Weaver Consultants Group

Project No. 0771-356-11-41
June 5, 2023

Asmerom T. Russom, P.E.
MC-124
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: Response to 1st Technical Notice of Deficiency Letter – Major Permit Amendment Application
Fort Worth C&D Landfill
Fort Worth, Tarrant County, Texas
MSW Permit No. 1983E
Tracking No. 28325020

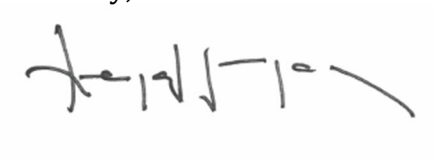
Dear Mr. Russom:

On behalf of Texas Regional Landfill Company, LP, please find enclosed one original and three copies of the replacement pages for the referenced permit amendment application. The attached replacement pages were developed to incorporate comments included in your letter dated May 4, 2023.

The enclosed table contains each comment identified by the TCEQ and a response to each below the comment.

During the course of your review, if you need additional information or have any questions, please call.

Sincerely,



Nevzat Turan, P.E.
Principal

Attachment:
Attachment 1: NOD1 Table
Attachment 2: Replacement Pages (Redline/Strikeout)
Attachment 3: Replacement Pages (Clean)

cc: Gary Bartels, Texas Regional Landfill Company, LP

ATTACHMENT 1

NOD1 TABLE

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
NT1	1	General	330.57(a) & (b)	Omitted	Submit completed form TCEQ-20885 Response: TCEQ Form 20885 has been completed and incorporated into Volume 1.
NT2	21	General	330.57(g)(2)	Omitted	Submit Title Page with Name, Application No., Site Operator Name, Location, Date Prepared, and Revision Date Response: A title page with the name, application no., site operator name, location, date prepared, and revision date is included with every volume and appendix.
NT3	22	General	330.57(g)(3)	Incomplete	Provide a table of contents of the entire application in each volume of the application/binders. Response: A table of contents of the entire application has been added to each volume of the application.
NT4	46	General	330.55(a)	Ambiguous	Provide page no. and Section if the acknowledgment has been provided in the application. Response: The site currently has a Subchapter U Air Standard Permit (Permit No. 96349). Refer to Parts I/II, Page I/II-3-2, Section 3.5.
NT5	134	Part II	330.61(h)(3)	Incomplete	Specify the information provided in Part I/II, Section 7.5. Indicate the area or radial distance from the landfill site for predicted growth trends. Response: Text specifying the radial distance (five miles) of the landfill for predicted growth trends has been added to Parts I/II, Section 7.5.
NT6	163	Part II	330.61(m)(2)	Incomplete	Include wetland determination in accordance with 30 TAC 330.61(m)(2). Response: The site has submitted a No Permit Required Application to USACE. The approval of this application will be provided to TCEQ upon receipt.
T7	189	Part II	330.61(d)(5)	Incomplete	Provide additional detailed information on the developmental sequence of the sectors. Response: Sector development information is provided in Appendix I/IIA – Facility Layout Maps, Figures I/II-A.2 through A.7.

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
T8	191	Part II	330.61(d)(7)	Incomplete	Provide additional information and provide the location of facility windbreaks, greenbelts, and visual screening. Parts I/II, Figure I/II-A.11 Access Control Plan does not contain sufficient information. Response: The facility is bounded by trees/vegetation to the west, south, and east. The existing dense tree lines function as both windbreaks and site screening. Tree lines/vegetation will be maintained to avoid nuisance conditions and maintain effective visual screening. This information is included on Figure I/II-A.11, Note 3.
T9	196	Part II	330.61(d)(9)(D)	Incomplete	Indicate the dimensions of cells/ Sectors. Response: The dimensions of cells/sectors can be found on a scale drawing in Parts I/IIA, Figure I/IIA-A.2 Sector Development Sequence.
NT10	229	Part II	330.543(a)	Incomplete	Include a statement in Part I/IIC-10, Section 7 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. Response: This statement has been added to Part I/IIC, Section 2 – Easements and Buffer Zones.
T11	294	Part III	330.305(d)(1)	Ambiguous	Discuss 7.60 fps and 6.16 fps for the post-development condition of storm discharge points at DCP03 and DCP04 (AO13) that appears to be erodible velocity. Response: DCPO3 (CO-4) and DCPO4 (AO13) are run-on locations to the permit boundary from off-site drainage areas to the south and east. As such, these velocities cannot be changed. However, as shown on Drawing IIIF-4, run-on from these locations enters channels 1 and 3, which have sufficient erosion control. The proposed velocities at these discharge points are equal to these calculated for the updated permitted condition.
NT12	311	Part III	330.63(c)(1)(D)(ii)	Omitted	Appendix IIIF-E, identify the location of Attachment 2A through 2G in the Drainage Report Attachment 2 of Part III. Response: Appendix IIIF-E, pages IIIF-E-74 through IIIF-E-117 are excerpts from the 2015 Geosyntec Application for reference. Attachments 2A through 2G can be found in Volume 3 (PDF page 265) of the 2015 Geosyntec Permit Amendment Application.

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
T13	313	Part III	330.63(c)(1)(D)(iv)	Incomplete	Discuss structural stability of drainage and storage structures. Response: §330.63(c)(1)(D)(iv) requires the presentation of structural designs of drainage facilities. The structural design for swales is provided on Drawings IIIF.7 and IIIF.8, for chutes on Drawings IIIF.8 through IIIF.12, for channels on Drawings IIIF.4 through IIIF.7, and for ponds on Drawing IIIF.13. Detailed sizing calculations for all drainage structures are included in Appendices IIIF-B and IIIF-C.
T14	318	Part III	301.33(a)(1)	Ambiguous	Expand the information provided in Part III, Page IIIF-E-82, first paragraph, ancillary landfill-related earthen fill, features, and elevation with reference to the floodplain elevation. Response: §301.33(a)(1) references Levee Improvements District, District Plans of Reclamation, and Levees and Other Improvements. There are no existing or proposed levees on the site. Pages IIIF-E-74 through IIIF-E-117 are excerpts from the 2015 Geosyntec Permit Amendment and are only included for reference.
T15	322	Part III	301.33(a)(4)(B)	Incomplete	Discuss whether the modification of the floodplain has affected the flood flow and provide information if adjacent property owners are affected by flood flow caused by levee development. Response: There is no proposed levee development for this expansion, therefore the site is not subject to this rule.
T16	326	Part III	301.34(1)	Incomplete	Submit plans for levees (existing and/or new) that include structural integrity. Response: There is no proposed or existing levee at the site. The landfill perimeter berm is not designed, proposed to be constructed or will function as a levee, consistent with standard engineering practice on similar projects.
NT17	333	Part III	301.35	Ambiguous	IIIF-E-101 - Indicate the location of Appendix IIF. Response: Appendix IIIF-E, pages IIIF-E-74 through IIIF-E-117 are an excerpt from the 2015 Geosyntec Application and are included for reference only. Appendix IIF can be found in Volume 3 (PDF page 245) of the 2015 Geosyntec Permit Amendment Application.

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
T18	335	Part III	330.63(c)(2)(D)(i)	Incomplete	Address and locate in the application for construction in the floodplain with reference to Rules 30 TAC 330.63(c)(2)(D)(i) through 30 TAC 330.63(c)(2)(D)(iv) for approval from the entities. Response: 30 TAC §330.63(c)(2)(D)(i) is not applicable as there is no proposed levee. The CLOMR was approved on September 23, 2022. A copy of this approval is included in IIIF-G-A. A copy of the approved floodplain development permit is included in IIIF-G-B. The site submitted a No Permit Required Application to USACE. The approval will be submitted to TCEQ once approved.
T19	385	Part III	330.337(e)	Ambiguous	Provide a foundation evaluation that considers the stability, and settlement of the landfill. Response: Title 30 TAC 330.377(e) requires that, prior to excavating below the seasonal high-water table a preliminary foundation evaluation will be performed, as is presented in this application (refer to Appendix IIIM). The evaluation is required to consider constructability, settlement and stability. Constructability of the in-situ liner and sideslope liner below the seasonal high-water table is discussed in detail in Appendix IIID, Sections 2.3.9 and 2.3.10. An updated settlement evaluation and conclusions are presented in Appendix IIIM, Section 1.1. The stability analyses previously presented in the application (Appendices IIIM-A-2 and IIIM-A-3) have been revised to include output figures from the Slide2 computer model demonstrating that the previously presented stability analyses included analysis of the foundations (as demonstrated by Slide2 model surfaces passing through the foundation strata).
T20	393	Part III	330.337(i)	Incomplete	Provide information in Section 7.3 that adjustment of the seasonal high-water table, if necessary, as new data is collected. The statement on Appendix IIID, Section 7.3, is not sufficient. Response: Appendix IIID, Section 7.3 has been revised to indicate that the facility's highest regarded groundwater elevation measurements will be provided in the Ballast Evaluation Reports.

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
T21	399	Part III	330.339(a)(1)	Incomplete	Provide additional information on geocomposite material details at the landfill. No detailed information has been provided. Response: The following information was included within the permit application related to drainage geocomposite for the temporary dewatering system: 1. Material Specification (Part IIID, Section 4.4 and Table 4-1). 2. Material Installation (Part IIID, Section 4.4.3). 3. Installation and Analysis Description and Design Calculations (Appendix IIID-C). 4. Installation Details (Figures IIID-C-1 through IIID-C-5). Geocomposite will only be utilized for the temporary dewatering system.
T22	487	Part III	330.63(e)(4)	Omitted	Add to the subsurface investigation results from a description of the Paw Paw formation beneath the site, including depth, lithology, saturation and other characteristics as applicable. Response: A limited number of geotechnical borings have penetrated into the PawPaw Formation due to the significant depth of its occurrence beneath the landfill unit and thick sequence of overlying unsaturated low permeability Grayson Shale and Main Street Limestone sediments. Appendix IIIG, Section 3.1.6 provides a description of PawPaw Formation based on the historical site-specific subsurface investigation observations; this section has been amended to include a statement regarding the elevation below which the PawPaw has been observed in previously drilled onsite boreholes.
T23	491	Part III	330.63(e)(4)(D)	Incomplete	Submit plugging reports for MW-1, MW-9 and all other abandoned monitoring wells. Response: As indicated in Section 3.3 (Previous Site Exploration Summary) and Table 3-1 (Summary of Existing Boring Depths and Elevations) in Appendix IIIG, monitoring well MW-1A was installed by EMCON in 1997 in conjunction with monitoring wells MW-2, MW-3, and MW-4. There are no records that indicate a monitoring well with the name "MW-1" was installed or plugged. MW-3 is the only former monitoring well documented to have been installed and later plugged, but no plugging report was found for this well in Submitted Drillers Report Database records.

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
T24	494	Part III	330.63(e)(4)(G)	Ambiguous	Revise drawing IIIG-C-13 (Section L-L') for the symbols of alluvium in the logs and legend to be consistent. Response: Figure IIIG-C-13 has been revised to make the requested changes to section L-L'. Geologic section figures IIIG-C-3, IIIG-C-9, and IIIG-C-10 have also been revised to reflect updates to unconsolidated sediment graphics and differentiate between fill and insitu sediments observed at time of drilling in the 2018/2019 expansion borings. What is the current understanding of the transition "Woodbine - Quarternary Alluvium", specifically between boreholes WC-4 & 5 (shown in the drawing as a question mark)? Response: The extent of Woodbine Formation sediments was estimated from both the Regional Geologic Map (depicted on Figure IIIG-A-1) and the site-specific geologic data which is also consistent with the existing permitted subsurface characterization (Permit No. MSW-1983D) and the former subsurface characterization (Permit No. MSW-1983C). The question mark symbol depicted in cross section drawings serve to indicate that horizontal contacts of Alluvium-to-Grayson-to-Woodbine are not precisely known within the southernmost facility area due to previous excavation and stockpiling activities.
T25	495	Part III	330.63(e)(4)(H)	Incomplete	Discuss the distinguishing characteristics and the criteria used to differentiate the Quarternary alluvium from the Woodbine (in most cases, the submitted logs do not appear to show a defined lithologic boundary between the two). Response: The extent of Woodbine Formation sediments was estimated from both the Regional Geologic Map (depicted on Figure IIIG-A-1) and the site-specific geologic data which is also consistent with the existing permitted subsurface characterization (Permit No. MSW-1983D) and the former subsurface characterization (Permit No. MSW-1983C). The subsurface stratigraphy discussed in Appendix IIIG, Section 3.1.2 (Quaternary Alluvium) and 3.1.3 (Woodbine Formation) describe the characteristics of Alluvium and Woodbine sediments based on historical subsurface investigation data. The site-specific lithology is further supported by the USGS Regional Geologic Map that shows the Woodbine Formation outcrop commensurate with the site-specific interpretation which is also consistent with the currently permitted subsurface characterization (under permit no. MSW-1983D). The lithologic descriptions in Appendix IIIG, Section 3.1.2 and 3.1.3 also indicate that the general sedimentary composition of alluvium sediments include gravel, which is generally not observed in the Woodbine Formation sediments. Lithologic logs are not generally annotated with formational interpretations and serve to describe lithologic attributes of observed soil and rock samples based on observations at time of drilling and as supported by relevant geotechnical testing results.

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
T26	495	Part III	330.63(e)(4)(H)	Incomplete	Expand the narrative of the site subsurface stratigraphy to discuss and explain the scattered distribution of the Woodbine beneath the alluvial deposits, and its disappearance toward the west. Response: The Woodbine is not interpreted as scattered in distribution. Rather, the extent of Woodbine sediments was estimated from both the Regional Geologic Map (depicted on Figure IIIG-A-1) and the site-specific geologic data and is consistent with the existing permitted subsurface characterization (Permit No. MSW-1983D) and the former subsurface characterization (Permit No. MSW-1983C). The subsurface stratigraphy discussed in Appendix IIIG, Section 3.1.2 (Quaternary Alluvium) and 3.1.3 (Woodbine Formation) describe the characteristics of Alluvium and Woodbine sediments based on historical subsurface investigation data. The site-specific lithology is further supported by the USGS Regional Geologic Map that shows the Woodbine Formation outcrop commensurate with the site-specific interpretation which is also consistent with the currently permitted subsurface characterization (under permit no. MSW-1983D) and indicate that the Woodbine and Alluvium sediments are isolated horizontally by Grayson Formation sediments with outcrop within the centermost facility area (pre-development) . The lithologic descriptions in Appendix IIIG, Sections 3.1.2 and 3.1.3 also indicate that the general sedimentary composition of alluvium sediments include gravel, which is generally not observed in the Woodbine Formation sediments. Provide an isopach map of the Woodbine formation, as interpreted from the site investigations. Response: The base of Woodbine sediments is commensurate with the top of Grayson Shale depicted on Drawing 4A-22 (Appendix IIIG-C, page IIIG-C-30), for the limited easternmost facility area where Woodbine Formation sediments are present on outcrop. The thickness of Woodbine sediments (where present) is dependent on previous excavation, filling, and stockpiling activities conducted by the landfill facility and by former facility owners. There have been no changes proposed from the facility's permitted subsurface characterizations (Permit No, MSW-1983D and former Permit No., MSW-1983C).

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
T27	504	Part III	330.63(e)(5)(C)	Omitted	Submit in table format groundwater level in all borings, sitewide: the information will consist of depths where water was first encountered as well as records of after equilibrium measurements. Response: Groundwater elevation data from the facility's existing and former groundwater wells and piezometers is provided in Table 4-1 and Table 4-2 in Appendix IIIG. The facility's historical records were reviewed to locate all additional available groundwater elevation data, including levels recorded at time of drilling. These historical groundwater elevation data are provided in table format as excepts from previous facility subsurface investigations and permit applications and have been amended to Appendix IIIG-D beginning with page IIIG-D-39. Appendix IIIG Section 4.1 has also been revised to reference the additional data tables.
T28	507	Part III	330.63(e)(5)(F)	Ambiguous	Explain the meaning/significance of the Woodbine groundwater contour maps shown on pages IIIG-D-36 through D-38: compare with the cross-sections in Figures IIIG-C-2 through C-9 where the Woodbine formation is missing. Response: The groundwater contour maps on pages IIIG-D-36 through IIIG-D-38 were obtained from the facility's Annual Groundwater Monitoring Reports by The Carel Corporation from the facility's June 2020, 2021, and 2022 monitoring events. Inquiry into these maps indicate that the Woodbine Formation was omitted from consideration in the development of the contours depicted on these maps. However, the groundwater elevation data are accurate and consistent with historical groundwater elevations and were contoured by WCG, consistent with the facility's permitted hydrogeological characterization, as depicted on existing Figures IIIG-D-1 through IIIG-D-3 in Appendix IIIG.
T29	638	Part III	330.421(a)(1)(D)	Incomplete	Provide PE signed, sealed boring log for MW-9A and any other monitoring wells drilled after March 2006. Response: As indicated in Table 3-1 in Appendix IIIG, monitoring well MW-9A (formerly piezometer WCP-10) is the only existing monitoring well that was installed after March 2006. The Lithologic Log for MW-9A has been revised to include a Texas P.G. Seal by the geologist who supervised the installation of MW-9A. The P.G. sealed MW-9A log is provided in Appendix IIIH-A on page IIIH-A-20.

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
T30	650	Part III	330.421(d)	Omitted	Submit surveyed locations and elevations, sealed by a Texas-registered professional land surveyor (RPLS), for all existing monitoring wells. Acknowledge that new wells will be surveyed by a RPLS before groundwater monitoring begins. Response: As indicated in Table 3-1 in Appendix IIIG, monitoring well MW-9A (formerly piezometer WCP-10) is the only existing monitoring well that was installed after March 2006. The Lithologic Log for MW-9A has been revised to include a Texas P.G. Seal by the geologist who supervised the installation of MW-9A. The P.G. sealed MW-9A log is provided in Appendix IIIH-A on page IIIH-A-20.
T31	664	Part III	330.371(e)	Inconsistent	Revise the application to indicate that postclosure landfill gas monitoring will continue for five years unless the listed 30 years (page III-I-1) is a voluntary commitment from the applicant. Response: Page III I-1 has been revised to indicate that the postclosure landfill gas monitoring will continue for 5 years.
NT32	702	Part III	330.457(f)(4)	Incorrect	Clarify or revise the rules referenced as 330.253(e) and 330.253(e)(10) in Part III, Section 4, Schedule of Unit Closure and Facility Closure. Response: The above-referenced rules have been corrected in Appendix IIIJ, Section 4.
T33	723	Part III	330.463(a)(3)	Incomplete	Acknowledge in Part III, Section 2, Page IIIK-2, Post-Closure Activities; the ED may require an investigation into the nature and extent of any release from the facility and an assessment to correct an impact to groundwater. Response: This statement has been added to Appendix IIIK, Section 2.
NT34	732	Part III	330.463(b)(3)(B)	Incomplete	Provide the name of the Region Engineer responsible for overseeing and conducting post-closure activities. Response: The name of the Region Engineer responsible for overseeing and conducting post-closure activities has been provided in Appendix IIIK, Section 3.

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
NT35	752	Part III	330.509(a)	Incomplete	Discuss any possible corrective action requirements or explain why a corrective action plan during postclosure care is not provided. Response: Corrective action is not currently needed at the site. If corrective action is ever required, a corrected action plan will be developed in accordance with 330.509(a) and submitted to TCEQ for approval. This information has been added to Appendix IIIJ.
NT36	756	Part III	330.503(b)	Incomplete	Address 330.503(b) financial assurance requirements. Response: Closure and postclosure cost estimates are provided in Appendix IIIL. Financial assurance will be provided once the application is finalized.
NT37	757	Part III	330.507(b)	Incomplete	Address 330.507(b) financial assurance requirements. Response: Closure and postclosure cost estimates are provided in Appendix IIIL. Financial assurance will be provided once the application is finalized.
NT38	781	Part IV	330.125(f)	Ambiguous	Explain the frequency for “Required Personnel Operator Licenses" indicated as "As Needed" with reference to 30 TAC 330.125(f). Response: Required Personnel Operator Licenses will be maintained “As Needed” in accordance with 30 TAC 330.125(f) as indicated in Part IV, Table IV-1.
NT39	793	Part IV	330.127(5)(A)	Ambiguous	Part IV, Section 5.6.3, Page IV-23, discuss the frequency of random inspections of incoming waste loads. Response: As noted on Page IV-24, random load inspections will be conducted on objectively-selected vehicles an average of one vehicle per day when the facility is in operation.
NT40	795	Part IV	330.127(5)(B)	Ambiguous	Part IV, Page IV-5, and Part IV, Section 5.6, explain the as "Per Occurrence" frequency for Load Inspection Reports with reference to 30 TAC 330.127(5)(B). Response: The table on page IV-5 indicates that records of the random inspection will be kept when random load inspections are completed (e.g., per occurrence of random load inspection). The table has been revised to include the content of the load inspection reports. As noted on Page IV-24, load inspection reports will be completed for loads subjected to random inspection. As noted in the response to NT39, random load inspections will occur at least once per each operating day.

NOD1 Table - Permit Type IV (Permit 1983E)

NOD ID	MRI ID	App. Part	Citation	1st NOD Type	NOD Description
T41	808	Part IV	330.133(a)	Incomplete	Specify the maximum size of each unloading area. Response: A table has been added to Part IV, Section 8 – Unloading Areas to specify the maximum size of the working face.
T42	894	Part IV	330.165(f)	Incomplete	Part IV, Section 24.4, Final Cover, indicates that final cover for the landfill must be in accordance with the site closure plan and Subchapter K of Chapter 330. Response: The above statement has been added to Part IV, Section 24.4 – Final Cover.

ATTACHMENT 2

REPLACEMENT PAGES (REDLINE/STRIKEOUT)

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

VOLUME 1 OF 4

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

This document intended for permitting purposes only.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION
~~VOLUME 1 OF 4~~

CONTENTS

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

APPLICATION TABLE OF CONTENTS

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

Project No. 0771-356-11-35

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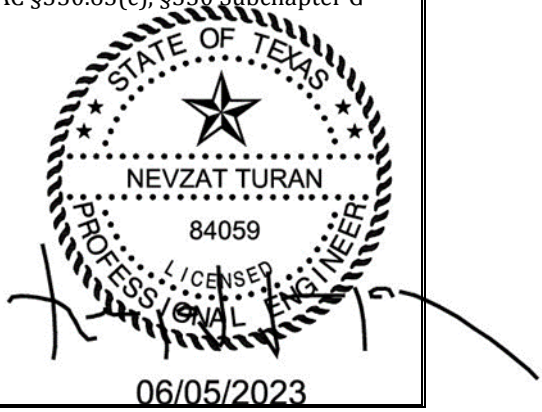
FORT WORTH C&D LANDFILL MAJOR PERMIT AMENDMENT APPLICATION
TCEQ PERMIT NO. MSW-1983E

TABLE OF CONTENTS



FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

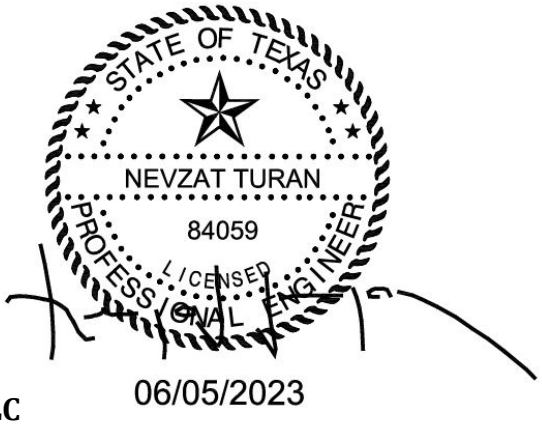
TCEQ PART I APPLICATION FORM, PART II APPLICATION FORM, CORE DATA FORM, WASTE ACCEPTANCE PLAN FORM, AND MAILING LABELS

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



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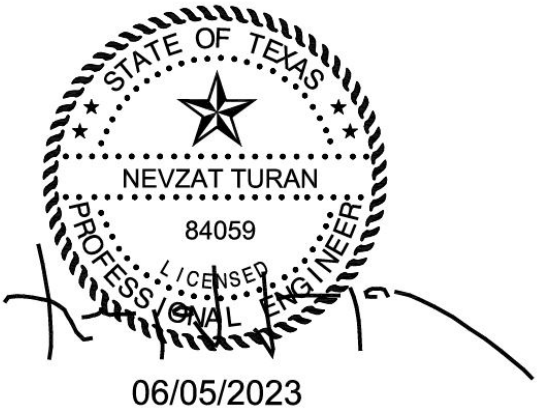
WCG Project No. 0771-356-11-35

This document intended for permitting purposes only

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION
TCEQ PART I APPLICATION FORM, CORE DATA FORM, AND MAILING LABELS

CONTENTS



Signature Page

Site Operator or Authorized Signatory

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

Name: Gary Bartels Title: Southern Region Engineer

Email Address: gary.bartels@wasteconnections.com

Signature: Gary J Bartels Date: June 5, 2023

Operator or Principal Executive Officer Designation of Authorized Signatory

To be completed by the operator if the application is signed by an authorized representative for the operator.

I hereby designate _____ 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.

Operator or Principal Executive Officer Name: _____

Email Address: _____

Signature: _____ Date: _____

Notary

SUBSCRIBED AND SWORN to before me by the said Gary Bartels

On this 5th day of June, 2023

My commission expires on the 17th day of May, 2025

Helen M Hanson

HELEN M. HANSON
Notary Public, State of Texas
Comm. Expires 05-17-2025
Notary ID 10180332

Notary Public in and for

Tarrant County, Texas

Note: Application Must Bear Signature & Seal of Notary Public

Texas Commission on Environmental Quality
Part II Application Form for New Permit or Permit Amendment for a Municipal Solid Waste Landfill Facility

I. Application Information

1. Facility Name: Fort Worth C&D Landfill
2. Permittee Name: Texas Regional Landfill Company, LP
3. MSW Authorization #: MSW-1983E
4. Initial Submittal Date: 02/09/2023

II. Existing Conditions Summary - 30 TAC §330.61(a)

Provide information to address any site-specific conditions that require special design considerations and possible mitigation of conditions as follows.

1. Provide a summary describing the existing conditions at the site and within the areas surrounding the site, which may include discussions of any additional land-use, environmental, or special issues related to the facility.

The Fort Worth C&D Landfill is located in Tarrant County, approximately 15 miles southeast of downtown Fort Worth and adjacent to the City of Kennedale. The property is approximately 184.3 acres in size. The site was originally permitted as a 38.1-acre MSW disposal facility in 1988 (Permit No. MSW-1983). Existing site conditions are presented in Section 3 of Parts I/II. The existing site consists of a liner system with in-situ weathered shale or recompacted clay liner. The existing groundwater monitoring system includes 8 monitoring wells, which include two upgradient background wells (MW-1A and MW-4) and 6 downgradient point of compliance wells (MW-2, MW-5, MW-6, MW-7, MW-8, and MW-9). The existing gas system consists of 11 gas probes (GMP_1, GMP_2, GMP_36, GMP-4A, GMP-5, GMP-6A, GMP-7, GMP-8, GMP-9, GMP-10, and GMP-11).

There are no additional land uses on the site or environmental or special issues related to the facility.

2. Provide brief descriptions of all site-specific conditions at the facility that require special design considerations.

Site specific conditions at the facility that require special design considerations include groundwater and floodplain. The site will be required to install an underdrain in portions of the future sideslope recompacted clay liner to control hydrostatic uplift pressure on the bottom of the liner from groundwater. The site is adjacent to Village Creek and has an approved CLOMR.

3. Indicate that reports of site-specific conditions that require special design considerations and mitigation of such conditions are provided under Sections VIII – XVI below with regard to (a) facility impacts on surrounding areas; (b)transportation; (c) general geology and soils; (d) groundwater and surface water; (e) existing and abandoned oil and water wells; (f) floodplains and wetlands; (g) endangered or threatened species impacts; and (h) compliance with the Texas Natural Resources Code, Chapter 191 (Texas Antiquities Code).

a. Impacts to surrounding areas are minimal as the site is an existing landfill, the area is flood prone, and traffic patterns are well established.
b. N/A - Refer to the Traffic Study in Appendix I/IID. The report demonstrates that the existing access roads will provide adequate access to the site.
c. N/A - The bottom of the expansion is founded in unweathered shale, and the elevation of deepest excavation is not changing.
d. The site will be required to install an underdrain in portions of the future sideslope. Granular material will be used for the underdrain sumps and collection trenches. Underdrain construction specifications are presented in Appendix IIID and Appendix IIID-C.
e. There are no known onsite oil, gas, or water wells documented onsite. Refer to Parts I/II, Section 2.5.
f. The floodplain of Village Creek forms the western boundary of the site. A CLOMR for the expansion has been approved by FEMA. Refer to Appendix IIIF-G for more information. The site is currently working with USACE on a No Permit Required Application for the site. The approval will be submitted to TCEQ when received.
g. In accordance with the submitted Threatened and Endangered Species Report, no suitable habitat exists on the site for any species listed for Tarrant County, nor has critical habitat been designated in the project area for any threatened and endangered species.
h. Texas Historical Commission determined no effects on identified archaeological sites or other cultural resources. Refer to Appendix I/IIB, page I/IIB-19.

III. Waste Acceptance Plan - 30 TAC §330.61(b)

1. ☐ If this application is for a Type I or Type IAE MSW landfill facility, attach completed Form No. TCEQ-20873. Attachment No.:
2. ☑ If this application is for a Type IV or Type IVAE MSW landfill facility, attach completed Form No. TCEQ-20890. Attachment No.:

IV. General Location Maps - 30 TAC §330.61(c)

Provide General Location Maps that accurately show the features listed below. Provide all General Location Maps in a single attachment and include the drawing number in the space provided. Include notes on each map, as needed, to describe information pertaining to the map.

1. The prevailing wind direction with a wind rose. Parts I/II, Figure I/II-4.2
2. 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."

   Parts I/II, Figure I/II-4.3
3. All structures and inhabitable buildings within 500 feet of the proposed facility.

   Parts I/II, Figure I/II-4.3
4. (i) Schools, (ii) licensed day-care facilities, (iii) churches, (iv) hospitals, (v) cemeteries, (vi) ponds, (vii) lakes, and (viii) residential, (ix) commercial, and (x) recreational areas within one mile of the facility. Churches and parks are shown in Parts I/II, Figure I/II-4.2 agricultural, and industrial areas are shown on Figure I/II-4.3, residential areas are shown on Figures I/II-4.3 and 7.1.
5. The location and surface type of all roads within one mile of the facility that will normally be used by the owner or operator for entering or leaving the facility. Parts I/II, Figure I/II-6.1
6. Latitudes and longitudes. Parts I/II, Figure I/II-6.1
7. Area streams. Parts I/II, Figure I/II-4.2
8. Airports within six miles of the facility. Parts I/II, Figure I/II-8.1
9. The property boundary of the facility. Parts I/II, Figure I/II-3.1
10. (i) Drainage, (ii) pipeline, and (iii) utility easements within or adjacent to the facility.

    Parts I/II, Figures I/II-3.1 through I/II-3.3
11. (i) Facility access control features. Appendix I/IIA, Figure I/II-A.11
12. (i) Archaeological sites, (ii) historical sites, and (iii) sites with exceptional aesthetic qualities adjacent to the facility. N/A - None Present

V. Facility Layout Maps - 30 TAC §330.61(d)

Provide the Facility Layout Map(s) as a single attachment, and include drawing number(s) in the space provided. Include notes on each map, as needed, to describe information on the map. Refer to Parts I/IIA, Appendix I/IIA - Facility Layout Maps

Provide a map or set of maps of the facility layout showing:

1. The outline of the units; Appendix I/IIA, Figures I/II-A.1 and I/II-A.2
2. General locations of main interior facility roadways; Figures I/II-A.4 through I/II-A.7
3. Locations of monitor wells; Appendix I/IIA, Figures I/II-A.1 and I/II-A.7
4. Locations of buildings; Appendix I/IIA, Figures I/II-A.1 and I/II-A.7

5. Any other graphic representations or marginal explanatory notes necessary to communicate the proposed construction sequence; N/A
6. Fencing; Appendix I/IIA, Figure I/II-A.11
7. Provisions for the maintenance of any natural windbreaks, such as greenbelts, where they will improve the appearance and operation of the facility and, where appropriate, plans for screening the facility from public view; Appendix I/IIA, Figure I/II-A.11
8. All site entrance roads from public access roads; Appendix I/IIA, Figures I/II-A.9 through I/II-A.11
9. General locations of main interior facility roadways that can be used to provide access to fill areas; Appendix I/IIA, Figures I/II-A.4 through I/II-A.6
10. Sectors with appropriate notations to communicate the types of wastes to be disposed of in individual sectors; Appendix I/IIA, Figures I/II-A.1 and I/II-A.2. All sectors accept all types of acceptable wastes.
11. The general sequence of filling operations; Appendix I/IIA, Figures I/II-A.2 and I/II-A.4 through I/II-A.6
12. Sequence of excavations and filling; Appendix I/IIA, Figures I/II-A.2 and I/II-A.4 through I/II-A.6
13. Dimensions of cells or trenches; Appendix I/IIA, Figure I/II-A.2 and
14. Maximum waste elevations and final cover. Appendix I/IIA, Figures I/II-A.3 and I/II-A-7.

VI. General Topographic Maps - 30 TAC §330.61(e)

1. Provide general topographic map(s) consisting of United States Geological Survey 7 ½-minute quadrangle sheets or equivalent for the facility.
   Map No(s). Parts I/II, Figure I/II-4.2
2. At least one of the general topographic maps provided is at a scale of one-inch equals 2,000 feet.
   ☑ Yes

VII. Aerial Photograph - 30 TAC §330.61(f)

Provide an aerial photograph approximately 9” x 9” with a scale within a range of one-inch equals 1,667 feet to one-inch equals 3,334 feet and showing the area within at least one-mile radius of the site boundaries. Mark the site boundaries and fill areas on the aerial photograph(s). A series of aerial photographs can be used to show growth trends.
Attachment No.(s): Parts I/II, Figure I/II-6.1

VIII. Land-Use Map - 30 TAC §330.61(g)

Provide a constructed map of the facility showing the following land-use features (list the map number(s) in the space provided): Parts I/II, Section 7

1. The boundary of the facility; Parts I/II, Figure I/II-7.1
2. Existing zoning on or surrounding the property; Parts I/II, Figures I/II-7.2 through I/II-7.4
3. Actual uses (e.g., agricultural, industrial, residential, etc.) both within the facility and within one mile of the facility. Parts I/II, Figure I/II-7.1
4. Drainage, pipeline, and utility easements within the facility; Parts I/II, Figure I/II-3.1
5. Access roads serving the facility; Parts I/II, Figure I/II-6.1

6. Check the following facilities if they are within one mile of the facility boundary and indicate on map. Refer to Attachment 2, Figures I/II-4.2, I/II-4.3, and I/II-7.1

   (a) ☑ residences;

   (b) ☑ commercial establishments;

   (c) ☐ schools;

   (d) ☐ licensed day-care facilities;

   (e) ☑ churches;

   (f) ☐ cemeteries;

   (g) ☑ ponds or lakes; and

   (h) ☑ recreational areas.

IX. Impact on Surrounding Area - 30 TAC §330.61(h)

Address the facility's impacts on cities, communities, groups of property owners, or individuals and describe mitigation of conditions as required. Attach additional pages as necessary. If a land use compatibility analysis report prepared by a qualified professional is provided, indicate the location within the application. Attachment No.:

1. **Impacts to Surrounding Areas:**
   (a) Provide information regarding the likely impacts of the facility on cities, communities, groups of property owners, or individuals by analyzing the compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest; and

Impacts to surrounding areas are minimal as the site is an existing landfill and has been in operation for over 30 years. There is also an existing landfill to the north of the facility. The site also has traffic patterns that are well established and is located in a flood prone area.

   (b) Describe any special design considerations and possible mitigation of potential impacts, as necessary.

As discussed above, impacts to surrounding areas will be minimal. The facility is bounded by high-canopy tree lines. The existing dense tree lines function as both windbreaks and site screening.

Published Zoning Map: If available, provide a published zoning map for the facility and within two miles of the facility for the county or counties in which the facility is or will be located.

See Attachment 6, Figures I/II-7.2 through I/II-7.4

2. **Special or Nonconforming Use Permit:**

   (a) Does the site require approval as a nonconforming use or a special permit from the local government having jurisdiction? ☐ Yes ☑ No

   (b) If yes, provide a copy of such approval. Attachment No.:

3. **Character of Surrounding Land Use:** Describe the character of the surrounding land uses within one mile of the proposed facility.

Land uses within one mile of the facility are predominantly undeveloped, floodplain, open/ agricultural, and single-family residential.

4. **Growth Trends and Directions of Major Development:**

(a) Provide information about growth trends within five miles of the facility.

Overall, this area of Tarrant County has been growing at a slower rate than the average growth for the county, due primarily to the presence of Village Creek floodplain nearby, as well as the lack of public infrastructure and related utilities access.

Growth and development patterns have generally been along the major transportation corridors of IH-20 to the north and IH-35W to the west. Major retail and big-box development has occurred along the west side of IH-35 at FM 1187.

(b) Describe the directions of major development.

The City of Kennedale has been growing towards the northeast and east toward the City of Arlington. While there has been some development of individual lots to the south, there has been no major or large residential subdivision development near the landfill property.

5. **Number of and Proximity to Residences and Other Uses:** Indicate the approximate number and proximity of residences and other uses within one mile of the facility as follows. Population density and proximity to residences and other uses may be considered in the assessment.

(a) Number of, distance, and directions to residences:

There are approximately 21 properties zoned for residential within 1 mile of the facility.

(i) Indicate the distance to the nearest residences: 90 feet

(ii) Provide directions to the nearest residences:

The nearest residences are to the south of the landfill off of Dick Price Road.

(b) Number of, distance, and directions to commercial establishments:

There are 3 commercial properties within one mile of the property.

(i) Indicate the distance to the nearest commercial establishments: Approx. 680 feet

(ii) Provide directions to the nearest commercial establishments:

All the commercial properties are located to the north of the landfill. The closest commercial property is located to the northwest of the landfill.

(c) Number of, distance, and directions to schools:

There are no schools within one mile of the facility. The closest school (James F. Delany Elementary) is approximately 1.25 miles from the landfill property.

(d) Number of, distance, and directions to churches:

There are six churches within one mile of the facility. The nearest church is located approximately 4,600 feet northeast of the landfill property.

(e) Number of, distance, and directions to cemeteries:

There are no known cemeteries within one mile of the facility. The nearest cemetery (Everman Cemetery) is approximately 1.5 miles west of the landfill property.

(f) Number of, distance, and directions to historic structures and sites:

There are no known historic structures or sites within one mile of the facility. The nearest historic site (Masonic Widows and Orphans Home Historic District) is over 5 miles away from the site.

(g) Number of, distance, and directions to archaeologically significant sites:
There are no known archaeologically significant sites within one mile of the facility.

(h) Number of, distance, and directions to sites having exceptional aesthetic quality:
There are no known sites having exceptional aesthetic quality within one mile of the facility.

6. **Known Wells**. Provide information and discussion of all known wells within 500 ft. of the proposed facility. Provide the well information using Table VIII-1 below. If site has more than 5 wells within the radius, include wells information as an attachment.

There are three private water wells within 500 feet of the facility. Refer to Parts I/II, Figure I/II-4.3 - Structures, Inhabitable Buildings, and Water Wells Within 500 feet.

Table VIII-1. Well Information

Wells Within 500 ft. Radius of the Proposed Facility							
Well Locator	Well ID No.	Depth (ft.)	Completion Date	Completion Formation	Well Use	Longitude	Latitude
SDR	372403	80	8/21/2014	Woodbine	Domestic	-97.2358	32.625
SDR	59447	80	8/21/2014	Woodbine	Irrigation	-97.2352	32.625
TCEQ	32-31-1	100	4/14/1987	Woodbine	Domestic	-97.2374	32.624
SDR	364447	80	6/2/2014	Woodbine	Domestic	-97.2338	32.626

X. Transportation and Airport Safety - 30 TAC §330.61(i) and §330.545

1. **Transportation:** Attach completed Transportation Data and Coordination Report Form for Municipal Solid Waste Type I Landfills, TCEQ-20719. Attachment No.: N/A - Type IV Facility

2. **Airport Safety:**

(a) Is the facility located, or will be located, within 10,000 feet of any airport runway end used by turbojet aircraft? ☐ Yes ☑ No

(b) Is the facility located, or will be located, within 5,000 feet of any airport runway end used by only piston-type aircraft? ☐ Yes ☑ No

(i) If the answer is "Yes" to either (a) or (b) above, indicate the distance of the facility from the nearest airport runway end used by only turbojet aircraft: N/A feet or piston-type aircraft: N/A feet; and

(ii) Provide required demonstration to show that the municipal solid waste facility units are or will be designed and operated so as not to pose a bird hazard to aircraft.
There are no airports located within 5,000 feet of the landfill. Therefore it is not necesssary to provide a demonstration regarding potential bird hazard to aircrafts.

(c) Is the facility located, or will be located, within a six-mile radius of any small general service airport runway end used by turbojet or piston-type aircraft? ☐ Yes ☑ No

(d) Is the facility located, or will be located, within a five-mile radius of any large general public airport runway end used by turbojet or piston-type aircraft? ☐ Yes ☑ No
There is one private airport within 6 miles of the site.

(i) If the answer to either of subsection (c) or (d) above is "Yes," has the applicant notified the affected airport as required?
☐ Yes ☐ No. Explain: N/A

(ii) Also, has the applicant notified the Federal Aviation Administration as required?
☐ Yes ☐ No. Explain: N/A

(iii) Provide copies of the notifications to the affected airport and to FAA.
See Appendix I/IIB, page I/IIB-3.

(iv) All landfill facilities within a six-mile radius of any small general service airport runway or within a five-mile radius of any large general public commercial airport runway shall be critically evaluated to determine if an incompatibility exists. Include any coordination received from the affected airport and from the FAA concerning compatibility.
N/A

(e) Will the subject landfill accept waste streams that include putrescible waste?
☐ Yes ☑ No.

(i) If the answer to subsection (e) is "Yes," address the potential for the facility to attract birds and cause significant hazards to low-flying aircraft. Guidelines regarding location of landfills near airports can be found in Federal Aviation Administration Order 5200.5(A), January 31, 1990 (or the replacement active orders, notices, and advisory circular guidelines from the FAA can be used).

XI. General Geology and Soils Statement and Location Restrictions - 30 TAC §330.61(j) and §§ 330.555 - 330.559

1. Discuss in general terms the geology and soils of the proposed site.

Surficial sediments in the undeveloped areas of the Site consist of unconsolidated clay, silt, sand, and gravel, which contain the Uppermost Aquifer under water-table conditions. These sediments are are underlain by indurated low permeability shale and limestone aquitard sediments.

2. Fault Areas

(a) Will the municipal solid waste landfill units at the facility or a lateral expansion of the facility be located within 200 feet of a fault that has had displacement in Holocene time?
☐Yes ☑No
If the answer is "Yes," provide demonstration to show that an alternative setback distance of less than 200 feet will prevent damage to the structural integrity of the landfill unit and will be protective of human health and the environment. Attachment No.:

(b) Is the facility located within areas that may be subject to differential subsidence or active geological faulting? ☐Yes ☑No
If the answer is "Yes," provide a detailed fault study. Attachment No.:

(c) Is an active fault known to exist within 1/2 mile of the site? ☐Yes ☑No
If the answer is "Yes," investigate the site for unknown faults and discuss its results. Attachment No.:

(d) Is the facility located in areas experiencing withdrawal of crude oil, natural gas, sulfur, etc., or significant amounts of groundwater? ☑Yes ☐No
If the answer is "Yes," investigate the site in detail for the possibility of differential subsidence or faulting that could adversely affect the integrity of landfill liners and discuss the site investigation and its results. Attachment No.: Part I/IIC & Part III, Attachment IIIG

(e) If conducted, were the studies of differential subsidence or faulting conducted under the direct supervision of a licensed professional engineer experienced in geotechnical engineering or a licensed professional geoscientist qualified to evaluate conditions of differential subsidence or faulting? ☑Yes ☐No. Explain
Fault Areas discussed in Part I/II Section 9 and Parts I/II Section 8.

(f) If conducted, do the studies of differential subsidence or faulting establish the limits (both upthrown and downthrown) of the zones of influence of all active faulted areas within the site vicinity? ☑Yes ☐No. Explain Not Applicable - No active faults in vicinity.

(g) If conducted, do the studies of differential subsidence include information or data addressing the following shown below, as applicable:

Table X-1. Information included in Fault Area Studies

Information to be included, as applicable:	Yes	Not Applicable
(i) structural damage to constructed facilities (roadways, railways, and buildings);	☐	☑
(ii) scarps in natural ground;	☐	☑
(iii) presence of surface depressions (sag ponds and ponded water);	☐	☑
(iv) lineation's noted on aerial maps and topographic sheets;	☐	☑
(v) structural control of natural streams;	☐	☑
(vi) vegetation changes;	☐	☑
(vii) crude oil and natural gas accumulations;	☐	☑
(viii) electrical spontaneous potential and resistivity logs (correlation of subsurface strata to check for stratigraphic offsets);	☐	☑
(ix) earth electrical resistivity surveys (indications of anomalies that may represent fault planes);	☐	☑
(x) open cell excavations (visual examinations to detect changes in subsoil texturing and/or weathering indicating stratigraphic offsets);	☐	☑
(xi) changes in elevations of established benchmarks; and	☐	☑
(xii) references to published geological literature pertaining to area conditions.	☑	☐

(h) If the site is or will be located within a zone of influence of active geological faulting or differential subsidence, does the application provide substantial evidence that the zone of influence will not affect the site?
☐Yes ☐No Attachment No.: Not Applicable

Address the following statement:

3. ☑ No solid waste disposal shall be accomplished within a zone of influence of active geological faulting or differential subsidence because active faulting results in slippage along failure planes, thus creating preferred seepage paths for liquids.

4. Seismic Impact Zones

(a) Is the proposed facility located in a seismic impact zone, as defined in 30 TAC §330.557?
☐Yes ☑No
Provide information to support response. Attachment No.: Parts I/II-C

(b) For facilities located in a seismic impact zone, provide a detailed demonstration showing that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. Attachment No.: Not Applicable

5. Unstable Areas

(a) Is the facility located in an unstable area, as defined in 30 TAC §330.559?
☐Yes ☑No Explain: _____

(b) If the facility is located in an unstable area, provide a demonstration that engineering measures have been incorporated into the landfill unit's design to ensure that the integrity of the structural components of the landfill unit will not be disrupted.
Attachment No.: N/A
The demonstration considered at least the following factors:

(i) on-site or local soil conditions that may result in significant differential settling;
☐Yes ☐No

(ii) on-site or local geologic or geomorphologic features; ☐Yes ☐No and

(iii) on-site or local human-made features or events (both surface and subsurface).
☐Yes ☐No

XII. Groundwater and Surface Water - 30 TAC §330.61(k) and §330.549

1. Groundwater

Provide an attachment containing data about the site-specific groundwater conditions at and near the site, from published and open-file sources, including:

- Aquifer names and their association with geologic units described in the General Geology and Soils Statement;
- Groundwater quality, including, if available, typical values or value ranges for total dissolved solids content; and
- Present use(s) of groundwater withdrawn from aquifers at and near the site, if available.

Attachment No.: IIIG

Address the following as applicable:

(a) Is the facility located over the Edwards Aquifer recharge zone, as defined in 30 TAC §330.549? ☐Yes ☑No.
If yes, discuss how the facility will comply with the applicable requirements in 30 TAC Chapter 213 (relating to Edwards Aquifer).

Not Applicable

(b) A Type I or Type IAE landfill is prohibited on the recharge zone of the Edwards Aquifer; the applicant will not locate a Type I or Type IAE landfill on the recharge zone of the Edwards Aquifer. Select either statement that applies:

☑ (i) The facility is not or will not be located over the Edwards Aquifer Recharge Zone.

☐ (ii) The facility is not a Type I or Type IAE landfill.

(c) A new landfill cell or an aerial expansion of an existing landfill cell managing Class 1 non-hazardous industrial solid waste may not be located in areas described in 30 TAC § 335.584(b)(1) and (2) (relating to Location Restrictions), unless the Executive Director (ED) approves an engineered design that the applicant has demonstrated will provide equal or greater protection to human health and the environment:

(i) Does the application propose Class 1 nonhazardous industrial solid waste cells or units at the subject facility? ☐Yes ☑No

(ii) If yes, discuss how the facility would comply with the location restriction requirements under 30 TAC §335.584(b)(1) and (2). Include any applicable equivalency demonstration that would provide equivalent or greater protection to human health and the environment. Attachment No.: N/A

2. Surface Water

(a) Provide data on surface water at and near the site (including lakes, ponds, creeks, streams, rivers, or similar water bodies).

Attachment Nos.: See Parts I/II, Section 10.2 - Surface Water Statement and Appendix IIIF, Section 4 - Drainage Patterns and Figure 4.2.

(b) Provide information demonstrating how the municipal solid waste facility will comply with applicable Texas Pollutant Discharge Elimination System (TPDES) storm water permitting requirements and the Clean Water Act, §402, as amended See Appendix I/II-E.

(i) The facility has obtained TPDES permit coverage under the following individual wastewater permit(s) (list permit number(s)): N/A . A copy of the permit(s) is provided in Attachment No.: , or

(ii) A certification statement indicating that the applicant will obtain the appropriate TPDES permit coverage when required.
☑Yes ☐No. Explain Site is currently covered under TPDES. See Appendix I/IIE for existing stormwater permit.

XIII. Abandoned Oil and Water Wells - 30 TAC §330.61(l)

1. Water Wells

(a) Are there any existing or abandoned water wells within the facility? ☐Yes ☑No
Refer to Parts I/II, Section 2.5 - Abandoned Oil and Water Wells

(i) If no, move to Item No. 2 below.

(ii) If yes, address the following:

(1) Provide a map showing the water well locations, identity, status, and use. Attachment No.:

(2) Will all the water wells be capped, plugged, and closed prior to construction at the facility? ☑Yes ☐No.

(3) If yes, provide written certification that all such wells will be capped, plugged, and closed in accordance with all applicable rules and regulations of TCEQ or other state agency within 30 days prior to construction at the facility. Attachment No.:

(4) If no, identify and describe the water wells that will be capped, plugged, and closed in accordance with all applicable rules and regulations of TCEQ or other state agency. Attachment No.:

(5) Also, identify the wells necessary for use, and that will remain in use, for supply for operations at the facility. Attachment No.:

(6) Are the water wells that will remain in use for supply for operations at the facility located outside of the groundwater monitoring well network and not subject to impact from landfill operations? ☐Yes ☐No. If no, explain

(7) The water wells that will remain in use for supply for operations at the facility and that are located inside of the groundwater monitoring network, but outside the landfill unit boundary, are identified in Attachment No.: for ED approval.

2. Oil and Gas Wells

(a) Are there any existing or abandoned on-site crude oil, natural gas, or other wells associated with mineral recovery under the jurisdiction of the Railroad Commission of Texas?
☐Yes ☑No Refer to Parts I/II, Section 2.5 - Abandoned Oil and Water Wells

(i) If yes, address the following items:

(1) Provide a map showing well locations, identity, type, and status.
Attachment No.:

(2) Identify and annotate the oil or natural gas wells that are producing and will remain in their current state, provided such wells do not affect or hamper landfill operations.

(3) Provide written certification that all the oil and natural gas wells, other than the producing wells approved for retention, have been properly capped, plugged, and closed at the time of application in accordance with all applicable rules and regulations of the Railroad Commission of Texas.
Attachment No.:

XIV. Floodplains - 30 TAC §330.61(m)(1) and §330.547

1. Describe the location of the facility with respect to floodplains.

The floodplain of Village Creek forms the west boundary of the site. The landfill expansion will modify the existing floodplain on the eastern side of Village Creek to allow for the landfill expansion to the west of the existing landfill. Refer to Appendix III-F for more information.

2. Provide a copy of the Federal Emergency Management Administration (FEMA) flood map for the area to show the facility boundary and to illustrate the information described in Section 1 above. Attachment No.: See Appendix IIIF - Figure 4.6

3. For construction of levees or other improvements associated with flood control on the proposed facility, provide data on floodplains in accordance with 30 TAC Chapter 301 Subchapter C (relating to Approval of Levees and Other Improvements). N/A

4. Address the following requirements with regard to the location of the facility:

(a) Provisions to ensure that no solid waste disposal operation is conducted within the facility in areas that are located in a 100-year floodway as defined by FEMA. No portion of the waste disposal disposal area will be located in the 100-year floodplain, and the perimeter berm will provide over 3 feet of freeboard between the 100-year floodplain and the top of the berm. Refer to Appendix IIIF-G - Excerpts from Approved CLOMR.

(b) Designs that demonstrate that municipal solid waste management units, including storage and processing facilities, located in 100-year floodplains will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment.
A floodplain storage area will be developed to compensate for the development of the expansion area. Refer to Appendix IIIF-G - Excerpts from Approved CLOMR.

(c) Demonstrate MSW storage and processing facilities shall be located outside of the 100-year floodplain unless the owner or operator demonstrates that the facility is designed and will operate to prevent washout during a 100-year storm event, or obtains a conditional letter of map amendment from FEMA.
As part of the proposed expansion, a CLOMR was prepared for the landfill area as the proposed development areas include the 100-year floodplain. The 100-year floodplain related design and demonstrations developed as part of this application meet the requirements set forth in 30 TAC 330.307. As shown in Appendix IIIF-G, the 100-year floodplain will be contained around the landfill footprint and will not encroach on the limit of waste.

(d) If applicable, provide a copy of the conditional letter of map amendment (or other applicable FEMA approval) from the FEMA administrator for development within a floodplain.

Refer to Appendix IIIF-G - Excerpts from Aproved CLOMR.

(e) References to provisions, designs, and narratives regarding floodplains in Part III of the application. Refer to Appendix IIIF.

XV. Wetlands - 30 TAC §330.61(m)(2) and §330.553

1. Provide a wetlands determination under applicable federal, state, and local laws and discuss wetlands in accordance with 30 TAC §330.553. Demonstration can be made by providing evidence that the facility has a Corps of Engineers permit for the use of any wetlands area.
Attachment No.: N/A The site has submitted a No Permit Required Application to USACE. The approval of this application will be provided upon receipt.

   (a) If applicable, provide a copy of any Corps of Engineers permit issued to the applicant for the use of any wetlands area within the facility. Attachment No.:

2. Identify wetlands located within the facility boundary, attach necessary maps and drawings.

Per the No Permit Required Application, no wetlands will be impacted by this expansion.

3. Where new municipal solid waste landfill units, lateral expansions, material recovery operations from a landfill, and storage or processing units are to be located in wetlands, discuss the identified wetlands considering the following:

   (a) Locating the landfill units, lateral expansions, material recovery operation from a landfill, and storage or processing units away from the identified wetlands. N/A

   (b) Steps taken to avoid impacts to wetlands to the maximum extent practicable to achieve no net loss of wetlands (as defined by acreage and function).

