CORRESPONDENCE COVER SHEET
WASTE PERMITS DIVISION
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Date:
Facility Name: Circle Lake Transfer Station
Permit or Registration No.:

Nature of Correspondence:
☒ Initial/New
☐ Response/Revision*

*If Response/Revision, please provide previous TCEQ Tracking No.:
(Previous TCEQ Tracking No. can be found in the Subject line of the TCEQ's response letter to your original submittal.)

This cover sheet should accompany all correspondences submitted to the Waste Permits Division and should be affixed to the front of your submittal as a cover page. Please check the appropriate box for the type of correspondence being submitted. For questions regarding this form, please contact the Waste Permits Division at (512) 239-2335.

Table 1 - Municipal Solid Waste

APPLICATIONS	REPORTS and RESPONSES
☒ New Notification	☐ Closure Report
☐ New Permit (including Subchapter T)	☐ Groundwater Alternate SRC Demonstration
☒ New Registration (including Subchapter T)	☐ Groundwater Corrective Action
☐ Major Amendment	☐ Groundwater Monitoring Report
☐ Minor Amendment	☐ Groundwater Statistical Evaluation
☐ Limited Scope Major Amendment	☐ Landfill Gas Corrective Action
☐ Notice Modification	☐ Landfill Gas Monitoring
☐ Non-Notice Modification	☐ Liner Evaluation Report
☐ Transfer/Name Change Modification	☐ Soil Boring Plan
☐ Temporary Authorization	☐ Special Waste Request
☐ Voluntary Revocation	☐ Other:
☐ Subchapter T Workplan	
☐ Other:	

Table 2 - Industrial & Hazardous Waste

APPLICATIONS	REPORTS and RESPONSES
☐ New	☐ Annual/Biennial Site Activity Report
☐ Renewal	☐ CfPT Plan/Result
☐ Post-Closure Order	☐ Closure Certification/Report
☐ Major Amendment	☐ Construction Certification/Report
☐ Minor Amendment	☐ CPT Plan/Result
☐ Class 3 Modification	☐ Extension Request
☐ Class 2 Modification	☐ Groundwater Monitoring Report
☐ Class 1 ED Modification	☐ Interim Status Change
☐ Class 1 Modification	☐ Interim Status Closure Plan
☐ Endorsement	☐ Soil Core Monitoring Report
☐ Temporary Authorization	☐ Treatability Study
☐ Voluntary Revocation	☐ Trial Burn Plan/Result
☐ 335.6 Notification	☐ Unsaturated Zone Monitoring Report
☐ Other:	☐ Waste Minimization Report
	☐ Other:

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

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

SECTION II: Customer Information

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

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

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

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

Circle Lake Transfer, LLC

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
080404465	32078929653	86-3552957	N/A

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other ☐ Sole Proprietorship ☒ Other: Limited liability company (LLC)

12. Number of Employees
☐ 0-20 ☒ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

13727 Office Park Drive

City	State	ZIP	ZIP + 4
Houston	TX	77070	

16. Country Mailing Information (*if outside USA*)

17. E-Mail Address (*if applicable*)
Jon@zters.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(832) 698-2203		(832) 698-2204

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected below this form should be accompanied by a permit application*)

☒ 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 Agency 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.*)

Circle Lake Transfer Station

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	34910 Circle Lake Drive							
	City	Pinehurst	**State**	TX	**ZIP**	77362	**ZIP + 4**	0
24. County	Montgomery							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	2,700 ft northeast on Circle Lake Drive from its intersection with TX-249/FM1774 (1,000 ft north of Aggie Expressway) Pinehurst, Montgomery County, Texas

26. Nearest City	**State**	**Nearest ZIP Code**
Magnolia	TX	77354

27. Latitude (N) In Decimal:	30.173144	**28. Longitude (W) In Decimal:**	-95.671292

Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	23	23.32	95	40	16.65

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
4212	4953	562111	

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

Type V MSW Transfer Station

34. Mailing Address:	**13727 Office Park Drive**							
	City	**Houston**	**State**	**TX**	**ZIP**	**77070**	**ZIP + 4**	

35. E-Mail Address:	**Jon@zters.com**

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** ***(if applicable)***
(832) 698-2203		**(832) 698-2204**

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☒ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Mr. Jeff Allen, Allen Engineering & Science	**41. Title:**	CEO & Principal

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(601) 955-8495		(601) 936-4463	jallen@allenes.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:	Circle Lake Transfer LLC	**Job Title:**	President
Name *(In Print):*	Shelby Lowe	**Phone:**	(214) 605- **2933**
Signature:		**Date:**	

Facility Name: Circle Lake Transfer Station
Permittee/Registrant Name: Circle Lake Transfer, LLC
MSW Authorization #:
Initial Submittal Date:
Revision Date:

Texas Commission on Environmental Quality

Part I Application Form for New Permit, Permit Amendment, or Registration for a Municipal Solid Waste Facility

1. Reason for Submittal

☒ Initial Submittal ☐ Notice of Deficiency (NOD) Response

2. Authorization Type

☐ Permit ☒ Registration

3. Application Type

☐ New Permit ☐ Permit Major Amendment ☐ Permit Major Amendment (Limited Scope)

☒ New Registration

4. Application Fees

Amount

☐ $2,050 for Permits and Permit Amendments ☒ $150 for Registrations

Payment Method

☒ Check ☐ Online through ePay portal <https://www3.tceq.texas.gov/epay/>

If paid online, enter ePay Trace Number:

5. Application URL

Is the application submitted for a Type I Arid Exempt (AE) or Type IV AE facility?

☐ Yes ☒ No

If the answer is "No", provide the URL address of a publicly accessible internet web site where the application and all revisions to that application will be posted.
http://**www.circlelaketransfer.com**

6. Application Publishing

Party Responsible for Publishing Notice:

☒ Applicant ☐ Agent in Service ☐ Consultant

Contact Name: **Mr. Shelby Lowe** Title: **President, Circle Lake Transfer LLC**

7. Alternative Language Notice

Is an alternative language notice required for this application? (For determination refer to Alternative Language Checklist on the Public Notice Verification Form TCEQ-20244-Waste)

☐ Yes ☒ No If it is determined that an alternate language notice is required, CLT shall ensure that the publication is in the applicable alternate language and is complete and accurate.

8. Public Place Location of Application

Name of the Public Place: **Montgomery County Commissioner Precinct No. 2**

Physical Address: **19910 Unity Park Drive**

City: **Magnolia** County: **Montgomery** State: **TX** Zip Code: **77355**

(Area code) Telephone Number: **281-259-6492**

9. Consolidated Permit Processing

Is this submittal part of a consolidated permit processing request, in accordance with 30 TAC Chapter 33?

☐ Yes ☒ No ☐ Not Applicable

If "Yes", state the other TCEQ program authorizations requested:

10. Confidential Documents

Does the application contain confidential documents?

☐ Yes ☒ No

If "Yes", cross-reference the confidential documents throughout the application and submit as a separate attachment in a binder clearly marked "CONFIDENTIAL."

11. Permits and Construction Approvals

Permit or Approval	Received	Pending	Not Applicable
Hazardous Waste Management Program under the Texas Solid Waste Disposal Act	☐	☐	☒
Underground Injection Control Program under the Texas Injection Well Act	☐	☐	☒
National Pollutant Discharge Elimination System Program under the Clean Water Act and Waste Discharge Program under Texas Water Code, Chapter 26	☐	☐	☒
Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA). Nonattainment Program under the FCAA	☐	☐	☒
National Emission Standards for Hazardous Air Pollutants Preconstruction Approval under the FCAA	☐	☐	☒
Ocean Dumping Permits under the Marine Protection Research and Sanctuaries Act	☐	☐	☒
Dredge or Fill Permits under the CWA	☐	☐	☒
Licenses under the Texas Radiation Control Act	☐	☐	☒
Other (describe) TPDES MSGP	☐	☒	☐
Other (describe)	☐	☐	☐
Other (describe)	☐	☐	☐
Other (describe)	☐	☐	☐

12. General Facility Information

Facility Name: Circle Lake Transfer Station

Contact Name: **Mr. Shelby Lowe** Title: **President**

MSW Authorization No. (if available): **To Be Assigned**

Regulated Entity Reference No. (if issued)*: RN**TBD**

Physical or Street Address (if available): **34910 Circle Lake Drive**

City: **Pinehurst** County: **Montgomery** State: **TX** Zip Code: **77362**

(Area Code) Telephone Number: **214-605-2933**

Latitude (Degrees, Minutes Seconds): **30° 10’ 23.32”**

Longitude (Degrees, Minutes Seconds): **95° 40’ 16.65”**

Benchmark Elevation (above mean sea level): **237.67**ft.

Provide a description of the location of the facility with respect to known or easily identifiable landmarks: **2,700 ft northeast on Circle Lake Drive from its intersection with TX-249/FM1774 (intersection is 1,000 ft north of Aggie Expressway).**

Detail access routes from the nearest United States or state highway to the facility: **2,700 ft northeast on Circle Lake Drive from its intersection with TX-249/FM1774 (intersection is 1,000 ft north of Aggie Expressway) Pinehurst, Montgomery County, Texas. Site located on deadend road so there is no other access.**

*If this number has not been issued for the facility, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Facility as the Regulated Entity.

13. Facility Type(s)

☐ Type I ☐ Type IV ☒ Type V

☐ Type I AE ☐ Type IV AE ☐ Type VI

14. Activities Conducted at the Facility

☒ Storage ☒ Processing ☐ Disposal

15. Facility Waste Management Unit(s)

☐ Landfill Unit(s)
☐ Class 1 Landfill Unit(s)
☐ Process Tank(s)
☒ Storage Tank(s)
☒ Tipping Floor
☒ Storage Area
☒ Container(s)
☒ Roll-off Boxes
☐ Surface Impoundment
☐ Incinerator(s)
☐ Autoclave(s)
☐ Refrigeration Unit(s)
☐ Mobile Processing Unit(s)
☐ Type VI Demonstration Unit
☐ Compost Pile(s) and/or Vessel(s)
☐ Other (specify):
☐ Other (specify):
☐ Other (specify)

16. Description of Proposed Facility or Changes to Existing Facility

Provide a brief description of the proposed activities if application is for a new facility, or the proposed changes to an existing facility or permit conditions if the application is for an amendment.

This is a registration application for a proposed new Type V MSW facility (transfer station)

17. Facility Contact Information

Site Operator (Permittee/Registrant) Name: Circle Lake Transfer, LLC

Customer Reference No. (if issued)*: CN**TBD**

Contact Name: **Shelby Lowe** Title: **President**

Mailing Address: **13727 Office Park Drive**

City: **Houston** County: **Harris** State: **Texas** Zip Code: **77070**

(Area Code) Telephone Number: **214-605-2933**

Email Address: **Shelby.L@zsites.com**

TX Secretary of State (SOS) Filing Number: **080404465**

*If the Site Operator (Permittee/Registrant) does not have this number, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Site Operator (Permittee/Registrant) as the Customer.

Operator Name[1]: Same as "Site Operator (Permittee/Registrant)"

Customer Reference No. (if issued)*: **TBD**

Contact Name: Title:

Mailing Address:

City: County: State: Zip Code:

(Area Code) Telephone Number:

Email Address:

TX SOS Filing Number:

[1]If the Operator is the same as Site Operator/Permittee type "Same as "Site Operator (Permittee/Registrant)".
*If the Operator does not have this number, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Operator as the customer.

Consultant Name (if applicable): Allen Engineering an Science, Inc.

Texas Board of Professional Engineers Firm Registration Number: **139569**

Contact Name: **Jeff Allen** Title: **President and Senior Engineer**

Mailing Address: **6360 I55 North**

City: **Jackson** County: **Hinds** State: **Mississippi** Zip Code: **39211**

(Area Code) Telephone Number: **601-936-4440**

Email Address: **jallen@allenes.com**

Agent in Service Name (required only for out-of-state): CT Corporation System

Mailing Address: **1999 Bryan Street, Suite 900**

City: **Dallas** County: **Dallas** State: **TX** Zip Code: **75201-3136**

(Area Code) Telephone Number: **214-979-1172**

Email Address: **ct-statecommunications@wolterskluwer.com**

18. Facility Supervisor's License

Select the Type of License that the Solid Waste Facility Supervisor, as defined in 30 TAC Chapter 30, Occupational Licenses and Registrations, will obtain prior to commencing facility operations.

☐ Class A ☒ Class B

19. Ownership Status of the Facility

☐ Corporation	☐ Limited Partnership	☐ Federal Government
☐ Individual	☐ City Government	☐ Other Government
☐ Sole Proprietorship	☐ County Government	☐ Military
☐ General Partnership	☐ State Government	☒ Other (specify): **LLC (limited liability company)**

Does the Site Operator (Permittee/Registrant) own all the facility units and all the facility property?

☐ Yes ☒ No

If "No", provide the information requested below for any additional ownership.

Owner Name: Ztopia LLC

Street or P.O. Box: **13727 Office Park Drive**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77070-2892**

(Area Code) Telephone Number: **832-698-2203**

Email Address: **Jon@Zters.com**

20. Other Governmental Entities Information

Texas Department of Transportation District: Houston

District Engineer's Name: **Eliza Paul, P.E.**

Street Address or P.O. Box: **7600 Washington Avenue**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77007**

(Area Code) Telephone Number: **713-802-5000**

Email Address:

The Local Governmental Authority Responsible for Road Maintenance (if applicable): Montgomery County Commission Precinct 2

Contact Person's Name: **JoAnne Moore**

Street Address or P.O. Box: **19110 Unity Park Drive**

City: **Magnolia** County: **Montgomery** State: **TX** Zip Code: **77355**

(Area Code) Telephone Number: **281-259-6492**

Email Address: **joanne.moore@mctx.org**

City Mayor Information

City Mayor's Name: **Not Applicable**

Office Address:

City: County: State: Zip Code:

(Area Code) Telephone Number:

Email Address:

City Health Authority:N/A

Contact Person's Name:

Street Address or P.O. Box:

City: County: State: Zip Code:

(Area Code) Telephone Number:

Email Address:

County Judge Information

County Judge's Name: **Mark J. Keough**

Street Address or P.O. Box: **501 North Thompson**

City: **Conroe** County: **Montgomery** State: **TX** Zip Code: **77301**

(Area Code) Telephone Number: **936-539-7812**

Email Address: **cojudge@mctx.org**

County Health Authority: Montgomery County Public Health District

Contact Person's Name: **Alicia Williams, MPH**

Street Address or P.O. Box: **1300 South Loop 336 West**

City: **Conroe** County: **Montgomery** State: **TX** Zip Code: **77304**

(Area Code) Telephone Number: **936-523-5025**

Email Address: **Not available**

State Representative Information

District Number: **District 3**

State Representative's Name: **Rep. Cecil Bell Jr.**

District Office Address: **18230 FM 1488 Ste. 302**

City: **Magnolia** County: **Montgomery** State: **TX** Zip Code: **77354**

(Area Code) Telephone Number: **281-259-3700**

Email Address: **Not available**

State Senator Information

District Number: **District 4**

State Senator's Name: **Honorable Brandon Creighton**

District Office Address: **2829 Technology Forest, Suite 240**

City: **The Woodlands** County: **Montgomery** State: **TX** Zip Code: **77381**

(Area Code) Telephone Number: **281-292-4128**

Email Address: **N/A**

Council of Government (COG) Name: HGAC - Houston-Galveston Area Council

COG Representative's Name: **Cheryl Mergo**

COG Representative's Title: **Manager, Community and Environmental Planning**

Street Address or P.O. Box: **3555 Timmons Lane, Suite 120 - (PO Box 22777 Zip 77227)**

City: **Houston** County: **Harris** State: **TX** Zip Code: **77027**

(Area Code) Telephone Number: **713-993-4520**

Email Address: **cheryl.mergo@h-gac.com**

River Basin Authority Name: San Jacinto River Authority

Contact Person's Name: **Jace Houston, General Manager**

Watershed Sub-Basin Name: **Spring Creek**

Street Address or P.O. Box: **1577 Dam Site Road**

City: **Conroe** County: **Montgomery** State: **TX** Zip Code: **77304**

(Area Code) Telephone Number: **936-588-3111**

Email Address:

Coastal Management Program

Is the facility within the Coastal Management Program boundary?

☐ Yes ☒ No

U.S. Army Corps of Engineers

The facility is located in the following District of the U.S. Army Corps of Engineers:

☐ Albuquerque, NM ☒ Galveston, TX

☐ Ft. Worth, TX ☐ Tulsa, OK

Local Government Jurisdiction

Within City Limits of: **None - Located in Pinehurst (Census designated area only) unicorporated area of Montgomery County, Precinct # 2 Commissioner Charlie Riley**

Within Extraterritorial Jurisdiction of: **N/A**

Is the facility located in an area in which the governing body of the municipality or county has prohibited the storage, processing or disposal of municipal or industrial solid waste?

☐ Yes ☒ No

If "Yes", provide a copy of the ordinance or order as an attachment.

Signature Page

I, Shelby Lowe, President,
(Site Operator (Permittee/Registrant)'s Authorized Signatory) (Title)

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.

Signature: _____ Date: 9/29/21

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

_____
Printed or Typed Name of Operator or Principal Executive Officer

_____
Signature

SUBSCRIBED AND SWORN to before me by the said Shelby Lowe
On this 29th day of September 2021
My commission expires on the 28th day of February, 2025

_____
Notary Public in and for
Harris County, Texas
(Note: Application Must Bear Signature & Seal of Notary Public)

Part I Attachments

(See Instructions for P.E. seal requirements.)

Required Attachments	**Attachment No.**
Supplementary Technical Report	**Part I/II Report**
Property Legal Description	**Part I/II Appendix B**
Property Metes and Bounds Description	**Part I/II Appendix B**
Facility Legal Description	**Part I/II Appendix B**
Facility Metes and Bounds Description	**Part I/II Appendix B**
Metes and Bounds Drawings	**Part I/II Appendix B**
On-Site Easements Drawing	**Part I/II Appendix B**
Land Ownership Map	**Part I/II PAR Engineering Drawing Set DWG13**
Land Ownership List	**Part I/II Appendix A and PAR Engineering Drawing Set DWG13**
Electronic List or Mailing Labels	**With Cover Letter**
Texas Department of Transportation (TxDOT) County Map	**Part I/II PAR Engineering**
Drawing Set	
General Location Map	**Part I/II PAR Engineering Drawing Set**
General Topographic Map	**art I/II PAR Engineering Drawing Set DWG3**
Verification of Legal Status	**Part I/II Appendix C**
Property Owner Affidavit	**Part I/II Appendix C**
Evidence of Competency	**Appendix I/IIE**
Additional Attachments as Applicable- Select all those apply and add as necessary	
☒ TCEQ Core Data Form(s)	**With Cover Letter**
☐ Signatory Authority Delegation	
☒ Fee Payment Receipt	**With Cover Letter**
☐ Confidential Documents	
☐ Waste Storage, Processing and Disposal Ordinances	
☒ Final Plat Record of Property	**Part I/II Appendix B**
☒ Certificate of Fact (Certificate of Incorporation)	**Part I/II Appendix C**
☐ Assumed Name Certificate	

Instructions for
Part I Application Form for New Permit, Permit Amendment, or Registration for a Municipal Solid Waste Facility

Form Availability

This form, as well as other Municipal Solid Waste (MSW) documents and rules are available on the TCEQ website site at <www.tceq.texas.gov/search_forms.html>. The number for this form is 0650. For further instructions regarding completion of this form, send an e mail to <mswper@tceq.texas.gov> or call 512-239-2335.

The original application and all copies for New Applications and Major Amendments should be submitted to:

Municipal Solid Waste Permits Section, MC 124
Waste Permits Division
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, Texas 78711-3087

Application Submittal

See 30 Texas Administrative Code (30 TAC) Section (§)305.43(c) for who can submit the application.

The complete application should be typewritten or printed neatly in black ink.

For a new permit/registration and major amendment to a permit application, submit:

1. The original application plus three (3) complete copies (prepared in accordance with 30 TAC §330.57) which includes:
   a. the TCEQ Core Data Form (See Attachment as applicable);
   b. the Application Table of Contents and Title Pages for Parts I, II, III, and IV shall be signed and sealed in accordance with 30 TAC §330.57(g)(2) & (3);
   c. the Application Part I Form;
   d. the Application Part I Form Attachments; and
   e. Parts II through IV
2. Include an electronic copy of a completed MSW Application Checklist, in Excel format, available on the TCEQ website at <www.tceq.texas.gov/goto/mswforms>.
3. If fee is paid by check, a check for payment of application fees transmitted directly to the TCEQ Financial Administration Division with a photocopy of the check included in the original application; and
4. Pre-printed mailing labels of the adjacent landowners or an electronic mailing list on a CD in Microsoft Word compatible format.

For all submittals, provide the Facility Name, Permittee/Registrant Name, MSW Authorization No., and dates in the form header. For initial submittals, leave "MSW Authorization No." in the form header blank.

For all notice of deficiency responses (NODs), (administrative and/or technical), submit the original plus three (3) copies of the response package which includes:

1. page 1 of this form to indicate that the submittal is for "Notice of Deficiency Response";
2. all revised pages of this form and/or attachments to Part I;
3. a new Signature Page; and
4. revised pages of Parts II through IV; and
5. marked (redline/strikeout) copy of the revised pages.

1. Reason for Submittal

Select **ONE** box that indicates if this form is being submitted in conjunction with an initial application or as part of an NOD response.

2. Authorization Type

Select **ONE** box that indicates the type of authorization sought.

3. Application Type

Select **ONE** box that indicates the application type for the submittal.

4. Application Fees

Amount

Check the box that indicates which fee was paid. The application fee for a new permit or permit amendment is $2,050. The application fee for a new registration is $150.

Payment Method

Check the box that indicates which method was used to pay the application fee.

Fees may be paid online using the TCEQ ePay portal at <https://www3.tceq.texas.gov/epay/> or may be paid by check. If payment is made online, enter the ePay trace number on the application form.

If a fee is paid by check, send the payment directly to the following address:

Financial Administration Division, MC 214
Texas Commission on Environmental Quality
P. O. Box 13088
Austin, Texas 78711-3088

5. Application URL

If the application is for a Type I AE and/or Type IV AE landfill, the URL address of a publicly accessible internet web site is **not** required.

For any other application and/or facility type, provide the URL address of a publicly accessible internet web site where the application and all revisions to that application will be posted.

6. Application Publishing

Select **ONE** box that indicates the party responsible for publishing all public notices for this application.

7. Alternative Language Notice

For certain permit, registration and amendment applications, public notice in an alternate language is required. If an elementary school or middle school nearest to the facility offers a bilingual program, notice may be required to be published in an alternative language. The Texas Education Code, upon which the TCEQ alternative language notice requirements are based, trigger a bilingual education program to apply to an entire school district should the requisite alternative language speaking student population exist. However, there may not exist any bilingual students at a particular school within a district which is required to offer the bilingual education program. For this reason, the requirement to publish notice in an alternative language is triggered if the nearest elementary or middle school, as a part of a larger school district, is required to make a bilingual education program available to qualifying students and either the school has students enrolled at such a program onsite, or has students who attend such a program at another location in satisfaction of the school's obligation to provide such a program as a member of a triggered district.

It is the burden of the applicant to demonstrate compliance with alternative language notice requirements. To assist you in meeting these requirements, the TCEQ Office of Chief Clerk will provide a Public Notice Verification Form (TCEQ-20244-Waste). You must follow instructions provided by the Office of Chief Clerk regarding completion and submittal of the Public Notice Verification Form indicating your compliance with the requirements regarding publication in an alternative language.

If it is determined that an alternative language notice is required, the applicant is responsible for ensuring that the publication in the alternate language is complete and accurate in that language. Electronic versions of the Spanish template examples are available from the TCEQ to help the applicant complete the publication in the alternative language.

More information about the Alternative Language Notice requirement and the Public Notice Verification Form are available on the TCEQ internet site at:

http://www.tceq.texas.gov/permitting/waste_permits/msw_permits/msw_notice.html.

8. Public Place Location of Application

Identify a public place in the county in which the facility is located or proposed to be located, at which a copy of the application will be available for review and copying (e.g. Public Library, Courthouse, City Hall).

9. Consolidated Permit Processing

For consolidated permit process, refer to 30 TAC Chapter 33.

10. Confidential Documents

The Commission has a responsibility to provide a copy of each application to other agencies and to interested persons upon request and to safeguard confidential material from becoming public knowledge. Thus, the Commission requests that the applicant (1) be prudent in the designation of material as confidential and (2) submit such material only when it might be essential to the staff in their development of a recommendation.

The Commission suggests that the applicant **NOT** submit confidential information as part of the permit or registration application. However, if this cannot be avoided, the confidential information should be described in non-confidential terms throughout the application, cross-referenced, and submitted as a separate document or binder, and clearly marked "CONFIDENTIAL."

Reasons of confidentiality include the concept of trade secrecy and other related legal concepts which give a business the right to preserve confidentiality of business information to obtain or retain advantages from its right in the information. This includes authorizations under, 18 U.S.C. 1905 and special rules cited in 40 CFR Chapter I, Part 2, Subpart B.

The applicant may elect to withdraw any confidential material submitted with the application. However, the permit cannot be issued, amended, or modified if the application is incomplete.

11. Permits and/or Construction Approvals

Select **ALL** permits or construction approvals received or applied for under any of the programs listed in this Section.

12. General Facility Information

Provide general facility information as listed under this Section. Facility name provided in this Section should match the Regulated Entity Name (Item #23) in the TCEQ Core Data Form.

If the Regulated Entity Reference Number has not been issued for the facility, complete a TCEQ Core Data Form and submit it with this application.

13. Facility Type

Select **ALL** boxes that apply to the facility. For facility types, refer to 30 TAC §330.5.

14. Activities Conducted at the Facility

Select **ALL** boxes that apply to the facility. For definitions of "storage, processing and disposal", refer to 30 TAC §330.3.

15. Facility Waste Management Units

Select **ALL** boxes that best describe the waste management units that will be authorized at the facility. If you are including other unit types, select "Other" and list them.

16. Description of Proposed Facility or Changes to Existing Facility

This section is only applicable for permit amendments. If the submittal is an amendment application, provide a brief description of the specific revisions to the permit conditions and supporting documents referenced by the permit. Also, provide an explanation of why the amendment is requested.

17. Facility Contact Information

Site Operator (Permittee/Registrant) Name

Enter Site Operator (Permittee/Registrant) information. Site Operator is defined in 30 TAC §330.3.

If the Site Operator (Permittee/Registrant) has filed with the Texas Secretary of State (SOS) as a Corporation, Limited Partnership or non-profit organization it will have been issued an SOS filing number which may be entered here. If the Site Operator (Permittee/Registrant) has not filed with the SOS, leave blank. Search for the SOS Filing number at: http://www.sos.state.tx.us/corp/sosda/index.shtml.

Operator Name

Enter Operator information. Operator is defined in 30 TAC §330.3.

If the Operator has filed with the SOS as a Corporation, Limited Partnership or non-profit organization it will have been issued an SOS filing number which may be entered here. If the Operator has not filed with the SOS, leave blank. Search for the SOS Filing number at: http://www.sos.state.tx.us/corp/sosda/index.shtml.

Consultant Name

Enter the consultant company's name and contact information responsible for the preparation of the application on behalf of the facility.

Agent in Service Name

If the application is submitted by a corporation or by a person residing out of state, the applicant must register an Agent in Service or Agent of Service with the Texas SOS office and provide a complete mailing address for the agent. The agent must be a Texas resident and the address provided for them should be within the State of Texas. Provide information if this is applicable for the facility. If not, enter "Not Applicable".

18. Facility Supervisor's License

Select the Type of License that the Solid Waste Facility Supervisor, as defined in 30 TAC Chapter 30, Occupational Licenses and Registrations (Figure 30 TAC §30.213(a)), will obtain prior to commencing facility operations. Include the rest of the Evidence of Competency information as an attachment (See List of Attachments).

19. Ownership Status of the Facility

Corporation

The Customer meets all of the following:

- Is legally incorporated under the laws of any state or country
- Is recognized as a corporation by the Texas SOS
- Has proper operating authority to operate in Texas

Sole Proprietorship

This is a business that is owned by only one person and has not been incorporated. This business may:

- Be under the person's name
- Have its own name ("doing business as", or DBA)
- Have any number of employees
- Customers must register assumed names with the county

Government

City, County, State or Federal: This is either an agency of one of these levels of government or the governmental body itself (ex. Blanco County, City of Houston)

General Partnership

A general partnership is created when two or more persons associate to carry on a business for profit. A partnership generally operates in accordance with a partnership agreement, but there is no requirement that the agreement be in writing and no state-filing requirement.

Limited Partnership (LP & LLP)

This is a partnership formed by two or more persons, having one or more general partners and one or more limited partners. The limited partnership operates in accordance with a partnership agreement, written or oral, of the partners as to the affairs of the limited partnership and the conduct of its business. While the partnership agreement is not filed for public record, the limited partnership must file a certificate of limited partnership with the Texas SOS. The Texas SOS provides a form for the certificate of limited partnership which meets minimum state law requirements.

Government – Other

This is a utility district, water district, tribal government, college district, council of governments or river authority (ex. Lower Colorado River Authority).

Other

Fits none of the above descriptions.

20. Other Governmental Entities Information

Texas Department of Transportation (TxDOT) District

Enter the district name and contact information for the district in which the facility is/will be located. TxDOT's District information can be found at

http://www.txdot.gov/inside-txdot/district.html.

The Local Governmental Authority Responsible for Road Maintenance

Enter the local authority name (e.g. local TxDOT maintenance office, city or county road maintenance authority) and contact information responsible for road maintenance. As required in 30 TAC §330.145 and §330.235, on days when the facility is in operation, the Site Operator (Permittee/Registrant) or Operator shall be responsible for at least once per day cleanup of waste materials spilled along and within the right-of-way of public access roads serving the facility for a distance of two miles in either direction from any entrances used for the delivery of waste to the facility. The facility operator shall consult with the TxDOT, county, and/or local governments with maintenance authority over the roads concerning cleanup of public access roads and rights-of-way.

City Mayor Information

Enter the Mayor's name and contact information for the city in which the facility is/will be located.

City Health Authority

Enter the Health Authority's name and contact information for the city in which the facility is/will be located.

County Judge Information

Enter the Judge's name and contact information for the county in which the facility is/will be located.

County Health Authority

Enter the Health Authority's name and contact information for the county in which the facility is/will be located.

State Representative Information

Enter the District Number, State Representative's name and District Office information for the district in which the facility is/will be located. State Representative's information can be found at:

http://www.house.state.tx.us/members/find-your-representative/ .

State Senator Information

Enter District Number, State Senator's name and District Office information for the district in which the facility is/will be located. State Senator's information can be found at:

http://www.house.state.tx.us/members/find-your-representative/ .

Council of Government (COG) Name

Enter the COG name and COG Office information for the COG area in which the facility is/will be located. COG information can be found at:

http://www.txregionalcouncil.org/display.php?page=regions_map.php.

River Basin Authority Name

Enter the River Basin Authority name and contact information for the river basin area in which the facility is/will be located. River Basin Authority information can be found at:

http://www.tpwd.state.tx.us/landwater/water/habitats/rivers/authorities.phtml.

Coastal Management Program

The boundary is established in Texas Natural Resources Code, §33.2053(k), as defined in Title 31, Texas Administrative Code, §503.1 (relating to Coastal Management Program Boundary).

U.S. Army Corps of Engineers

Select the box representing the District of the U.S. Army Corps of Engineers in which the facility is located.

Local Government Jurisdiction

Enter the name of the city or extraterritorial jurisdiction where the facility is located. If the facility is located in an area in which the governing body of the municipality or county has prohibited the disposal or processing of municipal or industrial solid waste, provide a copy of the ordinance and add it to the Additional Attachments list with the Attachment number provided.

Instructions - ATTACHMENTS

Supplementary Technical Report

Provide information about the facility as required under 30 TAC §305.45(a)(8). The report should be signed and sealed by a PE.

Property Legal Description, Property Metes and Bounds Description, Facility Legal Description, Facility Metes and Bounds Description, On-Site Easements, and Metes and Bounds Drawings

Provide a legal description of the facility including the following information, as required by 30 TAC §330.59(d)(1).

a. The abstract number, as maintained by the Texas General Land Office, for the surveyed tract of land.
b. A legal description of the property and the county, book, and page number or other generally accepted identifying reference of the current ownership record.
c. For property that is platted, the county, book, and page number or other generally accepted identifying reference of the final plat record that includes the acreage encompassed in the application and a copy of the **Final Plat Record of Property**.
d. A boundary metes and bounds description of the property signed and sealed by a registered professional land surveyor.
e. A boundary metes and bounds description and drawing for the facility signed and sealed by a registered professional land surveyor.
f. A drawing showing any on-site easements at the facility.

If the facility and property boundaries are identical, one metes and bounds description and drawing is sufficient. Refer to the same attachment number for above items (d) and (e).

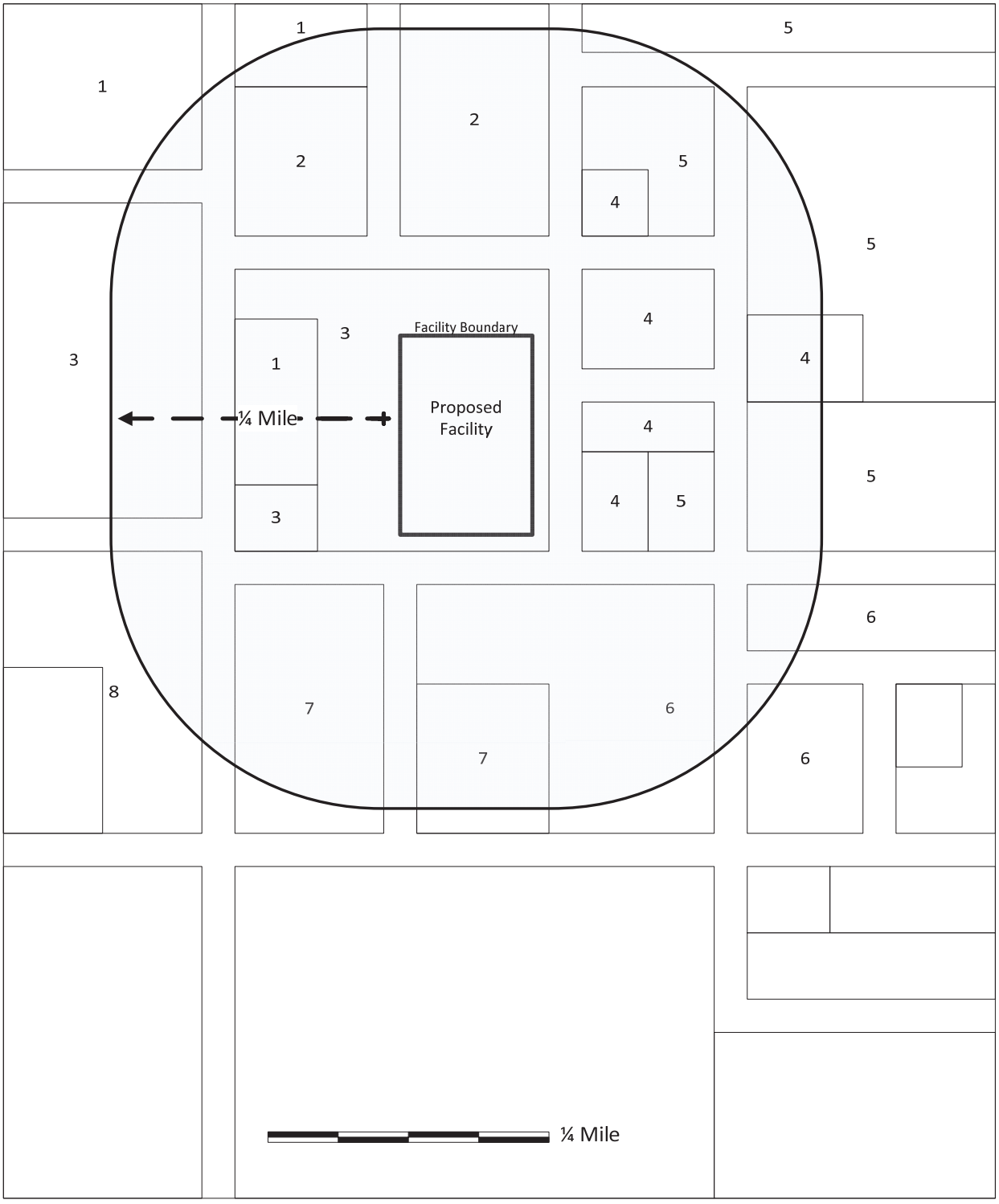
Land Ownership Map

Provide a map that locates the property owned by adjacent and potentially affected landowners. The maps should show all property ownership within 1/4 mile of the facility, on-site facility easement holders, and all mineral interest ownership under the facility.

Land Ownership List

Provide the adjacent and potentially affected landowners' list, keyed to the land ownership map with each property owner's name and mailing address. The list shall include all property owners within 1/4 mile of the facility, easement holders, and all mineral interest ownership under the facility. Provide the property, easement holders', and mineral interest owners' names and mailing addresses derived from the real property appraisal records as listed on the date that the application is filed.
Do not include elected officials and other interested parties that are not adjacent landowners on the landownership map, list and labels.

Sample Land Ownership Map



Landowners Cross-Referenced To Landowners Map
The persons identified below would be considered as affected persons.

1. MR & MRS SAMUEL L DAVIS
   11901 STAR BLVD
   AUSTIN, TX 78759

2. MR & MRS EDWARD SANCHEZ
   1405 LINE ROAD
   WACO TX 76710

3. TEX-LINK CORP
   8411 NW HWY
   HOUSTON TX 77590

4. MR & MRS TED GOLDSBY
   3210 LEON BLVD
   WACO TX 76724

5. JAXSON BREWING CO
   4240 KNIGHTS BRIDGE
   DALLAS TX 77640

6. PLAINVIEW COMPANY
   6647 CRAIGMONT LANE
   HOUSTON TX 77590

7. ABC CHEMICALS INC
   1212 ZIP STREET
   DALLAS TX 77640

8. BIG-C BOTTLE CO
   10024 REGIONAL BLVD
   BOVINA TX 79402

Mineral Interest Ownership Under The Facility*

1. BOB SANDERS
   867 HOLLOWBEND ROAD
   SEGUIN TX 78155

2. TED HENDERSON
   459 MAGUIRE AVE
   HARPER TX 78631

3. CAROL SANDERS
   5309 MAPLE LANE
   GAUSE TX 77857

4. ALICE HENDERSON
   2222 LONGWAY
   HDOOLE TX 76836

Facility Easement Holders*

1. GULF PIPELINE
   11200 S FANNIN
   HOUSTON TX 77002

2. TEXAS STAR UTILITIES
   8100 COMMERCE ST
   DALLAS TX 75230

*If available in Real Property Appraisal records as listed on the date that the application is filed.

In accordance with 30 TAC §39.5(b), submit this mailing list electronically. The electronic list must contain only the name, mailing address, city, state, and zip code with no reference to the lot number or lot location.

As an alternative to an electronic list, the applicant may elect to submit pre-printed mailing labels of this mailing list with the application. If you elect to provide the pre-printed mailing labels, use a label format that has 30 labels to a page (e.g. AVERY 5160). Each letter in the name and address must be capitalized, contain no punctuation, and the appropriate two-character abbreviation must be used for the state. Each entity listed must be blocked and spaced consecutively. Provide four complete sets of labels of the landowner list.
Do not include elected officials and other interested parties that are not adjacent landowners on the landownership map, list and labels.

Maps (Texas Department of Transportation (TxDOT) County Map, General Location Map and General Topographic Map

Submit at least one general location map at a scale of one-half inch equals one mile. This map shall be all or a portion of a county map prepared by TxDOT. If TxDOT publishes more detailed maps of the proposed facility area, the more detailed maps shall also be included in Part I. Use the latest revision of all maps.

Submit a topographic map, ownership map, county highway map, or a map prepared by a registered professional engineer or a registered surveyor which shows the facility and each of its intake and discharge structures and any other structure or location regarding the regulated facility and associated activities. The maps must be of material suitable for a permanent record, and shall be no larger than 11 inches by 17 inches and shall be on a scale of not less than one inch equals one mile.

The map shall depict the approximate boundaries of the tract of land owned or to be used by the applicant and shall extend at least one mile beyond the tract boundaries sufficient to show the following:

- each well, spring, and surface water body or other water in the state within the map area;
- the general character of the areas adjacent to the facility, including public roads, towns and the nature of development of adjacent lands such as residential, commercial, agricultural, recreational, undeveloped, etc.;
- the location of any waste disposal activities conducted on the tract not included in the application; and
- the ownership of tracts of land adjacent to the facility and within a reasonable distance from the proposed point or points of discharge, deposit, injection, or other place of disposal or activity.

Verification of Legal Status (30 TAC §281.5 and §330.59(e))

Provide verification of legal status. **Normally**, this is a one-page certificate of incorporation (Certificate of Fact) issued by the Texas SOS (see additional Attachments List). If you choose to provide a verification of the legal status by another mechanism, provide it under this Attachment. Also, provide a list of all persons having over a 20% ownership in the proposed facility. See example table provided below:

List of All Persons Having Over 20% Ownership in the Facility:

Name	Title	Contact Information

Property Owner Affidavit

Provide a Property Owner Affidavit by using the appropriate format provided below.

Signatory Name

The name of the individual signing the affidavit. If the individual signing the affidavit is the property owner of record, enter the name on "Printed Signatory Name" line only and omit the "Signatory Capacity" and "Printed Name of Property Owner of Record" lines. Otherwise, provide all information requested below.

Signatory Capacity

Indicate under what authority the Signatory is signing on behalf of the property owner of record.

Property Owner Of Record

The person(s) who, according to public records, is/are the owner(s) of a particular property.

For Landfills:

Property Owner Affidavit

"I/We, _____, as _____,
(Printed Signatory Name) (Signatory Capacity)

As authorized signatory for _____,
(Printed Name of Property Owner of Record)

acknowledge that the State of Texas may hold me either jointly or severally responsible for the operation, maintenance, and closure and post-closure care of the facility. For a facility where waste will remain after closure, I acknowledge that I have a responsibility to file with the county deed records an affidavit to the public advertising that the land will be used for a solid waste facility prior to the time that the facility actually beings operating as a municipal solid waste landfill facility, and to file a final recording upon completion of disposal operations and closure of the landfill units in accordance with Title 30 Texas Administrative Code §330.19, Deed Restriction. I further acknowledge that I or the operator and the State of Texas shall have access to the property during the active life and post-closure care period."

_____ _____
(Property Owner's Signature) (Date)

For Processing Facilities:

Property Owner Affidavit

"I/We, _____, as _____,
(Printed Signatory Name) (Signatory Capacity)

As authorized signatory for _____,
(Printed Name of Property Owner of Record)

acknowledge that the State of Texas may hold me either jointly or severally responsible for the operation, maintenance, and closure of the facility. I further acknowledge that I or the operator and the State of Texas shall have access to the property during the active life, and after closure for the purpose of inspection and maintenance, if required.

_____ _____
(Property Owner's Signature) (Date)

Evidence of Competency

At a minimum, provide the information listed below to comply with 30 TAC §330.59(f) as applicable to the facility type for which the application is submitted:

List of all Texas solid waste sites that the owner and operator have owned or operated within the last ten years.

Site Name	Site Type	Permit/Reg. No.	County	Dates of Operation

List of all solid waste sites in all states, territories, or countries in which the owner and operator have a direct financial interest.

Site Name	Location	Dates of Operation	Regulatory Agency (Name & Address)

Names of the principals and supervisors of the owner's and operator's organization, together with previous affiliations with other organizations engaged in solid waste activities.

Name	Previous Affiliation	Other Organization

For landfill permit applications only, evidence of competency to operate the facility shall also include landfilling and earthmoving experience if applicable, and other pertinent experience, or licenses as described in 30 TAC Chapter 30 possessed by key personnel. The number and size of each type of equipment to be dedicated to facility operation should be specified in greater detail on Part IV of the application within the site operating plan.

Landfilling/Earthmoving Equipment Types	Personnel Experience or Licenses

For mobile liquid waste processing units, submit a list of all solid waste, liquid waste, or mobile waste units that the owner and operator have owned or operated within the past five years. Submit a list of any final enforcement orders, court judgments, consent decrees, and criminal convictions of this state and the federal government within the last five years relating to compliance with applicable legal requirements relating to the handling of solid or liquid waste under the jurisdiction of the commission or the United States Environmental Protection Agency. Applicable legal requirement means an environmental law, regulation, permit, order, consent decree, or other requirement.

Solid waste, liquid waste, or mobile waste units owned or operated within past 5 years	Texas and federal final enforcement orders, court judgments, consent decrees, and criminal convictions

Additional Attachments (as applicable)

TCEQ Core Data Form(s)

If the Site Operator (Permittee/Registrant) does not have a Customer Reference Number (CN Number), complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Site Operator (Permittee/Registrant) as the customer.

If Regulated Entity Reference Number (RN Number) has not been issued for the facility, complete a TCEQ Core Data Form (TCEQ-10400) and submit it with this application. List the Facility as the Regulated Entity.

If the Operator does not have a Customer Reference Number (CN Number), complete another TCEQ Core Data Form (TCEQ-10400) for the "Operator" and submit it with this application. List the Operator as the customer.

Only under the following circumstances should a TCEQ Core Data Form be submitted:

- Your information is not yet in the Central Registry database or is incomplete
- Your information has changed from what is currently in the Central Registry database
- It is requested by the agency. You can check the status of your information in Central Registry on-line at http://www.tceq.texas.gov/goto/centralregistry/.

Signatory Authority Delegation

Provide documentation that the person signing the application meets the requirements of 30 TAC §305.44, Signatories to Applications. If the authority has been delegated, provide a copy of the document issued by the governing body of the Site Operator (Permittee/Registrant) or Operator authorizing the person that signed the application to act as agent for the owner or operator.

Fee Payment Receipt

As indicated in the "Application Fees" section, include a photocopy of the check in the initial application submitted to the MSW Permits Section.

Confidential Documents

The confidential information should be described in non-confidential terms throughout the application, cross-referenced, and submitted as a separate document or binder, and clearly marked "CONFIDENTIAL." Refer to Instructions, Section "Confidential Documents" for further detail.

Waste Storage, Processing and Disposal Ordinances

If the facility is located in an area in which the governing body of the municipality or county has prohibited the disposal or processing of municipal or industrial solid waste, provide a copy of the ordinance.

Final Plat Record of Property

For the property that is platted, provide the county, book, and page number or other generally accepted identifying reference of the final plat record that includes the acreage encompassed in the application and a copy of the final plat (30 TAC §330.59(d)(1)(B)).

Certificate of Fact (Certificate of Incorporation)

The Site Operator/ (Permittee/Registrant) or Operator shall provide verification of their legal status. If you choose to provide a one-page certificate of incorporation (Certificate of Fact) issued by the secretary of state, provide it as an attachment here.

Assumed Name Certificate

If the Site Operator/ (Permittee/Registrant) or Operator is an individual and/or partnership doing business under an assumed name, it must attach to the application an assumed name certificate.

ID	App. Part	Checklist Item	Item Type	Citation	Complete?	Location	Applicant Comments	Application Area
1	General	Submit all four parts of the permit, permit amendment or registration application	Required	330.57(a) & (b)	Yes	Parts I-IV are included within the submittal		Format-Application
2	General	Submit TCEQ Part I Form (Form No. 0650)	Required	330.57(c)(1)	Yes	Part I is included within the submittal		Forms
8	General	Part II of the application contains location and coordination information.	Informational	330.57(c)(2)		Completed		Format-Application
9	General	Part III of the application contains design information	Informational	330.57(c)(3)		Completed		Format-Application
10	General	Part IV of the application contains the site operating plan	Informational	330.57(c)(4)		Completed		Format-Application
11	General	The application should address all aspects of application and design requirements, even to show why not applicable (N/A)	Informational	330.57(d)		Completed		Format-Application
12	General	Submit data of sufficient completeness, accuracy and clarity	Required	330.57(d)	Yes	Application is completed		Format-Application
13	General	Failure to provide complete information may be cause for ED to return application.	Informational	330.57(d)		Understood		Format-Application
14	General	Provide 4 Copies for Initial Submittal (1 original and 3 copies)	Required	330.57(e)	Yes	4 copies have been provided		Format-Application
15	General	Provide 4 copies for NOD Responses including 1 copy with marked revisions (redline/strikeout)	Required	330.57(g)(6)	Yes	N/A	Initial response. Once the NOD response process begins, 4 copies with marked revisions will be submitted.	Format-Application
16	General	Application must be prepared in accordance with Texas Occupations Code, Texas Engineering Practice Act, Chapter 1001 and Texas Geoscience Practice Act, Chapter 1002	Informational	330.57(f)		Completed		Format-Application
17	General	Provide a PE signature, seal and date on the title page of each bound engineering report or individual engineering plan, and on each engineering drawing	Required	330.57(f)(1)	Yes	A PE seal, signed and dated, is provided where required.		Format-Application
18	General	Provide PG sign, seal, & date for applicable items	Required	330.57(f)(2)	Yes	N/A	A PG seal is not required for any of the information as this is a Transfer Station and not a landfill.	Format-Application
19	General	Applications that are not sealed are incomplete and shall be returned	Informational	330.57(f)(3)		Understood		Format-Application
20	General	Submit the application in three ring-binders	Required	330.57(g)(1)	Yes	Application is submitted within 3 ring binders.		Format-Application
21	General	Submit Title Page with Name, Application No., Site Operator Name, Operator Name (if applicable), Location, Date Prepared and Revision Date(s)	Required	330.57(g)(2)	Yes	Parts I-IV contain a Title Page that contains all requried information.		Format-Application
22	General	Provide Table of Contents with PE seal	Required	330.57(g)(3)	Yes	Parts II, III, IV Table of Contents		Format-Application
23	General	Use 8.5x11 inch or 11x17 paper (folded to 8.5x11 inch)	Required	330.57(g)(4)	Yes	Documentation is 8.5x11 inch paper and drawings/maps are 11x17 inches		Format-Application
24	General	Provide pages with date (original and revised) and sequential page numbers	Required	330.57(g)(5)	Yes	Provided		Format-Application
25	General	Provide legible drawings/maps	Required	330.57(h)(1)	Yes	Part I/II PAR Engineering Drawing Set		Format-Maps/Drawings
26	General	Provide color coding on all figures and drawings that is legible and distinct after copying in black & white	Required	330.57(h)(2)	Yes	All drawings are legible whether printed in color or black and white.		Format-Maps/Drawings
27	General	Provide a standard engineering scale on each figure or drawing	Required	330.57(h)(3)	Yes	Part I/II PAR Engineering Drawing Set		Format-Maps/Drawings
28	General	Provide a dated title block on each figure or drawing	Required	330.57(h)(4)(A)	Yes	Part I/II PAR Engineering Drawing Set	All drawings/maps have a title block that includes the date.	Format-Maps/Drawings

29	General	Provide a bar scale at least 1 inch on all figures and drawings	Required	330.57(h)(4)(B)	Yes	Part I/II PAR Engineering Drawing Set	All drawings that are to scale include a 1 inch scale bar.	Format-Maps/Drawings
30	General	Provide a revision block on all figures and drawings	Required	330.57(h)(4)(C)	Yes	Part I/II PAR Engineering Drawing Set	All drawings/maps include a revision block.	Format-Maps/Drawings
31	General	Provide a PE or PG seal ,if required, on all figures and drawings	Required	330.57(h)(4)(D)	Yes	Part I/II PAR Engineering Drawing Set		Format-Maps/Drawings
32	General	Include drawing number and a page number on each drawing and figure	Required	330.57(h)(4)(E)	Yes	Part I/II PAR Engineering Drawing Set	All drawings/maps are numbered.	Format-Maps/Drawings
33	General	Include a north arrow on each map or plan drawing	Required	330.57(h)(5)(A)	Yes	Part I/II PAR Engineering Drawing Set	All drawings/maps include a north arrow.	Format-Maps/Drawings
34	General	Include a reference to base map & date of most current base map used, if the map is based upon another map	Required	330.57(h)(5)(B)	Yes	Part I/II PAR Engineering Drawing Set	All drawings/maps that include a base map have the reference and date of the reference.	Format-Maps/Drawings
35	General	Include a legend on each map or plan drawing	Required	330.57(h)(5)(C)	Yes	Part I/II PAR Engineering Drawing Set	All drawings/maps include a legend.	Format-Maps/Drawings
36	General	Provide match lines and section lines that reference the drawing where the match or section is shown.	Required	330.57(h)(6)	Yes	Part I/II PAR Engineering Drawing Set		Format-Maps/Drawings
45	General	Acknowledge that the construction and operation of the waste management facility shall comply with Subchapter U of 30 TAC Chapter 330 (relating to Standard Air Permits for Municipal Solid Waste Landfill Facilities and Transfer Stations) or other approved air authorizations. Owners or operators of these types of facilities should consult with the Air Permits Division on or before the date that the municipal solid waste application is filed with the executive director	Acknowledgement	330.55(a)	Yes	Acknowledged All applicable air permitting will be completed prior to construction.		Other Authorizations
46	General	Acknowledge that all liquids resulting from the operation of solid waste facilities shall be disposed of in a manner that will not cause surface water or groundwater pollution. Facilities shall provide for the treatment of wastewaters resulting from waste management activities and from cleaning and washing. Owners or operators shall ensure that storm water and wastewater management is in compliance with the regulations of the commission	Acknowledgement	330.55(a)	Yes	Section 9.3		Other Authorizations
49	General	It is the responsibility of an owner or operator to possess or acquire a sufficient interest in or right to the use of the surface estate of the property for which a permit is issued, including the access route. The granting of a permit does neither convey any property rights or interest in either real or personal property; nor does it authorize any injury to private property, invasion of personal rights, or impairment of previous contract rights; nor any infringement of federal, state, or local laws or regulations outside the scope of the authority under which a permit is issued	Informational	330.67(a)		Part I/II PAR Sections 4 and 5	§330.67 is listed in Section 5 for acknowledgement purposes but does not list specifics.	General Information

51	General	Executive director approval or a permit will be required if any on-site operations subsequent to closure of a landfill facility involve disturbing the cover or liner of the landfill.	Informational	330.67(c)		Part I/II PAR Section 5	§330.67 is listed for acknowledgement purposes but does not list specifics.	General Information
52	General	It is the responsibility of an owner or operator to obtain any permits or approvals that may be required by local agencies such as for building construction, discharge of uncontaminated waters into ditches under control of a drainage district, discharge of effluent into a local sanitary sewer system, etc.	Informational	330.67(d)		Part I/II PAR Section 5	§330.67 is listed for acknowledgement purposes but does not list specifics.	General Information
58	General	If at any time during the life of the facility the owner or operator becomes aware of any condition in the permit or registration that necessitates a change to accommodate new technology or improved methods or that makes it impractical to keep the facility in compliance, the owner or operator shall submit to the executive director requested changes to the permit or registration in accordance with 30 TAC §305.62 or §305.70 and must be approved prior to their implementation	Informational	330.73(a)		Part I/II PAR Section 5	§330.73 is listed for acknowledgement purposes but does not list specifics.	General Information
60	General	The owner or operator shall obtain and submit certification by a Texas-licensed professional engineer that the facility has been constructed as designed in accordance with the issued registration or permit and in general compliance with the regulations prior to initial operation. The owner or operator shall maintain that certification on site for inspection	Informational	330.73(d)		Completed	§330.73 is listed for acknowledgement purposes but does not list specifics.	General Information
61	General	After all initial construction activity has been completed and prior to accepting any solid waste, the owner or operator shall contact the executive director and region office in writing and request a pre-opening inspection. A pre-opening inspection shall be conducted by the executive director within 14 days of notification by the owner or operator that all construction activities have been completed, accompanied by representatives of the owner or operator and the engineer	Informational	330.73(e)			§330.73 is listed for acknowledgement purposes but does not list specifics.	General Information
62	General	The MSW facility shall not accept solid waste until the executive director has confirmed in writing that all applicable submissions required by the permit or registration and this chapter have been received and found to be acceptable, and that construction is in compliance with the permit or registration and the approved site development plan. If the executive director has not provided a written or verbal response within 14 days of completion of the pre-opening inspection, the facility shall be considered approved for acceptance of waste	Informational	330.73(f)			§330.73 is listed for acknowledgement purposes but does not list specifics.	General Information
63	General	Identify if the Regulated Entity or Customer has any delinquent fees	Required	330.59(h), 330.671, 330.675	Yes	N/A	The Customer has no delinquet fees at this time.	Delinquent Fees
64	Part I	Provide a copy of the application, including all revisions and supplements on a publicly accessible Web site	Required in Part I Form	330.57(i)(1)		Part I; Item 5 http://www.circlelaketransfer.com		Part I Form

65	Part I	Provide the commission with the Web address link for the application materials	Required in Part I Form	330.57(i)(1)		Part I; Item 5 http://www.circlelaketransfer.com		Part I Form
66	Part I	Signature Page must have signature and notarization	Required in Part I Form	330.59(a)(1)		Part I ; Signature Page, Page 10		Part I Form
67	Part I	Applicant's name, mailing address & phone no.	Required in Part I Form	330.59(a)(1)		Part I; Item 17		Part I Form
68	Part I	Description of the nature of the business	Required in Part I Form	330.59(a)(1)		Part I; Item 16		Part I Form
69	Part I	Activities that require a permit (conducted at the facility)	Required in Part I Form	330.59(a)(1)		Part I; Items 13-15		Part I Form
70	Part I	Location description, facility name & mailing address	Required in Part I Form	330.59(b)(1); 305.45(a)(1)		Part I; Item 12		Part I Form
71	Part I	Access routes	Required in Part I Form	330.59(b)(2)		Part I; Item 12		Part I Form
72	Part I	Lat. & Long. of the facility	Required in Part I Form	330.59(b)(3)		Part I; Item 12		Part I Form
73	Part I	Lat. & Long. depicted	Required in Part I Form	330.59(c)(1)(A)		Part I/II PAR Engineering Drawing Set		Part I Form
74	Part I	All maps should show the facility location	Required in Part I Form	305.45(a)(6)		Part I/II PAR Engineering Drawing Set		Part I Form
76	Part I	All maps should show other structures or locations regarding the regulated facility and associated activities	Required in Part I Form	305.45(a)(6)		Part I/II PAR Engineering Drawing Set		Part I Form
77	Part I	At least one map with a scale not less than 1 inch = 1 mile	Required in Part I Form	305.45(a)(6)		Part I/II PAR Engineering Drawing Set		Part I Form
78	Part I	Permit/Registration boundary and 1 mile beyond to show the following:	Required in Part I Form	330.59(c)(1)(B)		Part I/II PAR Engineering Drawing Set		Part I Form
79	Part I	Wells, springs, surface water bodies	Required in Part I Form	305.45(a)(6)(A)		Part I/II PAR Engineering Drawing Set		Part I Form
80	Part I	Character of adjacent land including public roads, towns, development as residential, commercial, agricultural, etc.	Required in Part I Form	305.45(a)(6)(B)		Part I/II PAR Engineering Drawing Set		Part I Form
81	Part I	Location of any waste disposal activities conducted on the tract but not included in the application	Required in Part I Form	305.45(a)(6)(C)		Part I/II PAR Engineering Drawing Set		Part I Form
82	Part I	General location map, TXDOT, scale of ½ inch = 1 mile and most current map used	Required in Part I Form	330.59(c)(2)		Part I/II PAR Engineering Drawing Set		Part I Form
83	Part I	Land Ownership Map, within ¼ mile & mineral interest ownership	Required in Part I Form	330.59(c)(3)(A)		Part I/II PAR Engineering Drawing Set Part I/II Appendix A		Part I Form
84	Part I	Land Ownership List both in hardcopy and electronic form (alternatively pre-printed mailing labels)	Required in Part I Form	330.59(c)(3)(B)		Part I/II PAR Engineering Drawing Set Part I/II Appendix A		Part I Form
85	Part I	Legal description of property or other documentation of ownership	Required in Part I Form	330.59(d)(1)(A)		Part I/II Appendix B		Part I Form
86	Part I	If Platted; plat record with county, book, page number and acreage information	Required in Part I Form	330.59(d)(1)(B)		Part I/II Appendix B		Part I Form
87	Part I	Signed, sealed and dated surveyed metes and bounds description of the facility	Required in Part I Form	330.59(d)(1)(C)		Part I/II Appendix B		Part I Form
88	Part I	Signed & sealed metes & bounds drawing	Required in Part I Form	330.59(d)(1)(D)		Part I/II Appendix B		Part I Form
89	Part I	Signed property owner affidavit	Required in Part I Form	330.59(d)(2)		Part I/II Appendix C		Part I Form
90	Part I	Acknowledge that State may hold owner responsible	Required in Part I Form	330.59(d)(2)(A)		Part I/II Appendix C		Part I Form
92	Part I	Acknowledge that the owner & State shall have access during life of the facility and during closure	Required in Part I Form	330.59(d)(2)(C)		Part I/II Appendix C		Part I Form
94	Part I	Verified legal status of applicant and list of persons with 20% or more ownership in the facility	Required in Part I Form	330.59(e)		Part I/II Appendix C	Also in Part I/II PAR §4.4.1	Part I Form
95	Part I	Ownership status as federal, state, private, public, or other	Required in Part I Form	305.45(a)(2)		Part I; Item 19		Part I Form
96	Part I	List of all Texas solid waste sites that the owner or operator has owned or operated within the last ten years. The site name, site type, permit or registration number, county, and dates of operation shall also be submitted.	Required in Part I Form	330.59(f)(1)		N/A		Part I Form

97	Part I	List of all solid waste sites in all states, territories, or countries in which the owner or operator has a direct financial interest. The type of site shall be identified by location, operating dates, name, and address of the regulatory agency, and the name under which the site was operated.	Required in Part I Form	330.59(f)(2)		N/A		Part I Form
98	Part I	Shall employ a licensed solid waste facility supervisor before operating	Required in Part I Form	330.59(f)(3)		Part I; Item 18	The Supervisor that shall be employed will have a Class B License.	Part I Form
99	Part I	Names of principals & supervisors owner or operators organization together with previous affiliations with other organizations involved with solid waste activities	Required in Part I Form	330.59(f)(4)		Part I/II Appendix D		Part I Form
101	Part I	Signatory meets 305.44, documentation of delegated signatory authority	Required in Part I Form	330.59(g)		Part I/II Appendix E	The appointment letter is provided in Appendix E with the signature authority delegated.	Part I Form
102	Part I	Corporations – signed by a corporate officer	Required in Part I Form			Part I; Signature Page Authority delegated in Part I/II Appendix D	The appointment letter is provided in Appendix E with the signature aurthority delegated.	Part I Form
103	Part I	Partnership or proprietorship –signed by a general partner or proprietor	Required in Part I Form			N/A		Part I Form
104	Part I	Municipality, public agency –signed by an executive officer or elected official	Required in Part I Form			N/A		Part I Form
105	Part I	Signatory certification statement	Required in Part I Form			Part I; Signature Page		Part I Form
106	Part I	Hazardous Waste Management	Required in Part I Form	305.45(a)(7)(A)		Part I; Item 11 Part I/II, Section 5.2		Part I Form
107	Part I	Underground Injection Control	Required in Part I Form	305.45(a)(7)(B)		Part I; Item 11 Part I/II, Section 5.2		Part I Form
108	Part I	NPDES	Required in Part I Form	305.45(a)(7)(C)		Part I; Item 11 Part I/II, Section 5.2		Part I Form
109	Part I	Prevention of Significant Deterioration	Required in Part I Form	305.45(a)(7)(D)		Part I; Item 11 Part I/II, Section 5.2		Part I Form
110	Part I	Nonattainment Program	Required in Part I Form	305.45(a)(7)(E)		Part I; Item 11 Part I/II, Section 5.2		Part I Form
111	Part I	NESHAPS	Required in Part I Form	305.45(a)(7)(F)		Part I; Item 11 Part I/II, Section 5.2		Part I Form
112	Part I	Ocean dumping permit	Required in Part I Form	305.45(a)(7)(G)		Part I; Item 11 Part I/II, Section 5.2		Part I Form
113	Part I	Dredge & fill permit	Required in Part I Form	305.45(a)(7)(H)		Part I; Item 11 Part I/II, Section 5.2		Part I Form
114	Part I	Licenses under the TRCA	Required in Part I Form	305.45(a)(7)(I)		Part I; Item 11 Part I/II, Section 5.2		Part I Form
115	Part I	Other environmental permits	Required in Part I Form	305.45(a)(7)(K)		Part I/II Section 5		Part I Form
116	Part I	Permit Application Fee is $2050.00	Required in Part I Form	THSC 361.0675		Part I Item 4 Part I/II Section 5.4		Part I Form
117	Part I	A copy of the payment receipt to the MSW Permits Section, if paid by check.	Required in Part I Form	330.59(h)(1)		Part I Item 4	A copy of the receipt is also provided with the cover letter.	Part I Form
118	Part I	Prepared by PE, PG, or qualified person	Required in Part I Form	330.57(f)		The application and accompanying reports have been prepared by qualified individuals.		Part I Form
119	Part I	Description of facility & systems	Required in Part I Form	305.45(a)(8)(A)		Part I; Item 16		Part I Form
120	Part I	Volume, average & max rate of disposal for each place of disposal	Required in Part I Form	305.45(a)(8)(B)(i)		Part I/II, Section 3, Table 3-1		Part I Form
121	Part I	Physical, chemical, thermal, organic, bacteriological, radiological properties of waste	Required in Part I Form	305.45(a)(8)(B)(ii)		Part I/II Section 3.1		Part I Form
122	Part I	Other reasonable information	Required in Part I Form	305.45(a)(8)(C)		Other information can be provided if requested.		Part I Form
123	Part II	Provide the sources and characteristics of all waste to be accepted.	Required	330.61(b)(1)	Yes	Part I/II PAR Characteristics: Section 3.1 Sources: Section 3.3.1		Waste Acceptance Plan
124	Part II	Specify parametric limitations of each type of waste to be managed by the facility	Required	330.61(b)(1)	Yes	N/A Part II, Section 3.0 Part IV, Section 4.0		Waste Acceptance Plan

125	Part II	Provide a brief description of the general sources and generation areas contributing wastes to the facility. This description shall include an estimate of the population or population equivalent served by the facility	Required	330.61(b)(1)(A)	Yes	Part I/II PAR Sources: Section 3.3.1 Population Equivalent: Section 3.3.2		Waste Acceptance Plan
126	Part II	Provide a descriptive narrative that describes the percentage of incoming waste that must be recovered and its intended use	Required if Requested	330.61(b)(1)(A)	Yes	Part I/II PAR Section 3.5		Waste Acceptance Plan
127	Part II	Provide the maximum amount of solid waste to be received daily and annually projected for five years. Provide the maximum amount of solid waste to be stored and the maximum and average lengths of time that solid waste is to remain at the facility. Provide the intended destination of the solid waste received at this facility	Required	330.61(b)(1)(B)	Yes	Part I/II PAR Section 3.2		Waste Acceptance Plan
130	Part II	Provide any site specific conditions that require special design considerations & possible mitigation of conditions identified under sections (h) – (o)	Required	330.61(a)	Yes	N/A	There are no specific site conditions that require special design consideration or mitigation.	Facility Impact
131	Part II	Provide information regarding the likely impacts of the facility on cities, communities, groups of property owners, or individuals.	Required	330.61(h)	Yes	Part I/II PAR Section 6		Facility Impact
132	Part II	Provide information on the compatibility of the facility with surrounding land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest.	Required	330.61(h)	Yes	Part I/II PAR Section 6.1		Facility Impact
133	Part II	Provide information on the character of surrounding land use within one mile	Required	330.61(h)(2)	Yes	Part I/II PAR Section 6.1.2		Existing Conditions
134	Part II	Provide information about the growth trends within five miles & directions of development	Required	330.61(h)(3)	Yes	Part I/II PAR Section 6.1.3		Existing Conditions
135	Part II	Indicate the proximity to residences & items listed in 330.61(c)(4) & (12), ~ no. of residences & commercial establishments including direct & distance to nearest, population density, all within one mile.	Required	330.61(h)(4)	Yes	Part I/II PAR Section 6.1.4		Existing Conditions
136	Part II	Indicate all wells and the well density within 500 ft.	Required	330.61(h)(5)	Yes	Part I/II PAR Section 6.2		Existing Conditions
137	Part II	Provide any other information requested by the ED	Required	330.61(h)(6)	Yes	Information can be provided as it is requested.		Existing Conditions
138	Part II	Provide data on availability & adequacy of access roads	Required	330.61(i)(1)	Yes	Part I/II PAR Section 7.1	See also Appendix G for the Transportation Study	Transportation
139	Part II	Provide the existing & expected traffic volumes on access roads within one mile of the facility during the expected life of the facility	Required	330.61(i)(2)	Yes	Part I/II PAR Section 7.1	See also Appendix G for the Transportation Study	Transportation
140	Part II	Provide an estimate of traffic volume generated by the facility on access roads within one mile of the facility	Required	330.61(i)(3)	Yes	Part I/II PAR Section 7.1	See also Appendix G for the Transportation Study	Transportation
141	Part II	Provide documentation of coordination for roadway improvements and documentation of coordination with TXDOT for traffic and location restrictions	Required	330.61(i)(4)	Yes	Part I/II PAR Section 7.1	See also Appendix G for the Transportation Study	Transportation
146	Part II	Provide notice to the airport & the FAA for MSW units within 6 miles of a small airport or within 5 miles of a large commercial airport.	Required	330.545(b)	Yes	Part I/II PAR Section 7.2		Transportation
148	Part II	Discuss in general terms the geology and soils of the proposed site	Required	330.61(j)(1)	Yes	Part I/II PAR Section 8		Geology
152	Part II	Provide data on site specific groundwater conditions	Required	330.61(k)(1)	Yes	Part I/II PAR Section 9.1		Groundwater and Surface Water

153	Part II	Provide data on surface water at or near the site	Required	330.61(k)(2)	Yes	Part I/II PAR Section 9.2		Groundwater and Surface Water
154	Part II	Provide information on how facility will comply with applicable Texas Pollutant Discharge Elimination System (TPDES) storm water permitting requirements and the Clean Water Act, §402, as amended.. This may include the information requires by 30 TAC 330.61(k)(3)(A) & (B)	Required	330.61(k)(3)	Yes	Part I/II PAR Section 9.3		Groundwater and Surface Water
155	Part II	As applicable, provide a certification statement indicating the owner/operator will obtain the appropriate TPDES permit coverage when required	Required	330.61(k)(3)(A)	Yes	Part I/II PAR Section 5		Groundwater and Surface Water
156	Part II	As applicable, provide a copy of permit number under an individual wastewater permit	Required	330.61(k)(3)(B)	Yes	N/A	The facility will be covered under the Multi-Sector General Permit.	Groundwater and Surface Water
157	Part II	Provide the location of any water wells.	Required	330.61(l)(1)	Yes	Part I/II PAR Section 10.1 Drawing 10		Abandoned Oil and Water Wells
158	Part II	All water supply wells must be outside monitoring system or approved in the permit	Informational	330.61(l)(1)		N/A	See Part I/II PAR Sections 6 and 10.	Abandoned Oil and Water Wells
160	Part II	Provide the location of oil & gas wells production wells may remain if identified & don't disrupt operations	Required	330.61(l)(2)	Yes	Part I/II PAR Section 10.2 Drawing 11		Abandoned Oil and Water Wells
161	Part II	Production wells may remain if identified & they do not disrupt facility operations	Informational	330.61(l)(2)		N/A	See Part I/II PAR Sections 6 and 10.	Abandoned Oil and Water Wells
162	Part II	Indicate if the facility is within the 100yr floodplain. If facility within a floodplain see location restrictions in 30 TAC Chapter 330 Subchapter M	Required	330.61(m)(1)	Yes	Part I/II PAR Section 11.1		Floodplains and Wetlands
165	Part II	Acknowledge that the construction and operation of the facility shall not result in the destruction or adverse modification of the critical habitat or cause or contribute to the taking of endangered or threatened species.	Acknowledgement	330.61(n)(1)	Yes	Part I/II PAR Section 12		Endangered Species
165	Part II	Acknowledge that the construction and operation of the facility shall not result in the destruction or adverse modification of the critical habitat or cause or contribute to the taking of endangered or threatened species. If the WWTP permit contains a coordination and a review letter from the United States Fish and Wildlife Service and the Texas Parks and Wildlife Department, the owner or operator shall submit these documents as an attachment/appendix to the registration application and by referencing where this information is addressed in the WWTP Permit and/or permit application.	Acknowledgement	330.61(n)(1)	Yes	Part I/II PAR Section 12		Endangered Species
166	Part II	Provide a demonstration of whether facility is located within species range and provide a biological assessment.	Required	330.61(n)(2)	Yes	Part I/II PAR Section 12 Letters/documentation from USFWS and TPWD are in Appendix H		Endangered Species

166	Part II	Provide a demonstration of whether facility is located within species range and provide a biological assessment. If the WWTP permit contains a coordination and a review letter from the United States Fish and Wildlife Service and the Texas Parks and Wildlife Department, the owner or operator shall submit these documents as an attachment/appendix to the registration application and by referencing where this information is addressed in the WWTP Permit and/or permit application.	Required	330.61(n)(2)	Yes	Part I/II PAR Section 12 Letters/documentation from USFWS and TPWD are in Appendix H		Endangered Species
167	Part II	Provide documentation of compliance with Natural Resource Code, Chapter 191 (Texas Antiquities Code)	Required	330.61(o)	Yes	Part I/II PAR Section 13 Appendix I		Historical Commission
167	Part II	Provide documentation of compliance with Natural Resource Code, Chapter 191 (Texas Antiquities Code). If the WWTP permit contains coordination and a review letter from the Texas Historical Commission, the owner or operator shall submit these documents as an attachment/appendix to the registration application and by referencing where this information is addressed in the WWTP Permit and/or permit application.	Required	330.61(o)	Yes	Part I/II PAR Section 13 Appendix I		Historical Commission
168	Part II	Provide documentation that Parts I and II of the application were submitted for review to the applicable council of governments for compliance with regional solid waste plans.	Required	330.61(p)	Yes	Part I/II PAR Section 14 Appendix J		COG Review
169	Part II	Acknowledgement that the owner or operator requested a review letter from any local government, as appropriate for compliance with local solid waste plans. A review letter is not a prerequisite to a final determination on a permit or registration application.	Acknowledgement	330.61(p)	Yes	Part I/II PAR Section 14 Appendix J		COG Review
170	Part II	Provide a constructed map showing boundary, zoning, & land use within one mile including info from 330.61(c)(4), (5), & (10) (schools, hospitals, etc.)	Required	330.61(g)	Yes	Part I/II PAR Section 6	There are no zoning requirements for Montgomery County where the facility is located.	Maps/Drawings
171	Part II	Provide the prevailing wind direction with a wind rose.	Required	330.61(c)(1)	Yes	Part I/II PAR Engineering Drawing Set Drawing 9		Maps/Drawings
172	Part II	Provide the location of all known water wells within 500 feet of the proposed permit boundary with the state well numbering system designation for Water Development Board "located wells".	Required	330.61(c)(2)	Yes	Part I/II PAR Engineering Drawing Set Drawing 10		Maps/Drawings
173	Part II	Provide the location of all structures and inhabitable buildings within 500 feet of the facility	Required	330.61(c)(3)	Yes	Part I/II PAR Engineering Drawing Set Drawing 9		Maps/Drawings
174	Part II	Provide the location of all schools, licensed day-cares, churches, hospitals, cemeteries, ponds, lakes, residential, commercial, & recreational areas within one mile of the facility	Required	330.61(c)(4)	Yes	Part I/II PAR Engineering Drawing Set Drawing 7		Maps/Drawings
175	Part II	Provide the location and surface type of roads used for access within one mile of the facility	Required	330.61(c)(5)	Yes	Part I/II PAR Engineering Drawing Set Drawing 2	See also Appendix G for the Transportation Study	Maps/Drawings
176	Part II	Provide the latitude & longitude of the facility	Required	330.61(c)(6)	Yes	Part I/II PAR Engineering Drawing Set Drawings 1 and 3		Maps/Drawings
177	Part II	Provide the location of all area streams	Required	330.61(c)(7)	Yes	Part I/II PAR Engineering Drawing Set Drawings 3 and 12		Maps/Drawings
178	Part II	Provide the location of all airports within six miles	Required	330.61(c)(8)	Yes	Part I/II PAR Engineering Drawing Set Drawing 8B		Maps/Drawings

179	Part II	Indicate the property boundary of facility	Required	330.61(c)(9)	Yes	All Drawings		Maps/Drawings
180	Part II	Indicate all drainage, pipeline, and utility easements within & adjacent to the facility	Required	330.61(c)(10)	Yes	Part I/II PAR Engineering Drawing Set Drawing 6		Maps/Drawings
181	Part II	Provide the location of all access control features	Required	330.61(c)(11)	Yes	Part I/II PAR Section 2		Maps/Drawings
182	Part II	Provide the location of all archaeological sites, historical sites, and sites with an aesthetic quality adjacent to the facility	Required	330.61(c)(12)	Yes	N/A	See THC Letter within Appendix I, and Part I/II PAR Section 6.	Maps/Drawings
183	Part II	Provide a facility layout map	Required	330.61(d)	Yes	Part I/II PAR Engineering Drawing Set Drawing 6		Maps/Drawings
184	Part II	A set of maps may be provided	Informational	330.61(d)		The PAR Engineering Drawing Set has been included wtihin the Part I/II Application		Maps/Drawings
186	Part II	Provide the location of interior roads	Required	330.61(d)(2)	Yes	Part I/II PAR Engineering Drawing Set Drawing 6		Maps/Drawings
187	Part II	Indicate the location of monitor wells	Required	330.61(d)(3)	Yes	N/A	There are no monitoring wells due to this being a transfer station.	Maps/Drawings
188	Part II	Provide the location of all facility buildings	Required	330.61(d)(4)	Yes	Part I/II PAR Engineering Drawing Set Drawing 6		Maps/Drawings
189	Part II	Provide notes on sequence of development	Required	330.61(d)(5)	Yes	N/A	This site will be a singular development and not sequenced.	Maps/Drawings
190	Part II	Indicate the location of all facility fencing	Required	330.61(d)(6)	Yes	Part I/II PAR Engineering Drawing Set Drawing 6		Maps/Drawings
192	Part II	Indicate the location of site entrance roads	Required	330.61(d)(8)	Yes	Part I/II PAR Engineering Drawing Set Drawing 6		Maps/Drawings
198	Part II	Provide a general topographic maps: USGS 7.5 minute or equivalent one map at scale 1 in. = 2,000 ft.	Required	330.61(e)	Yes	Part I/II PAR Engineering Drawing Set Drawing 3		Maps/Drawings
199	Part II	Provide Aerial Photograph(s) that are at least 9 in. by 9 in. at scale range of one inch = 1,667-3,334 ft. that covers an area at least one mile in radius of the site. Facility boundary and fill areas (as applicable) must be shown.	Required	330.61(f)	Yes	Part I/II PAR Engineering Drawing Set Drawings 4A, 4B, and 4C		Maps/Drawings
200	Part II	A series of photos showing growth trends may be used	Informational	330.61(f)(2)		PAR I/II PAR Engineering Drawing Set Drawings 4A, 4B, and 4C		Maps/Drawings
201	Part II	All submitted prints & photocopies must be legible	Informational	330.61(f)(3)		All submitted documents are legible.		Maps/Drawings
202	Part II	Provide zoning map within two miles and a copy of any nonconforming use or special permit required for the facility	Required	330.61(h)(1)	Yes	There are no zoning requirements for Montgomery County where the facility is located.		Maps/Drawings
210	Part II	No solid waste disposal operations are permitted in the 100yr. floodway	Informational	330.547(a)		N/A	See Part I/II PAR Section 11.	Floodplains and Wetlands
211	Part II	Demonstrate that, a facility located in 100 year flood plains, does not restrict the flow of the 100 yr. flood, reduce temporary storage capacity, or result in washout of solid waste so as to pose a hazard to human health and the environment	Required	330.547(b)	Yes	Part I/II PAR Engineering Drawing Set Drawing 12		Floodplains and Wetlands
212	Part II	Demonstrate that storage and processing facilities are located outside of the 100 year floodplain.	Required	330.547(c)	Yes	Part I/II PAR Engineering Drawing Set Drawing 12		Floodplains and Wetlands
213	Part II	For storage and processing facilities located within the 100 year floodplain, please provide a demonstration that the facility is designed to prevent washout during a 100 year storm event, or a conditional letter of map amendment from the Federal Emergency Management Administration administrator	Required	330.547(c)	Yes	Part I/II PAR Section 11.1		Floodplains and Wetlands
214	Part II	Acknowledge if the facility will be located in wetlands.	Acknowledgement	330.553(a) & (b)	Yes	Part I/II PAR Section 11.2	The facility is not located within wetlands.	Floodplains and Wetlands
215	Part II	Demonstrate, if located within wetlands, that there is no practicable alternative location	Required	330.553(b)(1)	Yes	Part I/II PAR Section 11.2	The facility is not located within wetlands.	Floodplains and Wetlands

216	Part II	Acknowledge that the facility's construction & operations shall not cause or contribute to violations of state water quality standards, violation of any applicable toxic effluent standard or prohibition under the Clean Water Act §307; jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973, or violate any requirement under the Marine protection, Research, & Sanctuaries Act	Acknowledgement	330.553(b)(2)(A) - (D)	Yes	Part I/II PAR Sections 9 and 12	See Appendix H for letters from the TPWD	Floodplains and Wetlands
217	Part II	If wetlands are located within the facility, submit a demonstration for the integrity of landfill unit by addressing erosion, stability, & migration potential of native wetland soils, muds, and deposits used to support the landfill unit	Required	330.553(b)(3)(A)	Yes	Part I/II PAR Section 11.2	The facility is not located within wetlands.	Floodplains and Wetlands
218	Part II	If wetlands are located within the facility, submit a demonstration for the integrity of landfill unit by addressing erosion, stability, & migration potential of dredged and fill materials used to support the landfill	Required	330.553(b)(3)(B)	Yes	Part I/II PAR Section 11.2	The facility is not located within wetlands.	Floodplains and Wetlands
219	Part II	If wetlands are located within the facility, submit a demonstration for the integrity of landfill unit by addressing the volume and chemical nature of the waste managed in the landfill unit	Required	330.553(b)(3)(C)	Yes	Part I/II PAR Section 11.2	The facility is not located within wetlands.	Floodplains and Wetlands
220	Part II	If wetlands are located within the facility, submit a demonstration for the integrity of landfill unit by addressing the impacts on fish, wildlife, and other aquatic resources and their habitat for the release of solid waste	Required	330.553(b)(3)(D)	Yes	Part I/II PAR Section 11.2	The facility is not located within wetlands.	Floodplains and Wetlands
221	Part II	If wetlands are located within the facility, submit a demonstration for the integrity of landfill unit by addressing the potential effects of catastrophic release of waste to the wetlands and the resulting impacts on the environment	Required	330.553(b)(3)(E)	Yes	Part I/II PAR Section 11.2	The facility is not located within wetlands.	Floodplains and Wetlands
222	Part II	If wetlands are located within the facility, submit a demonstration for the integrity of landfill unit by addressing any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected	Required	330.553(b)(3)(F)	Yes	Part I/II PAR Section 11.2	The facility is not located within wetlands.	Floodplains and Wetlands
223	Part II	Sufficient information shall be provided to the ED to allow a reasonable determination to be made with respect to the demonstrations cited in 30 TAC §330.553(b)	Informational	330.553(b)(5)		N/A	See Part I/II PAR Section 11.	Floodplains and Wetlands
224	Part II	Provide the steps taken to achieve no net loss of wetlands	Required	330.553(b)(4)	Yes	Part I/II PAR Section 11.2	The facility is not located within wetlands.	Floodplains and Wetlands
225	Part II	Acknowledge that the operation of this facility shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species	Acknowledgement	330.551(a)	Yes	Part I/II PAR Section 12	A review of the area has shown that constructing/operating the facility will not impact any threatened or endangered species.	Endangered Species
226	Part II	The term "Harassing" means; An intentional or negligent act or omission that creates the likelihood of injury to wildlife	Informational	330.551(b)(1)		Understood		Endangered Species
227	Part II	The term "Harming" means; An act of omission that actually injures or kills wildlife, including acts that annoy it to such an extent as to significantly disrupt essential behavioral patterns	Informational	330.551(b)(2)		Understood		Endangered Species

228	Part II	The term "Taking" means; collecting an endangered or threatened species or attempting to engage in such conduct	Informational	330.551(b)(3)		Understood		Endangered Species
229	Part II	Acknowledge that no solid waste unloading, storage, disposal, or processing operations shall occur within any easement, buffer zone, or right-of-way that crosses the facility	Acknowledgement	330.543(a)	Yes	Part I/II PAR Section 4.3		Easements and Buffer Zone
268	Part II	Submit information for on-site local geologic or geomorphologic features	Required	330.559(2)	Yes	Part I/II PAR Section 8		Geology
269	Part II	Identify local human-made features or events	Required	330.559(3)	Yes	Part I/II PAR Section 8	There are no unstable areas, and therefore no local human-made features to identify that could make it unstable	Geology
270	Part III	Describe facility access control features	Required	330.63(b)(1)	Yes	Part III PAR Section 2.2		General Facility Design
271	Part III	Submit a process design for the facility [that includes items 330.63(b)(2)(A) through 330.63(b)(2)(I)]	Required	330.63(b)(2)	Yes	Part III PAR Section 2.3		General Facility Design
272	Part III	Submit a flow diagram(s) to describe the storage, processing, and disposal sequences for each type of waste and/or	Required	330.63(b)(2)(A)	Yes	Part I/II Engineerig Drawing Set Drawing 14		General Facility Design
273	Part III	Submit a schematic view drawing(s) showing phases for collection, separation and processing/disposal of each type of waste and/or feedstock/recyclable material	Required	330.63(b)(2)(B)	Yes	Part I/II Engineering Drawing Set Drawing 6		General Facility Design
274	Part III	Provide ventilation & odor control measures for each unit	Required	330.63(b)(2)(C)	Yes	Part III PAR Section 2.3.3		General Facility Design
275	Part III	Provide construction details of storage, processing units & components, dimensions, capacity, materials used, etc.	Required	330.63(b)(2)(D)	Yes	Part III PAR Section 2.3.4		General Facility Design
276	Part III	Provide performance data for all storage and processing units and ancillary equipment	Required	330.63(b)(2)(D)	Yes	Part III PAR Section 2.3.4		General Facility Design
278	Part III	Submit location and engineering designs for containment of storage, processing and loading & unloading areas including freeboard	Required	330.63(b)(2)(F)	Yes	Part III PAR Section 2.3.4		General Facility Design
279	Part III	Describe the storage and handling of grease, oil and sludge, including the maximum time waste will be on-site and details of ultimate disposition	Required	330.63(b)(2)(G)	Yes	N.A	The facility does not propose to accept or process grease, oil or sludges.	General Facility Design
280	Part III	Provide details of effluent disposal	Required	330.63(b)(2)(H)	Yes	Part III PAR Section 2.4		General Facility Design
281	Part III	Provide designs for noise pollution control	Required	330.63(b)(2)(I)	Yes	Part III PAR Section 2.3.5		General Facility Design
282	Part III	Describe how the processing areas will be designed for proper cleaning and to prevent surface water runoff onto, into, and off the treatment areas	Required	330.63(b)(3)(A)	Yes	Part III PAR Sections 2.4, 3, 4		General Facility Design
283	Part III	Describe construction material used for walls and floors that can be hosed down and scrubbed	Required	330.63(b)(3)(B)	Yes	Part III PAR Section 2.3.4		General Facility Design
284	Part III	Describe water or steam connections and equipment for cleaning	Required	330.63(b)(3)(C)	Yes	Part III PAR Section 2.4		General Facility Design
285	Part III	Provide adequate floor drains and/or sumps	Required	330.63(b)(3)(D)	Yes	Part III PAR Sections 2.3.4, 2.4, 3, 4		General Facility Design
286	Part III	Describe proper disposal of liquids resulting from waste processing, cleaning, and washing and provide for the treatment of waste water	Required	330.63(b)(4)	Yes	Part III PAR Sections 2.3.4, 2.4, 3, 4		General Facility Design
287	Part III	Describe how facility will be designed to protect endangered species	Required	330.63(b)(5)	Yes	Part I/II PAR Section 12		General Facility Design

336	Part III	Submit if applicable, a floodplain development permit from any agency with jurisdiction over the proposed improvements	Required if Requested	330.63(c)(2)(D)(ii)	Yes	N/A	The facility is not located within a 100-year floodplain.	Surface Water Drainage Report
337	Part III	Submit if applicable a Conditional Letter of Map Amendment from FEMA	Required if Requested	330.63(c)(2)(D)(iii)	Yes	N/A	The facility is not located within a 100-year floodplain.	Surface Water Drainage Report
338	Part III	Submit if applicable, Corps of Engineers Section 404 Specification of Disposal Sites for Dredged or Fill Material permit for construction of all necessary improvements	Required if Requested	330.63(c)(2)(D)(iv)	Yes	N/A Part I/II PAR Section 5.2	The facility does not have a Dredge or Fill permit	Surface Water Drainage Report
339	Part III	Provide for storage & transfer units a description of design features for the rapid processing and minimum detention of solid waste at the facility	Required	330.63(d)(1)(A)	Yes	Part III PAR Section 4		Waste Management Unit Design
340	Part III	Provide design features for a facility to prevent the creation of nuisances or public health hazards	Required	330.63(d)(1)(A)	Yes	Part III PAR Section 4.2		Waste Management Unit Design
545	Part III	Indicate that a characterization of the contaminated groundwater, including concentrations of assessment constituents as defined in §330.409	Required	330.63(f)(7)(A)	Yes	N/A	As the facility is not a landfill, no groundwater monitoring wells exist.	Groundwater Sampling & Analysis Plan
701	Part III	Specify in the closure plan that the operator will begin closure no later than 30 days after final receipt of waste or no later than one year if the unit has remaining capacity and additional waste may be received	Required	330.457(f)(3)	Yes	Part III PAR Section 5.2		Closure Plan
702	Part III	Provide for closure activities to be completed within 180 days of initiation	Required	330.457(f)(4)	Yes	Part III PAR Section 5.2		Closure Plan
704	Part III	Acknowledge that following receipt of closure documents and the inspection report by the TCEQ region, the ED may acknowledge termination of operation & closure & deem the facility properly closed	Acknowledgement	330.457(f)(6)	Yes	Part III PAR Section 5.3		Closure Plan
706	Part III	Indicate that notice of closure will be published in the newspaper of largest circulation 90 days prior to the initiation of a final facility closure. The notice shall provide the name, address, and physical location of the facility; the TCEQ authorization number; and the last date of intended receipt of waste.	Required	330.461(a)	Yes	Part III PAR Section 5.2		Closure Plan
707	Part III	Acknowledge that notice of closure will be provided to the ED 90 days prior to the initiation of a final facility closure and that the owner or operator will also make available an adequate number of copies of the approved final closure and post-closure plans (if applicable) for public access and review	Acknowledgement	330.461(a)	Yes	Part III PAR Section 5.2		Closure Plan
708	Part III	Acknowledge that least one closure sign will be posted at every point of access and notify all persons who utilize the facility of the date of closure and the prohibition against further receipt of waste materials.	Acknowledgement	330.461(b)	Yes	Part III PAR Section 5.2		Closure Plan
709	Part III	Indicate that suitable barriers will be installed at all access points to adequately prevent the unauthorized dumping of solid waste at the closed facility.	Required	330.461(b)	Yes	Part III PAR Section 5.2		Closure Plan

