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 <u>30 TAC 213</u>.

Administrative Review

1. <u>Edwards Aquifer applications</u> 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: <u>http://www.tceq.texas.gov/field/eapp</u>.

- 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: HUECO SPRINGS SUBSTATION | | | | | | 2. Regulated Entity No.: | | | | |
|---|-------------|-------|---------|--------|------------------|--------------------------|--|-------------------------------|--|--|
| 3. Customer Name: NEW BRAUNFELS UTILITIES | | | | | 4. Customer No.: | | | | | |
| 5. Project Type: (Please circle/check one) | New | Modif | icatior | 1 | Exter | ision | 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-r | esiden | tial |) | 8. Sit | Site (acres): 5.67 acres | | | |
| 9. Application Fee: | \$5000 | 10. P | ermai | nent l | BMP(| s): | YARD SURFACE ROCK, ROCK RIP RAP, WQ BASIN (BY OTHERS) | | | |
| 11. SCS (Linear Ft.): | N/A | 12. A | ST/US | ST (N | o. Tar | nks): | N/A | | | |
| 13. County: | COMAL | 14. W | aters | hed: | | | COMAL RIVER-GUADALUPE RIV | | | |

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:

<u>http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf</u> For more detailed boundaries, please contact the conservation district directly.

Austin Region

| | | 1 | | | | |
|---|---|---|--|--|--|--|
| County: | Hays | Travis | Williamson | | | |
| Original (1 req.) | | | | | | |
| Region (1 req.) | | | | | | |
| County(ies) | | | | | | |
| 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 Round Rock | | | |

| San Antonio Region | | | | | | | | |
|--|--|---|--------|------------------------------|---------------|--|--|--|
| County: | Bexar | Comal | Kinney | Medina | Uvalde | | | |
| Original (1 req.) | | | | | | | | |
| Region (1 req.) | | | | | | | | |
| County(ies) | | | | | | | | |
| Groundwater Conservation District(s) | Groundwater Conservation District(s) — Edwards Aquifer Authority Trinity-Glen Rose | | 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.

LENA ROHA

Print Name of Customer/Authorized Agent

01/09/2025

Signature of Customer/Authorized Agent

Date

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

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

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

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

Signature

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

Print Name of Customer/Agent: Lena Roha

Date: 01/09/2025

Signature of Customer/Agent:

Project Information

- 1. Regulated Entity Name: <u>Hueco Springs Substation</u>
- 2. County: Comal
- 3. Stream Basin: Comal River-Guadalupe River
- 4. Groundwater Conservation District (If applicable): Edwards Aquifer Authority
- 5. Edwards Aquifer Zone:

| \times | Recharge Zone |
|----------|-----------------|
| | Transition Zone |

6. Plan Type:

| 🛛 WPAP | AST |
|--------------|-------------------|
| SCS | UST |
| Modification | Exception Request |

7. Customer (Applicant):

Contact Person: <u>Jeffrey Morriss</u> Entity: <u>New Braunfels Utilities</u> Mailing Address: <u>355 FM 306</u> City, State: <u>New Braunfels, Texas</u> Telephone: <u>(830) 608-8881</u> Email Address: <u>imorriss@nbutexas.com</u>

Zip: <u>78130</u> FAX: <u>N/A</u>

8. Agent/Representative (If any):

Contact Person: <u>Lena Roha</u> Entity: <u>Schneider Engineering</u>, <u>LLC d.b.a. SEnergy</u> Mailing Address: <u>191 Menger Springs Parkway</u> City, State: <u>Boerne, Texas</u> Telephone: <u>(830) 249-3887</u> Email Address: <u>Iroha@poweredbysenergy.com</u>

Zip: <u>78006</u> FAX: <u>(830) 249-5434</u>

9. Project Location:

The project site is located inside the city limits of _____

The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of <u>City of New Braunfels</u>.

- 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.

911 Address: 1603 River Rd. New Braunfels, TX 78132 Located at intersection of River Rd. and Edwards Blvd.

- 11. Attachment A Road Map. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.
- 12. Attachment B USGS / Edwards Recharge Zone Map. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:
 - Project site boundaries.

USGS Quadrangle Name(s).

- Boundaries of the Recharge Zone (and Transition Zone, if applicable).
- Drainage path from the project site to the boundary of the Recharge Zone.
- 13. The TCEQ must be able to inspect the project site or the application will be returned. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

Survey staking will be completed by this date: _____

- 14. Attachment C Project Description. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:
 - Area of the site
 Offsite areas
 Impervious cover
 Permanent BMP(s)
 Proposed site use
 Site history
 Previous development
 Area(s) to be demolished

15. Existing project site conditions are noted below:

| | Existing commercial site |
|-------------|-------------------------------------|
| | Existing industrial site |
| | Existing residential site |
| | Existing paved and/or unpaved roads |
| | Undeveloped (Cleared) |
| \boxtimes | 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.



NE

UTILITIES

CNES, 2023

1" = 1000'-0"

PROJECT LOCATION MAP

HUECO SPRINGS SUBSTATION



DRAWN BY: LLR MAP SOURCE: N USGS, 2014 UTILITIES

UNFELS

DATE:

SCALE:

08-14-2024

1:24 000

NEW BRAUNFELS UTILITIES NEW BRAUNFELS, TEXAS

HUECO SPRINGS SUBSTATION

ATTACHMENT B USGS QUADRANGLE MAP

Attachment C – Project Narrative

1.0 AREA OF THE SITE

At approximately 5.67 acres, the site will consist of a new power substation pad with graded slopes and two entrance roads. Approximately 3.58 acres of land will be disturbed by construction while 2.09 acres will be undisturbed. (See Civil Design Drawings for Reference).

- a) Road Map(s)
 - 911 Address for Hueco Springs Substation: 1603 River Rd. New Braunfels, TX 78132
 - See *Attachment A* for road map showing directions to and the location of the project site.
- b) USGS Quadrangle Map
 - See **Attachment B** for official 7 $\frac{1}{2}$ minute USGS Quadrangle Map (Scale 1" = 2000') • of project site.

OFFSITE AREAS 2.0

According to the geologic assessment and environmental assessment, the substation property is surrounded by vacant land to the northwest, southwest, and southeast, and River Road and River City Church is located to the northeastern side of the station.

3.0 IMPERVIOUS COVER

Calculations to determine the impervious cover at the proposed Hueco Springs Substation site considers the following items: (See Civil Design Drawings for Reference)

- 112,700 sq. ft. of substation pad covered with 3" of $\frac{1}{2}$ " to 1" surface rock placed over a 1'-0" • compacted, crushed limestone flexible base.
- 26,995 sq. ft. of rock cut per grading the northwest portion of the substation pad.
- 7,675 sq. ft. of flexible base on substation entrances from River Rd. and Edwards Blvd.
- 7,675 sq. ft. of asphalt pavement for driveway access from River Rd. and Edwards Blvd.
- 8,575 sq. ft. of rock rip rap placed along all 3:1 graded slopes around the substation pad and entrance roads.
- 2,560 sq. ft. of concrete foundations to support substation equipment per ultimate site layout conditions.
- 1,035 sq. ft. for NBU's control house and 1,152 sq. ft. for LCRA's control house.
 - > 112,700 sq.ft. (Substation Pad Flexible Base) \div 43,560 $\frac{sq.ft.}{ac.}$ = 2.59 acres
 - > 26,995 sq.ft. (Substation Pad Grading) \div 43,560 $\frac{sq.ft.}{ac.}$ = 0.62 acres

 - > 7,675 sq.ft. (Entrance Road Flexible Base) \div 43,560 $\frac{sq.ft.}{ac.}$ = 0.17 acres > *7,675 sq.ft. (Asphalt Pavement Driveway) \div 43,560 $\frac{sq.ft.}{ac.}$ = 0.17 acres
 - > 8,575 sq.ft. (Rock Rip Rap) \div 43,560 $\frac{sq.ft.}{ac}$ = 0.20 acres

- > ** 2,560 sq.ft. (Concrete Foundations) \div 43,560 $\frac{sq.ft.}{ac.}$ = 0.059 acres
- > ** 2,187 sq.ft. (Control Houses) \div 43,560 $\frac{sq.ft.}{ac.}$ = 0.050 acres
- > 155,945 sq.ft. (Total Area) \div 43,560 $\frac{sq.ft.}{ac.}$ = 3.58 acres (Total Impervious Cover)
- 3.58 ac. (Total Impervious Cover) ÷ 5.67 ac. (Total Acreage) x 100 ≈ 63 % Impervious Cover

For the purpose of this application, all calculations for impervious cover consider the ultimate substation site layout design, which accounts for additional equipment that may be added to the substation in the future, if necessary.

*Asphalt pavement is to be installed above flexible base; therefore, it is not counted separately towards total area and total impervious cover.

**Concrete foundations and control house areas are included in the substation pad area; therefore, these are not counted separately towards total area and total impervious cover.

4.0 PERMANENT BMP(s)

Permanent BMPs are required to treat runoff from the developed substation site due to 63% impervious cover across the property.

The substation property will contribute stormwater runoff to a water quality treatment basin shared with the surrounding larger development. The shared basin is located downstream from the substation property on River Road, and upstream runoff will be diverted around the substation by slopes and ditching around the substation pad, while runoff collected on the substation pad will be diverted towards a culvert to cross Edwards Boulevard located southeast of the substation property.

5.0 PROPOSED SITE USE

Hueco Springs Substation will be a new power substation owned by New Braunfels Utilities (NBU). Hueco Springs Substation will have a split yard to be shared with Lower Colorado River Authority (LCRA). NBU will have ownership of the substation property and the equipment in their portion of the substation yard, and LCRA will have ownership of the equipment located in their portion of the substation yard.

The scope of the project includes installation of a new 138kV power transformer bank. This transformer has a 5,382-gallon oil capacity and will/will not require secondary containment to prevent harmful transformer oil discharge into the surrounding environment.

To satisfy secondary containment requirements, a new "moat" style concrete foundation will be installed around the power transformer to capture any oil that may leak from the transformer. The "moat" is designed to contain 10,100 gallons of liquid.

*Please note the final substation design configuration is used for all calculations and considerations on this application.

6.0 SITE HISTORY

Per the geologic assessment conducted by Raba Kistner, Inc., historical areal imagery captured from 1995 to 2019 indicate the property was undeveloped as part of a larger ranch property and a caliche road is visually present across the site in all aerials reviewed.

7.0 PREVIOUS DEVELOPMENT

An environmental assessment was conducted by Pape-Dawson Engineers, which states that aerial imagery dated 1938 to 2019 indicates the property has an unpaved road depicted crossing through the intended project site, but no other prior development was observed.

8.0 AREA(s) TO BE DEMOLISHED

There are no areas to be demolished for this project, therefore this section is **NOT APPLICABLE**.

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: Richard V. Klar, P.G.

Telephone: 210-699-9090

Date: October 15, 2024

Fax: 210-699-6426

Representing: Raba Kistner, Inc., TBPG Firm #50220 / TBPE Firm #3257 for New Braunfels <u>Utilities</u> (Name of Company and TBPG or TBPE registration number)

Signature of Geologist:



Regulated Entity Name: Hueco Springs Substation

Project Information

- Date(s) of Geologic Assessment was performed: September 26, 2024 1.
- Type of Project: 2.

| 🔀 WPAP | AST |
|--------|-----|
| SCS | 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.
- 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) |
|---|--------|------------------|
| Comfort Rock Outcrop Complex, 1-8% slopes (CrD) | D | Veneer to 1.5 |
| Lewisville silty clay, 1 to 3% slopes (LeB) | В | 4-5 |

*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 thickness 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. \square 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'' = 50'Site Geologic Map Scale: 1'' = 50'Site Soils Map Scale (if more than 1 soil type): 1'' = 100'

- 9. Method of collecting positional data:
 - Global Positioning System (GPS) technology.
 - Other method(s). Please describe method of data collection: _____
- 10. The project site boundaries are clearly shown and labeled on the Site Geologic Map.
- 11. Xurface 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.

| \boxtimes | There are <u>6</u> test holes present on the project site and the locations are shown and |
|-------------|---|
| | labeled. (Check all of the following that apply.) |

- \boxtimes The test holes are not in use and have been properly abandoned.
- The well is 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

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.

ATTACHMENTS

ATTACHMENT A

GEOLOGIC ASSESSMENT TABLE (TCEQ-0585-TABLE)

COMMENTS TO GEOLOGIC ASSESSMENT TABLE

SOIL PROFILE

SOILS MAP

| GEOL | GEOLOGIC ASSESSMENT TABLE | | | | | | Hueco Springs Substation, New Braunfels, Texas PROJECT NAME: (RKI Project No. ASF24-142-00) | | | | | | | | | | | | | |
|----------------------------|---------------------------|------------|-----------------|--------|-----------|-------|--|--------|--------------------|-----|--------------------|--------------------|--------|----------------------------------|-------|--------------|---------|-----------------|------------------|------------|
| LOCATION FEATURE CHARACTER | | | | | | STICS | ; | | | | | | | | EVA | LUAT | ION | PHY | SICA | L SETTING |
| 1A | 1B * | 1C* | 2A | 2B | 3 | | 4 | | 5 | 5A | 6 | 7 | 8A | 8B | 9 | 1 | 0 | 1 | 11 | 12 |
| FEATURE ID | LATITUDE | LONGITUDE | FEATURE TYPE | POINTS | FORMATION | DIN | DIMENSIONS (FEET) | | TREND (DEGREES) | DOM | DENSITY (NO/FT) | APERTURE (FEET) | INFILL | RELATIVE INFILTRATION RATE | TOTAL | SENS | ITIVITY | CATCI AREA (| HMENT (ACRES) | TOPOGRAPHY |
| | | | | | | Х | Y | Z | | 10 | | | | | | <40 | >40 | <1.6 | <u>>1.6</u> | |
| S-1 | N 29.73425 | W 98.12901 | SC | 20 | Кер | 0.5 | 0.3 | 1.75 | NW-SE | | | | F/N | 6 | 26 | \checkmark | | \checkmark | | Hilltop |
| S-2 | N 29.73460 | W 98.12938 | CD | 5 | Кер | 7.0 | 5.0 | 0.7 | NW-SE | | | | F | 5 | 10 | \checkmark | | \checkmark | | Hilltop |
| S-3 | N 29.73456 | W 98.12910 | CD | 5 | Кер | 5.0 | 2.5 | 0.5 | NW-SE | | | | F | 5 | 10 | \checkmark | | \checkmark | | Hilltop |
| S-4 | N 29.73463 | W 98.13081 | CD | 5 | Кер | 5.0 | 4.0 | 1.5 | N-S | | | | F | 5 | 10 | \checkmark | | \checkmark | | Hilltop |
| S-5 | N 29.73538 | W 98.12962 | MB (W) | 30 | Кер | 391 | 2.0 | ~2.5-5 | | | | | F/X | 8 | 38 | \checkmark | | \checkmark | | Hilltop |
| S-6 | N 29.73419 | W 98.13023 | MB (TH) | 30 | Кер | ~0.5 | ~0.5 | 30.0 | | | | | F | 5 | 35 | \checkmark | | \checkmark | | Hilltop |
| S-7 | N 29.73401 | W 98.12971 | MB (TH) | 30 | Кер | ~0.5 | ~0.5 | 30.0 | | | | | F | 5 | 35 | \checkmark | | \checkmark | | Hilltop |
| S-8 | N 29.73480 | W 98.12970 | MB (TH) | 30 | Кер | ~0.5 | ~0.5 | 30.0 | | | | | F | 5 | 35 | \checkmark | | \checkmark | | Hilltop |
| S-9 | N 29.73470 | W 98.13030 | MB (TH) | 30 | Кер | ~0.5 | ~0.5 | 30.0 | | | | | F | 5 | 35 | \checkmark | | \checkmark | | Hilltop |
| S-10 | N 29.73450 | W 98.12990 | MB (TH) | 30 | Кер | ~0.5 | ~0.5 | 30.0 | | | | | F | 5 | 35 | \checkmark | | \checkmark | | Hilltop |
| S-11 | N 29.73430 | W 98.12960 | MB (TH) | 30 | Кер | ~0.5 | ~0.5 | 30.0 | | | | | F | 5 | 35 | \checkmark | | \checkmark | | Hilltop |

* DATUM: <u>NAD83</u>

Features: W = potable water; TH = test hole Formation: Kep = Person Formation

| 2A TYI | PE TYPE | 2B POINTS | | 8A INFILLING | | | | |
|--------|-------------------------------------|-----------|---|--|--|--|--|--|
| С | Cave | 30 | Ν | None, exposed bedrock | | | | |
| SC | Solution cavity | 20 | С | Coarse - cobbles, breakdown, sand, gravel | | | | |
| SF | Solution-enlarged fracture(s) | 20 | 0 | O Loose or soft mud or soil, organics, leaves, sticks, dark colors | | | | |
| F | Fault | 20 | F | Fines, compacted clay-rich sediment, soil profile, gray or red colors | | | | |
| 0 | Other natural bedrock features | 5 | V | Vegetation. Give details in narrative description | | | | |
| MB | Manmade feature in bedrock | 30 | FS | Flowstone, cements, cave deposits | | | | |
| SW | Swallow hole | 30 | Х | Other materials: Granular bedding materials for utility lines (Feature S-5). | | | | |
| SH | Sinkhole | 20 | | | | | | |
| CD | Non-karst closed depression | 5 | | 12 TOPOGRAPHY | | | | |
| Z | Zone, clustered or aligned features | 30 | Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed | | | | | |
| | | | | | | | | |

I have read, I understood, and I have followed the Texas Natural Resource Conservation Commission'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 213.