N/A

   (c) For unavoidable impacts:

      (i) Clearly rebut the presumption that a practicable alternative to the proposed facility or recovery operation is available that does not involve wetlands.

N/A

      (ii) Demonstrate that the construction and operation of the municipal solid waste landfill unit, material recovery operation from a landfill, and storage or processing units will not:

         (1) cause or contribute to violations of any applicable state water quality standard;

N/A

         (2) violate any applicable toxic effluent standard or prohibition under the Clean Water

N/A

         (3) 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

N/A

         (4) violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

N/A

(iii) Demonstrate the integrity of the landfill unit and its ability to protect ecological resources by addressing the following factors showing that the municipal solid waste landfill unit or recovery operation will not cause or contribute to significant degradation of wetlands:
N/A

(1) erosion, stability, and migration potential of native wetland soils, muds, and deposits used to support the landfill unit; N/A

(2) erosion, stability, and migration potential of dredged and fill materials used to support the landfill unit; N/A

(3) the volume and chemical nature of the waste managed in the landfill unit; N/A

(4) impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste; N/A

(5) the potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and N/A

(6) any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected. N/A

(iv) Demonstrate steps taken to minimize unavoidable impacts to wetlands to the maximum extent practicable. N/A

(v) Demonstrate offsetting of remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands). N/A

XVI. Endangered or Threatened Species - 30 TAC §330.61(n) and §330.551

1. Provide Endangered Species Act compliance demonstrations as required under applicable state and federal laws. Attachment No.: Refer to Appendix I/IIB, page I/IIB-140.

2. Determine and discuss whether the facility is in the range of endangered or threatened species.
No suitable habitat exists on the site for any species listed for Tarrant County, nor has critical habitat been designated in the project area for any threatened and endangered species.

3. If the facility is located in the range of endangered or threatened species, provide a biological assessment prepared by a qualified biologist in accordance with standard procedures of the United States Fish and Wildlife Service (USFW) and the Texas Parks and Wildlife Department (TPWD) to determine the effect of the facility on the endangered or threatened species. Where a previous biological assessment has been made for another project in the general vicinity, a copy of that assessment may be submitted for evaluation. Attachment No.: Refer to Appendix I/IIB, page I/IIB-140.

4. Provide coordination correspondence with and responses from the USFW and the TPWD concerning locations and specific data relating to endangered and threatened species in Texas.
See Appendix I/IIB, page I/IIB-128 for TPWD coordination and page I/IIB-272 for USFW coordination.

5. Describe how the facility will comply with recommendations from the TPWD and USFW regarding protection of endangered and threatened species.
No recommendation was received from USFW or TPWD at this time.

6. Discuss the impact of the solid waste disposal facility upon endangered or threatened species:
The site has operated as a landfill for over 30 years, and a significant portion of the site has been disturbed by earth-moving activities. As discussed in the Endangered or Threatened Species Assessment, the site does not provide habitat for and would not likely be occupied by any federally listed and state listed threatened and endangered species.

7. Describe how the facility design, construction, and operation will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species.

No suitable habitat exists on the site for any species listed for Tarrant County, nor has critical habitat been designated in the project area for any threatened and endangered species. The landfill expansion will not result in the destruction or adverse modification of any federally designated critical habitat for any threatened or endangered species.

XVII. Texas Historical Commission Review 30 TAC §330.61(o)

1. Provide correspondence to and a review letter from the Texas Historical Commission documenting compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code.
   Attachment No.: Refer to Appendix I/IIB, page I/IIB-18.

XVIII. Council of Governments 30 TAC §330.61(p)

1. Provide documentation that Parts I and II of the application were submitted to the applicable council of governments for compliance with regional solid waste plans. Also provide a review letter if received from the applicable council of governments.
   Attachment No.: Refer to Appendix I/IIB, page I/IIB-308.
2. Provide documentation that a review letter was requested from any local governments as appropriate for compliance with local solid waste plans.
   Attachment No.: NCTCOG confirmed on June 5, 2023 that the plan is in conformance with the regional plan. The approval letter has been added as Page I/II-B-325.

XIX. Easement Protections 30 TAC §330.543(a)

1. Will the applicant design and operate the facility such that no solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way that crosses the facility? ☑Yes
2. Will the applicant design and operate the facility such that no solid waste disposal shall occur within 25 feet of the center line of any utility line or pipeline easement but no closer than the easement? ☑Yes
3. Will the applicant clearly mark all pipeline and utility easements with posts that extend at least six feet above ground level, spaced at intervals no greater than 300 feet?
   ☑Yes

XX. Buffer Zones 30 TAC §330.543(b)

1. Provide the buffer zone distance (i.e. 50 feet for Arid Exempt and Type IV landfills, 125 feet for Type I landfills) at the facility to demonstrate compliance with 30 TAC §330.543(b).

   Refer to Parts I/IIC - Location Restriction Demonstrations, Section 2 and Drawing I/IIC-1.
2. Provide references for the application drawings and maps that clearly show the buffer zones around the facility. Attachment(s) No.: Refer to Drawing I/IIC-1.

XXI. Coastal Areas 30 TAC §330.561

1. A new landfill cell or an aerial expansion of an existing landfill cell managing Class 1 industrial solid waste (other than waste which is Class 1 because of asbestos content) may not be located in areas: The Fort Worth C&D Landfill does accept Class I Industrial Solid Waste nor is it located near the coast. Therefore, the site is in compliance with the coastal areas location restriction.
   (a) On a barrier island or peninsula. N/A
   (b) Within 1,000 feet of an area subject to active coastal shoreline erosion, if the area is protected by a barrier island or peninsula, except as allowed under 30 TAC §335.584(b)(4). N/A
   (c) Within 5,000 feet of coastal shorelines that are subject to active shoreline erosion and which are unprotected by a barrier island or peninsula, except as allowed under 30 TAC §335.584(b)(4). N/A
2. Describe the location of the facility with regard to distance to coastal shoreline subject to active shoreline erosion. N/A

XXII. Type I and Type IV Landfill Permit Issuance Prohibited – 30 TAC §330.563

Address the following statements.

1. The commission may not issue a permit for a Type IV landfill that is subject to the conditions specified in Texas Health and Safety Code, §361.122, Denial of Certain Landfill Permits. Is the proposed facility a Type IV landfill located in the area subject to the referenced statute?
   ☐Yes ☑No Explain The facility is not located within 100 feet of a canal that is used for public drinking water source or for irrigation of crops used for human or animal consumption or located in a county with a population of more than 225,000 that is located adjacent to the Gulf of Mexico.
2. The commission may not issue a permit for a Type I or Type IV landfill that is subject to the conditions specified in Texas Health and Safety Code, §361.123, Limitation on Locations of Municipal Solid Waste Landfills. Is the proposed facility a Type I or Type IV landfill located in the area subject to the referenced statute?
   ☐Yes ☑ No Explain The location restriction prohibits the issuance of a permit for a new Type I or Type IV landfill or a permit amendment authorizing the conversion of a Type IV landfill to a Type I landfill only if the landfill is located adjacent to a county with a population of more than 3.3 million and inside the boundaries of a national forest, as designated by the U.S. Forest Service, on public or private land. Given that the Fort Worth C&D Landfill is a Type IV landfill and is not located inside the boundaries of a national forest, the site is in compliance with the Type I and Type IV landfill permit issuance prohibited location restriction.

Attachments

Table Att-1. Required Attachments

Attachments		Attachment No.
Existing Conditions Summary	Parts I/II-Section 3	
Waste Acceptance Plan Form	Volume I	
General Location Maps	Parts I/II, Figure I/II-4.1	
Facility Layout Maps	Parts I/II, Figures I/II-3.1 through 3.3	
General Topographic Maps	Parts I/II, Figure I/II-4.2	
Aerial Photographs	Parts I/II, Figure I/II-6.1	
Land Use Map	Parts I/II, Figure I/II-7.1	
Transportation and Airport Safety Form	N/A	
Federal Aviation Administration Coordination Letters, if applicable	Parts I/IIB, Page I/IIB-3	
Entity Exercising Maintenance Resp. of Public Roadway, if applicable		
Fault Lines, if applicable	Parts I/IIC, Figures I/IIC-2 and I/IIC-3	
Seismic Impact Zones, if applicable	Parts I/IIC, Figure I/IIC-4	
Unstable areas, if applicable	Parts I/IIC, Section 9.4	
Site Specific Groundwater Conditions	Parts I/II, Section 10	
Site Specific Surface Water Conditions	Parts I/II, Section 10	
Texas Pollutant Discharge Elimination System (TPDES)	Parts I/IIB, Page I/IIB-174	
Abandoned Oil and Water Wells, if applicable	Parts I/II, Section 2.5	
FEMA Map	Appendix F, Figure 4.6	
Facility Design Demonstration for Flood Map, or Conditional Letter of Map Amendment from FEMA, if applicable	Appendix IIIF-G	
Wetland Documentation, if applicable	Appendix I/IIC, Section 7	
Endangered or Threatened Species Documents, if applicable	Appendix I/IIB, Page 140	
Texas Historical Commission Letter(s)	Appendix I/IIB, Page I/IIB-18	
Council of Governments/Local Governments Review Request Coordination Letter(s)	Appendix I/IIB, Page I/IIB-308	
Buffer Zones	Appendix I/IIC, Section 2 and Drawing I/IIC-1	
Others (describe):		N/A
Others (describe):		N/A
Others (describe):		N/A
Confidential Documents, if applicable		N/A

Texas Commission on Environmental Quality
Waste Acceptance Plan Form
Type IV & Type IV AE Landfill Facilities

This form is designed to address the requirements for Waste Acceptance Plans in Part II of an application, as required by Title 30 Texas Administrative Code, Chapter 330, §330.61(b)(1). Rules are from Chapter 330 unless otherwise specified. If more space is needed for a line item or table item, include the information on a separate sheet and reference the line or table item. If you have any questions, contact the Municipal Solid Waste Permits Section at mswper@tceq.texas.gov or at (512) 239-2335.

A. Applicant Information

1. Facility Name: Fort Worth C&D Landfill
2. MSW Permit No.: MSW-1983E

B. Waste Generation Areas and Population Estimates [§330.61(b)(1)(A)]

Table 1. Areas contributing waste to the facility and estimate of population or population equivalent served by the facility. Values are estimates, not permit limits.

Waste Generation Area	Estimate of Population or Population Equivalent Served in each Area
Tarrant County	245,098
Johnson County	91,912
Dallas County	122,549
Parker County	61,275
Denton County	61,275
Collin County	30,636

Estimated population or population equivalent served by the facility.
612,745 persons

C. General Sources and Types of Waste to be Accepted at the Facility [§330.61(b)(1) and (1)(A)]

1. General sources of waste to be received (household, commercial, industrial, etc.).
Yard waste, Class 2, and Class 3 industrial waste, construction-demolition waste, and rubbish

2. Types of Waste to be Accepted for **Disposal** at the Facility

   a. Indicate whether the following wastes will be accepted for **disposal** (check "Yes" for will accept or "No" for will not accept).

      i. ☑ Yes ☐ No Construction or demolition waste [30 TAC §330.3(33)]

      ii. ☑ Yes ☐ No Brush [30 TAC §330.3(18)]

      iii. ☑ Yes ☐ No Rubbish [30 TAC §330.3(136)]

      iv. ☑ Yes ☐ No Tires that have been processed (such as by splitting, shredding, quartering or sidewall removal) in a manner acceptable to the executive director. [30 TAC §330.3(136); 30 TAC §330.15(e)(4) prohibits whole tire disposal]

      v. ☑ Yes ☐ No Class 2 industrial solid waste that is construction or demolition waste, brush, or rubbish. [30 TAC §330.3(22) and 30 TAC §330.173(i)]

      vi. ☑ Yes ☐ No Class 3 industrial solid waste. [30 TAC §330.3(23) and 30 TAC §330.173(j)]

   b. Indicate whether the following Special Wastes will be accepted for disposal.

      i. ☑ Yes ☐ No Pesticide (insecticide, herbicide, fungicide, or rodenticide) containers that have been triple-rinsed before receipt at the landfill, are rendered unusable before receipt or on arrival, and are covered by the end of the same working day they are received. [30 TAC §330.171(c)(5)]

      ii. ☑ Yes ☐ No Non-regulated asbestos-containing material (non-RACM). [40 CFR 261, 30 TAC §330.171(c)(4) and 30 TAC §330.3(95)]

      iii. ☐ Yes ☑ No Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas that is construction or demolition waste, brush, or rubbish. [30 TAC §330.171(b), 30 TAC §330.3(154)(P)]

      iv. ☐ Yes ☑ No Other special waste that is construction or demolition waste, brush, or rubbish. [30 TAC §330.3(154)]

      v. ☐ Yes ☑ No Industrial waste or waste from oil, gas, and geothermal activities that were generated outside the boundaries of Texas that is construction or demolition waste, brush, or rubbish. [30 TAC §330.171(b), 30 TAC §330.3(154)(Q)]

      vi. Specify any wastes to be accepted for disposal that are not listed above.

      _____

      _____

D. Waste Prohibited from Disposal [§330.61(b)(1)]

The following wastes are prohibited from **disposal**.

- Wastes that are not construction or demolition waste, brush, or rubbish. [30 TAC §330.5(a)(2)]
- Putrescible waste. [30 TAC §330.3(122)]

- Untreated medical waste. Please note that this prohibition may be superseded by the executive director in writing when a situation exists that requires disposal of untreated medical waste to protect human health and the environment from the effects of a natural or man-made disaster. [30 TAC §330.171(c)(1)]
- Lead-acid storage batteries. [30 TAC §330.15(e)(1)]
- Do-it-yourself used motor vehicle oil. [30 TAC §330.15(e)(2)]
- Used oil filters from internal combustion engines. [30 TAC §330.15(e)(3)]
- Whole used or scrap tires. [30 TAC §330.15(e)(4)]
- Items containing chlorinated fluorocarbon (CFC) that have not been handled in accordance with 40 CFR §82.156(f). [30 TAC §330.15(e)(5)]
- Waste material that contains free liquids by the Paint Filter Test, EPA Method 9095. [30 TAC §330.15(e)(6)]
- Regulated hazardous waste. [30 TAC §330.15(e)(7), 40 CFR §261.3]
- Waste that exhibits the characteristics for hazardous waste [40 CFR §261.3] from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas. [30 TAC §330.15(e)(7)]
- Polychlorinated biphenyl wastes (PCBs). [30 TAC §330.15(e)(8), 40 CFR §761]
- Radioactive materials [30 TAC Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services. [30 TAC §330.15(e)(9)]
- All wastes not authorized for disposal above, including those for which "No" has been indicated.

Specify any wastes to be prohibited for disposal that are not listed above.

_____
_____
_____

E. Material Recovery [§330.61(b)(1)(A)]

Will the facility recover materials from incoming waste? ☐ Yes ☑ No

If yes, provide a descriptive narrative describing the percentage of incoming waste, if applicable, that must be recovered and its intended use.

_____
_____
_____

F. Estimated Maximum Annual Waste Acceptance Rate Projected for Five Years [§330.61(b)(1)(C)]

Provide **estimated** maximum annual waste acceptance rates at the facility, projected for five years. These rates are not permit limitations.

Table 1. Five-Year Projection for Waste Acceptance.

Year	Estimated Maximum Annual Waste Acceptance Rate
2023	562,952
2024	571,492
2025	580,161
2026	588,962
2027	597,896

G. Storage and Processing Units [§330.61(b)(1)]

Indicate units that will store or process waste at the facility. Describe the wastes that will be stored or processed in these units. Provide the final disposition or use (e.g., landfill disposal, composting) of the processed materials. **Waste storage and processing authorized separately (such as a registered transfer station within the permit boundary of a landfill) should not be included on this form.**

Storage and processing units must be illustrated (or locations described) on site layout figures in Part II of the application. N/A

Examples:

1. Unit: liquid stabilization unit, Purpose: process, Waste Type: liquid waste, Disposition: solidified material to be disposed in a properly authorized landfill; or
2. Unit: grease separation and dewatering unit, Purpose: process, Disposition: water to WWTP and grease to composter or Type I landfill.

Table 3. Waste storage and processing units

Unit	Purpose	Waste Type Stored or Processed	Final Disposition or Use
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		

H. Prohibited from Processing [§330.61(b)(1)]

The following wastes are prohibited from **processing**.

- Any wastes not authorized for processing above.
- Lead-acid storage batteries may not be incinerated. [30 TAC §330.15(e)(1)]
- Used motor vehicle oil may not be incinerated. [30 TAC §330.15(e)(2)]
- Regulated hazardous waste. [40 CFR §261.3]
- Radioactive materials [30 TAC Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services. [30 TAC §330.15(e)(9)]
- All wastes not authorized for processing above, including those for which "No" has been indicated.

Specify any other wastes to be prohibited for storage or processing (specify):

_____
_____
_____

I. Special Waste Acceptance Plan [30 TAC §330.171(b)(2)]

☐ Yes ☑No Does this application include a Special Waste Acceptance Plan? If so, please specify its location in the application. _____

J. Limiting Parameters [30 TAC §330.61(b)(1)]

Municipal construction or demolition waste, brush, and rubbish are categorical. Constituent sampling is not required for these wastes and there are no associated limiting parameters for waste disposal or processing. [30 TAC §330.5(a)(2)]

1. Type IV and IV AE Landfill Limitations

   MSW Type IV and IV AE landfills may not accept wastes that are not construction or demolition waste, brush, or rubbish. [30 TAC §330.3(33), 30 TAC §330.3(18) and 30 TAC §330.3(136)] The presence of waste not fitting these categories, including but not limited to putrescible waste, is a limiting parameter for waste disposal. [30 TAC §330.5(a)(2)]

2. Regulated Hazardous Waste

   MSW landfills may not accept regulated hazardous waste [§330.3(133)] for processing or disposal. The presence or characteristic of any material meeting the definition of a regulated hazardous waste is a limiting parameter for waste disposal or processing.

3. Free Liquids

   The presence of free liquids, as defined by the Paint Filter Test, EPA Method 9095, in waste, but not household waste and not liquid in containers similar in size to those found in household waste, is a limiting parameter for waste disposal. [§330.15(e)(6), §330.3(83)]

4. PCBs

   The presence of polychlorinated biphenyls (PCB) wastes [40 CFR Part 761] unless authorized by the United States Environmental Protection Agency is a limiting parameter for waste disposal or processing. [§330.15(e)(8)]

5. Radioactive Materials

   The presence of radioactive materials [Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services, is a limiting parameter for waste disposal or processing. [§330.15(e)(9)]

6. Class 1 Solid Waste

   For all Type IV and Type IV AE landfills, 1,500 mg/kg total petroleum hydrocarbons (TPH) and the concentrations in 30 TAC §335.521(a)(1) are limiting parameters for waste disposal.

7. Other Limitations:

   _____
   _____
   _____

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PARTS I/II
GENERAL APPLICATION REQUIREMENTS

Prepared for:

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

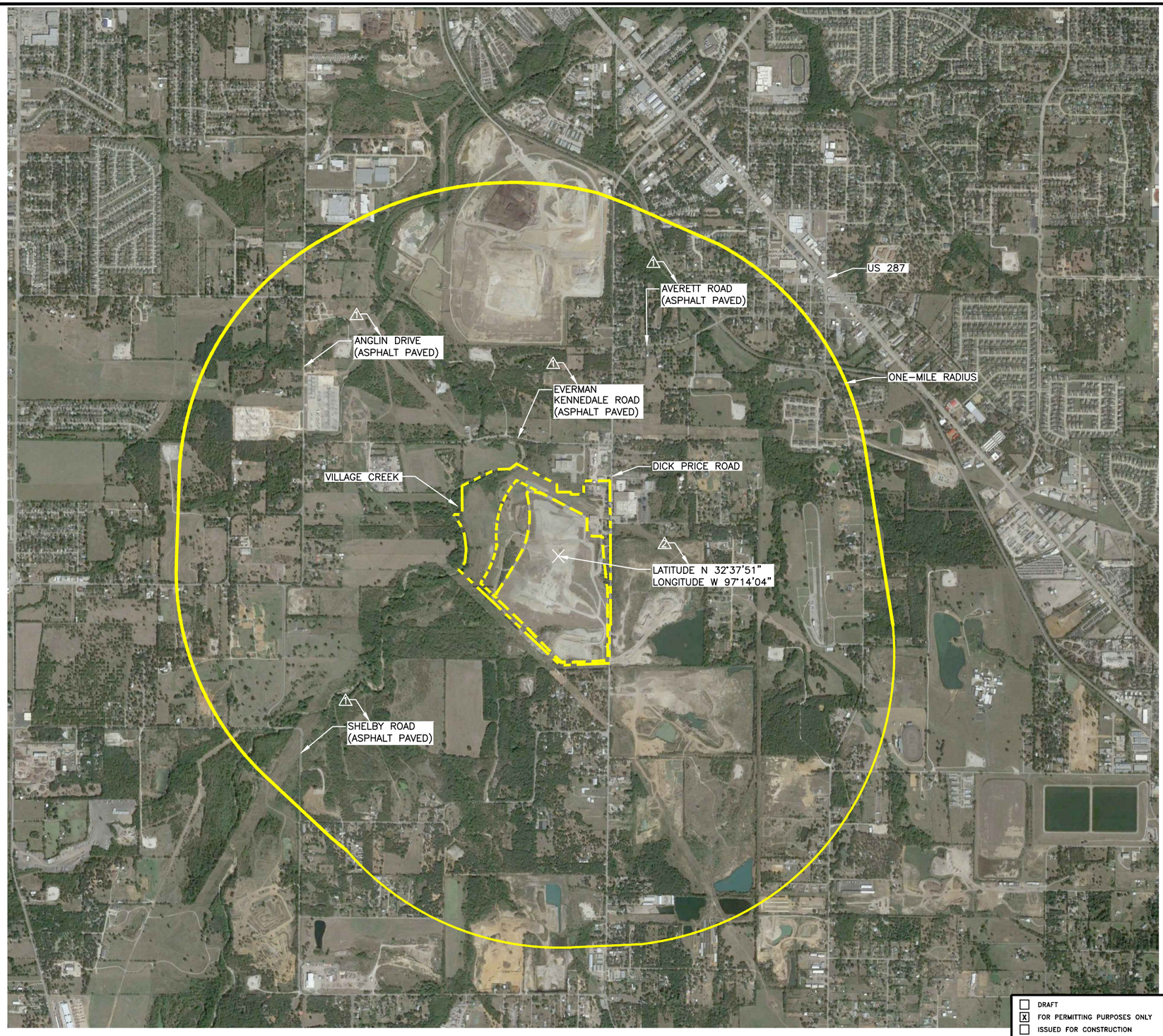
Prepared by:

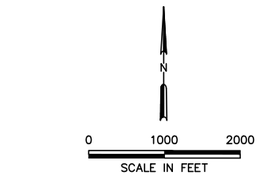
Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

This document intended for permitting purposes only.

- The permit boundary will include an area of 184.3 acres. No increase in the size or configuration of the permit boundary ~~are~~ is proposed for this amendment application. The legal description for the permit boundary is included in Section 13 of Parts I/II.
- A summary of the capacity (volume of waste and cover soils) of the site is listed below:
  - Remaining capacity of existing site (TCEQ Permit No. MSW-1983D) = 9.9 million cubic yards (as of February 17, 2022).
  - Increase due to major permit amendment application = 8.4 million cubic yards.
  - Remaining capacity of the site with the proposed expansion (TCEQ Permit No. MSW-1983E) = 18.3 million cubic yards (as of February 17, 2022).
- The maximum elevation of the final cover will be 860~~.5~~ ft-msl, and the maximum waste elevation will be 858.5 ft-msl.
- The elevation of deepest excavation (EDE) for the proposed landfill liner system excavation will be 550 ft-msl (if in-situ liner is used) or 546 ft-msl (if constructed liner is used) (i.e., bottom of liner system in deepest sump), which is the same as the currently approved EDE. This elevation represents the bottom of the liner system.
- The liner system (4-foot-thick intact in-situ unweathered shale or 3-foot-thick recompacted clay liner overlain by 1-foot of protective soil cover) will be constructed according to Title 30 TAC §330.331(d)(1) or (2). Details for the liner is provided in Part III, Appendix IIIA-A – Liner and Final Cover System Details.
- This application includes a horizontal and vertical expansion of the landfill. A containment system design for this area is provided to meet the requirements of Title 30 TAC §330.331(d)(1). The bottom liner design for the MSW lateral expansion area will incorporate an in-situ liner system consisting of unweathered shale that is present at the site or a recompacted clay liner overlain by protective cover soil. The sidewall liner system will consist of a 3-foot-thick recompacted clay liner overlain by a 1-foot-thick protective cover layer. The protective cover layer will be earthen material with a 3-inch diameter maximum particle size and without deleterious material.
- Above grade waste disposal will conform to the lines and grades set forth in Appendix I/IIA, Drawing I/II-A.8 – Landfill Completion Plan. Sideslope grades will not exceed 3H:1V from the toe of the side embankment to the top of the side embankment. The slope of the landfill top deck will be constructed at a five percent maximum slope.
- A final cover system will be constructed over the filled waste material, as shown in Part III, Appendix IIIA-A – Liner and Final Cover System Details.





LEGEND

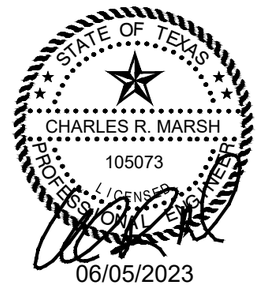
- PERMIT BOUNDARY
- PERMITTED LIMIT OF WASTE
- PROPOSED LIMIT OF WASTE
- INDICATES REVISION (SEE LIST OF REVISIONS)

NOTES:

1. AERIAL IMAGERY PROVIDED BY GOOGLE EARTH DATED 12/6/2019.

LIST OF REVISIONS:

1. ADDED ROAD SURFACE INFORMATION.
2. ADDED LATITUDE/LONGITUDE INFORMATION.



06/05/2023

- [ ] DRAFT
- [X] FOR PERMITTING PURPOSES ONLY
- [ ] ISSUED FOR CONSTRUCTION

DATE: 12/2022
FILE: 0771-356-11
CAD: 6.1-AERIAL PHOTOGRAPH.DWG

DRAWN BY: JDW
DESIGN BY: JBP
REVIEWED BY: CRM

Weaver Consultants Group
TBPE REGISTRATION NO. F-3727

PREPARED FOR
TEXAS REGIONAL LANDFILL COMPANY, LP

REVISIONS		
NO.	DATE	DESCRIPTION
01	06/2023	SEE LIST OF REVISIONS

MAJOR PERMIT AMENDMENT
AERIAL PHOTOGRAPH

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

WWW.WCGRP.COM

FIGURE I/II-6.1

7.3 Location and Zoning

Review of the City of Kennedale zoning map indicates the landfill property is within the Extraterritorial Jurisdiction (ETJ) of the City of Kennedale, but not subject to City of Kennedale zoning requirements. An ETJ designation allows the City of Kennedale to regulate some activities of properties located within their ETJ. The ETJ designation imposes no restrictions on the development, permitting, or continued operation of the landfill, including future expansion of the landfill, as the property is already approved for this. Future zoning coordination will be needed for construction of the proposed entrance facilities, because a small portion of it is located within the Kennedale City limits.

7.4 Surrounding Land Use

Land use within a 1-mile radius of the landfill property is predominantly undeveloped, floodplain, open/agricultural lands, and single-family residential with scattered commercial and light industrial facilities located in the near vicinity of the landfill property.

Major commercial/light industrial facilities are located primarily to the east/northeast and west within the 1-mile radius of the landfill property. Pipeline and utility corridors, another permitted landfill, manufactured housing, and mining/excavation operations make up smaller portions of the remaining 1-mile radius area around the landfill property.

There are several rural residential areas scattered around the landfill property, including single-family, multi-family, and mobile home residences.

South of the landfill property, undeveloped, park/park-like, or agricultural land is predominately found including Village Creek, Sonora Park, and Timberview Golf Course.

7.5 Growth Trends of the Nearest Community

The facility property is located within the ETJ of Kennedale with only the future entrance facilities being located within the City of Kennedale. Overall, this area of Tarrant County has been growing at a slower rate than the average growth for the county, due primarily to the presence of the Village Creek floodplain nearby, as well as the lack of public infrastructure and related utilities access. Growth and development patterns within five miles have generally been along the major transportation corridors of IH-20 to the north, and IH-35W to the west. Major retail and big-box development has occurred along the west side of IH-35 at FM 1187. The City of Kennedale has been growing towards the northeast and east toward the City of Arlington. While there has been some development of individual lots to the south,

8 TRANSPORTATION

8.1 Traffic Information

This section addresses §330.61(i).

8.1.1 Availability and Adequacy of Roads

The Fort Worth C&D Landfill is located adjacent to Kennedale, Texas, on Dick Price Road. The site is easily accessed from principal population centers via IH-20. In addition to Dick Price Road, Everman Kennedale Road, Anglin Drive, Shelby Road, and Averett Road are utilized to access the landfill. In general, landfill vehicles originating north of the site utilize ~~the Everman Kennedale Road~~ US Highway 287 Business to Dick Price Road to the landfill entrance road; and landfill vehicles originating south of the site use Dick Price Road.

A traffic impact study was prepared by WCG in July 2022 to evaluate the continued development of the Fort Worth C&D Landfill on local roadways and traffic. The traffic study is included in Parts I/II, Appendix I/IID.

In summary, the traffic study concludes that access roads within 1 mile of the landfill provide adequate access to the site. Coordination with TxDOT regarding traffic and location restrictions is included in Appendix I/IIB (TxDOT Tab).

8.2 Airport Safety

TCEQ distance restrictions set forth in Title 30 TAC §330.545 require municipal solid waste disposal facilities seeking vertical expansions located within 10,000 feet of any runway end used by turbojet aircraft or within 5,000 feet of any runway end used by piston-engine aircraft to demonstrate that the units are designed and operated so that the municipal solid waste landfill unit does not pose a bird hazard to aircraft. Title 30 TAC §330.545(d) further requires that landfill facilities within a 6-mile radius of any small general service airport runway or within a five-mile radius of any large general public commercial airport shall be critically evaluated to determine if an incompatibility exists.

As shown on Figure I/II 8.1 there are no airports located within 10,000 feet of the facility. Therefore 30 TAC §330.545(a) and (c) are not applicable, and it is not necessary to prepare a demonstration regarding potential bird hazards to aircrafts.

11 FLOODPLAINS AND WETLANDS STATEMENT

11.1 Floodplains Statement

As noted in Section 10.2, the floodplain of ~~Fort Worth C&D~~ Village Creek forms the west boundary of the site. The landfill expansion will modify the existing floodplain on the eastern side of Village Creek to allow for the landfill expansion to the west of the existing landfill. A floodplain storage area will be developed to compensate for the development of the expansion area. A CLOMR for the expansion of the landfill has been submitted to FEMA for review. No portion of the waste disposal area will be located in the 100-year floodplain, and the perimeter berm will provide over 3 feet of freeboard between the 100-year floodplain and the top of the berm.

Compliance with the floodplain location restrictions is further discussed in Appendix I/IIC (each of the 4 items listed under Title 30 TAC §330.63(c)(2)(D) are addressed in Appendix I/IIC, Section 4).

11.2 Wetlands Statement

A Jurisdictional Waters of the U.S. Report for the Fort Worth C&D Landfill was prepared by WCG in September 2021. The report included the assessment of potential waters of the U.S. located within the permit boundary and the proposed waste footprint. This permit amendment proposes a horizontal and vertical expansion to the currently permitted waste disposal area within the currently approved permit boundary. The property within the currently approved permit boundary of the Fort Worth C&D Landfill was evaluated for compliance with wetlands provisions, including the determination and identification requirements in Title 30 TAC §330.61(m)(2) and (3) and the wetlands location restriction in Title 30 TAC §330.553(b). The assessment concluded that the horizontally and vertically expanded landfill unit at the Fort Worth C&D Landfill will not be located within jurisdictional wetlands or waters of the U.S., and the proposed development of the site complies with the location restrictions.

The jurisdictional waters report was transmitted to the U.S. Army Corps of Engineers (USACE) requesting concurrence from the USACE that the horizontal and vertical expansion does not impact jurisdictional waters. A copy of the jurisdictional waters report, and correspondence with the USACE are included in Appendix I/IIB.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

APPENDIX I/IIA
FACILITY LAYOUT MAPS

Prepared for

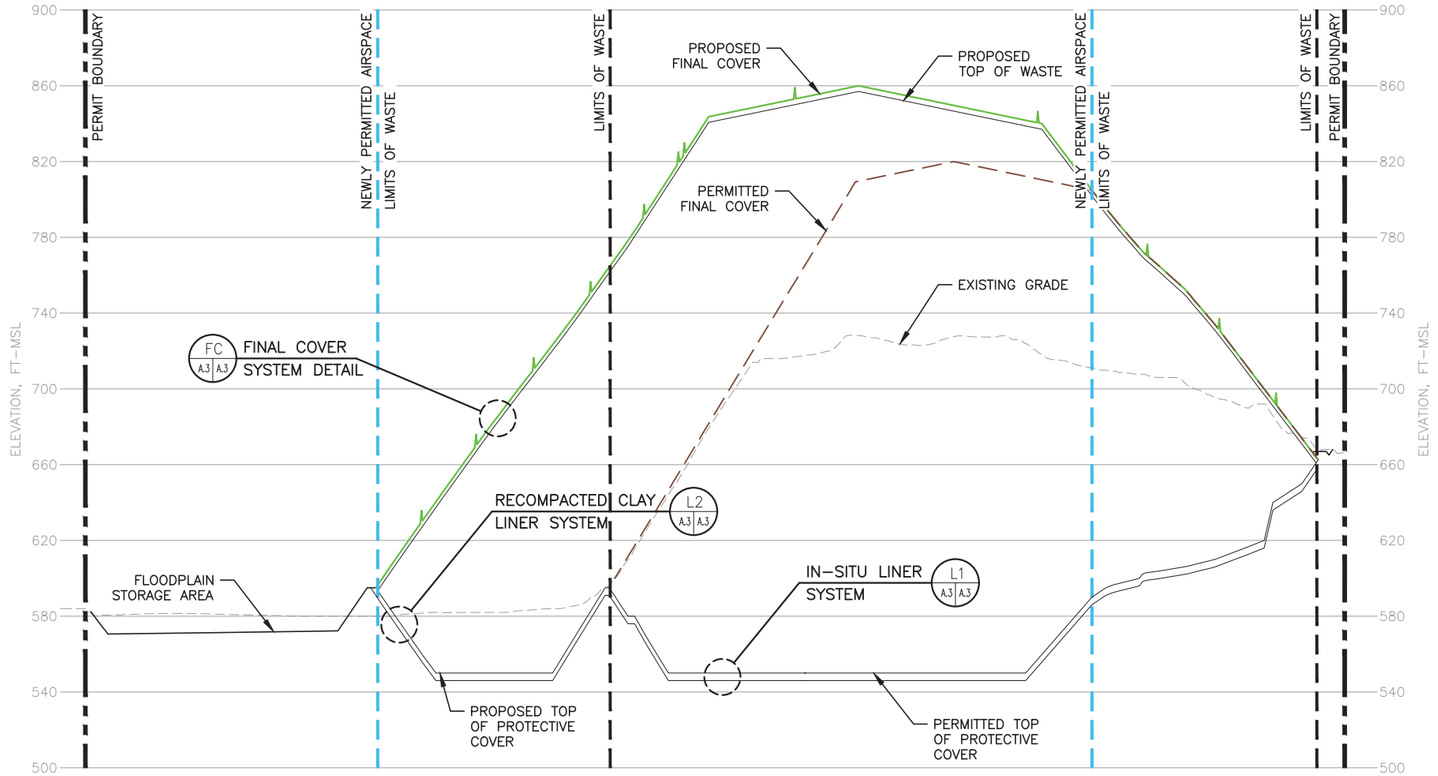
Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by
Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-368-11-123



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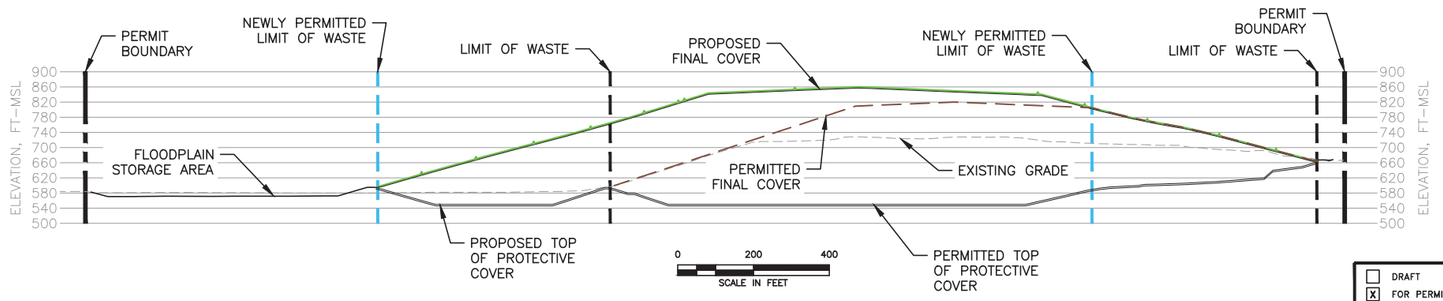
VERTICAL SCALE IN FEET

0 200 400
HORIZONTAL SCALE IN FEET



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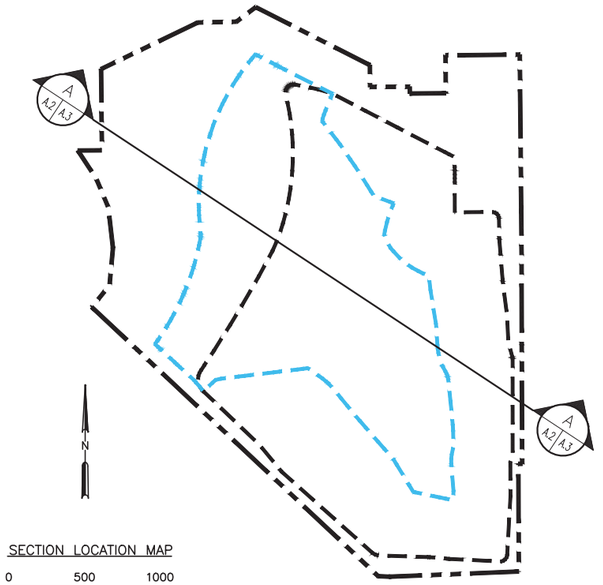
SCALE IN FEET



SECTION LOCATION MAP

0 500 1000
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMIT OF WASTE
- NEWLY PERMITTED LIMIT OF WASTE
- EXISTING GRADE
- TOP OF FINAL COVER
- TOP OF WASTE
- PERMITTED FINAL COVER
- L1 A3 A3 DETAIL CALLOUT (SEE NOTE 2)
- ⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

STATE OF TEXAS
CHARLES R. MARSH
105073
PROFESSIONAL LICENSED ENGINEER
06/05/2023

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK FROM AERIAL PHOTOGRAPHY FLOWN 02–17–2022.
2. REFER TO APPENDIX IIIA–A FOR LINER AND FINAL COVER SYSTEM DETAILS. DETAIL LOCATIONS REFER TO DRAWING NUMBERS IN APPENDIX IIIA–A THAT INCLUDE THE CALLED OUT DETAIL.
3. SEE APPENDIX IIIG FOR BORING DATA. BORINGS PROJECTED INTO THE LINE OF THE SECTION. SEE DRAWING B.1 FOR LOCATION.
4. AS SHOWN IN APPENDIX I/IIC, THE BUFFER ZONES VARY AROUND THE PERIMETER OF THE SITE, BUT IN NO CASE ARE THEY LESS THAN 50–FEET FOR EXISTING WASTE. THE BUFFER ZONE BETWEEN THE PERMIT BOUNDARY AND NEWLY PERMITTED (PERMIT NO. MSW–1983E) WASTE DISPOSAL AIRSPACE IS AT LEAST 50 FEET.
5. DRAINAGE DESIGN INFORMATION IS PROVIDED IN APPENDIX IIIF–SURFACE WATER DRAINAGE PLAN.
6. ⚠1 MINIMUM EXCAVATION ELEVATION IS 550 FT–MSL BASED ON USE OF IN–SITU LINER SYSTEM (OR 446 FT–MSL IF RECOMPACTED CLAY LINER IS USED). MAXIMUM TOP OF FINAL COVER ELEVATION IS 860.0 FT–MSL.

LIST OF REVISIONS:

1. UPDATED FINAL COVER ELEVATION.

- [ ] DRAFT
- [x] FOR PERMITTING PURPOSES ONLY
- [ ] ISSUED FOR CONSTRUCTION

DATE: 12/2022
FILE: 0771–356–11
CAD: FIG A.3–CROSS SECTION A.DWG

DRAWN BY: SRF
DESIGN BY: CAM
REVIEWED BY: CAM

Weaver Consultants Group
TBPE REGISTRATION NO. F–3727

PREPARED FOR
TEXAS REGIONAL LANDFILL COMPANY, LP

REVISIONS

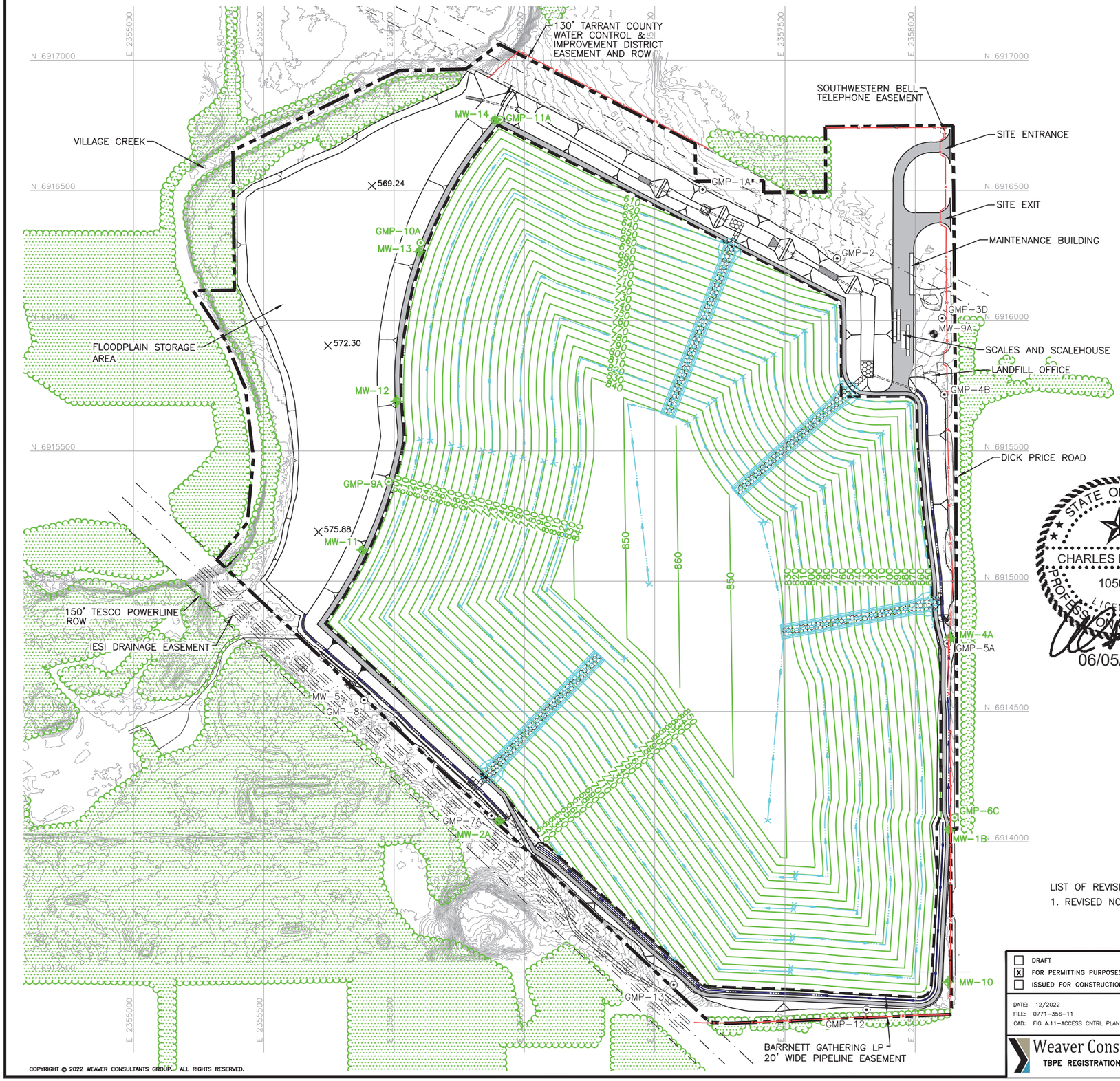
NO.	DATE	DESCRIPTION
01	06/2023	SEE LIST OF REVISIONS

MAJOR PERMIT AMENDMENT
CROSS–SECTION A
(TCEQ PERMIT NO. MSW–1983E)

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

WWW.WCGRP.COM

FIGURE I/II–A.3



LEGEND

- PERMIT BOUNDARY
- LIMIT OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- 860 — FINAL COVER CONTOUR
- DRAINAGE LETDOWN
- DRAINAGE SWALE
- PROPOSED PERIMETER CHANNEL
- EASEMENT
- GABIONS
- MW-2A — PERMITTED GROUNDWATER MONITORING WELL
- GMP-4B — PERMITTED GAS MONITORING PROBE
- MW-4A — PROPOSED GROUNDWATER MONITORING WELL
- GMP-6C — PROPOSED GAS MONITORING PROBE
- EXISTING FENCE
- EXISTING BUFFER ZONE WITH TREES AND SHRUBS (SEE NOTE 3)
- ⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK FROM AERIAL PHOTOGRAPHY FLOWN 02-17-2022. THE GRID SYSTEM IS TIED TO THE TEXAS STATE PLANE COORDINATE SYSTEM NORTH CENTRAL ZONE, NAD 1983.
2. ACCESS TO THE SITE WILL BE CONTROLLED BY PERIMETER FENCING (MINIMUM 4-FEET HIGH, 3-STRAND BARBED WIRE FENCES), A GATED ENTRANCE/EXIT, AND NATURAL BARRIERS (e.g VILLAGE CREEK, DENSE FOLIAGE, AND VEGETATION). ADDITIONALLY, IN AREAS OF NATURAL BARRIERS, THE ACCESS CONTROL PLAN IS PROVIDED TO PREVENT THE ENTRY OF LIVESTOCK, TO PREVENT THE PUBLIC FROM EXPOSURE TO POTENTIAL HEALTH AND SAFETY HAZARDS, AND TO DISCOURAGE UNAUTHORIZED ENTRY OR UNCONTROLLED DISPOSAL OF SOLID WASTE OR HAZARDOUS MATERIALS. NO TRESPASSING SIGNS WILL BE ADDED TO DISCOURAGE UNAUTHORIZED ENTRY OR UNCONTROLLED DISPOSAL OF SOLID WASTE OR HAZARDOUS MATERIALS. SIGNS WILL BE PLACED APPROXIMATELY 300 FEET APART ALONG THE NORTHERN AND SOUTHERN PORTION OF THE SITE.
3. ⚠ FACILITY IS BOUNDED HIGH-CANOPY TREE LINES. THE EXISTING DENSE TREE LINES FUNCTION AS BOTH WINDBREAKS AND SITE SCREENING. AS SHOWN IN FIGURE I/II-A.2 SECTOR DEVELOPMENT SEQUENCE, THE LANDFILL IS SEQUENCED SUCH THAT THE ACTIVE FILL AREA WILL BE SCREENED BY THE EXISTING VEGETATION. THE FILL SEQUENCE WILL ALSO DEVELOP THE OUTERMOST SECTORS FIRST, WHICH WILL SCREEN SUBSEQUENT OPERATIONS. FACILITY IS BOUNDED BY TREES ON THE WEST, SOUTH, AND NORTH. TREE LINES WILL BE MAINTAINED TO AVOID NUISANCE CONDITIONS AND MAINTAIN EFFECTIVE VISUAL SCREENING.

LIST OF REVISIONS:
1. REVISED NOTE 3.

- [ ] DRAFT
- [x] FOR PERMITTING PURPOSES ONLY
- [ ] ISSUED FOR CONSTRUCTION

DATE: 12/2022
FILE: 0771-356-11
CAD: FIG A.11-ACCESS CNTRL PLAN.DWG

DRAWN BY: SRF
DESIGN BY: JBP
REVIEWED BY: CRM

Weaver Consultants Group
TBPE REGISTRATION NO. F-3727

PREPARED FOR
TEXAS REGIONAL LANDFILL COMPANY, LP

REVISIONS		
NO.	DATE	DESCRIPTION
01	06/2023	SEE LIST OF REVISIONS

MAJOR PERMIT AMENDMENT
ACCESS CONTROL PLAN
(TCEQ PERMIT NO. MSW-1983E)

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

WWW.WCGRP.COM

FIGURE I/II-A.11

COORDINATION WITH
FEDERAL AVIATION ADMINISTRATION

- February 23, 2023 FAA Determination of No Hazard to Air Navigation Letters ~~will be included upon receipt.~~
- October 17, 2022 Request Letter requesting FAA determination of No Hazard to Air Navigation.

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2540-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point A
Location:	Kennedale, TX
Latitude:	32-38-10.48N NAD 83
Longitude:	97-14-23.38W
Heights:	585 feet site elevation (SE) 320 feet above ground level (AGL) 905 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 08/22/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

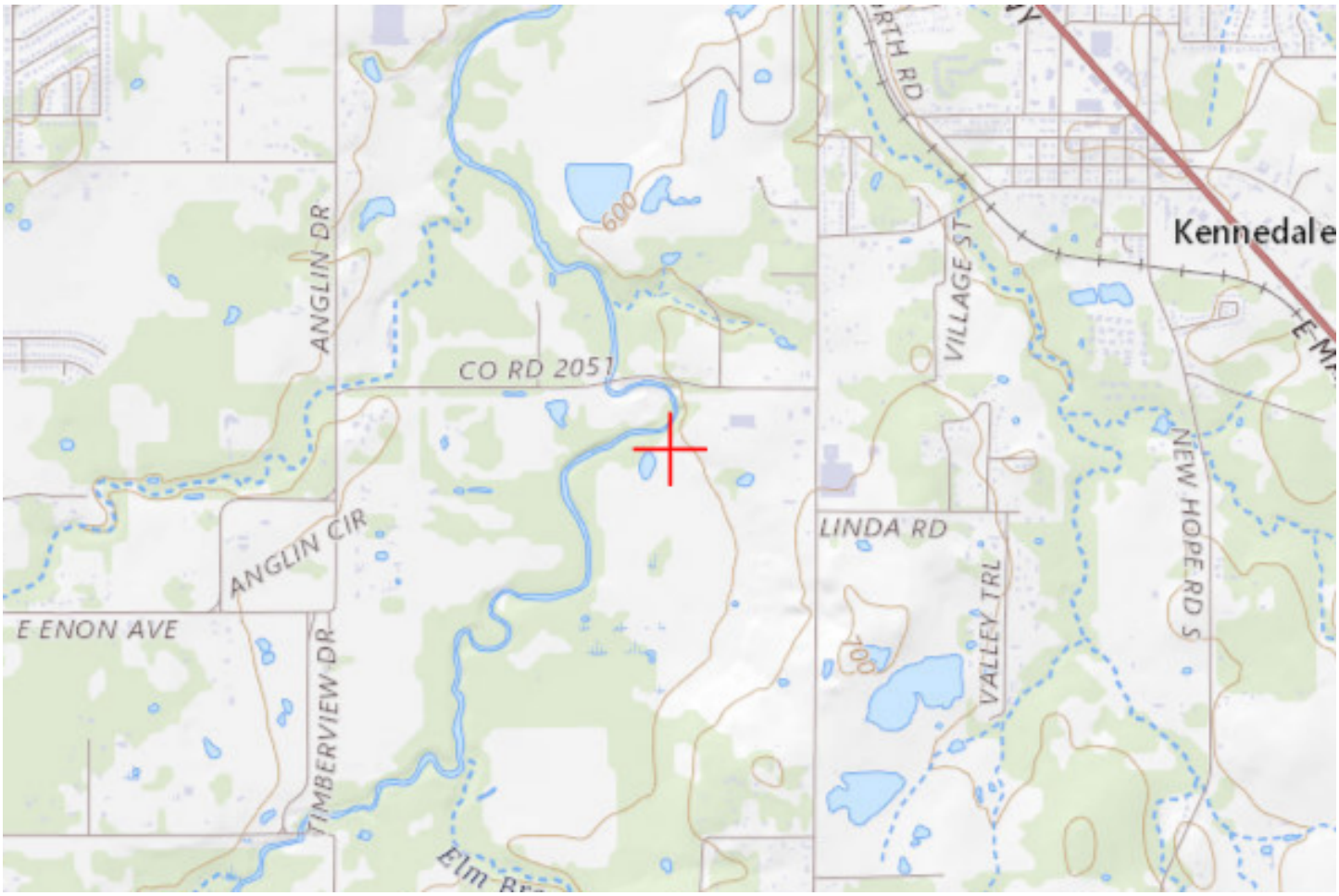
If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASW-2540-OE.

