WATER QUALITY IN THE GARDENS AT MAYFIELD MASTER PLANS (SDP1505-0002) BY GRAY ENGINEERING, APPROVED 5-12-17.
13. REFER TO THE GARDENS AT MAYFIELD SITE PLAN 3801 C.R. 175 FOR INFORMATION ON OFF-SITE DRAINAGE AND WATER QUALITY CONDITIONS.
14. TDLR TABS #TABS2024004063

*APPROVAL OF THESE PLANS BY THE CITY OF ROUND ROCK INDICATES COMPLIANCE WITH APPLICABLE CITY REGULATIONS ONLY. APPROVAL BY OTHER GOVERNMENT ENTITIES MAY BE REQUIRED PRIOR TO THE START OF CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR DETERMINING WHAT ADDITIONAL APPROVALS MAY BE NECESSARY.

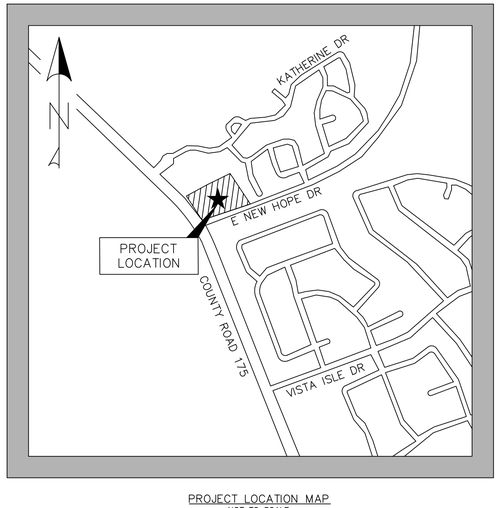
ACCEPTED FOR CONSTRUCTION:

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

STATE OF TEXAS
COUNTY OF WILLIAMSON

I, NICHOLAS SANDLIN, P.E. #124404, DO HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS DESCRIBED 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 SANDLIN — DATE



PROJECT LOCATION MAP
NOT TO SCALE

SHEET INDEX	
NUMBER	TITLE
1	COVER SHEET
2	GENERAL NOTES (1 OF 2)
3	GENERAL NOTES (2 OF 2)
4	FINAL PLAT
5	EROSION CONTROL, DEMOLITION, AND CRZ PROTECTION PLAN
6	EROSION CONTROL DETAILS
7	TREE PROTECTION PLAN
8	SITE PLAN
9	GRADING PLAN
10	SUB DRAINAGE AREA MAP
11	EXISTING CONDITIONS DRAINAGE AREA MAP
12	DEVELOPED CONDITIONS DRAINAGE AREA MAP
13	WATER QUALITY DAM
14	EXISTING WQ POND
15	WATER DISTRIBUTION PLAN
16	WASTEWATER COLLECTION PLAN
17	FIRE PROTECTION PLAN
18	UTILITY DETAILS (1 OF 3)
19	UTILITY DETAILS (2 OF 3)
20	UTILITY DETAILS (3 OF 3)
21	CONSTRUCTION DETAILS (1 OF 2)
22	CONSTRUCTION DETAILS (2 OF 2)
23	LANDSCAPE PLAN (1 OF 2)
24	LANDSCAPE PLAN (2 OF 2)
25	PHOTOMETRIC PLAN

CONTRACTOR NOTES:

1. THE CONTRACTOR SHALL OBTAIN A "NOTICE OF PROPOSED INSTALLATION OF UTILITY LINE" PERMIT FROM THE COUNTY FOR ANY WORK PERFORMED IN THE EXISTING COUNTY RIGHT-OF-WAY (DRIVEWAY APRON, WATER MAIN TIE-IN, ETC.) THIS PERMIT APPLICATION WILL REQUIRE A LIABILITY AGREEMENT, A CONSTRUCTION COST ESTIMATE FOR WORK WITHIN THE RIGHT-OF-WAY INCLUDING PAVEMENT REPAIR (IF NEEDED), A PERFORMANCE BOND, CONSTRUCTION PLANS AND, IF NECESSARY, A TRAFFIC CONTROL PLAN. AN INSPECTION FEE, AND A PRE-CONSTRUCTION MEETING MAY ALSO BE REQUIRED, DEPENDING ON THE SCOPE OF WORK. THE PERMIT WILL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER, AND MUST ALSO BE APPROVED BY THE COUNTY COMMISSIONERS COURT IF ANY ROAD CLOSURE IS INVOLVED.
2. BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE, HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.
3. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM 1-800-245-4545, OR THE OWNER OF EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.
4. ENVIRONMENTAL INSPECTION HAS THE AUTHORITY TO MODIFY/CHANGE EROSION AND SEDIMENTATION CONTROLS TO KEEP THE PROJECT IN COMPLIANCE.
5. THE CONTRACTOR OR SURVEYOR WILL OBTAIN A DIGITAL COPY OF THE CAD FILES THAT REPRESENT THESE IMPROVEMENTS; SANDLIN SERVICES, LLC AND IT'S ASSOCIATES TAKE NO RESPONSIBILITY FOR THE LOCATION OF THESE IMPROVEMENTS IN ANY COORDINATE SYSTEM. DIGITAL FILES USED TO PRODUCE THESE PLANS WERE PARTIALLY CREATED BY PARTIES OTHER THAN SANDLIN SERVICES, LLC AND ARE NOT INTENDED FOR USE IN CONSTRUCTION STAKING. VERTICAL AND HORIZONTAL DATA SHALL BE INDEPENDENTLY VERIFIED BY CONTRACTOR'S R.P.L.S.
6. SANDLIN SERVICES, LLC HAS ENDEAVORED TO DESIGN THESE PLANS COMPLIANT WITH ADA/TDLR AND OTHER ACCESSIBILITY REQUIREMENTS. HOWEVER, THE CONTRACTOR SHALL NOT BE RELIEVED OF ANY RESPONSIBILITY FOR CONSTRUCTING THESE IMPROVEMENTS COMPLIANT WITH ALL APPLICABLE ACCESSIBILITY STANDARDS. IF THE CONTRACTOR NOTICES ANY DISCREPANCIES BETWEEN THESE PLANS AND ACCESSIBILITY LAWS/RULES, HE IS TO STOP WORK IN THE AREA OF CONFLICT AND NOTIFY THE ENGINEER IMMEDIATELY FOR A RESOLUTION AND/OR REVISION TO THESE PLANS. SANDLIN SERVICES, LLC SHALL NOT BE HELD RESPONSIBLE FOR CONSTRUCTING THIS SITE COMPLIANT WITH ACCESSIBILITY LAWS/RULES REGARDLESS OF WHAT IS SHOWN IN THESE PLANS.

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

CORRECTIONS RECORD

NO.	DESCRIPTION	REVISE (R) ADD (D) VOID (V) SHEET NO.'s	TOTAL # SHEETS IN PLAN SET	NET CHANGE IMP. COVER (sq.ft.)	TOTAL SITE IMP. COVER (sq.ft.)/%	APPROVAL/ DATE	DATE IMAGED

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

COVER SHEET

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 1 OF 25

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0105-001 New Hope Retail\CAD\Construction Sheets\S NHR CVR.dwg-COVER SHEET Plotted Jan 30, 2024 at 4:59pm by Engineer | Last Saved by: Engineer

PAVEMENT RECOMMENDATIONS PER BURGE ENGINEERING & ASSOCIATES PROJECT #12-23-0442 DATED DECEMBER 20, 2023

Pavement Design

Based on our understanding the proposed development, the pavement areas will primarily support parking areas and drive areas for general automobile traffic, and some heavy truck traffic for deliveries and trash pick up. No detailed information regarding the expected traffic loads were known at the time of our report preparation. Therefore, assumptions were made regarding the anticipated traffic conditions.

Our pavement analysis was generally based on the design procedure developed by AASHTO's *Guide for Design of Pavement Structures*, 1993, as well as the American Concrete Institute's (ACI's) *Guide for the Design and Construction of Concrete Parking Lots*, ACI 330R-08.

Based on the site location and facility type, we utilized an effective pavement life of 20 years. Also for this analysis, we estimated a CBR (California Bearing Ratio) value of three (3) percent for Stratum 1 soils, which will likely be the predominant subgrade materials following rough grading operations. We estimated this CBR value since evaluation of CBR values by either field or laboratory testing was not included in the scope of our services. We selected this value based on our knowledge and experience with similar soil conditions in this region. Additional testing may be conducted on the actual subgrade materials at the time of construction in order to verify the assumptions in this report.

The following design parameters and criteria were considered in our analyses:

- Resilient Modulus: 4,500 psi (CBR = 3%)
- Modulus of Soil Reaction, k value: 90 pci
- Reliability: 70% for Flexible Pavement; 90 % for Rigid Pavement
- Overall Standard Deviation: 0.45 for Flexible Pavement; 0.35 for Rigid Pavement
- Initial Serviceability: 4.2
- Terminal Serviceability: 2.0 for Flexible Pavement; 2.5 for Rigid Pavement

The minimum recommended thicknesses for flexible pavement sections (asphaltic concrete) are presented in the table on the following page. Entrances to the new development as well as areas expected to require excessive maneuvering, such as dumpster areas or areas expected to accommodate heavy truck traffic, should consists of a rigid (concrete) pavement system. Minimum thicknesses for rigid pavement sections are also provided.

	Light Duty Pavement Section	Medium Duty Pavement Section	Heavy Duty Pavement Section	Fuel Tank Pit/Dumpster Pad Option
Pavement Material	**Thickness, (in)**	**Thickness, (in)**	**Thickness, (in)**	**Thickness (in)**
Reinforced Concrete	---	---	6	7
Type D, Hot Mix Asphaltic Concrete	1.5	2	---	---
Crushed Limestone Base	9	12	Note 1	Notes 2 & 3
Compacted Subgrade	6	6	6	Notes 2 & 3

Notes 1.) Although not required as a structural layer, crushed limestone base may be used as a level-up course.
2) Given the tank backfill consists of a granular material, the use of a moisture retarder over the tank backfill material is likely warranted to allow for proper curing of the concrete; however, this is at the discretion of the owner and should be discussed with the concrete contractor and supplier.
3) Similar to the fuel tank pit area, it is our experience that the canopy areas are difficult to place and compact fill due to the presence of utilities, granular backfill, and other impediments. The owner may consider the thickened 7-inch section in these areas provided that all other options are exhausted. However, the final subgrade material(s) must not be allowed to dry out; otherwise, there may be issues with curing and development of shrinkage cracks in the concrete section.

For the above pavement sections, we have calculated traffic loading conditions equal to or greater than 20,000 18-kip equivalent single-axle loads (ESALs) for the light-duty section and 120,000 for the medium-duty section. Typically, the light-duty section will meet the requirements for the parking spaces, while the medium-duty section will meet the requirements for the drive lanes and emergency vehicle access lanes, due to infrequency of loading. However, where repeated heavy truck traffic is anticipated, then the rigid pavement sections should be considered for the project. If our assumptions or the traffic loading conditions do not meet the intended use or if further information comes available, we would be happy to provide further design recommendations.

The following paragraphs specify the pavement materials to be used to construct the proposed pavement areas:

Reinforced Concrete - Concrete should be designed to exhibit a flexural strength (third point loading) of at least 630 psi at 28 days (this is a compressive strength of about 4,000 psi). The flexural strength (M_r) may be approximated by the following formula from ACI 330R-08: M_r=10 $(f_c')^{½}$ where f_c' is the average 28 day compressive strength of the concrete test cylinders. The actual relationship between flexural and compressive strength for the proposed mix should be evaluated in the laboratory.

Hot Mix Asphaltic Concrete Surface Course - The asphaltic concrete surface course should be plant mixed, hot laid Type D (Fine Graded Surface Course) meeting the 2014 Texas Department of Transportation (TxDOT) specification, Item 340 and specific criteria for the job mix formula. The mix should be designed for a stability of at least 40 and should be compacted to between 91 and 95 percent of the maximum theoretical density as determined in accordance with Tex-207-F. The asphalt cement content by percent of total mixture weight should fall within a tolerance of ± 0.3 percent asphalt cement from the specific mix design. In addition, the mix should be designed so that 75 to 85 percent of the voids in the mineral aggregate (VMA) are filled with asphalt cement.

Crushed Limestone Base - Base material should be composed of crushed limestone meeting the requirements of TxDOT Item 247, Grade 1-2, Type A. The base should be compacted to a minimum of 95 percent of the maximum dry density as determined by the standard moisture-density relationship (ASTM D-698) at -2 to +2 percentage points of optimum moisture content. The base material should be placed in loose lifts measuring no greater than eight (8) inch in thickness. Where multiple layers are required, the base course should be placed in approximately equal-depth layers.

Compacted Subgrade - Subgrade should be moisture-conditioned between optimum and plus four (+4) percentage points above optimum moisture content and compacted to at least 95 percent of the maximum dry density as determined in accordance with ASTM D-698.

In the event that the rigid pavements are utilized throughout, the following recommendations are provided for reinforcement and jointing.

Type of Joint	Joint Spacing	Joint Depth	Joint Width[2]
Contraction (Control)	15 feet each way	One-fourth (¼) of slab thickness	One-eighth (⅛) to one-fourth (¼) inch
Construction	At location of contraction joints	Full depth of pavement thickness	One-eighth (⅛) to one-fourth (¼) inch
Isolation	As required to isolate from structures	Full depth of pavement thickness	Three-fourths (¾) to one (1) inch
Expansion[3]	60 feet each way	Full depth of pavement thickness	Three-fourths (¾) to one (1) inch

Notes: 1.) Serious consideration should be given to the total elimination of expansion joints. In this region, drying shrinkage of concrete typically significantly exceeds anticipated expansion due to thermal affects. As a result, the need for expansion joints is eliminated. Construction of an unnecessary joint may be also become a maintenance problem.
2.) All joint widths should be as noted above or as required by the joint sealant manufacturer.

Distributed Steel: Steel reinforcement may consist of either steel bars or welded wire fabric (WWF) described below:

No. 3 reinforcing steel bars at 18 inches on center each way, Grade 60; or

WWF: W2.9 X W2.9, six (6) inches by six (6) inches, flat sheets only; or W1.4 X W1.4, four (4) inches by four (4) inches, flat sheets only.

Note: It is imperative that the distributed steel be positioned accurately in the pavement cross section. Properly supported, this is typically easier to accomplish with steel bars than with WWF.

All construction joints shall have dowels, and dowel information varies with pavement thickness. The applicable dowel information for this project is provided below:

Pavement Thickness:	6 inches	7 inches
Dowels	⅝-inch diameter	⅞-inch diameter
Dowel Spacing	12 inches on center	12 inches
Dowel Length	14 inches long	14 inches
Dowel Embedment	6 inches minimum	6 inches minimum

Any general fill material placed in the pavement areas should be an approved inorganic material, free of debris, and have a maximum particle size of three (3) inches. Any import fill material should be approved by the Geotechnical Engineer prior to importing on site. The on-site soils may be utilized provided the recommendations provided herein are met. This material should be placed in lifts not exceeding eight (8) inches in loose thickness, moisture-conditioned to within ±3 percentage points of the optimum moisture content for granular soils (GC, SC and SM or more granular) and 0 to +4 percentage points of the optimum moisture content for fine-graded soils (CL, ML, CH, etc.), and compacted to a minimum of 95 percent of the maximum dry density as determined in accordance with ASTM D698, Standard Proctor Method.

Proper perimeter drainage in and around pavement sections is very important, and should be provided so that infiltration of surface water from unpaved areas surrounding the pavement areas is minimized. We do not recommend installation of landscape beds or islands in the pavement. Such features provide an avenue for water to enter into the pavement section and the underlying subgrade soil. Water penetration usually results in degradation of the pavement section with time, and as vehicular traffic traverses the area of moisture infiltration. Above grade planter boxes, with drainage discharging onto the top of the pavement, or directed into storm sewers, should be considered if landscape features are desired.

Cracking, particularly longitudinal cracking within one (1) to five (5) feet of the pavement edges, should be expected of any asphalt pavements constructed where expansive soil is the subgrade material. Although not common, this longitudinal cracking may even occur further than this distance from the curb line. The cracking occurs as the expansive soils adjacent to and below the pavements shrink and swell with seasonal moisture fluctuations. Therefore, proper maintenance, including sealing all cracks on a timely manner, should be conducted throughout the life of any asphalt pavements. A crack sealant compatible to both asphalt and concrete should be provided at all concrete-asphalt interfaces, and at all interfaces of existing/new pavement areas.

If landscaping is used adjacent to the paved areas, we recommend the curbs extend at least six (6) inches into the subgrade. This will help reduce migration of groundwater below the pavement section from adjacent areas. A crack sealant compatible to both asphalt and concrete should be provided at all concrete-asphalt interfaces, and at all interfaces of existing/new pavement areas.

CITY OF ROUND ROCK PUBLIC IMPROVEMENTS

WATER			
Pipe Size	TYPE	LENGTH (LF)	VOL (GAL)
1"	DR9 Poly	21	0.807
2"	DR9 Poly	30	3.427
4"	C900	14	20.063

WASTEWATER			
Pipe Size	TYPE	LENGTH (LF)	VOL (GAL)
4"	SDR-26	3	7.344

STORM SEWER		
Pipe Size	TYPE	LENGTH (LF)

CONCRETE VALLEY GUTTERS	
Total	
	LF

HMAC	
Total	
	SY

CURB & GUTTER	
Total	
	LF

WASTEWATER MANHOLES	
Size	Qty
4'	
5'	
6'	

STORM SEWER MANHOLES	
Size	Qty
4'	
5'	
6'	
7'	

SIDEWALK	
Total	LF
10'	24
4'	
5'	3

VALVES	
Size	Total
Service Clamp	2
8"X6" Water Tee	1
6" Gate Valve	1

INLETS	
Size	Qty
5'	
10'	
15'	

FIRE HYDRANTS	
Total	Brand
1	American Darling

GENERAL NOTES:

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 DEMOLITION OR REMOVAL, THAT ARE DAMAGED OR REMOVED, SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S 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 AS 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).
6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS WELL AS THE STANDARD SPECIFICATIONS MANUAL SERIES 600. 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. ANY DEVIATIONS SHALL BE INCORPORATED INTO A REVISION AND APPROVED BY PLANNING AND DEVELOPMENT SERVICES. THE ENGINEER SHALL FURNISH THE CITY OF ROUND ROCK ACCURATE "AS-BUILT" RECORD DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE RECORD DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE PLANNING AND DEVELOPMENT SERVICES DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
9. THE CITY OF ROUND ROCK 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 PLANNING AND DEVELOPMENT SERVICES INSPECTOR.
11. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.
12. AVAILABLE PERMANENT BENCHMARKS WITH HORIZONTAL DATUM, VERTICAL DATUM, AND GEOID INFORMATION THAT MAY BE UTILIZED FOR THE CONSTRUCTION OF THIS PROJECT ARE DESCRIBED AS FOLLOWS:

    PER SURVEY #A0410023 BY ALL STAR LAND SURVEYING DATED 4/20/23
    NAVD 1988 DATUM
    GEOID18

    BEARINGS ARE BASED ON THE TEXAS STATE PLAN COORDINATE SYSTEM OF 1983, TEXAS CENTRAL ZONE (NAD 83)

    TEMPORARY BENCHMARK (TBM) – TRIANGLE CUT IN CURB
    ELEVATION = 878.56'

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL, SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. A SITE SPECIFIC ENGINEERED TRENCH SAFETY SYSTEM, ACCEPTED BY PLANNING AND DEVELOPMENT SERVICES, SHALL BE UTILIZED FOR THIS PROJECT.
2. IN ACCORDANCE WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) 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.
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 PLANNING 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 ROCK ENGINEERING AND THE PAVING SECTIONS DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF ROUND ROCK DESIGN CRITERIA. THE PAVING SECTIONS ARE TO BE CONSTRUCTED PER THE GEOTECHNICAL REPORT SHOWN THIS SHEET. 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 PLASTICITY INDEX (PI)IS OVER 20, SUBGRADES MUST BE STABILIZED UTILIZING A METHOD ACCEPTABLE TO THE CITY ENGINEER. ANY LIME SHALL BE APPLIED TO THE SUBGRADE SOIL IN SLURRY FORM UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. THE GEOTECHNICAL ENGINEER SHALL RECOMMEND AN APPROPRIATE SUBGRADE STABILIZATION IF SULFATES ARE DETERMINED TO BE PRESENT.

TRAFFIC MARKING NOTES:

1. ANY METHODS, STREET MARKING 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 MARKING, 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 STREET 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 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 GE 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 STREET DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.
6. ONCE REVEGETATION REQUIREMENTS HAVE BEEN MET, ALL TEMPORARY SEDIMENT CONTROLS (E.G. SILT FENCE, ROCK BERMS, INLET PROTECTION, ETC.) SHALL BE REMOVED FROM THE SITE AND DISPOSED. ANY DISTURBED AREAS SHALL BE CLEANED OF DIRT AND DEBRIS AND PROPERLY RAKED AND GRADED.

WATER AND WASTEWATER NOTES:

1. PIPE MATERIAL AND ACCESSORIES SHALL BE OF NEW MATERIALS ONLY. WATER MAINS SHALL BE DUCTILE IRON (AWWA C-110, C-104 AND ANSI/AWWA C-153/A21.53-84, MIN. PRESSURE CLASS 200) OR PVC (AWWA C-900/C-905, ASTM F477 AND D3139, MIN. PRESSURE CLASS 200), OR HDPE (AWWA C-906, ASTM F714, NSF 61 AND PE 3408 BY ASTM 3350) WITH A MINIMUM 11 DIMENSION RATIO AND (DR) DUCTILE IRON PIPE SIZE (DIPS). SERVICE PIPING SHALL BE COPPER SEAMLESS TYPE K OR POLYETHYLENE (BLACK, 200 PSI, DR9) AS ACCEPTED BY THE CITY.
2. PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE 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 CIVIL 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 CIVIL 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 CITY OF ROUND ROCK CIVIL INSPECTOR.
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 ROUND ROCK CIVIL 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 THROUGH CHISELING AND PAINTING AS FOLLOWS:

    WATER SERVICE – "W" ON TOP OF CURB
    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. ANY WATER SHUTDOWN OR TIE-IN MUST BE SCHEDULED TEN (10) DAYS IN ADVANCE.
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.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

GENERAL NOTES
(1 OF 2)

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 2 OF 25

G:\shared drives\sandlin services llc\sandlin services projects\land development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR CVR.dwg-GENERAL NOTES (1 OF 2) Plotted Jan 30, 2024 at 1:23pm by Engineer | Last Saved by: Engineer

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

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

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

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan (WPAP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.

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

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

5. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the approved plans and manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

6. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.

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

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

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

10. If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 14th day of inactivity. If activity will resume prior to the 21st day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14th day, stabilization measures shall be initiated as soon as possible.

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

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

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

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

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

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

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

Texas Commission on Environmental Quality
Organized Sewage Collection System
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

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

1. This Organized Sewage Collection System (SCS) must be constructed in accordance with 30 Texas Administrative Code (TAC) §213.5(c), the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules and any local government standard specifications.

2. All contractors conducting regulated activities associated with this proposed regulated project must be provided with copies of the SCS plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors must be required to keep on-site copies of the plan and the approval letter.

3. A written notice of construction must be submitted to the presiding TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

4. Any modification to the activities described in the referenced SCS application following the date of approval may require the submittal of an SCS application to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval.

5. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. These controls must remain in place until the disturbed areas have been permanently stabilized.

6. If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovered. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing and the applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality while maintaining the structural integrity of the line.