E OF TEL Richard V. KLAR GEOLOGY

| Date: | October 15, 2024 | | | | |
|-------|------------------|--|--|--|--|
| Sheet | of | | | | |

COMMENTS TO GEOLOGIC ASSESSMENT TABLE **Hueco Springs Substation** New Braunfels, Comal County, Texas

The locations of the following features are indicated on the Site Geologic Map, which is provided as Attachment D of this report.

Karst Features

Feature S-1 (SC):



General view of *Feature S-1* opening. Northeast is up.

Close-up view of feature opening.

Feature S-1 consists of a vertical solution cavity formed by dissolution of limestone bedrock apparently associated with tree root growth of an adjacent Ashe Juniper tree located near the southeast property corner. The dimensions of this feature are approximately 0.5 x 0.25 x 1.75 feet in length, width, and depth, respectively. The feature is fully-contained within a single limestone bedding unit. Orientation of the long axis of this feature in planview is approximately 300° (NW-SE). The solution cavity was fully delineated by probing and limited hand excavation and was determined to terminate in compact clay soil. The feature does not extend below the uppermost epikarst horizon. There was no evidence of focused recharge or surface drainage. No air flow was detected from this feature. At the time assessment activities were conducted, common cave spiders were observed in the feature opening.

Non-Karst Closed Depressions

Feature S-2 (CD):



Feature S-2 consists of a non-karst closed depression formed in association with an uprooted tree located at the edge of a clearing in the east-central portion of the property. The feature dimensions are on the order of 7.0 x 5.0 x 0.7 feet in length, width, and depth, respectively. The feature is completely contained within reddish-brown clay soil, with no connection to underlying limestone bedrock. There was no observed channeling or evidence of preferential surface flow directed to this feature.

Feature S-3 (CD):



Feature S-3 consists of a non-karst closed depression formed in association with an uprooted tree located at the edge of a clearing near the east boundary of the property. The feature dimensions are on the order

2

RABAKISTNER

of 5.0 x 2.5 x 0.5 feet in length, width, and depth, respectively. The feature is completely contained within reddish-brown clay soil, with no connection to underlying limestone bedrock. There was no observed channeling or evidence of preferential surface flow directed to this feature.

Feature S-4 (CD):



Feature S-4. View to the southeast.

Center of Feature S-4. View to the northeast.

Feature S-4 consists of a non-karst closed depression formed in association with tree root growth near the northwest boundary of the property. The feature dimensions are on the order of $5.0 \times 4.0 \times 1.5$ feet in length, width, and depth, respectively. The feature is completely contained within reddish-brown clay soil, with no connection to underlying limestone bedrock. There was no observed channeling or evidence of preferential surface flow directed to this feature.

Manmade Features in Bedrock

Feature S-5 (MB):



Feature S-5. View to the northwest.

Feature S-5. View to the northwest.

Feature S-5 consists of a backfilled utility trench associated with an existing 16-in water main that appears to have been recently installed along the northeast property boundary adjacent to River Road. It is inferred that the trench is installed 2.5-5.0 feet or more into the underlying Person Formation of Edwards Limestone. The location of this trench was determined based on review of existing utility plan and profile sheets (LJA Engineering, Inc., 2024), field reconnaissance, and the observed locations of hydrants and valve access points. The length of the utility trench within the assessment area is estimated on the order of 391 linear feet.

Features S-6 through S-11 (MB):



Features S-6 through **S-11** consists of plugged test holes associated with a geotechnical subsurface investigation reportedly conducted by Terracon Consultants, Inc. on September 23, 2022. Based on review of the geotechnical report (Terracon, 2022) these exploratory soil borings were drilled to depths of approximately 30 feet below the ground surface into the underlying Person Formation. The locations of these test holes were determined based on review of the geotechnical report and field reconnaissance observations of the backfill materials. Based on our field observations and review of boring logs, we understand that all test holes were properly plugged with soil cuttings and granular bentonite.

SOIL PROFILE Hueco Springs Substation New Braunfels, Comal County, Texas

| SOIL SERIES | THICKNESS ON SITE | DESCRIPTION | | |
|------------------|-----------------------|---|--|--|
| Comfort- Rock | Veneer to 1.5 feet | Comfort-Rock outcrop complex, undulating (CrD): This complex comprises shallow clayey soils and limestone outcrop on side slopes, hilltops, and ridge tops in the Edwards Plateau. On average, Comfort soils make of 70% of the complex. Areas of limestone outcrop form narrow horizontal bands, and Comfort soils occur between the bands. The surface layer of the Comfort soil is dark brown, extremely stony clay, typically about 6 inches thick. Cobbles to 4 inches in diameter are abundant. Subsoil is dark reddish-brown clay, extremely stony and occurs to depths of about 13 inches. | | |
| Lewisville | 4-5 feet | <i>Lewisville silty clay, 1 to 3% slopes (LeB):</i> This soil is deep, gently sloping on stream terraces. The surface layer is a dark grayish brown silty clay approximately 15 inches thick. The subsoil consists of light brown silty clay to approximately 33 inches in depth and reddish-brown yellow silty clay to a depth of approximately 63 inches. This soil is well drained, moderately alkaline and calcareous throughout. | | |

The preceding table was prepared on the basis of information provided in the *Soils Survey of Comal and Hays Counties, Texas (June 1984)* in addition to field observations. As presented on the attached *Soils Map*, native soils mapped across the majority of the SITE are classified as Comfort-Rock outcrop complex, undulating (CrD). CrD soils are weakly-developed and relatively thin, occurring over weathered limestone units of the Person Formation. CrD soil unit exhibits low permeability (0.2-0.6 inches/hour), which accounts for its Soil Group classification of "D". The CrD soils are also reported as having low to moderate shrink-swell potential. The Lewisville silty clay soils, 1 to 3% slopes (LeB) are mapped only at the southwest corner of the SITE. LeB soils consist of silty clays that are deep soil cover over stream deposits. Permeability for LeB soils is considered to be moderate at 0.6-2.0 inches/hour and reported to have a high shrink-swell potential.



ATTACHMENT B

STRATIGRAPHIC COLUMN

STRATIGRAPHIC COLUMN Hueco Springs Substation New Braunfels, Comal County, Texas

| STRATIGRAPHIC FORMATION | THICKNESS | DESCRIPTION | |
|---|--------------|--|--|
| Edwards Limestone (Ked) | | | |
| Person Formation (Kep) | 180-224 feet | | |
| Cyclic and Marine Member, undivided | 80-100 feet | Unit consists of massive mudstone to packstone; <i>miliolid</i> grainstone; and chert. Identified in the field by cycles of massive beds to relatively thin beds. <i>Limited</i> <i>exposures and float rock were present</i> <i>within the north portion of the subject</i> <i>property above an elevation of</i> <i>approximately 700 feet.</i> | |
| Leached and Collapsed Member, undivided | 50-60 feet | Unit consists of highly altered crystalline limestone; chalky mudstone and chert. Identified in the field by boxwork voids with neospar and travertine frame. <i>Limited exposures were present within the</i> <i>central and south portions of the property</i> <i>below an elevation of approximately 700</i> <i>feet.</i> | |
| Regional Dense Member | 20–24 feet | Unit consists of dense, argillaceous mudstone. Identified in the field by wispy iron-oxide stains. <i>Not exposed at the SITE</i> . | |

Note: Stratigraphic Column for the SITE is adapted from Collins (2000).

ATTACHMENT C

NARRATIVE OF SITE SPECIFIC GEOLOGY

SITE GEOLOGY NARRATIVE Hueco Springs Substation New Braunfels, Comal County, Texas

Introduction

The following discussion is a site-specific assessment of existing geological conditions and potential recharge features identified for the Hueco Springs Substation site. This assessment was performed by **Raba Kistner**, **Inc. (RKI)** on behalf of New Braunfels Utilities, pursuant to applicable Edwards Aquifer Protection Program Rules as specified in *Title 30 of the Texas Administrative Code, Section 213 (30 TAC §213, effective April 24, 2008)*. This assessment report is in the format required by the Texas Commission on Environmental Quality (TCEQ) for the Geologic Assessment portion of the referenced Water Pollution Abatement Plan (WPAP) submittal and was prepared in accordance with the revised *Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zones (TCEQ-0585)*, which are applicable to submittals received by the TCEQ after October 1, 2004.

This geologic assessment report documents conditions observed by **RKI** within the project boundaries on September 26, 2024.

Site Description

Site Location. The subject project comprises a 5.67-acre tract of undeveloped land located northwest of the River Road and Edwards Boulevard intersection in New Braunfels, Comal County, Texas (hereinafter referred to as SITE). The subject property is currently vacant. Based on review of official maps published by the Texas Commission on Environmental Quality (TCEQ), the SITE is fully located within the Edwards Aquifer Recharge Zone (EARZ). As such, the performance of a geologic assessment is required to facilitate planned WPAP construction activities in accordance with applicable provisions set forth in the EAPP rules as specified in *Title 30 of the Texas Administrative Code, Section 213 (30 TAC 213, effective April 24, 2008).*

Topography and Drainage. Topographic contours on the U.S. Geological Survey (USGS, 2005) 7.5-minute topographic map (i.e. New Braunfels West Quadrangle) were reviewed to evaluate the general surface conditions and drainage patterns, are included on the *Site Geologic Map.* The SITE area generally consists of gently sloping land characterized by hilltop topography. The maximum elevation for the subject property is approximately 715 feet above mean sea level (msl) and slopes to the southeast to an elevation of approximately 678 feet msl. As indicated by topographic contours presented on the *Site Geologic Map*, the surface drainage pattern for the SITE is primarily from northwest to southeast but a small ephemeral drainage feature is present that focuses drainage within the southwest portion of the SITE. Surface water at the SITE generally drains as sheetflow to the southeast and ultimately enters Blieders Creek approximately 0.15 miles to the southeast. A review of the Flood Insurance Rate Map (FEMA, 2009) indicates that no portion of the SITE is located within 100-year floodplain as depicted on official maps.

Historical Property Use. Although research pertaining to past SITE operations and historical land use activities was beyond the scope of this assessment, historical aerial imagery was reviewed to evaluate historical land use and the presence of lineations that could indicate the presence of normal faulting. The

following aerial photographs from Google Earth[™] were reviewed: 1995, 2005, 2008, 2012, 2014, 2016, 2018, 2019, 2020, 2021, and 2023. The aerial images from 1995 to 2023 indicate that the SITE was undeveloped as part of a larger ranch property. An unimproved (caliche) road is visually present across the central section of the SITE in all aerial imagery reviewed. The SITE conditions appear essentially unchanged with negligible differences in vegetation based on review of previous aerial imagery. As presented on the attached *Site Geologic Map*, current adjacent properties include vacant land to the northwest, southwest, and southeast, and River Road with River City Church to the northeast.

Classification of Recharge Features: As further described herein, eleven recharge features were identified within SITE boundaries including one solution cavity, three non-karst closed depressions, and seven manmade feature in bedrock. The significance of these features was assessed using definitions and guidance provided in *Instructions to Geologists (TCEQ-0585-Instructions, revised October 1, 2004)*. All features within the SITE that met the criteria presented in this reference were mapped. The characteristics of all mapped features and the assessments of these features, as defined by the TCEQ, are presented in the attached *Geologic Assessment Table (TCEQ-0585)*.

Stratigraphy

As presented in the attached *Stratigraphic Column*, information pertaining to the lithologies and thickness of geologic units underlying the SITE was taken from Collins (2000). The published reference indicates that the SITE is underlain by the Person Formation (Kep). As reported by Collins (2000) and presented on the *Site Geologic Map*, Qt (terrace deposits) are mapped along the southeast boundary of the SITE, but no significant deposits were observed in conjunction with field mapping efforts. The Kep, which comprises the uppermost portion of the Edwards Limestone, is commonly subdivided into three discrete members as follows: (i) Cyclic and Marine Member, undivided – mudstone to packstone, grainstone, and chert; (ii) Leached and Collapsed Member, undivided - unit includes crystalline limestone, mudstone to grainstone, and chert; and (iii) Regional Dense Member - unit consists of dense, carbonate mudstone.

Based on field reconnaissance efforts, limited exposures and float rock of the Cyclic and Marine Member of the Kep (Kpcm) were observed above an elevation of approximately 700 feet within the northwest portions of the SITE. Exposures of the Leached and Collapsed Member of the Person Formation (Kplc) were observed within the central and south portions of the SITE below an elevation of approximately 700 feet.

Structure

This SITE is located within the Balcones Fault Zone and as such possesses a distinct structural trend. This zone generally consists of a northeast-southwest trending, *en echelon* normal fault system, which juxtaposes Upper Cretaceous lithologies in the southeast with Lower Cretaceous lithologies in the northwest. As a result of this larger-scale, regional faulting, minor internal fault sequences and fractures exist within this zone which follow the same structural trend and accommodate localized displacement.

No faults are mapped within the SITE, and based on review of historical aerial photographs, published maps, and in conjunction with field mapping efforts, no indications of lineations that could be associated with normal faulting were identified within the SITE boundaries.

Karst Features

One solution cavity **(Feature S-1)** was identified during this assessment within the Person Formation that appears to have formed as the result of tree root activities but enlarged as the result of surface erosional processes and/or burrowing animals. **Feature S-1** is located along the southeast boundary of the SITE and is approximately $0.5 \times 0.25 \times 1.75$ feet in length, width, and depth, respectively. This feature is primarily limited to the soil and epikarst zone and was found to extend no more than approximately 1.75 feet vertically into the subsurface. The solution cavity was delineated by probing the full extent of the feature in addition to limited hand-excavation activities and determined to terminate in compact soils. Collective field observations confirm that the feature is limited to the uppermost weathered limestone/soil horizon (epikarst zone) and does not connect to a larger subsurface karst features or open void.

Feature S-1 is classified as not sensitive owing to the inferred surface erosional origin, position within the epikarst zone with no connection to underlying limestone, and estimated low relative infiltration rate (i.e., no evidence of rapid infiltration capacity or preferred drainage toward the feature).

Non-Karst Closed Depressions

Three non-karst closed depressions (CDs) were identified during this assessment. Two CDs were mapped near uprooted trees in the southeast section of the SITE, and one CD was mapped in the northwest section of the SITE. These features are further described as follows:

- *Feature S-2* is approximately 7.0 x 5.0 x 0.7 feet in length, width, and depth, respectively.
- *Feature S-3* is approximately 5.0 x 2.5 x 0.5 feet in length, width, and depth, respectively.
- *Feature S-4* is approximately 5.0 x 4.0 x 1.5 feet in length, width, and depth, respectively.

The floor of each feature consists of soil cover with no exposed limestone rock units. *Features S-2* and *S-3* appear to have been formed by historical land clearing activities, while *Feature S-4* appears to have been formed by surface erosion.

The non-karst closed depression features do not have capacity for rapid infiltration or surface runoff and are therefore considered not sensitive based upon the point assignment criteria set forth in the *Geologic Assessment Table (TCEQ-0585)* and professional judgement.

Manmade Features

As presented on the *Site Geologic Map*, a total of seven manmade features, designated *S-5* through *S-11*, were identified that may potentially serve to enhance the transmission of surface runoff to the subsurface.

Feature S-5 consists of a backfilled utility trench for a 16-in potable water main that meets the criteria for assessment as a manmade feature in bedrock. Information regarding the location of the existing utility

trench was gleaned from a base map provided by LJA Engineering, Inc. on September 20⁻ 2024, field observations of hydrants, and observed access points or valves. Although not directly observable, it is inferred that *Feature S-5* is backfilled in accordance with standard construction practices that include the use of structural fill soils (e.g., base course materials, limestone gravel, compacted clay soils, etc.) overlain by native or fill soils, depending upon location and surface improvements. The trench was not observed in conjunction with any naturally-occurring recharge features.

Features S-6 through S-11 consist of six test holes installed as part of a subsurface geotechnical study that meet the criteria for assessment as manmade features in bedrock. Information regarding the locations of the test holes was determined based on a geotechnical subsurface investigation (Terracon, 2022) provided to **RKI** on October 9, 2024.