710	Part III	Indicate that an Affidavit to the Public will be submitted to the ED by registered mail, if waste will remain onsite and indicate that The Owner or Operator will also record a certified notation on the deed to the facility property that the land has been used as a landfill and submit a certified copy of the modified deed to the ED.	Required if Requested	330.461(c)(1)	Yes	Part III PAR Section 5.3		Closure Plan
711	Part III	Acknowledge that a certification, signed by a P.E., will be provided within 10 days of final closure activities, verifying that final facility closure has been completed in accordance with the approved closure plan and will include all applicable documentation necessary for certification	Acknowledgement	330.461(c)(2)	Yes	Part III PAR Section 5.3		Closure Plan
713	Part III	The owner or operator may request permission from the ED to remove the notation from the deed if all wastes are removed from the facility	Informational	330.461(d)		N/A	See Part III PAR Section 5.	Closure Plan
714	Part III	Submit a closure plan for Storage and Processing units to remove all waste, waste residues, and any recovered materials. Units shall be dismantled and removed off-site or decontaminated.	Required	330.459(a)	Yes	Part III PAR Section 5.2		Closure Plan For Processing Facilities
715	Part III	Provide plans for the evacuation of all material on-site to an authorized facility and the disinfecting of all contaminated water handling units, tipping areas, processing and post-processing areas (as applicable)	Required	330.459(b)	Yes	Part III PAR Section 5.2		Closure Plan For Processing Facilities
716	Part III	Acknowledge that if there is evidence of a release, the ED may require an investigation, assessment, and or corrective action.	Acknowledgement	330.459(c)	Yes	Part III PAR Section 5.2		Closure Plan For Processing Facilities
717	Part III	Submit a plan (if combustible material is stored outdoors) for closure of a recycling facility that includes collecting processed and unprocessed materials, and transporting the materials to an authorized facility for disposition	Required	330.459(d)(1)	Yes	N/A Part IV PAR, Section 4.1	Combustible material is not proposed to be stored	Closure Plan For Processing Facilities
718	Part III	Provide for the closure plan to be implemented (if combustible material is stored outdoors) and completed within 180 days following the most recent acceptance of processed or unprocessed materials	Required	330.459(d)(2)	Yes	N/A Part III PAR, Section 5	Combustible material is not proposed to be stored outdoors.	Closure Plan For Processing Facilities
737	Part III	Submit cost estimates for closure & post-closure. Existing facilities must submit a copy of the financial assurance documentation. New facilities must submit financial assurance within 60 days prior to receipt of waste	Required	330.63(j)	Yes	Part III PAR Section 6		Closure Cost Estimates
742	Part III	Provide cost estimates to close a Recycling facility that stores combustible materials outdoors.	Required	330.505(a)(1)	Yes	N/A Part IV PAR, Section 4.1	Combustible material is not proposed to be stored outdoors.	Closure Cost Estimates
743	Part III	Provide a closure cost estimate that equals the costs of closure of the facility, including disposition of the maximum inventories of all waste; processed and unprocessed combustible materials stored outdoors on site during the life of the facility	Required	330.505(a)(2)(A)	Yes	Part III PAR Section 6, Table 6-1		Closure Cost Estimates
744	Part III	Provide a closure cost estimate that is based on the costs of hiring a third party that is not affiliated with the owner or operator; and is based on a per cubic yard and/or short ton measure for collection and disposition costs.	Required	330.505(a)(2)(B-(C)	Yes	Part III PAR Section 6.2		Closure Cost Estimates

745	Part III	Provide for the closure cost estimate & financial assurance to be increased if conditions change which increase the maximum cost of closure at any time during the active life of the facility	Required	330.505(a)(3)	Yes	Part III PAR Section 6.3		Closure Cost Estimates
746	Part III	A reduction in the closure cost estimate and the amount of financial assurance may be approved if the cost estimate exceeds the maximum cost of closure at any time during the remaining life of the facility.	Required if Requested	330.505(a)(4)	Yes	Part III PAR Section 6.3		Closure Cost Estimates
747	Part III	Provide for the maintenance of financial assurance for Recycling facilities that store combustible materials outdoors or that pose a risk	Required	330.505(b)(1)	Yes	N/A Part IV PAR, Section 4.1	Combustible material is not propsoed to be stored outdoors.	Closure Cost Estimates
748	Part III	Provide for the maintenance of financial assurance until closure is approved by ED.	Required	330.505(b)(2)	Yes	Part III PAR Section 5		Closure Cost Estimates
758	Part IV	A site operating plan shall cover all on-site units in accordance with Subchapters D & E of Chapter 330.	Informational	330.65(a)		Acknowledged.		Site Operating Plan
785	Part IV	Indicate that the facility will provide the reports required by 30 TAC §330.675 to the Executive Director	Required	330.675	Yes	Part IV PAR Section 2.8 Table 2-1		Site Operating Plan
988	Part IV	Provide information identifying any permit required under the TPDES and any permit requirements imposed by other agencies for a grease, grit, & septage processing facility	Required	330.65(d)	Yes	N/A	This facility is not a grease, grit, or septage processing facility.	Site Operating Plan
989	Part IV	Identify source & characteristics of wastes that will be received and Specify any limiting parameters that may influence the design and operation of the facility	Required	330.203(a)	Yes	Part IV PAR Section 4.1		Site Operating Plan
990	Part IV	Provide estimate of the amount of each waste to be received daily, max amount stored at any one time, max & average time waste will remain on-site, max & average processing time, intended destination of generated wastes, & description of how 10% will be recovered if applicable.	Required	330.203(b)	Yes	Part IV PAR Section 4.2		Site Operating Plan
991	Part IV	Acknowledge that 10% recovery of material for beneficial use is considered to be the recovery of fats, oil, and greases, but does not include the recovery of water.	Acknowledgement	330.203(b)	Yes	N/A Part IV PAR Section 4.5	The facility will ensure that the incoming waste has already been reduced by at least 10% through a source-separation recycling program.	Site Operating Plan
1000	Part IV	Acknowledge that failure to achieve the relevant 10 percent recycling rate in any two quarters within any one-year period will cause a registration to terminate and will require the owner or operator of the facility to obtain a permit to continue facility operations.	Acknowledgement	330.9(g)(1)	Yes	N/A	This is in reference to a mobile liquid waste processing unit, which the proposed facility will not have.	Site Operating Plan
1001	Part IV	Provide for a quarterly report to be submitted that will include volume of waste received, percent solids, and the method of determining the percent solids, processed, disposed, and recycled or reused.	Required	330.9(g)(1)	Yes	N/A	This is in reference to a mobile liquid waste processing unit, which the proposed facility will not have.	Site Operating Plan
1002	Part IV	Provide in the quarterly report, the method(s) utilized to achieve at least 10% recycling or reuse of incoming material	Required	330.9(g)(1)	Yes	N/A	This is in reference to a mobile liquid waste processing unit, which the proposed facility will not have.	Site Operating Plan
1003	Part IV	Submit a quarterly report that reconciles the volume of waste with the amounts on manifests, shipping documents, or trip tickets and indicate where the recyclable material was taken for recycling.	Required	330.9(g)(1)	Yes	N/A	This is in reference to a mobile liquid waste processing unit, which the proposed facility will not have.	Site Operating Plan

1004	Part IV	Acknowledge that the addition of any material such as lime, polymer, or flocculent added as part of the recycling process is not allowed to be considered as part of the 10% recovery of material from the waste stream and must be subtracted from the material considered as recycled.	Acknowledgement	330.9(g)(1)	Yes	N/A	This is in reference to a mobile liquid waste processing unit, which the proposed facility will not have.	Site Operating Plan
1005	Part IV	Acknowledge that diverting material from the waste stream without processing is not considered to be recycling as part of this activity.	Acknowledgement	330.9(g)(1)	Yes	N/A	This is in reference to a mobile liquid waste processing unit, which the proposed facility will not have.	Site Operating Plan
1006	Part IV	Provide the characteristics and constituent concentrations of wastes generated by the facility and indicate that documentation that all wastes leaving the facility can be adequately managed by other authorized facilities will be provided	Required	330.205(a)	Yes	Part IV PAR Section 5	The ony waste generated will be contaminated water.	Site Operating Plan
1007	Part IV	Indicate that all wastes generated by a facility must be processed or disposed at an authorized solid waste management facility	Required	330.205(b)	Yes	Part IV PAR Sections 4.3, 5		Site Operating Plan
1008	Part IV	Indicate that all wastewaters generated by a facility shall be managed as contaminated water in accordance with 330.207	Required	330.205(c)	Yes	Part IV PAR Sections 4.3, 5		Site Operating Plan
1010	Part IV	Indicate that the facility shall be designed and operated to produce a sludge that is acceptable at municipal solid waste landfills and does not exceed standards specified in 30 TAC §330.205(d)	Required If Requested	330.205(d)	Yes	N/A	This facility will not be producing sludges.	Site Operating Plan
1011	Part IV	Indicate that sludges exceeding the limits shall not be disposed in municipal solid waste landfills and must be sent to an authorized facility for further processing or disposal as a hazardous waste, as appropriate or disposed in a municipal solid waste landfill with dedicated Class 1 industrial solid waste cells if the sludge is nonhazardous.	Required If Requested	330.205(d)	Yes	N/A	This facility will not be producing sludges.	Site Operating Plan
1012	Part IV	The owner or operator shall not discharge contaminated water without specific written authorization.	Informational	330.207(a)		Part IV PAR Section 5		Site Operating Plan
1013	Part IV	Provide a plan that describes how all liquids resulting from the operation of the facility shall be disposed of in a manner that will not cause surface water or groundwater pollution.	Required	330.207(a)	Yes	Part IV PAR Section 5		Site Operating Plan
1014	Part IV	Indicate that contaminated water shall be collected and contained until properly managed.	Required	330.207(b)	Yes	Part IV PAR Section 5		Site Operating Plan
1015	Part IV	Indicate that leachate shall be collected and contained until properly managed.	Required	330.207(b)	Yes	Part IV PAR Section 5		Site Operating Plan
1016	Part IV	Indicate that collection units other than storage tanks shall have a clay or synthetic liner and the liner shall be constructed in accordance with 30 TAC §330.331(b)	Required If Requested	330.207(b)	Yes	N/A	Storage tanks are proposed as the means of collection and holding contact stormwater/leachate.	Site Operating Plan
1018	Part IV	Indicate that the use of leachate & gas condensate in mining process is prohibited.	Required	330.207(c)	Yes	N/A	This is not a mining process	Site Operating Plan
1019	Part IV	Indicate that the facility will not discharge to a septic system	Required	330.207(d)	Yes	N/A	Processed waste will not be discharged into the septic system.	Site Operating Plan
1020	Part IV	Indicate that off-site discharge of contaminated waters shall be made only after approval under the Texas Pollutant Discharge Elimination System authority	Required	330.207(e)	Yes	Part IV PAR Section 5		Site Operating Plan

1021	Part IV	Acknowledge that wastewaters discharged to a facility permitted under Texas Water Code, Chapter 26 must not interfere with or pass-through the treatment facility processes or operations, interfere with or pass-through its sludge processes, use, or disposal or otherwise be inconsistent with the prohibited discharge standards, including 40 Code of Federal Regulations Part 403, General Pretreatment Regulations for Existing and New Source Pollution	Acknowledgement	330.207(f)(1)	Yes	Part IV PAR Section 5		Site Operating Plan
1022	Part IV	Indicate that the daily effluent design standard for oil and grease concentration leaving the facility and entering a public sewer system shall not exceed 200 milligrams per liter, the concentration established in the wastewater discharge permit pretreatment limit or the concentration established by the treatment facility permitted under Texas Water Code, Chapter 26, the National Pollutant Discharge Elimination System, or the limits established in 30 TAC §330.207, if the discharge points do not require compliance with locally set limits.	Required	330.207(g)	Yes	Part IV PAR Section 5		Site Operating Plan
1023	Part IV	Indicate that lagoons, open-top storage tanks, open vessels, and underground storage units are prohibited at liquid waste transfer facilities	Required	330.207(h)	Yes	N/A	This is not a liquid transfer facility.	Site Operating Plan
1024	Part IV	Provide plans demonstrating that all waste shall be stored in such a manner that it does not constitute a fire, safety, or health hazard or provide food or harborage for animals and vectors, and shall be contained or bundled so as not to result in litter	Required	330.209(a)	Yes	Part IV PAR Section 6		Site Operating Plan
1025	Part IV	Provide a description of on-site storage area for source-separated or recyclable materials that is separate from a transfer station or process area and provides for the control of odors, vectors, and windblown waste	Required If Requested	330.209(b)	Yes	Part IV PAR Section 6		Site Operating Plan
1026	Part IV	Provide plans for process area of transfer stations that recover material from putrescible or liquid waste. Such plans shall provide for the storage of processed and unprocessed waste & recycled materials in enclosed buildings, vessels, or containers.	Required If Requested	330.209(c)	Yes	N/A	Part IV PAR, Section 6 states that the facility will not recover materials from solid waste that contains putrescible materials, nor process liquid waste.	Site Operating Plan
1027	Part IV	Provide a plan that describes how all waste containing food wastes shall be stored in covered or closed containers that are leak-proof, durable, and designed for safe handling and easy cleaning	Required	330.211	Yes	Part IV PAR Section 6		Site Operating Plan
1028	Part IV	Indicate that nonreusable containers shall be of suitable strength to minimize vector scavenging or rupturing.	Required	330.211(1)	Yes	Part IV PAR Section 6		Site Operating Plan
1029	Part IV	Indicate that reusable containers must be maintained in a clean condition as not to constitute a nuisance, harbor, feed, and propagate vectors.	Required	330.211(2)	Yes	Part IV PAR Section 6		Site Operating Plan
1030	Part IV	Indicate that any containers emptied manually must be capable of being serviced without physical contact with waste.	Required	330.211(2)(A)	Yes	Part IV PAR Section 6		Site Operating Plan
1031	Part IV	Indicate that containers that are mechanically handled must be designed to prevent spillage/leakage during storage, handling, and transport.	Required	330.211(2)(B)	Yes	Part IV PAR Section 6		Site Operating Plan

1032	Part IV	Provide a plan that describes how a citizen's collection stations shall be operated in accordance with 30 TAC §330.213	Required If Requested	330.213(a)	Yes	N/A	A separate citizen's collection station is not planned for this facility.	Site Operating Plan
1033	Part IV	Indicate that it is the responsibility of the person that owns or operates the collection center to provide for the collection of deposited waste on a scheduled basis and supervise the facility in order to maintain it in a sanitary condition.	Required If Requested	330.213(a)	Yes	N/A	A separate citizen's collection station is not planned for this facility.	Site Operating Plan
1034	Part IV	A citizen's collection station may accept sharps from single-family or multi-family dwellings, hotels, motels, or other establishments that provide lodging and related services for the public. The sharps will not be considered medical waste, as defined in 30 TAC §330.3	Required If Requested	330.213(b)	Yes	N/A	A separate citizen's collection station is not planned for this facility.	Site Operating Plan
1035	Part IV	Provide operational standards for stationary compactors that describe how they will operated and maintained in such a way as not to create a public nuisance through material loss or spillage, odor, vector breeding or harborage, or other condition.	Required If Requested	330.215(1) and (2)	Yes	N/A	A stationary compactor is not planned for this facility.	Site Operating Plan
1036	Part IV	Indicate that a copy of the permit or registration, application, and any other plans or related documents, and as-built plans will be maintained in the site operating record and shall be made available for inspections by agency representatives or other interested parties	Required	330.219(a)	Yes	Part IV PAR Section 2.1		Site Operating Plan
1037	Part IV	Indicate that operator shall record & retain location restriction demonstrations, inspection records, training procedures, closure plans, monitoring, testing, analytical data relating to closure, cost estimates, financial assurance documents, all correspondence, modification, approvals, manifests, shipping documents, tickets relating to special waste, & documents as specified by the executive director in the operating record.	Required	330.219(b)(1) – (7)	Yes	Part IV PAR Section 2.2 Table 2-1		Site Operating Plan
1038	Part IV	Indicate that trip tickets will be maintained according to the record retention provisions in 30 TAC §312.145.	Required	330.219(b)(8)	Yes	Part IV PAR Table 2-1		Site Operating Plan
1040	Part IV	Indicate that all reports will be signed by a person who is a duly authorized as a signatory for reports. A person is duly authorized if authorized in in writing by the owner or operator in accordance with 30 TAC §305.44(a) and the authorization specifies individual or position with responsibility and this written authorization is submitted to the executive director	Required	330.219(c)(1)(A) - (C)	Yes	Part IV PAR Section 2.3		Site Operating Plan
1041	Part IV	Acknowledge that if the authorization to sign is not longer accurate a new authorization will be submitted	Acknowledgement	330.219(c)(2)	Yes	Part IV PAR Section 2.3		Site Operating Plan
1042	Part IV	Indicate that any person signing a report shall make the certification in 305.44(b).	Required	330.219(c)(3)	Yes	Part IV PAR Section 2.3		Site Operating Plan
1043	Part IV	Indicate that the operator shall maintain records on-site, available for inspection by the executive director for a period consisting of the two most recent calendar years	Required	330.219(d)	Yes	Part IV PAR Section 2		Site Operating Plan

1045	Part IV	Indicate that the results of final product testing under 30 TAC §330.613 or §332.71 will be maintained in the site operating record	Required	330.219(d)(2)	Yes	Part IV PAR Section 2		Site Operating Plan
1046	Part IV	Indicate that copies of annual reports will be maintained in the site operating record for 5yrs	Required	330.219(d)(3)	Yes	Part IV PAR Section 2.1		Site Operating Plan
1047	Part IV	Indicate that the site operating record shall be furnished and available for inspection by executive director.	Required	330.219(e)	Yes	Part IV PAR Section 2.4		Site Operating Plan
1048	Part IV	Indicate that the operator shall retain site operating record for the life of the facility.	Required	330.219(f)	Yes	Part IV PAR Section 2.5		Site Operating Plan
1049	Part IV	Indicate that the executive director may set alternative recordkeeping & notification schedules.	Required	330.219(g)	Yes	Part IV PAR Section 2.6		Site Operating Plan
1051	Part IV	Provide a fire protection plan that describes the source of fire protection (a local fire department, fire hydrants, fire extinguishers, water tanks, water well, etc.), procedures for using the fire protection source, and employee training and safety procedures. The fire protection plan shall comply with local fire codes.	Required	330.221(c)	Yes	Part IV PAR Section 7		Site Operating Plan
1052	Part IV	Provide a description of the availability of water under pressure for firefighting purposes	Required	330.221(a)	Yes	Part IV PAR Section 7		Site Operating Plan
1053	Part IV	Provide a description of on-site firefighting equipment	Required	330.221(b)	Yes	Part IV PAR Section 7		Site Operating Plan
1054	Part IV	Indicate that all employees shall be trained in the contents and use of the fire protection plan	Required	330.221(c)	Yes	Part IV PAR Section 7		Site Operating Plan
1055	Part IV	Provide a description of the artificial barriers, natural barriers, or a combination of both, appropriate to protect human health and safety and the environment that are used to control access to the facility and indicate that uncontrolled access to the facility shall be prevented.	Required	330.223(a)	Yes	Part IV PAR Section 8.1		Site Operating Plan
1056	Part IV	Provide a description of the, minimum two lane, access road from the public road and how it is designed for expected traffic volumes and adequate turning radii.	Required	330.223(b)	Yes	Part IV PAR Section 8.1		Site Operating Plan
1057	Part IV	Provide a description of vehicle parking for equipment, employees, and visitors. Indicate that safety bumpers at hoppers must be provided for vehicles. And provide a description of the positive means to control dust and mud	Required	330.223(b)	Yes	Part IV PAR Section 8.1		Site Operating Plan
1058	Part IV	Provide a description of perimeter control fencing that includes having lockable gates and attendant on site during operating hours. Operating and transport areas shall be enclosed by walls or fencing	Required	330.223(c)	Yes	Part IV PAR Section 8.1		Site Operating Plan
1059	Part IV	Provide a description of the unloading areas and indicate that unloading areas will be confined to as small an area as practical and be monitored by attendant.	Required	330.225(a)	Yes	Part IV PAR Section 8.2		Site Operating Plan
1060	Part IV	Provide a description of the signs & forced access lanes used to prevent indiscriminate dumping	Required	330.225(a)	Yes	Part IV PAR Section 8.2		Site Operating Plan
1061	Part IV	Indicate that the facility is not required to accept any solid waste that he/she determines will cause or may cause problems in maintaining full and continuous compliance	Required	330.225(a)	Yes	Part IV PAR Section 8.2		Site Operating Plan

1062	Part IV	Provide procedures to ensure that waste in unauthorized areas is removed immediately and disposed of properly.	Required	330.225(b)	Yes	Part IV PAR Section 8.2		Site Operating Plan
1063	Part IV	Provide procedures for the detection and prevention of the unloading of processing of prohibited wastes.	Required	3330.225©	Yes	Part IV PAR Section 8.2		Site Operating Plan
1064	Part IV	Indicate that prohibited waste must be returned immediately to the transporter or generator.	Required	330.225(c)	Yes	Part IV PAR Section 8.2		Site Operating Plan
1065	Part IV	Provide a description of how storage & processing areas are designed to control and contain worst case spill or release and will account for precipitation from a 25-year, 24-hour storm.	Required	330.227	Yes	Part IV PAR Section 8.3		Site Operating Plan
1066	Part IV	Specify the waste acceptance and facility operating hours	Required	330.229(a)	Yes	Part IV PAR Section 8.4		Site Operating Plan
1067	Part IV	The waste acceptance hours may be any time between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, unless otherwise approved by the executive director or commission for a permit. The operating hours for operating heavy equipment and transporting materials on- or off-site may be any time between the hours of 5:00 a.m. and 9:00 p.m., Monday through Friday, unless otherwise approved in the authorization.	Required	330.229(a)	Yes	Part IV PAR Section 8.4		Site Operating Plan
1068	Part IV	Specify alternative operating hours of up to five days in a calendar year to accommodate special occasions, special purpose events, holidays, or other special occurrences	Required	330.229(b)	Yes	Part IV PAR Section 8		Site Operating Plan
1069	Part IV	Indicate that the facility will record in the site operating record the dates, times, and duration when any alternative operating hours are utilized.	Required	330.229(d)	Yes	Part IV PAR Section 8.4		Site Operating Plan
1070	Part IV	Indicate that the commission's regional offices may allow additional temporary operating hours to address disaster or other emergency situations, or other unforeseen circumstances that could result in the disruption of waste management services in the area.	Required	330.229(c)	Yes	Part IV PAR Section 8.4		Site Operating Plan
1071	Part IV	Indicate that a sign measuring at least 4' X 4' must be displayed at all entrances. Indicate that information on the sign must including the facility name and type, hours and days of operation, authorization number, and facility rules.	Required	330.231	Yes	Part IV PAR Section 8.5		Site Operating Plan
1072	Part IV	Indicate that windblown material and litter shall be collected as necessary, throughout the facility, along fences and access roads, and at the gate, at least once per day on days that the facility is in operation, to minimize unhealthy, unsafe, or unsightly conditions.	Required	330.233(a)	Yes	Part IV PAR Section 8.6		Site Operating Plan
1073	Part IV	Indicate the measures used to control windblown waste.	Required	330.233(a)(1)	Yes	Part IV PAR Section 8.6		Site Operating Plan
1074	Part IV	Provide a description of fence or screen used to minimize windblown waste if the facility is not completely enclosed.	Required	330.233(b)	Yes	Part IV PAR Section 8.6		Site Operating Plan
1075	Part IV	Provide procedures to encourage waste hauling vehicles to cover loads that may include posting signs, reporting offenders, and assessing surcharges.	Required	330.235	Yes	Part IV PAR Section 8.7		Site Operating Plan

1077	Part IV	Provide a description of all weather access roads at the facility and how the tracking of mud and debris onto public roadways will be minimized.	Required	330.237(a)	Yes	Part IV PAR Section 8.7		Site Operating Plan
1078	Part IV	Provide procedures use to ensure that dust from on-site and other access roadways shall not become a nuisance to surrounding areas and indicate that a water source and necessary equipment or other means of dust control shall be provided.	Required	330.237(b)	Yes	Part IV PAR Section 8.7		Site Operating Plan
1079	Part IV	Provide procedures to be used to maintain on site roads and minimize depressions, ruts, and potholes.	Required	330.237(c)	Yes	Part IV PAR Section 8.7		Site Operating Plan
1080	Part IV	Describe screening or other means used to prevent noise pollution & adverse visual impacts.	Required	330.239	Yes	Part IV PAR Section 8.9		Site Operating Plan
1081	Part IV	Provide procedures used to ensure that the design capacity of the facility shall not be exceeded and that waste will not be allowed to accumulate in quantities that create a nuisance, create odors, or harbor vectors.	Required	330.241(a)	Yes	Part IV PAR Section 8.10		Site Operating Plan
1082	Part IV	Provide procedures that describe how unprocessed grease, grit, & septage will only be stored up to 72hrs.	Required	330.241(a)(1)	Yes	N/A	These wastes will not be accepted at the facility.	Site Operating Plan
1083	Part IV	Provide procedures that provide for the restriction, diversion or removal of waste if the facility experiences a significant work stoppage.	Required	330.241(b)	Yes	Part IV PAR Section 8.10		Site Operating Plan
1084	Part IV	Provide an alternative processing/disposal procedures for when facility is inoperable for more than 24hrs.	Required	330.241(c)	Yes	Part IV PAR Section 8.10		Site Operating Plan
1085	Part IV	Provide procedures for washing down all working surfaces in contact with waste at least weekly or twice per week for facilities that operate continuously.	Required	330.243(a)	Yes	Part IV PAR Section 8.11		Site Operating Plan
1086	Part IV	Provide procedures to ensure that wash water shall not be allowed to accumulate without proper treatment.	Required	330.243(b)	Yes	Part IV PAR Section 8.11		Site Operating Plan
1087	Part IV	Provide procedures that demonstrate that wash water shall be collected & disposed of in an authorized manner.	Required	330.243(c)	Yes	Part IV PAR Section 8.11		Site Operating Plan
1088	Part IV	Acknowledge that air emissions from municipal solid waste facilities must not cause or contribute to a condition of air pollution as defined in the Texas Clean Air Act.	Acknowledgement	330.245(a)	Yes	Part IV PAR Section 8.12		Site Operating Plan
1090	Part IV	Provide a description of odor-retaining containers & vessels used to store liquid and solid waste	Required	330.245(c)	Yes	Part IV PAR Section 8.12		Site Operating Plan
1091	Part IV	Provide a description of how the facility has been designed and will be operated to provide adequate ventilation and prevent nuisance odors from leaving boundary of facility	Required	330.245(d)	Yes	Part IV PAR Section 8.12		Site Operating Plan
1092	Part IV	Indicate that air pollution emission capture & abatement equipment shall be cleaned and maintained per manufacturer's recommendations and as necessary so that the equipment efficiency can be adequately maintained.	Required	330.245(e)	Yes	Part IV PAR Section 8.12		Site Operating Plan
1093	Part IV	Provide a description of the measures/equipment, in accordance with 30 TAC §330.245(f)(1) – (4), that will be use to control odor at the facility.	Required	330.245(f)(1) – (4)	Yes	Part IV PAR Section 8.12		Site Operating Plan

1094	Part IV	Indicate that the process areas that recover material from solid waste that contains putrescibles shall be maintained totally within an enclosed building and describe how openings to the process area shall be controlled to prevent releases of nuisance odors from leaving the property boundary of the facility.	Required	330.245(g)	Yes	N/A	This facility will not recover materials from solid waste that contain putrescible materials.	Site Operating Plan
1095	Part IV	Provide a description of how facility shall be designed to allow a minimal time of exposure of liquid waste to the air and minimize waste contact with air during unloading of liquid waste into the facility.	Required	330.245(h)	Yes	N/A	This facility will not process liquid waste.	Site Operating Plan
1096	Part IV	Acknowledge that the reporting of emissions events shall be made in accordance with §101.201 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements) and reporting of scheduled maintenance shall be made in accordance with §101.211 of this title (relating to Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements).	Acknowledgement	330.245(j)	Yes	Part IV PAR Section 8.12		Site Operating Plan
1097	Part IV	Provide procedures for the control of ponded water to avoid its becoming a nuisance and alleviate any objectionable odors	Required	330.245(k)	Yes	Part IV PAR Section 8.12		Site Operating Plan
1098	Part IV	Indicate that facility personnel will be trained in the appropriate sections of the facility's health and safety plan.	Required	330.247	Yes	Part IV PAR Section 8.13		Site Operating Plan
1099	Part IV	Indicate that the facility shall provide potable water and sanitary facilities for all employees and visitors.	Required	330.249	Yes	Part IV PAR Section 8.14		Site Operating Plan

TYPE V TRANSFER FACILITY

PERMIT APPLICATION REPORT (PAR) PACKAGE

PARTS I AND II

PREPARED FOR:

CIRCLE LAKE TRANSFER, LLC.

13727 OFFICE PARK DRIVE
HOUSTON, TEXAS 77070

PREPARED BY:

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SEPTEMBER 2021

Alabama / Georgia / Louisiana / Mississippi / Texas

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TABLES:

PERMIT APPLICATION REPORT ENGINEERING DRAWING SET:

APPENDICES:

ACRONYMS:

AllenES	Allen Engineering and Science, Inc.
bls	Below Land Surface
CFR	Code of Federal Regulations
CLT	Circle Lake Transfer, LLC
CLTS	Circle Lake Transfer Station
FAA	Federal Aviation Administration
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
g	Gravity
GIS	Geographic Information System
HGAC	Houston-Galveston Area Council of Government
IPaC	Information for Planning and Consultation
MSL	Mean Sea Level
MSW	Municipal Solid Waste
NPDES	National Pollution Discharge Elimination System
NRACM	Non-Regulated Asbestos-Containing
PAR	Permit Application Report
PCB	Polychlorinated Biphenyls
P-CO	Public, with Conditional Overlay
PGA	Peak Ground Acceleration
RRC	Railroad Commission
SOP	Site Operating Plan
SWPPP	Stormwater Pollution Prevention Plan
T&E	Threatened and Endangered
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
TPDES	Texas Pollutant Discharge Elimination system
TPWD	Texas Parks and Wildlife Department
TWDB	Texas Water Development Board
TxDOT	Texas Department of Transportation
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Services
USGS	United States Geologic Survey
UWZ	Uppermost Water-bearing Zone
WOTUS	Waters of the US

1.0 INTRODUCTION

1.1 TERMS OF REFERENCE

Circle Lake Transfer, LLC (CLT) is submitting an application to register a Type V Municipal Solid Waste (MSW) transfer facility. The facility will be located in the southwestern corner of Montgomery County, near Pinehurst, Texas. The site is located approximately one-half mile northeast of Circle Lake Drive's intersection with State Highway 1774 (Magnolia Boulevard) near its intersection (north) with State Highway 249. The proposed facility will be located within the property boundary shown in the attached drawing set. The purpose of this transfer facility is to provide efficient means to transfer MSW to local regional landfills. The Circle Lake Transfer Station (CLTS) will accept waste from public and private waste hauling vehicles. Waste material will be transferred to a permitted MSW landfill located not more than 50 miles from the facility. The Circle Lake Transfer Station will be owned and operated by Circle Lake Transfer, LLC.

The CLTS will provide an efficient means to transfer MSW that is generated in the Montgomery County, and the surrounding areas to a Texas Commission on Environmental Quality (TCEQ) permitted Type I MSW landfill. This facility will comply with Title 30 Texas Administrative Code (TAC) §330.9(e)(1) by ensuring that the incoming waste has been reduced by at least 10 percent through source separation, curbside recycling, and other materials recovery programs. Examples of diversion include source separation of household recyclables, concrete and other construction debris diversion, brush and woody waste diversion, and other recyclable waste streams that are identified for recycling. Refer to **Part IV – Site Operating Plan (SOP) (SECTION 4.5)** for additional information regarding waste diversion. Additionally, in accordance with Title 30 TAC §330.9(e)(2), unrecovered solid waste will be transferred to a permitted municipal solid waste landfill located within 50 miles of the CLTS (e.g., the Twin Oaks Landfill in Grimes County, TCEQ Permit No. MSW-2292) or other TCEQ approved MSW Type I Landfill located within 50 miles of the CLTS.

The complete registration application is separated into **Parts I-IV** as required by 30 TAC §330.57. **Part I** includes the **Part I Application Form**, this report, and attached appendices. These materials collectively present site and applicant information to address the items required by 30 TAC §330.59, §281.5, and §305.45. **Part II** presents an existing conditions summary and information on the character of the facility and surrounding area. **Part II** has been combined with **Part I**, as allowed. This includes provision of a single **Part I/II Permit Application Report (PAR)**, referencing and attaching as appendices, the various required informational items of **Parts I** and **II**. **Part III** presents general facility design information, schematic designs of the facility, and required plans. **Part IV** presents the **Site Operating Plan (SOP)**, which describes the general procedures for conducting day-to-day operations at the facility.

2.0 FACILITY DESCRIPTION

This section provides information on the general facility location, to address 30 TAC §330.59(b) and (c); as well as §330.61(c), (e), (f), and (g) to show proximity to surrounding features. Facility layout, pursuant to §330.61(d) is also addressed.

2.1 OVERVIEW

The proposed Type V transfer facility will be located on an approximate 5.5-acre site located in Pinehurst, Texas. The proposed facility is located 2,700 ft northeast on Circle Lake Drive from its intersection with TX-249/FM1774 (the Circle Lake Drive TX-249/FM1774 intersection is 1,000 ft north of the Aggie Expressway and 5 miles south on FM 1774 from the center of town of Magnolia, Texas) Pinehurst, Montgomery County, Texas. The proposed facility is located on dead end road so there is no other access**.** The transfer facility and associated features (building, access roads, turnaround areas, approach ramps, parking, support features, etc.) will utilize approximately four (4) acres of the site, while the building is expected to occupy less than one (1) acre.

The proposed transfer station will provide CLT the ability to collect, process, load, and transport solid waste and recyclables more efficiently by allowing small solid waste collection vehicles to transfer the solid waste into larger transfer trailers before transport to a permitted MSW landfill.

This facility will comply with Title 30 TAC §330.9(e)(1) by ensuring that the incoming waste has been reduced by at least 10 percent through source separation, curbside recycling, and other materials programs. Additionally, in accordance with Title 30 TAC 330.9(e)(2), non-recyclable waste from the transfer station will be transferred to a permitted Type I MSW landfill located within 50 miles of the CLTS (e.g. the Twin Oaks Landfill in Grimes County, TCEQ Permit No. MSW-2292) or other TCEQ approved MSW Type I Landfill located within 50 miles of the CLTS.

The facility will contain four scales onsite. Two scales will be for collection trucks, located along the ingress/egress routes of the facility for collection trucks, and two will be for transfer trucks, located within the facility loadout area. There is expected to be two attendant buildings located adjacent to the collection truck scales, and one small office building located along the southeastern corner of the transfer station building.

The proposed transfer station building will be a pre-engineered metal building with a roof, exterior walls, openings for collection vehicles to enter the building to unload, covered loadout, and ancillary support features. The inside of the transfer station building will have a reinforced concrete slab (minimum 4,000 psi 28-day compression strength) tipping floor with an area of approximately 30,000 square feet, and reinforced concrete push walls to resist typical forces of transfer station operations.

The transfer station will have controlled access through a gate and scale house. Incoming loads will be weighed and directed to the tipping floor inside the enclosed transfer station building. The unloading area for waste collection vehicles will consist of a reinforced concrete tipping floor (where incoming waste will be deposited) that extends beneath the entire overhead roof structure. The tipping floor will be well-lit (via natural and overhead lighting) and include an area where transfer trailers will park during loading from the tipping floor. Incoming loads will be directed to the tipping floor for transfer operations. Typically, MSW deposited on the tipping floor will be pushed by a front-end loader to a grapple loader (or similar materials handling equipment), which will load the MSW into a transfer trailer. The grapple loader may also be used to compact the

waste or more evenly distribute the waste within the transfer trailer. The transfer trailer will haul the MSW to a permitted MSW landfill.

Ventilation in the transfer station building will be provided by the openings through which waste hauling vehicles will enter and exit, and vents which will be installed on the building roof. The transfer facility doors on each end of the transfer truck loadout area may also be opened, if needed, for additional ventilation. Excessive dust and particulates that occur at the transfer station facility will be controlled using water sprays or similar methods. No significant air pollution emissions are expected to result from the operation of the transfer station.

The quantity and types of waste to be transferred at the CLTS, as well as the site development and site operations, are discussed in the following subsections.

Details on the layout of the transfer facility, design features, and design criteria, are provided in the **Site Development Plan (Part III)** portion of the application, as required; and details regarding the operations of the facility, including scale house, unloading, loading and transfer, can be found in **Part IV - SOP**, as required.

2.2 EXISTING CONDITIONS SUMMARY

Currently, the site is being utilized as a solid waste collection depot including solid waste collection truck/equipment parking, maintenance, and storage of equipment and dumpsters. No MSW is stored on-site. The site's previous use was a heavy industrial use as a debarking and bark processor of large timber/logs. The existing facility infrastructure includes a perimeter fence, front gate, site office, maintenance shop, all-weather access roads, and all general overhead and underground utilities.

On the northwest portion of the site, there is a small stormwater holding pond that generally receives runoff from the entire site. The pond drains north-northwest to a 30-foot-wide drainage easement, which is directly adjacent to the holding pond. Additionally, there is a 50-foot wide Superior Oil Company easement which is comprised of a 40-foot-wide pipeline easement and a 10-foot-wide telephone line easement.

2.3 MAPS AND DRAWINGS

Maps and drawings are presented in the **PAR Engineering Drawing Set** to show the general location of the facility, proximity to surrounding features, land use of the area, etc. This set also includes a facility layout plan for the transfer facility. As mentioned, the required transfer facility process and design drawings are provided in the **Site Development Plan (Part III)**, as required.

2.4 ADJACENT LAND OWNERSHIP

A map presenting the adjacent land ownership is included in the **PAR Engineering Drawing Set**. The proposed facility is located on a dead-end road. The registration boundary of the facility is over 500 feet from the nearest residence and/or retail business (there are other heavy industrial operations on Circle Lake Drive including a steel pipe supplier, asphalt plant, concrete plant, gas pipeline, utility corridor and gas compressor station). The map shows properties within a quarter mile from the registration boundary and addresses mineral interest ownership under the facility. A land ownership list, keyed to the land ownership maps, is also provided in **Appendix A.**

This information has been provided to satisfy the requirements of 30 TAC §330.59(c)(3), 30 TAC §305.45(a)(6)(D), and 30 TAC §281.5.

3.0 WASTE ACCEPTANCE PLAN

This section provides information on waste acceptance to address 30 TAC §330.61(b); including a description of the waste characteristics, the maximum amount of waste to be received daily and annually for five years, and other amounts and duration of, and capacity for, receipt and/or storage as detailed herein. Other than the waste classification and/or source of waste as outlined below, there are no waste constituent(s) or waste characteristic(s) that are limiting parameters (such as pH or other constituents) that may impact or influence the design and operation of the facility.

3.1 WASTE CHARACTERISTICS

The proposed facility is a Type V MSW facility (a transfer facility). The general classifications of solid waste that are allowed to be accepted at the transfer facility, and that are prohibited from acceptance, are provided below. The classifications of waste are defined in 30 TAC §330.3.

Allowable Wastes: The facility is allowed to accept the following classifications of solid wastes for subsequent transfer to a properly permitted municipal solid waste landfill facility for disposal:

- Household waste,
- Yard waste,
- Commercial waste,
- Construction waste,
- Demolition waste,
- Brush,
- Rubbish,
- Class 2 non-hazardous industrial solid waste,
- Class 3 non-hazardous industrial solid waste,
- Shredded or quartered tires, and
- Certain special wastes.

Each classification of waste is defined in Title 30 TAC §330.3 and summarized below:

Household Waste – Any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas); does not include brush.

Yard Waste – Leaves, grass clippings, yard and garden debris, and brush, including clean woody vegetative material not greater than six inches in diameter, that results from landscaping maintenance and land-clearing operations. The term does not include stumps, roots, or shrubs with intact root balls.

Commercial Solid Waste – All types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Construction or Demolition Waste – Waste resulting from construction or demolition projects; includes all materials that are directly or indirectly the by-products of construction work or that result from demolition of buildings and other structures, including, but not limited to, paper, cartons, gypsum board, wood, excelsior, rubber, and plastics.

Brush – Cuttings or trimmings from trees, shrubs, or lawns and similar materials.

Rubbish – Non-putrescible solid waste (excluding ashes), consisting of both combustible and noncombustible waste materials. Combustible rubbish includes paper, rags, cartons, wood, excelsior, furniture, rubber, plastics, brush, or similar materials; noncombustible rubbish includes glass, crockery, tin cans, aluminum cans, and similar materials that will not burn at ordinary incinerator temperatures (1,600 degrees Fahrenheit to 1,800 degrees Fahrenheit).

Class 2 wastes – Any individual solid waste or combination of industrial solid waste that are not described as Hazardous, Class 1, or Class 3 as defined in §335.506 of this title (relating to Class 2 Waste Determination).

Class 3 wastes – Inert and essentially insoluble industrial solid waste, usually including, but not limited to, materials such as rock, brick, glass, dirt, and certain plastics and rubber, etc., that are not readily decomposable, as further defined in §335.507 of this title (relating to Class 3 Waste Determination).

Certain Special Wastes – Special waste is defined by TCEQ's solid waste regulations (30 TAC §330.3(154)). Only those certain special wastes specifically listed below are allowed to be accepted at this facility without prior written approval from the Executive Director. Further, such special waste must be compatible with the compaction and loading equipment operated at the facility or unless modifications are made to the facility to accommodate the special waste.

- Dead animals and slaughterhouse waste that are incidental to routine collection of municipal solid waste and that can be systematically processed along with other solid waste.
- Drugs, contaminated foods, or contaminated beverages, other than those contained in normal household waste.
- Empty containers which have been used for pesticides, herbicides, fungicides, or rodenticides will be accepted for disposal provided the containers have been triple rinsed, crushed or rendered unusable upon receipt at the gate.
- Incidental amounts of non-regulated asbestos-containing materials (NRACM). The incidental amount is defined as the maximum of 10 percent of the waste received on an annual basis by scale weight (annual basis is defined as the latest 4 consecutive quarters).
- Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas when those wastes are to be processed, treated, or disposed of at a solid waste management facility. Only those wastes authorized for disposal at a solid waste management facility will be accepted.
- Waste generated outside the boundaries of Texas that contains any industrial waste; any waste associated with oil, gas, and geothermal exploration, production, or development activities; or any material that is listed in the bullets above.
- Other special waste than as described above and approved for acceptance by the Executive Director.

Prohibited Wastes: The facility is prohibited from accepting, and shall not accept the following wastes:

- Regulated hazardous waste,
- Polychlorinated biphenyls (PCBs),
- Liquid wastes,

- Certain special wastes not listed above as allowable, namely:
  - Hazardous waste from conditionally exempt small-quantity generators that may be exempt from full controls under Title 30 TAC Chapter 335, Subchapter N (relating to Household Materials Which Could Be Classified as Hazardous Wastes),
  - Class 1 non-hazardous industrial waste,
  - Untreated medical waste,
  - Municipal wastewater treatment plant sludges, other types of domestic sewage treatment plant sludges, and water-supply treatment plant sludges,
  - Septic tank pumpings,
  - Grease and grit trap wastes,
  - Wastes from commercial or industrial wastewater treatment plants, air pollution control facilities; and tanks, drums, or containers used for shipping or storing any material that has been listed as a hazardous constituent in Title 40 Code of Federal Regulations (CFR), Part 261, Appendix VIII but has not been listed as a commercial chemical product in 40 CFR §261.33(e) or (f),
  - Incinerator ash,
  - Used oil,
  - Lead acid storage batteries, and
  - Used-oil filters from internal combustion engines.

3.2 WASTE ACCEPTANCE AMOUNTS AND STORAGE DURATIONS

TABLE 3-1: WASTE ACCEPTANCE EVALUATION

Year[1]	Daily Waste Acceptance[2] (tons/day)	Waste Accepted[3] (tons/year)
1	500	143,000
2	1,000	286,000
3	1,500	429,000
4	1,800	514,800
5	2,500	715,000
5 Year Average	1,460	417,560

1. "Year" 1 is estimated to be 2022 – 2023.
2. Based on projected population increase for service area and ramp of volume
3. Based on 5.5 days per week operation.

Note in **TABLE 3-1** that the daily acceptance rates for the first 5 years of transfer station operation are less than the proposed maximum daily waste acceptance rate of 3,200 tons per day. The TS sizing has been designed to provide for the safe and efficient transfer of waste it is projected to receive, with additional tipping floor provided for staging and storage of waste. It is estimated that the CLTS will reach its maximum capacity of 3,200 tons/day in Year 14 or 2035-2036.

The maximum amount of waste that will be stored at the facility is 2,500 tons. If market conditions change and the facility stores more than 2,500 tons of waste overnight, a TCEQ authorization will be obtained to meet the provisions of Title 30 TAC §330.991(a)(2)(B). The maximum length of time material will remain onsite is 48 hours, except holidays and weekends, as discussed in **Part IV - SOP SECTION 8.10.** During holidays and/or weekends, waste may be temporarily stored at the facility not to exceed a time period of 72 hours.

In accordance with Title 30 TAC §330.9(e)(2), unrecovered solid waste will be transferred to a permitted municipal solid waste landfill located within 50 miles of the CLTS (e.g. the Twin Oaks Landfill in Grimes County, TCEQ Permit No. MSW-2292) or other TCEQ approved MSW Type I Landfill located within 50 miles of the CLTS.

3.3 FACILITY SERVICE AREA

The primary service area of the facility will be Montgomery County, other County members of the Houston-Galveston Council and surrounding counties.

3.3.1 WASTE SOURCES AND GENERATION AREAS

The facility will serve individuals, businesses, communities, institutions, and public and private solid waste collection vehicles in Montgomery County, other geographic areas of the other County members of the Houston-Galveston Council and surrounding counties.

3.3.2 POPULATION-EQUIVALENT SERVED

According to the U.S. Census Bureau in 2018/2019, Montgomery County was one of the top 10 fastest-growing counties in the state of Texas. The county's population grew 3% from July 1, 2018, to July 1, 2019—increasing from 589,770 to 607,391. The Census Bureau current estimated population for Montgomery County for 2020 is 642,633 making Montgomery County the 12th largest county in Texas with a 39.9 % growth rate from 2010 to 2020. In 2010 the County Population was 459,208 and in 2000 Population was 293,768 (119% growth rate from 2000 to 2010).

Montgomery County is expected to continue on the population growth trend and is expected to be the second-fastest growing county in the Houston metropolitan area, with a projected household population growth of 133.5% by 2045. The completion of Highway 249 – the "Aggie Expressway" and the outer loop Highway 99 – the "Grand Parkway" are expected to contribute to the growth of Montgomery County. The addition of both of these highways will also greatly augment and facilitate traffic to and from the proposed transfer station facility.

The population of the service area that is within 45-minute drive time from the proposed facility is 4,436,576. Based on the TCEQ Report titled, "*Municipal Solid Waste in Texas – A Year in Review – FY 2016 Data Summary and Analysis*" the average waste generation *per capita* (i.e., pounds per person per day) for all of Texas is 6.83 pounds/day and for the Houston-Galveston Area Council (H-GAC) is 7.08 pounds/day. Based on the average *per capita* rate for all of Texas of 6.83 pounds/day, the estimated MSW generated within the 45-minute drive time of the proposed facility is 5.5 million tons per year.

Based on the five (5) year average of waste received by the facility per year of 417,560 tons in **SECTION 3.2** above, this average annual intake will equate to 8% of the tonnage generated (based on current population) annually within a 45-minute drive time from the proposed facility.

From a *Population-Equivalent Served* perspective, the average population-equivalent of areas served by the facility, using the above 5-year average daily projected waste acceptance rate of 1,460 tons/day and a per capita disposal rate of 6.83 *per capita*, is 427,525 persons.

$$\frac{\text{(1,460 tons/day) x (2,000 pounds/ton)}}{\text{(6.83 pounds/persons/day)}} = 427{,}525 \text{ persons}$$

Waste will be transferred on a daily basis to a TCEQ permitted MSW landfill located within 50 miles of the CLTS. As economic conditions, population growth, and waste generation rates change, the volume of incoming waste may vary. The estimated maximum annual waste acceptance rate for the facility for five years is shown in **TABLE 3-2** above in **SECTION 3.2**.

3.4 FACILITY DESIGN CAPACITY

TABLE 3-2: FACILITY DESIGN CAPACITY

Description	Number	Explanation
Unloading Capacity		
No. of Tipping Floor Unloading Positions	6	Given based on design of facility tip floor
Average Time to Unload a Collection Vehicle (minutes)	8	Conservative value - typically able to unload more quickly
Number of Vehicles Unloaded Per Hour, Per Position	7.5	Calculated per 60 minutes (60 divided by 8)
Hourly Unloading Capacity (tons/hour)	315	Calculated as number of vehicles per hour per position x number of positions x average collection vehicle capacity (i.e. 7 tons)
Daily Unloading Capacity (tons/day)	5,040	Calculated as the hourly capacity multiplied by the number of operating hours per day **(assumed to be 16 hours** - but not a limiting parameter of the registration).
Trailer Loading/Loadout Capacity		
Number of Transfer Trailer Loading Positions	2	Given based on design of facility tip floor.
Average Time to Load a Transfer Trailer (minutes)	12	Conservative value - typically able to transfer and load-out more quickly
Number of Vehicles Loaded Per Hour, Per Position	5	Calculated as 60 minutes per hour divided by the average loading time (and rounded down to nearest whole number)
Hourly Load-out Capacity (tons/hour)	200	Calculated as number of positions x number of vehicles per hour per position x average transfer trailer vehicle capacity (i.e. 20 tons)
Daily Load-out Capacity (tons/day)	3,600	Calculated as the hourly capacity multiplied by the number of operating hours per day (assumed to be **18 hours** - but not a limiting parameter of the registration)
Design Capacity		
Design capacity is determined by the lower value of the unloading and loadout capacity. Therefore, the design capacity is 3,600 tons/day, which is greater than the proposed maximum daily waste acceptance rate of 3,200 tons per day.		

3.5 INTENDED DESTINATION OF SOLID WASTE RECEIVED AT THIS FACILITY

In accordance with Title 30 TAC 330.9(e)(2), non-recyclable waste from the transfer station will be transferred to a permitted Type I municipal solid waste landfill located within 50 miles of the CLTS (e.g. the Twin Oaks Landfill in Grimes County, TCEQ Permit No. MSW-2292) or other TCEQ approved MSW Type I Landfill located within 50 miles of the CLTS.

3.6 FACILITY QUALIFICATION AS A REGISTRATION

This facility will qualify for a Registration by complying with Title 30 TAC §330.9(e)(1) and (2) as follows:

1. This facility will comply with Title 30 TAC §330.9(e)(1) by ensuring that the incoming waste has been reduced by at least 10 percent through source separation, curbside recycling, and other materials recovery programs. Examples of diversion include source separation of household recyclables, concrete and other construction debris diversion, brush and woody waste diversion, and other recyclable waste streams that are identified for recycling. Refer to **Part IV - SOP SECTION 4.5** for additional information regarding waste diversion.

2. In accordance with Title 30 TAC §330.9(e)(2), unrecovered solid waste will be transferred to a permitted municipal solid waste landfill located within 50 miles of the CLTS (e.g. the Twin Oaks Landfill in Grimes County, TCEQ Permit No. MSW-2292) or other TCEQ approved MSW Type I Landfill located within 50-miles of the CLTS.

4.0 PROPERTY, OWNER, AND OPERATOR INFORMATION

This section provides property and owner-related information, to address the requirements of 30 TAC §330.59(d) through (h).

4.1 LEGAL DESCRIPTION OF FACILITY

A legal description of the transfer facility property boundary is included within **Appendix B**.

4.2 PROPERTY OWNERSHIP

As shown on the documentation provided in **Appendix B,** CLT is the owner of the land within the 5.5-acre property boundary.

4.3 EASEMENTS

A survey of easements within the property boundary are presented on the property plat in **Appendix B.** These easement locations are derived from the surveyor's easement research on the recorded easements listed in the property records of Montgomery County for the subject parcels of land. As shown, there is a 30-foot drainage easement on the northwestern portion of the property. Additionally, there is a 50-foot Superior Oil Company easement which is comprised of a 40-foot pipeline easement and a 10-foot telephone line easement.

A duplicate of this survey map that has been modified to show the transfer station registration boundary and proposed transfer station building location is also provided in **Appendix B.** As shown, there are three (3) easements within or adjacent to the transfer station registration boundary, but there are no easements in the area that will be occupied by the transfer station building. Accordingly, no solid waste loading or storage will occur within any easement (or right of way) that crosses the facility.

4.4 PROPERTY OWNER AFFIDAVIT AND LEGAL AUTHORITY

4.4.1 LIST OF ALL PERSONS HAVING OVER 20% OWNERSHIP IN THE CIRCLE LAKE TRANSFER FACILITY AND PROPERTY.

CLT is submitting an application to register a Type V MSW transfer facility. CLT will own and operate the transfer station facility. CLT is a Texas domestic limited liability company registered with the Texas Secretary of State under registration #804040465. There is only one person who owns 20% or more of CLT, as outlined in the **TABLE 4-1** below.

TABLE 4-1: ALL PERSONS HAVING OVER 20% OWNERSHIP

Name	Title	Contact Information
Mr. Jon Farley	Manager of LLC of Circle Lake Transfer LLC and Ztopia LLC	13727 Office Park Drive Houston, Texas 77070 832-698-2203 Jon@Zters.com

The CLTS and permit are owned and operated through a lease agreement between CLT and Ztopia LLC. Details of this lease can be found in **Appendix B.**

4.4.2 VERIFICATION OF LEGAL STATUS (30 TAC §281.5 AND §330.59(E))

Texas Secretary of State Certificates of Fact can be found in **Appendix B.**

4.4.3 PROPERTY OWNER AFFIDAVIT

A signed property owner affidavit, pursuant to 30 TAC §330.59(d)(2), is presented in **Appendix C**. The legal authority and status of the applicant has been verified as required by 30 TAC §330.59(e) and §281.5 and is also included in **Appendix C**.

4.5 FACILITY MANAGEMENT AND PERSONNEL

Jon Foley (Managing Partner) and Shelby Lowe (President) will be the primary management personnel of CLT. Their experience and qualifications from past waste management responsibilities is included as **Appendix D**.

4.6 APPOINTMENT LETTERS

Letters that authorize the Applicant's Agent to sign the application, and that designate the Engineer, are presented in **Appendix E**.

5.0 OTHER PERMITS, AUTHORIZATIONS, AND ACKNOWLEDGEMENTS

5.1 OTHER PERMITS OR APPROVALS/AUTHORIZATIONS

Besides this TCEQ registration application for the proposed Type V MSW facility (transfer facility), other applicable facility permits, authorizations, or construction approvals are identified on the **Part I Application Form**.

5.1.1 LOCAL AND COUNTY PERMITS

Montgomery County has various development permits that are required prior to construction activities. CLT shall ensure that all required local county development permits are acquired prior to construction.

Montgomery County Development Permits require:

- Site Plan – Showing the location of existing and planned buildings, storage areas, pipeline crossings, detention pond, and gravel and/or paved areas.
- Paving Plan – showing various types and locations of paving recommended in the geotechnical report provided by the owner.
- Grading Plan – showing storm drainage features, pad layout, proposed minimum finished floor elevations of buildings, existing and proposed topography, etc. The primary emphasis is on proposed grades.
- Drainage Plan & Calculations – delineating drainage post developed areas and showing runoff, inlets, storm sewer calculations and storm sewer layout.
- Stormwater Pollution Prevention Plan (SWPPP) (plan only, no report) – showing layout of erosion and sediment protection elements (i.e. rock dams, sediment fence, inlet protection, etc.) to be used during the construction phase to minimize pollutants into the City/County's storm sewer system.
- Utility Plan – showing proposed layout and design of on-site private domestic water distribution up to public point of connection and private sanitary sewer facilities up to public point of connection. It is assumed that water and sewer facilities to serve the site will all be privately maintained
- Septic plan and permit/approval
- Fire permit/approval

5.1.2 STORMWATER PERMITS

In addition to the Montgomery County Development Plan permits/approvals above the facility will also require a National Pollution Discharge Elimination System Program (NPDES) under the Clean Water Act and Waste Discharge Program under the Texas Water Code 26. However, the state of Texas has assumed the authority to administer the NPDES program in Texas, and thus the TCEQ Texas Pollutant Discharge Elimination System (TPDES) program has federal regulatory authority over the discharges to Texas surface water. Therefore, CLT will acquire a TPDES permit, as required.

The transfer facility has been designed to prevent the discharge of pollutants into waters of the state of Texas or water of the United States, as defined by the Texas Water Code and the federal Clean Water Act, respectively. Surface water from the existing facility will discharged under the TPDES Multi-Sector General Permit TXR050000 for Storm Water Discharges Associated with Industrial Activity.

The facility will be subject to TCEQ's stormwater permit requirements under the TPDES program; and accordingly, CLTS will operate in accordance with the TPDES permit requirements of the appropriate industry sector for the transfer facility, including a site-specific SWPPP.

5.1.3 AIR PERMITS

The facility is claiming Permit By Rule (PBR) per 30 TAC §106.4 and §106.534 for operation. TCEQ documents 10149 and 20303 proving the calculations required are included within **Appendix K**. Additionally, prior to when construction begins, CLT will acquire all applicable air construction permits for development of the facility.

5.2 NON-APPLICABLE REGULATORY PROGRAMS

The facility will not accept or manage hazardous or radioactive waste, perform underground injection or ocean dumping of waste, or discharge waste into waters of the U.S. Also, the facility does not propose to perform subsurface area drip dispersal. No jurisdictional wetlands will be affected. Therefore, the facility does not require any additional permits or construction approvals under the following programs.

- Hazardous Waste Management Program under the Texas Solid Waste Disposal Act;
- Underground Injection Control (UIC) Program under the Texas Injection Well Act;
- Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA);
- Nonattainment Program under the FCAA;
- National Emission Standards for Hazardous Air Pollutants Preconstruction Approval under the FCAA;
- Ocean dumping permits under the Marine Protection Research and Sanctuaries Act;
- Dredge or fill permits under the Federal Clean Water Act;
- Licenses under the Texas Radiation Control Act; or
- Subsurface area drip dispersal system permits under Texas Water Code, Chapter 32.

5.3 APPLICATION FEES

On behalf of the applicant, Allen Engineering and Science, Inc. (AllenES) has paid both the $150 permit registration and $2,050 permit application fee. The e-pay receipt confirmation number is provided on **the Part I Application Form**, and a copy of the payment receipt is attached to the overall application cover letter at the front of the application binder.

5.4 INTERNET POSTING

In accordance with 30 TAC §330.67(i), a complete copy of this application will be posted (upon submittal of the application to TCEQ) to the internet at the publicly accessible website identified www.circlelaketransfer.com on the **Part I Application Form**. Future revisions and supplements to the application will be posted at the same location. The internet posting is for informational purposes only.

5.5 OTHER OWNER/OPERATOR ACKNOWLEDGEMENTS AND INFORMATIONAL ITEMS

The owner/operator acknowledges the following:

- Liquids resulting from the operation of this solid waste facility will be disposed of in a manner that will not cause surface water or groundwater pollution. The facility will provide for the treatment of wastewaters resulting from waste management activities and from cleaning and washing. The operator will ensure that stormwater and wastewater management is in compliance with the regulations of the commission. As indicated in the table in **Part I Application Form**, the facility has received a TPDES Multi-Sector General Permit.

The owner/operator is providing a discussion as follows to address the other general informational requirements for which they will be responsible, as indicated below.

- It is the responsibility of an owner or operator to possess the property-related rights and interests required by applicable provisions of 30 TAC §330.67.
- It is the responsibility of an owner or operator to obtain any permits or approvals that may be required by local agencies such as for building construction, discharge of uncontaminated waters into ditches under control of a drainage district, discharge of effluent into a local sanitary sewer, etc.
- The owner or operator will be aware of and meet their requirements and responsibilities associated with the public notice process for registrations, as required by applicable provisions of 30 TAC §330.69.
- The owner or operator will be aware of and meet their requirements and responsibilities associated with standard registration conditions for MSW facilities, as required by applicable provisions of 30 TAC §330.73.

6.0 LAND USE

6.1 LAND USE INFORMATION

A land use evaluation was conducted for this project to assess the potential impact of the transfer facility on the surrounding area. Land uses in the area were determined using Montgomery County Geographic Information System (GIS) data including land use mapping, 2020 aerial imagery, Texas Historical Commission's (THC) Historic Sites Atlas, and any other relevant sources required to accurately depict the use of the surrounding areas.

6.1.1 ZONING

The facility will be located in unincorporated areas of Montgomery County, Texas near Pinehurst, Texas. AllenES confirmed with county officials that Montgomery County has no zoning regulations or requirements. Attached within **Appendix F** is the Montgomery County Codes and Zoning letter for unincorporated areas that states that "… Montgomery County does not have zoning regulations…".

6.1.2 SURROUNDING LAND USE

The surrounding area within 1 mile of the proposed facility was evaluated to determine the land use. The **Table 6-1**: **Surrounding Land-Use** provides the breakdown of the land use within the radius.

TABLE 6-1: SURROUNDING LAND-USE

Designation / Land Use	Acreage	Percentage
Undeveloped	1,582.7	68.58
Residential	298.4	12.93
Highway	105.9	4.59
Agricultural	61.2	2.65
Commercial	60.2	2.61
Right of Way	50.0	2.17
Industrial	48.2	2.09
Surface Mine	30.0	1.30
Roads	28.5	1.23
Parks and Recreational	17.1	0.74
Church	7.8	0.34
Water	6.7	0.29
Public	6.1	0.26
Utility	5.0	0.22

As seen above, the Undeveloped categorization comprises most of the area to the northwest and to the southeast, with Residential, Highway, then Agricultural and Commercial following as the next largest areas from the west-northwest to south-southeastern area. A general land use map is included within the attached drawing set.

Structures within a 500-foot radius of the facility are gas pipeline control stations and/or maintenance buildings for neighboring industrial companies. The existing structures within the property boundary are temporary and consist of sheds and trailers which will be removed or

altered to fit the general facility design. None of the structures are residential. A map showing the structures and inhabitable buildings has been provided as **Drawing 9**.

6.1.3 GROWTH TRENDS AND DIRECTIONS OF MAJOR DEVELOPMENT

According to the U.S. Census Bureau in 2018/2019, Montgomery County was one of the top 10 fastest-growing counties in the state of Texas. The county's population grew 3% from July 1, 2018, to July 1, 2019—increasing from 589,770 to 607,391. The Census Bureau current estimated population for Montgomery County for 2020 is 642,633 making Montgomery County the 12th largest county in Texas with a 39.9 % growth rate from 2010 to 2020. In 2010 the County Population was 459,208 and in 2000 Population was 293,768 (119% growth rate from 2000 to 2010).

Montgomery County is expected to continue on the population growth trend and is expected to be the second-fastest growing county in the Houston metropolitan area, with a projected household population growth of 133.5% by 2045. The completion of Highway 249 – the "Aggie Expressway" and the outer loop Highway 99 – the "Grand Parkway" are expected to contribute to the growth of Montgomery County. The addition of both of these highways will also greatly augment and facilitate traffic to and from the proposed transfer station facility.

6.1.4 PROXIMITY TO SPECIFIED USES

- Based on a review of the latest available aerial imagery (obtained in Google Earth / Maps, with latest available imagery dated November 2020), it is estimated that there are approximately 350-370 existing residences located within one mile of the facility. The nearest existing residence is approximately a half mile to the southwest of the facility.
- Based on a review of the latest available aerial imagery (obtained in Google Earth / Maps, with latest available imagery dated November 2020), it is estimated that there are approximately there are approximately 45-55 businesses within one mile of the site, representing a mix of both commercial and industrial activity.
- There are no churches located within one mile of the site.
- There are no historic sites located within one mile of the site.
- There are no known parks or recreational areas within one mile of the facility.
- There are no schools or day care centers located within one mile of the site.
- Ponds and Lakes. There are 3 ponds located within the one-mile radius around the site, including the stormwater pond that is on-site. All ponds appear to be man-made. There are no lakes within one mile of the site.
- The Circle Lake Catholic Retreat is not adjacent to but is approximately one mile east-northeast of the facility. There are no archaeological sites, historical sites, or other known sites having exceptional aesthetic quality adjacent to the facility.
- The specified uses outlined above in this subsection 6.1.4 are shown on **Drawing 7**.

6.2 WELLS WITHIN 500 FEET OF THE FACILITY

Drawings 10 and **11** present water and oil and gas well maps. These maps include a 500-foot offset line from the facility property boundary and illustrate the following:

- Water Wells: The facility has a single active water well on the northeastern portion of the property and plans to continue utilization of this well during facility operations. CLTS will install additional water wells onsite for operations as needed. Otherwise, there are no

water wells registered with the Texas Water Development Board (TWDB) located within 500 feet of the facility. The closest registered water well is approximately 3,000 feet away and is either plugged or destroyed. The nearest active well is approximately 3,677 feet away and is 105 feet in depth.

- Oil and Gas Wells: Per the Texas Oil and Gas Board and the Railroad Commission of Texas, there are no oil and gas wells located within 500 feet of the facility. Additionally, there are no active wells within one mile of the facility.

6.3 PREVAILING WIND DIRECTIONS

A wind rose is included on **Drawing 9**. The wind rose indicates that the prevailing wind direction in the area is from the south-southeast.

6.4 EASEMENTS AND BUFFER ZONES

6.4.1 EASEMENTS

As previously discussed in **SECTION 4.3**, there is a 30-foot drainage easement on the northwestern portion of the property and a 50-foot Superior Oil Company easement which is comprised of a 40-foot pipeline easement and a 10-foot telephone line easement. None of these easements shall be in the area that is occupied by the transfer facility building. No solid waste loading or storage will occur within any easement on the facility property.

6.4.2 BUFFER ZONES

30 TAC §330.543(b) requires that a minimum 50-foot separating distance be maintained between the facility's permit boundary and solid waste storage and processing areas. The buffer zone must provide for safe passage for fire-fighting and other emergency vehicles.

The buffer zones are shown on the facility layout plan presented in **Drawing 6**. As shown, a 50-foot or greater buffer will be maintained between the transfer facility and the facility permit boundary.

6.5 CONCLUSIONS REGARDING LAND USE

The facility will be used as described in this application and will be compatible with the existing land uses on Circle Lake Drive and the surrounding area. This facility will not adversely impact any of the surrounding area when construction and/or operations begin.

7.0 TRANSPORTATION

7.1 ROADS AND TRAFFIC

A comprehensive Transportation Study evaluating roads and traffic was performed for the proposed CLTS – covering a study period through the year 2047. Copies of the transportation study and the Texas Department of Transportation (TxDOT) coordination letters and response(s) are provided in **Appendix G** of this application to serve as the basis for satisfying the following requirements for this application:

- Availability and adequacy of roads that the owner or operator will use to access the site;
- The volume of vehicular traffic on access roads within one mile of the facility, both existing and expected, during the expected life of the facility (which was studied through the year 2047); and
- The volume of traffic expected to be generated by the facility on the access roads within one mile of the proposed facility.

7.2 AIRPORTS

An airport map, which presents the current edition of the Federal Aviation Administration (FAA) Sectional Aeronautical Chart for the area, identifies the site location and shows a 6-mile offsite radius from the facility property boundary, and is provided as **Drawing 8B**.

As shown, there are no airports within 6 miles of the facility property. The nearest airport to the site is Jones International, approximately 8 miles south of the facility. Furthermore, the transfer facility will manage solid waste indoors within a single-story building with a roof; therefore, no adverse impacts to air traffic or airport safety will be created by transfer facility operation.

8.0 GENERAL GEOLOGY AND SOILS STATEMENT

8.1 GEOLOGY

The subject site is located within the southwest portion of Montgomery County, Texas, approximately 32 miles northwest of Downtown Houston. The regional geology of Southeast Texas mainly consists of geologically younger Quaternary and Tertiary Period coastal sedimentary facies. The site is underlain by the Willis Formation within the Pleistocene Epoch and Quaternary Period. The surficial geologic deposits at the site are approximately one (1) million years old. These fluviatile deposits within the Willis Formation mostly consists of clay, silt, sand, and pebble-sized siliceous gravel (United States Geologic Survey (USGS), 2021) The Willis Formation has a thickness of approximately 100 feet and includes some petrified wood and sand. The sand is coarser than in younger rocks, noncalcareous, mostly deeply weathered and lateritic, indurated by clay, and cemented by iron oxide (USGS, 2021).

Underlying the Willis Formation is the Fleming Formation within the Fleming Group, Miocene Epoch, and Tertiary Period. The approximately ten (10) million-year-old deposits within the Fleming Formation consists mostly of calcareous clay with light to yellowish gray indurated silt and sand (USGS, 2021). The Fleming Formation has an approximate thickness of 1,300 – 1,450 feet (USGS, 2021). Underlying the Fleming Group are the Tertiary Period Catahoula, Whitsett, and Manning Formations with a combined thickness of approximately 600 feet. These formations consist of mudstone, clay, sand, and sandstone (USGS, 2021).

8.2 TOPOGRAPHY AND SOILS

The subject site's elevation is approximately 250 feet above mean sea level (MSL). The topography of the subject area generally increases to the northwest and decreases to the southeast with no sharp changes in relief. The subject site is located within Coastal Prairies Region within the Gulf Coastal Plains Physiographic Province. The Coastal Prairies Region is characteristic of generally flat areas to rolling hills with grass, various species of deciduous trees, and mostly clay soils.

Onsite surficial soils are part of the Woodtell-Pinetucky-Conroe Group (General Soil Map of Texas, USDA-NRCS, 9-25-2008). The Conroe Series consists of mostly brown gravelly, loamy, fine sand from the surface to approximately two (2) feet below land surface (bls) and mostly a sandy clay to approximately eight (8) feet bls (National Cooperative Soil Survey).

8.3 FAULTS

Relevant information and maps from USGS Quaternary Faults and Folds Database (USGS, 2010), as well as Federal Emergency Management Agency (FEMA), TCEQ, and public universities, were reviewed in order to determine the site's location in relation to any Holocene-aged faults. No active faults were identified within 200 feet of the subject property. The Hockley-Conroe Fault is the nearest fault system to the subject area approximately seven (7) miles south of the subject site (Saribudak, 2006).

8.4 SEISMIC IMPACT ZONES

The USGS publishes probabilistic seismic hazard analyses for the United States under its National Hazard Mapping Project, the goal of which is to quantify the rate (or probability) of

exceeding various ground motion levels at a given location (USGS, 2018). Traditionally, peak ground acceleration (PGA), expressed as a percentage of the acceleration of gravity (g), is used to quantify ground motion rates by examining and including the likelihood of an actual earthquake exceeding the design ground motion. A probabilistic, risk-level scenario, like the two and ten-percent probability of PGA exceedance in 50 years is considered to assist engineers in design parameters. The PGA expected in Montgomery County, Texas is 1-to-2% g for the ten percent probability and 2%-4%g for the two percent, risk-level scenario.

Given the low hazard PGA percentages demonstrated by the USGS for the subject region, the long-term seismic risk associated with construction or operation of the proposed waste transfer facility is very low to non-existent.

8.5 UNSTABLE AREAS

An unstable area assessment of the site was completed through research of the subject area soils and drainage, with the conclusion that no unstable areas exist at the site. The site is situated on a low/gentle graded plateau with a substantial thickness of stiff and stable Willis Formation soils that provide good foundation. The nearest creek is approximately 4,000 feet away from the site. The site is not prone to mass movement or susceptible to differential subsidence, karst activity, or any forces that could impair or damage structures, given the geology of the review area.

9.0 GROUNDWATER AND SURFACE WATER STATEMENT

9.1 GROUNDWATER

The uppermost water-bearing zone (UWZ) is the Chicot aquifer approximately 20 – 50 feet bls (TWDB) Report 136, Fig. 26, 1971). This UWZ generally and likely flows in conformity with the general area topography and drainage patterns in all directions except to the northwest at the subject site.

There are six (6) recognized hydrologic units in Montgomery County, Texas: the Catahoula Sandstone (deepest 300 - 500 feet thickness), the lower part of the Jasper aquifer (1,100 - 2,200 feet thick), the upper part of the Jasper aquifer (100 – 400 feet thick), the Burkeville aquiclude (0 – 300 feet thick), the Evangeline aquifer (0 – 1,300 feet thick), and the Chicot aquifer (most shallow 0 – 200 feet thick) (TWDB Report 136, 1971).

The Catahoula Sandstone consists of sand overlain by clay and is the deepest fresh water-bearing unit in Montgomery County, Texas. The lower part of the Jasper aquifer is separated from the upper part based on lithology. The lower part is a mostly interbedded sand and clay layer with 30-60% sand. The upper part is mostly a massive sand layer with 50%-80% sand. The Burkeville aquiclude is generally a massive clay layer near the top of the Fleming Formation. The Evangeline aquifer is part of the Fleming Formation on top of the Burkeville aquiclude and is an alternating sand and clay layer and an important source of water for the Houston area. The Chicot aquifer consists of the Willis Formation Sand and is mostly present in southern portions of Montgomery County, Texas, same as the subject site (TWDB Report 136, 1971).

9.2 SURFACE WATER

Surface water at the subject site flows into the Decker Branch-Mill Creek Sub Watershed, which is part of the Walnut Creek-Spring Creek Watershed just northwest of Houston. These watersheds are located within the San Jacinto River Basin (Texas Watershed Viewer, May 2021). Major surface water features within the San Jacinto River Basin include Peach Creek, Caney Creek, White Oak Creek, Spring Creek, and Buffalo Bayou. Various lakes and ponds are scattered throughout the subject area as well. The proposed transfer facility is topographically located on a highpoint within the subject area.

The subject site generally drains towards the north-northwest. Onsite stormwater drains to Mill Creek approximately 4,350 feet to the north-northwest of the site. This overall drainage pathway drains into Spring Creek and finally into Galveston Bay. (Google Earth, May 2021).

9.3 STORMWATER PERMITTING UNDER TPDES

As stated in **SECTION 5.1.2**, the transfer facility has been designed to prevent the discharge of pollutants into waters of the state of Texas or water of the United States, as defined by the Texas Water Code and the federal Clean Water Act, respectively. Surface water from the facility will be discharged under the TPDES Multi-Sector General Permit TXR050000 for Storm Water Discharges Associated with Industrial Activity.

The facility will be subject to TCEQ's stormwater permit requirements under the TPDES program; and accordingly, CLT will operate in accordance with the TPDES permit requirements of the appropriate industry sector for the transfer facility, including a site-specific SWPPP.

10.0 ABANDONED OIL AND WATER WELLS

Pursuant to 30 TAC §330.61(1), this section provides a description and discussion of all existing or abandoned water and oil and gas wells situated within the facility permit boundary.

10.1 WATER WELLS WITHIN THE FACILITY BOUNDARY

As stated in **SECTION 6.2**, the facility has a single active water well on the northeastern portion of the property and plans to continue utilization of this well during facility operations. Otherwise, there are no water wells registered with the TWBD located within 500 feet of the facility.

In the event that previously unknown or abandoned water wells are discovered during development of the transfer facility, the facility will provide written notification to the TCEQ executive director of their location within 30 days of their discovery; the facility shall also provide, within 30 days prior to construction, the TCEQ executive director with written certification that the well has been capped, plugged, and closed in accordance with all applicable rules and regulations of the Commission or other state agency.

10.2 OIL AND GAS WELLS WITHIN THE FACILITY BOUNDARY

As stated in **SECTION 6.2, T**here are no known oil and gas wells within the facility boundary, per the Texas Oil and Gas Board and the Railroad Commission of Texas.

In the event that previously unknown or abandoned oil and gas wells are discovered during development of the transfer facility, the facility will provide written notification to the TCEQ executive director of their location within 30 days of their discovery. The facility will also properly cap, plug, and close the wells in accordance with all applicable rules and regulations of the RRC. A copy of the plugging report will be submitted to the TCEQ executive director within 30 days after the well has been plugged.

11.0 FLOODPLAINS AND WETLANDS STATEMENT

11.1 FLOODPLAINS

11.1.1 INTRODUCTION AND PURPOSE

Pursuant to 30 TAC §330.61(m)(l), this section provides data on floodplains. This section also discusses how the facility will be in compliance with the applicable provisions of the floodplain location restriction given in 30 TAC §330.547 as they pertain to transfer facilities.

11.1.2 FEMA MAP

With respect to mapped floodplains, the site and vicinity are part of FEMA Flood Insurance Rate Map (FIRM), Map No. 48339C0495G (August 18, 2014). As illustrated, there are no mapped floodplain or floodways on or adjacent to the site. The nearest floodplain is approximately 2,000 feet away to the north, which drains into Mill Creek.

11.2 WETLANDS

A jurisdictional waters determination was performed on June 22, 2021, to determine the extent of federal jurisdictional “waters of the U.S.” (WOTUS) on the subject site. Waters of the United States were identified in accordance with the United States Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). Other waters (e.g., streams) were identified based on the presence/absence of an observable ordinary high-water mark in accordance with USACE Regulatory Guidance Letter No. 05-05.

One 0.36-acre isolated, manmade freshwater pond was identified within the site review area. No defined nexus was observed linking this area to a jurisdictional wetland or other waters. Therefore, AllenES does not believe the isolated feature is jurisdictional.

Water was observed seeping from the adjacent property pond through the berm and onto the subject property, ultimately draining to the drainage easement as a result of site topography. The duration of the seep was unclear but soil conditions along the property boundary did not indicate obvious long-term changes (i.e., anaerobic conditions were not evident).

Based on the available literature and the site reconnaissance, the review area does not contain any jurisdictional wetlands including jurisdictional perennial and intermittent streams. Please note that while AllenES is confident in our delineations, jurisdictional waters determinations must be verified by the USACE. We have requested an Approved Jurisdictional Determination from the USACE and are awaiting the response. Once received, that determination can be provided.

A copy of the wetland documentation is provided in **Appendix H**.

12.0 PROTECTION OF ENDAGERED SPECIES

A threatened and endangered (T&E) species evaluation was performed to identify the presence of any T&E species and any supporting critical habitats associated with the subject site.

The T&E evaluation was completed by reviewing the list of T&E species published by the United States Fish and Wildlife Services (USFWS) Environmental Conservation Online System website. Specifically, the USFWS Information for Planning and Consultation (IPaC) tool was utilized to evaluate the potential presence of T&E Species within the identified project review area. In addition to the USFWS, AllenES coordinated with the Texas Parks and Wildlife Department (TPWD) to identify the potential presence of any state listed T&E species and critical habitats within the review area.

According to the USFWS IPaC tool, the following species were identified to potentially occur within the review area:

- Endangered — Red-cockaded Woodpecker (*Picoides borealis*)
- Threatened — Piping Plover (*Charadrius melodus*)
- Threatened — Red Knot (*Calidris canutus rufa*)

The USFWS did not identify any critical habitats within the project area.

AllenES did not identify any habitats suitable for the species identified by the USFWS. Furthermore, the USFWS stated the Piping Plover and Red Knot only need to be considered for “wind related projects along migratory routes”. The proposed development of a Type V MSW transfer facility is not a wind related project and will not affect migratory routes, therefore, AllenES does not believe the proposed development will affect these species.

Consultation with the TPWD did not identify any T&E species or critical habitats within the identified project review area. AllenES reviewed shape file data provided by the TPWD for any listed species within our review area.

Consultation records with the USFWS and TPWD are included in **Appendix H.**

13.0 TEXAS HISTORICAL COMMISION REVIEW

AllenES coordinated with the THC pursuant to review under Section 106 of the National Historic Preservation Act to identify the potential presence of any cultural resources within the identified project review area.

For this proposed transfer facility registration application, coordination with THC has been performed to inform them of this project, and to confirm the understanding that the portion of the facility proposed for the transfer facility was covered under the previous fining, or otherwise is in compliance with the Texas Antiquities Code and may proceed.

According to the THC, no identified historic properties, archaeological sites, or other cultural resources are present or affected within the project review area. THC requests that if cultural materials are encountered during project development, all work should cease in the immediate area pending consultation with the THC Archaeology Division to determine necessary actions to protect cultural remains.

A copy of the THC coordination letter, which also includes backup information from the previous coordination efforts, is provided with this application as **Appendix I**.

14.0 COUNCIL OF GOVERNMENTS REVIEW REQUEST

30 TAC §330.61(p) requires that the owner or operator shall submit documentation that **Parts I** and **II** of the application were submitted for review to the applicable council of governments for compliance with regional solid waste plans. The owner or operator shall also submit documentation that a review letter was requested from any local governments as appropriate for compliance with local solid waste plans. A review letter is not a prerequisite to a final determination on a permit or registration application.

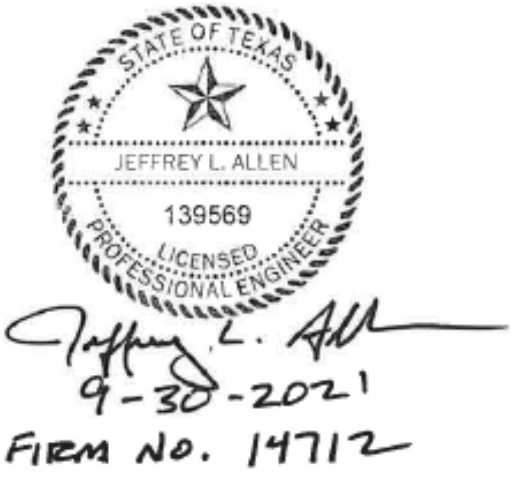
The applicable council of governments for this facility location is the HGAC. Documentation that **Parts I** and **II** of this application were submitted to HGAC for their review for compliance with regional solid waste plans is provided in **Appendix J**.

15.0 SIGNATURE OF PREPARER

I certify that the information provided in this application report and engineering drawings is a true and correct representation of that which is requested. I am aware that there are significant penalties for knowingly submitting false information.

I also confirm that based on my professional judgment, and on information collected during the application preparation, the design and planned operations of the facility is in compliance with the TCEQ regulations and criteria and will be protective of the environment.

Signature of Preparer	President & Senior Principal Engineer Title, if applicable
Jeffrey L. Allen, P.E. Name	9-30-2021 Date



16.0 BIBLIOGRAPHY

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PERMIT APPLICATION REPORT
ENGINEERING DRAWING SET

TYPE V MSW TRANSFER FACILITY
PERMIT APPLICATION REPORT
ENGINEERING DRAWING SET

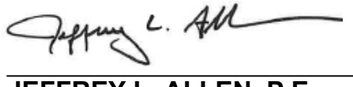
PREPARED FOR:

CIRCLE LAKE TRANSFER FACILITY

CIRCLE LAKE TRANSFER, LLC
13727 OFFICE PARK DRIVE
HOUSTON, TEXAS 77070

PREPARED BY:

SEPTEMBER 2021
BY:



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PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 139569

ALLEN ENGINEERING AND SCIENCE
6360 I–55 North, Suite 330, Jackson, MS
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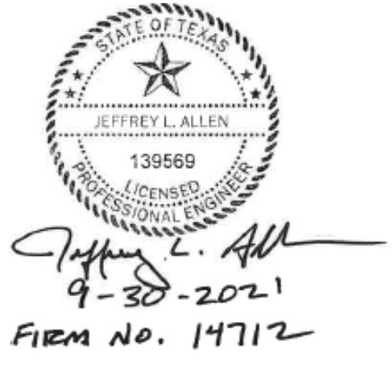

VICINITY MAP
SCALE: N.T.S.

STATE OF TEXAS
JEFFREY L. ALLEN
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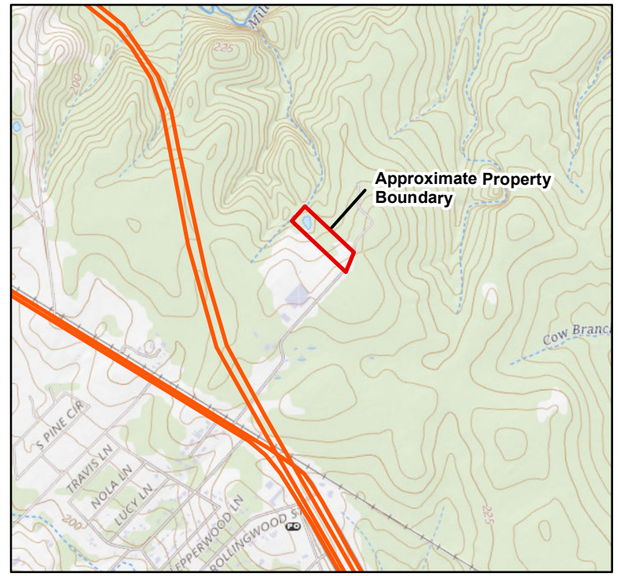
9-30-2021

FIRM NO. 14712



PROJECT LOCATION MAP
SCALE: 1" = 2,000'
LATITUDE: 30.173722
LONGITUDE: -95.671617

0 1,000 2,000 Feet

DRAWING INDEX

DRAWING NO.	DESCRIPTION	REVISION NO.
0	TITLE PAGE	0
1	PROJECT LOCATION MAP, VICINITY MAP, AND DRAWING INDEX	0
2	DETAILED HIGHWAY MAP	0
3	GENERAL TOPO QUAD MAP	0
4A	AERIAL PHOTOGRAPH OF SURROUNDINGS (2020)	0
4B	AERIAL PHOTOGRAPH OF SURROUNDINGS (2016)	0
4C	AERIAL PHOTOGRAPH OF SURROUNDINGS (2010)	0
5	SITE AERIAL PHOTOGRAPH	0
6	FACILITY LAYOUT PLAN	0
7	GENERAL LAND USE MAP	0
8A	AERONAUTICAL MAP	0
8B	AIRPORT MAP	0
9	STRUCTURES AND INHABITABLE BUILDINGS MAP	0
10	WATER WELLS MAP	0
11	OIL & GAS WELLS MAP	0
12	FLOODPLAIN MAP	0
13	ADJACENT PROPERTY OWNERS MAP	0
14	WASTE FLOW DIAGRAM	0

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

LEGEND

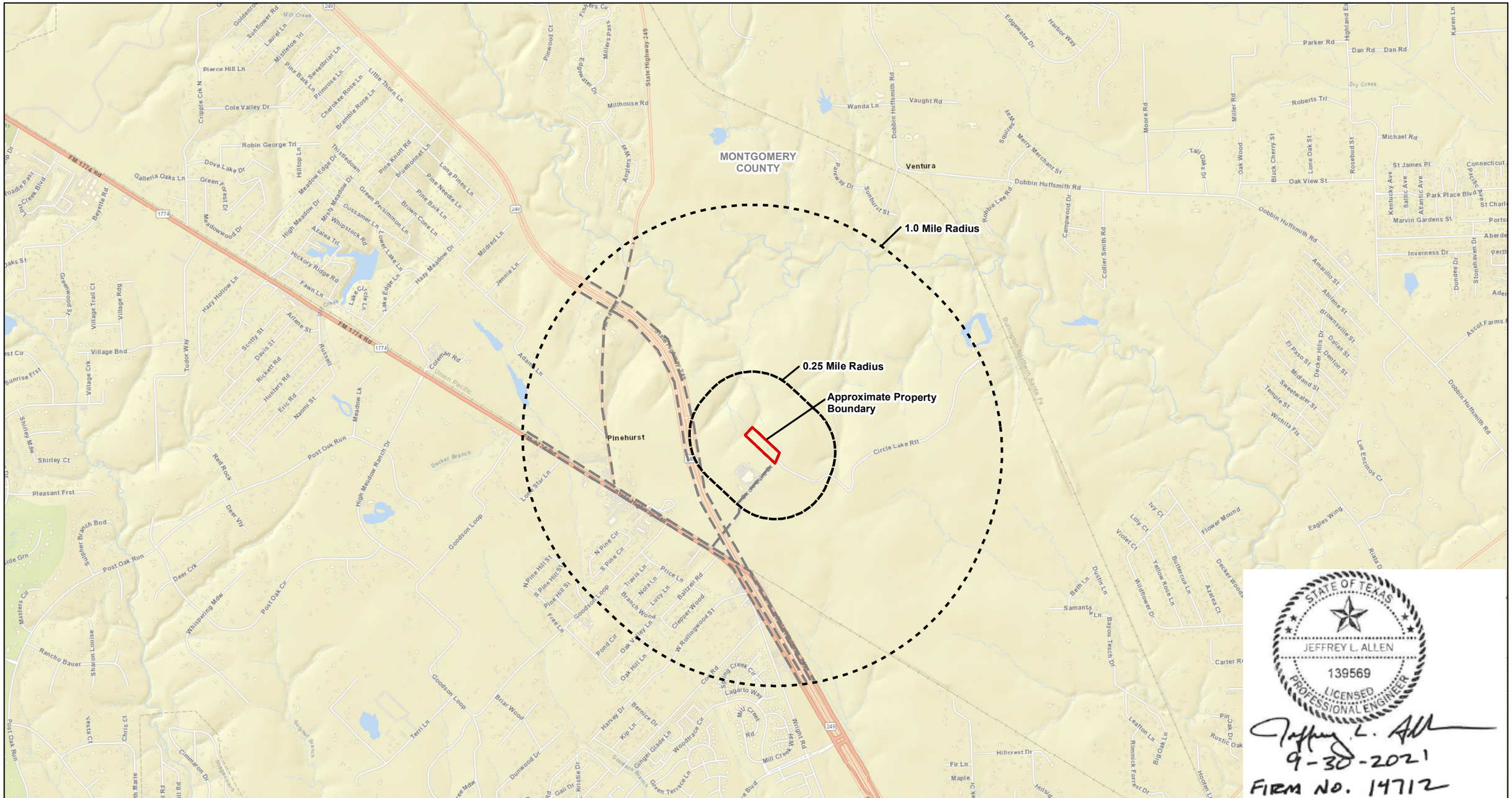
Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-

Source: National Geographic Service US Topo

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: AS SHOWN	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG01 R00 D GTQM	
PROJECT LOCATION MAP, VICINITY MAP, AND DRAWING INDEX		DRAWING 1



REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
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LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius
- Primary Ingress/Egress Roads to Facility

Note:
All primary access road are asphalted.