7. Sewer lines located within or crossing the 5-year floodplain of a drainage way will be protected from inundation and stream velocities which could cause erosion and scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill, or the sewer lines must be encased in concrete. All concrete shall have a minimum thickness of 6 inches.

8. Blasting procedures for protection of existing sewer lines and other utilities will be in accordance with the National Fire Protection Association criteria. Sand is not allowed as bedding or backfill in trenches that have been blasted. If any existing sewer lines are damaged, the lines must be repaired and retested.

9. All manholes constructed or rehabilitated on this project must have watertight size on size resilient connectors allowing for differential settlement. If manholes are constructed within the 100-year floodplain, the cover must have a gasket and be bolted to the ring. Where gasketed manhole covers are required for more than three manholes in sequence or for more than 1500 feet, alternate means of venting will be provided. Bricks are not an acceptable construction material for any portion of the manhole.

   The diameter of the manholes must be a minimum of four feet and the manhole for entry must have a minimum clear opening diameter of 30 inches. These dimensions and other details showing compliance with the commission's rules concerning manholes and sewer line/manhole inverts described in 30 TAC §217.55 are included on Plan Sheet __ of __.

   It is suggested that entrance into manholes in excess of four feet deep be accomplished by means of a portable ladder. The inclusion of steps in a manhole is prohibited.

10. Where water lines and new sewer line are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC §217.53(d) (Pipe Design) and 30 TAC §290.44(e) (Water Distribution).

11. Where sewers lines deviate from straight alignment and uniform grade all curvature of sewer pipe must be achieved by the following procedure which is recommended by the pipe manufacturer: _____.

    If pipe flexure is proposed, the following method of preventing deflection of the joint must be used: _____.

    Specific care must be taken to ensure that the joint is placed in the center of the trench and properly bedded in accordance with 30 TAC §217.54.

12. New sewage collection system lines must be constructed with stub outs for the connection of anticipated extensions. The location of such stub outs must be marked on the ground such that their location can be easily determined at the time of connection of the extensions. Such stub outs must be manufactured wyes or tees that are compatible in size and material with both the sewer line and the extension. At the time of original construction, new stub-outs must be constructed sufficiently to extend beyond the end of the street pavement. All stub-outs must be sealed with a manufactured cap to prevent leakage. Extensions that were not anticipated at the time of original construction or that are to be connected to an existing sewer line not furnished with stub outs must be connected using a manufactured saddle and in accordance with accepted plumbing techniques.

    If no stub-out is present an alternate method of joining laterals is shown in the detail on Plan Sheet __ of __. (For potential future laterals).

    The private service lateral stub-outs must be installed as shown on the plan and profile sheets on Plan Sheet __ of __ and marked after backfilling as shown in the detail on Plan Sheet __ of __.

13. Trenching, bedding and backfill must conform with 30 TAC §217.54. The bedding and backfill for flexible pipe must comply with the standards of ASTM D-2321, Classes IA, IB, II or III. Rigid pipe bedding must comply with the requirements of ASTM C 12 (ANSI A 106.2) classes A, B or C.

14. Sewer lines must be tested from manhole to manhole. When a new sewer line is connected to an existing stub or clean-out, it must be tested from existing manhole to new manhole. If a stub or clean-out is used at the end of the proposed sewer line, no private service attachments may be connected between the last manhole and the cleanout unless it can be certified as conforming with the provisions of 30 TAC §213.5(c)(3)(E).

15. All sewer lines must be tested in accordance with 30 TAC §217.57. The engineer must retain copies of all test results which must be made available to the executive director upon request. The engineer must certify in writing that all wastewater lines have passed all required testing to the appropriate regional office within 30 days of test completion and prior to use of the new collection system. Testing method will be:

    (a) For a collection system pipe that will transport wastewater by gravity flow, the design must specify an infiltration and exfiltration test or a low-pressure air test. A test must conform to the following requirements:

    (1) *Low Pressure Air Test.*

    (A) A low pressure air test must follow the procedures described in American Society For Testing And Materials (ASTM) C-828, ASTM C-924, or ASTM F-1417 or other procedure approved by the executive director, except as to testing times as required in Table C.3 in subparagraph (C) of this paragraph or Equation C.3 in subparagraph (B)(ii) of this paragraph.

    (B) For sections of collection system pipe less than 36 inch average inside diameter, the following procedure must apply, unless a pipe is to be tested as required by paragraph (2) of this subsection.

    (i) A pipe must be pressurized to 3.5 pounds per square inch (psi) greater than the pressure exerted by groundwater above the pipe.

    (ii) Once the pressure is stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge is computed from the following equation:

Equation C.3 $$T = \frac{0.085 \times D \times K}{Q}$$

Where:

T = time for pressure to drop 1.0 pound per square inch gauge in seconds
K = 0.000419 X D X L, but not less than 1.0
D = average inside pipe diameter in inches
L = length of line of same size being tested, in feet
Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface

(C) Since a K value of less than 1.0 may not be used, the minimum testing time for each pipe diameter is shown in the following Table C.3:

Pipe Diameter *(inches)*	Minimum Time *(seconds)*	Maximum Length for Minimum Time *(feet)*	Time for Longer Length *(seconds/foot)*
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

(D) An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.

(E) If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure.

(F) Wastewater collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.

(G) A testing procedure for pipe with an inside diameter greater than 33 inches must be approved by the executive director.

(2) *Infiltration/Exfiltration Test.*

(A) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the crown of a pipe at an upstream manhole.

(B) An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.

(C) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two feet above the crown of a pipe at an upstream manhole, or at least two feet above existing groundwater level, whichever is greater.

(D) For construction within a 25-year flood plain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at the same minimum test head as in subparagraph (C) of this paragraph.

(E) If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall undertake remedial action in order to reduce the infiltration or exfiltration to an amount within the limits specified. An owner shall retest a pipe following a remediation action.

(b) If a gravity collection pipe is composed of flexible pipe, deflection testing is also required. The following procedures must be followed:

(1) For a collection pipe with inside diameter less than 27 inches, deflection measurement requires a rigid mandrel.

(A) *Mandrel Sizing.*

(i) A rigid mandrel must have an outside diameter (OD) not less than 95% of the base inside diameter (ID) or average ID of a pipe, as specified in the appropriate standard by the ASTMs, American Water Works Association, UNI-BELL, or American National Standards Institute, or any related appendix.

(ii) If a mandrel sizing diameter is not specified in the appropriate standard, the mandrel must have an OD equal to 95% of the ID of a pipe. In this case, the ID of the pipe, for the purpose of determining the OD of the mandrel, must equal be the average outside diameter minus two minimum wall thicknesses for OD controlled pipe and the average inside diameter for ID controlled pipe.

(iii) All dimensions must meet the appropriate standard.

(B) *Mandrel Design.*

(i) A rigid mandrel must be constructed of a metal or a rigid plastic material that can withstand 200 psi without being deformed.

(ii) A mandrel must have nine or more odd number of runners or legs.

(iii) A barrel section length must equal at least 75% of the inside diameter of a pipe.

(iv) Each size mandrel must use a separate proving ring.

(C) *Method Options.*

(i) An adjustable or flexible mandrel is prohibited.

(ii) A test may not use television inspection as a substitute for a deflection test.

(iii) If requested, the executive director may approve the use of a deflectometer or a mandrel with removable legs or runners on a case-by-case basis.

(2) For a gravity collection system pipe with an inside diameter 27 inches and greater, other test methods may be used to determine vertical deflection.

(3) A deflection test method must be accurate to within plus or minus 0.2% deflection.

(4) An owner shall not conduct a deflection test until at least 30 days after the final backfill.

(5) Gravity collection system pipe deflection must not exceed five percent (5%).

(6) If a pipe section fails a deflection test, an owner shall correct the problem and conduct a second test after the final backfill has been in place at least 30 days.

16. All manholes must be tested to meet or exceed the requirements of 30 TAC §217.58.

(a) All manholes must pass a leakage test.

(b) An owner shall test each manhole (after assembly and backfilling) for leakage, separate and independent of the collection system pipes, by hydrostatic exfiltration testing, vacuum testing, or other method approved by the executive director.

(1) Hydrostatic Testing.

(A) The maximum leakage for hydrostatic testing or any alternative test methods is 0.025 gallons per foot diameter per foot of manhole depth per hour.

(B) To perform a hydrostatic exfiltration test, an owner shall seal all wastewater pipes coming into a manhole with an internal pipe plug, fill the manhole with water, and maintain the test for at least one hour.

(C) A test for concrete manholes may use a 24-hour wetting period before testing to allow saturation of the concrete.

(2) Vacuum Testing.

(A) To perform a vacuum test, an owner shall plug all lift holes and exterior joints with a non-shrink grout and plug all pipes entering a manhole.

(B) No grout must be placed in horizontal joints before testing.

(C) Stub-outs, manhole boots, and pipe plugs must be secured to prevent movement while a vacuum is drawn.

(D) An owner shall use a minimum 60 inch/lb torque wrench to tighten the external clamps that secure a test cover to the top of a manhole.

(E) A test head must be placed at the inside of the top of a cone section, and the seal inflated in accordance with the manufacturer's recommendations.

(F) There must be a vacuum of 10 inches of mercury inside a manhole to perform a valid test.

(G) A test does not begin until after the vacuum pump is off.

(H) A manhole passes the test if after 2.0 minutes and with all valves closed, the vacuum is at least 9.0 inches of mercury.

17. All private service laterals must be inspected and certified in accordance with 30 TAC §213.5(c)(3)(I). After installation of and, prior to covering and connecting a private service lateral to an existing organized sewage collection system, a Texas Licensed Professional Engineer, Texas Registered Sanitarian, or appropriate city inspector must visually inspect the private service lateral and the connection to the sewage collection system, and certify that it is constructed in conformity with the applicable provisions of this section. The owner of the collection system must maintain such certifications for five years and forward copies to the appropriate regional office upon request. Connections may only be made to an approved sewage collection system.

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

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

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC

TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

GENERAL NOTES
(2 OF 2)

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 3 OF 25

G:\shared drives\sandlin services llc\sandlin services projects\prod development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR CVR.dwg-GENERAL NOTES (2 OF 2) Plotted Jan 30, 2024 at 1:23pm by Engineer | Last Saved by: Engineer

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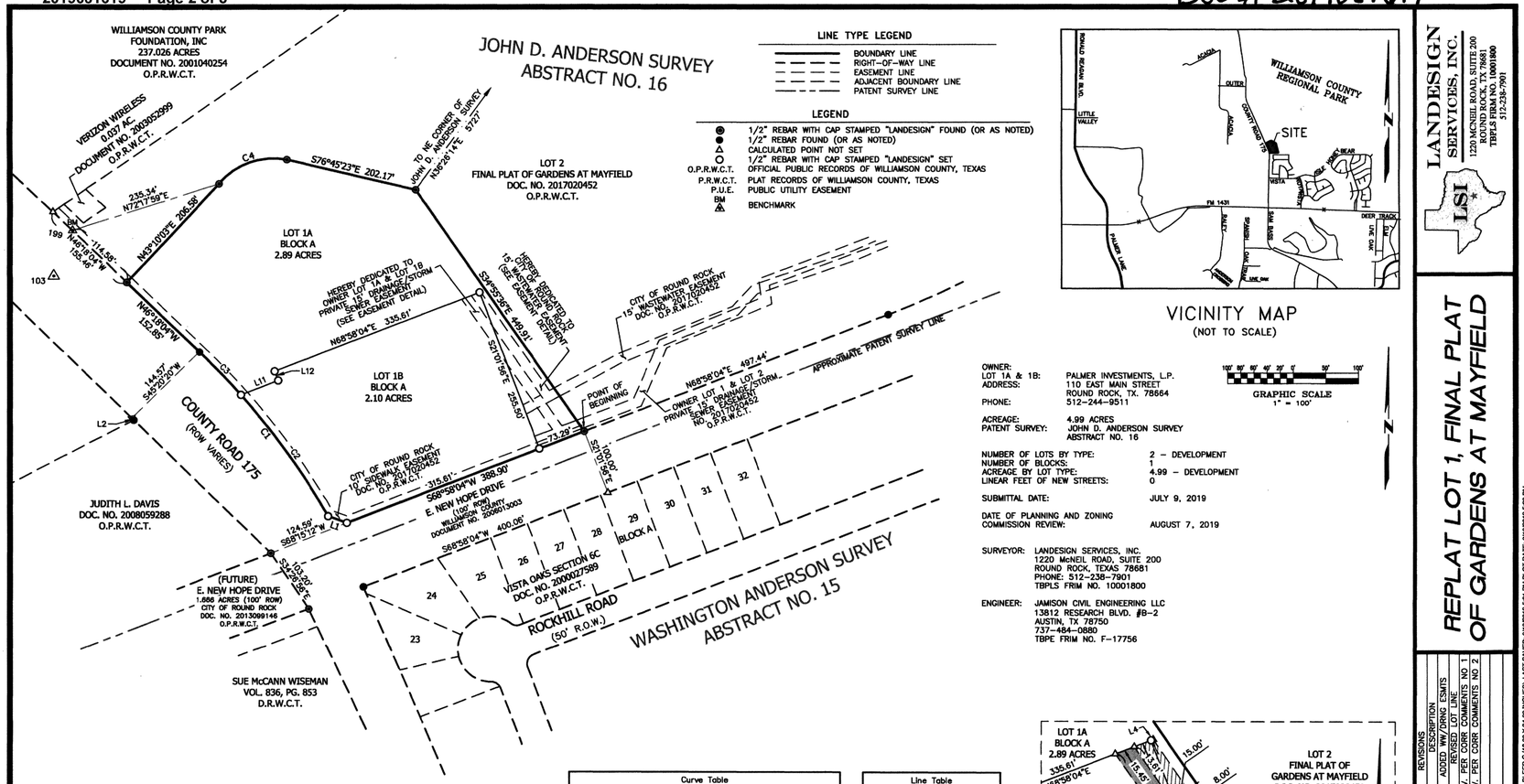


VICINITY MAP
(NOT TO SCALE)

GRAPHIC SCALE
1" = 100'

OWNER:
LOT 1A & 1B: PALMER INVESTMENTS, L.P.
ADDRESS: 110 EAST MAIN STREET
ROUND ROCK, TX. 78664
PHONE: 512-244-9511

ACREAGE: 4.99 ACRES
PATENT SURVEY: JOHN D. ANDERSON SURVEY
ABSTRACT NO. 16

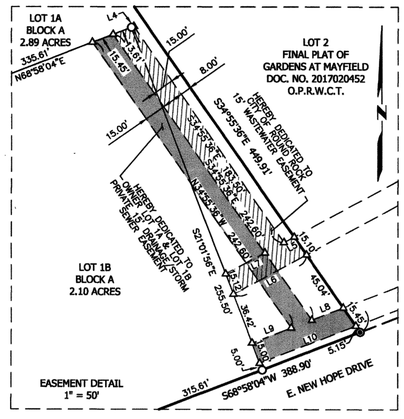
NUMBER OF LOTS BY TYPE:	2 - DEVELOPMENT
NUMBER OF BLOCKS:	1
ACREAGE BY LOT TYPE:	4.99 - DEVELOPMENT
LINEAR FEET OF NEW STREETS:	0
SUBMITTAL DATE:	JULY 9, 2019
DATE OF PLANNING AND ZONING COMMISSION REVIEW:	AUGUST 7, 2019

SURVEYOR: LANDESIGN SERVICES, INC.
1220 McNEIL ROAD, SUITE 200
ROUND ROCK, TEXAS 78681
PHONE: 512-238-7901
TBPLS FRIM NO. 10001800

ENGINEER: JAMISON CIVIL ENGINEERING LLC
13812 RESEARCH BLVD. #B-2
AUSTIN, TX 78750
737-484-0880
TBPE FRIM NO. F-17756

Curve Table					
Curve #	Radius	Length	Delta	Chord Bearing	Chord
C1	1107.91'	320.40'	16°34'10"	N38° 04' 53"W	319.28'
C2	1107.91'	228.55'	11°49'11"	N35° 42' 23"W	228.15'
C3	1107.91'	91.84'	4°44'59"	N43° 59' 28"W	91.82'
C4	108.00'	114.91'	60°57'41"	N70° 18' 49"E	109.57'

Line Table		
Line #	Direction	Length
L1	N70° 09' 22"W	30.24'
L2	S45° 50' 26"E	4.29'
L4	N68° 58' 04"E	1.84'
L5	N61° 43' 49"E	8.05'
L6	S61° 43' 49"W	57.99'
L7	N61° 43' 49"E	31.18'
L8	N68° 58' 04"E	23.69'
L9	N68° 58' 04"E	29.19'
L10	S68° 58' 04"W	72.05'
L11	N68° 58' 04"E	60.66'
L12	N21° 01' 56"W	15.00'



EASEMENT DETAIL
1" = 50'

THIS PROJECT IS REFERENCED FOR ALL BEARING AND COORDINATE BASIS TO THE TEXAS COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83 – 2011 ADJUSTMENT), CENTRAL ZONE (4203).

DISTANCES SHOWN HEREON ARE SURFACE VALUES REPRESENTED IN U.S. SURVEY FEET BASED ON A SURFACE-TO-GRID COMBINED ADJUSTMENT FACTOR OF 1.0001247 AND SCALED FROM AN ORIGIN POINT OF GRID COORDINATES: N=10173807.25, E=3105700.48.

VERTICAL DATUM IS BASED ON A BRASS DISK STAMPED "CITY OF ROUND ROCK REF POINT", LOCATED IN THE EAST RIGHT-OF-WAY OF SAM BASS ROAD, APPROXIMATELY 21' WEST OF THE SOUTHWEST CORNER OF AN EXISTING CELL TOWER FENCE AT THE NORTH ENTRANCE OF GARDENS AT MAYFIELD CONDOMINIUMS. APPROXIMATELY 0.38 OF ONE MILE NORTH OF THE INTERSECTION OF SAM BASS ROAD AND VISTA ISLE DRIVE. ELEVATION 879.47, NAVD 88, GEOID 12A.

BM Point No.	103	199
Northing	10174043.21	10174112.86
Easting	3104980.71	3105008.83
Elevation	880.33	879.47
Description	CP IRS	CP IRS

GENERAL NOTES:

1. 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 OR PUD 101 AS APPLICABLE.
2. SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PART III, ZONING AND DEVELOPMENT CODE, SECTION 6-28, CITY OF ROUND ROCK, TEXAS, 2018, AS AMENDED OR PUD 101 AS APPLICABLE.
3. NO OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO FENCING OR STORAGE, SHALL BE PERMITTED IN ANY DRAINAGE EASEMENTS SHOWN HEREON UNLESS OTHERWISE ALLOWED PER PUD 101.
4. NO PORTION OF THIS TRACT IS ENCROACHED BY ANY SPECIAL FLOOD HAZARD AREAS INUNDATED BY THE 1% ANNUAL CHANCE FLOOD AS IDENTIFIED BY THE U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY BOUNDARY MAP (FLOOD INSURANCE RATE MAP) COMMUNITY PANEL NUMBER 48491C0470E, EFFECTIVE DATE SEPTEMBER 26, 2008, FOR WILLIAMSON COUNTY, TEXAS.
5. NO PORTION OF THIS TRACT IS ENCROACHED BY THE ULTIMATE 1% CHANCE FLOODPLAIN.
6. LOT 1A AND LOT 1B ARE SUBJECT TO PASS-THROUGH WASTEWATER SERVICE GRANTED TO THE CITY OF ROUND ROCK RECORDED IN DOCUMENT NO. 2015079983 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.
7. A TEN-FOOT (10') PUBLIC UTILITY EASEMENT ABUTTING AND ALONG THE STREET SIDE PROPERTY LINE IS HEREBY CONVOYED FOR ALL STREET SIDE PROPERTY LOTS SHOWN HEREON.

FP1907-001

LANDESIGN SERVICES, INC.
1220 McNEIL ROAD, SUITE 200
ROUND ROCK, TX 78681
TBPLS FIRM NO. 10001800
512-238-7901

REPLAT LOT 1, FINAL PLAT OF GARDENS AT MAYFIELD

REVISIONS	
DATE	DESCRIPTION
06/28/19	ADDED WW/DRNG ESMTS
07/02/19	REVISED LOT LINE
07/22/19	REV. PER CORR. COMMENTS NO. 1
09/07/19	REV. PER CORR. COMMENTS NO. 2

PROJECT NAME: 3901 CR. 175
JOB NUMBER: 19-022
DATE: 06/12/2019
DRAWING FILE PATH: L:\19022 - 3901 CR 175\CAD\DWGS\GPM LOT 1 REPLAT.DWG
ELEVATION NOTE FILE PATH: N/A
SCALE: 1" = 100'
RPLS: TST | TECH: HAS | PARTYCHIEF: MD
CHECKED BY: TST | FIELDBOOK: 304/43

DRAWING NAME: G:\M LOT 1 REPLAT

SHEET
01 of 02

DRAWING PATH: L:\19022 - 3901 CR 175\CAD\DWGS\GPM LOT 1 REPLAT.DWG SHEET PLOT SIZE: ARCH FULL BLEED C (18.00 X 24.00 INCHES) LAST SAVED: 9/13/2019 5:21 PM PLOT DATE: 9/13/2019 5:23 PM

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

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PROJECT CASE: #SDP23-00007

SANDLIN
ENGINEERING | CONSULTING
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

FINAL PLAT

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION	SHEET
				4 OF 25

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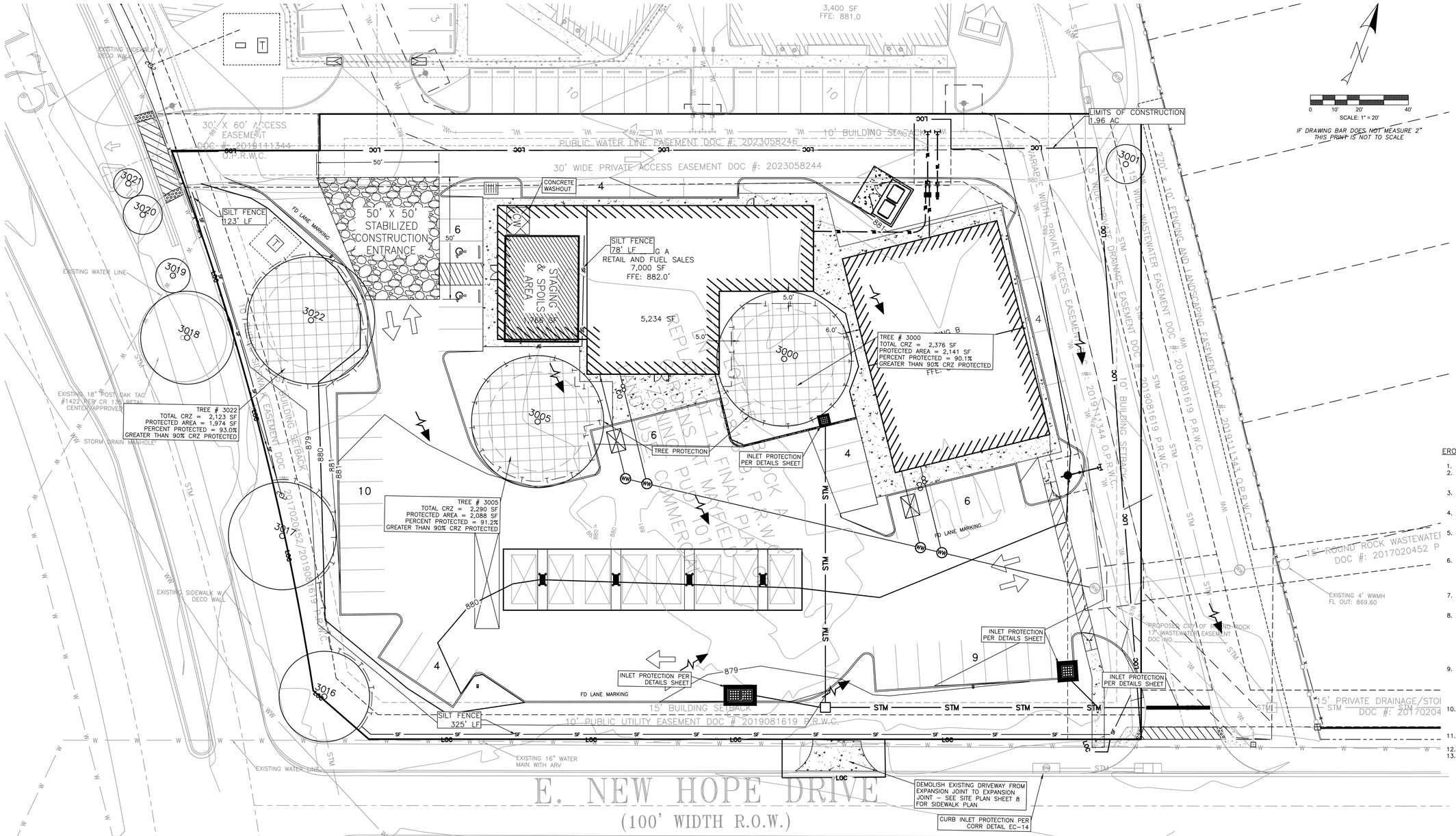

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED PROFESSIONAL ENGINEER
1/29/2024

EROSION CONTROL LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- LOC LOC LOC — LIMITS OF CONSTRUCTION
- SF SF SF — SILT FENCE
- T T T — TREE PROTECTION FENCE
- STAGING & TEMPORARY SPOILS AREA
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- TEMPORARY ROCK BERM
- AREA INLET PROTECTION
- CURB INLET PROTECTION
- 750 EXISTING CONTOURS
- 755 PROPOSED CONTOURS
- 100 EXISTING TREE (TO REMAIN)
- 100 EXISTING TREE (TO BE REMOVED)

NOTE: ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY INSPECTOR AT TIME OF CONSTRUCTION.