Based on the geotechnical boring logs and materials observed at the surface of the test hole locations, *Features S-6 through S-11* were backfilled with soil cuttings and bentonite for the full depth of the borings (on the order of 30 feet below the ground surface). None of the test holes were observed in conjunction with any naturally-occurring recharge features.

Although the backfilled trench and test holes may exhibit somewhat greater relative infiltration rate than the surrounding soil/rock strata underlying the project boundaries, these manmade features are classified as not sensitive, having a low potential of preferentially transmitting fluids into the Edwards Aquifer. This classification is based upon the point assignment criteria presented in the *Geologic Assessment Table (TCEQ-0585)* and professional judgment.

Potential for Fluid Migration to the Edwards Aquifer

Based on a review of SITE geology, topography and drainage conditions, and the results of our mapping efforts, the overall potential for fluid movement (i.e., surface-derived flow) to the Edwards Aquifer via infiltration is considered to be low to moderate. The following assessment findings support this conclusion:

- The majority of the SITE is overlain by surface soils ranging in thickness from a veneer to approximately 1.5 feet with reported moderate to slow infiltration rates.
- The SITE is directly underlain by the Cyclic Marine and Leached and Collapsed Members of the Person Formation. The Kplc, in particular, is documented to be prone to karst weathering processes and is represented at the SITE by vuggy limestone bedding units.
- No sensitive features were identified throughout SITE boundaries attributed to karstification of limestone terrain. Solution cavities identified as the result of this assessment were fully assessed by probing and/or hand-excavation and determined to be limited to the epikarst zone with no evidence of rapid infiltration capacity or focused recharge.

References

- Barnes, V. L., 1983, Geologic Atlas of Texas San Antonio Sheet; Bureau of Economic Geology, The University of Texas at Austin, Austin, Texas.
- Collins, Edward W., 2000, Geologic Map of the New Braunfels, Texas, 30 X 60 Minute Quadrangle: Geologic Framework of an Urban-Growth Corridor along the Edwards Aquifer, South-Central Texas: Bureau of Economic Geology, The University of Texas at Austin, Austin, Texas.
- Google Earth[™], January 1995, October 2005, February 2008, April 2012, November 2014, October 2016, January 2018, November 2019, December 2020, October 2021, and January 2023 aerial photographs.
- LGA Engineering, Inc., 2024, Veramendi Substation WPAP Existing Utilities.pdf provided to **RKI** via email correspondence on September 5, 2024.
- National Flood Insurance Program, 2009, Flood Insurance Rate Map, Comal County, Texas and Incorporated Areas; Federal Emergency Management Agency, Map 48091C0435F.
- TCEQ Edwards Aquifer Protection Program, 2005, Edwards Aquifer Recharge Zone Map, New Braunfels West Quadrangle; TNRCC, September 1998.
- Terracon, 2022, *Geotechnical Engineering Report Hueco Springs Substation* provided to **RKI** via email correspondence with Senergy on October 9, 2024.
- Texas Water Development Board, Water Data Interactive (WDI) Groundwater Data Viewer, <u>https://www2.twdb.texas.gov/apps/WaterDataInteractive/GroundwaterDataViewer/?map=</u> <u>sdr</u>, accessed October 10, 2024.

United States Geological Survey (USGS), 2013, New Braunfels West Quadrangle; USGS, Denver, Colorado. United States Department of Agriculture (USDA), 1984, Soil Survey of Comal and Hays Counties, Texas; USDA / Soil Conservation Service / Texas Agricultural Experiment Station.

United States Department of Agriculture (USDA), 1986, Urban Hydrology for Small Watersheds; USDA / Natural Resource Conservation Service, Technical Release (TR-) 55, June 1986.

ATTACHMENT D

FEATURE POSITION TABLE (GPS COORDINATES)

SITE GEOLOGIC MAP

FEATURE POSITION TABLE

Hueco Springs Substation

New Braunfels, Comal County, Texas

RKEI Project No. ASF24-142-00

| Feature Designation | Feature Type | Date Collected | North Latitude | West Longitude | UTM Northing (meters) | UTM Easting (meters) |
|------------------------|--|-------------------|-------------------|-------------------|-----------------------------|----------------------------|
| S-1 | Solution cavity | 9/26/2024 | N29 44 3.32 | W98 7 44.5 | 3289657 | 584229 |
| S-2 | Non-karst closed depression | 9/26/2024 | N29 44 4.58 | W98 7 45.8 | 3289695 | 584193 |
| S-3 | Non-karst closed depression | 9/26/2024 | N29 44 4.43 | W98 7 44.8 | 3289691 | 584220 |
| S-4 | Non-karst closed depression | 9/26/2024 | N29 44 4.69 | W98 7 50.9 | 3289698 | 584054 |
| S-5 | Manmade Feature in Bedrock (Potable Water Line) | 9/26/2024 | N29 44 7.39 | W98 7 46.7 | 3289782 | 584169 |
| S-6 | Manmade Feature in Bedrock (Test Hole, Plugged) | 9/26/2024 | N29 44 3.10 | W98 7 48.9 | 3289649 | 584111 |
| S-7 | Manmade Feature in Bedrock (Test Hole, Plugged) | 9/26/2024 | N29 44 2.45 | W98 7 50.0 | 3289630 | 584161 |
| S-8 | Manmade Feature in Bedrock (Test Hole, Plugged) | 9/26/2024 | N29 44 5.28 | W98 7 46.9 | 3289717 | 584162 |
| S-9 | Manmade Feature in Bedrock (Test Hole, Plugged) | 9/26/2024 | N29 44 4.92 | W98 7 49.0 | 3289705 | 584104 |
| S-10 | Manmade Feature in Bedrock (Test Hole, Plugged) | 9/26/2024 | N29 44 4.20 | W98 7 47.6 | 3289683 | 584143 |
| S-11 | Manmade Feature in Bedrock (Test Hole, Plugged) | 9/26/2024 | N29 44 3.48 | W98 7 46.6 | 3289661 | 584172 |

NOTES:

1) Geographic coordinates are presented Degrees, Minutes, Decimal Seconds

2) Reference Datum is NAD 83

3) Data were collected utilizing a Garmin GPS 60cx Global Positioning System.

4) Horizontal Accuracy: RMS Value < 3 meter ground resolution

5) GPS data was collected by Anthony Krupa (**RKI** Project Professional).

6) GPS coordinates correlate to the points on the map for each feature.


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: <u>Lena Roha</u> Date: <u>01/09/2025</u>

Signature of Customer/Agent:

Regulated Entity Name: Hueco Springs Substation

Regulated Entity Information

- 1. The type of project is:
 -] Residential: Number of Lots:_____
 - Residential: Number of Living Unit Equivalents:
 - Commercial
 - Industrial
 - Other: Power Substation
- 2. Total site acreage (size of property): 5.67
- 3. Estimated projected population:0
- 4. The amount and type of impervious cover expected after construction are shown below:

| Impervious Cover of Proposed Project | Sq. Ft. | Sq. Ft./Acre | Acres |
|---|---------|--------------|-------|
| Structures/Rooftops | 4,747 | ÷ 43,560 = | 0.11 |
| Parking | N/A | ÷ 43,560 = | N/A |
| Other paved surfaces | 151,198 | ÷ 43,560 = | 3.47 |
| Total Impervious Cover | 155,945 | ÷ 43,560 = | 3.58 |

Table 1 - Impervious Cover Table

Total Impervious Cover $3.58 \div$ Total Acreage $5.67 \times 100 = 63.1\%$ 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 = _____ $Ft^2 \div 43,560 Ft^2/Acre = _____ acres.$

10. Length of pavement area: _____ feet.

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

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:

| <u>0</u> % Domestic | <u>0</u> Gallons/day |
|----------------------------|-----------------------|
| <u>0</u> % Industrial | <u>0 </u> Gallons/day |
| <u>0</u> % Commingled | <u>0 </u> Gallons/day |
| TOTAL gallons/day <u>0</u> | |

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 |

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

Sewage Collection System (Sewer Lines):

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

The SCS was previously submitted on_____.

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

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

| Existing. |
|-----------|
| Proposed |

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

Site Plan Requirements

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

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

Site Plan Scale: 1" = <u>50</u>'.

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. | |

 \boxtimes 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): <u>FEMA OGC Web Mapping Service (Updated 08-12-2024, accessed 08-12-2024)</u>

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. (Che | ck 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.

 \boxtimes 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. \square 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. \boxtimes Locations where soil stabilization practices are expected to occur.
- 26. Surface waters (including wetlands).

🖂 N/A

- 27. Locations where stormwater discharges to surface water or sensitive features are to occur.
 - There will be no discharges to surface water or sensitive features.
- 28. 🔀 Legal boundaries of the site are shown.

Administrative Information

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

ATTACHMENT A – FACTORS AFFECTING SURFACE WATER QUALITY

A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use.

Post-construction, there are no factors affecting surface water quality from the project site. Therefore, this section is **NOT APPLICABLE.**

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. 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 preconstruction and post-construction conditions.

1.0 PRE-DEVELOPMENT CONDITIONS

The proposed project site has a total site area of 5.67 acres. The initial site surface conditions are classified as *undeveloped pasture/range* at a natural 5.1% slope. The pre-development runoff coefficients and Manning's roughness coefficient are as follows:

$$C_{25} = 0.42$$
 $C_{100} = 0.49$ $n = 0.13$ (Pre-
Development) (Pre-

To calculate the time of concentration for pre-development site conditions, consider the travel time of storm water flow from the furthest point of the station to be 820 feet. For the initial 100 feet from the furthest point of the station, storm water runoff sheet flows at the following rate:

$$T_{f1} = \frac{0.007(nL)^{0.3}}{(p_2^{0.5})(s^{0.4})} * 60 = 5.322 \ minutes$$
(Equation 1.1)

During the last 720 feet, storm water runoff has shallow concentrated flow at the following rate:

$$T_{f2} = \frac{L}{60(16.1345)(s^{0.4})} = 2.446 \text{ minutes}$$
 (Equation 1.2)

The total time of concentration is 5.322 minutes plus 2.446 minutes, yielding 7.768 minutes for storm water to travel 820' feet across the proposed station. The average rain rate of intensity for a 25-year event and a 100-year event can then be calculated using the following:

$$i_{25} = 9.970 in/hr$$
 (Equation 1.3)
 $i_{100} = 12.810 in/hr$ (Equation 1.4)

Finally, the peak runoff for a 25-year event and a 100-year event for pre-construction site conditions are as follows:

$$Q_{25} = CiA = (0.42) \Big(9.970 \ \frac{in}{hr} \Big) (5.67 \ ac) = 23.743 \ CFS$$
 (Equation 1.5)

$$Q_{100} = CiA = (0.49) \left(12.810 \frac{in}{hr} \right) (5.67 ac) = 35.591 CFS$$
 (Equation 1.6)

2.0 POST-DEVELOPMENT CONDITIONS

Approximately 3.58 acres of land will be disturbed by construction, which includes areas for the substation pad, slopes, and access roads. The substation pad finished surface is classified as *crushed limestone base with 3" surface rock (3/4" to 1")* at a 1.3% slope. The runoff coefficients and Manning's roughness coefficient post-development are as follows:

 $C_{25} = 0.55$ $C_{100} = 0.60$ n = 0.016 (*Post-Development*) To calculate the time of concentration for post-development site conditions, consider the travel time of storm water flowing from the furthest point of the station to discharge at the T-culvert at Edwards Boulevard:

• Storm water travels 100 feet over the substation pad through 3" of gravel media by sheet flow:

$$T_{f1} = \frac{0.007(nL)^{0.8}}{(p_2^{0.5})(s^{0.4})} * 60 = 1.72 \text{ minutes}$$
(Equation 2.1)

• Storm water travels 360 feet across the substation pad through 3" of gravel media by shallow concentrated flow:

$$T_{f2} = \frac{L}{60(16.1345)(s^{0.4})} = 2.113 \text{ minutes}$$
 (Equation 2.2)

• Storm water travels 120 feet across pad side slopes by shallow concentrated flow:

$$T_{f3} = \frac{L}{60(16.1345)(s^{0.4})} = 0.504 \text{ minutes}$$
(Equation 2.3)

The total time of concentration is 1.72 + 2.113 + 0.504 minutes, yielding 4.337 minutes for storm water to travel across the finished site post-construction. The average rain rate of intensity for a 25-year event and a 100-year event can then be calculated using the following:

$$i_{25} = 11.35 in/hr$$
 (Equation 2.5)
 $i_{100} = 14.64 in/hr$ (Equation 2.6)

Approximately 2.09 acres of land will not be disturbed post-construction, which excludes areas for the substation pad, slopes, and access roads. The substation pad finished surface is classified as *undeveloped pasture/range* at a 4.7% slope. The runoff coefficients and Manning's roughness coefficient post-development are as follows:

$$C_{25} = 0.42$$
 $C_{100} = 0.49$ $n = 0.13$ (Post-
Development) (Post-

To calculate the time of concentration for post-development site conditions, consider the travel time of storm water flowing from the furthest point of the station to discharge at the T-culvert at Edwards Boulevard as follows:

• For the initial 100 feet from the furthest point of the station, storm water runoff sheet flows at the following rate:

$$T_{f1} = \frac{0.007(nL)^{0.8}}{(p_2^{0.5})(s^{0.4})} * 60 = 5.498 \text{ minutes}$$
(Equation 2.7)

• Storm water travels 320 feet around the substation pad by shallow concentrated flow:

$$T_{f2} = \frac{L}{60(16.1345)(s^{0.4})} = 1.123 \text{ minutes}$$
(Equation 2.8)

The total time of concentration is 5.498 + 1.123 minutes, yielding 6.621 minutes for storm water to travel across the finished site post-construction. The average rain rate of intensity for a 25-year event and a 100-year event can then be calculated using the following:

$$i_{25} = 10.482 in/hr$$
 (Equation 2.9)
 $i_{100} = 13.483 in/hr$ (Equation 2.10)

Finally, the total peak runoff for a 25-year event and a 100-year event for post-construction site conditions are as follows:

| $Q_{25} = CiA = (0.55)$ | $(11.35 \ \frac{in}{hr})(3.58 \ a$ | c.) + (0.42) (10.48) | $2\frac{in}{hr}\Big)(2.09\ ac)=3$ | 1.549 <i>CFS</i> (Eq | uation 2.11) |
|-------------------------------|------------------------------------|--|--|----------------------|-----------------|
| $Q_{100} = CiA = (0.60) (14.$ | $.64 \frac{in}{hr}$ (3.58 ac.) | $+ (0.49) \Big(13.483 \frac{ir}{h_1} \Big)$ | $\left(\frac{a}{r}\right)(2.09 \ ac) = 45.2$ | 54 <i>CFS</i> | (Equation 2.12) |

TABLE 1: PRE-DEVELOPED VS POST-DEVELOPED RUNOFF

| Condition | Storm Event | Peak Runoff | Difference |
|----------------|-------------|-------------|------------|
| Pre-Developed | 25-Year | 23.743 CFS | - |
| Post-Developed | 25-Year | 31.549 CFS | 7.806 CFS |
| Pre-Developed | 100-Year | 35.591 CFS | - |
| Post-Developed | 100-Year | 45.254 CFS | 9.663 CFS |

For a 100-year storm event, the peak runoff increases by 9.663 CFS. The water quality treatment basin and discharge controls must limit discharge to 45.254 CFS due to construction of the substation.

3.0 STORM WATER RUNOFF SUMMARY

For a 100-year event, storm water runoff from upgradient will be diverted around the substation site by perimeter ditches and culverts as shown in the design drawings.

Storm water runoff generated on the pad site will flow across the pad through 3" of ³/₄" to 1" washed gravel media towards culvert located under the expansion of Edwards Boulevard. In a 100-year storm event, discharge of approximately 45.254 CFS will be directed towards the culvert located under the expansion of Edwards Boulevard to the water quality treatment basin from the substation property.

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: Lena Roha

Date: 01/09/2025

Signature of Customer/Agent:

Regulated Entity Name: <u>Hueco Springs Substation</u>

Project Information

Potential Sources of Contamination

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

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

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

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

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

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

- Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
- Fuels and hazardous substances will not be stored on the site.
- 2. Attachment A Spill Response Actions. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. Attachment B Potential Sources of Contamination. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

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

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

- For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- 6. Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: <u>Comal River, Guadalupe River</u>

Temporary Best Management Practices (TBMPs)

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

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

| | | A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site. |
|-----|-----------|---|
| | | A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site. |
| | | A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer. |
| | | A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction. |
| 8. | \square | The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided. |
| | | Attachment E - Request to Temporarily Seal a Feature. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature. There will be no temporary sealing of naturally-occurring sensitive features on the |
| | | site. |
| 9. | | Attachment F - Structural Practices . A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided. |
| 10. | | Attachment G - Drainage Area Map. A drainage area map supporting the following requirements is attached: |
| | | For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided. |
| | | For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used. |
| | | For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect |
| | | down slope and side slope boundaries of the construction area. There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area. |

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

- 11. Attachment H Temporary Sediment Pond(s) Plans and Calculations. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
 - 🛛 N/A
- 12. Attachment I Inspection and Maintenance for BMPs. A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
- 13. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
- 14. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
- 15. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
- 16. 🖂 Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

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

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

- 18. Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 19. Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

- 20. \square All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

ATTACHMENT A - SPILL RESPONSE ACTIONS

A site-specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances.