0 1,000 2,000 Feet

Source: World Street Map Basemap

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CIRCLE LAKE TRANSFER FACILITY
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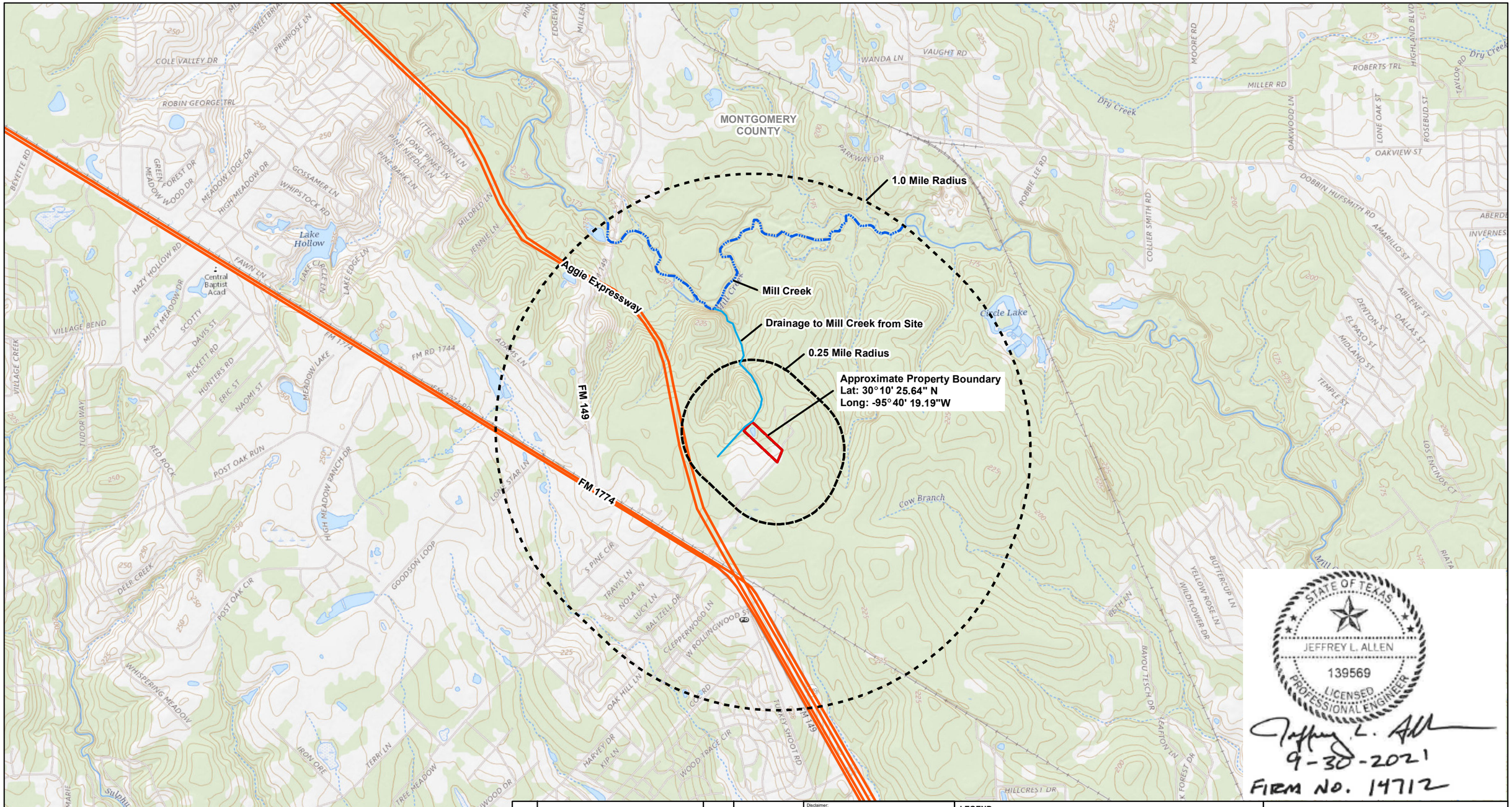
ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=2,000'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG02 R00 D DHM	

DETAILED HIGHWAY MAP — DRAWING 2



REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
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LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius
- Approximate Highway Locations
- Approximate Mill Creek
- Approximate Drainage Way

0 1,000 2,000 Feet

Source: National Geographic Service US Topo

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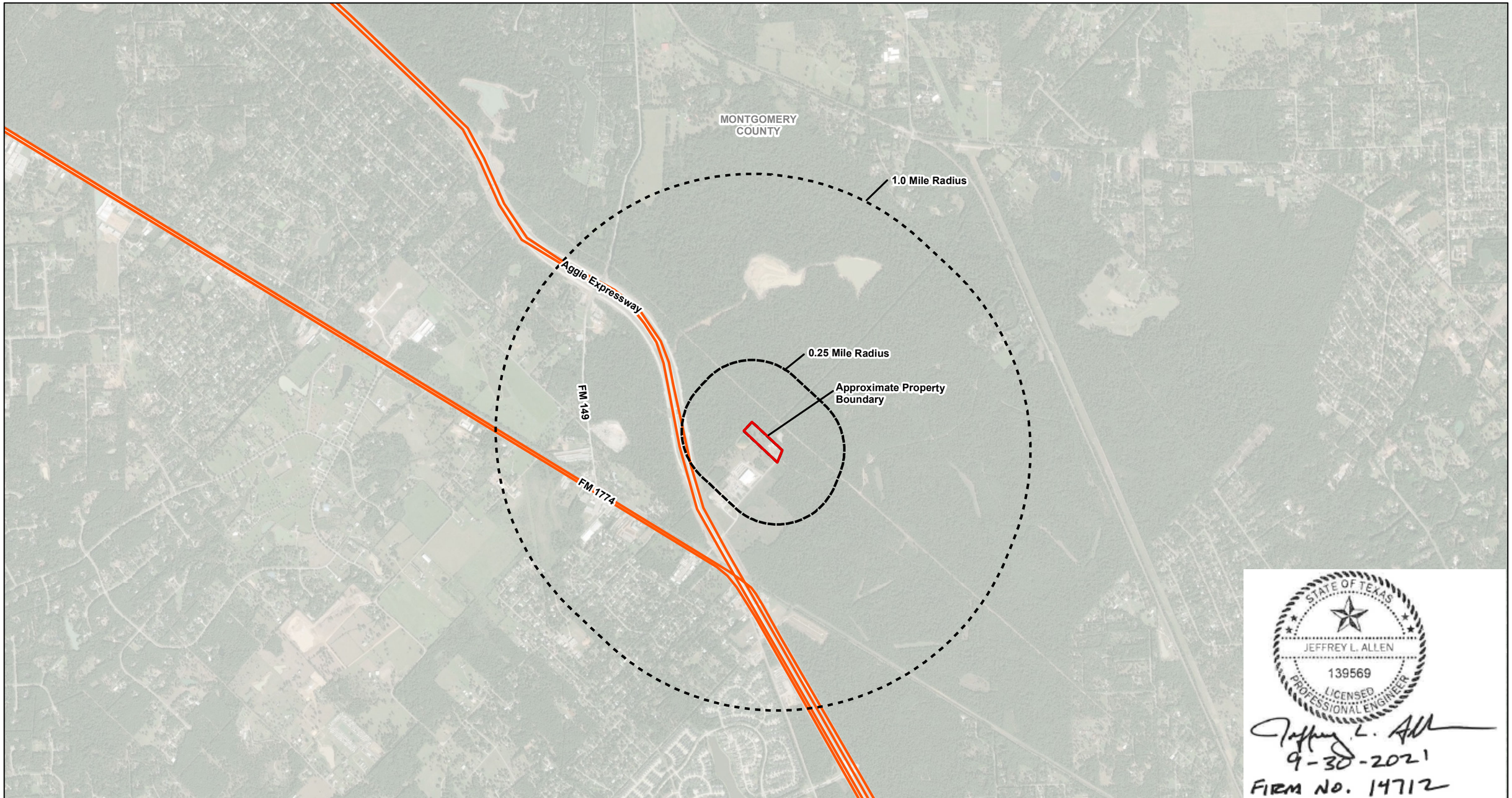
SCALE: 1"=2,000'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG03 R00 D GTQM	

GENERAL TOPO QUAD MAP — DRAWING 3



REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
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LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius
- Approximate Highway Locations

0 1,000 2,000 Feet

Source: National Geographic World Imagery

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CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=2,000'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG04A R00 D APOS	
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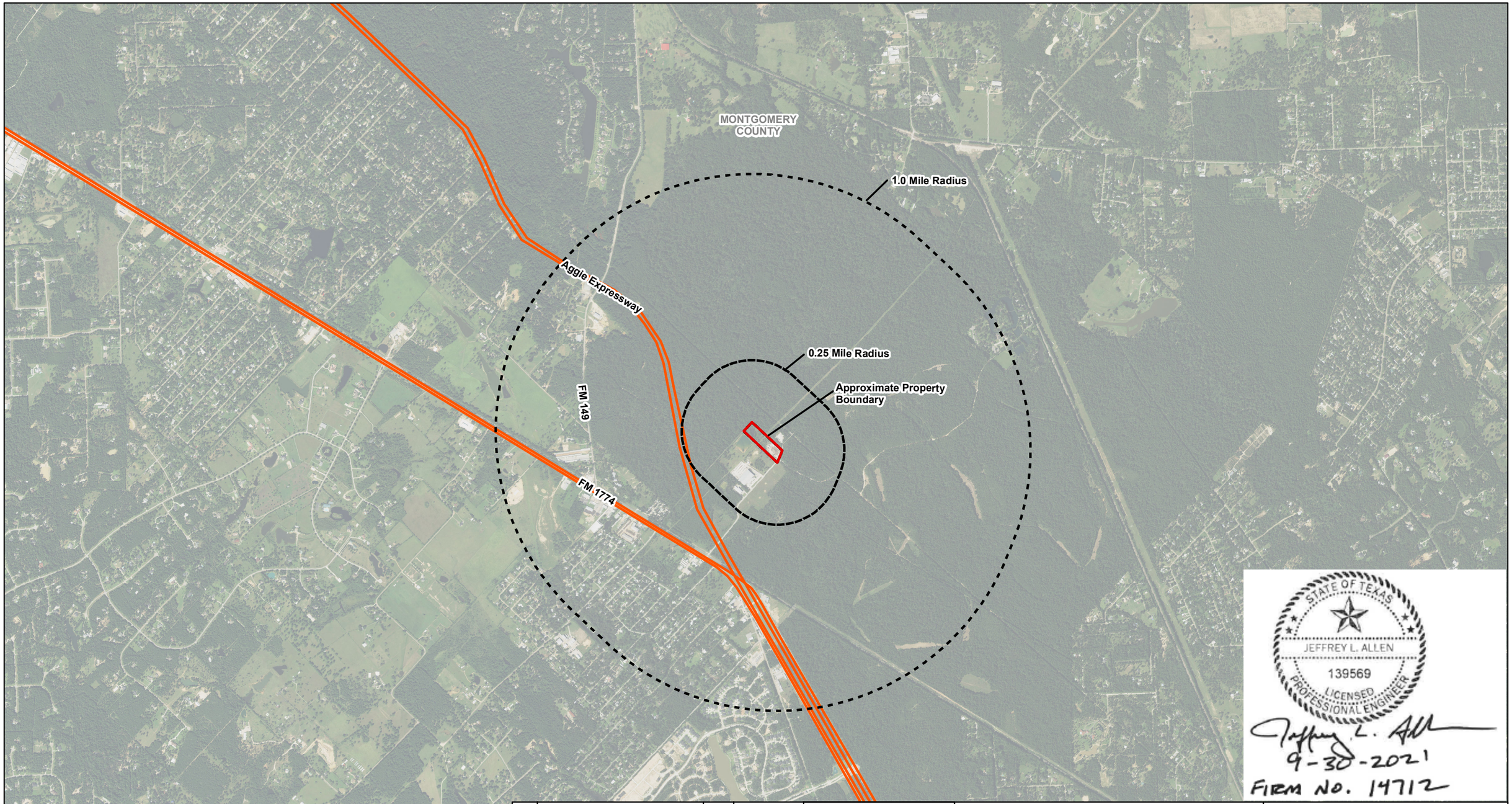

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius
- Approximate Highway Locations

0 1,000 2,000 Feet

Source: Texas Natural Resource Information System (NAIP 2016 Imagery)

STATE OF TEXAS
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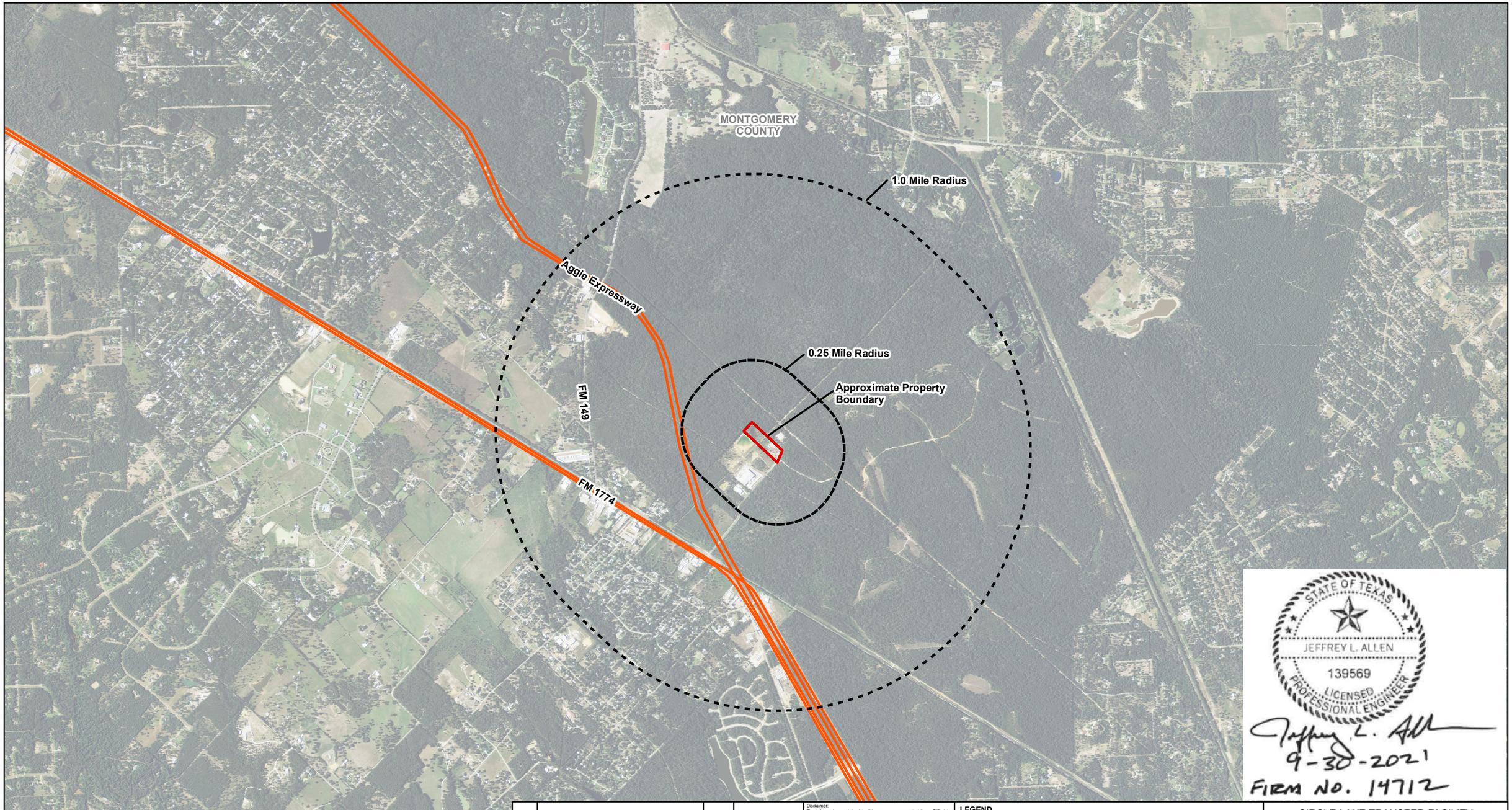
9-30-2021
FIRM NO. 14712

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=2,000'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG04B R00 D APOS	

AERIAL PHOTOGRAPH OF SURROUNDINGS (2016) — DRAWING 4B



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REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius
- Approximate Highway Locations

0 1,000 2,000 Feet

N

Source: Texas Natural Resource Information System (NAIP 2016 Imagery)

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=2,000'	DRAWN BY: PML	DATE: 08-17-2021
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PROJECT NO. 21052	FILE 21052 081721 DWG04C R00 D APOS	

AERIAL PHOTOGRAPH OF SURROUNDINGS (2010) — DRAWING 4C

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

LEGEND

Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-

0 60 120 Feet

Source: AllenES Drone Aerial - 06/24/2021

STATE OF TEXAS
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CIRCLE LAKE TRANSFER FACILITY
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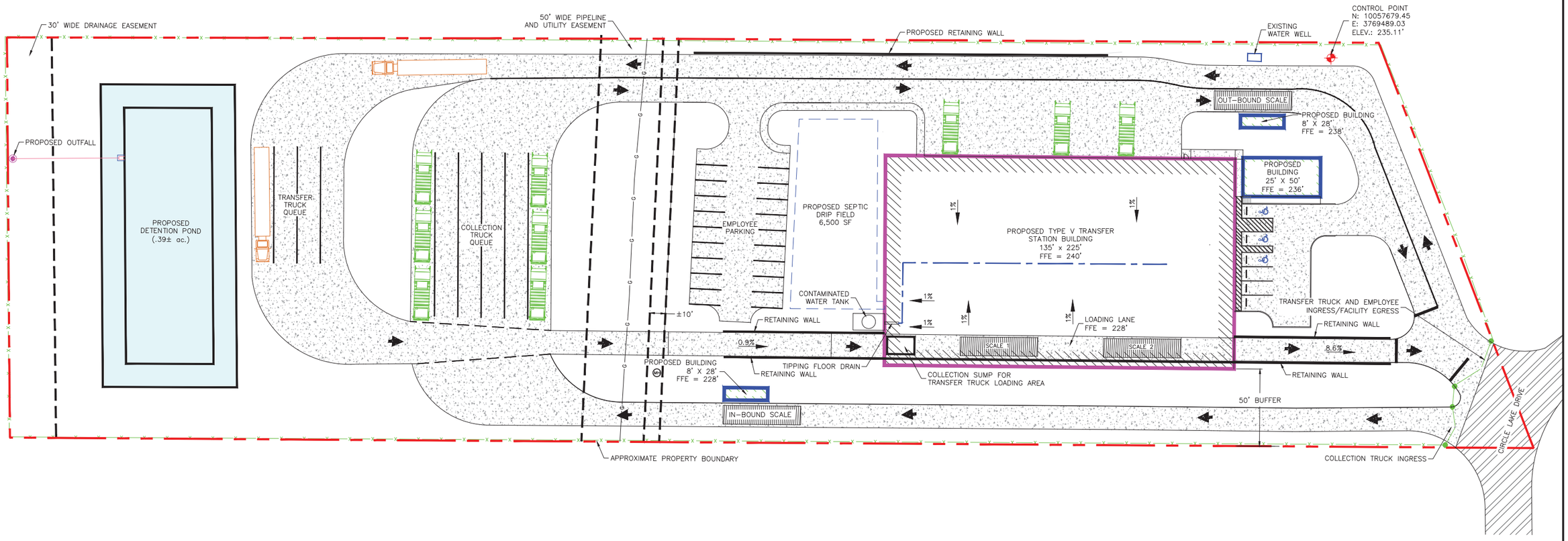
ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=120'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG05 R00 D SAP	

SITE AERIAL PHOTOGRAPH — DRAWING 5



NOTES:

1. SEE APPENDIX B OF THE PAR PACKAGE FOR ADDITIONAL INFORMATION ON EASEMENTS.
2. ALL FOUNDATION SUBGRADE, CONTAMINATED WATER TANK, AND STRUCTURAL SPECIFICATIONS OF THE TYPE V TRANSFER STATION SHALL CONFORM WITH APPLICABLE LOCAL BUILDING CODES.
3. BUILDING CONSTRUCTION AND MATERIAL SELECTION SHALL CONFORM WITH APPLICABLE LOCAL BUILDING CODES WHILE MEETING THE MINIMUM DIMENSIONS SHOWN (i.e. PRE-FABRICATED STEEL OR EQUIVALENT).
4. TIPPING FLOOR SHALL BE CONSTRUCTED OF CONCRETE SLAB WITH STEEL REBAR REINFORCEMENT AND ACHIEVE A 4,000 PSI (MIN) 28-DAY COMPRESSION STRENGTH. OTHER REBAR FOUNDATION AND SUBGRADE REQUIREMENTS SHALL BE DESIGNED BY A TEXAS PROFESSIONAL ENGINEER AS DETERMINED FROM A GEOTECHNICAL FIELD INVESTIGATION AND FOUNDATION LOADING ANALYSIS (i.e. BEARING CAPACITY ANALYSIS) OF THE TIPPING FLOOR AREA.
5. CONTAMINATED WATER TANK SHALL HAVE A MINIMUM 2,000 GALLON (NOMINAL) CAPACITY AND BE COMPATIBLE WITH LIQUIDS ASSOCIATED WITH TRANSFER ACTIVITIES OF MSW WASTE (i.e. HIGH-DENSITY POLYETHYLENE OR EQUIVALENT).
6. CONTAMINATED WATER TANK AND THE CONTRIBUTING TIPPING FLOOR DRAIN SHALL UTILIZE A RISER STRUCTURE OR OVERFLOW VALVE TO PREVENT CONTAMINATED OVERFLOW DURING HIGH-VOLUME MSW TRANSFER AND WASHDOWN ACTIVITIES. GRADING OF THE AREAS ADJACENT TO THE BUILDING, ROOF GUTTERS, AND ALL-WEATHER SITE ROAD SHALL ROUTE STORM WATER AWAY FROM THE BUILDING AND CONTAMINATED WATER TANK, SUCH THAT THE TIPPING FLOOR DRAIN AND CONTAMINATED WATER TANK ONLY RECEIVE LIQUIDS ASSOCIATED WITH WASTE TRANSFER AND WASHDOWN ACTIVITIES. A SECONDARY CONTAINMENT STRUCTURE (REINFORCED CONCRETE OR EQUIVALENT) SHALL BE INSTALLED AROUND THE WATER TANK. THE INSTALLATION OPERATION AND LEAK PREVENTION PROCEDURES OF THE CONTAMINATED WATER TANK AND CONTRIBUTING TIPPING FLOOR DRAIN SHALL BE PLACED INTO THE SITE OPERATING RECORDS.
7. TRANSFER STATION BUILDING ENTRANCE SHALL BE INSTALLED WITH AN APPROPRIATE ODOR CONTROL SYSTEM.

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- TRANSFER STATION BUILDING
- SUPPORT BUILDING
- SCALE
- SECURITY FENCE LINE
- SECURITY GATE
- EASEMENT
- GAS LINE
- CONCRETE
- ASPHALT
- MAN HOLE

SCALE
0 15' 30' 60'

STATE OF TEXAS
JEFFREY L. ALLEN
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Jeffrey L. Allen
9-30-2021
FIRM NO. 14712

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	JLA	08/31/2021

CIRCLE LAKE TRANSFER, LLC

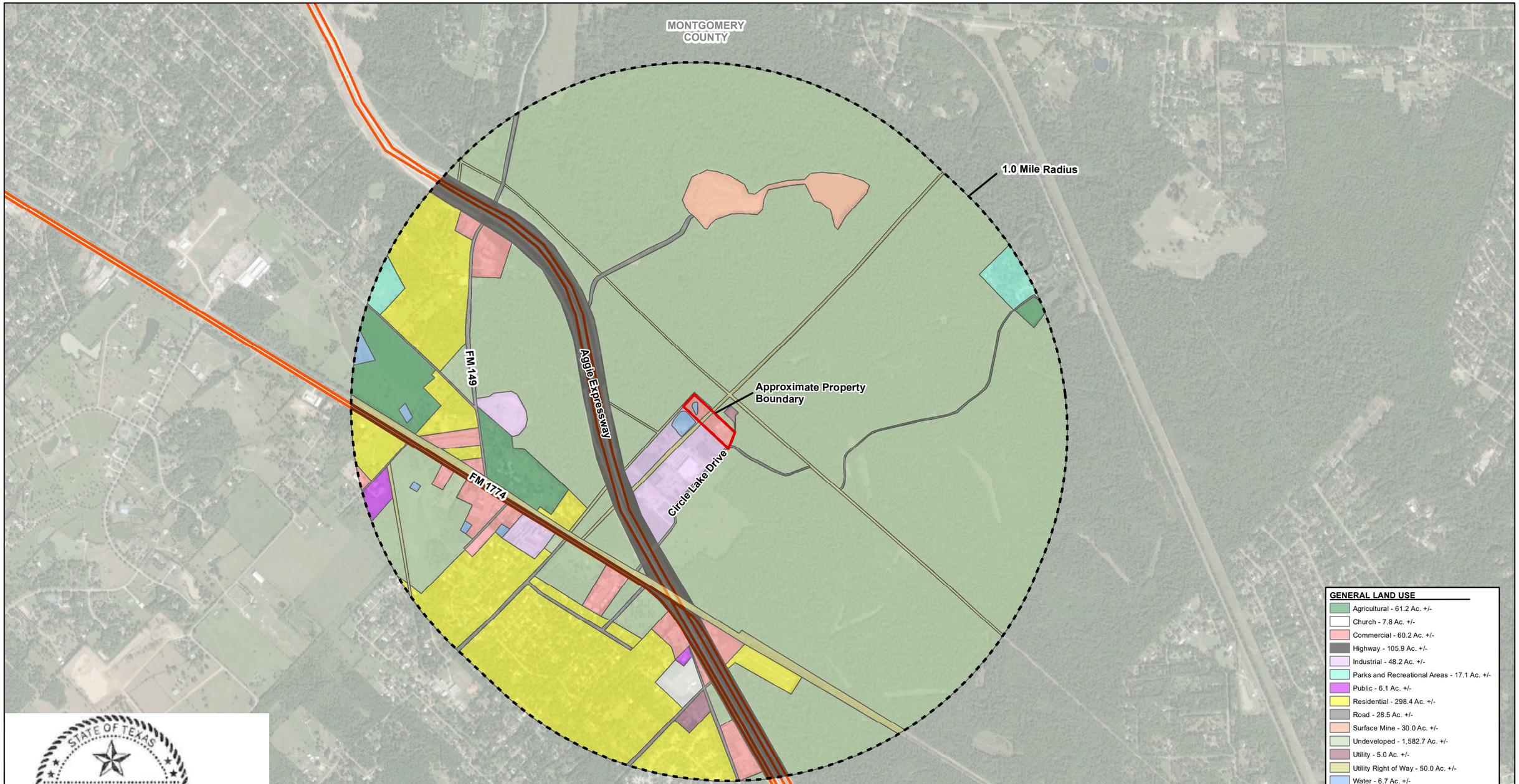
SCALE:	1" = 30'
DRAWN:	N. SISSON
CHECKED:	W. PENTECOST
REVIEWED:	M. HOHM
PROJECT MANAGER:	M. HOHM
DATE:	08/31/2021

ALLEN ENGINEERING AND SCIENCE

SITE LAYOUT PLAN

CIRCLE LAKE TRANSFER, LLC
PINEHURST, TEXAS

PROJECT No.	
21052.01	
CAD FILE NAME	
083121 DWG06 R0 SLP	
DRAWING	REVISION
6	0



STATE OF TEXAS
JEFFREY L. ALLEN
139569
LICENSED PROFESSIONAL ENGINEER

9-30-2021

FIRM NO. 14712

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

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LEGEND

Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-

Approximate 500 Foot Buffer

0 750 1,500 Feet

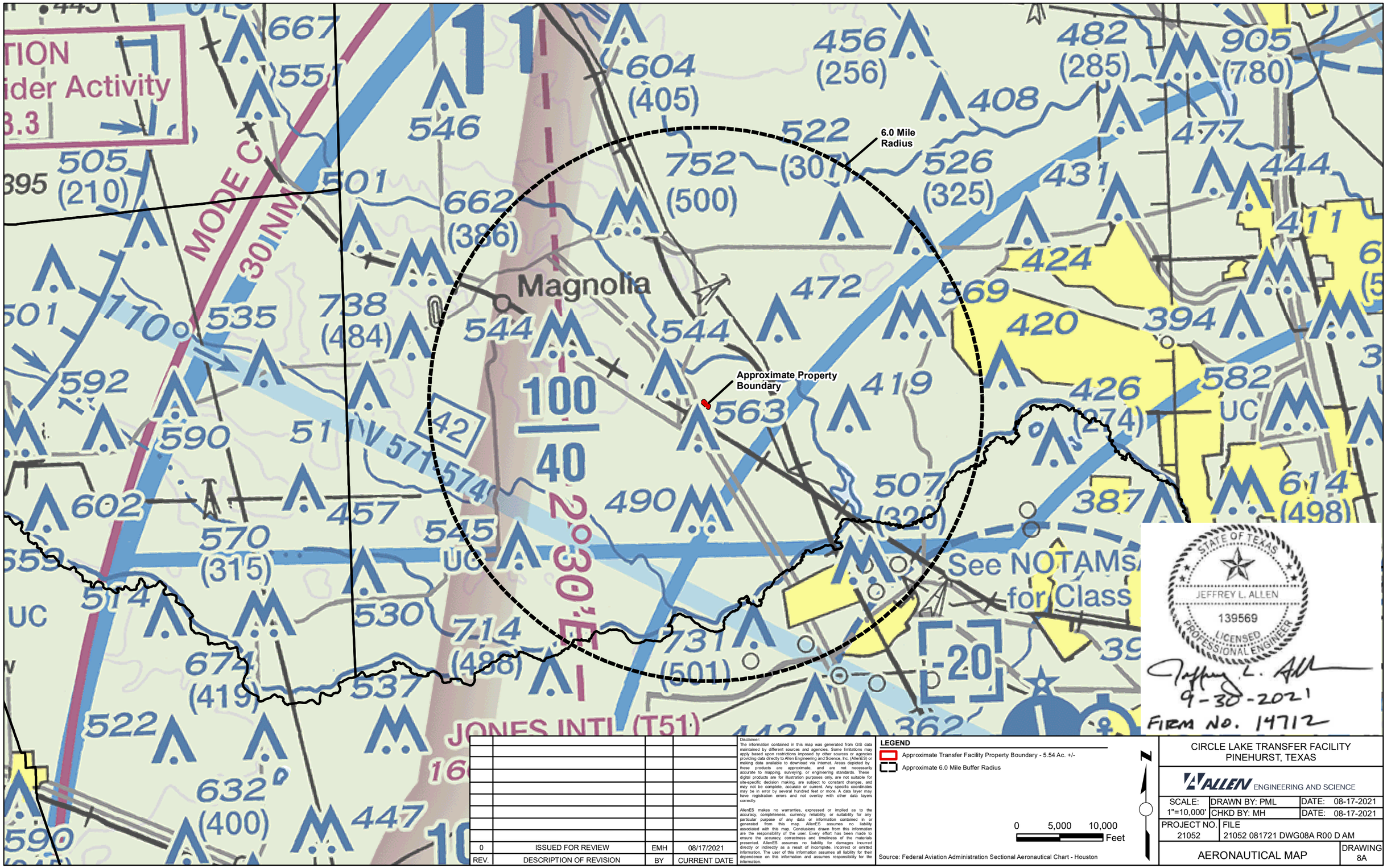
Source: World Imagery, USGS Topo, PhotoInterpretation

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE:	DRAWN BY: PML	DATE: 08-17-2021
1"=1,500'	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG07 R00 D GLUM	

GENERAL LAND USE MAP — DRAWING 7



REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

LEGEND

Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-

Approximate 6.0 Mile Buffer Radius

0 5,000 10,000 Feet

Source: Federal Aviation Administration Sectional Aeronautical Chart - Houston

STATE OF TEXAS
JEFFREY L. ALLEN
139569
LICENSED PROFESSIONAL ENGINEER

9-30-2021

FIRM NO. 14712

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=10,000'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG08A R00 D AM	

AERONAUTICAL MAP — DRAWING 8A

6.0 Mile Radius

Approximate Property Boundary

8.6+/- Miles

20.2+/- Miles

22.2+/- Miles

North Houston Airport

Dan Jones International Airport

George Bush Intercontinental/Houston Airport

Lake Creek

San Jacinto River

Caney Creek

Spring Creek

Walnut Creek

Magnolia

Pinehurst

The Woodlands

Shenandoah

Oak Ridge North

Porter Heights

Spring

Humble

David Wayne Hooks Memorial Airport

Dry Creek Airport

GRAND PKWY

TOMBALL PKWY

N FWY

NW FWY

Cypress Creek

242

249

290

99

548

45

69

STATE OF TEXAS
JEFFREY L. ALLEN
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LICENSED PROFESSIONAL ENGINEER

9-30-2021

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REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

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LEGEND

Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-

Approximate 6.0 Mile Buffer Radius

0 5,000 10,000 Feet

Source: Federal Aviation Administration Sectional Aeronautical Chart - Houston

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=10,000'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG08B R00 D AM	

AIRPORT MAP — DRAWING 8B

STATE OF TEXAS
JEFFREY L. ALLEN
139569
LICENSED PROFESSIONAL ENGINEER

9-30-2021

FIRM NO. 14712

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 500 Foot Buffer
- Approximate Structures and Inhabitable Buildings

0 150 300 Feet

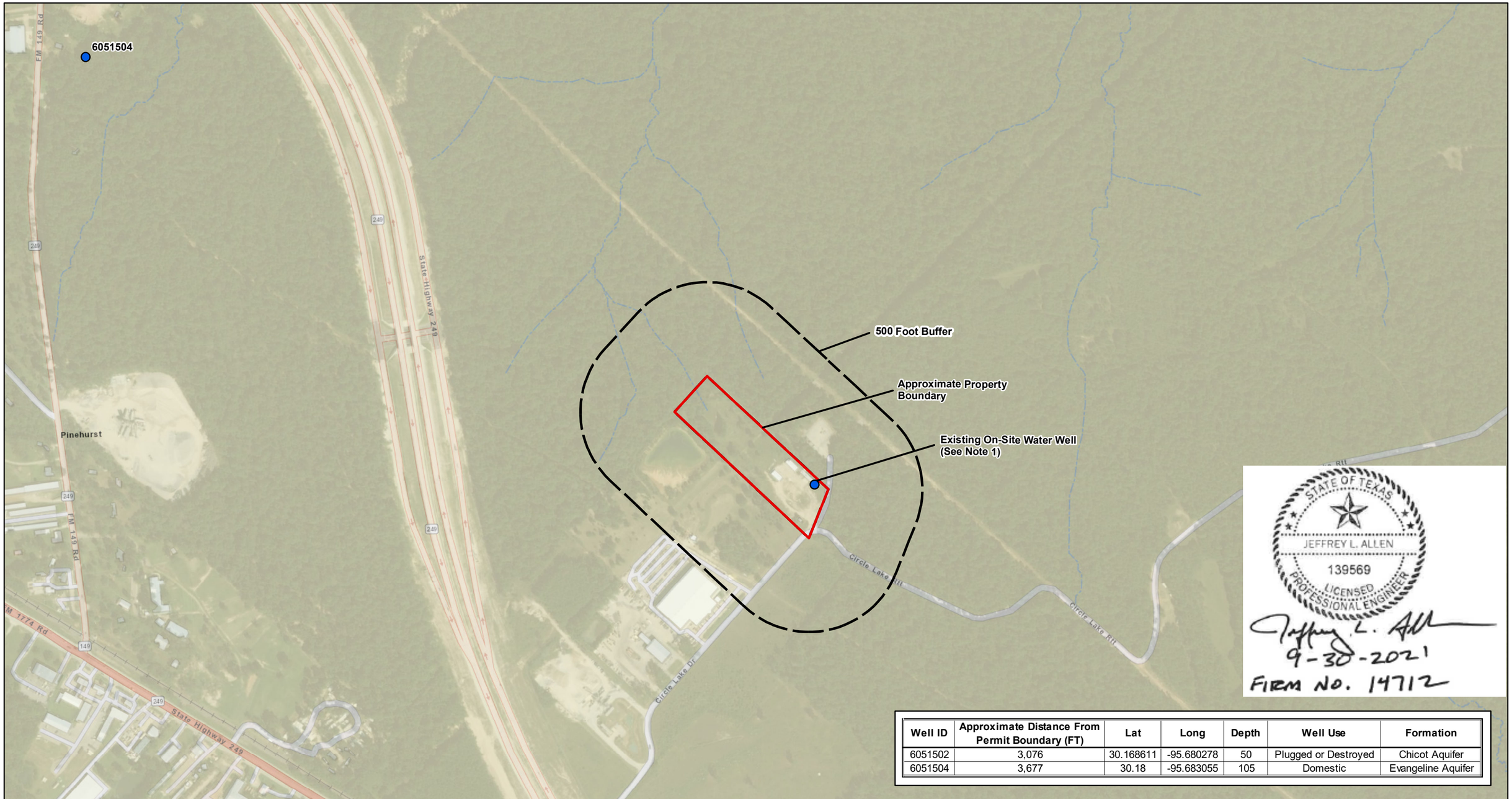
Source: World Imagery, USGS Topo, Wind Rose - Iowa State Mesonet

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=300'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG09 R00 D S&IBM	

STRUCTURES AND INHABITABLE BUILDINGS MAP — DRAWING 9



Well ID	Approximate Distance From Permit Boundary (FT)	Lat	Long	Depth	Well Use	Formation
6051502	3,076	30.168611	-95.680278	50	Plugged or Destroyed	Chicot Aquifer
6051504	3,677	30.18	-95.683055	105	Domestic	Evangeline Aquifer

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

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LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 500 Foot Buffer
- Existing Water Well Identification and Location

6051502

Note:
1. See PAR text for information on water well.

0 250 500 Feet

Source: ESRI World Street Map, Texas Water Development Board

STATE OF TEXAS
JEFFREY L. ALLEN
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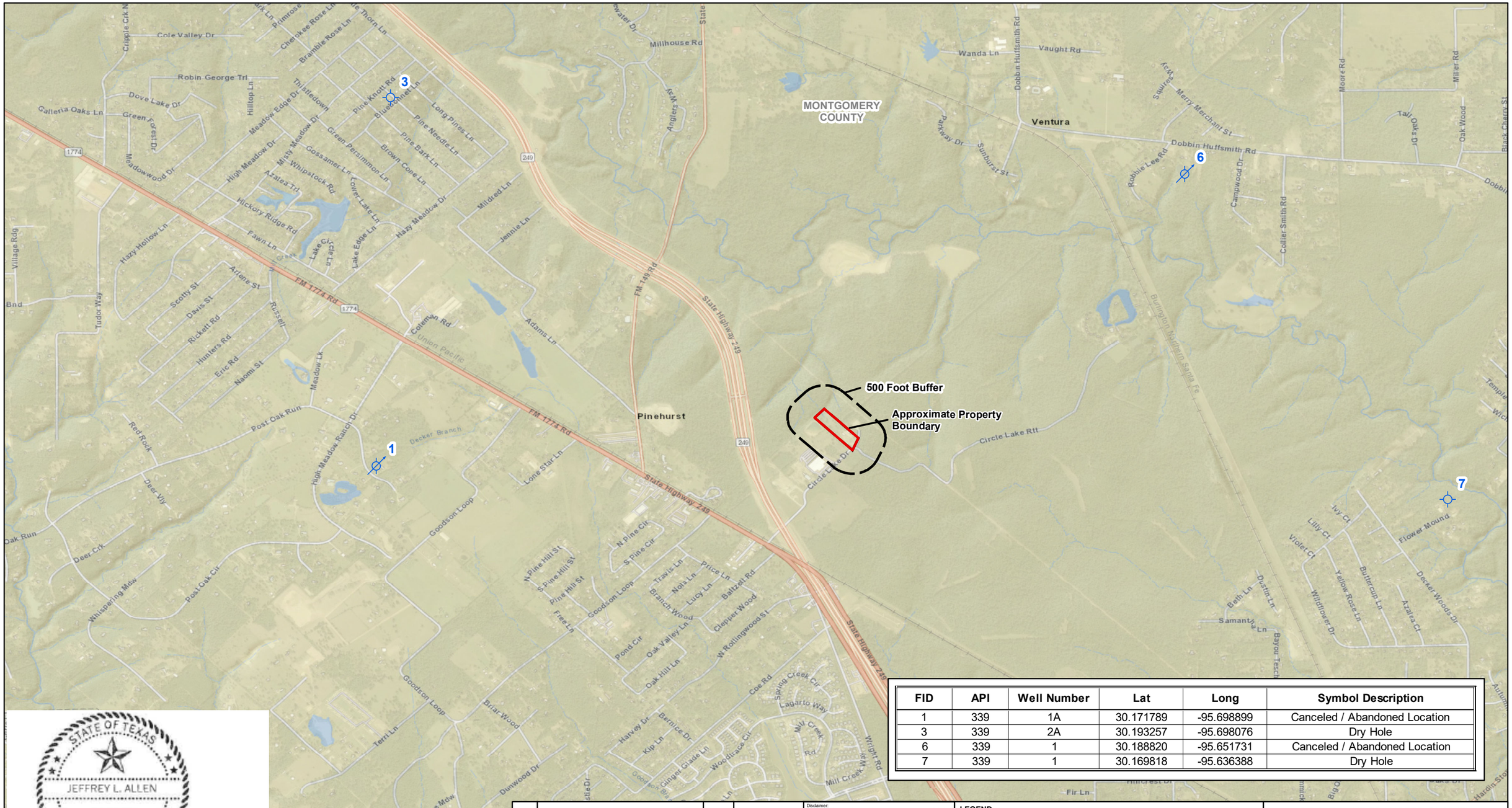
9-30-2021
FIRM NO. 14712

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=500'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG10 R00 D WWM	

WATER WELLS MAP — DRAWING 10



FID	API	Well Number	Lat	Long	Symbol Description
1	339	1A	30.171789	-95.698899	Canceled / Abandoned Location
3	339	2A	30.193257	-95.698076	Dry Hole
6	339	1	30.188820	-95.651731	Canceled / Abandoned Location
7	339	1	30.169818	-95.636388	Dry Hole

STATE OF TEXAS
JEFFREY L. ALLEN
139569
LICENSED PROFESSIONAL ENGINEER

9-30-2021

FIRM NO. 14712

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 500 Foot Buffer
- Canceled / Abandoned Location
- Dry Hole

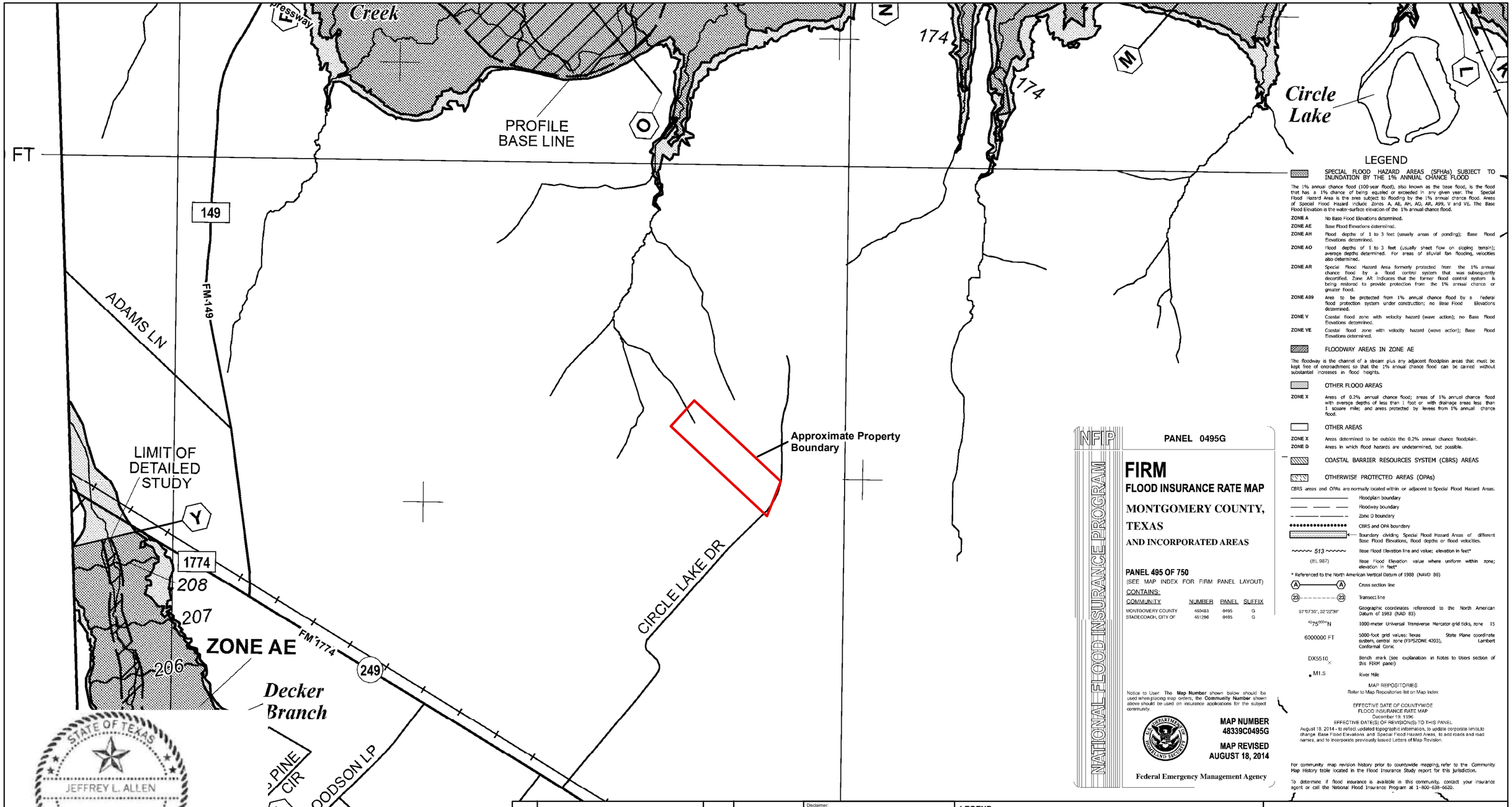
0 1,000 2,000 Feet

Source: ESRI World Street Map, Texas Railroad Commission

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=2,000'	DRAWN BY: PML	DATE:	08-17-2021
	CHKD BY: MH	DATE:	08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG11 R00 D O&GWM		
OIL & GAS WELLS MAP		DRAWING 11	



JEFFREY L. ALLEN
139569
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS

9-30-2021

FIRM NO. 14712

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equalled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN — 1000-meter Universal Transverse Mercator grid ticks, zone 15
- 6000000 FT — 5000-foot grid values: Texas State Plane coordinate system, central zone (FIPSZONE 4203), Lambert Conformal Conic
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
December 19, 1996

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
August 18, 2014 - to reflect updated topographic information, to update corporate limits,to change Base Flood Elevations and Special Flood Hazard Areas, to add roads and road names, and to incorporate previously issued Letters of Map Revision

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0495G

FIRM
FLOOD INSURANCE RATE MAP
MONTGOMERY COUNTY, TEXAS
AND INCORPORATED AREAS

PANEL 495 OF 750
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MONTGOMERY COUNTY	480483	0495	G
STAGECOACH, CITY OF	451296	0495	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48339C0495G

MAP REVISED
AUGUST 18, 2014

Federal Emergency Management Agency

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

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LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 0.25 Mile Buffer Radius

0 350 700 Feet

Source: National Geographic World Imagery, Montgomery County Parcel Data

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE:	DRAWN BY: PML	DATE: 08-17-2021
1"=700'	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG12 R00 D FM	
FLOODPLAIN MAP		DRAWING 12

Parcel	Property Number	State	County	Owner	Owner Address	Acreage
1	0255-00-00100	TX	Montgomery	Terra Investments LP	10001 Westheimer Road, ste 2888, Houston, TX 77042-3140	516.85
2	0255-00-00106	TX	Montgomery	Shah, Ashok	4318 Pensacola Oaks, Sugar Land, TX 77479-2735	0.12
3	0255-00-00107	TX	Montgomery	Shah, Lalit	5918 Gentlewood Ln., Sugar Land, TX 77479-1684	0.12
4	0255-00-00108	TX	Montgomery	Parikh, Bhagirath N	3031 Bissonnet St., Houston, TX 77005-4018	0.12
5	0255-00-00111	TX	Montgomery	Patel, Atul Shantilal	11623 Kirkshaw Dr. Richmond, TX 77407-3027	0.12
6	0255-00-00112	TX	Montgomery	Parikh, Girish Ramanlal	4302 Village Forest Dr., Sugar Land, TX 77479-3412	0.12
7	0123-00-00301	TX	Montgomery	Sunoco Pipeline LP Mag Tex	1735 Market St., Ste LL 29, Philadelphia, PA 19103-7528	4.08
8	0123-00-00300	TX	Montgomery	Primewood Investments LP	10001 Westheimer Rd., Ste 2888, Houston, TX 77042-3140	858.71
9	0120-01-02700	TX	Montgomery	Holderrieth Road Properties LLC	19211 Circle Lake Dr., Pinehurst, TX 77362-4193	18.57
10	0120-01-02800	TX	Montgomery	DMEI TX Property LLC	Miller Farm Road, P.O. Box 8, Inman, SC 29349-0008	5.80
11	0120-01-02900	TX	Montgomery	CCB Land Partners, LTD	P.O. Box 1137, Montgomery, TX 77356	16.80
12	0513-00-00200	TX	Montgomery	CCB Land Partners, LTD	P.O. Box 1137, Montgomery, TX 77356	49.00
13	0120-01-01300	TX	Montgomery	Lane Associates, LLC	36 Buttonbush CT, Spring, TX 77380-1499	11.13
14	0120-01-01301	TX	Montgomery	Hindsight 7, LLC	10526 Tanner Rd., Houston, TX 77041-7217	5.08
15	0120-01-01302	TX	Montgomery	Circle Lake Drive TX, LLC	P.O. Box 8 Inman, SC 29349-0008	4.29
16	0120-01-02810	TX	Montgomery	Wiseman Development I, LLC	19602 Country Lake Dr., Magnolia, TX 77355-1817	24.75

STATE OF TEXAS
JEFFREY L. ALLEN
139569
LICENSED PROFESSIONAL ENGINEER

9-30-2021

FIRM NO. 14712

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	EMH	08/17/2021

LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 0.25 Mile Buffer Radius
- Approximate Highway Locations
- Approximate Tax Parcel Boundaries

0 250 500 Feet

N

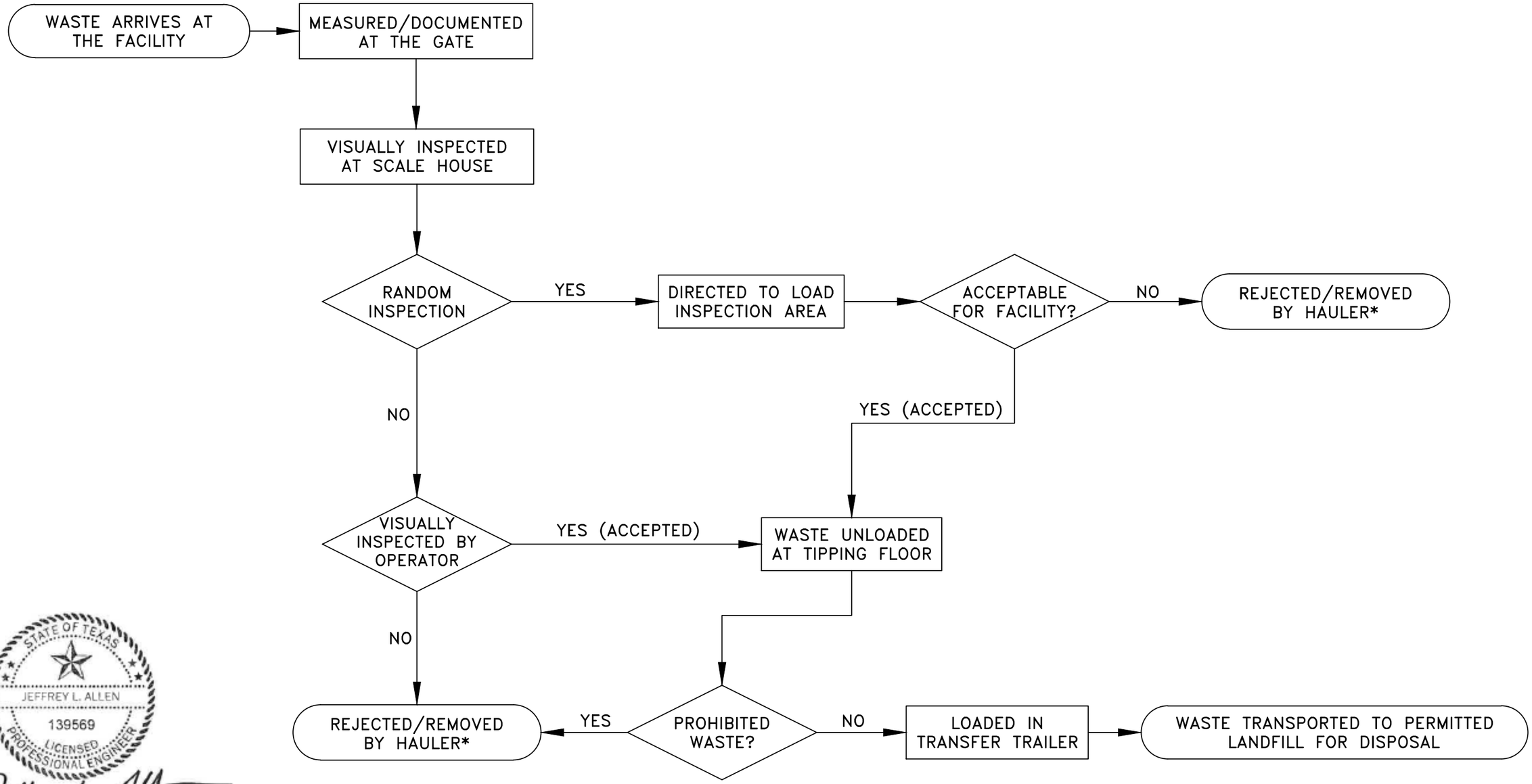
Source: National Geographic World Imagery, Montgomery County Parcel Data

CIRCLE LAKE TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=500'	DRAWN BY: PML	DATE: 08-17-2021
	CHKD BY: MH	DATE: 08-17-2021
PROJECT NO. 21052	FILE 21052 081721 DWG13 R00 D APOM	

ADJACENT PROPERTY OWNERS MAP — DRAWING 13



* WASTE REJECTION OR DISCREPANCY REPORT FILED AT FACILITY

STATE OF TEXAS
JEFFREY L. ALLEN
139569
LICENSED PROFESSIONAL ENGINEER

9-30-2021

FIRM NO. 14712

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	JLA	08/17/21

CIRCLE LAKE TRANSFER, LLC

SCALE: N.T.S.
DRAWN: N. SISSON
CHECKED: M. EVANS
REVIEWED: M. HOHM
PROJECT MANAGER: M. HOHM
DATE: 08/17/21

ALLEN ENGINEERING AND SCIENCE

WASTE FLOW DIAGRAM

CIRCLE LAKE TRANSFER, LLC
PINEHURST, TEXAS

PROJECT No. 21052.01
CAD FILE NAME 081721 DWG14 RO WFD
DRAWING 14
REVISION 0

APPENDICES

APPENDIX A
ADJACENT LAND OWNERSHIP MAP AND LIST

Adjacent Land Ownership List						
Parcel	Property Number	State	County	Owner	Owner Address	Acreage
1	0255-00-00100	TX	Montgomery	Terra Investments LP	10001 Westheimer Road, ste 2888, Houston, TX 77042-3140	516.85
2	0255-00-00106	TX	Montgomery	Shah, Ashok	4318 Pensacola Oaks, Sugar Land, TX 77479-2735	0.12
3	0255-00-00107	TX	Montgomery	Shah, Lalit	5918 Gentlewood Ln., Sugar Land, TX 77479-1684	0.12
4	0255-00-00108	TX	Montgomery	Parikh, Bhagirath N	3031 Bissonnet St., Houston, TX 77005-4018	0.12
5	0255-00-00111	TX	Montgomery	Patel, Atul Shantilal	11623 Kirkshaw Dr. Richmond, TX 77407-3027	0.12
6	0255-00-00112	TX	Montgomery	Parikh, Girish Ramanlal	4302 Village Forest Dr., Sugar Land, TX 77479-3412	0.12
7	0123-00-00301	TX	Montgomery	Sunoco Pipeline LP Mag Tex	1735 Market St., Ste LL 29, Philadelphia, PA 19103-7528	4.08
8	0123-00-00300	TX	Montgomery	Primewood Investments LP	10001 Westheimer Rd., Ste 2888, Houston, TX 77042-3140	858.71
9	0120-01-02700	TX	Montgomery	Holderrieth Road Properties LLC	19211 Circle Lake Dr., Pinehurst, TX 77362-4193	18.57
10	0120-01-02800	TX	Montgomery	DMEI TX Property LLC	Miller Farm Road, P.O. Box 8, Inman, SC 29349-0008	5.80
11	0120-01-02900	TX	Montgomery	CCB Land Partners, LTD	P.O. Box 1137, Montgomery, TX 77356	16.80
12	0513-00-00200	TX	Montgomery	CCB Land Partners, LTD	P.O. Box 1137, Montgomery, TX 77356	49.00
13	0120-01-01300	TX	Montgomery	Lane Associates, LLC	36 Buttonbush CT, Spring, TX 77380-1499	11.13
14	0120-01-01301	TX	Montgomery	Hindsight 7, LLC	10526 Tanner Rd., Houston, TX 77041-7217	5.08
15	0120-01-01302	TX	Montgomery	Circle Lake Drive TX, LLC	P.O. Box 8 Inman, SC 29349-0008	4.29
16	0120-01-02810	TX	Montgomery	Wiseman Development I, LLC	19602 Country Lake Dr., Magnolia, TX 77355-1817	24.75

APPENDIX B
REGISTRATION BOUNDARY, PROPERTY OWNERSHIP AND EASEMENT INFORMATION

C & C Surveying, Inc.
7424 F.M. 1488, Suite A
Magnolia, Texas 77354
Office: 281-259-4377 Metro: 281-356-5172 Metro Fax: 281-356-1935

Metes and Bounds

5.512 Acres
J. D. Cochran Survey, Abstract 123
Montgomery County, Texas

Being a 5.512 acre tract of land situated in the J. D. Cochran Survey, Abstract 123, of Montgomery County, Texas, being all of a called 5.5181 acre tract, as recorded in Clerk's File Number 2020-152511 of the Real Property Records of Montgomery County, Texas; and said 5.512 acre tract being more particularly described as follows with all bearings based on said deed;

BEGINNING at a ½ inch iron rod, found for the South corner of the herein described tract, common with the Southerly West corner of a called 2,253.2253 acre tract, as recorded in Clerk's File Number 2004-023496 of the Real Property Records of Montgomery County, being on the Northeast line of a called 5.7393 acre tract, and on the Northeast right-of-way line of Circle Lake Drive, said Point of Beginning also being on the common line of the J. D. Cochran Survey, Abstract 123 and the B. Canfield Survey, Abstract Number 120, and proceeding;

THENCE North 45 degrees 01 minutes 25 seconds West (called North 45 degrees 10 minutes 07 seconds West), along the Southwest line of the herein described tract, common with the Northeast line of Circle Lake Drive and the called 5.7393 acre tract, and being on the common line of the J. D. Cochran Survey, Abstract 123 and the B. Canfield Survey, Abstract Number 120, a distance of 24.20 feet (called 24.03 feet), to a PK nail, found for an angle point of the herein described tract, common with the North corner of said called 5.7393 acre tract and being the East corner of a called 18.568 acre tract, as recorded in Clerk's File Number 2017-058204 of the Real Property Records of Montgomery County;

THENCE North 45 degrees 04 minutes 04 seconds West (called North 45 degrees 03 minutes 08 seconds West), continuing along the Southwest line of the herein described tract, common with the Northeast line of said called 18.568 acre tract, and with said survey line, a distance of 955.21 feet (called 956.26 feet), to a ½ inch iron rod, found for the West corner of the herein described tract, common with the North corner of said called 18.568 acre tract, and being on a Southeast line of the aforementioned called 2,253.2253 acre tract, and being on the common corner of said J. D. Cochran Survey, Abstract 123 the B. Canfield Survey, Abstract Number 120, and the A. J. Hensley Survey, Abstract Number 255;

THENCE North 44 degrees 01 minutes 54 seconds East (called North 44 degrees 02 minutes 58 seconds East), along the Northwest line of the herein described tract, common with a Southeast line of said called 2,253.2253 acre tract, and along the Southeast line of the following tracts;

Called 0.1148 acre tract, as recorded in Clerk's File Number 2019-089175,
Called 0.1148 acre tract, as recorded in Clerk's File Number 2019-089178,
Called 0.1148 acre tract, as recorded in Clerk's File Number 2019-089181,
Called 0.1148 acre tract, as recorded in Clerk's File Number 2019-089270,
Called 0.1148 acre tract, as recorded in Clerk's File Number 2019-089273,

and along the common J. D. Cochran Survey, and the A. J. Hensley Survey line, a distance of 257.57 feet (called 257.48 feet), to a 4 inch iron pipe, found for the North corner of the herein described tract, common with an interior corner of said called 2,253.2253 acre tract;

THENCE South 45 degrees 00 minutes 00 seconds East, along the Northeast line of the herein described tract, common with a Southwest line of said called 2,253.2253 acre tract, departing said called J. D. Cochran Survey, and the A. J. Hensley Survey line, at a distance of 433.83 feet, passing a concrete monument, found for the West corner of a called 4.080 acre tract, as recorded in Clerk's File Number 2008-11916 of the Real Property Records of Montgomery County, at 803.30 feet passing a concrete monument, found for the South corner of said called 4.080 acre tract, and a total distance of 889.23 feet (called 890.10 feet), to an axle, found for the East corner of the herein described tract, common with an interior corner of said called 2,253.2253 acre tract;

,

THENCE South 24 degrees 45 minutes 45 seconds West (called South 24 degrees 46 minutes 56 seconds West), along the Southeast line of the herein described tract, common with a Northwest line of said called 2,253.2253 acre tract, a distance of 273.27 feet (called 273.35 feet), back to the **POINT OF BEGINNING** and containing 5.512 acres, as computed based on the survey and plat prepared by C & C Surveying Inc. dated April 01, 2021.

Steven L. Crews, Registered Professional Land Surveyor, Number 4141

21-0067
04/01/2021

Notes:
1. Basis of bearings: Northeast Property Line of subject Deed.
2. Property is subject to a blanket Center Point Energy Houston Electric Easement, as recorded in CF No. 2008-032980 R.P.R.H.C.T.
3. Property is subject to a blanket Superior oil Company Pipeline Easement, as recorded in Volume 272, Page 168 D.R.H.C.T.
4. A 15 ft. roadway easement as recorded in Volume 528, Page 65 H.C.D.R., does not effect affect this property.
5. Revised April 14, 2021 added Title Commitment.

LINE	BEARING	DISTANCE
L1	N 45°01'25" W	24.20'
Called	N 45°10'07" W	24.03'

This property lies within ZONE " " as SCALED from FEMA Map Panel Number 48 dated August 18, 2014.

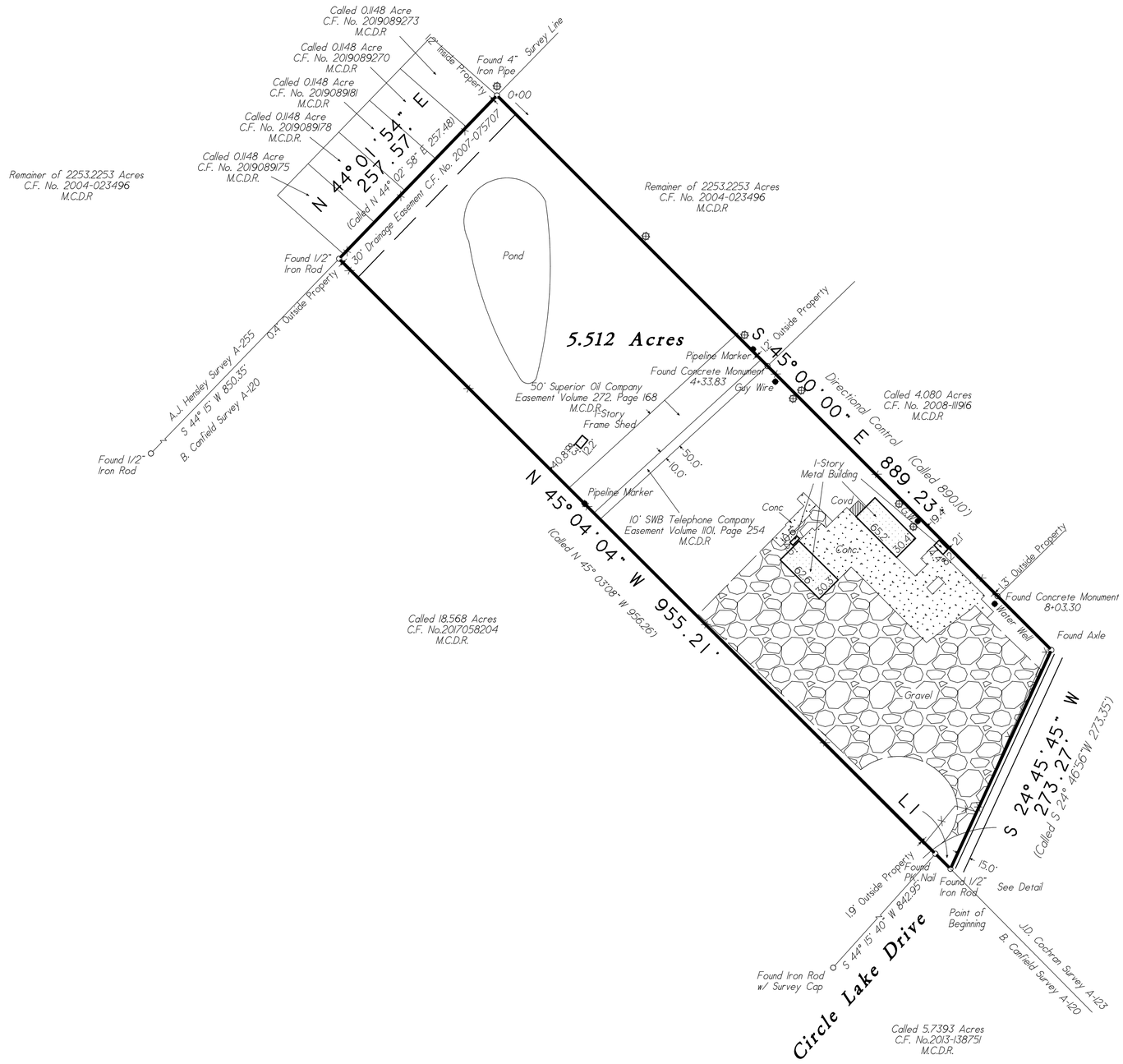
THIS MEANS THAT THE SUBJECT PROPERTY SCALES OUTSIDE THE 100 YEAR FLOOD PLAIN.

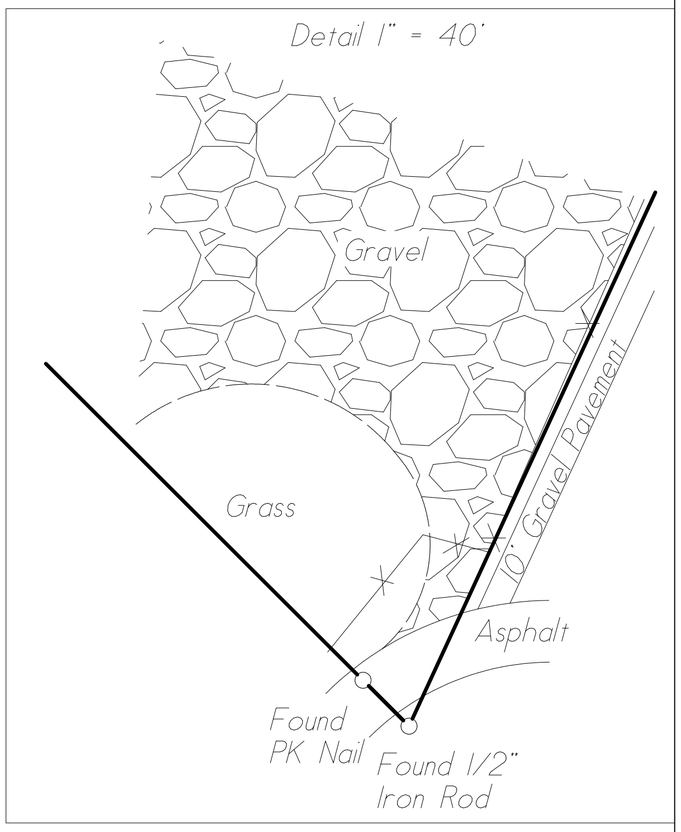
This determination is made strictly according to the FEMA Maps and does not reflect actual on ground flood conditions. Furthermore, this company takes no responsibility for such.

-X-X- - WIRE FENCE

○ - POWER POLE

G.W. - GUY WIRE





Being a 5.512 acre tract of land situated in the J.D. Cochran Survey, Abstract Number 123, Montgomery County, Texas, and being out of a called 5.5181 acres as described in deed recorded in Clerk's File Number 2020-152511 of the Real Property Records of Montgomery County, Texas;

Date: April 1, 2021		GF No. ATCH-16-ATCH20104480TC	
Job No. 21-0067		Scale: 1" = 100' (18x24)	
Address: 34910 Circle Lake Drive			Drawn By: DY
City, State Pinehurst, Texas	Zip 77362		Rev. 4/14/21

C & C Surveying, Inc.
Firm Number 10009400
7424 F.M. 1488, Suite A, Magnolia, Texas 77354
Office: 281-259-4377 Metro: 281-356-5172
Email: survey@ccsurveying.com Web: www.ccsurveying.com

STATE OF TEXAS REGISTERED STEVEN L. CREWS 4141 PROFESSIONAL LAND SURVEYOR

RPLS Seal

Certified To: Alamo Title Insurance Company and Zlopia, LLC
Client: Jon Farley

I HEREBY CERTIFY THIS SURVEY WAS MADE ON THE GROUND, AND THAT THIS PLAT CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF SURVEY AND THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS MANUAL OF PRACTICE REQUIREMENTS FOR A CATEGORY 1B, CONDITION III, TSPS STANDARD LAND SURVEY, AND THAT THERE ARE NO ENCROACHMENTS EXCEPT AS SHOWN.

Steven L. Crews R.P.L.S. # 4141

V:\DRAWINGS\2021\21-0067.gxd -- 04/14/2021 -- 10:35 AM -- Scale 1 : 1200.0

APPENDIX C
PROPERTY OWNER AFFIDAVIT AND LEGAL AUTHORITY

Property Owner Affidavit

I, Jon Farley, as the manager and authorized signatory for Ztopia, LLC (the "Owner"), the owner of 34910 Circle Lake Drive, Pinehurst, Texas 77362 (the "Property"), acknowledge that the State of Texas may hold the Owner either jointly or severally responsible for the operation, maintenance, and closure of the proposed transfer station facility (the "Facility") located at the Property. I further acknowledge that the I or the operator and the State of Texas shall have access to the Property during the active life, and after closure, of the Facility, for the purposes of inspection and maintenance, if required.

Jon Farley, as Manager of Ztopia, LLC

8/30/2021
Date Signed

STATE OF TEXAS §
§
COUNTY OF HARRIS §

SWORN TO AND SUBSCRIBED BEFORE ME by Mr. Jon Farley, as the Manager of Ztopia, LLC, on this 30th day of August, 2021, which witnesses my hand and seal of office.

SEAL

ANGELA SUE PHILLIPS
My Notary ID # 129327673
Expires February 28, 2025

Notary Public in and for The State of Texas

Angela Sue Phillips
Printed Name

My Commission Expires: February 28, 2025

Corporations Section
P.O.Box 13697
Austin, Texas 78711-3697

Jose A. Esparza
Deputy Secretary of State

Office of the Secretary of State

Certificate of Fact

The undersigned, as Deputy Secretary of State of Texas, does hereby certify that the document, Certificate of Formation for Circle Lake Transfer LLC (file number 804040465), a Domestic Limited Liability Company (LLC), was filed in this office on April 27, 2021.

It is further certified that the entity status in Texas is in existence.

It is further certified that our records indicate JON FARLEY as the designated registered agent for the above named entity and the designated registered office for said entity is as follows:

13727 OFFICE PARK DRIVE

HOUSTON, TX - 77070 USA

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on July 17, 2021.

Jose A. Esparza
Deputy Secretary of State

Corporations Section
P.O.Box 13697
Austin, Texas 78711-3697

Jose A. Esparza
Deputy Secretary of State

Office of the Secretary of State

Certificate of Fact

The undersigned, as Deputy Secretary of State of Texas, does hereby certify that the document, Certificate of Formation for Ztopia LLC (file number 801840758), a Domestic Limited Liability Company (LLC), was filed in this office on August 26, 2013.

It is further certified that the entity status in Texas is in existence.

It is further certified that our records indicate JON FARLEY as the designated registered agent for the above named entity and the designated registered office for said entity is as follows:

13727 OFFICE PARK DRIVE

HOUSTON, TX - 77070 USA

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on July 17, 2021.

Jose A. Esparza
Deputy Secretary of State

APPENDIX D
EVIDENCE OF COMPETENCY

EVIDENCE OF COMPETENCY

MR. JON FARLEY, MANAGING PARTNER, CIRCLE LAKE TRANSFER LLC

Mr. Farley, with over 45 years of solid waste industry experience, is the CEO/Owner of Zters, Inc and Zters Site Services, LLC and Managing Partner of Circle Lake Transfer, LLC. Zters, based in Cypress, Texas, has been named to the Inc 5000 fastest growing businesses and the Houston Chronicle top workplaces for the last 3 years running. Before founding Zters Inc (www.zters.com) in 2009, Mr. Farley has been involved in all aspects of the industry, ranging from collection, recycling, and disposal of solid waste to landfill, transfer station, and recycle operations and management. Mr. Farley has held management positions with Republic Services, Allied Waste and Browning Ferris Industries. He has built and/or operated landfills, transfer stations and recycling facilities in Houston, Dallas, the Rio Grande Valley and Denver, Colorado. In his role as DVP of Public Sector and Strategic Planning for BFI, he was responsible for over a $1 billion book of business with cities and counties across the United States.

MR. SHELBY LOWE, PRESIDENT OF CIRCLE LAKE TRANSFER LLC

Mr. Lowe has over 45 years in the solid waste industry, both in the commercial and residential transportation operations. He also managed Type I and Type 4 landfills, and Transfer Stations across five states for a Fortune 500 company. Mr. Lowe owned a solid waste company in Lafayette, Louisiana, and sold the multi-million-dollar company to Browning-Ferris Industries (BFI). He rose through the BFI ranks and became a Regional Vice-President for Allied Waste (acquired BFI) managing 5 states with annual revenues over $980 million dollars. As a Regional Vice President, he was responsible for numerous solid waste commercial, residential, and recycling transportation, recycling plants, Type 1 and Type 4 landfills, and transfer stations.

Mr. Lowe was also a Vice President of Operations over 32 states for a multi-million-dollar bio-solids company managing dewatering, land applying, and recycling bio-solids. He developed an organics program for Liquid Environmental Solutions and was awarded a Texas wide multi-million-dollar organics contract with Walmart. Liquid Environmental Solutions expanded his responsibilities to manage industrial wastewater transportation and over-see industrial wastewater plants throughout Texas and Louisiana.

APPENDIX E
APPOINTMENTS

July 15, 2021

Circle Lake Transfer, LLC
34910 Circle Lake Drive
Pinehurst, Texas 77362

Municipal Solid Waste Permits Section, MC 124
Waste Permits Division
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, Texas 78711-3087

Subject: Notice of Appointment
Registration Application - Type V MSW Facility
Circle Lake Transfer Station
Pinehurst, Montgomery County, Texas

To Whom it May Concern:

This is to advise you that Circle Lake Transfer, LLC (CLT) has appointed Allen Engineering and Science, Inc. (AllenES) as the design and registration engineering consulting firm for the purposes of submitting engineering reports, planning materials, plans, drawings, specifications, responses to comments, and related data for the above-referenced registration application. Mr. Jeffrey Allen, P.E. of AllenES, a licensed Professional Engineer in good standing in the State of Texas, is the responsible engineer for this project and for the overall preparation of this registration application.

We herewith authorize you to review and comment on such reports, planning material, plans, drawings, specifications and related data that AllenES may submit to you pertaining to this registration.

Sincerely,

Shelby Lowe

President of Circle Lake Transfer LLC and Director of Disposal Operations

July 15, 2021

Circle Lake Transfer, LLC
34910 Circle Lake Drive
Pinehurst, Texas 77362

Municipal Solid Waste Permits Section, MC 124
Waste Permits Division
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, Texas 78711-3087

Subject: Notice of Appointment
Registration Application - Type V MSW Facility
Circle Lake Transfer Station
Pinehurst, Montgomery County, Texas

To Whom it May Concern:

I am a **corporate officer** of Circle Lake Transfer, LLC (CLT). I also hold the title of Manager of the LLC and I have responsibility for the overall management of CLT and its operations throughout Texas. I hereby delegate authority to Mr. Shelby Lowe, President of CLT and Director of Disposal Operations, to act as agent for Circle Lake Transfer, LLC in the execution of this registration application for the above-referenced Type V MSW facility, and to sign documents and conduct other business in connection with the TCEQ registration application.

Sincerely,

Jon Farley
Manager of Circle Lake Transfer, LLC

STATE OF TEXAS §
§
COUNTY OF HARRIS §

SWORN TO AND SUBSCRIBED BEFORE ME by Mr. Jon Farley on this 15th day of July, 2021, which witnesses my hand and seal of office.

SEAL

ANGELA SUE PHILLIPS
My Notary ID # 129327673
Expires February 28, 2025

Notary Public in and for The State of Texas

Angela Sue Phillips
Printed Name

My Commission Expires: February 28, 2025

APPENDIX F
ZONING AND ORDINANCES

MONTGOMERY COUNTY
PERMIT DEPARTMENT
501 N. THOMPSON, SUITE 100
CONROE, TEXAS 77301
(936) 539-7836 / FAX (936) 538-8155

RE: Building Codes/Fire Codes/Zoning in Unincorporated Areas of Montgomery County. Certificates of Occupancy and Certificates of Compliance.

TO WHOM IT MAY CONCERN:

Building Codes are not enforced for single family residential structures or multi-family complexes with less than four (4) units. Please be advised that Montgomery County does not have zoning regulations, and does not issue Certificates of Occupancy for buildings or structures. Primarily, Certificates of Occupancy are issued by incorporated areas or subdivision associations.

The Montgomery County Fire Marshal will enforce fire codes and applicable building codes under the 2018 IFC, IBC and NFPA for relevant commercial structures. No codes were enforced before January 1, 2008. A Certificate of Compliance will be issued by the Montgomery County Fire Marshal's office for commercial Fire Code Permits after final inspection and approval.

Montgomery County does require septic permits, development permits, food service permits, and fire code permits, if applicable.

Sincerely,

Phil D. Jones

Phil D. Jones, CFM
Director, Permit Department

Revised May 24, 2021

Texas Counties have no Authority to Regulate Noise

Many Texas cities have adopted ordinances to regulate noise, including engine-braking ordinances. Cities' authority to regulate noise is found in Texas Local Government Code Chapter 51, which grants them general police power.[1] As the Texas Supreme Court has observed, cities "look to the Legislature not for grants of power, but only for limitations on their power."[2]

In contrast, counties lack general police power and may exercise only those powers expressly conferred upon them by the Constitution and by the Legislature.[3] To date, the Legislature has not conferred upon counties the authority to regulate noise in their unincorporated areas. Since at least 2009, various bills have been presented in legislative session that would have empowered counties to pass noise ordinances, but none of the bills made it out of session. Until the Texas Legislature grants the state's counties authority to adopt noise ordinances, Montgomery County will remain unable to regulate noise.

When neighbors in unincorporated areas of the county disagree on appropriate times and volumes for noise, county residents' may have legal recourse by contacting their local constable or sheriff's office if the noise is so loud that it violates the state's criminal statute. Under Section 42.01(5) of the Texas Penal Code, a person commits an offense if he or she "intentionally or knowingly . . . makes unreasonable noise . . . in or near a private residence that he has no right to occupy." Section 42.01(c)(2) of the Texas Penal Code states that a noise is presumed unreasonable if the decibel level exceeds 85. Noise is considered unreasonable—and in violation of the statute—if it is 85 decibels at the point where it is observed by others.

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[1] *See* TEX. LOCAL GOV. CODE § 51.001, stating that "[t]he governing body of a municipality may adopt . . . an ordinance, rule, or police regulation that (1) is for the good government, peace or order of the municipality."
[2] *Dallas Merchants & Concessionaires Ass'n v. City of Dallas*, 852 S.W.2d 489, 490–91 (Tex. 1993).
[3] *See Canales v. Laughlin*, 214 S.W.2d 451 (Tex. 1948).

APPENDIX G
TRANSPORTATION

TRANSPORTATION IMPACT STUDY
FOR THE
CIRCLE LAKE TRANSFER STATION
PINEHURST, TEXAS

PREPARED FOR:

CIRCLE LAKE TRANSFER, LLC.

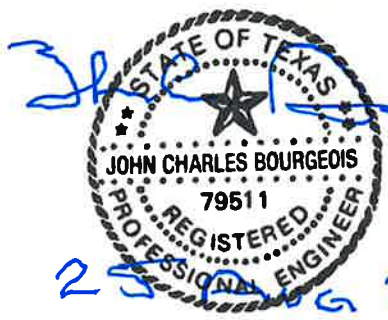
13727 OFFICE PARK DRIVE
HOUSTON, TEXAS 77070

PREPARED BY:

ALLEN
ENGINEERING
AND SCIENCE

6360 I-55 NORTH, SUITE 330
JACKSON, MISSISSIPPI 39211

AUGUST 2021



25 AUG 2021

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1.0 BACKGROUND, PROJECT PURPOSE AND SCOPE of WORK

1.1 BACKGROUND

Circle Lake Transfer, LLC is proposing to permit a Municipal Solid Waste Transfer Station in Pinehurst, Texas. The proposed site is approximately 1/4 miles Northeast of the intersection of FM 1774 and Circle Lake Drive in Pinehurst, Texas. The Transfer Station will be located at the following location:
Latitude N30 10' 22"
Longitude W95 40' 16"

1.2 PROJECT PURPOSE AND SCOPE OF WORK

Allen Engineering and Science, Inc. (AllenES), was retained by the Circle Lake Transfer, LLC to perform a Transportation Impact Study of the proposed Transfer Station site. The scope of the project is to:

- Provide data on the availability and adequacy of roads that the owner or operator will use to access the site;
- Obtain 12-hour turning movement counts at the intersection of:
    - FM 149 at Aggie Expressway Service Roads
    - FM 149 at FM 1774
    - FM 149/1774 at Circle Lake Drive
    - Aggie Expressway Service Roads at Rollingwood Drive West
- Obtain 24-hour approach counts for: FM 149/1774 between Circle Lake Drive and FM 149 and on FM 149 between FM 1774 and Aggie Expressway.
- Project the volume of traffic expected to be generated by the facility on the access roads within one mile of the proposed facility; and
- Prepare documentation for submittal demonstration coordination of the preliminary designs of proposed public roadway improvements such as turning lanes, storage lanes, potential traffic signal at the intersection of Circle Lake Drive/FM 1774, etc., associated agency exercising maintenance responsibility of the public roadway involved, including completion of TCEQ Form 20719.

2.0 INTRODUCTION

Circle Lake Transfer, LLC intends to permit and operate a new municipal solid waste Transfer Station, in Pinehurst, Texas. The purpose of this traffic report is to address traffic/transportation as required by TCEQ in support of a permit application for the municipal solid waste Transfer Station. The facilities will use a two-lane site access road. This traffic report addresses the requirements for Transfer Station located in Pinehurst, Texas.

The primary access to the Transfer Station will be from Aggie Expressway (FM 249) into Pinehurst. Circle Lake vehicles and collection vehicles will access the Transfer Station via FM 149 and FM 1774, and then northeasterly on Circle Lake Drive then into the entrance into the Transfer Station. The Transfer Station is proposed to operate with hours for incoming waste hauling vehicles of 5:00 AM to 7:00 PM Monday through Friday during a typical week. Limited operation of 7:00 AM to 12:00 PM is anticipated on Saturdays. The facility is expected to be closed on Sundays.

FIGURE 1 presents a detailed highway map prepared for the site that depicts the general location of proposed development and the surrounding roadway network. A one-mile radius around the site is also shown on the figure.

Three analysis years are addressed as part of this study:

2022 - the projected opening year;
2027 - five years after the facility opens; and
2047 - expected life of the facility.

The expected life year analysis for the year 2047 was conducted and presented first due to the fact that if an intersection operates adequately under 2047 traffic volumes, then it will also do so under 2022 and 2027 volumes as well.

The expected life year of 2047 was selected based on the Texas Commission on the Environmental Quality (TCEQ) rule requiring analysis during the life of the facility.

While build-out and future year (five years after build out) analyses are commonplace in development of traffic impact analyses, it should be noted that an analysis of the expected life of 25 years is not standard practice. The Institute of Transportation Engineers recommends that an analysis period of five to ten years be used for most site impact analyses. However, in this case, TCEQ requires this uncommon analysis of life expectancy of the development.

The study area for this traffic study consisted of the primary access roads within one mile of the proposed facility. These roadways are Circle Lake Drive, FM 1774, FM 149, West Rollingwood Drive, and Aggie Expressway (FM 249). These roadways are described in more detail below:

> **Circle Lake Drive** – Circle Lake Drive is a two-lane local industrial access road with a no posted speed limit in the vicinity of the site. The roadway currently serves a ready-mix concrete plant, an asphalt paving contractor, a specialty steel supplier, a wood products company, and a lake retreat. The assumed speed limit is 30 miles per hour. Circle Lake Drive is constructed with an asphalt surface.

FM 1774 – FM 1774 is a four-lane curb and gutter farm to market roadway with two-way center turn lane (TWCTL) with a 45-55 miles per hour posted speed limit in the vicinity of the site. FM 1774 is constructed with a concrete surface.

FM 149 – FM 149 is a two-lane farm to market road with a posted speed limit of 40 miles per hour in the vicinity of the site. FM 149 is constructed with asphalt pavement.

West Rollingwood Drive – West Rollingwood Drive is a two-lane local road with a 30 miles per hour posted speed limit in the vicinity of the site. The roadway currently serves as an access to Aggie Expressway. West Rollingwood Street is constructed with an asphalt surface.

Aggie Expressway (FM 249) – Aggie Expressway is a new four-lane median divided expressway with a speed limit of 70 miles per hour in the vicinity of the site. Aggie Expressway has two lane, one way service roads in each direction. Aggie Expressway has recently been opened for traffic. Aggie Expressway is constructed with a concrete surface.

3.0 TRIP GENERATION, DISTRIBUTION, AND ASSIGNMENT

3.1 TRIP GENERATION

Representatives of Circle Lake Transfer, LLC provided trip generation data based on the expected operation of the facility. The trip generation estimates were developed based on the facility waste acceptance rate and anticipated customer mix. A detailed breakdown of this estimate appears in the appendix of this study.

Most vehicles accessing the facility are expected to be waste route collection vehicles and waste transfer trucks. A route collection vehicle is approximately 35 feet long and is considered a single unit vehicle. A transfer truck is a semi-trailer combination vehicle with a 53-foot-long trailer. The impact of single unit vehicles, such as busses and RVs, and combination vehicles, such as semi-trailers, on traffic operations is different than that of passenger cars. This is primarily due to the different acceleration, deceleration, and handling characteristics of these larger vehicles.

The *Highway Capacity Manual* contains an adjustment factor to convert truck and bus volumes into passenger car equivalents. Using a passenger car equivalency adjustment factor of 1.5 for each truck, the trips generated by the transfer station were converted into passenger car equivalents to estimate the traffic impacts of the facility. The adjusted daily trip generation data is also presented in **TABLE 1.**

TABLE 1: PROJECTED DAILY TRIP GENERATION

2022 Trip Generation (Facility Opening Year)						
Vehicle Types	**Average Daily Trips (Actual Vehicle)**			**Average Daily Trips (Passenger Car Equivalents)**		
	Enter	**Exit**	**Total**	**Enter**	**Exit**	**Total**
Route Collection Trucks	71	71	142	107	107	213
Transfer Trucks	25	25	50	38	38	75
Small Trucks & Passenger Cars	20	20	40	20	20	40
Totals	**116**	**116**	**232**	**164**	**164**	**328**
2027 Trip Generation (5 Years After Facility Opening)						
Vehicle Types	**Average Daily Trips (Actual Vehicle)**			**Average Daily Trips (Passenger Car Equivalents)**		
	Enter	**Exit**	**Total**	**Enter**	**Exit**	**Total**
Route Collection Trucks	357	357	714	536	536	1071
Transfer Trucks	125	125	250	188	188	375
Small Trucks & Passenger Cars	20	20	40	20	20	40
Totals	**502**	**502**	**1004**	**743**	**743**	**1486**
2047 Trip Generation (Projected Year of Expected Life of Facility)						
Vehicle Types	**Average Daily Trips (Actual Vehicle)**			**Average Daily Trips (Passenger Car Equivalents)**		
	Enter	**Exit**	**Total**	**Enter**	**Exit**	**Total**
Route Collection Trucks	457	457	914	686	686	1371
Transfer Trucks	160	160	320	240	240	480
Small Trucks & Passenger Cars	20	20	40	20	20	40
Totals	**637**	**637**	**1274**	**946**	**946**	**1891**

Source: Circle Lake Transfer Facility, LLC

Representatives of Circle Lake Transfer, LLC provided an estimated distribution of arriving traffic during each hour of a typical operational day, and these are included in the appendix of this study. This distribution of traffic over the day allows the estimation of traffic generated by the site during any specific hour.

Traffic operations during the traditional AM and PM peak periods of the adjacent street (FM 149) are typically analyzed within a traffic study for a development. Traffic operations are analyzed for the peak one hour within each peak period. The AM peak hour selected for analysis was 7:00 AM to 8:00 AM based on the traffic counts collected and the site trip generation characteristics. The PM peak hour of the adjacent street was determined to occur between 4:45 PM and 5:45 PM based on the automated traffic counts collected.

The facility is anticipated to generate the highest amount of traffic during the 10:00 AM to 11:00 AM hour with 5.3% of the daily site generated traffic occurring during this hour. The 10:00 AM to 11:00 AM hour was selected for analysis as the peak hour of the generator. **TABLE 2** presents the percentage of daily traffic accessing the facility during each analysis hour.

TABLE 2: PERCENTAGE OF DAILY TRAFFIC ACCESSING SITE

Period	Hour	Percentage of Daily Site Traffic During the Analysis Hour
AM Peak Hour of FM 1774	0700 - 0800	7.7%
PM Peak Hour of FM 1774	1645 - 1745	8.2%
Peak Hour of Circle Lake Transfer Station	1000 - 1100	5.3%

Peak Hour Based on Traffic Counts Collected (06/15/2021)
Projected Peak % and Hour of Facility Based on Projections by Circle Lake Transfer, LLC

The passenger car equivalent volumes from **TABLE 1** were then multiplied by the hourly percentages to determine the amount of traffic accessing the site during the three-analysis peak hours. This results in the hourly trip generation presented in **TABLE 3**.