EROSION CONTROL NOTES:

1. LIMITS OF CONSTRUCTION 1.96 AC
2. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK EROSION AND SEDIMENTATION CONTROL ORDINANCE.
3. ALL STAGING AND STORAGE SHALL OCCUR WITHIN THE BOUNDARIES OF THE PROPERTY AND LIMITS OF CONSTRUCTION.
4. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING.
5. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING, OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
6. TEMPORARY STAGING AND STORAGE AREA/TEMPORARY SPOILS AREA IS TO BE USED DURING NORMAL WORK HOURS (7 AM TO 6 PM). ONCE CONSTRUCTION IS COMPLETE, CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS FROM AREA AND RESTORE TO ORIGINAL CONDITION OR BETTER.
7. 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.
8. 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 INSPECT BY THE CITY OF ROUND ROCK FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.
9. 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 REMOVED EACH STRUCTURE AS APPROVED BY THE ENGINEER.
10. 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.
11. ALL DISTURBED AREAS SHALL BE REVEGETATED PER CORR SPECIFICATIONS
12. TREE SURVEY PERFORMED 5-17-2021
13. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED UP IMMEDIATELY.

811 TEXAS 811.org DIG RIGHT BEFORE YOU DIG

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PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC

TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

EROSION CONTROL, DEMOLITION, AND CRZ PROTECTION PLAN

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 5 OF 25

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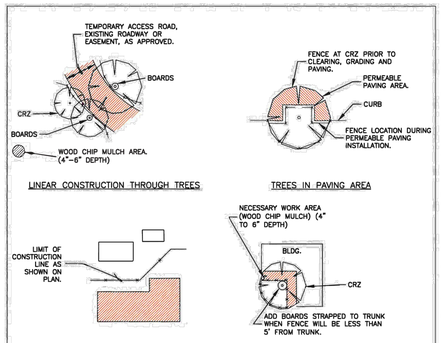
1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL TREES TO BE PRESERVED FROM HIS ACTIVITIES.
2. ALL TREES SHOWN TO BE RETAINED ON THE PLANS, SHALL BE PROTECTED DURING CONSTRUCTION WITH FENCING. SEE: TREE PROTECTION TREE WELLS (EC-02), TREE PROTECTION TREE LOCATION (EC-03) AND TREE PROTECTION FENCE-CHAIN LINK (EC-04).
3. TREE PROTECTION FENCES SHALL BE ERECTED ACCORDING TO CITY STANDARDS FOR TREE PROTECTION, INCLUDING TYPES OF FENCING AND SIGNAGE.
4. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR GRADING) AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
5. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIPLINES.
6. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES, LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE) OR CRITICAL ROOT ZONE (CRZ), WHICHEVER IS GREATER; AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   6A. SOIL COMPACTION IN CRZ AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIAL.
   6B. CRZ DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL) OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE FORESTRY MANAGER.
   6C. WOUNDS TO EXPOSED ROOTS, TRUNK, OR LIMBS BY MECHANICAL EQUIPMENT.
   6D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES.
7. EXCEPTIONS TO INSTALLING TREE FENCES AT THE TREE DRIPLINES OR CRZ, WHICHEVER IS GREATER, MAY BE PERMITTED IN THE FOLLOWING CASES:
   7A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, OR TREE WELL.
   7B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   7C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.
   7D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE FORESTRY MANAGER TO DISCUSS ALTERNATIVES.
8. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE THAT IS CLOSER THAN 5 FEET TO A TREE TRUNK, THE TRUNK SHALL BE PROTECTED BY STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
9. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES UNDER THE DRIPLINE OR CRZ, WHICHEVER IS GREATER, THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION.
10. ALL GRADING WITHIN CRZ AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA.
11. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL AND BACKFILLED WITH GOOD QUALITY TOP SOIL WITHIN TWO DAYS. IF EXPOSED ROOT AREAS CANNOT BE BACKFILLED WITHIN 2 DAYS, AN ORGANIC MATERIAL WHICH REDUCES SOIL EVAPORATION AND MINIMIZES WATER LOSS DUE TO EVAPORATION SHALL BE PLACED TO COVER THE ROOTS UNTIL BACKFILL CAN OCCUR.
12. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, IN A LOCATION AND TO A DEPTH APPROVED BY THE FORESTRY MANAGER, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
13. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES WILL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS ARE TO BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON LEAVES.
14. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, A PLASTIC VAPOR BARRIER SHALL BE PLACED BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE CRZ.
15. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
16. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR (4) INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OR CRZ OF TREES, WHICHEVER IS GREATER. NO TOPSOIL IS PERMITTED ON ROOT FLARES OF ANY TREE.
17. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. ALL PRUNING MUST BE DONE ACCORDING TO CITY STANDARDS AND AS OUTLINED IN LITERATURE PROVIDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA PRUNING TECHNIQUES).
18. ALL OAK TREE CUTS, INTENTIONAL OR UNINTENTIONAL, SHALL BE SEALED WITH AN APPROVED PRUNING SEALER IMMEDIATELY (WITHIN 10 MINUTES). PRUNING SEAL OR TREE PAINT MUST BE KEPT ON SITE AT ALL TIMES.
19. THE FORESTRY MANAGER HAS THE AUTHORITY TO REQUIRE ADDITIONAL TREE PROTECTION BEFORE OR DURING CONSTRUCTION.
20. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED. REFER TO THE CITY OF ROUND ROUND ROCK TREE TECHNICAL MANUAL FOR APPROPRIATE REMOVAL METHODS.
21. PRIOR TO CONSTRUCTION, ALL LOWER TREE LIMBS OVER ROADWAYS MUST BE PRUNED TO A HEIGHT OF 14 FEET USING THE TECHNIQUES DESCRIBED IN THE CITY OF ROUND ROCK TREE TECHNICAL MANUAL.
22. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS NON COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

SCALE: NTS

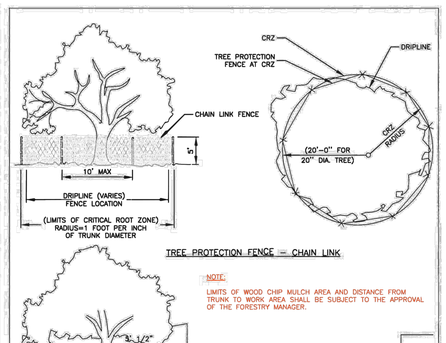
RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: EC-01
APPROVED 01-28-21 DATE	TREE PROTECTION NOTES	SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

SCALE: NTS

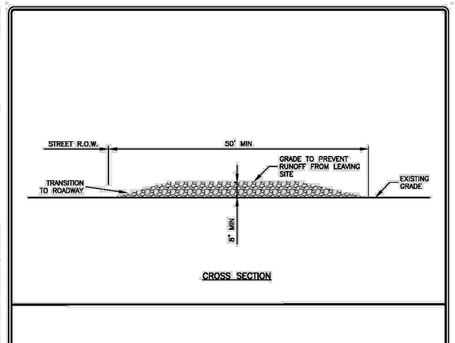
RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: EC-03
APPROVED 01-28-21 DATE	TREE PROTECTION FENCE LOCATIONS	SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



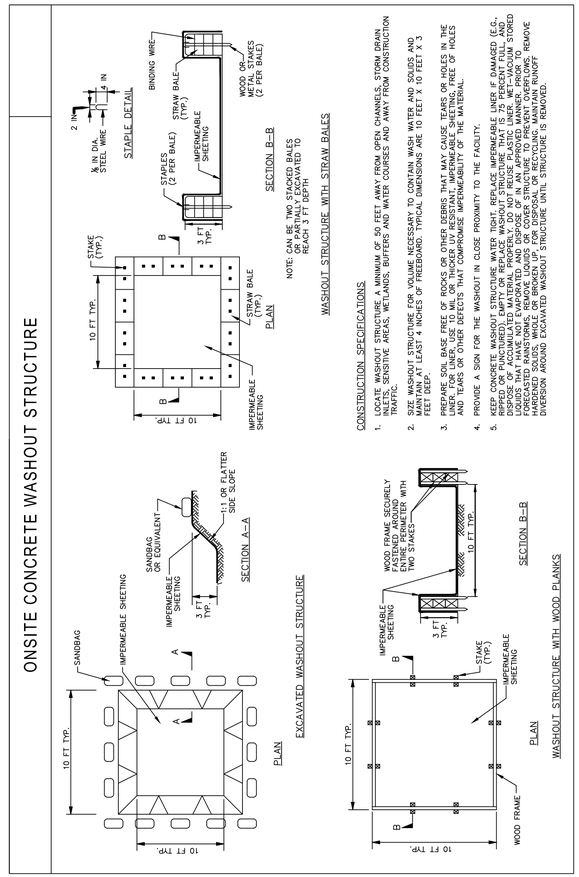
FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

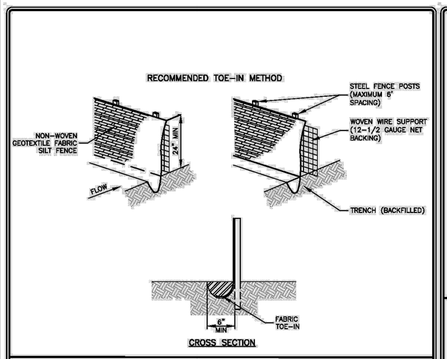
SCALE: NTS

RECORD SIGNED COPY ON FILE	CITY OF ROUND ROCK	DRAWING NO: EC-04
APPROVED 01-28-21 DATE	TREE PROTECTION FENCE CHAIN LINK	SHEET 1 of 1
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-09
APPROVED 03-25-11 DATE	STABILIZED CONSTRUCTION ENTRANCE DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

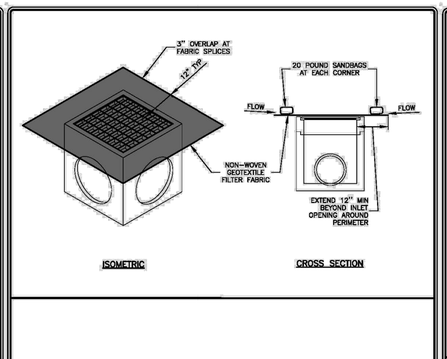




NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1) FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

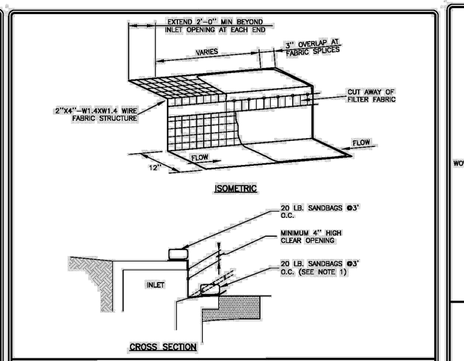
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-10
APPROVED 03-25-11 DATE	SILT FENCE DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
3. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

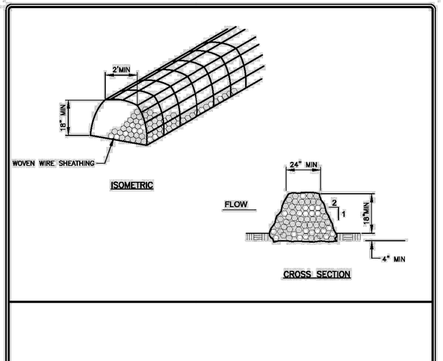
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-15
APPROVED 03-25-11 DATE	AREA INLET PROTECTION DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1" X 4" BOARD SECURED WITH CONCRETE NAILS 3' O.C. NAILED INTO THE GUTTER IN LIEU OF SANDBAGS TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, CLEAN ANY DIRT/DEBRIS FROM NAILING LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH SURFACE OF GUTTER.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-14
APPROVED 03-25-11 DATE	CURB INLET PROTECTION DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS



NOTES:

1. USE ONLY OPEN GRADED ROCK (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/ OR FABRIC CORE–WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH OF 8", THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-12
APPROVED 03-25-11 DATE	ROCK BERM DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK TEXAS

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

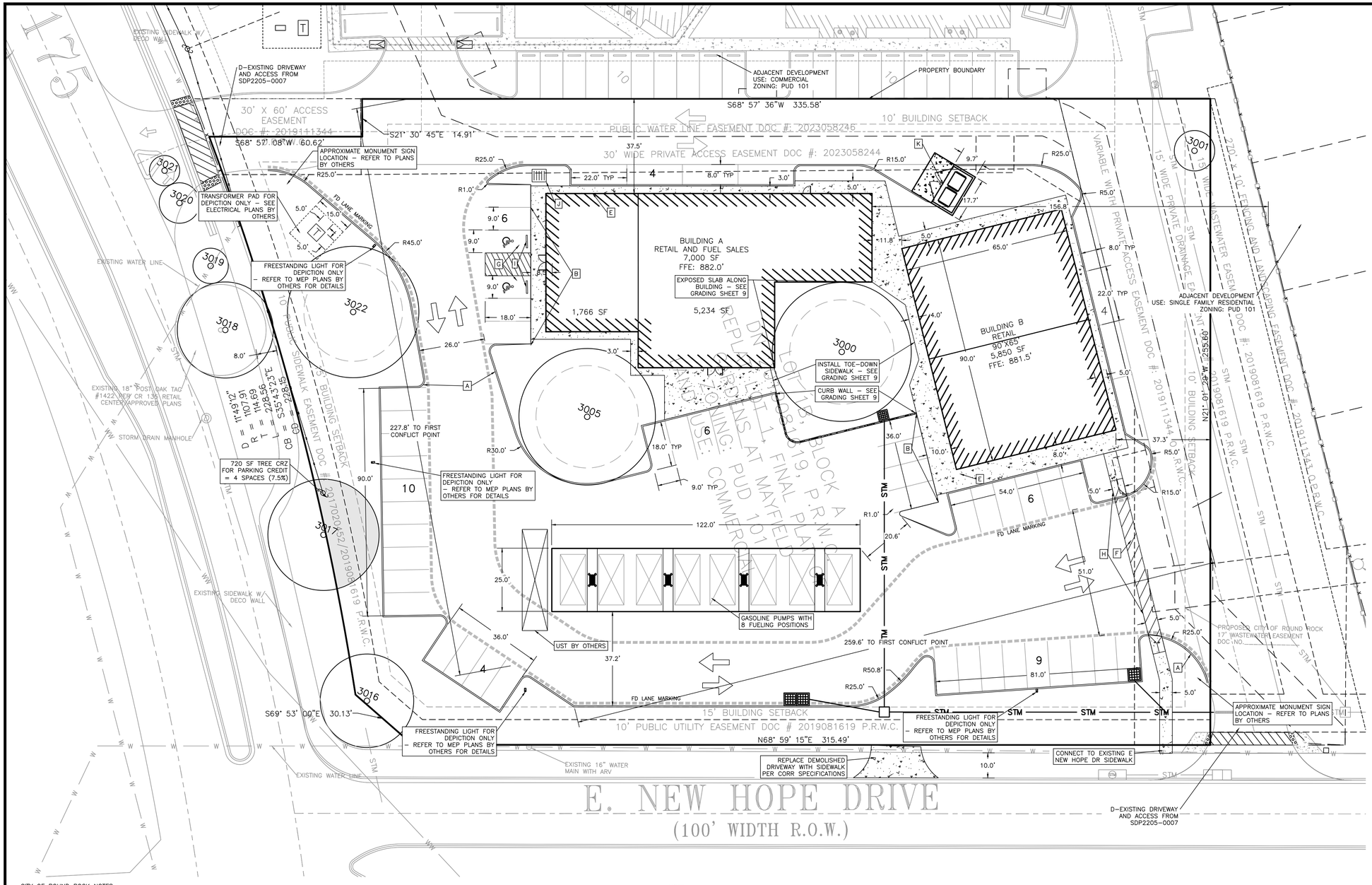
PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

EROSION CONTROL DETAILS

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION	SHEET
				6 OF 25



0 10' 20' 40'
SCALE: 1" = 20'

IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED PROFESSIONAL ENGINEER
1/29/2024

SITE PLAN LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- FIRE LANE
- PROPOSED CURB & GUTTER
- STREET CENTERLINE
- STRUCTURAL RETAINING WALL (BY OTHERS)
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PARKING SPACES
- TRANSFORMER PAD
- SITE WALLS
- PHASING

TAS ACCESSIBLE ROUTE
TAS ACCESSIBLE ROUTES MAY NOT EXCEED A CROSS SLOPE OF 1:50 (2%) OR EXCEED A RUNNING SLOPE OF 1:20 (5%) UNLESS DESIGNED AS A RAMP. THE MAXIMUM RUNNING SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12 (8.33%). THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 INCHES. REFER TO GRADING SHEET(S).

- EX. WATER LINE / PR. WATER LINE
- EX. WASTEWATER / PR. WASTEWATER
- EX. STORM SEWER LINE / PR. STORM SEWER LINE
- EX. FIRE HYDRANT / PR. FIRE HYDRANT
- EX. WATER METER / PR. WATER METER
- EX. WASTEWATER MANHOLE / PR. WASTEWATER MANHOLE
- FITTINGS AS NOTED
- GATE VALVE AS NOTED
- WW CLEAN OUT
- BFP BACK FLOW PREVENTER
- FLOW ARROW
- EX. UTILITY POLE

SITE LEGEND

- A 6" CURB & GUTTER. SEE DETAIL SHEET.
- B RIBBON CURB. SEE DETAIL SHEET.
- C CASTELLATED CURB. SEE DETAIL SHEET.
- D STANDARD CITY TYPE II DRIVEWAY. SEE DETAIL SHEET
- E CONCRETE SIDEWALK. SEE DETAIL SHEET.
- F PEDESTRIAN CROSSWALK.
- G HANDICAP SPACE W/SIGN. SEE DETAIL SHEET.
- H PEDESTRIAN ADA RAMP OR AT GRADE ADA DOME PAVERS. SEE DETAIL SHEET.
- I CONCRETE WHEEL STOP. SEE DETAIL SHEET.
- J STANDARD CITY BIKE RACK. SEE DETAIL SHEET.
- K DUMPSTER ENCLOSURE WITH CONCRETE PAD PER GEOTECHNICAL REPORT AND CITY STANDARDS

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

CITY OF ROUND ROCK NOTES:

1. LIGHTING
   - A. EXTERIOR LIGHTING SHALL BE USED TO PROVIDE ILLUMINATION FOR SECURITY AND SAFETY OF ENTRY DRIVES, PARKING AREAS, SERVICE AND LOADING AREAS AND PATHWAYS AND COURTYARDS. ALL EXTERIOR LIGHT FIXTURES SHOULD BE DESIGNED AND COORDINATED AS COMPATIBLE FIXTURES WHICH RELATE TO THE ARCHITECTURAL CHARACTER OF THE BUILDINGS ON A SITE.
   - B. EXTERNAL LIGHTING SHALL BE ARRANGED AND CONTROLLED, THROUGH THE USE OF SHIELDING AND OTHER MEASURES, SO AS TO DEFLECT LIGHT AWAY FROM ANY RESIDENTIAL AREAS.
   - C. BUILDING ILLUMINATION
     - I. THE DESIGN AND MATERIALS OF LIGHTING FIXTURES SHALL BE CONSISTENT WITH THE CHARACTER OF THE AREA. FULLY RECESSED DOWN-LIGHTS, GOOSENECK LIGHTS OR OTHER FIXTURES APPROPRIATE TO THE STYLE OF A BUILDING SHALL BE USED.
     - II. ILLUMINATION OF A FACADE TO HIGHLIGHT ARCHITECTURAL DETAILS IS PERMITTED. FIXTURES SHALL BE SMALL, SHIELDED AND DIRECTED TOWARD THE BUILDING RATHER THAN TOWARD THE STREET, SO AS TO MINIMIZE GLARE FOR PEDESTRIANS AND DRIVERS. FLASHING, SCROLLING OR NEON LIGHTING SHALL BE PROHIBITED.
   - D. SITE LIGHTING DESIGN REQUIREMENTS
     - I. FIXTURE (LUMINAIRE)
       THE LIGHT SOURCE SHALL BE COMPLETELY CONCEALED (RECESSED) WITHIN AN OPAQUE HOUSING AND SHALL NOT BE VISIBLE FROM ANY STREET OR RESIDENTIAL DEVELOPMENT
     - II. LIGHT SOURCE (LAMP)
       INCANDESCENT, LED (LIGHT EMITTING DIODE), FLUORESCENT, METAL HALIDE OR COLOR-CORRECTED HIGH-PRESSURE SODIUM MAY BE USED. OTHER LAMP TYPES MAY BE USED, SUBJECT TO THE APPROVAL OF THE CITY. THE SAME TYPE OF LAMP SHALL BE USED FOR THE SAME OR SIMILAR TYPES OF LIGHTING ON ANY ONE SITE THROUGHOUT A DEVELOPMENT.
     - III. MOUNTING
       FIXTURES SHALL BE MOUNTED IN SUCH A MANNER THAT THE CONE OF LIGHT DOES NOT CROSS ANY PROPERTY LINE OF THE SITE.
     - IV. HEIGHT OF FIXTURE
       THE HEIGHT OF A FIXTURE SHALL NOT EXCEED TWENTY (20) FEET.
     - V. LIGHTING WITHIN ANY LOT THAT UNNECESSARILY ILLUMINATES AND SUBSTANTIALLY INTERFERES WITH THE USE OR ENJOYMENT OF ANY OTHER LOT IS NOT PERMITTED. LIGHTING UNNECESSARILY ILLUMINATES ANOTHER LOT IF IT CLEARLY EXCEEDS THE REQUIREMENTS OF THIS SECTION, OR IF THE STANDARD COULD REASONABLY BE ACHIEVED IN A MANNER THAT WOULD NOT SUBSTANTIALLY INTERFERE WITH THE USE OR ENJOYMENT OF NEIGHBORING PROPERTIES.
     - VI. LIGHTING SHALL NOT BE ORIENTED SO AS TO DIRECT GLARE OR EXCESSIVE ILLUMINATION ONTO THE STREET IN A MANNER THAT MAY DISTRACT OR INTERFERE WITH THE VISION OF DRIVERS ON SUCH STREETS.
     - VII. IF THE COM PARCEL IS ADJACENT TO A RESIDENTIAL DISTRICT, FOOT CANDLE READINGS AT THE PROPERTY LINE ADJACENT TO A RESIDENTIAL USE SHALL NOT EXCEED 1.0.