In the event of a spill, the following measures to contain any spill of hydrocarbons or hazardous substances at the Hueco Springs Substation includes:

- Spill cleanup supplies will be located in the New Braunfels Utilities control house for spot treatment. Supplies include:
 - o Absorbent materials
 - o Broom
 - o Shovel
 - o Dustpan
 - Protective equipment for handling the spill
 - Salvage drum for waste disposal
- A secondary-containment moat surrounding the power transformers will capture any leakage or spills from the largest piece of oil-filled equipment on site
- 3" of crushed, washed limestone surface rock to mitigate the flow of contaminated stormwater runoff across the substation pad
- 9" of 3"x5" rock rip rap along the substation pad slopes to mitigate the flow of contaminated stormwater runoff
- All stormwater runoff from the substation site will be directed towards the water quality basin located downstream from the substation property for treatment

Spills are to be contained and addressed expeditiously. A Spill Prevention, Control, and Countermeasure (SPCC) plan will be developed for the substation.

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.

Potential sources of contamination include leakage from oil-filled electrical substation equipment and from minimal traffic on the substation pad required for maintenance. Stormwater runoff collected on the substation pad will be mitigated by 3" layer of $\frac{1}{2}$ " to 1" crushed and washed limestone rock (yard surface rock) and 9" of 3"x5" rock rip rap along the substation slopes, and ultimately diverted to the culvert downstream leading to a shared stormwater treatment basin prior to release to navigable waters.

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).

A. Site Preparation

- 1. Clearing and Grubbing (2 weeks)
 - a. Clearing and grubbing is the first step in the construction process in which the site is cleared of existing brush and a 3" layer of topsoil is removed from the project area.
 - b. Area affected by construction activity: 3.58 acres
 - c. Temporary control measures: Stabilized Construction Entrance, Sediment Control Berm
- 2. Site Grading Cut (3 weeks)
 - a. Cuts are made into the existing grade to meet design criteria for the substation pad.
 - b. Area affected by construction activity: 3.58 acres
 - c. Temporary control measures: Stabilized Construction Entrance, Sediment Control Berm
- 3. Site Grading Filling and Compacting (3 weeks)
 - a. Road base and select fill material is imported and compacted to design specifications to meet design criteria for the substation pad.
 - b. Area affected by construction activity: 3.58 acres
 - c. Temporary control measures: Stabilized Construction Entrance, Sediment Control Berm
- 4. Pad Stabilization (2 weeks)
 - a. A 9" layer of 3"x5" rock rip rap is applied to pad slopes for pad stabilization.
 - b. Area affected by construction activity: 3.58 acres
 - c. Temporary control measures: Stabilized Construction Entrance, Sediment Control Berm

B. Substation Construction

- 1. Foundations (10 weeks)
 - a. Preparation and the pouring of concrete foundations to support substation equipment and the control houses as shown on construction drawings.
 - b. Area affected by construction activity: 3.58 acres
 - c. Temporary control measures: Stabilized Construction Entrance, Sediment Control Berm, Concrete Washout
- 2. Equipment Installation (10 weeks)
 - a. Installation of electrical substation equipment and supporting structures.
 - b. Area affected by construction activity: 3.58 acres
 - c. Temporary control measures: Stabilized Construction Entrance, Sediment Control Berm
- 3. Pad Finish (1 week)
 - a. A 3'' layer of $\frac{1}{2}''$ to 1'' crushed, washed limestone surface rock is installed on the substation pad.
 - b. Area affected by construction: 3.58 acres
 - c. Temporary control measures: Stabilized Construction Entrance, Sediment Control Berm

ATTACHMENT D - TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

1. Describe how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates <u>upgradient</u> from the site and flows across the site.

Stormwater originating upgradient from the site will be diverted around the substation pad via ditching and natural grade lower than design elevations of the pad. Implementation of a sediment control berm along the downstream side of the substation property will prevent sediment from leaving the substation site during a storm event.

2. Describe how BMPs and measures will prevent pollution of surface water or groundwater that originates <u>on-site or flows off site</u>, including pollution caused by contaminated stormwater runoff from the site.

On the substation pad, a stabilized construction is implemented to prevent sediment from leaving the property site, and a concrete washout pit for contaminated water and slurry from concrete construction activities is available on-site. Stormwater runoff collected on the substation pad is collected and diverted to a culvert located to the southeast towards a shared water quality treatment basin located downstream from the substation property.

3. Describe how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

While no surface streams or sensitive features are currently present on this site, BMPs and measures implemented will prevent pollutants from entering the aquifer by controlling and mitigating contaminated stormwater runoff towards water quality treatment prior to release to nearby navigable waters.

4. Describe how, to the maximum extent practicable, BMPs and measures will maintain flow to naturallyoccurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

No naturally-occurring sensitive features have been identified by the geologic assessment for this project, however, in the event one is discovered during TCEQ inspections or during excavation, blasting, or construction, the following BMPs and measures will protect against potential contamination of flow towards the feature:

- Stabilized Construction Entrance: A stabilized construction entrance is placed at the main entrance to the construction site to prevent dirt and debris from being tracked onto public roads.
- Sediment Control Berm: Sediment control is located along the southeast boundary of the property to reduce sediment being carried downstream and off-site during construction.

• Concrete Washout: Concrete trucks may wash any contaminated water or slurry produced while pouring concrete in a designated and controlled area on-site. This control measure prevents concrete trucks from tracking pollutants onto public roads and drains.

The need for additional temporary BMPs required to maintain flow to naturally-occurring sensitive features discovered at a later date, either by TCEQ inspections or during excavation, blasting, or construction will be evaluated and implemented accordingly.

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.

Structural practices for this project include installation of a sediment control berm, a stabilized construction entrance, and concrete washout area.

- Sediment from the project site may be captured by a sediment control berm located downstream along the southeastern property line.
- A stabilized construction entrance will be installed to mitigate sediment, dirt, or debris from transferring to River Road during construction activities.
- A concrete washout area will capture contaminated water and slurry generated by concrete trucks after pouring concrete on-site.

Placement of structural practices in the floodplains has been avoided.

ATTACHMENT I – INSPECTION AND MAINTENANCE FOR BMPs

Provide a plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit. Include a description of the documentation procedures, recordkeeping practices, and inspection frequency that is specific to the site and/or BMP. On-site inspections are to be conducted on a weekly basis and within 48 hours after every rainfall event by designated Inspectors. Inspections will include removal of litter or debris, and assessment of damage caused by rain events and/or animal interference. All monitoring activities and records of damage and/or repairs are to be documented and stored on-site.

<u>ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION</u> <u>PRACTICES</u>

A schedule of the interim and permanent soil stabilization practices for the site. Interim soil stabilization practices include installing a sediment control berm, stabilized construction

entrance, and concrete washout area.

- A sediment control berm will be installed prior to the start of any construction activities. The berm will remain in place throughout the duration of construction and will be removed after construction has concluded.
- A stabilized construction entrance will be installed at the start of construction activities. The entrance will remain in place throughout the duration of construction and will be removed after construction has concluded.
- A concrete washout area will be installed after pad stabilization, but before pouring foundations on the substation pad. The washout area will be accessible throughout the duration of foundation construction and will be removed after all concrete has been poured for the project.

Permanent soil stabilization practices include flexible base, select fill, yard surface rock and rock rip rap.

- A 12" layer of TXDOT Type A Grade 2 flexible base or appropriate select fill material will be installed and compacted per construction drawings to stabilize the substation pad.
- A 3" layer of ¹/₂" to 1" crushed, washed limestone surface rock will be placed on the substation pad.
- A 9" layer of 3"x5" rock rip rap will be placed on the substation pad slopes for stabilization.

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: Lena Roha

Date: 01/09/2025

Signature of Customer/Agent

Regulated Entity Name: Hueco Springs Substation

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.



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 multifamily 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. | \boxtimes | 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. |
| | \boxtimes | 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 |

 \square N/A

Responsibility for Maintenance of Permanent BMP(s)

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

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

N/A

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

🖂 N/A

ATTACHMENT B - BMPs FOR UPGRADIENT STORMWATER

Permanent BMP's 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.

Stormwater generated upgradient from the site is directed around the substation pad and will not flow across the pad. Therefore, permanent BMPs for upgradient stormwater are **NOT APPLICABLE** for this application.

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.

On-site stormwater runoff is mitigated by a 3" layer of $\frac{1}{2}$ " to 1" crushed and washed limestone yard surface rock and a 9" layer of 3"x5" rock rip rap and is directed towards a shared water quality basin downstream from the property site. Any pollution caused by contaminated stormwater runoff from the site will be treated prior to release to surface water or groundwater sources.

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 geological features
- All proposed structural BMP(s) plans and specifications

Please see attached Substation Design Construction Plans for site TSS calculations, TCEQ construction notes, and all geologic features, and all proposed structural BMPs plans and specifications pertaining to the substation project site.

NEW BRAUNFELS UTILITIES HUECO SPRINGS SUBSTATION **ELECTRICAL & STRUCTURAL**



911 SUB. ADDRESS: 1603 River Rd, New Braunfels, TX. 78132 GPS COORDINATES: 29.73268, -98.12791

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NEW BRAUNFELS UTILITIES

HUECO SPRINGS SUBSTATION

ELECTRICAL & STRUCTURAL COVER SHEET

SCALE FOR 34 x 22 DWG 1"=1,000'

DRAWING NO. NBU-HS-000

| REV | DWG. NUMBER | DESCRIPTION |
|-----|--------------|--|
| | NBU-HS-000-C | COVER SHEET-CIVIL DRAWINGS |
| | NBU-HS-001 | DRAWING LIST-CIVIL DRAWINGS |
| | NBU-HS-004 | TCEQ GENERAL CONSTRUCTION NOTES |
| | NBU-HS-040 | OVERALL SITE PLAN |
| | NBU-HS-041 | COMBINED SITE & CIVIL LAYOUT |
| | NBU-HS-042 | CIVIL GRADING & GRADING SECTIONS LAYOUT |
| | NBU-HS-043 | GRADING SECTIONS A-A, B-B, C-C, D-D, E-E, F-F |
| | NBU-HS-044 | SOIL DISTURBANCE LAYOUT |
| | NBU-HS-045 | STORMWATER MANAGEMENT-VOLUME & CHARACTERISTICS |
| | NBU-HS-046 | YARD SURFACE LAYOUT |
| | NBU-HS-047 | SEDIMENT CONTROL LAYOUT |
| | NBU-HS-048 | SEDIMENT CONTROL DETAILS |
| | NBU-HS-049 | NORTH DRIVEWAY DETAILS |
| | NBU-HS-050 | SOUTH DRIVEWAY DETAILS |
| | NBU-HS-051 | CULVERT DETAILS |
| | NBU-HS-052 | CULVERT END TREATMENT DETAILS |
| | NBU-HS-053 | TSS CALCULATIONS WORKSHEET |
| | NBU-HS-054 | 100-YR FLOODPLAIN LAYOUT |

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NEW BRAUNFELS UTILITIES

HUECO SPRINGS SUBSTATION

DRAWING LIST CIVIL DRAWINGS

NBU-HS-001-

DRAWING NO.

N.T.S.

SCALE FOR 34 x 22 DWG

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

- 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 should 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.
- If any sensitive feature(s) (caves, solution cavity, sink hole, etc.) is discovered during construction, 3 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.
- No temporary or permanent hazardous substance storage tank shall be installed within 150 feet of a water supply 4. source, distribution system, well, or sensitive feature.
- Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) 5. 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.
- Any sediment that escapes the construction site must be collected and properly disposed of 6. before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.

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- 7. 50% of the basin's design capacity.
- Litter, construction debris, and construction chemicals exposed to stormwater shall be 8. prevented from being discharged offsite.
- 9. prior to the placement of spoils at the other site.
- 10. shall be initiated as soon as possible.
- The following records should be maintained and made available to the TCEQ upon request: 11.
 - the dates when major grading activities occur;

 - portion of the site; and
 - the dates when stabilization measures are initiated
- 12. writing and obtain approval from the executive director prior to initiating any of the following:
 - A. structures;
 - Β. prevent pollution of the Edwards Aquifer;
 - C. pollution abatement plan.

Austin Regional Office 12100 Park 35 Circle, Building A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795

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

TCEQ-0592 (Rev. July 15, 2015)



Sediment must be removed from the sediment traps or sedimentation basins not later than when it occupies

All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of soils 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

If portions of the site will have a temporary or permanent cease in construction activity lasting longer than 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

- the dates when construction activities temporarily or permanently cease on a

The holder of any approved Edwards Aquifer protection plan must notify the appropriate regional office in

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

any change in the nature or character of the regulated activity from that which was originally approved or a change would significantly impact the ability of the plan to

any development of land previously identified as undeveloped in the original water

San Antonio Regional Office 14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329

GENERAL TCEQ CONSTRUCTION NOTES SCALE FOR 34 x 22 DWG N.T.S.

DRAWING NO. **NBU-HS-004**







SCALE FOR 34 x 22 DWG 1" = 50' - 0"

DRAWING NO. NBU-HS-040

- 600 - EXISTING ELEVATION

— — EASEMENT SETBACK

----- X ------ CHAIN LINK FENCE CONCRETE FENCE ---- PL ---- PROPERTY BOUNDARY

------ WORK BY OTHERS

Found 1/2" iron rod

SET 1/2" IRON ROD

CORRUGATED METAL PIPE

------ EDGE OF GRADED PAD





ULTIMATE COMBINED SITE & CIVIL LAYOUT

SCALE FOR 34 x 22 DWG 1" = 30'-0"DRAWING NO.



LEGEND



NBU-HS-041



| ESTIMATED | QUANTI | TIES |
|---|--------|-------------------------|
| ITEM | UNIT | QUANTITY |
| STRIP EXISTING TOP SOIL | M1.1 | 1,620 C.Y |
| ON-SITE CUT | M2.1 | 6,245 C.Y. |
| ON-SITE FILL | M2.1 | 6,245 C.Y. |
| SELECT FILL | M2.2 | 5,285 C.Y. (9,500 TONS) |
| TYPE A GRADE 2 FLEXIBLE BASE (PAD) | M3.1 | 6,480 C.Y. (8,640 TONS) |
| ¹ / ₂ " to 1" yard finish rock (NBU yard only) | M4.1 | 400 C.Y. (560 TONS) |
| CONCRETE DRIVEWAY | M4.5 | 145 C.Y. (205 TONS) |
| 3" X 5" ROCK RIP RAP | M5.1 | 310 C.Y. (560 TONS) |
| (1) CMP 24" X 55' | M6.1a | 1 EA. |
| 2 CMP 24" X 57' | M6.1b | 1 EA. |
| 3 CMP 24" X 100' | M6.1c | 1 EA. |
| SEDIMENT CONTROL BERM | M9.1 | 400 LF |
| STABILIZED CONSTRUCTION ENTRANCE | M10.1 | 1 EA. |
| CONCRETE WASHOUT AREA | M10.2 | 1 EA. |

| FG | ٦F | Ν | D |
|----|----|---|---|

| 600 EXISTING ELEVATION |
|-----------------------------|
| |
| EASEMENT SETBACK |
| EDGE OF GRADED PAD |
| X CHAIN LINK FENCE |
| CONCRETE FENCE |
| PL PROPERTY BOUNDARY |
| S SEDIMENT CONTROL BERM |
| Found 1/2" iron rod |
| SET 1/2" IRON ROD |
| CORRUGATED METAL PIPE (CMP) |
| |


22NBU6100











SOIL DISTURBANCE

| DISTURBED AREA | 3.58 ACRES |
|------------------|------------|
| UNDISTURBED AREA | 2.09 ACRES |

NOTE: ALL AREAS, DISTURBED OR UNDISTURBED, WILL BE CAPTURED AND TREATED.