Signature Control No: 571920446-573755646 (DNE)
Andrew Hollie
Specialist

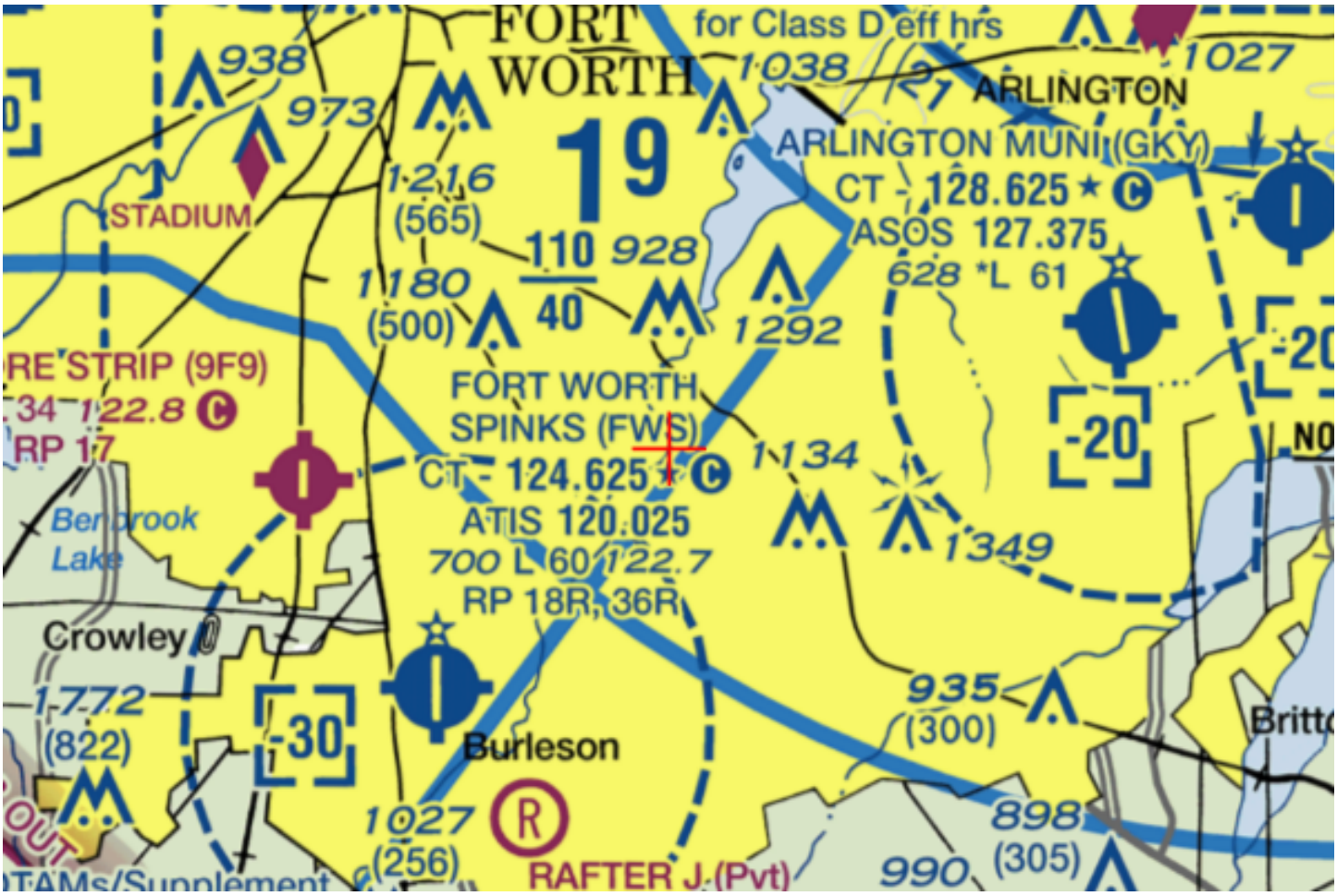
Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2540-OE



Sectional Map for ASN 2023-ASW-2540-OE



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2541-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point B
Location:	Kennedale, TX
Latitude:	32-37-59.86N NAD 83
Longitude:	97-14-05.03W
Heights:	650 feet site elevation (SE) 255 feet above ground level (AGL) 905 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 08/22/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

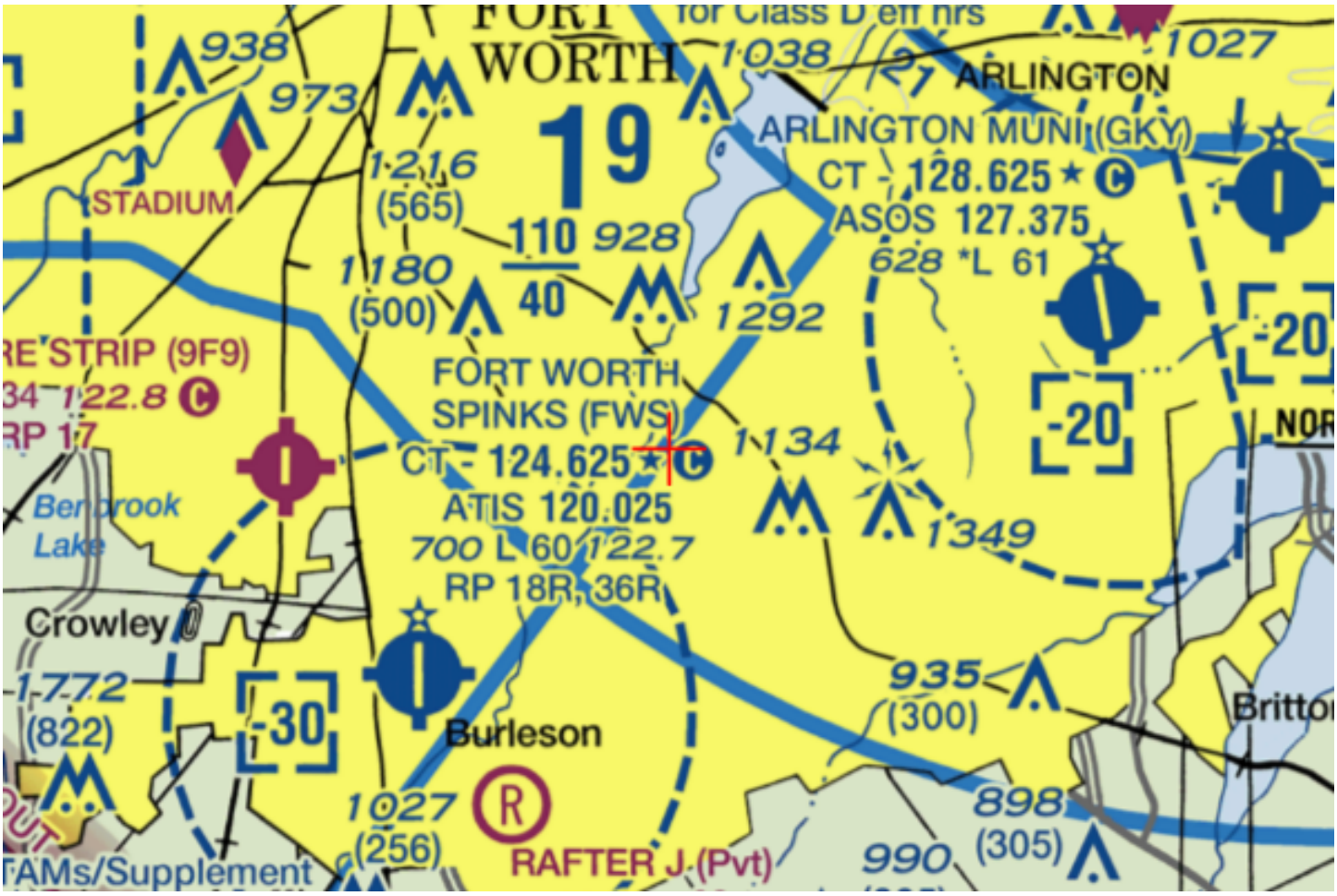
If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASW-2541-OE.

Signature Control No: 571920456-573755645 (DNE)
Andrew Hollie
Specialist

Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2541-OE


FORT WORTH
for Class D eff hrs
938
973
1038
1027
ARLINGTON
ARLINGTON MUNI (GKY)
CT 128.625
ASOS 127.375
628 *L 61
19
1216
(565)
110
40
928
1180
(500)
1292
STADIUM
RE STRIP (9F9)
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RP 17
FORT WORTH
SPINKS (FWS)
CT 124.625
ATIS 120.025
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Burleson
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(256)
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RAFTER J (Pvt)
898
(305)
990
TAMs/Supplement

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2542-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point C
Location:	Kennedale, TX
Latitude:	32-37-37.55N NAD 83
Longitude:	97-14-04.76W
Heights:	675 feet site elevation (SE) 45 feet above ground level (AGL) 720 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 08/22/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

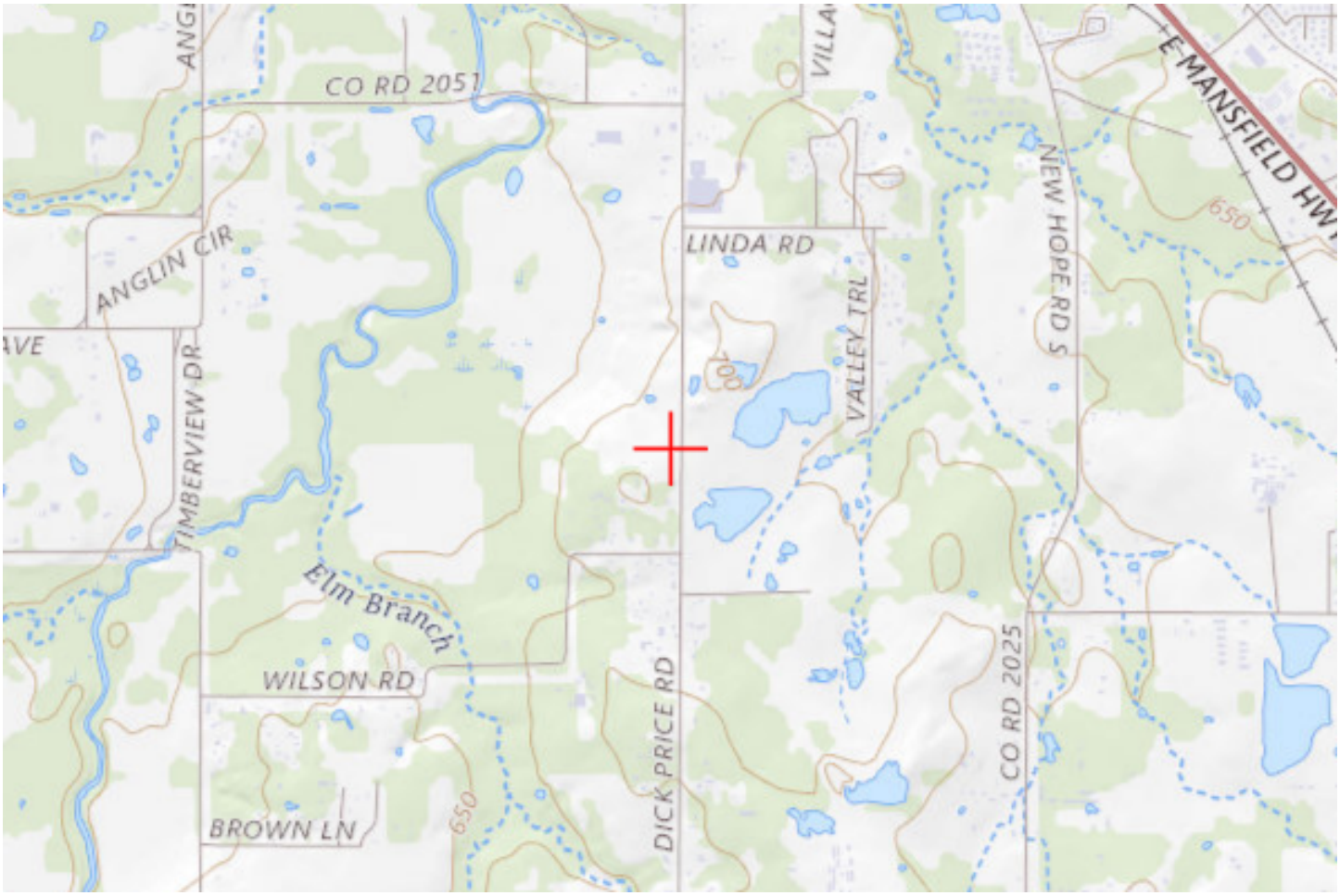
If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASW-2542-OE.

Signature Control No: 571920467-573755940 (DNE)
Andrew Hollie
Specialist

Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2542-OE



Sectional Map for ASN 2023-ASW-2542-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2543-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point D
Location:	Kennedale, TX
Latitude:	32-37-51.77N NAD 83
Longitude:	97-14-31.31W
Heights:	584 feet site elevation (SE)
	321 feet above ground level (AGL)
	905 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 08/22/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

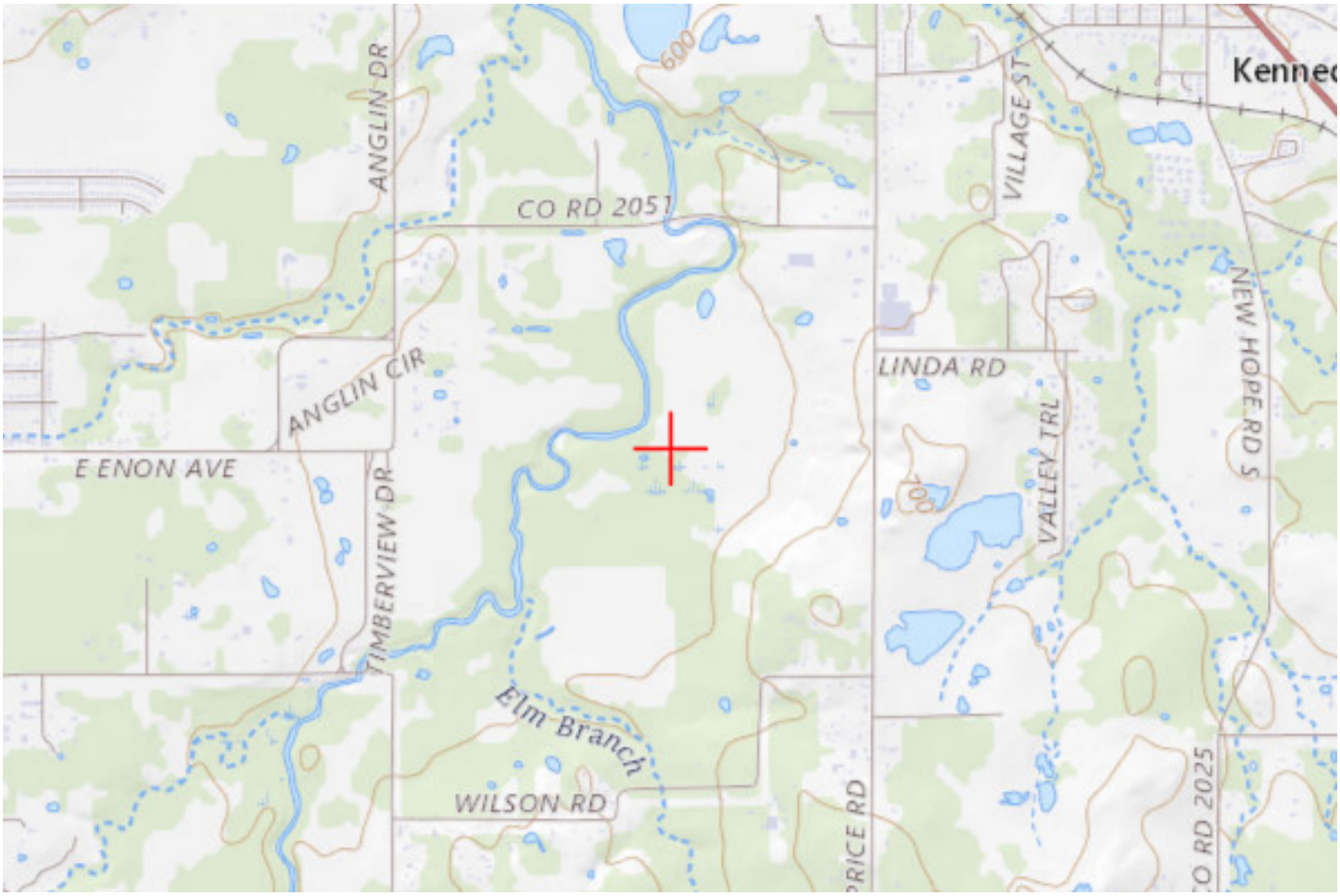
If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASW-2543-OE.

Signature Control No: 571920496-573755647 (DNE)
Andrew Hollie
Specialist

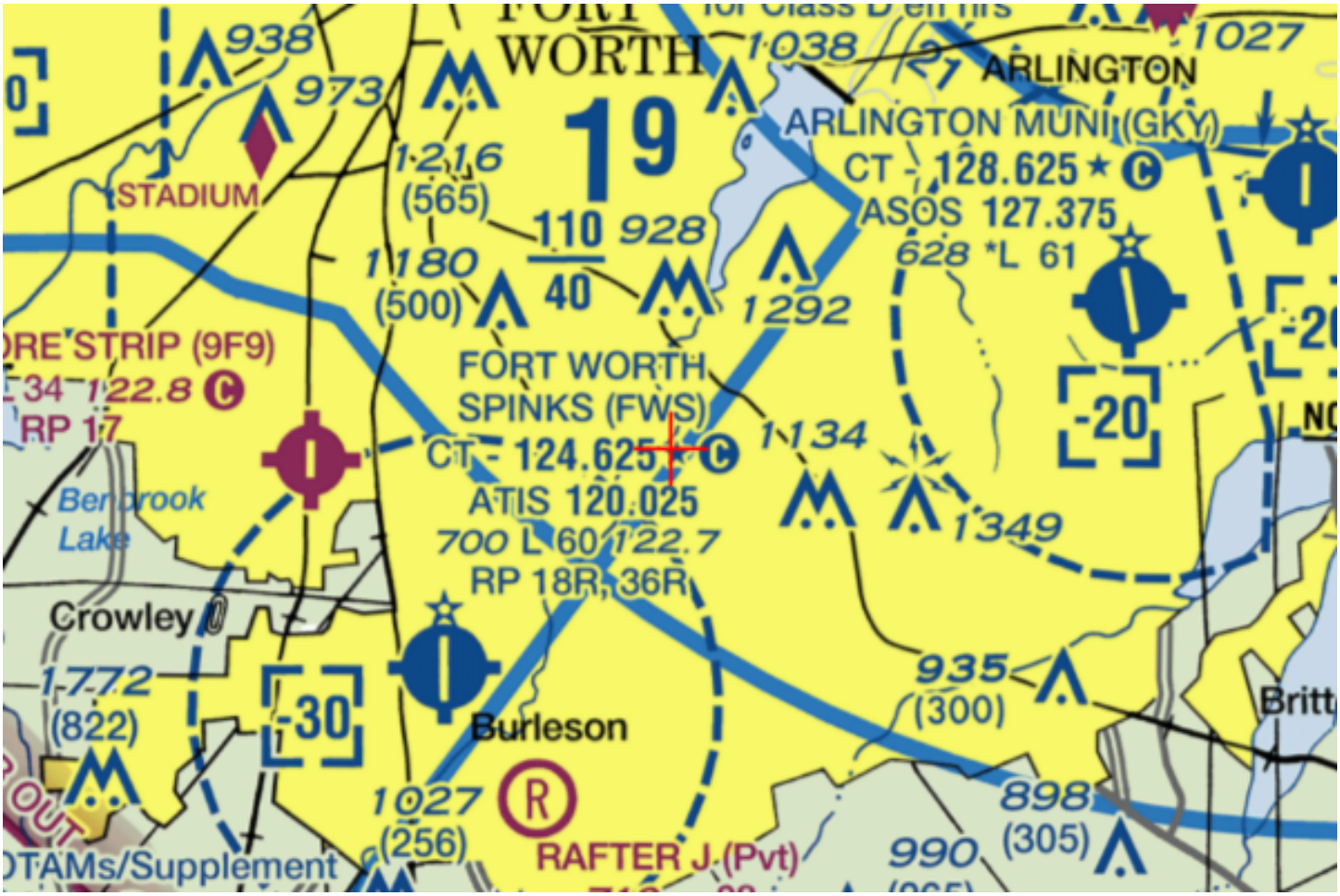
Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2543-OE



Sectional Map for ASN 2023-ASW-2543-OE



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2544-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point E
Location:	Kennedale, TX
Latitude:	32-37-53.30N NAD 83
Longitude:	97-14-15.58W
Heights:	599 feet site elevation (SE) 179 feet above ground level (AGL) 778 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 08/22/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASW-2544-OE.

Signature Control No: 571920515-573755939 (DNE)
Andrew Hollie
Specialist

Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2544-OE

Sectional Map for ASN 2023-ASW-2544-OE

COORDINATION WITH
NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

- February 9, 2023 NCTCOG Review Request Letter
- June 5, 2023 NCTCOG Approval Letter.

North Central Texas Council Of Governments

June 5, 2023

Mr. Charles Marsh, P.E.
Project Director
Weaver Consultants Group, LLC
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109

RE: Major Permit Amendment Application for the Fort Worth C&D Landfill, Tarrant County, Texas
Physical Site Address: 4144 Dick Price Road, Kennedale, Texas 76140

Dear Mr. Marsh,

Thank you to you and your colleagues for attending and presenting at the Facility Conformance Subcommittee meeting of the Resource Conservation Council (RCC) on May 15, 2023, regarding the major permit amendment application for the Fort Worth C&D Landfill in Tarrant County, Texas.

The North Central Texas Council of Governments (NCTCOG) has been directed by the Texas Commission on Environmental Quality to determine the consistency of solid waste permit applications, amendments, and registration applications with the Regional Solid Waste Management Plan, *Planning for Sustainable Materials Management in North Central Texas 2015-2040: North Central Texas Regional Solid Waste Management Plan*.

At its meeting on May 24, 2023, the Resource Conservation Council, the region's solid waste advisory committee, approved the recommendation of the Facility Conformance Subcommittee, which determined that the major permit amendment application for the Fort Worth C&D Landfill is consistent with the goals of the Regional Solid Waste Management Plan. Unless there are significant changes to the application from those outlined in the presentation, this determination should not change.

If you have any questions regarding NCTCOG's conformance review, please contact Elena Berg by phone at (817) 608-2363, or by email at EBerg@nctcog.org.

Sincerely,

Kathy Fonville

Kathy Fonville
Chair, Resource Conservation Council

cc: Ms. Megan Henson, Manager, MSW Permits Section, Texas Commission on Environmental Quality
MC-124, P.O. Box 13087, Austin, Texas 78711-3087

cc: Mr. Gary Bartels, Southern Region Engineer, Texas Regional Landfill Company, LP
3 Waterway Square Place, Suite 550, The Woodlands, Texas, 77380

616 Six Flags Drive, Centerpoint Two
P. O. Box 5888, Arlington, Texas 76005-5888
(817) 640-3300 FAX: 817-640-7806 ♻ recycled paper
www.nctcog.org

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT

APPENDIX I/IIC
LOCATION RESTRICTION DEMONSTRATIONS

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

2 EASEMENTS AND BUFFER ZONES

The easements and buffer zones location restrictions within Title 30 TAC §330.543 require that no solid waste ~~disposal~~ unloading, storage, disposal, or processing shall occur within any easement, buffer zone, or right of way. No solid waste disposal shall occur within 25 feet of the center line of any utility line or pipeline easement but no closer than the easement, unless otherwise authorized by the Executive Director. Also, all pipeline and utility easements shall be clearly marked with posts that extend at least six feet above ground level, spaced at intervals no greater than 300 feet. In addition, for vertical or horizontal expansions, the owner or operator shall establish and maintain a 50-foot buffer zone for any newly permitted airspace.

The proposed buffer zones for the site are shown on Drawing I/IIC-1 and are discussed below.

- **Existing Permitted Limits of Waste.** As shown on Drawing I/IIC-1, a buffer zone of at least 50 feet is maintained between the permit boundary and the permitted limits of waste defined in TCEQ Permit No. 1983E.
- **Expansion Area.** As shown on Drawing I/IIC-1, a minimum 50-foot buffer zone is maintained between the permit boundary and the proposed new waste disposal airspace (labeled as "newly permitted airspace limit of waste"), consistent with Title 30 TAC §330.543(b)(1). No waste is proposed to be placed between the permitted limits of waste and the newly permitted airspace limits of waste.

There are three easements located within the permit boundary. A 130-foot Tarrant Regional Water District (TRWD) water pipeline easement is located along the northern portion of the permit boundary, a 20-foot wide Barrnett Gathering LP natural gas pipeline easement is located at the southern portion of the permit boundary, and a Southwestern Bell Telephone utility easement is located at the northeastern corner of the permit boundary. No easement center lines are within 25 feet of the existing or proposed limits of waste, thereby providing the required separation between the easement and the waste footprint. In addition, all utility line and pipeline easements will be clearly marked in accordance with the Site Operating Plan.

Given the above, the site is in compliance with the easements and buffer zone location restrictions. Within the TRWD easement there are three raw waterline pipes. The TRWD easement and associated pipelines are oriented in a general southeast to northwest direction. The closest edge of the TRWD easement is

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

VOLUME 2 OF 4

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

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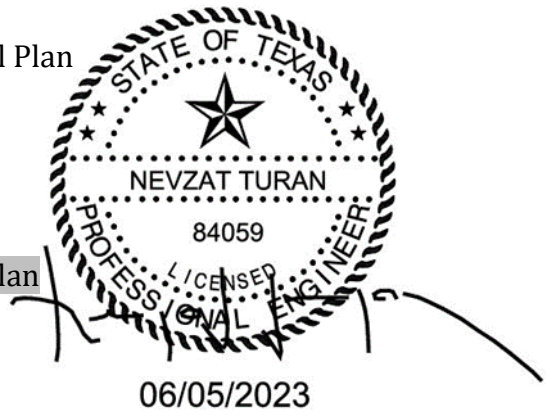
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION
~~VOLUME 2 OF 4~~

CONTENTS



FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PART III – SITE DEVELOPMENT PLAN

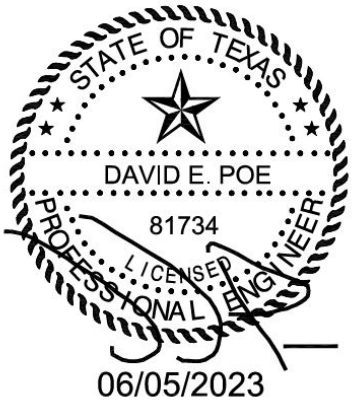
APPENDIX IIID
LINER QUALITY CONTROL PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



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Fort Worth, TX 76109
817-735-9770

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less than 40,000 pounds, and that this compaction equipment was utilized during the entire period of placing waste ballast.

- If waste is used for ballast, documentation of the observations that the initial 5 feet of waste used for ballast on the liner system is free of brush and large bulky items, which may not be compacted to the required density.
- A waste-as-ballast placement record (Appendix IIID-D) completed and signed by the Site Manager.
- Survey of the top of waste to document that the required waste ballast thickness has been placed.
- ~~Water-level~~ The facility's highest recorded groundwater elevation measurements taken in the site monitor well/piezometer system ~~adjacent to the liner construction area~~ to verify that the groundwater level has not exceeded the design high water level.
- Final ballast thickness calculation using procedures included in Appendix IIID-B and the as-built minimum densities and thicknesses for each component as well as updated groundwater levels.
- A BER will be prepared and signed and sealed by a professional engineer licensed to practice in Texas.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

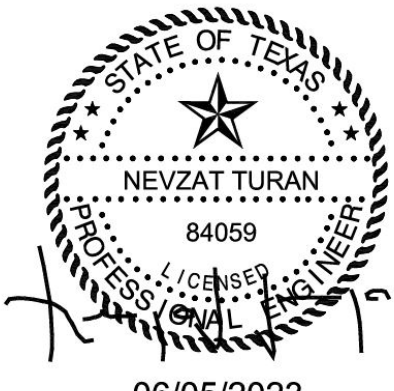
PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIF
SURFACE WATER DRAINAGE PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



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6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

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APPENDIX IIIF-G

EXCERPTS FROM APPROVED CLOMR

CONTENTS

FLOODPLAIN SUMMARY

This appendix addresses §330.61(m).

As discussed in Parts I/II in Section 11, Parts I/II-Appendix I/IIC, and Part III-Appendix IIIF, the floodplain for Fort Worth C&D Landfill is located west of the landfill area. A Conditional Letter of Map Revision (CLOMR) was developed for the proposed expansion to revise the floodplain limits as a part of the proposed landfill development.

Excerpts from the CLOMR are included in Appendix IIIF-G-A. As shown in Appendix IIIF-G-A, the proposed solid waste fill areas will not be located within the limits of the post-development 100-year floodplain in the approved CLOMR. The approved Floodplain Development Permit from Tarrant County is provided in Appendix IIIF-G-B.

APPENDIX IIIF-G-B

APPROVED FLOODPLAIN DEVELOPMENT PERMIT

TARRANT COUNTY
FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

INSTRUCTIONS: Complete all questions. If any item does not apply, indicate by place "NA" in the blank. **DO NOT LEAVE ANY BLANK EMPTY.**

SECTION 1. OWNER INFORMATION

PROPERTY OWNER'S FULL NAME: Gary Bartels
Address: 4144 Dick Price Road
City: Fort Worth State: Texas Zip Code: 76140
Home Phone: Work Phone: Cell Phone: 817-705-6072
eMail Address: gary.bartels@wasteconnections.com

Is the Owner a Corporation or Partnership? [X] Yes [ ] No
If Yes, attach a letter on company stationery, signed by an authorized individual, authorizing the Applicant to file an Application on behalf of the company.

SECTION 2. APPLICANT INFORMATION

[X] Same as Owner (if checked, skip to Section 3)
APPLICANT'S FULL NAME:
Applicant's Address:
City: State: Zip Code:
Home Phone: Work Phone: Cell Phone:
eMail Address:

SECTION 3. SUBJECT PROPERTY INFORMATION

Street Address for the Subject Property (if established)[1]: 4144 Dick Price Road

City: Fort Worth Zip Code: 76140

Legal Description:
Lot: Block: Subdivision Section or Phase:

If not located in a subdivision:
Survey: Tarrant County Deed Records (38.107 acres) Abstract: Recorded (Vol/Page): Vol. 12748 Pg. 132
Shelby County School Land Survey (133.15 acres) A-1375 File D202040557

List the names of all roads by which the property can be accessed: Dick Price Road

Total Current Land Area: 151.73
Vicinity Map Attached? [X] Yes [ ] No

Located in City ETJ: [ ] Yes [X] No City Name:

[1] **If a 911 street address has not been assigned to the Subject Property, the Applicant must contact the 911 Coordinator at (817)_____ to obtain an address.**

SECTION 4. PROPOSED DEVELOPMENT:

DEVELOPMENT OF LAND (Check all that are applicable):

- [X] Clearing
- [X] Fill
- [ ] Mining
- [ ] Drilling
- [X] Grading
- [X] Excavating (except for structural development checked above)
- [ ] Watercourse Alteration (including dredging and channel modifications)
- [ ] Road, Street or Bridge Construction
- [ ] Subdividing — Name of Subdivision: _____
- [ ] Construction of Utility — Type of Utility: _____
- [ ] Other (please specify): _____

DEVELOPMENT OF STRUCTURES (Check all that are applicable):

[ ] New Construction	[ ] Relocation	[ ] Demolition
[ ] Addition	[ ] Alteration	[ ] Repair
[ ] Remodel	[ ] Replacement	[X] Other: Detention Pond

STRUCTURE TYPE (Check all that are applicable):

[ ] Habitable Structure: Living Area: _____sf # of Bedrooms: _____

- [ ] Single Family Residence (1 family)
- [ ] Multi-Family Residence (2-4 families)
- [ ] Multi-Family Residence (more than 4 families)
- [ ] Mobile/Manufactured Home — Located in MHRC? [ ] Yes [ ] No
- [ ] Recreational Vehicle
- [ ] Commercial Type: _____
- [ ] Combined Use (Residential and Commercial): Type: _____
- [ ] Non-Residential — [ ] Floodproofing Type: _____
  - [ ] Floodproofing Certification Attached
- [X] Non-Inhabitable Structure (specify):
  - [ ] Garage
  - [ ] Storage Building
  - [ ] Barn
  - [X] Other: Detention Pond

TYPE OF FOUNDATION:

- [ ] Building on Slab
- [ ] Building on Piers, Piles or Columns
- [ ] Building with Basement

PROJECT COSTS:

Estimated market value of the existing Structure: $ N/A

Estimated cost of proposed construction: $ N/A

If the cost of the proposed construction equals or exceed fifty percent (50%) of the market value of the existing Structure, "Substantial Improvement" provisions shall apply. Contact the Floodplain Administrator at (817)884-1250 before proceeding.

SECTION 5. ENGINEERING STUDIES AND DOCUMENTATION

FIRM Map Panel: 48439CO340K ☐ Zone A ☒ Zone AE

Site Plan attached? ☒ Yes ☐ No
Construction Plans attached? ☒ Yes ☐ No
Certification by Registered Engineer or Architect attached? ☒ Yes ☐ No

Base Flood Elevation: 590
Elevation of Lowest Floor: N/A

How was BFE determined?

- ☒ Flood Insurance Study (FIS) Date: 5/26/2021
- ☐ Flood Insurance Rate Map (FIRM) Date:
- ☐ Flood Elevation Study Date:
- ☐ Two-Foot Contour Map

SECTION 6. CONSULTANTS: List all professionals involved in the preparation of this Application or any of the supplemental information provided herewith. Attach additional sheets, if necessary.

REGISTERED PROFESSIONAL LAND SURVEYOR:
Name:
Mailing Address:
City: State: Zip Code:
Work Phone: Cell Phone: Fax Number:
eMail Address:

PROFESSIONAL ENGINEER:
Name: Charles R. Marsh
Mailing Address: 6420 Southwest Blvd., Suite 206
City: Fort Worth State: Texas Zip Code: 76109
Work Phone: 817-735-9770 Cell Phone: Fax Number:
eMail Address: cmarsh@wcgrp.com

OTHER:
Name:
Mailing Address:
City: State: Zip Code:
Work Phone: Cell Phone: Fax Number:
eMail Address:

OTHER:
Name:
Mailing Address:
City: State: Zip Code:
Work Phone: Cell Phone: Fax Number:
eMail Address:

SECTION 7. OWNER/APPLICANT'S ACKNOWLEDGMENT AND CERTIFICATION:

By my signature below, I acknowledge that I have read and understand the following:

1. No work of any kind may start until a Floodplain Development Permit is issued by Tarrant County.
2. The Development Authorization Permit may be revoked if any false statements are made in this Application or its attachments.
3. The Development Authorization Permit expires if work in accordance with this Application is not **commenced** within 12 months of issuance or if the work is not **completed** within 24 months of issuance.
4. If the Development Authorization Permit expires or is revoked for any reason, all work must cease until a new Permit is issued. The Applicant will be required to submit a new Application with accompanying fees.
5. It shall be unlawful to use, occupy, or permit the use or occupancy of any building, development, or premises, or any part thereof, hereafter created, erected, changed, converted, altered, or enlarged until the development is in compliance with the Tarrant County Subdivision and Land Use Regulations and Tarrant County Manufactured Housing Rental Community Regulations.
6. Applicant may need other permits to fulfill local, state, and federal regulatory requirements. It is Applicant's responsibility to determine what permits are needed and to obtain these permits from the appropriate authorities.
7. Construction costs undertaken in accordance with this Application are Applicant's responsibility. Applicant is not permitted to erect permanent structures or signs on or over any portion of Tarrant County's right-of-way or within any established setbacks.
8. Applicant must construct the improvements in strict conformance with the plans and specifications submitted with this Application and as approved by Tarrant County. Failure to do so will result in Applicant being required to modify or re-construct the improvements at Applicant's cost.
9. Maintenance of improvements remains the Applicant's responsibility, and the County retains the right to require any changes, maintenance, or repairs as necessary to protect life or property.

I hereby certify to the following:

1. I have carefully read the complete Application and all its attachments and certify that all documents submitted are true and correct.
2. There is no outstanding tax liability to Tarrant County on the Subject Property.
3. The Owner of the Subject Property, if different from the Applicant, has authorized the submittal of this Application.
4. As the Owner of the Subject Property or a duly authorized Applicant, I hereby grant permission to representatives of Tarrant County to enter the premises and make all necessary inspections and to take all other actions necessary to review and act upon this Application.

Signature: Gary J Bartels

Print Name: Gary Bartels

Date: 02-11-2022

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

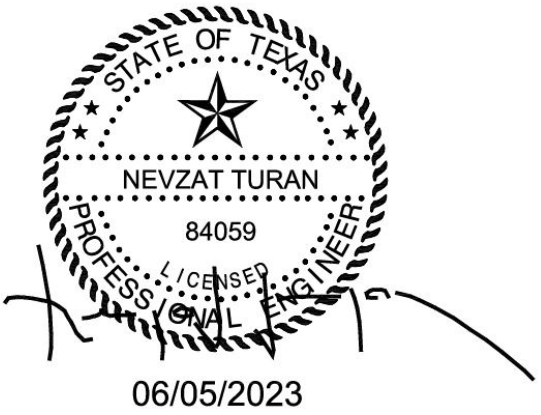
VOLUME 3 OF 4

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



Prepared by

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TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
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817-735-9770

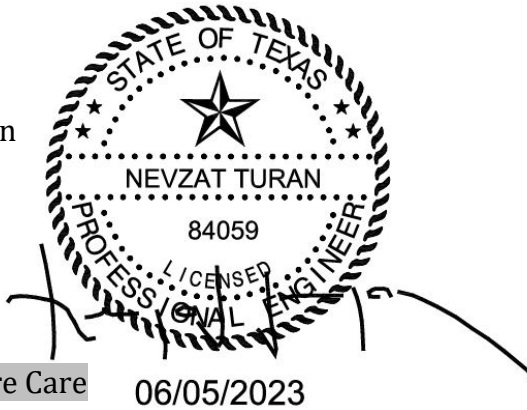
WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION
~~VOLUME 3 OF 4~~

CONTENTS



FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIG
GEOLOGY REPORT

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Blvd., Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11

GEOLOGY REPORT CERTIFICATION

Site Information

Site: Fort Worth C&D Landfill

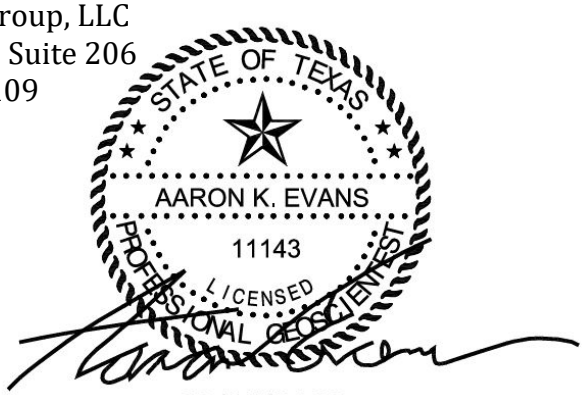
Site Location: Tarrant County

MSW Permit No.: 1983E

Qualified Groundwater Scientist Statement

I, Aaron K. Evans, am a Texas-licensed professional geoscientist and a qualified groundwater scientist as defined in Title 30 TAC §330.3(120). I have prepared the Geology Report which constitutes Appendix IIIG of this permit application. In my professional opinion, the Geology Report is in compliance with the requirements specified in Title 30 TAC §330.63(e). This report has been completed specifically for the Fort Worth C&D Landfill. The only warranty made by me in connection with this report is that I have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of my profession, practicing in the same or similar locality. No other warranty, expressed or implied, is intended.

Firm/Address: Weaver Consultants Group, LLC
6420 Southwest Blvd., Suite 206
Fort Worth, Texas 76109



Signature: 06/05/2023
Aaron K. Evans, P.G., Texas License No. 11143

Date: 6/5/2023

3.1.5 Main Street Limestone

Underlying the Grayson Shale, the Main Street Limestone consists of hard, dry limestone interbedded with dry, calcareous, clayey shale that ranges in thickness from about 28 to 31 feet across the site. It is noted that the BEG (1987) regional geologic formation taxonomy categorized the Grayson Shale and Main Street Limestone as a single undivided formation. Laboratory permeability testing indicates a vertical hydraulic conductivity ranging from $2.06x10^{-8}$ to $9.83x10^{-8}$ cm/sec.

3.1.6 Pawpaw Formation

The Pawpaw Formation underlies the Main Street Limestone and consists predominately of hard, dry, calcareous shale. None of the existing boreholes have penetrated the vertical extent of the Pawpaw beneath the site. The uppermost contact of Pawpaw to overlying Main Street Limestone sediments is below elevation 525 ft-msl as observed in onsite borings. No site-specific hydrogeological data exists for this deep-bedded dry shale formation.

Table 3-1
Summary of Existing Boring Depths and Elevations

Borehole Number	Northing	Easting	Surface Elevation (ft-msl)	Total Depth (ft-msl)	Bottom Elevation (ft-msl)	Bottom Depth Above or Below EDE[1] (feet)
1986 Borings by Baker-Shiflett, Inc.						
PB-1	6914059	2356708	589.5	28	561.5	11.5
PB-1A	6914068	2356840	590.4	57	533.4	-16.6
PB-2	6914532	2356954	583.1	41.5	541.6	-8.4
PB-3	6914391	2357928	641.5	40	601.5	51.5
PB-4	6914234	2357976	644	41	603	53
PB-5	6914729	2357247	605.1	46	559.1	9.1
PB-6	6914726	2357560	617.2	49	568.2	18.2
PB-7	6914725	2358056	655.5	60	595.5	45.5
PB-8	6914381	2357287	586.4	45.5	540.9	-9.1
PB-9	6914318	2357646	632.4	35.5	596.9	46.9
PB-9A	6914247	2357646	632.6	70.5	562.1	12.1
PB-10	na	na	na	na	na	na
PB-10A	6914073	2357008	592.1	65.5	526.6	-23.4
PB-11	6914046	2357472	631.7	53	578.7	28.7
PB-11A	6914046	2357402	631.1	61	570.1	20.1
PB-12	6914014	2358069	636	25	611	61
1989 Borings by Freese and Nichols, Inc.						
B-1	6917378.33	2356061.92	573.9	16.8	557.1	7.1
B-2	6917384.99	2356572.49	600.3	44.2	556.1	6.1
B-3	6917418.49	2357108.60	620.4	39.4	581	31
B-4	6916981.73	2355486.17	578.2	20	558.2	8.2
B-5	6916889.99	2356091.37	578	34.5	543.5	-6.5
B-6	6916877.20	2357091.25	625	124.4	500.6	-49.4
B-7	6916399.05	2355375.01	583.1	22	561.1	11.1
B-8	6916396.05	2355375.03	583.1	12	571.1	21.1
B-7A	6916396.05	2355585.04	580.7	69	511.7	-38.3
B-9	6916383.56	2356584.92	587.3	40	547.3	-2.7
B-10	6916196.33	2357401.94	624.9	49.3	575.6	25.6
B-11	6915896.37	2355578.60	582.4	22	560.4	10.4
B-12	6915890.02	2356078.59	581.5	33.2	548.3	-1.7
B-13	6915883.68	2356578.58	584.1	23.5	560.6	10.6
B-14	6915877.23	2357078.46	594.6	46.7	547.9	-2.1
B-15	6915888.39	2357578.68	626	36	590	40
B-16	6915948.92	2357864.62	645.3	17	628.3	78.3
B-16A	6915983.88	2357828.89	645.3	42.5	602.8	52.8
B-17	6915396.48	2355572.26	586.5	25.7	560.8	10.8
B-18	6915390.04	2356072.25	583.5	34.3	549.2	-0.8
B-19	6915383.70	2356572.13	584.4	37.6	546.8	-3.2
B-20	6915377.35	2357072.12	592.7	48.3	544.4	-5.6
B-21	6915370.91	2357572.11	618.8	114.8	504	-46
B-22	6915243.07	2358115.36	658.4	49	609.4	59.4
B-23	6914896.50	2355565.82	582.5	64.5	518	-32
B-24	6914890.16	2356065.81	582.4	17.4	565	15
B-25	6914964.53	2356619.33	587.5	21.1	566.4	16.4
1991 Borings by Baker-Shiflett						
B-7B	6916399.05	2355375.01	583.1	50.3	532.8	-17.2
B-10A	6916214.42	2357379.97	624.9	55.6	569.3	19.3
B-11A	6915890.36	2355578.48	582.4	45.0	537.4	-12.6
B-13A	6915873.77	2356566.97	584.1	50.0	534.1	-15.9
B-15A	6915898.39	2357578.59	626.0	55.0	571	21.0
B-17A	6915396.58	2355582.26	586.8	45.0	541.8	-8.2
B-21A	6915370.91	2357572.11	618.8	35.6	583.2	33.2
B-22A	6915251.79	2358138.67	658.4	75.0	583.4	33.4
B-24A	6914890.06	2356055.81	582.4	40.0	542.4	-7.6
B-25A	6914911.06	2356559.53	587.5	50.0	537.5	-12.5
B-26	6914567.37	2356383.89	593.6	41.0	552.6	2.6
B-27	6914355.41	2356788.73	583.8	45.0	538.8	-11.2
B-28	6916399.01	2355454.81	579.0	50.0	529	-21.0
1997 Borings by EMCON						
MW-1A	6914061.4	2358122.6	672.8	48.5	624.3	74.3
MW-2	6914097.3	2356547.5	586.7	19.0	567.7	17.7
MW-3	6914749.7	2356796.2	592.5	24.0	568.5	18.5
MW-4	6914800.9	2358109.1	654.3	34.0	620.3	70.3

[1] The permitted EDE for the facility is 648.4 ft-msl.
na = No available data.
Boring details obtained from lithologic logs and associated data tables and represent condition at time of drilling.

Table 3-1 (Continued)
Summary of Existing Boring Depths and Elevations

Borehole Number	Northing	Easting	Surface Elevation (ft-msl)	Total Depth (ft-msl)	Bottom Elevation (ft-msl)	Bottom Depth Above or Below EDE[1] (feet)
2001 Borings by Biggs and Mathews Environmental						
B-12A	6916404.90	2356073.69	581.5	65.0	516.5	-33.5
B-14A	6915877.23	2357078.46	594.6	77.0	517.6	-32.4
B-18A	6915390.04	2356072.25	583.5	65.0	518.5	-31.5
B-20A	6915377.35	2357072.12	592.7	79.0	513.7	-36.3
B-101 (MW-8)	6916527.19	2356391.52	583.4	20.0	563.4	13.4
B-101A	6916527.19	2356391.52	583.4	69.6	513.8	-36.2
B-102 (MW-7)	6915865.20	2356422.38	582.4	15.0	567.4	17.4
B-102A	6915865.20	2356422.38	582.4	67.0	515.4	-34.6
B-103 (MW-6)	6915225.95	2356172.24	584.6	15.0	569.6	19.6
B-103A	6915225.95	2356172.24	584.6	67.0	517.6	-32.4
B-104 (MW-5)	6914601.74	2355830.87	583.1	15.0	568.1	18.1
B-104A	6914601.74	2355830.87	583.1	66.0	517.1	-32.9
B-105 (MW-9)	6915656.93	2358067.26	660.9	40.0	620.9	70.9
B-105A	6915656.93	2358067.26	660.9	146.0	514.9	-35.1
2002 Borings by Team Consultants						
GMP-9	6915469	2356196	582.6	25.0	557.6	7.5
GMP-10	6916361	2356401	582.4	25.0	557.4	7.4
GMP-11	6916820	2356488	590.4	30.0	560.4	10.4
2003 Borings by Team Consultants						
GMP-5	6914725.46	2358115.71	657.0	35.0	622	72.0
GMP-6	6914059.60	2357780.20	657.2	42.0	615.2	65.2
GMP-7	6914059.30	2356783.38	605.5	39.0	566.5	16.5
GMP-8	6914543.22	2355885.46	586.1	17.0	569.1	19.1
2005 Borings by Team Consultants						
GMP-1	6916535	2357086	611.5	45.0	566.5	16.5
GMP-2	6916239	2357700	635.1	45.0	590.1	40.1
2006 Borings by Team Consultants						
GMP-3C	6915858	2357723	633.3	17.0	616.3	66.3
GMP-4A	6915713	2357937	649.8	17.0	632.8	82.8
2013 Borings by Team Consultants						
GMP-6A	6914050.59	2357779.62	655.6	42.0	613.6	63.6
2013 Borings by Geosyntec						
B-201	6916140.05	2357628.52	636.1	25.5	610.6	60.6
B-202	6916515.11	2356587.23	594.3	30.3	564	14.0
B-203	6915563.98	2356537.13	594.5	24.8	569.7	19.7
B-204	6914616.95	2356002.83	594.9	31.0	563.9	13.9
B-205	6914067.61	2356621.30	600.5	32.6	567.9	17.9
B-206	6914033.83	2357804.21	657.0	39.5	617.5	67.5
B-207	6914119.80	2358108.74	675.2	51.5	623.7	73.7
2018 - 2019 Borings by Weaver Consultants Group						
WC-1	6914013.90	2356505.28	600.4	84.0	516.4	-33.6
WC-2	6913994.25	2358089.67	674.9	159.0	515.9	-34.1
WC-3	6913602.43	2356872.05	635.4	93.5	541.9	-8.1
WC-4	6913853.78	2357263.87	699.5	199.0	500.5	-49.5
WC-5	6913896.46	2357885.63	681.7	166.0	515.7	-34.3
WC-6	6913342.73	2357318.82	684.5	170.0	514.5	-35.5
WC-7	6913354.24	2357738.30	678.7	140.0	538.7	-11.3
WC-8	6913429.21	2358098.36	673.1	160.0	513.1	-36.9
WC-9	6915986.57	2357761.00	642.7	125.0	517.7	-32.3
WC-10	6915954.43	2358080.54	652.2	112.0	540.2	-9.8
WC-11	6915156.69	2358010.68	648.0	132.0	516.0	-34.0
WCP-1	6914009.69	2356504.16	600.4	42.0	558.4	8.4
WCP-6	6913342.84	2357329.16	684.9	63.0	621.9	71.9
WCP-8	6913423.71	2358097.97	673.5	122.0	551.5	1.5
WCP-10 (MW-9A)	6915949.75	2358071.51	652.0	36.0	616.0	66.0
2021 Borings by SCS Engineers						
GMP-1A	6916502.60	2357184.50	615.0	48.1	566.9	16.9
GMP-3D	6916009.80	2358103.20	651.4	34.0	617.4	67.4
GMP-4B	6915716.50	2358111.30	661.2	28.4	632.8	82.8
GMP-5A	6914760.60	2358123.00	658.2	36.0	622.2	72.2
GMP-6B	6913816.10	2358125.30	674.3	61.0	613.3	63.3
GMP-7A	6914100.40	2356737.80	596.2	36.0	560.2	10.2
GMP-12	6913355.30	2357813.30	678.0	69.5	608.5	58.5
GMP-13	6913450.40	2357072.90	656.3	62.0	594.3	44.3

[1] The permitted EDE for the facility is 550.0 ft-msl.
na = No available data.
Boring details obtained from lithologic logs and associated data tables and represent condition at time of drilling.

4 GROUNDWATER INVESTIGATION REPORT

4.1 Water Level Measurements

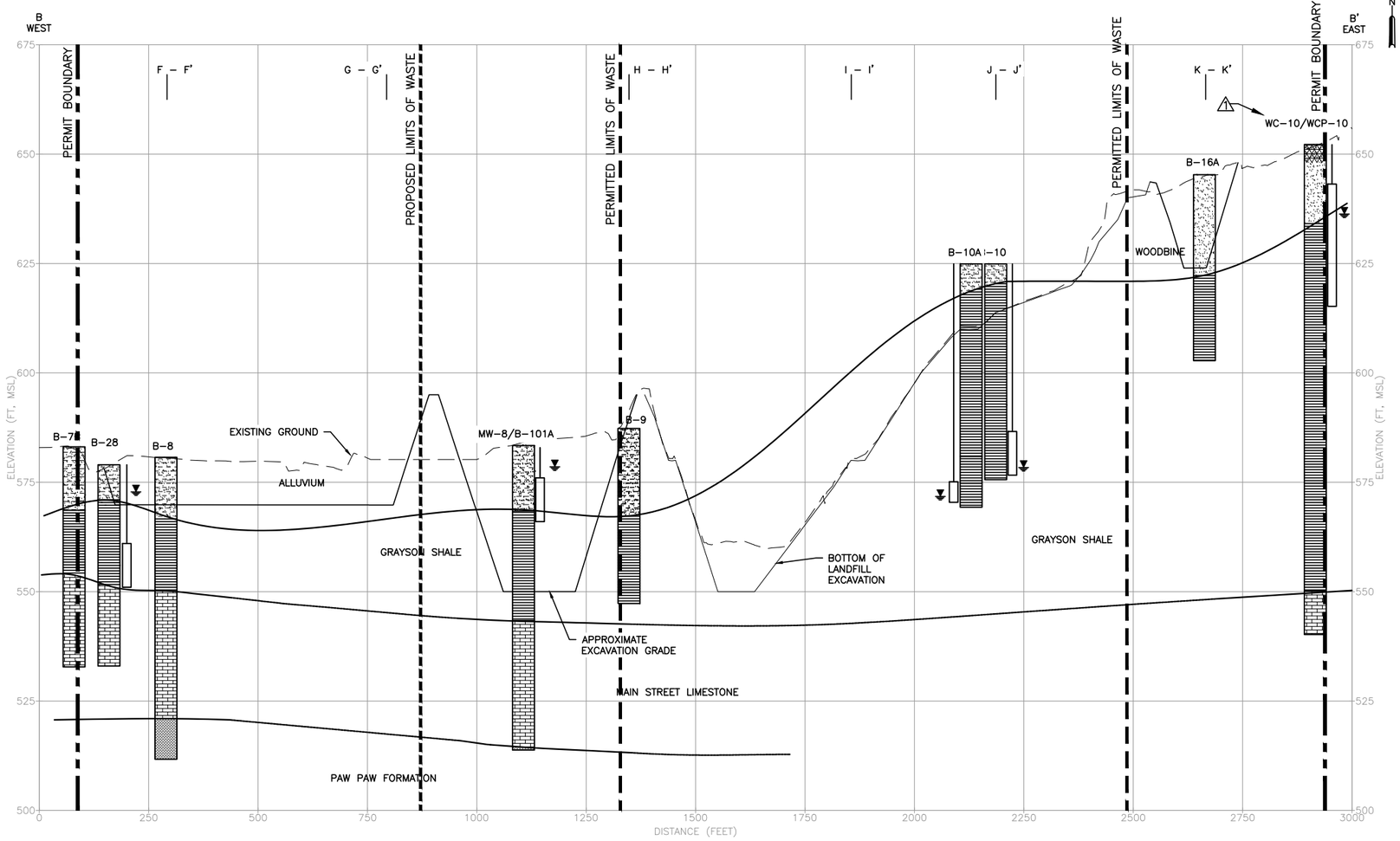
Groundwater at the facility has been evaluated using historical water-level data from the facility's former and existing piezometers and groundwater monitoring wells. Groundwater elevations from the facility's existing monitoring wells and piezometers are provided in Table 4-1 and were measured during monitoring events dating back to August of 1997. These data were obtained from the facility's Subtitle D groundwater database and from water level readings conducted by WCG.

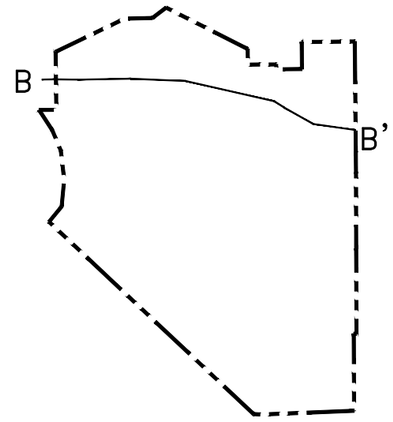
Groundwater elevations from the facility's former monitoring wells and piezometers are provided in Table 4-2 and were measured during monitoring events dating back to March of 1992. Additional historical groundwater elevation data are provided in Appendix IIIG-D as excerpts from previous submittals. These data were obtained from prior subsurface investigation reports. Historical groundwater contour and elevation maps prepare by others are provided in Appendix IIIG-D and include maps from gauging conducted from 2013 to 2022 during prior subsurface investigation and routine groundwater monitoring events. It is noted that some of the historical groundwater maps do not depict a groundwater contour and/or do not distinguish the alluvium and Woodbine groundwater units.