TABLE 3: PROJECTED PEAK HOUR TRIP GENERATION

2022 Trip Generation (Facility Opening Year)								
AM Peak Hour (7.7% of Daily Traffic) (Passenger Car Equivalents)			**PM Peak Hour (8.2% of Daily Traffic) (Passenger Car Equivalents)**			**Facility Peak Hour (5.3% of Daily Traffic) (Passenger Car Equivalents)**		
Enter	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
8	8	16	9	9	18	6	6	11
3	3	6	3	3	6	2	2	4
2	2	3	2	2	3	1	1	2
13	**13**	**25**	**14**	**14**	**27**	**9**	**9**	**17**
2027 Trip Generation (5 Years After Facility Opening)								
AM Peak Hour (7.7% of Daily Traffic) (Passenger Car Equivalents)			**PM Peak Hour (8.2% of Daily Traffic) (Passenger Car Equivalents)**			**Facility Peak Hour (5.3% of Daily Traffic) (Passenger Car Equivalents)**		
Enter	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
42	42	84	45	45	90	30	30	60
15	15	30	16	16	32	10	10	20
2	2	4	2	2	4	1	1	2
59	**59**	**118**	**63**	**63**	**126**	**41**	**41**	**82**
2047 Trip Generation (Projected Year of Expected Life of Facility)								
AM Peak Hour (7.7% of Daily Traffic) (Passenger Car Equivalents)			**PM Peak Hour (8.2% of Daily Traffic) (Passenger Car Equivalents)**			**Facility Peak Hour (5.3% of Daily Traffic) (Passenger Car Equivalents)**		
Enter	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
54	54	108	58	58	116	38	38	76
19	19	38	21	21	42	13	13	26
2	2	4	2	2	4	1	1	2
75	**75**	**150**	**81**	**81**	**162**	**52**	**52**	**104**

The volumes shown above are the passenger car equivalent volumes for the site that were used in traffic analyses. The predicted number of actual vehicles accessing the site is lower than the equivalent number shown in **TABLE 3**. This results in a conservative estimate of site impact.

The site is also expected to accept waste at the facility on Saturdays during the morning only. The predicted amount of this daily traffic on Saturday accessing the facility is relatively low. Saturday volumes on the local network are generally lower than those occurring during the weekday AM and PM peak hours. As such, no analysis is conducted for the Saturday volumes as they are not anticipated to have an impact on the access roadways.

3.2 TRIP DISTRIBUTION

The distribution of site generated traffic entering and leaving Circle Lake Transfer Station on the area roadways was prepared based on the locations of principal roadways and information provided by Circle Lake Transfer, LLC. The primary access to Circle Lake Transfer Station will be from Aggie Expressway (FM 249) into Pinehurst, vehicles will access the transfer station via northbound FM 249 frontage road, then FM 1774 to Circle Lake Drive and then northeasterly approximately ½ mile to the transfer station site. Thus, all site traffic will enter the site by making a northwesterly bound turn into the site via Circle Lake Drive. All site traffic and Circle Lake Drive traffic will be accessed via FM 1774 from either eastbound or westbound FM 1774:

- Approximately 60% of site traffic is estimated to ingress/egress the site to/from the east via FM 1774
- Approximately 40% of site traffic is estimated to ingress/egress the site to/from the west via FM 1774

The directional distribution was used to assign site traffic to the adjacent roadway network and the site access road.

3.3 TRAFFIC ASSIGNMENT

Traffic volumes expected to be generated by the Circle Lake Transfer Station were assigned to the area roadways and the site access road based on the directional distribution described above.

The 2022 (Opening Year) site-generated traffic volumes are provided in **FIGURE 2.**

The 2027 (5 Years After Opening) site-generated traffic volumes are provided in **FIGURE 3.**

The 2047 (Expected Life) site-generated traffic volumes are provided in **FIGURE 4.**

4.0 EXISTING AND PROJECTED TRAFFIC VOLUMES

4.1 EXISTING VOLUMES

Twenty-four-hour automated traffic counts were collected on FM 1774 and FM 149 in the vicinity of the site on Tuesday, June 15, 2021. The counts on FM 1774 and FM 149 are in alignment with counts collected by Texas DOT and available on their website. Additional 12 hour turning movement counts were also collected at the intersections of Aggie Expressway (FM 249)/FM 149, FM 149/FM 1774, FM 1774/Circle Lake Drive and Aggie Expressway (FM 249)/West Rollingwood Drive. The 24-hour counts collected are summarized in **TABLE 4.**

TABLE 4: AUTOMATED TRAFFIC VOLUMES COLLECTED

Location	Direction	24 Hour Volume	AM Peak Hour of FM 1774 (0700-0800) (vehicles per hour)	Facility Peak Hour (1000-1100) (vehicles per hour)	PM Peak Hour of FM 1774 (1645-1745) (vehicles per hour)
FM 1774 Westbound between FM 149 & Circle Lake Drive	WB	11,638	626	534	1,188
FM 1774 Eastbound between FM 149 & Circle Lake Drive	EB	12,699	1,237	755	799
FM 149 Northbound between FM 1774 & Aggie Expressway	NB	3,754	309	213	359
FM 149 Southbound between FM 1774 & Aggie Expressway	SB	3,614	253	193	307

24 Hour volume counts collected June 15, 2021

Manual 12 hour turning movement counts for the AM and PM peak periods were also collected at the intersections of Aggie Expressway (FM 249)/FM 149, FM 149/FM 1774, FM 1774/Circle Lake Drive and Aggie Expressway (FM 249)/West Rollingwood Drive. **FIGURE 5** presents the existing 12 hour turning movement counts collected Tuesday, June 15, 2021.

4.2 HISTORICAL TRAFFIC VOLUME DATA

Historical count data for the area was obtained from TxDOT Houston District count maps for 1999 through 2019. An image excerpt from the 2019 count map appears in **FIGURE 6**. The map also illustrates average annual daily traffic for Circle Lake Drive at 232 vehicles per day, which is consistent with the volumes collected on June 15, 2021.

Historical volumes during the period 2008 - 2019 are depicted in **TABLE 5** for FM 149 and FM 1774.

TABLE 5: TEXAS DOT EXISTING TRAFFIC VOLUMES

Year	FM 149 Between FM 1774 & Aggie Expressway Annual Average Daily Traffic (AADT) (vehicles per day)	FM 1774 Between FM 149 & Circle Lake Drive Annual Average Daily Traffic (AADT) (vehicles per day)
2021	7,368*	24,337*
2020	11,555	30,310
2019	13,010	28,250
2018	12,603	26,481
2017	11,833	26,468
2016	13,288	30,095
2015	12,457	29,347
2014	10,928	20,428
2013	10,748	23,741
2012	9,800	24,000
2011	8,800	24,000
2010	8,600	24,000
2009	8,300	22,000
2008	8,800	25,000

Source: TXDOT District Traffic Web Viewer

* Data collected by CJ Hensch 06/15/21

Based on the average annual daily traffic volumes shown in **TABLE 5**, traffic volumes in the study area are relatively stable. The traffic volumes fluctuate upwards and downwards over the 12-year period. The overall trend for FM 1774 has been growth of 1.08 percent per year. The traffic volumes collected in 2021 reflect the changes that have occurred as a result of the recent construction of Aggie Expressway (FM 249).

4.3 BACKGROUND TRAFFIC VOLUMES (2022 AND 2027)

An annual average growth rate of 1.08 percent for traffic on FM 1774 will be utilized to trend the traffic for the roads in the vicinity of Circle Lake Transfer Station. The existing turning movement volumes collected and shown in **FIGURE** 5 were grown annually by 1.08 percent to arrive at background traffic volumes for the years 2022 and 2027. These background volumes are shown in **FIGURE 7** and **FIGURE 8.**

4.4 BACKGROUND TRAFFIC VOLUMES (2047)

The Circle Lake Transfer Station is expected to have a service life of 25 years. The 1.08 percent annual growth used to develop the 2022 and 2027 volumes was maintained in order to estimate the 2047 background volume. The projected 2047 traffic volumes are shown in **FIGURE 9.**

4.5 TOTAL TRAFFIC VOLUMES

The site generated traffic volumes shown in Figures 2, 3, and 4 were added to the background traffic volumes shown in **FIGURES 7**, **8**, and **9** to obtain the projected total traffic volumes for each of the analysis years - 2022 (Opening Year), 2027 (5 Years After Opening), and 2047 (25 Year Life Expectancy).

The projected 2022 (Opening Year) total traffic volumes are shown in **FIGURE 10.**

The projected 2027 (5 Years After Opening) total traffic volumes are shown in **FIGURE 11.**

The projected 2047 (25 Year Life Expectancy) total traffic volumes are shown in **FIGURE 12.**

5.0 TRAFFIC ANALYSES

5.1 INTERSECTION TRAFFIC ANALYSIS

Intersection capacity analysis was conducted using the 2047 Expected Life year total traffic volumes. If an intersection operates acceptably under the 2047 volumes, then it will also perform acceptably under the 2022 and 2027 volumes.

The *Highway Capacity Manual* defines levels of service for automobiles at intersections based on the amount of average delay, in seconds/vehicle, experienced at the intersection. The Level of Service (LOS) of an intersection is a qualitative measure of the capacity and operating conditions and is directly related to vehicle delay.

5.2 UNSIGNALIZED INTERSECTIONS

For unsignalized intersections, the levels of service, as shown in **TABLE 6**, are defined by average control delay in seconds per vehicle. LOS is given a letter designation from A to F, with LOS A representing shorter delays and LOS F representing longer delays.

TABLE 6: LEVEL OF SERVICE CRITERIA FOR TWO-WAY STOP-CONTROLLED UNSIGNALIZED INTERSECTIONS

Level-of-Service (LOS)	Average Control Delay (seconds/vehicles)
A	< 10
B	10 - 15
C	15 - 25
D	25 - 35
E	35 - 50
F	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2010

The existing intersection at FM 1774 and Circle Lake Drive is currently unsignalized with two-way stop-control on Circle Lake Drive. Unsignalized two-way stop-control analysis was performed for the existing intersection at FM 1774 at Circle Lake Drive since this will be the primary access to Circle Lake Transfer Station.

Based on the existing 24-hour automated traffic counts in **TABLE 4**, the 10:00 AM to 11:00 AM Circle Lake Transfer Station peak hour (1,289 vph) is a significantly lower volume (65% -69%) for background traffic as compared to the peak AM (1,863 vph) and peak PM period (1,987 vph).

FM 1774/Circle Lake Drive Traffic Analysis

TABLE 7 presents the results of the 2021, 2022, 2027, and 2047 capacity analysis for the intersection at FM 1774 and Circle Lake Drive. As can be seen in the table, the FM 1774 and Circle Lake Drive experiences major delays if operated as a two lane, stop control on Circle Lake

Drive, unsignalized intersection currently and through 2047. It should be noted that the southbound left turn from Circle Lake Drive is currently experiencing a level of service of F. As a result, the TXDOT has posted this approach as right turn only, **no left turn**. It will be necessary to improve the capacity of the intersection by making geometric changes or lane additions to Circle Lake Drive and to signalize the intersection. The analysis indicates that the intersection will not operate at an acceptable level of service as a unsignalized intersection in the current state and with the projected traffic volumes. It will be necessary to signalize the intersection to improve function.

TABLE 7: UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS

Circle Lake Drive at FM 1774			
Peak	**Intersection Delay in Seconds (LOS)**	**Eastbound Left Delay in Seconds (LOS)**	**Southbound Left Delay in Seconds (LOS)**
2021 AM Peak Hour	0.2s (A)	9.0s(A)	17.3s(C)
2021 PM Peak Hour	0.5s (A)	0.0s(A)	61.2s(F)
2021 Site Peak Hour	0.2s (A)	8.7s(A)	15.9s(C)
2022 AM Peak Hour	0.4s (A)	9.0s(A)	22.1s(C)
2022 PM Peak Hour	1.0s (A)	12.1s(B)	67.2s(F)
2022 Site Peak Hour	0.3s (A)	8.7s(A)	15.9s(C)
2027 AM Peak Hour	1.7 s(A)	9.4 s (B)	43.5 s (E)
2027 PM Peak Hour	8.7 s(A)	13.2 s (B)	244.3 s (F)
2027 Site Peak Hour	0.9 s(A)	8.9 s (A)	20.1 s (C)
2047 AM Peak Hour	6.8 s(A)	10.3 s (B)	177 s (F)
2047 PM Peak Hour	43.6 s(E)	16.8 s (C)	1,215.7 s (F)
2047 Site Peak Hour	1.3 s(A)	9.6 s (A)	30.9 s (D)

West Rollingwood Drive/Aggie Expressway (FM 249) Service Roads Traffic Analysis

TABLES 8 and **9** presents the results of the 2021, 2022, 2027, and 2047 capacity analysis for the intersection at West Rollingwood Drive/Aggie Expressway (FM 249) Service Roads. As can be seen in the table, the intersection at West Rollingwood Drive/Aggie Expressway (FM 249) Service

Road experiences delays if operated with the current geometry as a unsignalized intersections in 2047. It will not be necessary to improve the capacity of the intersection at this time. The analysis indicates that the intersection will operate at an acceptable level of service as a unsignalized intersection in the current state with the projected traffic volumes. The AM and PM peak for the eastbound and westbound movements will experience significant delays in 2047, but this is not attributable to the volumes generated by Circle Lake Transfer Station.

TABLE 8: UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS

West Rollingwood Drive/NB Service Rd Aggie Expressway (FM 249)			
Peak	**Intersection Delay in Seconds (LOS)**	**Eastbound Lane Delay in Seconds (LOS)**	**Westbound Lane Delay in Seconds (LOS)**
2021 AM Peak Hour	0.4 s(A)	11.8 s (B)	10.4 s (B)
2021 PM Peak Hour	0.5 s(A)	18.0 s (C)	26.7 s (D)
2021 Site Peak Hour	0.9 s(A)	11.7 s (B)	12.6 s (B)
2022 AM Peak Hour	0.4 s(A)	11.9 s (B)	10.5 s (B)
2022 PM Peak Hour	0.5 s(A)	18.3 s (C)	27.4 s (D)
2022 Site Peak Hour	0.9 s(A)	11.8 s (B)	12.6 s (B)
2027 AM Peak Hour	0.4 s(A)	12.3 s (B)	10.7 s (B)
2027 PM Peak Hour	0.5 s(A)	20.0 s (C)	31.2 s (D)
2027 Site Peak Hour	0.9 s(A)	12.2 s (B)	13.2 s (B)
2047 AM Peak Hour	0.4 s(A)	13.8 s (B)	19.2 s (C)
2047 PM Peak Hour	0.8 s(A)	28.2 s (D)	50.8 s (F)
2047 Site Peak Hour	1.0 s(A)	13.8 s (B)	15.5 s (C)

TABLE 9: UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS

West Rollingwood Drive/SB Service Rd Aggie Expressway (FM 249)			
Peak	**Intersection Delay in Seconds (LOS)**	**Eastbound Lane Delay in Seconds (LOS)**	**Westbound Lane Delay in Seconds (LOS)**
2021 AM Peak Hour	0.8 s(A)	26.4 s (D)	28.7 s (D)
2021 PM Peak Hour	1.0 s(A)	18.7 s (C)	17.1 s (C)
2021 Site Peak Hour	1.3 s(A)	17.8 s (C)	15.3s (C)
2022 AM Peak Hour	0.9 s(A)	27.1 s (D)	29.7 s (D)
2022 PM Peak Hour	1.0 s(A)	19.1 s (C)	17.4 s (C)
2022 Site Peak Hour	1.3 s(A)	18.1 s (C)	15.4 s (C)
2027 AM Peak Hour	1.0 s(A)	31.1 s (D)	34.6 s (D)
2027 PM Peak Hour	1.1 s(A)	21.2 s (C)	19.0 s (C)
2027 Site Peak Hour	1.4 s(A)	19.7s (C)	16.5 s (C)
2047 AM Peak Hour	1.8 s(A)	57.6 s (F)	63.1 s (F)
2047 PM Peak Hour	1.5 s(A)	29.8 s (D)	26.1 s (D)
2047 Site Peak Hour	1.9 s(A)	26.9 s (D)	21.3 s (C)

5.3 SIGNALIZED INTERSECTIONS

For signalized intersections, the levels of service, as shown in **TABLE 10** are defined by average control delay in seconds per vehicle. LOS is given a letter designation from A to F, with LOS A representing shorter delays and LOS F representing longer delays.

TABLE 10: LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level-of-Service (LOS)	Control Delay Per Vehicle (seconds/vehicles)
A	< 10
B	10 - 20
C	20 - 35
D	35 - 55
E	55 - 80
F	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2010

FM 1774/FM 149 Traffic Analysis

TABLE 11 presents the results of the 2021, 2022, 2027, and 2047 capacity analysis for the intersection at FM 1774/FM 149. As can be seen in the table, the intersection at FM 1774/FM 149 experiences minor delays if operated with the current geometry as a signalized intersection during the period 2022 to 2047. It will not be necessary to improve the capacity of the intersection. The analysis indicates that the intersection will operate at an acceptable level of service as a signalized intersection in the current state with the projected traffic volumes.

The movements that that are projected to experience delays is the FM 1774 eastbound left and FM 149 southbound during the PM peak in 2047. This delay may result in vehicles being congested during multiple cycles of the signal. The eastbound left movement on FM 1774 is clearly not a movement impacted by access to the Circle Lake Transfer Station.

TABLE 11: SIGNALIZED INTERSECTION CAPACITY ANALYSIS

FM 1774/FM 149						
Peak	**Intersection Delay in Seconds (LOS)**	**Eastbound Left Delay in Seconds (LOS)**	**Eastbound Delay in Seconds (LOS)**	**Westbound Delay in Seconds (LOS)**	**Northbound Delay in Seconds (LOS)**	**Southbound Delay in Seconds (LOS)**
2021 AM Peak Hour	12.0 s(B)	8.9 s (A)	10.3 s (B)	12.3 s (B)	11.3 s (B)	19.0 s (B)
2021 PM Peak Hour	18.7 s(B)	10.1 s (B)	7.7 s (A)	23.6 s (C)	15.3 s (B)	28.4 s (C)
2021 Site Peak Hour	8.2 s(A)	5.9 s (A)	5.8 s (A)	10.0 s (B)	11.6 s (B)	11.9 s (B)
2022 AM Peak Hour	12.3 s(B)	9.2 s (A)	10.8 s (B)	12.4 s (B)	11.4 s (B)	19.0 s (B)
2022 PM Peak Hour	18.3 s(B)	11.0 s (B)	7.5 s (A)	21.6 s (C)	16.6 s (B)	32.4 s (C)
2022 Site Peak Hour	8.4 s(A)	6.1 s (A)	6.0 s (A)	10.2 s (B)	11.0 s (B)	11.7 s (B)
2027 AM Peak Hour	13.9 s(B)	10.2 s (B)	11.8 s (B)	14.5 s (B)	11.3 s (B)	21.7 s (C)
2027 PM Peak Hour	21.4 s(C)	14.8 s (B)	8.4 s (A)	24.1 s (C)	19.0 s (B)	40.6 s (D)
2027 Site Peak Hour	9.2 s(A)	6.8 s (A)	6.6 s (A)	10.9 s (B)	10.7 s (B)	12.9 s (B)
2047 AM Peak Hour	25.8 s(C)	17.0 s (B)	24.8 s (C)	22.4 s (C)	11.1 s (B)	38.1 s (D)
2047 PM Peak Hour	42.5 s(D)	72.8 s (E)	12.3 s (B)	48.1 s (D)	26.5 s (C)	75.0 s (E)
2047 Site Peak Hour	12.3 s(B)	8.9 s (A)	9.0 s (A)	14.9 s (B)	10.9 s (B)	16.2 s (B)

FM 149/Aggie Expressway (FM 249) Service Roads Traffic Analysis

TABLES 12 and **13** presents the results of the 2021, 2022, 2027, and 2047 capacity analysis for the intersection at FM 149/Aggie Expressway (FM 249) Service Roads. As can be seen in the table, the intersection at FM 149/Aggie Expressway (FM 249) Service Roads experience minor delays if operated with the current geometry as a signalized intersection in 2022 to 2047. It will not be necessary to improve the capacity of the intersection due to the impacts of Circle Lake Transfer Station. The analysis indicates that the intersection will operate at an acceptable level of service as a signalized intersection in the current state with the projected traffic volumes.

The intersection does experience significant delays due to two movements that are not the result of impacts by Circle Lake Transfer Station, the Northbound and the Southbound through on FM 149 is a level of service F and E for the 2047 PM peak hour. These delays are created by the 2-lane existing capacity of FM 149. Neither of these movements are the result of traffic generated by Circle Lake Transfer Station.

Table 12: Signalized Intersection Capacity Analysis

FM 149/SB Service Road Aggie Expressway (FM 249)							
Peak	**Intersection Delay in Seconds (LOS)**	**Eastbound Left Delay in Seconds (LOS)**	**Eastbound Thru Delay in Seconds (LOS)**	**Northbound Thru Delay in Seconds (LOS)**	**Northbound Right Delay in Seconds (LOS)**	**Southbound Left Delay in Seconds (LOS)**	**Southbound Thru Delay in Seconds (LOS)**
2021 AM Peak Hour	6.0 s(A)	13.5 s (B)	0.0 s (A)	9.4 s (A)	0.0 s (A)	6.2 s (A)	1.3 s (A)
2021 PM Peak Hour	4.4 s(A)	12.0 s (B)	0.0 s (A)	7.9 s (A)	0.0 s (A)	3.4 s (A)	2.5 s (A)
2021 Site Peak Hour	4.3 s(A)	11.0 s (B	8.4 s (A)	8.4 s (A)	0.0 s (A)	3.4 s (A)	1.5 s (A)
2022 AM Peak Hour	6.1 s(A)	13.8 s (B)	0.0 s (A)	9.5 s (A)	0.0 s (A)	6.4 s (A)	1.3 s (A)
2022 PM Peak Hour	1.9 s(A)	33.5 s (C)	0.1 s (A)	1.0 s (A)	0.3 s (A)	2.8 s (A)	1.3 s (A)
2022 Site Peak Hour	4.4 s(A)	11.0 s (B)	7.9 s (A)	8.4 s (A)	0.0 s (A)	3.5 s (A)	1.5 s (A)
2027 AM Peak Hour	7.8 s(A)	17.2 s (B)	0.1 s (A)	12.3 s (B)	0.0 s (A)	8.1 s (A)	2.1 s (A)
2027 PM Peak Hour	5.8 s(A)	14.8 s (B)	0.1 s (A)	10.2 s (B)	0.0 s (A)	4.6 s (A)	2.5 s (A)
2027 Site Peak Hour	4.7 s(A)	12.0 s (B)	7.2 s (A)	9.0 s (A)	0.0 s (A)	3.5 s (A)	1.5 s (A)
2047 AM Peak Hour	11.2 s(B)	27.0 s (C)	0.1 s (A)	19.2 s (B)	0.0 s (A)	11.0 s (B)	2.4 s (A)
2047 PM Peak Hour	6.5 s(A)	16.4 s (B)	0.1 s (A)	11.0 s (B)	0.0 s (A)	5.8 s (A)	2.6 s (A)
2047 Site Peak Hour	6.6 s(A)	13.8 s (B)	7.8 s (A)	10.7 s (B)	0.0 s (A)	6.2 s (A)	2.2 s (A)

TABLE 13: SIGNALIZED INTERSECTION CAPACITY ANALYSIS

FM 149/NB Service Road Aggie Expressway (FM 249)							
Peak	**Intersection Delay in Seconds (LOS)**	**Westbound Left Delay in Seconds (LOS)**	**Westbound Thru Delay in Seconds (LOS)**	**Westbound Right Delay in Seconds (LOS)**	**Northbound Left Delay in Seconds (LOS)**	**Northbound Thru Delay in Seconds (LOS)**	**Southbound Thru Delay in Seconds (LOS)**
2021 AM Peak Hour	7.4 s(A)	12.3 s (B)	12.0s (B)	6.2 s (A)	4.3 s (A)	6.1 s (A)	8.4 s (A)
2021 PM Peak Hour	19.0 s(B)	8.3 s (A)	8.2 s (A)	28.9 s (C)	8.6 s (A)	13.4 s (B)	10.7 s (B)
2021 Site Peak Hour	5.5 s(A)	7.8 s (A)	7.7 s (A)	4.3 s (A)	5.3 s (A)	6.1 s (A)	5.7 s (A)
2022 AM Peak Hour	7.5 s(A)	12.3 s (B)	12.0 s (B)	6.1 s (A)	4.5 s (A)	6.1 s (A)	8.4 s (A)
2022 PM Peak Hour	19.7 s(B)	8.3 s (A)	8.2 s (A)	30.4 s (C)	8.8 s (A)	13.6 s (B)	10.8 s (B)
2022 Site Peak Hour	6.9 s(A)	10.9 s (B)	11.0 s (B)	5.5 s (A)	4.8 s (A)	5.8 s (A)	7.9s (A)
2027 AM Peak Hour	7.7 s(A)	12.5s (B)	12.2 s (B)	6.2 s (A)	4.9 s (A)	6.3 s (A)	8.8 s (A)
2027 PM Peak Hour	22.0 s(C)	7.7 s (A)	7.5 s (A)	29.1 s (C)	14.5 s (B)	20.6 s (C)	15.2 s (B)
2027 Site Peak Hour	6.9 s(A)	11.1 s (B)	11.0 s (B)	5.6 s (A)	4.9 s (A)	5.9 s (A)	7.9 s (A)
2047 AM Peak Hour	9.2 s(A)	15.9 s (B)	15.6 s (B)	7.4 s (A)	4.8 s (A)	6.4 s (A)	10.9 s (B)
2047 PM Peak Hour	59.7 s(E)	10.0 s (A)	9.9 s (A)	46.5 s (D)	30.2 s (C)	99.7 s (F)	56.3 s (E)
2047 Site Peak Hour	7.5 s(A)	11.8 s (B)	11.6 s (B)	5.8 s (A)	5.2 s (A)	6.4 s (A)	8.7 s (A)

6.0 AUXILLARY LANE ANALYSES

6.1 DECELERATION LANES

Access to the proposed Circle Lake Transfer Station will be provided via the existing intersection along FM 1774 at Circle Lake Drive. This intersection will be evaluated for deceleration lanes.

Guidelines contained in TxDOT's Access Management Manual for un-divided roadways with a posted speed limit greater than 45 mph indicate that right turn deceleration lanes should be considered for right turn volumes greater than 50 vehicles per hour. Un-divided roadways with a posted speed limit less than or equal to 45 mph indicate that right turn deceleration lanes should be considered for right turn volumes greater than 60 vehicles per hour.

The intersection at FM 1774 and Circle Lake Drive is projected to have a 2047 northbound right turning traffic peak at 55 vehicles per hour during the AM peak. The posted speed limit near Circle Lake Drive is 45 MPH. Based on site traffic data provided by Circle Lake Transfer, LLC, the adjusted site traffic (passenger car equivalents) is unlikely to exceed 60 right turns per hour during the projected 25 year expected life of the Circle Lake Transfer Station. Therefore, based strictly on volume, the intersection of FM 1774 at Circle Lake Drive **does not** warrant a deceleration lane.

Other conditions that might affect the need for a deceleration lane at intersections include:

- High crash experience
- Heavier than normal peak flow movements on the main roadway
- Large volume of truck traffic
- Highways where sight distance is limited

Crash data has not been evaluated for this intersection. However, due the rural nature of the intersection, intersection geometry and volumes, it is unlikely that this intersection would have high crash experience. Peak volumes are relatively normal, truck volume is not large (approximately 11%), and sight distance is adequate. Based on these conditions at this intersection, a deceleration lane is **not recommended** for this intersection.

6.2 ACCELERATION LANES

Access to the proposed Circle Lake Transfer Station will be provided via the existing intersection along FM 1774 at Circle Lake Drive. This intersection will be evaluated for acceleration lanes.

Guidelines in TxDOT's Access Management Manual indicate that right turn acceleration lanes should be considered where right turn egress volumes exceed 200 vehicles per hour. The facility peak hour is predicted to generate 43 exiting vehicles during the 2047 AM peak at the intersection of FM 1774 at Circle Lake Drive. Therefore, based strictly on volume, the intersection of FM 1774 at Circle Lake Drive **does not** warrant an acceleration lane.

The roadway profile along FM 1774 is sloped uphill slightly away from Circle Lake Drive. Due to the low volume nature of the exit movement along with the slight uphill slope, an acceleration lane is **not** recommended for northbound acceleration on FM 1774.

7.0 INTERSECTION SIGHT DISTANCE

As part of this traffic analysis, the required and available sight distances for motorists accessing the proposed site were evaluated. Guidelines for providing sight distance on roadways and intersections are provided by the *Roadway Design Manual* Texas DOT, 2018. **TABLES 2-1** and **2-2** from the *Roadway Design Manual*, illustrates the recommended Stopping Sight and Decision Sight Distance Values for Texas highways for the minimum (stopping sight) and desirable (intersection) sight distances, is provided below:

TABLE 2-1: STOPPING SIGHT DISTANCE

			Stopping sight distance	
Design Speed (mph)	Brake reaction distance (ft)	Braking distance on level (ft)	Calculated (ft)	Design (ft)
15	55.1	21.6	76.7	80
20	73.5	38.4	111.9	115
25	91.9	60.0	151.9	155
30	110.3	86.4	196.7	200
35	128.6	117.6	246.2	250
40	147.0	153.6	300.6	305
45	165.4	194.4	359.8	360
50	183.8	240.0	423.8	425
55	202.1	290.3	492.4	495
60	220.5	345.5	566.0	570
65	238.9	405.5	644.4	645
70	257.3	470.3	727.6	730
75	275.6	539.9	815.5	820
80	294.0	614.3	908.3	910
Note: brake reaction distance predicated on a time of 2.5s; deceleration rate 11.2 ft/sec²				

Source: TXDOT *Roadway Design Manual*

TABLE 2-2: RECOMMENDED DECISION SIGHT DISTANCE VALUES

Decision sight distance (ft) Avoidance maneuver					
Design speed (mph)	**A**	**B**	**C**	**D**	**E**
30	220	490	450	535	620
35	275	590	525	625	720
40	330	690	600	715	825
45	395	800	675	800	930
50	465	910	750	890	1030
55	535	1030	865	980	1135
60	610	1150	990	1125	1280
65	695	1275	1050	1220	1365
70	780	1410	1105	1275	1445
75	875	1545	1180	1365	1545
80	970	1685	1260	1455	1650

Avoidance Maneuver A: Stop on rural road – t = 3.0s
Avoidance Maneuver B: Stop on urban road – t = 9.1s
Avoidance Maneuver C: Speed/path/direction change on rural road – t varies between 10.2 and 11.2s
Avoidance Maneuver D: Speed/path/direction change on suburban road – t varies between 12.1 and 12.9s
Avoidance Maneuver E: Speed/path/direction change on urban road – t varies between 14.0 and 14.5s

Source: TXDOT *Roadway Design Manual*

FM 1774/Circle Lake Drive

For the intersection of FM 1774 and Circle Lake Drive, the minimum required (based on stopping sight distance) and desirable (based on intersection sight distance) sight distances were estimated using the aforementioned tables. The design vehicles used were a combination truck and passenger car.

In order to evaluate the adequacy of existing sight distances looking left and right from Circle Lake Drive along FM 1774, the available intersection sight distances were estimated by observing earth imagery.

The summary of the sight distance evaluation is presented in **TABLE 14.**

TABLE 14: ANALYSIS OF INTERSECTION SIGHT DISTANCE

Circle Lake Drive at FM 1774		
Major Roadway	FM 1774	
Posted Speed Limit	45 MPH	
Minor Roadway	Circle Lake Drive	
Design Vehicle	Passenger Car	Combination Truck WB67
Observation Height	3.5'	7.6'
Target Height	3.5'	3.5'
Stopping Sight Distance (MINIMUM)	360'	360'
Intersection Sight Distance (DESIRABLE)	429'	693'
Estimated Sight Distance to Left	1,060'	1,060'
Estimated Sight Distance to the Right	1,050'	1,050'
Sight Distance Available to Left (MINIMUM)	YES	YES
Sight Distance Available to Right (MINIMUM)	YES	YES
Sight Distance Available to Left (DESIRABLE)	YES	YES
Sight Distance Available to Right (DESIRABLE)	YES	YES

Based on the imagery observations, adequate stopping sight distance is available at the intersection of Circle Lake Drive at FM 1774 for both directions. Desirable sight distance is available within the rights-of-way of FM 1774.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this study for the Circle Lake Transfer Station, the conclusions and recommendations are as follows:

- The Circle Lake Transfer Station is estimated to generate approximately 330 trips on a daily basis during 2022 (Facility Opening Year), 1,488 per day during 2027 (5 Years After Opening), and 1,892 per day during 2047 (Expected Life of Facility).

- Intersection capacity analysis results for Circle Lake Drive/FM 1774 an existing unsignalized intersections are predicted to operate at unacceptable levels of service under 2022 to 2047 total traffic conditions. It will be necessary to signalize this intersection and construct geometric improvements on Circle Lake Drive at FM 1774 to improve capacity and safety. A schematic of the proposed improvements to Circle Lake Drive at FM 1774 are illustrated on **FIGURE 13**.

- Intersection capacity analysis results for the existing signalized intersections within 1 mile of Circle Lake Transfer Station are predicted to operate at acceptable levels of service under 2022 to 2047 total traffic conditions. The intersections of FM 1774/FM 149, FM 149/Aggie Expressway (FM 249) Service Roads, and West Rollingwood Drive/Aggie Expressway (FM 249) Service Roads will not need improvements to accommodate the traffic of Circle Lake Transfer Station.

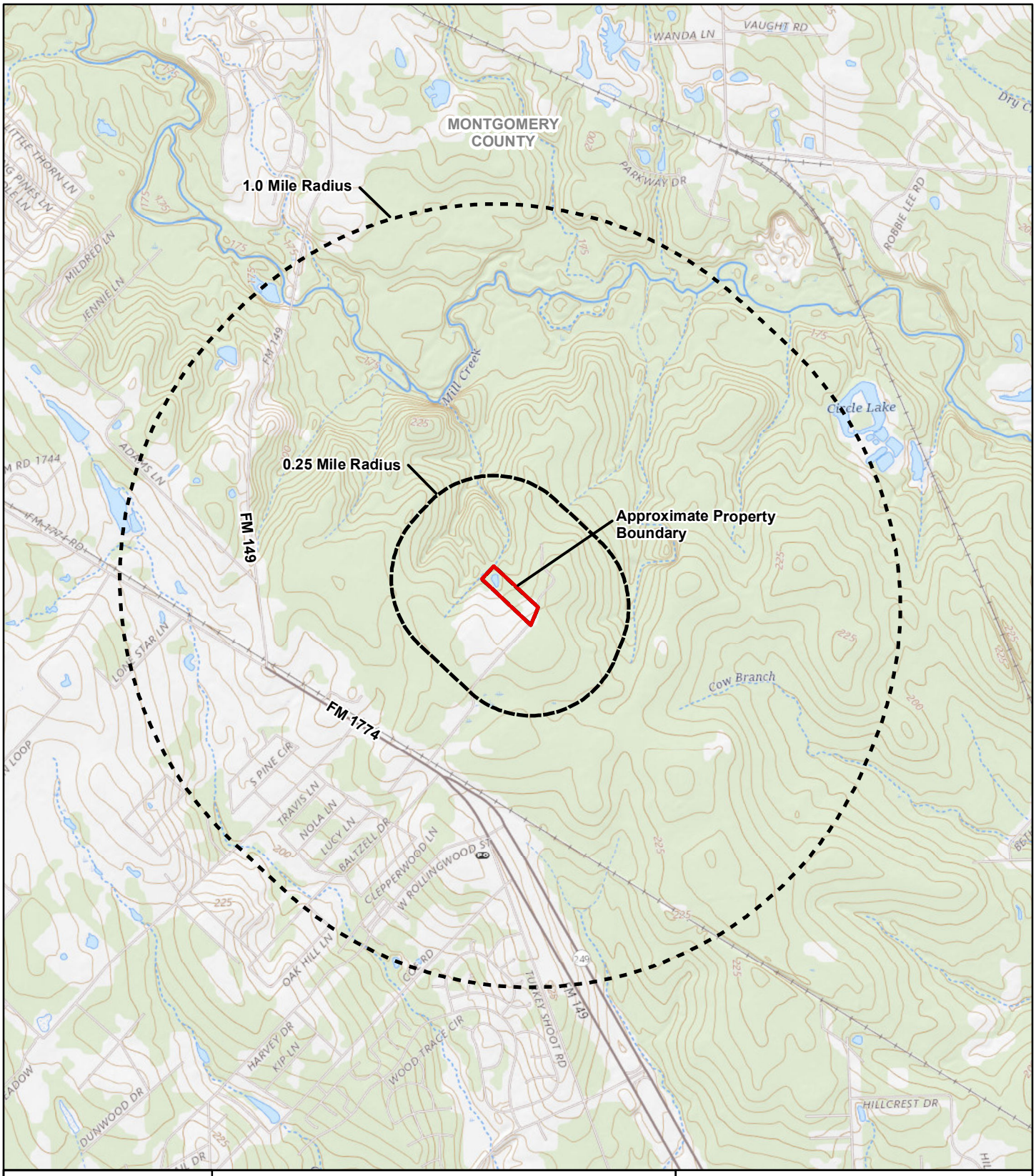
- Circle Lake Drive, FM 1774, FM 149, West Rollingwood Drive and Aggie Expressway (FM 249) have adequate capacity available to serve the traffic generated by Circle Lake Transfer Station. Circle Lake Transfer Station traffic is predicted to have minimal impact to the roadways within 1 mile of the facility.

- Auxiliary lanes, deceleration and acceleration lanes, are not recommended for the existing intersections within 1 mile of Circle Lake Transfer Station.

- There is no need to improve sight distance at the intersection Circle Lake Drive/FM 1774.

- No other roadway improvements are necessary to accommodate traffic generated by Circle Lake Transfer Station. The existing roadway infrastructure has adequate capacity to accommodate the site generated traffic.

FIGURES



PROJECT LOCATION
-95.671930 , 30.173757

LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius

Source: National Geographic Service US Topo

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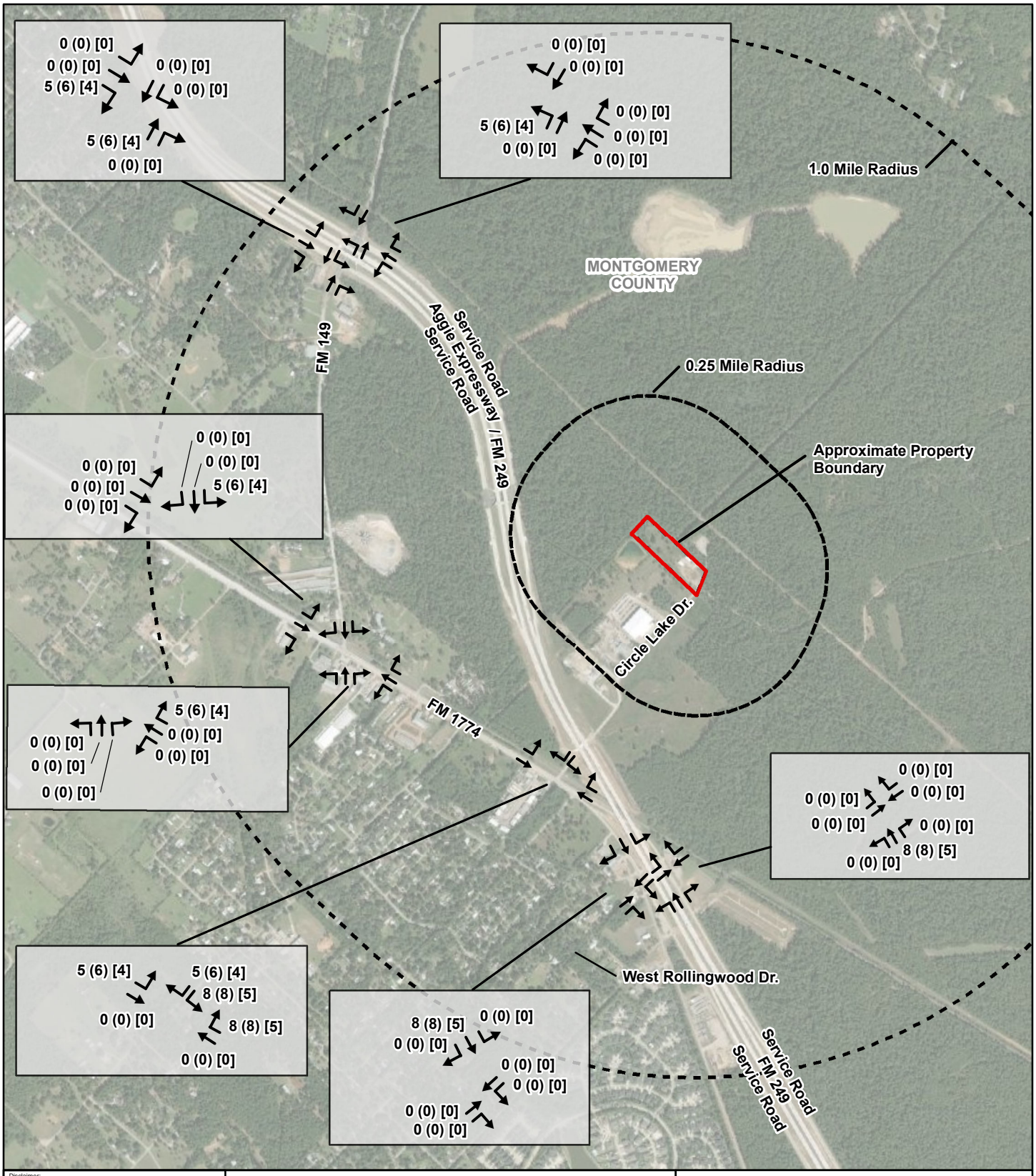
SITE LOCATION MAP — FIGURE 1



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- Approximate 1.0 Mile Buffer Radius

VOLUME LEGEND (VEHICLES PER HOUR)

17 (24) [27] = AM Peak (PM Peak) [Site Peak]

Source: World Imagery

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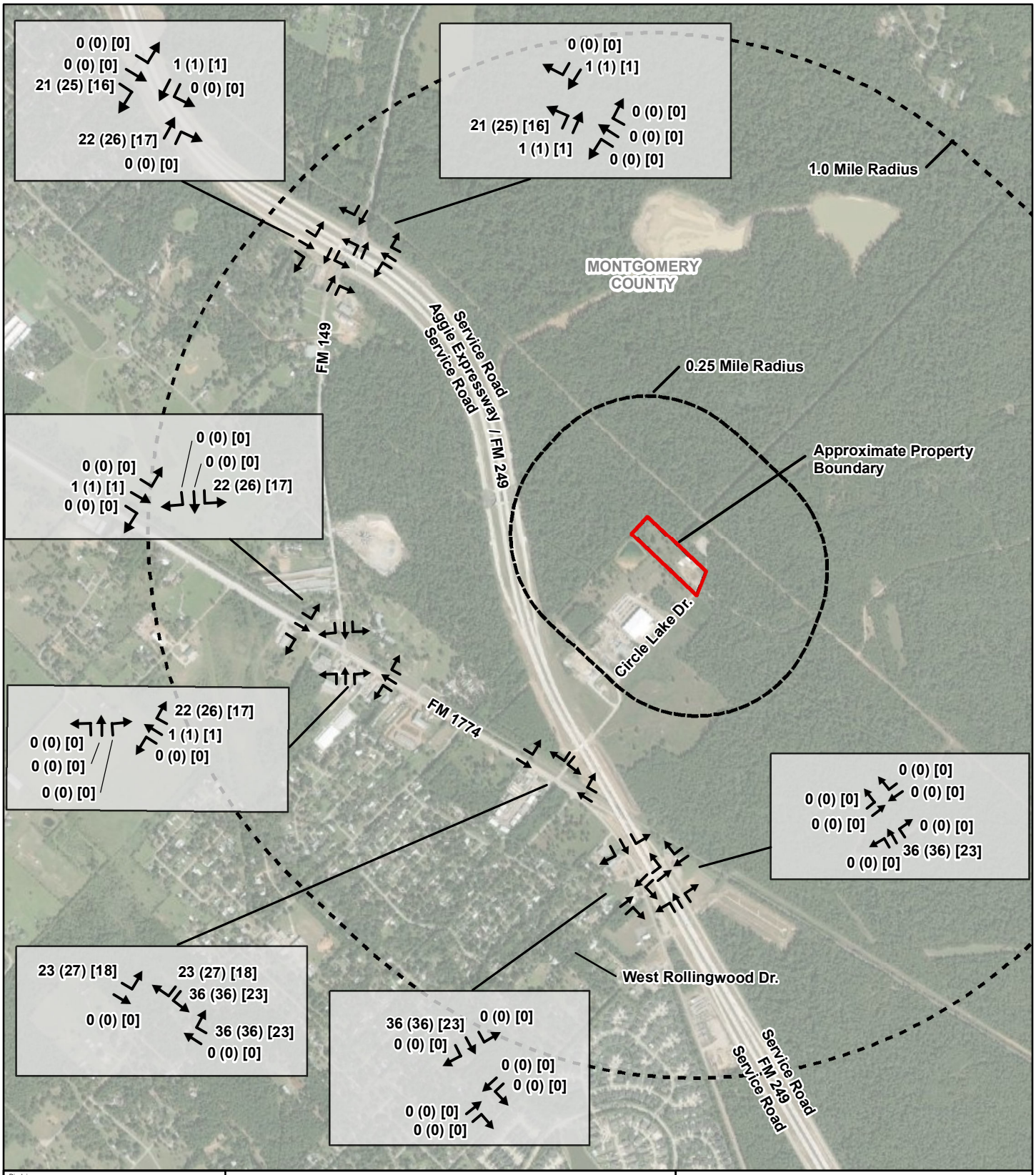
SITE GENERATED TRAFFIC VOLUMES (2022 OPENING YEAR) - PASSENGER CAR EQUIVALENTS

FIGURE 2



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VOLUME LEGEND (VEHICLES PER HOUR)

17 (24) [27] = AM Peak (PM Peak) [Site Peak]

Source: World Imagery

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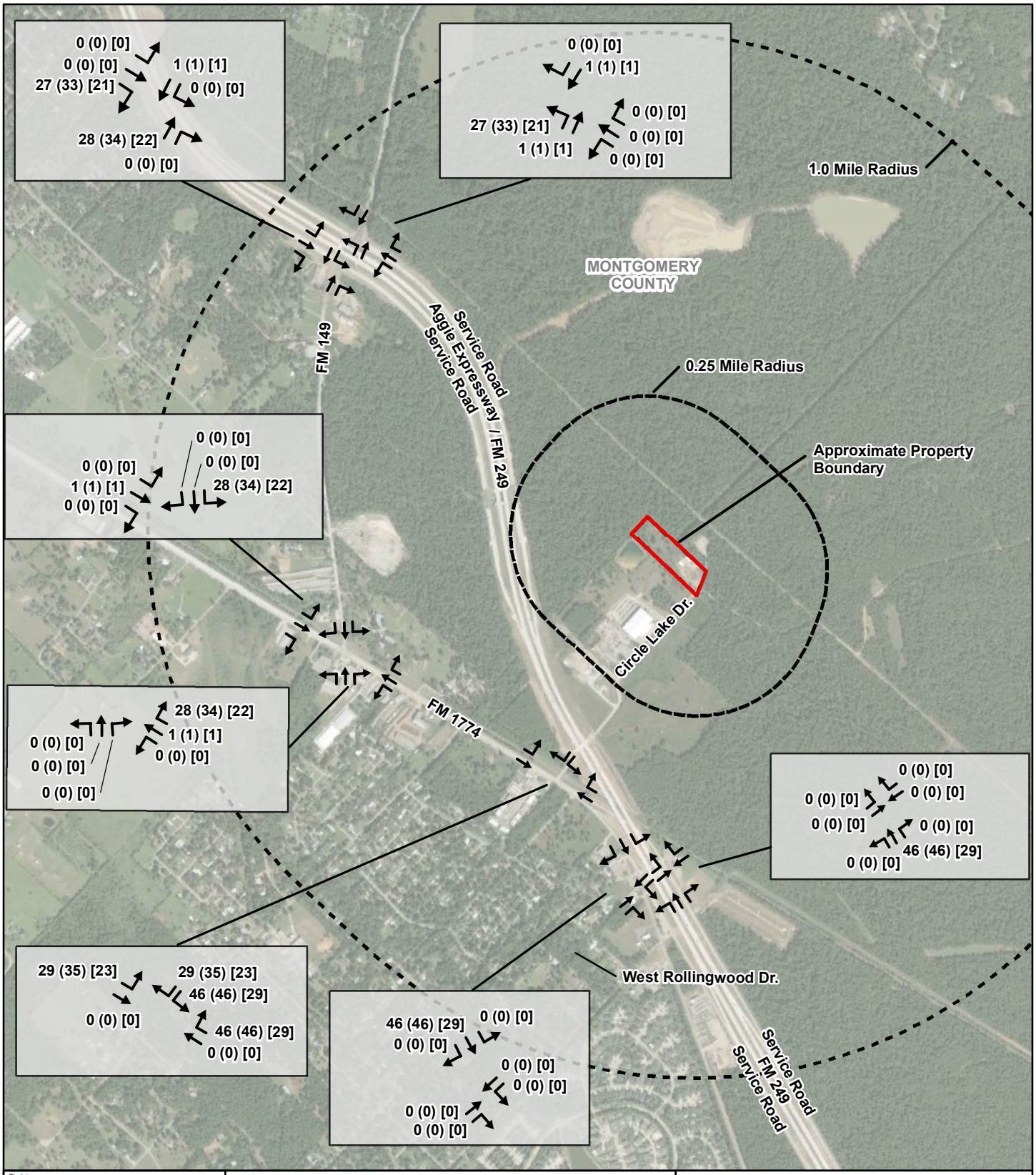
SITE GENERATED TRAFFIC VOLUMES (2027 5 YEARS OPEN) - PASSENGER CAR EQUIVALENTS

FIGURE 3



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LEGEND

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- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius

VOLUME LEGEND (VEHICLES PER HOUR)

17 (24) [27] = AM Peak (PM Peak) [Site Peak]

Source: World Imagery

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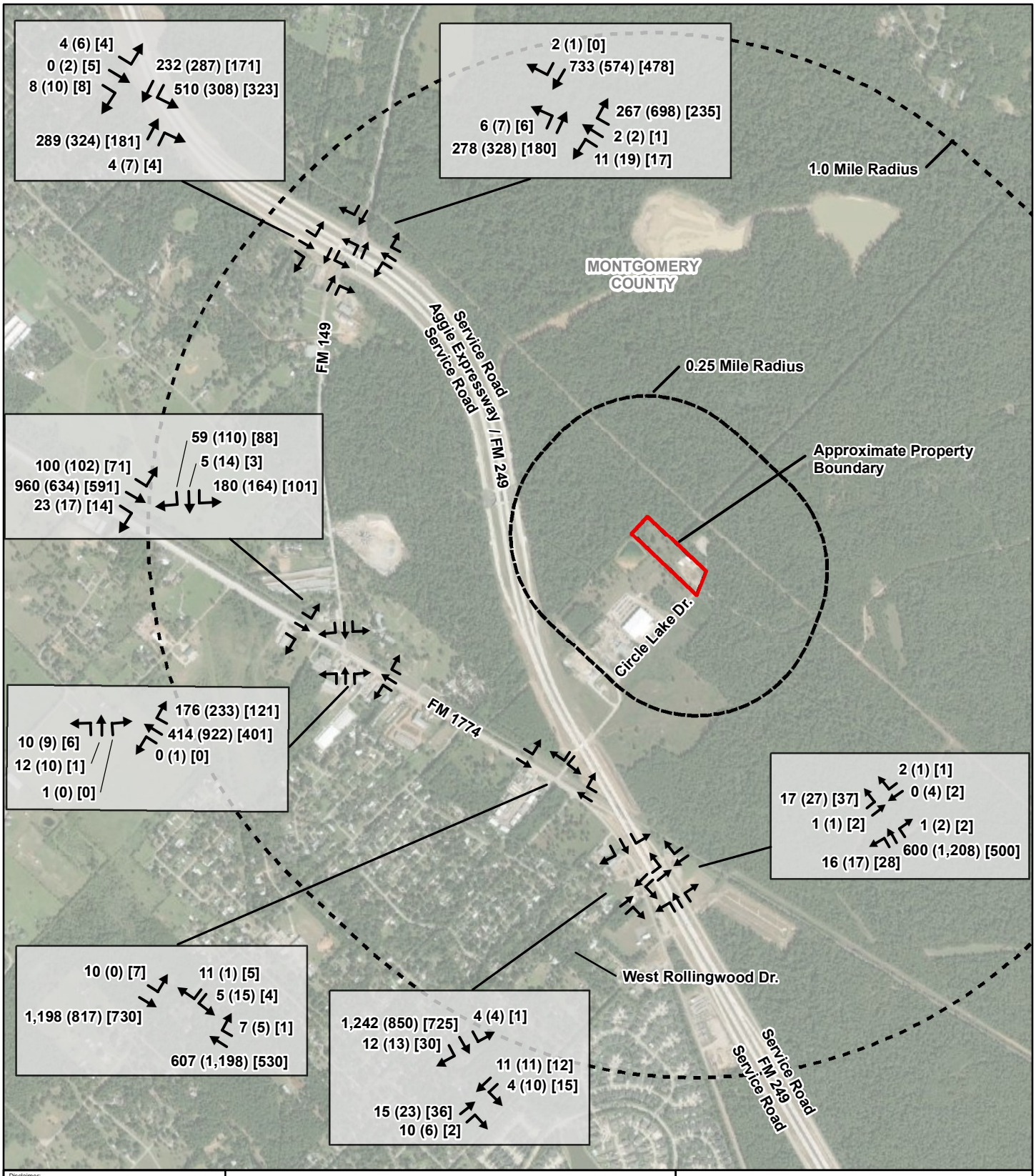
SITE GENERATED TRAFFIC VOLUMES
(2047 25 YEARS LIFE EXPECTANCY) -
PASSENGER CAR EQUIVALENTS

FIGURE 4



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LEGEND

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- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius

VOLUME LEGEND (VEHICLES PER HOUR)

17 (24) [27] = AM Peak (PM Peak) [Site Peak]

Source: World Imagery

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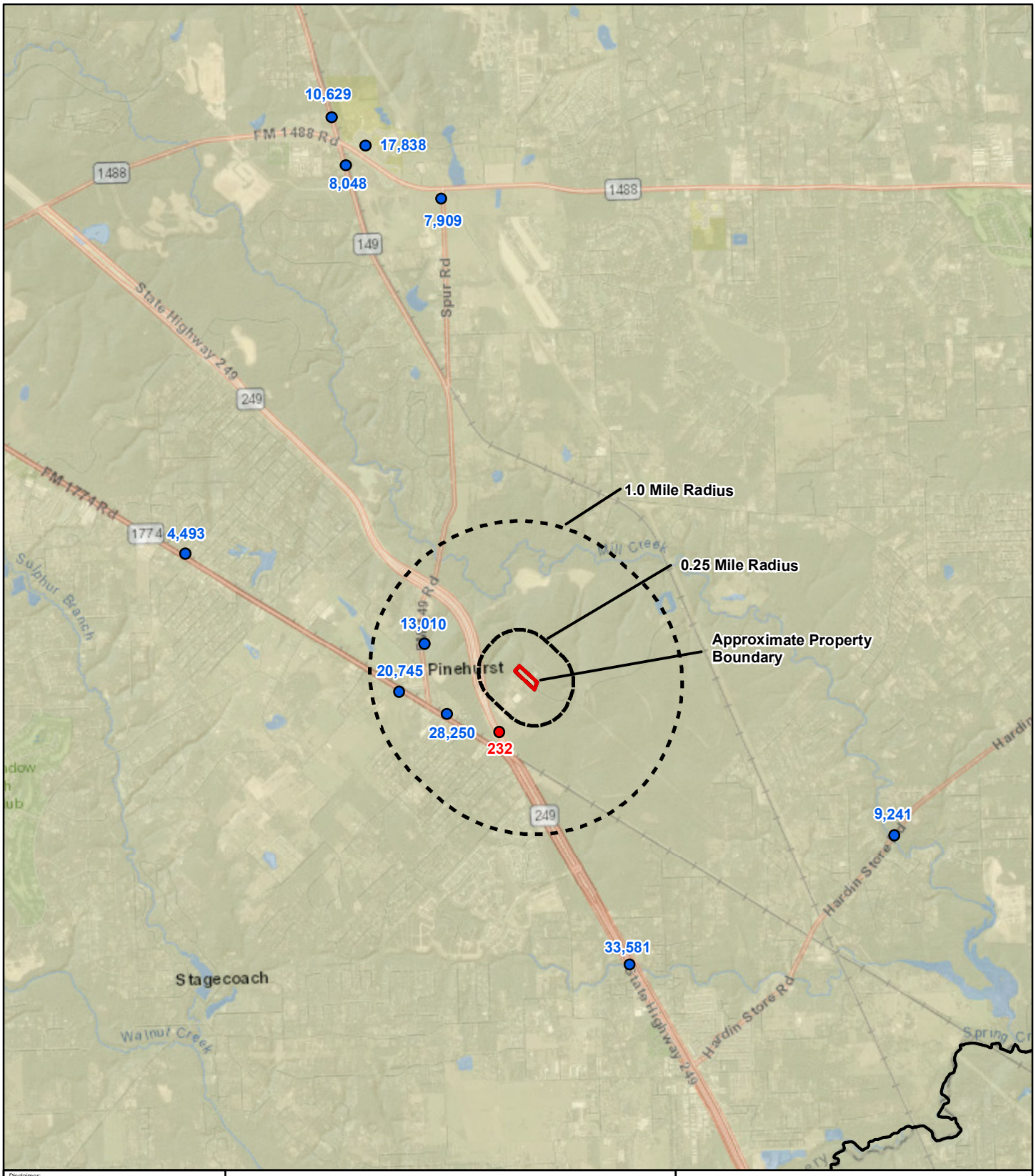
EXISTING TURNING MOVEMENT COUNTS (JUNE 15, 2021)		FIGURE 5



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LEGEND

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- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius
- 7,909 — Texas Department of Transportation (TXDOT) 2019 Annual ACR
- 232 — Texas Department of Transportation (TXDOT) 2016 Annual ACR

Source: World Imagery and World Street Map Basemap

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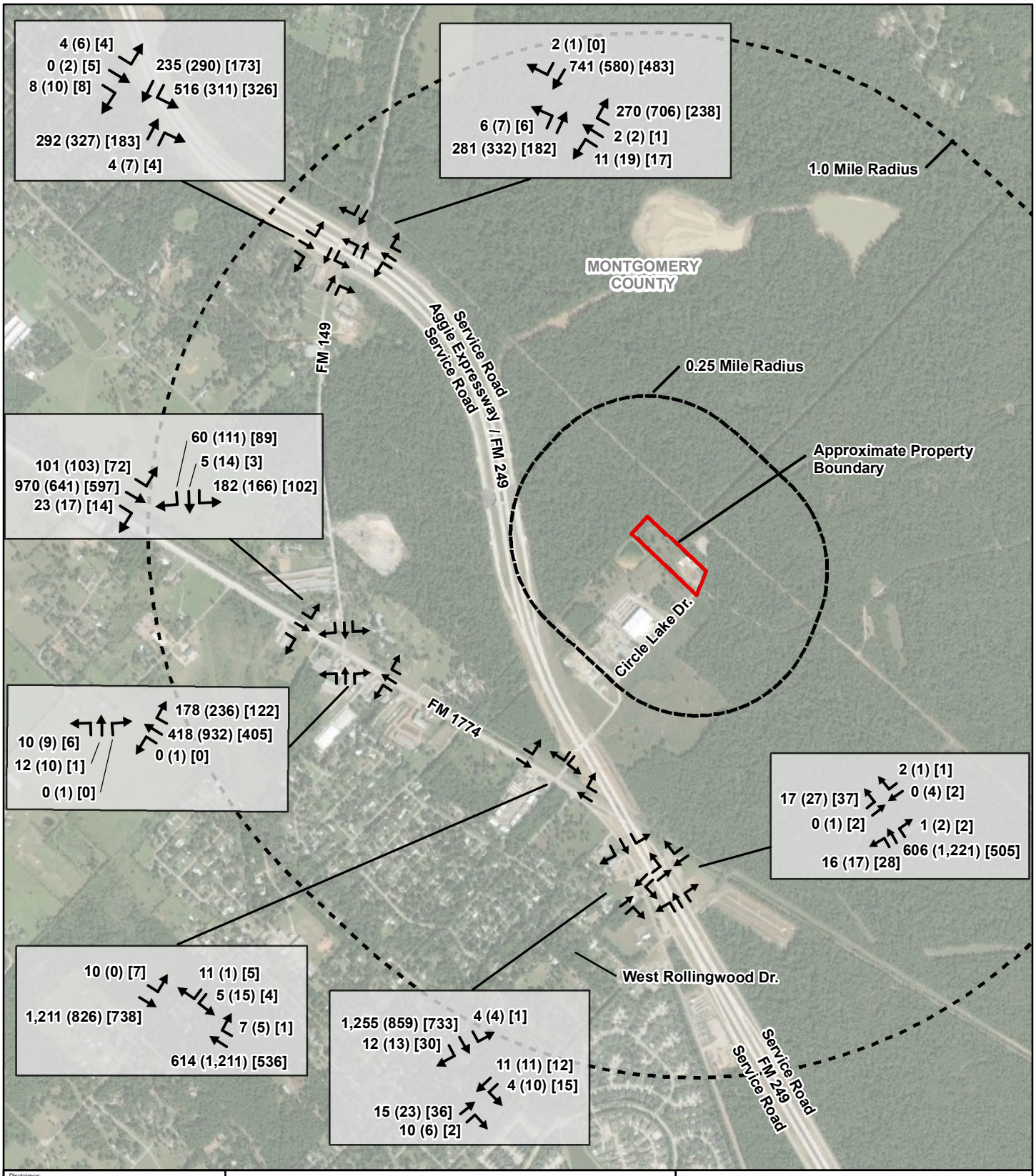
TXDOT 2019/2016 HISTORICAL ANNUAL AVERAGE DAILY TRAFFIC

FIGURE 6



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VOLUME LEGEND (VEHICLES PER HOUR)

17 (24) [27] = AM Peak (PM Peak) [Site Peak]

Source: World Imagery

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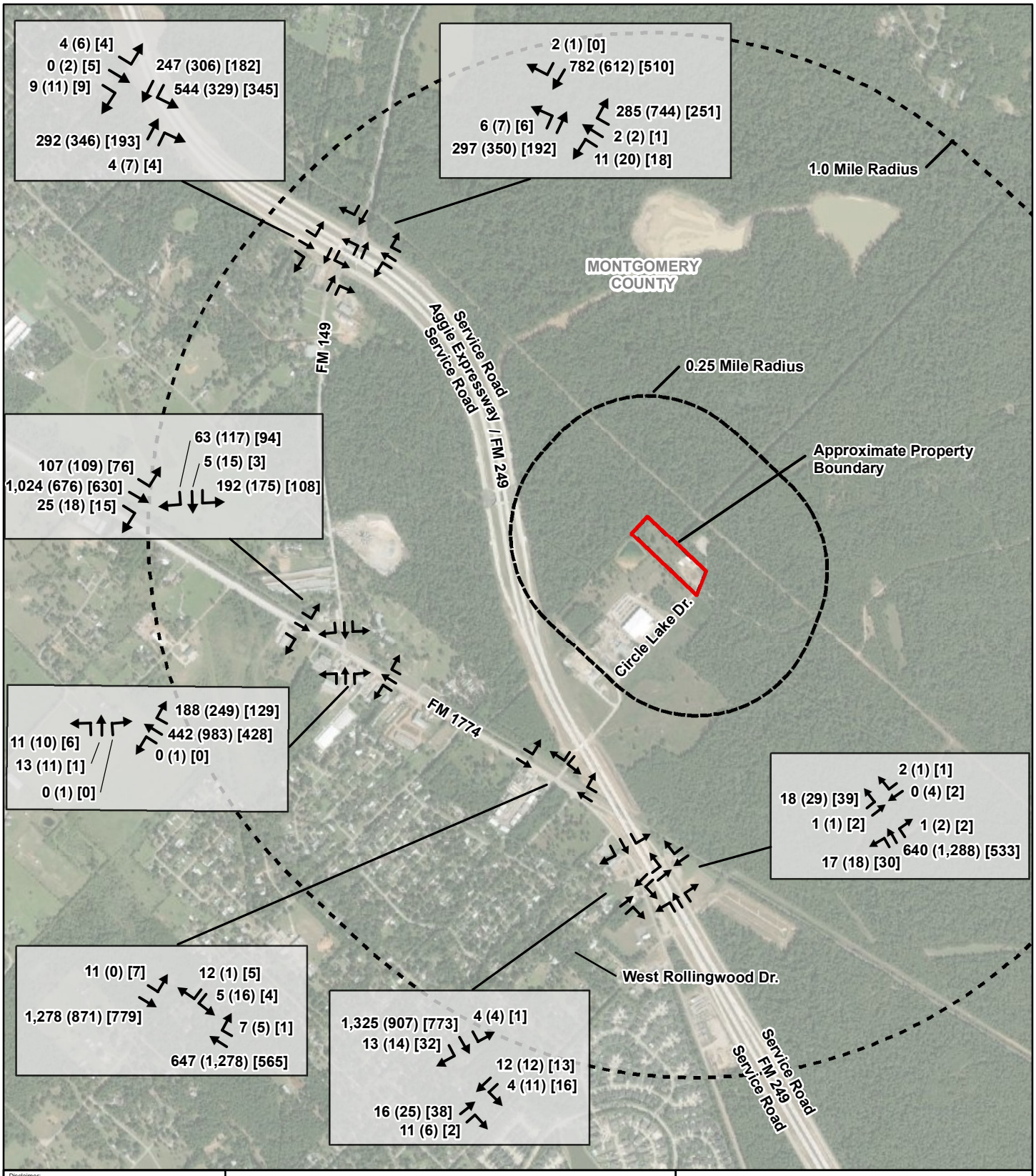
2022 OPENING YEAR BACKGROUND TRAFFIC VOLUMES - PASSENGER CAR EQUIVALENTS

FIGURE 7



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VOLUME LEGEND (VEHICLES PER HOUR)

17 (24) [27] = AM Peak (PM Peak) [Site Peak]

Source: World Imagery

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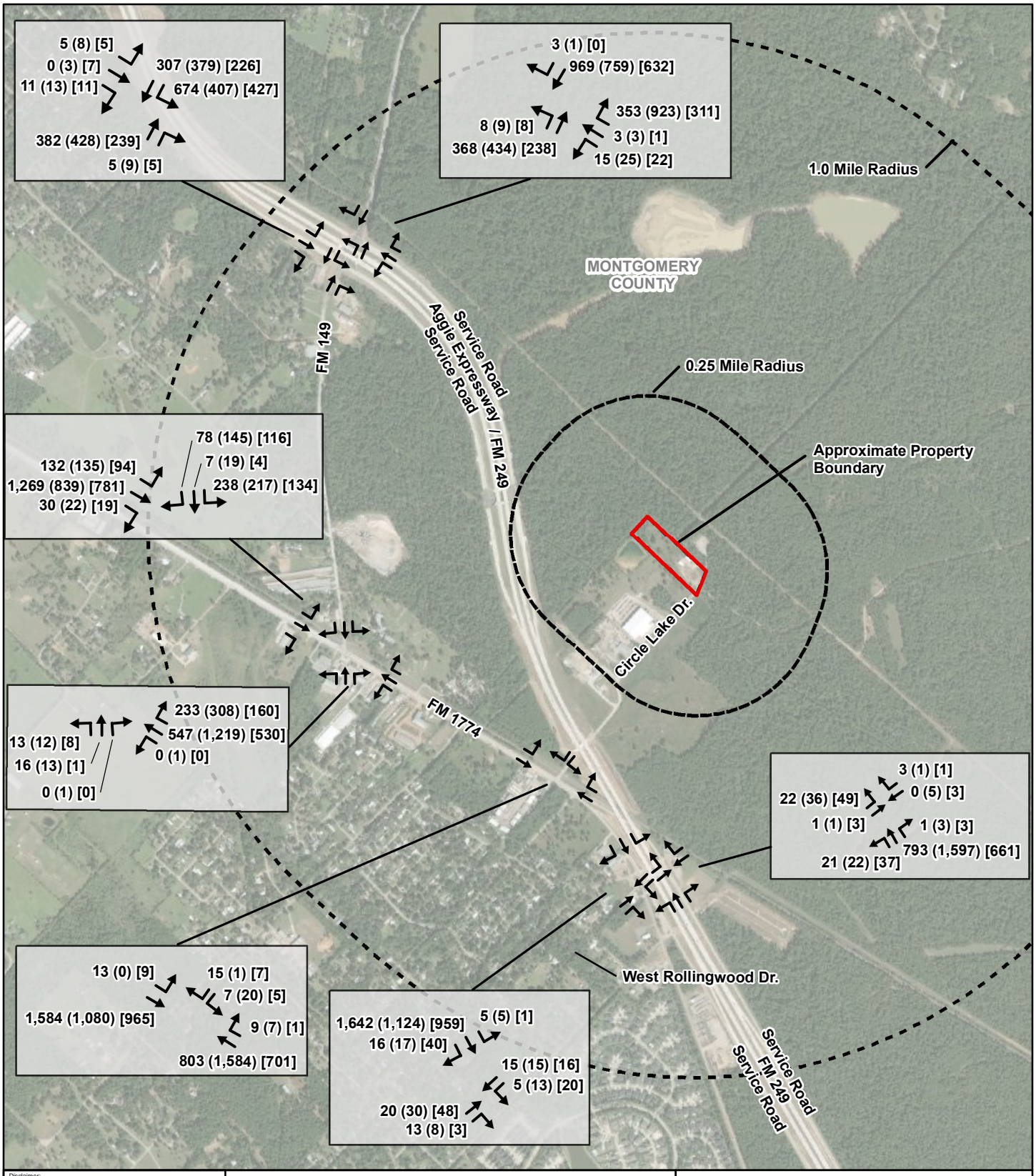
2027 (5 YEARS OPEN) BACKGROUND TRAFFIC VOLUMES

FIGURE 8



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VOLUME LEGEND (VEHICLES PER HOUR)

17 (24) [27] = AM Peak (PM Peak) [Site Peak]

Source: World Imagery

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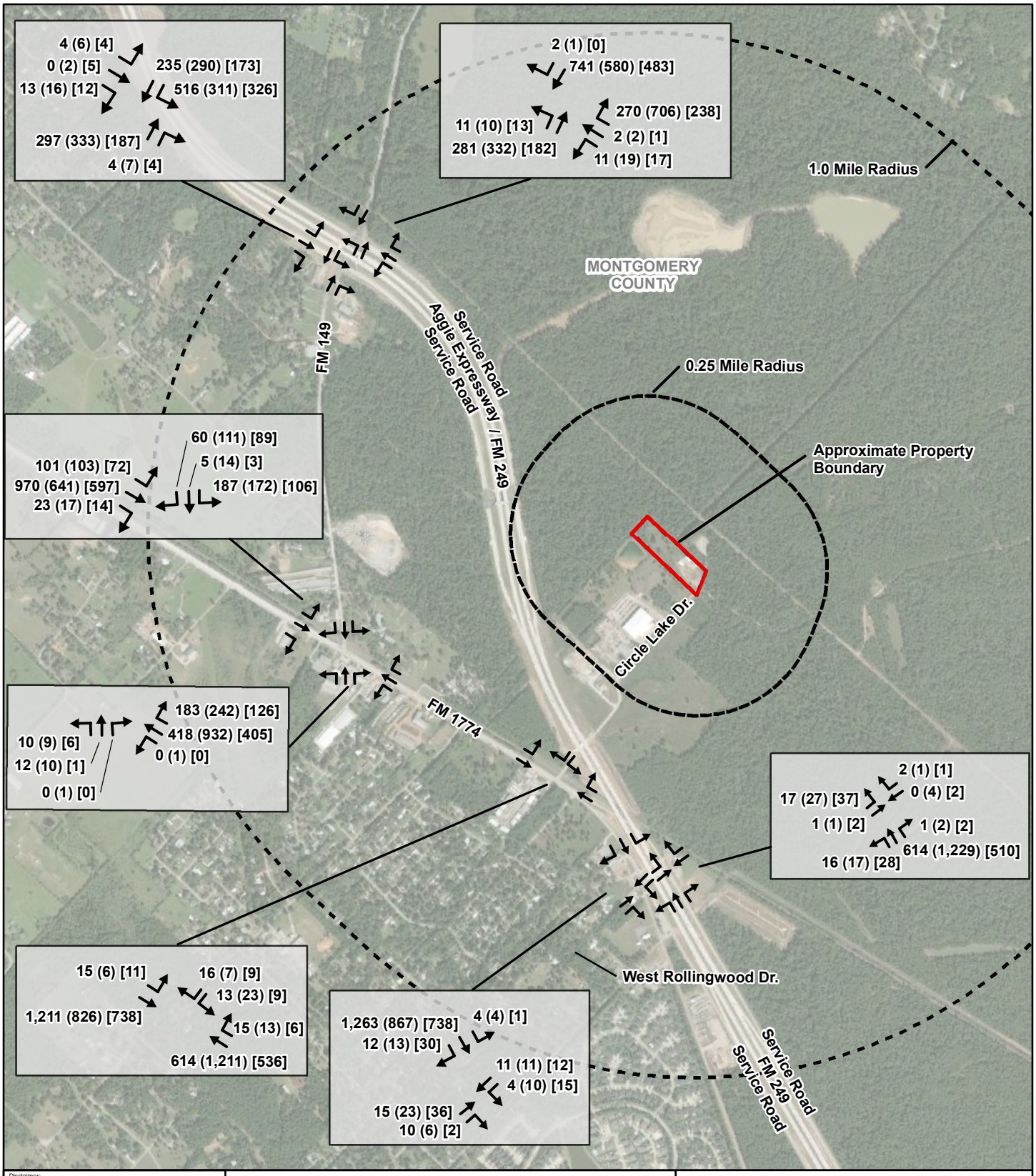
2047 (25 YEARS LIFE EXPECTANCY)
BACKGROUND TRAFFIC VOLUMES

FIGURE 9



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Source: World Imagery

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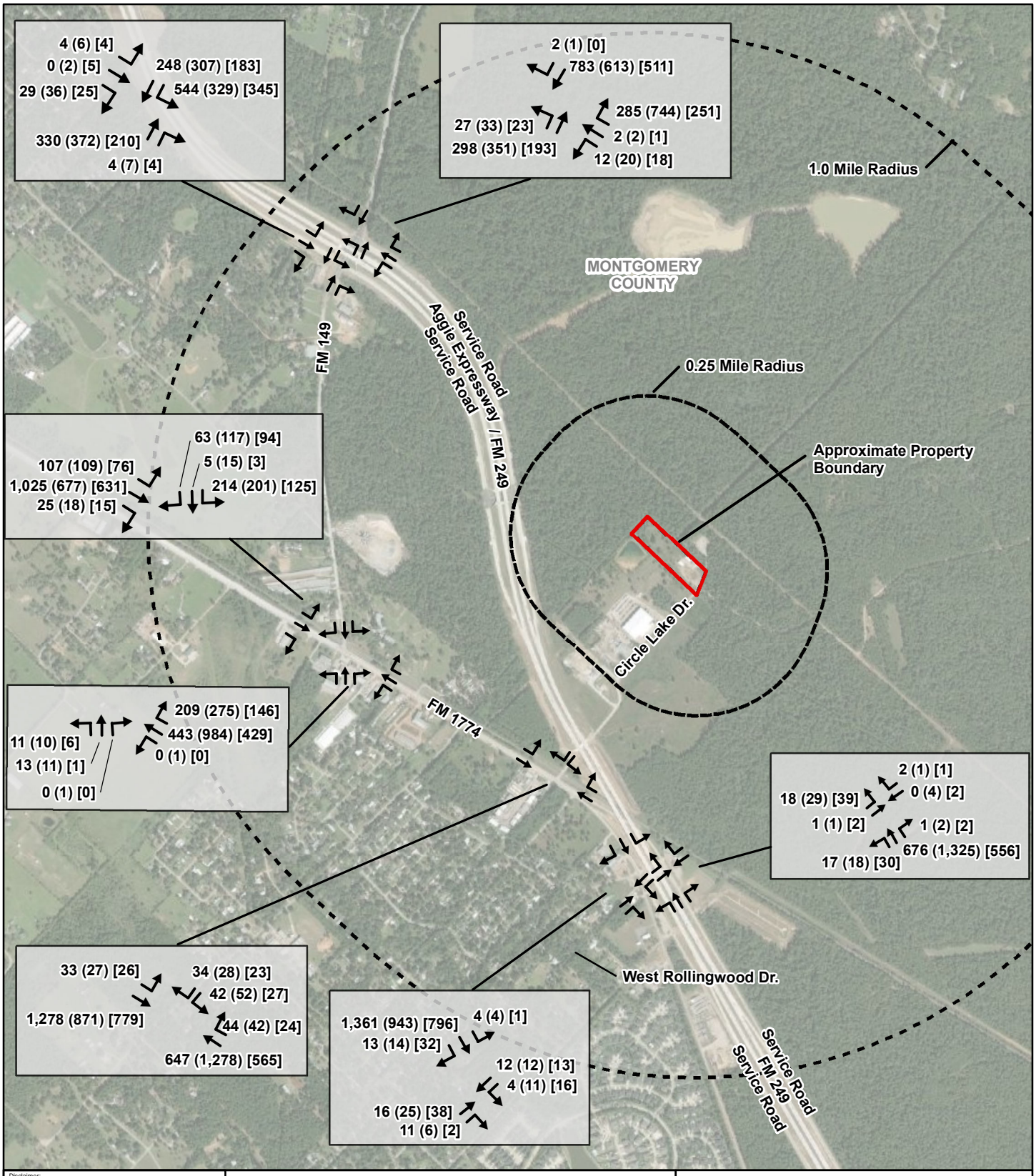
2022 OPENING YEAR TOTAL TRAFFIC VOLUMES - PASSENGER CAR EQUIVALENTS

FIGURE 10



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VOLUME LEGEND (VEHICLES PER HOUR)

17 (24) [27] = AM Peak (PM Peak) [Site Peak]

Source: World Imagery

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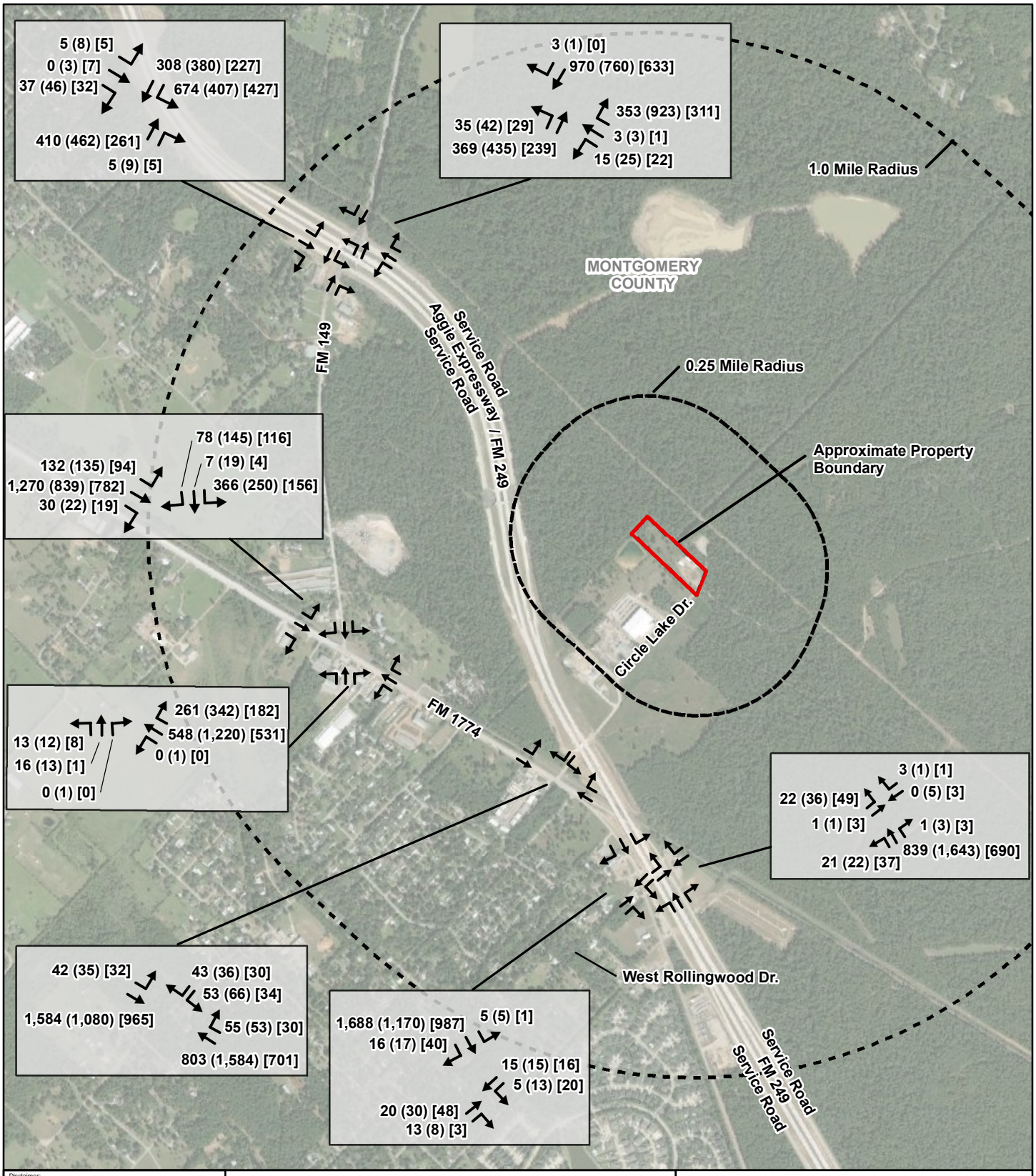
	CHKD BY: JB	DATE: 07-15-2021
PROJECT NO. 21052	FILE 21052 071521 FIG11 R00 D 27 5YOTT	

2027 (5 YEARS OPEN) TOTAL TRAFFIC VOLUMES

FIGURE 11



Disclaimer:
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LEGEND

- Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-
- Approximate 0.25 Mile Buffer Radius
- Approximate 1.0 Mile Buffer Radius

VOLUME LEGEND (VEHICLES PER HOUR)

17 (24) [27] = AM Peak (PM Peak) [Site Peak]

Source: World Imagery

N

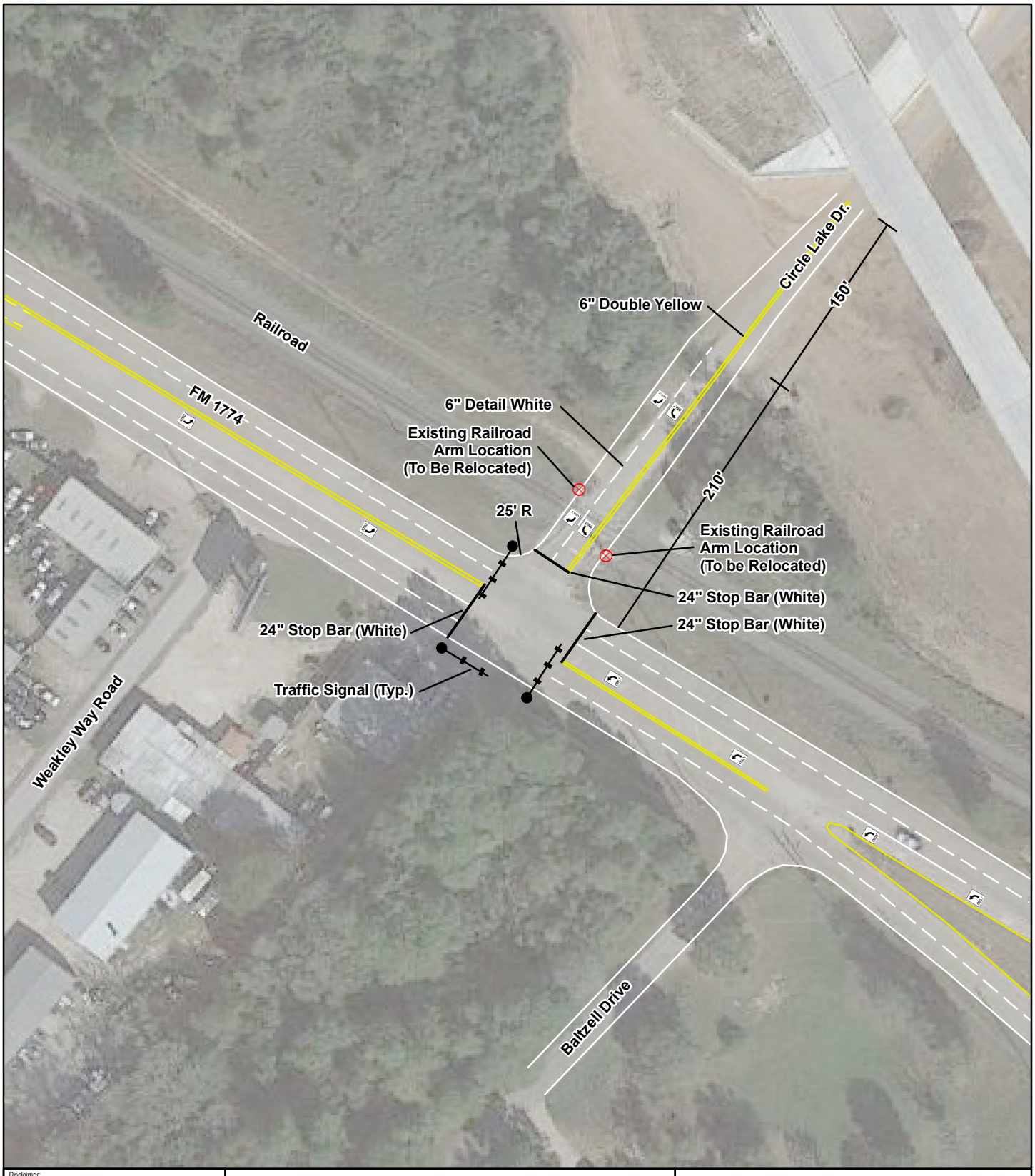
TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=1,500'	DRAWN BY: PML	DATE: 07-15-2021
	CHKD BY: JB	DATE: 07-15-2021
PROJECT NO. 21052	FILE 21052 071521 FIG12 R00 D 47 25YLETT	

2047 (25 YEARS LIFE EXPECTANCY)
TOTAL TRAFFIC VOLUMES

FIGURE 12



LEGEND

Approximate Transfer Facility Property Boundary - 5.54 Ac. +/-

Source: Google Earth 11/16/2020

N

TRANSFER FACILITY
PINEHURST, TEXAS

ALLEN ENGINEERING AND SCIENCE

SCALE: 1"=100'	DRAWN BY: PML	DATE: 07-15-2021
	CHKD BY: JB	DATE: 07-15-2021
PROJECT NO. 21052	FILE 21052 071521 FIG13 R00 D CLD/FM1774	

CIRCLE LAKE DRIVE/FM 1774
GEOMETRIC IMPROVEMENTS

FIGURE 13

APPENDICES

APPENDIX A
ESTIMATED SITE TRAFFIC PROVIDED BY CIRCLE LAKE TRANSFER, LLC

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Appendix A

Circle Lake Transfer Station

Estimated Site Traffic

Assumptions:		
Incoming / Outgoing Waste Volume Year 1 :	500	TPD
Tons per Incoming Route Truck :	7	TPD
Tons per Outgoing Transfer Truck :	20	TPD
Passengers Cars and Small Trucks per day (employees, vendors, supplies, vistors,	20	TPD

Year	Route Trucks			Transfer Trucks			Passengers Cars and Small Trucks			Totals		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
1	71	71	143	25	25	50	20	20	40	116	116	233
2	143	143	286	50	50	100	20	20	40	213	213	426
3	214	214	429	75	75	150	20	20	40	309	309	619
4	257	257	514	90	90	180	20	20	40	367	367	734
5	357	357	714	125	125	250	20	20	40	502	502	1,004
6	368	368	736	129	129	258	20	20	40	517	517	1,033
7	379	379	758	133	133	265	20	20	40	532	532	1,063
8	390	390	781	137	137	273	20	20	40	547	547	1,094
9	402	402	804	141	141	281	20	20	40	563	563	1,125
10	414	414	828	145	145	290	20	20	40	579	579	1,158
11	426	426	853	149	149	299	20	20	40	596	596	1,191
12	439	439	878	154	154	307	20	20	40	613	613	1,226
13	452	452	905	158	158	317	20	20	40	631	631	1,262
14	457	457	914	160	160	320	20	20	40	637	637	1,274
15	457	457	914	160	160	320	20	20	40	637	637	1,274
16	457	457	914	160	160	320	20	20	40	637	637	1,274
17	457	457	914	160	160	320	20	20	40	637	637	1,274
18	457	457	914	160	160	320	20	20	40	637	637	1,274
19	457	457	914	160	160	320	20	20	40	637	637	1,274
20	457	457	914	160	160	320	20	20	40	637	637	1,274
21	457	457	914	160	160	320	20	20	40	637	637	1,274
22	457	457	914	160	160	320	20	20	40	637	637	1,274
23	457	457	914	160	160	320	20	20	40	637	637	1,274
24	457	457	914	160	160	320	20	20	40	637	637	1,274
25	457	457	914	160	160	320	20	20	40	637	637	1,274

APPENDIX B
ESTIMATED HOURLY SITE TRAFFIC PROVIDED BY CIRCLE LAKE TRANSFER, LLC

ALLEN ENGINEERING AND SCIENCE

Appendix B

Circle Lake Transfer Station

Estimated Hourly Site Traffic - Year 1

Assumptions:		
Total Incoming / Outgoing Volume	500	TPD
Traffic Volume of Route Trucks	143	trips / day
Traffic Volume of Transfer Trucks	50	trips / day
Passengers Cars and Small Trucks per day (employees, vendors, supplies, vistors, etc.)	40	trips / day

Total Incoming/Outgoing Vehicles	5 - 6 AM	6 - 7 AM	7 - 8 AM	8 - 9 AM	9 - 10 AM	10 - 11 AM	11 - 12 PM	12 - 1 PM	1 - 2 PM	2 - 3 PM	3 - 4 PM	4 - 5 PM	5 - 6 PM	6 - 7 PM	Totals
Route Trucks	0	0	0	0	29	57	29	7	14	7	0	0	0	0	**143**
Transfer Trucks	0	0	0	0	0	10	10	10	13	3	3	3	0	0	**50**
Passenger Cars & Small Trucks	10	0	1	2	3	0	4	4	0	3	2	1	0	10	**40**
Hourly Totals	**10**	**0**	**1**	**2**	**32**	**67**	**43**	**21**	**27**	**13**	**5**	**4**	**0**	**10**	**233**
% Hourly	**4.3%**	**0.0%**	**0.4%**	**0.9%**	**13.6%**	**28.8%**	**18.3%**	**9.1%**	**11.5%**	**5.4%**	**1.9%**	**1.5%**	**0.0%**	**4.3%**	**100.0%**

Estimated Directional Distribution (% of incoming vehicles)	
From Southbound Aggie Expressway	75%
From Northbound Aggie Expressway	20%
From Southbound Local via FM 149/FM 1774	3%
From Northbound Local via FM 149/FM 1775	2%

Estimated Directional Distribution (% of outgoing vehicles)	
To Southbound Aggie Expressway	0%
To Northbound Aggie Expressway	100%
To Southbound Local	0%
To Northbound Local	0%

APPENDIX H
WETLANDS AND T&E SPECIES DOCUMENTATION

ALLEN
ENGINEERING
AND SCIENCE

902 20th Avenue
Meridian, Mississippi 39301
www.AllenES.com

Phone 601.696.7146
Fax 601.696.7149

July 21, 2021

U.S. Army Corps of Engineers
Regulatory Branch - Galveston District
P.O. Box 1229
Galveston, TX 77553

Re: Waters of the U. S. Delineation
Circle Lake Transfer, LLC – Title V Municipal Solid Waste Transfer Facility
Pinehurst, Montgomery County, Texas

Dear Regulatory Branch:

Allen Engineering and Science, Inc. (AllenES) completed a jurisdictional waters of the U.S. delineation for Circle Lake Transfer, LLC (Circle Lake). The proposed project is located off Circle Lake Drive, approximately ½ mile from TX-249. The review area is approximately 5.51 acres and is specifically located at latitude 30.173938, and longitude -95.672008. A site location map of the area is provided as **Figure 1**. The proposed project activities include potential development for a Type V Municipal Solid Waste (MSW) transfer facility. The project work will consist of clearing, excavation, earthwork, and construction. The purpose of this transfer facility is to provide efficient means to transfer MSW to local regional landfills.