LEGEND

SOIL DISTURBANCE LAYOUT

SCALE FOR 34 x 22 DWG 1" = 30'-0"

DRAWING NO. NBU-HS-044

| A. <u> </u> | PRE-DEVELOPMENT TOTAL SITE AREA SURFACE = UNDI RUNOFF COEFFICI MANNING'S ROUGI | <u>CONDITIONS:</u> = 5.67 ACRES EVELOPED PASTURE/RA ENTS: C ₂₅ =0.42 HNESS COEFFICIENT: n | ANGE C ₁₀ 1=0.1 |
|-----------------|---|--|--|
| • | TIME OF CONCEN TRAVEL TIME OF | <u>tration</u> storm water flow f | ROM |
| | SHEET FLOW – F T _{t1} = [| [IRST_100' [(0.007)(nL)^0.8]/(p₂ | 0.5)(s |
| | SHALLOW CONCEN T _{t2} = | NTRATED FLOW – LAST L/(60)(16.1345)(s^0.4 | - 72(1) = |
| | TOTAL $T_c = 5.3$ | + 2.4 = 7.7 minutes | ŝ |
| • | FOR T _c = 7.7 m i ₂₅ = 9.97 in/hr i ₁₀₀ = 12.81 in/l | in.: hr | |
| • | $\begin{array}{rcl} & {\sf RUNOFF} \\ & {\sf Q}_{25} \ = \ {\sf CiA} \ = \ (0, 1, 1, 2, 2, 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3,$ | 42)(9.97)(5.67) = 23 .49)(12.81)(5.67) = 3 | .74 35.59 |
| Β. | POST-DEVELOPME | NT CONDITIONS: | |
| DISTU • • | <u>JRBED AREA</u> SUBSTATION PAD FINISHED SURFACE RUNOFF COEFFICIE MANNING'S ROUGH | + SLOPES + ROADWA E = CRUSHED LIMEST(ENTS: C ₂₅ =0.55 INESS COEFFICIENT: n | Y AF DNE C ₁₀ =0.0 |
| • | TIME OF CONCENT TRAVEL TIME OF S EDWARDS BOULEV | T <u>ration</u> Stormwater flow fr Ard: | om I |
| | 100' OVER SUBST T _{t1} = [| ATION PAD THROUGH (0.007)(nL)^0.8]/(p_^0 | 3" C 0.5)(sî |
| | 360' OVER SUBST $T_{t2} = L$ | TATION PAD THROUGH ./(60)(16.1345)(s^0.4 | 3" () = |
| | 120' ACROSS PAD $T_{t3} = L$ |) SIDE SLOPES – SHA _/(60)(16.1345)(s^0.4 | (LLOV) = |
| | TOTAL $T_c = 1.7$ | + 2.1 + 0.5 = 4.3 r | minu |
| • | FOR $T_c = 4.3$ mi $i_{25} = 11.35$ in/hi $i_{100} = 14.64$ in/h | n.: f ir | |
| <u>undi</u> | <u>sturbed area</u> 2.09 acres | | |
| • • | FINISHED SURFACE RUNOFF COEFFICIE MANNING'S ROUGH | E = UNDEVELOPED PA ENTS: C ₂₅ =0.42 INESS COEFFICIENT: n | STUF, C ₁₀ =0.1 |
| <u>time</u> | OF CONCENTRATIC |) <u>n</u> Storm water flow f | ROM |
| | SHEET FLOW - F T _{t1} = [| IRST_100' (0.007)(nL)^0.8]/(p,^0 | 0.5)(s^ |
| | SHALLOW CONCEN $T_{t_2} = L$ | TRATED FLOW – LAST _/(60)(16.1345)(s^0.4 | 32C) = |
| | TOTAL $T_c = 5.5$ | + 1.1 = 6.6 minutes | , |
| • | FOR $T_c = 6.6$ mi $i_{25} = 10.48$ in/hi $i_{100} = 13.48$ in/h | n.: T | |
| • | TOTAL POST-DEVE $Q_{25} = CiA = (0.5)$ $Q_{100} = CiA = (0.5)$ | ELOPMENT RUNOFF 55)(11.35)(3.58) + (0 60)(14.64)(3.58) + (0 | .42) 0.49) |
| | PRE-DEV | ELOPED VS PO | ST- |
| | CONDITION | STORM EVENT | P |
| PF | KL-ULVLLOPED | 25-YEAR 25-year | |
| PF | RE-DEVELOPED | 100-YEAR | |
| PO | ST-DEVELOPED | 100-YEAR | <u> </u> |

FOR 100-YEAR EVENT, PEAK RUNOFF INCREAS MUST LIMIT Q TO 45.25 CFS.

KG,

NEW BRAUNFEL

HUECO SPRINGS

| ANGE, 5.1% SLOPE C ₁₀₀ =0.49 n=0.13 | | W | |
|--|-----------------------------------|---------------------------|---|
| FROM FURTHEST POINT | (820'): | | R R |
| ^0.5)(s^0.4)]*60 = 5.3 min T 720' 4) = 2.4 min. s | ٦. | ŗ | |
| 5.74 CFS 35.59 CFS | | | |
| AY AREA = 3.58 ACRES ONE BASE W/ 3" SURF C ₁₀₀ =0.60 1=0.016 | 5 Face Rock (<u>3</u> " to 1" |), 1.3% SLOPE | |
| ROM FURTHEST POINT C | OF THE STATION TO D | ISCHARGE AT THE T-CULY | vert at |
| 3" OF GRAVEL MEDIA - [0.5)(s^0.4)]*60 = 1.7 min | – SHEET FLOW | | |
| 3" of gravel media | – SHALLOW CONCENT | RATED FLOW: | |
| ÁLLOW CONCENTRATED I 4) = 0.5 min. | FLOW: | | |
| minutes | | | |
| | | | |
| ASTURE/RANGE, SLOPE C ₁₀₀ =0.49 1=0.13 | 4.7% | | |
| FROM FURTHEST POINT | (420'): | | |
| 0.5)(s^0.4)]*60 = 5.5 min | l. | | |
| 320') = 1.1 min. | | LEGEND | |
| 5 | - | PRE-DEVELOPMENT STORM W | ATER FLOW |
| | | POST-DEVELOPMENT OFF-SITE | E STORM WATER FLOW |
| | | | |
| (0.42)(10.48)(2.09) = 3 (0.49)(13.48)(2.09) = 4 | 1.55 CFS 45.25 CFS | | |
| ST-DEVELOPED | RUNOFF | | |
| PEAK RUNOFF 23.74 CFS | DIFFERENCE - | | |
| 31.55 CFS | 7.81 CFS | | |
| 45.25 CFS | 9.66 CFS | | |
| SE = 9.66 CFS. PONDS | AND DISCHARGE CON | ROLS | |
| LS UTILITIES | STORMWATE | | SCALE FOR 34×22 DWG 1" = $30'-0"$ |
| S SUBSTATION | | 1ARAUTERISTICS | DRAWING NO. |

HUECO SPRINGS SUBSTATION

YARD SURFACE LAYOUT

SCALE FOR 34 x 22 DWG 1" = 30' - 0"

DRAWING NO.

ROCK RIP RAP YARD ROCK CONCRETE PAVEMENT ASPHALT PAVEMENT Sound 1/2" Iron rod SET 1/2" IRON ROD

LEGEND

---- EASEMENT SETBACK

----- X ----- CHAIN LINK FENCE ----- CONCRETE FENCE - PL - PROPERTY BOUNDARY

----- EDGE OF GRADED PAD

NEW BRAUNFELS UTILITIES

HUECO SPRINGS SUBSTATION

SEDIMENT CONTROL LAYOUT

DRAWING NO. NBU-HS-047

SCALE FOR 34 x 22 DWG 1" = 30'-0"

LEGEND

NEW BRAUNFELS UTILITIES

HUECO SPRINGS SUBSTATION

GENERAL NOTES:

- <u>STONE SIZE</u> 3 TO 5 INCH OPEN GRADED ROCK.
- <u>LENGTH</u> AS EFFECTIVE, BUT NOT LESS THAN 100 FEET.
- THICKNESS NOT LESS THAN 6 INCHES. 3. 4. WIDTH- NOT LESS THAT FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- 5. <u>WASHING</u>-WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.
- 6. <u>MAINTENANCE</u> THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
- 7. <u>Drainage</u> Entrance Must be properly graded or INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

STABILIZED CONSTRUCTION ENTRANCE

SEDIMENT CONTROL DETAILS SCALE FOR 34 x 22 DWG N.T.S

DRAWING NO. NBU-HS-048

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|--------------------------|-----|------|---|----------|--|------|------------|-----|-----------------|
| JED TRUCTION -2024 | | | THE RELEASE OF THIS AUTHORIZ J. GREG GRUSENDORF | | THIS DOCUM RIZED BY: RUSENDORF #80199 3-2024 | | | | |
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| | | | | OXCENS | EUKK | DRWN | 10-09-24 | LLR | <u></u> |
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| Y | СНК | APPD | 1 | | | APPD | 12-03-2024 | JGG | NUMBER F-1594 |

SENERGY WERED BY SCHNEIDER ENGINEERING **TEXAS REGISTRATION NUMBER F-1594**

NEW BRAUNFELS UTILITIES

HUECO SPRINGS SUBSTATION

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|-----|----|-----|-----|---|
| | | | | |

NORTH DRIVEWAY DETAILS

SCALE FOR 34 x 22 DWG 1" = 10'-0"

DRAWING NO.

NBU-HS-049

22NBU6100

HUECO SPRINGS

| | CMP | ASPHALT (BY OTHERS) |
|-------------|---------|---------------------------------|
| S UTILITIES | CULVERT | scale for 34 x 22 dwg N.T.S. |
| SUBSTATION | DETAILS | drawing no. NBU-HS-051 |

22NBU6100

(SHOWING PIPE CULVERT DETAILS OF CONCRETE PIPE CULVERT ARE SIMILAR.)

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| 2 | • | | (|

THE RELEASE OF THIS DOCUMENT WAS AUTHORIZED BY: J. GREG GRUSENDORF P.E. #80199 12-03-2024 CENSES CENSES DATE BY RGY SZ WWW.SE-TEXAS.COM DRWN 09-25-24 LLR CHK 12-03-2024 RGG TEXAS REGISTRATION OWERED BY **SCHNEIDER ENGINEERING** NUMBER F-1594 APPD 12-03-2024 JGG **TEXAS REGISTRATION NUMBER F-1594**

HUECO SPRINGS SUBSTATION

-TRIMMED EDGE OF PIPE

NOTES:

REINFORCING STEEL SHALL BE PER ASTM A185 SPECIFICATION. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI. @ 28 DAYS. 3. THE TESTED SLUMP VALUE SHOULD BE NO GREATER THAN 5" FOR THE SLAB.

NEW BRAUNFELS UTILITIES

CULVERT END TREATMENT DETAILS

SCALE FOR 34 x 22 DWG N.T.S.

DRAWING NO. NBU-HS-052

| | Project Name:Hueco Springs Substation Date Prepared:9/20/2024 | ISS Removal Calculations 04-20-2009 |
|---|--|--|
| | er right corner. Place the cursor over the cell. /anual - RG-348 | Additional information is provided for cells with a red triangle in the Technical Order |
| | e fields will remove the equations used in the spreadsheet. | Characters shown in red are data entry fields. Characters shown in black (Bold) are calculated fields. Changes to |
| | om RG-348 Pages 3-27 to 3-30 | 1. The Required Load Reduction for the total project: |
| | | Page 3-29 Equation 3.3: LM =27.2(AN |
| | removal resulting from the proposed development = 80% of increased load i impervious area for the project | where: LM _{TOTAL PROJECT} =Required AN =Net incre |
| | I precipitation, inches | P =Average Site Data:Determine Required Load Removal Based on the Entire Project |
| | acres | County = Con Total project area included in plan * = 5,6 Predevelopment impervious area within the limits of the plan * = 0.0 |
| | acres | Total post-development impervious area within the limits of the plan* 3.5 Total post-development impervious cover fraction * 0.6 |
| | lincnes | P = <u>3</u> . LM _{TOTAL PROJECT} = 32 [.] |
| | | * The values entered in these fields should be for the total project area. |
| | | Number of drainage basins / outfalls areas leaving the plan area = 1 |
| | | 2. Drainage Basin Parameters (This information should be provided for each basin |
| : | acres | Drainage Basin/Outfall Area No. = 1 Total drainage basin/outfall area = 5,6 |
| | acres | Predevelopment impervious area within drainage basin/outfall area = 0.0 Post-development impervious area within drainage basin/outfall area = 3.6 Post-development impervious fraction within drainage basin/outfall area = 0.6 |
| | lbs. | LM _{THIS BASIN} = 32' |
| | | 3. Indicate the proposed BMP Code for this basin. Proposed BMP =Sand Fill |
| | percent Aqualogic Cartridge Filter Bioretention | Removal efficiency = 89 |
| | Contech StormFilter Constructed Wetland | |
| | Grassy Swale Retention / Irrigation | |
| | Sand Filter Stormceptor Vegetated Filter Strips | |
| | Vortechs Wet Basin Wet Vault | |
| | <u>3MP Typ</u> e. | 4. Calculate Maximum TSS Load Removed (LR) for this Drainage Basin by the sele |
| | rainage area in the BMP catchment area | where: AC =Total Or |
| | a proposed in the BMP catchment area remaining in the BMP catchment area | AI =Impervio AP =Pervious |
| | acres | LR =TSS Loa |
| | acres | AI = 3.6 AP = 2.0 |
| | lbs | LR = 36 7 |
| | | |
| | | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area |
| | | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area Desired LM _{THIS BASIN} = 3482 |
| If any of th If any of th | | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area Desired LM _{THIS BASIN} = 3482 F = 0.95 |
| If any of th If any of th <u>16. Vegeta</u> | Calculations from RG-348 Pages 3-34 to 3-36 | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area Desired LM _{THIS BASIN} = 3482 F = 0.95 6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall |
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| If any of th If any of th <u>16. Vegeta</u> There are The 80% ro the sheet across 50 | Calculations from RG-348 Pages 3-34 to 3-36 | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area Desired LMTHIS BASIN = 3482 F = 0.95 6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall Rainfall Depth = 2.60 Post Development Runoff Coefficient = 0.44 On-site Water Quality Volume = 23771 |
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| If any of the 16. Vegetation There are it The 80% right the sheet of across 500 If vegetation 17. Wet Val First calculated If a bypasse Calculated 18. Permeat PERMEAB 19. BMPs I | Calculations from RG-348 Pages 3-34 to 3-36 hes ide feet RG-348 Pages 3-36 to 3-37 res ide feet ide feet<td>5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area Desired LM_{Intes basin} = 3482 F = 0.35 5. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall Rainfall Depth = 2.60 Post Development Runoff Coefficient = 0.44 On-site Water Quality Volume = 23771 Calculations Off-site area draining to BMP = 0.00 Off-site Impervious cover draining to BMP = 0.00 Off-site Impervious cover draining to BMP = 0.00 Off-site Runoff Coefficient = 0.00 Required Water Quality Volume for retention basin = NA NA S. Extended Detention Basin System Water Quality Volume for coefficient = 0.01 Maximum sedimentation basin area = 10201 Maximum sedimentation basin area = 2071 S. B. Partial SedImentation and Filtration System Vater Quality Volume for combined basins = 28525 Kinimum filter basin area = 2071</td> | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area Desired LM _{Intes basin} = 3482 F = 0.35 5. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall Rainfall Depth = 2.60 Post Development Runoff Coefficient = 0.44 On-site Water Quality Volume = 23771 Calculations Off-site area draining to BMP = 0.00 Off-site Impervious cover draining to BMP = 0.00 Off-site Impervious cover draining to BMP = 0.00 Off-site Runoff Coefficient = 0.00 Required Water Quality Volume for retention basin = NA NA S. Extended Detention Basin System Water Quality Volume for coefficient = 0.01 Maximum sedimentation basin area = 10201 Maximum sedimentation basin area = 2071 S. B. Partial SedImentation and Filtration System Vater Quality Volume for combined basins = 28525 Kinimum filter basin area = 2071 |
| If any of the If any of the If any of the If a 80% retrieved to across 50 If vegetative 17. Wet Val First calculate If a bypass Calculate of 18. Permea PERMEAB 19. BMPs J | . Calculations from RG-348 Pages 3-34 to 3-36 hes ide feet RG-348 Pages 3-36 to 3-37 es es ide feet ide faet id | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area 3482 F = 0.35 6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall Rainfall Depth = 2.60 Post Development Runoff Coefficient = 0.44 On-site Water Quality Volume = 23771 Calculations Off-site area draining to BMP = 0.00 Off-site Impervious fraction of off-site area = 0 0 Off-site Runoff Coefficient = 0.00 0ff-site Runoff Coefficient = 0.00 Off-site Runoff Coefficient = 0.00 0ff-site Runoff Coefficient = 0.00 Off-site Runoff Coefficient = 0.00 0ff-site Water Quality Volume = 0 Off-site Runoff Coefficient = 0.00 0ff-site Water Quality Volume = 0 Off-site Runoff Coefficient = 0.00 Off-site Water Quality Volume = 0 Poster Development Coefficient = 0.00 Off-site Water Quality Volume(s) for the values of BMP Types not selected in cell C45 will show NA. 1 1 Total Capture Volume (required water Quality Volume for retention basin = NA NA NA Required Mater Quality Volume for extended detention basin NA |
| If any of the 16. Vegetat There are in the sheet of across 500 If vegetathe 17. Wet Val First calculate of a 18. Permera PERMEAB 19. BMPs J | Calculations from RG-348 Pages 3-34 to 3-36 hes abc feet abc feet abc feet abc feet bac feet foor maximum water depth of 2 feet bac feet feor maximum water depth of 2 feet bac feet foor maximum water depth of 8 feet | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area 3482 F = 0.95 6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall Rainfall Depth = 2.60 Post Development Runoff Coefficient = 0.44 On-site Water Quality Volume = 23771 Calculate Capture Volume required by the BMP Type for this drainage basin / outfall Post Development Runoff Coefficient = 0.44 On-site Water Quality Volume = 0.00 Off-site Impervious fraction of off-site area = 0 Off-site Runoff Coefficient = 0.00 Storage for Sediment = 1754 Total Capture Volume (required water quality volume(s) tot reating tot wolw A. |
| If any of th 16. Vegetat There are if The 80% re the sheet f across 50 If vegetat 17. Wet Va First calcu- If a bypass Calculate f 18. Permea PERMEAB 19. BMPs I | Calculations from RG-348 Pages 3-34 to 3-36 hes | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area 3482 F = 0.95 6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall Rainfall Depth = 2.60 Post Development Runoff Coefficient = 0.00 Off-site area draining to BMP = 0.00 Off-site area draining to BMP = 0.00 Off-site area draining to BMP = 0.00 Off-site area draining to BMP = 0.00 Off-site area draining to BMP = 0.00 Off-site area draining to BMP = 0.00 Off-site area draining to BMP = 0.00 Off-site area draining to BMP = 0.00 Off-site Autor draining to BMP = 0.00 Off-site Memorious cover draining to BMP = 0.00 Off-site Nature draining to BMP = 0.00 Off-site Memorious fraction of off-site area draining to BMP = 0.00 Off-site Nature duality volume(s) x1.20 = 28525 The following sections are used to calculations: NA NA NA Required Water Quality Volume for retention basin = NA NA Settended Detention Basin System Designed as NA Settended Detention Basin System NA NA Settended Detention Basin System |
| If any of th 16. Vegetal There are 1 The 80% re the sheet 1 across 50 If vegetalth 17. Wet Val First calcu- If a bypass Calculate 1 18. Permea PERMEAB 19. BMPs J | Calculations from RG-348 Pages 3-34 to 3-36 hes | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area 3482 F = 0.95 6. Calculate Capture Volume regulated by the BMP Type for this drainage basin / outfall Rainfall Depth = 0.04 Post Development Runoff Coefficient = 0.04 0.04 0.04 Orf-site Development Runoff Coefficient = 0.00 0.01 0.01 0.00 Off-site Impervious cover draining to BMP = 0.00 0.00 0.01 0.00 0.01 0.00 |
| If any of the 16. Vegetate There are The 80% r the sheet across 50 If vegetathe 17. Wet Val First calcu- If a bypass Calculate for 18. Permea PERMEAB 19. BMPs J | Calculations from RG-348 Pages 3-34 to 3-36 hes | 5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area 3482 F = 0.95 6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall Rainfall Depti = 2.00 Post Development Runoff Coefficient = 0.04 0.44 On-site Water Quality Volume = 23771 Calculations 0.00 0ff-site area draining to BMP = 0.00 Off-site Runoff Coefficient = 0.00 0.01 0.00 0.01 Off-site Runoff Coefficient = 0.00 0.01 0.01 0.00 0.01 0.00 |