2. FENCING
   - A. FENCING SHALL BE CONSTRUCTED OF THE FOLLOWING MATERIALS: BRICK, STONE, REINFORCED CONCRETE, CONCRETE PANEL, WROUGHT IRON, AND OTHER DECORATIVE MASONRY MATERIALS. FENCE POSTS SHALL BE CONSTRUCTED OF RUST RESISTANT METAL PARTS, CONCRETE BASED MASONRY OR CONCRETE PILLARS OF SOUND STRUCTURAL INTEGRITY.
   - B. ALL FENCES ADJACENT TO RESIDENTIAL USES SHALL PROVIDE A FINISHED FACE ABUTTING THE RESIDENTIAL USE, UNLESS OTHERWISE NOTED.
   - C. ALL FENCING AND WALLS ON COM COMMERCIAL DEVELOPMENTS THAT ARE VISIBLE FROM THE STREET SHALL BE CONSTRUCTED OF A MATERIAL COMPARABLE TO THE MASONRY WALL MATERIALS UTILIZED WITHIN THE RES RESIDENTIAL PORTIONS OF THE COMMUNITY.

NOTE:

1. A SEPARATE SIGN PERMIT IS REQUIRED FOR ALL FREE STANDING SIGNS AND WALL MOUNTED SIGNS.
2. SEE PHOTOMETRIC PLAN FOR SITE LIGHTING.
3. REFER TO SIGNS BELOW AND PHOTOMETRIC PLAN FOR APPROXIMATE LOCATION
4. FOUNDATION TREATMENT WILL BE PROVIDED WITH LANDSCAPING PER CITY OF ROUND ROCK REQUIREMENTS.
5. TREE MITIGATION WILL BE PROVIDED FOR THE SHOWN TREES. MITIGATION WILL BE PROVIDED WITH PLANTED TREES IN THE CENTER OF EXISTING END ISLANDS OF THE ADJACENT PARKING.
6. ANY GROUND MOUNTED EQUIPMENT SHALL BE IN CONFORMANCE WITH SEC. 8-40 (SECTION 2-72(D)7) ALTHOUGH NOT ANTICIPATED FOR THIS PROJECT.
7. PER SEC. 2-72(E) A MINIMUM OF FIVE DIFFERENT BUILDING ARTICULATIONS AND ONE SPECIAL DESIGN FEATURE ARE REQUIRED. SEE BUILDING FOOTPRINT.
8. MATERIALS, ARTICULATION, AND DESIGN FEATURES SHALL COMPLY WITH ROUND ROCK PUD REQUIREMENTS.
9. PER SECTION 8-1 ROOF-MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW. SCREENING SHALL UTILIZE THE SAME OR SIMILAR MATERIALS AS THE PRINCIPAL STRUCTURE.
10. DETENTION POND, DUMPSTER ENCLOSURES, AND GROUND-LEVEL UTILITIES MUST BE SCREENED PER SECTION 8-40.
11. SIDEWALK SHALL BE REMOVED AND REPLACED TO NEAREST EXPANSION JOINT. SAW CUTTING IS NOT PERMITTED.
12. CONVEYANCE TO REGIONAL DETENTION AND WATER QUALITY FACILITIES TO BE PROVIDED. DEVELOPED CONDITIONS FALL WITHIN ORIGINAL DESIGN ASSUMPTIONS FOR WATER QUALITY IN THE GARDENS AT MAYFIELD MASTER PLANS (SDP1505-0002) BY GRAY ENGINEERING, APPROVED 5-12-17.
13. REFER TO THE GARDENS AT MAYFIELD SITE PLAN 3801 C.R. 175 FOR INFORMATION ON OFF-SITE DRAINAGE AND WATER QUALITY CONDITIONS.

CORR ZONING SETBACKS

ZONE: C1A - GENERAL COMM
MIN. FRONT YARD SETBACK: 15
MIN. REAR SETBACK: 10
MIN. SIDE SETBACK: 10

MAX BUILDING HEIGHT: 2 STORIES

PARKING TABLE	
TOTAL BUILDING AREA	12,850 SF
PARKING RATIO - RETAIL	1 SPACE: 250 SF
PARKING REQUIRED	12,850 / 250 = 52 - 5 SPACES (10% TREE CREDIT) = 47 SPACES
PARKING PROVIDED	53 SPACES INCL. 2 ADA & 1 VAN

CITY OF ROUND ROCK SITE DATA	
	PROPOSED
TOTAL SITE AREA	2.1 AC / 91,639 SF
EXISTING ZONING	PUD 101
IMPERVIOUS COVER	69,056 SF/91,639 SF = 75.4%
BUILDING HEIGHT	1 STORY - 18 FT
FOUNDATION TYPE	CONCRETE SLAB

PROJECT CASE: #SDP23-00007

SANDLIN
ENGINEERING | CONSULTING
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

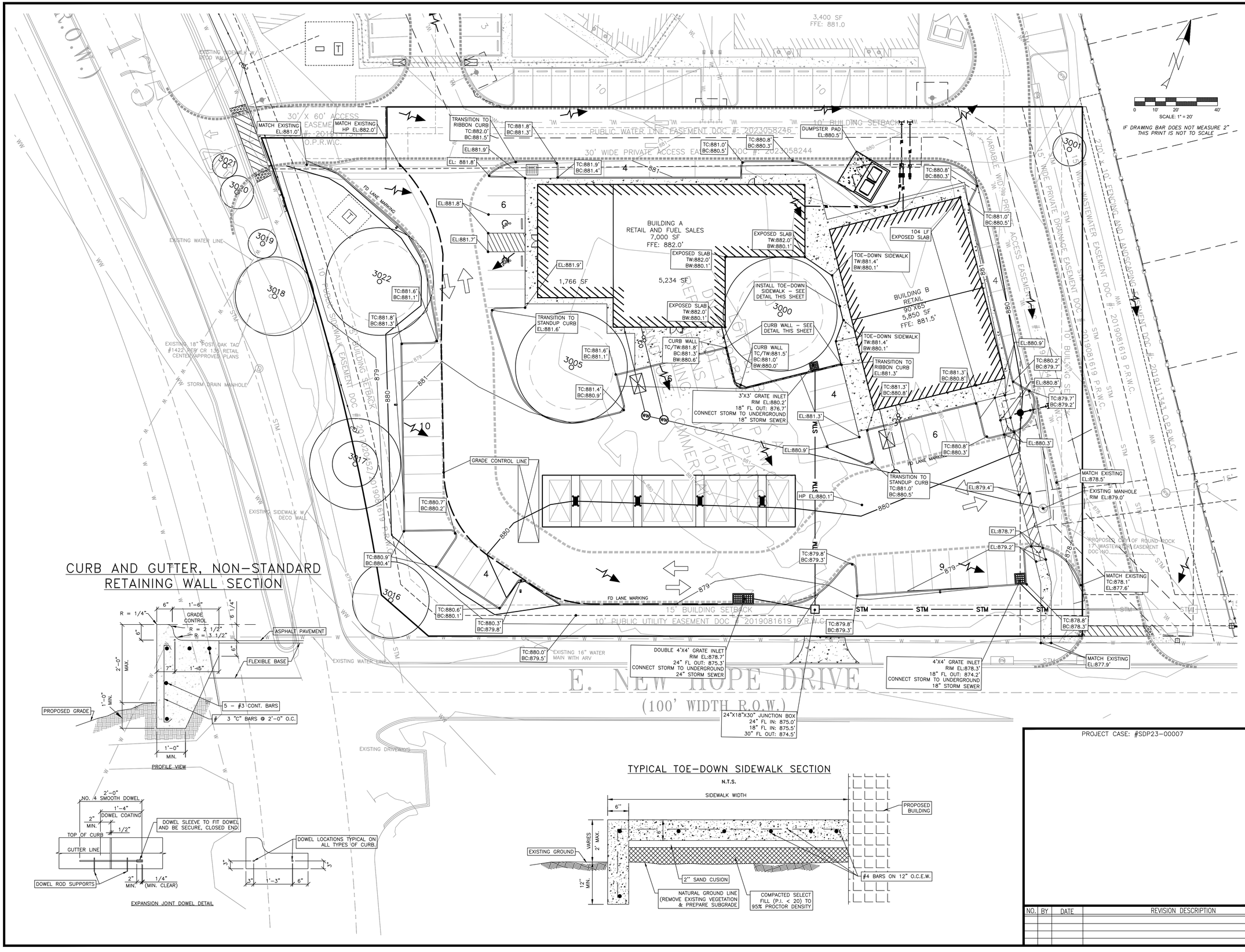
SITE PLAN

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 8 OF 25

G:\phased drives\pendlin services llc\pendlin services projects\land development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR SITE.dwg-SITE PLAN Plotted Jan 30, 2024 at 1:24pm by Engineer | Last Saved by: Engineer



CURB AND GUTTER, NON-STANDARD RETAINING WALL SECTION

TYPICAL TOE-DOWN SIDEWALK SECTION

N.T.S.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED PROFESSIONAL ENGINEER
1/29/2024

GRADING LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- GRADE CONTROL LINE
- PROPOSED CURB & GUTTER
- EXISTING CONTOURS / PROPOSED CONTOURS
- EX. WATER LINE / PR. WATER LINE
- EX. WASTEWATER / PR. WASTEWATER
- EX. STORM SEWER LINE / PR. STORM SEWER LINE
- EX. FIRE HYDRANT / PR. FIRE HYDRANT
- EX. WATER METER / PR. WATER METER
- EX. WASTEWATER MANHOLE / PR. WASTEWATER MANHOLE
- 100 EXISTING TREE (TO REMAIN)
- 100 EXISTING TREE (TO BE REMOVED)
- EL:800.0 EXISTING GROUND ELEVATION
- TC:800.0 BC:800.0 PROPOSED CURB & GUTTER
- HP:800.0 HIGH POINT ELEVATION
- LP:800.0 LOW POINT ELEVATION
- TW:800.0 BW:800.0 PROPOSED TOP AND BOTTOM OF WALL
- FL:800.0 PROPOSED FLOW LINE
- 1.00% PROPOSED SLOPE (SLOPE DOWN)

GRADING NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURE WITHIN THE SCOPE OF THIS CONTRACT WHERE NO SPECIFICALLY COVERED IN THE CONSTRUCTION DOCUMENTS SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL CONDITION ANY DAMAGE DONE TO EXISTING IMPROVEMENTS OR UTILITIES.
3. EARTHWORK FOR THE BUILDING FOUNDATION, CONCRETE SLABS AND CONCRETE AND ASPHALT PAVEMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
4. ADJUST PAVEMENT, CURB ELEVATIONS, AND/OR SIDEWALK ELEVATIONS AS NECESSARY TO ENSURE A CONTINUOUS GRADE WITH EXISTING ELEVATIONS.
5. EXISTING AND PROPOSED GRADE CONTOUR INTERVALS SHOWN ARE ONE FOOT (1').
6. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE FOUR (4) INCHES OF TOPSOIL.
7. REFER TO GEOTECHNICAL REPORT FOR PAVING SECTION RECOMMENDATIONS.

FIRE LANE NOTE:

GRADE THROUGHOUT FIRE LANE ACCESS SHALL NOT EXCEED SEVEN PERCENT WITH GRADE BREAKS NO GREATER THAN 3 PERCENT.

TEXAS 811 BEFORE YOU DIG

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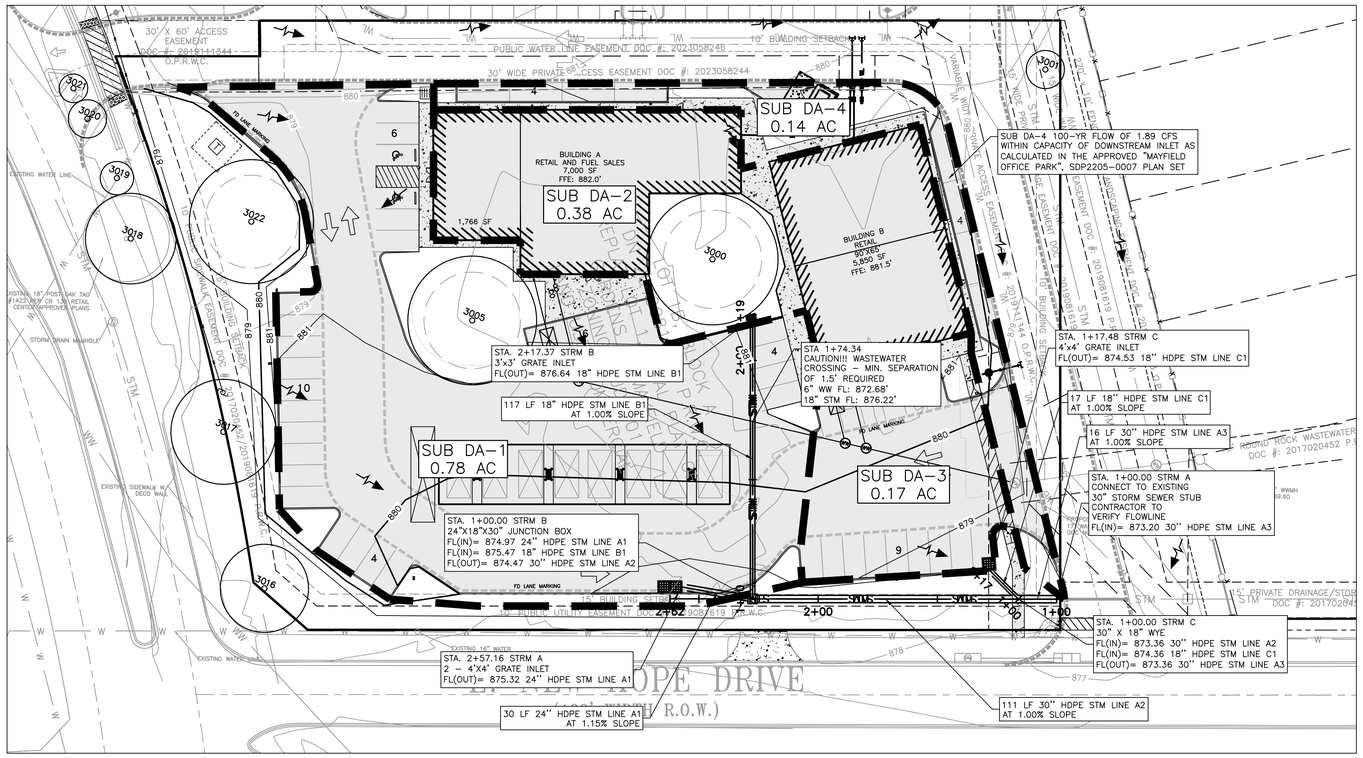
GRADING PLAN

NEW HOPE RETAIL

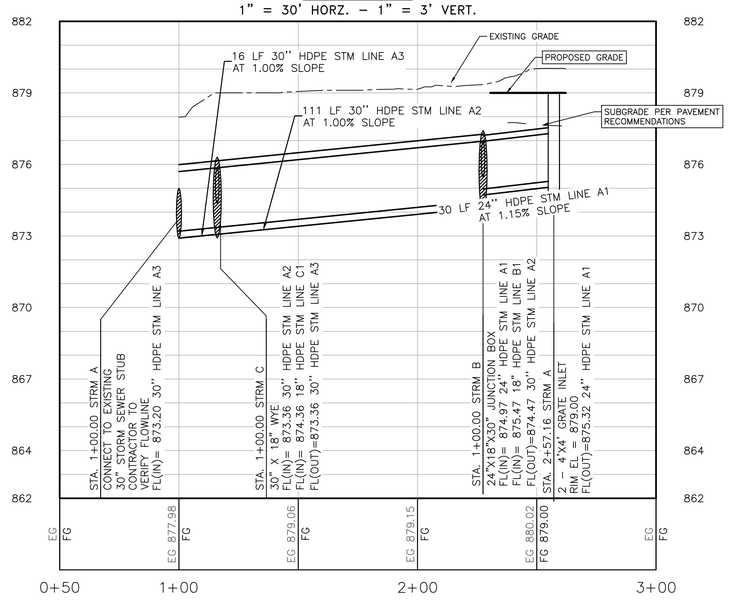
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

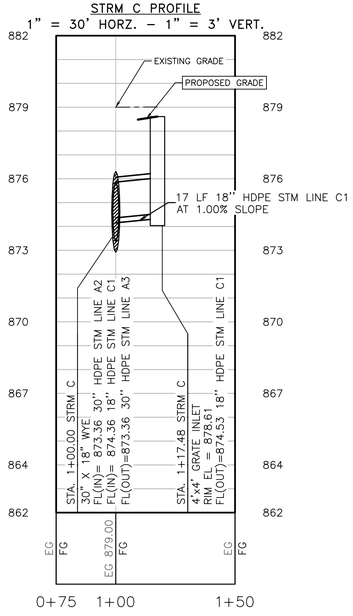
SHEET 9 OF 25



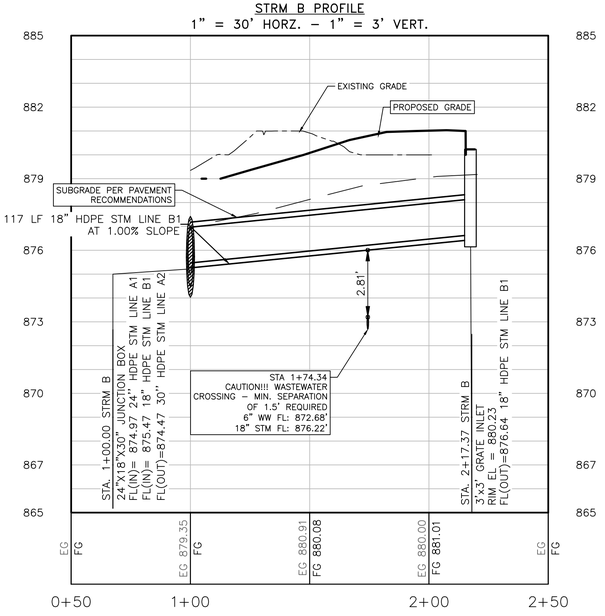
STRM A PROFILE
1" = 30' HORZ. – 1" = 3' VERT.



STRM C PROFILE
1" = 30' HORZ. – 1" = 3' VERT.



STRM B PROFILE
1" = 30' HORZ. – 1" = 3' VERT.



Drainage Area	Drainage Area		2-year			10-year			25-year			50-year			100-year		
	(Ac)	T_c* (min)	C	I** (in/hr)	Q (cfs)	C	I** (in/hr)	Q (cfs)	C	I** (in/hr)	Q (cfs)	C	I** (in/hr)	Q (cfs)	C	I** (in/hr)	Q (cfs)
SUB DA-1	0.78	5.00	0.73	6.24	3.55	0.81	9.13	5.77	0.86	11.10	7.45	0.80	12.60	7.87	0.95	14.20	10.52
SUB DA-2	0.38	5.00	0.73	6.24	1.73	0.81	9.13	2.81	0.86	11.10	3.63	0.62	12.60	2.97	0.95	14.20	5.13
SUB DA-3	0.17	5.00	0.73	6.24	0.77	0.81	9.13	1.26	0.86	11.10	1.62	0.53	12.60	1.13	0.95	14.20	2.29
SUB DA-4	0.14	5.00	0.73	6.24	0.64	0.81	9.13	1.04	0.86	11.10	1.34	0.51	12.60	0.90	0.95	14.20	1.89

*Most conservative Tc value of 5.0 minutes and impervious cover of 100% was assumed for each drainage area
**City of Round Rock RAIn document Table 2 utilized for rainfall intensities

CORR based Grate Inlet Calculations - Sub DA-1		
Grate Inlet Equation Q=Cf*4.82*A*h^0.5		
	2 - 4'x4' Inlets	
Size of Inlet (length)	4	ft
Size of Inlet (width)	8	ft
A= Area of Inlet	32	ft^2
h= Depth across grate	0.5	ft
Cf= Clogging factor	0.5	
Q25 from Drainage Calcs	7.45	cfs
Q100 from Drainage Calcs	10.52	cfs
Inlet Capacity	**54.53**	cfs

CORR based Grate Inlet Calculations - Sub DA-2		
Grate Inlet Equation Q=Cf*4.82*A*h^0.5		
	1 - 3'x3' Inlet	
Size of Inlet (length)	3	ft
Size of Inlet (width)	3	ft
A= Area of Inlet	9	ft^2
h= Depth across grate	0.5	ft
Cf= Clogging factor	0.5	
Q25 from Drainage Calcs	3.63	cfs
Q100 from Drainage Calcs	5.13	cfs
Inlet Capacity	**15.34**	cfs

STORM SEGMENT CALCULATIONS					
Segment	A1 - 24"	A2 - 30"	A3 - 30"	B1 - 18"	C1 - 18"
Q_{25} (cfs) =	7.45	11.07	12.70	3.63	1.62
Q_{100} (cfs) =	10.52	15.65	17.94	5.13	2.29
Pipe Diameter (ft) =	2.0	2.5	2.5	1.5	1.5
Mannings "n" - HDPE	0.013	0.013	0.013	0.013	0.013
Length (ft) =	30.0	111.0	16.0	117.0	17.0
FL_{IN} (ft) =	875.32	874.47	873.36	876.64	874.53
FL_{OUT} (ft) =	874.97	873.36	873.20	875.47	874.36
Slope (ft/ft) =	0.012	0.010	0.010	0.010	0.010
$Q_{CAPACITY}$ (cfs) =	24.3	41.1	41.1	10.5	10.5
$Q_{CAPACITY} = (0.3117)*(1.49/n)*(D^{(8/3)})*(S^{.5})$					

CORR based Grate Inlet Calculations - Sub DA-3		
Grate Inlet Equation Q=Cf*4.82*A*h^0.5		
	1 - 4'x4' Inlet	
Size of Inlet (length)	4	ft
Size of Inlet (width)	4	ft
A= Area of Inlet	16	ft^2
h= Depth across grate	0.5	ft
Cf= Clogging factor	0.5	
Q25 from Drainage Calcs	1.62	cfs
Q100 from Drainage Calcs	2.29	cfs
Inlet Capacity	**27.27**	cfs

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

PROPOSED DRAINAGE LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- PR. DA-X XX.XX AC — DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW
- TIME OF CONCENTRATION LINE (SHEET FLOW)
- TIME OF CONCENTRATION LINE (SHALLOW CONCENTRATED FLOW)
- 750 EXISTING CONTOURS
- 750 PROPOSED CONTOURS

NOTES:

1. PIPES TO BE CONSTRUCTED USING RCP OR HDPE AS SPECIFIED BY THE OWNER AND/OR ENGINEER. ALL JOINTS, BENDS, AND STRUCTURES ARE TO BE SUITABLE TO THE PIPE USED AND BEDDING SHALL BE AS PER MANUFACTURER'S SPECIFICATIONS.
2. ALL STORM SEWER WYES, BENDS, FITTINGS AND PIPE TRANSITIONS SHALL BE PRE-FABRICATED AND FREE FROM DEFECTS (TYP.)
3. CORR STANDARD DETAIL FOR STORM BEDDING ASSUMES USE OF RCP. IF USING HDPE, PIPE BEDDING SHALL BE 1' ABOVE TOP OF PIPE OR PER MANUFACTURER'S SPECIFICATION.
4. RATIONAL METHOD WITH COMPOSITE RUNOFF COEFFICIENT UTILIZED FOR SUB DRAINAGE AREA CALCULATIONS.