Currently, the site is being utilized as a solid waste collection depot including solid waste collection truck/equipment parking, maintenance, and storage of equipment and dumpsters (no waste is stored on-site). The existing facility infrastructure includes a perimeter fence, front gate, site office, maintenance shop, all-weather access roads, and all general overhead and underground utilities.

SCOPE

A delineation of potentially jurisdictional water features was conducted in accordance with the 1987 US Army Corps of Engineers Wetland Delineation Manual, the 2010 Atlantic and Gulf Coastal Plain (Version 2.0) regional supplement, and the 2005 Regulatory Guidance Letter N. 05-05. AllenES reviewed the U. S. Geological Survey (USGS) topographic map (**Figure 1**), National Wetland Inventory (NWI) Map (**Figure 2**), aerial photography (**Figure 3**), and Natural Resource Conservation Service (NRCS) Web Soil Survey (**Figure 4**). Representative photographs of the area are included as **Appendix A.** Wetland delineation data forms are included in **Appendix B**.

GENERAL SITE OBSERVATIONS

The topography of the review area is generally flat with a gentle slope northwest. Elevations on the site range from approximately 218 to 240 feet above mean sea level. A gas pipeline (Southcross Energy) intersects the central portion of the site. On the northwest side of the property is an approximate 0.36-acre manmade stormwater pond. The pond was identified on the National Wetlands Inventory (NWI) map as a Freshwater Pond (PUBHh). A drainage easement was observed on the northwest boundary and extended through the subject site. A larger sediment pond (approximately 1.80 acres) was observed to the south of the review area on the neighboring property associated with Specialty Steel Supply. The neighboring sediment pond discharges onto the subject site via a culvert as part of the drainage easement. The drainage easement channel was lined with riprap/concrete blocks with no visible discharge from the culvert at the time of the site visit. The drainage channel appeared to be approximately 2 to 3 feet wide with only standing water observed immediately at the culvert. The drainage lacked an ordinary high-water mark (OHW) throughout the reach. Photos of the culvert/channel and other site features are included in Appendix A.

Portions of the berm of the neighboring property pond shares the southwestern property boundary with the subject site. Water was observed seeping from the adjacent property pond through the berm and onto the subject property, ultimately draining to the drainage easement as a result of site topography. The duration of the seep was unclear but soil conditions along the property boundary did not indicate obvious long-term changes (i.e., anaerobic conditions were not evident).

The NWI map also identified an intermittent riverine system (R4SBC) potentially occurring along the northernmost portion of the subject site. However, field reconnaissance revealed that the drainage system does not intercept the subject site. An existing site conditions map is provided as **Figure 3**.

The vegetation on the majority of the upland portions of the site consists of the following two habitat types: mixed pine hardwood forest and maintained grass field.

The mixed pine hardwood forest habitat generally consists of shortleaf pine (*Pinus echinada*) and sweetgum (*Liquidambar styraciflua*) in the overstory stratum with sweetgum, American beautyberry (*Callicarpa americana*), winged sumac (*Rhus copallinum*), tallowtree (*Triadica sebifera*), southern dewberry (*Rubus trivialis*), and slender woodoats (*Chasmanthium laxum*) in the understory/herbaceous strata.

The maintained field habitat generally consisted of bahiagrass (*Paspalum notatum*) and vasey's grass (*Paspalum urvillei*) with large portions of the area recently plowed and planted with unknown grass seed still visible in the topsoil.

The USACE wetland determination data forms associated with field data collection are provided in **Appendix B**.

According to the *Soil Survey of Montgomery County, Texas,* the site contains only one soil unit, Conroe loamy fine sand, 0 to 5 percent slopes. The soil is moderately well drained and is found

on gentle slopes. A map depicting the NRCS soil locations is included as **Figure 4**. The soil observed on the site generally correlate with the mapped soil.

Photographs from the site visit are included as **Appendix A.** Wetland Determination Data Forms are included as **Appendix B.**

CLOSING

The report presents a review of environmental conditions as specified in our scope of work with Circle Lake. AllenES gathered background information, reviewed records, and conducted a site reconnaissance of the project site to determine the presence of potential jurisdictional waters of the U.S. Based on the available literature and our site reconnaissance, the review area contains an approximate 0.36-acre manmade stormwater pond, a result of prior site development, and a drainage easement on the northwest property boundary. A larger sediment pond (approximately 1.80 acres) was observed to the south of the review area on the neighboring property associated with Specialty Steel Supply. The neighboring sediment pond discharges onto the subject site via a culvert as part of the drainage easement.

AllenES did not identify any jurisdictional waters on the subject site. The soils observed onsite and immediately surrounding the freshwater pond were sandy, well drained and lacked indicators of hydrology. AllenES does not believe the observed features are jurisdictional and requests concurrence from your office via an Approved Jurisdictional Determination.

Please forward a copy of your determination to:

Allen Engineering and Science
Attn: Travis Beard
902 20th Avenue
Meridian, Mississippi 39301

If during your review, you or members of your staff have any questions or require any additional information, please do not hesitate to contact me at tbeard@allenes.com or (205) 310-8345. Any efforts on your part to expedite the review would be greatly appreciated.

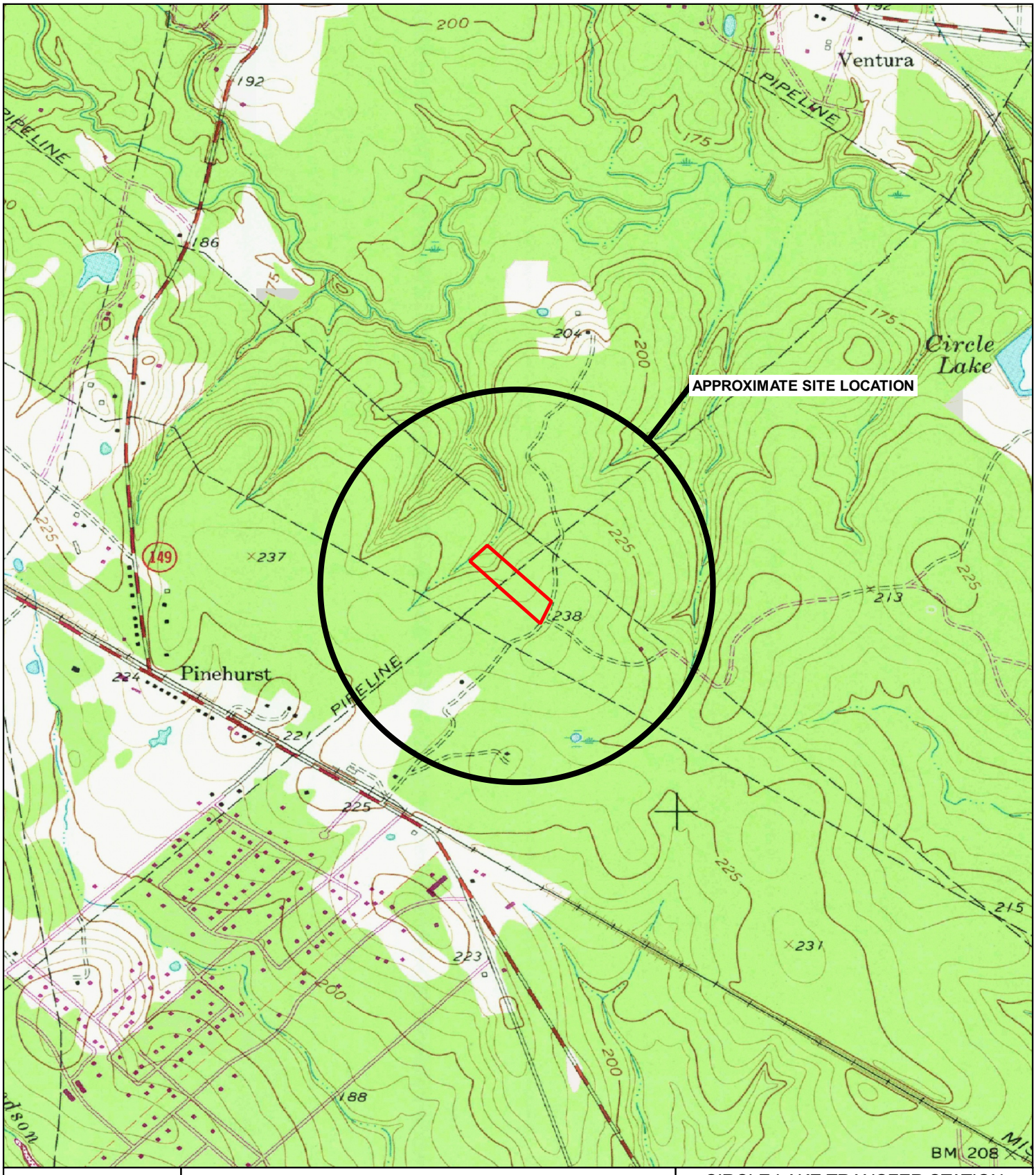
Thank you in advance for your timely attention in this matter.

Sincerely,
Allen Engineering and Science, Inc.

Travis Beard
Environmental Scientist

Attachments

FIGURES



PROJECT LOCATION

30.173938, -95.672008

LEGEND

Approximate Property Boundary (5.51 ac. +/-)

Source: USGS Topo - Magnolia East, TX

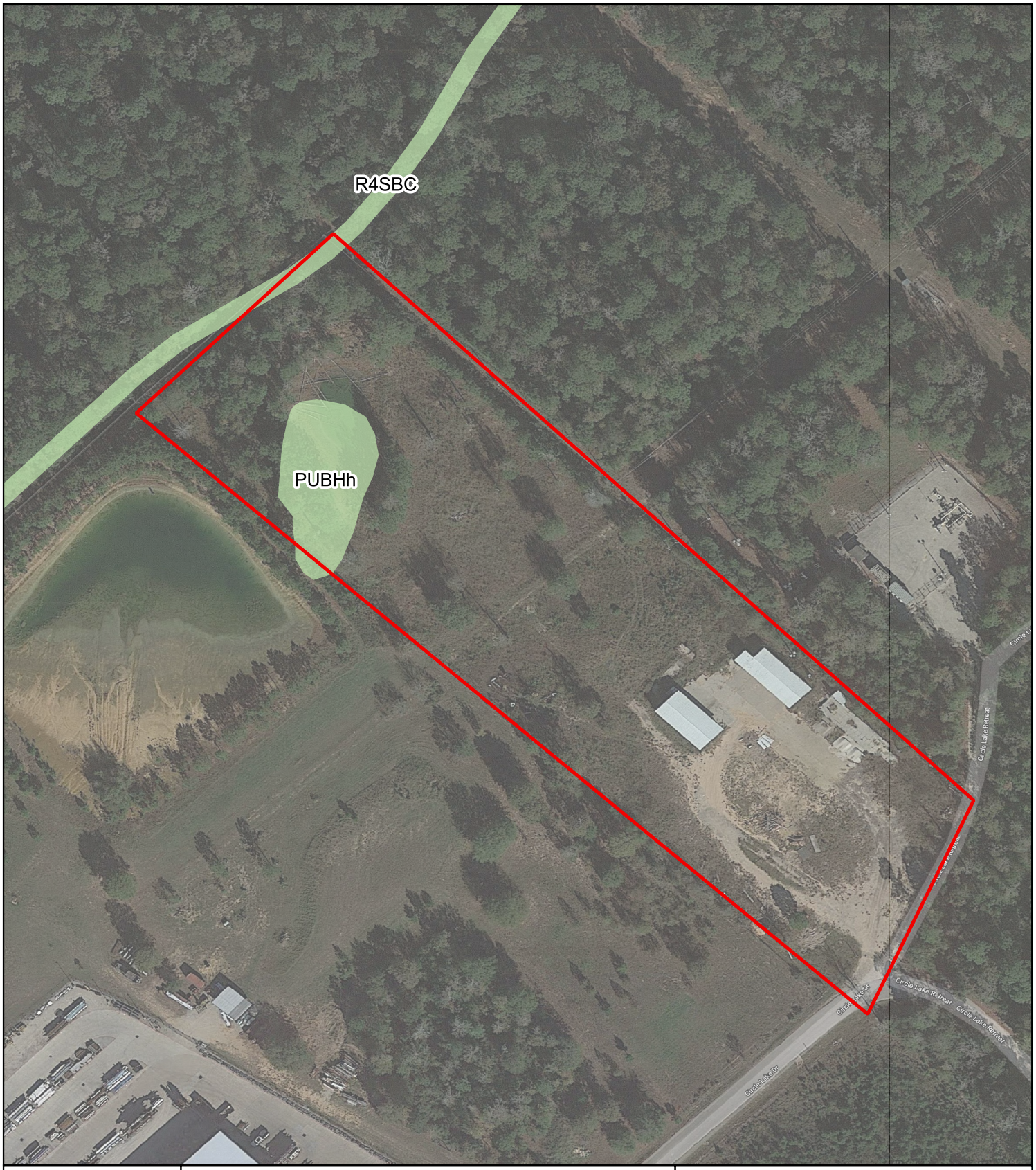
CIRCLE LAKE TRANSFER STATION
MONTGOMERY COUNTY, TEXAS

ALLEN ENGINEERING AND SCIENCE

Scale: 1" = 1000'	DRAWN BY: OB	DATE: 06/11/21
	CHKD BY: TB	DATE: 06/11/21
PROJECT NO. 21052.02	CAD FILE: 21052.02 061121 FIG01 R00 D SLM	

SITE LOCATION MAP

FIGURE 1



LEGEND

- Approximate Property Boundary (5.51 ac. +/-)
- National Wetlands Inventory (0.35 ac. +/- within Property Boundary)

Source: National Wetlands Mapper / Google Satellite 2018

N

CIRCLE LAKE TRANSFER STATION
MONTGOMERY COUNTY, TEXAS

ALLEN ENGINEERING AND SCIENCE

Scale: 1" = 100'	DRAWN BY: OB	DATE: 06/11/21
	CHKD BY: TB	DATE: 06/11/21
PROJECT NO. 21052.02	CAD FILE: 21052.02 061121 FIG02 R00 D NWI	

NATIONAL WETLANDS INVENTORY MAP

FIGURE 2

Disclaimer:

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LEGEND

- Approximate Property Boundary (5.51 ac +/-)
- Approximate Freshwater Pond (0.36 ac +/-)
- Approximate Culvert Location +/-
- Approximate Drainage Easement Location +/-
- Approximate 2' Contour Interval
- Approximate Data Point Identification and Location

Source: AllenES Drone (06.23.21)

N

CIRCLE LAKE TRANSFER STATION
MONTGOMERY COUNTY, TEXAS

ALLEN ENGINEERING AND SCIENCE

Scale:	DRAWN BY: OB	DATE: 07/06/21
1" = 100'	CHKD BY: TB	DATE: 07/06/21
PROJECT NO. 21052.02	CAD FILE: 21052.02 070621 FIG03 R00 D ECM	

EXISTING CONDITIONS MAP

FIGURE 3

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LEGEND

Approximate Property Boundary (5.51 ac. +/-)

NRCS Soil Web Survey (2020)

- Bb - Bibb soils, frequently flooded
- CoC - Conroe loamy fine sand, 0 to 5 percent slopes
- Fs - Lilbert loamy fine sand
- Ho - Hockley loamy fine sand, 1 to 3 percent slopes
- LelA - Lelavale silt loam, 0 to 1 percent slopes, frequently ponded
- SplB - Splendora fine sandy loam, 0 to 2 percent slopes
- Ss - Conroe soils
- SuD - Woodville fine sandy loam, 5 to 12 percent slopes
- WkD - Fetzer loamy fine sand, 5 to 12 percent slopes

N

CIRCLE LAKE TRANSFER STATION
MONTGOMERY COUNTY, TEXAS

ALLEN ENGINEERING AND SCIENCE

Scale: 1" = 400'	DRAWN BY: OB	DATE: 06/11/21
	CHKD BY: TB	DATE: 06/11/21
PROJECT NO. 21052.02	CAD FILE: 21052.02 061121 FIG04 R00 D SM	

SOILS MAP

FIGURE 4

APPENDIX A
SITE PHOTOGRAPHS

Photo 01. Aerial image of subject site looking northwest.

Photo 02. Aerial image of subject site looking southeast.

Photo 03 Existing site conditions photo of central portion of subject site looking southeast.

Photo 04. Photo of drainage easement exiting the west portion of subject site boundary.

Photo 05 Photo of culvert connected to south neighboring sediment pond located on west side of subject site.

Photo 06. Photo of existing site conditions near DP-1 and DP-2 on west portion of the subject site.

Photo 07. Data Point 1 (DP-1) soil profile.

Photo 08. Data Point 2 (DP-2) soil profile.

Photo 09. Data Point 3 (DP-3) soil profile.

APPENDIX B
WETLAND DELINEATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Circle Lake Transfer Station City/County: Pinehurst, TX Sampling Date: 06/22/21

Applicant/Owner: Circle Lake Transfer, LLC State: TX Sampling Point: DP-1

Investigator(s): T. Beard, O. Birch Section, Township, Range: 339120 Canfield B

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): 133B Lat: º 30.174536 Long: - º 95.673225 Datum:

Soil Map Unit Name: Conroe Loamy Fine Sand 0-5% Slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Significant rain event occurred within previous 24 hours.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus echinada	20	x	
2. Quercus nigra	15	x	FAC
3. Liquidambar styraciflua	15	x	FAC
4.			
5.			
6.			
7.			
8.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		

Sapling/Shrub Stratum (Plot size: 30)			
1. Callicarpa americana	10	x	FACU
2. Rhus copallinum	10	x	UPL
3. Triadica sebifera	10	x	FAC
4. Ulmus americana	5		FAC
5.			
6.			
7.			
8.			
	35 = Total Cover		
50% of total cover: 17.5	20% of total cover: 7		

Herb Stratum (Plot size:)			
1. Chasmanthium laxum	20	x	FACW
2. Rubus trivialis	15	x	FACU
3. Smilax bona-nox	10	x	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		

Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 6/3	100					Fine Sand	
4-16	10YR 6/4	93	5YR 5/6	7			Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Circle Lake Transfer Station City/County: Pinehurst, TX Sampling Date: 06/22/21

Applicant/Owner: Circle Lake Transfer, LLC State: TX Sampling Point: DP-2

Investigator(s): T. Beard, O. Birch Section, Township, Range: 339120 Canfield B

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): 133B Lat: º 30.174452 Long: - º 95.673091 Datum:

Soil Map Unit Name: Conroe Loamy Fine Sand 0-5% Slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Significant rain event occurred within previous 24 hours.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus echinada	20	x	
2. Quercus nigra	15	x	FAC
3. Liquidambar styraciflua	15	x	FAC
4.			
5.			
6.			
7.			
8.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		
Sapling/Shrub Stratum (Plot size: 30)			
1. Callicarpa americana	10	x	FACU
2. Rhus copallinum	10	x	UPL
3. Triadica sebifera	10	x	FAC
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
50% of total cover: 15	20% of total cover: 6		
Herb Stratum (Plot size:)			
1. Chasmanthium laxum	10	x	FACW
2. Rubus trivialis	10	x	FACU
3. Smilax bona-nox	10	x	FAC
4. Lygodium japonicum	10	x	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/4	100					Fine Sand	
6-12	10YR 6/4	95	5YR 5/6	5			Fine Sand	
12-16	10YR 7/3	95	5YR 5/6	5			Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Circle Lake Transfer Station City/County: Pinehurst, TX Sampling Date: 06/22/21

Applicant/Owner: Circle Lake Transfer, LLC State: TX Sampling Point: DP-3

Investigator(s): T. Beard, O. Birch Section, Township, Range: 339120 Canfield B

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR or MLRA): 133B Lat: º 30.174649 Long: - º 95.672538 Datum:

Soil Map Unit Name: Conroe Loamy Fine Sand 0-5% Slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

Significant rain event occurred within previous 24 hours.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☐	No ☑	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☑

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

DP-3 area recently cleared and planted with unknown grass seed. Seeds were visible in the topsoil.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-3

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus nigra	10	x	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Sapling/Shrub Stratum (Plot size: 30)			
1. Triadica sebifera	10	x	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Herb Stratum (Plot size:)			
1. Paspalum urvillei	20	x	FAC
2. Carex sp	10	x	
3. Smilax bona-nox	5		FAC
4. Cuphea carthagenensis	5		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 5/4	100					Fine Sand	
5-16	10YR 6/4	95	5YR 5/6	5			Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

ALLEN
ENGINEERING
AND SCIENCE

6360 I-55 North, Suite 330
Jackson, Mississippi 39211
www.AllenES.com

Phone 601.936.4440
Fax 601.936.4463

June 8, 2021

Texas Parks and Wildlife Department
Wildlife Division: Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, Texas 78744-3291
Via Electronic Mail: whab@tpwd.texas.gov

Re: **Request for Information**
Endangered / Threatened Species Assessment
Montgomery County, Texas

Dear Sir/Madam:

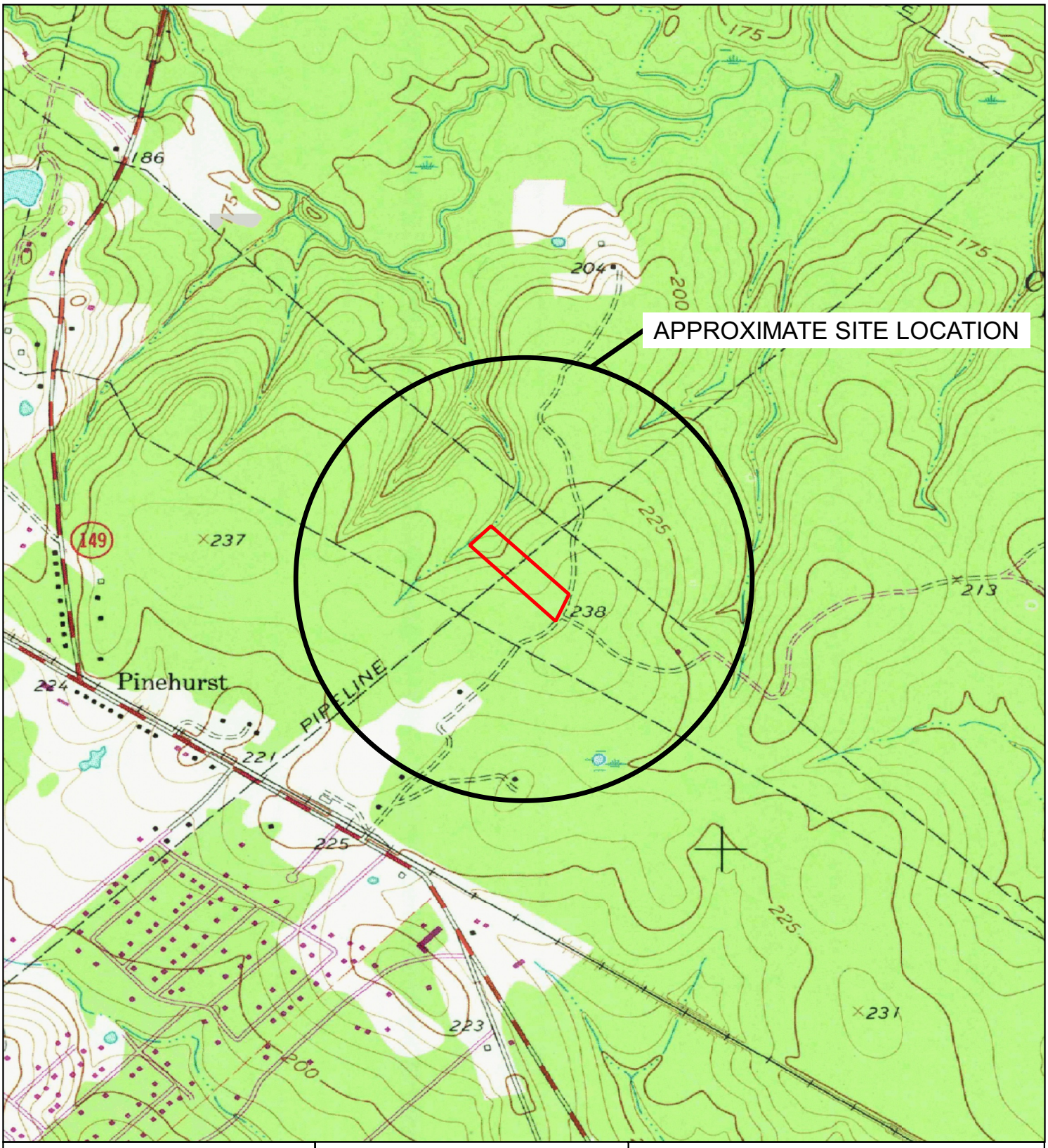
On behalf of Circle Lake Transfer, LLC, Allen Engineering and Science, Inc. (AllenES) is requesting assistance from Texas Parks & Wildlife in providing an endangered or threatened species/critical habitat and species of special status determination for proposed work located in Montgomery County, Texas. Specifically, the proposed facility is located at latitude 30.173938, and longitude -95.672008 on Circle Lake Drive, Pinehurst, Texas. A USGS 7.5-minute site location map (*Magnolia East, Texas*) for the project area is included as **Figure 1.** The proposed facility includes the construction of a Type V transfer facility on an approximate 5.5-acres of land. The transfer facility and associated features (building, access roads, turnaround areas, approach ramps, parking, support features, etc.) will utilize approximately four (4) acres of the site, while the building is expected to be less than one (1) acre. The project work will consist of clearing, excavation, earthwork and construction. The site is generally developed and has a pipeline right-of-way through the middle of the site. The entire site has been previously disturbed during initial development by previous owners.

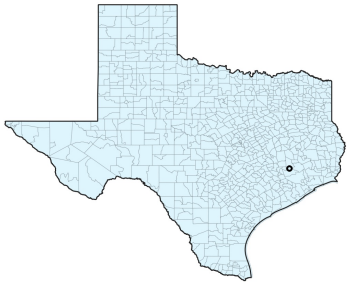
Any information from your office concerning the known presence of threatened or endangered species and critical habitat for the proposed project area is greatly appreciated. If you need additional information or have any questions regarding this request, please contact myself at obirch@allenes.com or Travis Beard at (601) 696-7146 or tbeard@allenes.com.

Sincerely,
Allen Engineering and Science, Inc.

Travis Beard
Environmental Scientist

Attachments: ***Figure 1: Site Location Map***





PROJECT LOCATION
30.173938, -95.672008

LEGEND

Approximate Transfer Facility Property Boundary (5.54 ac. +/-)

Source: USGS TOPO MAGNOLIA EAST, TX

CIRCLE LAKE TRANSFER STATION
MONTGOMERY COUNTY, TEXAS

ALLEN ENGINEERING AND SCIENCE

Scale: 0 0.05 0.1 0.15 0.2 0.25 mi	DRAWN BY: OB	DATE: 06/07/21
	CHKD. BY: TB	DATE: 06/07/21
PROJECT NO. 21052	CAD FILE: 21052 FIG01 SLM	
SITE LOCATION MAP		FIGURE 1

July 15, 2021

Oliver Birch
Allen Engineering and Science
902 20th Ave.
Meridian, MS 39301

RE: Proposed Circle Lake Transfer Facility; Montgomery County, Texas

Dear Mr. Birch:

Texas Parks and Wildlife Department (TPWD) has received and reviewed the submitted documentation regarding the above-referenced project.

Please be aware that a written response to a TPWD recommendation or informational comment received by a state governmental agency may be required by state law. For further guidance, see the Texas Parks and Wildlife Code (PWC), section 12.0011. For tracking purposes, please refer to TPWD project number 46780 in any return correspondence regarding this project.

Project Description

Circle Lake Transfer, LLC (Circle Lake Transfer), proposes to develop a waste transfer facility (facility) in Pinehurst, Texas. The proposed facility includes the construction of a Type V transfer facility on an approximate 5.5-acres of land. The facility and ancillary features will utilize approximately four acres of the site, while the building is expected to be less than one acre. The project work will consist of clearing, excavation, earthwork and construction. The site is generally developed and has a pipeline right-of-way (ROW) transecting the proposed project area. The site has been previously disturbed.

TPWD offers the following comments and recommendations concerning the development of the proposed facility.

Construction Recommendations

General Construction Recommendations

Recommendation: For soil stabilization within the proposed project area, TPWD recommends erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes, birds, and other wildlife species. Because the

mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife, TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding rather than erosion control blankets or mats due to a reduced risk to wildlife. If erosion control blankets or mats will be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic mesh matting and hydromulch containing microplastics should be avoided.

Recommendation: During construction, operation, and maintenance of the proposed facility, TPWD recommends observing slow (25 miles per hour, or less) speed limits within the project site. Reduced speed limits would allow personnel to see wildlife in the vehicle path and avoid harming them.

Federal Law: Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits direct and affirmative purposeful action that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control, except when specifically authorized by the Department of the Interior. This protection applies to most native bird species, including ground nesting species. The U.S. Fish and Wildlife Service (USFWS) Migratory Bird Office can be contacted at (505) 248-7882 for more information on potential impacts to migratory birds.

Within the project area, potential impacts to migratory birds may occur during site preparation and grading activities through the disturbance of existing vegetation and bare ground that may harbor active bird nests, including nests that may occur in grass, shrubs and trees and on bare ground.

Recommendation: TPWD recommends any vegetation clearing be scheduled outside of the general bird nesting season of March 15th to September 15th; however, if clearing must occur during nesting season, nest surveys should be conducted prior to clearing. Nest surveys should be conducted not more than 5 days prior to scheduled clearing to maximize detection of active nests. If nests are observed during surveys, a vegetation buffer area of no less than 150-feet in diameter should remain around the nest until all young have fledged.

State Law: Parks and Wildlife Code – Chapter 64, Birds

PWC section 64.002, regarding protection of nongame birds, provides that no person may catch, kill, injure, pursue, or possess a bird that is not a game bird. PWC section 64.003, regarding destroying nests or eggs, provides that no person may destroy or take the nests, eggs, or young and any wild game bird, wild bird, or wild fowl.

Recommendation: Please review the *Federal Law: Migratory Bird Treaty Act* section above for recommendations as they are also applicable for Chapter 64 of the TPW Code compliance.

Thank you for considering project impacts to Texas' fish and wildlife resources. If you have any questions, please contact me at Rachel.Lange@tpwd.texas.gov or (979) 732-4213.

Sincerely,

Rachel Lange
Wildlife Habitat Assessment Program
Wildlife Division

RAL/46780

ALLEN
ENGINEERING
AND SCIENCE

6360 I-55 North, Suite 330
Jackson, Mississippi 39211
www.AllenES.com

Phone 601.936.4440
Fax 601.936.4463

June 8, 2021

Ms. Tanya Sommer
U.S. Fish and Wildlife Service
Austin Ecological Services Field Office
10711 Burnet Rd. Suite #200
Austin, TX 78758
Via Electronic Mail: Tanya_Sommer@fws.gov

Re: **Request for Information**
Endangered / Threatened Species Assessment
Montgomery County, Texas

Dear Ms. Sommer:

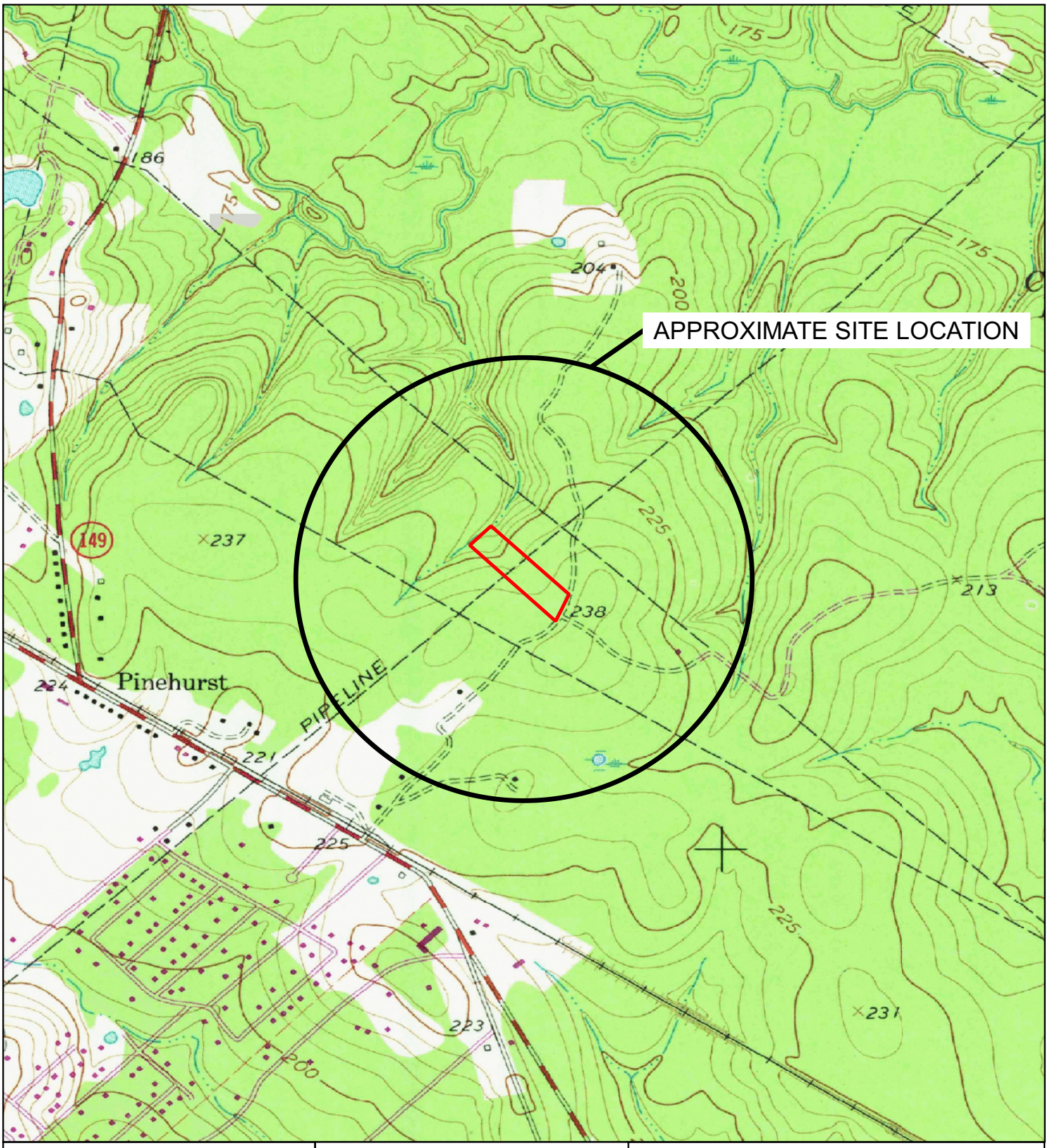
On behalf of Circle Lake Transfer, LLC, Allen Engineering and Science, Inc. (AllenES) is requesting assistance from U.S. Fish and Wildlife Service in providing an endangered or threatened species/critical habitat and species of special status determination for proposed work located in Montgomery County, Texas. Specifically, the proposed facility is located at latitude 30.173938, and longitude -95.672008 on Circle Lake Drive, Pinehurst, Texas. A USGS 7.5-minute site location map (*Magnolia East, Texas*) for the project area is included as **Figure 1.** The proposed facility includes the construction of a Type V transfer facility on an approximate 5.5-acres of land. The transfer facility and associated features (building, access roads, turnaround areas, approach ramps, parking, support features, etc.) will utilize approximately four (4) acres of the site, while the building is expected to be less than one (1) acre. The project work will consist of clearing, excavation, earthwork and construction. The site is generally developed and has a pipeline right-of-way through the middle of the site. The entire site has been previously disturbed during initial development by previous owners.

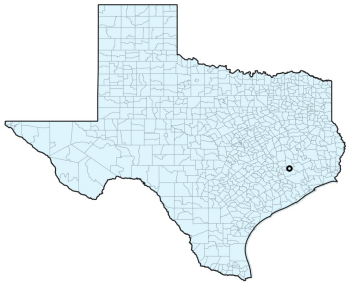
Any information from your office concerning the known presence of threatened or endangered species and critical habitat for the proposed project area is greatly appreciated. If you need additional information or have any questions regarding this request, please contact me at (601) 696-7146 or tbeard@allenes.com.

Sincerely,
Allen Engineering and Science, Inc.

Travis Beard
Environmental Scientist

Attachments: ***Figure 1: Site Location Map***





PROJECT LOCATION
30.173938, -95.672008

LEGEND

Approximate Transfer Facility Property Boundary (5.54 ac. +/-)

Source: USGS TOPO MAGNOLIA EAST, TX

CIRCLE LAKE TRANSFER STATION
MONTGOMERY COUNTY, TEXAS

ALLEN ENGINEERING AND SCIENCE

Scale: 0 0.05 0.1 0.15 0.2 0.25 mi	DRAWN BY: OB	DATE: 06/07/21
	CHKD. BY: TB	DATE: 06/07/21
PROJECT NO. 21052	CAD FILE: 21052 FIG01 SLM	
SITE LOCATION MAP		FIGURE 1

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Texas Coastal Ecological Services Field Office
4444 Corona Drive, Suite 215
Corpus Christi, TX 78411
Phone: (281) 286-8282 Fax: (281) 488-5882
http://www.fws.gov/southwest/es/TexasCoastal/
http://www.fws.gov/southwest/es/ES_Lists_Main2.html

In Reply Refer To: June 10, 2021
Consultation Code: 02ETTX00-2021-SLI-2156
Event Code: 02ETTX00-2021-E-04988
Project Name: Circle Lake Transfer Station

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The U.S. Fish and Wildlife Service (Service) field offices in Clear Lake, Tx, and Corpus Christi, Tx, have combined administratively to form the Texas Coastal Ecological Services Field Office. A map of the Texas Coastal Ecological Services Field Office area of responsibility can be found at: http://www.fws.gov/southwest/es/TexasCoastal/Map.html. All project related correspondence should be sent to the field office responsible for the area in which your project occurs. For projects located in southeast Texas please write to: Field Supervisor; U.S. Fish and Wildlife Service; 17629 El Camino Real Ste. 211; Houston, Texas 77058. For projects located in southern Texas please write to: Field Supervisor; U.S. Fish and Wildlife Service; P.O. Box 81468; Corpus Christi, Texas 78468-1468. For projects located in six counties in southern Texas (Cameron, Hidalgo, Starr, Webb, Willacy, and Zapata) please write: Santa Ana NWR, ATTN: Ecological Services Sub Office, 3325 Green Jay Road, Alamo, Texas 78516.

The enclosed species list identifies federally threatened, endangered, and proposed to be listed species; designated critical habitat; and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project.

New information from updated surveys, changes in the abundance and distribution of species, changes in habitat conditions, or other factors could change the list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website http://ecos.fws.gov/ipac/ at regular intervals during project planning and implementation for updates to species list and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Candidate species have no protection under the Act but are included for consideration because they could be listed prior to the completion of your project. The other species information should help you determine if suitable habitat for these listed species exists in any of the proposed project areas or if project activities may affect species on-site, off-site, and/or result in "take" of a federally listed species.

"Take" is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. In addition to the direct take of an individual animal, habitat destruction or modification can be considered take, regardless of whether it has been formally designated as critical habitat, if the activity results in the death or injury of wildlife by removing essential habitat components or significantly alters essential behavior patterns, including breeding, feeding, or sheltering.

Section 7

Section 7 of the Act requires that all Federal agencies consult with the Service to ensure that actions authorized, funded or carried out by such agencies do not jeopardize the continued existence of any listed threatened or endangered species or adversely modify or destroy critical habitat of such species. It is the responsibility of the Federal action agency to determine if the proposed project may affect threatened or endangered species. If a "may affect" determination is made, the Federal agency shall initiate the section 7 consultation process by writing to the office that has responsibility for the area in which your project occurs.

Is not likely to adversely affect - the project may affect listed species and/or critical habitat; however, the effects are expected to be discountable, insignificant, or completely beneficial. Certain avoidance and minimization measures may need to be implemented in order to reach this level of effects. The Federal agency or the designated non-Federal representative should seek written concurrence from the Service that adverse effects have been eliminated. Be sure to include all of the information and documentation used to reach your decision with your request for concurrence. The Service must have this documentation before issuing a concurrence.

Is likely to adversely affect - adverse effects to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial. If the overall effect of the proposed action is beneficial to the listed species but also is likely to cause some adverse effects to individuals of that species, then the proposed action "is likely to adversely affect" the listed species. An "is likely to adversely affect" determination requires the Federal action agency to initiate formal section 7 consultation with this office.

No effect - the proposed action will not affect federally listed species or critical habitat (i.e., suitable habitat for the species occurring in the project county is not present in or adjacent to the action area). No further coordination or contact with the Service is necessary. However, if the project changes or additional information on the distribution of listed or proposed species becomes available, the project should be reanalyzed for effects not previously considered.

Regardless of your determination, the Service recommends that you maintain a complete record of the evaluation, including steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related articles.

Please be advised that while a Federal agency may designate a non-Federal representative to conduct informal consultations with the Service, assess project effects, or prepare a biological assessment, the Federal agency must notify the Service in writing of such a designation. The Federal agency shall also independently review and evaluate the scope and contents of a biological assessment prepared by their designated non-Federal representative before that document is submitted to the Service.

The Service's Consultation Handbook is available online to assist you with further information on definitions, process, and fulfilling Act requirements for your projects at: http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf

Section 10

If there is no federal involvement and the proposed project is being funded or carried out by private interests and/or non-federal government agencies, and the project as proposed may affect listed species, a section 10(a)(1)(B) permit is recommended. The Habitat Conservation Planning Handbook is available at: http://www.fws.gov/endangered/esa-library/pdf/HCP_Handbook.pdf

Service Response

Please note that the Service strives to respond to requests for project review within 30 days of receipt, however, this time period is not mandated by regulation. Responses may be delayed due to workload and lack of staff. Failure to meet the 30-day timeframe does not constitute a concurrence from the Service that the proposed project will not have impacts to threatened and endangered species.

Proposed Species and/or Proposed Critical Habitat

While consultations are required when the proposed action may affect listed species, section 7(a)(4) was added to the ESA to provide a mechanism for identifying and resolving potential conflicts between a proposed action and proposed species or proposed critical habitat at an early planning stage. The action agency should seek conference from the Service to assist the action agency in determining effects and to advise the agency on ways to avoid or minimize adverse effect to proposed species or proposed critical habitat.

Candidate Species

Candidate species are species that are being considered for possible addition to the threatened and endangered species list. They currently have no legal protection under the ESA. If you find you have potential project impacts to these species the Service would like to provide technical assistance to help avoid or minimize adverse effects. Addressing potential impacts to these species at this stage could better provide for overall ecosystem healh in the local area and ay avert potential future listing.

Several species of freshwater mussels occur in Texas and four are candidates for listing under the ESA. The Service is also reviewing the status of six other species for potential listing under the ESA. One of the main contributors to mussel die offs is sedimentation, which smothers and suffocates mussels. To reduce sedimentation within rivers, streams, and tributaries crossed by a

project, the Service recommends that that you implement the best management practices found at: http://www.fws.gov/southwest/es/TexasCoastal/FreshwaterMussels.html.

Candidate Conservation Agreements (CCAs) or Candidate Conservation Agreements with Assurances (CCAAs) are voluntary agreements between the Service and public or private entities to implement conservation measures to address threats to candidate species. Implementing conservation efforts before species are listed increases the likelihood that simpler, flexible, and more cost-effective conservation options are available. A CCAA can provide participants with assurances that if they engage in conservation actions, they will not be required to implement additional conservation measures beyond those in the agreement. For additional information on CCAs/CCAAs please visit the Service's website at http://www.fws.gov/endangered/what-we-do/cca.html.

Migratory Birds

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions for the protection of migratory birds. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. Many may nest in trees, brush areas or other suitable habitat. The Service recommends activities requiring vegetation removal or disturbance avoid the peak nesting period of March through August to avoid destruction of individuals or eggs. If project activities must be conducted during this time, we recommend surveying for active nests prior to commencing work. A list of migratory birds may be viewed at http://www.fws.gov/migratorybirds/regulationspolicies/mbta/mbtandx.html.

The bald eagle (*Haliaeetus leucocephalus*) was delisted under the Act on August 9, 2007. Both the bald eagle and the goden eagle (*Aquila chrysaetos*) are still protected under the MBTA and BGEPA. The BGEPA affords both eagles protection in addition to that provided by the MBTA, in particular, by making it unlawful to "disturb" eagles. Under the BGEPA, the Service may issue limited permits to incidentally "take" eagles (e.g., injury, interfering with normal breeding, feeding, or sheltering behavior nest abandonment). For more information on bald and golden eagle management guidlines, we recommend you review information provided at http://www.fws.gov/midwest/eagle/pdf/NationalBaldEagleManagementGuidelines.pdf.

The construction of overhead power lines creates threats of avian collision and electrocution. The Service recommends the installation of underground rather than overhead power lines whenever possible. For new overhead lines or retrofitting of old lines, we recommend that project developers implement, to the maximum extent practicable, the Avian Power Line Interaction Committee guidelines found at http://www.aplic.org/.

Meteorological and communication towers are estimated to kill millions of birds per year. We recommend following the guidance set forth in the Service Interim Guidelines for Recommendations on Communications Tower Siting, Constructions, Operation and Decommissioning, found online at: http://www.fws.gov/habitatconservation/communicationtowers.html, to minimize the threat of avian mortality at these towers. Monitoring at these towers would provide insight into the effectiveness of the minimization measures. We request the results of any wildlife mortality monitoring at towers associated with this project.

We request that you provide us with the final location and specifications of your proposed towers, as well as the recommendations implemented. A Tower Site Evaluation Form is also available via the above website; we recommend you complete this form and keep it in your files. If meteorological towers are to be constructed, please forward this completed form to our office.

More information concerning sections 7 and 10 of the Act, migratory birds, candidate species, and landowner tools can be found on our website at: http://www.fws.gov/southwest/es/TexasCoastal/ProjectReviews.html.

Wetlands and Wildlife Habitat

Wetlands and riparian zones provide valuable fish and wildlife habitat as well as contribute to flood control, water quality enhancement, and groundwater recharge. Wetland and riparian vegetation provides food and cover for wildlife, stabilizes banks and decreases soil erosion. These areas are inherently dynamic and very sensitive to changes caused by such activities as overgrazing, logging, major construction, or earth disturbance. Executive Order 11990 asserts that each agency shall provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial value of wetlands in carrying out the agency's responsibilities. Construction activities near riparian zones should be carefully designed to minimize impacts. If vegetation clearing is needed in these riparian areas, they should be re-vegetated with native wetland and riparian vegetation to prevent erosion or loss of habitat. We recommend minimizing the area of soil scarification and initiating incremental re-establishment of herbaceous vegetation at the proposed work sites. Denuded and/or disturbed areas should be re-vegetated with a mixture of native legumes and grasses. Species commonly used for soil stabilization are listed in the Texas Department of Agriculture's (TDA) Native Tree and Plant Directory, available from TDA at P.O. Box 12847, Austin, Texas 78711. The Service also urges taking precautions to ensure sediment loading does not occur to any receiving streams in the proposed project area. To prevent and/or minimize soil erosion and compaction associated with construction activities, avoid any unnecessary clearing of vegetation, and follow established rights-of-way whenever possible. All machinery and petroleum products should be stored outside the floodplain and/or wetland area during construction to prevent possible contamination of water and soils.

Wetlands and riparian areas are high priority fish and wildlife habitat, serving as important sources of food, cover, and shelter for numerous species of resident and migratory wildlife. Waterfowl and other migratory birds use wetlands and riparian corridors as stopover, feeding, and nesting areas. We strongly recommend that the selected project site not impact wetlands and riparian areas, and be located as far as practical from these areas. Migratory birds tend to concentrate in or near wetlands and riparian areas and use these areas as migratory flyways or corridors. After every effort has been made to avoid impacting wetlands, you anticipate unavoidable wetland impacts will occur; you should contact the appropriate U.S. Army Corps of Engineers office to determine if a permit is necessary prior to commencement of construction activities.

If your project will involve filling, dredging, or trenching of a wetland or riparian area it may require a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (COE).

For permitting requirements please contact the U.S. Corps of Engineers, District Engineer, P.O. Box 1229, Galveston, Texas 77553-1229, (409) 766-3002.

Beneficial Landscaping

In accordance with Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping (42 C.F.R. 26961), where possible, any landscaping associated with project plans should be limited to seeding and replanting with native species. A mixture of grasses and forbs appropriate to address potential erosion problems and long-term cover should be planted when seed is reasonably available. Although Bermuda grass is listed in seed mixtures, this species and other introduced species should be avoided as much as possible. The Service also recommends the use of native trees, shrubs, and herbaceous species that are adaptable, drought tolerant and conserve water.

State Listed Species

The State of Texas protects certain species. Please contact the Texas Parks and Wildlife Department (Endangered Resources Branch), 4200 Smith School Road, Austin, Texas 78744 (telephone 512/389-8021) for information concerning fish, wildlife, and plants of State concern or visit their website at: http://www.tpwd.state.tx.us/huntwild/wild/wildlife_diversity/texas_rare_species/listed_species/.

If we can be of further assistance, or if you have any questions about these comments, please contact 281/286-8282 if your project is in southeast Texas, or 361/994-9005, ext. 246, if your project is in southern Texas. Please refer to the Service consultation number listed above in any future correspondence regarding this project.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Texas Coastal Ecological Services Field Office
4444 Corona Drive, Suite 215
Corpus Christi, TX 78411
(281) 286-8282

Project Summary

Consultation Code: 02ETTX00-2021-SLI-2156
Event Code: 02ETTX00-2021-E-04988
Project Name: Circle Lake Transfer Station
Project Type: DEVELOPMENT
Project Description: The proposed facility includes the construction of a Type V transfer facility on an approximate 5.5-acres of land. The project work will consist of clearing, excavation, earthwork and construction.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@30.173965449999997,-95.6719902010165,14z

Counties: Montgomery County, Texas

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Wind related projects within migratory route. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Wind related projects within migratory route. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Red-cockaded Woodpecker *Picoides borealis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX I
TEXAS HISTORICAL COMMISSION (THC), ANTIQUITIES CODE DOCUMENTATION

ALLEN
ENGINEERING
AND SCIENCE

6360 I-55 North, Suite 330
Jackson, Mississippi 39211
www.AllenES.com

Phone 601.936.4440
Fax 601.936.4463

June 8, 2021

Mr. Mark Wolfe
State Historic Preservation Officer
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711-2276
Via Electronic Mail: mark.wolfe@thc.texas.gov

Re: **Request for Information**
Cultural Resource Assessment
Montgomery County, Texas

Dear Mr. Wolfe:

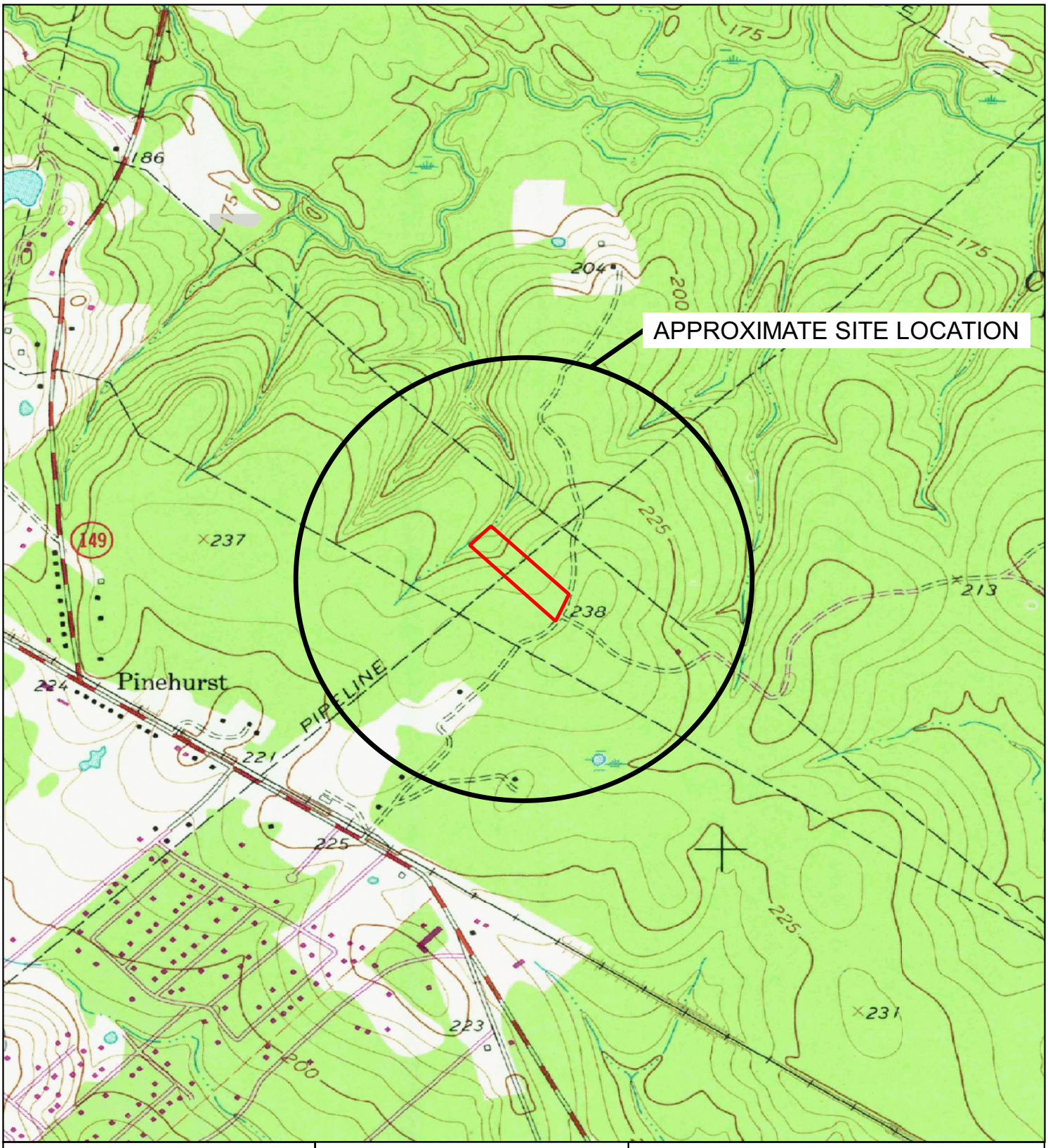
On behalf of Circle Lake Transfer, LLC, Allen Engineering and Science, Inc. (AllenES) is requesting assistance from Texas Historical Commission in providing a cultural resource assessment for proposed work located in Montgomery County, Texas. Specifically, the proposed facility is located at latitude 30.173938, and longitude -95.672008 on Circle Lake Drive, Pinehurst, Texas. A USGS 7.5-minute site location map (*Magnolia East, Texas*) for the project area is included as **Figure 1.** The proposed facility includes the construction of a Type V transfer facility on an approximate 5.5-acres of land. The transfer facility and associated features (building, access roads, turnaround areas, approach ramps, parking, support features, etc.) will utilize approximately four (4) acres of the site, while the building is expected to be less than one (1) acre. The project work will consist of clearing, excavation, earthwork and construction. The site is generally developed and has a pipeline right-of-way through the middle of the site. The entire site has been previously disturbed during initial development by previous owners. AllenES does not believe any cultural resources will be impacted by this facility upgrade.

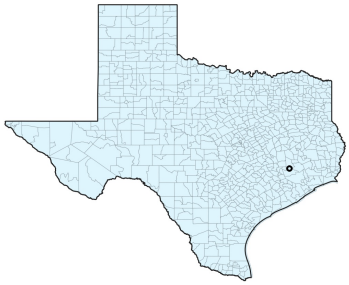
Any information from your office concerning the known presence of cultural resources for the proposed project area is greatly appreciated. If you need additional information or have any questions regarding this request, please contact me at (601) 696-7146 or tbeard@allenes.com.

Sincerely,
Allen Engineering and Science, Inc.

Travis Beard
Environmental Scientist

Attachments: ***Figure 1: Site Location Map***





PROJECT LOCATION
30.173938, -95.672008

LEGEND

Approximate Transfer Facility Property Boundary (5.54 ac. +/-)

Source: USGS TOPO MAGNOLIA EAST, TX

CIRCLE LAKE TRANSFER STATION
MONTGOMERY COUNTY, TEXAS

ALLEN ENGINEERING AND SCIENCE

Scale: 0 0.05 0.1 0.15 0.2 0.25 mi	DRAWN BY: OB	DATE: 06/07/21
	CHKD. BY: TB	DATE: 06/07/21
PROJECT NO. 21052	CAD FILE: 21052 FIG01 SLM	
SITE LOCATION MAP		FIGURE 1

This Correspondence sent to tbeard@allenes.com on 07-08-2021

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under Section 106 of the National Historic Preservation Act
THC Tracking #202110301
Date: 07/08/2021
Circle Lake Transfer LLC
34910 Circle Lake Road
Pinehurst,TX 77362

Description: The proposed facility includes the construction of a Type V transfer facility on an approximate 5.5-acres of land.

Dear Travis Beard:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act.

The review staff, led by Marie Archambeault, has completed its review and has made the following determinations based on the information submitted for review:

Archeology Comments

- No identified historic properties, archeological sites, or other cultural resources are present or affected. However, if cultural materials are encountered during project activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THCâ€™s Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: marie.archambeault@thc.texas.gov.

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

for Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

APPENDIX J
HOUSTON-GALVESTON AREA COUNCIL OF GOVERNMENT (HGAC) DOCUMENTATION

October 10, 2017 | 9:00 AM – 12:00 PM

A MSW Generation and Diversion Forecast for the H-GAC Planning Region

H-GAC

NewGen Strategies & Solutions

ECONOMICS STRATEGY STAKEHOLDERS SUSTAINABILITY

www.newgenstrategies.net

Workshop Agenda

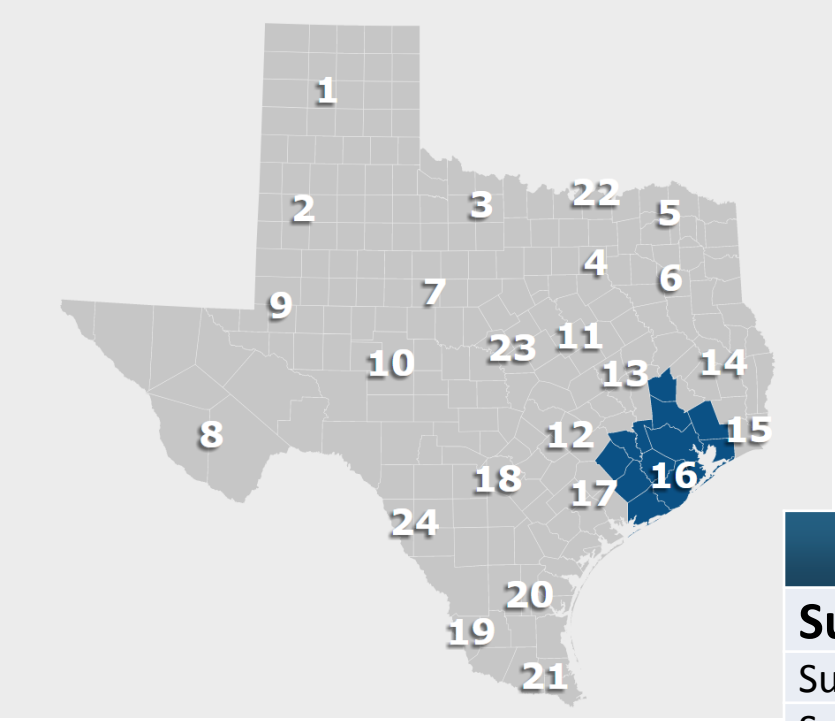
- Project Background
- Purpose of Project
- Data Sources
- Forecasts
- Analysis
- Findings and Recommendations
- Conclusion

Project Background

Project Background

- In 2005, H-GAC retained R. W. Beck, Inc. to conduct a *Regional Solid Waste Characterization Study* (2005 Study)
- In January 2017, H-GAC retained NewGen to conduct *A Municipal Solid Waste Generation and Diversion Forecast for the H-GAC Planning Region* (2017 Study)

H-GAC Subregions



H-GAC Subregions	
Subregion	**Counties**
Subregion 1	Montgomery, Walker
Subregion 2	Chambers, Liberty
Subregion 3	Galveston
Subregion 4	Brazoria
Subregion 5	Colorado, Matagorda, Wharton
Subregion 6	Austin, Waller
Subregion 7	Fort Bend
Subregion 8	Harris

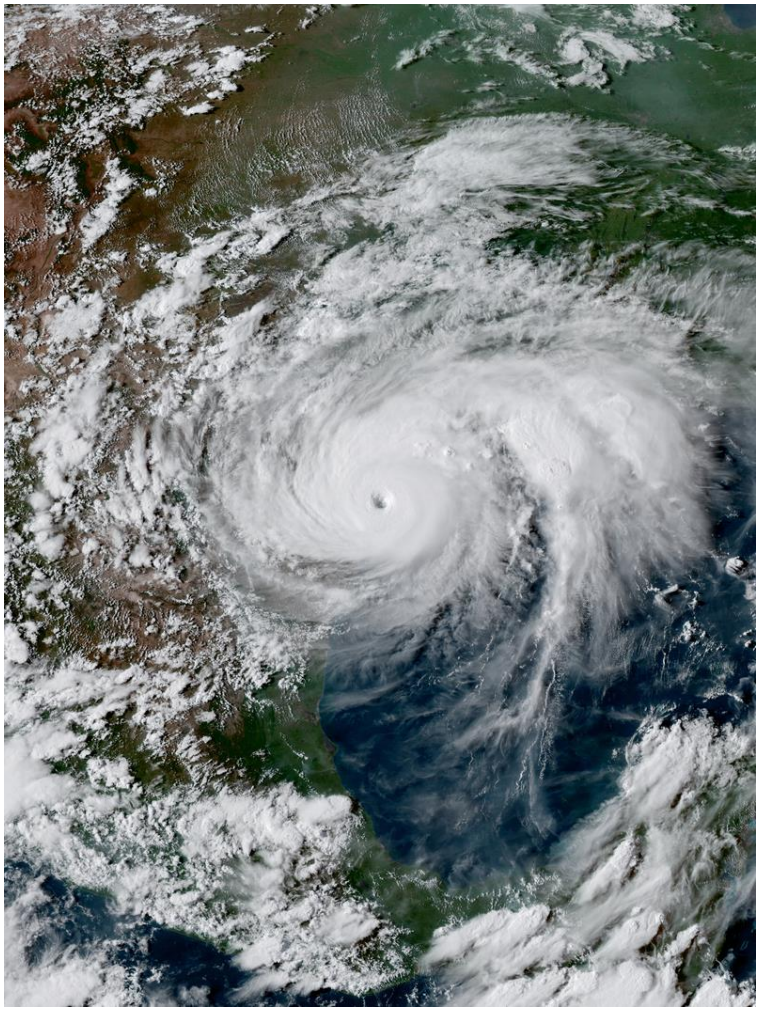
Purpose of Project

Purpose of Project

To provide H-GAC with a tool to aid in its effort to provide regional solid waste disposal capacity planning for the H-GAC region.

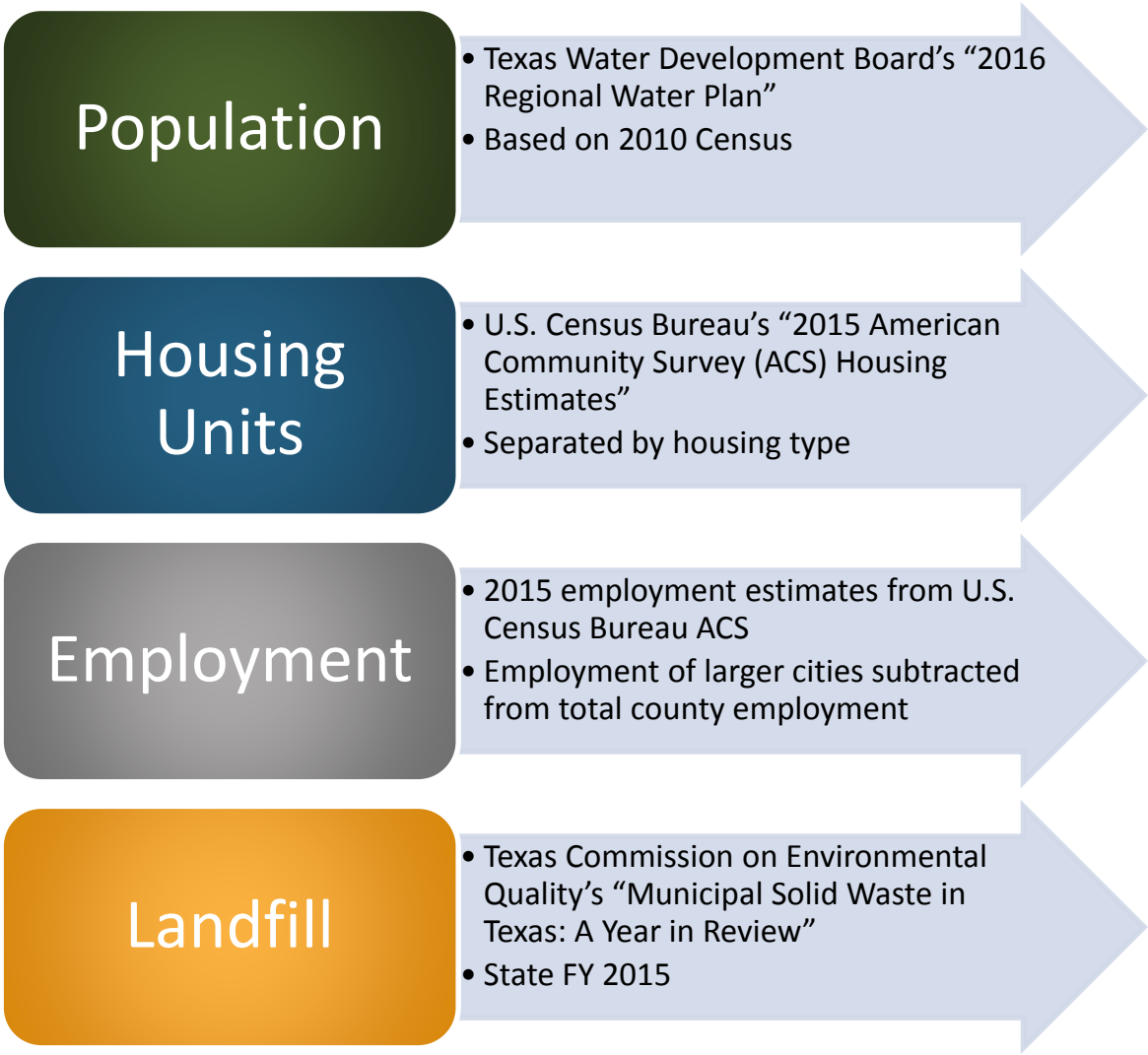
Disclaimer

The project forecasts and associated analyses were completed prior to Hurricane Harvey making landfall in Texas during late August 2017.



Data Sources

Data Sources – Overview



Data Sources – Population

	2005	2017
Population	▪ 8 major counties: H-GAC data ▪ 5 minor counties: Texas State Data Center (TSDC)	▪ Texas Water Development Board (TWDB) • Projections by City • Projections by County • 100% coverage, except for The Woodlands • (2016 population <1% difference between TWDB and TSDC estimates)

Data Sources – Housing

	2005	2017
Housing	▪ 8 major counties: H-GAC data ▪ 5 minor counties: U.S. Census Bureau: 2000 Census	▪ U.S. Census Bureau: 2015 American Community Survey (ACS) Housing Estimates ▪ Single-Family/Multi-Family by City ▪ Single-Family/Multi-Family by County ▪ 100% coverage

Data Sources – Housing (cont.)

2015 American Community Survey (ACS) Housing Estimates

- 1-unit, detached
- 1 unit, attached
- 2 units
- 3 or 4 units
- 5 to 9 units
- 10 to 19 units
- 20 or more units
- Mobile home
- Boat, RV, van etc.

EXAMPLE:
In 2015 Sealy had 1,895 occupied housing units categorized as single-family housing (versus a total of 2,263 total occupied housing units), which means approximately 83.74% of residents in Sealy live in single-family housing

Data Sources – Employment

	2005	2017
Employment	▪ 8 major counties: H-GAC data ▪ 5 minor counties: Texas Workforce Commission historical	▪ Census Bureau: 2015 ACS Employment Estimates ▪ Employment by City ▪ Employment by County ▪ 100% coverage

Data Sources – City Survey

Figure 2-1. H-GAC City Survey Introduction Screen

Data Sources – City Survey (cont.)

City Survey Distribution				
Alvin	Dayton	Houston	Liberty	Texas City
Angleton	Deer Park	Humble	Manvel	The Woodlands
Bay City	Dickinson	Huntsville	Missouri City	Webster
Baytown	El Campo	Jacinto City	Palacios	West University Place
Bellaire	Freeport	Jersey Village	Pasadena	Wharton
Bellville	Friendswood	Katy	Pearland	Willis
Cleveland	Galena Park	La Marque	Richmond	
Clute	Galveston	La Porte	Rosenberg	
Columbus	Hempstead	Lake Jackson	Seabrook	
Conroe	Hitchcock	League City	Sugar Land	

Data Sources – City Survey (cont.)

City Survey Responses	
Alvin	League City
Bellaire	Missouri City
Bellville	Pasadena
Dickinson	Seabrook
Houston	Sugar Land
Huntsville	Texas City
La Porte	The Woodlands

Forecasts

Forecasts – Population

- Population forecasts
  - Based on 2010 TWDB data (in 10-year increments)
  - Calculated compound annual growth rate (CAGR) for each city and county, for each 10-year period)
  - Austin County was 28,417 in 2010 and is projected to be 33,014 in 2020, which equates to a CAGR of 1.51%

AUSTIN COUNTY EXAMPLE:

((33,014 population 2020 ÷ 28,417 population 2010)^(1 ÷ 10 years)) – 1 = 1.51% CAGR for 2010 – 2020

Forecasts – Population (cont.)

Table 3-1
Total Residential Population Forecast

City	County	2016	2021	2026	2031	2036
Alvin	Brazoria	25,761	27,024	28,014	29,056	30,205
Angleton	Brazoria	18,983	19,078	19,150	19,221	19,288
Bay City	Matagorda	18,315	18,894	19,384	19,849	20,164
Baytown	Harris	74,110	75,884	76,869	77,878	78,948
Bellaire	Harris	17,022	17,278	18,012	18,779	19,582
Bellville	Austin	4,268	4,418	4,581	4,750	4,925
Small Cities & Unincorporated[1]	Waller	36,084	39,987	44,149	48,660	53,287
Small Cities & Unincorporated[1]	Wharton	21,719	22,480	23,293	24,091	24,743
H-GAC TOTAL		**6,787,681**	**7,393,712**	**7,821,751**	**8,265,379**	**8,663,781**

1 "Small Cities & Unincorporated" is the remaining population in each county, determined by subtracting the combined population of the cities above from their respective total county population in any given year.

Forecasts – Employment

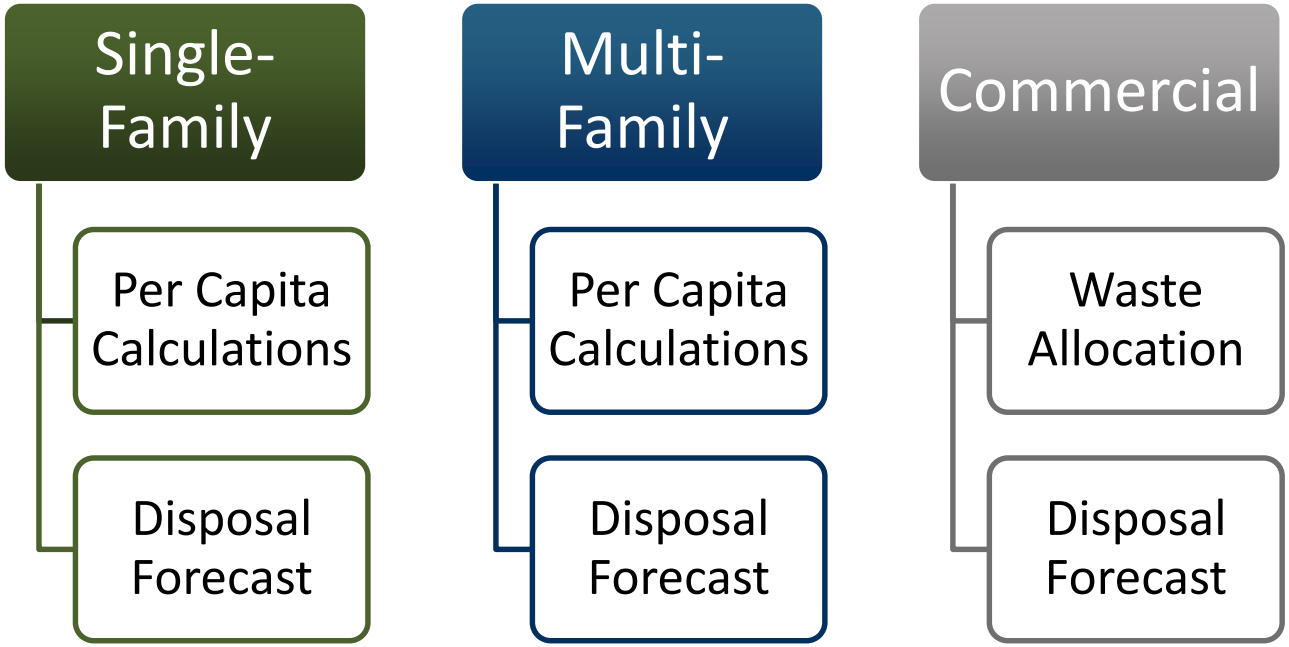
- 2015 employment estimates used to determine ratios of employment relevant to total population

Table 3-4
Employment Forecast for the H-GAC Region

City	County	Ratio	2016	2021	2026	2031	2036
Alvin	Brazoria	47.52%	12,241	12,841	13,312	13,807	14,353
Angleton	Brazoria	44.87%	8,517	8,560	8,592	8,624	8,654
Bay City	Matagorda	42.48%	7,779	8,025	8,234	8,431	8,565
Baytown	Harris	41.63%	30,851	31,590	32,000	32,420	32,865
Bellaire	Harris	50.43%	8,584	8,713	9,083	9,470	9,875
Bellville	Austin	46.35%	1,978	2,048	2,124	2,202	2,283
Unincorporated[1]	Waller	43.19%	15,586	17,272	19,069	21,018	23,016
Unincorporated[1]	Wharton	45.43%	9,866	10,212	10,581	10,944	11,240
H-GAC TOTAL		**46.03%**	**3,122,941**	**3,394,831**	**3,586,407**	**3,784,766**	**3,963,309**

1 "Small Cities & Unincorporated" is the remaining employment in each county, determined by subtracting the combined employment of the cities above from their respective total county employment in any given year.

Forecasts – Generation and Disposal



An important observation by NewGen between the time of the 2005 Study and the 2017 Study is the significant increase in composting and mulching facilities located within the H-GAC region, that were not in existence in 2005. This has had a significant impact upon the decrease in the disposal rate on a per capita basis.

Forecasts – Generation and Disposal (cont.)

Table 3-5
Surveyed Cities Single-Family Per Capita Calculations

City	SF Garbage (tons/year)	SF Brush (tons/year)	SF Bulky (tons/year)	SF Recycling (tons/year)	SF Total (tons/year)	2016 SF Population	Generation Per Capita[4]	Disposal Per Capita[5]
Bellville	2,736	58	64	202	3,060	3,509	**0.8722**	**0.7981**
Alvin[1]	6,213	-	631	1,501	8,345	18,488	**0.4514**	**0.3702**
Missouri City	14,945	2,079	839	2,101	19,964	71,944	**0.2775**	**0.2194**
Sugar Land	40,420[2]	8,388	-	15,655	64,462	85,693	**0.7522**	**0.4717**
Dickinson	10,600	250	-	1,200	12,050	15,950	**0.7555**	**0.6646**
League City	42,044	-	-	3,833	45,877	80,585	**0.5693**	**0.5217**
Texas City	15,851	4,061	7,500	978	28,390	36,274	**0.7827**	**0.6437**
Bellaire	6,318	1,579	157	1,958	10,012	16,101	**0.6218**	**0.4021**
Houston	385,660	54,479	287,064	58,036	785,239	1,038,448[3]	**0.7562**	**0.6478**
La Porte	11,999	7,827	15,213	6,225	41,264	29,563	**1.3958**	**0.9205**
Pasadena[1]	46,815	-	22,177	1,635	70,627	99,834	**0.7074**	**0.6911**
Seabrook	5,464	-	-	572	6,036	7,707	**0.7832**	**0.7090**
The Woodlands	33,391	2,073	-	14,087	49,551	91,141	**0.5437**	**0.3664**
Huntsville	5,845	327	510	1,449	8,130	21,945	**0.3705**	**0.2896**

1 Tonnage data for Brush and Bulky items were combined for these cities, NewGen assumed all tonnage was disposed in landfills due to the comingling of these categories.
2 Sugar Land SF Garbage tonnage includes Bulky tonnage.
3 Single-family population of Houston served by City, excluding private sector customers. City serves 386,628 single-family households out of the 431,666 total single-family households = approx. 89.57%. Total Houston single-family population in 2016 = 1,159,415 X 89.57% = 1,038,448 Single-family population served by City.
4 Total SF tonnage / 2016 SF Population = Generation Per Capita, shown in (tons/capita/year).
5 SF Garbage tonnage + SF Bulky tonnage / 2016 SF Population = Disposal Per Capita, shown in (tons/capita/year). NewGen assumed all Brush was diverted from landfills.

Any arithmetic differences are due to rounding.

Forecasts – Generation and Disposal (cont.)

- NewGen calculated a weighted average, single-family per capita disposal rate using the data provided by the 14 cities.

Table 3-6
Single-Family Disposal Per Capita in the H-GAC Region

	Tonnage	Population	Disposal Per Capita[5] (tons/capita/year)
Single-Family Garbage	628,300	1,617,182[3]	0.3885
Single-Family Brush[1]	-	-	-
Single-Family Bulky[2]	334,155	1,336,105[4]	0.2501
Single-Family Total			0.6386

1 NewGen assumed all brush tonnage collected on dedicated brush routes is diverted from the landfill.
2 Bulky tonnage includes some Brush tonnage due to the comingling of these materials in areas without dedicated routes for Brush pick-up.
3 Total single-family population of all 14 cities who returned tonnage data for single-family garbage.
4 Total single-family population of the 9 cities who returned tonnage data for single-family bulky.
5 Per Capita = Tonnage / Population.

Forecasts – Generation and Disposal (cont.)

Table 3-7
Single-Family Disposal Forecast (Tons)

City	County	2016	2021	2026	2031	2036
Alvin	Brazoria	6,844	7,180	7,443	7,720	8,025
Angleton	Brazoria	8,860	8,904	8,938	8,971	9,002
Bay City	Matagorda	8,414	8,680	8,905	9,118	9,263
Baytown	Harris	33,093	33,885	34,325	34,775	35,253
Bellaire	Harris	6,475	6,572	6,851	7,143	7,449
Bellville	Austin	2,800	2,898	3,005	3,116	3,231
Small Cities & Unincorporated[1]	Waller	21,517	23,845	26,326	29,017	31,776
Small Cities & Unincorporated[1]	Wharton	13,549	14,024	14,530	15,029	15,435
H-GAC TOTAL		**3,137,926**	**3,445,950**	**3,660,951**	**3,884,426**	**4,084,045**

1 "Small Cities & Unincorporated" is the remaining tonnage in each county, determined by subtracting the combined tonnage of the cities above from their respective total county tonnage in any given year.

Forecasts – Multi-Family

- Limited multi-family data available
- Assumed multi-family per capita
  - Single-family garbage + single-family bulky
  - NewGen assumed that brush/yard waste would be disposed/diverted by professional landscapers

Multi-Family Per Capita Disposal Rate: 0.6386 tons

Forecasts – Multi-Family (cont.)

Table 3-8
Multi-Family Disposal Forecast (Tons)

City	County	2016	2021	2026	2031	2036
Alvin	Brazoria	2,692	2,824	2,928	3,037	3,157
Angleton	Brazoria	3,263	3,279	3,292	3,304	3,316
Bay City	Matagorda	3,282	3,386	3,474	3,557	3,614
Baytown	Harris	14,235	14,576	14,765	14,959	15,164
Bellaire	Harris	370	376	392	409	426
Bellville	Austin	606	627	651	675	699
Small Cities & Unincorporated[1]	Waller	1,526	1,691	1,867	2,058	2,254
Small Cities & Unincorporated[1]	Wharton	321	333	345	356	366
H-GAC TOTAL		**1,122,859**	**1,191,597**	**1,244,525**	**1,298,804**	**1,349,023**

1 "Small Cities & Unincorporated" is the remaining tonnage in each county, determined by subtracting the combined tonnage of the cities above from their respective total county tonnage in any given year.

Forecasts – Commercial

- Commercial MSW is allocated based on employment

Table 3-9
City of Katy Commercial Waste Allocation

Katy Employment 2017	8,420
Total Employment H-GAC Region	3,179,732
Percentage of Total	0.26%
Total Commercial MSW Tonnage to be Allocated in 2017	4,812,250
Commercial MSW Tonnage Allocated to Katy	**12,743**

Any arithmetic differences are due to rounding.

Forecasts – Commercial (cont.)

Table 3-10
Commercial Disposal Forecast (Tons)

City	County	2016	2021	2026	2031	2036
Alvin	Brazoria	18,514	19,475	20,219	21,001	21,853
Angleton	Brazoria	12,882	12,982	13,051	13,118	13,176
Bay City	Matagorda	11,766	12,172	12,506	12,824	13,041
Baytown	Harris	46,662	47,911	48,605	49,313	50,039
Bellaire	Harris	12,983	13,215	13,797	14,404	15,035
Bellville	Austin	2,992	3,106	3,225	3,349	3,476
Small Cities & Unincorporated[1]	Waller	23,573	26,196	28,964	31,970	35,043
Small Cities & Unincorporated[1]	Wharton	14,922	15,488	16,071	16,646	17,113
H-GAC TOTAL		**4,723,400**	**5,148,780**	**5,447,405**	**5,756,838**	**6,034,325**

1 "Small Cities & Unincorporated" is the remaining tonnage in each county, determined by subtracting the combined tonnage of the cities above from their respective total county tonnage in any given year.

Total Annual Disposal Forecast

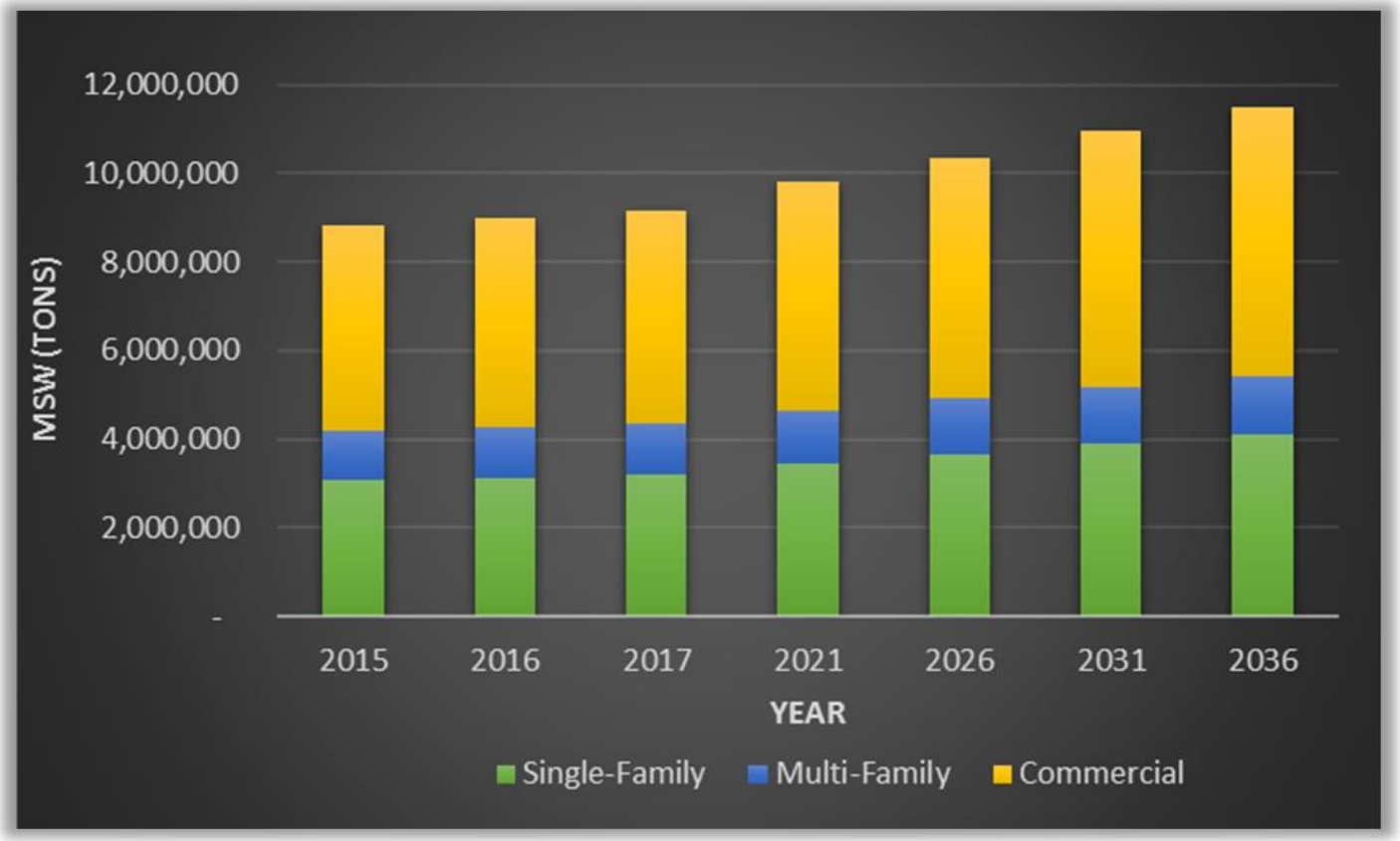


Figure 3-1: Total MSW Forecast

Total Annual Disposal Forecast (cont.)

Table 3-11
Total Disposal Forecast

City	County	2016	2021	2026	2031	2036
Alvin	Brazoria	28,051	29,480	30,590	31,758	33,035
Angleton	Brazoria	25,005	25,166	25,280	25,393	25,494
Bay City	Matagorda	23,462	24,237	24,885	25,499	25,918
Baytown	Harris	93,989	96,372	97,694	99,047	100,456
Bellaire	Harris	19,829	20,163	21,040	21,956	22,910
Bellville	Austin	6,398	6,632	6,881	7,140	7,407
Small Cities & Unincorporated[1]	Waller	46,617	51,732	57,158	63,045	69,073
Small Cities & Unincorporated[1]	Wharton	28,793	29,844	30,946	32,031	32,915
H-GAC TOTAL		**8,984,184**	**9,786,327**	**10,352,881**	**10,940,068**	**11,467,393**

1 "Small Cities & Unincorporated" is the remaining tonnage in each county, determined by subtracting the combined tonnage of the cities above from their respective total county tonnage in any given year.

Analysis

Analysis

- Analyses performed by NewGen

1. Historical landfill analysis
   - Identifies trends since 2005 study
2. Examines 2015 waste stream
   - Composition and where it is landfilled
3. Remaining landfill capacity
   - Entire region
4. Other analyses
   - Per capita rates, transfer stations, etc.

Historical Landfill Analysis

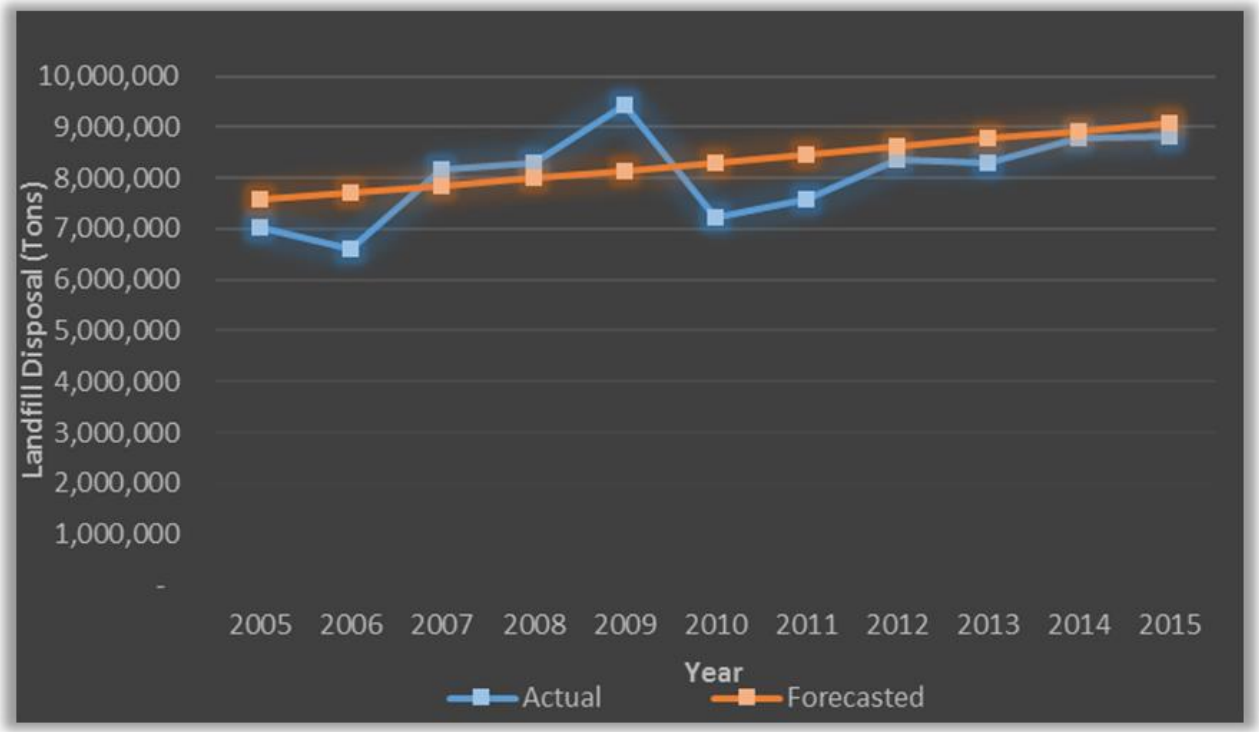


Figure 4-1: Forecasted 2005 Study Tonnage Disposed vs. Actual Annual Tonnage Disposed

The difference in actual tonnage versus forecasted tonnage fluctuates annually, but the cumulative forecasted tonnage was only 3.10% higher than the reported tonnage for the period of 2005 to 2015.