Groundwater potentiometric surface contour maps were prepared from groundwater elevation data gauged during routine groundwater monitoring events by The Carel Corporation in June 2020, June 2021, and June 2022 are presented on Figures IIIG-D-1 through IIIG-D-4 in Appendix IIG-D. A groundwater potentiometric surface contour map prepared from site-wide groundwater elevation data gauged by WCG in September 2022 is presented on Figures IIIG-D-5 in Appendix IIG-D. These groundwater contour maps indicate a groundwater flow regime that is consistent with those depicted historically for the facility. Historical groundwater flow regime and groundwater monitoring system design is further discussed in Appendix IIIH of the SDP.

APPENDIX IIIG-C

SITE GEOLOGIC DATA





SECTION LOCATION MAP
NTS

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- WOODBINE FORMATION
- ALLUVIUM
- GRAYSON SHALE
- MAIN STREET LIMESTONE
- PAW PAW FORMATION
- FILL
- STATIC GROUNDWATER ELEVATION (NOTE 4)
- MONITORING WELL OR PIEZOMETER WITH RISER (TOP) AND FILTER PACK/SCREENED INTERVAL (BOTTOM)

NOTES:

1. CROSS SECTION LOCATION INDICATED IN SECTION LOCATION MAP INSET AND FIGURE IIIG–C–1.
2. EXISTING GROUND SURFACE BASED ON FEBRUARY 2022 AERIAL PHOTOGRAPHY BY FIRMATEK.
3. CROSS SECTION LITHOLOGIC DEPICTIONS AND STRATIGRAPHIC UNIT CORRELATIONS REPRODUCED FROM 2020 GEOLOGIC CROSS SECTION BY GEOSYNTEC CONSULTANTS, INC. AND MODIFIED TO ACCOMMODATE EXISTING SITE CONDITIONS AND PROPOSED FACILITY RECONFIGURATION.
4. STATIC GROUNDWATER ELEVATIONS OBTAINED FROM FACILITY SUBTITLE D GROUNDWATER DATABASE AND PREVIOUS SUBSURFACE INVESTIGATION DATA SUMMARY TABLES.
5. CROSS SECTION CORRELATIONS ARE INTERPOLATED BETWEEN BORINGS. ACTUAL CONDITIONS MAY VARY FROM THOSE DEPICTED.
6. BOREHOLE GRAPHICS ARE HORIZONTALLY EXAGGERATED FOR ILLUSTRATION PURPOSES AND MAY BE OFFSET FROM ONE ANOTHER TO PREVENT OVERLAP IN SECTION SPACE.

STATE OF TEXAS
AARON K. EVANS
11143
LICENSED
PROFESSIONAL GEOSCIENTIST

06/05/2023

0 150 300
HORIZONTAL SCALE IN FEET

0 15 30
VERTICAL SCALE IN FEET

⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

LIST OF REVISIONS:

1. LITHOLOGIC GRAPHICS UPDATED FOR WC–10 UNCONSOLIDATED SEDIMENTS.
2. LITHOLOGIC GRAPHIC ADDED TO LEGEND FOR "FILL" MATERIALS.

- [ ] DRAFT
- [x] FOR PERMITTING PURPOSES ONLY
- [ ] ISSUED FOR CONSTRUCTION

DATE: 12/2022
FILE: 0771–356–11
CAD: IIIG–C–2–13–SECTION.DWG
DRAWN BY: JDW
DESIGN BY: CGM
REVIEWED BY: AKE

Weaver Consultants Group
TBPE REGISTRATION NO. F–3727

PREPARED FOR
TEXAS REGIONAL LANDFILL COMPANY, LP

REVISIONS		
NO.	DATE	DESCRIPTION
1	06/2023	SEE LIST OF REVISIONS

MAJOR PERMIT AMENDMENT
CROSS SECTION B–B'

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

WWW.WCGRP.COM

FIGURE IIIG–C–3

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- STATIC GROUNDWATER ELEVATION (NOTE 4)
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- GRAYSON SHALE
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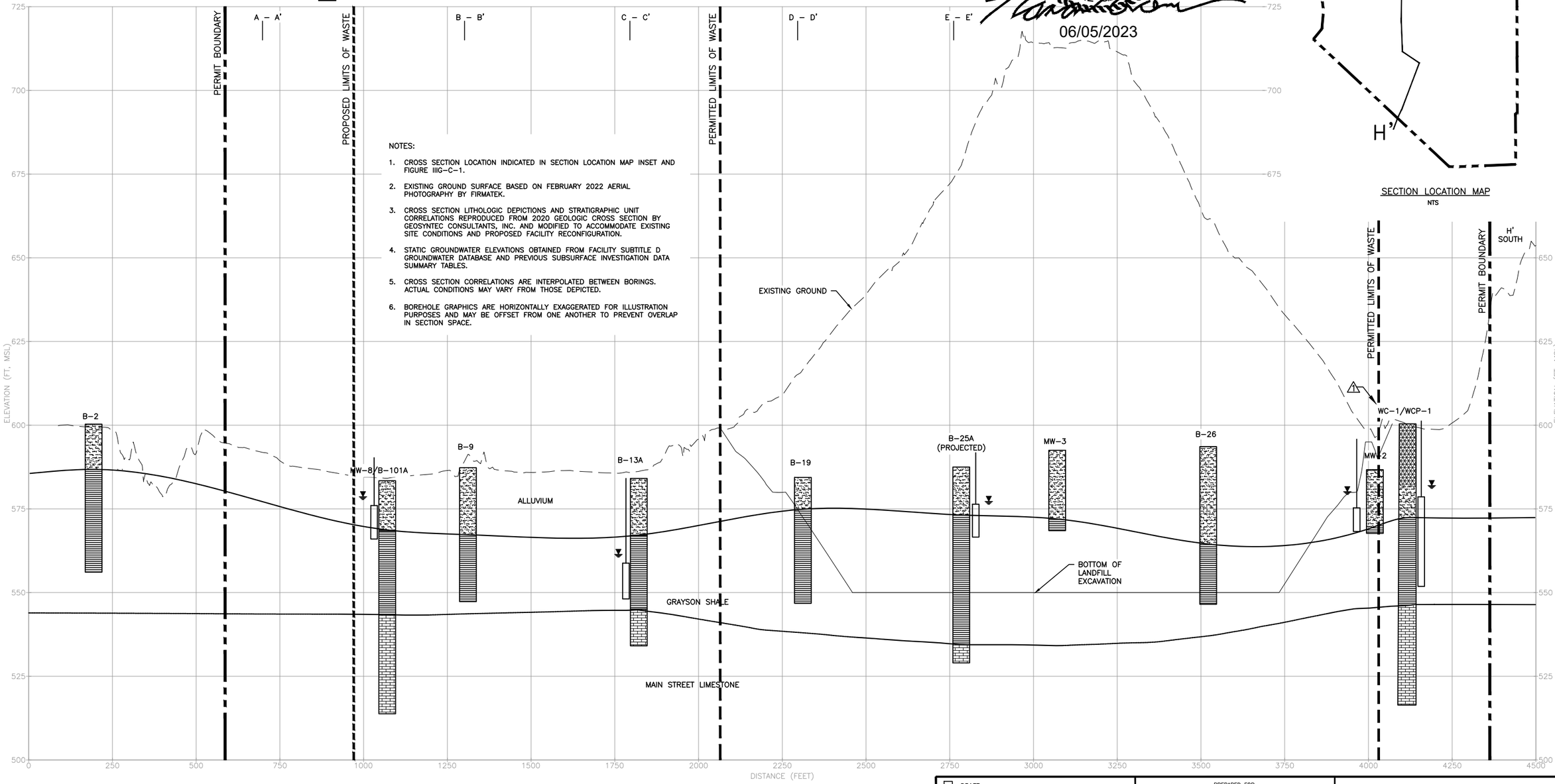
H NORTH



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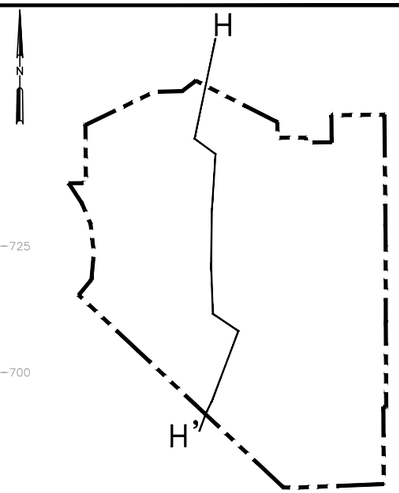

SECTION LOCATION MAP
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TEXAS REGIONAL LANDFILL COMPANY, LP

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NO.	DATE	DESCRIPTION
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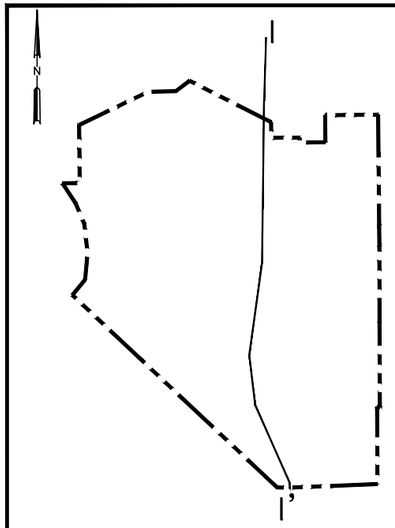
MAJOR PERMIT AMENDMENT
CROSS SECTION H–H'

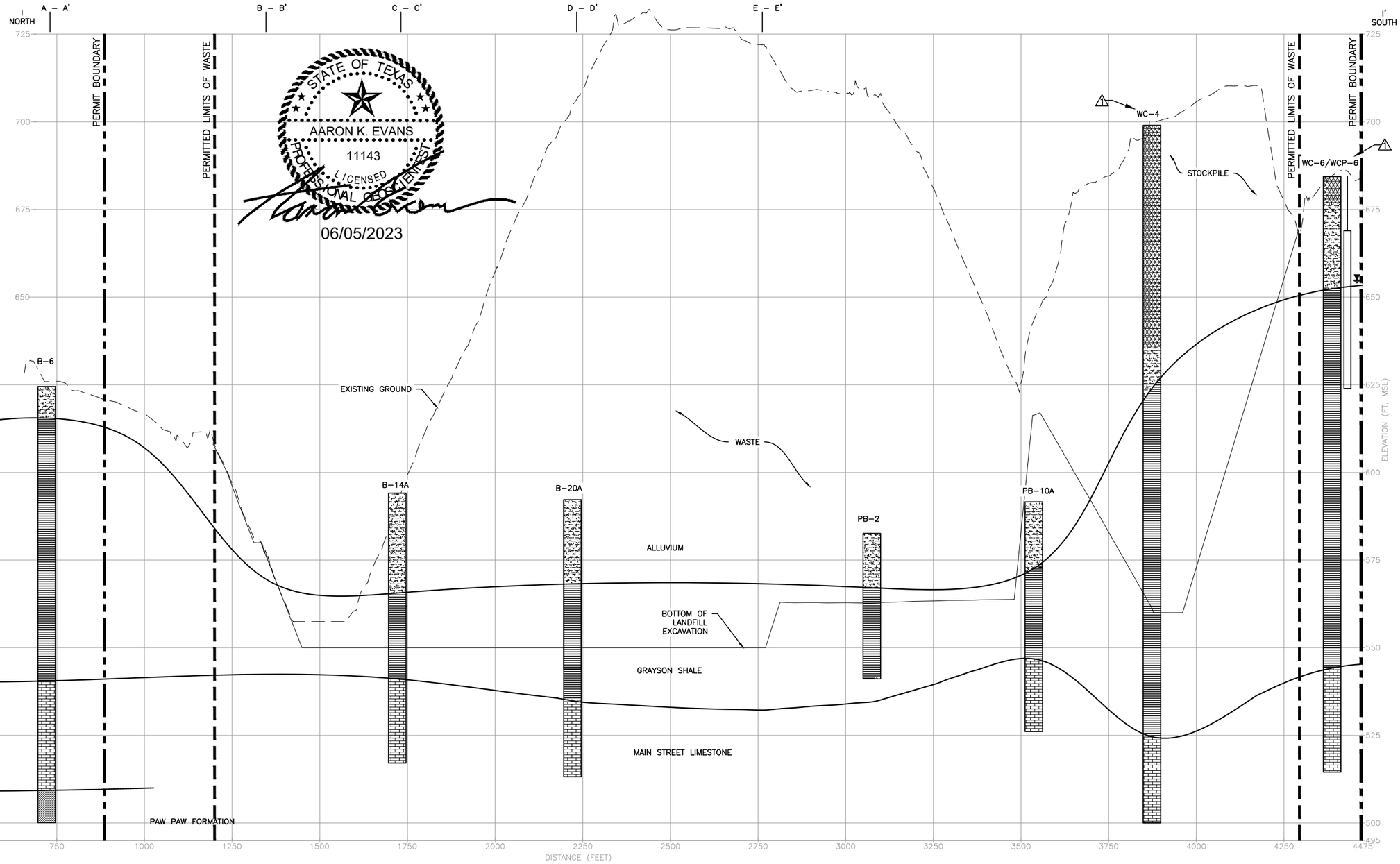
FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

WWW.WCGRP.COM

FIGURE IIIG–C–9



SECTION LOCATION MAP
NTS



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6. BOREHOLE GRAPHICS ARE HORIZONTALLY EXAGGERATED FOR ILLUSTRATION PURPOSES AND MAY BE OFFSET FROM ONE ANOTHER TO PREVENT OVERLAP IN SECTION SPACE.

0 150 300
HORIZONTAL SCALE IN FEET

0 15 30
VERTICAL SCALE IN FEET

⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

LIST OF REVISIONS:

1. LITHOLOGIC GRAPHICS UPDATED FOR WC–4 AND WC–6 UNCONSOLIDATED SEDIMENTS.
2. LITHOLOGIC GRAPHIC ADDED TO LEGEND FOR "FILL" MATERIALS.

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DESIGN BY: CGM
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REVISIONS		
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MAJOR PERMIT AMENDMENT
CROSS SECTION I–I'

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TARRANT COUNTY, TEXAS

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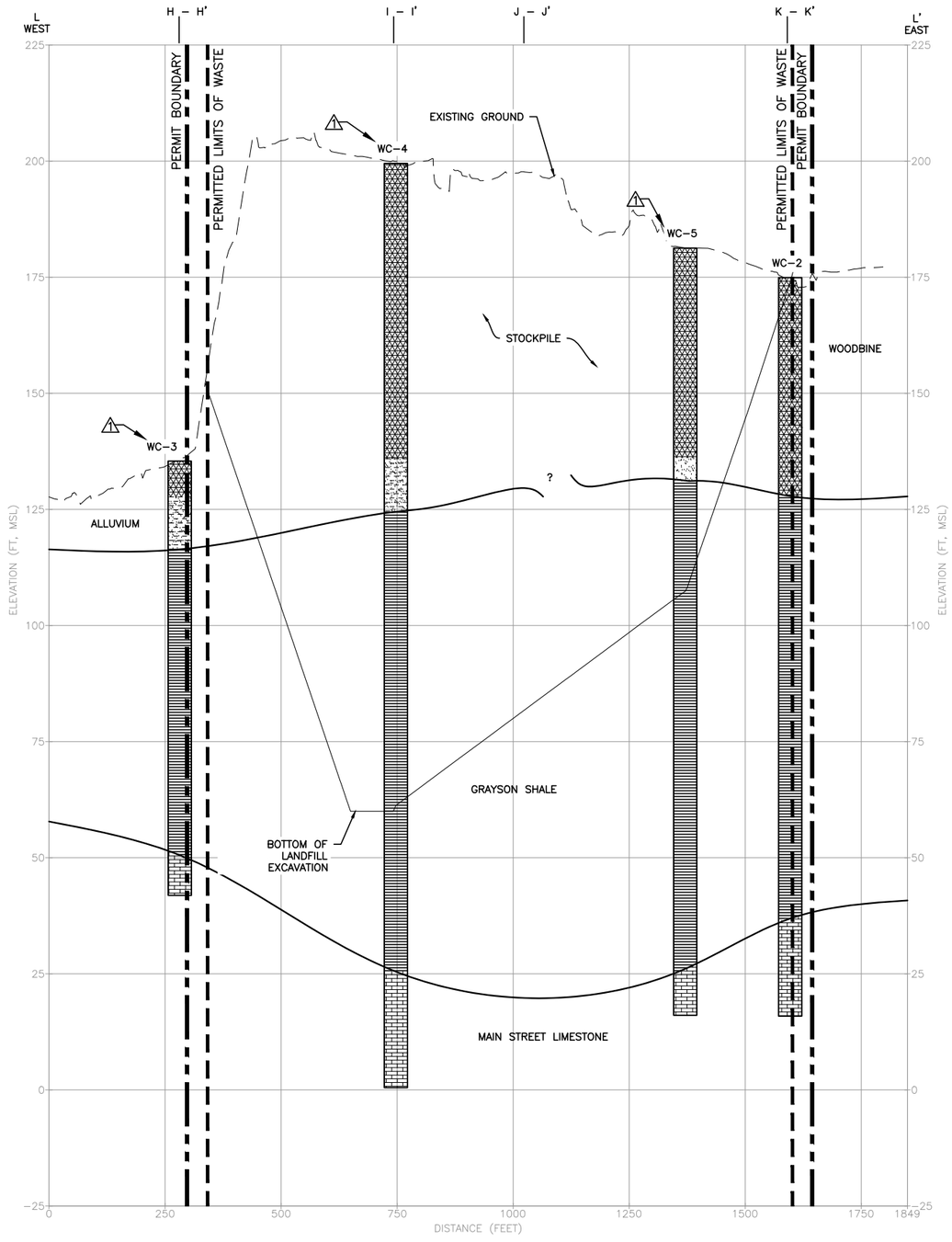
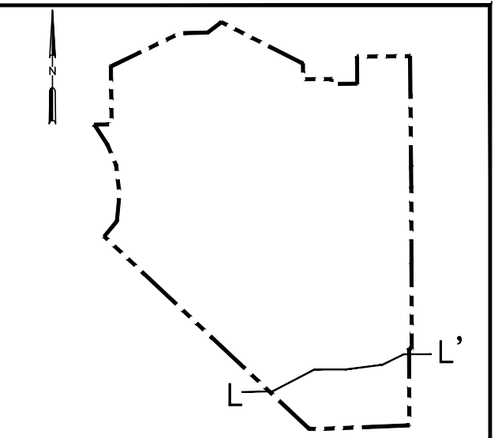
FIGURE IIIG–C–10





SECTION LOCATION MAP
NTS

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- WOODBINE FORMATION
- ALLUVIUM
- GRAYSON SHALE
- MAIN STREET LIMESTONE
- PAW PAW FORMATION
- FILL
- STATIC GROUNDWATER ELEVATION (NOTE 4)
- MONITORING WELL OR PIEZOMETER WITH RISER (TOP) AND FILTER PACK/SCREENED INTERVAL (BOTTOM)

STATE OF TEXAS
AARON K. EVANS
11143
LICENSED PROFESSIONAL GEOLOGIST

06/05/2023

NOTES:

1. CROSS SECTION LOCATION INDICATED IN SECTION LOCATION MAP INSET AND FIGURE IIIG–C–1.
2. EXISTING GROUND SURFACE BASED ON FEBRUARY 2022 AERIAL PHOTOGRAPHY BY FIRMATEK.
3. CROSS SECTION LITHOLOGIC DEPICTIONS AND STRATIGRAPHIC UNIT CORRELATIONS REPRODUCED FROM 2020 GEOLOGIC CROSS SECTION BY GEOSYNTEC CONSULTANTS, INC. AND MODIFIED TO ACCOMMODATE EXISTING SITE CONDITIONS AND PROPOSED FACILITY RECONFIGURATION.
4. STATIC GROUNDWATER ELEVATIONS OBTAINED FROM FACILITY SUBTITLE D GROUNDWATER DATABASE AND PREVIOUS SUBSURFACE INVESTIGATION DATA SUMMARY TABLES.
5. CROSS SECTION CORRELATIONS ARE INTERPOLATED BETWEEN BORINGS. ACTUAL CONDITIONS MAY VARY FROM THOSE DEPICTED.
6. BOREHOLE GRAPHICS ARE HORIZONTALLY EXAGGERATED FOR ILLUSTRATION PURPOSES AND MAY BE OFFSET FROM ONE ANOTHER TO PREVENT OVERLAP IN SECTION SPACE.

⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

LIST OF REVISIONS:

1. LITHOLOGIC GRAPHICS UPDATED FOR WC–3, WC–4, AND WC–5 UNCONSOLIDATED SEDIMENTS.

0 150 300
HORIZONTAL SCALE IN FEET

0 15 30
VERTICAL SCALE IN FEET

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MAJOR PERMIT AMENDMENT
CROSS SECTION L–L'

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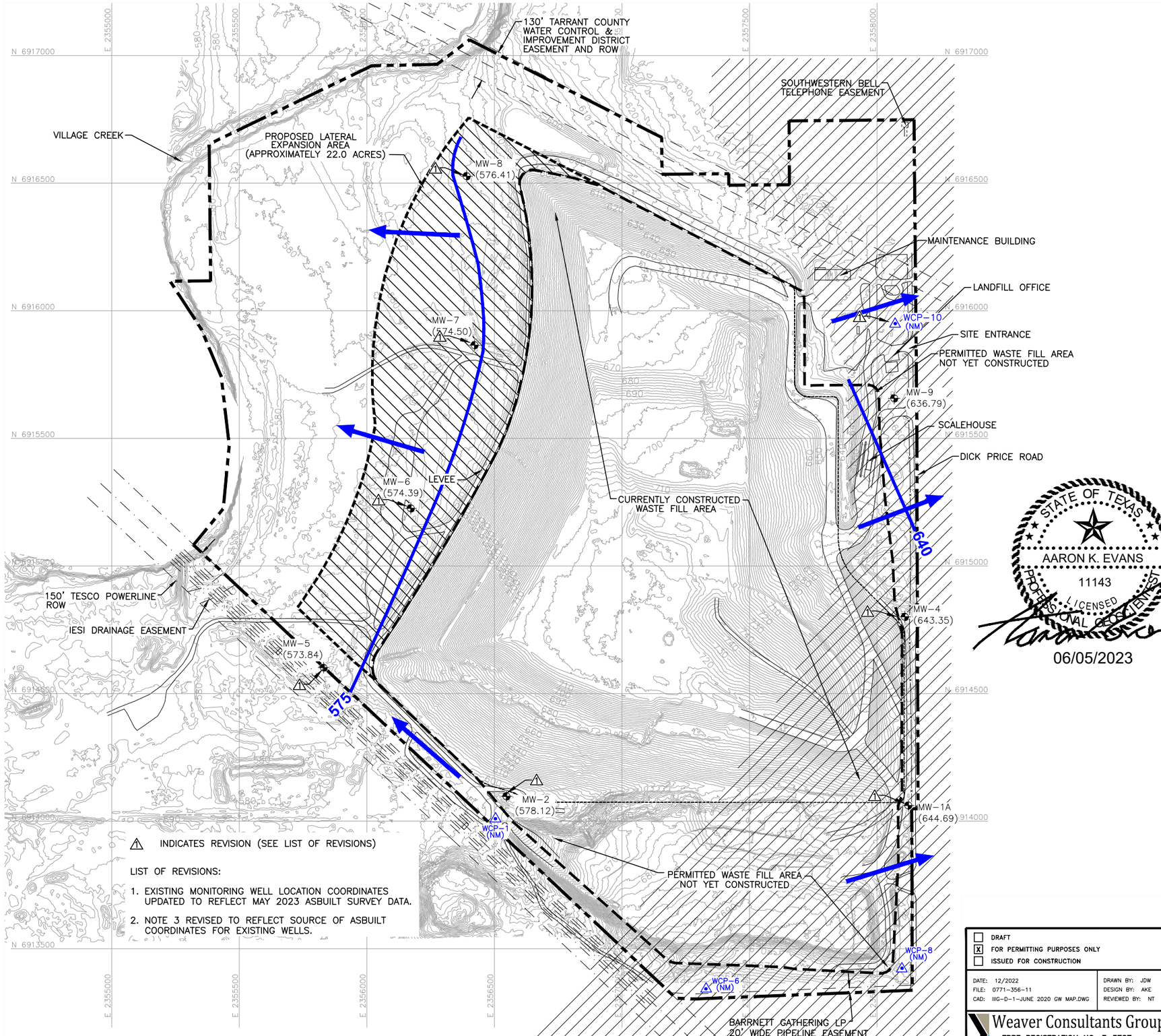
FIGURE IIIG–C–13

APPENDIX IIIG-D

SITE HYDROGEOLOGIC DATA

CONTENTS



N

0 200 400

SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- EASEMENT
- PROPOSED LATERAL EXPANSION AREA
- MW-4 (643.35) — EXISTING GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- WCP-1 (NM) — EXISTING GROUNDWATER PIEZOMETER WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- 640 — GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR IN FT-MSL
- DIRECTION OF GROUNDWATER FLOW
- WOODBINE FORMATION OUTCROP (APPROXIMATE)

STATE OF TEXAS
AARON K. EVANS
11143
LICENSED PROFESSIONAL GEOSCIENTIST

06/05/2023

⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

LIST OF REVISIONS:

1. EXISTING MONITORING WELL LOCATION COORDINATES UPDATED TO REFLECT MAY 2023 ASBUILT SURVEY DATA.
2. NOTE 3 REVISED TO REFLECT SOURCE OF ASBUILT COORDINATES FOR EXISTING WELLS.

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK, FROM AERIAL PHOTOGRAPHY FLOWN 02-17-2022. GRID COORDINATES BASED ON TEXAS STATE PLANE COORDINATE SYSTEM NAD 83.
2. THE EXISTING PERMIT BOUNDARY REPRODUCED FROM THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
3. ⚠ GROUNDWATER MONITORING WELL LOCATION COORDINATES OBTAINED FROM MAY 2023 MONITORING WELL ASBUILT SURVEY REPORT BY WEAVER CONSULTANT GROUP (SEE GWSAP PAGE IIIH-A-22). PIEZOMETER LOCATION COORDINATES OBTAINED FROM APPENDIX 4 (GEOLOGY REPORT) OF THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN PREPARED BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
4. APPROXIMATE WOODBINE FORMATION OUTCROP REPRODUCED FROM APPENDIX 5, DRAWING 5A-1 OF THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN PREPARED BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
5. GROUNDWATER ELEVATIONS GAUGED BY THE CAREL CORPORATION IN JUNE 2020 AND POSTED IN FT-MSL BY EACH MONITORING WELL AND PIEZOMETER LOCATION. PIEZOMETERS NOT GAUGED DURING THIS EVENT.
6. ALLUVIUM GROUNDWATER FLOWS TO THE WEST TOWARD TOWARD VILLAGE CREEK. WOODBINE FORMATION GROUNDWATER FLOWS TOWARD THE EAST/NORTHEAST IN DIRECTION OF FORMATIONAL DIP.
7. NM = GROUNDWATER ELEVATION NOT MEASURED.

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MAJOR PERMIT AMENDMENT JUNE 2020 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

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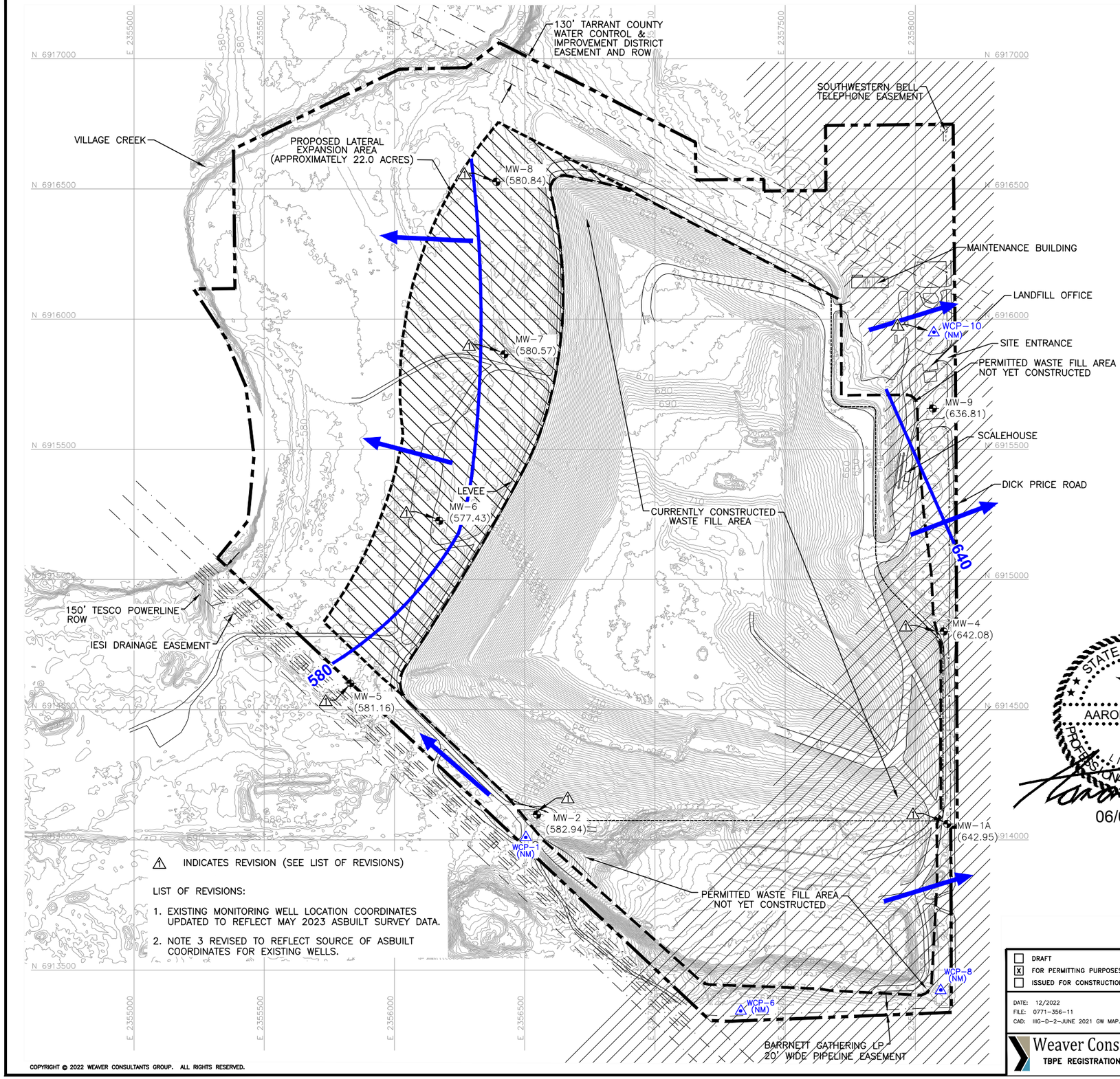
FIGURE IIIG-D-1



N

0 200 400

SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- EASEMENT
- PROPOSED LATERAL EXPANSION AREA
- MW-4 (642.08) — EXISTING GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- WCP-1 (NM) — EXISTING GROUNDWATER PIEZOMETER WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- 640 — GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR IN FT-MSL
- DIRECTION OF GROUNDWATER FLOW
- WOODBINE FORMATION OUTCROP (APPROXIMATE)

⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

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1. EXISTING MONITORING WELL LOCATION COORDINATES UPDATED TO REFLECT MAY 2023 ASBUILT SURVEY DATA.
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STATE OF TEXAS
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LICENSED PROFESSIONAL GEOSCIENTIST

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3. ⚠2 GROUNDWATER MONITORING WELL LOCATION COORDINATES OBTAINED FROM MAY 2023 MONITORING WELL ASBUILT SURVEY REPORT BY WEAVER CONSULTANT GROUP (SEE GWSAP PAGE IIIH-A-22). PIEZOMETER LOCATION COORDINATES OBTAINED FROM APPENDIX 4 (GEOLOGY REPORT) OF THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN PREPARED BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
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6. ALLUVIUM GROUNDWATER FLOWS TO THE WEST TOWARD TOWARD VILLAGE CREEK. WOODBINE FORMATION GROUNDWATER FLOWS TOWARD THE EAST/NORTHEAST IN DIRECTION OF FORMATIONAL DIP.
7. NM = GROUNDWATER ELEVATION NOT MEASURED.

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REVIEWED BY: AKE

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REVISIONS

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1	06/2023	SEE LIST OF REVISIONS

MAJOR PERMIT AMENDMENT JUNE 2021 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

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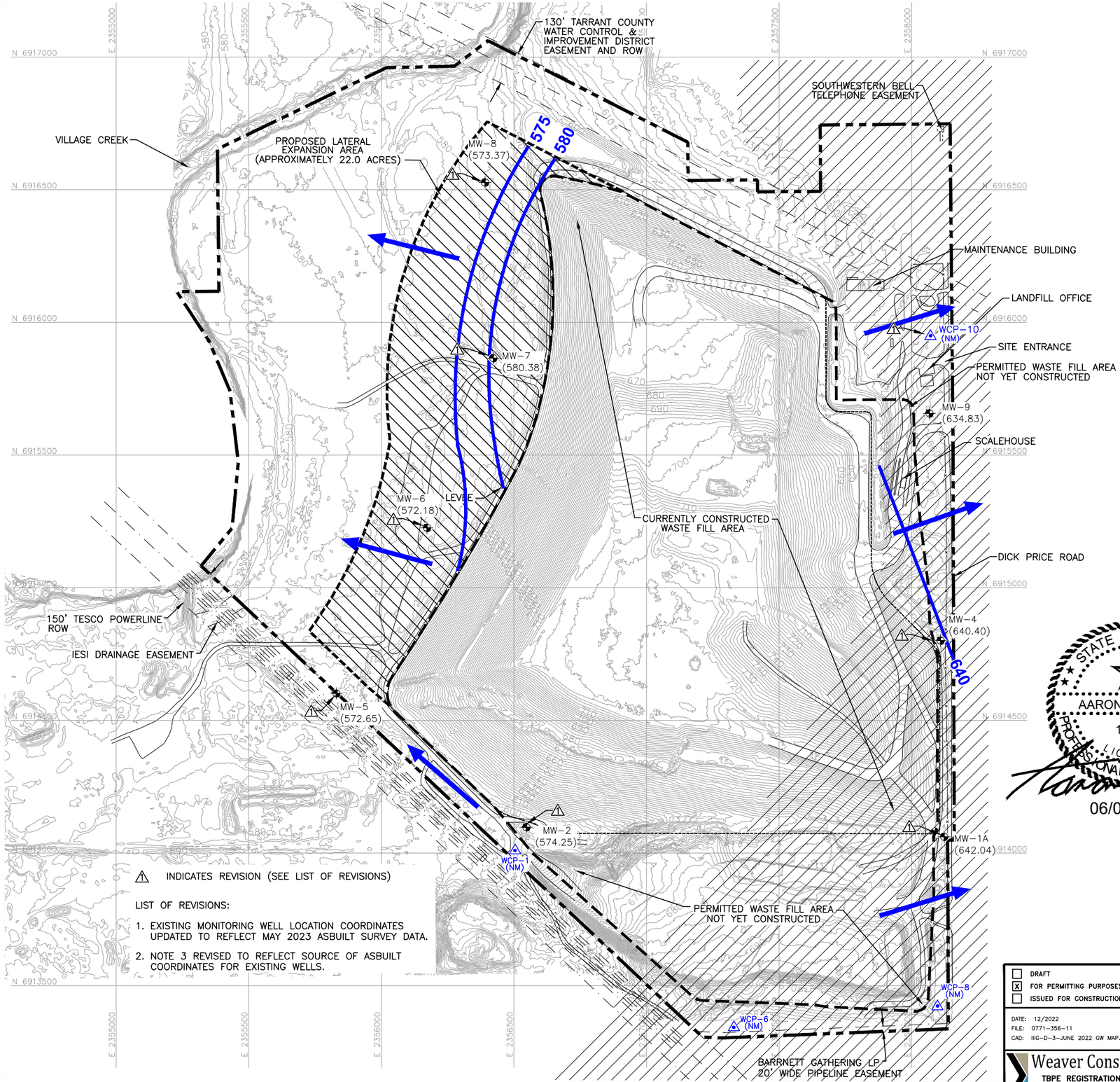
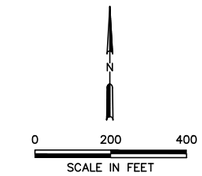
FIGURE IIIG-D-2





LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- EASEMENT
- PROPOSED LATERAL EXPANSION AREA
- MW-4 (640.40) — EXISTING GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- WCP-1 (NM) — EXISTING GROUNDWATER PIEZOMETER WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- 640 — GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR IN FT-MSL
- DIRECTION OF GROUNDWATER FLOW
- WOODBINE FORMATION OUTCROP (APPROXIMATE)

⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

LIST OF REVISIONS:

1. EXISTING MONITORING WELL LOCATION COORDINATES UPDATED TO REFLECT MAY 2023 ASBUILT SURVEY DATA.
2. NOTE 3 REVISED TO REFLECT SOURCE OF ASBUILT COORDINATES FOR EXISTING WELLS.

STATE OF TEXAS
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06/05/2023

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7. NM = GROUNDWATER ELEVATION NOT MEASURED.

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MAJOR PERMIT AMENDMENT JUNE 2022 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP

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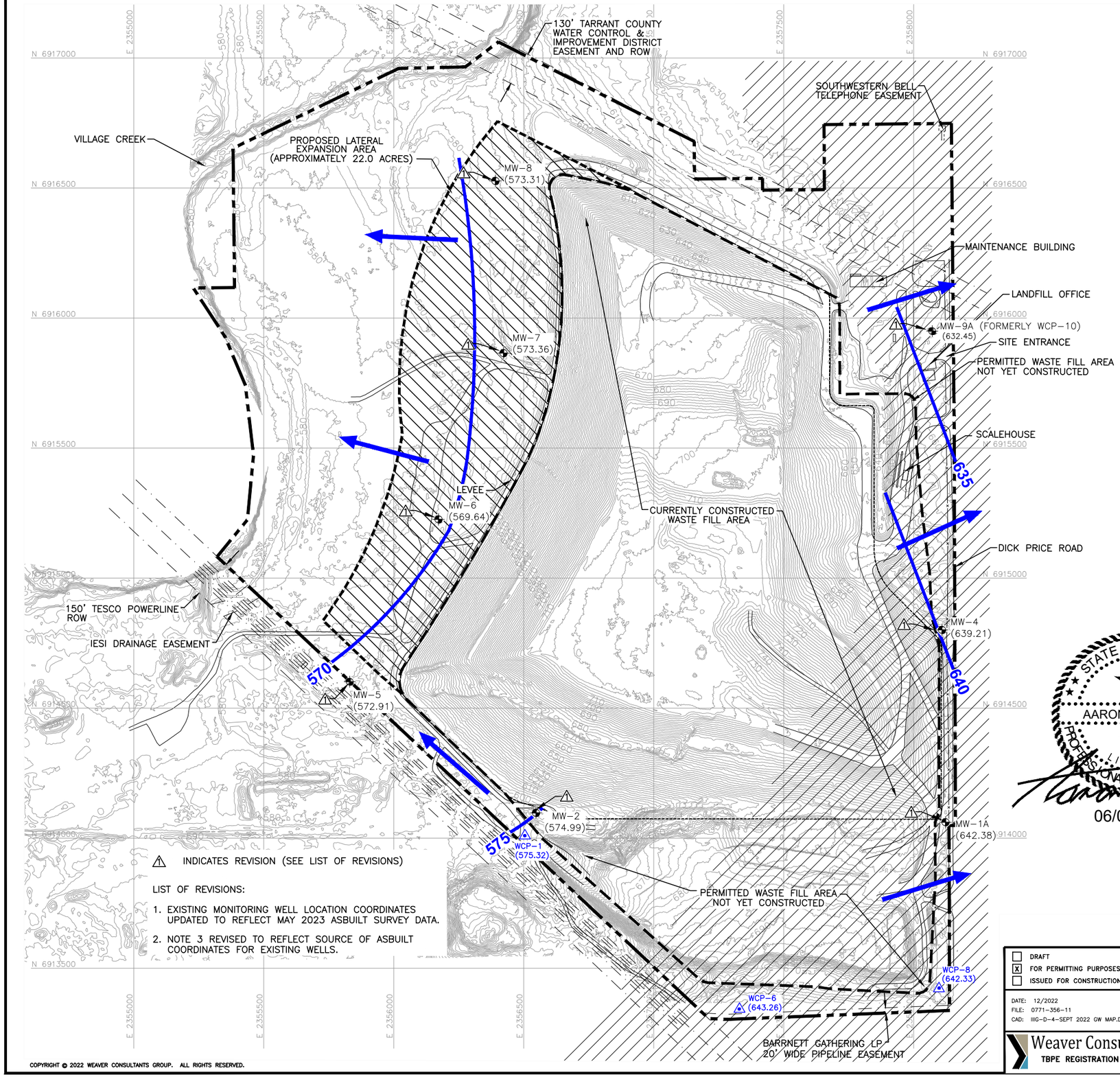
FIGURE IIIG-D-3

0:\0771\356\EXPANSION 2022\PART IIIH\IIG\IIG-D-3 JUNE 2022 GW MAP.dwg, jpohr, 1:2



⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

LIST OF REVISIONS:

1. EXISTING MONITORING WELL LOCATION COORDINATES UPDATED TO REFLECT MAY 2023 ASBUILT SURVEY DATA.
2. NOTE 3 REVISED TO REFLECT SOURCE OF ASBUILT COORDINATES FOR EXISTING WELLS.

N

0 200 400

SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- EASEMENT
- PROPOSED LATERAL EXPANSION AREA
- MW-9A (632.45) — EXISTING GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- WCP-1 (575.32) — EXISTING GROUNDWATER PIEZOMETER WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- 640 — GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR IN FT-MSL
- DIRECTION OF GROUNDWATER FLOW
- WOODBINE FORMATION OUTCROP (APPROXIMATE)

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3. ⚠ GROUNDWATER MONITORING WELL LOCATION COORDINATES OBTAINED FROM MAY 2023 MONITORING WELL ASBUILT SURVEY REPORT BY WEAVER CONSULTANT GROUP (SEE GWSAP PAGE IIIH-A-22). PIEZOMETER LOCATION COORDINATES OBTAINED FROM APPENDIX 4 (GEOLOGY REPORT) OF THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN PREPARED BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
4. APPROXIMATE WOODBINE FORMATION OUTCROP REPRODUCED FROM APPENDIX 5, DRAWING 5A-1 OF THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN PREPARED BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
5. GROUNDWATER ELEVATIONS GAUGED BY WCG IN SEPTEMBER 2022 AND POSTED IN FT-MSL BY EACH MONITORING WELL AND PIEZOMETER LOCATION.
6. ALLUVIUM GROUNDWATER FLOWS TO THE WEST TOWARD TOWARD VILLAGE CREEK. WOODBINE FORMATION GROUNDWATER FLOWS TOWARD THE EAST/NORTHEAST IN DIRECTION OF FORMATIONAL DIP.

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MAJOR PERMIT AMENDMENT SEPTEMBER 2022 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP

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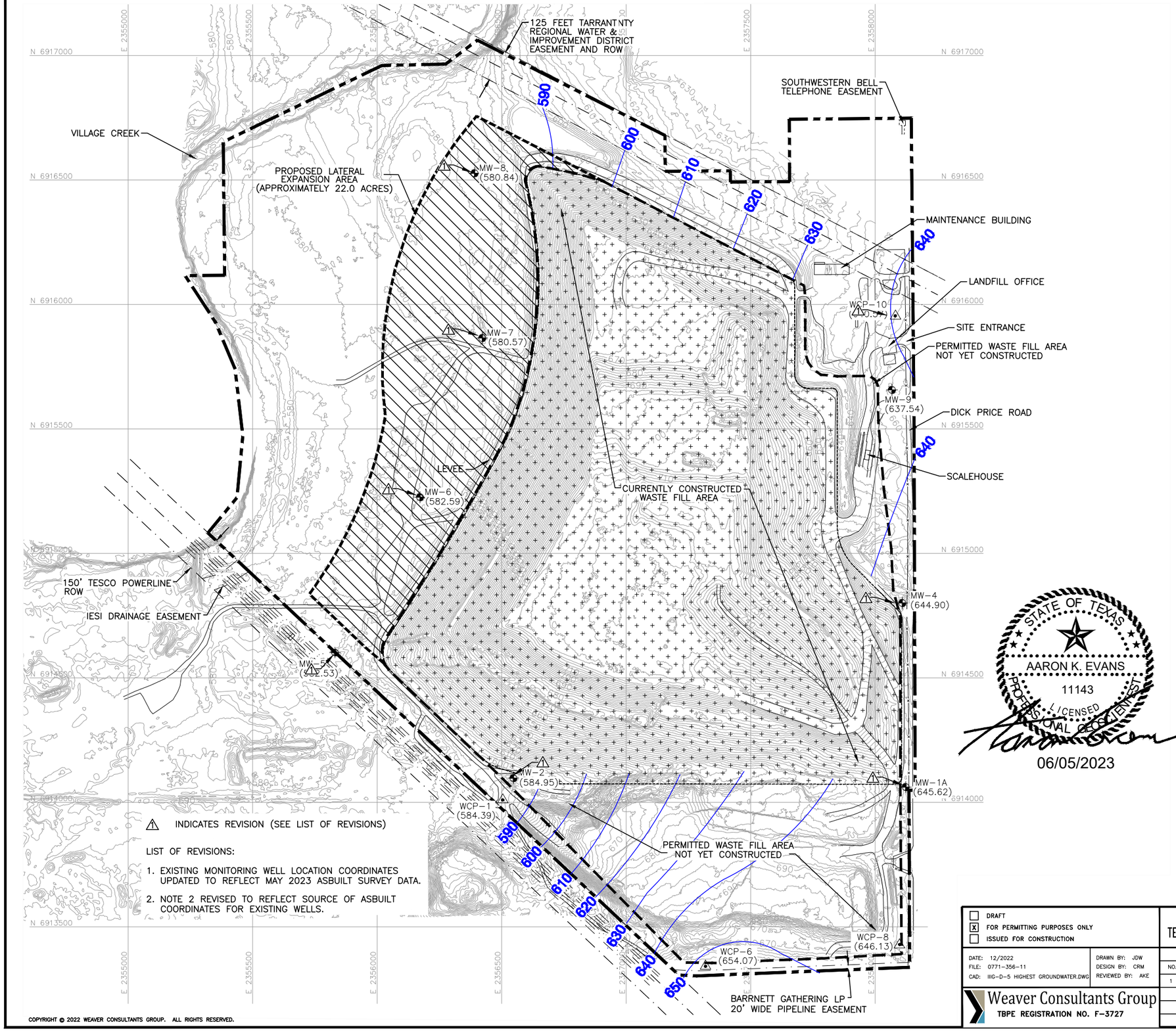
FIGURE IIIG-D-4



⚠ INDICATES REVISION (SEE LIST OF REVISIONS)

LIST OF REVISIONS:

1. EXISTING MONITORING WELL LOCATION COORDINATES UPDATED TO REFLECT MAY 2023 ASBUILT SURVEY DATA.
2. NOTE 2 REVISED TO REFLECT SOURCE OF ASBUILT COORDINATES FOR EXISTING WELLS.

N

0 200 400

SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- MW-2 (583.95) — EXISTING GROUNDWATER MONITORING WELL
- WCP-1 (584.39) — EXISTING GROUNDWATER PIEZOMETER
- 640 — HIGHEST MEASURED GROUNDWATER ELEVATION SURFACE CONTOUR (SEE NOTE 4)
- CURRENTLY CONSTRUCTED WASTE FILL AREA
- PROPOSED LATERAL EXPANSION AREA

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK FROM AERIAL PHOTOGRAPHY FLOWN 02-17-2022.
2. GROUNDWATER MONITORING WELL LOCATION COORDINATES OBTAINED FROM MAY 2023 MONITORING WELL ASBUILT SURVEY REPORT BY WEAVER CONSULTANT GROUP (SEE GWSAP PAGE IIIH-A-22).
3. GROUNDWATER ELEVATION DATA FOR MONITORING WELLS OBTAINED FROM THE FACILITY'S SUBTITLE D GROUNDWATER MONITORING DATABASE. GROUNDWATER DATA FOR PIEZOMETERS OBTAINED FROM INVESTIGATION REPORTS.
4. GROUNDWATER CONTOURS WERE PRODUCED USING EACH POINTS HISTORICALLY HIGHEST MEASURED GROUNDWATER ELEVATION AND DO NOT REPRESENT A SINGLE GROUNDWATER MONITORING EVENT OR ACTUAL GROUNDWATER FLOW.

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Highest Measured Groundwater Data

Measurement Point	Groundwater Elevation (FT-MSL)	Measurment Date
MW-1A	645.62	7/19/2019
MW-2	583.95	5/17/2019
MW-4	644.90	5/17/2019
MW-5	582.53	6/23/2004
MW-6	582.89	6/21/2016
MW-7	580.57	6/1/2021
MW-8	580.84	6/1/2021
MW-9	637.54	5/17/2019
WCP-1	584.39	5/17/2019
WCP-6	654.07	6/25/2019
WCP-8	646.13	5/17/2019
WCP-10	640.57	5/17/2019

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CAD: IIIG-D-5 HIGHEST GROUNDWATER.DWG

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DESIGN BY: CRM
REVIEWED BY: AKE

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REVISIONS		
NO.	DATE	DESCRIPTION
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MAJOR PERMIT AMMENDMENT
HIGHEST MEASURED GROUNDWATER ELEVATION MAP

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FIGURE IIIG-D-5

O:\0771\356\EXPANSION 2022\PART III\IIIG\IIIG-D-5 HIGHEST GROUNDWATER.dwg, jpuhr, 1:2

ADDITIONAL GROUNDWATER ELEVATION DATA TABLES

Table 4-14(a)
Fort Worth C&D Landfill
Water Level Elevations – Monitoring Wells

Event Date	MW-1A	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9
8/13/97	636.15	576.94	576.78	633.99					
12/8/97	635.7	574.96	574.96	636.3					
5/9/98	636	581.1	589.1	633.8					
6/26/98	635.6	577.08	576.62	633.26					
6/28/99	635.1	577.2	575.2	633.19					
6/27/00	636.3	583.25	573.6	633.5					
6/25/01	636.13	570.82	573.6	633.9					
10/9/01	637.65	571.04	572.70	634.51	570.64	570.48	568.89	568.86	629.39
3/12/03	N/A	N/A		N/A	574.88	572.67	575.70	575.94	611.32
6/18/03	636.05	574.04		628.95	574.07	570.92	574.31	574.01	610.43
9/18/03	N/A	N/A		N/A	572.92	DRY	570.30	570.64	610.23
12/18/03	N/A	N/A		N/A	573.08	DRY	571.85	570.83	610.31
3/8/04	N/A	N/A		N/A	N/A	572.49	N/A	N/A	N/A
6/23/04	637.13	575.19		634.06	582.53	574.91	577.80	577.07	611.42
9/9/04	N/A	N/A		N/A	N/A	573.30	N/A	N/A	N/A
6/21/05	639.46	572.27		635.35	572.21	573.17	572.97	572.50	613.02
6/13/06	638.15	573.08		635.77	572.95	573.17	573.53	573.20	612.75
6/29/07	638.09	579.51		636.38	578.60	576.73	576.60	579.84	614.26
11/7/07	638.17	575.66		636.77	572.80	573.10	572.48	572.57	614.32
1/1/08	638.04	575.81		636.98	573.06	573.18	572.32	572.60	614.64
6/26/08	638.25	571.98		637.46	573.06	573.57	574.41	576.32	614.62
8/27/08	638.48	571.59		637.04	572.15	572.66	571.66	571.25	614.12
6/18/09	636.54	571.38		636.45	572.55	DRY	574.51	574.38	614.01
6/3/10	637.45	573.89		638.70	573.23	573.84	575.68	577.30	616.30
6/9/11	638.72	562.99		638.35	572.65	572.31	574.52	576.12	614.96
6/5/12	640.07	572.69		639.28	572.87	573.41	573.35	575.96	634.96
6/20/13	638.50	570.97		636.89	DRY	DRY	571.27	570.39	617.06
7/1/2014	637.50	561.84		635.58	572.10	DRY	572.01	573.65	617.06

Table 4-14(b)
Fort Worth C&D Landfill
Water Level Elevations – Piezometers

Event Date	B-1	B-3	B-10	B-10A	B-11	B-13	B-13A	B-17	B-21A	B-22	B-24A	B-25	B-28
7/28/89	567.00	593.00	580.00	575.13	570.00	576.00	*	573.00	587.89	631.00	550.23	578.00	577.54
8/14/89	569.00	592.00	*	573.29	572.00	576.00	572.73	572.00	586.12	631.00	549.99	578.00	585.18
8/25/89	566.00	590.00	577.00	575.52	572.00	575.00	572.02	572.00	586.23	631.00	549.98	578.00	568.68
9/25/89	565.50	589.00	576.00	575.75	571.00	575.00	571.60	572.00	591.53	631.00	550.84	577.00	569.08
6/26/91	565.00	596.00	578.00	574.65	571.00	574.00	575.09	571.00	601.97	630.00	552.59	576.00	571.78
7/5/91	567.20	595.10	577.09	573.98	570.95	574.52	580.25	570.74	609.07	631.21	554.55	575.53	574.25
7/19/91	*	*	577.28	573.19	*	573.59	581.58	*	[537.6]	*	557.30	*	574.17
7/29/91	565.35	595.10	576.93	528.50	570.11	573.16	579.87	570.15	606.77	*	557.52	574.21	574.12
8/23/91	*	*	577.33	*	570.02	572.68	579.05	*	603.75	*	*	*	573.95
11/11/91	569.65	596.27	577.80	573.03	572.84	574.94	578.64	572.32	592.45	630.92	558.22	576.26	573.87
12/31/91	570.89	590.34	577.78	578.92	574.73	580.06	579.95	573.08	592.30	631.33	558.6	582.60	574.48
3/10/92	570.43	586.73	577.77	578.90	573.66	580.52	578.92	572.56	592.90	631.97	559.10	583.42	573.12
3/17/92	569.48	595.07	577.69	578.92	573.17	579.69	578.14	572.29	596.87	632.13	560.15	582.91	573.39
3/25/92	*	*	*	578.93	*	578.81	578.25	*	597.45	*	561.18	*	574.37
4/2/92	568.39	598.45	577.86	579.25	572.34	578.46	576.38	571.99	595.36	632.40	562.52	581.47	574.19
4/17/92	567.67	595.08	571.49	572.38	570.20	575.52	575.18	571.55	592.81	632.51	563.78	580.78	574.10
5/7/92	566.77	593.32	572.08	572.50	571.27	574.53	574.33	571.20	591.78	632.49	565.03	579.93	573.68
6/12/92	567.90	593.33	571.08	Dry	572.03	577.94	573.66	571.55	590.99	632.67	566.06	581.08	573.39
7/7/92	*	595.47	570.63	578.88	572.40	578.00	575.10	571.95	593.13	632.78	568.84	580.77	573.38
8/4/92	566.30	599.73	570.89	578.92	571.18	576.13	577.12	570.94	598.25	633.05	570.05	579.20	573.26
9/3/92	565.55	600.93	577.72	571.90	570.43	574.99	575.27	570.33	592.90	632.76	573.10	577.97	574.35
10/2/92	564.98	596.32	577.81	571.70	570.07	574.12	573.00	569.99	590.98	632.65	572.88	577.17	572.42
10/29/92	565.02	593.63	577.68	571.70	569.79	573.46	572.45	569.60	590.57	632.45	572.95	576.37	572.27
12/24/92	566.39	598.83	Dry	*	570.83	574.93	*	570.50	*	632.76	*	576.81	*
2/24/93	567.14	*	570.46	*	571.96	576.96	*	571.32	*	632.99	*	579.01	*
7/19/93	*	*	577.68	*	571.28	574.96	*	571.09	*	633.01	*	577.50	*
9/6/93	*	*	577.68	*	569.60	572.81	*	569.45	*	632.38	*	575.25	*
10/8/93	*	*	577.68	*	569.32	572.28	*	569.10	*	632.33	*	574.78	*

*Indicates that water level was not taken

[Anomalous data – likely a typographical error carried forward from 1993 report]

Note: Original piezometers P-7, P-8, and P-11 on the existing site are not included on this table because they were apparently screened across several different lithologic units and no construction details are available for these piezometers. In addition, no water levels are available for these piezometers.