BY CHK APPD NO DATE

REVISION

NO DATE 22NBU6100 REVISION

| Constructed Wetlands | Designed a | is Required in RG-348 | Pages 3-71 to 3-73 | |
|---|----------------------------|---|--|--|
| Required Water Quality Volume for Constructed Wetlands = | NA | cubic feet | | |
| Anual agieTM Carteidao Sustam | Designed | Poquirad in PC 249 | Pages 2 74 to 2 79 | |
| 105 Technical Guidance Manual (RG-348) does not exempt the required | I 20% Incre | ase with maintenance | e contract with AquaLogit | |
| Required Sedimentation chamber capacity = Filter canisters (FCs) to treat WQV = | NA NA | cubic feet cartridges | | |
| Filter basin area (RIAF) = Stormwater Management StormFilter® by CONTECH | NA | square feet | | |
| Required Water Quality Volume for Contech StormFilter System = | NA | cubic feet | | |
| SIZING REQUIREMENTS FOR THE FOLLOWING BMPs / LOAD REMO | VALS ARE | BASED UPON FLOW | V RATES - NOT CALCULATED WATER QUALITY VOL | U <u>ME</u> S |
| Grassy Swales | Designed a | as Required in RG-348 | Pages 3-51 to 3-54 | |
| Drainage Area to be Treated by the Swale – A – | F | 670000 | | |
| Impervious Cover in Drainage Area Impervious Cover in Drainage Area Rainfall intensity = i = | 3 | 3.58acres 1.1in/hr | | |
| Swale Slope = Side Slope (z) = Design Water Depth = y = | (| 3).33ft | | |
| weighted Kunon Coentident = C = | ι | 1.59 | | |
| ACS = cross-sectional area of flow in Swale PW = Wetted Perimeter = RH = hydraulic radius of flow cross-section = ACS/PW | = 10 31 /= 0 |).27sf 1.93feet).32feet | | |
| n = Manning's roughness coefficient = | = | 0.2 | | |
| Mapping the method becomed in the Key etc. | | | | |
| manning's Equation: $Q = 1.49$ ACS RH S ⁴³ n | | | | |
| $b = 0.134 \times Q - zy$ | = 29 | 9.82feet | | |
| y.₀7 S ^{0.5} Q = CiA = | 3 | 3.67cfs | | |
| alculate the flow velocity in the swale: | | | | |
| V (Velocity of Flow in the swale) = Q/ACS | = (|).36ft/sec | | |
| L = Minimum Swale Length = V (ft/sec) * 300 (sec) = | 107 | 7.24feet | | |
| If any of the resulting values do not meet the design requiremer | nt set forth in | n RG-348, the design pa | parameters must be modified and the solver rerun. | |
| Alternative Method using Excel Solver | | | | To solve for bottom width of the trapezoidal swale (b) using the Excel solver: Excel can simultaneously solve the "Design Q" (C217) vs "Manning's Q" (C219) by varying the "Swale Width" (C220). The required "Swale Width" occurs when the "Design Q" = "Manning's Q" |
| Design Q = CiA = | 3 | 3.67cfs | From 4 - 200 | First, highlight Cell F219 (Error 1 value). The equation showing in the fx screen for Cell F219 should be "= \$C\$217-\$C\$219" |
| Swale Width= | 6 | 5.00ft | 2.92 | The value in the "By Changing Cells" should be \$F\$219 "Error 1 =" Click on active the "By Changing Cells" should be \$C\$220 "Swale Width" |
| Instructions are provided to the right (green comments). | | | | Click on solve. The resulting "Swale Width" must be less than 10 feet to meet the requirements of the TGM. |
| Flow Velocity Minimum Length = | 0.36ft 107.24ft | /s | | If there is not the option for "Solver" under "Tools" |
| Instructions are provided to the right (blue comments). | | | | Click on "Tools" and "Add Ins" and then check "Solver Add-in" Then proceed as instructed above. |
| Design Width = Design Discharge = Design Depth = | 6ft 0.76c 0.33ft | fs | Error 2 = 2.92 | If you would like to increase the bottom width of the trapezoidal swale (b): Excel can simultaneously solve the "Design Q" (C217) vs "Design Discharge" (C232) by varying the "Design Depth" (C233). The required "Design Depth" for a 10-foot bottom width occurs when the "Design Q" (C217) = the "Design Discharge" (C232). |
| Flow Velocity = Minimum Length = | 0.32c 97.48ft | fs | | First set the desired bottom width in Cell C231. Highlight Cell F232 The equation showing in the fx screen for Cell F232 should be "= \$C\$217.\$C\$232" |
| esulting values do not meet the design requirement set forth in RG esulting values still do not meet the design requirement set forth in | -348, the c n RG-348, v | design parameters m widening the swale b | nay be modified and the solver rerun. bottom value may not be possible. | Click on "Tools" and "Solver". The "Solver Parameters" screen pops up. |
| Filter Strips Desig | ined as Re | quired in RG-348 | Pages 3-55 to 3-57 | The value in the "By Changing Cells" should be \$C\$233 "Design Depth" Click on solve. |
| calculations required for determining the load or size of vegetative eval is provided when the contributing drainage area does not exce leaving the impervious cover is directed across 15 feet of engine | eed 72 feet ered filter | es. t (direction of flow) a strips with maximum | and n slope of 20% or | The resulting "Design Depth" must be equal to or less than 0.33 feet to meet the requirements of the TGM. If the resulting "Design Depth" exceeds 0.33 feet then the design parameters must be revised and the solver run again. |
| of natural vegetation with a maximum slope of 10%. There can be Iter strips are proposed for an interim permanent BMP, they may b | e a break i be sized as | n grade as long as n s described on Page | no slope exceeds 20%. 3-56 of RG-348. | First set the desired bottom width in Cell C231. Highlight Cell F232. The equation showing in the fx screen for Cell F232 should be "= \$C\$217-\$C\$232" Click on "Tools" and "Solver". The "Solver Parameters" screen pops up. |
| Desir | ined as Re | quired in RG-348 | Pages 3-30 to 3-32 & 3-70 | The value in the "Set Target cell" should be \$F\$232 |
| Required Load Removal Based upon Equation 3.3 = | NA I | bs | | The resulting "Design Depth" must be equal to or less than 0.33 feet to meet the requirements of the TGM. |
| the load removal at 1.1 in/hour | | | | n are resulting besign beptill exceeds 0.33 reet then the design parameters must be revised and the solver run again. |
| KG-348 Page 3-30 Equation 3.4: Q = CiA C = runoff coefficient for the drainage area = | 0.45 | C = Rund | off Coefficient = 0.546 (IC) + 0.328 (IC) + 0.03 | |
| i = design rainfall intensity = A = drainage area in acres = | 1.1in 1a | n/hour cres | | |
| Q = flow rate in cubic feet per second = R_{C-248} Page 2.24 Equation 2.51 V/OD = 0.44 | 0.50c | ubic feet/sec | | |
| رم-عبة حمية حريمة Equation 3.5: VUR = Q/A Q = Runoff rate calculated above = | 0.50c | ubic feet/sec | | |
| A = Water surface area in the wet vault = VOR = Overflow Rate = | 150so | quare feet | | |
| Percent TSS Removal from Figure 3-1 (RG-348 Page 3-31) = | 53p | ercent | | |
| Load removed by Wet Vault = #v | ALUE! I | bs | | |
| curs at a raintall intensity of less than 1.1 in/hours efficiency reduction for the actual rainfall intensity rate | | | | |
| Actual Rainfall Intensity at which Wet Vault bypass Occurs = Fraction of rainfall treated from Figure 3-2 RG-348 Page 3-32 = | 0.5ir 0.75p | n/hour ercent | | |
| Efficiency Reduction for Actual Rainfall Intensity = | 0.83p | ercent | | |
| Consiste | | | Decc- 0.704 - 0.00 | |
| CONCRETE MAY ONLY BE USED ON THE CONTRIBUTING ZONE | jned as Re | quirea in RG-348 | Pages 3-79 to 3-83 | |
| alled in a Series Desig | jned as Re | quired in RG-348 | Pages 3-32 | |
| Michael E. Barrett, Ph.D., P.E. recommended that the coefficient | for E2 be o | changed from 0.5 to | 0.65 on May 3, 2006 | |
| EIUI = [1 - ((1 - E1) X (1 - 0.65E2) X (1 - 0.25E3))] X 100 = EFFICIENCY OF FIRST BMP IN THE SERIFS = F1 = | 86.38p 75.00p | ercent NET EFF | -ICIENCY OF THE BMPs IN THE SERIES | |
| EFFICIENCY OF THE SECOND BMP IN THE SERIES = E2 = | 70.00p | ercent | | |
| EFFICIENCY OF THE THIRD BMP IN THE SERIES = E3 = | 0.00p | ercent | | |

| THE | RELEASE Al J. GR | E OF 1 JTHO EG G P.E. 12-0 | THIS DOCUMENT RIZED BY: RUSENDORF #80199 03-2024 | WAS |
|-----|------------------------|--|--|-----|
| | | | | |

| WWW SE-TEXAS COM | BY | DATE | | |
|--------------------|-----|------------|------|--|
| | LLR | 08-07-24 | DRWN | |
| TEXAS REGISTRATION | RGG | 12-03-2024 | СНК | |
| NUMBER F-1594 | JGG | 12-03-2024 | APPD | |

NEW BRAUNFELS UTILITIES

HUECO SPRINGS SUBSTATION

THEREFORE, THE NET LOAD REMOVAL WOULD BE: (AI AND AP VALUES ARE FROM SECTION 3 ABOVE)

| | | LR = ETOT X P X (AI X 34.6 X AP X0.54) = | 3562.8 | 7lbs |
|---------------|---------------|--|------------|-----------------|
| | | | | |
| 20. Stormcept | or | | | |
| ••• | | Required TSS Removal in BMP Drainage Area= | NA | bs |
| | | Impervious Cover Overtreatment= | 0.0000 | ac |
| | | TSS Removal for Uncaptured Area = | 0.00 | lbs |
| | BMP Sizing | | | |
| | | Effective Area = | | EA |
| | Actual M | odel Size (if multiple values provided in Calculated | #N/A | |
| | Mode | Size or if you are choosing a larger model size) = | 0 | Model Size |
| | | · · · · · · · · · · · · · · · · · · · | Č | |
| | | Surface Area = | #N/A | ft ² |
| | | Overflow Rate = | #VALUE! | Vor |
| | | Rounded Overflow Rate = | #VALUE! | Vor |
| | | BMP Efficiency % = | #VALUE! | % |
| | | LR Value = | #VALUE! | lbs |
| | | TSS Load Credit = | #VALUE! | lbs |
| | Is Sufficient | Treatment Available? (TSS Credit_> TSS Uncapt.) | #VALUE! | |
| | | TSS Treatment by BMP (LM + TSS Uncapt.) = | #VALUE! | |
| 24 Venteeb | | | | |
| 21. vortech | | Required TSS Removal in BMP Drainage Area= | NA | lbs |
| | | Impervious Cover Overtreatment= | 0.0000 | ac |
| | | TSS Removal for Uncaptured Area = | 0.00 | lbs |
| | BMP Sizing | | | |
| | | Effective Area = Calculated Model Size(s) = | NA #N/A | EA |
| | | | | |
| | ŀ | ctual Model Size (if choosing larger model size) = | Vx1000 | Pick Model Size |
| | | Surface Area = | 7.10 | ft ² |
| | | Overflow Rate = | #VALUE! | Vor |
| | | Rounded Overflow Rate = | #VALUE! | Vor |
| | | BMP Efficiency % = | #VALUE! | % |
| | | LR Value = | #VALUE! | lbs |
| | | TSS Load Credit = | #VALUE! | lbs |
| | Is Sufficient | Treatment Available? (TSS Credit_> TSS Uncapt.) | #VALUE! | |
| | | TSS Treatment by BMP (LM + TSS Uncapt.) = | #VALUE! | |
| | | | | |

SCALE FOR 34 x 22 DWG N.T.S.

TSS CALCULATIONS WORKSHEET

DRAWING NO. NBU-HS-053

| D UCTI 024 | ON | |
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| | 12-03-2024 | | | | |
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| | DATE | ΒY | WWW SE-TEXAS COM | | |
| RWN | 08-09-24 | LLR | | | |
| CHK | 12-03-2024 | RGG | TEXAS REGISTRATION | | |
| PPD | 12-03-2024 | JGG | NUMBER F-1594 | | |

| E | S | UT | ΊL | ITI | ES | |
|---|---|----|----|-----|----|--|
| | | | | | | |

100-YR FLOODPLAIN LAYOUT

scale for 34 x 22 dwg 1" = 96'-0"

DRAWING NO.