Historical Landfill Analysis (cont.)

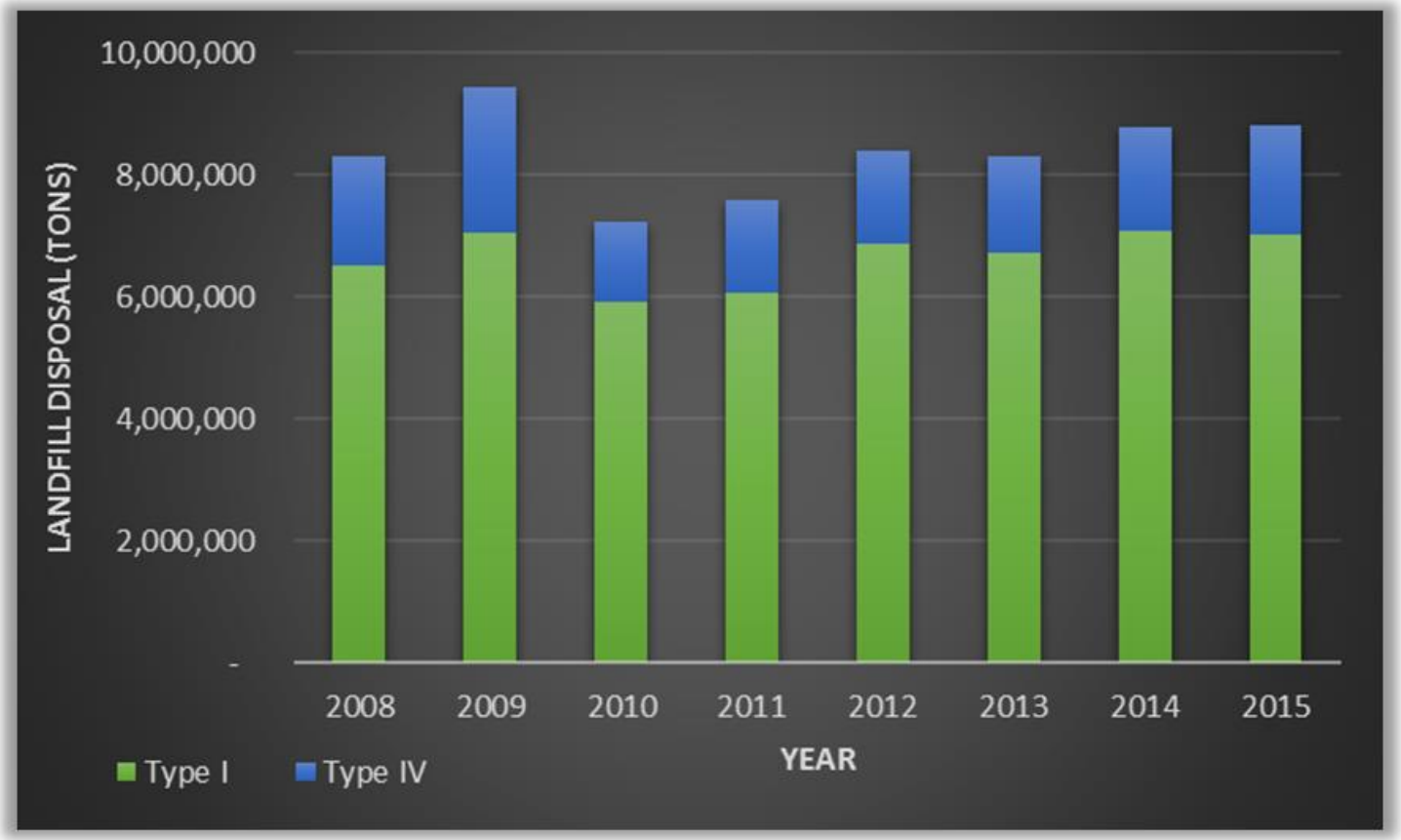


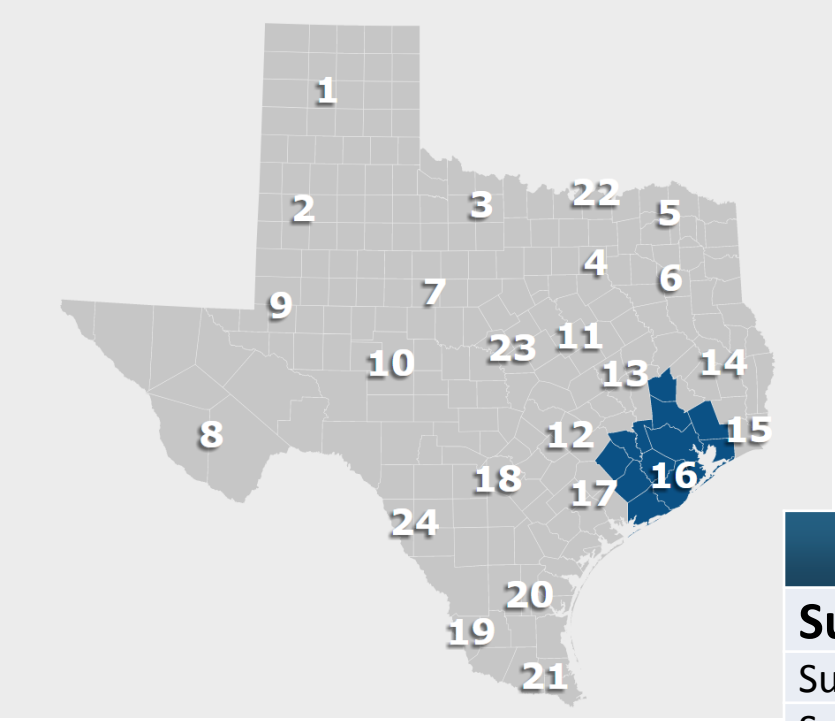
Figure 4-2: Tonnage Disposed in Type I vs. Type IV Landfills (2008-2015)

Historical Landfill Analysis (cont.)

Table 4-1
Breakdown of Total Waste Landfilled in the H-GAC Region

	2008	2009	2010	2011	2012	2013	2014	2015
Type I	78.57%	74.76%	82.18%	80.03%	82.01%	81.09%	80.74%	79.50%
Type IV	21.43%	25.24%	17.82%	19.97%	17.99%	18.91%	19.26%	20.50%

Just a reminder…



H-GAC Subregions	
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Subregion 6	Austin, Waller
Subregion 7	Fort Bend
Subregion 8	Harris

Historical Landfill Analysis (cont.)

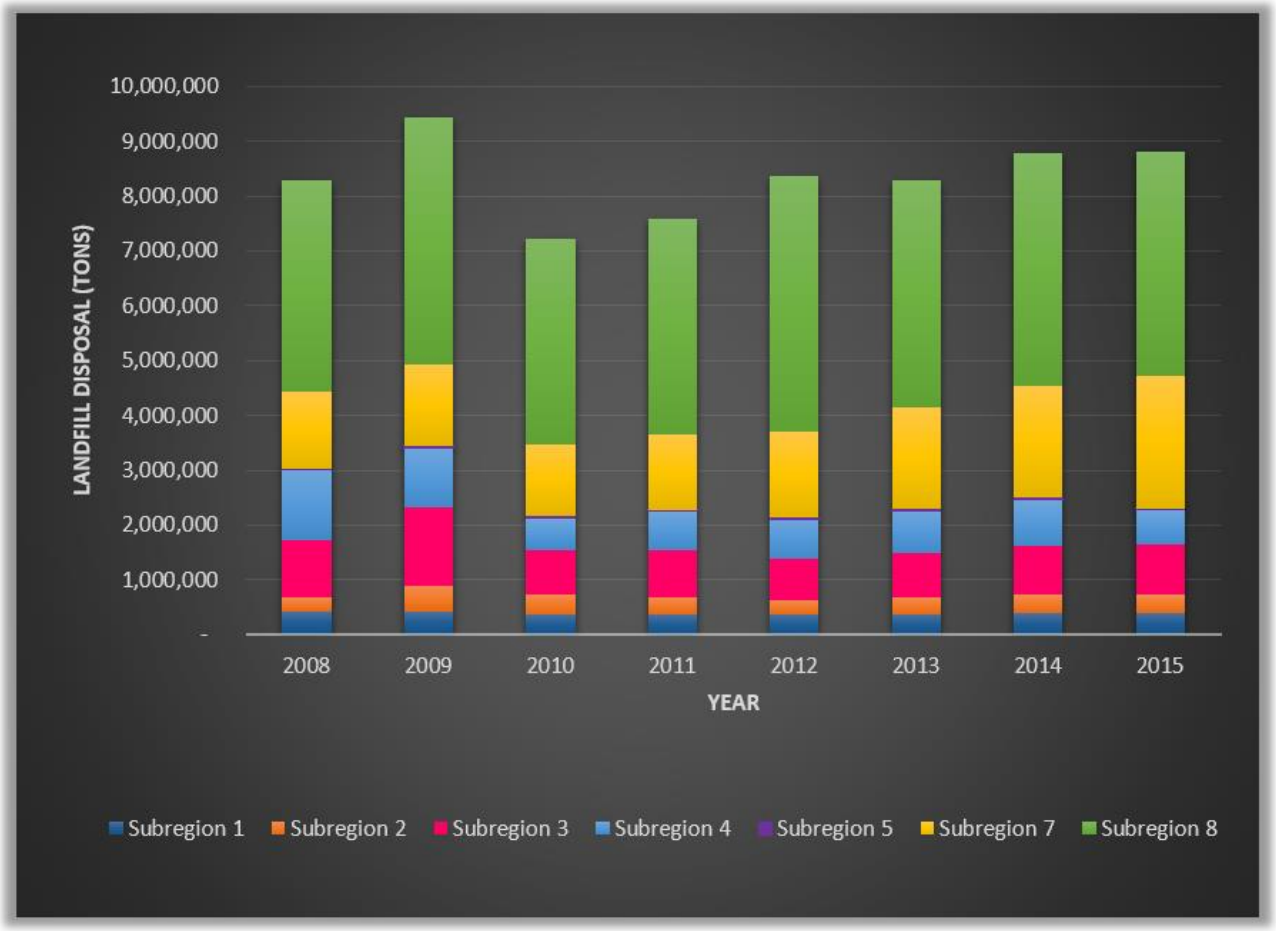


Figure 4-3: Total Tonnage Landfilled by Subregion

Subregion 6 (Austin and Walker counties) has no active landfills and has been omitted from the landfill analyses.

2015 Detailed Waste Stream Analysis

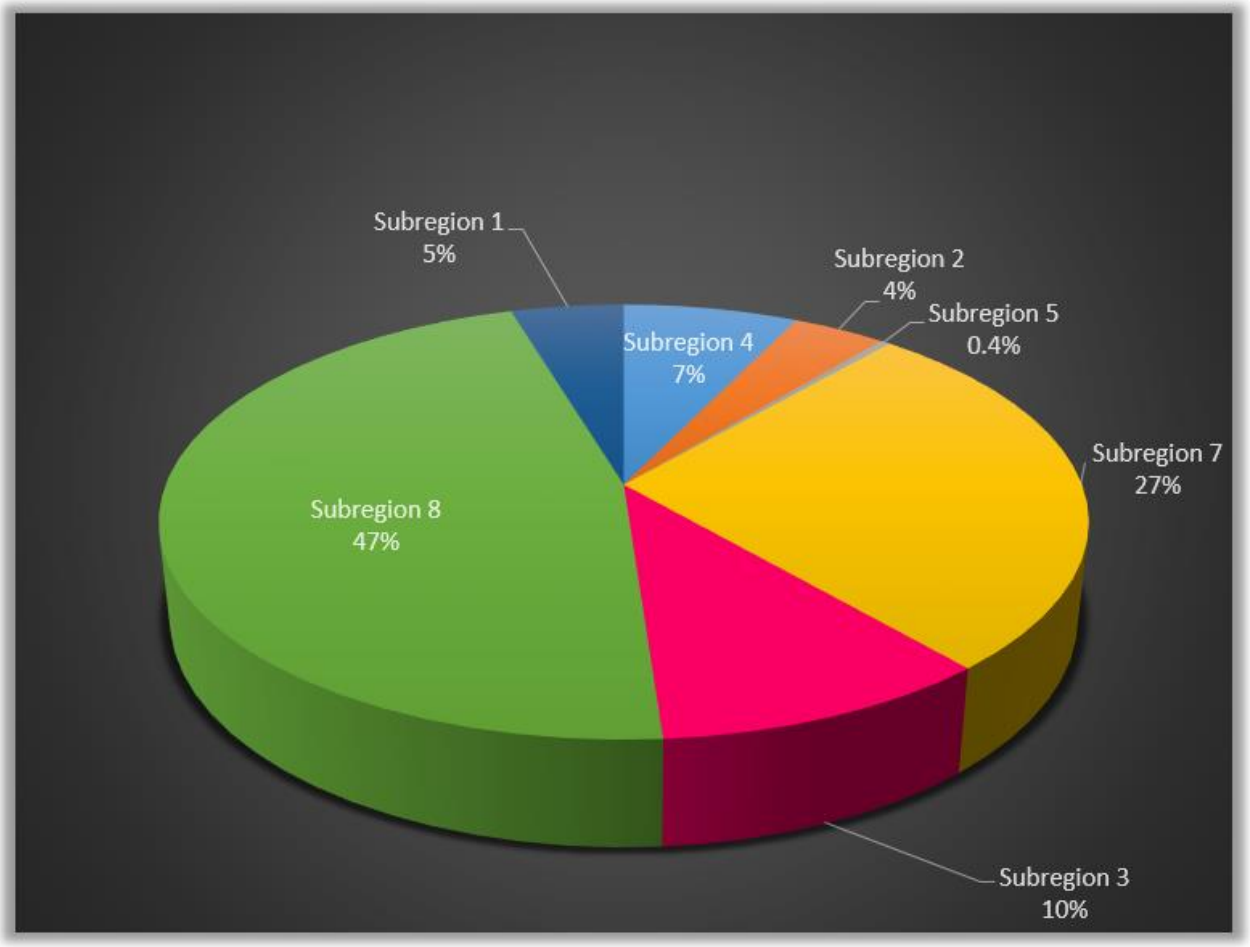


Figure 4-6: Where Waste is Disposed in the H-GAC Region

2015 Detailed Waste Stream Analysis (cont.)

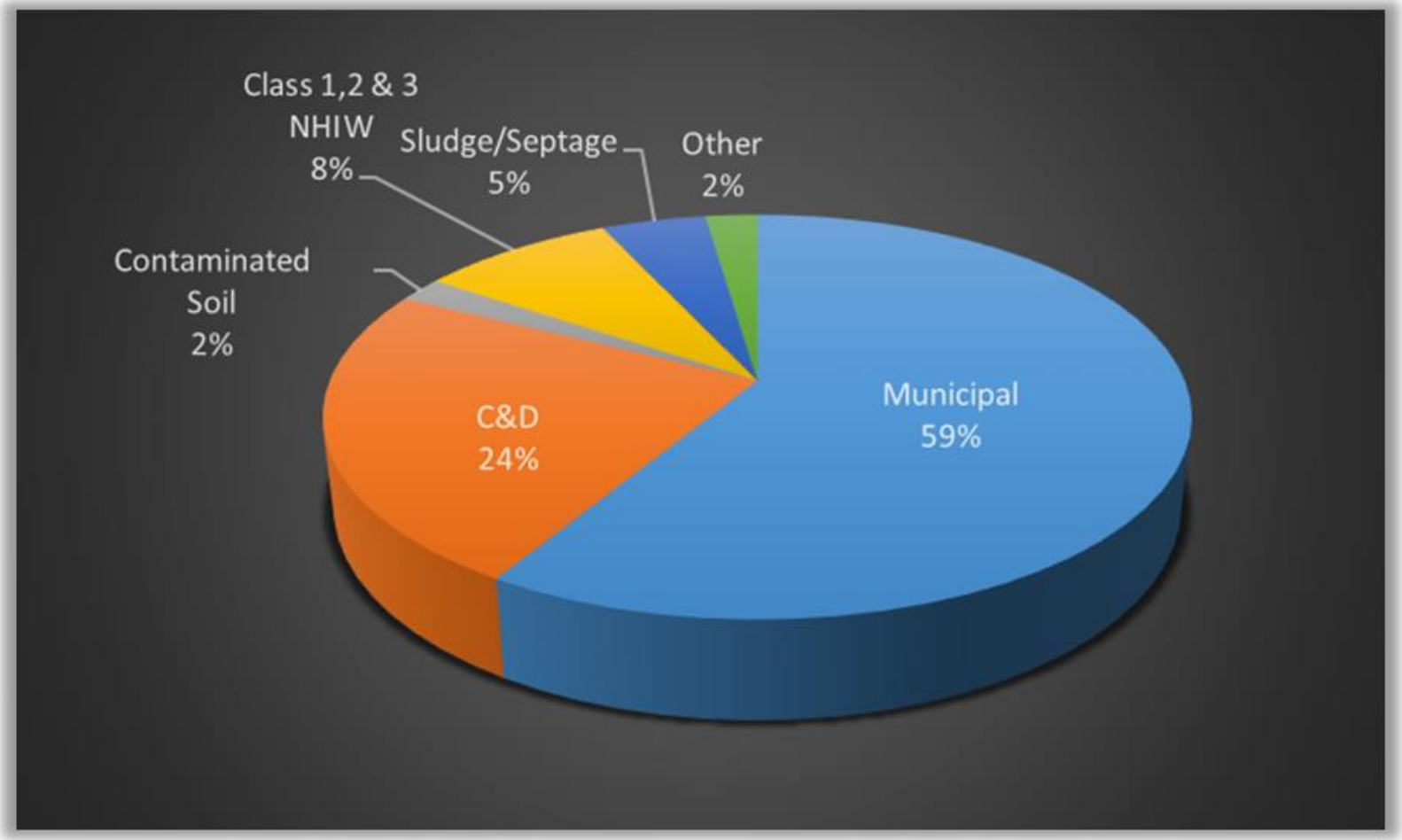


Figure 4-7: FY 2015 Waste Stream Composition

Landfill Capacity

Table 4-3
Remaining Landfill Capacity

Permit	Type	County	Permittee/ Registrant	2015 Remaining Capacity		Expansions (tons)	2015 Remaining Capacity with Expansions (tons)[1]
				Cubic Yards	Tons		
1539A	1	Brazoria	Seabreeze LF	24,107,207	21,588,004	-	21,588,004
1502A	1	Chambers	Chambers County LF	17,625,309	10,575,185	-	10,575,185
1535B	1	Chambers	Baytown LF	9,524,792	6,286,363	-	6,286,363
203A	1	Colorado	Altair LF	682,901	409,741	-	409,741
1505A	1	Fort Bend	Blue Ridge LF	146,734,412	92,295,945	-	92,295,945
2270	1	Fort Bend	Fort Bend LF	38,446,737	33,640,895	-	33,640,895
1149B	1	Galveston	Galveston County LF[2]	15,868,808	10,655,905	18,580,258	29,236,163
1721A	1	Galveston	Coastal Plains RDF	12,994,698	10,395,758	-	10,395,758
261B	1	Harris	McCarty Road LF	23,714,739	26,252,216	-	26,252,216
1193	1	Harris	Whispering Pines LF	10,902,343	10,902,343	-	10,902,343
1307D	1	Harris	Atascocita RDF	41,325,341	31,820,513	-	31,820,513
1752B	1	Montgomery	Security Landfill RDF	13,591,254	9,649,790	-	9,649,790
TYPE I SUBTOTAL				**355,518,541**	**264,472,658**	**18,580,258**	**283,052,916**

Landfill Capacity (cont.)

Permit	Type	County	Permittee/ Registrant	2015 Remaining Capacity		Expansions (tons)	2015 Remaining Capacity with Expansions (tons)[1]
				Cubic Yards	Tons		
1708	4	Brazoria	Dixie Farm Road LF	2,079,645	915,044	-	915,044
1797A	4	Fort Bend	Sprint Fort Bend LF	14,908,965	7,245,757	-	7,245,757
1849B	4	Galveston	North County LF	3,689,442	3,929,256	-	3,929,256
1301	4	Harris	Addicks Fairbanks LF	470,444	319,902	-	319,902
1403	4	Harris	Casco LF	1,621,642	729,739	-	729,739
1540A	4	Harris	Greenshadows LF	2,807,774	2,498,919	-	2,498,919
1565B	4	Harris	Fairbanks LF[3]	50,080	41,316	14,755,950	14,797,266
1586A	4	Harris	WCT Greenbelt LF	3,341,565	2,506,174	-	2,506,174
1599B	4	Harris	Greenhouse Road LF[4]	5,924,756	2,962,378	3,536,500	6,498,878
1921A	4	Harris	Cougar LF	69,396	57,252	-	57,252
2185	4	Harris	Hawthorn Park LF	201,024	136,696	-	136,696
2240B	4	Harris	Ralston Road LF[5]	768,062	576,047	758,334	1,334,381
2304	4	Harris	Tall Pines LF[6]	2,707,956	2,030,967	11,332,824	13,363,791
2344	4	Harris	Lone Star RDF	12,273,118	7,977,527	-	7,977,527
TYPE IV SUBTOTAL				**50,913,869**	**31,926,974**	**30,383,608**	**62,310,582**
TOTAL				**406,432,410**	**296,399,632**	**48,963,866**	**345,363,498**

1 This column shows capacity (**permitted and pending**) as of 2015, assuming all expansions occur.

2 Galveston County Landfill expansion permitted December 2015, remaining capacity at FYE 2016 = 28,878,670 tons, with 357,493 tons disposed during FY 2016.
FY 2015 Remaining Capacity with Expansion = 28,878,670 + 357,493 = 29,236,163 tons. Expansion Tons = 29,236,163 – 10,655,905 = 18,580,258 tons.

3 Fairbanks Landfill expansion permitted February 2016, expansion included an additional 17,886,000 cubic yards of disposal capacity.
Fairbanks Expansion Tons = (17,886,000 / 2,000) x 1,650 estimated compaction rate = 14,755,950 tons.

4 Greenhouse Road Landfill expansion is pending, expansion would include an additional 7,073,000 cubic yards of disposal capacity.
Greenhouse Road Expansion Tons = (7,073,000 / 2,000) X 1,000 estimated compaction rate = 3,536,500 tons.

5 Ralston Road Landfill expansion permitted March 2017, expansion included an additional 1,011,112 cubic yards of disposal capacity.
Ralston Road Expansion Tons = (1,011,112 / 2,000) x 1,500 estimated compaction rate = 758,334 tons.

6 Tall Pines Landfill expansion is pending, expansion would include an additional 15,110,432 cubic yards of disposal capacity.
Tall Pines Expansion Tons = (15,110,432 / 2,000) x 1,500 estimated compaction rate = 11,332,824 tons.

Disposal Forecast vs. Capacity

Entire Region

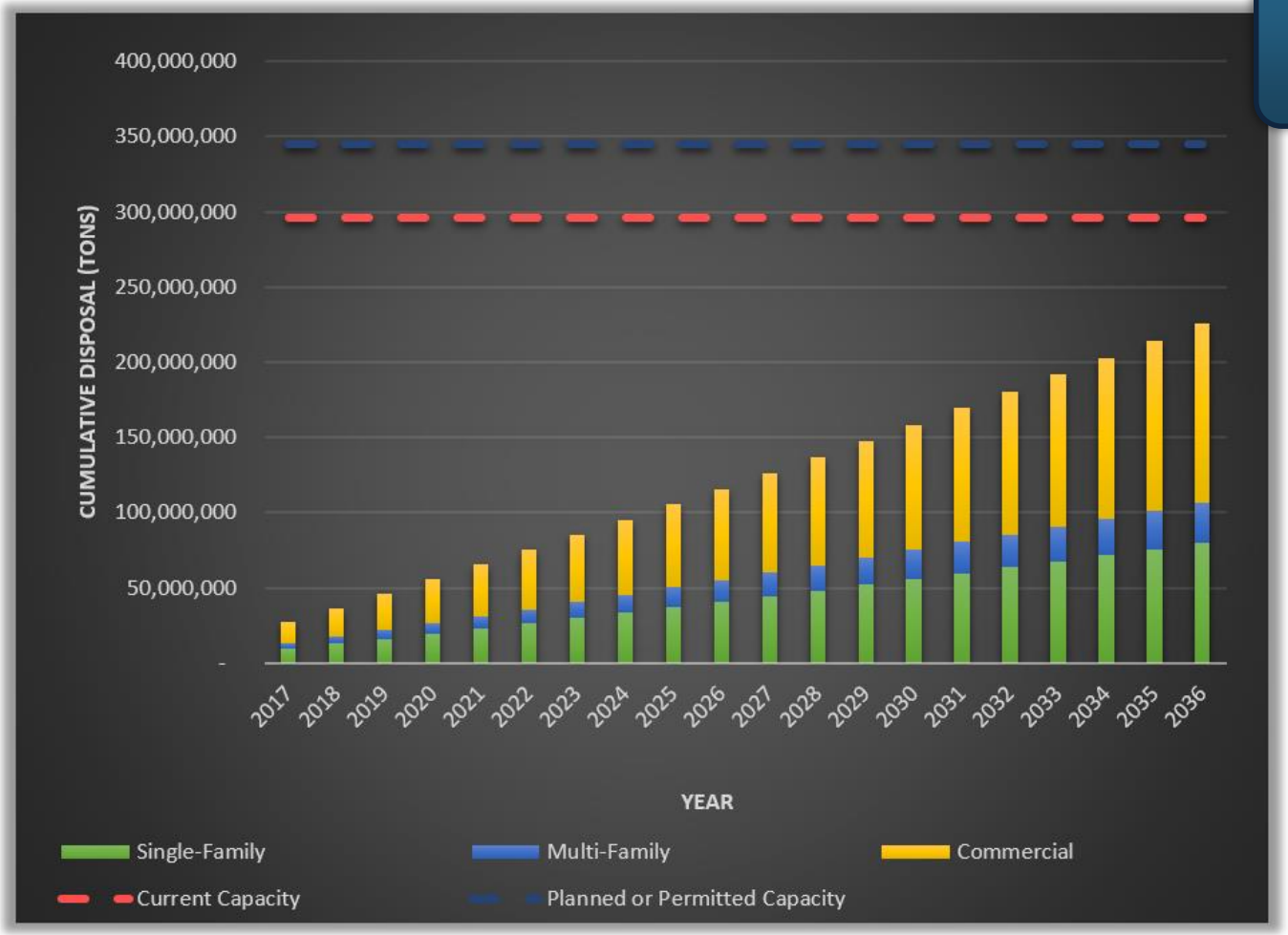


Figure 4-12: MSW Disposal Forecast vs. Disposal Capacity in the H-GAC Region

Disposal Forecast vs. Capacity (cont.)

Subregion 1

Montgomery
Walker

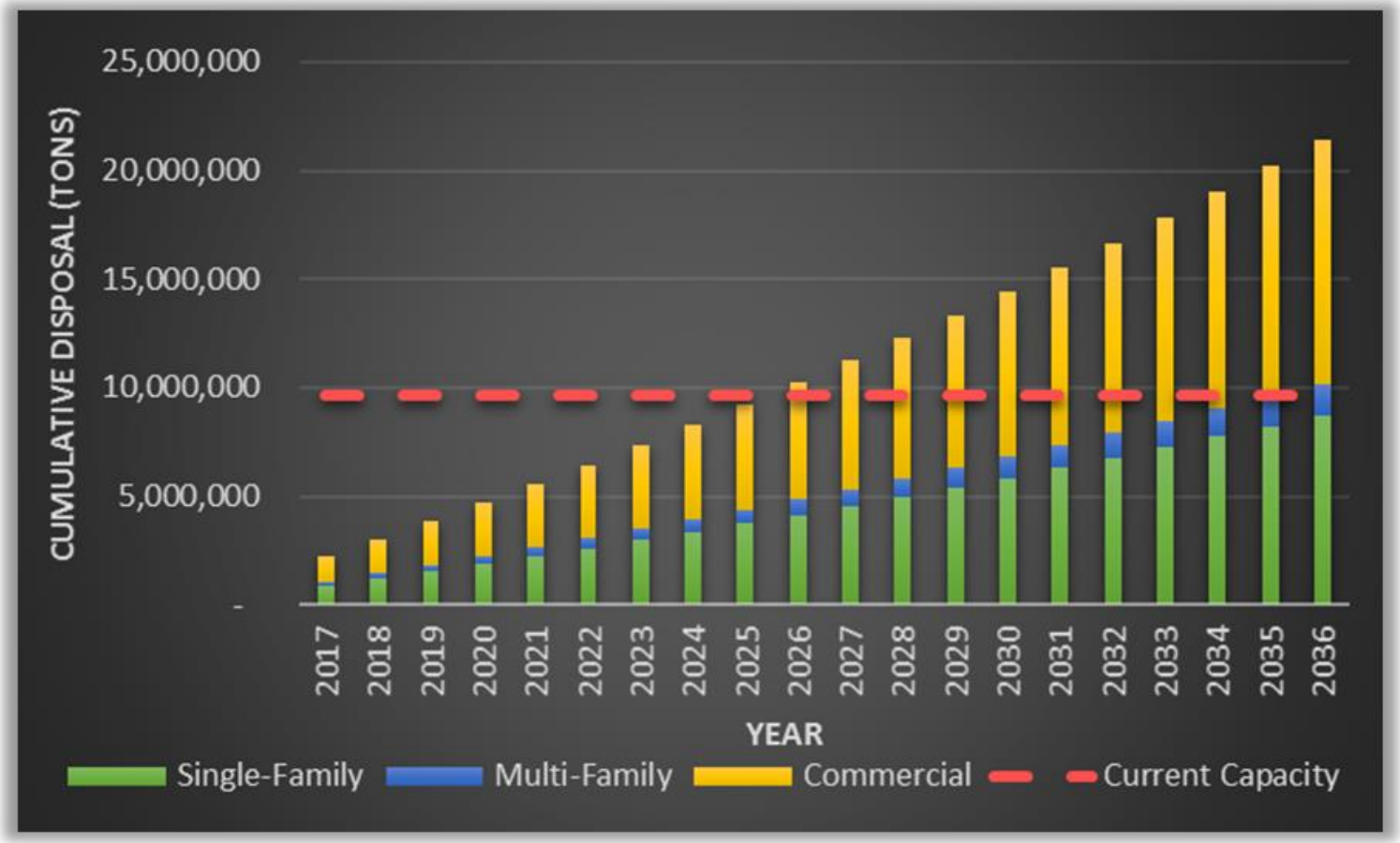


Figure 4-13: Subregion 1 Disposal Forecast vs. Disposal Capacity

Disposal Forecast vs. Capacity (cont.)

Subregion 5

Colorado
Matagorda
Wharton

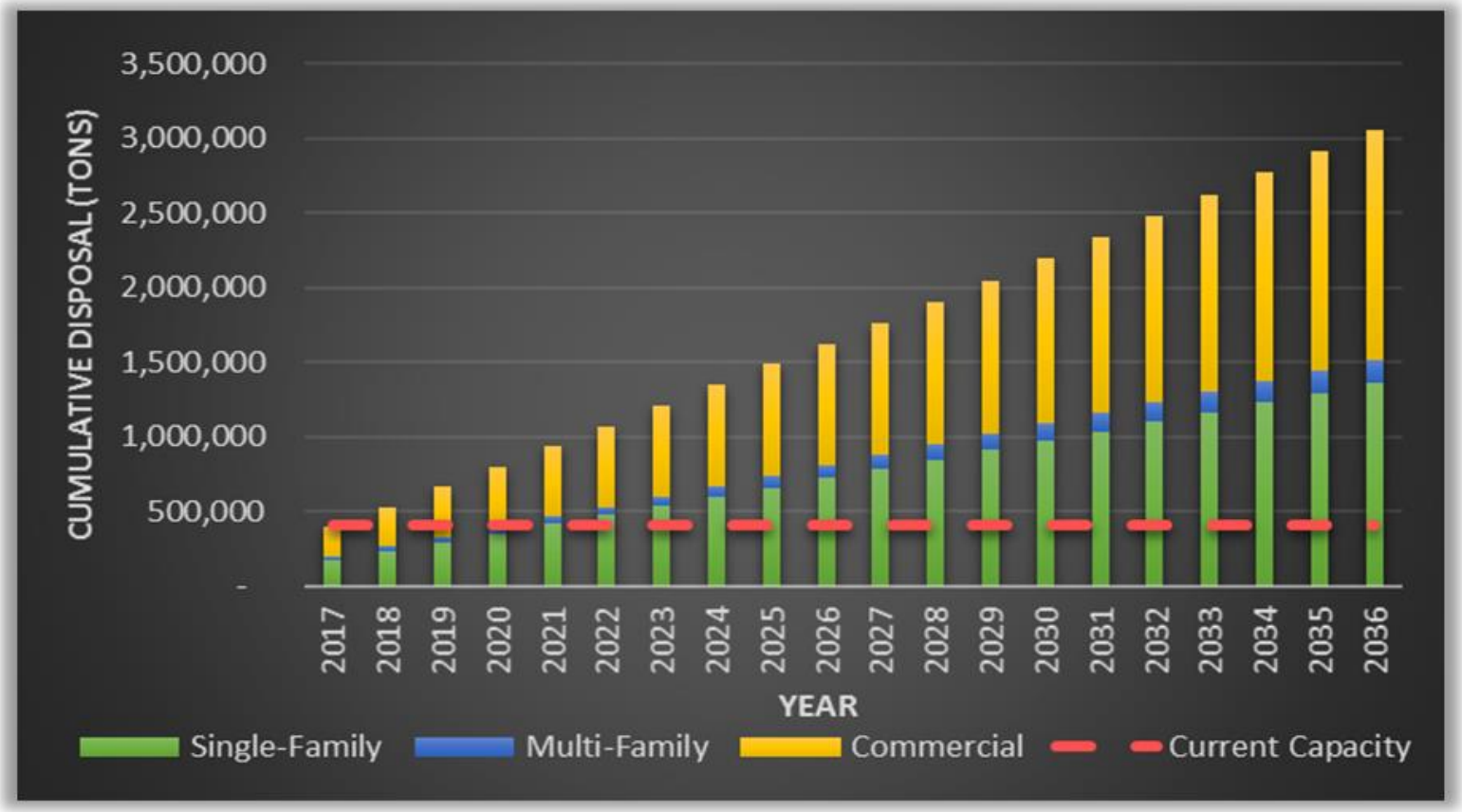


Figure 4-17: Subregion 5 Disposal Forecast vs. Disposal Capacity

Disposal Forecast vs. Capacity (cont.)

Subregion 6

Austin
Waller

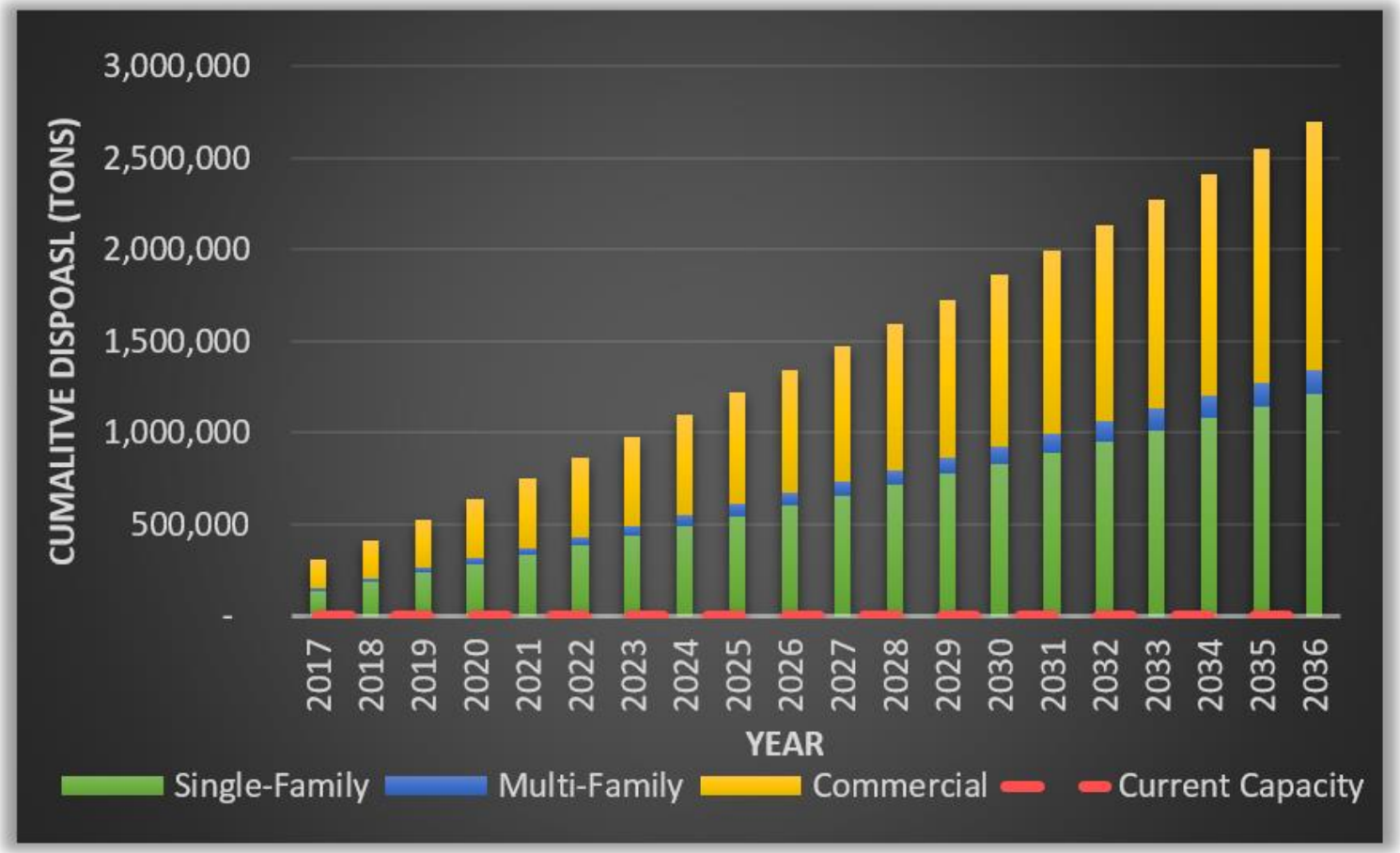


Figure 4-18: Subregion 6 Disposal Forecast vs. Disposal Capacity

Disposal Forecast vs. Capacity (cont.)

Subregion 8

Harris

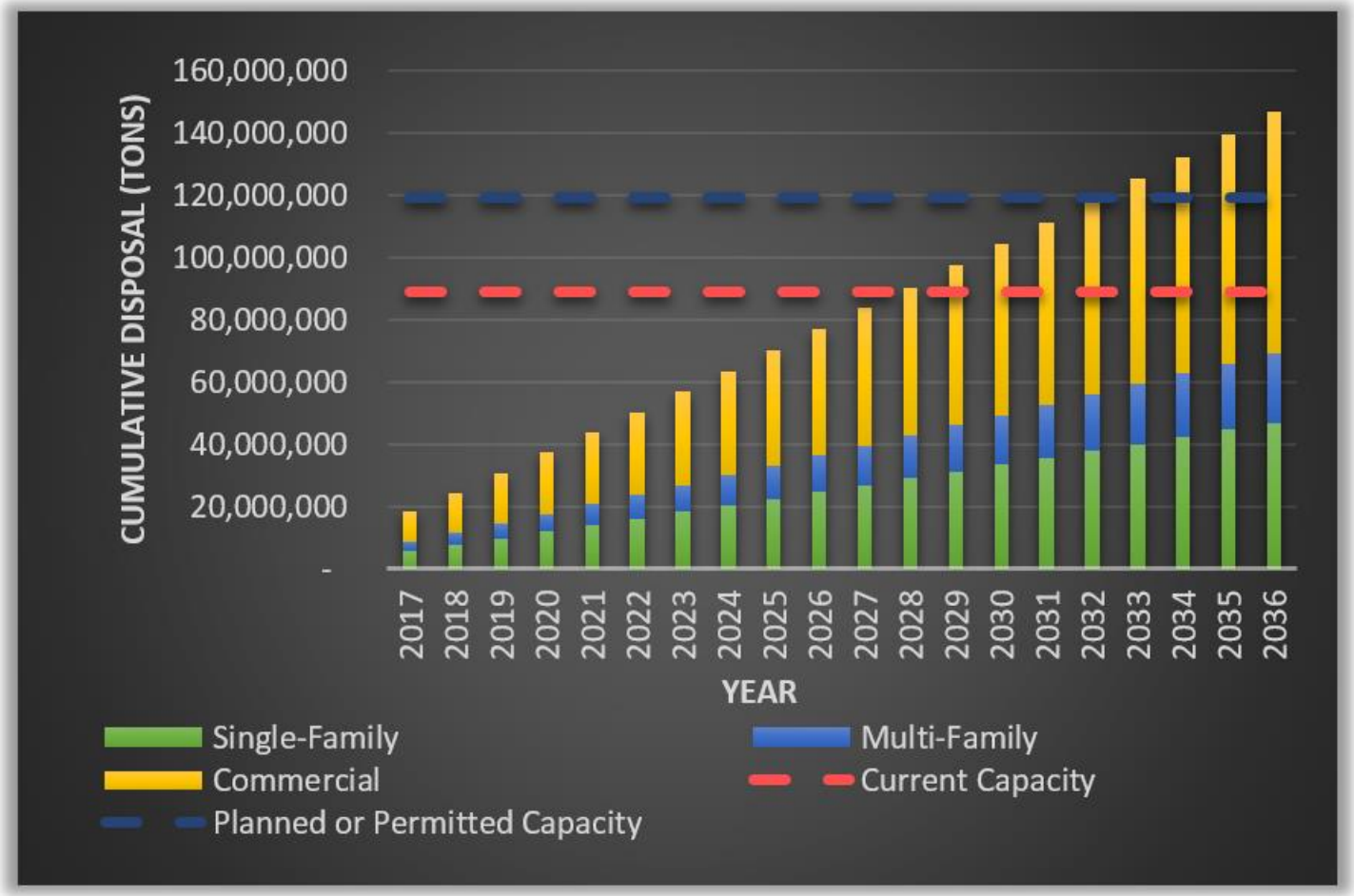


Figure 4-20: Subregion 8 Disposal Forecast vs. Disposal Capacity

Other Analyses

- Single-Family Per capita comparison

Table 4-4
Per Capita Comparison

	2005 Study (tons/capita/year)	2017 Study (tons/capita/year)	% Change	2005 Study (lbs/capita/day)	2017 Study (lbs/capita/day)
Single-Family Garbage	0.7667	0.3885	-49%	4.20	2.13
Single-Family Brush	0.1198	0.0000	-100%	0.66	-
Single-Family Bulky	0.1078 [1]	0.2501	132%	0.59	1.37
Per Capita Disposal Rate	**0.9934**	**0.6386**	**-36%**	**5.45**	**3.50**
Recycling	N/A	0.0677	N/A	N/A	0.37

1 Initial single-family bulky tonnage data in 2005 for Houston was .23, prior to being adjusted downward.

Other Analyses (cont.)

- NewGen identified several significant trends that supports the decrease in per capita disposal rates since the 2005 Study:
  - The H-GAC per capita disposal rate has decreased 9% since the 2005 Study, based on TCEQ data
    - Per capita disposal rate of 7.74 pounds per person per day in 2003 TCEQ “MSW in Texas: A Year in Review” has decreased to 7.08 pounds per person per day in the 2015 edition of the TCEQ report
  - There has been a significant increase in brush/yard waste diversion
  - There has been a large increase in recycling programs in communities and increased movement from dual-stream to single-stream recycling program
  - A decrease in packaging content associated with consumer goods

Other Analyses (cont.)

Table 4-5
Transfer Stations in the H-GAC Region

Permit	County	Permittee/ Registrant	Active in 2005 Study?	2015 Tonnage
40191	Austin	Country Waste	Y	7,959
2106	Colorado	City of Weimar TS	Y	35,889
40264	Fort Bend	Stericycle	N	2,801
164	Galveston	City of Galveston	Y	90,164
1355A	Harris	Ruffino Hills TS	N	422,691
1471	Harris	Sam Houston Recycling Center	Y	169,183
1483A	Harris	Koenig Street TS	Y	157,777
1578	Harris	Hardy Road TS	Y	405,600
1697	Harris	City of Deer Park	Y	16,092
40098	Harris	BFI Wastes Services of Texas	Y	-
40131	Harris	Houston Southeast TS	Y	219,022
40132	Harris	Houston Southwest TS	Y	292,856
40133	Harris	Houston Northwest TS	Y	226,364
40189	Harris	Egbert Type V TS	Y	56,282
40211	Harris	Sprint Recycling Center Northeast	N	128,800
40217	Harris	Tanner Road Facility	N	54,961
40236	Harris	Excell Disposal Waste Containers	N	17,516
40249	Harris	Lone Star Recycling & Disposal	N	199,983
40028	Matagorda	Matagorda County	Y	5,462
40056	Walker	City of Huntsville TS	Y	39,512
40014	Waller	City of Hempstead TS	Y	127
40282	Colorado	City of Weimar TS (New)	N	(1)
2387	Walker	City of Huntsville TS (New)	N	(1)
TOTAL TONS TRANSFERRED				**2,549,040**

1 Will replace/expand existing facilities on this list.

Other Analyses (cont.)

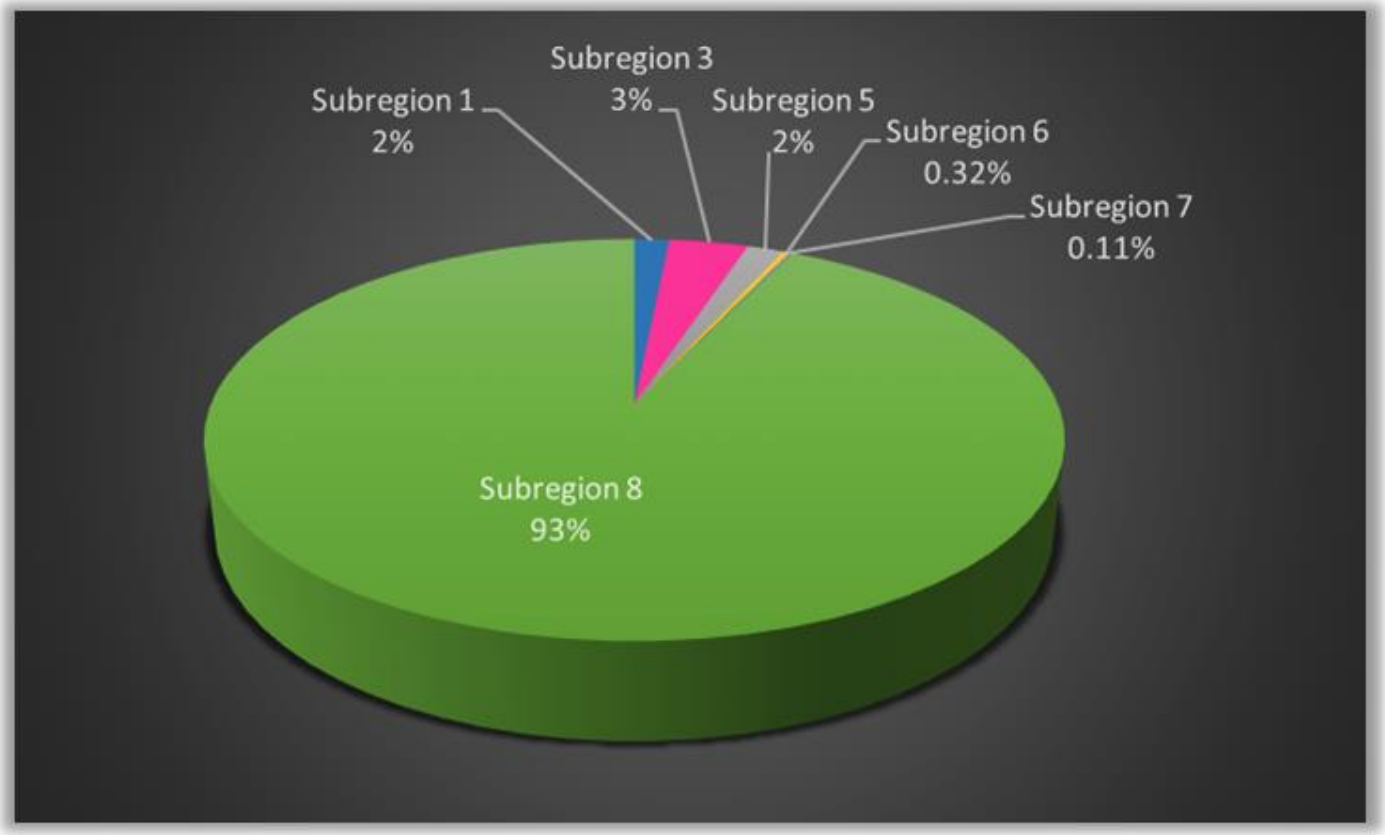


Figure 4-21:Transfer Station Tonnage by Subregion

Other Analyses (cont.)

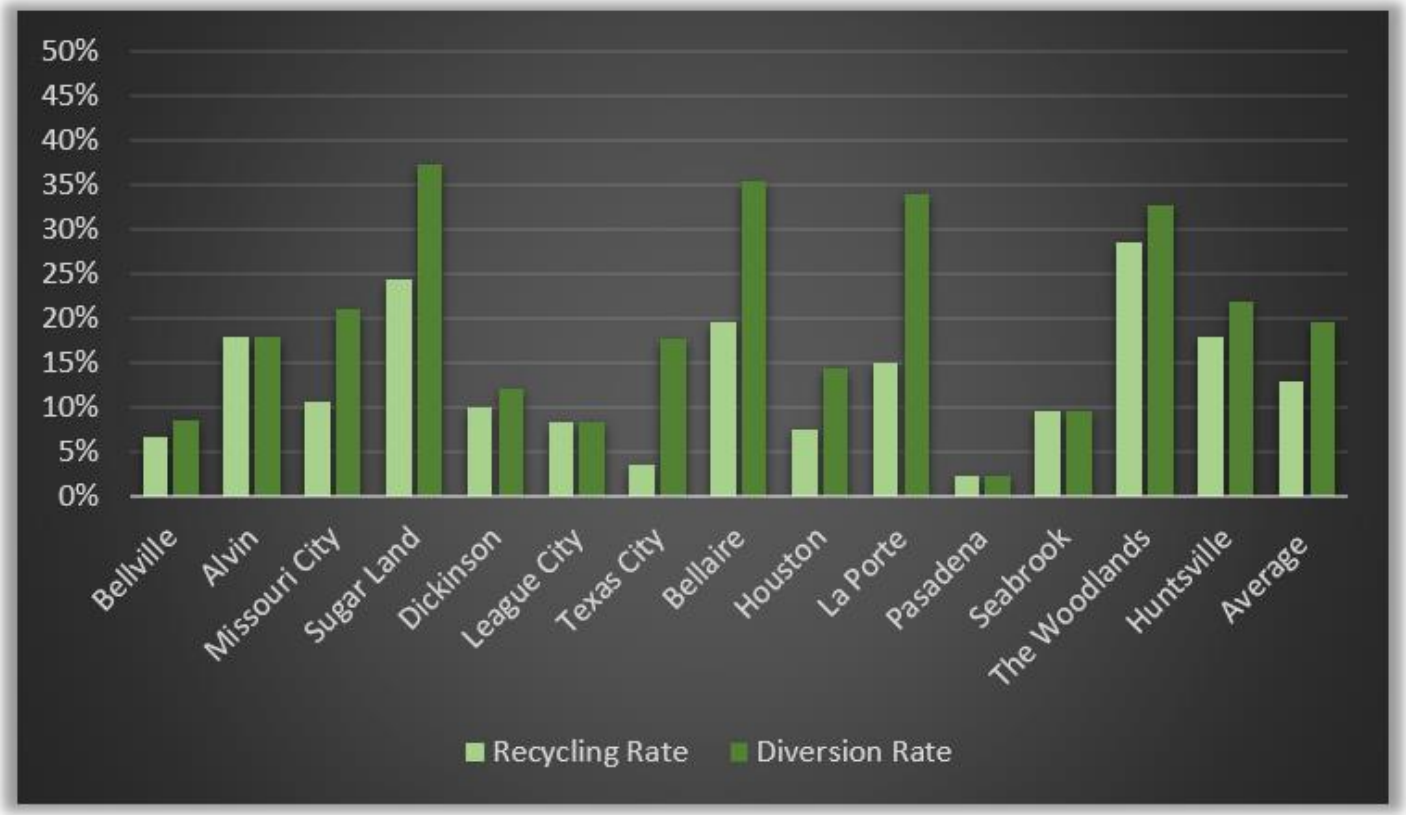
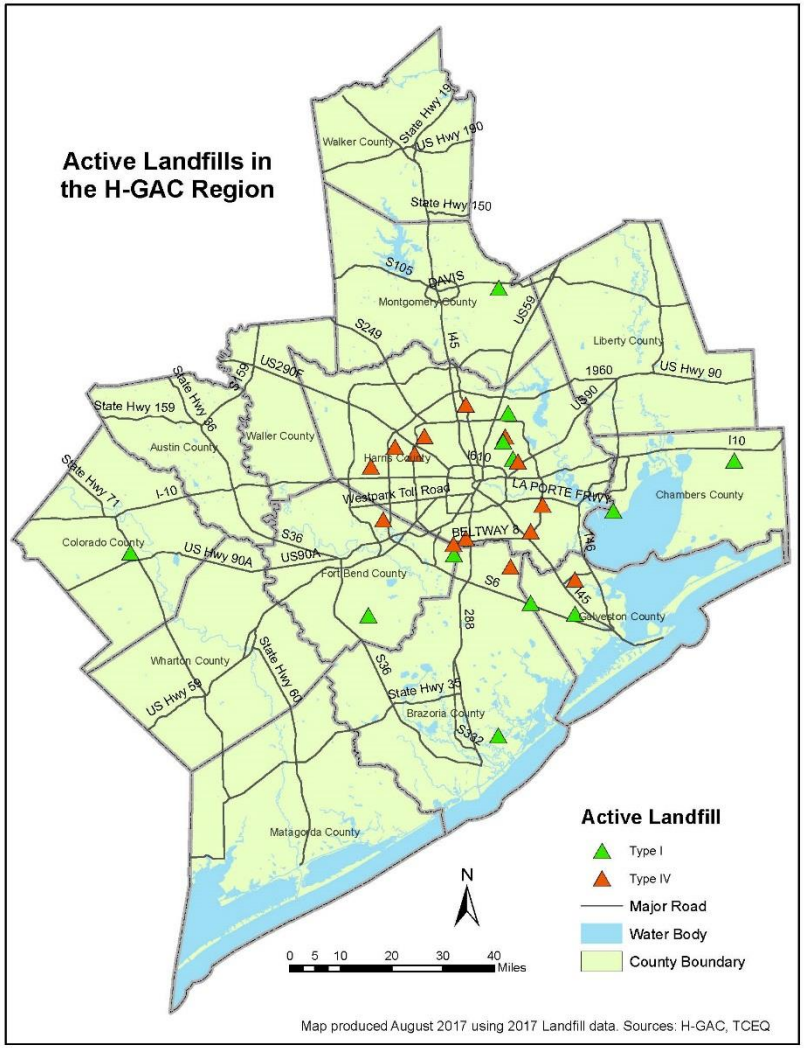


Figure 4-22: Recycling and Diversion Rates of Surveyed Cities

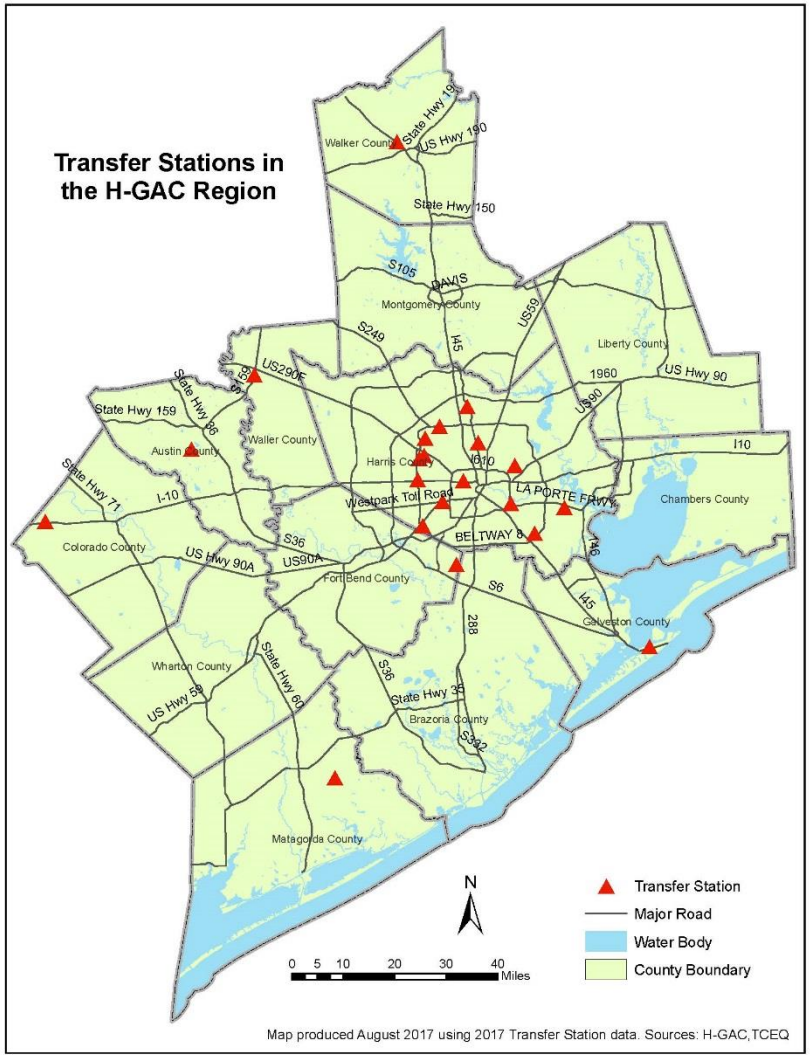
Planning Region Maps

1. Active Type I and Type IV Landfills
2. Transfer Stations
3. Citizens' Collection Stations
4. Material Recovery Facilities
5. Composters

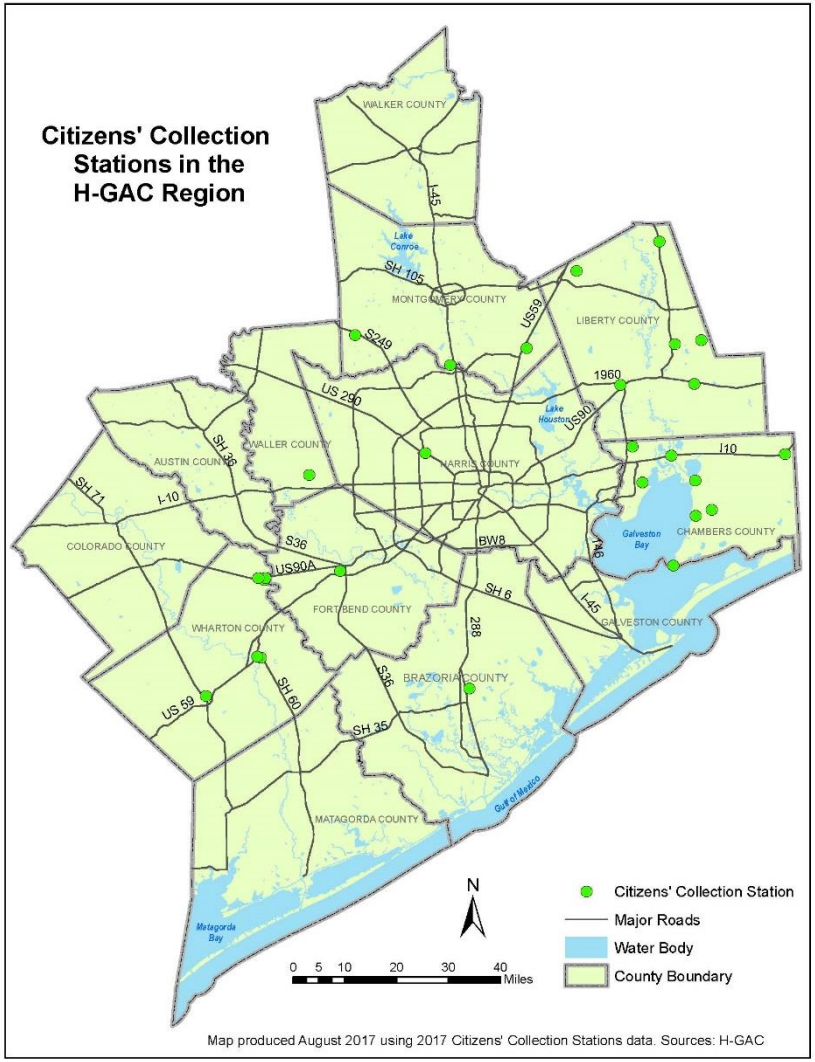
Active Landfills



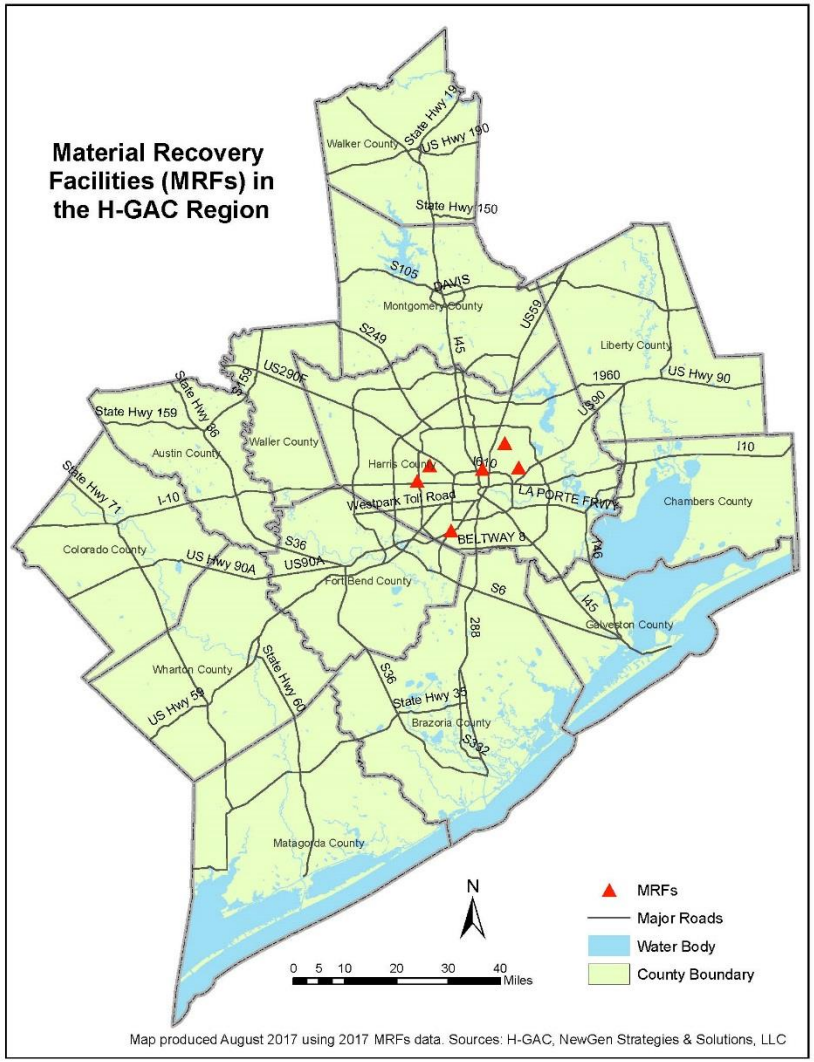
Transfer Stations



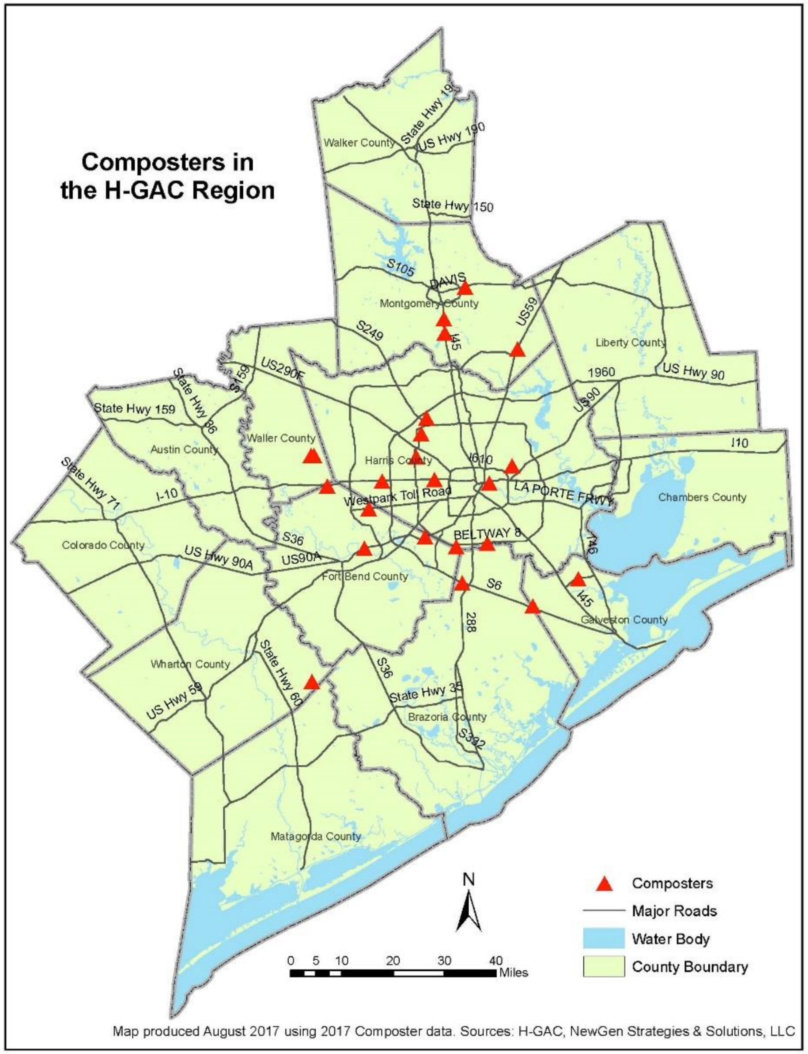
Citizens' Collection Stations



Material Recovery Facilities



Composters



Composters in the H-GAC Region
Walker County
State Hwy 19
US Hwy 190
State Hwy 150
S105
DAVIS
Montgomery County
S249
I45
US59
Liberty County
1960
US Hwy 90
US90
US290E
S159
State Hwy 159
State Hwy 36
Waller County
Austin County
Harris County
I610
I10
State Hwy 71
I-10
Westpark Toll Road
LA PORTE FRWY
Chambers County
Colorado County
US Hwy 90A
S36
US90A
BELTWAY 8
I46
Fort Bend County
S6
I45
288
Galveston County
Wharton County
State Hwy 60
US Hwy 59
S36
State Hwy 35
Brazoria County
S332
Matagorda County
N
0 5 10 20 30 40 Miles
Composters
Major Roads
Water Body
County Boundary
Map produced August 2017 using 2017 Composter data. Sources: H-GAC, NewGen Strategies & Solutions, LLC

Findings and Recommendations

Findings and Recommendations

- **Conduct brush and yard waste analysis.**
- **Identify cities** with above average recycling rates.
- **Survey cities** every two years to calculate their generation, disposal and diversion rates.
- **Analyze the impact of Hurricane Harvey** on landfill capacity in two to three years when data is available.
- **Subregion 1 (Montgomery, Walker).** It is projected Subregion 1 cumulative disposal will surpass current permitted capacity in 2026, H-GAC should examine opportunities to expand landfill capacity in the region or ensure adequate transfer stations are in place.

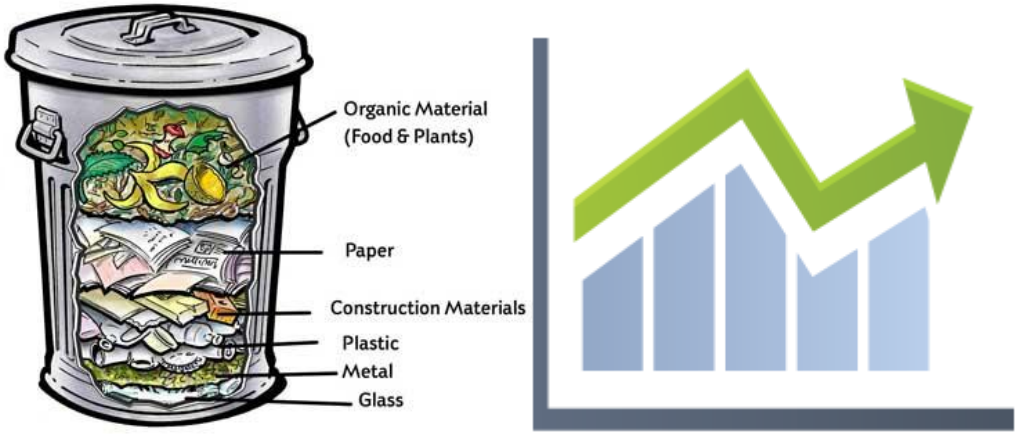
Findings and Recommendations (cont.)

- **Subregion 5 (Colorado, Matagorda, Wharton).** It is projected Subregion 5 cumulative disposal will surpass current permitted capacity during the forecast period. Further transfer station and landfill expansion in the subregion should be evaluated.
- **Subregion 6 (Austin, Waller).** This Subregion contains no active landfills. As a result, further transfer station analysis should be evaluated to ensure adequate resources for the Subregion.
- **Subregion 8 (Harris).** It is projected Subregion 8 cumulative disposal will surpass current permitted capacity during the forecast period. Further transfer station and landfill expansion in the subregion should be evaluated.

Conclusion

Conclusion

- In order to analyze the long-term disposal capacity for the H-GAC region, it is important to understand:
  - the source of the municipal solid waste (MSW) stream,
  - how the population and employment factors will change in the region over the next 20 years (2017–2036), and
  - the ultimate impact on the waste stream.







Questions or Comments?

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APPENDIX K

AIR PERMIT BY RULE DOCUMENTATION

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

The following checklist was developed by the Texas Commission on Environmental Quality (TCEQ), **Air Permits Division**, to assist applicants in determining whether or not a facility meets all of the applicable requirements. Before claiming a specific Permit by Rule (PBR), a facility must first meet all of the requirements of **Title 30 Texas Administrative Code § 106.4** (30 TAC § 106.4), "Requirements for Permitting by Rule." Only then can the applicant proceed with addressing requirements of the specific Permit by Rule being claimed.

The use of this checklist is not mandatory; however, it is the responsibility of each applicant to show how a facility being claimed under a PBR meets the general requirements of 30 TAC § 106.4 and also the specific requirements of the PBR being claimed. If all PBR requirements cannot be met, a facility will not be allowed to operate under the PBR and an application for a construction permit may be required under 30 TAC § 116.110(a).

Registration of a facility under a PBR can be performed by completing **Form PI-7** (Registration for Permits by Rule) or **Form PI-7-CERT** (Certification and Registration for Permits by Rule). The appropriate checklist should accompany the registration form. Check the most appropriate answer and include any additional information in the spaces provided. If additional space is needed, please include an extra page and reference the question number. The PBR forms, tables, checklists, and guidance documents are available from the TCEQ, Air Permits Division website at: www.tceq.texas.gov/permitting/air/nav/air_pbr.html.

1. 30 TAC § 106.4(a)(1) and (4): Emission Limits	**Answer**
List emissions in tpy for **each** facility (add additional pages or table if needed):	
Are the SO_2, PM_{10}, VOC, or other air contaminant emissions claimed for **each** facility in this PBR submittal less than 25 tpy?	☒ YES ☐ NO
Are the NO_x and CO emissions claimed for each facility in this PBR submittal less than 250 tpy?	☒ YES ☐ NO
*If the answer to both is "Yes," continue to the question below. If the answer to either question is "No," a **PBR cannot be claimed**.*	
Has any facility at the property had public notice and opportunity for comment under 30 TAC Section 116 for a regular permit or permit renewal? (This does not include public notice for voluntary emission reduction permits, grandfathered existing facility permits, or federal operating permits.)	☐ YES ☒ NO
If "Yes," skip to Section 2. If "No," continue to the questions below.	
If the site has had no public notice, please answer the following:	
Are the SO_2, PM_{10}, VOC, or other emissions claimed for **all** facilities in this PBR submittal less than 25 tpy?	☒ YES ☐ NO
Are the NO_x and CO emissions claimed for all facilities in this PBR submittal less than 250 tpy?	☒ YES ☐ NO
If the answer to both questions is "Yes," continue to Section 2.	
*If the answer to either question is "No," **a PBR cannot be claimed**. A permit will be required under Chapter 116.*	

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

2. 30 TAC § 106.4(a)(2): Nonattainment Check	Answer
Are the facilities to be claimed under this PBR located in a designated ozone nonattainment county?	☒ YES ☐ NO
If "Yes," please indicate which county by checking the appropriate box to the right.	
(Moderate) - Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties:	☒ HGB
(Moderate) - Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise counties:	☐ DFW
If "Yes," to any of the above, continue to the next question. If "No," continue to Section 3.	
Does this project trigger a nonattainment review?	☐ YES ☒ NO
Is the project's potential to emit (PTE) for emissions of VOC or NO_x increasing by 100 tpy or more?	☐ YES ☒ NO
PTE is the maximum capacity of a stationary source to emit any air pollutant under its worst-case physical and operational design unless limited by a permit, rules, or made federally enforceable by a certification.	
Is the site an existing major nonattainment site and are the emissions of VOC or NO_x increasing by 40 tpy or more?	☐ YES ☒ NO
If needed, attach contemporaneous netting calculations per nonattainment guidance.	
Additional information can be found at: www.tceq.texas.gov/permitting/air/forms/newsourcereview/tables/nsr_table8.html and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html	
*If "Yes," to any of the above, the project is a major source or a major modification and **a PBR may not be used**. A Nonattainment Permit review must be completed to authorize this project. If "No," continue to Section 3.*	
3. 30 TAC § 106.4(a)(3): Prevention of Significant Deterioration (PSD) check	
Does this project trigger a review under PSD rules?	
To determine the answer, review the information below:	
Are emissions of any regulated criteria pollutant increasing by 100 tpy of any criteria pollutant at a named source?	☐ YES ☒ NO
Are emissions of any criteria pollutant increasing by 250 tpy of any criteria pollutant at an unnamed source?	☐ YES ☒ NO
Are emissions increasing above significance levels at an existing major site?	☐ YES ☒ NO
PSD information can be found at: www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/Tables/10173tbl.pdf and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html	
*If "Yes," to any of the above, **a PBR may not be used**. A PSD Permit review must be completed to authorize the project.*	
If "No," continue to Section 4.	

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

4. 30 TAC § 106.4(a)(6): Federal Requirements	Answer
Will all facilities under this PBR meet applicable requirements of Title 40 Code of Federal Regulations (40 CFR) Part 60, New Source Performance Standards (NSPS)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable? *(answer below.)*	
Will all facilities under this PBR meet applicable requirements of 40 CFR Part 63, Hazardous Air Pollutants Maximum Achievable Control Technology (MACT) standards?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable? *(answer below.)*	
Will all facilities under this PBR meet applicable requirements of 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable? *(answer below.)*	
If "Yes" to any of the above, please attach a discussion of how the facilities will meet any applicable standards.	
5. 30 TAC § 106.4(a)(7): PBR prohibition check	
Are there any air permits at the site containing conditions which prohibit or restrict the use of PBRs?	☐ YES ☒ NO
If "Yes," PBRs may not be used or their use must meet the restrictions of the permit. A new permit or permit amendment may be required.	
List permit number(s):	
6. 30 TAC § 106.4(a)(8): NO_x Cap and Trade	
Is the facility located in Harris, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?	☒ YES ☐ NO
If "Yes," answer the question below.	
If "No," continue to Section 7.	
Will the proposed facility or group of facilities obtain required allowances for NO_x if they are subject to 30 TAC Chapter 101, Subchapter H, Division 3 (relating to the Mass Emissions Cap and Trade Program)?	☐ YES ☒ NO

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

7. Highly Reactive Volatile Organic Compounds (HRVOC) check		
Is the facility located in Harris County?		☒ YES ☐ NO
If "Yes," answer the next question. If "No," skip to the box below.		
Will the project be constructed after June 1, 2006?		☒ YES ☐ NO
If "Yes," answer the next question.		
If "No," skip to the box below.		
Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☒ NO
If "Yes," complete the information below:		
Information	**lb/hr**	**tpy**
► 1,3-butadiene		
► all isomers of butene (e.g., isobutene [2-methylpropene or isobutylene])		
► alpha-butylene (ethylethylene)		
► beta-butylene (dimethylethylene, including both cis- and trans-isomers)		
► ethylene		
► propylene		
Is the facility located in Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
Will the project be constructed after June 1, 2006?		☐ YES ☐ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☐ NO
If "Yes," complete the information below:		
Information	**lb//hr**	**tpy**
► ethylene		
► propylene		

Save Form Reset Form

Municipal Solid Waste Landfills (MSWLF) and Transfer Stations
Permit by Rule (PBR) § 106.534 Quick Screen Checklist

If the answers to all of the questions below are "YES," and the site meets the general conditions under § 106.4 through §106.8, then PBR § 106.534 can be claimed. Use the 106.534 Checklist to aid the MSW landfill applicability determination and compliance with the PBR § 106.534. If any of the answers are "NO," go to the Standard Permit (SP) § 330 Quick Screen Checklist to determine if the site qualifies for the Standard Permit.

Questions/Descriptions	Response
MSWLF With or Without a Transfer Station Co-Located at the Site	
Does this site meet the definition of municipal solid waste (MSW) landfill general conditions and limitations under § 106.4 through § 106.8?	❒ YES ❒ NO
Does the owner/operator have a valid permit or registration under 30 TAC § 330.7 (Permit Required), for one of the following type sites: Type I, Type I-AE, Type II, Type III, Type IV, or Type IV-AE, or Type V transfer station?	❒ YES ❒ NO
Does the MSWLF and transfer station (if applicable) have a design capacity less than 2.5 million megagrams (MMg) by mass or 2.5 million cubic meters (M^3) by volume, if constructed, modified (as defined in 40 CFR § 60.751), or reconstructed after May 30, 1991?	❒ YES ❒ NO
Does the MSWLF and transfer station (if applicable) have a non-methane organic compound (NMOC) emission rate less than 50 megagrams per year (50 Mg/yr) as determined by the latest version of LandGEM computer model?	❒ YES ❒ NO
Does the MSWLF site and transfer station (if applicable) have emissions of 25 tons per year, or less of volatile organic compounds (VOC) or particulate matter (PM) respectively?	❒ YES ❒ NO
Are the visible emissions at the MSWLF and transfer station (if applicable) controlled in a matter such that no visible emissions leave the property for a period exceeding 30 seconds in any six-minute period as determined by United States Environmental Protection Agency Test Method 22?	❒ YES ❒ NO
Transfer Stations Not Located at a MSWLF	
Are the visible emissions at the transfer station controlled in a matter such that no visible emissions leaves the property for a period exceeding 30 seconds in any six-minute period as determined by United States Environmental Protection Agency Test Method 22?	☑ YES ❒ NO
Does the transfer station operate in compliance with the Texas Solid Waste Disposal Act? (*Texas Health and Safety Code, Chapter 361*)	☑ YES ❒ NO
Does the Transfer Station retaining, over 1000 tons (over-night, defined as sun-down to sun-rise) have the area transfer and temporary storage enclosed by a building with a minimum exhaust ventilation of 45,000 cubic feet per minute exiting vertically from a minimum height of 16 feet above the building's foundation?	☑ YES ❒ NO

Municipal Solid Waste Landfills (MSWLF) and Transfer Stations
Permit by Rule (PBR) § 106.534 Quick Screen Checklist

If the answers to all of the questions below are "YES," and the site meets the general conditions under § 106.4 through §106.8, then PBR § 106.534 can be claimed. Use the 106.534 Checklist to aid the MSW landfill applicability determination and compliance with the PBR § 106.534. If any of the answers are "NO," go to the Standard Permit (SP) § 330 Quick Screen Checklist to determine if the site qualifies for the Standard Permit.

Questions/Descriptions	Response
MSWLF With or Without a Transfer Station Co-Located at the Site	
Does this site meet the definition of municipal solid waste (MSW) landfill general conditions and limitations under § 106.4 through § 106.8?	❒ YES ❒ NO
Does the owner/operator have a valid permit or registration under 30 TAC § 330.7 (Permit Required), for one of the following type sites: Type I, Type I-AE, Type II, Type III, Type IV, or Type IV-AE, or Type V transfer station?	❒ YES ❒ NO
Does the MSWLF and transfer station (if applicable) have a design capacity less than 2.5 million megagrams (MMg) by mass or 2.5 million cubic meters (M^3) by volume, if constructed, modified (as defined in 40 CFR § 60.751), or reconstructed after May 30, 1991?	❒ YES ❒ NO
Does the MSWLF and transfer station (if applicable) have a non-methane organic compound (NMOC) emission rate less than 50 megagrams per year (50 Mg/yr) as determined by the latest version of LandGEM computer model?	❒ YES ❒ NO
Does the MSWLF site and transfer station (if applicable) have emissions of 25 tons per year, or less of volatile organic compounds (VOC) or particulate matter (PM) respectively?	❒ YES ❒ NO
Are the visible emissions at the MSWLF and transfer station (if applicable) controlled in a matter such that no visible emissions leave the property for a period exceeding 30 seconds in any six-minute period as determined by United States Environmental Protection Agency Test Method 22?	❒ YES ❒ NO
Transfer Stations Not Located at a MSWLF	
Are the visible emissions at the transfer station controlled in a matter such that no visible emissions leaves the property for a period exceeding 30 seconds in any six-minute period as determined by United States Environmental Protection Agency Test Method 22?	☑ YES ❒ NO
Does the transfer station operate in compliance with the Texas Solid Waste Disposal Act? (*Texas Health and Safety Code, Chapter 361*)	☑ YES ❒ NO
Does the Transfer Station retaining, over 1000 tons (over-night, defined as sun-down to sun-rise) have the area transfer and temporary storage enclosed by a building with a minimum exhaust ventilation of 45,000 cubic feet per minute exiting vertically from a minimum height of 16 feet above the building's foundation?	☑ YES ❒ NO

TYPE V TRANSFER FACILITY

PERMIT APPLICATION REPORT (PAR) PACKAGE

PART III

PREPARED FOR:

CIRCLE LAKE TRANSFER, LLC

13727 OFFICE PARK DRIVE
HOUSTON, TEXAS 77070

PREPARED BY:

ALLEN
ENGINEERING
AND SCIENCE

6360 I-55 NORTH, SUITE 330
JACKSON, MISSISSIPPI 39211

SEPTEMBER 2021

TABLE OF CONTENTS

TABLES:

APPENDICES:

ACRONYMS:

AllenES	ALLEN ENGINEERING AND SCIENCE, INC.
CLT	CIRCLE LAKE TRANSFER, LLC
CLTS	CIRCLE LAKE TRANSFER STATION
MSW	MUNICIPAL SOLID WASTE
PAR	PERMIT APPLICATION REPORT
SDP	SITE DEVELOPMENT PLAN
SOP	SITE OPERATING PLAN
TAC	TEXAS ADMINISTRATIVE CODE
TCEQ	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
TPWD	TEXAS PARKS AND WILDLIFE DEPARTMENT
TxDOT	TEXAS DEPARTMENT OF TRANSPORTATION
USFWS	UNITED STATES FISH AND WILDLIFE SERVICES

1.0 INTRODUCTION

This **Site Development Plan (Part III) Permit Application Report (PAR)** has been prepared for the Circle Lake Transfer Station (hereafter also referred to as the "facility" or "site") consistent with the requirements of 30 Texas Administrative Code (TAC) §330.63. The **Site Development Plan (SDP)** addresses the criteria used in the selection and design of this facility for safeguarding the health, welfare, and physical property of the public and the environment. This narrative report includes discussion of the drainage, land use, zoning, adequacy of access roads and highways, and other considerations specific to this facility.

1.1 BACKGROUND

The Circle Lake Transfer Station (CLTS) near Pinehurst, Texas will provide an efficient means to process and transfer the waste that is generated in Montgomery County and the surrounding areas and transfer the waste to a Texas Commission on Environmental Quality (TCEQ) permitted municipal solid waste (MSW) landfill. The CLTS will be owned and operated by Circle Lake Transfer, LLC (CLT). This facility qualifies for a registration per Title 30 Texas Administrative Code (TAC) §330.9 because it will comply with Title 30 TAC §330.9(e)(1) by ensuring that the incoming waste has been reduced by at least 10 percent through source separation, curbside recycling, and other materials recovery programs. Examples of diversion include source separation of household recyclables, concrete and other construction debris diversion, brush and woody waste diversion, and other recyclable waste streams that are identified for recycling. Refer to **Part IV – Site Operating Plan (SOP) (SECTION 4.5)** for additional information regarding waste diversion. Additionally, in accordance with Title 30 TAC §330.9(e)(2), unrecovered solid waste will be transferred to a permitted municipal solid waste landfill located within 50 miles of the CLTS (e.g. the Twin Oaks Landfill in Grimes County, TCEQ Permit No. MSW-2292) or other TCEQ approved MSW Type I Landfill located within 50 miles of the CLTS.

Support facilities for the CLTS will include a site entrance road, scales(s), scale house, solid waste collection and transfer equipment parking/staging area(s), transfer station building, and employee facilities.

1.2 SITE LOCATION

The proposed facility is located 2,700 ft northeast on Circle Lake Drive from its intersection with TX-249/FM1774 (the Circle Lake Drive TX-249/FM1774 intersection is 1,000 ft north of the Aggie Expressway and 5 miles south on FM 1774 from the center of town of Magnolia, Texas) Pinehurst, Montgomery County, Texas. The proposed facility is located on a dead-end road so there is no other access.

1.3 LAND USE AND ZONING

An analysis of land use and zoning, and potential impact on the area surrounding the facility, is presented in the **Part I/II PAR, SECTION 6**.

1.4 ADEQUACY OF ACCESS ROADS AND HIGHWAYS

Adequacy of access roads and highways is addressed in **SECTION 7** of the **Part I/II PAR**. The traffic evaluation is presented in **Part I/II** of the application, with additional supporting

documentation including a comprehensive **Transportation Study** contained in **Appendix G**, concludes that for this transfer station access roads are available and adequate.

A facility layout plan showing the access points is presented on **Drawing 6** of the **Part I/II PAR Engineering Drawing Set**.

As discussed in **Part I/II**, **Appendix G**, the primary access routes to the facility on Circle Lake Road include the Aggie Expressway, TX-249, FM1774. The primary access routes are public roads and are maintained by Montgomery County and the Texas Department of Transportation (TxDOT). Routine maintenance of Circle Lake Drive should be adequate to keep these roadways in good condition over the life of the facility. There are no known weight restrictions on these roads in one-mile proximity to the facility, other than the maximum legal weight limit of 80,000 pounds.

In accordance with Title 30 TAC §330.61(i)(4), TxDOT was contacted to determine if any traffic or location restrictions apply to the facility. The TxDOT coordination information is included in **Part I/II**, **Appendix G**.

2.0 GENERAL FACILITY DESIGN

2.1 INTRODUCTION

SECTION 2 of this report has been prepared to address the general facility design topics required by 30 TAC §330.63(b).

2.2 FACILITY ACCESS CONTROL

This section describes how access will be controlled for the facility, pursuant to 30 TAC §330.63(b)1. The access controls described below are designed to prevent the entry of livestock, protect the public from exposure to potential health and safety hazards, and to discourage unauthorized entry or uncontrolled disposal of solid waste or hazardous materials. Refer to **SECTION 8** of the **SOP (Part IV)**, for operating requirements related to access control.

Fencing and gates will serve as the primary landfill access controls. Outside of operating hours, a gate constructed of 6-foot chain link fence is located across the facility entrance road south of the scale house to prevent unauthorized vehicle access. The height and material for the entrance gate may vary. The scale house entrance will be locked to prevent unauthorized access. Vehicle access to the site at points other than the entry gate will be minimized by suitable fencing, which will be a 6-foot chain link fence, 4-foot barbed wire, or other acceptable fencing.

The operating area (i.e. the transfer station) is a building. The general facility layout is shown on **Drawing 6** in the **Part I/II PAR Engineering Drawing Set**.

A facility attendant will be on-site during operating hours and will monitor and restrict access to the facility. The Scale House Attendant will be present at all hours when the transfer station facility is open to receive waste (i.e. 7:00 a.m. and 7:00 p.m., Monday through Friday and Saturday 7:00 a.m. to 12:00 (noon) p.m.). In addition to these hours to receive waste, the hours of operation for heavy equipment and transporting materials on- or off-site may be any time between the hours of 5:00 a.m. and 9:00 p.m., Monday through Friday and Saturday 7:00 a.m. to 5:00 p.m. During these heavy equipment operating hours (when the facility is closed for receiving waste) the lead operator will monitor and restrict access to the facility. The lead operator will be the responsible person to close, lock and secure the facility at the end of each operating day. In addition to the waste acceptance and operating hours, other non-waste management activities, including administrative and maintenance activities, may occur 24 hours per day, 7 days per week. The facility gates shall be closed during any other non-waste management activities and the employees on duty shall be responsible to monitor and restrict access to the facility.

In addition to the waste acceptance and operating hours, other non-waste management activities, including administrative and maintenance activities, may occur 24 hours per day, 7 days per week. The facility gates shall be closed during any other non-waste management activities and the employees on duty shall be responsible to monitor and restrict access to the facility.
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Entry to the transfer station will be restricted to designated personnel, appropriate subcontractors, approved waste haulers, TCEQ personnel, and properly identified persons

whose entry is authorized by facility management. The facility attendant will direct waste transport drivers to the transfer station. There, the drivers will be directed to a specific unloading area. Additionally, when appropriate, signs with directional arrows and/or barricades may be placed along site roads to direct traffic and control interior access.