4.3 Water Levels Observed During Drilling

This section discusses groundwater observed during drilling. Table 4-14(c) lists groundwater observations noted on the boring, piezometer, or monitor well drilling logs. Borings that are not listed in this table had no groundwater observation on the boring log. The depth at which groundwater was encountered and records of after-equilibrium measurements noted are included in Tables 4-14(a) and 4-14(b). Borehole water level data are generally noted on logs. However, because some of the borings were drilled with water, it was not generally possible to distinguish between drilling water and formation water. Borehole fluid level data were not used in engineering calculations because the piezometers were properly constructed and screened to provide water level data on individual strata; these data are much more reliable than borehole data.

Table 4-14(c)
Fort Worth C&D Landfill
Groundwater Observed During Drilling

Boring No.	Boring Date	Boring Depth (ft)	Surface Elevation (msl)	Water Level During Drilling Depth to Water (ft)
B-205	12-20-2013	32.6	600.45	29.1
B-206	12-28-2013	39.5	657.0	22.5
B-101 (MW-8)	8-29-2001	20.0	583.4	15.0
B-102 (MW-7)	8-29-2001	15.0	582.4	11.8
B-103 (MW-6)	8-29-2001	15.0	584.6	13.1
B-104 (MW-5)	8-29-2001	15.0	583.1	11.4
B-105 (MW-9)	8-29-2001	40.0	660.9	30.0
B-28	5-28-1991	50.0	583.0	9.0
B-1 (PB-1)	8-12-1986	28.0	589.5	11.0
B-8 (PB-8)	8-11-1986	45.5	586.5	11.5
B-1	7-15-1989	16.8	573.9	8.4
B-2	7-13-1989	44.2	600.3	12.0
B-4	7-14-1989	20.0	578.2	7.9
B-5	7-12-1989	34.5	578.0	8.0
B-7	6-21-1989	22.0	583.1	8.7
B-8	7-22-1989	69.0	580.7	6.0
B-9	6-23-1989	40.0	587.3	16.0
B-11	6-21-1989	22.0	582.4	7.0
B-12	6-20-1989	33.2	581.5	4.0
B-13	6-20-1989	23.5	584.1	9.0
B-15	6-15-1989	36.0	626.0	28.0
B-16A	6-19-1989	42.5	645.3	15.0
B-17	7-10-1989	25.7	586.5	14.8
B-18	7-6-1989	34.3	583.5	6.3
B-23	7-5-1989	64.5	582.5	5.0
B-24	7-7-1989	17.4	582.4	3.8
B-25	7-10-1989	21.1	587.5	10.0

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIH
GROUNDWATER SAMPLING AND ANALYSIS PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Blvd., Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

data. These data are summarized in Figure IIIH-A-2 (Groundwater Monitoring Well Details) in Appendix IIH-A. Typical groundwater monitoring well specifications are depicted in Figure IIIH-A-3 in Appendix IIIH-A. Review of monitoring well installation records indicate that the facility's existing monitoring wells were constructed in accordance with the requirements of Title 30 TAC §330.421.

All parts of the groundwater monitoring system will be operated and maintained so that they perform to design specifications throughout the life of the monitoring program. Any monitoring well that is damaged to the extent that it is no longer suitable for sampling will be reported to the TCEQ who may make a determination about whether to repair or replace the well. Well plugging and abandonment will be performed by a Texas-licensed monitoring well driller in accordance with TCEQ and any other applicable regulatory requirements. No monitoring well will be plugged and abandoned without prior written authorization from TCEQ. Any replacement monitoring well installation will be performed in accordance with Title 30 TAC §330.421 by a Texas-licensed monitoring well driller. Monitoring well construction will provide for the maintenance of the integrity of the borehole, collection of representative groundwater samples from the uppermost aquifer, and prevention of migration of groundwater and surface water within the borehole in accordance with Title 30 TAC §330.421(a).

New or replacement monitoring well installations will be surveyed for horizontal and vertical control by a Texas-licensed Registered Professional Land Surveyor prior to initiation of groundwater sampling in accordance with Title 30 TAC §330.421(d).

2.3 Groundwater Monitoring Program

Facility detection monitoring wells will be sampled annually for the detection monitoring parameters listed in 40 Code of Federal Regulations (CFR), Part 258, Appendix I, which are also listed in Table 5-1 in Section 5.1. Details regarding groundwater sampling, analyses, and statistical comparison procedures are discussed in the following sections of Appendix IIIH.

In accordance with Title 30 TAC §403(e)(3), the facility will promptly notify the executive director, and any local pollution agency with jurisdiction that has requested to be notified, in writing of changes in facility construction or operation or changes in adjacent property that affect or are likely to affect the direction and rate of groundwater flow and the potential for detecting groundwater contamination and that may require the installation of additional monitoring wells or sampling points. Such additional wells or sampling points require a modification of the site development plan which will be requested in accordance with Title 30 TAC §305.70(j).

APPENDIX IIIH-A

GROUNDWATER MONITORING SYSTEM

CONTENTS

GROUNDWATER MONITORING SYSTEM CERTIFICATION

General Site Information

Site: Fort Worth C&D Landfill

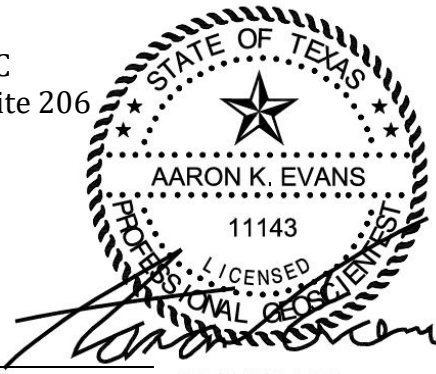
Site Location: Tarrant County

MSW Permit No.: 1983E

Qualified Groundwater Scientist Statement

I, Aaron K. Evans, am a registered professional geoscientist in the State of Texas and a qualified groundwater scientist as defined in Title 30 TAC §330.3(120). I have reviewed the groundwater monitoring system and supporting details contained herein. In my professional opinion, the groundwater monitoring system design and construction details are in compliance with the groundwater monitoring requirements specified in Title 30 TAC §§330.401, 330.403, 330.405, 330.407, 330.409, 330.419, and 330.421. This system has been designed for the Fort Worth C&D Landfill. The only warranty made by me in connection with this document is that I have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of my profession, practicing in the same or similar locality. No other warranty, expressed or implied, is intended.

Firm/Address: Weaver Consultants Group, LLC
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109



Signature: _____

Aaron K. Evans, P.G., Texas License No. 11143

06/05/2023

Date: 6/5/2023

GROUNDWATER MONITORING WELL LITHOLOGIC LOGS AND MONITOR WELL DATA SHEETS

WEAVER CONSULTANTS GROUP, LLC

LOG OF BORING: MW-9A

Project Title: Fort Worth C&D Landfill Expansion

Project No: 0771-356-11

Geologist: Aaron K. Evans, P.G.

Driller: CASCADE

Boring Start Date: 1/8/2019 Northing: 6915949

Boring End Date: 1/10/2019 Easting: 2358071

Ground Elevation: 652.0 ft-msl TOC Elevation: 654.1 ft-msl

Remarks: 6" diameter boring advanced and continuously sampled via sonic core drilling techniques and 2" diameter PVC groundwater piezometer installed. Static water level gauged on 03-30-2019.

▽ = First Water Encountered At Time of Drilling = Not Observed

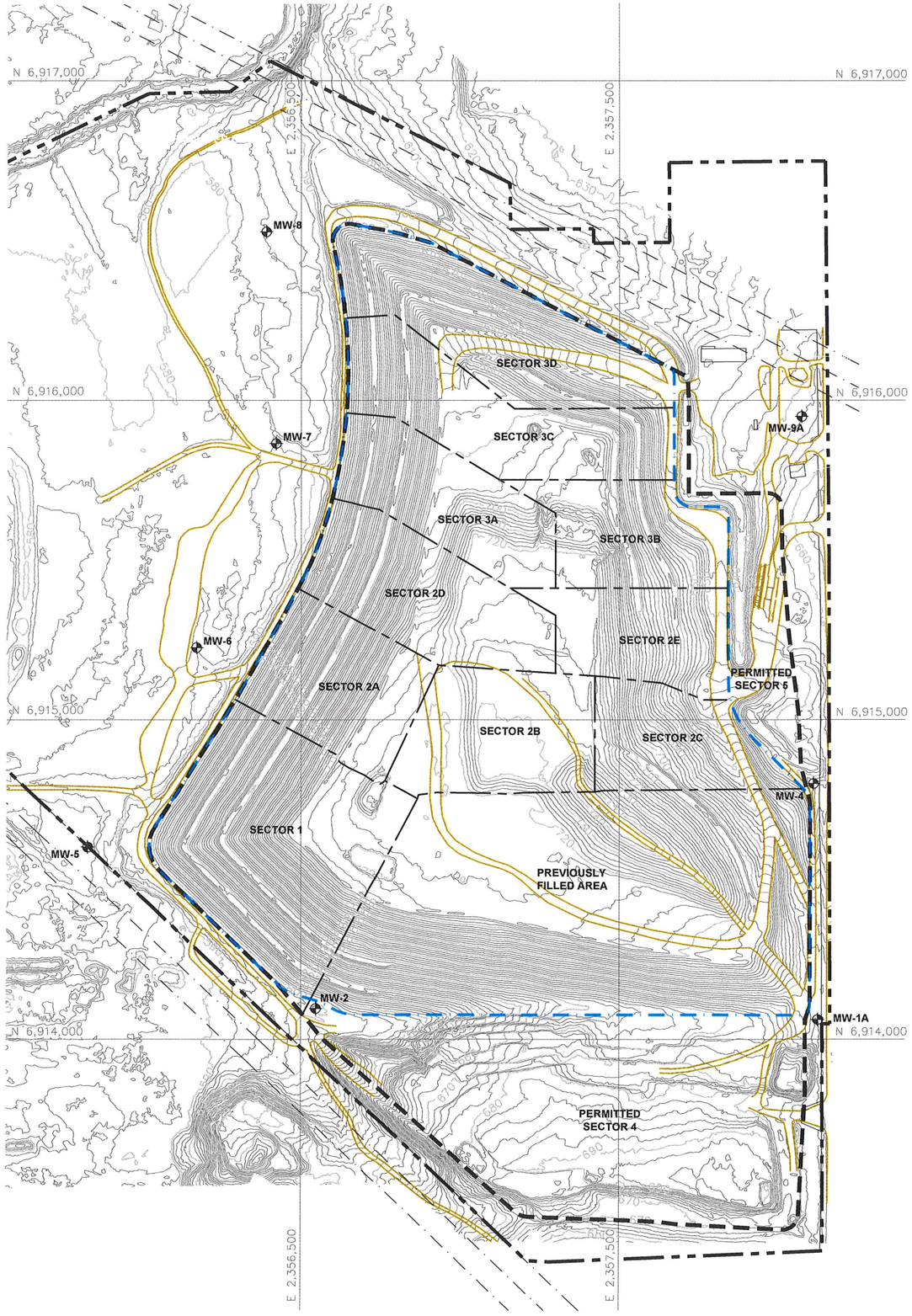
▼ = Static Water Level Elevation = 640.81 ft-msl

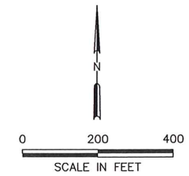
Depth (ft)	Samples	Graphic Log	Description	FT MSL	Hand Penetrometer Test (tsf)	Water at Time of Drilling	Static Water Level	Percent Passing No. 200	Percent Moisture Content	Unit Dry Weight (pcf)	Liquid Limit	Plastic Limit	Plasticity Index	Well Details
			FILL, predominatey clay and silt with intermixed gravel, moist, firm, low to medium plasticity in zones, intermixed, dark brown andark reddish brown, with rootlets.	648.0										649.99
5			SILT, sandy, trace clay, moist, firm, low plasticity, thinly bedded, brown, very fine grained.	647.0										646.99
			SAND, silty, clayey, moist, stiff, low plasticity, thinkly bedded, reddish yellow with red mottling.	644.0										
10			SAND, moist, very stiff, non-plastic, thickly to thinly bedded, reddish yellow, with red and gray mottling, fine grained.											641.99
			- Sand becomes dark reddish brown below 12'.	639.0			▼							
15			CLAY, silty, moist, very stiff, high plasticity, moderately bedded, dark reddish brown and red with reddish yellow and gray mottling.	638.0										
			SILT, clayey, moist, stiff, low plasticity, very thinly bedded, dark reddish brown and red with gray mottling.	636.0										
			CLAY, silty, moist, hard, high plasticity, laminated, dark reddish brown, red, and gray, with iron staining and gradational contact to underlying shale.	634.0										
20			SHALE, clayey, moist, hard, medium to high plasticity, laminated, dark reddish brown, red, and gray, with iron staining.											
25			- Shale becomes silty, with medium plsticity, dark brown, dark reddish brown, and red, with calcareous nodules below 24'.											
			- Shale becomes gray to dark gray below 26.5'.											
30			- Shale contains trace silt and no calcareous nodules, and becomes dark gray with high plasticity below 28'.											
35			- Shale becomes calcareous and interbedded with limestone laminations below 35'.	616.5 616.0										616.99 615.99
			SHALE, clayey, dry, hard, plastic when moistened, thinly bedded to laminated, gray and dark gray, calcareous, fossiliferous, interbedded with occassional thin limestone seams and laminations.											
40														
45														

STATE OF TEXAS
AARON K. EVANS
11143
LICENSED PROFESSIONAL GEOLOGIST

06/05/23

FTWC&D - LOG OF BORING (PIEZOS) FTWC&D - PROJECT DATABASE.GPJ FTWC&D - DATA TEMPLATE (AE).GDT 6/15/19





LEGEND

- PERMIT BOUNDARY
- LIMIT OF WASTE
- LIMITS OF CONSTRUCTED LINER
- N 6,917,000 — SITE GRID (SEE NOTE 2)
- SECTOR LIMITS
- MW–7 — EXISTING GROUNDWATER MONITORING WELL
- LID — TOP OF PROTECTIVE COVER
- PVC — TOP OF PVC WELL CASING (DATUM)
- CONC — SURFACE OF WELL PAD
- NG — NEAREST NATURAL GROUND

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK FROM AERIAL PHOTOGRAPHY FLOWN 02–21–2023.
2. COORDINATES SHOWN HEREON RELATIVE TO THE TEXAS COORDINATE SYSTEM OF 1983, NORTH AMERICAN DATUM OF 1983, NORTH CENTRAL ZONE, AND HELD FIXED BY LOCAL SITE CONTROL POINTS. (SEE TABLE LOWER RIGHT).
3. ELEVATIONS SHOWN HEREON RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88) AND AS HELD FIXED BY LOCAL SITE CONTROL. (SEE TABLE LOWER RIGHT).
4. MONITORING WELL AS–BUILT LOCATIONS AND ELEVATIONS SHOWN HEREON BASED ON A FIELD SURVEY PERFORMED BY WEAVER CONSULTANTS GROUP, LLC. ON MAY 18, 2023. (SEE TABLE AT RIGHT).

SURVEYOR CERTIFICATION

THAT I, ANDREW J. WIDOLFF, A REGISTERED PROFESSIONAL LAND SURVEYOR BY THE STATE OF TEXAS, AFFIRM THAT THIS DOCUMENT AND DATA DEPICTED HEREON IS BASED UPON A FIELD SURVEY ON MAY 18, 2023 UNDER MY DIRECT SUPERVISION.

ANDREW J. WIDOLFF, RPLS #6771
WEAVER CONSULTANTS GROUP, LLC
6420 SOUTHWEST BLVD #206
FORT WORTH, TX 76103 817–735–9770
TBPELS SURV FIRM NO. 10095400

Well ID	Northing	Easting	Latitude	Longitude	Elevation	Description
MW-1A	6914061.07	2358118.25	32.62883135N	97.23436280W	673.85	NG
	6914061.47	2358122.13	32.62883234N	97.23435020W	673.11	CONC
	6914061.53	2358122.47	32.62883248N	97.23434910W	675.77	PVC
	6914061.54	2358122.54	32.62883252N	97.23434887W	676.11	LID
MW-2	6914092.21	2356545.05	32.62896901N	97.23947131W	595.37	NG
	6914096.48	2356546.67	32.62898068N	97.23946587W	596.05	CONC
	6914096.69	2356547.14	32.62898123N	97.23946433W	598.84	PVC
	6914096.64	2356546.96	32.62898110N	97.23946493W	599.25	LID
MW-4	6914796.30	2358107.79	32.63085245N	97.23436799W	654.71	NG
	6914800.31	2358109.29	32.63086341N	97.23436295W	655.03	CONC
	6914800.81	2358109.22	32.63086479N	97.23436317W	657.67	PVC
	6914800.79	2358109.12	32.63086476N	97.23436350W	658.71	LID
MW-5	6914606.22	2355825.89	32.63040544N	97.24178709W	583.01	NG
	6914602.15	2355830.63	32.63039411N	97.24177184W	583.91	CONC
	6914601.85	2355830.68	32.63039327N	97.24177170W	586.11	PVC
	6914601.87	2355830.79	32.63039333N	97.24177135W	586.75	LID
MW-6	6915227.16	2356167.52	32.63210080N	97.24065326W	584.50	NG
	6915225.95	2356171.74	32.63209735N	97.24063961W	585.35	CONC
	6915226.06	2356172.06	32.63209762N	97.24063858W	587.88	PVC
	6915226.14	2356172.00	32.63209786N	97.24063875W	588.33	LID
MW-7	6915862.16	2356421.77	32.63383768N	97.23980267W	583.79	NG
	6915865.09	2356422.10	32.63384573N	97.23980150W	582.81	CONC
	6915865.37	2356422.40	32.63384648N	97.23980048W	585.77	PVC
	6915865.41	2356422.25	32.63384660N	97.23980097W	586.22	LID
MW-8	6916522.80	2356392.07	32.63565441N	97.23987337W	583.43	NG
	6916526.95	2356391.26	32.63566583N	97.23987584W	583.63	CONC
	6916527.18	2356391.50	32.63566645N	97.23987505W	586.18	PVC
	6916527.30	2356391.44	32.63566678N	97.23987523W	586.55	LID
MW-9A	6915953.54	2358071.56	32.63403426N	97.23444033W	651.80	NG
	6915949.98	2358071.73	32.63402448N	97.23443990W	651.88	CONC
	6915949.65	2358071.44	32.63402359N	97.23444088W	654.10	PVC
	6915949.58	2358071.58	32.63402337N	97.23444042W	654.67	LID

FTW C&D CONTROL				
POINT#	NORTHING	EASTING	ELEVATION	DESCRIPTION
7	6915867.06	2356421.33	582.79	MW-7 "X" CUT
104	6914801.41	2358109.38	654.99	MW-4 DISK SITE BM
120	6914060.72	2358122.69	673.34	MW-1A DISK

☐ DRAFT
☒ FOR INFORMATIONAL PURPOSES ONLY
☐ ISSUED FOR CONSTRUCTION

DATE: 05/2023
FILE: 0771–356–11
CAD: 0771–356–09–81 As–Builts.DWG

DRAWN BY: EA/CS
DESIGN BY:
REVIEWED BY: AJW

Weaver Consultants Group
TBPE REGISTRATION NO. F–3727

PREPARED FOR
WASTE CONNECTIONS

REVISIONS

NO.	DATE	DESCRIPTION

GROUNDWATER MONITORING WELL AS–BUILT REPORT

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

WWW.WCGRP.COM

DRAWING A

P:\SBI Survey\Solid Waste\0771 (Waste Connections, Inc-former IESI)\356 (Fort Worth C&D Landfill)\2023\0771-356-11-41 (Mon Well As-Built)\2. Exhibit\0771-356-09-81 As-Builts.dwg

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

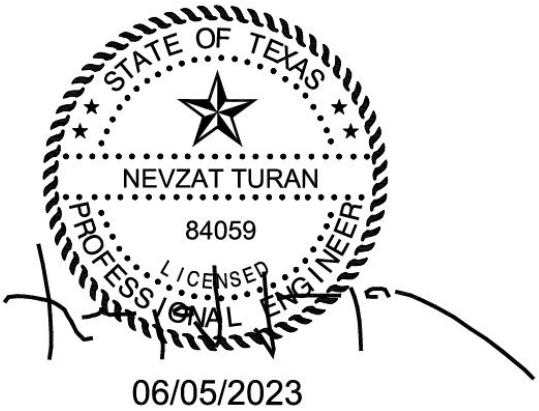
VOLUME 4 OF 4

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



Prepared by

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TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

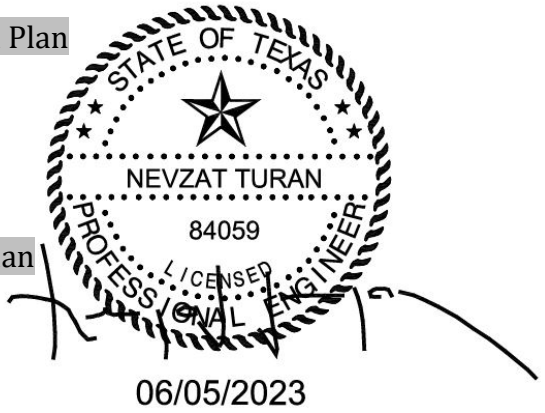
WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION
~~VOLUME 4 OF 4~~

CONTENTS



FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PART III – SITE DEVELOPMENT PLAN
APPENDIX III I
LANDFILL GAS MANAGEMENT PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

1 INTRODUCTION

1.1 Scope

This Landfill Gas Management Plan (LGMP) has been developed for the Fort Worth C&D Landfill consistent with the requirements set forth in the Texas Commission on Environmental Quality (TCEQ) Municipal Solid Waste (MSW) regulations Title 30 Texas Administrative Code (TAC) §330.371, §330.159, and RCRA Subtitle D regulations in 40 CFR §258.23. The existing landfill is owned and operated by Texas Regional Landfill Company, LP.

This LGMP describes the existing and proposed upgrades to the landfill gas (LFG) monitoring network. It also discusses the operation and monitoring of this network, notification procedures, and possible remediation activities, if required.

1.2 Purpose

Title 30 TAC §330.159 requires landfills to develop a LGMP in accordance with Title 30 TAC §330.371. Compliance with Title 30 TAC §330.371 requires landfills to implement a routine monitoring program for methane to verify that (1) the concentration of methane gas generated by the facility does not exceed 1.25% by volume in facility structures (excluding LFG control or recovery system components) within the permit boundary, and (2) the concentration of methane gas does not exceed 5% by volume in monitoring points, probes, subsurface soils, or other matrices at the facility boundary as defined by the legal description in the permit or permit by rule.

The purpose of the LGMP is to provide guidelines for management of LFG at the site. These guidelines cover the evaluation of LFG migration at the permit boundary and in structures within the permit boundary. The presence of LFG will be verified by monitoring LFG concentrations in monitoring probes near the facility's permit boundary and within on-site occupied structures. LFG migration may be controlled by various options which are discussed in Section 5.

The LFG monitoring (postclosure care period) program will continue for a period of ~~30~~ 5 years after final closure of the facility or until the owner or operator receives written authorization from TCEQ to revise or discontinue the program.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIJ
CLOSURE PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

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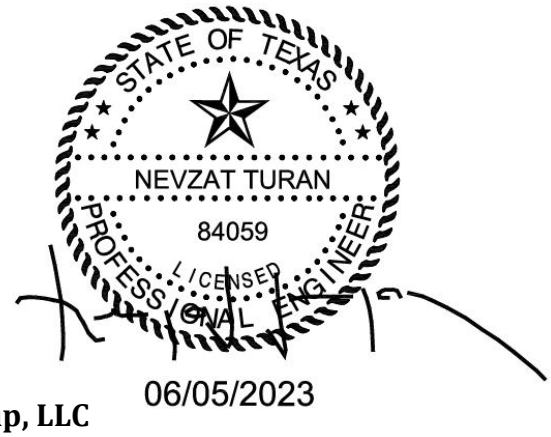

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- Engineering plans will be developed to address site closure at the time of discontinued waste filling.
- The final waste received will be placed and properly compacted.
- Excavations will be filled with suitable material, and the site will be graded to promote runoff and prevent ponding.
- The final cover system will be constructed according to specifications.
- The top of the landfill will be regraded and reshaped as needed to provide the proper slope for positive drainage.
- As noted above (first bullet), a revised final closure plan will be developed and submitted to the TCEQ for approval.
- Following application of final cover, the site will be vegetated with appropriate grasses to minimize erosion. The established grasses will provide a minimum of 90 percent coverage of the final cover system.
- A surface water management system will be constructed to minimize erosion.
- A closure certification will be prepared by an independent licensed professional engineer and submitted to TCEQ for approval.
- All proper notices and documentation will be filed with the appropriate agencies.
- If corrective action at the site is required, a corrective action plan will be developed in accordance with §330.509 and submitted to TCEQ for approval.

3.2.1 Estimate of Largest Active Disposal Area

The largest area that could be open within the next year is shown on Figure IIIL-1 in Appendix IIIL. Consistent with this rule and TCEQ guidelines for financial assurance to complete closure and postclosure activities, financial assurance will be posted for the current active area as discussed in Appendix IIIL – Cost Estimate for Closure and Postclosure Care. As additional liner areas developed, Appendix IIIL will be updated (closure plan does not need to be updated) per §305.70(j) to ensure continued compliance with financial assurance requirements. The entire 184.3-acre site will also need to be administratively closed.

Supporting calculations are presented in Appendix IIIL – Cost Estimate for Closure and Postclosure Care.

3.2.2 Estimate of Maximum Inventory of Waste Ever On Site

The estimate of maximum inventory of waste (defined as waste and daily cover) ever on site over the active life of the facility is approximately 31.3 million cubic yards. The site life calculations (Appendix IIIB – Site Life Calculations) show that approximately 18,300,000 cubic yards of airspace remain (using the February 17, 2022 topographic map and the proposed closure plan).

4 SCHEDULE OF UNIT CLOSURE AND FACILITY FINAL CLOSURE

4.1 Final Closure Requirements

Consistent with §330.~~253(e)~~457(f), the site will be closed implementing the following steps.

- No later than 45 days prior to initiation of final closure activities for the Type IV municipal solid waste landfill (MSWLF) unit, the Executive Director of the TCEQ will be notified that a notice of the intent to close the unit has been placed in the operating record.
- No later than 90 days prior to initiation of final closure activities for the Type IV MSWLF unit, a public notice of facility closure which contains the name, address, and physical location of the facility, the permit number, and the last date of intended receipt of waste, will be provided in the newspaper of the largest circulation in the vicinity of the facility (e.g., the Dallas Morning News). The Fort Worth C&D Landfill will also make available a copy of the approved final closure and postclosure plan at the landfill office for public access and review.
- Following notification of the Executive Director of the TCEQ, a minimum of one sign will be posted at the main entrance notifying all persons utilizing the facility of the closure date or date after which further receipt of waste is prohibited. In addition, barriers or gates will be installed at access points following the closure date to prevent unauthorized dumping of solid waste at the facility.
- Final closure activities will commence at the Type IV MSWLF unit no later than 30 days after the date the Type IV MSWLF unit receives the known final receipt of waste. If the Type IV MSWLF unit has remaining capacity and there is a reasonable likelihood that the Type IV MSWLF unit will receive additional waste, final closure activities will commence no later than one year after the most recent receipt of wastes.
- Final closure activities of the Type IV MSWLF unit will be completed in accordance with the Final Closure Plan within 180 days following the beginning of closure.
- Following completion of final closure activities, a documented certification, signed by an independent licensed professional engineer, will be submitted to the TCEQ for review and approval. This certification will verify that final

closure has been completed in accordance with the final closure plan and will include all applicable documentation necessary for certification of final closure. Once approved, this application will be placed in the operating record.

- Within 10 days after completion of final closure activities of the facility, a certified copy of an Affidavit to the Public (most current format provided by the TCEQ will be used) will be submitted to the TCEQ and placed in the operating record. In addition, a certified notation will be recorded in the Denton County Deed records that will in perpetuity notify any potential purchaser of the property that the land has been used as a landfill facility and the use of the land is restricted according to the provisions specified in Attachment 13 – Postclosure Care Plan. Within 10 days after completion of final closure activities of the facility, a certified copy of the modified deed will be submitted to the TCEQ and placed in the operating record.

Following receipt of the required final closure documents and an inspection report from the TCEQ district office verifying proper closure of the Type IV MSWLF facility according to this Final Closure Plan, the Executive Director may acknowledge the termination of operation and closure of the facility and deem it properly closed. The steps in the closure process are depicted on Figure 12.3 – Final Closure Schedule.

4.2 Provisions for Extending Closure Period

If the Fort Worth C&D Landfill has remaining capacity at the time of its closure, final closure activities will begin no later than one year after the most recent receipt of waste. A request for an extension beyond the one-year deadline for the initiation of final closure may be submitted to the Executive Director for review and approval and will include all applicable documentation to demonstrate that; (1) the unit or site has the capacity to receive additional waste, and (2) the Fort Worth C&D Landfill has taken all steps necessary to prevent threats to human health and the environment.

Closure activities will be completed within 180 days following the initiation of final closure activities. If necessary, a request for an extension of the completion of final closure activities will be submitted to the Executive Director for approval. This request will include all applicable documentation necessary to demonstrate that final closure will take longer than 180 days and all steps have been taken and will continue to be taken to prevent threats to human health and the environment from the unclosed site. In accordance with §330.~~253(e)(10)~~457(f)(4), post-closure care maintenance will begin immediately upon the date of final closure as approved by the Executive Director.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

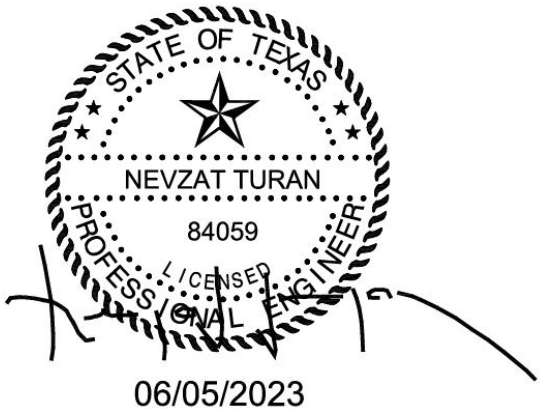
PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIK
POSTCLOSURE CARE PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



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WCG Project No.0771-356-11-35

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2 POSTCLOSURE ACTIVITIES

2.1 Monitoring and Maintenance

In accordance with §330.463(b)(1), postclosure care maintenance will commence upon completion of final closure requirements set forth in Appendix IIIJ – Closure Plan. Postclosure care maintenance will continue for a period of 5 years unless the TCEQ approves a postclosure period of a different duration. If there is evidence of a release from a municipal solid waste unit, 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 may be performed. Postclosure care maintenance will consist, at a minimum, of the following requirements carried out by Texas Regional Landfill Company, LP:

- Retain the right of entry and maintain all rights-of-way to the closed landfill.
- Conduct site inspections a minimum of twice yearly after closure.
- Conduct maintenance and/or remediation activities, as needed, to maintain the integrity and effectiveness of the final cover, site vegetation, and drainage control systems. Vegetation shall be maintained on the final cover to provide a minimum of 85 percent coverage.
- Manage surface runon and runoff in order to minimize the erosion of the final cover system.
- Correct the effects of settlement, subsidence, ponded water, erosion, or other events or failures in as much as these situations are detrimental to the integrity of the closed landfill.
- Maintain the groundwater monitoring system in accordance with §330.463(a)(2) and §330.463(b)(1)(C) and monitor groundwater in accordance with an approved Groundwater Sampling and Analysis Plan. However, Texas Regional Landfill Company, LP reserves the right to request TCEQ approval of (1) an alternative monitoring frequency, and (2) an alternative list of parameters to be monitored. Such requests will be based on supporting data available at the time of the request.

2.2 Decreasing Postclosure Period

The length of the postclosure care maintenance period may be decreased by the Executive Director if Texas Regional Landfill Company, LP submits, to the Executive Director for review and approval, a documented certification signed by an independent licensed professional engineer. Any such certification would include

3 PERSON RESPONSIBLE FOR CONDUCTING POSTCLOSURE ACTIVITIES

At the time of development of this document, the following position will be responsible for overseeing and/or conducting postclosure care activities at this landfill.

Gary Bartels – Southern Region Engineer
Texas Regional Landfill Company, LP
c/o Waste Connections
3 Waterway Square Place Suite 550
The Woodlands, TX 77380
(832) 442-2900

The position responsible for conducting postclosure activities is subject to change. However, as part of the closure notification to TCEQ, as required by Title 30 TAC §330.463(b)(3)(B), Texas Regional Landfill Company, LP will notify the TCEQ regarding the responsible position.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PART III – SITE DEVELOPMENT PLAN

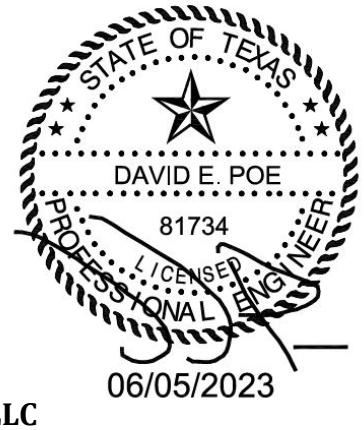
APPENDIX IIIM
GEOTECHNICAL REPORT

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



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CONTENTS

1 INTRODUCTION

This appendix addresses §330.63(e)(5)(A) and (B).

The purpose of this report is to present the geotechnical analysis and design for the proposed major permit amendment for the vertical and lateral expansion of the Fort Worth C&D Landfill (landfill). The landfill is a Type IV landfill, and accepts brush, construction and demolition waste, and rubbish. Municipal solid waste is not accepted at this landfill. Title 30 TAC §330.337(e) requires that prior to excavating below the seasonal high water table the owner and operator will perform a preliminary foundation evaluation satisfactory to the executive director, and the evaluation will consider stability (Appendix IIIM, Section 5), settlement (Appendix IIIM, Section 1.1), and constructability (Appendix IIID, Section 4.4). This report is based on the geotechnical investigations and testing information that has previously been compiled from the subsurface investigations at the site and additional information obtained during recent investigations.

This report contains a compilation of geotechnical analysis and design information, including:

- Slope and foundation stability analyses of the landfill and landfill foundation based on the geotechnical testing results and subsurface conditions, including groundwater, for landfill excavations, landfill completion, and sequence of development (interim condition analysis) plans.~~; and~~ The analysis complies with the requirements of Title 30 TAC §330.337(e) and is presented in Section 5 of this appendix and in Appendix IIIM-A.
- Settlement analysis of the final cover system, which are also based on the landfill excavation and completion plans.
- Settlement of the foundation is discussed in Section 1.1, below.

~~As this landfill is a Type IV landfill and does not incorporate a leachate collection and removal system, analysis of settlement of the landfill bottom liner was deemed unnecessary and has not been incorporated into this appendix. Testing of the in-situ unweathered shale/marl (Grayson Formation) which comprises the floor and portions of sidewalls of the landfill indicates this shale/marl will undergo little or no consolidation settlement during future waste loading and will not influence the overall performance of the liner or final cover systems. It is further assumed that~~

~~the generally low plasticity, sandy and gravelly alluvium soils will undergo primary and partial secondary consolidation during waste placement and prior to final cover installation and will not impact the long-term performance of the final cover system and has therefore not been incorporated into the final cover settlement analysis.~~

This report also provides geotechnical recommendations for construction of the landfill components, including bottom liner (for sidewall areas receiving 3-foot-thick recompacted clay liner over alluvium) and final cover systems. The construction quality control and material and construction specifications for the groundwater protection components of the landfill are provided in Appendix IIID – Liner Quality Control Plan (LQCP) and Appendix IIIE – Final Cover System Quality Control Plan (FCSQCP).

1.1 Foundation Settlement Analysis

To address the requirements of Title 30 TAC §330.337(e), WCG reviewed the geological conditions described in Appendix G of this application, specifically as it relates to the competency and compressibility of the geological formation underlying the landfill. Additionally, WCG considered the Type IV landfill design, which does not incorporate leachate collection systems or geosynthetic barrier layers in the floor of the landfill that are susceptible to displacement or damage from potential differential settlement of the landfill foundation. Testing of the in-situ unweathered shale/marl (Grayson Formation) which comprise the landfill floor and portions of sidewalls of the landfill indicate this shale/marl formation will undergo little or no consolidation settlement during future waste loading and will not negatively impact the overall performance of the liner or final cover systems.

Based on the evaluation of the foundation conditions and of the Type IV landfill design, WCG concludes that additional analysis of settlement is not warranted, and the landfill short and long-term performance or environmental protection will not be negatively influenced by waste-induced settlement.

Table 5-4
Summary of Slope Stability Analysis for the Final Cover Landfill Configuration

Slope Designation	Method of Analysis	Minimum Factor of Safety Generated[1]		Acceptable Factor of Safety	
		Effective Stress	Total Stress	Effective	Total
Final Cover Slope B-1	Bishop-Circular	2.01	2.04	YES	YES
Final Cover Slope B-2	Rankine-Block	2.20	2.26	YES	YES
Final Cover Slope D-1	Bishop-Circular	2.03	2.06	YES	YES
Final Cover Slope D-2	Rankine-Block	1.89	1.89	YES	YES

[1] Recommended Minimum Factor of Safety for long-term stability analysis using effective stress is 1.5 and short-term stability analysis using total stress is 1.3.

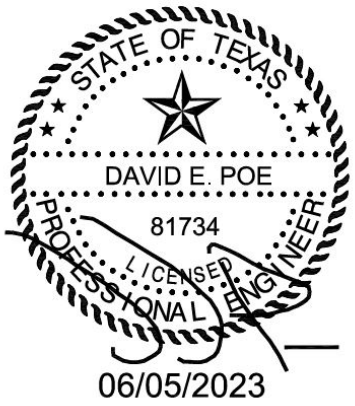
Computer-generated slope stability analysis output is included in Appendix IIIM-A. The minimum calculated factor of safety for the closed condition is 1.89, which is greater than the recommended minimum factor of safety of 1.5 for long-term slope stability. Note that model sections presenting both the critical failure surface as well as the modeling search surfaces are included in Appendix IIIM-A, which demonstrate that the stability analysis searches considered both landfill and underlying foundation conditions.

5.5.2 Infinite Slope Stability Analysis

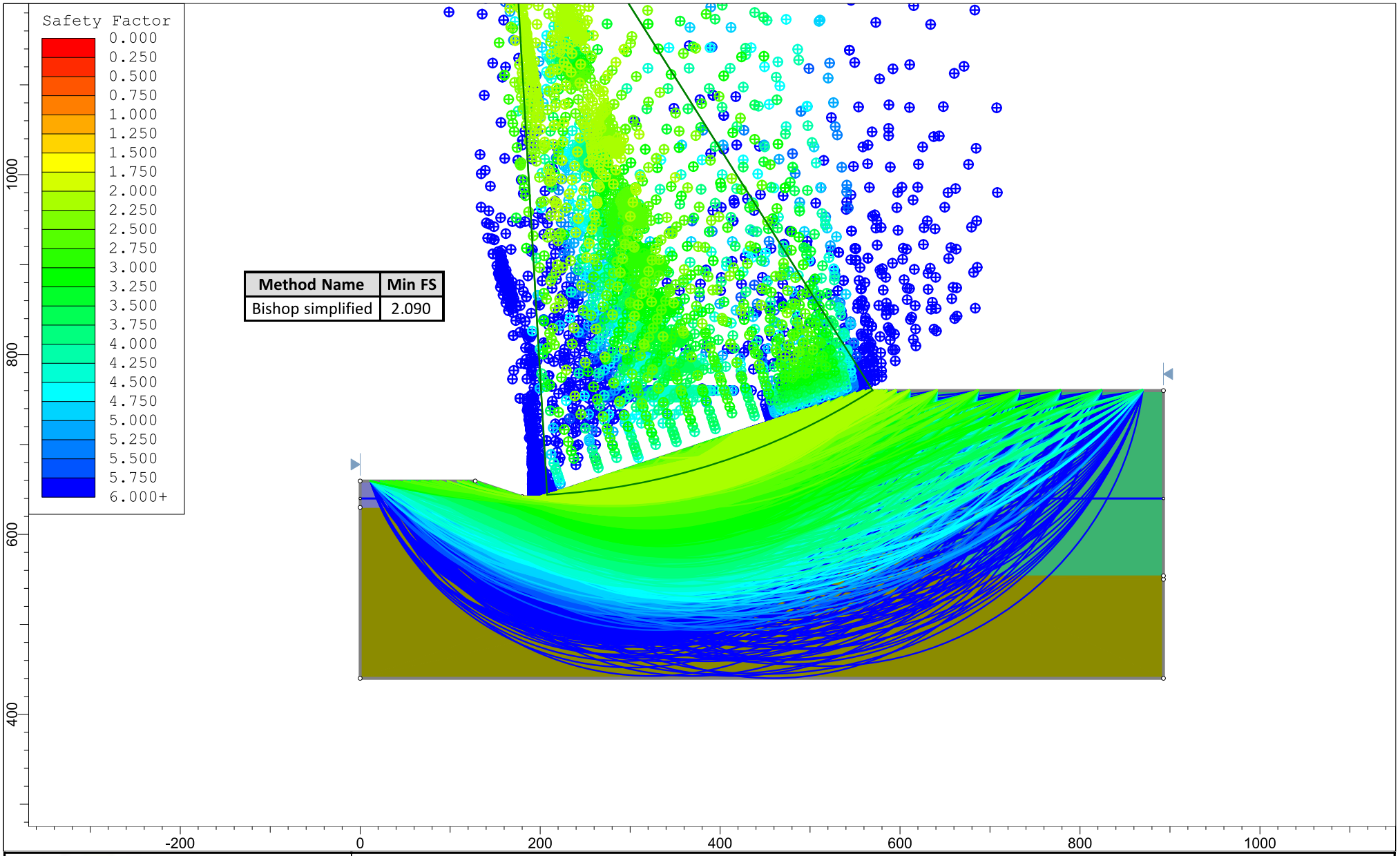
Infinite slope stability analysis for the recompacted clay liner and final cover systems has been included in this design in addition to block method analysis discussed in the previous section. The infinite liner analyses also address shear forces within the geocomposite underdrain system. The infinite final cover slope stability analysis addresses the shear forces within the final cover system. These calculations are presented in Appendix IIIM-A-4. As demonstrated in Appendix IIIM-A-4, the liner and cover systems are structurally stable using the strength parameters shown.

APPENDIX IIIM-A-2

INTERIM SLOPE CONFIGURATION STABILITY ANALYSIS



Includes pages IIIM-A-2-1 through IIIM-A-2-21



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	Group	ENGINEERING	Scenario: DRAINED-CIRCULAR
	Drawn By	PREP BY: MB CHKD BY:DEP	Company: WEAVER CONSULTANTS GROUP
	Date	5/16/2023	File Name: SECTION B-Drained-Circular.slmd

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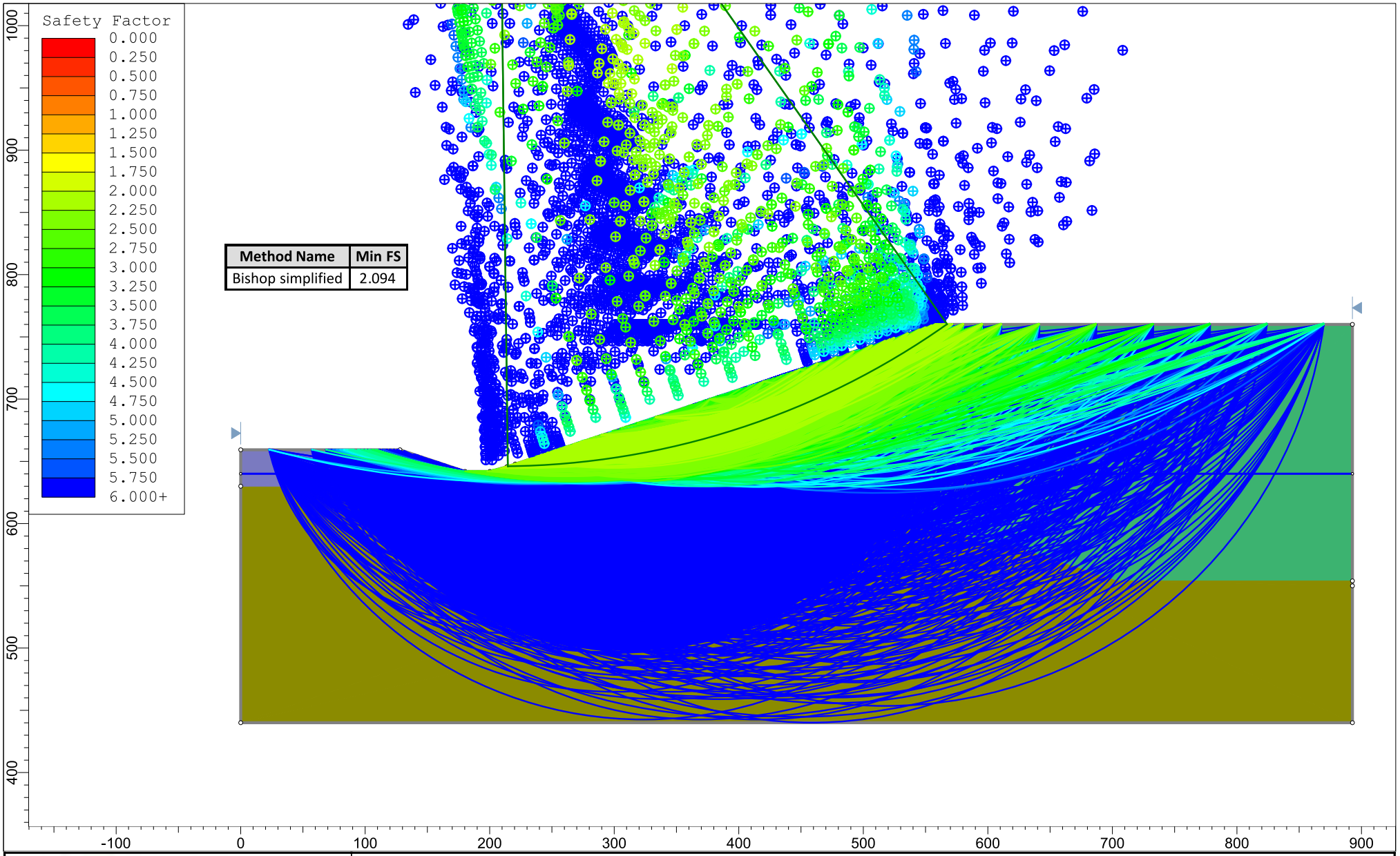

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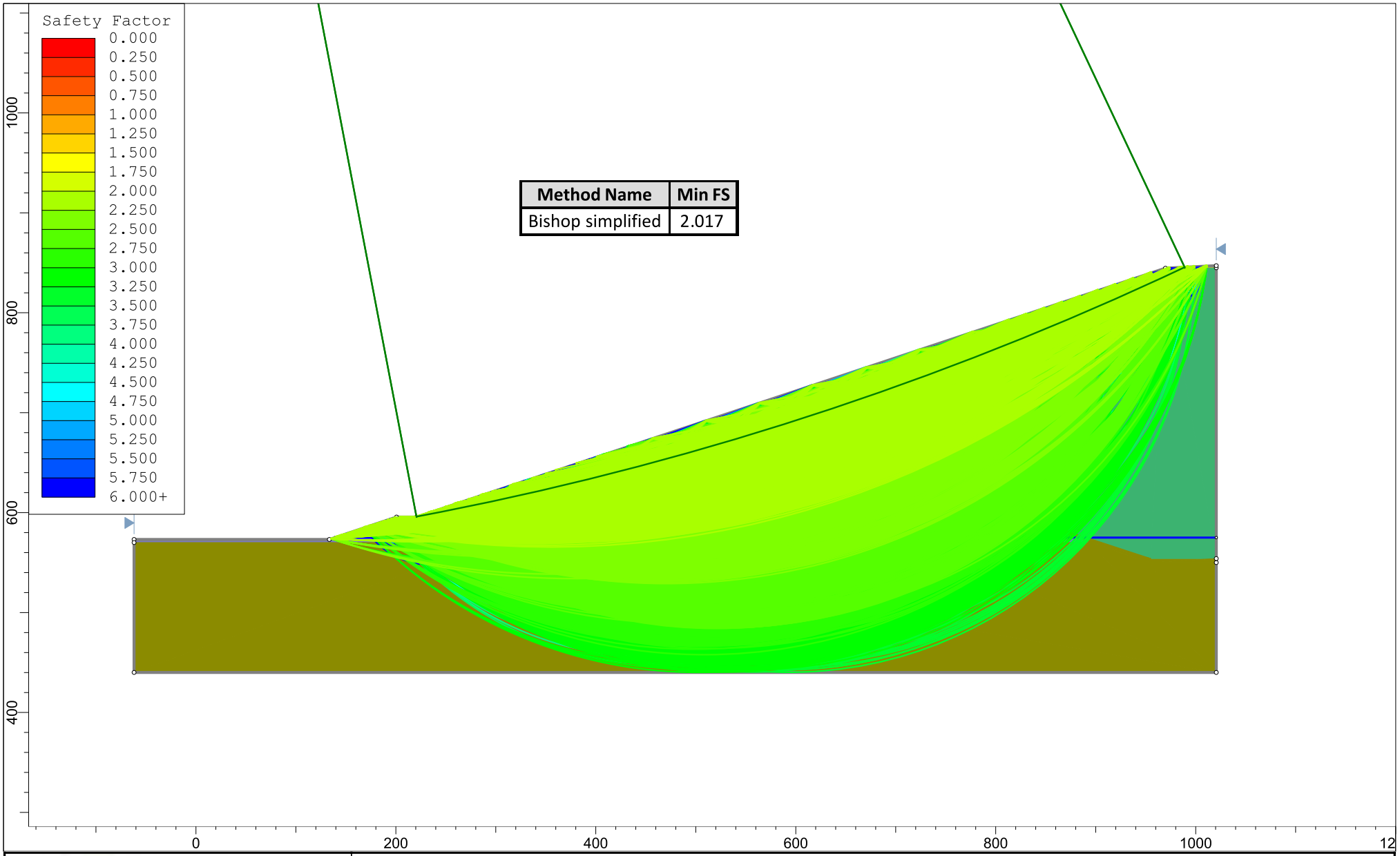
	Drawn By	PREP BY: MB CHKD BY:DEP	Company: WEAVER CONSULTANTS GROUP
SLIDEINTERPRET 9.018	Date	5/16/2023	File Name: SECTION B-Undrained-Circular.slmd

APPENDIX IIIM-A-3

FINAL COVER CONFIGURATION STABILITY ANALYSIS

Includes pages IIIM-A-3-1 through IIIM-A-3-50



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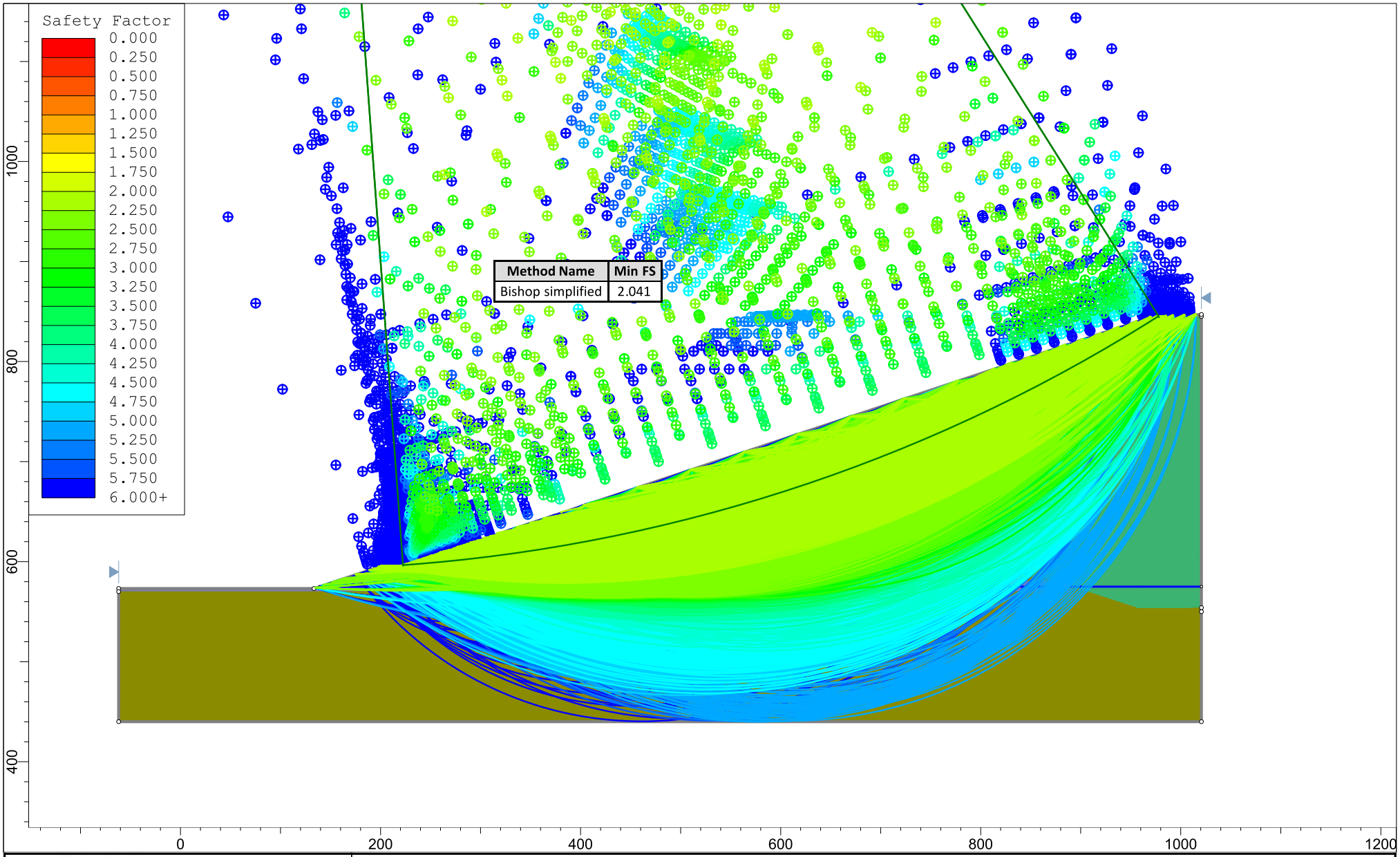