0 15' 30' 60'
SCALE: 1" = 30'

IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

811 TEXAS 811 DIG RIGHT BEFORE YOU DIG

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

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SERVICES, LLC

TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

SUB DRAINAGE AREA MAP

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

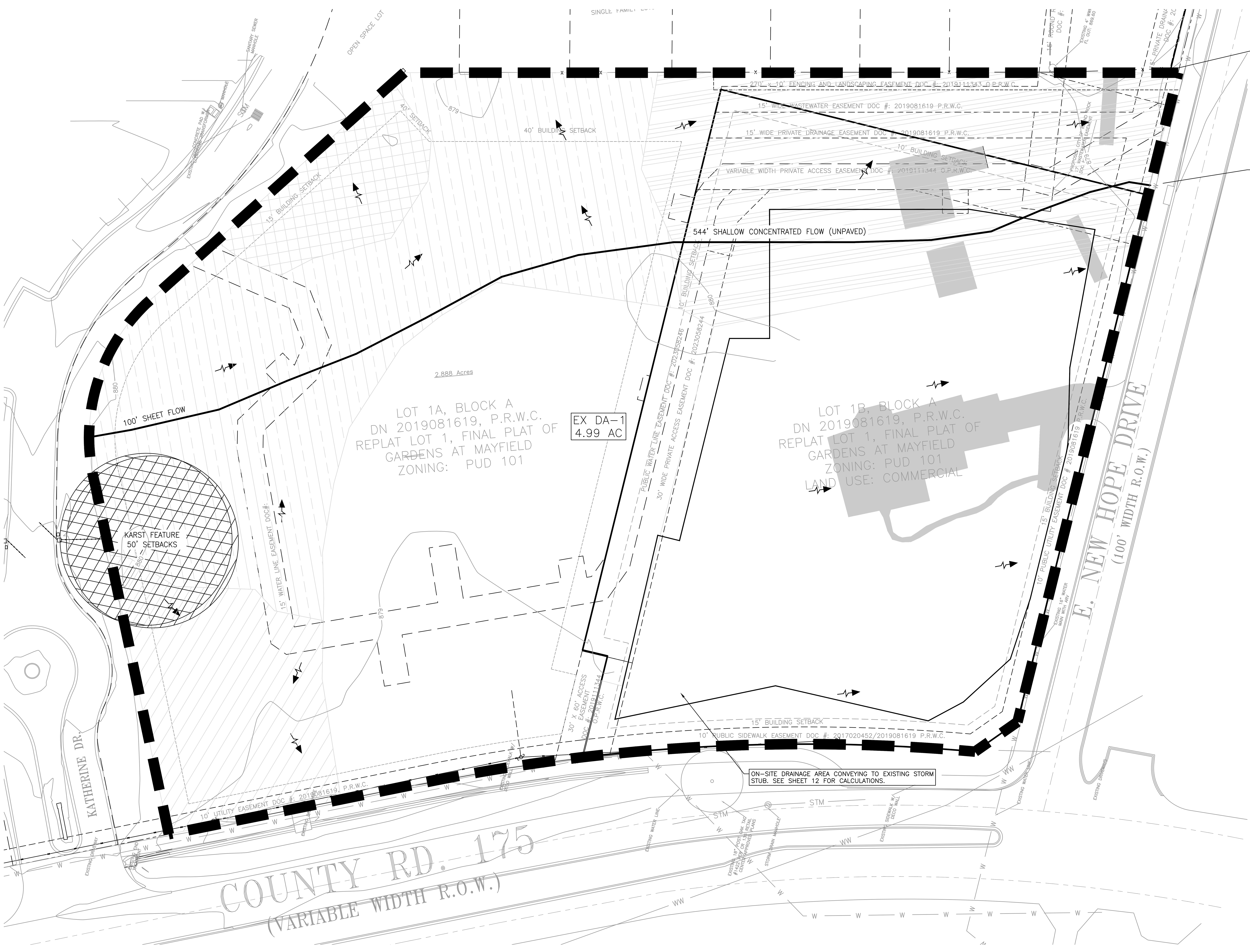
SHEET 10 OF 25

G:\phored drives\pendlin services llc\pendlin services projects\bond development division\01-0100-001 new hope retail\CAD\construction sheets\S NHR SDAM.dwg-SUB DRAINAGE AREA MAP Plotted Jan 30, 2024 at 1:24pm by Engineer | Last Saved by: Engineer

Time of Concentration Calculations					Sheet Flow				Shallow Conc. Flow				Channel Flow								Total	
Existing Flows		Area	Area		L	n	S	T_t	L	Surface Type	S	T_t	L	Manning's 'n'	S	Wetted Perimeter	Cross-Sectional Area	Hydraulic Radius	Vavg	T_t	T_c	
From	To	(Ac)	(sf)		(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(ft)	(ft^2)	(sf)	(ft/s)	(min)	(min)	lag time
EX DA-1	AP1 - Exist Curb Inlet	4.99	217,364		100	0.240	0.005	23.96	544	Unpaved	0.005	7.95	-	-	-	-	-	-	-	0.00	**31.91**	19.15

EXISTING			IMPERVIOUS			GRASS		
Drainage Area	Total Area (Ac)	Total Area (sf)	Area Impervious (sf)	Area Impervious (Ac)	Area Impervious (%)	Area Grass (sf)	Area Grass (Ac)	Area Grass (%)
EX DA-1	4.99	217,364	9,375	0.22	4.3%	207,989	4.77	95.7%

Drainage Basin Characteristics - Existing Conditions									
Drainage Area	Area (Acres)	I.C. (%)	Curve No.	Tc (min)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q50 (cfs)	Q100 (cfs)
EX DA-1	4.99	4.3%	82	31.91	9.53	17.06	22.07	26.08	30.26



Analysis Point 2: Existing 36" Storm Stub		
Flow from Approved Plans		
25 YR	33.79	CFS
100 YR	41.33	CFS
NOTE: SEE GARDENS AT MAYFIELD PLANS FOR CALCULATIONS		

Analysis Point 1: Southeast ROW		
2 YR	9.53	CFS
10 YR	17.06	CFS
25 YR	22.07	CFS
50 YR	26.08	CFS
100 YR	30.26	CFS

NOTE: THE HATCHED DELINEATIONS AND FLOW ARROWS ARE BASED ON THE SURVEY CONDUCTED BY CARRIZALES LAND SURVEYING, LLC, JOB #22-081, ON 4-19-22. HOWEVER, THE DRAINAGE AREA DELINEATION AND CALCULATIONS ARE SHOWN AS TO STAY ALIGNED WITH THE APPROVED MASTER PLAN DEVELOPMENT DRAINAGE ANALYSIS: THE GARDENS AT MAYFIELD (SDP1505-0002), APPROVED 5-12-17. PROPOSED ON-SITE IMPERVIOUS COVER IS TO CONVEY FLOWS TO THE EXISTING 36" STORM STUB, THEREBY REDUCING THE EXISTING FLOWS TO THE ADJACENT PROPERTIES. PLEASE SEE SHEET 14 FOR EXISTING STORM SEWER CONTINUATION AND SHEET 12 FOR PROPOSED DRAINAGE AREAS AND CALCULATIONS.

Table 1: NOAA Atlas 14 Brushy Creek Watershed Centroid Rainfall Depth for selected Durations and Frequencies (inches); AC = Annual Chance

Duration	1-yr	2-yr	5-yr	10-yr	25-yr (4% AC)	50-yr	100-yr (1% AC)	200-yr	500-yr	1000-yr
5-min	0.438	0.520	0.650	0.761	0.921	1.05	1.18	1.32	1.50	1.65
10-min	0.697	0.829	1.040	1.22	1.47	1.68	1.90	2.11	2.38	2.59
15-min	0.879	1.04	1.30	1.52	1.83	2.09	2.35	2.61	2.98	3.25
30-min	1.24	1.47	1.82	2.12	2.55	2.90	3.25	3.63	4.15	4.57
60-min	1.61	1.91	2.39	2.80	3.39	3.85	4.35	4.89	5.66	6.28
2-hr	1.93	2.35	2.99	3.57	4.41	5.11	5.87	6.73	7.99	9.03
3-hr	2.10	2.61	3.36	4.05	5.08	5.94	6.91	8.02	9.65	11.0
6-hr	2.40	3.05	3.98	4.86	6.19	7.32	8.62	10.1	12.3	14.2
12-hr	2.73	3.49	4.58	5.61	7.18	8.53	10.1	11.9	14.6	17.0
24-hr	3.10	3.97	5.20	6.38	8.17	9.70	11.5	13.5	16.7	19.3

NOTE: NOAA ATLAS 14 RAIN DEPTHS UTILIZED FROM ROUND ROCK RAIN AS SHOWN.

STATE OF TEXAS
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124404
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1/29/2024

EXISTING DRAINAGE LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- EX. DA-X XX.XX AC — DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW
- TIME OF CONCENTRATION LINE (SHEET FLOW)
- TIME OF CONCENTRATION LINE (SHALLOW CONCENTRATED FLOW)
- 750 EXISTING CONTOURS
- 755 PROPOSED CONTOURS

0 15' 30' 60'
SCALE: 1" = 30'

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PROJECT CASE: #SDP23-00007

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EXISTING CONDITIONS DRAINAGE AREA MAP

NEW HOPE RETAIL

4631 E NEW HOPE DR

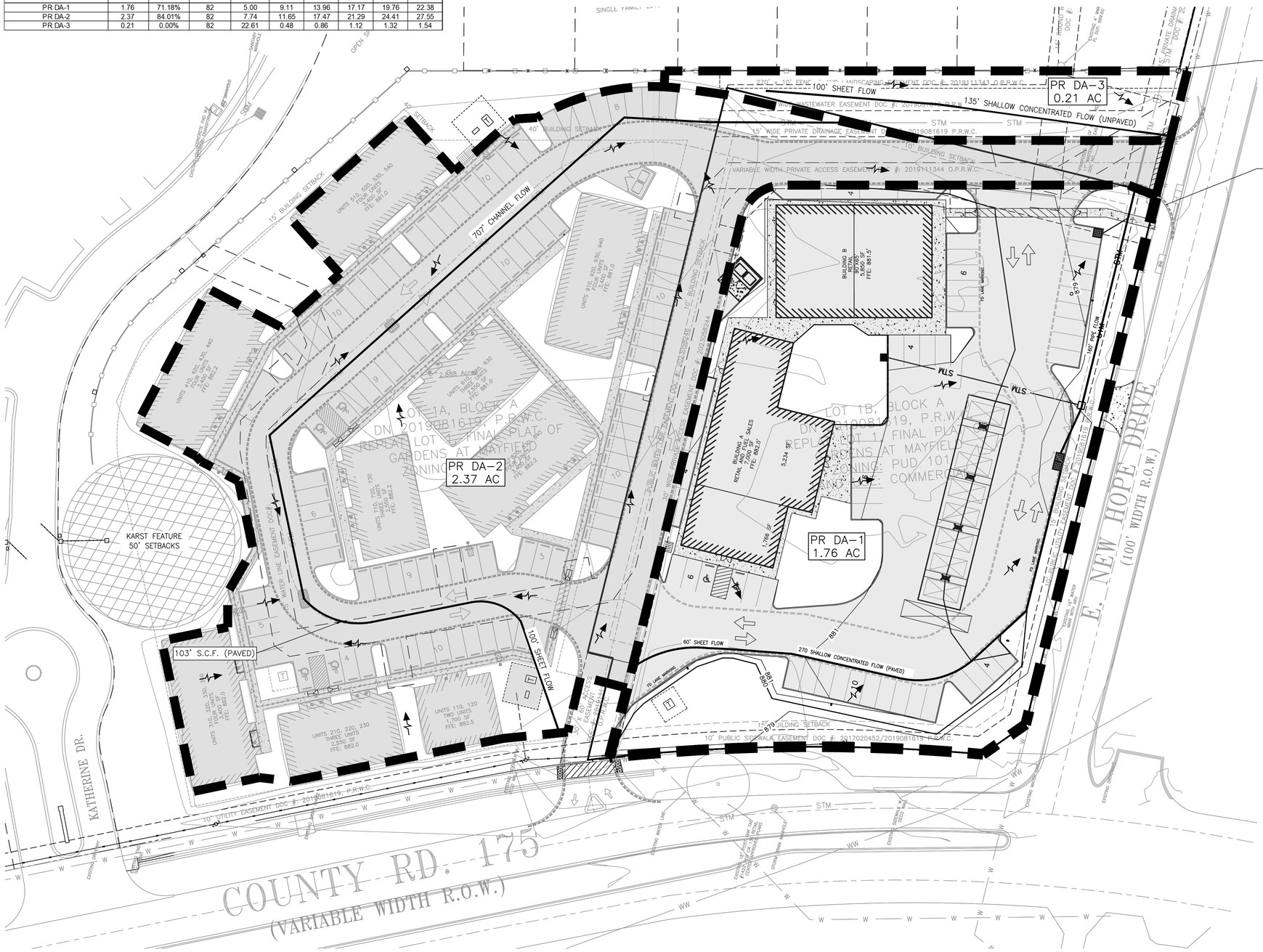
NO.	BY	DATE	REVISION DESCRIPTION

SHEET 11 OF 25

Time of Concentration Calculations				Sheet Flow				Shallow Conc. Flow				Channel Flow								Total	
Proposed Flows		Area	Area	L	n	S	T_t	L	Surface Type	S	T_t	L	Manning's 'n'	S	Wetted Perimeter	Cross-Sectional Area	Hydraulic Radius	Vavg	T_t	T_c	
From	To	(Ac)	(sf)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(min)	(ft)	-	(ft/ft)	(ft)	(ft^2)	(ft)	(ft/s)	(min)	(min)	lag time
PR DA-1	AP2 - Exist 36" Storm Stub	1.76	76,744	60	0.018	0.010	1.52	270	Paved	0.010	2.21	160	0.013	0.010	-	10	1.75	16.64	0.16	**5.00**	3.00
PR DA-2	AP2 - Exist 36" Storm Stub	2.37	103,426	100	0.018	0.010	2.29	15	Paved	0.010	0.12	707	0.013	0.008	5	1	0.10	2.21	5.34	**7.74**	4.65
PR DA-3	AP1 - Exist Curb Inlet	0.21	9,351	100	0.240	0.007	20.95	135	Unpaved	0.007	1.67	-	-	-	-	-	-	-	0.00	**22.61**	13.57

PROPOSED			IMPERVIOUS			GRASS		
Drainage Area	Total Area	Total Area	Area Impervious	Area Impervious	Area Impervious	Area Grass	Area Grass	Area Grass
	(Ac)	(sf)	(sf)	(Ac)	(%)	(sf)	(Ac)	(%)
PR DA-1	1.76	76,744	54,625	1.25	71.2%	22,119	0.51	28.8%
PR DA-2	2.37	103,426	86,887	1.99	84.0%	16,539	0.38	16.0%
PR DA-3	0.21	9,351	0	0.00	0.0%	9,351	0.21	100.0%

Drainage Basin Characteristics - Proposed Conditions									
Drainage Area	Area	I.C. (%)	Curve No.	Tc	Q2	Q10	Q25	Q50	Q100
PR DA-1	1.76	71.18%	82	5.00	9.11	13.96	17.17	19.76	22.38
PR DA-2	2.37	84.01%	82	7.74	11.65	17.47	21.29	24.41	27.55
PR DA-3	0.21	0.00%	82	22.61	0.48	0.86	1.12	1.32	1.54



Analysis Point 2: Exist 36" Storm Stub				
	SDP1505-0002 Design Flows		Proposed Flows	
2 YR		CFS	20.46	CFS
10 YR		CFS	30.96	CFS
25 YR	33.79	CFS	37.87	CFS
50 YR	-	CFS	43.49	CFS
100 YR	41.33	CFS	49.16	CFS

Analysis Point 1: Southeast ROW				
	Existing Flows		Proposed Flows	
2 YR	9.53	CFS	0.48	CFS
10 YR	17.06	CFS	0.86	CFS
25 YR	22.07	CFS	1.12	CFS
50 YR	26.08	CFS	1.32	CFS
100 YR	30.26	CFS	1.54	CFS
NOTE: ALL PROPOSED FLOWS TO THIS ANALYSIS POINT ARE LESS THAN EXISTING FLOWS				

NOTE: STORMWATER INCREASES FOR ATLAS 14 RAINFALL RATES WERE MODELED FOR THE DOWNSTREAM GARDENS AT MAYFIELD STORM SEWER NETWORK, PER AS-BUILT RECORD DRAWINGS, WITH THE FULLY DEVELOPED CONDITIONS PER THIS DRAINAGE PLAN. THE RESULTS OF THE MODELED FLOWS CONFIRM THAT THE FLOWRATES ARE CONTAINED WITHIN THE STORM SEWER NETWORK. THIS PLAN AND THE FULLY DEVELOPED ADJACENT LOT HAVE NO ADVERSE IMPACT TO THE SAFETY OF THE PUBLIC DOWNSTREAM OF THIS PROJECT. THE HYDRAULIC GRADE LINE FOR THE 100 YEAR STORM, IS CONTAINED WITHIN THE EXISTING DRAINAGE FACILITIES DIRECTLY DOWNSTREAM AND MEETS THE CITY OF ROUND ROCK DRAINAGE CRITERIA.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

PROPOSED DRAINAGE LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- PR. DA-X XX.XX AC — DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW
- TIME OF CONCENTRATION LINE (SHEET FLOW)
- TIME OF CONCENTRATION LINE (SHALLOW CONCENTRATED FLOW)
- 750 — EXISTING CONTOURS
- 755 — PROPOSED CONTOURS

0 15' 30' 60'
SCALE: 1" = 30'

IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

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PROJECT CASE: #SDP23-00007

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SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

DEVELOPED CONDITIONS DRAINAGE AREA MAP

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 12 OF 25

G:\Shared drives\Sandlin Services LLC\Sandlin Services Projects\Land Development Division\01-0105-001 New Hope Retail\CAD\Reference\TITLE BLOCK 24x36.dwg-Model Plotted Jan 30, 2024 at 1:14pm by Engineer | Last Saved by: Engineer

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: NEW HOPE RETAIL
Date Prepared: 1/30/2024

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

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

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 85% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

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

County =	Williamson	
Total project area included in plan * =	4.99	acres
Predevelopment impervious area within the limits of the plan * =	0.22	acres
Total post-development impervious area within the limits of the plan* =	3.31	acres
Total post-development impervious cover fraction * =	0.66	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	2690	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	4.99	acres
Predevelopment impervious area within drainage basin/outfall area =	0.22	acres
Post-development impervious area within drainage basin/outfall area =	3.31	acres
Post-development impervious fraction within drainage basin/outfall area =	0.66	
$L_{M\ THIS\ BASIN}$ =	2690	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Wet Basin
Removal efficiency = 93 percent

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

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

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

A_C =	4.99	acres
A_I =	3.31	acres
A_P =	1.68	acres
L_R =	3435	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 2690 lbs.

F = 0.78

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

Rainfall Depth =	1.00	inches	
Post Development Runoff Coefficient =	0.47		
On-site Water Quality Volume =	8533	cubic feet	
On-site Water Quality Volume x 1.2 (generated by our development) =	10240	cubic feet	

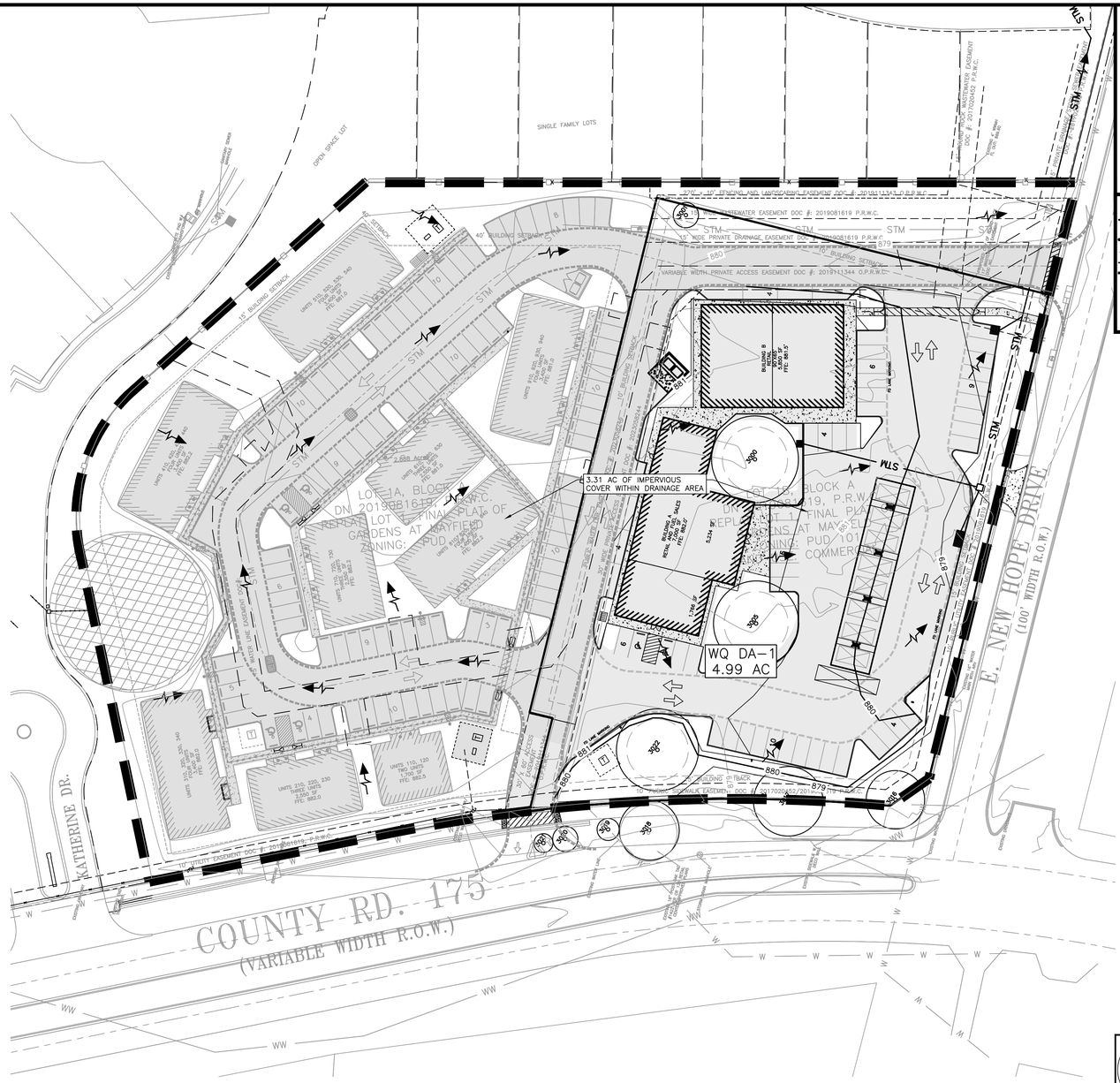
Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP =	38.32	acres	<- From approved Gardens at Mayfield plans
Off-site Impervious cover draining to BMP =	13.43	acres	<- From approved Gardens at Mayfield plans
Impervious fraction of off-site area =	0.35		
Off-site Runoff Coefficient =	0.28		
Off-site Water Quality Volume =	39386	cubic feet	
Storage for Sediment =	9584		
Total Capture Volume (required water quality volume(s) x 1.20) =	57503	cubic feet	