When the site is closed, the entry gate at the main entrance/exit will be closed to prevent site access and locked when no personnel are present on site.

2.3 WASTE MOVEMENT

2.3.1 WASTE FLOW DIAGRAM

Pursuant to 30 TAC §330.63(b)(2)(A), a waste flow diagram indicating the processing and storage sequences (there is no disposal) for wastes received is shown on **Drawing 14** in the **Part I/II PAR Engineering Drawing Set**.

2.3.2 WASTE PROCESS SCHEMATIC

Pursuant to 30 TAC §330.63(b)(2)(B), a schematic indicating the waste processing and storage areas is shown on the "**Site Layout Plan**" in the **Part I/II PAR Engineering Drawing Set (Drawing 6)**. The **Site Layout Plan** shows the location of the transfer station within the registration boundary, and also for informational purposes and context, references other features on the site that are not associated with the registration. Additional drawings are provided in Part III Attachment 1 to show the layout of the transfer station within the registration boundary at an enlarged scale, and also show the traffic flow patterns to help better define the waste process schematics. Note that there is no disposal proposed as part of this registration application, and there is no phased sequence of development (the transfer station will be built all at once in order to commence operations).

2.3.3 VENTILATION AND ODOR CONTROL

As required by 30 TAC §330.63(b)(2)(C), the transfer station structure is designed to provide adequate ventilation. Ventilation in the transfer station building will be provided by the openings through which waste hauling vehicles will enter and exit, and vents which will be installed on the building roof. The transfer facility doors on each end of the transfer truck loadout area may also be opened, if needed, for additional ventilation. Excessive dust and particulates that occur at the transfer station facility will be controlled using water sprays or similar methods. No significant air pollution emissions are expected to result from the operation of the transfer station.

The transfer station will be operated to provide adequate ventilation for odor control and employee safety. The operator will prevent nuisance odors from leaving the transfer station registration boundary. If nuisance odors are detected near the transfer station registration boundary, the site will immediately take action to abate the condition. Odors are controlled by limiting operations to within the structure and limiting the time solid waste may be stored on the tipping floor (refer to **Part IV – SOP**, **SECTIONS 4** and **8**). All processing of solid waste will occur within the transfer station structure. Mist systems (using water) may be used within the transfer station structure to suppress odors, if needed. The mist (or similar) systems may also be used to control odors through the addition of chemical deodorizers. Ponding water will be controlled to avoid objectionable odors.

2.3.4 GENERALIZED CONSTRUCTION DETAILS REQUIRED BY §330.63(b)(2)(D – F)

The general facility layout can be seen on **Drawing 6** of the **Part I/II PAR Engineering Drawing Set** and contains all building layouts and dimensions, estimated finished floor elevations, general material specifications, locations of all roads and parking, all easements located on the property, proposed detention pond location, estimated retaining wall locations, and the proposed septic drip field.

The facility will contain four scales onsite. Two scales will be for collection trucks, located along the ingress/egress routes of the facility for collection trucks, and two will be for transfer trucks, located within the facility loadout area. There is expected to be two attendant buildings located adjacent to the collection truck scales, and one small office building located along the southeastern corner of the transfer station building.

The proposed transfer station building will be a pre-engineered metal building with a roof, exterior walls, openings for collection vehicles to enter the building to unload, covered loadout, and ancillary support features. The inside of the transfer station building will have a reinforced concrete slab (minimum 4,000 psi 28-day compression strength) tipping floor with an area of approximately 30,000 square feet, and reinforced concrete push walls to resist typical forces of transfer station operations.

The tipping floor is designed with a slope to drain toward the western end of the building. The eastern side of the building has openings for collection vehicles to enter the tipping floor for unloading. The western side of the building has one entrance and exit for loading of transfer trailer vehicles. The tipping floor is designed with a slope to drain towards the center of the building and flow to the northwest to the contaminated water tank for off-site transfer. Additionally, there is a collection sump in the transfer truck loading area to collect any incidental stormwater flowing into the facility's loading area or washdown water from the same source. This water will be routed to the contaminated water tank mentioned above. The contaminated water tank will be a minimum 2,000 gallon (nominal) holding tank.

2.3.5 TAC §330.63(B)(2)(G – H)

Waste grease, oil, or sludge will not be received or accepted at the facility. Other than contaminated water, the transfer station facility will not produce any effluent. All contaminated water will be managed in accordance with the procedures set forth in **SECTION 5** of **Part IV - SOP**.

The **Part I/II PAR Engineering Drawing Set** presents the site plan, general construction details and associated design criteria for the transfer station.

2.3.6 NOISE POLLUTION CONTROL

As required by 30 TAC §330.63(b)(2)(I), the transfer station will be designed to control noise pollution. Since transfer station activities take place within the building structure, generated noise is mostly confined to the structure. The facility is located on dead-end road next to industrial facilities. Furthermore, it appears that the nearest residential area is approximately a half mile to the southwest across Texas Highway 249. This road that the facility is located on does not receive regular public traffic. The transfer station structure is located at a sufficient

distance from nearby residences and businesses so that activities at the site are not readily visible.

Per the Montgomery County Commissioners Court, the Noise Ordinance provided states that "…the Legislature has not conferred upon counties the authority to regulate noise in their unincorporated areas…". As stated in **Part I/II - PAR, SECTION 6**, the facility is located in an unincorporated area of Montgomery County. However, the letter further states that under "Section 42.01(c)(2) of the Texas Penal Code states that a noise is presumed unreasonable if the decibel level exceeds 85. Noise is considered unreasonable – and in violation of the stature – if it is 85 decibels at the point where it is observed by others.". This letter can be found within **Part I/II Appendix F**.

As stated previously, this is an indoor facility, located next to other industrial facilities, surrounding mostly by forested area, with the nearest residential area approximately 2,600 feet to the southwest on the other side of Texas Highway 249, a major highway. It is Allen Engineering and Science, Inc.'s (AllenES') opinion that the facility will not exceed a decibel level of 85 at any point outside of the property boundary.

2.4 SANITATION AND WATER POLLUTION CONTROL

As required by 30 TAC §330.63(b)(3) and (4), the transfer station will be designed to facilitate proper cleaning. The transfer station structure will include a metal roof that covers the concrete slab waste processing area (tipping floor) and the waste storage area. Waste will be unloaded and processed on the concrete tipping floor. The operator of the facility will control surface drainage in the vicinity of the facility to prevent surface water runoff onto, into, and off of the waste tipping and storage areas. The transfer station site will be graded to prevent run-on drainage and flow of stormwater onto the tipping floor. The push walls will be composed of reinforced concrete to resist typical forces on transfer operations and be able to be hosed down and scrubbed. Other walls in operating areas will be masonry, concrete, or other hard-surfaced materials that can be hosed down and scrubbed by the operator.

The tipping floor is designed with a slope to drain toward the center and then to the northwest corner of the building. The loadout area floor is designed with a slope to drain toward a grate drain in the northwestern area of the loadout floor. The grate drains will convey water (primarily wash water), which will be managed as contaminated water, to a minimum 2,000 gallon (nominal) holding tank.

The facility will be designed with the necessary utility connections to allow for the adequate cleaning of the facility with water, (steam or pressure).

Details of water supply connections and grate drains can be found in **Part I/II PAR Engineering Drawing Set** presents the site plan, general construction details and associated design criteria for the transfer station.

Sanitation procedures will be conducted by the Operator in accordance with the procedures set forth in **SECTION 8.11** of **Part IV - SOP**.

2.4.1 SURFACE WATER AND GROUNDWATER PROTECTION

As required by 30 TAC §330.63(b)(3)(A) and §330.63(b)(4), surface drainage in the vicinity of the facility will be controlled to prevent surface water runoff onto, into, and off the treatment area. Based on the facility design information presented in this Site Development Plan, the transfer station is designed to prevent discharge of pollutants into water of the United States, as defined by the Texas Water Code and the Federal Clean Water Act, respectively. The facility will be constructed, maintained, and operated to manage run-on and runoff during the peak discharge of a 25-year rainfall event and prevent the off-site discharge of waste material, including, but not limited to, in-process and/or processed materials. Surface water drainage in and around the e facility will be controlled to prevent surface water from running into, onto, and off the processing area.

Waste grease, oil, or sludge will not be received or accepted at the facility. Other than contaminated water, the transfer station facility will not produce any effluent. All contaminated water will be managed in accordance with the procedures set forth in **SECTION 5** of **Part IV - SOP**.

Since all contaminated water is managed in a controlled manner, as discussed above, surface water and groundwater are protected.

2.4.2 FLOOR WASH DOWN

As required by 30 TAC §330.63(b)(3)(A) through (D) and §330.243(a), the transfer station will be constructed to facilitate proper cleaning. Waste processing operations within the transfer station structure will be conducted on a covered tipping floor. All floors in operating areas will be constructed of reinforced concrete. The push walls will be composed of reinforced concrete to resist typical forces on transfer operations and be able to be hosed down and scrubbed. Other walls in operating areas will be masonry, concrete, or other hard-surfaced materials that can be hosed down and scrubbed by the operator. A connection to a supply of water under pressure will be provided for cleaning. All contaminated water will be managed in accordance with the procedures set forth in **SECTION 5** of **Part IV - SOP**.

Water supply for wash down purposes will be provided by an on-site water well with an appropriately sized water tank that is capable of providing the facility with an around-the-dock supply of potable water.

Details of water supply storage, water connections and grate drains can be found in **Part I/II PAR Engineering Drawing Set** presents the site plan, general construction details and associated design criteria for the transfer station.

2.5 PROTECTION OF ENDANGERED SPECIES

Pursuant to 30 TAC §330.61(n), §330.63(b)(5), and §330.551, site specific endangered and threatened species assessments were conducted by a qualified biologist for this project site. The assessment included a review of state and federal reference information of the United States Fish and Wildlife Service (USFWS) and the Texas Parks and Wildlife Department (TPWD) and a field survey for threatened or endangered species and their habitats. The endangered species assessment and related documentation is provided in **Part I/II, Appendix H**.

The outcome of the assessment is that no federal or state-listed endangered or threatened species, or any critical habitats for such species, were found at the site. The findings are that ongoing facility development and operation is not expected to cause or result in the destruction or adverse modification of critical habitats or contribute to the taking or harming of any endangered or threatened species.

However, the TPWD did offer the following comments and recommendations concerning the development of the proposed facility in their response letter:

- Recommendation: For soil stabilization within the proposed project area, TPWD recommends erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes, birds, and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife, TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding rather than erosion control blankets or mats due to a reduced risk to wildlife. If erosion control blankets or mats will be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic mesh matting and hydromulch containing microplastics should be avoided.
- Recommendation: During construction, operation, and maintenance of the proposed facility, TPWD recommends observing slow (25 miles per hour, or less) speed limits within the project site. Reduced speed limits would allow personnel to see wildlife in the vehicle path and avoid harming them.
- Recommendation: TPWD recommends any vegetation clearing be scheduled outside of the general bird nesting season of March 15th to September 15th; however, if clearing must occur during nesting season, nest surveys should be conducted prior to clearing. Nest surveys should be conducted not more than 5 days prior to scheduled clearing to maximize detection of active nests. If nests are observed during surveys, a vegetation buffer area of no less than 150-feet in diameter should remain around the nest until all young have fledged.
- Recommendation: Please review the Federal Law: Migratory Bird Treaty Act section for recommendations as they are also applicable for Chapter 64 of the TPW Code compliance.

The CLTS will incorporate the four (4) above referenced TPWD recommendations into the facility's best management practices.

3.0 SURFACE WATER DRAINAGE REPORT

3.1 INTRODUCTION

SECTION 3 of this report has been prepared to address the applicable surface water drainage design topics required by 30 TAC §330.63(c).

3.2 DRAINAGE DESIGN

The transfer station will be constructed, maintained, and operated to manage run-on and runoff during the peak discharge of a 25-year storm event and prevent the off-site discharge of waste material, including, but not limited to, in-process and/or processed materials. Surface water drainage in and around the facility will be controlled to minimize surface water running onto, into, and off the processing area. Details for the drainage system and associated design demonstrations are included in within this report as **Appendix A, Surface Water Drainage Report**.

3.3 FLOODPLAIN CONSIDERATIONS

As shown on **Drawing 12** in the **Part I/II PAR Engineering Drawing Set** and documented/discussed further in **SECTION 11** of the **Part I/II PAR**, the transfer station area is not located within a 100-year floodplain.

4.0 WASTE PROCESSING FACILITY DESIGN

4.1 INTRODUCTION

SECTION 4 of this report presents waste management unit design information, pursuant to 30 TAC §330.63(d)(1)(A). The general facility design was previously addressed in **SECTION 2**. **Drawing 6** of the **Part I/II PAR Engineering Drawing Set** provides the supporting engineering drawings, plans, specifications, and calculations for the design of the waste processing facility.

4.2 WASTE OPERATIONS

Pursuant to 30 TAC §330.63(d)(1)(A), the transfer station facility is designed for rapid processing and minimum detention of solid waste, up to and including the registered maximum daily waste acceptance rate as set forth in the **Waste Acceptance Plan** (see **SECTION 3** of the **Part I/II PAR**). The area to be used for waste transfer operations will be the building footprint, which is approximately 135 feet by 225 feet.

All solid waste capable of creating public health hazards or nuisances will be stored within the building, processed, or transferred promptly, and will not be allowed to result in a nuisance or public health hazard. All solid waste stored overnight at the facility will either be in a transfer trailer with a tarp over it or on the tipping floor with a tarp over it. Recyclable materials on the tipping floor or within enclosed containers will not require tarping.

Procedures for the unloading of waste are provided in **SECTION 8** of **Part IV - SOP**. This includes procedures for traffic control on-site, and procedures for the detection and prevention of unauthorized waste.

Unloading of waste in unauthorized areas is prohibited. Any waste that is identified as having been deposited in an unauthorized area will be immediately moved to the proper unloading areas.

4.3 SPILL PREVENTION AND CONTROL

Pursuant to 30 TAC §330.63(d)(1)(B), the transfer station facility is designed to control and contain spills and contaminated water. Staging and processing areas at this facility will be located within the transfer station structure. The unloading areas are designed to control and contain spills and contaminated water. The building walls in waste operations areas (discussed above in **Section 2.4.2** of this report) will serve as a form of spill containment. All contaminated water will be managed in accordance with the procedures set forth in **SECTION 5** of the **SOP (Part IV)**.

Uncontaminated stormwater run-on and run-off will be directed away from the transfer station building entrances by site design and grading to a storm water pond. Details for the drainage system and associated design demonstrations are included in **Appendix A, Surface Water Drainage Report**. The transfer station building interior where waste is managed will not result in any storm-generated run-off since the transfer station building is completely covered.

4.4 WASTE STORAGE PERIOD

Pursuant to 30 TAC §330.63(d)(1)A) and (C), the period of time that wastes will remain on site will be limited. The facility will not accumulate solid waste in quantities that cannot be processed within such time as will preclude the creation of odors, insect breeding, or harborage of other vectors. Solid waste will be stored in a manner to prevent fires, ensure safety, prevent a health hazard, or preclude food or harborage for animals and vectors, and contained to minimize windblown solid waste and litter. Solid waste will be stored either in a transfer trailer with a tarp cover or on the tipping floor with a tarp cover. Recyclable materials stored on the tipping floor or in enclosed containers will not require tarping. The maximum time waste material will be stored will not exceed 48 hours for the transfer station, except on holidays or weekends. On holidays and/or weekends, the maximum time will not exceed 72 hours.

5.0 CLOSURE PLAN

5.1 INTRODUCTION

Pursuant to 30 TAC §330.63(h), this Closure Plan is included with **Part III**. The Closure Plan has been prepared to meet the requirements of 30 TAC §330.459 (Closure requirements for MSW Storage and Processing Units).

5.2 CLOSURE ACTIVITIES

Closure will be accomplished by the owner or operator removing all waste, waste residues, and any recovered materials. Processing equipment and other non-permanent facility units will either be dismantled and removed off-site or decontaminated. Processing equipment shall not be relied upon or used for closure activities.

No later than 90 days prior to the initiation of final closure, the facility will, through a public notice in the newspaper(s) of largest circulation in the vicinity of the facility, provide public notice for final facility closure. The notice will include the name, address and physical location of the facility, the registration number, and the intended last day of receipt of materials at the facility. The facility will also make an adequate number of copies of the approved Closure Plan available for public review. Also, no later than 90 days prior to the initiation of a final facility closure, the owner or operator will also provide written notice of closure to the Executive Director of the intent to close the facility and place this notice of intent in the Site Operating Record.

Initiation of closure activities for the facility will begin no later than 30 days after the date on which the facility receives the known final receipt of waste. Closure of the facility must be completed within 180 days following the most recent acceptance of processed or unprocessed materials unless otherwise directed or approved in writing by the Executive Director.

The following steps will be taken for closure:

- Notify TCEQ when closure is initiated.
- At least one sign will be posted at the main entrance notifying all persons who may utilize the facility of the date of closing and the prohibition against further receipt of waste materials after the stated date. Additional signs will be posted at other frequently used points of access.
- Suitable barriers to all gates or access points will be installed, or alternatively, the entire perimeter property boundary will have a fence as a barrier, to adequately prevent the unauthorized dumping of solid waste at the closed facility.
- Cleanup of the site and removal of wastes will be completed. All waste, waste residues, contaminated water and any recovered materials will be removed and will be transported to an authorized facility for disposal.
- Partial or full dismantling of process unit(s) including cleanup and decommission (equipment should be rendered unusable) of process equipment/facility.
- No dismantling of the concrete pad (tipping floor) or other permanent structures will be conducted at closure.
- No changes to the site elevations at closure will occur that will affect the final contour map.

- General Cleanup to include wash down and disinfection of facility (floors, walls, containment areas, processing areas). To include removal, transport, treatment, and disposal of all wash down waters/media.
- Vector control will be implemented as outlined in the approved Site Operating Plan
- If there is evidence of a release of waste from the facility, the Executive Director may require an investigation into the nature and extent of the release and an assessment of measures necessary to correct an impact to groundwater. As part of the closure activities, after general cleanup and wash down/disinfection, the underground contaminated water storage tank and any contaminated water in the tank will be removed and properly disposed of. Soils below the tank will be tested for contamination before earth work or grading of the area. As part of closure activities and prior to sampling for testing, TCEQ will be contacted for sampling and testing requirements of soil below (or around) the tank.
- Removal, treatment, and disposal of any contaminated soils, concrete, storm water, or other contaminated materials on site.
- The closed facility will be inspected by an independent professional engineer who will verify that final facility closure has been completed in accordance with the approved closure plan, and who will then prepare a certification of final facility closure as set forth in **SECTION 5.3**.
- The certification of closure will be submitted to the Executive Director as set forth in **SECTION 5.3**.

5.3 CERTIFICATION OF FINAL FACILITY CLOSURE

Within 10 days after completion of the final closure activities for the facility, the operator will submit to the Executive Director by registered mail the following:

1. Certification of abandonment and completion of cleanup.
    a. Sampling/testing/classification of waste (ash, liquids, sludge, other waste not readily identifiable as garbage, trash, refuse). To include lab reports, chain of custody, quality assurance and quality control.
    b. Perform site inspection and prepare certification of closure.
    c. The certification, signed by an independent licensed professional engineer, verifying that final facility closure has been completed in accordance with the approved closure plan. The submittal to the Executive Director shall include all applicable documentation necessary for certification of final facility closure; and
    d. A request for voluntary revocation of the facility registration.

Following receipt of the closure documents and the inspection report by the TCEQ Region, the Executive Director may acknowledge termination of operation and closure and deem the facility properly closed.

5.4 POST CLOSURE LAND USE

All wastes and waste residues will be removed from the facility as part of closure; no wastes will remain at the closed facility. Accordingly, this facility does not require post closure care requirement.

A request for voluntary revocation of the facility's registration will be submitted to the Executive Director within 10 days after completion of the final closure activities, in conjunction with the certification of closure described in **SECTION 5.3** of this Plan.

6.0 COST ESTIMATE FOR CLOSURE

6.1 INTRODUCTION

This Cost Estimate for Closure for the CLTS was prepared to meet the applicable requirements of 30 TAC §330.63(j), §330.501, and §330.505. The Cost Estimate is based upon the maximum inventory of stored waste allowed to be at the facility, and therefore represents the maximum anticipated closure cost. This Cost Estimate also presents information on financial assurance for closure which will be established for the facility in accordance with 30 TAC Chapter 37, Subchapter R.

6.2 CLOSURE COST ESTIMATE

The Closure Cost Estimate is provided in **TABLE 6-1**. This cost estimate, which is presented in current dollars, has been developed in accordance with 30 TAC §330.505. The cost estimate accounts for closure of the maximum inventory of waste potentially stored at the transfer facility and assumes that the work will be performed by a third party not affiliated with the owner or operator of the facility. The registrant will conduct an annual review to evaluate whether the cost estimate is sufficient based on current operating conditions. As outlined in **SECTION 6.3**, the estimate and financial assurance will be adjusted as necessary.

As outlined in 30 TAC Chapter 37, Subchapter R, the registrant will establish and maintain financial assurance for closure. The financial assurance for closure will be maintained continuously until all requirements of the final closure plan have been met as evidenced in writing by the TCEQ Executive Director. Cost estimate and financial assurance adjustments will be made as described in **SECTION 6.3**.

6.3 COST ESTIMATE AND FINANCIAL ASSURANCE ADJUSTMENTS

During the active life of the facility, the registrant will annually adjust the current cost estimates for inflation within 60 days prior to the anniversary date of the first establishment of the financial assurance mechanism. The adjustment may be made by recalculating the maximum costs of closure and post-closure care in current dollars, or by using an inflation factor published on TCEQ's website.

The registrant will evaluate the closure cost annually to determine whether an increase in the closure cost is required as a result of continued facility development or otherwise changed facility conditions. This will include a review the facility's registration conditions on an annual basis to verify that the current active areas match the areas on which closure cost estimates are based. An increase in the closure cost estimate and the amount of financial assurance will be made if changes to the final Closure Plan or the facility conditions increase the maximum cost of closure.

A reduction in the closure cost estimate and amount of financial assurance provided may be requested if the cost estimate exceeds the maximum costs of closure at any time during the remaining life of the facility. The registrant will provide written notice to the TCEQ Executive Director of the detailed justification for the reduction of the closure cost estimate the amount of financial assurance. The registrant may request a reduction in the cost estimate and the financial assurance as a registration modification.

TABLE 6-1: CIRCLE LAKE TRANSFER STATION COST ESTIMATE FOR THIRD PARTY CLOSURE

Item	Description	Unit	Amount	Unit Cost [1]	Cost [1]
A	**Administration Third-Party Closure**				
1A	Site survey and file review to determine closure activities	LS	1	$5,000	$5,000
2A	Preparation of engineering plans	LS	1	$5,000	$5,000
3A	Procurement of bids	LS	1	$2,000	$2,000
4A	Contract Award and admin of contract	LS	1	$2,000	$2,000
5A	Installation of closure signage	LS	1	$1,000	$1,000
6A	Securing of building and site	LS	1	$2,500	$2,500
7A	Vector Control	LS	1	$2,500	$2,500
B	**Contractor Mobilization**				
1B	Mobilization	LS	1	$2,000	$2,000
C	**Waste Disposal**				
1C	Cleanup/removal of waste stored on-site	Ton	3,600	$10.00	$36,000
2C	Waste Transport by authorized transporter	Ton	3,600	$20.00	$72,000
3C	Treatment/disposal of waste at authorized facility	Ton	3,600	$30.00	$108,000
D	**General Cleanup to Include Washdown, Disinfection and Removal, Transport, Treatment and Disposal of All Washdown Waters/Media**				
1D	General Cleanup	LS	1	$5,000	$5,000
E	**Cleanup and Decommissioning of Process Equipment/Facility**				
1E	Cleanup and Decommissioning	LS	1	$5,000	$5,000
F	**Inspection and Certification of Closure**				
1F	Inspection and Certification	LS	1	$5,000	$5,000
				Closure Subtotal	$253,000
				Contingency (18.6%) of Subtotal	$47,000
				TOTAL	$300,000

7.0 SIGNATURE OF PREPARER

I certify that the information provided in this application report and engineering drawings is a true and correct representation of that which is requested. I am aware that there are significant penalties for knowingly submitting false information.

I also confirm that based on my professional judgment, and on information collected during the application preparation, the design and planned operations of the facility is in compliance with the TCEQ regulations and criteria and will be protective of the environment.

Signature of Preparer	President & Senior Principal Engineer Title, if applicable
Jeffrey L. Allen, P.E. Name	9-30-2021 Date

APPENDICES

APPENDIX A
SURFACE WATER DRAINAGE REPORT

CIRCLE LAKE TRANSFER STATION
TYPE V TRANSFER FACILITY

SURFACE WATER DRAINAGE REPORT

PREPARED FOR:

CIRCLE LAKE TRANSFER, LLC.

13727 OFFICE PARK DRIVE
HOUSTON, TEXAS 77070

PREPARED BY:

ALLEN
ENGINEERING
AND SCIENCE

6360 I-55 NORTH, SUITE 330
JACKSON, MISSISSIPPI 39211
ALLEN ENGINEERING AND SCIENCE PROJECT NO. 21052

SEPTEMBER 2021

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1.0 INTRODUCTION

1.1 PURPOSE

In accordance with 30 TAC §330.63(c), this Surface Water Drainage Report (Drainage Report) has been developed as part of the Type V MSW Transfer Station registration application for the Circle Lake Transfer Station, located in Pinehurst, Texas. This report has been prepared to demonstrate that the facility design complies with the requirements of 30 TAC §330.303. The report includes a narrative description of the drainage setting and features at the site under pre-development and post-development conditions and is accompanied by supporting hydrology and hydraulic design calculations for the site's drainage features. Overall objectives of this Drainage Report are to:

- Establishment of pre-development drainage conditions;
- Summarize the proposed post-development surface water management system design and description of the drainage features, structures, and components within the transfer station facility;
- Describe the post-development drainage conditions;
- Describe the hydrologic method and design parameters applied to estimate the peak flow rates and runoff volumes for both pre-development and post-development drainage conditions;
- Comparison of pre-development and post-development discharges from the site and demonstrate that existing drainage patterns shall not be adversely impacted as a result of the proposed transfer station facility;
- Describe the hydraulic methods and parameters applied to design the features and components of the surface water management system;
- Describe the erosion and sediment control measures, including requirements for surface water inspections and maintenance; and
- Present overall conclusions that summarize the results of the surface water drainage analysis and design.

1.2 PROJECT OVERVIEW

The proposed Type V transfer facility will be located on an approximate 5.5-acre site located in Pinehurst, Texas. The proposed facility is located 2,700 ft northeast on Circle Lake Drive from its intersection with TX-249/FM1774 (the Circle Lake Drive TX-249/FM1774 intersection is 1,000 ft north of the Aggie Expressway and 5 miles south on FM 1774 from the center of town of Magnolia, Texas) Pinehurst, Montgomery County, Texas. The proposed facility is located on dead end road so there is no other access**.** The transfer facility and associated features (building, access roads, turnaround areas, approach ramps, parking, support features, etc.) will utilize approximately four (4) acres of the site, while the building is expected to occupy less than one (1) acre.

The general facility layout can be seen on **Drawing 6** of the **Part I/II PAR Engineering Drawing Set** and contains all building layouts and dimensions, estimated finished floor elevations, general material specifications, locations of all roads and parking, all easements located on the property, proposed detention pond location, estimated retaining wall locations, and the proposed septic drip field.

The facility will contain four scales onsite. Two scales will be for collection trucks, located along the ingress/egress routes of the facility for collection trucks, and two will be for transfer trucks,

located within the facility loadout area. There is expected to be two attendant buildings located adjacent to the collection truck scales, and one small office building located along the southeastern corner of the transfer station building.

The proposed transfer station building will be a pre-engineered metal building with a roof, exterior walls, openings for collection vehicles to enter the building to unload, covered loadout, and ancillary support features. The inside of the transfer station building will have a reinforced concrete slab (minimum 4,000 psi 28-day compression strength) tipping floor with an area of approximately 30,500 square feet, and reinforced concrete push walls to resist typical forces of transfer station operations.

The tipping floor is designed with a slope to drain toward the western end of the building. The eastern side of the building has openings for collection vehicles to enter the tipping floor for unloading. The western side of the building has one entrance and exit for loading of transfer trailer vehicles. The tipping floor is designed with a slope to drain towards the center of the building and flow to the northwest to the contaminated water tank for off-site transfer. Additionally, there is a collection sump in the transfer truck loading area to collect any incidental stormwater flowing into the facility's loading area or washdown water from the same source. This water will be routed to the contaminated water tank mentioned above. The contaminated water tank will be a minimum 2,000 gallon (nominal) holding tank.

1.3 100-YEAR FLOODPLAIN INFORMATION

With respect to mapped floodplains, the site and vicinity are part of FEMA Flood Insurance Rate Map (FIRM), Map No. 48339C0495G (August 18, 2014). As illustrated, there are no mapped floodplain or floodways on or adjacent to the site. The nearest floodplain is approximately 2,000 feet away to the north, which drains into Mill Creek.

2.0 METHODOLOGY

The sections below describe the methodology used for pre-development and post-development runoff calculations. In accordance with 30 TAC § 330.303(a), the surface water drainage system has been designed to be capable of carrying the peak discharges from the 25-year, 24-hour rainfall event. The source of the methodology used for the calculations is the "Montgomery County Drainage Manual" dated November 1989.

2.1 PRE-DEVELOPMENT

Rational Method serves as the basis of calculating pre-development and post-development peak discharges since the drainage area with the proposed development is under 50 acres in size. The size of the drainage area was determined, and a composited runoff coefficient was determined based on land description of the pre-developed area. Rain intensity is estimated using precipitation values from NOAA's Precipitation Frequency Data Server (PFDS) for Pinehurst, Texas and a given storm duration of 24 hours. A frequency correction factor is also used with the Rational Method to determine peak runoff. For the 25-year, 24-hour storm, the frequency correction factor is 1.10. The peak discharge for pre-development conditions is estimated using the methodology listed above.

2.2 POST-DEVELOPMENT

Post-development peak discharge is estimated using the same methodology as the pre-development peak discharge. A new composite runoff coefficient is calculated based on the land description of the drainage area after development. The pre-development and post-development peak discharges are compared, and the difference of the runoff volume resulting from development is stored in a detention basin. The stored volume is released in a controlled manner at no more than the pre-development peak flow.

The outfall structure is designed following methodology described in the Federal Highway Administration's "Hydraulic Design of Highway Culverts". A flow analysis on the discharge structure is performed to determine if the structure is outlet or inlet controlled. Once the control type is determined, several flow equations are utilized to determine flow type. The lowest flow value determined in the analysis is the controlling flow for the structure. The discharge flow value is at or lower than the pre-development peak flow.

Drainage channels and culverts are sized to convey the 25-year, time of concentration storm event. Time of concentration is estimated using Overton and Meadows (1976) overland sheet flow equation, SCS TR-55's shallow concentrated flow equation, and Manning's equation for channels and pipes. Precipitation values from NOAA's PFDS based on the calculated time of concentration is chosen and used in the Rational Method to determine the peak flow in the analyzed drainage channel or culvert. Manning's equation is used to calculate the capacity of the drainage channel or culvert. If the capacity is greater than the estimated peak flow, the drainage channel's geometry or culvert size is accepted.

3.0 SURFACE WATER DRAINAGE SYSTEM DESIGN

This section summarizes the proposed surface water drainage system design and describes the drainage features and components of the transfer station facility. The surface water management system has been designed and will be operated to achieve the following objectives:

- Prevent the discharge of wastes or pollutants into or adjacent to the Waters of the United States.
- Prevent the discharge of pollutants into Waters of the United States.
- Prevent the discharge of dredged or fill material into Waters of the United States.
- Prevent the discharge of nonpoint source pollution to Waters of the United States.
- Prevent erosion over areas associated with the facility boundary.

Results of the surface water drainage analysis is presented below. Calculations are included **Appendix A**.

3.1 PRE-DEVELOPMENT

3.1.1 DRAINAGE AREA

The drainage area with the proposed development is approximately 5.50 acres. The pre-development area currently has a building, gravel parking lot, and a pond. The soils are generally sandy (Hydrological Soil Group B), and the surface is sloped between 1% and 4%. **Table 1** illustrates the breakdown between impervious and grass areas of the pre-developed area.

Table 1:

Pre-Development Area and Runoff Coefficient		
Type	Area (Acres)	Runoff Coefficient (C)
Impervious	0.35	0.95
Grass-Sandy Soil	5.15	0.55
Total	**5.50**	**0.58**

3.1.2 DRAINAGE CALCULATIONS

3.1.2.1 HYDROLOGICAL

Using Rational Method, peak discharges were calculated for various storm frequencies over a 24-hour period. **Table 2** below shows a summary of peak discharges for the pre-development area. These peak discharges will be utilized along with the post-development calculations to size the discharge structure and detention pond. The 25-year, 24-hour event has a peak discharge of 1.56 cubic feet per second, while the 100-year, 24-hour storm event has a peak discharge of 2.66 cubic feet per second.

Table 2:

Pre-Development Peak Discharges for 24-Hour Storm Events					
Parameter	Storm Frequency (yrs.)				
	2	5	10	25	100
Precipitation (in.)	4.69	6.43	8.14	10.7	16
Rainfall Intensity (in./hr.)	0.20	0.27	0.34	0.45	0.67
Frequency Adjustment Factor	1	1	1	1.1	1.25
Peak Discharge (cfs)	0.62	0.85	1.08	1.56	2.66

3.2 POST-DEVELOPMENT

3.2.1 DRAINAGE AREA

The proposed development area will include an approximate 30,500 square feet building with multiple parking areas and roads. The potential for run-on onto the site is minimal because of the site's topography, so the drainage area is approximately 5.5 acres. The site's runoff will be stored at a detention pond on the north end of the property, and the detention pond will discharge at a rate lower than the pre-development discharge rate for the given storm event. **Table 3** summarizes the post-development land types and estimates the composite runoff coefficient.

Table 3:

Post-Development Area and Runoff Coefficient		
Type	Area (Acres)	Runoff Coefficient (C)
Impervious	2.35	0.95
Grass-Sandy Soil	3.15	0.55
Total	**5.50**	**0.72**

3.2.2 DRAINAGE CALCULATIONS

3.2.2.1 HYDROLOGICAL

Using Rational Method, peak discharges were calculated for various storm frequencies over a 24-hour period. **Table 4** below shows a summary of peak discharges for the post-development area. The 25-year, 24-hour event has a peak discharge of 1.96 cubic feet per second, while the 100-year, 24-hour storm event has a peak discharge of 3.33 cubic feet per second.

Table 4:

Post-Development Peak Discharges for 24-Hour Storm Events					
Parameter	Storm Frequency (yrs.)				
	2	5	10	25	100
Precipitation (in.)	4.69	6.43	8.14	10.7	16
Rainfall Intensity (in./hr.)	0.20	0.27	0.34	0.45	0.67
Frequency Adjustment. Factor	1	1	1	1.1	1.25
Peak Discharge (cfs)	0.78	1.07	1.36	1.96	3.33

3.2.2.2 DETENTION BASIN

A detention basin will be constructed at the north end of the property to store runoff and discharge it in a controlled manner. **Table 5** summarizes the detention calculations for a 25-year, 24-hour and a 100-year, 24-hour storm events; and the required storage volume is 43,100 and 64,450 cubic feet respectively.

Table 5:

Detention Basin Storage Calculations						
Storm Event	Inflow Volume (acre-feet)	Peak Inflow Rate (cfs)	Inflow Duration (min)	Peak Discharge Rate (cfs)	Required Storage Volume (acre-feet)	Required Storage Volume (cubic feet)
25-Year	4.90	1.96	3,633	1.56	0.99	43,102
100-Year	7.33	3.33	3,197	2.66	1.48	64,452

The proposed detention basin size is 195 feet by 86 feet with an effective depth of 5 feet and three-feet horizontal to one-foot vertical sideslopes. The resulting volume is estimated to be 65,000 cubic feet, which is greater than the required 25-year and 10-year storages of 43,100 and 64,500 cubic feet respectively.

The stored volume will be controlled and released using a discharge structure. The discharge structure is anticipated to be a 2-feet diameter culvert with the first ten feet restricted to 1 foot in diameter. **Appendix A** includes the parameters, checks, and calculations for the culvert being affected by headwater and tailwater. The discharge structure is under outlet control, and the full flow volume during a 100-year, 24-hour storm water event is estimated to be 2.60 cubic feet per second, which is less than the pre-development peak discharge of 2.67 cubic feet per second. **Drawing 4** in **Appendix B** shows typical sections of the proposed detention basin and outfall structure.

3.2.2.3 CHANNELS AND CULVERTS

Drainage channels and culverts are the primary means of carrying surface drainage water to the detention basin. The drainage channels and culverts for the surface water drainage system are sized to convey the peak runoff for a 25-year, 24-hour storm event. In general, five culverts and five drainage channels convey runoff from the proposed site to the detention pond. **Table 6** below summarized the culverts, and **Table 7** summarizes and channels. **Drawing 2** in **Appendix B** shows the proposed culvert locations with their corresponding drainage area. **Drawing 3** in **Appendix B** shows the proposed drainage channel locations with their corresponding drainage area.

Table 6:

Drainage Culverts for Proposed Development					
Culvert	Drainage Area (acres)	Culvert Diameter (inches)	Slope (feet/feet)	25-Year Peak Flow (cfs)	Culvert Capacity (cfs)
1	0.8	18	0.005	4.50	8.41
2	0.45	12	0.0125	2.75	4.72
3	0.67	18	0.01	6.02	12.45
4	0.93	24	0.02	17.86	37.91
5	0.28	12	0.005	1.58	2.99

Table 7:

Drainage Channels for Proposed Development										
Channel	Drainage Area (acres)	25-Year Peak Flow (cfs)	Width (feet)	Flow Depth (feet)	Sideslopes (H:V)	Slope (feet/feet)	Freeboard (feet)	Channel Capacity (cfs)	Channel Velocity at Full Capacity (ft/s)	Channel Lining
1	1.73	11.84	12	1	3:1	0.02	0.5	31.42	5.24	Grass
2	0.29	2.17	10	0.25	10:1	0.02	0.25	3.12	2.49	Grass
3	0.57	3.57	10	0.25	10:1	0.03	0.25	3.75	3.00	Grass
4	0.2	2.00	10	0.25	10:1	0.01	0.25	2.47	1.97	Grass
5	4.93	28.86	30	1.25	8.5:1	0.005	0.5	51.40	2.74	Grass

Drawing 4 in **Appendix B** shows typical sections for each drainage channel. The drainage channels are not expected to experience erosion because each channels velocity at full capacity is at or under 3 feet per second. Channel 1's velocity is estimated to be 5.24 feet per second at the channel's full capacity; however, the 25-year peak flow is estimated at 11.84 cubic feet per second. For Channel 1 at the 25-year peak flow, the velocity is estimated to be 3.25 feet per second, which is expected to not warrant erosion.

3.3 Erosion and Sediment Control

The erosion and sediment control measures are documented in the site's operation Stormwater Pollution Prevention Plan, which is required by the Texas Pollutant Discharge Elimination System stormwater permitting requirements administered by the TCEQ. These features include the establishment of vegetation, hard-armored drainage-ways, or other revetments in non-concrete paved portions of the facility. Additionally, the site grading is such that stormwater is designed to drain toward the onsite detention pond without creating potential erosional issues.

3.3.1 Site Maintenance and Best Management Practices

During site construction and operations, inspection and maintenance of disturbed areas and their surface water management system features will be conducted in accordance with the facility's TPDES Multi-Sector General Permit. Records of these inspections and maintenance activities shall be maintained in accordance with the TPDES permit.

In general, the following procedures will be followed when deemed necessary by the inspections performed as part of the Multi-Sector General Permit to maintain and ensure functionally of the surface water drainage system and best management practice (BMP) controls:

- Eroded areas or areas with ponding water will be regraded to their original slopes and reseeded or covered with an erosion resistant material. Upgrades to the original design specifications can be adjusted as the site develops and dependent upon the severity of system degradation.
- Additional temporary erosion protection and sediment control measures using established BMPs will be implemented (seeding, temporary berms, ditches, silt fencing, erosion mats, check dams, etc.), as necessary, during operation to minimize the amount of erosional runoff. These measures can be removed once the erosion has negated, and long-term vegetation is established, and permanent conveyance structures are in-place.
- Piped structures will be kept free of debris to allow flows to achieve the design.

- Vegetated water conveyance areas will be mowed periodically to encourage healthy growth and to maintain design flow capacities and erosion resistance.
- Erosion control structures and drainage features will be cleaned periodically to maintain design capacity. The excavated sediment will be transported to designated areas for spreading and drying and will be surrounded by adequate erosion controls.
- Areas of distressed vegetation will be identified and re-vegetated.
- Excess silt, vegetation, and other debris accumulated in drainage channels and other conveyances will be removed to restore their design configuration, followed by re-vegetating the disturbed areas as needed.

4.0 CONCLUSION

This Drainage Report has been prepared to demonstrate that the facility design complies with the requirements of 30 TAC §330.303 and to address the applicable requirements of 30 TAC Chapter 330, Subchapter G. The Drainage Report is accompanied by supporting hydrologic and hydraulic design calculations of the site's drainage features. The following conclusions summarize the results of the drainage analysis and design:

- The drainage design criteria selected meet the requirements of 30 TAC Chapter 330.
- Surface water drainage system drainage channels and culverts are designed to convey peak flows from the 25-year rainfall event with 0.25 to 0.50 feet of freeboard with the detention basin having a freeboard of 1 foot.
- Erosion will be minimized through the interim and permanent design features and BMPs described herein.
- The post-development discharge rates from the site are less than the pre-development discharge rates, and the discharge volumes, velocities, and time-to-peak discharge for the pre-development and post-development conditions are similar.
- The proposed facility is not within the 100-year floodplain.
- The post-development drainage patterns will be similar to the existing pre-development drainage patterns and will direct surface water runoff to the same general outfall location. The existing pre-development drainage patterns will not be adversely altered.

Appendix A:

Design Calculations

Pre-Development vs. Post-Development Peak Flows and Detention Calculations
Circle Lake Transfer Facility - Montgomery County, Texas

Pre-Development Peak Flow

Equation (Rational Method)	Composite Runoff Coefficient					
$Q=kciA_{drainage}F_c$	Type		Runoff Coefficient		Area	
	Impervious		0.95		0.35	
	Grass		0.55		5.15	
	Total/Composite		0.58		5.5	
	Storm Frequency (Yr)					
	2	5	10	25	100	Units
Flow = Q	0.62	0.85	1.08	1.56	2.66	cfs
Conversion constant = k	1.008					
Intensity = I	0.20	0.27	0.34	0.45	0.67	inches per hour
Composite Runoff coefficient = c	0.58					
Drainage Area = Adrainage	5.5					acres
Precipitation = P	4.69	6.43	8.14	10.7	16.0	inches
Storm Duration = T_d	24					hours
Frequency Adjustment Factor = Fc	1	1	1	1.1	1.25	

Precipitation values are derived from NOAA's precipitation frequency charts for Pinehurst, Texas.
Storm duration for detention pond sizing is 24 hours.

Post-Development Peak Flow

Equation (Rational Method)	Composite Runoff Coefficient					
$Q=kciA_{drainage}F_c$	Type		Runoff Coefficient		Area	
	Impervious		0.95		2.35	
	Grass		0.55		3.15	
	Total/Composite		0.72		5.5	
	Storm Frequency (Yr)					
	2	5	10	25	100	Units
Flow = Q	0.78	1.07	1.36	1.96	3.33	cfs
Conversion constant = k	1.008					
Intensity = I	0.20	0.27	0.34	0.45	0.67	inches per hour
Composite Runoff coefficient = c	0.72					
Drainage Area = Adrainage	5.5					acres
Precipitation = P	4.69	6.43	8.14	10.7	16.0	inches
Storm Duration = T_d	24					hours
Frequency Adjustment Factor = Fc	1	1	1	1.1	1.25	

Precipitation values are derived from NOAA's precipitation frequency charts for Pinehurst, Texas.
Storm duration for detention pond sizing is 24 hours.

Pre-Development vs. Post-Development Peak Flows and Detention Calculations
Circle Lake Transfer Facility - Montgomery County, Texas

Required Detention Based on Frequency of Storm and Peak Flows

Equations		Pre-Development and Post-Development Flows				
V_g =	$P_{storm,feet}*A_{drainage}$	Flow Type	Storm Frequency			
B =	$43,560*V_g$		2	10	25	100
	0.5*I	Pre-Dev. Flow	0.62	1.08	1.56	2.66
S =	0.5*B*(I-O)	Post-Dev. Flow	0.78	1.36	1.96	3.33
	43,560					

	Storm Frequency				
	2	10	25	100	Units
Total Basin Inflow Volume = Vg	2.15	3.73	4.90	7.33	acre-feet
Peak Inflow Rate = I	0.78	1.36	1.96	3.33	cubic feet per second
Duration of Inflow to the Basin = B	239,777	239,777	217,979	191,821	seconds
Peak Discharge Rate = O	0.62	1.08	1.56	2.66	cubic feet per second
Required Storage Volume = S	0.433712	0.752753	0.989491	1.479613	acre-feet
Required Storage Volume = S	18,892	32,790	43,102	64,452	cubic feet

Detention Pond Sizing

Length	195	feet	Depth	5	feet	Volume	65,025	cubic feet
Width	86	feet	Sideslopes	3	#H:1V			

Is Detention Provided?	Storm Frequency			
	2	10	25	100
	YES	YES	YES	YES

Pre-Development vs. Post-Development Peak Flows and Detention Calculations Circle Lake Transfer Facility - Montgomery County, Texas							
Discharge Structure Sizing and Checks							
Discharge for 25-Year Storm			1.56	cubic feet per second			
Discharge for 100-Year Storm			2.66	cubic feet per second			
Headwater (Upstream) Elevation			216.25	feet			
Diameter of Culvert			1	feet			
Length of Culvert			10	feet			
Culvert Invert - Inlet			214.15	feet			
Culvert Invert - Outlet			214	feet			
Culvert Slope			0.015	feet/feet			
Tailwater (Downstream) Elevation			2	feet			
Culvert Material			Concrete				
Entrance Type			Headwall - Grooved Edge				
Check Inlet Control - Ref. FHWA "Hydraulic Design of Highway Culverts", Table 8, Pg. 192, Rev. 2005							
Hwi/D	2.1	From Inlet Control Nomagraph		Qi	5.37	cfs	
Check Orifice Control							
Equation		$0.6*A_{orifice}*SQRT(2gH_{orifice})$					
$Head_{orifice}$		1.6	feet	C_d	0.6	$Q_{orifice}$	4.78 cfs
Check Outlet Control - Ref. FHWA "Hydraulic Design of Highway Culverts"							
Qo	2.60	cfs	Head	0.25	feet	For outlet control with tailwater above ((0.6*D)+(culvert outlet invert))	
Qo	6.69	cfs	Head	1.65	feet	For outlet control with tailwater assumed to be at ((0.6*D)+(culvert outlet invert))	
Since the tailwater is above ((0.6*D)+(culvert outlet invert)) or 214.6 feet and the outlet flow is smaller than the inlet flow, the culvert is outlet controlled; and the full flow is approximately 2.60 cfs which is below the 100-year pre-development flow of 2.67.							

Area 1

Flow into Culvert 1							
Equation	Q = kciA * F_c	Runoff Coefficient		0.5	Acres	0.9	Impervious
				0.3	Acres	0.55	Grass
Storm Event = N		2	5	10	25	year	
Flow = Q		2.44	2.99	3.46	4.50	cubic feet per second	
Conversion Constant = k		1.008					
Composite Runoff Coefficient = c		0.7688				composite	
Precipitation = P		1.30	1.59	1.84	2.18	inches	
Intensity = i		3.94	4.82	5.57	6.60	inches per hour	
Drainage Area = $A_{drainage}$		0.8				acres	
Rainfall intensity is derived from a N-year event with a T_c of 20 minutes.							

Culvert 1 Size						
Equation	Q= $\frac{1.49*A*R^{2/3}*S^{1/2}}{n}$	and	Hydraulic Radius	R=	Area / Wetted Perimeter	
Flow = Q	0.45	2.85	8.41	18.11	cubic feet per second	
Velocity = V	2.29	3.63	4.76	5.76	feet per second	
Hydraulic Radius = R	0.13	0.25	0.38	0.50	feet	
Cross-Sectional Area = A	0.20	0.79	1.77	3.142	square feet	
Wetted Perimeter = P_w	1.57	3.14	4.71	6.28	feet	
Upstream Inv.	232.71				feet	
Downstream Inv.	231.25				feet	
Length	320				feet	
Slope = S	0.00456				foot/foot	
Manning's Roughness Coefficient = n	0.011				plastic pipe	
Pipe ID	0.5	1	1.5	2	feet	
Pipe ID	6	12	18	24	inches	
The 25 year Tc storm produces a flow of 4.50 cfs, which is less than the 8.41 cfs capacity of a 18 inch pipe at approximatly 0.45% slope.						

Area 1

Time of Concentration			
Sheet flow			
Equation	$t_{sheet\ flow} = \frac{0.007*(n*L)^{0.8}}{(P2yr.)^{1/2}*S^{0.4}}$		
Manning's n (sheet flow)	0.24	Dense Grass	
Length (ft)	90		
P (2 yr. , 24 hr.) (in.)	4.78	NOAA Precipitation Frequency Server for Pinehurst, TX	
Slope (ft/ft)	0.005		
Sheet Flow (minutes)	18.69		

Pipe Size			
Equation	$Q = \frac{1.49*A*R^{2/3}*S^{1/2}}{n}$ and Hydraulic Radius $R = \frac{\text{Area}}{\text{Wetted Perimeter}}$		
Flow = Q		8.41	cubic feet per second
Velocity = V		4.76	feet per second
Hydraulic Radius = R		0.38	feet
Cross-Sectional Area = A		1.77	square feet
Wetted Perimeter = P_w		4.71	feet
Upstream Inv.		232.71	feet
Downstream Inv.		231.25	feet
Length		320.00	feet
Slope = S		0.00456	foot/foot
Manning's Roughness Coefficient = n		0.011	plastic pipe
Pipe ID		1.50	feet
Pipe ID		18.00	inches
Time		1.12	minutes
Area 1 Tc		19.81	minutes
Area 1 Tc		0.33	hours

Area 2

Flow into Culvert 4 & Channel 1						
Equation	Q = kciA * F_c	Runoff Coefficient	0.61	Acres	0.9	Impervious
			0.32	Acres	0.55	Grass

Storm Event = N	2	5	10	25	year
Flow = Q	3.89	4.81	5.59	7.34	cubic feet per second
Flow From Previous Area 1,3, & 4 = Q	5.71	7.00	8.08	10.52	cubic feet per second
Total Flow = Q	9.61	11.81	13.67	17.86	cubic feet per second
Conversion Constant = k	1.008				
Composite Runoff Coefficient = c	0.7796				composite
Precipitation = P	0.899	1.11	1.29	1.54	inches
Intensity = i	5.33	6.58	7.65	9.13	inches per hour
Drainage Area = $A_{drainage}$	0.93				acres

Rainfall intensity is derived from a N-year event with a T_c of 10 minutes.

Equation	$Q=\frac{1.49*A*R^{2/3}*S^{1/2}}{n}$	and	Hydraulic Radius	$R=\frac{\text{Area}}{\text{Wetted Perimeter}}$

Flow = Q	31.42	cubic feet per second
Velocity = V	5.24	feet per second
Hydraulic Radius = R	0.73	feet
Cross-Sectional Area = A	6.00	square feet
Wetted Perimeter = P_w	8.25	feet
Upstream Elev.	231.25	feet
Downstream Elev.	222.00	feet
Length	400.00	feet
Slope = S	0.02	foot/foot
Manning's Roughness Coefficient = n	0.035	dense grass

Drainage Channel 1 Dimensions

1.5 feet total depth with 0.5 foot of freeboard. Calculation are shown for 1.5 feet deep.

Triangular-Shaped Channel with a top width of 12 feet.

Culvert 4 Size

Equation	$Q=\frac{1.49*A*R^{2/3}*S^{1/2}}{n}$	and	Hydraulic Radius	$R=\frac{\text{Area}}{\text{Wetted Perimeter}}$

Flow = Q	5.97	17.60	37.91	68.74	cubic feet per second
Velocity = V	7.60	9.96	12.07	14.00	feet per second
Hydraulic Radius = R	0.25	0.38	0.50	0.63	feet
Cross-Sectional Area = A	0.79	1.77	3.14	4.909	square feet
Wetted Perimeter = P_w	3.14	4.71	6.28	7.85	feet
Upstream Inv.	222				feet
Downstream Inv.	220				feet
Length	100				feet
Slope = S	0.020				foot/foot
Manning's Roughness Coefficient = n	0.011				plastic pipe
Pipe ID	1	1.5	2	2.5	feet
Pipe ID	12	18	24	30	inches

The 25 year Tc storm produces a combined flow in this area of 17.86 cfs, which is less than the 37.91 cfs capacity of a 24 inch pipe at approximatly 2% slope.

Area 2

Time of Concentration			
Sheet flow			
Equation	$t_{sheet\ flow}=\frac{0.007*(n*L)^{0.8}}{(P2yr.)^{1/2}*S^{0.4}}$		
Manning's n (sheet flow)		0.24	Dense Grass
Length (ft)		100	
P (2 yr. , 24 hr.) (in.)		4.78	NOAA Precipitation Frequency Server for Pinehurst, TX
Slope (ft/ft)		0.04	
Sheet Flow (minutes)		8.85	
Channel 1 Dimensions & Velocity			
Equation	$V=\frac{1.49*R^{2/3}*S^{1/2}}{n}$		
Manning's n		0.035	Dense Grass
Area (ft^2)		6	
Wetted Perimeter (ft)		8.25	Triangular
R=A/P (ft)		0.73	
Upstream Elev.		231.25	
Downstream Elev.		222	
Slope (ft/ft)		0.0231	
Width (ft)		12	
Depth of Water (ft)		1	
Side Slope		4	3:1 Slope
Velocity (ft/s) (full)		5.24	
Length (ft)		400	
Time (L/V)/60 (min)		1.27	
Area 1 Tc (min.)		10.12	
Area 1 Tc (hr.)		0.17	

Area 3

Flow into Culvert 2							
Equation	Q = kciA * F_c	Runoff Coefficient		0.23	Acres	0.9	Impervious
				0.22	Acres	0.55	Grass
Storm Event = N		2	5	10	25	year	
Flow = Q		1.48	1.82	2.11	2.75	cubic feet per second	
Conversion Constant = k		1.008					
Composite Runoff Coefficient = c		0.7289				composite	
Precipitation = P		1.14	1.40	1.62	1.92	inches	
Intensity = i		4.48	5.50	6.37	7.55	inches per hour	
Drainage Area = $A_{drainage}$		0.45				acres	
Rainfall intensity is derived from a N-year event with a T_c of 15 minutes.							

Culvert 2 Size						
Equation	Q= $\frac{1.49*A*R^{2/3}*S^{1/2}}{n}$	and	Hydraulic Radius	R=	Area / Wetted Perimeter	
Flow = Q	0.74	4.72	13.92	29.97	cubic feet per second	
Velocity = V	3.79	6.01	7.88	9.54	feet per second	
Hydraulic Radius = R	0.13	0.25	0.38	0.50	feet	
Cross-Sectional Area = A	0.20	0.79	1.77	3.142	square feet	
Wetted Perimeter = P_w	1.57	3.14	4.71	6.28	feet	
Upstream Inv.	225.5				feet	
Downstream Inv.	225				feet	
Length	40				feet	
Slope = S	0.0125				foot/foot	
Manning's Roughness Coefficient = n	0.011				plastic pipe	
Pipe ID	0.5	1	1.5	2	feet	
Pipe ID	6	12	18	24	inches	
The 25 year Tc storm produces a flow of 2.75 cfs, which is less than the 4.72 cfs capacity of a 12 inch pipe at approximatly 1.25% slope.						

Area 3

Time of Concentration			
Sheet flow			
Equation	$t_{sheet\ flow} = \frac{0.007*(n*L)^{0.8}}{(P2yr.)^{1/2}*S^{0.4}}$		
Manning's n (sheet flow)		0.24	Dense Grass
Upstream Inv.		230.00	
Downstream Inv.		228.00	
Length (ft)		125	
P (2 yr. , 24 hr.) (in.)		4.78	NOAA Precipitation Frequency Server for Pinehurst, TX
Slope (ft/ft)		0.016	
Sheet Flow (minutes)		15.26	

Area 1 Tc (min.)	15.26
Area 1 Tc (hr.)	0.25

Area 4

Flow into Culvert 3							
Equation	Q = kciA * F_c	Runoff Coefficient		0.36	Acres	0.9	Impervious
				0.31	Acres	0.55	Grass
Storm Event = N		2	5	10	25	year	
Flow = Q		1.79	2.19	2.52	3.27	cubic feet per second	
Flow From Previous Area 3 = Q		1.48	1.82	2.11	2.75	cubic feet per second	
Total Flow = Q		3.27	4.01	4.63	6.02	cubic feet per second	
Conversion Constant = k		1.008					
Composite Runoff Coefficient = c		0.7381				composite	
Precipitation = P		1.46	1.79	2.06	2.43	inches	
Intensity = i		3.59	4.40	5.06	5.97	inches per hour	
Drainage Area = $A_{drainage}$		0.67				acres	
Rainfall intensity is derived from a N-year event with a T_c of 25 minutes.							

Culvert 3 Size						
Equation	Q= $\frac{1.49*A*R^{2/3}*S^{1/2}}{n}$	and	Hydraulic Radius	R=	Area	
					Wetted Perimeter	
Flow = Q	0.66	4.22	12.45	26.81	cubic feet per second	
Velocity = V	3.39	5.38	7.04	8.53	feet per second	
Hydraulic Radius = R	0.13	0.25	0.38	0.50	feet	
Cross-Sectional Area = A	0.20	0.79	1.77	3.142	square feet	
Wetted Perimeter = P_w	1.57	3.14	4.71	6.28	feet	
Upstream Inv.	222.5				feet	
Downstream Inv.	222.25				feet	
Length	25				feet	
Slope = S	0.010				foot/foot	
Manning's Roughness Coefficient = n	0.011				plastic pipe	
Pipe ID	0.5	1	1.5	2	feet	
Pipe ID	6	12	18	24	inches	
The 25 year Tc storm produces a combined flow in this area of 6.02 cfs, which is less than the 12.45 cfs capacity of a 18 inch pipe at approximatly 1% slope.						

Area 4

Time of Concentration			
Sheet flow			
Equation	$t_{sheet\ flow}=$	$\frac{0.007*(n*L)^{0.8}}{(P2yr.)^{1/2}*S^{0.4}}$	
Manning's n (sheet flow)		0.24	Dense Grass
Upstream Inv.		227.00	
Downstream Inv.		225.00	
Length (ft)		185	
P (2 yr. , 24 hr.) (in.)		4.78	NOAA Precipitation Frequency Server for Pinehurst, TX
Slope (ft/ft)		0.010810811	
Sheet Flow (minutes)		24.43	

Area 1 Tc (min.)	24.43
Area 1 Tc (hr.)	0.41

Area 5

Flow into Culvert 5							
Equation	Q = kciA * F_c	Runoff Coefficient		0.15	Acres	0.9	Impervious
				0.13	Acres	0.55	Grass
Storm Event = N		2	5	10	25	year	
Flow = Q		0.85	1.05	1.21	1.58	cubic feet per second	
Conversion Constant = k		1.008					
Composite Runoff Coefficient = c		0.7375				composite	
Precipitation = P		1.30	1.59	1.84	2.18	inches	
Intensity = i		4.11	5.02	5.81	6.89	inches per hour	
Drainage Area = $A_{drainage}$		0.28				acres	
Rainfall intensity is derived from a N-year event with a T_c of 20 minutes.							

Culvert 5 Size						
Equation	Q= $\frac{1.49*A*R^{2/3}*S^{1/2}}{n}$	and	Hydraulic Radius	R=	Area / Wetted Perimeter	
Flow = Q	0.47	2.99	8.80	18.96	cubic feet per second	
Velocity = V	2.39	3.80	4.98	6.03	feet per second	
Hydraulic Radius = R	0.13	0.25	0.38	0.50	feet	
Cross-Sectional Area = A	0.20	0.79	1.77	3.142	square feet	
Wetted Perimeter = P_w	1.57	3.14	4.71	6.28	feet	
Upstream Inv.	220				feet	
Downstream Inv.	219.8				feet	
Length	40				feet	
Slope = S	0.005				foot/foot	
Manning's Roughness Coefficient = n	0.011				plastic pipe	
Pipe ID	0.5	1	1.5	2	feet	
Pipe ID	6	12	18	24	inches	
The 25 year Tc storm produces a flow of 1.58 cfs, which is less than the 2.99 cfs capacity of a 12 inch pipe at approximatly 0.5% slope.						

Area 5

Time of Concentration			
Sheet flow			
Equation	$t_{sheet\ flow} = \frac{0.007*(n*L)^{0.8}}{(P2yr.)^{1/2}*S^{0.4}}$		
Manning's n (sheet flow)		0.24	Dense Grass
Upstream Inv.		223.00	
Downstream Inv.		221.00	
Length (ft)		150	
P (2 yr. , 24 hr.) (in.)		4.78	NOAA Precipitation Frequency Server for Pinehurst, TX
Slope (ft/ft)		0.013333333	
Sheet Flow (minutes)		18.99	

Area 1 Tc (min.)	18.99
Area 1 Tc (hr.)	0.32

Area 6

Flow into Channel 5							
Equation	Q = kciA * F_c	Runoff Coefficient		0.85	Acres	0.9	Impervious
				0.95	Acres	0.55	Grass
Storm Event = N		2	5	10	25	year	
Flow = Q		5.11	6.25	7.23	9.43	cubic feet per second	
Flow From Previous Area 1,2,3,4,&5 = Q		10.46	12.85	14.88	19.44	cubic feet per second	
Total Flow = Q		15.57	19.10	22.12	28.86	cubic feet per second	
Conversion Constant = k		1.008					
Composite Runoff Coefficient = c		0.7153				composite	
Precipitation = P		1.30	1.59	1.84	2.18	inches	
Intensity = i		3.94	4.82	5.57	6.60	inches per hour	
Drainage Area = $A_{drainage}$		1.8				acres	
Rainfall intensity is derived from a N-year event with a T_c of 20 minutes.							
Equation	$Q=\frac{1.49*A*R^{2/3}*S^{1/2}}{n}$ and Hydraulic Radius	$R=\frac{\text{Area}}{\text{Wetted Perimeter}}$					
Flow = Q		51.40			cubic feet per second		
Velocity = V		2.74			feet per second		
Hydraulic Radius = R		0.87			feet		
Cross-Sectional Area = A		18.75			square feet		
Wetted Perimeter = P_w		21.57			feet		
Upstream Elev.		219.75			feet		
Downstream Elev.		219.25			feet		
Length		100.00			feet		
Slope = S		0.00500			foot/foot		
Manning's Roughness Coefficient = n		0.035			dense grass		
Drainage Channel 5 Dimensions							
1.25 feet total depth with 0.5 foot of freeboard. Calculation are shown for 1.25 feet deep.							
Triangular-Shaped Channel with a top width of 30 feet.							

Area 6

Time of Concentration of Area 2 Channel 1			
Sheet flow			
Equation	$t_{sheet\ flow} = \frac{0.007*(n*L)^{0.8}}{(P2yr.)^{1/2}*S^{0.4}}$		
Manning's n (sheet flow)	0.24	Dense Grass	
Length (ft)	90		
P (2 yr. , 24 hr.) (in.)	4.78	NOAA Precipitation Frequency Server for Pinehurst, TX	
Slope (ft/ft)	0.005		
Sheet Flow (minutes)	18.69		
Pipe Size			
Equation	$Q = \frac{1.49*A*R^{2/3}*S^{1/2}}{n}$ and Hydraulic Radius $R = \frac{Area}{Wetted\ Perimeter}$		
Flow = Q	8.41	cubic feet per second	
Velocity = V	4.76	feet per second	
Hydraulic Radius = R	0.38	feet	
Cross-Sectional Area = A	1.77	square feet	
Wetted Perimeter = P_w	4.71	feet	
Upstream Inv.	232.71	feet	
Downstream Inv.	231.25	feet	
Length	320.00	feet	
Slope = S	0.00456	foot/foot	
Manning's Roughness Coefficient = n	0.011	plastic pipe	
Pipe ID	1.50	feet	
Pipe ID	18.00	inches	
Time	1.12	minutes	
Area 1 Tc	19.81	minutes	
Area 1 Tc	0.33	hours	

Channel 5 Dimensions and Velocity		
Equation	$V = \frac{1.49*R^{2/3}*S^{1/2}}{n}$	
Manning's n	0.035	Dense Grass
Area (ft^2)	18.75	
Wetted Perimeter (ft)	21.57	Triangular
R=A/P (ft)	0.87	
Upstream Elev.	219.75	
Downstream Elev.	219.25	
Slope (ft/ft)	0.0050	
Width (ft)	30	
Depth of Water (ft)	1.25	
Side Slope	8.571428571	8.5:1 Slope
Velocity (ft/s) (full)	2.74	
Length (ft)	100	
Time (L/V)/60 (min)	0.61	
Area 1 Tc (min.)	0.61	
Area 1 Tc (hr.)	0.01	

Channel 2

Flow into Channel 2							
Equation	Q = kciA * F_c	Runoff Coefficient		0.145	Acres	0.9	Impervious
				0.145	Acres	0.55	Grass
Storm Event = N		2	5	10	25	year	
Flow = Q		1.17	1.44	1.67	2.17	cubic feet per second	
Conversion Constant = k		1.008					
Composite Runoff Coefficient = c		0.7250				composite	
Precipitation = P		1.14	1.40	1.62	1.92	inches	
Intensity = i		5.53	6.80	7.87	9.32	inches per hour	
Drainage Area = $A_{drainage}$		0.29				acres	
Rainfall intensity is derived from a N-year event with a T_c of 15 minutes.							
Equation	$Q=\frac{1.49*A*R^{2/3}*S^{1/2}}{n}$	and	Hydraulic Radius	$R=\frac{\text{Area}}{\text{Wetted Perimeter}}$			
Flow = Q		3.12		cubic feet per second			
Velocity = V		2.49		feet per second			
Hydraulic Radius = R		0.25		feet			
Cross-Sectional Area = A		1.25		square feet			
Wetted Perimeter = P_w		5.02		feet			
Upstream Elev.		237.50		feet			
Downstream Elev.		224.50		feet			
Length		593.00		feet			
Slope = S		0.02192		foot/foot			
Manning's Roughness Coefficient = n		0.035		dense grass			
Drainage Channel 5 Dimensions							
0.25 feet total depth with 0.25 foot of freeboard. Calculation are shown for 0.25 feet deep.							
Triangular-Shaped Channel with a top width of 10 feet.							

Channel 2

Time of Concentration		
Sheet flow		
Equation	$t_{sheet\ flow} = \frac{0.007*(n*L)^{0.8}}{(P2yr.)^{1/2}*S^{0.4}}$	
Manning's n (sheet flow)	0.1255	Dense Grass & Concrete Avg
Length (ft)	150	
P (2 yr. , 24 hr.) (in.)	4.78	NOAA Precipitation Frequency Server for Pinehurst, TX
Slope (ft/ft)	0.0219	
Sheet Flow (minutes)	9.27	
Shallow Concentrated Flow		
Equation	$t_{shallow} = 16.1345*S^{1/2}$	
Slope (ft/ft)	0.0219	
Length (ft)	443	
Shallow Conc. Flow (ft/s)	2.388910288	
Time (min)	3.09	
Area 1 Tc (min.)	12.36	
Area 1 Tc (hr.)	0.21	

Channel 2 Dimensions and Velocity		
Equation	$V = \frac{1.49*R^{2/3}*S^{1/2}}{n}$	
Manning's n	0.035	Dense Grass
Area (ft^2)	1.25	
Wetted Perimeter (ft)	5.02	Triangular
R=A/P (ft)	0.25	
Upstream Elev.	237.5	
Downstream Elev.	224.5	
Slope (ft/ft)	0.0219	
Width (ft)	10	
Depth of Water (ft)	0.25	
Side Slope	10	10:1 Slope
Velocity (ft/s) (full)	2.49	
Length (ft)	593	
Time (L/V)/60 (min)	3.96	
Area 1 Tc (min.)	16.32	
Area 1 Tc (hr.)	0.27	

Channel 3

Flow into Channel 3							
Equation	Q = kciA * F_c	Runoff Coefficient		0.44	Acres	0.9	Impervious
				0.13	Acres	0.55	Grass
Storm Event = N		2	5	10	25	year	
Flow = Q		2.45	2.34	2.72	3.57	cubic feet per second	
Conversion Constant = k		1.008					
Composite Runoff Coefficient = c		0.8202				composite	
Precipitation = P		0.899	1.11	1.29	1.54	inches	
Intensity = i		5.21	4.97	5.77	6.89	inches per hour	
Drainage Area = $A_{drainage}$		0.57				acres	

Rainfall intensity is derived from a N-year event with a T_c of 10 minutes.

Equation	$Q=\frac{1.49*A*R^{2/3}*S^{1/2}}{n}$	and	Hydraulic Radius	$R=\frac{\text{Area}}{\text{Wetted Perimeter}}$

Flow = Q	3.75	cubic feet per second
Velocity = V	3.00	feet per second
Hydraulic Radius = R	0.25	feet
Cross-Sectional Area = A	1.25	square feet
Wetted Perimeter = P_w	5.02	feet
Upstream Elev.	239.50	feet
Downstream Elev.	222.00	feet
Length	550.00	feet
Slope = S	0.03182	foot/foot
Manning's Roughness Coefficient = n	0.035	dense grass

Drainage Channel 3 Dimensions
0.25 feet total depth with 0.25 foot of freeboard. Calculation are shown for 0.25 feet deep.
Triangular-Shaped Channel with a top width of 10 feet.

Channel 3

Time of Concentration			
Sheet flow			
Equation	$t_{sheet\ flow}=$	$\frac{0.007*(n*L)^{0.8}}{(P2yr.)^{1/2}*S^{0.4}}$	
Manning's n (sheet flow)		0.1255	Dense Grass & Concrete Avg
Length (ft)		150	
P (2 yr. , 24 hr.) (in.)		4.78	NOAA Precipitation Frequency Server for Pinehurst, TX
Slope (ft/ft)		0.0318	
Sheet Flow (minutes)		7.98	
Shallow Concentrated Flow			
Equation	$t_{shallow}=$	$16.1345*S^{1/2}$	
Slope (ft/ft)		0.0318	
Length (ft)		410	
Shallow Conc. Flow (ft/s)		2.878015914	
Time (min)		2.37	
Area 1 Tc (min.)		10.36	
Area 1 Tc (hr.)		0.17	

Channel 3 Dimensions and Velocity			
Equation	V=	$\frac{1.49*R^{2/3}*S^{1/2}}{n}$	
Manning's n		0.035	Dense Grass
Area (ft^2)		1.25	
Wetted Perimeter (ft)		5.02	Triangular
R=A/P (ft)		0.25	
Upstream Elev.		239.5	
Downstream Elev.		222	
Slope (ft/ft)		0.0318	
Width (ft)		10	
Depth of Water (ft)		0.25	
Side Slope		10	10:1 Slope
Velocity (ft/s) (full)		3.00	
Length (ft)		550	
Time (L/V)/60 (min)		3.05	
Area 1 Tc (min.)		13.41	
Area 1 Tc (hr.)		0.22	

Channel 4

Flow into Channel 4						
Equation	Q = kciA * F_c	Runoff Coefficient	0.12	Acres	0.9	Impervious
			0.08	Acres	0.55	Grass

Storm Event = N	2	5	10	25	year
Flow = Q	1.07	1.32	1.53	2.00	cubic feet per second
Conversion Constant = k	1.008				
Composite Runoff Coefficient = c	0.7600				composite
Precipitation = P	0.57	0.70	0.81	0.96	inches
Intensity = i	6.96	8.61	9.98	11.85	inches per hour
Drainage Area = $A_{drainage}$	0.2				acres

Rainfall intensity is derived from a N-year event with a T_c of 5 minutes.

Equation $Q = \frac{1.49 * A * R^{2/3} * S^{1/2}}{n}$ and Hydraulic Radius $R = \frac{\text{Area}}{\text{Wetted Perimeter}}$

Flow = Q	2.47	cubic feet per second
Velocity = V	1.97	feet per second
Hydraulic Radius = R	0.25	feet
Cross-Sectional Area = A	1.25	square feet
Wetted Perimeter = P_w	5.02	feet
Upstream Elev.	237.50	feet
Downstream Elev.	235.00	feet
Length	182.00	feet
Slope = S	0.01374	foot/foot
Manning's Roughness Coefficient = n	0.035	dense grass

Drainage Channel 5 Dimensions
0.25 feet total depth with 0.25 foot of freeboard. Calculation are shown for 0.25 feet deep.
Triangular-Shaped Channel with a top width of 10 feet.

Channel 4

Time of Concentration			
Sheet flow			
Equation	$t_{sheet\ flow}=$	$\frac{0.007*(n*L)^{0.8}}{(P2yr.)^{1/2}*S^{0.4}}$	
Manning's n (sheet flow)		0.1255	Dense Grass & Concrete Avg
Length (ft)		20	
P (2 yr. , 24 hr.) (in.)		4.78	NOAA Precipitation Frequency Server for Pinehurst, TX
Slope (ft/ft)		0.005	
Sheet Flow (minutes)		3.34	
Channel 4 Dimensions and Velocity			
Equation	V=	$\frac{1.49*R^{2/3}*S^{1/2}}{n}$	
Manning's n		0.035	Dense Grass
Area (ft^2)		1.25	
Wetted Perimeter (ft)		5.02	Triangular
R=A/P (ft)		0.25	
Upstream Elev.		237.5	
Downstream Elev.		235	
Slope (ft/ft)		0.0137	
Width (ft)		10	
Depth of Water (ft)		0.25	
Side Slope		10.0000	10:1 Slope
Velocity (ft/s) (full)		1.97	
Length (ft)		182	
Time (L/V)/60 (min)		1.54	
Area 1 Tc (min.)		4.88	
Area 1 Tc (hr.)		0.08	

Appendix B:

Drainage Maps & Stormwater Management Details

TYPE V MSW TRANSFER FACILITY
SURFACE WATER DRAINAGE REPORT
SITE STORMWATER DRAWINGS

SEPTEMBER 2021

PREPARED FOR:

9-30-2021

FIRM NO. 14712

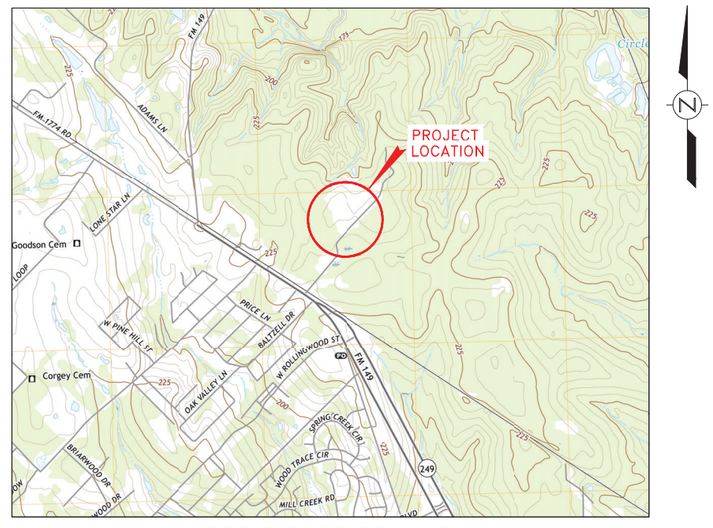
CIRCLE LAKE TRANSFER FACILITY

CIRCLE LAKE TRANSFER, LLC
13727 OFFICE PARK DRIVE
HOUSTON, TEXAS 77070

DRAWING INDEX		
DRAWING NO.	DESCRIPTION	REVISION NO.
1	TITLE SHEET, INDEX, AND SITE LOCATION MAP	0
2	DRAINAGE AREAS – CULVERTS	0
3	DRAINAGE AREAS – CHANNELS	0
4	STORMWATER MANAGEMENT DETAILS	0

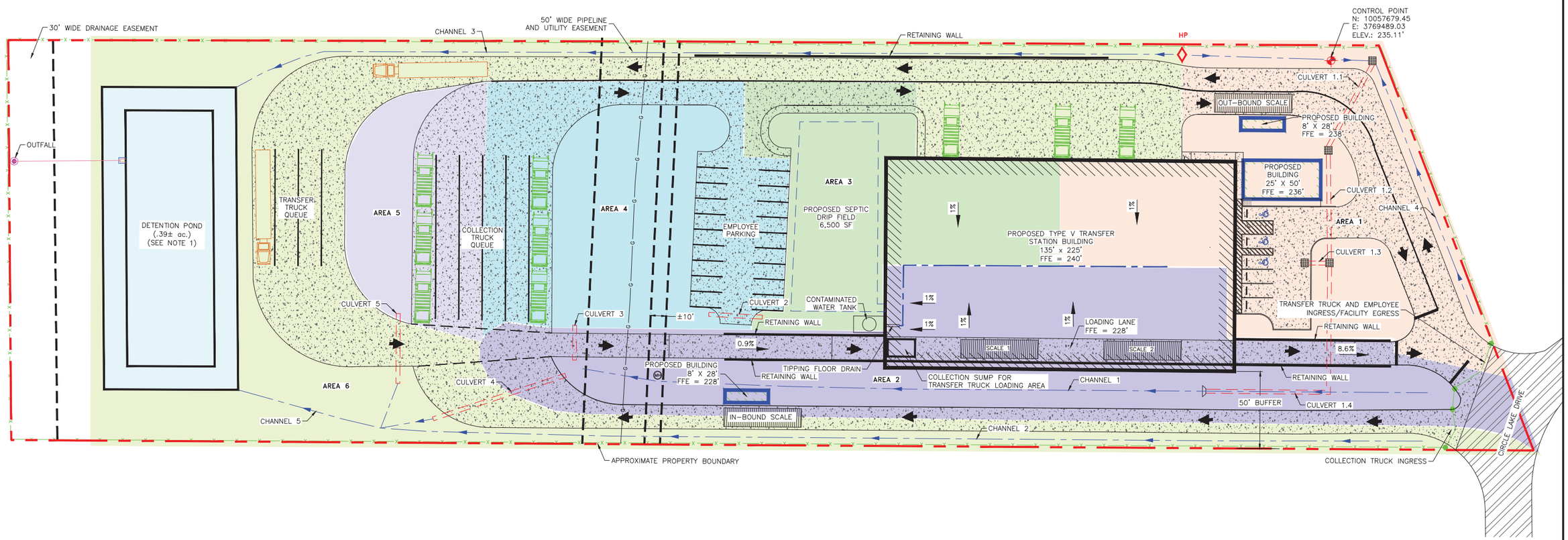
PREPARED BY:

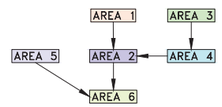
ALLEN ENGINEERING AND SCIENCE
6360 I–55 North, Suite 330, Jackson, MS
TEL: (601) 936–4440



PROJECT LOCATION MAP

SCALE: 1" = 1,500'
LATITUDE: N30° 10' 17.48"
LONGITUDE: W-95° 40' 22.33"





CULVERT DRAINAGE NODES

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- TRANSFER STATION BUILDING
- SUPPORT BUILDING
- SCALE
- SECURITY FENCE LINE
- SECURITY GATE
- EASEMENT
- GAS LINE
- CONCRETE
- ASPHALT
- MAN HOLE
- DRAINAGE GRATE
- UNDERGROUND CULVERT
- CHANNEL AND FLOW DIRECTION

SCALE
0 15' 30' 60'

NOTES:

1. SEE PRE-DEVELOPMENT AND POST-DEVELOPMENT STORMWATER CALCULATIONS FOR DETENTION POND STORAGE REQUIREMENTS.
2. SEE CULVERT CALCULATIONS FOR SIZING, AND DESIGN PARAMETERS.
3. REFER TO STORMWATER MANAGEMENT DETAILS SHEET IN THIS SET FOR OUTFALL STRUCTURE AND CHANNEL DETAILS.

STATE OF TEXAS
JEFFREY L. ALLEN
139569
LICENSED PROFESSIONAL ENGINEER

Jeffrey L. Allen
9-30-2021

FIRM NO. 14712

REV.	DESCRIPTION OF REVISION	BY	DATE
0	ISSUED FOR REVIEW	JLA	09/30/2021

CIRCLE LAKE TRANSFER, LLC

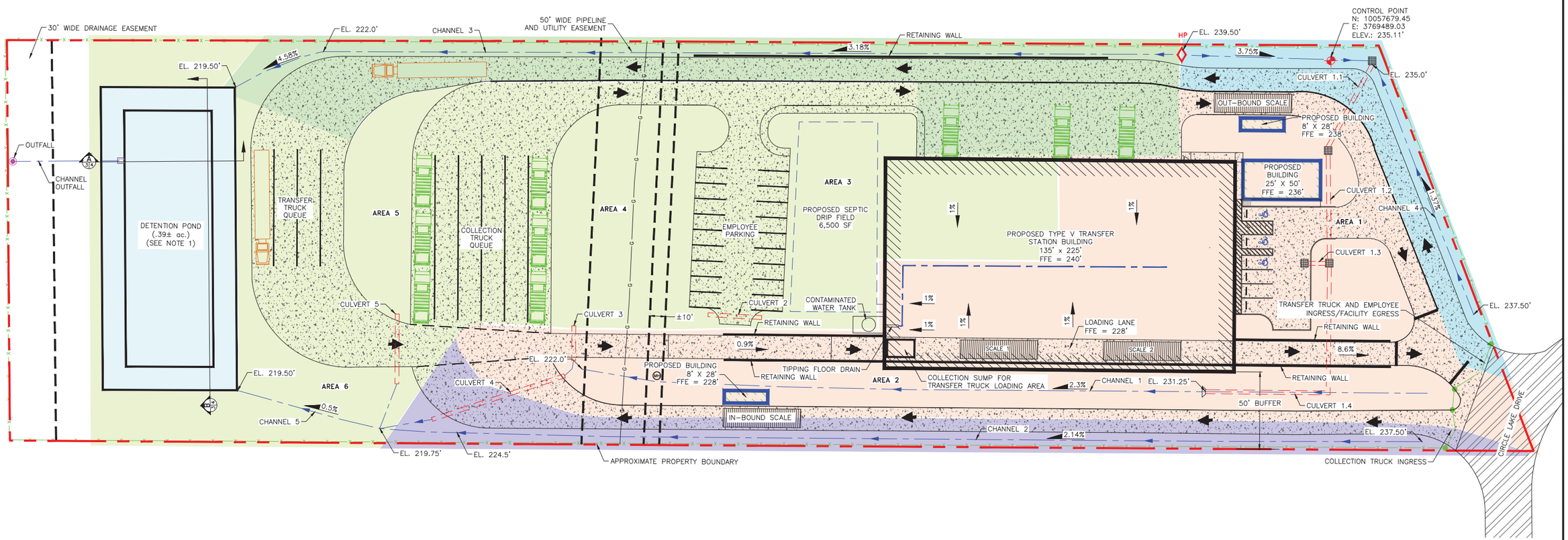
SCALE:	1" = 30'
DRAWN:	N. SISSON
CHECKED:	J. HILL
REVIEWED:	M. HOHM
PROJECT MANAGER:	M. HOHM
DATE:	09/30/2021

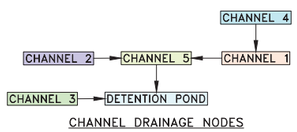
ALLEN ENGINEERING AND SCIENCE

DRAINAGE AREAS - CULVERTS

CIRCLE LAKE TRANSFER, LLC
PINEHURST, TEXAS

PROJECT No.	
21052.01	
CAD FILE NAME	
093021 DWG02 R0 DAC	
DRAWING	REVISION
2	0





CHANNEL DRAINAGE NODES

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- TRANSFER STATION BUILDING
- SUPPORT BUILDING
- SCALE
- SECURITY FENCE LINE
- SECURITY GATE
- EASEMENT
- GAS LINE
- CONCRETE
- ASPHALT
- MAN HOLE
- DRAINAGE GRATE
- UNDERGROUND CULVERT
- CHANNEL AND FLOW DIRECTION

SCALE
0 15' 30' 60'

NOTES:

1. SEE PRE-DEVELOPMENT AND POST-DEVELOPMENT STORMWATER CALCULATIONS FOR DETENTION POND STORAGE REQUIREMENTS.
2. SEE CHANNEL CALCULATIONS FOR SIZING, DESIGN PARAMETERS, AND LINING TYPES.
3. REFER TO STORMWATER MANAGEMENT DETAILS SHEET IN THIS SET FOR OUTFALL STRUCTURE AND CHANNEL DETAILS.
4. SEE DESIGN CALCULATIONS FOR AREA SIZES AND RUNOFF COEFFICIENTS.

STATE OF TEXAS
JEFFREY L. ALLEN
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LICENSED PROFESSIONAL ENGINEER

Jeffrey L. Allen
9-30-2021

FIRM NO. 14712

REV.	DESCRIPTION OF REVISION	BY	CURRENT DATE
0	ISSUED FOR REVIEW	JLA	09/30/2021

CIRCLE LAKE TRANSFER, LLC

SCALE:	1" = 30'
DRAWN:	N. SISSON
CHECKED:	J. HILL
REVIEWED:	M. HOHM
PROJECT MANAGER:	M. HOHM
DATE:	09/30/2021

ALLEN ENGINEERING AND SCIENCE

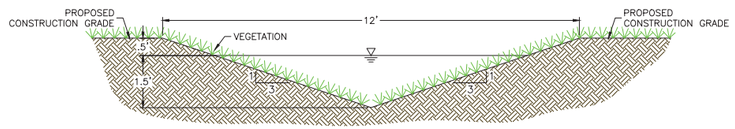
DRAINAGE AREAS - CHANNELS

CIRCLE LAKE TRANSFER, LLC
PINEHURST, TEXAS

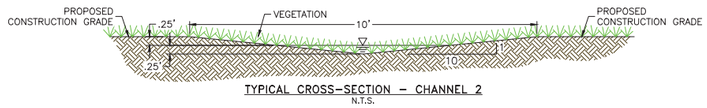
PROJECT No.	21052.01
CAD FILE NAME	093021 DWG03 R0 DAC
DRAWING	3
REVISION	0

STATE OF TEXAS
JEFFREY L. ALLEN
139569
LICENSED
PROFESSIONAL ENGINEER

Jeffrey L. Allen
9-30-2021
FIRM NO. 14712



TYPICAL CROSS-SECTION – CHANNEL 1
N.T.S.



TYPICAL CROSS-SECTION – CHANNEL 2
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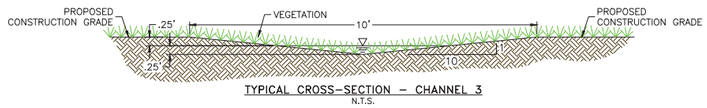
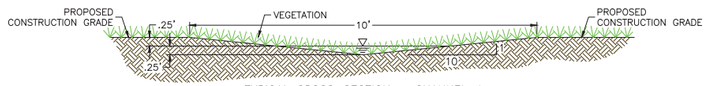


TYPICAL CROSS-SECTION – CHANNEL 3
N.T.S.



TYPICAL CROSS-SECTION – CHANNEL 4
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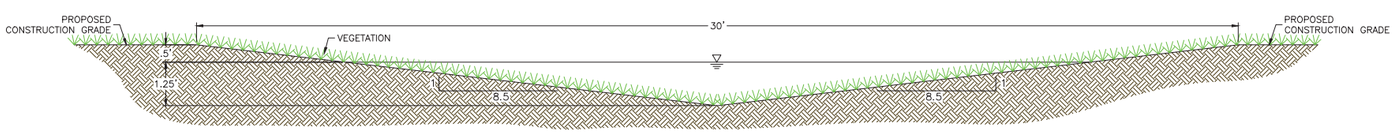
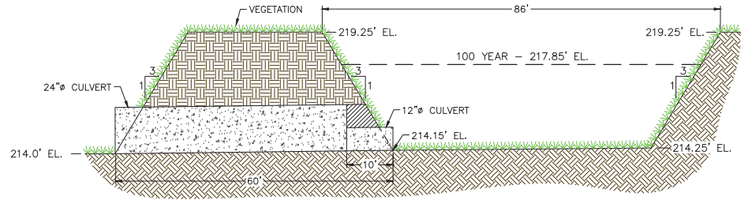
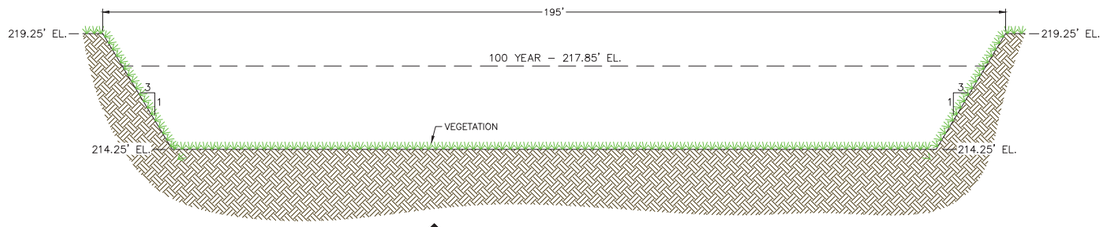


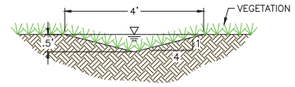
TYPICAL CROSS-SECTION – CHANNEL 5
N.T.S.



A/4/3 DETENTION POND CROSS-SECTION
SCALE: HORIZONTAL – 1"=15'
VERTICAL – 1"=3'



B/4/3 DETENTION POND CROSS-SECTION
SCALE: HORIZONTAL – 1"=15'
VERTICAL – 1"=3'



CHANNEL OUTFALL CROSS-SECTION
N.T.S.

LEGEND
- IN-SITU SOIL
- STRUCTURAL FILL
- CONCRETE
- VEGETATION

SCALE
HORIZONTAL 0 7.5' 15' 30'
VERTICAL 0 1.5' 3' 6'

REV.	DESCRIPTION OF REVISION	BY	DATE
0	ISSUED FOR REVIEW	JLA	09/30/2021

CIRCLE LAKE TRANSFER, LLC

SCALE:	AS SHOWN
DRAWN:	N. SISSON
CHECKED:	J. HILL
REVIEWED:	M. HOHM
PROJECT MANAGER:	M. HOHM
DATE:	09/30/2021

ALLEN ENGINEERING AND SCIENCE

STORMWATER MANAGEMENT DETAILS

CIRCLE LAKE TRANSFER, LLC
PINEHURST, TEXAS

PROJECT No.	
21052.01	
CAD FILE NAME	
093021 DWG04 R0 SMD	
DRAWING	REVISION
4	0

TYPE V TRANSFER FACILITY

PERMIT APPLICATION REPORT (PAR) PACKAGE

PART IV

PREPARED FOR:

CIRCLE LAKE TRANSFER, LLC.