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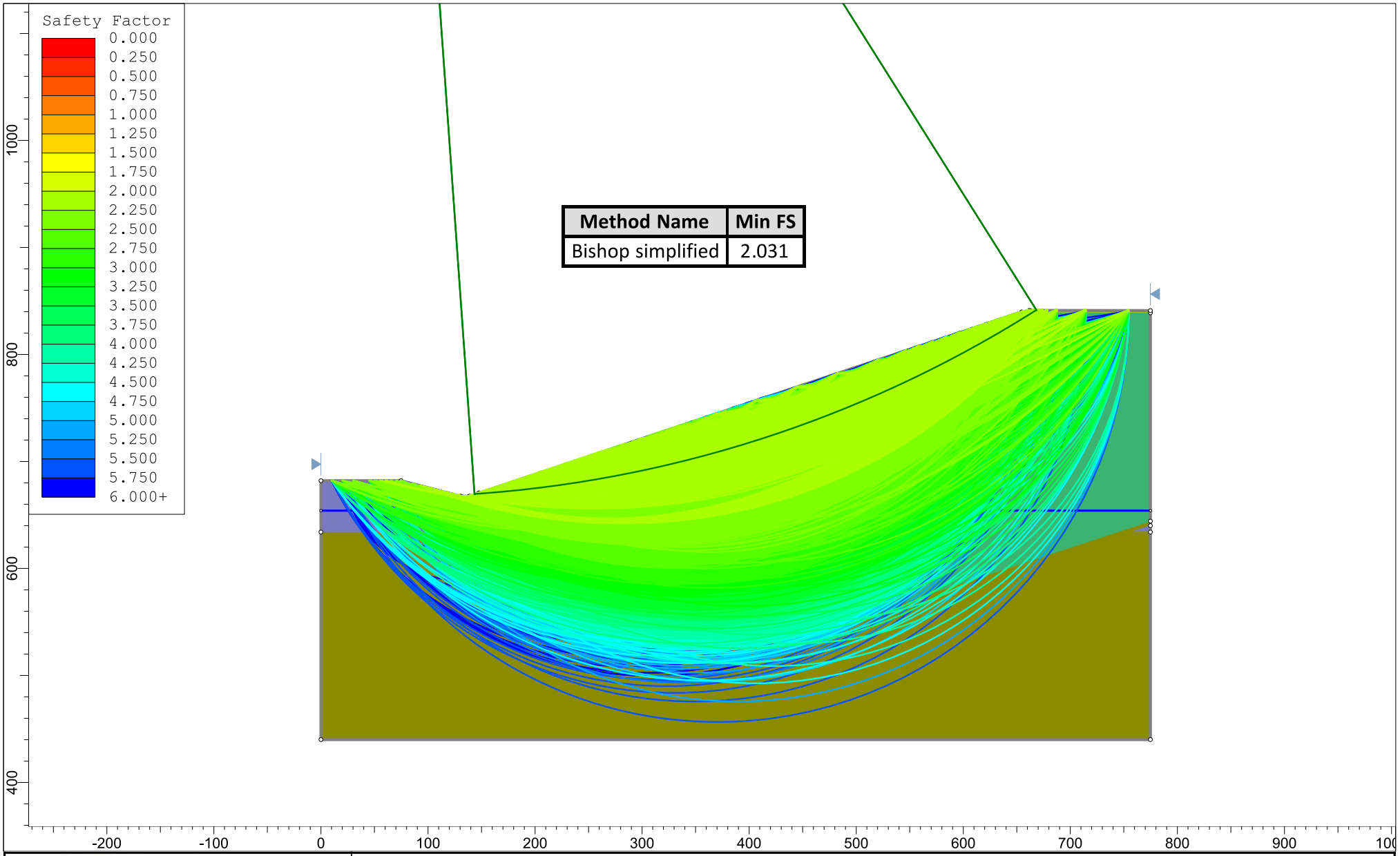

Weaver Consultants Group	Project	FORT WORTH C&D LANDFILL SLOPE STABILITY	
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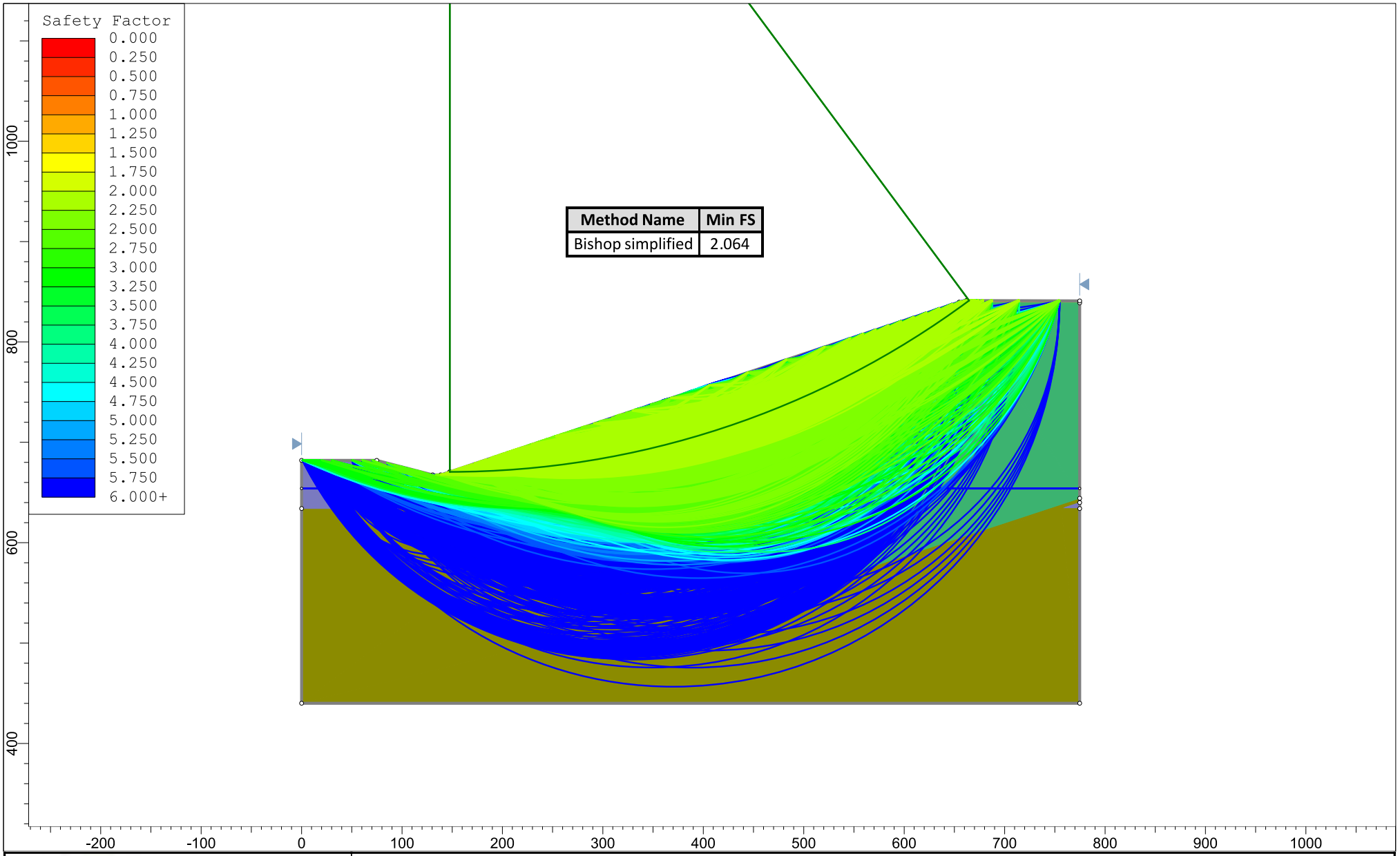

Weaver Consultants Group	Project	FORT WORTH C&D LANDFILL SLOPE STABILITY	
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	Drawn By	PREP BY: MB CHKD BY:DEP	Company: WEAVER CONSULTANTS GROUP
	Date	5/16/2023	File Name: SECTION D-Undrained-Circular.slmd

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MAJOR PERMIT AMENDMENT APPLICATION

PART IV – SITE OPERATING PLAN

Prepared for

Texas Regional Landfill Company, LP

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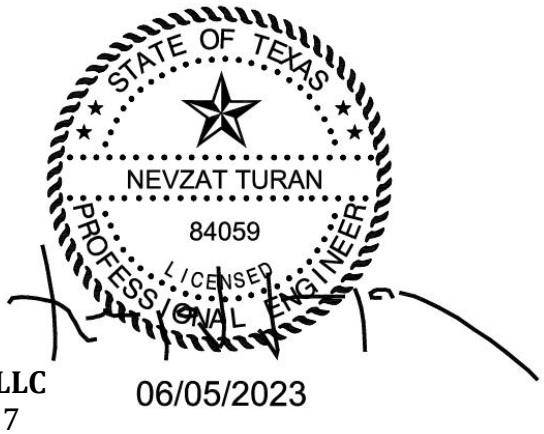

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Table IV-1
Recordkeeping Requirements

Record Needed	Description of Contents	Rule Citation (30 TAC)	Frequency	For More Information
Permit No. MSW- 1983D (including all modifications and amendments)	a. Site Development Plan b. Site Operating Plan c. Closure Plan d. Post-Closure Plan e. Landfill Gas Management Plan	330.121(a) and 330.125(a)	Upon Issuance of Permit, and Approved Modifications and Amendments	None
Location Restriction Demonstrations	Demonstrations that the site is in compliance with the location restriction criteria.	330.125(b)(1)	Submittal of Permit Amendment Application	Parts I/II of Permit Application
Information on Excluding Prohibited Waste	Record and retain inspection records, training procedures, and notification procedures relating to excluding the receipt of prohibited waste, including a record of unauthorized material incidents (receipt of prohibited waste and removal/remediation of the incident)	330.125(b)(2) and 330.133(b)	Per Occurrence	SOP Sections 5.6, 8.2
Gas Monitoring Results and Remediation Plans	Results from gas monitoring and any remediation plans related to explosive and other gases.	330.125(b)(3)	Gas Monitoring – Quarterly; Remediation Plans – Per Occurrence	SOP Sections 16 and 21. Part III SDP Appendix IIII
Groundwater Monitoring and Corrective Action Information	Demonstrations, certifications, findings, monitoring, testing, and analytical data relating to groundwater monitoring and/or corrective action.	330.125(b)(5)	Monitoring – Annual; Corrective Action and Other Documentation – As Required	Part III SDP Appendix IIIH
Closure and Post- Closure Care Data	Closure and Post-Closure Plans and applicable monitoring, testing, or analytical data relating to post- closure requirements.	330.125(b)(6)	Monitoring and Data – Annual	Part III SDP Appendix IIIJ and IIIK
Cost Estimates and Financial Assurance Documentation	Any and all cost estimates and financial assurance documentation relating to financial assurance for closure and post-closure care.	330.125(b)(7)	Annual	Part III SDP Appendix IIIL
Correspondence	Copies of correspondence and responses relating to the operation of the facility, modifications to the permit, approvals and other matters pertaining to technical assistance.	330.125(b)(9)	Per Occurrence	None
Special Waste Documentation	Documents, manifests, shipping documents, trip tickets, etc., involving special waste.	330.125(b)(10)	Per Occurrence	None
Liner Evaluation Reports, Ballast Evaluation Reports, and Liner Interim Status Reports	Documentation of construction of the liner for a new disposal area, along with evaluation and documentation of ballast (if required), and interim status of liner (if needed).	330.125(b)(12)	Per Occurrence	SOP Section 2; Part III SDP Appendix IIID (SLQCP)
Landfill Gas System Inspections	Documentation of inspection of the landfill gas monitoring system indicating the findings and documenting any repairs made.	330.125(b)(12) and 330.159	Inspect Gas Monitoring System – Quarterly	Part III SDP Appendix IIII
Personnel Training Records	Training records for all personnel will be maintained in accordance with 30 TAC §335.586(d) and (e).	330.125(e)	As Needed (Minimum Annually)	SOP Section 5.4
Required Personnel Operator Licenses	Licensing records will be maintained in accordance with 30 TAC Chapter 30, Subchapter F.	330.125(f)	As Needed	None
Waste Acceptance Rate Documentation	Documentation in the form of quarterly and annual solid waste summary reports will be maintained as required by 30 TAC §330.675.	330.125(h)	Quarterly and Annually, As Appropriate	SOP Section 4.2
Load Inspection Reports	A copy of the load inspection reports will be added to the Site Operating Record. The load inspection reports will include the date and time of inspection, the name and address of the transporter, the type of vehicle, the size and contents of the load, and the results of the inspection.	330.127(5)(B)	Per Occurrence	SOP Section 5.6
Fire Occurrence Notices	Written description of waste-related fire that is not extinguished within 10 minutes of detection, including record of required notifications.	330.129	Per Occurrence	SOP Section 6
Access Control	A record of the required access inspections, findings, and any repairs made and notification of breach if applicable.	330.131	Inspect – Monthly; Repair/ Notification – As Needed, if not repairable within 8 hours of detection	SOP Section 7.2
Records of Alternate Operating Hours	Documentation of any dates, times, and durations when alternate operating hours are utilized.	330.135(d)	As Required	SOP Section 9
Landfill Marker Inspections	A record of the landfill marker inspections, findings, and any repairs.	330.143(a)	Monthly	SOP Section 13.3
Water, Crude Oil, and/or Natural Gas Well Location and Plugging Reports	Documentation of notification, certification of plugging, and a copy of the well plugging report.	330.161(a)-(c)	Within 30 Days of Discovery	SOP Section 22
Cover Inspection Record	A record of the required cover inspections, findings, and any corrective actions (e.g., repairs) taken. Includes inspecting for and remedy of ponded water.	330.165(h)	Active Facility – Weekly (and after storm events); Closed Facility – Per Post-Closure Plan (Semi-Annually)	SOP Section 24.5 and 24.6.2
Cover Application Log	A record showing site grid areas where weekly and/or intermediate cover has been placed each week.	330.165(h)	Weekly (when site is in operation)	SOP Section 24.6.1
Ponded Water Inspections	Inspection of the landfill waste fill areas to check for ponded water, and corrective actions to remove ponded water.	330.167	Part of Cover Inspections (see above)	SOP Sections 24 and 25

8 UNLOADING AREAS

8.1 Unloading at Working Face

Unloading of waste to be placed in the landfill will take place at the designated working face or recycling area under the supervision of trained site personnel. Equipment Operators will maintain the daily working face, the size of which will be limited to be as small an area as practical for the safe operation of the incoming waste hauling vehicles, operation of compaction equipment, and placement of weekly cover. Signs and barricades may be used in addition to instructions from site personnel to direct incoming loads to the designated unloading area.

Maximum Working Face Size[1]

Incoming Waste[2] Accepted	Maximum Working Face Size[2, 3]
0 – 1,500 Tons/Day	150 feet by 175 feet (or 26,250 sf)[5]
1,500 – 3,000 Tons/Day	250 feet by 325 feet (or 81,250 sf)[5]

[1] The working face maximum size listed above is based on the maximum area needed to spread and compact waste in uniform lifts. The working face does not include areas used to move waste from an MSW Tipper to the working face.

[2] During the placement of the first lift of MSW in a newly constructed cell, the maximum working face size listed above does not apply provided that odors, vectors, and windblown litter are controlled consistent with standard operating conditions.

[3] The maximum working face size listed above does not apply to areas that have less than a 6-foot-thick waste column left before the final permitted grades are achieved provided that odors, vectors, and windblown waste are controlled consistent with standard operating conditions.

[4] The width and length shown above is for guidance purposes only. The maximum working face size will be governed by the area listed above.

Equipment Operators and other staff with responsibility for the working face operations will be appropriately trained as specified in Section 5.4 of this SOP with regard to approved waste acceptance procedures and requirements. This will include an understanding of prohibited waste (e.g., putrescible, hazardous, PCB, etc.) recognition and incident management methods. One or more of these trained employees will direct and visually monitor disposal of incoming loads of waste at the working face. Trained personnel will be on duty at all times when wastes are being discharged at the working face and will have the authority and responsibility to reject unauthorized loads, to assess appropriate surcharges, and to have unauthorized material removed by the transporter or on-site personnel or otherwise properly managed by the facility.

8.2 Unloading Unauthorized and Prohibited Wastes

Unloading of waste in unauthorized areas is prohibited. Waste deposited in an unauthorized area will be removed immediately and disposed of properly.

The methods employed at the site to detect and prevent the disposal of prohibited wastes were discussed in Section 5.6 and will be followed during waste unloading. If unauthorized or prohibited waste is detected by site personnel after it has been discharged, the procedures, notifications, and recordkeeping outlined in Sections 5.6.2 and 5.6.3 will be followed for the type of waste involved in the incident.

24.4 Final Cover

Final cover placement will occur in accordance with the Closure Plan (Appendix IIIJ of the Site Development Plan) and Subchapter K of Chapter 330.

The final cover grading plan (i.e., landfill completion plan showing final contours) and final cover system components are presented in the Parts I/II. Specifically, refer to Parts I/II, Figure I/II – 2.1 for the final cover grading plan, and Site Development Plan Appendix IIIJ for the Closure Plan describing the final cover system components.

The Closure Plan presents the specific requirements and schedules for closure activities, and related final cover system specifications, Quality Assurance/Quality Control (QA/QC) requirements, certification requirements, notifications, etc. This includes requirements for establishing vegetation on the final cover. During the early stages of vegetative growth, mulching, slope soil regrading, and mowing will be performed as required to promote a complete vegetative coverage and effective erosion control.

24.5 Cover Inspection, Repair of Erosion, and Final Cover Maintenance

24.5.1 Inspection

During the active life of the landfill, inspection of intermediate and final cover, including checking for erosion and ponded water, will be performed on a weekly basis. The reports of these inspections will be maintained as part of the Site Operating Record.

24.5.2 Repair of Erosion

Erosion gullies or washed-out areas deep enough to jeopardize the intermediate or final cover (i.e., exceeding four inches in depth as measured from the vertical plane of the erosion feature and its 90-degree intersection with the horizontal slope face or surface) shall be repaired within five (5) days of detection unless the TCEQ regional office approves an extension (e.g., due to inclement weather, unfavorable seasonal weather conditions, extent of the damage and resulting repair work needing more time to complete, etc.). Repairs will typically consist of regrading, backfilling, compacting, and seeding, as necessary. The dates of detection of erosion and completion of repairs, and reasons for any delay of repairs, will be documented in the Cover Inspection Record (see Section 24.6).

ATTACHMENT 3

REPLACEMENT PAGES (CLEAN)

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

VOLUME 1 OF 4

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

This document intended for permitting purposes only.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

CONTENTS

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

APPLICATION TABLE OF CONTENTS

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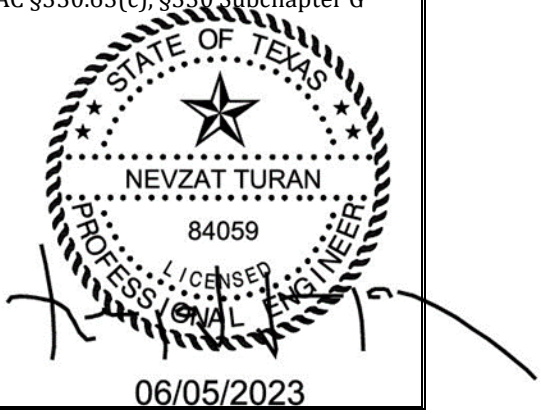
FORT WORTH C&D LANDFILL MAJOR PERMIT AMENDMENT APPLICATION
TCEQ PERMIT NO. MSW-1983E

TABLE OF CONTENTS



FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

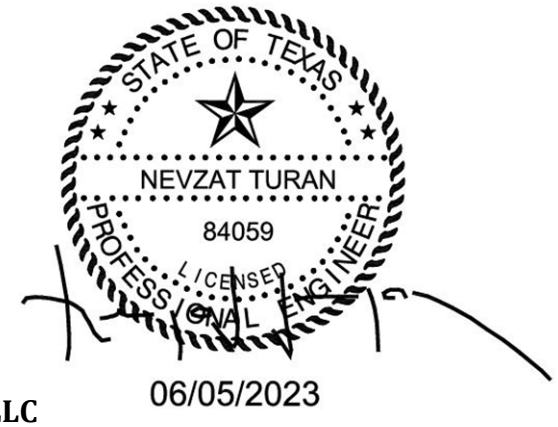
TCEQ PART I APPLICATION FORM, PART II APPLICATION FORM, CORE DATA FORM, WASTE ACCEPTANCE PLAN FORM, AND MAILING LABELS

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



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TARRANT COUNTY, TEXAS
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MAJOR PERMIT AMENDMENT APPLICATION
TCEQ PART I APPLICATION FORM, CORE DATA FORM, AND MAILING LABELS

CONTENTS

Signature Page

Site Operator or Authorized Signatory

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

Name: Gary Bartels Title: Southern Region Engineer

Email Address: gary.bartels@wasteconnections.com

Signature: Gary J Bartels Date: June 5, 2023

Operator or Principal Executive Officer Designation of Authorized Signatory

To be completed by the operator if the application is signed by an authorized representative for the operator.

I hereby designate _____ 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.

Operator or Principal Executive Officer Name: _____

Email Address: _____

Signature: _____ Date: _____

Notary

SUBSCRIBED AND SWORN to before me by the said Gary Bartels

On this 5th day of June, 2023

My commission expires on the 17th day of May, 2025

Helen M Hanson

HELEN M. HANSON
Notary Public, State of Texas
Comm. Expires 05-17-2025
Notary ID 10180332

Notary Public in and for

Tarrant County, Texas

Note: Application Must Bear Signature & Seal of Notary Public

Texas Commission on Environmental Quality
Part II Application Form for New Permit or Permit Amendment for a Municipal Solid Waste Landfill Facility

I. Application Information

1. Facility Name: Fort Worth C&D Landfill
2. Permittee Name: Texas Regional Landfill Company, LP
3. MSW Authorization #: MSW-1983E
4. Initial Submittal Date: 02/09/2023

II. Existing Conditions Summary - 30 TAC §330.61(a)

Provide information to address any site-specific conditions that require special design considerations and possible mitigation of conditions as follows.

1. Provide a summary describing the existing conditions at the site and within the areas surrounding the site, which may include discussions of any additional land-use, environmental, or special issues related to the facility.

The Fort Worth C&D Landfill is located in Tarrant County, approximately 15 miles southeast of downtown Fort Worth and adjacent to the City of Kennedale. The property is approximately 184.3 acres in size. The site was originally permitted as a 38.1-acre MSW disposal facility in 1988 (Permit No. MSW-1983). Existing site conditions are presented in Section 3 of Parts I/II. The existing site consists of a liner system with in-situ weathered shale or recompacted clay liner. The existing groundwater monitoring system includes 8 monitoring wells, which include two upgradient background wells (MW-1A and MW-4) and 6 downgradient point of compliance wells (MW-2, MW-5, MW-6, MW-7, MW-8, and MW-9). The existing gas system consists of 11 gas probes (GMP_1, GMP_2, GMP_36, GMP-4A, GMP-5, GMP-6A, GMP-7, GMP-8, GMP-9, GMP-10, and GMP-11).

There are no additional land uses on the site or environmental or special issues related to the facility.

2. Provide brief descriptions of all site-specific conditions at the facility that require special design considerations.

Site specific conditions at the facility that require special design considerations include groundwater and floodplain. The site will be required to install an underdrain in portions of the future sideslope recompacted clay liner to control hydrostatic uplift pressure on the bottom of the liner from groundwater. The site is adjacent to Village Creek and has an approved CLOMR.

3. Indicate that reports of site-specific conditions that require special design considerations and mitigation of such conditions are provided under Sections VIII – XVI below with regard to (a) facility impacts on surrounding areas; (b)transportation; (c) general geology and soils; (d) groundwater and surface water; (e) existing and abandoned oil and water wells; (f) floodplains and wetlands; (g) endangered or threatened species impacts; and (h) compliance with the Texas Natural Resources Code, Chapter 191 (Texas Antiquities Code).

a. Impacts to surrounding areas are minimal as the site is an existing landfill, the area is flood prone, and traffic patterns are well established.
b. N/A - Refer to the Traffic Study in Appendix I/IID. The report demonstrates that the existing access roads will provide adequate access to the site.
c. N/A - The bottom of the expansion is founded in unweathered shale, and the elevation of deepest excavation is not changing.
d. The site will be required to install an underdrain in portions of the future sideslope. Granular material will be used for the underdrain sumps and collection trenches. Underdrain construction specifications are presented in Appendix IIID and Appendix IIID-C.
e. There are no known onsite oil, gas, or water wells documented onsite. Refer to Parts I/II, Section 2.5.
f. The floodplain of Village Creek forms the western boundary of the site. A CLOMR for the expansion has been approved by FEMA. Refer to Appendix IIIF-G for more information. The site is currently working with USACE on a No Permit Required Application for the site. The approval will be submitted to TCEQ when received.
g. In accordance with the submitted Threatened and Endangered Species Report, no suitable habitat exists on the site for any species listed for Tarrant County, nor has critical habitat been designated in the project area for any threatened and endangered species.
h. Texas Historical Commission determined no effects on identified archaeological sites or other cultural resources. Refer to Appendix I/IIB, page I/IIB-19.

III. Waste Acceptance Plan - 30 TAC §330.61(b)

1. ☐ If this application is for a Type I or Type IAE MSW landfill facility, attach completed Form No. TCEQ-20873. Attachment No.:
2. ☑ If this application is for a Type IV or Type IVAE MSW landfill facility, attach completed Form No. TCEQ-20890. Attachment No.:

IV. General Location Maps - 30 TAC §330.61(c)

Provide General Location Maps that accurately show the features listed below. Provide all General Location Maps in a single attachment and include the drawing number in the space provided. Include notes on each map, as needed, to describe information pertaining to the map.

1. The prevailing wind direction with a wind rose. Parts I/II, Figure I/II-4.2
2. 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."

   Parts I/II, Figure I/II-4.3
3. All structures and inhabitable buildings within 500 feet of the proposed facility.

   Parts I/II, Figure I/II-4.3
4. (i) Schools, (ii) licensed day-care facilities, (iii) churches, (iv) hospitals, (v) cemeteries, (vi) ponds, (vii) lakes, and (viii) residential, (ix) commercial, and (x) recreational areas within one mile of the facility. Churches and parks are shown in Parts I/II, Figure I/II-4.2 agricultural, and industrial areas are shown on Figure I/II-4.3, residential areas are shown on Figures I/II-4.3 and 7.1.
5. The location and surface type of all roads within one mile of the facility that will normally be used by the owner or operator for entering or leaving the facility. Parts I/II, Figure I/II-6.1
6. Latitudes and longitudes. Parts I/II, Figure I/II-6.1
7. Area streams. Parts I/II, Figure I/II-4.2
8. Airports within six miles of the facility. Parts I/II, Figure I/II-8.1
9. The property boundary of the facility. Parts I/II, Figure I/II-3.1
10. (i) Drainage, (ii) pipeline, and (iii) utility easements within or adjacent to the facility.

    Parts I/II, Figures I/II-3.1 through I/II-3.3
11. (i) Facility access control features. Appendix I/IIA, Figure I/II-A.11
12. (i) Archaeological sites, (ii) historical sites, and (iii) sites with exceptional aesthetic qualities adjacent to the facility. N/A - None Present

V. Facility Layout Maps - 30 TAC §330.61(d)

Provide the Facility Layout Map(s) as a single attachment, and include drawing number(s) in the space provided. Include notes on each map, as needed, to describe information on the map. Refer to Parts I/IIA, Appendix I/IIA - Facility Layout Maps

Provide a map or set of maps of the facility layout showing:

1. The outline of the units; Appendix I/IIA, Figures I/II-A.1 and I/II-A.2
2. General locations of main interior facility roadways; Figures I/II-A.4 through I/II-A.7
3. Locations of monitor wells; Appendix I/IIA, Figures I/II-A.1 and I/II-A.7
4. Locations of buildings; Appendix I/IIA, Figures I/II-A.1 and I/II-A.7

5. Any other graphic representations or marginal explanatory notes necessary to communicate the proposed construction sequence; N/A
6. Fencing; Appendix I/IIA, Figure I/II-A.11
7. Provisions for the maintenance of any natural windbreaks, such as greenbelts, where they will improve the appearance and operation of the facility and, where appropriate, plans for screening the facility from public view; Appendix I/IIA, Figure I/II-A.11
8. All site entrance roads from public access roads; Appendix I/IIA, Figures I/II-A.9 through I/II-A.11
9. General locations of main interior facility roadways that can be used to provide access to fill areas; Appendix I/IIA, Figures I/II-A.4 through I/II-A.6
10. Sectors with appropriate notations to communicate the types of wastes to be disposed of in individual sectors; Appendix I/IIA, Figures I/II-A.1 and I/II-A.2. All sectors accept all types of acceptable wastes.
11. The general sequence of filling operations; Appendix I/IIA, Figures I/II-A.2 and I/II-A.4 through I/II-A.6
12. Sequence of excavations and filling; Appendix I/IIA, Figures I/II-A.2 and I/II-A.4 through I/II-A.6
13. Dimensions of cells or trenches; Appendix I/IIA, Figure I/II-A.2 and
14. Maximum waste elevations and final cover. Appendix I/IIA, Figures I/II-A.3 and I/II-A-7.

VI. General Topographic Maps - 30 TAC §330.61(e)

1. Provide general topographic map(s) consisting of United States Geological Survey 7 ½-minute quadrangle sheets or equivalent for the facility.
   Map No(s). Parts I/II, Figure I/II-4.2
2. At least one of the general topographic maps provided is at a scale of one-inch equals 2,000 feet.
   ☑ Yes

VII. Aerial Photograph - 30 TAC §330.61(f)

Provide an aerial photograph approximately 9” x 9” with a scale within a range of one-inch equals 1,667 feet to one-inch equals 3,334 feet and showing the area within at least one-mile radius of the site boundaries. Mark the site boundaries and fill areas on the aerial photograph(s). A series of aerial photographs can be used to show growth trends.
Attachment No.(s): Parts I/II, Figure I/II-6.1

VIII. Land-Use Map - 30 TAC §330.61(g)

Provide a constructed map of the facility showing the following land-use features (list the map number(s) in the space provided): Parts I/II, Section 7

1. The boundary of the facility; Parts I/II, Figure I/II-7.1
2. Existing zoning on or surrounding the property; Parts I/II, Figures I/II-7.2 through I/II-7.4
3. Actual uses (e.g., agricultural, industrial, residential, etc.) both within the facility and within one mile of the facility. Parts I/II, Figure I/II-7.1
4. Drainage, pipeline, and utility easements within the facility; Parts I/II, Figure I/II-3.1
5. Access roads serving the facility; Parts I/II, Figure I/II-6.1

6. Check the following facilities if they are within one mile of the facility boundary and indicate on map. Refer to Attachment 2, Figures I/II-4.2, I/II-4.3, and I/II-7.1

   (a) ☑ residences;

   (b) ☑ commercial establishments;

   (c) ☐ schools;

   (d) ☐ licensed day-care facilities;

   (e) ☑ churches;

   (f) ☐ cemeteries;

   (g) ☑ ponds or lakes; and

   (h) ☑ recreational areas.

IX. Impact on Surrounding Area - 30 TAC §330.61(h)

Address the facility's impacts on cities, communities, groups of property owners, or individuals and describe mitigation of conditions as required. Attach additional pages as necessary. If a land use compatibility analysis report prepared by a qualified professional is provided, indicate the location within the application. Attachment No.:

1. **Impacts to Surrounding Areas:**
   (a) Provide information regarding the likely impacts of the facility on cities, communities, groups of property owners, or individuals by analyzing the compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest; and

Impacts to surrounding areas are minimal as the site is an existing landfill and has been in operation for over 30 years. There is also an existing landfill to the north of the facility. The site also has traffic patterns that are well established and is located in a flood prone area.

   (b) Describe any special design considerations and possible mitigation of potential impacts, as necessary.

As discussed above, impacts to surrounding areas will be minimal. The facility is bounded by high-canopy tree lines. The existing dense tree lines function as both windbreaks and site screening.

Published Zoning Map: If available, provide a published zoning map for the facility and within two miles of the facility for the county or counties in which the facility is or will be located.

See Attachment 6, Figures I/II-7.2 through I/II-7.4

2. **Special or Nonconforming Use Permit:**

   (a) Does the site require approval as a nonconforming use or a special permit from the local government having jurisdiction? ☐ Yes ☑ No

   (b) If yes, provide a copy of such approval. Attachment No.:

3. **Character of Surrounding Land Use:** Describe the character of the surrounding land uses within one mile of the proposed facility.

Land uses within one mile of the facility are predominantly undeveloped, floodplain, open/ agricultural, and single-family residential.

4. **Growth Trends and Directions of Major Development:**

(a) Provide information about growth trends within five miles of the facility.

Overall, this area of Tarrant County has been growing at a slower rate than the average growth for the county, due primarily to the presence of Village Creek floodplain nearby, as well as the lack of public infrastructure and related utilities access.

Growth and development patterns have generally been along the major transportation corridors of IH-20 to the north and IH-35W to the west. Major retail and big-box development has occurred along the west side of IH-35 at FM 1187.

(b) Describe the directions of major development.

The City of Kennedale has been growing towards the northeast and east toward the City of Arlington. While there has been some development of individual lots to the south, there has been no major or large residential subdivision development near the landfill property.

5. **Number of and Proximity to Residences and Other Uses:** Indicate the approximate number and proximity of residences and other uses within one mile of the facility as follows. Population density and proximity to residences and other uses may be considered in the assessment.

(a) Number of, distance, and directions to residences:

There are approximately 21 properties zoned for residential within 1 mile of the facility.

(i) Indicate the distance to the nearest residences: 90 feet

(ii) Provide directions to the nearest residences:

The nearest residences are to the south of the landfill off of Dick Price Road.

(b) Number of, distance, and directions to commercial establishments:

There are 3 commercial properties within one mile of the property.

(i) Indicate the distance to the nearest commercial establishments: Approx. 680 feet

(ii) Provide directions to the nearest commercial establishments:

All the commercial properties are located to the north of the landfill. The closest commercial property is located to the northwest of the landfill.

(c) Number of, distance, and directions to schools:

There are no schools within one mile of the facility. The closest school (James F. Delany Elementary) is approximately 1.25 miles from the landfill property.

(d) Number of, distance, and directions to churches:

There are six churches within one mile of the facility. The nearest church is located approximately 4,600 feet northeast of the landfill property.

(e) Number of, distance, and directions to cemeteries:

There are no known cemeteries within one mile of the facility. The nearest cemetery (Everman Cemetery) is approximately 1.5 miles west of the landfill property.

(f) Number of, distance, and directions to historic structures and sites:

There are no known historic structures or sites within one mile of the facility. The nearest historic site (Masonic Widows and Orphans Home Historic District) is over 5 miles away from the site.

(g) Number of, distance, and directions to archaeologically significant sites:
There are no known archaeologically significant sites within one mile of the facility.

(h) Number of, distance, and directions to sites having exceptional aesthetic quality:
There are no known sites having exceptional aesthetic quality within one mile of the facility.

6. **Known Wells**. Provide information and discussion of all known wells within 500 ft. of the proposed facility. Provide the well information using Table VIII-1 below. If site has more than 5 wells within the radius, include wells information as an attachment.

There are three private water wells within 500 feet of the facility. Refer to Parts I/II, Figure I/II-4.3 - Structures, Inhabitable Buildings, and Water Wells Within 500 feet.

Table VIII-1. Well Information

Wells Within 500 ft. Radius of the Proposed Facility							
Well Locator	Well ID No.	Depth (ft.)	Completion Date	Completion Formation	Well Use	Longitude	Latitude
SDR	372403	80	8/21/2014	Woodbine	Domestic	-97.2358	32.625
SDR	59447	80	8/21/2014	Woodbine	Irrigation	-97.2352	32.625
TCEQ	32-31-1	100	4/14/1987	Woodbine	Domestic	-97.2374	32.624
SDR	364447	80	6/2/2014	Woodbine	Domestic	-97.2338	32.626

X. Transportation and Airport Safety - 30 TAC §330.61(i) and §330.545

1. **Transportation:** Attach completed Transportation Data and Coordination Report Form for Municipal Solid Waste Type I Landfills, TCEQ-20719. Attachment No.: N/A - Type IV Facility

2. **Airport Safety:**

(a) Is the facility located, or will be located, within 10,000 feet of any airport runway end used by turbojet aircraft? ☐ Yes ☑ No

(b) Is the facility located, or will be located, within 5,000 feet of any airport runway end used by only piston-type aircraft? ☐ Yes ☑ No

(i) If the answer is "Yes" to either (a) or (b) above, indicate the distance of the facility from the nearest airport runway end used by only turbojet aircraft: N/A feet or piston-type aircraft: N/A feet; and

(ii) Provide required demonstration to show that the municipal solid waste facility units are or will be designed and operated so as not to pose a bird hazard to aircraft.
There are no airports located within 5,000 feet of the landfill. Therefore it is not necesssary to provide a demonstration regarding potential bird hazard to aircrafts.

(c) Is the facility located, or will be located, within a six-mile radius of any small general service airport runway end used by turbojet or piston-type aircraft? ☐ Yes ☑ No

(d) Is the facility located, or will be located, within a five-mile radius of any large general public airport runway end used by turbojet or piston-type aircraft? ☐ Yes ☑ No
There is one private airport within 6 miles of the site.

(i) If the answer to either of subsection (c) or (d) above is "Yes," has the applicant notified the affected airport as required?
☐ Yes ☐ No. Explain: N/A

(ii) Also, has the applicant notified the Federal Aviation Administration as required?
☐ Yes ☐ No. Explain: N/A

(iii) Provide copies of the notifications to the affected airport and to FAA.
See Appendix I/IIB, page I/IIB-3.

(iv) All landfill facilities within a six-mile radius of any small general service airport runway or within a five-mile radius of any large general public commercial airport runway shall be critically evaluated to determine if an incompatibility exists. Include any coordination received from the affected airport and from the FAA concerning compatibility.
N/A

(e) Will the subject landfill accept waste streams that include putrescible waste?
☐ Yes ☑ No.

(i) If the answer to subsection (e) is "Yes," address the potential for the facility to attract birds and cause significant hazards to low-flying aircraft. Guidelines regarding location of landfills near airports can be found in Federal Aviation Administration Order 5200.5(A), January 31, 1990 (or the replacement active orders, notices, and advisory circular guidelines from the FAA can be used).

XI. General Geology and Soils Statement and Location Restrictions - 30 TAC §330.61(j) and §§ 330.555 - 330.559

1. Discuss in general terms the geology and soils of the proposed site.

Surficial sediments in the undeveloped areas of the Site consist of unconsolidated clay, silt, sand, and gravel, which contain the Uppermost Aquifer under water-table conditions. These sediments are are underlain by indurated low permeability shale and limestone aquitard sediments.

2. Fault Areas

(a) Will the municipal solid waste landfill units at the facility or a lateral expansion of the facility be located within 200 feet of a fault that has had displacement in Holocene time?
☐Yes ☑No
If the answer is "Yes," provide demonstration to show that an alternative setback distance of less than 200 feet will prevent damage to the structural integrity of the landfill unit and will be protective of human health and the environment. Attachment No.:

(b) Is the facility located within areas that may be subject to differential subsidence or active geological faulting? ☐Yes ☑No
If the answer is "Yes," provide a detailed fault study. Attachment No.:

(c) Is an active fault known to exist within 1/2 mile of the site? ☐Yes ☑No
If the answer is "Yes," investigate the site for unknown faults and discuss its results. Attachment No.:

(d) Is the facility located in areas experiencing withdrawal of crude oil, natural gas, sulfur, etc., or significant amounts of groundwater? ☑Yes ☐No
If the answer is "Yes," investigate the site in detail for the possibility of differential subsidence or faulting that could adversely affect the integrity of landfill liners and discuss the site investigation and its results. Attachment No.: Part I/IIC & Part III, Attachment IIIG

(e) If conducted, were the studies of differential subsidence or faulting conducted under the direct supervision of a licensed professional engineer experienced in geotechnical engineering or a licensed professional geoscientist qualified to evaluate conditions of differential subsidence or faulting? ☑Yes ☐No. Explain
Fault Areas discussed in Part I/II Section 9 and Parts I/II Section 8.

(f) If conducted, do the studies of differential subsidence or faulting establish the limits (both upthrown and downthrown) of the zones of influence of all active faulted areas within the site vicinity? ☑Yes ☐No. Explain Not Applicable - No active faults in vicinity.

(g) If conducted, do the studies of differential subsidence include information or data addressing the following shown below, as applicable:

Table X-1. Information included in Fault Area Studies

Information to be included, as applicable:	Yes	Not Applicable
(i) structural damage to constructed facilities (roadways, railways, and buildings);	☐	☑
(ii) scarps in natural ground;	☐	☑
(iii) presence of surface depressions (sag ponds and ponded water);	☐	☑
(iv) lineation's noted on aerial maps and topographic sheets;	☐	☑
(v) structural control of natural streams;	☐	☑
(vi) vegetation changes;	☐	☑
(vii) crude oil and natural gas accumulations;	☐	☑
(viii) electrical spontaneous potential and resistivity logs (correlation of subsurface strata to check for stratigraphic offsets);	☐	☑
(ix) earth electrical resistivity surveys (indications of anomalies that may represent fault planes);	☐	☑
(x) open cell excavations (visual examinations to detect changes in subsoil texturing and/or weathering indicating stratigraphic offsets);	☐	☑
(xi) changes in elevations of established benchmarks; and	☐	☑
(xii) references to published geological literature pertaining to area conditions.	☑	☐

(h) If the site is or will be located within a zone of influence of active geological faulting or differential subsidence, does the application provide substantial evidence that the zone of influence will not affect the site?
☐Yes ☐No Attachment No.: Not Applicable

Address the following statement:

3. ☑ No solid waste disposal shall be accomplished within a zone of influence of active geological faulting or differential subsidence because active faulting results in slippage along failure planes, thus creating preferred seepage paths for liquids.

4. Seismic Impact Zones

(a) Is the proposed facility located in a seismic impact zone, as defined in 30 TAC §330.557?
☐Yes ☑No
Provide information to support response. Attachment No.: Parts I/II-C

(b) For facilities located in a seismic impact zone, provide a detailed demonstration showing that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. Attachment No.: Not Applicable

5. Unstable Areas

(a) Is the facility located in an unstable area, as defined in 30 TAC §330.559?
☐Yes ☑No Explain: _____

(b) If the facility is located in an unstable area, provide a demonstration that engineering measures have been incorporated into the landfill unit's design to ensure that the integrity of the structural components of the landfill unit will not be disrupted.
Attachment No.: N/A
The demonstration considered at least the following factors:

(i) on-site or local soil conditions that may result in significant differential settling;
☐Yes ☐No

(ii) on-site or local geologic or geomorphologic features; ☐Yes ☐No and

(iii) on-site or local human-made features or events (both surface and subsurface).
☐Yes ☐No

XII. Groundwater and Surface Water - 30 TAC §330.61(k) and §330.549

1. Groundwater

Provide an attachment containing data about the site-specific groundwater conditions at and near the site, from published and open-file sources, including:

- Aquifer names and their association with geologic units described in the General Geology and Soils Statement;
- Groundwater quality, including, if available, typical values or value ranges for total dissolved solids content; and
- Present use(s) of groundwater withdrawn from aquifers at and near the site, if available.

Attachment No.: IIIG

Address the following as applicable:

(a) Is the facility located over the Edwards Aquifer recharge zone, as defined in 30 TAC §330.549? ☐Yes ☑No.
If yes, discuss how the facility will comply with the applicable requirements in 30 TAC Chapter 213 (relating to Edwards Aquifer).

Not Applicable

(b) A Type I or Type IAE landfill is prohibited on the recharge zone of the Edwards Aquifer; the applicant will not locate a Type I or Type IAE landfill on the recharge zone of the Edwards Aquifer. Select either statement that applies:

☑ (i) The facility is not or will not be located over the Edwards Aquifer Recharge Zone.

☐ (ii) The facility is not a Type I or Type IAE landfill.

(c) A new landfill cell or an aerial expansion of an existing landfill cell managing Class 1 non-hazardous industrial solid waste may not be located in areas described in 30 TAC § 335.584(b)(1) and (2) (relating to Location Restrictions), unless the Executive Director (ED) approves an engineered design that the applicant has demonstrated will provide equal or greater protection to human health and the environment:

(i) Does the application propose Class 1 nonhazardous industrial solid waste cells or units at the subject facility? ☐Yes ☑No

(ii) If yes, discuss how the facility would comply with the location restriction requirements under 30 TAC §335.584(b)(1) and (2). Include any applicable equivalency demonstration that would provide equivalent or greater protection to human health and the environment. Attachment No.: N/A

2. Surface Water

(a) Provide data on surface water at and near the site (including lakes, ponds, creeks, streams, rivers, or similar water bodies).

Attachment Nos.: See Parts I/II, Section 10.2 - Surface Water Statement and Appendix IIIF, Section 4 - Drainage Patterns and Figure 4.2.

(b) Provide information demonstrating how the municipal solid waste facility will comply with applicable Texas Pollutant Discharge Elimination System (TPDES) storm water permitting requirements and the Clean Water Act, §402, as amended See Appendix I/II-E.

(i) The facility has obtained TPDES permit coverage under the following individual wastewater permit(s) (list permit number(s)): N/A . A copy of the permit(s) is provided in Attachment No.: , or

(ii) A certification statement indicating that the applicant will obtain the appropriate TPDES permit coverage when required.
☑Yes ☐No. Explain Site is currently covered under TPDES. See Appendix I/IIE for existing stormwater permit.

XIII. Abandoned Oil and Water Wells - 30 TAC §330.61(l)

1. Water Wells

(a) Are there any existing or abandoned water wells within the facility? ☐Yes ☑No
Refer to Parts I/II, Section 2.5 - Abandoned Oil and Water Wells

(i) If no, move to Item No. 2 below.

(ii) If yes, address the following:

(1) Provide a map showing the water well locations, identity, status, and use. Attachment No.:

(2) Will all the water wells be capped, plugged, and closed prior to construction at the facility? ☑Yes ☐No.

(3) If yes, provide written certification that all such wells will be capped, plugged, and closed in accordance with all applicable rules and regulations of TCEQ or other state agency within 30 days prior to construction at the facility. Attachment No.:

(4) If no, identify and describe the water wells that will be capped, plugged, and closed in accordance with all applicable rules and regulations of TCEQ or other state agency. Attachment No.:

(5) Also, identify the wells necessary for use, and that will remain in use, for supply for operations at the facility. Attachment No.:

(6) Are the water wells that will remain in use for supply for operations at the facility located outside of the groundwater monitoring well network and not subject to impact from landfill operations? ☐Yes ☐No. If no, explain

(7) The water wells that will remain in use for supply for operations at the facility and that are located inside of the groundwater monitoring network, but outside the landfill unit boundary, are identified in Attachment No.: for ED approval.

2. Oil and Gas Wells

(a) Are there any existing or abandoned on-site crude oil, natural gas, or other wells associated with mineral recovery under the jurisdiction of the Railroad Commission of Texas?
☐Yes ☑No Refer to Parts I/II, Section 2.5 - Abandoned Oil and Water Wells

(i) If yes, address the following items:

(1) Provide a map showing well locations, identity, type, and status.
Attachment No.:

(2) Identify and annotate the oil or natural gas wells that are producing and will remain in their current state, provided such wells do not affect or hamper landfill operations.

(3) Provide written certification that all the oil and natural gas wells, other than the producing wells approved for retention, have been properly capped, plugged, and closed at the time of application in accordance with all applicable rules and regulations of the Railroad Commission of Texas.
Attachment No.:

XIV. Floodplains - 30 TAC §330.61(m)(1) and §330.547

1. Describe the location of the facility with respect to floodplains.

The floodplain of Village Creek forms the west boundary of the site. The landfill expansion will modify the existing floodplain on the eastern side of Village Creek to allow for the landfill expansion to the west of the existing landfill. Refer to Appendix III-F for more information.

2. Provide a copy of the Federal Emergency Management Administration (FEMA) flood map for the area to show the facility boundary and to illustrate the information described in Section 1 above. Attachment No.: See Appendix IIIF - Figure 4.6

3. For construction of levees or other improvements associated with flood control on the proposed facility, provide data on floodplains in accordance with 30 TAC Chapter 301 Subchapter C (relating to Approval of Levees and Other Improvements). N/A

4. Address the following requirements with regard to the location of the facility:

(a) Provisions to ensure that no solid waste disposal operation is conducted within the facility in areas that are located in a 100-year floodway as defined by FEMA. No portion of the waste disposal disposal area will be located in the 100-year floodplain, and the perimeter berm will provide over 3 feet of freeboard between the 100-year floodplain and the top of the berm. Refer to Appendix IIIF-G - Excerpts from Approved CLOMR.

(b) Designs that demonstrate that municipal solid waste management units, including storage and processing facilities, located in 100-year floodplains will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment.
A floodplain storage area will be developed to compensate for the development of the expansion area. Refer to Appendix IIIF-G - Excerpts from Approved CLOMR.

(c) Demonstrate MSW storage and processing facilities shall be located outside of the 100-year floodplain unless the owner or operator demonstrates that the facility is designed and will operate to prevent washout during a 100-year storm event, or obtains a conditional letter of map amendment from FEMA.
As part of the proposed expansion, a CLOMR was prepared for the landfill area as the proposed development areas include the 100-year floodplain. The 100-year floodplain related design and demonstrations developed as part of this application meet the requirements set forth in 30 TAC 330.307. As shown in Appendix IIIF-G, the 100-year floodplain will be contained around the landfill footprint and will not encroach on the limit of waste.

(d) If applicable, provide a copy of the conditional letter of map amendment (or other applicable FEMA approval) from the FEMA administrator for development within a floodplain.

Refer to Appendix IIIF-G - Excerpts from Aproved CLOMR.

(e) References to provisions, designs, and narratives regarding floodplains in Part III of the application. Refer to Appendix IIIF.

XV. Wetlands - 30 TAC §330.61(m)(2) and §330.553

1. Provide a wetlands determination under applicable federal, state, and local laws and discuss wetlands in accordance with 30 TAC §330.553. Demonstration can be made by providing evidence that the facility has a Corps of Engineers permit for the use of any wetlands area.
   Attachment No.: N/A The site has submitted a No Permit Required Application to USACE. The approval of this application will be provided upon receipt.
   (a) If applicable, provide a copy of any Corps of Engineers permit issued to the applicant for the use of any wetlands area within the facility. Attachment No.:
2. Identify wetlands located within the facility boundary, attach necessary maps and drawings.

Per the No Permit Required Application, no wetlands will be impacted by this expansion.

3. Where new municipal solid waste landfill units, lateral expansions, material recovery operations from a landfill, and storage or processing units are to be located in wetlands, discuss the identified wetlands considering the following:

   (a) Locating the landfill units, lateral expansions, material recovery operation from a landfill, and storage or processing units away from the identified wetlands. N/A

   (b) Steps taken to avoid impacts to wetlands to the maximum extent practicable to achieve no net loss of wetlands (as defined by acreage and function).

N/A

   (c) For unavoidable impacts:

      (i) Clearly rebut the presumption that a practicable alternative to the proposed facility or recovery operation is available that does not involve wetlands.

N/A

      (ii) Demonstrate that the construction and operation of the municipal solid waste landfill unit, material recovery operation from a landfill, and storage or processing units will not:

         (1) cause or contribute to violations of any applicable state water quality standard;

N/A

         (2) violate any applicable toxic effluent standard or prohibition under the Clean Water

N/A

         (3) 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

N/A

         (4) violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

N/A

(iii) Demonstrate the integrity of the landfill unit and its ability to protect ecological resources by addressing the following factors showing that the municipal solid waste landfill unit or recovery operation will not cause or contribute to significant degradation of wetlands:
N/A

(1) erosion, stability, and migration potential of native wetland soils, muds, and deposits used to support the landfill unit; N/A

(2) erosion, stability, and migration potential of dredged and fill materials used to support the landfill unit; N/A

(3) the volume and chemical nature of the waste managed in the landfill unit; N/A

(4) impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste; N/A

(5) the potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and N/A

(6) any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected. N/A

(iv) Demonstrate steps taken to minimize unavoidable impacts to wetlands to the maximum extent practicable. N/A

(v) Demonstrate offsetting of remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands). N/A

XVI. Endangered or Threatened Species - 30 TAC §330.61(n) and §330.551

1. Provide Endangered Species Act compliance demonstrations as required under applicable state and federal laws. Attachment No.: Refer to Appendix I/IIB, page I/IIB-140.

2. Determine and discuss whether the facility is in the range of endangered or threatened species.

No suitable habitat exists on the site for any species listed for Tarrant County, nor has critical habitat been designated in the project area for any threatened and endangered species.

3. If the facility is located in the range of endangered or threatened species, provide a biological assessment prepared by a qualified biologist in accordance with standard procedures of the United States Fish and Wildlife Service (USFW) and the Texas Parks and Wildlife Department (TPWD) to determine the effect of the facility on the endangered or threatened species. Where a previous biological assessment has been made for another project in the general vicinity, a copy of that assessment may be submitted for evaluation. Attachment No.: Refer to Appendix I/IIB, page I/IIB-140.