NBU-HS-054

LEGEND 600 ---- PROPOSED ELEVATION (TOP OF FLEX BASE) — — EASEMENT SETBACK ------ EDGE OF GRADED PAD ---- PL ---- PROPERTY BOUNDARY CITTING CORRUGATED METAL PIPE — WORK BY OTHERS 1% ANNUAL CHANCE FLOOD HAZARD 1% ANNUAL CHANCE FLOOD HAZARD

AREA OF UNDETERMINED FLOOD HAZARD

FLOODPLAIN SOURCE: FEMA OGC WEB MAPPING SERVICES (WMS) (08/12/2024)

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

|--|

Print Name

Electric Substations Manager

Title - Owner/President/Other

of New Braunfels Utilities

Corporation/Partnership/Entity Name

have authorized Lena Roha

Print Name of Agent/Engineer

of Schneider Engineering, LLC (d.b.a. SEnergy)

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:

Aug 9, 2024 Signature THE STATE OF Texas § County of Comal s BEFORE ME, the undersigned authority, on this day personally appeared <u>Jeffrey Morrics</u>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. 9 day of August GIVEN under my hand and seal of office on this 2024. NOTARY PUBLIC DAVID GORDON WINKLER David Cooden Winkler Typed or Printed Name of Notary Notary Public, State of Texas Comm. Expires 07-31-2025 Notary ID 129507568 7/31/2025 MY COMMISSION EXPIRES:

Application Fee Form

| Name of Proposed Regulated Entity: Hueco Springs Substation Regulated Entity: Location: 1603 River Road, New Braunfels, Texas 78132 Name of Customer: New Braunfels Utilities (NBU) Contact Person: Lena Roha Phone: (830) 249-3887 Customer Reference Number (if issued):CN 600522957 Regulated Entity Reference Number (if issued):RN | Texas Commission on Environme | | | |
|--|--|--------------------------------|------------------------------|------------------------|
| Regulated Entity Location: 1603 River Road, New Braunfels, Texas 78132 Name of Customer: New Braunfels Utilities (NBU) Contact Person: Lena Roha Phone: (830) 249-3887 Customer Reference Number (if issued):RN | Name of Proposed Regulated Entity: <u>Hueco Springs Substation</u> | | | |
| Name of Customer: New Braunfels Utilities (NBU) Contact Person: Lena Roha Phone: [830] 249-3887 Customer Reference Number (if issued):RN | Regulated Entity Location: 1603 R | iver Road, New Braunf | <u>els, Texas 78132</u> | |
| Contact Person: Lena Roha Phone: [830] 249-3887 Customer Reference Number (if issued):RN | Name of Customer: New Braunfel | s Utilities (NBU) | | |
| Customer Reference Number (if issued):CN 600522957 Regulated Entity Reference Number (if issued):RN | Contact Person: <u>Lena Roha</u> | Phor | ne: <u>(830) 249-3887</u> | |
| Regulated Entity Reference Number (if issued):RN Austin Regional Office (3373) Hays Travis San Antonio Regional Office (3362) Bexar Medina Comal Kinney Application fees must be paid by check, certified check, or money order, payable to the Texas Commission on Environmental Quality. Your canceled check will serve as your receipt. This form must be submitted with your fee payment. This payment is being submitted to: Austin Regional Office San Antonio Regional Office Mailed to: TCEQ - Cashier Overnight Delivery to: TCEQ - Cashier Revenues Section 12100 Park 35 Circle Mail Code 214 Building A, 3rd Floor P.O. Box 13088 Austin, TX 78753 Austin, TX 78711-3088 (512)239-0357 Site Location (Check All That Apply): Transition Zone Mater Pollution Abatement Plan, Contributing Zone Fee Due Plan: One Single Family Residential Dwelling Acres Water Pollution Abatement Plan, Contributing Zone \$ Plan: Non-residential 5.67 Acres \$ 5000 Sewage Collection System L.F. \$ Underground or Aboveground Storage Tank Facility Tanks <td< td=""><td>Customer Reference Number (if is</td><td>sued):CN <u>600522957</u></td><td></td><td></td></td<> | Customer Reference Number (if is | sued):CN <u>600522957</u> | | |
| Austin Regional Office (3373) Iravis Williamson San Antonio Regional Office (3362) Ivalde Bexar Medina Uvalde Comal Kinney Ivalde Application fees must be paid by check, certified check, or money order, payable to the Texas Commission on Environmental Quality. Your canceled check will serve as your receipt. This form must be submitted with your fee payment. This payment is being submitted to: Austin Regional Office San Antonio Regional Office Mailed to: TCEQ - Cashier Overnight Delivery to: TCEQ - Cashier Revenues Section 12100 Park 35 Circle Mailed to: TCEQ - Cashier Overnight Delivery to: TCEQ - Cashier P.O. Box 13088 Austin, TX 78753 Austin, TX 78711-3088 (512)239-0357 Site Location (Check All That Apply): Iransition Zone Plan: One Single Family Residential Dwelling Acres Vater Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks Plan: Non-residential 5.67 Acres \$ 5000 | Regulated Entity Reference Numb | er (if issued):RN | | |
| Hays ☐ Travis ☐ Williamson San Antonio Regional Office (3362) ☐ Uvalde ☐ Bexar ☐ Medina ☐ Uvalde ☐ Comal ☐ Kinney Application fees must be paid by check, certified check, or money order, payable to the Texas Commission on Environmental Quality. Your canceled check will serve as your receipt. This form must be submitted with your fee payment. This payment is being submitted to: ☐ Austin Regional Office ☐ San Antonio Regional Office ☐ Mailed to: TCEQ - Cashier ☐ Overnight Delivery to: TCEQ - Cashier Revenues Section 12100 Park 35 Circle Mail Code 214 Building A, 3rd Floor P.O. Box 13088 Austin, TX 78753 Austin, TX 78711-3088 (512)239-0357 Site Location (Check All That Apply): ☐ ☑ Recharge Zone ☐ Contributing Zone ☐ Plan: One Single Family Residential Dwelling Acres \$ Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential \$ Plan: Multiple Single Family Residential and Parks Acres \$ Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential \$ Plan: Non-residential \$ </td <td>Austin Regional Office (3373)</td> <td></td> <td></td> <td></td> | Austin Regional Office (3373) | | | |
| San Antonio Regional Office (3362) Bexar Medina Uvalde Comal Kinney Application fees must be paid by check, certified check, or money order, payable to the Texas Commission on Environmental Quality. Your canceled check will serve as your receipt. This form must be submitted with your fee payment. This payment is being submitted to: Austin Regional Office San Antonio Regional Office Mailed to: TCEQ - Cashier Overnight Delivery to: TCEQ - Cashier Revenues Section 12100 Park 35 Circle Mail Code 214 Building A, 3rd Floor P.O. Box 13088 Austin, TX 78753 Austin, TX 78711-3088 (512)239-0357 Site Location (Check All That Apply): Transition Zone Recharge Zone Contributing Zone Transition Zone Plan: One Single Family Residential Dwelling Acres \$ Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks Acres \$ Plan: Multiple Single Family Residential and Parks Acres \$ \$ Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential 5.67 Acres \$ 5000 Sewage Collection System L.F. | Hays | Travis | w | illiamson |
| □ Bexar □ Medina □ Uvalde □ Comal □ Kinney Application fees must be paid by check, certified check, or money order, payable to the Texas Commission on Environmental Quality. Your canceled check will serve as your receipt. This form must be submitted with your fee payment. This payment is being submitted to: □ Austin Regional Office San Antonio Regional Office □ Mailed to: TCEQ - Cashier Overnight Delivery to: TCEQ - Cashier Revenues Section 12100 Park 35 Circle Mail Code 214 Building A, 3rd Floor P.O. Box 13088 Austin, TX 78753 Austin, TX 78711-3088 (512)239-0357 Site Location (Check All That Apply): Image: Contributing Zone □ Contributing Zone Image: Contributing Zone Plan: One Single Family Residential Dwelling Acres Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks Water Pollution Abatement Plan, Contributing Zone Sono Plan: Non-residential 5.67 Acres \$ 5000 Sewage Collection System L.F. \$ Lift Stations without sewer lines Acre | San Antonio Regional Office (336 | 2) | | |
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| form must be submitted with your fee payment. This payment is being submitted to: Austin Regional Office San Antonio Regional Office Mailed to: TCEQ - Cashier Overnight Delivery to: TCEQ - Cashier Revenues Section 12100 Park 35 Circle Mail Code 214 Building A, 3rd Floor P.O. Box 13088 Austin, TX 78753 Austin, TX 78711-3088 (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 Fee Due 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 5.67 Acres \$ 5000 Sewage Collection System L.F. \$ \$ \$ Underground or Aboveground Storage Tank Facility Tanks \$ \$ Piping System(s)(only) Each \$ \$ \$ Exception Each < | Commission on Environmental Q | uality. Your canceled o | check will serve as you | r receipt. This |
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| Underground or Aboveground Storage Tank FacilityTanks\$Piping System(s)(only)Each\$ExceptionEach\$Extension of TimeEach\$ | Lift Stations without sewer lines | | Acres | \$ |
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| Exception Each \$ | Piping System(s)(only) | | Each | \$ |
| Extension of Time Each \$ | Exception | | Each | \$ |
| | Extension of Time | | Each | \$ |

Signature: _____

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 | \$1,500 |
| | 5 < 10 | \$3,000 |
| | 10 < 40 | \$4,000 |
| | 40 < 100 | \$6,500 |
| | 100 < 500 | \$8,000 |
| | ≥ 500 | \$10,000 |
| Non-residential (Commercial, industrial, institutional, | < 1 | \$3,000 |
| multi-family residential, schools, and other sites | 1 < 5 | \$4,000 |
| where regulated activities will occur) | 5 < 10 | \$5,000 |
| | 10 < 40 | \$6,500 |
| | 40 < 100 | \$8,000 |
| | ≥ 100 | \$10,000 |

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

| Project | Fee |
|-------------------|-------|
| Exception Request | \$500 |

Extension of Time Requests

| Project | Fee |
|---------------------------|-------|
| Extension of Time Request | \$150 |

TCEQ 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 desc | cribe in space provided.) | |
|--|---------------------------------|--|
| | | |
| New Permit, Registration or Authorization (<i>Core Data I</i> | Form should be submitted with a | the program application.) |
| | | |
| Bonowal (Cara Data Form should be submitted with the | a rangual form) | Othor |
| Renewal (Core Data Form should be submitted with the renewal form) | | |
| | | |
| 2. Customer Reference Number (if issued) | Follow this link to soarch | 3. Regulated Entity Reference Number (if issued) |
| | | |
| | for CN or RN numbers in | |
| CN 600522957 | Central Registry** | BN |
| en | | |
| |] | |

SECTION II: Customer Information

| | | | | 1 | | | | | | | | | |
|---|---------------------|------------|-----------------|---------------------|-----------------------|------------|-------------|---------------|---------------|--------------|---------------|-----------------|-----------------|
| 4. General Cu | istomer In | formati | on | 5. Effectiv | e Date for C | ustome | er Inf | ormation | Update | es (mm/dd/ | уууу) | | 08-12-2024 |
| New Custor | mer | | U [] | pdate to Cust | omer Informa | ition | | Chan | ge in Re | egulated Ent | ity Owne | ership | |
| Change in Le | egal Name (| Verifiabl | e with the Te | kas Secretary | of State or Tex | kas Com | ptroll | ler of Public | Accour | nts) | | | |
| The Custome | r Name su | hmitter | there may | he undated | automatical | llv hase | nd on | what is a | urront | and active | with th | no Toyas Soci | retary of State |
| (SOS) or Texa | s Comptro | oller of F | Public Accou | ints (CPA). | uutomuticui | ly buse | uon | i what is c | anent | unu uttive | with th | ie iekus seci | etary of State |
| 6. Customer | Legal Nam | e (If an i | ndividual, prii | nt last name j | first: eg: Doe, . | lohn) | | | <u>If nev</u> | v Customer, | enter pre | evious Custom | er below: |
| NEW BRAUN | NFELS UTI | LITIES | | | | | | | | | | | |
| 7. TX SOS/CP | A Filing Nu | umber | | 8. TX State | e Tax ID (11 d | ligits) | | | 9. Fe | deral Tax I | D | 10. DUNS | Number (if |
| | | | | | | | | | | •••• | | applicable) | |
| | | | | 174600 ⁷ | 17837 | | | | (9 alg | (ITS) | | 0383461 | 694000 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 11. Type of C | ustomer: | | Corporat | tion | | | | 🗌 Individ | dual Partne | | ership: 🗌 Ger | ieral 🗌 Limited | |
| Government: | City 🗌 C | County [|] Federal 🗌 | Local 🗌 Sta | te 🗹 Other | | | 🗌 Sole Pr | oprieto | orship | 🗌 Ot | her: | |
| 12. Number o | of Employe | ees | | | | | | | 13. lı | ndepender | ntly Ow | ned and Op | erated? |
| | 21-100 F | 7 101-25 | 50 251 | 500 🗆 50 | 1 and highor | | | | | ne l | | | |
| | 21-100 | _ 101-2. | JU V 251- | JOO [] JO | | | | | | | | | |
| 14. Customer | r Role (Prop | oosed or | Actual) – as in | t relates to th | e Regulated E | ntity list | ed or | n this form. | Please d | check one of | the follo | owing | |
| Owner | | | erator | V | wner & Opera | ator | | | | - | | | |
| | al Licensee | Re | sponsible Par | rty 🗌 |] VCP/BSA App | olicant | | | | U Other: | | | |
| 15. Mailing | 263 MAIN PLAZA | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Address: | City | | | 2 | State | ТХ | | 7IP | 7912 | 0 | | 7IP + 4 | 78130-5135 |
| | enty | | | , | otate | | | | 1013 | 0 | | | |
| 16. Country Mailing Information (if outside USA) | | | USA) | | | 17. | . E-Mail Ac | ldress | (if applicabl | e) | | | |
| | | | | | | | | | | | | | |
| 18. Telephon | e Number | | | | 19. Extensio | on or C | ode | | | 20. Fax N | umber | (if applicable) | |

SECTION III: Regulated Entity Information

| 24. Company Description of Francisco | | | | | | | | |
|--|---|-------------------------|--------------------|-------------|--------------|---------------------------|---------|------------|
| 21. General Regulated En | itity informa | aπon (If 'New Regulated | d Entity" is selec | cted, a new | permit appli | cation is also required.) | | |
| New Regulated Entity | 🗹 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.) | | | | | | | | |
| HUECO SPRINGS SUBSTATION | | | | | | | | |
| 23. Street Address of 1603 RIVER ROAD | | | | | | | | |
| (No BO Boyes) | | | | 1 | | | ſ | |
| (INO PO BOXES) | City | NEW BRAUNFELS | State | ТХ | ZIP | 78132 | ZIP + 4 | 78132-4026 |
| 24. County | | | | | | | | |
| | If no Street Address is provided, fields 25-28 are required. | | | | | | | |
| 25. Description to | | | | | | | | |

| Physical Location: | | | | | | | | | |
|--|---------------------------|------------------------------------|--------------------------------------|------------------------------|-------------|--------------|----------------|----------|----------------|
| 26. Nearest City | | | | | | State | | Nea | rest ZIP Code |
| | | | | | | | | | |
| Latitude/Longitude are r used to supply coordinat | equired and es where n | d may be added/ one have been p | /updated to mee rovided or to gai | t TCEQ Core in accuracy). | Data Stand | ards. (Geoco | oding of the | Physical | Address may be |
| 27. Latitude (N) In Decim | al: | | | 28. | Longitude (| W) In Decim | al: | | |
| Degrees | Minutes | | Seconds | Degr | rees | Mi | nutes | | Seconds |
| | | | | | | | | | |
| 29. Primary SIC Code | 30 | . Secondary SIC | Code | 31. Prima | ary NAICS C | ode | 32. Second | dary NAI | CS Code |
| (4 digits) | (4 | digits) | | (5 or 6 dig | gits) | | (5 or 6 digit | s) | |
| 4911 | | | | 237130 | | | | | |
| 33. What is the Primary I | Business of | this entity? (Do | o not repeat the SIC | C or NAICS desc | cription.) | | | | |
| POWER SUBSTATION | | | | | | | | | |
| | 263 MAI | IN PLAZA | | | | | | | |
| 34. Malling | | | | | | | | | |
| Address: | City | NEW BRAUNF | ELS State | TX | ZIP | 78130 | | ZIP + 4 | 78130-5135 |
| 35. E-Mail Address: | | | | | | | | | |
| 36. Telephone Number | · | | 37. Extension o | or Code | 38. | Fax Number | (if applicable | ?) | |
| (830)608-8881 | | | | | (|) - | | | |

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 | D PWS |
| | | | | |
| Sludge | Storm Water | 🔲 Title V Air | Tires | Used Oil |
| | | | | |
| Voluntary Cleanup | UWastewater | Wastewater Agriculture | Water Rights | Other: |
| | | | | |

SECTION IV: Preparer Information

| 40. Name: | LENA ROHA | ۱. | | 41. Title: | |
|---------------|-----------|---------------|----------------|--------------|----------------------|
| 42. Telephone | Number | 43. Ext./Code | 44. Fax Number | 45. E-Mail A | Address |
| (830)249-3887 | • | (830)280-0625 | (830)249-5434 | LROHA@F | POWEREDBYSENERGY.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: | SCHNEIDER ENGINEERING, LLC d.b.a. SEnergy | Job Title: | | |
|------------------|---|------------|-----------------|------------|
| Name (In Print): | LENA ROHA | Phone: | (830) 249 3887 | |
| Signature: | | | Date: | 01/09/2025 |

Construction General Permit Stormwater Pollution Prevention Plan (SWP3) January 2025

Texas Pollutant Discharge Elimination Systems (TPDES)

Construction Stormwater General Permit (TXR150000)

Stormwater Pollution Prevention Plan (SWP3)

Company: Schneider Engineering d.b.a. SEnergy

Role: Engineer

Project Name: Hueco Springs Substation

Plan Date: 01/2025

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Certification Page

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 gather and evaluate 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sign as required by 30 TAC 305.128

Signed:

They proud

Date: 01/09/2025

Greg Grusendorf Senior Engineer

Primary Operators

Schneider Engineering d.b.a. SEnergy

New Braunfels Utilities

Site Description

Section 1

Nature of Construction and List of Pollutants

Part III, Sect. F.1. (a)

Description of the general nature of construction activities:

The project is located in the ETJ of the City of New Braunfels, TX located at 1603 River Road. Hueco Springs Substation will be a new power substation owned by New Braunfels Utilities (NBU). The substation property is approximately 5.34 acres and will consist of a shared yard with Lower Colorado River Authority (LCRA).