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool =	57503	cubic feet	**Permanent Pool Capacity is 1.20 times the WQV**
Required capacity at WQV Elevation =	66037	cubic feet	**Total Capacity should be the Permanent Pool Capacity plus a second WQV.**



SCALE: 1" = 40'

IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
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PROFESSIONAL ENGINEER
1/29/2024

WATER QUALITY LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- DRAINAGE AREA BOUNDARY
- WQ DA-X / XX.XX AC — WQ DRAINAGE AREA DESIGNATION AND AREA DRAINED
- FLOW ARROW

PROJECT CASE: #SDP23-00007

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TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

WATER QUALITY DAM

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 13 OF 25

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EXISTING WET BASIN		
Contributing Drainage Area =	WQ DA-1	
Total Drainage Area =	4.99	acre
Pre-Development I.C. =	0.22	acre
Post-Development I.C. =	3.31	acre
Post-Development I.C. Fraction =	0.66	
$L_{M\ TOTAL\ PROJECT}$ =	2690	lbs
A_C =	**4.99**	acre
A_I =	**3.31**	acre
A_P =	**1.68**	acre
L_R =	**3435**	lbs
Fraction of Annual Runoff (F) =	0.78	
Rainfall Depth =	1.00	inch
Post Development Runoff Coefficient =	0.47	
On-site Water Quality Volume =	8533	cubic ft
Off-site area draining to BMP =	38.32	acre
Off-site Impervious cover draining to BMP =	13.43	acre
Impervious fraction of off-site area =	-	
Off-site Runoff Coefficient =	-	
Off-site Water Quality Volume =	39386	cubic ft
Storage for Sediment =	9584	cubic ft
Total Capture Volume Required =	57503	cubic ft
Total Capture Volume Provided = (From Approved Gardens at Mayfield Plans)	**110830**	**cubic ft**

STATE OF TEXAS
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1/29/2024

0 50' 100' 200'
SCALE: 1" = 100'

IF DRAWING BAR DOES NOT MEASURE 2"
THIS PRINT IS NOT TO SCALE

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WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

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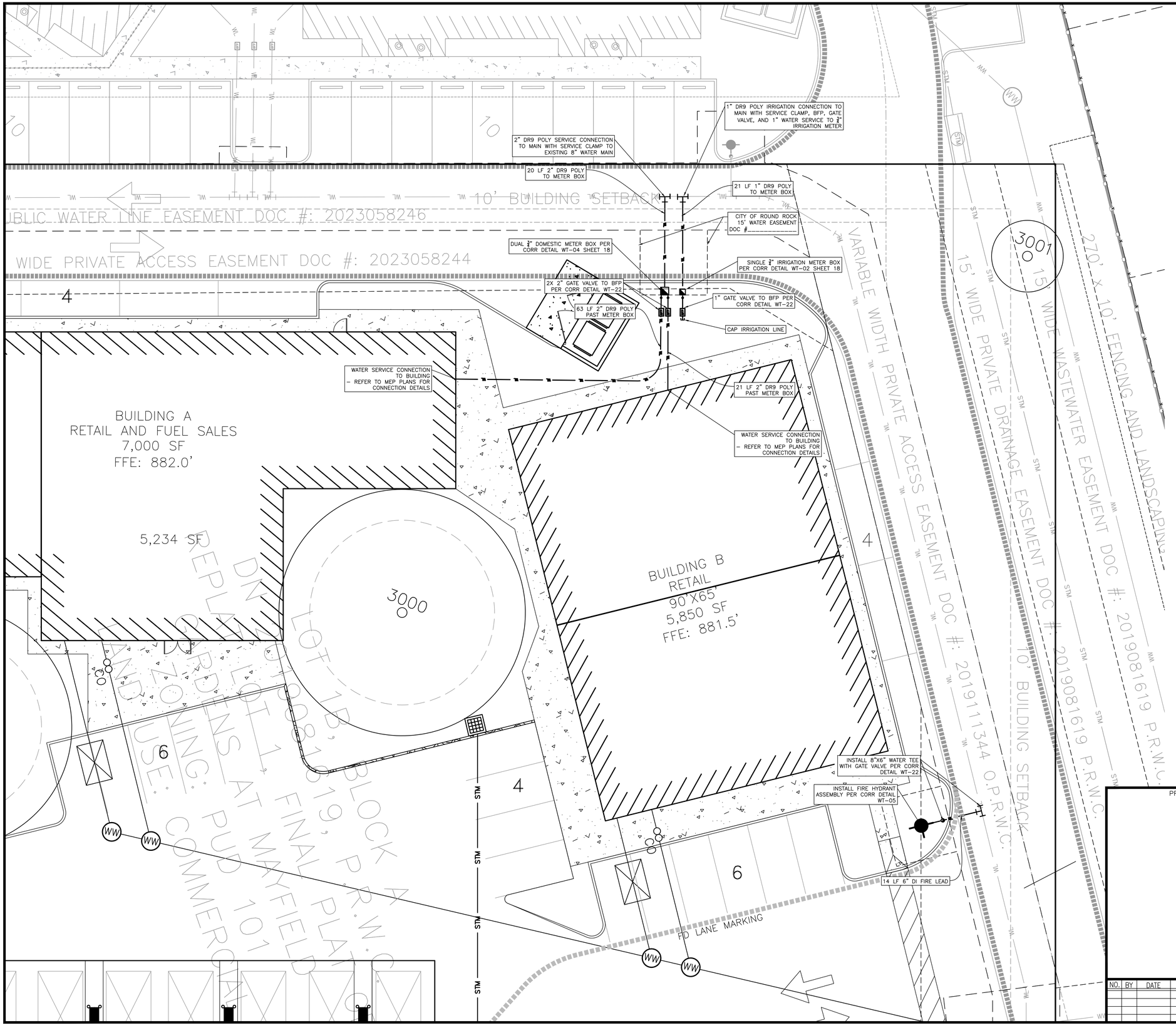
EXISTING WQ POND

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 14 OF 25



IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

STATE OF TEXAS
NICHOLAS R. SANDLIN
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1/29/2024

UTILITY LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- EXISTING CONTOURS (750)
- PROPOSED CONTOURS (750)
- EX. WATER LINE (W) / PR. WATER LINE (W)
- EX. WASTEWATER (WW) / PR. WASTEWATER (WW)
- EX. STORM SEWER LINE (STM) / PR. STORM SEWER LINE (STM)
- EX. FIRE HYDRANT / PR. FIRE HYDRANT
- EX. WATER METER (WM) / PR. WATER METER
- EX. WASTEWATER MANHOLE (WW) / PR. WASTEWATER MANHOLE
- FITTINGS AS NOTED
- FLOW ARROW
- GATE VALVE AS NOTED
- ELECTRIC TRANSFORMER (T)
- WW CLEAN OUT
- UTILITY POLE
- BFP BACK FLOW PREVENTER
- FIRE LINE (F)
- EXISTING TREE (TO REMAIN) (100)
- EXISTING TREE (TO BE REMOVED) (100)

NOTES:

1. WARNING:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2. IMPORTANT:
A MINIMUM 24" SEPARATION DISTANCE IS REQUIRED AT ALL WATER AND WASTEWATER CROSSINGS. CENTER ONE JOINT OF WATER PIPE PERPENDICULAR TO WASTEWATER PIPE AT EACH CROSSING IN ACCORDANCE WITH TAC 290.44(e)(4)(B)(i). NOTIFY ENGINEER IMMEDIATELY IF NOT ABLE TO MAINTAIN.

3. IMPORTANT:
WHERE A NINE FOOT SEPARATION DISTANCE BETWEEN WATER AND WASTEWATER CANNOT BE ACHIEVED, PVC WITH MINIMUM PRESSURE RATING OF 150 PSI SHALL BE USED, A MINIMUM SEPARATION DISTANCE OF 6 INCHES BETWEEN OUTSIDE DIAMETERS OF PIPES SHALL BE ACHIEVED, WASTEWATER SHALL BE BELOW WATER, AND JOINTS SHALL BE LOCATED AS FAR AS POSSIBLE FROM THE INTERSECTION, IN ACCORDANCE WITH TAC TITLE 30 217.53(d).

4. IF THE MAXIMUM STATIC PRESSURE EXCEEDS EIGHTY (80) PSI, A PRV WILL BE REQUIRED ON THE PROPERTY OWNER'S SIDE OF THE WATER METER AND SHALL BE SHOWN ON THE PLAN VIEW IN ACCORDANCE WITH DACS UTILITY CRITERIA MANUAL SECTION 1 1.6.2(A)(1)(F).

5. DOMESTIC SERVICE CONNECTIONS SHALL CONFORM TO CORR STANDARD DETAIL, BASED ON METER SIZE, WITH REGARDS TO CONSTRUCTION AND MATERIAL

6. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRICAL, 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"

7. ALL PIPE FITTINGS SHALL BE JOINT-RESTRAINED. ALL SEGMENTS OF PIPE LOCATED IN ENCASEMENT SHALL BE FULLY RESTRAINED.

8. ALL FITTINGS SHALL HAVE THRUST BLOCKING PER CORR WT-25.

9. ALL VALVES SHOWN ARE _____ BRAND.

10. ALL FIRE SERVICE LEADS SHALL BE DUCTILE IRON.

11. ALL PVC WATER MAINS SHALL BE CONSTRUCTED OF C-900 DR-14.

12. WATER METER SHALL BE LOCATED OUTSIDE VEHICULAR & PEDESTRIAN TRAFFIC AREAS OUTSIDE OF WALKWAYS IN LANDSCAPING.

13. DRY UTILITY ALIGNMENTS BY OTHERS ARE PRELIMINARY AND THE PERMIT IS TO BE REVISED PENDING APPROVAL BY THE FRANCHISED UTILITY.

14. MAXIMUM DESIGN VELOCITY OF COMBINED FIRE FLOW AND PEAK HOUR FLOW IS 9.69 FEET PER SECOND.

TEXAS 811 BEFORE YOU DIG

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

WATER DISTRIBUTION PLAN

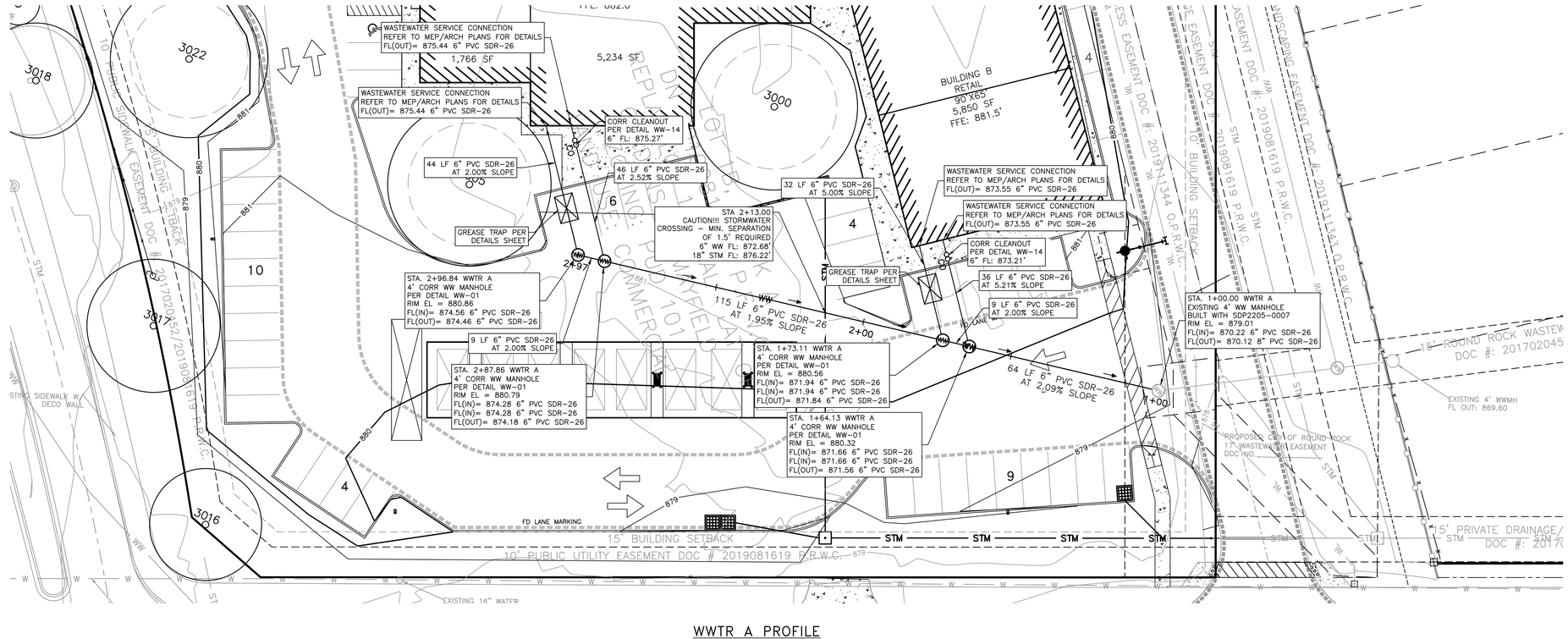
NEW HOPE RETAIL

4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 15 OF 25

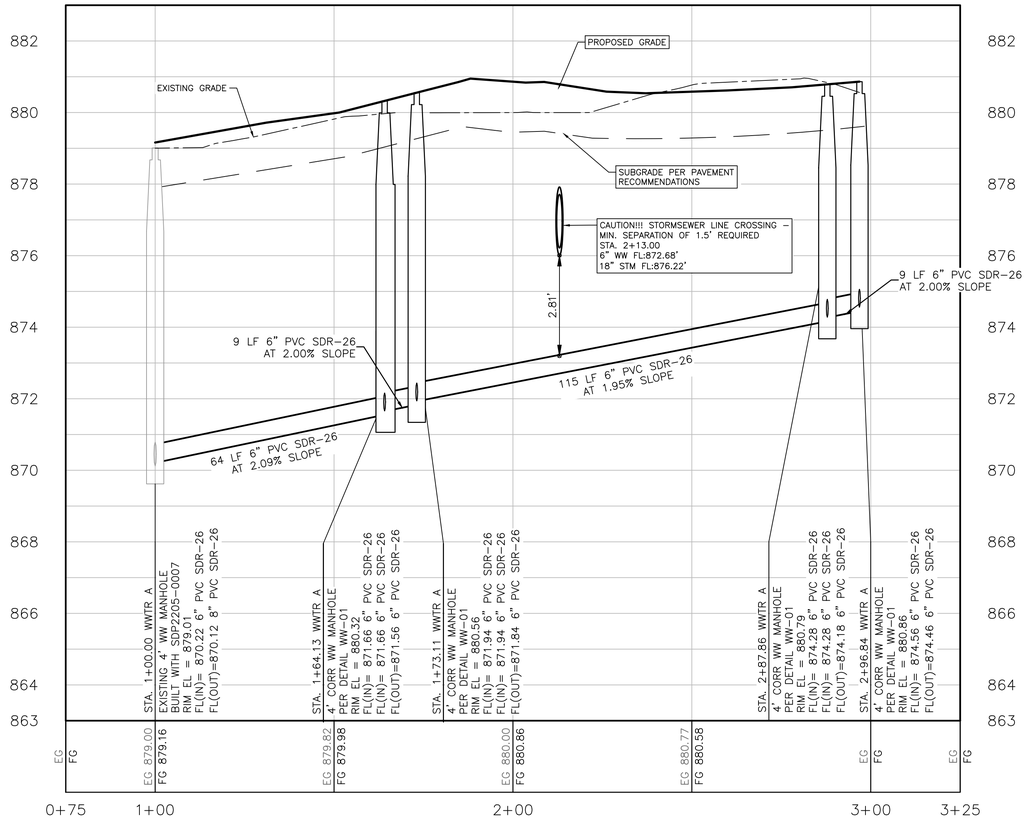
G:\shared drives\sandlin services llc\sandlin services projects\land development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR WATR.dwg-WATER DISTRIBUTION PLAN Plotted Jan 30, 2024 at 1:25pm by Engineer | Last Saved by: Engineer



IF DRAWING BAR DOES NOT MEASURE 2" THIS PRINT IS NOT TO SCALE

WWTR A PROFILE

1" = 20' HORZ. – 1" = 2' VERT.



STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

UTILITY LEGEND

- PROPOSED PROPERTY/ PROJECT BOUNDARY LINE
- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- PROPOSED CURB & GUTTER
- EXISTING CONTOURS (750)
- PROPOSED CONTOURS (750)
- EX. WATER LINE / PR. WATER LINE
- EX. WASTEWATER / PR. WASTEWATER
- EX. STORM SEWER LINE / PR. STORM SEWER LINE
- EX. FIRE HYDRANT / PR. FIRE HYDRANT
- EX. WATER METER / PR. WATER METER
- EX. WASTEWATER MANHOLE / PR. WASTEWATER MANHOLE
- FITTINGS AS NOTED
- FLOW ARROW
- GATE VALVE AS NOTED
- ELECTRIC TRANSFORMER
- WW CLEAN OUT
- UTILITY POLE
- BFP BACK FLOW PREVENTER
- FIRE LINE
- 100 EXISTING TREE (TO REMAIN)
- 100 EXISTING TREE (TO BE REMOVED)

NOTES:

1. WARNING:
   CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. IMPORTANT:
   A MINIMUM 24" SEPARATION DISTANCE IS REQUIRED AT ALL WATER AND WASTEWATER CROSSINGS. CENTER ONE JOINT OF WATER PIPE PERPENDICULAR TO WASTEWATER PIPE AT EACH CROSSING IN ACCORDANCE WITH TAC 290.44(e)(4)(B)(i). NOTIFY ENGINEER IMMEDIATELY IF NOT ABLE TO MAINTAIN.
3. IMPORTANT:
   WHERE A NINE FOOT SEPARATION DISTANCE BETWEEN WATER AND WASTEWATER CANNOT BE ACHIEVED, PVC WITH MINIMUM PRESSURE RATING OF 150 PSI SHALL BE USED, A MINIMUM SEPARATION DISTANCE OF 6 INCHES BETWEEN OUTSIDE DIAMETERS OF PIPES SHALL BE ACHIEVED, WASTEWATER SHALL BE BELOW WATER, AND JOINTS SHALL BE LOCATED AS FAR AS POSSIBLE FROM THE INTERSECTION, IN ACCORDANCE WITH TAC TITLE 30 217.53(d).
4. ALL NON-CITY INFRASTRUCTURE INCLUDING GAS, ELECTRICAL, 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"
5. ALL MANHOLES SHALL BE COATED AND VACUUM TESTED.
6. ALL WASTEWATER MAINS AND LATERALS ARE TO BE CONSTRUCTED OF SDR-26 PIPE WITH ASTM D3034 SPECIFICATION PER DACS UTILITY CRITERIA MANUAL SECTION 1.6.3(C)(1).
7. ALL SEGMENTS OF PIPE LOCATED IN ENCASEMENT SHALL BE FULLY RESTRAINED.
8. DRY UTILITY ALIGNMENTS BY OTHERS ARE PRELIMINARY AND THE PERMIT IS TO BE REVISED PENDING APPROVAL BY THE FRANCHISED UTILITY.

TEXAS 811 DIG RIGHT BEFORE YOU DIG

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

WASTEWATER COLLECTION PLAN

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

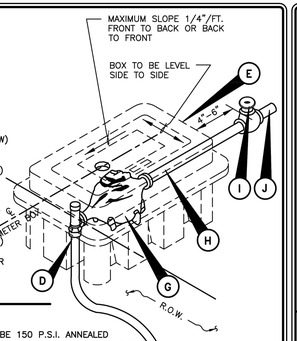
SHEET 16 OF 25

MATERIAL LIST:

A. SERVICE SADDLE REQUIRED. SERVICE SADDLE TO BE EPOXY COASTED WITH DUAL STAINLESS STEEL BANDS.
B. 1" CORPORATION STOP – SERVICE PIPE OUTLET. (SEE NOTE #2)
C. 1" SERVICE PIPE.
D. LOCKING ANGLE METER STOP; SERVICE PIPE INLET X SWIVEL COUPLING NUT OUTLET:
- FOR 5/8" AND 3/4" METERS: 1" X 3/4"
- FOR 1" METERS: 1" X 1"
- 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:
- FOR 5/8" AND 3/4" METERS: 3/4" X 8 1/2" LONG.
- FOR 1" METERS: LENGTH OF PIPE TO BE DETERMINED BY CONTRACTOR. EXTEND PIPE TO 4"–6" OUTSIDE OF METER BOX.

I. BRONZE GATE VALVE: NON–RISING STEM (3/4" OR 1") FEMALE I.P.T. (PROPERTY OWNERS CUT–OFF OUTSIDE METER BOX IN SEPARATE VALVE CAN WITH LID AS PER CITY OF ROUND ROCK STANDARDS).
J. 3/4" OR 1" PIPE MEETING CITY OF ROUND ROCK PLUMBING CODE REQUIREMENTS.

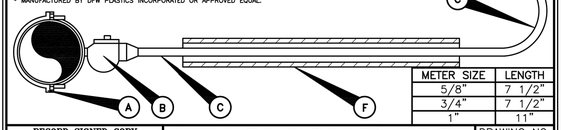


NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT MAY BE 150 P.S.I. ANNEALED SEAMLESS TYPE "K" COPPER TUBING OR 200 P.S.I. 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 BOXES SHALL BE 1" ABOVE FINISHED GRADE.
5. PIPING AND 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 ACCOMMODATE 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
DFW36C–12–BODY*	36C	BLACK	12"	TOP = 13–3/4"	TOP = 18–7/8"
DFW36C–AF1EQA–LID*	36C	BLACK	1–7/8"	LID = 10–3/16"	LID = 15–9/16"
DFW36C–12–AF1EQA*	36C	BLACK	12"	BASE = 10–1/2"	BASE = 18–7/8"

* MANUFACTURED BY DFW PLASTICS INCORPORATED OR APPROVED EQUAL.



METER SIZE	LENGTH
5/8"	7 1/2"
3/4"	7 1/2"
1"	11"

RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT
APPROVED
03–01–18
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK

SINGLE 5/8", 3/4" OR 1" WATER METER DETAIL

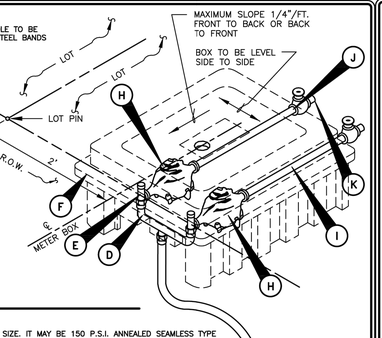
DRAWING NO: WT–02

ROUND ROCK TEXAS

MATERIAL LIST:

A. SERVICE SADDLE REQUIRED. SERVICE SADDLE TO BE EPOXY COATED WITH DUAL STAINLESS STEEL BANDS
B. 1 1/2" CORPORATION STOP (TYPICAL) – SERVICE PIPE OUTLET. (SEE NOTE #2)
C. 1 1/2" SERVICE PIPE (TYPICAL).
D. BRANCH CONNECTION: 1 1/2" OR 2" SERVICE PIPE INLET AND 2 3/4" MALE I.P.T. OUTLETS 7 1/2" O.C. (SEE NOTE #2)
E. 3/4" LOCKING ANGLE METER STOP; FEMALE I.P.T. INLET AND SWIVEL COUPLING NUT OUTLET.
F. PLASTIC RECTANGULAR METER BOX. (SEE TABLE BELOW)
G. PIPE CASING WHERE APPLICABLE. (AS PER DETAIL WT–01)
H. WATER METERS, CENTERED IN BOX. (SEE TABLE BELOW)
I. 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.