4. Provide coordination correspondence with and responses from the USFW and the TPWD concerning locations and specific data relating to endangered and threatened species in Texas.

See Appendix I/IIB, page I/IIB-128 for TPWD coordination and page I/IIB-272 for USFW coordination.

5. Describe how the facility will comply with recommendations from the TPWD and USFW regarding protection of endangered and threatened species.

No recommendation was received from USFW or TPWD at this time.

6. Discuss the impact of the solid waste disposal facility upon endangered or threatened species:

The site has operated as a landfill for over 30 years, and a significant portion of the site has been disturbed by earth-moving activities. As discussed in the Endangered or Threatened Species Assessment, the site does not provide habitat for and would not likely be occupied by any federally listed and state listed threatened and endangered species.

7. Describe how the facility design, construction, and operation will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species.

No suitable habitat exists on the site for any species listed for Tarrant County, nor has critical habitat been designated in the project area for any threatened and endangered species. The landfill expansion will not result in the destruction or adverse modification of any federally designated critical habitat for any threatened or endangered species.

XVII. Texas Historical Commission Review 30 TAC §330.61(o)

1. Provide correspondence to and a review letter from the Texas Historical Commission documenting compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code.
   Attachment No.: Refer to Appendix I/IIB, page I/IIB-18.

XVIII. Council of Governments 30 TAC §330.61(p)

1. Provide documentation that Parts I and II of the application were submitted to the applicable council of governments for compliance with regional solid waste plans. Also provide a review letter if received from the applicable council of governments.
   Attachment No.: Refer to Appendix I/IIB, page I/IIB-308.
2. Provide documentation that a review letter was requested from any local governments as appropriate for compliance with local solid waste plans.
   Attachment No.: NCTCOG confirmed on June 5, 2023 that the plan is in conformance with the regional plan. The approval letter has been added as Page I/II-B-325.

XIX. Easement Protections 30 TAC §330.543(a)

1. Will the applicant design and operate the facility such that no solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way that crosses the facility? ☑Yes
2. Will the applicant design and operate the facility such that no solid waste disposal shall occur within 25 feet of the center line of any utility line or pipeline easement but no closer than the easement? ☑Yes
3. Will the applicant clearly mark all pipeline and utility easements with posts that extend at least six feet above ground level, spaced at intervals no greater than 300 feet?
   ☑Yes

XX. Buffer Zones 30 TAC §330.543(b)

1. Provide the buffer zone distance (i.e. 50 feet for Arid Exempt and Type IV landfills, 125 feet for Type I landfills) at the facility to demonstrate compliance with 30 TAC §330.543(b).

   Refer to Parts I/IIC - Location Restriction Demonstrations, Section 2 and Drawing I/IIC-1.
2. Provide references for the application drawings and maps that clearly show the buffer zones around the facility. Attachment(s) No.: Refer to Drawing I/IIC-1.

XXI. Coastal Areas 30 TAC §330.561

1. A new landfill cell or an aerial expansion of an existing landfill cell managing Class 1 industrial solid waste (other than waste which is Class 1 because of asbestos content) may not be located in areas: The Fort Worth C&D Landfill does accept Class I Industrial Solid Waste nor is it located near the coast. Therefore, the site is in compliance with the coastal areas location restriction.
   (a) On a barrier island or peninsula. N/A
   (b) Within 1,000 feet of an area subject to active coastal shoreline erosion, if the area is protected by a barrier island or peninsula, except as allowed under 30 TAC §335.584(b)(4). N/A
   (c) Within 5,000 feet of coastal shorelines that are subject to active shoreline erosion and which are unprotected by a barrier island or peninsula, except as allowed under 30 TAC §335.584(b)(4). N/A
2. Describe the location of the facility with regard to distance to coastal shoreline subject to active shoreline erosion. N/A

XXII. Type I and Type IV Landfill Permit Issuance Prohibited – 30 TAC §330.563

Address the following statements.

1. The commission may not issue a permit for a Type IV landfill that is subject to the conditions specified in Texas Health and Safety Code, §361.122, Denial of Certain Landfill Permits. Is the proposed facility a Type IV landfill located in the area subject to the referenced statute?
   ☐Yes ☑No Explain The facility is not located within 100 feet of a canal that is used for public drinking water source or for irrigation of crops used for human or animal consumption or located in a county with a population of more than 225,000 that is located adjacent to the Gulf of Mexico.
2. The commission may not issue a permit for a Type I or Type IV landfill that is subject to the conditions specified in Texas Health and Safety Code, §361.123, Limitation on Locations of Municipal Solid Waste Landfills. Is the proposed facility a Type I or Type IV landfill located in the area subject to the referenced statute?
   ☐Yes ☑No Explain The location restriction prohibits the issuance of a permit for a new Type I or Type IV landfill or a permit amendment authorizing the conversion of a Type IV landfill to a Type I landfill only if the landfill is located adjacent to a county with a population of more than 3.3 million and inside the boundaries of a national forest, as designated by the U.S. Forest Service, on public or private land. Given that the Fort Worth C&D Landfill is a Type IV landfill and is not located inside the boundaries of a national forest, the site is in compliance with the Type I and Type IV landfill permit issuance prohibited location restriction.

Attachments

Table Att-1. Required Attachments

Attachments		Attachment No.
Existing Conditions Summary	Parts I/II-Section 3	
Waste Acceptance Plan Form	Volume I	
General Location Maps	Parts I/II, Figure I/II-4.1	
Facility Layout Maps	Parts I/II, Figures I/II-3.1 through 3.3	
General Topographic Maps	Parts I/II, Figure I/II-4.2	
Aerial Photographs	Parts I/II, Figure I/II-6.1	
Land Use Map	Parts I/II, Figure I/II-7.1	
Transportation and Airport Safety Form	N/A	
Federal Aviation Administration Coordination Letters, if applicable	Parts I/IIB, Page I/IIB-3	
Entity Exercising Maintenance Resp. of Public Roadway, if applicable		
Fault Lines, if applicable	Parts I/IIC, Figures I/IIC-2 and I/IIC-3	
Seismic Impact Zones, if applicable	Parts I/IIC, Figure I/IIC-4	
Unstable areas, if applicable	Parts I/IIC, Section 9.4	
Site Specific Groundwater Conditions	Parts I/II, Section 10	
Site Specific Surface Water Conditions	Parts I/II, Section 10	
Texas Pollutant Discharge Elimination System (TPDES)	Parts I/IIB, Page I/IIB-174	
Abandoned Oil and Water Wells, if applicable	Parts I/II, Section 2.5	
FEMA Map	Appendix F, Figure 4.6	
Facility Design Demonstration for Flood Map, or Conditional Letter of Map Amendment from FEMA, if applicable	Appendix IIIF-G	
Wetland Documentation, if applicable	Appendix I/IIC, Section 7	
Endangered or Threatened Species Documents, if applicable	Appendix I/IIB, Page 140	
Texas Historical Commission Letter(s)	Appendix I/IIB, Page I/IIB-18	
Council of Governments/Local Governments Review Request Coordination Letter(s)	Appendix I/IIB, Page I/IIB-308	
Buffer Zones	Appendix I/IIC, Section 2 and Drawing I/IIC-1	
Others (describe):		N/A
Others (describe):		N/A
Others (describe):		N/A
Confidential Documents, if applicable		N/A

Texas Commission on Environmental Quality
Waste Acceptance Plan Form
Type IV & Type IV AE Landfill Facilities

This form is designed to address the requirements for Waste Acceptance Plans in Part II of an application, as required by Title 30 Texas Administrative Code, Chapter 330, §330.61(b)(1). Rules are from Chapter 330 unless otherwise specified. If more space is needed for a line item or table item, include the information on a separate sheet and reference the line or table item. If you have any questions, contact the Municipal Solid Waste Permits Section at mswper@tceq.texas.gov or at (512) 239-2335.

A. Applicant Information

1. Facility Name: Fort Worth C&D Landfill
2. MSW Permit No.: MSW-1983E

B. Waste Generation Areas and Population Estimates [§330.61(b)(1)(A)]

Table 1. Areas contributing waste to the facility and estimate of population or population equivalent served by the facility. Values are estimates, not permit limits.

Waste Generation Area	Estimate of Population or Population Equivalent Served in each Area
Tarrant County	245,098
Johnson County	91,912
Dallas County	122,549
Parker County	61,275
Denton County	61,275
Collin County	30,636

Estimated population or population equivalent served by the facility.
612,745 persons

C. General Sources and Types of Waste to be Accepted at the Facility [§330.61(b)(1) and (1)(A)]

1. General sources of waste to be received (household, commercial, industrial, etc.).
Yard waste, Class 2, and Class 3 industrial waste, construction-demolition waste, and rubbish

2. Types of Waste to be Accepted for **Disposal** at the Facility

   a. Indicate whether the following wastes will be accepted for **disposal** (check "Yes" for will accept or "No" for will not accept).

      i. ☑ Yes ☐ No Construction or demolition waste [30 TAC §330.3(33)]

      ii. ☑ Yes ☐ No Brush [30 TAC §330.3(18)]

      iii. ☑ Yes ☐ No Rubbish [30 TAC §330.3(136)]

      iv. ☑ Yes ☐ No Tires that have been processed (such as by splitting, shredding, quartering or sidewall removal) in a manner acceptable to the executive director. [30 TAC §330.3(136); 30 TAC §330.15(e)(4) prohibits whole tire disposal]

      v. ☑ Yes ☐ No Class 2 industrial solid waste that is construction or demolition waste, brush, or rubbish. [30 TAC §330.3(22) and 30 TAC §330.173(i)]

      vi. ☑ Yes ☐ No Class 3 industrial solid waste. [30 TAC §330.3(23) and 30 TAC §330.173(j)]

   b. Indicate whether the following Special Wastes will be accepted for disposal.

      i. ☑ Yes ☐ No Pesticide (insecticide, herbicide, fungicide, or rodenticide) containers that have been triple-rinsed before receipt at the landfill, are rendered unusable before receipt or on arrival, and are covered by the end of the same working day they are received. [30 TAC §330.171(c)(5)]

      ii. ☑ Yes ☐ No Non-regulated asbestos-containing material (non-RACM). [40 CFR 261, 30 TAC §330.171(c)(4) and 30 TAC §330.3(95)]

      iii. ☐ Yes ☑ No Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas that is construction or demolition waste, brush, or rubbish. [30 TAC §330.171(b), 30 TAC §330.3(154)(P)]

      iv. ☐ Yes ☑ No Other special waste that is construction or demolition waste, brush, or rubbish. [30 TAC §330.3(154)]

      v. ☐ Yes ☑ No Industrial waste or waste from oil, gas, and geothermal activities that were generated outside the boundaries of Texas that is construction or demolition waste, brush, or rubbish. [30 TAC §330.171(b), 30 TAC §330.3(154)(Q)]

      vi. Specify any wastes to be accepted for disposal that are not listed above.

      _____

      _____

D. Waste Prohibited from Disposal [§330.61(b)(1)]

The following wastes are prohibited from **disposal**.

- Wastes that are not construction or demolition waste, brush, or rubbish. [30 TAC §330.5(a)(2)]
- Putrescible waste. [30 TAC §330.3(122)]

- Untreated medical waste. Please note that this prohibition may be superseded by the executive director in writing when a situation exists that requires disposal of untreated medical waste to protect human health and the environment from the effects of a natural or man-made disaster. [30 TAC §330.171(c)(1)]
- Lead-acid storage batteries. [30 TAC §330.15(e)(1)]
- Do-it-yourself used motor vehicle oil. [30 TAC §330.15(e)(2)]
- Used oil filters from internal combustion engines. [30 TAC §330.15(e)(3)]
- Whole used or scrap tires. [30 TAC §330.15(e)(4)]
- Items containing chlorinated fluorocarbon (CFC) that have not been handled in accordance with 40 CFR §82.156(f). [30 TAC §330.15(e)(5)]
- Waste material that contains free liquids by the Paint Filter Test, EPA Method 9095. [30 TAC §330.15(e)(6)]
- Regulated hazardous waste. [30 TAC §330.15(e)(7), 40 CFR §261.3]
- Waste that exhibits the characteristics for hazardous waste [40 CFR §261.3] from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas. [30 TAC §330.15(e)(7)]
- Polychlorinated biphenyl wastes (PCBs). [30 TAC §330.15(e)(8), 40 CFR §761]
- Radioactive materials [30 TAC Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services. [30 TAC §330.15(e)(9)]
- All wastes not authorized for disposal above, including those for which "No" has been indicated.

Specify any wastes to be prohibited for disposal that are not listed above.

_____
_____
_____

E. Material Recovery [§330.61(b)(1)(A)]

Will the facility recover materials from incoming waste? ☐ Yes ☑ No

If yes, provide a descriptive narrative describing the percentage of incoming waste, if applicable, that must be recovered and its intended use.

_____
_____
_____

F. Estimated Maximum Annual Waste Acceptance Rate Projected for Five Years [§330.61(b)(1)(C)]

Provide **estimated** maximum annual waste acceptance rates at the facility, projected for five years. These rates are not permit limitations.

Table 1. Five-Year Projection for Waste Acceptance.

Year	Estimated Maximum Annual Waste Acceptance Rate
2023	562,952
2024	571,492
2025	580,161
2026	588,962
2027	597,896

G. Storage and Processing Units [§330.61(b)(1)]

Indicate units that will store or process waste at the facility. Describe the wastes that will be stored or processed in these units. Provide the final disposition or use (e.g., landfill disposal, composting) of the processed materials. **Waste storage and processing authorized separately (such as a registered transfer station within the permit boundary of a landfill) should not be included on this form.**

Storage and processing units must be illustrated (or locations described) on site layout figures in Part II of the application. N/A

Examples:

1. Unit: liquid stabilization unit, Purpose: process, Waste Type: liquid waste, Disposition: solidified material to be disposed in a properly authorized landfill; or
2. Unit: grease separation and dewatering unit, Purpose: process, Disposition: water to WWTP and grease to composter or Type I landfill.

Table 3. Waste storage and processing units

Unit	Purpose	Waste Type Stored or Processed	Final Disposition or Use
	☐ Store ☐ Process		
	☐ Store ☐ Process		
	☐ Store ☐ Process		
	☐ Store ☐ Process		
	☐ Store ☐ Process		
	☐ Store ☐ Process		
	☐ Store ☐ Process		
	☐ Store ☐ Process		

H. Prohibited from Processing [§330.61(b)(1)]

The following wastes are prohibited from **processing**.

- Any wastes not authorized for processing above.
- Lead-acid storage batteries may not be incinerated. [30 TAC §330.15(e)(1)]
- Used motor vehicle oil may not be incinerated. [30 TAC §330.15(e)(2)]
- Regulated hazardous waste. [40 CFR §261.3]
- Radioactive materials [30 TAC Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services. [30 TAC §330.15(e)(9)]
- All wastes not authorized for processing above, including those for which "No" has been indicated.

Specify any other wastes to be prohibited for storage or processing (specify):

_____
_____
_____

I. Special Waste Acceptance Plan [30 TAC §330.171(b)(2)]

☐ Yes ☑ No Does this application include a Special Waste Acceptance Plan? If so, please specify its location in the application. _____

J. Limiting Parameters [30 TAC §330.61(b)(1)]

Municipal construction or demolition waste, brush, and rubbish are categorical. Constituent sampling is not required for these wastes and there are no associated limiting parameters for waste disposal or processing. [30 TAC §330.5(a)(2)]

1. Type IV and IV AE Landfill Limitations

   MSW Type IV and IV AE landfills may not accept wastes that are not construction or demolition waste, brush, or rubbish. [30 TAC §330.3(33), 30 TAC §330.3(18) and 30 TAC §330.3(136)] The presence of waste not fitting these categories, including but not limited to putrescible waste, is a limiting parameter for waste disposal. [30 TAC §330.5(a)(2)]

2. Regulated Hazardous Waste

   MSW landfills may not accept regulated hazardous waste [§330.3(133)] for processing or disposal. The presence or characteristic of any material meeting the definition of a regulated hazardous waste is a limiting parameter for waste disposal or processing.

3. Free Liquids

   The presence of free liquids, as defined by the Paint Filter Test, EPA Method 9095, in waste, but not household waste and not liquid in containers similar in size to those found in household waste, is a limiting parameter for waste disposal. [§330.15(e)(6), §330.3(83)]

4. PCBs

   The presence of polychlorinated biphenyls (PCB) wastes [40 CFR Part 761] unless authorized by the United States Environmental Protection Agency is a limiting parameter for waste disposal or processing. [§330.15(e)(8)]

5. Radioactive Materials

   The presence of radioactive materials [Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services, is a limiting parameter for waste disposal or processing. [§330.15(e)(9)]

6. Class 1 Solid Waste

   For all Type IV and Type IV AE landfills, 1,500 mg/kg total petroleum hydrocarbons (TPH) and the concentrations in 30 TAC §335.521(a)(1) are limiting parameters for waste disposal.

7. Other Limitations:

   _____
   _____
   _____

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PARTS I/II
GENERAL APPLICATION REQUIREMENTS

Prepared for:

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

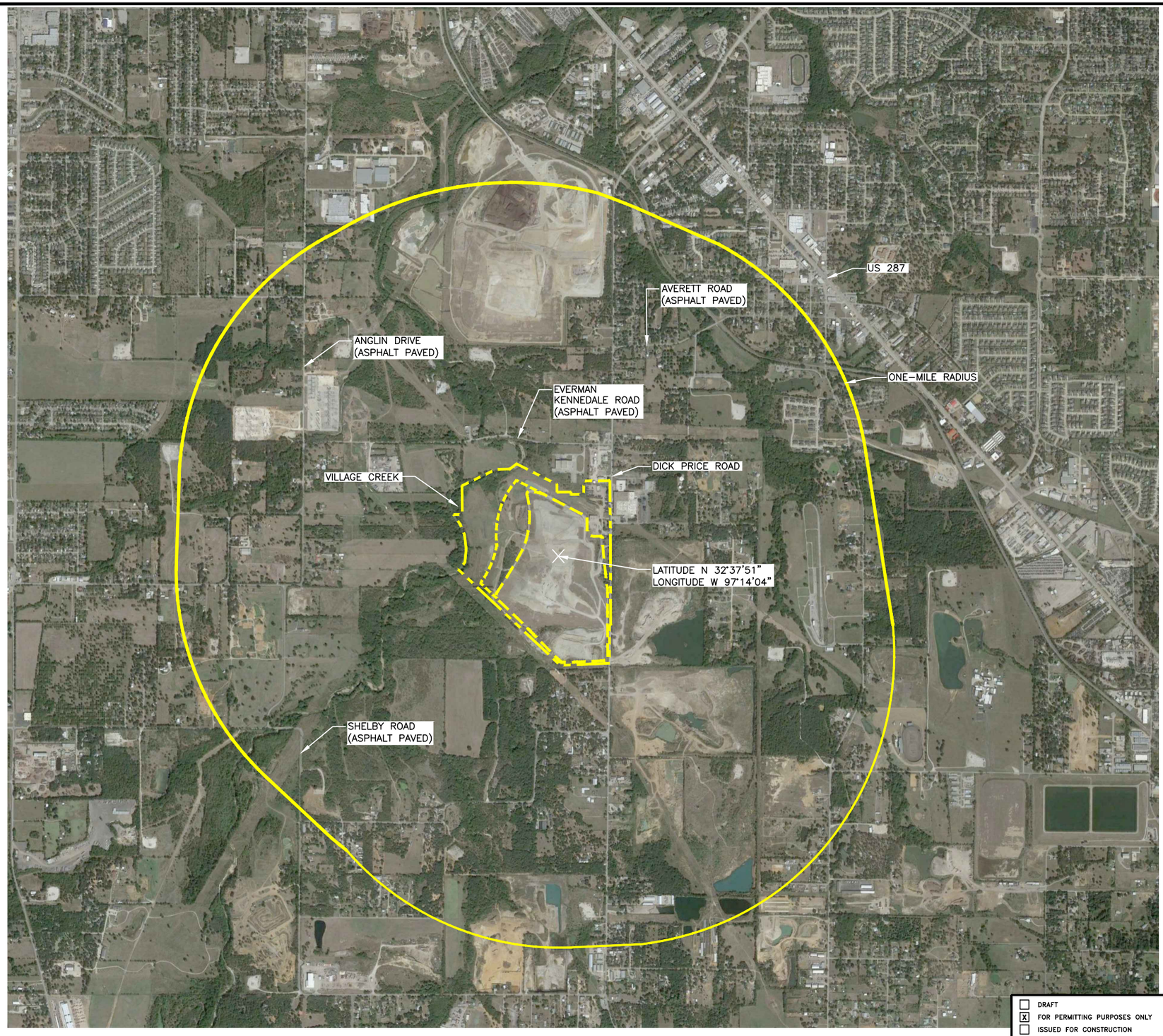
Prepared by:

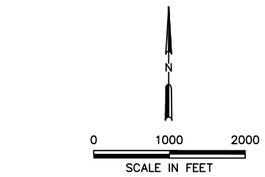
Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

This document intended for permitting purposes only.

- The permit boundary will include an area of 184.3 acres. No increase in the size or configuration of the permit boundary is proposed for this amendment application. The legal description for the permit boundary is included in Section 13 of Parts I/II.
- A summary of the capacity (volume of waste and cover soils) of the site is listed below:
  - Remaining capacity of existing site (TCEQ Permit No. MSW-1983D) = 9.9 million cubic yards (as of February 17, 2022).
  - Increase due to major permit amendment application = 8.4 million cubic yards.
  - Remaining capacity of the site with the proposed expansion (TCEQ Permit No. MSW-1983E) = 18.3 million cubic yards (as of February 17, 2022).
- The maximum elevation of the final cover will be 860 ft-msl, and the maximum waste elevation will be 858.5 ft-msl.
- The elevation of deepest excavation (EDE) for the proposed landfill liner system excavation will be 550 ft-msl (if in-situ liner is used) or 546 ft-msl (if constructed liner is used) (i.e., bottom of liner system in deepest sump), which is the same as the currently approved EDE. This elevation represents the bottom of the liner system.
- The liner system (4-foot-thick intact in-situ unweathered shale or 3-foot-thick recompacted clay liner overlain by 1-foot of protective soil cover) will be constructed according to Title 30 TAC §330.331(d)(1) or (2). Details for the liner is provided in Part III, Appendix IIIA-A – Liner and Final Cover System Details.
- This application includes a horizontal and vertical expansion of the landfill. A containment system design for this area is provided to meet the requirements of Title 30 TAC §330.331(d)(1). The bottom liner design for the MSW lateral expansion area will incorporate an in-situ liner system consisting of unweathered shale that is present at the site or a recompacted clay liner overlain by protective cover soil. The sidewall liner system will consist of a 3-foot-thick recompacted clay liner overlain by a 1-foot-thick protective cover layer. The protective cover layer will be earthen material with a 3-inch diameter maximum particle size and without deleterious material.
- Above grade waste disposal will conform to the lines and grades set forth in Appendix I/IIA, Drawing I/II-A.8 – Landfill Completion Plan. Sideslope grades will not exceed 3H:1V from the toe of the side embankment to the top of the side embankment. The slope of the landfill top deck will be constructed at a five percent maximum slope.
- A final cover system will be constructed over the filled waste material, as shown in Part III, Appendix IIIA-A – Liner and Final Cover System Details.



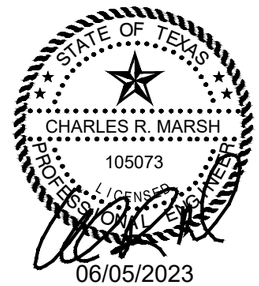


LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMIT OF WASTE
- PROPOSED LIMIT OF WASTE

NOTES:

1. AERIAL IMAGERY PROVIDED BY GOOGLE EARTH DATED 12/6/2019.



06/05/2023

- [ ] DRAFT
- [X] FOR PERMITTING PURPOSES ONLY
- [ ] ISSUED FOR CONSTRUCTION

DATE: 12/2022
FILE: 0771-356-11
CAD: 6.1-AERIAL PHOTOGRAPH.DWG

DRAWN BY: JDW
DESIGN BY: JBP
REVIEWED BY: CRM

Weaver Consultants Group
TBPE REGISTRATION NO. F-3727

PREPARED FOR
TEXAS REGIONAL LANDFILL COMPANY, LP

REVISIONS		
NO.	DATE	DESCRIPTION
01	06/2023	1ST TCEQ COMMENT RESPONSE

MAJOR PERMIT AMENDMENT
AERIAL PHOTOGRAPH

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

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FIGURE I/II-6.1

O:\0771\356\EXPANSION 2022\PARTS I-II\CLEAN\6.1-AERIAL PHOTOGRAPH.dwg, jpuhr, 1:2

7.3 Location and Zoning

Review of the City of Kennedale zoning map indicates the landfill property is within the Extraterritorial Jurisdiction (ETJ) of the City of Kennedale, but not subject to City of Kennedale zoning requirements. An ETJ designation allows the City of Kennedale to regulate some activities of properties located within their ETJ. The ETJ designation imposes no restrictions on the development, permitting, or continued operation of the landfill, including future expansion of the landfill, as the property is already approved for this. Future zoning coordination will be needed for construction of the proposed entrance facilities, because a small portion of it is located within the Kennedale City limits.

7.4 Surrounding Land Use

Land use within a 1-mile radius of the landfill property is predominantly undeveloped, floodplain, open/agricultural lands, and single-family residential with scattered commercial and light industrial facilities located in the near vicinity of the landfill property.

Major commercial/light industrial facilities are located primarily to the east/northeast and west within the 1-mile radius of the landfill property. Pipeline and utility corridors, another permitted landfill, manufactured housing, and mining/excavation operations make up smaller portions of the remaining 1-mile radius area around the landfill property.

There are several rural residential areas scattered around the landfill property, including single-family, multi-family, and mobile home residences.

South of the landfill property, undeveloped, park/park-like, or agricultural land is predominately found including Village Creek, Sonora Park, and Timberview Golf Course.

7.5 Growth Trends of the Nearest Community

The facility property is located within the ETJ of Kennedale with only the future entrance facilities being located within the City of Kennedale. Overall, this area of Tarrant County has been growing at a slower rate than the average growth for the county, due primarily to the presence of the Village Creek floodplain nearby, as well as the lack of public infrastructure and related utilities access. Growth and development patterns within five miles have generally been along the major transportation corridors of IH-20 to the north, and IH-35W to the west. Major retail and big-box development has occurred along the west side of IH-35 at FM 1187. The City of Kennedale has been growing towards the northeast and east toward the City of Arlington. While there has been some development of individual lots to the south,

8 TRANSPORTATION

8.1 Traffic Information

This section addresses §330.61(i).

8.1.1 Availability and Adequacy of Roads

The Fort Worth C&D Landfill is located adjacent to Kennedale, Texas, on Dick Price Road. The site is easily accessed from principal population centers via IH-20. In addition to Dick Price Road, Everman Kennedale Road, Anglin Drive, Shelby Road, and Averett Road are utilized to access the landfill. In general, landfill vehicles originating north of the site utilize US Highway 287 Business to Dick Price Road to the landfill entrance road; and landfill vehicles originating south of the site use Dick Price Road.

A traffic impact study was prepared by WCG in July 2022 to evaluate the continued development of the Fort Worth C&D Landfill on local roadways and traffic. The traffic study is included in Parts I/II, Appendix I/IID.

In summary, the traffic study concludes that access roads within 1 mile of the landfill provide adequate access to the site. Coordination with TxDOT regarding traffic and location restrictions is included in Appendix I/IIB (TxDOT Tab).

8.2 Airport Safety

TCEQ distance restrictions set forth in Title 30 TAC §330.545 require municipal solid waste disposal facilities seeking vertical expansions located within 10,000 feet of any runway end used by turbojet aircraft or within 5,000 feet of any runway end used by piston-engine aircraft to demonstrate that the units are designed and operated so that the municipal solid waste landfill unit does not pose a bird hazard to aircraft. Title 30 TAC §330.545(d) further requires that landfill facilities within a 6-mile radius of any small general service airport runway or within a five-mile radius of any large general public commercial airport shall be critically evaluated to determine if an incompatibility exists.

As shown on Figure I/II 8.1 there are no airports located within 10,000 feet of the facility. Therefore 30 TAC §330.545(a) and (c) are not applicable, and it is not necessary to prepare a demonstration regarding potential bird hazards to aircrafts.

11 FLOODPLAINS AND WETLANDS STATEMENT

11.1 Floodplains Statement

As noted in Section 10.2, the floodplain of Village Creek forms the west boundary of the site. The landfill expansion will modify the existing floodplain on the eastern side of Village Creek to allow for the landfill expansion to the west of the existing landfill. A floodplain storage area will be developed to compensate for the development of the expansion area. A CLOMR for the expansion of the landfill has been submitted to FEMA for review. No portion of the waste disposal area will be located in the 100-year floodplain, and the perimeter berm will provide over 3 feet of freeboard between the 100-year floodplain and the top of the berm.

Compliance with the floodplain location restrictions is further discussed in Appendix I/IIC (each of the 4 items listed under Title 30 TAC §330.63(c)(2)(D) are addressed in Appendix I/IIC, Section 4).

11.2 Wetlands Statement

A Jurisdictional Waters of the U.S. Report for the Fort Worth C&D Landfill was prepared by WCG in September 2021. The report included the assessment of potential waters of the U.S. located within the permit boundary and the proposed waste footprint. This permit amendment proposes a horizontal and vertical expansion to the currently permitted waste disposal area within the currently approved permit boundary. The property within the currently approved permit boundary of the Fort Worth C&D Landfill was evaluated for compliance with wetlands provisions, including the determination and identification requirements in Title 30 TAC §330.61(m)(2) and (3) and the wetlands location restriction in Title 30 TAC §330.553(b). The assessment concluded that the horizontally and vertically expanded landfill unit at the Fort Worth C&D Landfill will not be located within jurisdictional wetlands or waters of the U.S., and the proposed development of the site complies with the location restrictions.

The jurisdictional waters report was transmitted to the U.S. Army Corps of Engineers (USACE) requesting concurrence from the USACE that the horizontal and vertical expansion does not impact jurisdictional waters. A copy of the jurisdictional waters report, and correspondence with the USACE are included in Appendix I/IIB.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

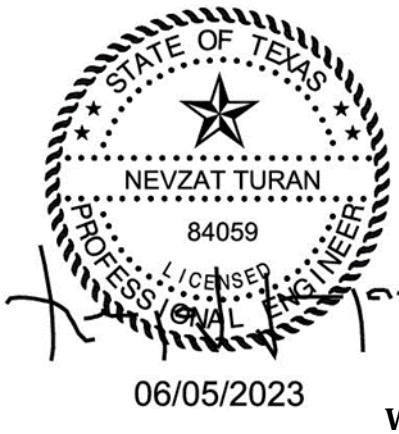
APPENDIX I/IIA
FACILITY LAYOUT MAPS

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



Prepared by
Weaver Consultants Group, LLC
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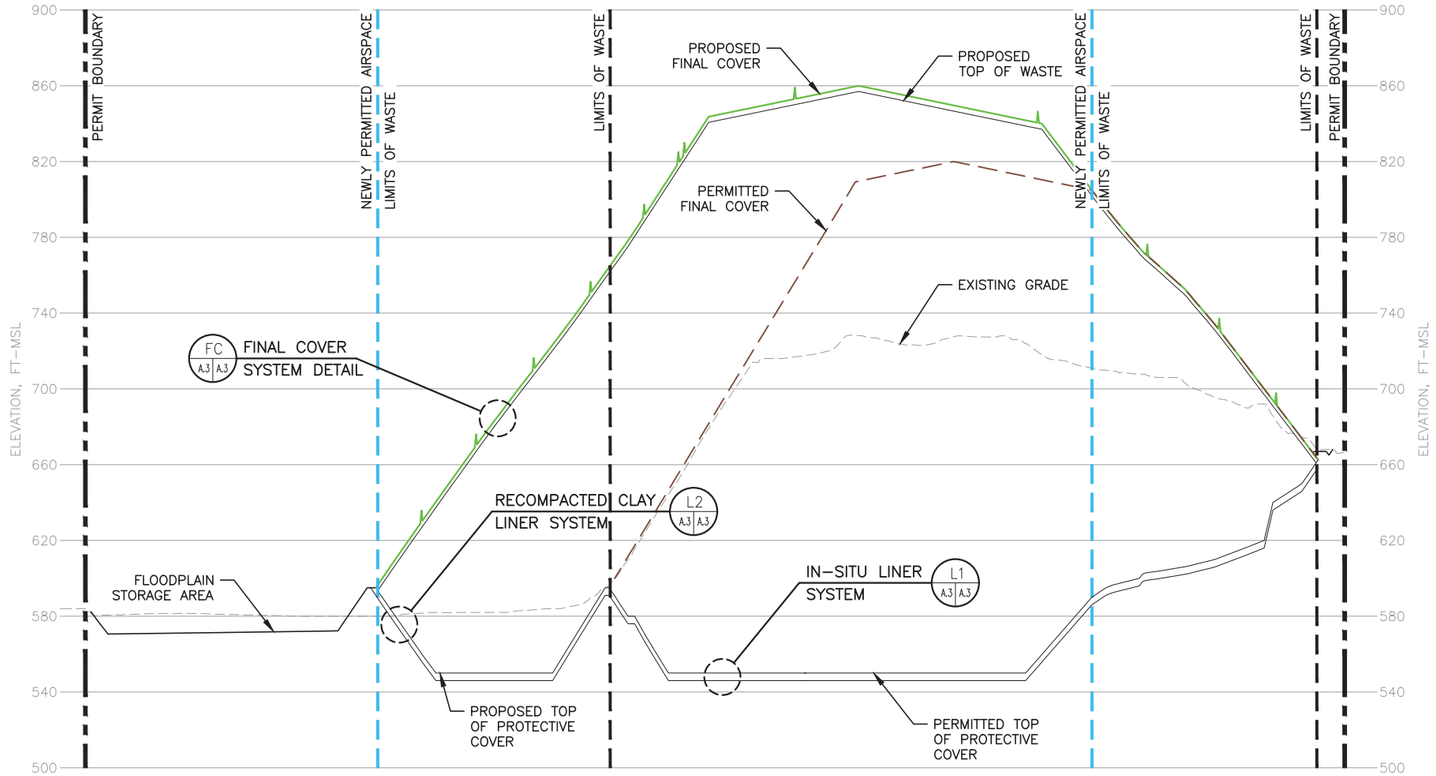
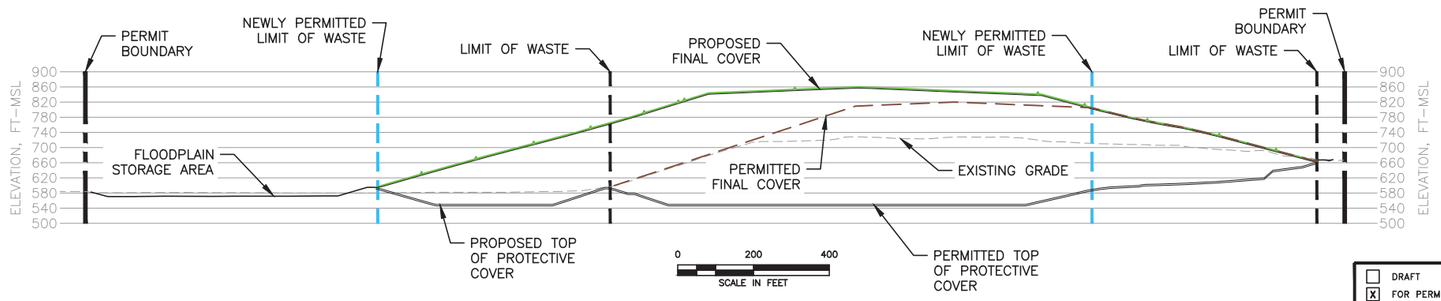
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-368-11-123

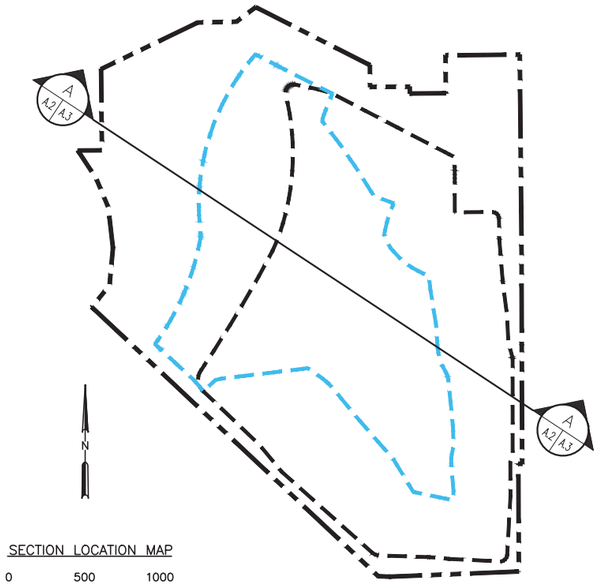


0 40 80
VERTICAL SCALE IN FEET

0 200 400
HORIZONTAL SCALE IN FEET



0 200 400
SCALE IN FEET



SECTION LOCATION MAP

0 500 1000
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMIT OF WASTE
- NEWLY PERMITTED LIMIT OF WASTE
- EXISTING GRADE
- TOP OF FINAL COVER
- TOP OF WASTE
- PERMITTED FINAL COVER
- L1 A3 A3 DETAIL CALLOUT (SEE NOTE 2)

STATE OF TEXAS
CHARLES R. MARSH
105073
PROFESSIONAL LICENSED ENGINEER
06/05/2023

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK FROM AERIAL PHOTOGRAPHY FLOWN 02-17-2022.
2. REFER TO APPENDIX IIIA-A FOR LINER AND FINAL COVER SYSTEM DETAILS. DETAIL LOCATIONS REFER TO DRAWING NUMBERS IN APPENDIX IIIA-A THAT INCLUDE THE CALLED OUT DETAIL.
3. SEE APPENDIX IIIG FOR BORING DATA. BORINGS PROJECTED INTO THE LINE OF THE SECTION. SEE DRAWING B.1 FOR LOCATION.
4. AS SHOWN IN APPENDIX I/IIC, THE BUFFER ZONES VARY AROUND THE PERIMETER OF THE SITE, BUT IN NO CASE ARE THEY LESS THAN 50-FEET FOR EXISTING WASTE. THE BUFFER ZONE BETWEEN THE PERMIT BOUNDARY AND NEWLY PERMITTED (PERMIT NO. MSW-1983E) WASTE DISPOSAL AIRSPACE IS AT LEAST 50 FEET.
5. DRAINAGE DESIGN INFORMATION IS PROVIDED IN APPENDIX IIIF-SURFACE WATER DRAINAGE PLAN.
6. MINIMUM EXCAVATION ELEVATION IS 550 FT-MSL BASED ON USE OF IN-SITU LINER SYSTEM (OR 446 FT-MSL IF RECOMPACTED CLAY LINER IS USED). MAXIMUM TOP OF FINAL COVER ELEVATION IS 860.0 FT-MSL.

- [ ] DRAFT
- [x] FOR PERMITTING PURPOSES ONLY
- [ ] ISSUED FOR CONSTRUCTION

DATE: 12/2022
FILE: 0771-356-11
CAD: FIG A.3-CROSS SECTION A.DWG

DRAWN BY: SRF
DESIGN BY: CAM
REVIEWED BY: CAM

Weaver Consultants Group
TBPE REGISTRATION NO. F-3727

PREPARED FOR
TEXAS REGIONAL LANDFILL COMPANY, LP

REVISIONS

NO.	DATE	DESCRIPTION
01	06/2023	1ST TCEQ COMMENT RESPONSE

MAJOR PERMIT AMENDMENT
CROSS-SECTION A
(TCEQ PERMIT NO. MSW-1983E)

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

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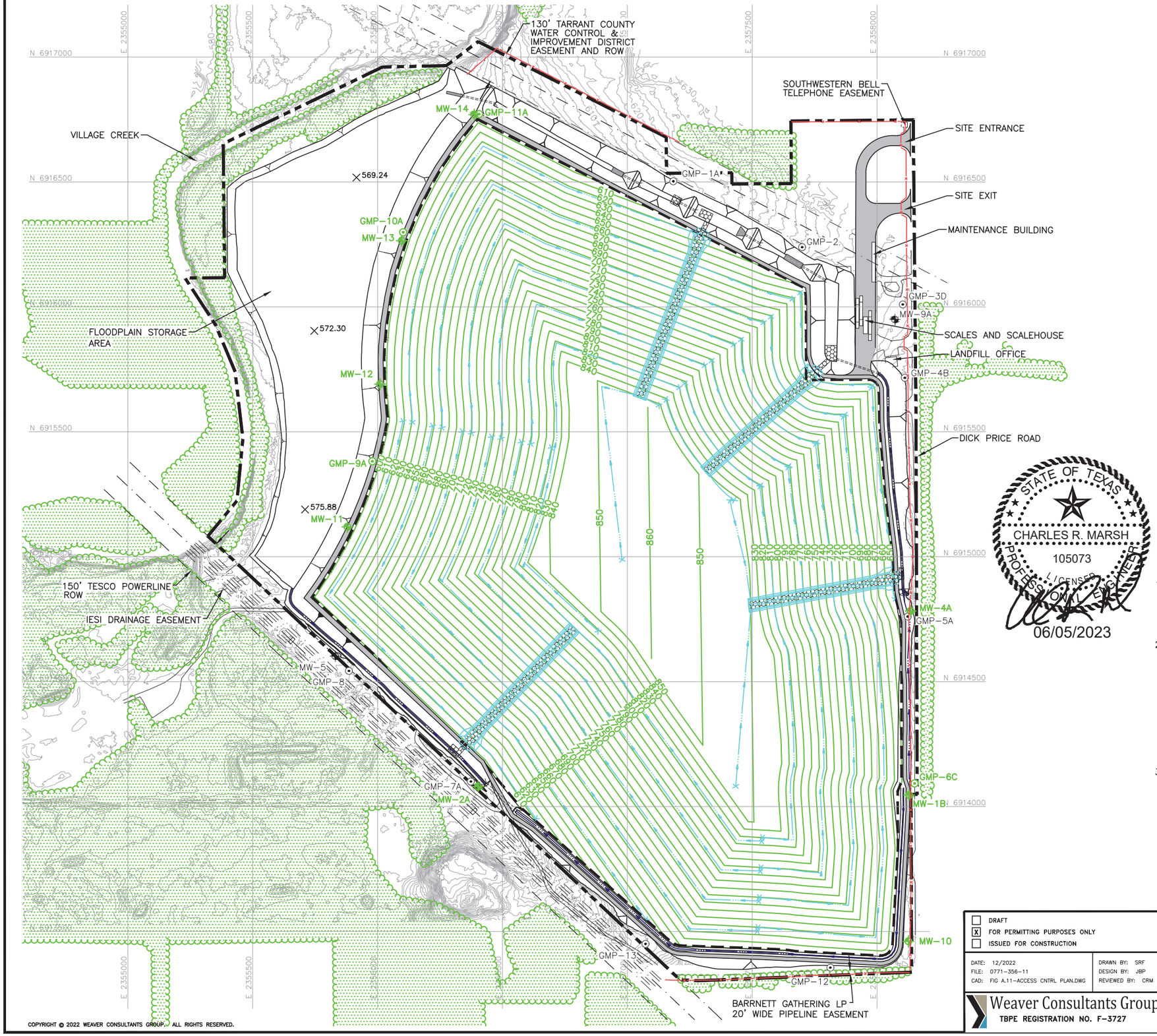
FIGURE I/II-A.3



0 200 400
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- LIMIT OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- 860 — FINAL COVER CONTOUR
- DRAINAGE LETDOWN
- DRAINAGE SWALE
- PROPOSED PERIMETER CHANNEL
- EASEMENT
- GABIONS
- MW-2A — PERMITTED GROUNDWATER MONITORING WELL
- GMP-4B — PERMITTED GAS MONITORING PROBE
- MW-4A — PROPOSED GROUNDWATER MONITORING WELL
- GMP-6C — PROPOSED GAS MONITORING PROBE
- EXISTING FENCE
- EXISTING BUFFER ZONE WITH TREES AND SHRUBS (SEE NOTE 3)

STATE OF TEXAS
CHARLES R. MARSH
105073
LICENSED PROFESSIONAL ENGINEER
06/05/2023

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK FROM AERIAL PHOTOGRAPHY FLOWN 02-17-2022. THE GRID SYSTEM IS TIED TO THE TEXAS STATE PLANE COORDINATE SYSTEM NORTH CENTRAL ZONE, NAD 1983.

2. ACCESS TO THE SITE WILL BE CONTROLLED BY PERIMETER FENCING (MINIMUM 4-FEET HIGH, 3-STRAND BARBED WIRE FENCES), A GATED ENTRANCE/EXIT, AND NATURAL BARRIERS (e.g VILLAGE CREEK, DENSE FOLIAGE, AND VEGETATION). ADDITIONALLY, IN AREAS OF NATURAL BARRIERS, THE ACCESS CONTROL PLAN IS PROVIDED TO PREVENT THE ENTRY OF LIVESTOCK, TO PREVENT THE PUBLIC FROM EXPOSURE TO POTENTIAL HEALTH AND SAFETY HAZARDS, AND TO DISCOURAGE UNAUTHORIZED ENTRY OR UNCONTROLLED DISPOSAL OF SOLID WASTE OR HAZARDOUS MATERIALS. NO TRESPASSING SIGNS WILL BE ADDED TO DISCOURAGE UNAUTHORIZED ENTRY OR UNCONTROLLED DISPOSAL OF SOLID WASTE OR HAZARDOUS MATERIALS. SIGNS WILL BE PLACED APPROXIMATELY 300 FEET APART ALONG THE NORTHERN AND SOUTHERN PORTION OF THE SITE.

3. FACILITY IS BOUNDED HIGH-CANOPY TREE LINES. THE EXISTING DENSE TREE LINES FUNCTION AS BOTH WINDBREAKS AND SITE SCREENING. AS SHOWN IN FIGURE I/II-A.2 SECTOR DEVELOPMENT SEQUENCE, THE LANDFILL IS SEQUENCED SUCH THAT THE ACTIVE FILL AREA WILL BE SCREENED BY THE EXISTING VEGETATION. THE FILL SEQUENCE WILL ALSO DEVELOP THE OUTERMOST SECTORS FIRST, WHICH WILL SCREEN SUBSEQUENT OPERATIONS. FACILITY IS BOUNDED BY TREES ON THE WEST, SOUTH, AND NORTH. TREE LINES WILL BE MAINTAINED TO AVOID NUISANCE CONDITIONS AND MAINTAIN EFFECTIVE VISUAL SCREENING.

- [ ] DRAFT
- [X] FOR PERMITTING PURPOSES ONLY
- [ ] ISSUED FOR CONSTRUCTION

DATE: 12/2022
FILE: 0771-356-11
CAD: FIG A.11-ACCESS CNTRL PLAN.DWG
DRAWN BY: SRF
DESIGN BY: JBP
REVIEWED BY: CRM

Weaver Consultants Group
TBPE REGISTRATION NO. F-3727

PREPARED FOR
TEXAS REGIONAL LANDFILL COMPANY, LP

REVISIONS		
NO.	DATE	DESCRIPTION
01	06/2023	1ST TCEQ COMMENT RESPONSE

MAJOR PERMIT AMENDMENT ACCESS CONTROL PLAN (TCEQ PERMIT NO. MSW-1983E)

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

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FIGURE I/II-A.11

COORDINATION WITH
FEDERAL AVIATION ADMINISTRATION

- February 23, 2023 FAA Determination of No Hazard to Air Navigation Letters.
- October 17, 2022 Request Letter requesting FAA determination of No Hazard to Air Navigation.

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2540-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point A
Location:	Kennedale, TX
Latitude:	32-38-10.48N NAD 83
Longitude:	97-14-23.38W
Heights:	585 feet site elevation (SE) 320 feet above ground level (AGL) 905 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 08/22/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

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This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

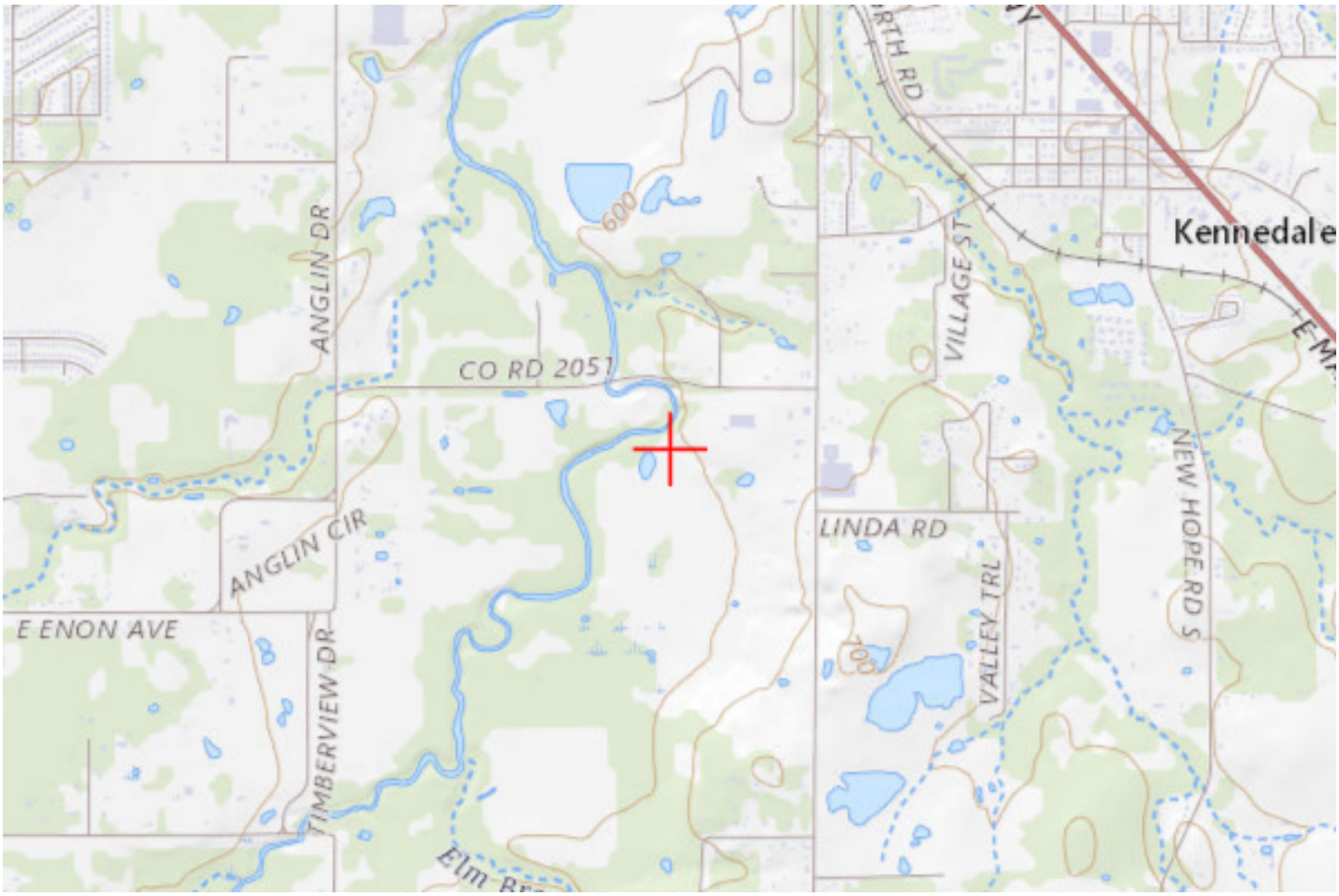
If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASW-2540-OE.