The nature of the project includes the installation of electrical switching components, conduit, overhead wires, transmission lines, and a control house all of which helps distribute power to the surrounding area.

Construction activities include land clearing and excavation activities for grading of the site and equipment foundations, establishing security measures, adding permanent driveways to access the adjacent roads, installing erosion and sediment controls, installing drainage structures, underground conduit placement, erecting steel structures and electrical equipment, and energization of the substation.

Part III, Sect. F.1. (b)

List of ALL potential pollutants and their sources:

| Potential Pollutants | Source |
|-------------------------------|-------------------------------------|
| Sediment to stormwater runoff | Soil on site |
| Fluids such as oil, gas, ect | Equipment and Construction Vehicles |

Construction Schedule

Part III Sect. F.1. (c)

Description of the intended schedule, or a sequence of the major activities that will be disturbing soil for the major portions of the site. Add or subtract rows as needed.

| Name of Operator | Phase of Project Projected dates Month/year | Activity Disturbing Soil clearing, excavation, etc. | Location on-site where activity will be conducted | Acreage being disturbed |
|------------------------|---|---|---|----------------------------|
| Lambda Construction | 04/2025 – 04/2025 | Clearing/Excavation | Majority of Property | 3.58 ac |
| Lambda Construction | 04/2025 – 05/2025 | Cut/Fill | Majority of Property | 3.58 ac |
| Lambda Construction | 05/2025 – 06/2025 | Pad Stabilization | Majority of Property | 3.58 ac |
| Lambda Construction | 06/2025 – 08/2025 | Foundations | Majority of Property | 3.58 ac |
| Lambda Construction | 08/2025 – 11/2025 | Equipment Installation | Majority of Property | 3.58 ac |
| Lambda Construction | 11/2025 – 11/2025 | Pad Finish | Majority of Property | 3.58 ac |

Acreage, Material Storage, and Soil Type

Part III, Sect. F.1. (d)

The total acreage of the entire property and the total acreage where construction activity will occur. Include off-site material storage areas, overburden and stockpiles of dirt or aggregates, and borrow areas.

| Material Storage | Material (s) | Acreage | Location |
|--|--|----------------------------------|------------------------------|
| Off-site | Select Fill | N/A | New Braunfels/San Antonio |
| On-site | Fat Clay, Limestone (Edwards Formation) | 5.67 ac | Inside Property Lines |
| Overburden/Stockpiles of Dirt | N/A | N/A | N/A |
| Borrow Areas | N/A | N/A | N/A |
| Other areas used as part of the project | N/A | N/A | N/A |
| Total acreage of project property: | 5.67 ac | Total acreage of disturbed soil: | 3.58 ac |

Part III Sect. F.1. (e)

Description of the soil type (e.g., loamy, clayey, sandy, rocky) or the quality of any discharge from the site.

The existing soil has been previously undeveloped and contains fat clay and Edwards limestone formation. Discharge from the station flows towards a culvert located beneath the south entrance driveway at the furthest downhill point of the station towards shared water treatment basin. Following treatment, discharge is released towards the Comal and Guadalupe Rivers.

Location Map

Part III Sect. F.1. (f)

Detailed Site Map(s)

Part III Sect. F.1.g (i)-(viii)

Site Description – Support Facilities

Part III Sect. F.1. (h)

A description of the activities and their locations of any asphalt plants, concrete batch plants or other activity supporting this construction site.

| Facility | Description | Location |
|----------------------|----------------------------|---------------------------|
| Concrete Batch Plant | Foundations for substation | New Braunfels/San Antonio |

Part III Sect. F.1. (i)

List of receiving waters at or near the site that will be disturbed or that will receive discharges from the project's disturbed areas.

| Name of Receiving | Will Receiving Water Be | Location of Receiving water |
|------------------------------|-------------------------|--|
| | Disturbed? | |
| Comal River, Guadalupe River | NO | Approximately 1.8 miles from project site to Comal River. Approximately 2.4 miles from project site to Guadalupe River. |

Copies of Construction General Permit (CGP) TXR150000 or description of location of CGP NOI, certificate, and/or site notice

Best Management Practices

Section 8

Best Management Practices (BMPs) Erosion and Sediment Controls

Part III Section F.2.a.(i)-(ii) and F.2. (c)

Description of Erosion and Sediment Controls designed to retain sediment. Add as many rows as needed.

| BMPs Installed | Location(s) On-Site | Inspection/Maintenance | Modifications/Replacement |
|-----------------------|----------------------|------------------------|---------------------------|
| | | Schedule | Activities |
| Sediment Control | Along southeast | Weekly | Remove and Replace as |
| Berm | property line | | needed |
| Stabilized | North entrance | Weekly | Remove and Replace as |
| Construction | driveway | | needed |
| Entrance | | | |
| Rock Rip Rap | Edge of pad of | Weekly | Remove and Replace as |
| | substation | - | needed |
| Concrete Washout | Towards southeast | Weekly | Remove and Replace as |
| Area | corner of substation | | needed |
| | pad | | |
| Culvert Pipes | Under north | Weekly | Remove and Replace as |
| | entrance from River | | needed |
| | Road and south | | |
| | entrance from | | |
| | Edwards Boulevard | | |

| Are there sedimentation basins or traps?* If yes, list the | Yes | No |
|---|----------------|----------------|
| measures taken to reduce the pollutants transported off-site by | | |
| pumping activities. | | |
| Prevention Measure | Location | Implementation |
| | On-Site | Date |
| N/A | N/A | N/A |

* Part III Section F.6. (c) Sediment must be removed from sediment traps and basins no later than the time that the design capacity has been reduced by 50 percent.

BMPs, Off-Site Transfer of Pollutant Controls

Part III Section F.2.a. (iii)

List of good housekeeping practices implemented to limit the off-site transport of litter, construction debris, and construction materials.

| Litter Controls: | | |
|----------------------------------|---|--|
| Good Housekeeping Activity | Location(s) On-Site | |
| Trash Bags | In Company Trucks | |
| Roll-Off Dumpster | Inside fenced substation perimeter | |
| Construction Debris Controls: | | |
| Good Housekeeping Activity | Location(s) On-Site | |
| Sediment Control Berm | Along southeast property line | |
| Stabilized Construction Entrance | North entrance driveway from River Road | |
| Rock Rip Rap | Around the Substation pad | |
| Construction Material Controls: | | |
| Good Housekeeping Activity | Location(s) On-Site | |
| Concrete Washout Area | Southeast corner of Substation Pad | |

BMPs, Stabilization and Erosion Control Practices

Part III Section F.2.b. (i)

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.

| Stabilization Practices | Location On-Site | Implementation Date | Interim or Permanent |
|-------------------------|------------------------|---------------------|----------------------|
| Pad Stabilization – 3" | Substation pad | 11/2025 | Permanent |
| top rock cover | | | |
| Rock Rip Rap | Edge of Substation pad | 05/2025 | Permanent |
| | | | |

Section 11

Dates of Major Grading Activities and Construction Stoppage

Part III Section F.2.b. (ii) (A)-(C), (iii-iv)

If you do not list activities below, either attach documentation or state where records for the activities can be accessed:

Documentation attached? Yes 🗌 No 🔀

Where can documentation be found (if not included in SWP3)? N/A Contact Person: N/A Phone Number: N/A

Dates when major grading activities will occur and locations on-site:

| Activity | Location | Dates when Activity is Scheduled |
|---|----------------|-------------------------------------|
| Clearing/Grubbing | Substation Pad | 04/2025 - 04/2025 |
| Site Grading (Cut/Fill & Compacting) | Substation Pad | 04/2025 - 05/2025 |
| Stabilization (Rock Rip Rap) | Substation Pad | 05/2025 - 06/2025 |
| Foundation Installation | Substation Pad | 06/2025 - 08/2025 |
| Equipment Installation/Structure Erection | Substation Pad | 08/2025 - 11/2025 |
| Pad Finish (Yard Rock) | Substation Pad | 11/2025 - 11/2025 |

Yes No

Yes No

Dates when construction activity will temporarily or permanently cease:

| Location on-site | Date activity is to be | Temporary or | Stabilization |
|------------------|------------------------|--------------|-----------------|
| | stopped | Permanent? | Initiation Date |
| Substation Pad | 11/2025 | Permanent | 11/2025 |

Section 12

Sediment Control Practices

Part III Section F.2. (c)

Will the project disturb 10 acres or more at one time?

If yes, is it feasible to install a sediment basin?

Calculate the volume of runoff from a 2-year, 24 hour storm event: 4.08 in

Volume of sediment basin: N/A - Sediment basin to be installed by larger development. Drainage from project site considered for basin size.

In determining feasibility have you considered (attach any additional justification in determining feasibility):

| Site Factor | Considered? | Site Factor | Considered? |
|--|-------------|-----------------------|-------------|
| Site Soils | Yes | Precipitation pattern | Yes |
| Slope | Yes | Site geometry | Yes |
| Available area | Yes | Site vegetation | Yes |
| Public safety | Yes | Geotechnical factors | Yes |
| Groundwater depth | Yes | Infiltration capacity | Yes |
| Other? (list): Surface rock on completed substation pad. | Yes | Other? (list) | |

Based on above information, sedimentation basin will \boxtimes be used OR \square is not feasible.

In addition to settlement ponds the following structural control practices that will be used:

| Article II. Structural Control | Used? Yes/No | Location On-Site |
|-------------------------------------|--------------|------------------|
| A series of smaller sediment basins | Yes 🗌 No 🔀 | N/A |

| Article II. Structural Control | Used? Yes/No | Location On-Site |
|---|--------------|-------------------------------------|
| Sediment Control Berm | Yes 🖾 No 🗌 | Along southeastern property line |
| Vegetative buffer strips | Yes 🗌 No 🔀 | N/A |
| Sediment traps | Yes 🗌 No 🔀 | N/A |
| Other (list): Rock Rip Rap | Yes 🛛 No 🗌 | Around Substation Pad |
| Other (list): Stabilized Construction Entrance | Yes 🛛 No 🗌 | North Entrance from River Road |

Permanent Stormwater Controls

Part III Section F.3

The following measures will be constructed to control post-construction runoff:

| Control Measure | Location on Project Site | Control runo <u>ff</u> from what areas |
|-----------------------------|--|---|
| Culvert Pipes | Under north and south entrance driveways | Upstream and inside Property boundary |
| Rock Rip Rap | Around Substation Pad | Inside Substation Area |
| Storm Water Retention Ponds | Downstream Off-Site | Inside Substation Area |

Section 14

Other Stormwater Controls

Part III Section F.4. (a)

Control to minimize dust generation and off-site tracking of sediment:

| Control Practice Used | Location(s) On-Site |
|-----------------------|--------------------------------------|
| Water | When needed on Construction Entrance |
| Gradation | Pad and Construction Entrance |

Part III Section F.4. (b)

The following construction and waste materials will be stored on-site:

| Materials Stored On-Site | Average Amount Stored | Location On-Site | Controls Used to Prevent Pollutants |
|--------------------------|--------------------------|------------------|--|
| N/A | N/A | N/A | N/A |

Other Stormwater Controls

Part III Section F.4. (c)- (d)

Describe pollutant sources from areas other than construction (make additional copies of this worksheet as needed):

| Type of pollutant source | Pollutant(s) | Control(s) or measure(s) used to minimize pollutants |
|--------------------------|--------------|---|
| N/A | N/A | N/A |

Describe the velocity dissipation devices that will be placed at discharge locations and/or along the length of any outfall channels:

| Dissipation Device (hay | Outfall Discharging to | <i>At Outfall or Channel</i> |
|------------------------------------|-----------------------------------|---|
| bales, silt fence, pond, | (MS4, bar ditch, | (distance interval for |
| etc.) | creek/stream) | channel) |
| Yard Surface Rock, Rock Rip Rap | Culvert under the south driveway. | To earthen channel towards water quality treatment basin |
Section 15

Inspection of Controls Worksheets/Report

Part III Section F.7.

Complete this worksheet every seven days; **OR**, every 14 days and within 24 hours of a 0.5 inch rainfall event, and retain in your SWP3.

| Inspector (name/title): | Inspection | Date: | Day: | Time: | am/pm |
|--|------------|------------|--------------|-------|-------|
| Scope of inspection: 14 Day Inspection | n 🗌 or | Weekly In | spection 🗌 |] | |
| Day of week normally conducted: | | 0.5 inch R | ainfall Evei | nt 🗌 | |

| Inspection Type: | Inspected? (Y/N) | Areas of Concern (Describe in detail in the narrative section) |
|-----------------------------|------------------|--|
| Disturbed Soil Areas | Yes No | |
| Material Storage Areas | Yes No | |
| Structural Controls | Yes No | |
| Sediment & Erosion Controls | Yes No | |
| Entrance(s) and Exit(s) | Yes No | |

Discharges:

| Nature of discharge (silt, gravel, sand, other pollutant) | Location on-site discharge |
|---|----------------------------|
| | |
| | |
| | |
| | |
| | |

Inspection of Controls Worksheets (contd.)

Part III Section F.7.

Best Management Practices Inspected: Add additional rows if needed.

| BMP and Location | OK (no action required) | BMP failed (describe failure) | Required Maintenance (describe corrective actions needed) |
|------------------|----------------------------|----------------------------------|--|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Additional BMPs Needed

| Location | Best Management Practice | Replacing Existing BMP? |
|----------|--------------------------|--------------------------------|
| | | |
| | | |
| | | |
| | | |

Inspection Narrative Description/Certification

Part III Section F.7.

Complete this worksheet every seven days; **OR**, every 14 days and within 24 hours of a 0.5 inch rainfall event and retain in your SWP3.

Describe the inspector's qualifications to conduct the inspections:

Describe how your inspection was conducted:

Describe all incidents of non-compliance (i.e. major discharges, BMP failures):

"I certify that the facility or site is in compliance with the stormwater pollution prevention plan and this permit."

I further certify that I am authorized to sign this report under TCEQ rules at 30 TAC 305.128 (relating to Signatories to Reports)

Name/Title:

Date:

Section 16

Eligible Non-Stormwater Discharges (listed in Part II.3. [a]-[h])

Part III, Sect. F.8

| Eligible Non-stormwater | Used? Yes/No | Pollution Prevention | Implementation |
|-----------------------------------|--------------|-----------------------------|----------------|
| Discharge | | Measure(s) | Date |
| Fire Fighting Activities | Yes No | N/A | N/A |
| Fire Hydrant Flushing | Yes No | N/A | N/A |
| Washing of Vehicles, Buildings, | Yes No | Rock Rip Rap, | 05/2025 |
| or Pavement without detergents or | | Stabilized | |
| soap (see description in Part | | Construction Entrance | |
| II.3.[c]) | | | |
| Dust Control | Yes No | Water, Stabilized | 05/2025 |
| | | Construction Entrance, | |
| | | Substation Pad | |
| Potable Water Sources (water line | Yes No | N/A | N/A |
| flushing) | | | |
| Air Conditioning Condensate | Yes No | N/A | N/A |
| Uncontaminated Ground/Spring | Yes No | N/A | N/A |
| Water | | | |
| Other? (List) | Yes No | N/A | N/A |

List any other non-stormwater discharge permitted by a separate NPDES, TPDES, or TCEQ Permit.

| Non-stormwater Discharge | Pollution Prevention | Implementation Date |
|--------------------------|----------------------|---------------------|
| | Measure | |
| | | |
| | | |
| | | |
| | | |
| | | |

Section 17

Stormwater Runoff from Concrete Batch Plants

Part IV

See Instructions for information regarding Concrete Batch Plants associated with Construction Projects.

Concrete is coming from offsite therefore Stormwater runoff is not a concern.

Section 18

Concrete Truck Washout Requirements

Part V

Location of concrete washout area on site and description of BMPs established to prevent the concrete wash out water from contributing to groundwater contamination or entering the waters of the state.

Concrete washout area is towards the southeastern corner of the substation pad. BMPs that prevent the concrete wash out water from contributing to groundwater contamination or entering the waters of the state include putting down plastic lining as well as having elevated berms in order to contain all water from the concrete wash out area. See project drawings for details.