13727 OFFICE PARK DRIVE
HOUSTON, TEXAS 77070

PREPARED BY:

ALLEN
ENGINEERING
AND SCIENCE

6360 I-55 NORTH, SUITE 330
JACKSON, MISSISSIPPI 39211

SEPTEMBER 2021

TABLE OF CONTENTS

TABLES:

FIGURES:

ACRONYMS:

BMP	BEST MANAGEMENT PRACTICE
CFCS	CHLORINATED FLUOROCARBONS
CFR	CODE OF FEDERAL REGULATIONS
CLT	CIRCLE LAKE TRANSFER LLC
CLTS	CIRCLE LAKE TRANSFER STATION
H-GAC	HOUSTON-GALVESTON AREA COUNCIL OF GOVERNMENTS
IIED	INFRASTRUCTURE IN ENVIRONMENTAL DEVELOPMENT
MSW	MUNICIPAL SOLID WASTE
NRACM	NON-REGULATED ASBESTOS-CONTAINING MATERIAL
PAR	PERMIT APPLICATION REPORT
PCBS	POLYCHLORINATED BIPHENYLS
POTW	PUBLICLY OWNED TREATMENT WORKS
RACM	REGULATED ASBESTOS-CONTAINING MATERIAL
SDP	SITE DEVELOPMENT PLAN
SOP	SITE OPERATING PLAN
SPCC	SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
SWP	SPECIAL WASTE PROFILE
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TAC	TEXAS ADMINISTRATIVE CODE
TCEQ	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

1.0 INTRODUCTION

This **Site Operating Plan (SOP)** has been prepared for the Circle Lake Transfer Station (CLTS). The CLTS (hereafter also referred to as the "facility" or "site") is a proposed Type V municipal solid waste (MSW) facility, owned and operated by Circle Lake Transfer LLC (CLT). This **SOP** provides general and facility-specific instructions for site management and personnel to operate the facility on a daily basis in a manner consistent with the design of the facility and with the applicable rules of the Texas Commission on Environmental Quality (TCEQ). This **SOP** complies with the requirements of Texas Administrative Code (TAC) Title 30, Chapter 330, Subchapter E, "Operational Standards for Municipal Solid Waste Landfill Storage and Processing Units," applicable to Type V MSW transfer station registrations. This **SOP** will be retained onsite throughout the active life of the facility until after certification of closure.

The CLTS is located in the census-designated place of Pinehurst in Montgomery County, Texas and is accessed from Circle Lake Drive. The site is located approximately one-half mile northeast of Circle Lake Drive's intersection with State Highway 1774 (Magnolia Boulevard) near its intersection (north) with State Highway 249. The CLTS will accept waste from public and private waste hauling vehicles. Waste material will be transferred to a permitted MSW landfill located not more than 50 miles from the facility. Support facilities include a site entrance road, scale house, and break room.

This **SOP** provides guidance for facility management and operating personnel for daily operation of the CLTS. This **SOP** also includes provisions for facility management and operating personnel to meet the general and facility-specific requirements.

The specific procedures outlined in this **SOP** are operational requirements and must be understood, acknowledged, and followed by the site personnel. This **SOP** will be retained at the facility throughout the active life of the facility until after certification of closure.

References to the terms "Executive Director" or "TCEQ" used in this **SOP** shall refer to the Executive Director of the TCEQ or the designated representative(s) of the TCEQ. References to information in the "registration" or "registration application" for this facility shall refer to the most current version of those documents, including any amendments, modifications, or revisions as approved.

2.0 RECORDKEEPING AND REPORTING RQUIREMENTS (30 tac §330.219)

2.1 DOCUMENTS (§330.219(a))

The CLTS Facility will maintain the operating record for the facility on site. These plans will be furnished upon request to TCEQ representatives and made available for inspection by TCEQ representatives or other interested parties. These plans and documents are part of the facility operating record. The operating record will be maintained in an organized format which will allow information to be easily located and retrieved. All information contained within the operating record and the different required plans will be retained during the active life of the facility until after certification of closure. A list of records required to be maintained is provided below in **TABLE 2-1**. These documents will be made available for inspection by TCEQ agency representatives or other interested parties. Site Operating Record files that are older than five (5) years may be stored in a secured off-site records storage facility. Records stored off-site will be made available for review within 72 hours of a request. Records, including waste manifests, may be maintained electronically and/or in a manner consistent with the e-manifest database requirements.

Consistent with 30 TAC §330.219, copies of documents that are part of the approved registration process and are considered part of the Site Operating Record for the facility are listed in **TABLE 2-1**.

2.2 REQUIRED RECORDS TO BE MAINTAINED (§330.219(b))

The CLTS Facility, in accordance with Title 30 TAC §330.219(b), will promptly record and retain in the operating record any and all records for those items listed in **TABLE 2-1**. In addition to the records maintained in **TABLE 2-1** the records listed below will be kept, maintained and filed as part of the facility operating record. Log books and schedules may be used.

- Access Control Inspection and Maintenance
- Daily Litter Pickup
- Windblown Waste and Litter Control Operations
- Dust Nuisance Control Efforts
- Access Roadway Regrading
- Salvaged Material Storage Nuisance Control Efforts
- Special Waste Acceptance Plan Compliance
- Class I Industrial Waste Acceptance Plan Compliance
- Waste Rejection and Waste Discrepancy Reports
- Fire Occurrence Notices
- Documentation of Compliance with Approved Odor Management Plan

All records will be placed in the operating record within seven working days of completion or upon receipt of analytical data, as appropriate. All records may be kept by the facility operator in electronic or other approved format(s).

2.3 REPORT SIGNATORIES (§330.219(c))

The owner or operator will sign all reports and other information requested by the Executive Director as described in 30 TAC §305.44(a) if applicable, or they will be signed by a duly authorized representative of the owner or operator only if:

The authorization is made in writing by the owner or operator as described in 30 TAC §305.44(a)

The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity or for environmental matters for the owner or operator (e.g., environmental manager, or a position of equivalent responsibility). A duly authorized representative may thus be either a named individual or any individual occupying a named position

The written authorization is submitted to the Executive Director.

If an authorization under this section is no longer accurate because of a change in individuals or position, a new authorization satisfying the requirements of this section must be submitted to the Executive Director prior to, or together with, any reports, information, or applications to be signed by an authorized representative.

Any person signing a report shall make the certification in 30 TAC §305.44(b).

2.4 EXECUTIVE DIRECTOR ACCESS TO INFORMATION (§330.219(e))

The CLTS Facility, in accordance with Title 30 TAC §330.219(e), will furnish the operating record to the Executive Director upon request and will be made available at all reasonable times at the facility for inspection by the Executive Director.

2.5 RECORD RETENTION (§330.219(f))

In accordance with Title 30 TAC §330.219(f), the site will retain all information contained within the operating record of the facility, and all plans required for the facility for the life of the facility until after certification of closure.

2.6 ALTERNATIVE SCHEDULES FOR RECORDKEEPING AND NOTIFICATIONS (§330.219(g))

The Executive Director, in accordance with Title 30 TAC §330.219(g), may set alternative schedules for recordkeeping and notification requirements as specified in Title 30 TAC §330.219(a) - (e).

2.7 PERSONNEL TRAINING RECORDS AND LICENSES

The CLTS Facility will maintain personnel training records. Personnel training requirements will be consistent with **SECTION 2 - PERSONNEL AND TRAINING**. Personnel training records for current facility personnel will be maintained until closure of the facility. The facility will maintain operator licenses for municipal solid waste supervisors as required by 30 TAC Chapter 30, Subchapter F. Personnel training records and personnel operator licenses will be maintained in the operating record as listed in **TABLE 2-1**.

All operator licenses and facility permits shall be prominently displayed (i.e. framed and mounted on the wall) in the on-site office at the facility.

2.8 ANNUAL WASTE ACCEPTANCE RATE AND WASTE ACCEPTANCE RATE (§330.675)

As listed in **TABLE 2-1**, the facility will maintain records to document the annual waste acceptance rate for the facility. Documentation will include maintaining the quarterly solid waste summary reports and the annual solid waste summary reports required by Title 30 TAC §330.675 in the site operating record.

TABLE 2-1: RECORDKEEPING REQUIREMENTS

Records to be Maintained in the Site Operating Record *	Frequency	Rule Citation
MSW Registration	Once upon issuance	§330.219(a)
Approved Registration Application	Updated as modifications are approved	§330.219(a)
Site Operating Plan, as-built set of construction plans and any other plans or related documents	Upon approval and as updated	§330.219(a)
Location restriction demonstrations	As updated	§330.219(b)(1)
Inspection records (including drainage inspections and action taken for drainage repairs) and training procedures	Per Occurrence	§330.219(b)(2)
Closure Plans and any monitoring, testing or analytical data relating to closure requirements	As required	§330.219(b)(3)
Cost estimates and financial assurance documentation relating to closure	Annually	§330.219(b)(4)
Copies of correspondence and responses relating to facility operation, permit modifications, approvals and technical assistance	Per Occurrence	§330.219(b)(5)
All documents, manifests, shipping documents, trip tickets, etc., involving special waste	Per Occurrence	§330.219(b)(6)
Other documents specified in the permit or by the Executive Director	As Required	§330.219(b)(7)
Trip tickets as required by 30 TAC §312.145(b)(2)	Per Occurrence (retained for 5 years)	§312.145 §330.219(b)(8)
Dates, times and duration of alternative operating hours	As Needed	§330.229(d)
Alternate schedules and notification requirements, if required	As Required	§330.219(g)
Inspection records and training procedures relating to Fire Protection Plan and facility safety	Approval of Registration Application	§330.221(c)
Personnel training records (including topics covered and attendee list) and detailed job descriptions	As Needed	§330.219(b)(2)
Records to document the annual waste acceptance rate and annual s/w summary report	Annually	§330.675(b)
Waste unloading/ prohibited waste discovery, unauthorized material removal	Per Occurrence	§330.225
Personnel operator licenses issued under 30 TAC Chapter 30, Subchapter F	As Needed	§330.59(f)(3)
All site inspection and maintenance documentation noted in “Facility Inspection and Maintenance Schedule”	As Required	§330.223 - §330.243
Documentation that all wastes leaving the facility are managed by other licensed or permitted facilities	As Needed	§330.205(a)
Log of abnormal events	Per Occurrence	§330.219(d)(1)
Report and supporting records demonstrating that at least 10% of the volume of the waste received was processed to recover material that was recycled or reused	Quarterly (sent to Executive Director and maintained in operating record)	§312.219(b)(9)

* All records may be kept by the facility operator in electronic or other approved format(s).

3.0 PERSONNEL AND TRAINING

3.1 FACILITY PERSONNEL

This section lists the personnel involved with the operation of the CLTS. The CLTS Management Team and Site Personnel are listed on the organizational chart shown on **FIGURE 3-1**. The following subsections describe the personnel involved with operating the CLTS.

The general organizational structure for facility personnel who will be involved in the operation of the facility will be as shown on the organizational chart provided below as **FIGURE 3-1**. The Site Manager will have overall responsibility for daily operations. Individual job titles and personnel are subject to change based on changes in operational conditions and changes in roles and responsibilities. However, the total number of key site personnel will be sufficient to meet the requirements outlined in this **SOP**. In addition, personnel training regarding duties and responsibilities will be maintained to ensure ongoing compliance with the requirements of this **SOP**.

3.1.1 CORPORATE MANAGEMENT

The President of CLT has management and oversight responsibilities for all operations within the geographic area including the CLTS. The President is responsible for all hauling, recycling, and transfer operations in the area. His responsibilities include staff management, financial planning, as well as other management responsibilities. The President reports to the CEO of CLT. The CLTS Site Manager will be able to rely on the support and knowledge base of the CEO, President and Circle Lake Corporate Management for critical decisions affecting all aspects of the transfer station design, permitting, management and operations; however, the CEO, President and Circle Lake Corporate Management may be considered personnel employed by the Circle Lake Transfer Station.

3.1.2 TRANSFER STATION SITE MANAGER

The CLTS Site Manager (or Site Manager) will be ultimately responsible for daily facility operations. As such, this individual will be directly responsible for staff and equipment allocation to ensure operation of the facility in accordance with the approved **Site Development Plan (SDP)**, **SOP,** and applicable local, state, and federal regulations. The Site Manager serves as the emergency contact and coordinator for the facility and will be responsible for maintaining the Site Operating Record and required logs.

The Site Manager has the responsibility for overall management and the general direction of the facility; participates in the orientation and training of employees; and, has overall responsibility for implementation and adherence to this **SOP**. Wherever this **SOP** describes procedures or requirements without naming a specific individual or position responsible for those requirements, the Site Manager shall have primary responsibility for those requirements. Where a specific individual or position is responsible for a particular task, that responsibility is described. Otherwise, the Site Manager may delegate authority and assign qualified personnel to accomplish the requirements of this **SOP**. The Site Manager will designate an individual(s) to fulfill his or her duties during periods when the Site Manager is absent.

Onsite personnel shall perform the job functions of Scale House Attendant, Lead Operator, Equipment Operator(s), Mechanic(s), and Laborer(s) and are under the supervision of the Site

Manager or his designee. The same individual may perform these functions provided that the minimum staffing compliment are available on site. The Site Manager is responsible for hiring and terminating personnel in these positions.

The Site Manager will have a minimum education of a high school diploma or equivalent and will have experience in MSW processing operations. The Site Manager will have and maintain an MSW Facility Class A or B License as a MSW facility supervisor in accordance with 30 TAC Chapter 30, Subchapter F; and, as such, must meet the specific qualification standards (training, education, experience, applicable examination) contained in that Subchapter to obtain and maintain a Class B License.

3.1.3 LEAD OPERATOR

The Site Manager will appoint a Lead Operator who will be responsible for managing daily work operations, equipment maintenance and repair, and personnel safety of the facility's operation in accordance with federal and state regulations and guidelines. This individual will be responsible for detecting prohibited waste, potentially dangerous conditions, and potentially careless or improper actions of persons while on the premises. The Lead Operator will consider personnel safety and will direct Equipment Operators on a daily basis regarding waste processing operations. The Lead Operator will also perform other required tasks as directed by the Site Manager. The Lead Operator must, at a minimum, have a high school diploma or equivalent, experience in municipal solid waste processing operations, be knowledgeable of **SOP** requirements, and have the aptitude to manage personnel and implement operational aspects of solid waste processing operations and obtain/maintain a license as a municipal solid waste facility Supervisor consistent with the requirements of Chapter 30, Subchapter F (i.e. MSW Supervisor Occupational license Grade C or above).

3.1.4 SCALE HOUSE ATTENDANT

The Scale House Attendant (or Attendant) is primarily responsible for maintaining complete and accurate records of vehicles and solid waste entering the facility. The Attendant will be trained in facility safety procedures, to visually check for unauthorized wastes, to weigh vehicles, measure waste volumes if necessary, and to collect waste disposal fees. There may be more than one (1) Attendant utilized at the facility depending on the hours of the facility, volume and types of waste/vehicles being processed at the facility. Specifically, the Attendant is required to: (1) screen the incoming vehicles for waste type(s) and to exclude prohibited waste or unauthorized waste; (2) inspect waste loads to confirm that they are authorized for disposal; (3) review manifests and other shipping documents; (4) record incoming waste loads; (5) review and confirm special waste documents; (6) provide general customer direction and information; and (7) accept tipping fees. The Attendant will be present at all hours when the transfer station facility is open receive waste. The Scale House Attendant, at a minimum, will be required to have a basic understanding of accounting principles and basic communication skills; and, at a minimum, will have a high school diploma or equivalent, along with experience or education/training in municipal solid waste processing operations. The Scale House Attendant will be under the daily supervision of the Transfer Station Site Manager but will also have accounting and financial reporting responsibilities to the President or his designee.

3.1.5 EQUIPMENT OPERATORS

The Equipment Operator(s) primary responsibilities will include the safe operation of the solid waste transfer-related and other facility equipment. Equipment Operators will be responsible for detecting potentially dangerous conditions and potentially careless or improper actions of persons while on the premises. Equipment Operators will monitor and direct unloading vehicles and are also responsible for maintenance, construction, litter abatement, and general facility cleanup. Equipment Operators will intervene as necessary to prevent accidents and report unsafe conditions immediately to the Lead Operator or Site Manager. Equipment Operators are also responsible for screening and identifying prohibited and unauthorized wastes.

Equipment Operators, at a minimum, must be experienced in the operation of heavy equipment and demonstrate the ability to be trained in MSW processing operations. Equipment operators will have a minimum of six (6) months experience in heavy equipment operation or supervised on-the-job training. At all times when the facility is open to receive waste, at least one Equipment Operator will be designated as the Lead Operator on duty, who will assume the role and responsibilities as described above for that position.

3.1.6 LABORERS

Laborers will provide miscellaneous operations support at the facility. This support will include but is not limited to: check for prohibited and unauthorized wastes, sweep the operation area, perform facility wash-down, collection and disposing of windblown and other litter control (e.g. litter fencing installation and maintenance), installation and maintenance of stormwater best management practices (BMPs), general equipment and building maintenance, and directing and spotting vehicles in the unloading areas.

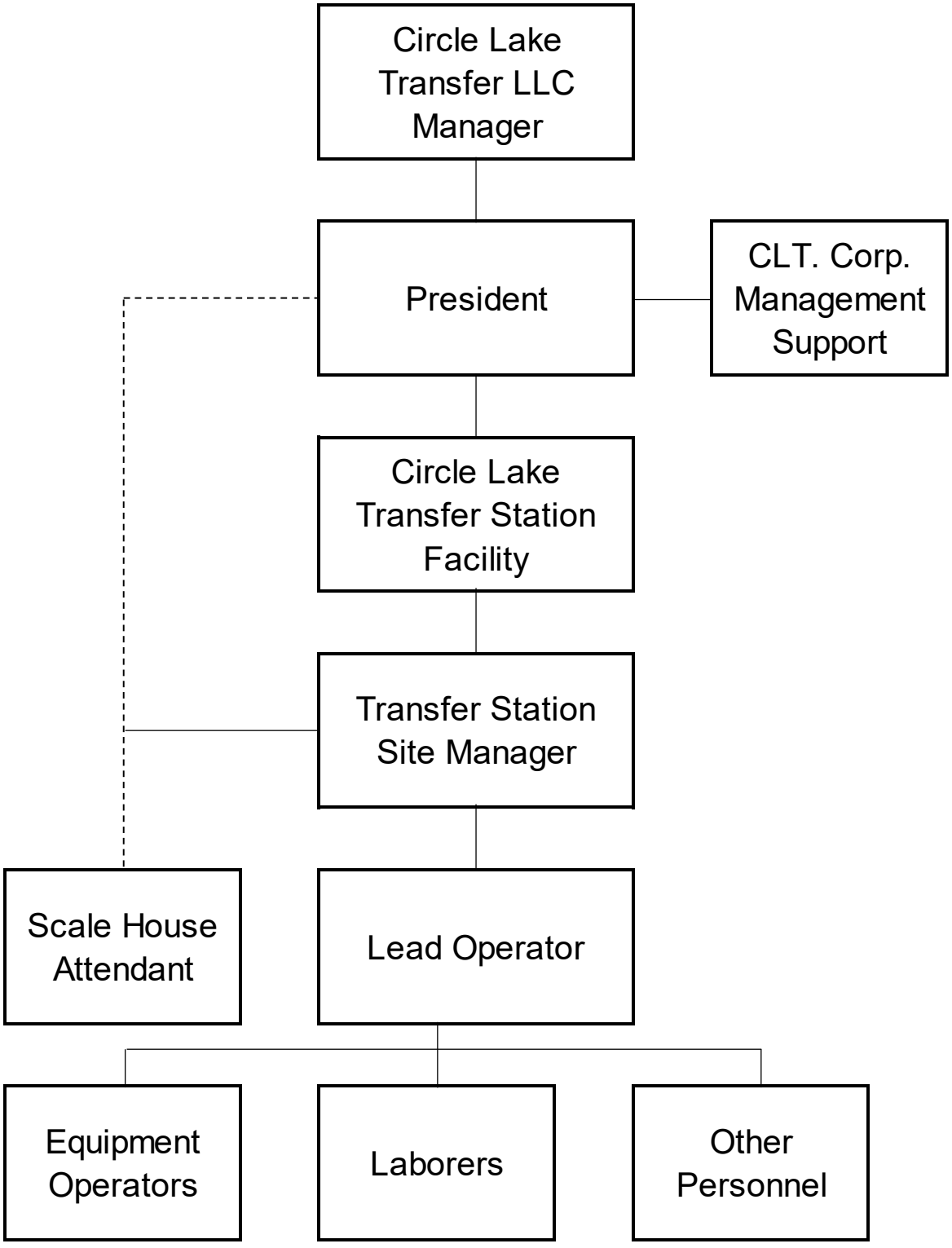
3.1.7 MECHANICS

Mechanics perform necessary and routine maintenance on equipment. Mechanics may substitute as Equipment Operators. Mechanics report to the Transfer Station Manager. The minimum qualifications for the Mechanics are being able to fulfill the duties described in this section. The site may also use third party mechanics to perform maintenance on the equipment.

3.1.8 OTHER SITE PERSONNEL

Other Site Personnel may be employed from time to time in categories such as maintenance, construction, litter abatement, and general site cleanup. Other Site Personnel report to the Transfer Station Site Manager or his designee. Also, additional personnel will be utilized in the event of a temporary incoming waste increase due to an extraordinary interruption by a natural cause (such as a flood or earthquake) of the usual course of events that experience, prescience, or care cannot reasonably foresee or prevent. .

FIGURE 3-1 – ORGANIZATIONAL CHART



3.2 TRAINING

Training of facility personnel will consist of classroom instruction and/or on-the-job training that instructs site personnel in the performance of their duties and compliance with this **SOP**, the facility's registration requirements and provisions, and applicable regulations. Training will be directed by employees, supervisors, or other individuals experienced in waste management procedures and operations, health and safety, and related subjects needed for satisfactory job performance. This may include in-house training by qualified individuals within company affiliates, as well as training at TCEQ-sponsored training courses or training events provided by other organizations as deemed appropriate by facility management. Training will include instruction in the solid waste management and related skills, duties, and procedures relevant to each specific job as set forth herein (e.g., fire prevention, facility safety, prohibited waste management procedures, etc.). Job-specific training may include **SOP** requirements, regulatory compliance, and compliance with other plans such as the Spill Prevention Control and Countermeasure Plan (SPCC) (if required), the Storm Water Pollution Prevention Plan (SWPPP) (if required), the content and use of the fire protection plan, the Special Waste Acceptance Plan, and general safety procedures.

A description of the training provided to each employee will be maintained in the Site Operating Record.

The owner or operator will ensure that the transfer station site manager at the facility is knowledgeable in the proper operation of a municipal solid waste facility and the current operational standards required by the TCEQ. The Transfer Station Site Manager will be experienced and will maintain a Class A, B, or C license as defined in 30 TAC §330.210. The Lead Operator will be experienced and will maintain MSW Supervisor Occupational license Grade C or above. The Transfer Station Site Manager will ensure that all personnel are properly trained and are operating the transfer station in accordance with this **SOP**, operational standards required by the permit/registration, the TCEQ municipal solid waste regulations and Occupational Safety and Health Administration regulations.

The personnel training program will be directed by a person trained in waste management procedures and will include instruction that teaches facility personnel waste management procedures and contingency plan implementation relevant to the positions in which they are employed.

New employees will receive a comprehensive overview of all aspects of transfer station operations, focusing on information that is necessary to protect the health and welfare of the new employee and enable them to perform their duties in accordance with this **SOP** and operational standards required by the permit/registration and the TCEQ municipal solid waste regulations. Initial training subject matter will include applicable requirements found in the **SDP**, attachments to the **SDP**, the **SOP** and other plans such as the SPCC Plan, the SWPPP and general safety procedures. Following the initial training, the new employee training will continue during monthly or more frequent training sessions, during on-the-job training, and during the annual review of their initial training.

Training meetings will be scheduled and conducted for all employees at least once per month. If a regular monthly meeting is cancelled, it will be rescheduled or combined with the scheduled training the next month. Training sessions will be scheduled to allow facility operations to be uninterrupted. Records of personnel attending each training session and the topics covered will

be maintained at the facility. Topics for training may vary, but will be conducted at least annually for the following:

- Safety;
- Fire protection, prevention, and evacuation;
- Fire extinguisher use;
- Emergency response;
- Litter control and windblown waste pick-up;
- Hazardous waste and polychlorinated biphenyls (PCB) waste detection and control (waste screening), if applicable;
- Prohibited and unauthorized waste management; and
- Random inspection procedures.

Facility personnel will take part in an annual review of their initial training. A written description of the type and amount of introductory and continued training provided to each employee will be maintained in the facility operating record.

Facility personnel will receive training at TCEQ- sponsored or approved training courses, as deemed appropriate by Facility management. The Institute for Infrastructure in Environmental Development (IIED) provides courses in the Class A, B, C, and D certification for municipal solid waste facilities, waste screening, transfer station, and safety. The IIED provides certification in accordance with 30 TAC §30.201, §30.207, §30.210, and §30.212 as related to licenses for municipal solid waste operators. Other qualified TCEQ or other consultants may also provide training as appropriate.

3.3 EQUIPMENT

The facility will typically use bucket front-end loaders and raised-cab basket grapple loaders with a scale (or similar materials handling equipment) for the transfer operations. The minimum equipment required to operate the facility is one front-end loader. Collection vehicles will unload MSW within the transfer station on the tipping floor. A front-end loader will typically push the MSW towards a grapple loader (or similar materials handling equipment), which will transfer the MSW from the tipping floor into the transfer trailers or directly load waste from tipping floor to transfer trailers. The facility will have a permitted maximum rate of waste acceptance of 2,500 tons per day. CLTS will provide sufficient equipment if the volume of daily waste transfer will require additional equipment.

Additional company-owned or rental equipment, such as road tractors, water trucks, and backhoes, may be provided as necessary to enhance operational efficiency. At infrequent times, such as during equipment breakdown or periodic maintenance, additional equipment stationed at other company or rental equipment company facilities will be transported to the transfer station as needed. Other equivalent types of equipment may be substituted on an as-needed basis to adequately maintain the transfer station and meet the operational standards required by the TCEQ's regulations in accordance with all applicable local, state, and federal regulations. Equipment used for waste staging and loading (e.g., the front-end loader) will be maintained in an operational state, and periodically will be cleaned (washing, sweeping) on an as-needed basis to prevent the accumulation of waste residue on the equipment and the creation of odors.

4.0 WASTE ACCEPTANCE, ANALYSIS (§330.203 AND §330.205) AND MATERIALS RECOVERY AND DIVERSION (§330.9(e)(1))

4.1 PROPERTIES AND CHARACTERISTICS OF WASTE (§330.203(a))

The proposed facility is a Type V MSW facility (a transfer station). The general classifications of solid waste that are allowed to be accepted at the transfer station (Allowable Wastes), and that are prohibited from acceptance (Prohibited Wastes), are provided below. The waste classifications are defined in 30 TAC §330.3.

Other than the waste classification and/or source of waste as outlined below, there are no waste constituent(s) or waste characteristic(s) that are limiting parameters (such as pH or other constituents) that may impact or influence the design and operation of the facility.

Allowable Wastes: The facility is allowed to accept the following classifications of solid wastes, for subsequent transfer to a properly-permitted MSW landfill facility for disposal:

- yard waste;
- commercial waste;
- construction waste;
- demolition waste;
- brush;
- rubbish;
- Class 2 non-hazardous industrial solid waste;
- Class 3 non-hazardous industrial solid waste;
- shredded or quartered tires; and
- certain special wastes allowed to be accepted without written approval from the Executive Director.

Special waste is defined by 30 TAC §330.3(154). Only those special wastes listed below are allowed to be accepted at this facility without prior written approval from the Executive Director. Further, such special waste must be compatible with the compaction and loading equipment operated at the facility, unless modifications are made to the facility to accommodate the special waste, as follows:

- Empty containers which have been used for pesticides, herbicides, fungicides, or rodenticides, provided the containers have been triple rinsed, crushed, or rendered unusable upon receipt at the gate.
- Incidental amounts of non-regulated asbestos-containing materials (NRACM). An incidental amount is defined as the maximum of 10-percent of the waste received on an annual basis by scale weight (annual basis is defined as the most recent four consecutive quarters).
- Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas when those wastes are to be processed, treated, or disposed of at a solid waste management facility. Only those wastes authorized for disposal at a solid waste management facility will be accepted.
- Dead animals that are incidental to routine collection of MSW and that can be systematically processed along with other solid waste.

- Special waste other than as described above and approved for acceptance by the TCEQ Executive Director.
- Class 2 and Class 3 industrial solid wastes may be accepted at the facility, provided processing of these wastes does not interfere with proper operation of the facility.

Class 2 industrial solid waste is any individual industrial solid waste or combination of industrial solid wastes that cannot be described as Class 1 or Class 3, as defined in 30 TAC §335.506 (relating to Class 2 waste determination). Examples of Class 2 non-hazardous industrial waste include “plant trash” or waste originating in the facility offices or plant producing areas that are composed of paper and/or wooden packaging materials, glass, aluminum foil, aluminum cans, aluminum scrap, stainless steel, steel, iron scrap, Styrofoam, rope, twine, uncontaminated rubber, uncontaminated wooden materials, equipment belts, wiring, uncontaminated cloth, metal buildings, empty containers with a holding capacity of five gallons or less, uncontaminated floor sweepings, or food packaging that are produced as a result of plant production.

Class 3 industrial solid waste is any inert and essentially insoluble industrial solid waste, including materials such as rock, brick, glass, dirt, and certain plastics and rubber, etc., that are not readily decomposable as defined in 30 TAC §335.507 (relating to Class 3 waste determination).

Class 2 and Class 3 industrial solid wastes may be accepted at the facility, provided processing of these wastes does not interfere with proper operation of the facility. The facility will maintain the right to reject the acceptance of any waste that, in the sole discretion of the Transfer Station Site Manager, interferes with the normal operations of the facility or the facility employees in the performance of their duties.

Bulky and large items arriving at the transfer station will be placed on the tipping floor so as to allow the front-end loader to crush and flatten the items prior to loading into the transfer trailer. Where this is not possible, bulky or large items will be loaded into transfer trailers that have been partially filled to prevent damage to the trailer from impact due to the heavy weight of the bulky and large items. Appliances potentially containing refrigerant will be inspected to ensure that any refrigerant has been extracted in accordance with Section 608 of the federal Clean Air Act.

Large, heavy, or bulky items which cannot be incorporated in the regular compaction and loading operations at the transfer or subsequent landfill disposal maybe recycled provided the items are non-combustible. A special area will be established to collect these items. This special collection area will be designated as a large-item salvage area. The operator will remove the items from the facility often enough to prevent these items from becoming a nuisance and to preclude the discharge of any pollutants from the area. Additionally, waste material items classified as large, heavy, or bulky can include, but are not limited to, white goods (household appliances), air conditioner units, metal tanks and large metal pieces may be recycled (provided the items are non-combustible) or rejected at the discretion of the facility operator.

The facility shall not accept any combustible items for recycling.

Items containing chlorinated fluorocarbons (CFCs) will be handled in accordance with the Code of Federal Regulations (CFR), Title 40, Part 82.

Prohibited Wastes: The facility is prohibited from accepting, and shall not accept, the following wastes:

- regulated hazardous waste;
- PCBs;
- liquid wastes;
- certain special wastes ***not listed above as allowable***, namely:
    - hazardous waste from conditionally exempt small-quantity generators that may be exempt from full controls under Title 30 TAC Chapter 335, Subchapter N (relating to Household Materials Which Could Be Classified as Hazardous Wastes);
    - Waste generated outside the boundaries of Texas that contains any industrial waste; any waste associated with oil, gas, and geothermal exploration, production, or development activities; or any material that is listed in the bullets above.
    - Drugs and contaminated foods, other than those contained in normal household waste.
    - Class 1 non-hazardous industrial waste;
    - untreated medical waste;
    - municipal wastewater treatment plant sludges, other types of domestic sewage treatment plant sludges, and water-supply treatment plant sludges; septic tank pumpings;
    - grease and grit trap wastes;
    - wastes from commercial or industrial wastewater treatment plants; air pollution control facilities; and tanks, drums, or containers used for shipping or storing any material that has been listed as a hazardous constituent in 40 CFR, Part 261, Appendix VIII but has not been listed as a commercial chemical product in 40 CFR §261.33(e) or (f);
    - soil contaminated by petroleum products, crude oils, or chemicals in concentrations of greater than 1,500 milligrams per kilogram total petroleum hydrocarbons; or contaminated by constituents of concern that exceed the concentrations listed in Table 1 of 30 TAC §335.521(a)(1);
    - incinerator ash;
    - used oil;
    - lead acid storage batteries; and
    - used-oil filters from internal combustion engines.

Consistent with 30 TAC §330.15, the facility will not accept Class 1 non-hazardous industrial wastes, regulated hazardous wastes, regulated asbestos-containing material (RACM), liquid wastes, radioactive wastes, PCB wastes, untreated medical wastes, or other wastes prohibited by TCEQ regulations.

Unacceptable Waste and Waste Rejection: A waste may be determined to be unacceptable and rejected from the facility for the following reasons:

- The waste is a prohibited waste
- There is prohibited waste within the load.
- The delivery vehicle is unsuitable for facility operations / conditions.
- The load is not accompanied by the correct documentation.
- The waste is significantly deteriorated and/or malodorous.
- The waste is determined to present a hazard to the facility or its employees/users

- The waste is a non-conforming waste (non-conforming waste is any waste that is not consistent with its special waste profile, manifest or prevailing/generally accepted standards for the particular waste)

If a waste is identified as being unacceptable at the facility entrance or at the point of offloading the Facility Manager or Lead Operator will be contacted and a Waste Discrepancy Report is issued to the driver. The driver will be informed of the reasons for the rejection and requested to leave the Facility. If safe and appropriate, a rejected load should be reloaded onto the delivery vehicle and returned to the generator of the waste or delivered to an appropriate licensed facility.

If it is determined that the load is not safe to be sent back onto the road, then the vehicle or load shall be detained until appropriate arrangements can be made for its removal.

If unacceptable waste cannot be reloaded onto the delivery vehicle, the waste will be stored in a separate area or container. The customer will be contacted, arrangements to remove the unacceptable waste will be made and a copy of the rejection form containing reasons for the rejection will be supplied.

If arrangements for the customer to remove the waste cannot be made, CLTS will make such arrangements. All unacceptable waste material removed by CLTS will be exported off Facility by a licensed waste carrier to an appropriately licensed facility. Details of all waste rejections, Waste Discrepancy Reports and its subsequent removal from facility will be recorded and retained in the Site Operating Record until the final closure of the facility.

In the event of a rejected load the TCEQ may be contacted by telephone and / or email with details of the rejected load. These details should include information relating to the nature and quantity of waste involved, the time and date, the name and address of the waste producer, the registration number of the vehicle delivering the waste and the company name and address of the vehicle driver and waste generator.

4.2 VOLUME AND RATE OF TRANSFER (§330.203(b) AND §330.205(a) AND (b))

The facility will serve, in general, the individuals, businesses, institutions, and public and private collection vehicles from Montgomery County and surrounding counties. The facility will process and transfer solid waste up to the registered maximum daily waste acceptance rate of 2,500 tons/day. The facility is designed for efficient waste processing. The area to be used for unloading and waste transfer operations will be approximately 135 feet by 225 feet. Facility layout drawings are included in the **PAR Engineering Drawing Set** of **Part I/II**.

The following types and estimated percentages of waste are expected to be received at the facility. These waste types and percentages are estimates only and may vary based upon the actual wastes received at the facility.

TABLE 4-1 TYPES OF WASTE

TYPE OF WASTE	EXPECTED PERCENTAGE
Residential	45%
Commercial/Institutional	30%
Construction / Demolition	15%
Class 2 & 3 Non-Haz Industrial	5%
Other Authorized Waste	5%
Total	100%

The facility is designed for the efficient transfer of MSW to trucks for transport to a permitted MSW landfill for disposal, typically on the same day the waste is received at the facility. As economic conditions, population growth, and waste generation rates change, the volume of incoming waste may vary. As noted in **SECTION 2** of this **SOP**, the waste acceptance rate for the facility will be reported annually. The maximum amount of waste that may be temporarily stored at the facility is 2,500 tons. On average (i.e., under typical operating conditions), MSW accepted at the facility will be transferred on a daily basis (i.e., in less than 24-hours). The maximum length of time waste material will remain (i.e., be temporarily stored) on-site is 48 hours.

The destination of the MSW collected by the facility is a properly permitted Type I MSW facility where the waste will be disposed. A Type I MSW facility within approximately 50 miles or less will be utilized for receiving the transferred waste for disposal. The facility will maintain documentation in the Site Operating Record that all wastes leaving the facility are being adequately managed by other authorized solid waste management facilities.

4.3 FACILITY GENERATED WASTES (§330.205)

Facility generated wastes will include small amounts of solid waste generated by the administrative offices, scale house(s), maintenance of the facility and equipment. These waste materials will include paper, cardboard, packing materials, pallets, discarded parts, discarded food/beverage containers from employees and other waste materials generated by the operations of the facility (i.e. collected litter, discarded litter fencing, discarded storm water BMPs such as hay bales and silt fencing).

Liquid facility generated wastes will include septic waste from the on-site restroom usage (no off-site septic waste will be accepted) and wastewater generated as a result of wash water resulting from washing the tipping floor and small amounts of liquids contained within the incoming waste loads and other water that has come into contact with waste (“contaminated water”).

Septic waste generated by on-site restrooms shall be handled by an on-site septic system approved by the Montgomery County Permit Department and maintained by the facility.

The contaminated water generated by the transfer station facility shall be managed in accordance with Title 30 TAC §330.207 (relating to Contaminated Water Management) as outlined with the provisions set forth in **SECTION 5** of this **SOP**. This water will be handled and managed as contaminated water and will be transported to a duly-permitted off-site treatment and disposal facility in accordance with the provisions set forth in **SECTION 5** of this **SOP**.

All wastes generated by the facility will be processed or disposed at an authorized solid waste management facility.

Wastewaters generated by the transfer station will be managed in accordance with §330.207, Contaminated Water Management which is found in **SECTION 5** of this **SOP**.

No sludges are planned to be produced by the transfer station

Special Waste Acceptance and Handling Procedures - A Special Waste Acceptance Plan, which outlines the acceptance requirements and handling procedures for special wastes that are allowed for acceptance at this facility, is provided in **SECTION 10** of this **SOP**.

4.4 SAMPLING AND ANALYSIS FOR EXPERIMENTAL FACILITIES (§330.203(c))

This regulation is not applicable to this facility. This facility is not an experimental facility and there will be no on-site processing of grit trap wastes, sludge other generation of effluent from a treatment process. As such, there will be no effluent discharged to a trap, interceptor, or treatment facility permitted under Texas Water Code, Chapter 26. Therefore, the sampling and analysis requirements of 30 TAC §330.203(c)(1) and (2) are not applicable.

4.5 MATERIALS RECOVERY AND DIVERSION (§330.9(e)(1))

This application for Type V registration complies with Title 30 TAC §330.9(e)(l), because the current recycling rate in Montgomery County is 10%. In 2005, The Houston-Galveston Area Council of Government (H-GAC) retained R. W. Beck, Inc. to conduct a *Regional Solid Waste Characterization Study* (the "2005 Study"). This information was updated for the H-GAC in 2017. In January 2017, H-GAC retained NewGen to conduct *A Municipal Solid Waste Generation and Diversion Forecast for the H-GAC Planning Region* (the "2017 Study"). At present, the 2017 Study is the most recent waste generation and diversion data available for the H-GAC. A copy of the 2017 Study is included in **Part I/II**, **Appendix J**. Based on the 2017 Study (page 48) the average single-family *per capita* (i.e. pounds per person per day) Disposal Rate for the H-GAC is 3.5 pounds and the recycling rate is 0.37 pounds per person per day which equates to a recycling rate of 10%. The 2017 Study detailed some individual communities within the member counties of the H-GAC. The only community within Montgomery County that was detailed was The Woodlands on page 23 of the 2017 Study. The details provided for The Woodlands show the single-family total waste generation (i.e. garbage, brush, bulky and recycling) at 49,551 tons/year and the single-family recycling volume as 14,087 tons/year which equates to a 28% recycling rate.

According to the H-GAC, Montgomery County operates four (4) drop-off recycling centers.

1. Montgomery County Recycling Center Precinct 2

31354 Friendship Drive, Magnolia, TX 77354
Accepts: Paper, Cardboard, Tin Cans, Aluminum, Scrap Metal, Glass Bottles and Jars, Plastic Bags, Plastic Containers (No styrofoam), appliances (with freon removed), Lawn mowers (gas removed) and electronics.

2. Montgomery County Recycling Center Precinct 4

23628 Roberts Road, New Caney, TX 77357
Accepts: Paper, Cardboard, Aluminum and Tin Cans, Plastics #1-5 and #7.

3. Montgomery County Precinct 3 Recycling, Reuse & Household Chemical Waste Facility

1122 Pruitt Road, Spring, TX 77380
Accepts: Paper, Cardboard, Cans, Scrap Metal, Plastics #1-7, Glass Bottles and Jars, Plastic Bags and Plastic Film, Styrofoam Blocks, Rinsed Styrofoam (Containers, Cups, Plates), Appliances, Yard Waste, Antifreeze, Car Batteries, Motor Oil and Filters, Tires (fee), Textiles, Electronics, Rechargeable Batteries, Cell Phones, Ink Jet Cartridges, Latex Paint (fee).

Household Hazardous Waste Center Accepts: Latex and Oil Based Paint, Stains, Solvents, Mercury Containing Objects (Fluorescent Bulbs, Thermometers, Thermostats), Lawn Chemicals (Fertilizer, Herbicides, Pesticides), Cleaning Products.

4. The Woodlands Recycling Center

5310 Research Forest Drive, The Woodlands, TX 77381
Accepts: Mixed Paper, Newspapers, Magazines, Cardboard, Aluminum, Tin Cans, Plastics #1-5 and #7, Glass (Clear, Brown, Green), Yard Waste.

Other recycling programs conducted by municipalities in Montgomery County include:

- City of Montgomery has recycling bin curbside collection once (1) per week. Recyclable materials collected includes metal and aluminum cans, plastics, paper, cardboard and glass.
- City of Conroe has recycling cart curbside collection once (1) per week. Recyclable materials collected includes metal and aluminum cans, plastics, paper, cardboard and glass.
- The Woodlands Township has recycling 96-gallon cart curbside collection once (1) per week. Recyclable materials collected includes metal and aluminum cans, plastics, paper, cardboard and glass.

CLTS will maintain the facility scale records as well as additional documentation to demonstrate that the total incoming waste was previously reduced by at least 10 percent in accordance with the materials recovery provisions of Title 30 TAC §330.9(e)(l). CLTS will keep operating records and provide a report to the Executive Director on a quarterly basis that demonstrates the total incoming waste was previously reduced at least 10 percent (refer to **SECTION 2.8** for more information).

5.0 CONTAMINATED WATER MANAGEMENT

The facility shall manage contaminated water in accordance with 30 TAC §330.207. All potentially contaminated liquids resulting from the operation of the facility shall be disposed of in a manner that will not cause surface water or groundwater pollution, and the facility shall implement necessary steps to control and prevent the unauthorized discharge of contaminated water from the facility. As noted in the **SOP – Part III**, the facility is designed to manage stormwater in a controlled manner in order to not cause surface water or groundwater pollution.

Contaminated water generated by the facility will consist of wash water resulting from washing the tipping floor and, potentially, small amounts of liquids contained within the incoming waste loads (i.e., leachate). This contaminated water and leachate will be directed via floor drains in the tipping floor and loading bays to a minimum 2,000-gallon contaminated water holding tank where it will be collected and contained until properly managed (i.e. disposed of). The contaminated water collected in the holding tank will be pumped as necessary into a tanker truck (properly registered hauler) for transportation to a duly-permitted off-site treatment and disposal facility that is authorized to accept this type of wastewater. The Circle Lake Transfer Station will adhere to the sampling and analysis (testing) requirements of the receiving treatment facility (and associated treatment facility concentration or other discharge requirements of acceptance for treatment).

The discharge of stormwater from the tipping floor area will not occur. All water coming in contact with waste will be managed as contaminated water. The transfer station will be operated consistent with 30 TAC §330.15(h)(1)-(4), prohibiting the discharge of solid wastes or pollutants into waters of the United States. The facility will not discharge contaminated water without a separate, specific written authorization from TCEQ under the authority of the Texas Pollutant Discharge Elimination System.

Wastewaters discharged to a treatment facility permitted under Texas Water Code, Chapter 26 will not:

1. Interfere with or pass-through the treatment facility processes or operations,
2. Interfere with or pass-through its sludge processes, use, or disposal,
3. Otherwise be inconsistent with the prohibited discharge standards, including 40 code of federal regulations part 403, general pretreatment regulations for existing and new source pollution

The daily effluent design standard for oil and grease concentration leaving the facility and entering a public sewer system will not exceed the concentration established in the wastewater discharge permit pretreatment limit or the concentration established by the treatment facility permitted under Texas Water Code, Chapter 26, the National Pollutant Discharge Elimination System.

Uncontaminated stormwater run-on and run-off will be directed away from the transfer station building entrances by site grading. The building interior where waste is processed will not result in any storm-generated run-off since the enclosed transfer station building will have a roof to prevent precipitation from coming in contact with waste. Stormwater will be managed by maintaining the stormwater patterns identified in the **SOP - Part III** in areas outside of the transfer station building footprint.

Uncontaminated stormwater run-on and run-off will be directed away from the transfer station building entrances by site grading. The building interior where waste is processed will not result in any storm-generated run-off since the transfer station building is completely covered. Stormwater will be managed by maintaining the stormwater patterns identified in the **SDP** in areas outside of the transfer station building footprint.

6.0 STORAGE REQUIREMENTS

6.1 SOLID WASTE STORAGE (§330.209(a))

Solid waste storage will take place either indoors in the enclosed transfer station building on the tipping floor or in tarped transfer trailers awaiting transport off-site. All solid waste will be stored in such a manner that it does not constitute a fire, safety, or health hazard, or provide food or harborage for animals and vectors, or cause odors; and will be contained to prevent windblown solid waste and litter.

On-site storage area for acceptable source-separated or recyclable materials in a location separate from the transfer station waste tipping area and transfer vehicle loading operations.

No solid waste loading or storage will occur within any easement, buffer zone, or right-of-way that crosses the facility. On-site storage of waste will comply with the maximum storage times and volumes set forth in this **SOP**. Waste that is stored overnight at the facility will be either stored in tarped transfer trailers or stored indoors in the enclosed transfer station building on the tipping floor.

The transfer station will not recover materials from solid waste that contains putrescible materials. The transfer station will not process liquid waste.

6.2 APPROVED CONTAINERS (§330.211)

It is required that all solid waste containing food wastes shall be stored in covered or closed containers that are leakproof, durable, and designed for safe handling and easy cleaning. This will be accomplished through the use of approved containers, along with the waste processing methods to limit the length of time waste is stored on the tipping floor, as follows: Incoming waste will be deposited onto the concrete tipping floor within the enclosed transfer station building. Waste will be transferred to transfer trailers on a daily basis (i.e., within less than 24-hours) under typical operating conditions, and under all circumstances waste will not be stored on-site for more than 48 hours. The transfer trailers will be maintained in a condition such that they do not create a nuisance or conditions conducive for the harborage, feeding, and propagation of vectors. The transfer trailers will be leak-proof, durable, and designed for safe handling and easy cleaning. The transfer trailers will be equipped with tarps or covers to be used during on-site storage and transport. These containers (mechanically handled) are designed to prevent spillage or leakage during storage, handling, and transport.

Non-reusable containers, if used, will be of suitable strength to minimize animal scavenging or rupturing during collection operations. All containers to be emptied manually will be capable of being serviced without the collector coming into contact with waste.

6.3 CITIZEN'S COLLECTION STATION / DROPOFF AREA (§330.213)

A separate citizen's collection station/dropoff area is not planned for the facility. Therefore, the requirements of 30 TAC §330.213 are not applicable to this facility. Montgomery County has a Recycling Center for residents nearby at 31354 Friendship Drive in Magnolia, Texas 77355. The Recycling Center is open Monday – Saturdays from 7:00 a.m. until 5:00 p.m. (except for County Holidays). The Center accepts Paper, Cardboard, Tin Cans, Aluminum, Scrap Metal, Glass

Bottles and Jars, Plastic Bags, Plastic Containers (No Styrofoam), Appliances (Freon Removed), Lawn Mowers (Gas Removed), Electronics.

6.4 STATIONARY COMPACTORS (§330.215)

A stationary compactor is not planned for the facility. Therefore, the requirements of 30 TAC §330.215 are not applicable to this facility.

7.0 FIRE PROTECTION PLAN

This Fire Protection Plan describes the source(s) of fire protection (i.e., fire prevention and protection methodology), procedures for using the fire protection source(s), and employee training and safety procedures. This plan has been prepared to address compliance with local fire codes of Montgomery County, Texas.

7.1 FIRE PREVENTION

In order to minimize fire hazards at the facility, the following fire prevention steps or procedures will be implemented.

- Flammable and combustible materials such as fuel, oils and lead-acid batteries will be stored and dispensed only in authorized areas away from the tipping area. Efforts will be made to contain and control fuel spills immediately upon discovery. Spilled fuel and impacted soil will be promptly collected, profiled, and properly disposed.
- Equipment used at the facility will be routinely cleaned through the use of water, steam cleaners, or compressed air. The water or steam cleaning will remove combustible waste and caked material which can cause equipment overheating and increase fire potential. Equipment wash water will be managed as contaminated water.
- The open burning of waste is prohibited at the facility.
- The facility will be equipped with readily available fire extinguishers of a type, size, location, and number as recommended by the Montgomery County fire code. Each fire extinguisher will be fully-charged and ready for use at all times. Each extinguisher will be inspected on an annual basis and recharged as necessary. These inspections will be performed by a qualified service company, and all extinguishers will display a current inspection tag. Inspection and recharging will be performed following each use.
- In conjunction with the development and building permit process through/approved by Montgomery County, the transfer station building will be designed to comply with applicable local fire codes, including the provision of fire protection systems (e.g., fire alarm, fire extinguishing or smoke control systems, approved water supply capable of supplying the required fire flow or fire hydrant access, as applicable) as required by Montgomery County Fire Code for the size and usage of the building. After selection of fire protection system an on-site tank may be required to meet flow demands.
- Burning waste from incoming loads will be prevented from being dumped in the active area of the transfer station. The Scale House Attendants and Equipment Operators will be alert and will observe incoming loads for signs of burning waste such as smoke, steam, or heat. The vehicle will be directed to an area outside the transfer station building where waste can be safely discharged and isolated, and the fire extinguished. Upon extinguishing the fire, the waste will be immediately moved inside the transfer station building.
- Smoking is not allowed in the working areas of the site. Smoking is allowed only in designated areas. Smoking is specifically prohibited:
    - at fuel storage and dispensing areas;
    - at the active waste tipping and loading areas;
    - other fire-sensitive areas.

7.2 GENERAL FIRE FIGHTING PROCEDURES

The following general procedures will be implemented in the event of a fire.

- If it can be done safely, fires will be promptly extinguished by trained site personnel.
- If necessary:
    - Contact the local fire department by calling 911.
    - Closest Fire Station is Magnolia Volunteer Fire Department Station 187 located 1.3 miles from facility
    - Notify the Site Manager
    - Alert other facility personnel
    - Prevent customer access to facility until fire is assessed and controlled
    - Assess the extent of the fire and the potential for the fire to spread
    - If safe, attempt to contain or extinguish the fire until the local fire department arrives.
    - Be familiar with the use and limitations of firefighting equipment available onsite.
    - Firefighting methods include spraying the burning material with water from the hose. If detected soon enough, a small fire may be fought with a handheld fire extinguisher.
    - Direct the local fire department to the fire and provide assistance as appropriate.
    - Do not attempt to fight the fire alone.
    - Do not attempt to fight the fire without adequate personal protective equipment.
    - Evacuate the facility as necessary.

General fire-fighting methods include separating burning material from other waste and spraying the burning material with water from the wash-down hoses or using a fire extinguisher. All transfer station equipment and vehicles will be equipped with a fire extinguisher, and two additional fire extinguishers will be located in the transfer station building as required by the Montgomery County Fire Code.

7.3 SPECIFIC FIRE FIGHTING PROCEDURES

The following specific procedures will be followed in the event of a fire.

- If a fire occurs on a vehicle or piece of equipment, the Equipment Operator should bring the vehicle or equipment to a safe stop. If the safety of personnel will allow, the vehicle must be parked outside of the facility away from fuel supplies, solid wastes, and other vehicles. The engine should be shut off and the brake engaged (or other methods implemented) to prevent movement of the vehicle or equipment. Fire extinguishers should be used to extinguish the fire, if possible, without risk to the Equipment Operator.
- If a fire is on the tipping floor, the burning area should be promptly isolated and pushed away from the other waste. The burning area should be sprayed with water from the wash-down hoses, or, if small enough, extinguished with a hand- held fire extinguisher.
- If burning waste materials are discovered after having been unloaded at the transfer station, the load will be extinguished with water or by fire extinguisher, as appropriate.
- Use the fire extinguishers located in the transfer station building and equipment, or the water hoses, to extinguish a fire, as appropriate.
- The facility water supply for fighting fires is supplied by the public water supply system, via the wash-down hoses.

7.4 FIRE PROTECTION TRAINING

Facility operations personnel (not including personnel with administrative duties only) will receive annual training in the contents of this section of the **SOP**. The training will include:

- review and discussion of this Fire Protection Plan;
- fire prevention and hazard awareness;
- fire safety; and
- fire-fighting procedures

Administrative personnel will receive training relating to fire prevention and hazard awareness and fire safety. Records of fire protection training will be kept in the Site Operating Record.

7.5 TCEQ NOTIFICATION

If a fire is not extinguished within 10 minutes of detection, the facility will make every reasonable effort to immediately contact the appropriate TCEQ Regional Office by phone, but not later than four (4) hours after detection. The facility will provide the appropriate TCEQ Regional office with a written description of the fire and resulting response within 14 days of the event.

8.0 OPERATIONAL PROCEDURES (§330.223 - §330.249)

8.1 ACCESS CONTROLS (§330.223)

Public access and all other access to the facility shall be controlled by means of artificial barriers, natural barriers, or a combination of both, appropriate to protect human health and safety and the environment. Uncontrolled access to the facility shall be prevented. Public access to the site will be limited to the gated facility entrance. The Scale House Attendant controls access and monitors vehicles entering and exiting the facility. An attendant shall be on-site during operating hours.

The facility perimeter is fenced to control access and prevent unauthorized access and has lockable gates. Fencing will be composed of a combination of (at minimum) a four-foot barbed wire fence and a six-foot chain-link fence or equivalent (e.g., iron or metal bar-style fencing) to prevent unauthorized access to the facility.

Operating areas and transport unit storage areas shall be enclosed by walls or fencing. The operating area for unloading vehicles will be the transfer station building. Safety bumpers shall be provided at hoppers or other floor openings for all vehicles.

A positive means to control dust and mud shall be provided and is discussed in **SECTION 8.8.**

8.1.1 FACILITY SECURITY

Facility security measures are designed to prevent unauthorized persons from entering the facility, to protect the site and its equipment from possible damage caused by trespassers, and to prevent disruption of facility operations caused by unauthorized facility entry.

Unauthorized entry into the facility will be minimized by controlling access to the site with fencing (see **SECTION 8.1** above). Gates constructed of suitable fencing materials will be located on the entrance road. The gates will be locked when the facility is not accepting waste and the offices are closed. The collection truck and primary employee access shall be through Gate 1, and all transfer trucks and facility egress shall be through Gate 2. This is illustrated on **Drawing 6** of the **PART II PAR ENGINEERING DRAWING SET**.

Entrance to the facility will be monitored by the scale house personnel during facility operating hours. Outside waste acceptance hours, entrance gates will be locked. A sign regulating access at the Circle Lake Drive entrance will be posted to restrict access during non-operating hours to company personnel only.

Entry to the facility will be restricted to designated personnel, appropriate subcontractors, approved waste haulers, TCEQ personnel, and properly identified persons whose entry is authorized by facility management. Visitors may be allowed on the site only when accompanied by a facility representative.

The facility will comply with the schedule and notification requirements in **TABLE 8-1** for any access breach.

TABLE 8-1: SCHEDULE NOTIFICATION/REPAIR OF PERIMETER ACCESS CONTROL BREACHES

Requirement	Access Breach Permanently Repaired Within 8 Hours	Access Breach Not Permanently Repaired Within 8 Hours
Notify TCEQ region office of breach and repair schedule	Not required	Within 24 hours of breach detection
Make temporary repairs	(not applicable)	Within 24 hours of breach detection
Make permanent repairs	Within 8 hours of breach detection	Within schedule indicated in initial breach report submitted to regional office
Notify TCEQ regional office when permanent repair completed	Not required	Within schedule indicated in initial breach report submitted to regional office

8.1.2 TRAFFIC CONTROL AND ACCESS ROADS

Access to the facility will be provided via the facility and shall be at least a two-lane paved road, designed for the expected traffic flow from Circle Lake Drive, and through the gates into the facility. Safe on-site access for all collection vehicles shall be provided. The access road design must include adequate turning radii according to the vehicles that will utilize the facility and avoid disruption of normal traffic patterns. The Scale House Attendant stationed at the scales will restrict facility access to authorized vehicles, will direct waste collection vehicles appropriately, and will monitor waste vehicle traffic to ensure vehicles are following the directed route. After leaving the scale area, waste collection vehicles will drive to the tipping floor unloading area. These vehicles will deposit their loads and then depart the site. Transfer trailers will drive to the waste loadout tunnels at the transfer station building where they will be loaded before departing the site.

Within the facility, signs will be placed along the entrance road at a frequency adequate to guide users to the proper areas and which roads are to be used. Roads not being used for access will be blocked or otherwise marked for no entry. An adequate turning radius for the vehicles utilizing the facility will be provided to maintain normal traffic flow.

In addition to the Scale House Attendant and other facility personnel providing traffic directions to facilitate the safe movement of vehicles at the facility (including into and out of the transfer station building), appropriate signs will be positioned at the facility to guide users and indicate where vehicles are to unload. Signs will be placed along the entrance road to direct vehicles, at a frequency/spacing that is adequate to guide users to the proper areas and identify which roads are to be used. The use of forced access lanes through barricades, flagging, or other means will be used in conjunction with signs for the prevention of unauthorized dumping. Roads not being used for access will be blocked or otherwise marked for no entry. Signs will also direct vehicles to the facility exit.

The entrance and the on-site roads will be all-weather surfaced (e.g., gravel, asphalt, concrete) and will have a minimum width of two-lanes. The scale area is equipped with a bypass lane in each direction (inbound and outbound). The entrance and facility roads have been designed for the expected traffic flow, to provide safe on-site access for commercial collection vehicles and the

public, to avoid disruption of normal traffic patterns, and to provide safe turning radii for vehicles that utilize the facility. Vehicle parking is provided at the facility for employees and visitors.

Equipment parking and staging will be directed by transfer station personnel so as not to block or hinder waste collection vehicles or transfer trailers from ingress or egress to the tipping floor and loadout tunnels.

8.2 UNLOADING OF WASTE (§330.223)

8.2.1 WASTE UNLOADING PROCEDURES

The Scale House Attendant will monitor all incoming loads of waste (see **SECTION 8.2.2**). Incoming waste hauling traffic will be directed to the tipping floor (waste unloading area) once the vehicle's incoming weight or volume has been recorded at the scale area by the Scale House Attendant. Appropriate signs shall also be used to indicate where vehicles are to unload. The unloading of waste in unauthorized areas shall be prohibited. The use of forced access lanes, identified by ditches, dikes, fences, or other means, shall be used in conjunction with signs for the prevention of indiscriminate dumping. Waste loading and unloading operations will only occur within the transfer station building and will be confined to as small an area as practical. The facility personnel shall ensure that any waste deposited in an unauthorized area will be removed immediately and disposed of properly. Safety bumpers at hoppers and floor openings will be provided for vehicles.

Incoming vehicles will unload solid waste within the transfer station building on the tipping floor. Equipment Operators will monitor the unloading of incoming waste. Typically, a front- end loader will push the solid waste towards a grapple loader, which will transfer the waste from the tipping floor into the transfer trailers. Waste transfer operations will be confined within the transfer station structure and will not be exposed outside the building.

The facility will provide sufficient equipment to effectively operate in accordance with the operational standards required by this **SOP**, applicable TCEQ regulations, and applicable local, state, and federal regulations.

The Scale House Attendant is the first point of contact with the hauler. The hauler will be asked to inform the Scale House Attendant of the content of the load. The Scale House Attendant visually inspects containers to verify contents. In the event prohibited wastes are identified in the load, the entire load is turned away from the gate and not allowed entrance to the site. In addition, if the waste haul vehicle is delivering special or industrial waste, site personnel will visually compare the material presented for disposal to the Special Waste Profile (SWP) or similar form to confirm that the physical characteristics (i.e., color, odor, and appearance) of the material match those detailed on the SWP. In the event that the physical characteristics of the waste differ from the approved waste stream, the waste load will be rejected. Class 1 nonhazardous solid waste (including railroad commission waste above 1,500 mg/kg total petroleum hydrocarbons) will not be accepted at the transfer station.

Any prohibited waste that is unloaded at the facility will be returned immediately to the transporter or generator of the waste.

In the event unauthorized waste is not discovered until after the collection vehicle that delivered it is gone, the site will attempt to segregate the unauthorized waste and manage it properly as directed by the Transfer Station Site Manager. The site will, if necessary, notify the TCEQ and

seek guidance on how to dispose of the waste. Documentation will be included in the site operating record each time unauthorized or prohibited waste is discovered and removed from the site. Site personnel will have a basic understanding of both industrial and hazardous waste and their transportation and disposal requirements.

8.2.2 PROCEDURES FOR THE DETECTION AND PREVENTION OF UNAUTHORIZED WASTE

This section provides procedures for the detection and prevention of unauthorized waste, including regulated hazardous waste as defined in 40 CFR Part 261 and PCB wastes as defined in 40 CFR Part 761.

Prohibited waste will not be accepted at the facility. Additionally, the facility is not required to accept any solid waste that the facility determines will cause or may cause problems in maintaining full and continuous compliance with this **SOP** and applicable TCEQ regulations.

The Scale House Attendant is the first point of contact with the hauler. The hauler will be asked to inform the Scale House Attendant of the content of the load. The Scale House Attendant will visually inspect containers to verify contents. In the event prohibited wastes are identified in the load, the entire load is turned away from the gate and not allowed entrance to the site. In addition, if the waste hauling vehicle is delivering special or industrial waste, facility personnel will visually compare the material presented for disposal with the waste profile form to confirm that the physical characteristics (e.g., color, odor, appearance) of the material matches that detailed on the profile. In the event that the physical characteristics of the waste differ from the approved waste stream, the waste load will be rejected.

Equipment Operators will visually monitor the unloading of waste. Should any indication of prohibited waste be detected, appropriate facility personnel will stop the unloading of the vehicle to allow facility personnel to conduct a thorough evaluation of the load. The driver will be directed to a load inspection area, where the load will be discharged from the vehicle. The load inspector will break up the waste pile and inspect the material for any prohibited waste. Known prohibited waste will be placed back into the vehicle and the driver will be instructed to depart the facility. Should any regulated hazardous waste be detected, the entire load will be rejected.

Any prohibited waste that is not discovered by the facility until after it is unloaded will be returned to the vehicle that delivered the waste. That party will be responsible for the proper disposal of this rejected waste. In the event the unauthorized waste is not discovered until after the vehicle that delivered it has departed the site, the waste will be segregated and controlled as necessary. An effort will first be made to identify the entity that deposited the prohibited waste and have them return to the facility and properly dispose of the waste. In the event that identification of the responsible party is not possible, the facility will arrange for the proper management of the waste or will notify the TCEQ and seek guidance on how to dispose of the waste.

In addition to the above procedure, incoming loads will be visually inspected on a random basis. The Transfer Station Site Manager will be responsible for determining the random load inspection schedule. The driver of the randomly selected load will be notified and instructed to proceed as above to a load inspection area.

Although the inspection location may vary, all inspections will be made in areas where containment is provided and/or potential spills of unauthorized waste would be minimized. Vehicles that transport commercial and industrial waste will be considered for inspections. Such

vehicles typically include front-end loaders, commercial rear-end loaders, side loaders, trucks with roll-off boxes, stake-bed trucks, dump trucks, pick- up trucks, and pick-up trucks with trailers transporting non-household wastes.

Vehicles containing suspicious loads will be inspected. Suspicious loads may include:

- Drums or containers with warning labels
- Loads which have a visible emission, smoke, strong chemical odor, or cause physical symptoms (e.g., irritation of eyes, nose, throat, skin, nausea, dizziness, or headache).

The inspector will not physically inspect any vehicle that appears to present possible physical danger. The Transfer Station Manager or his designee will be contacted immediately if such a load enters the facility.

The Transfer Station Site Manager will maintain and include in the operating record the load inspection reports for randomly inspected loads. Load inspection reports, recorded on standardized forms, will be completed for each inspected load. The reports will include, at a minimum, the date and time of inspection, the name and address of the hauling company and driver, the type of vehicle, the size and source of the load, contents of the load, indicators of prohibited waste, and results of the inspection.

8.3 SPILL PREVENTION AND CONTROL (§330.227)

The waste unloading, processing and storage areas have been designed to control and contain spills and contaminated water from leaving the facility. The design is sufficient to control and contain a worst-case spill or release (refer to **Part III - SDP** of the Application for details of the transfer station design). Because the transfer station waste unloading, processing and storage areas will be under a building with a roof, and because liquid wastes are not allowed to be delivered to the transfer station, only small amounts of contaminated water incidental to MSW may be within the materials delivered to the transfer station (i.e. precipitation from storm events will not enter the roofed/enclosed transfer station building). The reinforced concrete transfer station unloading, storage and processing areas will be sloped towards floor drains and with interior and exterior push walls to serve as containment of spills and wash waters. These areas shall be designed to control and contain spills and contaminated water from leaving the facility.

All contaminated water will be managed as described in **SECTION 5** of this **SOP**.

8.4 OPERATING HOURS (§330.229)

The waste acceptance hours may be any time between the hours of 5:00 a.m. and 9:00 p.m., Monday through Friday and Saturday 5:00 a.m. to 2:00 p.m. The operating hours for operating heavy equipment and transporting materials on- or off-site may be any time between the hours of 5:00 a.m. and 11:00 p.m., Monday through Friday and Saturday 5:00 a.m. to 5:00 p.m. Waste acceptance hours for the public will be posted on the entrance sign and will be within the hours listed above.

A facility attendant will be on-site during operating hours that the facility is open to receive waste and will monitor and restrict access to the facility (i.e. 5:00 a.m. to 7:00 p.m., Monday through Friday and Saturday 5:00 a.m. to 2:00 p.m.). In addition to these hours to receive waste, the hours of operation for heavy equipment and transporting materials on- or off-site may be any time

between the hours of 5:00 a.m. and 9:00 p.m., Monday through Friday and Saturday 5:00 a.m. to 5:00 p.m. During these heavy equipment operating hours (when the facility is closed for receiving waste) the lead operator will monitor and restrict access to the facility. The lead operator will be the responsible person to close, lock and secure the facility at the end of each operating day. In addition to the waste acceptance and operating hours, other non-waste management activities, including administrative and maintenance activities, may occur 24 hours per day, 7 days per week. The facility gates shall be closed during any other non-waste management activities and the employees on duty shall be responsible to monitor and restrict access to the facility.

In addition to the waste acceptance and operating hours, other non-waste management activities, including administrative and maintenance activities, may occur 24 hours per day, 7 days per week.

In addition, the transfer station may request alternative operating hours to accommodate special occasions, special purpose events, holidays, or other special occurrences. The facility will notify the TCEQ regional office in advance for these alternative hours.

When warranted, the facility supervisor will request approval from the commission's regional office to allow additional temporary operating hours to address disaster or other emergency situations, or other unforeseen circumstances (such as traffic delays or adverse weather) that could result in the disruption of waste management services in the area. The facility personnel will document the reason or reasons for the delay for each day on which a delay occurs and place the documentation in the operating record.

The facility will record the dates, time, and duration when any alternative operating hours are utilized. The information will be maintained with the site operating record.

8.5 FACILITY ENTRANCE SIGN (§330.231)

A conspicuous sign measuring at least 4-ft by 4-ft will be maintained at the entrance to the facility through which wastes are received. The sign will be readable from the facility entrance and will state, at a minimum, in letters at least three (3) inches high:

- Facility Name;
- Facility MSW registration number.
- Type of facility (i.e., Type V MSW facility);
- Hours and days of operation for waste acceptance;
- 24-hour emergency contact phone number(s);
- Emergency phone number of the local fire department (i.e., 911); and
- Facility rules (e.g., regarding prohibited wastes, stating that all loads must be properly covered or otherwise secured, etc.).

Other relevant information may also be included on the sign. Note that waste acceptance hours may differ for commercial waste haulers versus the public, and, if different, both categories of waste acceptance hours will be posted on the facility sign. In no instance will normal waste acceptance hours be outside the allowable hours for waste acceptance as set forth in **SECTION 8.4** of this **SOP**.

8.6 CONTROL OF WINDBLOWN MATERIAL AND LITTER (§330.233)

Windblown material and litter will be collected and properly managed to control unhealthy, unsafe, or unsightly conditions by the following methods:

- Waste transportation vehicles using this facility must be enclosed or use adequate covers, such as a tarp, net, or other means, to effectively secure the load consistent with §330.235. The adequacy of covers or other means to secure incoming wastes will be checked at the facility gatehouse/scale area (see **SECTION 8.7**).
- When the facility is in operation, the facility operator shall be responsible for at least once per day cleanup of waste materials spilled along and within the right-of-way of public access roads serving the facility for a distance of two miles in either direction from any entrances used for the delivery of waste to the facility. The facility operator shall consult with the Texas Department of Transportation, county, and/or local governments with maintenance authority over the roads concerning cleanup of public access roads and rights-of-way.
- Portable fencing may be employed to confine windblown material resulting from unloading. If a portable fence is not practical, other suitable practices shall be employed to control windblown material.
- Windblown material and litter scattered throughout the facility, along fences and access roads, and at the gate must be picked up once a day on the days the facility is in operation.
- The transfer station building will be a covered/enclosed structure with openings on the sides (i.e. unloading vehicle bays/doors on one (1) side and transfer trailer doors on two (2) sides) to facilitate the safe and efficient flow of vehicles through the facility while minimizing windblown material and litter. Unloading and loading of waste will be performed within the enclosed building to control windblown material and litter. The facility will provide litter control devices (including wire or other type fencing or screening) constructed of appropriate materials for the control of windblown material and litter, as necessary, at appropriate locations near the unloading areas and elsewhere. Should wind, weather or other conditions occur that create excess (i.e. more than normal) windblown material and litter to be generated on the facility, the facility will use supplemental litter control measures (i.e. more litter fencing and more frequent litter collection) to abate the windblown material and litter.

8.7 MATERIALS ALONG ROUTE TO THE FACILITY (§330.235)

The facility operator shall take steps to require that vehicles hauling waste to the facility are enclosed or provided with a tarpaulin, net, or other means to effectively secure the load in order to prevent the escape of any part of the load by blowing or spilling. The facility operator shall take actions such as posting signs, reporting offenders to proper law enforcement officers, adding surcharges, or similar measures. Transfer trailers loaded with waste that are leaving the facility will be tarped prior to leaving the facility. On days when the facility is in operation, the facility operator shall be responsible for at least once per day cleanup of waste materials spilled along and within the right-of-way of public access roads serving the facility for a distance of two miles in either direction from any entrances used for the delivery of waste to the facility. The facility operator shall consult with the Texas Department of Transportation, county, and/or local governments with maintenance authority over the roads concerning cleanup of public access roads and rights-of-way consistent with 30 TAC §330.235. An alternative clean-up frequency and distance may be approved by the executive director.

Should wind, weather or other conditions occur that create excess (i.e. more than normal) windblown material and litter to be generated along the route to the facility, the facility will use supplemental litter control measures (i.e. more frequent litter collection) to abate the windblown material and litter.

8.8 FACILITY ACCESS ROADS (§303.245)

The entrance road will provide access from Circle Lake Drive to the facility for waste hauling vehicles, operating personnel, and visitors. The entrance road will be two lanes with a concrete or asphalt surface from the Circle Lake Drive connection. All other internal access roads will be constructed with an all-weather surface. The concrete or asphalt surface entrance, access road, and internal roads will provide mud control for the waste hauling vehicles and transfer trailers prior to exiting the facility and returning to public access roads. It is not anticipated that mud or other debris will be tracked onto Circle Lake Drive given the concrete or asphalt surface that will exist on these roads. The onsite access roads will be maintained in a reasonably mud and dust free condition by routine mechanical sweeping and/or periodic water spraying from a water truck dispatched to the site (or from the wash down hose), as necessary. All on-site and other access roadways shall be maintained on a regular basis. Access roadways shall be regraded as necessary to minimize depressions, ruts, and potholes. Repairs will be performed as identified during routine inspections.

8.9 NOISE POLLUTION AND VISUAL SCREENING (§330.239)

Since transfer activities will occur within the enclosed transfer station building structure, generated noise will be largely confined to the inside of the transfer station building, and waste unloading, processing and transfer operations are screened from the public roadway to prevent adverse visual impacts. Additionally, the facility entrance at the public roadway (Circle Lake Drive) will utilize vegetated earthen berms and vegetation on top of the berms as a means of visual screening and noise abatement, and these features will remain in-place and be maintained.

The facility is located at a significant distance from any residences and retail businesses such that activities at the site will not be visible. The registration boundary and facility structure is located more than 500 feet from the nearest residence. The registration boundary is over 500 feet from the nearest retail business (there are other heavy industrial operations on Circle Lake Drive including a steel pipe supplier, asphalt plant, concrete plant, gas pipeline, utility corridor and gas compressor station).

The entrance for customer vehicles entering the transfer station building will be oriented to face in a northernly direction (facing an industrial facility - gas compression station) away from the public access roadway of Circle Lake Drive. Additionally, as appropriate along the facility boundaries, fencing, wattles and other landscaping effects including vegetation will be utilized to visibly screen the conspicuous aspects of the operations. There are no schools, churches, historic cemeteries, or aesthetically significant sites within a half mile radius of the facility.

These setbacks, which are greater than the regulatory minimums, are such that waste transfer unloading, processing and storage operations at the site will not be readily visible from off-site locations. Additionally, such operations will be at a distance and orientation such that potential noise pollution will be attenuated (i.e., by being blocked by the building walls, roof, and existing terrain, and/or by being dissipated across the setback distances from potential off-site receptors).

The operator of the facility shall provide other screening and other measures as necessary to minimize noise pollution and adverse visual impacts.

8.10 OVERLOADING AND BREAKDOWN (§330.241)

As required by 30 TAC 330.241(a), the design capacity of the transfer station will not be exceeded during operation. The design capacity of the facility is computed in the **Part I/II PAR**. Such overloading beyond the design capacity will be prevented by conducting real-time tracking of incoming waste tonnage received at the facility throughout each operating day (i.e. each load is weighed and the data are recorded by the facility). Through this real-time tracking of cumulative daily total waste receipts, the facility will continually monitor the incoming tonnage and will stop accepting waste before the registered maximum daily waste acceptance rate is exceeded, thus ensuring that the design capacity is not exceeded.

The design capacity of the solid waste facility set forth in **SECTION 4.2** of this **SOP** will not be exceeded during operation. The facility will not accumulate solid waste in quantities that cannot be processed within such time as will preclude the creation of odors, insect breeding, or harborage of other vectors. If such accumulations occur, additional solid waste will not be received until the adverse conditions are abated.

The maximum time waste material will be stored, prior to off-site transport, will not exceed 48 hours, except holidays and weekends. During holidays and/ or weekends, waste may be temporarily stored at the facility not to exceed a time period of 72 hours. Waste is generally stored for 24 hours or less prior to transport off-site.

If a significant work stoppage should occur at the facility due to a mechanical breakdown, or other causes such as an extraordinary interruption by a natural cause (such as a flood or earthquake) of the usual course of events that experience, prescience, or care cannot reasonably foresee or prevent, or the facility is expected to become inoperable for a period of 24 hours or more beyond the storage periods listed in **SECTION 4.2** of this **SOP**, or the facility cannot operate in accordance with this **SOP**, the facility will restrict the receiving of solid waste and direct incoming solid waste to other approved processing or disposal facilities. If the work stoppage is anticipated to last long enough to create objectionable odors, insect breeding, or harborage of vectors, the accumulated solid waste will be removed from the facility to an approved backup processing or disposal facility. In no event will waste remain (i.e., be temporarily stored) on-site for more than 72 hours.

Backup Provision:

In the event of equipment repairs or during equipment maintenance periods, the facility will obtain equipment from other facilities, contractors, or local rental companies to avoid interruption of waste services.

8.11 SANITATION (§330.243)

The tipping floor will be washed down at least once per week at the completion of the daily processing period, or more frequently if it is determined to be necessary to control odors within the transfer station facility.

Wash waters will not be allowed to accumulate on the tipping floor; the tipping floor will be sloped towards a floor drain, where all wash water will be collected and managed as contaminated water, and properly disposed of in an authorized manner as set forth in **SECTION 5** of this **SOP**.

8.12 VENTILATION AND AIR POLLUTION CONTROL

Air emissions from the facility will not cause or contribute to a condition of air pollution as defined in the Texas Clean Air Act.

The facility is claiming Permit By Rule (PBR) per 30 TAC §106.4 and §106.534 for operation. TCEQ documents 10149 and 10228 proving the calculations required are included within **Part I/II, Appendix K**. Additionally, prior to when construction begins, CLT will acquire all applicable air construction permits prior to development of the facility.

All liquid waste and solid waste will be stored in covered odor-retaining containers and vessels.

The facility will be designed and operated to provide adequate ventilation for odor control and employee safety. Ventilation in the transfer station building will be provided by the openings through which waste hauling vehicles will enter and exit, and vents installed on the building roof. The transfer facility doors on each end of the transfer truck loadout tunnel may also be opened, if needed, for additional ventilation.

The operator will prevent nuisance odors from leaving the boundary of the facility. If nuisance odors are found to be passing the facility boundary, the facility operator may suspend operations until the nuisance is abated or immediately take action to abate the nuisance.

The operator will prevent nuisance odors from leaving the boundary of the facility. The following measures will be employed:

- On-site buffer zones will be maintained. All waste processing and storage will occur in areas setback from the facility boundary by a minimum of 50 feet.
- Solid waste processing will occur within the enclosed transfer station building.
- Stored solid waste will be kept in odor-retaining containers (i.e., either indoors in the enclosed transfer station building or in tarped transfer trailers awaiting transport off-site).
- All air pollution emission capture and abatement equipment or equivalent technology will be properly maintained and operated during the facility operation. Cleaning and maintenance of the abatement equipment will be performed as recommended by the manufacturer and as necessary so that the equipment efficiency can be adequately maintained. Abatement measures may include misting systems (using water) to suppress odors, if needed. The misting system may also be used to control odors through the addition of chemical deodorizers in the water or nonaqueous odor control systems may be utilized. Air authorization will be obtained from TCEQ as necessary for the odor control system used.
- Ponded water will be controlled to avoid objectionable odors and nuisance conditions. In the event that objectionable odors do occur from any ponded water, appropriate measures shall be taken to alleviate the condition. The site will be graded to drain naturally so that stormwater will not accumulate. Any unanticipated low spots where stormwater may pond will be addressed by filling or grading.
- There are no proposed process areas that recover material from any solid waste that contains putrescible wastes. Additionally, the facility will not accept liquid waste; thus,

there will be no exposure of liquid waste to the air. There is also no proposed mobile waste processing unit equipment at the facility.

Prior to operations, the appropriate air permit or authorization will be obtained, and the facility will operate in accordance with applicable air permit/authorization provisions so that air emissions from the transfer station facilities do not cause or contribute to a condition of air pollution as defined in the Texas Clean Air Act.

If required, the reporting of emissions events shall be made in accordance with §101.201 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements) and reporting of scheduled maintenance shall be made in accordance with §101.211 of this title (relating to Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements).

8.13 HEALTH AND SAFETY (§330.247)

Facility personnel will be trained in accordance with the procedures and topics outlined in **SECTION 3** of this **SOP**, which will include training on the facility's health and safety plan (which is addressed in **SECTION 9** of this **SOP**).

8.14 EMPLOYEE SANITATION FACILITIES (§330.249)

Potable water and sanitary facilities will be provided for all employees and visitors.

8.15 FACILITY INSPECTION AND MAINTENANCE SCHEDULE

TABLE 8-2 provides the facility inspection and maintenance schedule.

TABLE 8-2: FACILITY INSPECTION AND MAINTENANCE SCHEDULE

Item	Task	Frequency
Fence/Gates	Inspect perimeter fence and gates for damage. Make repairs if necessary.	Weekly
Windblown Waste	Police working area, wind fences, access roads, entrance areas, and perimeter fence for loose trash. Clean up as necessary.	Daily as specified in **SECTION 8.6.**
Waste Spilled on Route to the Facility	Police the entrance areas and all roads at least 2 miles from the facility entrances for loose trash. Clean up as necessary.	Daily as specified in **SECTION 8.7.**
Facility Access Road	Inspect facility access road for damage from vehicle traffic, erosion, or excessive mud accumulation. Maintain as needed with crushed rock or stone. Grading equipment will be used at least once per week to control or remove mud accumulations on roads as well as minimize depressions, ruts, and potholes.	Daily – more often during wet weather or extended dry weather periods.
Facility Signs	Inspect all facility signs for damage, general location, and accuracy of posted information.	Weekly
Odor	Inspect the perimeter of the facility to access the performance of facility operations to control odor.	Daily
Perimeter Channels/Ponds	Inspect perimeter channels and detention ponds to verify that they are functioning as designed (e.g., excess sediment removed, outlet structures intact).	Weekly and within 72-hours of a rainfall event of 0.5 inches or more.

9.0 GENERAL INSTRUCTIONS

9.1 GENERAL FACILITY SAFETY

This section addresses general facility safety and serves as a health and safety plan for the promotion of safe operations and activities at the facility. The facility may implement additional company policies regarding health and safety, but such policies are beyond the scope of this **SOP**.

Facility safety will be promoted by facility personnel using well-maintained equipment to perform standard work procedures. Facility safety will be enhanced by limiting access to working areas to only authorized personnel. In the event of an emergency, planned emergency response procedures will be followed.

Access to the facility will be limited to authorized personnel as described in the access control section of this **SOP** (**SECTION 8.1**). As indicated, access is controlled by physical barriers (i.e., fencing and lockable gates), and signage will be present to enhance access control and general facility safety. Facility personnel are responsible to be alert for the presence of unauthorized personnel or persons in prohibited areas.

In the event of an emergency, facility personnel will assess the situation, notify the Site Manager or designee, and take appropriate actions, such as rendering aid, calling for assistance, or closing access to the emergency scene. Additional measures specific to fire protection are provided in **SECTION 7** of this **SOP**.

The **emergency phone number is 911**; this will be posted beside the telephone in the gatehouse.

10.0 SPECIAL WASTE ACCEPTANCE PLAN

10.1 INTRODUCTION

This Special Waste Acceptance Plan outlines the acceptance requirements and review and approval process that will be used to accept special waste. Special waste is defined by TCEQ's MSW regulations (30 TAC §330.3(154)). Only those special wastes specifically listed below will be accepted at this facility without prior written approval from the Executive Director.

- Empty containers that have been used for pesticides, herbicides, fungicides, or rodenticides provided the containers have been triple rinsed, crushed, or rendered unusable upon receipt at the gate.
- Incidental amounts of NRACM. An incidental amount is defined as the maximum of 10-percent of the waste received on an annual basis by scale weight (annual basis is defined as the most recent four consecutive quarters).
- Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas when those wastes are to be processed, treated, or disposed of at a solid waste management facility. Only those wastes authorized for disposal at a solid waste management facility will be accepted.
- Dead animals that are incidental to routine collection of MSW and that can be systematically processed along with other solid waste.
- Special waste other than as described above and approved for acceptance by the TCEQ Executive Director.

No special waste will be received at the facility unless it is compatible with the compaction and loading equipment operated at the facility or unless modifications are made to the facility to accommodate the special waste. Any changes in operations must be approved in writing by the Executive Director prior to implementation.

The following wastes will not be accepted at this facility:

- Regulated hazardous waste
- PCBs
- Liquid wastes
- Certain special wastes, including:
    - hazardous waste from conditionally exempt small-quantity generators that may be exempt from full controls under 30 TAC Chapter 335, Subchapter N (relating to Household Materials Which Could Be Classified as Hazardous Wastes);
    - Class 1 industrial nonhazardous waste;
    - untreated medical waste;
    - municipal wastewater treatment plant sludges, other types of domestic sewage treatment plant sludges, and water-supply treatment plant sludges;
    - septic tank pumpings;
    - grease and grit trap wastes;
    - wastes from commercial or industrial wastewater treatment plants; air pollution control facilities; and tanks, drums, or containers used for shipping or storing any material that has been listed as a hazardous constituent in 40 CFR, Part 261, Appendix VIII but has not been listed as a commercial chemical product in 40 CFR §261.33(e) or (f);

- Soil contaminated by petroleum products, crude oils, or chemicals in concentrations of greater than 1,500 milligrams per kilogram total petroleum hydrocarbons; or contaminated by constituents of concern that exceed the concentrations listed in Table 1 of 30 TAC §335.521(a)(1).
- Waste generated outside of Texas that contains any industrial waste; any waste associated with oil, gas, and geothermal exploration, production, or development activities; or any material that is listed in the bullets above.
- Drugs and contaminated foods, other than those contained in normal household waste.
- Incinerator ash;
- Used oil;
- Lead acid storage batteries; and
- Used-oil filters from internal combustion engines.

10.2 SPECIAL WASTE ACCEPTANCE

Prior to being accepted at the facility, special wastes must be preapproved by the landfill that will be receiving the waste, in accordance with the receiving landfill's special waste screening, acceptance procedures and permit. Special waste evaluation and approval will take place prior to delivery of the waste to the transfer station. Typically, the special waste analyst for the landfill will utilize information provided by the generator (e.g., waste-specific chemical and characteristic information or process knowledge information) to determine the acceptability of a waste for disposal at the landfill. The special waste analyst will be responsible for maintaining and utilizing current regulatory guidelines and constituent limits for evaluation of wastes. The special waste analyst also will be responsible for knowing and applying applicable future changes to state and federal disposal regulations, review and acceptance procedures. This information will be provided to transfer station personnel prior to waste acceptance at the transfer station.

The preceding special waste review procedures will include the following.

- The SWP sheet or waste profile document will be reviewed for completeness. The SWP will typically be completed electronically through final disposal destination or other third-party portal set up for this process and may include electronic signatures. The review will include:
  - The SWP must be completely and legibly filled out by the generator of the waste with all appropriate addresses, contact names, phone and fax numbers, and signatures.
  - The waste stream information must include sufficient information to provide the special waste analyst a clear understanding of the waste type(s), origin, shipping method, and anticipated frequency of disposal. This information will be used by the special waste analyst to compare the waste with applicable state and federal regulations. If the description is not explicit, additional information will be requested of the generator. The physical characteristics of waste must include information on the chemical and physical properties of the waste sufficient to allow the special waste analyst to identify the waste and correlate the waste properties to applicable state and federal regulations.
  - The generator maybe required to provide analytical data, safety datasheets, or process knowledge information to the special waste analyst, showing the characteristics of the waste used as the basis to comply with 30 TAC

§330.203(c)(2) and RG-003 for wastes regulated by the Railroad Commission and related wastes.

- Site Specific Evaluation - It will be confirmed that all special waste acceptance is acceptable in accordance with the following: (1) TCEQ and local regulations and (2) permit conditions of the receiving landfill. The special waste analyst may request additional information from the generator before rendering a decision. This may include additional analytical, process description, safety data sheets, or other applicable information.

Facility personnel may visually compare the material presented for disposal to the SWP to confirm that the physical characteristics (i.e., color, odor, and appearance) or manifest description of the material match those detailed on the SWP. In the event that the waste differs from the approved waste stream, the waste load will be held at the gate while the discrepancy is investigated and resolved; or if it cannot be resolved, the load will be rejected. The generator will be notified of the reasons for rejecting the load. Additional process information and/or chemical analyses may be required to further characterize the waste.

In accordance with 30 TAC §330.219(b)(6), the facility will maintain in the Site Operating Record all documents, manifests, shipping documents, trip tickets, etc., involving special waste.

10.3 SPECIAL WASTE HANDLING PROCEDURES

The transfer station facility will exercise appropriate care and safeguards when processing special wastes.

Drivers of transfer trucks containing special waste will provide the required documentation to the receiving landfill concerning the special waste contained within the transfer trailer. The receiving landfill will be responsible to ensure the transferred special waste is disposed of in accordance with the landfill's permit.

Specific handling/disposal procedures are detailed below for the special wastes that will be processed at this facility, as follows:

TABLE 10-1: SPECIAL WASTE HANDLING PROCEDURES

Special Waste Type	Handling Procedures
Empty containers, including paper, cardboard, and metal that have been used for pesticides, herbicides, fungicides, or rodenticides	These containers will be processed in the transfer station upon receipt. These containers will not be allowed to accumulate on the tipping floor. All containers received will be handled in accordance with Title 30 TAC §330.171 and will be triple rinsed prior to arrival. If containers cannot be processed upon receipt they will be crushed with the loader and rendered unusable.
Incidental amounts of non-regulated asbestos- containing materials (NRACM)	Loads of primarily NRACM will be transferred directly from the tipping floor of the transfer station into the transfer trailers. The front-end loader will not attempt to compact or travel over the NRACM. These procedures will minimize the handling of NRACM so that the integrity of the material is maintained.
Selected waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas	This waste will be accepted at this facility provided the incoming loads are delivered in quantities that will allow the waste to be processed safely and efficiently along with other solid waste. In addition, prior to acceptance at the transfer station, waste acceptance approval information from the landfill that will dispose of this waste will be obtained. The approval information will include all applicable information used to characterize this material. No liquids or sludges will be accepted. This waste material will only be accepted if the requirements set forth in TCEQ RG-003 are met.
Dead animals	Dead animals that are incidental to routine collection of municipal solid waste and that can be systematically processed along with other solid waste will be accepted at this facility. This waste may contain some animal remains; however, this facility will not accept bulk quantities of dead animals or animal remains in a specific shipment or load. All slaughterhouse waste, including contaminated packaging materials, and dead animals will be processed upon receipt or covered with a minimum of three feet of solid waste until it is processed into transfer trailers. The tipping floor and equipment will be cleaned at the end of each day when special waste containing dead animals or slaughterhouse waste is processed.

11.0 SIGNATURE OF PREPARER

I certify that the information provided in this application report and engineering drawings is a true and correct representation of that which is requested. I am aware that there are significant penalties for knowingly submitting false information.

I also confirm that based on my professional judgment, and on information collected during the application preparation, the design and planned operations of the facility is in compliance with the TCEQ regulations and criteria and will be protective of the environment.

Signature of Preparer	President & Senior Principal Engineer Title, if applicable
Jeffrey L. Allen, P.E. Name	9-30-2021 Date