J. BRONZE GATE VALVE; NON–RISING STEM (3/4" OR 1") FEMALE I.P.T. (PROPERTY OWNERS CUT–OFF OUTSIDE METER BOX IN SEPARATE VALVE CAN WITH LID AS PER CITY OF ROUND ROCK STANDARDS).
K. 3/4" OR 1" PIPE MEETING CITY OF ROUND ROCK PLUMBING CODE REQUIREMENTS.

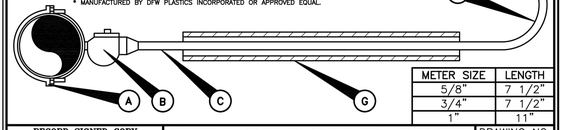


NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT MAY BE 150 P.S.I. ANNEALED SEAMLESS TYPE "K" COPPER TUBING OR 200 P.S.I. 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 BOXES SHALL BE 1" ABOVE FINISHED GRADE.
5. PIPING AND 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 ACCOMMODATE PIPING INTO AND OUT OF BOX, SHALL NOT BE MODIFIED.
8. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH THE SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
9. LOCATION OF METER BOXES SHALL BE SUBJECT TO THE APPROVAL OF THE C.O.R.R.

PART NUMBER	SERIES	COLOR	HEIGHT	WIDTH	LENGTH
DFW38C–14–BODY*	38C	BLACK	14"	TOP = 20–1/2"	TOP = 21–1/2"
DFW38C–AF1EQA–LID*	38C	BLACK	2"	LID = 17"	LID = 18"
DFW38C–14–AF1EQA*	38C	BLACK	14"	BASE = 17"	BASE = 21–1/2"

* MANUFACTURED BY DFW PLASTICS INCORPORATED OR APPROVED EQUAL.



METER SIZE	LENGTH
5/8"	7 1/2"
3/4"	7 1/2"
1"	11"

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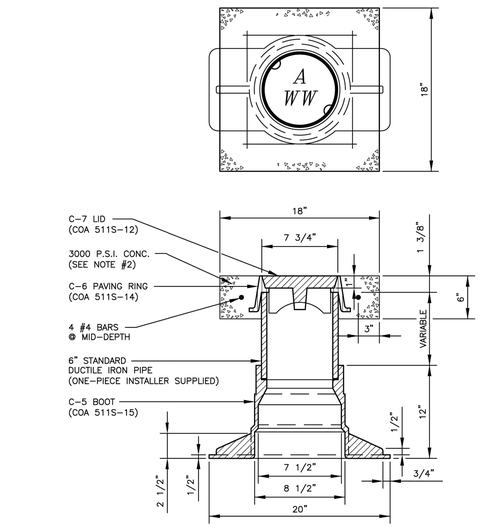
APPROVED
03–01–18
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK

DUAL 5/8", 3/4" OR 1" WATER METERS DETAIL

DRAWING NO: WT–04

ROUND ROCK TEXAS



NOTES:

1. NUMBERED CASTINGS STANDARDS SHOWN IN PARENTHESES ARE REFERENCES TO THE CITY OF AUSTIN STANDARDS CRITERIA MANUAL.
2. DELETE CONCRETE AND REBAR WHEN VALVE IS WITHIN PAVED STREET.

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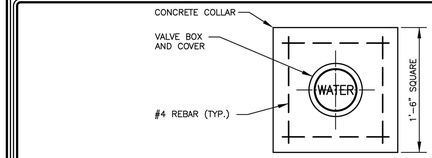
03–01–18
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK

VALVE BOX ASSEMBLY DETAIL

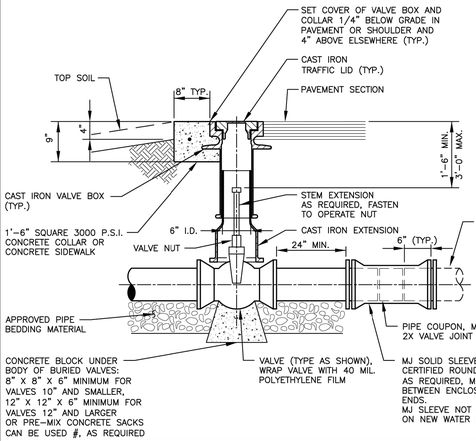
DRAWING NO: WT–06

ROUND ROCK TEXAS



PLAN VIEW

SEE DETAIL WT–06



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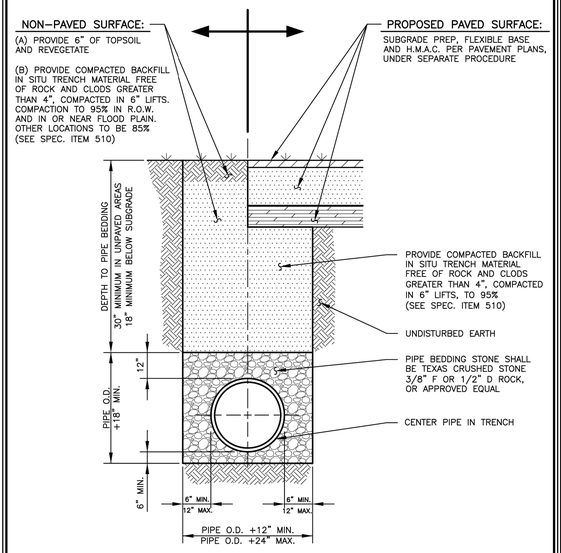
APPROVED
03–01–18
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK

GATE VALVE DETAIL

DRAWING NO: WT–22

ROUND ROCK TEXAS



NOTE:

1. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

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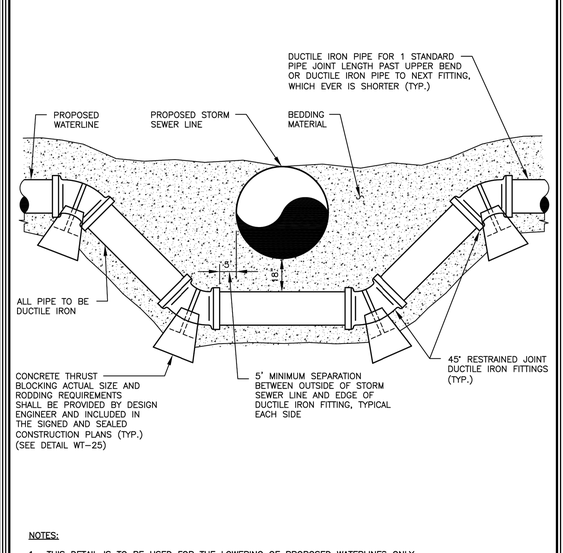
APPROVED
03–01–18
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)

CITY OF ROUND ROCK

WATERLINE BEDDING AND SURFACE REPAIR DETAIL (NON–PAVED & PROPOSED PAVED SURFACE)

DRAWING NO: WT–08

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.

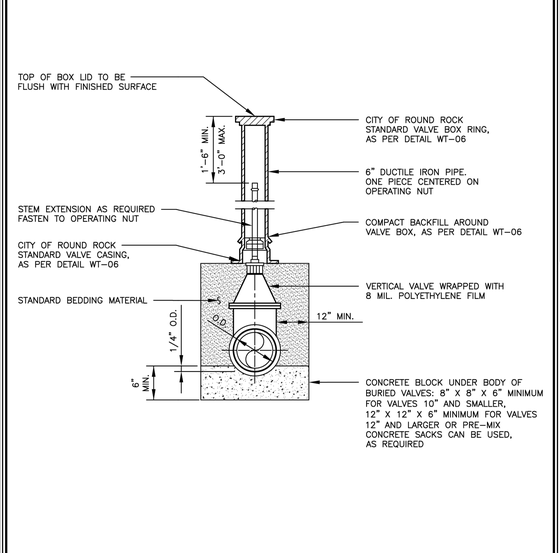
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT
APPROVED
03–01–18
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)

CITY OF ROUND ROCK

WATERLINE AND STORM SEWER LINE CROSSING DETAIL (TYPE 1)

DRAWING NO: WT–09

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 U&ES DEPARTMENT
APPROVED
03–01–18
DATE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)

CITY OF ROUND ROCK

VERTICAL VALVE INSTALLATION DETAIL

DRAWING NO: WT–11

ROUND ROCK TEXAS

PROJECT CASE: #SDP23–00007

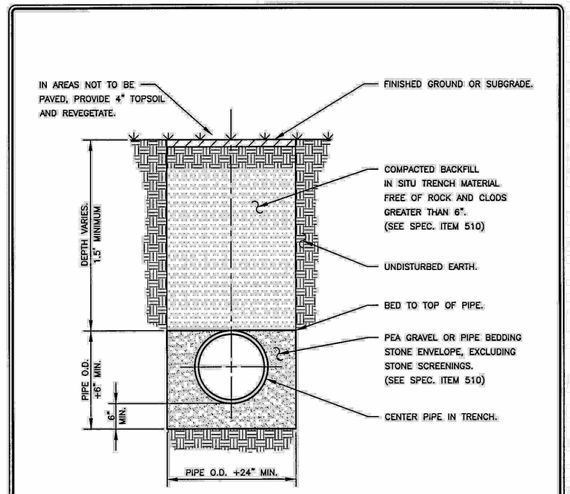
ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

UTILITY DETAILS (1 OF 3)

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

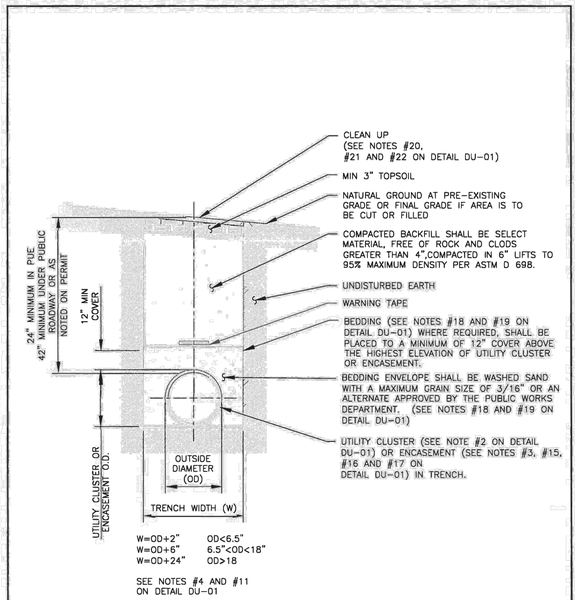
SHEET 18 OF 25



NOTE:

ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 08-21-03 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK STORM SEWER LINE BEDDING DETAIL (NON-PAVED SURFACE)	DRAWING NO: D-02



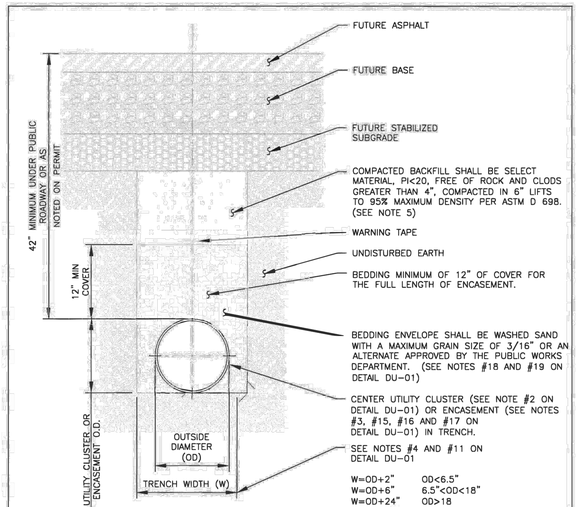
W=OD+2" OD<6.5"
W=OD+6" 6.5"<OD<18"
W=OD+24" OD>18

SEE NOTES #4 AND #11 ON DETAIL DU-01

FOR ADDITIONAL GENERAL NOTES, SEE DETAIL DU-01

SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK UNPAVED AREA TRENCH (UAT) DETAIL	DRAWING NO: DU-02 SHEET 1 of 1



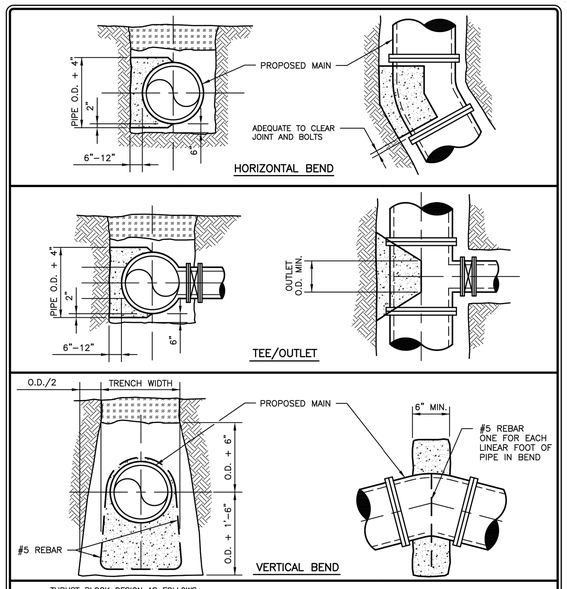
W=OD+2" OD<6.5"
W=OD+6" 6.5"<OD<18"
W=OD+24" OD>18

NOTES:

1. THIS DETAIL IS APPLICABLE WHERE FUTURE PAVEMENT IS SCHEDULED TO BE INSTALLED WITHIN TWO YEARS.
2. ALL TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
3. ENCASEMENT MUST EXTEND 10' PAST THE PROPOSED BACK OF CURB.
4. WORK ON INSTALLATION MUST BE COMPLETE THROUGH CLEAN UP BEFORE WORK RELATED TO PAVEMENT INSTALLATION IS SCHEDULED TO START, EXCEPT IN THE CASES THAT THE ROAD CONTRACTOR HAS AGREED TO ROUGH CUT BEFORE UTILITY TRENCHING OR THE SAME CONTRACTOR IS PERFORMING BOTH UTILITY AND ROAD WORK.
5. SPOILS MAY BE USED IF THEY MEET SELECT MATERIAL STANDARDS. THE INSPECTOR MAY STOP BACKFILL OPERATIONS UNTIL THE CONTRACTOR OBTAINS LAB TEST RESULTS IF THERE IS ANY QUESTION OF ACCEPTABILITY.
6. FOR ADDITIONAL GENERAL NOTES, SEE DETAIL DU-01.

SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK PROPOSED PAVEMENT AREA TRENCH (PPAT) DETAIL	DRAWING NO: DU-04 SHEET 1 of 1

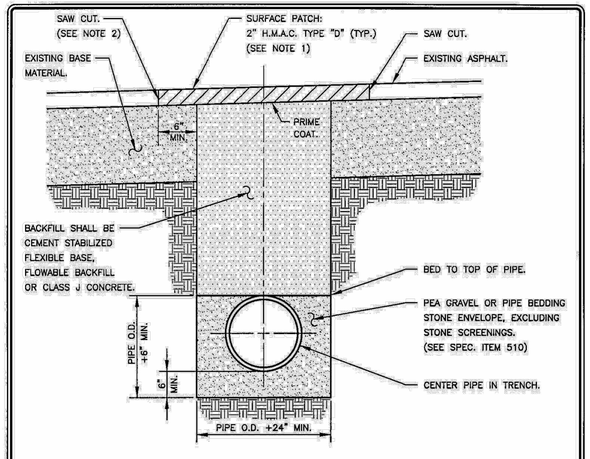


THRUST BLOCK DESIGN AS FOLLOWS:

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 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.

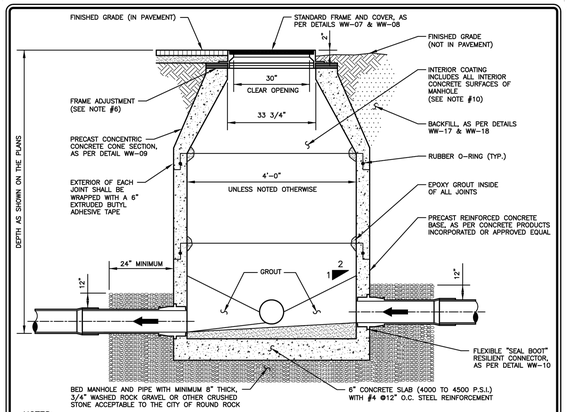
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT APPROVED 03-01-18 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	CITY OF ROUND ROCK THRUST BLOCK DETAIL	DRAWING NO: WT-25



NOTES:

1. H.M.A.C. SHOWN IN THIS DETAIL IS SEPARATE FROM ANY ADDITIONAL THICKNESS CREATED BY ANY OVERLAY ITEM IN CONTRACT.
2. THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING PAVEMENT A MINIMUM OF 6" BEYOND EITHER THE EDGE OF THE STORM SEWER TRENCH OR THE POINT WHERE EXISTING PAVEMENT IS DAMAGED DUE TO TRENCHING OPERATIONS, WHICHEVER IS GREATER.
3. INSTALLATION OF BACKFILL, SAW CUTTING AND REMOVAL OF EXISTING PAVEMENT AND SURFACE PATCH, SHALL NOT BE PAID FOR SEPARATELY. COSTS FOR THESE ITEMS SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
4. THE CONTRACTOR SHALL PROVIDE STEEL PLATES TO SPAN THE TRENCH AS NECESSARY OR TO ALLOW BACKFILL TO CURE. SUCH PLATES SHALL BE SUITABLE FOR VEHICLE PASSAGE OVER THE TRENCH AND SHALL BE SATISFACTORILY ANCHORED IN PLACE. COSTS FOR THIS ITEM SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
5. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

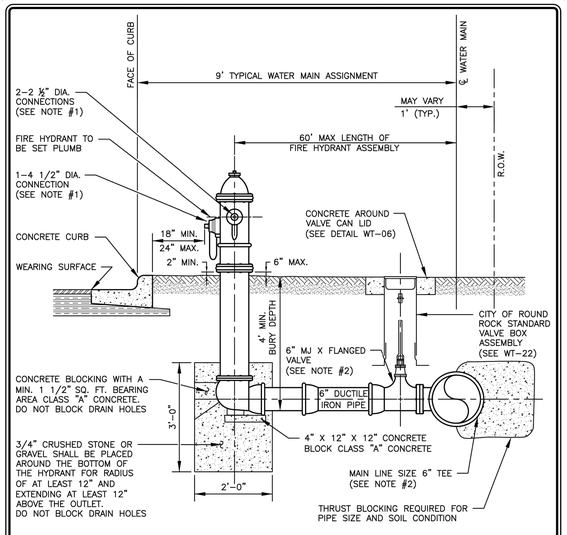
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS APPROVED 08-21-03 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK STORM SEWER LINE BEDDING DETAIL (EXISTING PAVED SURFACE)	DRAWING NO: D-01



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, SPRAYMALL, 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 APPROVED 03-01-18 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	CITY OF ROUND ROCK PRECAST CONCRETE WASTEWATER MANHOLE DETAIL	DRAWING NO: WW-01



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 U&ES DEPARTMENT APPROVED 03-01-18 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)	CITY OF ROUND ROCK FIRE HYDRANT ASSEMBLY DETAIL	DRAWING NO: WT-05

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED PROFESSIONAL ENGINEER
1/29/2024

TEXAS 811 811 BEFORE YOU DIG

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

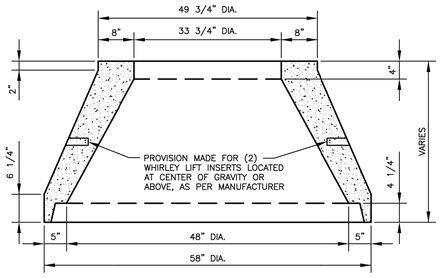
UTILITY DETAILS (2 OF 3)

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 19 OF 25

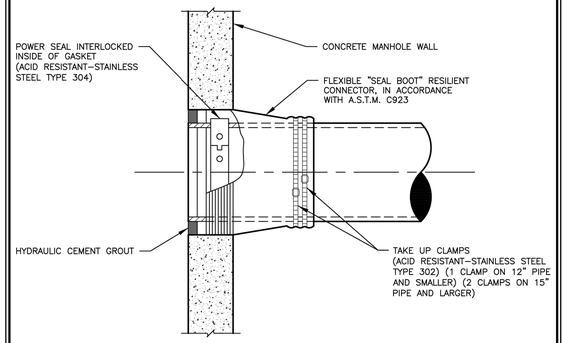
G:\shared drives\sandlin services llc\sandlin services projects\land development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR DTLS.dwg-UTILITY DETAILS (2 OF 3) Plotted Jan 30, 2024 at 1:26pm by Engineer | Last Saved by: Engineer



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.

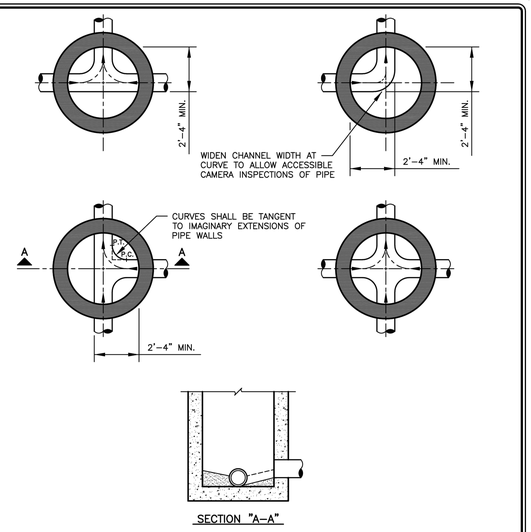
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-09
APPROVED 03-01-18 DATE	PRECAST 48" CONCENTRIC CONCRETE CONE SECTION DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTE:

1. FLEXIBLE "SEAL BOOT" RESILIENT CONNECTOR TO BE A MINIMUM OF 12 INCHES (12") FROM A MANHOLE JOINT.

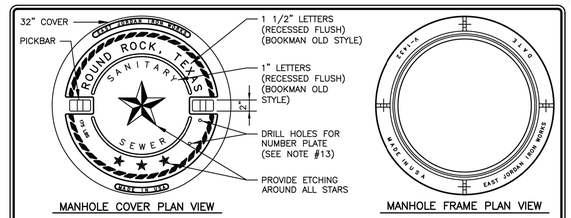
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-10
APPROVED 03-01-18 DATE	FLEXIBLE "SEAL BOOT" RESILIENT CONNECTOR DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



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.

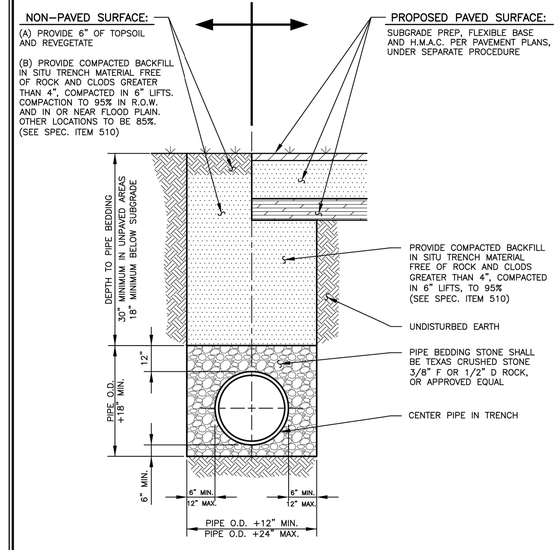
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-11
APPROVED 03-01-18 DATE	WASTEWATER FLOW PATTERNS FOR INVERT CHANNELS DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. 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.

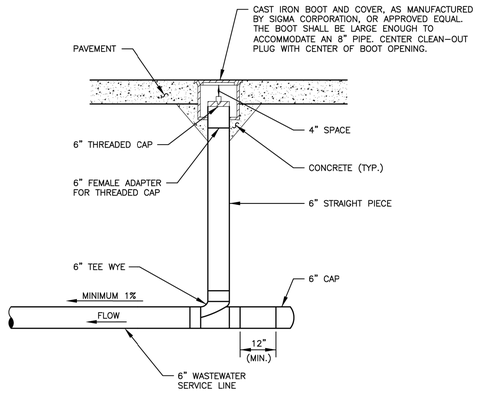
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-08
APPROVED 03-01-18 DATE	NON–BOLTED WASTEWATER MANHOLE COVER AND FRAME DETAIL	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTE:

ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

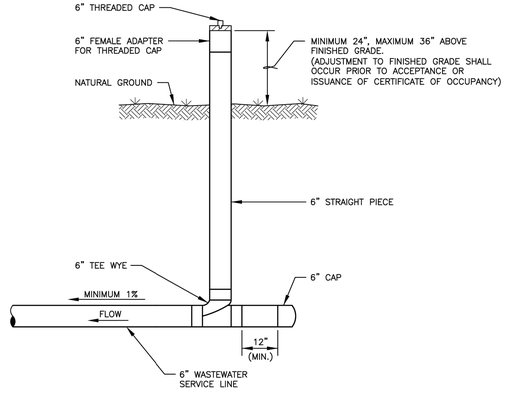
RECORD SIGNED COPY ON FILE AT U&ES DEPARTMENT	CITY OF ROUND ROCK	DRAWING NO: WW-18
APPROVED 03-01-18 DATE	WASTEWATER LINE BEDDING AND SURFACE REPAIR DETAIL (NON–PAVED & PROPOSED PAVED SURFACE)	ROUND ROCK TEXAS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		



NOTES:

1. 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)		



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)		

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23–00007

ENGINEERING | CONSULTING
SANDLIN SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

UTILITY DETAILS (3 OF 3)

NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION	SHEET
				20 OF 25

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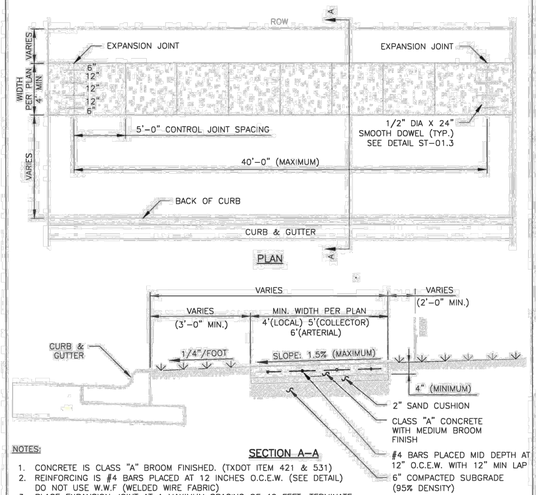


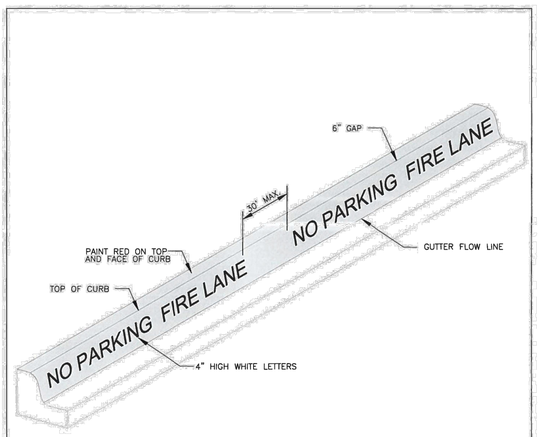
SECTION A–A

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 APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK SIDEWALK DETAIL	DRAWING NO: ST-01.1 SHEET 1 of 3 ROUND ROCK TEXAS

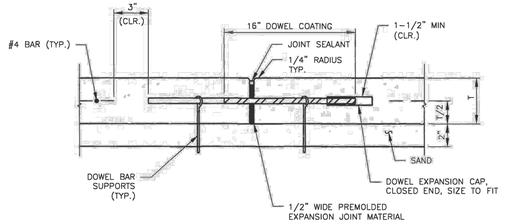


NOTES:

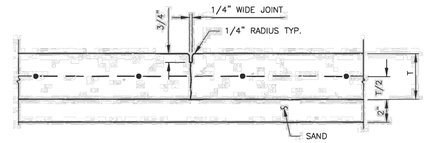
FIRE LANE STRIPING TO BE 6" WIDE RED PAINT WITH "NO PARKING FIRE LANE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 30' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK FIRE LANE MARKING DETAIL	DRAWING NO: ST-16 SHEET 1 of 1 ROUND ROCK TEXAS



SIDEWALK EXPANSION JOINT DETAIL



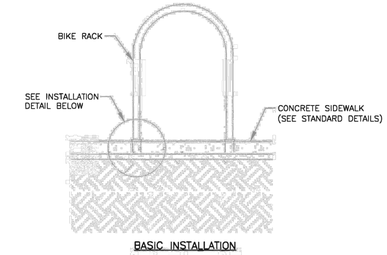
CONTROL JOINT DETAIL

NOTES:

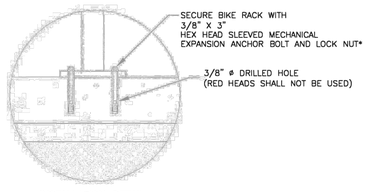
1. SIDEWALKS SHALL BE CONSTRUCTED PER CURRENT ADA STANDARDS.
2. PROPER CHAIRS SHALL BE USED TO SUPPORT THE STEEL REINFORCEMENT.

SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK SIDEWALK & SHARED USE PATH DETAIL	DRAWING NO: ST-01.3 SHEET 3 of 3 ROUND ROCK TEXAS



BASIC INSTALLATION



INSTALLATION DETAIL

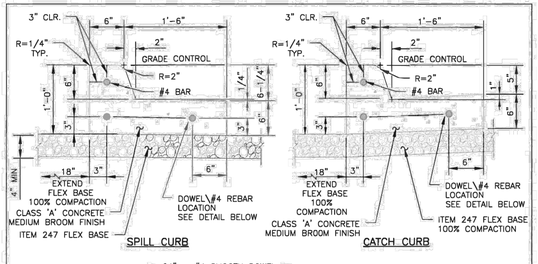
GENERAL NOTES:

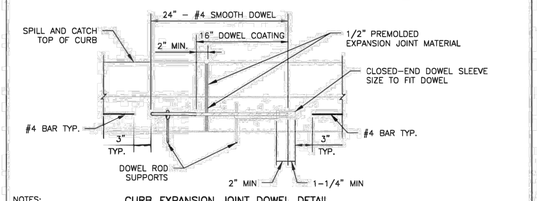
1. RACKS SHALL COMPLY WITH CITY STANDARD DETAIL ST–19 OR ST–20.
2. RACK PLACEMENT SHALL BE AS SHOWN ON THE DRAWINGS.

*TO PREVENT THEFT OF BICYCLE RACK OR BIKES, EXPOSED BOLTS MUST BE DEFORMED AND NUTS RE–TIGHTENED TO PREVENT THEM FROM BEING EASILY UNTHREADED. NUTS SHOULD BE TESTED TO ENSURE THAT THEY CANNOT BE EASILY REMOVED AFTER DEFORMATION.

SCALE: NTS

RECORD SIGNED COPY ON FILE APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK BICYCLE RACK INSTALLATION IN CONCRETE SIDEWALK–ALTERNATE 1	DRAWING NO: ST-22 SHEET 1 of 1 ROUND ROCK TEXAS





CURB EXPANSION JOINT DOWEL DETAIL

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 16 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 APPROVED 01-28-21 DATE THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL.	CITY OF ROUND ROCK SPILL AND CATCH CURB DETAIL (WITH CURB EXPANSION JOINT DOWEL DETAIL)	DRAWING NO: ST-06 SHEET 1 of 1 ROUND ROCK TEXAS

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED
PROFESSIONAL ENGINEER
1/29/2024

TEXAS 811 BEFORE YOU DIG

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

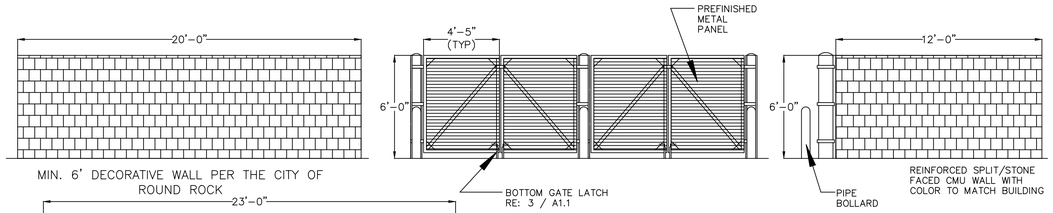
CONSTRUCTION DETAILS (1 OF 2)

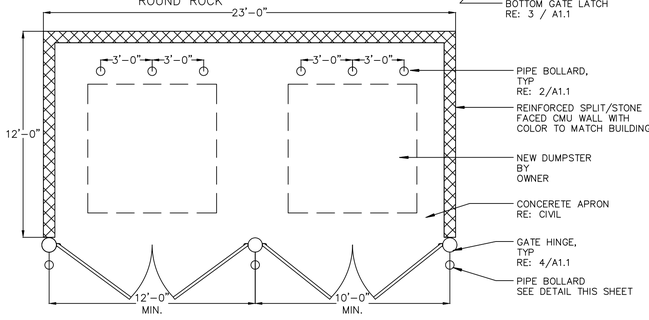
NEW HOPE RETAIL
4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 21 OF 25

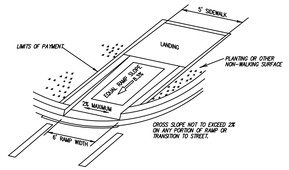
G:\shared drives\sandlin services llc\sandlin services projects\land development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR DTLS.dwg-CONSTRUCTION DETAILS (1 OF 2) Plotted Jan 30, 2024 at 1:26pm by Engineer | Last Saved by: Engineer



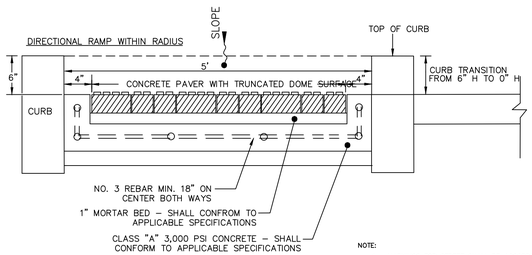


DUMPSTER ENCLOSURE

SCALE: NONE

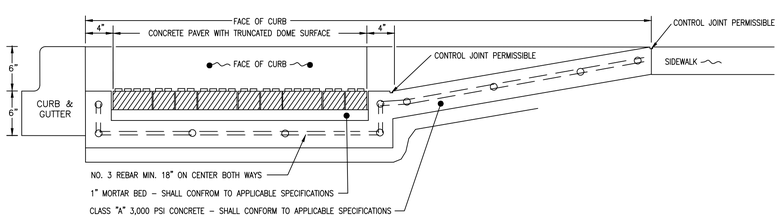


NOTES:
1. SEE SITE PLAN FOR TOTAL LAYOUT.
2. THESE DETAILS ARE FOR REFERENCE AND DIMENSION CONTROL ONLY.
3. ALL DIMENSIONS ARE TO ℄ OF STRIPE UNLESS OTHERWISE INDICATED.
4. ALL COLORS AS SHOWN OR AS SPECIFIED BY LOCAL CODES.



SECTION A–A

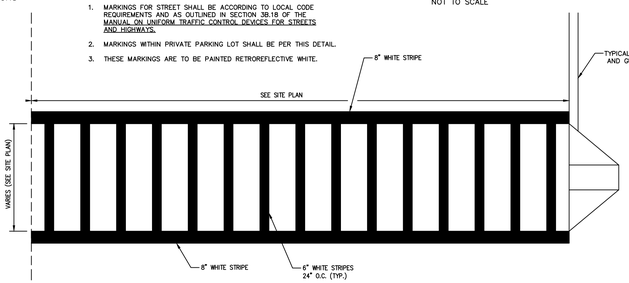
NOT TO SCALE

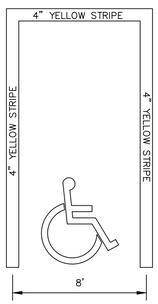


SECTION B–B

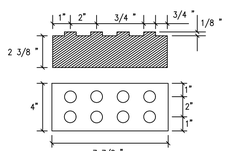
NOT TO SCALE

NOTE:
1. MARKINGS FOR STREET SHALL BE ACCORDING TO LOCAL CODE REQUIREMENTS AND AS OUTLINED IN SECTION 3B.18 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. MARKINGS WITHIN PRIVATE PARKING LOT SHALL BE PER THIS DETAIL.
3. THESE MARKINGS ARE TO BE PAINTED RETROREFLECTIVE WHITE.



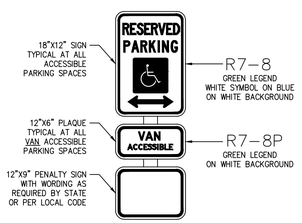


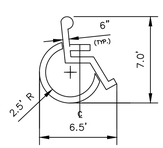
TYPICAL ACCESSIBLE STALL STRIPING



CONCRETE PAVER WITH TRUNCATED DOME SURFACE

NOT TO SCALE





ACCESSIBLE PARKING SYMBOL

LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

STATE OF TEXAS
NICHOLAS R. SANDLIN
124404
LICENSED PROFESSIONAL ENGINEER
1/29/2024

WARNING !!!! CONTRACTOR TO FIELD VERIFY ALL EXIST. UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO CONTACT ENGINEER IF ANY EXISTING UTILITY INFORMATION DIFFERS FROM DATA SHOWN IN THE PLANS. CALL 811 BEFORE YOU DIG.

PROJECT CASE: #SDP23-00007

ENGINEERING | CONSULTING
SANDLIN
SERVICES, LLC
TBPELS FIRM #21356
4501 WHISPERING VALLEY DRIVE UNIT 27 AUSTIN, TX 78727

CONSTRUCTION DETAILS (2 OF 2)

NEW HOPE RETAIL

4631 E NEW HOPE DR

NO.	BY	DATE	REVISION DESCRIPTION

SHEET 22 OF 25

G:\shared drives\sandlin services llc\sandlin services projects\land development division\01-0105-001 new hope retail\CAD\construction sheets\S NHR DTLS.dwg-CONSTRUCTION DETAILS (2 OF 2) Plotted Jan 30, 2024 at 1:26pm by Engineer | Last Saved by: Engineer

Permanent Stormwater Section
(TCEQ-0600)

Attachment G:
Inspection, Maintenance, Repair and Retrofit Plan

Please refer to the existing approved WPAP Plan for the IMRR that is maintained by others. Our site will remain in functioning order per this plan and will drain to the approved conveyance system.

Recommended Maintenance Guidelines for Wet Basin BMP

Batch detention ponds capture and temporarily detain the water quality volume. They capture the first flush of stormwater, allowing the solids fraction to settle, and they limit downstream erosion by controlling peak flow rates during erosive events. A batch detention pond can be used in combination with grassy swales to achieve water quality and drainage goals. Batch detention ponds may have moderate to somewhat higher maintenance requirements since they are active stormwater controls. There are many factors that may affect a batch detention pond's operation and that will be periodically checked. These factors can include mowing, removal of accumulated bottom sediments, removal of debris from all inflow and outflow structures, unclogging of orifice perforations, and the upkeep of all physical structures that are within the batch detention pond area.

Routine Maintenance

Mowing
The side-slopes, embankment, and emergency spillway of the basin should be mowed at least twice a year to prevent woody growth and control weeks.

Inspections
Wet basins should be inspected at least twice a year (once during or immediately following wet weather0 to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the basin is functioning properly. There are many functions and characteristics of these BMPs that should be inspected. The embankment should be checked for subsidence, erosion, leakage, cracking, and tree growth. The condition of the emergency spillway should e checked. The inlet, barrel, and outlet should be inspected for clogging. The adequacy of upstream and down stream channel erosion protection measures should be checked. Stability of the side slopes should be check. Modifications to the basin structure and contributing watershed should be evaluated. During semi-annual inspections, replace any dead or displaced vegetation. Replanting of various species of wetland vegetation may be required at first, until a viable mix of species is established. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage. The inspections should be carried out with as-built pond plans in hand.

Debris and Litter Removal
As part of periodic mowing operations and inspections, debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the riser, and the outlet should be checked for possible clogging.

Erosion Control
The basin side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion. Corrective measures such as regrading and revegetation may be necessary. Similarly, the riprap protecting the channel near the outlet may need to be repaired or replaced.

Nuisance Control
Most public agencies surveyed indicate that control of insects, weeks, odors, and algae may be needed in some ponds. Nuisance control is probably the most frequent maintenance item demanded by local resident. If the ponds are properly sized and vegetate, these problems should be rate in wet ponds except under extremely dry weather conditions. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.). Biological control of algae and mosquitoes using fish such as fathead minnows is preferable to chemical applications.

Non-routine maintenance

Structural Repairs and Replacement
Eventually, the various inlet/outlet and riser works in the wet basin will deteriorate and must be replaced. Some public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yrs., while concrete barrels and risers may last from 50 to 75 yr. the actual life depends on the type of soil, pH of runoff, and other factors. Polyvinyl chloride (PVC) pipe is a corrosion resistant alternative to metal and concrete pipes. Local experience typically determines which materials are best suited to the site conditions. Leakage or seepage of water through the embankment can be avoided if the embankment has been constructed of impermeable material, has been compacted, and if anti-seep collars are used around the barrel. Correction of any of these design flaws is difficult.

Sediment Removal
Wet ponds will eventually accumulate enough sediment to significantly reduce storage capacity of the permanent pool. As might be expected, the accumulated sediment can reduce both the appearance and pollutant removal performance of the pond. Sediment accumulated in the sediment forebay area should be removed from the facility every two years to prevent accumulation in the permanent pool. Dredging of the permanent pool should occur at least every 20 years, or when accumulation of sediment impairs functioning of the outlet structure.

Harvesting
If vegetation is present on the fringes or in the pond, it can be periodically harvested and the clippings removed to provide export of nutrients and to prevent the basin from filling with decaying organic matter.

Record Keeping

Maintenance and inspection records should be kept on file by the Owner of the permanent BMPs for a period of at least three (3) years. Repair and retrofit records should be kept on file by the Owner of the permanent BMPs for a period of at least five (5) years.

General Owner Responsibility

The OWNER or SUBSEQUENT OWNER shall bear all expenses for the operation and maintenance of this Permanent Water Quality Control (PWQC) system including but not limited to all general maintenance activities needed to keep this system in proper operation condition. If this system is abused or not maintained, then it may contribute to malfunction of the storm water system. All designated PWQC areas shall remain free of construction, development, and encroachments.

You as the OWNER of this property have a responsibility to provide any SUBSEQUENT OWNER or your real estate agent with a copy of this Best Management Practices (BMP) Maintenance Plan if this facility is sold so that the BMPs can be properly maintained and operated. The same rights, duties, and responsibilities borne by the current OWNER shall be borne by each subsequent OWNER.

OWNER ACKNOWLEDGEMENT AND ACCEPTANCE:

NEW HOPE RETAIL

Rahim Karimali
Print Name

Owner
Title

DocuSigned by:
4F80B8D25784410...
Signature

2/1/2024
Date

PREPARED AND CERTIFIED BY ENGINEER:

Nick Sandlin, P.E.

2/1/2024
Date

Permanent Stormwater Section
(TCEQ-0600)

Attachment H:
Pilot-Scale Field Testing Plan (if proposed)
(NOT APPLICABLE)

A pilot-scale field testing plan is not applicable. All BMP design and calculations are based on and comply with Edwards Aquifer Technical Guidance for Edwards Aquifer Rules (RG-348, revised July 2005).

Permanent Stormwater Section
(TCEQ-0600)

Attachment I:
Measures for Minimizing Surface Stream Contamination

No surface streams flow across the property. The property drains south toward Brushy Creek segment 1244A. The Existing BMP will address onsite water quality and stormwater drainage to mitigate and minimize offsite surface stream contamination.

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 RAHIM KARIMALI,
Print Name

MANAGER,
Title - Owner/President/Other

of NEW HOPE RE, LLC,
Corporation/Partnership/Entity Name

have authorized NICK SANDLIN, P.E.
Print Name of Agent/Engineer

of SANDLIN SERVICES, LLC
Print Name of Firm

to represent and act on the behalf of the above-named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

02/01/24
Date

SAHEREJ KAREDIYA
My Notary ID # 129923449
Expires August 22, 2026

THE STATE OF TEXAS §

County of TRAVIS §

BEFORE ME, the undersigned authority, on this day personally appeared RAHIM KARIMALI 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 1st day of FEB ' 2024.

NOTARY PUBLIC

SAHEREJ A KAREDIYA
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: AUG-22-2026

Application Fee Form
(TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: NEW HOPE RETAIL
Regulated Entity Location: 4631 E NEW HOPE DR, LEANDER, TX 78641
Name of Customer: NEW HOPE RE, LLC
Contact Person: RAHIM KARIMALI Phone: 512-925-9610
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	2.1 Acres	$ 4,000
Sewage Collection System	197 L.F.	$ 650
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: 

Date: 1/29/2023

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

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

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:*

NEW HOPE RE, 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)*
0803305161	32070561280		

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:

901 Ambrose Dr							
City	Pflugerville	**State**	TX	**ZIP**	78660	**ZIP + 4**	

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	rahimkali29@gmail.com

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

( ) -		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

NEW HOPE RETAIL

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	4631 E New Hope Dr							
	City	LEANDER	**State**	TX	**ZIP**	78641	**ZIP + 4**	
24. County	WILLIAMSON							

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

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

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

27. Latitude (N) In Decimal:	30.552097		**28. Longitude (W) In Decimal:**	-97.763208	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	33	7.55	-97	45	47.55

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)
5541	5999	457110	459999

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

C-store and Fuel station, Retail

34. Mailing Address:	**901 Ambrose Dr**							
	City	**Pflugerville**	**State**	**TX**	**ZIP**	**78660**	**ZIP + 4**	
35. E-Mail Address:	**rahimkali29@gmail.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 925-9610		( ) -

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 SANDLIN, P.E. (SANDLIN SERVICES, LLC)	**41. Title:**	PROFESSIONAL ENGINEER

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(806 **)** 679-7303		**( )** -	operations@sandlinservices.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:	SANDLIN SERVICES, LLC	**Job Title:**	PRINCIPAL AND PROFESSIONAL ENGINEER
Name *(In Print):*	NICK SANDLIN, P.E.	**Phone:**	**(** 806 **)** 679- **7303**
Signature:		**Date:**	1/30/2024