Signature Control No: 571920446-573755646 (DNE)
Andrew Hollie
Specialist

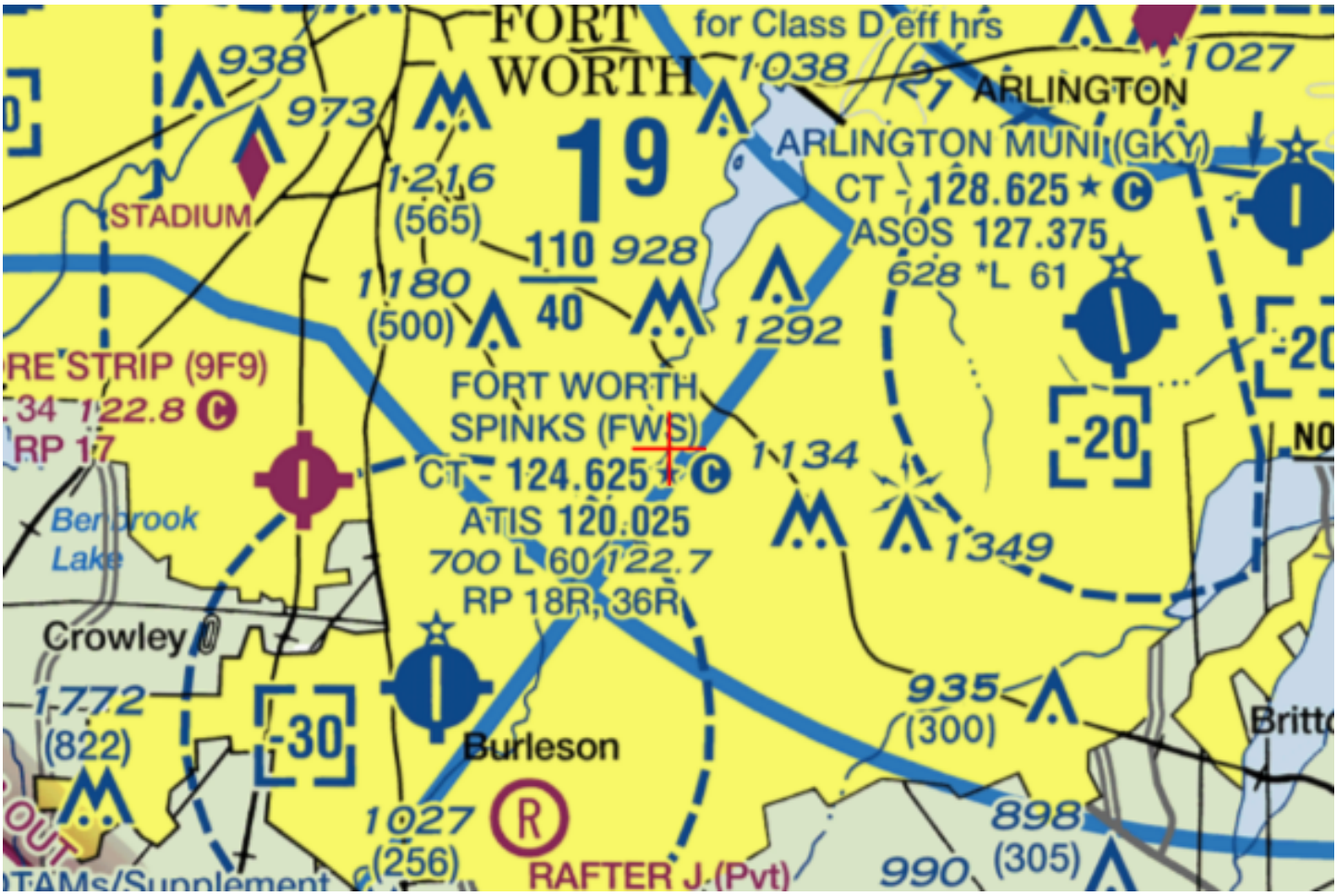
Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2540-OE



Sectional Map for ASN 2023-ASW-2540-OE



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2541-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point B
Location:	Kennedale, TX
Latitude:	32-37-59.86N NAD 83
Longitude:	97-14-05.03W
Heights:	650 feet site elevation (SE) 255 feet above ground level (AGL) 905 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 08/22/2024 unless:

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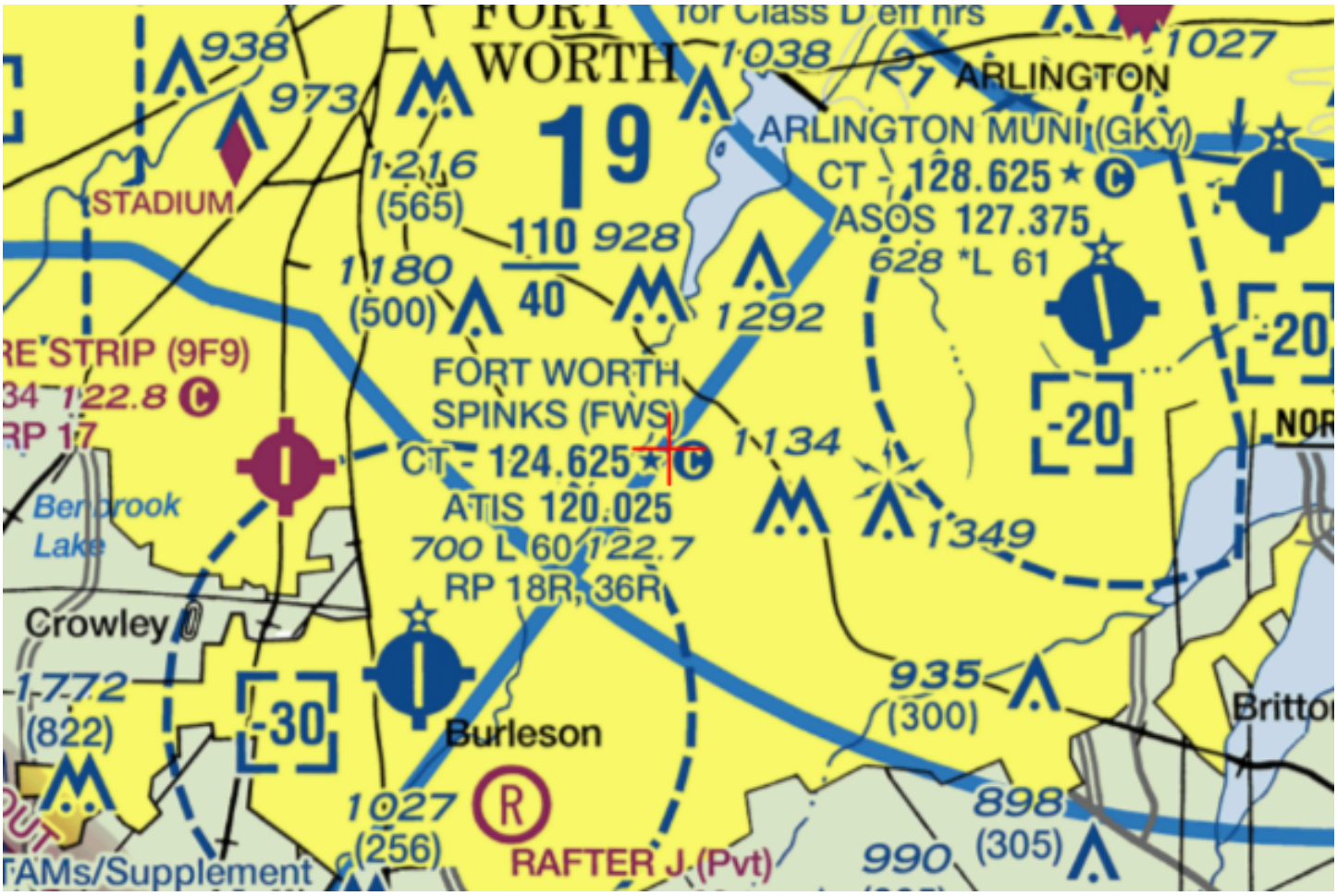
If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASW-2541-OE.

Signature Control No: 571920456-573755645 (DNE)
Andrew Hollie
Specialist

Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2541-OE


FORT WORTH
for Class D eff hrs
938
973
1038
1027
ARLINGTON
ARLINGTON MUNI (GKY)
CT 128.625
ASOS 127.375
628 *L 61
19
1216
(565)
110
40
928
1180
(500)
1292
STADIUM
RE STRIP (9F9)
34 122.8
RP 17
FORT WORTH
SPINKS (FWS)
CT 124.625
ATIS 120.025
700 L 60 122.7
RP 18R, 36R
1134
1349
-20
-30
Crowley
Burleson
1772
(822)
935
(300)
1027
(256)
R
RAFTER J (Pvt)
898
(305)
990
TAMs/Supplement

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2542-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point C
Location:	Kennedale, TX
Latitude:	32-37-37.55N NAD 83
Longitude:	97-14-04.76W
Heights:	675 feet site elevation (SE) 45 feet above ground level (AGL) 720 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 08/22/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
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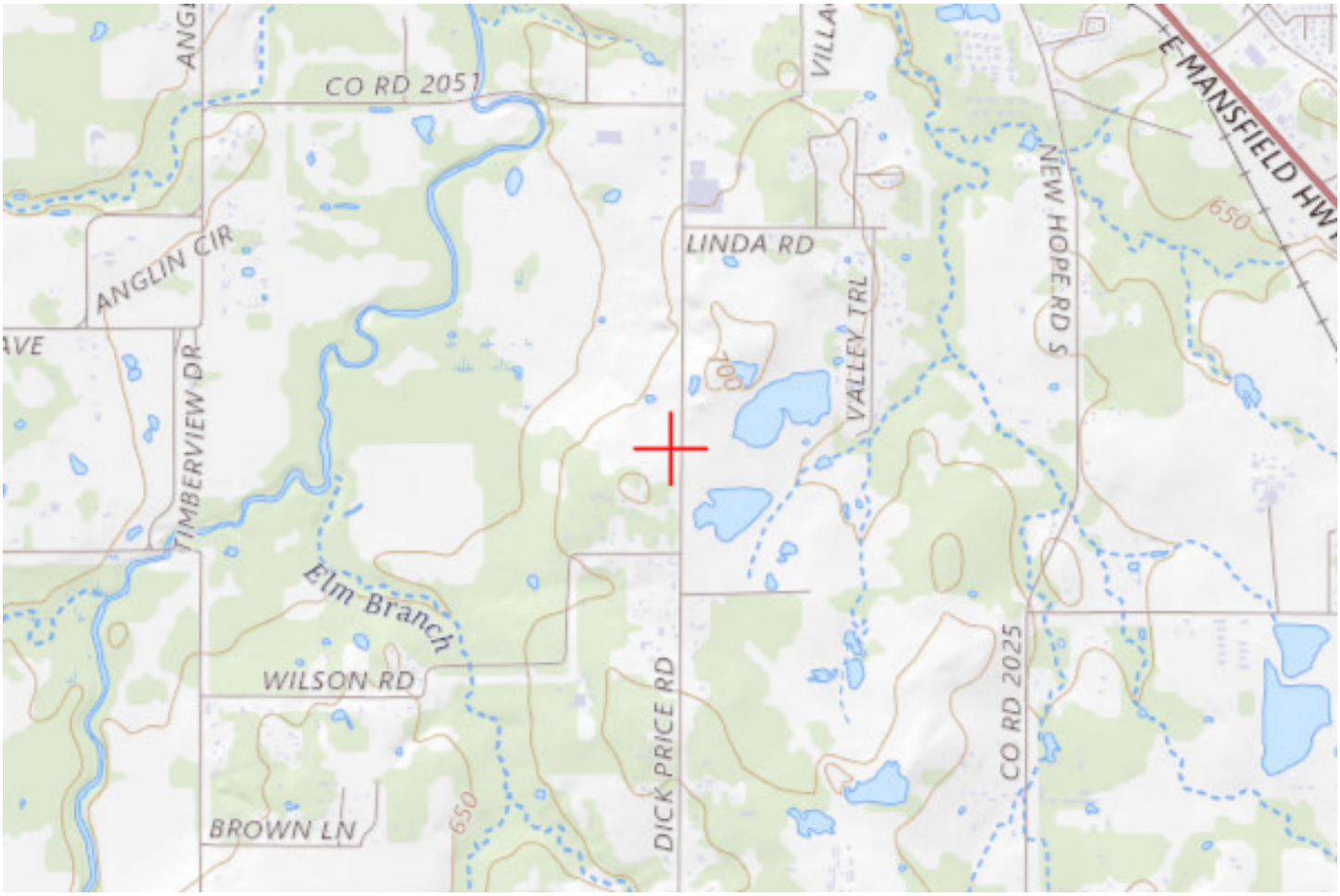
If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASW-2542-OE.

Signature Control No: 571920467-573755940 (DNE)
Andrew Hollie
Specialist

Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2542-OE



Sectional Map for ASN 2023-ASW-2542-OE

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2543-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point D
Location:	Kennedale, TX
Latitude:	32-37-51.77N NAD 83
Longitude:	97-14-31.31W
Heights:	584 feet site elevation (SE)
	321 feet above ground level (AGL)
	905 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

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_____ At least 10 days prior to start of construction (7460-2, Part 1)
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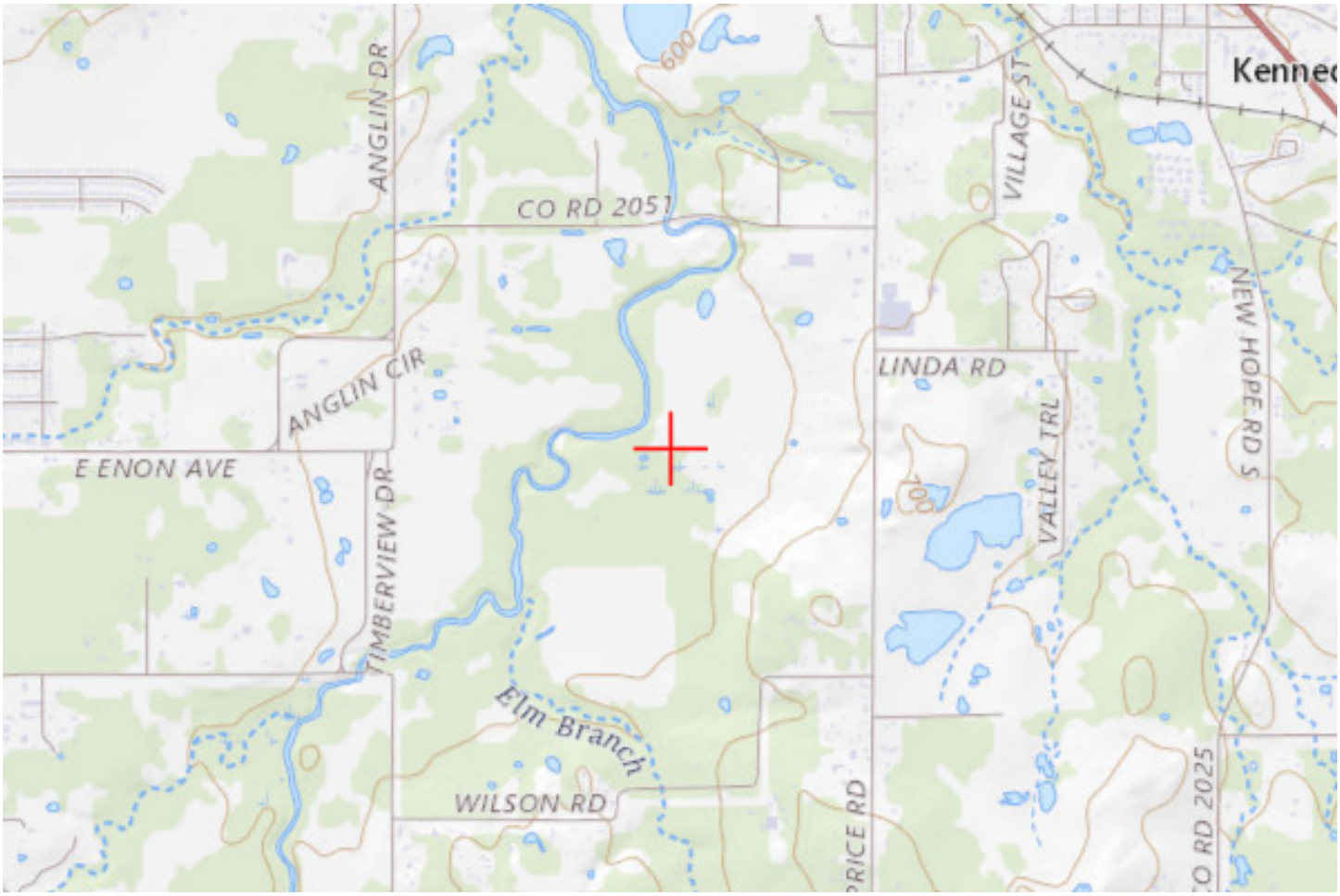
Signature Control No: 571920496-573755647 (DNE)
Andrew Hollie
Specialist

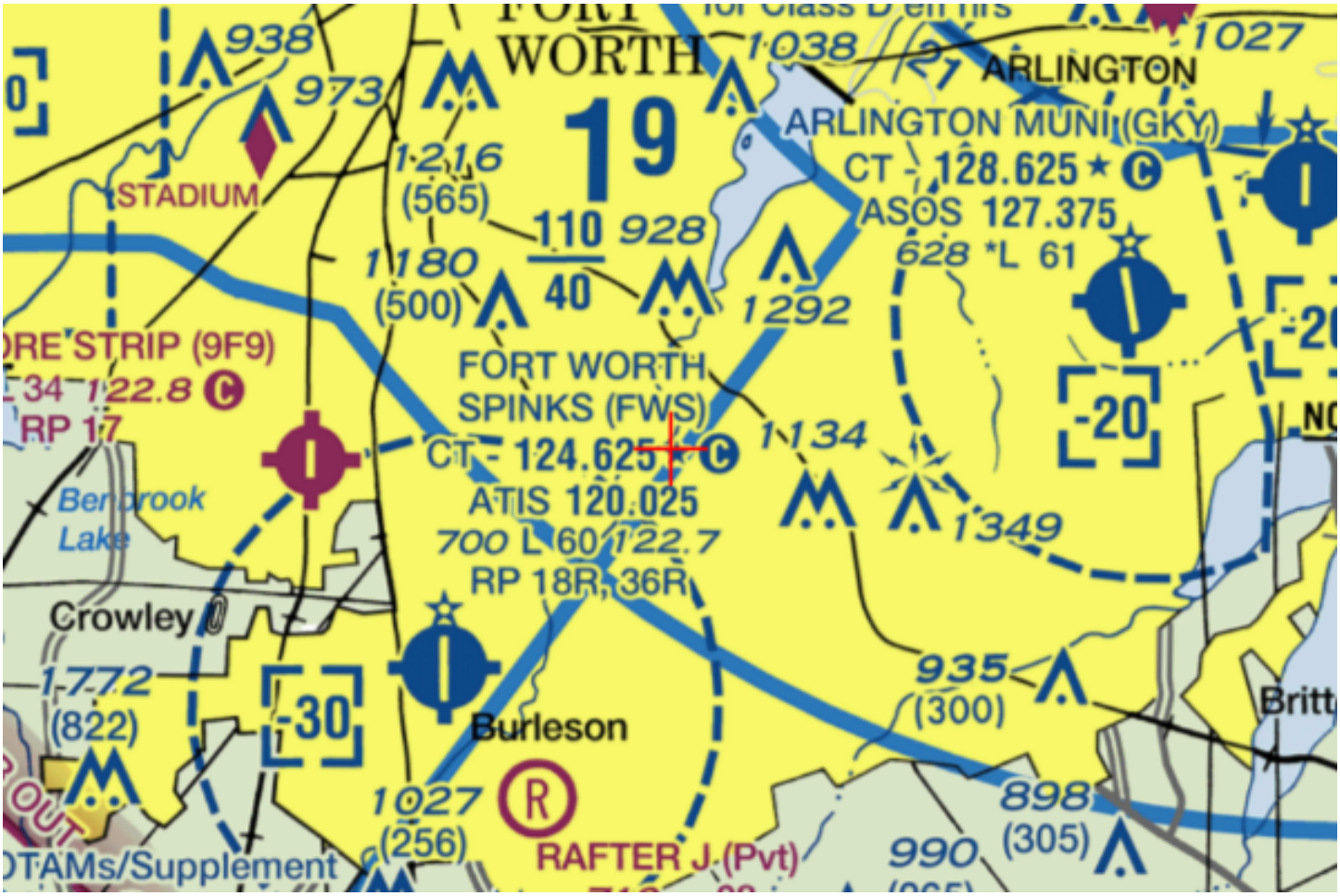
Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2543-OE



Sectional Map for ASN 2023-ASW-2543-OE



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-ASW-2544-OE
Prior Study No.
2020-ASW-2801-OE

Issued Date: 02/22/2023

Gary Bartels
Texas Regional Landfill Company, LP
9100 S Interstate 35W
Alvarado, TX 76009

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Construction and Demolition (C&D) Landfill Fort Worth C&D Landfill Point E
Location:	Kennedale, TX
Latitude:	32-37-53.30N NAD 83
Longitude:	97-14-15.58W
Heights:	599 feet site elevation (SE) 179 feet above ground level (AGL) 778 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 08/22/2024 unless:

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If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ASW-2544-OE.

Signature Control No: 571920515-573755939 (DNE)
Andrew Hollie
Specialist

Attachment(s)
Case Description
Map(s)

Increase of permitted landfill waste disposal area.

TOPO Map for ASN 2023-ASW-2544-OE

Sectional Map for ASN 2023-ASW-2544-OE

COORDINATION WITH
NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

- February 9, 2023 NCTCOG Review Request Letter
- June 5, 2023 NCTCOG Approval Letter.

North Central Texas Council Of Governments

June 5, 2023

Mr. Charles Marsh, P.E.
Project Director
Weaver Consultants Group, LLC
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109

RE: Major Permit Amendment Application for the Fort Worth C&D Landfill, Tarrant County, Texas
Physical Site Address: 4144 Dick Price Road, Kennedale, Texas 76140

Dear Mr. Marsh,

Thank you to you and your colleagues for attending and presenting at the Facility Conformance Subcommittee meeting of the Resource Conservation Council (RCC) on May 15, 2023, regarding the major permit amendment application for the Fort Worth C&D Landfill in Tarrant County, Texas.

The North Central Texas Council of Governments (NCTCOG) has been directed by the Texas Commission on Environmental Quality to determine the consistency of solid waste permit applications, amendments, and registration applications with the Regional Solid Waste Management Plan, *Planning for Sustainable Materials Management in North Central Texas 2015-2040: North Central Texas Regional Solid Waste Management Plan*.

At its meeting on May 24, 2023, the Resource Conservation Council, the region's solid waste advisory committee, approved the recommendation of the Facility Conformance Subcommittee, which determined that the major permit amendment application for the Fort Worth C&D Landfill is consistent with the goals of the Regional Solid Waste Management Plan. Unless there are significant changes to the application from those outlined in the presentation, this determination should not change.

If you have any questions regarding NCTCOG's conformance review, please contact Elena Berg by phone at (817) 608-2363, or by email at EBerg@nctcog.org.

Sincerely,

Kathy Fonville

Kathy Fonville
Chair, Resource Conservation Council

cc: Ms. Megan Henson, Manager, MSW Permits Section, Texas Commission on Environmental Quality
MC-124, P.O. Box 13087, Austin, Texas 78711-3087

cc: Mr. Gary Bartels, Southern Region Engineer, Texas Regional Landfill Company, LP
3 Waterway Square Place, Suite 550, The Woodlands, Texas, 77380

616 Six Flags Drive, Centerpoint Two
P. O. Box 5888, Arlington, Texas 76005-5888
(817) 640-3300 FAX: 817-640-7806 ♻ recycled paper
www.nctcog.org

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT

APPENDIX I/IIC
LOCATION RESTRICTION DEMONSTRATIONS

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

06/05/2023

06/05/2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

2 EASEMENTS AND BUFFER ZONES

The easements and buffer zones location restrictions within Title 30 TAC §330.543 require that no solid waste unloading, storage, disposal, or processing shall occur within any easement, buffer zone, or right of way. No solid waste disposal shall occur within 25 feet of the center line of any utility line or pipeline easement but no closer than the easement, unless otherwise authorized by the Executive Director. Also, all pipeline and utility easements shall be clearly marked with posts that extend at least six feet above ground level, spaced at intervals no greater than 300 feet. In addition, for vertical or horizontal expansions, the owner or operator shall establish and maintain a 50-foot buffer zone for any newly permitted airspace.

The proposed buffer zones for the site are shown on Drawing I/IIC-1 and are discussed below.

- **Existing Permitted Limits of Waste.** As shown on Drawing I/IIC-1, a buffer zone of at least 50 feet is maintained between the permit boundary and the permitted limits of waste defined in TCEQ Permit No. 1983E.
- **Expansion Area.** As shown on Drawing I/IIC-1, a minimum 50-foot buffer zone is maintained between the permit boundary and the proposed new waste disposal airspace (labeled as "newly permitted airspace limit of waste"), consistent with Title 30 TAC §330.543(b)(1). No waste is proposed to be placed between the permitted limits of waste and the newly permitted airspace limits of waste.

There are three easements located within the permit boundary. A 130-foot Tarrant Regional Water District (TRWD) water pipeline easement is located along the northern portion of the permit boundary, a 20-foot wide Barrnett Gathering LP natural gas pipeline easement is located at the southern portion of the permit boundary, and a Southwestern Bell Telephone utility easement is located at the northeastern corner of the permit boundary. No easement center lines are within 25 feet of the existing or proposed limits of waste, thereby providing the required separation between the easement and the waste footprint. In addition, all utility line and pipeline easements will be clearly marked in accordance with the Site Operating Plan.

Given the above, the site is in compliance with the easements and buffer zone location restrictions. Within the TRWD easement there are three raw waterline pipes. The TRWD easement and associated pipelines are oriented in a general southeast to northwest direction. The closest edge of the TRWD easement is

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

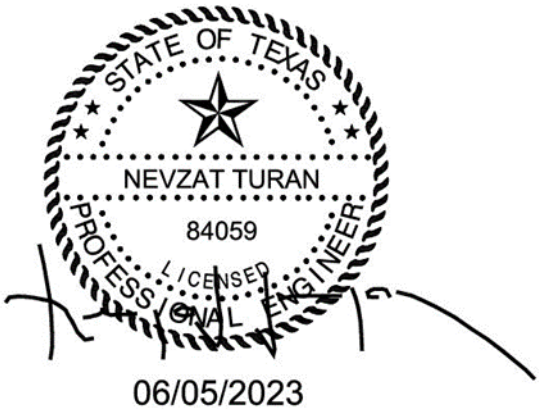
VOLUME 2 OF 4

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

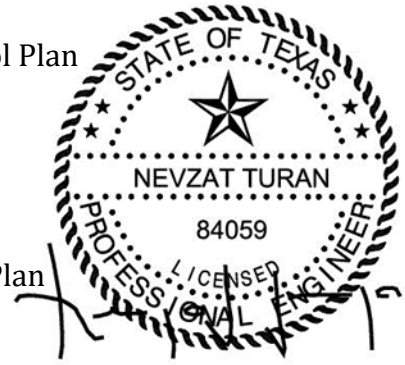
WCG Project No. 0771-356-11-35

This document intended for permitting purposes only.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

CONTENTS



FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PART III – SITE DEVELOPMENT PLAN

APPENDIX IIID
LINER QUALITY CONTROL PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, TX 76109
817-735-9770

WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

less than 40,000 pounds, and that this compaction equipment was utilized during the entire period of placing waste ballast.

- If waste is used for ballast, documentation of the observations that the initial 5 feet of waste used for ballast on the liner system is free of brush and large bulky items, which may not be compacted to the required density.
- A waste-as-ballast placement record (Appendix IIID-D) completed and signed by the Site Manager.
- Survey of the top of waste to document that the required waste ballast thickness has been placed.
- The facility's highest recorded groundwater elevation measurements taken in the site monitor well/piezometer system to verify that the groundwater level has not exceeded the design high water level.
- Final ballast thickness calculation using procedures included in Appendix IIID-B and the as-built minimum densities and thicknesses for each component as well as updated groundwater levels.
- A BER will be prepared and signed and sealed by a professional engineer licensed to practice in Texas.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

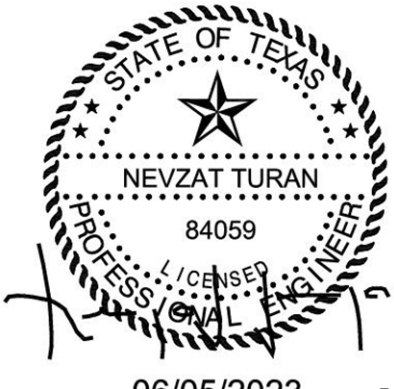
PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIF
SURFACE WATER DRAINAGE PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

APPENDIX IIIF-G

EXCERPTS FROM APPROVED CLOMR

CONTENTS

FLOODPLAIN SUMMARY

This appendix addresses §330.61(m).

As discussed in Parts I/II in Section 11, Parts I/II-Appendix I/IIC, and Part III-Appendix IIIF, the floodplain for Fort Worth C&D Landfill is located west of the landfill area. A Conditional Letter of Map Revision (CLOMR) was developed for the proposed expansion to revise the floodplain limits as a part of the proposed landfill development.

Excerpts from the CLOMR are included in Appendix IIIF-G-A. As shown in Appendix IIIF-G-A, the proposed solid waste fill areas will not be located within the limits of the post-development 100-year floodplain in the approved CLOMR. The approved Floodplain Development Permit from Tarrant County is provided in Appendix IIIF-G-B.

APPENDIX IIIF-G-B

APPROVED FLOODPLAIN DEVELOPMENT PERMIT

TARRANT COUNTY
FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

INSTRUCTIONS: Complete all questions. If any item does not apply, indicate by place "NA" in the blank. **DO NOT LEAVE ANY BLANK EMPTY.**

SECTION 1. OWNER INFORMATION

PROPERTY OWNER'S FULL NAME: Gary Bartels
Address: 4144 Dick Price Road
City: Fort Worth State: Texas Zip Code: 76140
Home Phone: Work Phone: Cell Phone: 817-705-6072
eMail Address: gary.bartels@wasteconnections.com

Is the Owner a Corporation or Partnership? [X] Yes [ ] No
If Yes, attach a letter on company stationery, signed by an authorized individual, authorizing the Applicant to file an Application on behalf of the company.

SECTION 2. APPLICANT INFORMATION

[X] Same as Owner (if checked, skip to Section 3)
APPLICANT'S FULL NAME:
Applicant's Address:
City: State: Zip Code:
Home Phone: Work Phone: Cell Phone:
eMail Address:

SECTION 3. SUBJECT PROPERTY INFORMATION

Street Address for the Subject Property (if established)[1]: 4144 Dick Price Road

City: Fort Worth Zip Code: 76140

Legal Description:
Lot: Block: Subdivision Section or Phase:

If not located in a subdivision:
Survey: Tarrant County Deed Records (38.107 acres) Abstract: Recorded (Vol/Page): Vol. 12748 Pg. 132
Shelby County School Land Survey (133.15 acres) A-1375 File D202040557

List the names of all roads by which the property can be accessed: Dick Price Road

Total Current Land Area: 151.73
Vicinity Map Attached? [X] Yes [ ] No

Located in City ETJ: [ ] Yes [X] No City Name:

[1] **If a 911 street address has not been assigned to the Subject Property, the Applicant must contact the 911 Coordinator at (817)_____ to obtain an address.**

SECTION 4. PROPOSED DEVELOPMENT:

DEVELOPMENT OF LAND (Check all that are applicable):

- [X] Clearing
- [X] Fill
- [ ] Mining
- [ ] Drilling
- [X] Grading
- [X] Excavating (except for structural development checked above)
- [ ] Watercourse Alteration (including dredging and channel modifications)
- [ ] Road, Street or Bridge Construction
- [ ] Subdividing — Name of Subdivision: _____
- [ ] Construction of Utility — Type of Utility: _____
- [ ] Other (please specify): _____

DEVELOPMENT OF STRUCTURES (Check all that are applicable):

[ ] New Construction	[ ] Relocation	[ ] Demolition
[ ] Addition	[ ] Alteration	[ ] Repair
[ ] Remodel	[ ] Replacement	[X] Other: Detention Pond

STRUCTURE TYPE (Check all that are applicable):

[ ] Habitable Structure: Living Area: _____sf # of Bedrooms: _____

- [ ] Single Family Residence (1 family)
- [ ] Multi-Family Residence (2-4 families)
- [ ] Multi-Family Residence (more than 4 families)
- [ ] Mobile/Manufactured Home — Located in MHRC? [ ] Yes [ ] No
- [ ] Recreational Vehicle
- [ ] Commercial Type: _____
- [ ] Combined Use (Residential and Commercial): Type: _____
- [ ] Non-Residential — [ ] Floodproofing Type: _____
  - [ ] Floodproofing Certification Attached
- [X] Non-Inhabitable Structure (specify):
  - [ ] Garage
  - [ ] Storage Building
  - [ ] Barn
  - [X] Other: Detention Pond

TYPE OF FOUNDATION:

- [ ] Building on Slab
- [ ] Building on Piers, Piles or Columns
- [ ] Building with Basement

PROJECT COSTS:

Estimated market value of the existing Structure: $ N/A

Estimated cost of proposed construction: $ N/A

If the cost of the proposed construction equals or exceed fifty percent (50%) of the market value of the existing Structure, "Substantial Improvement" provisions shall apply. Contact the Floodplain Administrator at (817)884-1250 before proceeding.

SECTION 5. ENGINEERING STUDIES AND DOCUMENTATION

FIRM Map Panel: 48439CO340K ☐ Zone A ☒ Zone AE

Site Plan attached? ☒ Yes ☐ No
Construction Plans attached? ☒ Yes ☐ No
Certification by Registered Engineer or Architect attached? ☒ Yes ☐ No

Base Flood Elevation: 590
Elevation of Lowest Floor: N/A

How was BFE determined?

- ☒ Flood Insurance Study (FIS) Date: 5/26/2021
- ☐ Flood Insurance Rate Map (FIRM) Date:
- ☐ Flood Elevation Study Date:
- ☐ Two-Foot Contour Map

SECTION 6. CONSULTANTS: List all professionals involved in the preparation of this Application or any of the supplemental information provided herewith. Attach additional sheets, if necessary.

REGISTERED PROFESSIONAL LAND SURVEYOR:
Name:
Mailing Address:
City: State: Zip Code:
Work Phone: Cell Phone: Fax Number:
eMail Address:

PROFESSIONAL ENGINEER:
Name: Charles R. Marsh
Mailing Address: 6420 Southwest Blvd., Suite 206
City: Fort Worth State: Texas Zip Code: 76109
Work Phone: 817-735-9770 Cell Phone: Fax Number:
eMail Address: cmarsh@wcgrp.com

OTHER:
Name:
Mailing Address:
City: State: Zip Code:
Work Phone: Cell Phone: Fax Number:
eMail Address:

OTHER:
Name:
Mailing Address:
City: State: Zip Code:
Work Phone: Cell Phone: Fax Number:
eMail Address:

SECTION 7. OWNER/APPLICANT'S ACKNOWLEDGMENT AND CERTIFICATION:

By my signature below, I acknowledge that I have read and understand the following:

1. No work of any kind may start until a Floodplain Development Permit is issued by Tarrant County.
2. The Development Authorization Permit may be revoked if any false statements are made in this Application or its attachments.
3. The Development Authorization Permit expires if work in accordance with this Application is not **commenced** within 12 months of issuance or if the work is not **completed** within 24 months of issuance.
4. If the Development Authorization Permit expires or is revoked for any reason, all work must cease until a new Permit is issued. The Applicant will be required to submit a new Application with accompanying fees.
5. It shall be unlawful to use, occupy, or permit the use or occupancy of any building, development, or premises, or any part thereof, hereafter created, erected, changed, converted, altered, or enlarged until the development is in compliance with the Tarrant County Subdivision and Land Use Regulations and Tarrant County Manufactured Housing Rental Community Regulations.
6. Applicant may need other permits to fulfill local, state, and federal regulatory requirements. It is Applicant's responsibility to determine what permits are needed and to obtain these permits from the appropriate authorities.
7. Construction costs undertaken in accordance with this Application are Applicant's responsibility. Applicant is not permitted to erect permanent structures or signs on or over any portion of Tarrant County's right-of-way or within any established setbacks.
8. Applicant must construct the improvements in strict conformance with the plans and specifications submitted with this Application and as approved by Tarrant County. Failure to do so will result in Applicant being required to modify or re-construct the improvements at Applicant's cost.
9. Maintenance of improvements remains the Applicant's responsibility, and the County retains the right to require any changes, maintenance, or repairs as necessary to protect life or property.

I hereby certify to the following:

1. I have carefully read the complete Application and all its attachments and certify that all documents submitted are true and correct.
2. There is no outstanding tax liability to Tarrant County on the Subject Property.
3. The Owner of the Subject Property, if different from the Applicant, has authorized the submittal of this Application.
4. As the Owner of the Subject Property or a duly authorized Applicant, I hereby grant permission to representatives of Tarrant County to enter the premises and make all necessary inspections and to take all other actions necessary to review and act upon this Application.

Signature: Gary J Bartels

Print Name: Gary Bartels

Date: 02-11-2022

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

VOLUME 3 OF 4

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109
817-735-9770

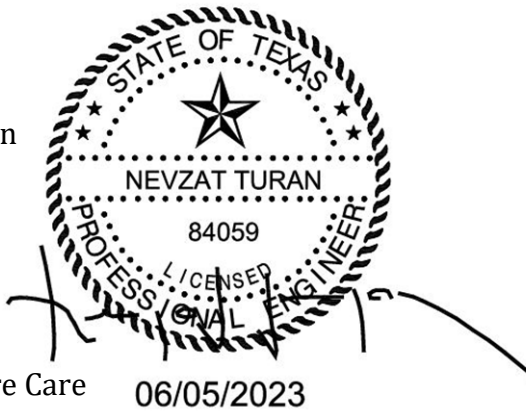
WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

CONTENTS



FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIG
GEOLOGY REPORT

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Blvd., Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11

GEOLOGY REPORT CERTIFICATION

Site Information

Site: Fort Worth C&D Landfill

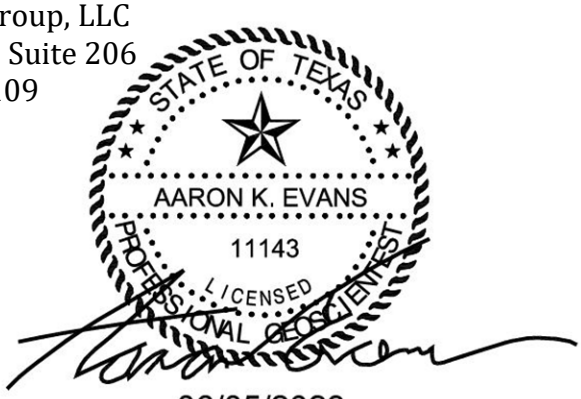
Site Location: Tarrant County

MSW Permit No.: 1983E

Qualified Groundwater Scientist Statement

I, Aaron K. Evans, am a Texas-licensed professional geoscientist and a qualified groundwater scientist as defined in Title 30 TAC §330.3(120). I have prepared the Geology Report which constitutes Appendix IIIG of this permit application. In my professional opinion, the Geology Report is in compliance with the requirements specified in Title 30 TAC §330.63(e). This report has been completed specifically for the Fort Worth C&D Landfill. The only warranty made by me in connection with this report is that I have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of my profession, practicing in the same or similar locality. No other warranty, expressed or implied, is intended.

Firm/Address: Weaver Consultants Group, LLC
6420 Southwest Blvd., Suite 206
Fort Worth, Texas 76109



Signature: 06/05/2023
Aaron K. Evans, P.G., Texas License No. 11143

Date: 6/5/2023

3.1.5 Main Street Limestone

Underlying the Grayson Shale, the Main Street Limestone consists of hard, dry limestone interbedded with dry, calcareous, clayey shale that ranges in thickness from about 28 to 31 feet across the site. It is noted that the BEG (1987) regional geologic formation taxonomy categorized the Grayson Shale and Main Street Limestone as a single undivided formation. Laboratory permeability testing indicates a vertical hydraulic conductivity ranging from $2.06x10^{-8}$ to $9.83x10^{-8}$ cm/sec.

3.1.6 Pawpaw Formation

The Pawpaw Formation underlies the Main Street Limestone and consists predominately of hard, dry, calcareous shale. None of the existing boreholes have penetrated the vertical extent of the Pawpaw beneath the site. The uppermost contact of Pawpaw to overlying Main Street Limestone sediments is below elevation 525 ft-msl as observed in onsite borings. No site-specific hydrogeological data exists for this deep-bedded dry shale formation.

Table 3-1
Summary of Existing Boring Depths and Elevations

Borehole Number	Northing	Easting	Surface Elevation (ft-msl)	Total Depth (ft-msl)	Bottom Elevation (ft-msl)	Bottom Depth Above or Below EDE[1] (feet)
1986 Borings by Baker-Shiflett, Inc.						
PB-1	6914059	2356708	589.5	28	561.5	11.5
PB-1A	6914068	2356840	590.4	57	533.4	-16.6
PB-2	6914532	2356954	583.1	41.5	541.6	-8.4
PB-3	6914391	2357928	641.5	40	601.5	51.5
PB-4	6914234	2357976	644	41	603	53
PB-5	6914729	2357247	605.1	46	559.1	9.1
PB-6	6914726	2357560	617.2	49	568.2	18.2
PB-7	6914725	2358056	655.5	60	595.5	45.5
PB-8	6914381	2357287	586.4	45.5	540.9	-9.1
PB-9	6914318	2357646	632.4	35.5	596.9	46.9
PB-9A	6914247	2357646	632.6	70.5	562.1	12.1
PB-10	na	na	na	na	na	na
PB-10A	6914073	2357008	592.1	65.5	526.6	-23.4
PB-11	6914046	2357472	631.7	53	578.7	28.7
PB-11A	6914046	2357402	631.1	61	570.1	20.1
PB-12	6914014	2358069	636	25	611	61
1989 Borings by Freese and Nichols, Inc.						
B-1	6917378.33	2356061.92	573.9	16.8	557.1	7.1
B-2	6917384.99	2356572.49	600.3	44.2	556.1	6.1
B-3	6917418.49	2357108.60	620.4	39.4	581	31
B-4	6916981.73	2355486.17	578.2	20	558.2	8.2
B-5	6916889.99	2356091.37	578	34.5	543.5	-6.5
B-6	6916877.20	2357091.25	625	124.4	500.6	-49.4
B-7	6916399.05	2355375.01	583.1	22	561.1	11.1
B-8	6916396.05	2355375.03	583.1	12	571.1	21.1
B-7A	6916396.05	2355585.04	580.7	69	511.7	-38.3
B-9	6916383.56	2356584.92	587.3	40	547.3	-2.7
B-10	6916196.33	2357401.94	624.9	49.3	575.6	25.6
B-11	6915896.37	2355578.60	582.4	22	560.4	10.4
B-12	6915890.02	2356078.59	581.5	33.2	548.3	-1.7
B-13	6915883.68	2356578.58	584.1	23.5	560.6	10.6
B-14	6915877.23	2357078.46	594.6	46.7	547.9	-2.1
B-15	6915888.39	2357578.68	626	36	590	40
B-16	6915948.92	2357864.62	645.3	17	628.3	78.3
B-16A	6915983.88	2357828.89	645.3	42.5	602.8	52.8
B-17	6915396.48	2355572.26	586.5	25.7	560.8	10.8
B-18	6915390.04	2356072.25	583.5	34.3	549.2	-0.8
B-19	6915383.70	2356572.13	584.4	37.6	546.8	-3.2
B-20	6915377.35	2357072.12	592.7	48.3	544.4	-5.6
B-21	6915370.91	2357572.11	618.8	114.8	504	-46
B-22	6915243.07	2358115.36	658.4	49	609.4	59.4
B-23	6914896.50	2355565.82	582.5	64.5	518	-32
B-24	6914890.16	2356065.81	582.4	17.4	565	15
B-25	6914964.53	2356619.33	587.5	21.1	566.4	16.4
1991 Borings by Baker-Shiflett						
B-7B	6916399.05	2355375.01	583.1	50.3	532.8	-17.2
B-10A	6916214.42	2357379.97	624.9	55.6	569.3	19.3
B-11A	6915890.36	2355578.48	582.4	45.0	537.4	-12.6
B-13A	6915873.77	2356566.97	584.1	50.0	534.1	-15.9
B-15A	6915898.39	2357578.59	626.0	55.0	571	21.0
B-17A	6915396.58	2355582.26	586.8	45.0	541.8	-8.2
B-21A	6915370.91	2357572.11	618.8	35.6	583.2	33.2
B-22A	6915251.79	2358138.67	658.4	75.0	583.4	33.4
B-24A	6914890.06	2356055.81	582.4	40.0	542.4	-7.6
B-25A	6914911.06	2356559.53	587.5	50.0	537.5	-12.5
B-26	6914567.37	2356383.89	593.6	41.0	552.6	2.6
B-27	6914355.41	2356788.73	583.8	45.0	538.8	-11.2
B-28	6916399.01	2355454.81	579.0	50.0	529	-21.0
1997 Borings by EMCON						
MW-1A	6914061.4	2358122.6	672.8	48.5	624.3	74.3
MW-2	6914097.3	2356547.5	586.7	19.0	567.7	17.7
MW-3	6914749.7	2356796.2	592.5	24.0	568.5	18.5
MW-4	6914800.9	2358109.1	654.3	34.0	620.3	70.3

[1] The permitted EDE for the facility is 648.4 ft-msl.
na = No available data.
Boring details obtained from lithologic logs and associated data tables and represent condition at time of drilling.

Table 3-1 (Continued)
Summary of Existing Boring Depths and Elevations

Borehole Number	Northing	Easting	Surface Elevation (ft-msl)	Total Depth (ft-msl)	Bottom Elevation (ft-msl)	Bottom Depth Above or Below EDE[1] (feet)
2001 Borings by Biggs and Mathews Environmental						
B-12A	6916404.90	2356073.69	581.5	65.0	516.5	-33.5
B-14A	6915877.23	2357078.46	594.6	77.0	517.6	-32.4
B-18A	6915390.04	2356072.25	583.5	65.0	518.5	-31.5
B-20A	6915377.35	2357072.12	592.7	79.0	513.7	-36.3
B-101 (MW-8)	6916527.19	2356391.52	583.4	20.0	563.4	13.4
B-101A	6916527.19	2356391.52	583.4	69.6	513.8	-36.2
B-102 (MW-7)	6915865.20	2356422.38	582.4	15.0	567.4	17.4
B-102A	6915865.20	2356422.38	582.4	67.0	515.4	-34.6
B-103 (MW-6)	6915225.95	2356172.24	584.6	15.0	569.6	19.6
B-103A	6915225.95	2356172.24	584.6	67.0	517.6	-32.4
B-104 (MW-5)	6914601.74	2355830.87	583.1	15.0	568.1	18.1
B-104A	6914601.74	2355830.87	583.1	66.0	517.1	-32.9
B-105 (MW-9)	6915656.93	2358067.26	660.9	40.0	620.9	70.9
B-105A	6915656.93	2358067.26	660.9	146.0	514.9	-35.1
2002 Borings by Team Consultants						
GMP-9	6915469	2356196	582.6	25.0	557.6	7.5
GMP-10	6916361	2356401	582.4	25.0	557.4	7.4
GMP-11	6916820	2356488	590.4	30.0	560.4	10.4
2003 Borings by Team Consultants						
GMP-5	6914725.46	2358115.71	657.0	35.0	622	72.0
GMP-6	6914059.60	2357780.20	657.2	42.0	615.2	65.2
GMP-7	6914059.30	2356783.38	605.5	39.0	566.5	16.5
GMP-8	6914543.22	2355885.46	586.1	17.0	569.1	19.1
2005 Borings by Team Consultants						
GMP-1	6916535	2357086	611.5	45.0	566.5	16.5
GMP-2	6916239	2357700	635.1	45.0	590.1	40.1
2006 Borings by Team Consultants						
GMP-3C	6915858	2357723	633.3	17.0	616.3	66.3
GMP-4A	6915713	2357937	649.8	17.0	632.8	82.8
2013 Borings by Team Consultants						
GMP-6A	6914050.59	2357779.62	655.6	42.0	613.6	63.6
2013 Borings by Geosyntec						
B-201	6916140.05	2357628.52	636.1	25.5	610.6	60.6
B-202	6916515.11	2356587.23	594.3	30.3	564	14.0
B-203	6915563.98	2356537.13	594.5	24.8	569.7	19.7
B-204	6914616.95	2356002.83	594.9	31.0	563.9	13.9
B-205	6914067.61	2356621.30	600.5	32.6	567.9	17.9
B-206	6914033.83	2357804.21	657.0	39.5	617.5	67.5
B-207	6914119.80	2358108.74	675.2	51.5	623.7	73.7
2018 - 2019 Borings by Weaver Consultants Group						
WC-1	6914013.90	2356505.28	600.4	84.0	516.4	-33.6
WC-2	6913994.25	2358089.67	674.9	159.0	515.9	-34.1
WC-3	6913602.43	2356872.05	635.4	93.5	541.9	-8.1
WC-4	6913853.78	2357263.87	699.5	199.0	500.5	-49.5
WC-5	6913896.46	2357885.63	681.7	166.0	515.7	-34.3
WC-6	6913342.73	2357318.82	684.5	170.0	514.5	-35.5
WC-7	6913354.24	2357738.30	678.7	140.0	538.7	-11.3
WC-8	6913429.21	2358098.36	673.1	160.0	513.1	-36.9
WC-9	6915986.57	2357761.00	642.7	125.0	517.7	-32.3
WC-10	6915954.43	2358080.54	652.2	112.0	540.2	-9.8
WC-11	6915156.69	2358010.68	648.0	132.0	516.0	-34.0
WCP-1	6914009.69	2356504.16	600.4	42.0	558.4	8.4
WCP-6	6913342.84	2357329.16	684.9	63.0	621.9	71.9
WCP-8	6913423.71	2358097.97	673.5	122.0	551.5	1.5
WCP-10 (MW-9A)	6915949.75	2358071.51	652.0	36.0	616.0	66.0
2021 Borings by SCS Engineers						
GMP-1A	6916502.60	2357184.50	615.0	48.1	566.9	16.9
GMP-3D	6916009.80	2358103.20	651.4	34.0	617.4	67.4
GMP-4B	6915716.50	2358111.30	661.2	28.4	632.8	82.8
GMP-5A	6914760.60	2358123.00	658.2	36.0	622.2	72.2
GMP-6B	6913816.10	2358125.30	674.3	61.0	613.3	63.3
GMP-7A	6914100.40	2356737.80	596.2	36.0	560.2	10.2
GMP-12	6913355.30	2357813.30	678.0	69.5	608.5	58.5
GMP-13	6913450.40	2357072.90	656.3	62.0	594.3	44.3

[1] The permitted EDE for the facility is 550.0 ft-msl.
na = No available data.
Boring details obtained from lithologic logs and associated data tables and represent condition at time of drilling.

4 GROUNDWATER INVESTIGATION REPORT

4.1 Water Level Measurements

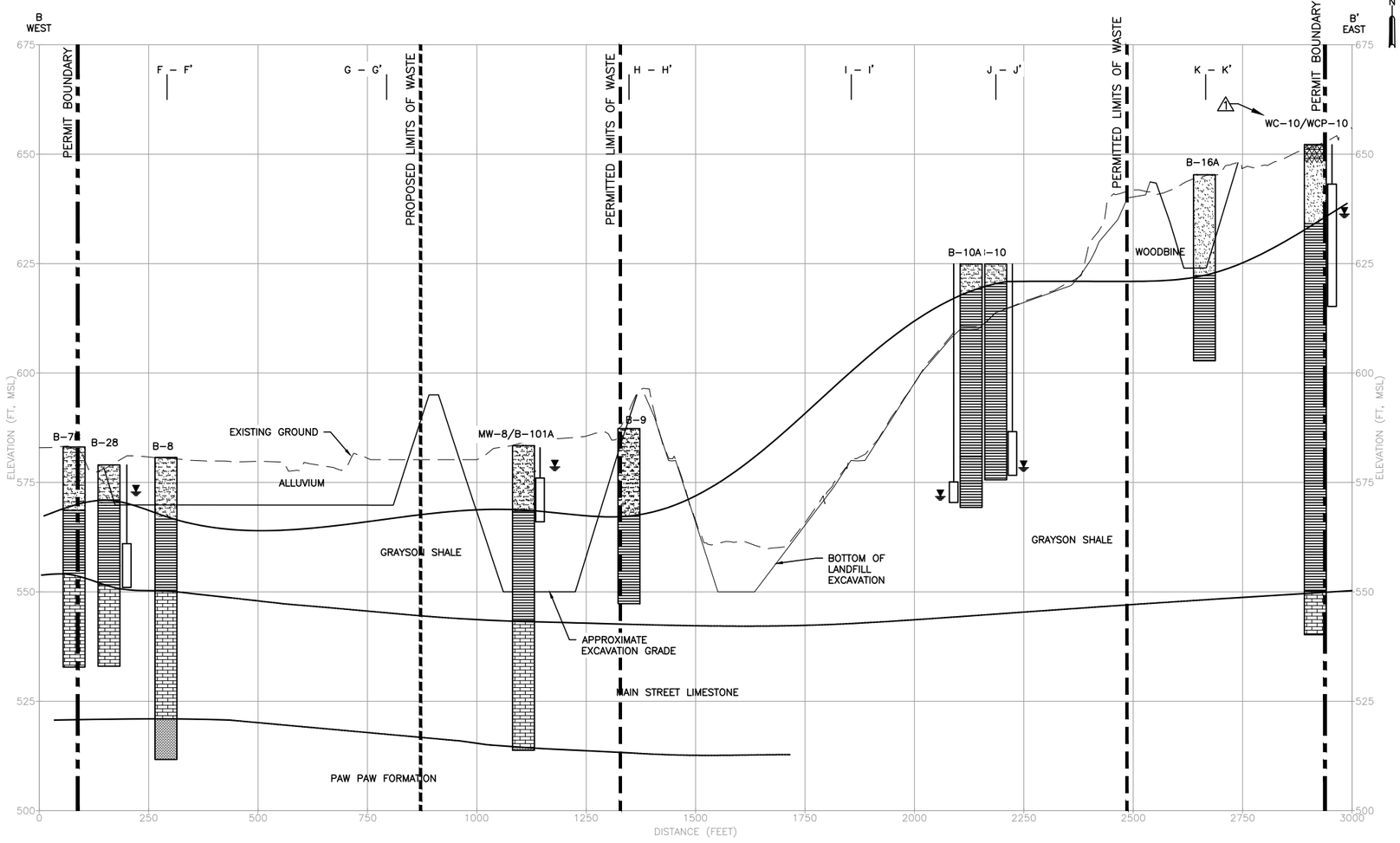
Groundwater at the facility has been evaluated using historical water-level data from the facility's former and existing piezometers and groundwater monitoring wells. Groundwater elevations from the facility's existing monitoring wells and piezometers are provided in Table 4-1 and were measured during monitoring events dating back to August of 1997. These data were obtained from the facility's Subtitle D groundwater database and from water level readings conducted by WCG.

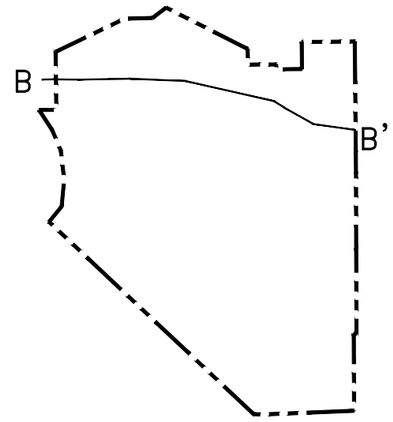
Groundwater elevations from the facility's former monitoring wells and piezometers are provided in Table 4-2 and were measured during monitoring events dating back to March of 1992. Additional historical groundwater elevation data are provided in Appendix IIIG-D as excerpts from previous submittals. These data were obtained from prior subsurface investigation reports. Historical groundwater contour and elevation maps prepare by others are provided in Appendix IIIG-D and include maps from gauging conducted from 2013 to 2022 during prior subsurface investigation and routine groundwater monitoring events. It is noted that some of the historical groundwater maps do not depict a groundwater contour and/or do not distinguish the alluvium and Woodbine groundwater units.

Groundwater potentiometric surface contour maps were prepared from groundwater elevation data gauged during routine groundwater monitoring events by The Carel Corporation in June 2020, June 2021, and June 2022 are presented on Figures IIIG-D-1 through IIIG-D-4 in Appendix IIG-D. A groundwater potentiometric surface contour map prepared from site-wide groundwater elevation data gauged by WCG in September 2022 is presented on Figures IIIG-D-5 in Appendix IIG-D. These groundwater contour maps indicate a groundwater flow regime that is consistent with those depicted historically for the facility. Historical groundwater flow regime and groundwater monitoring system design is further discussed in Appendix IIIH of the SDP.

APPENDIX IIIG-C

SITE GEOLOGIC DATA





SECTION LOCATION MAP
NTS

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- WOODBINE FORMATION
- ALLUVIUM
- GRAYSON SHALE
- MAIN STREET LIMESTONE
- PAW PAW FORMATION
- FILL
- STATIC GROUNDWATER ELEVATION (NOTE 4)
- MONITORING WELL OR PIEZOMETER WITH RISER (TOP) AND FILTER PACK/SCREENED INTERVAL (BOTTOM)

NOTES:

1. CROSS SECTION LOCATION INDICATED IN SECTION LOCATION MAP INSET AND FIGURE IIIG–C–1.
2. EXISTING GROUND SURFACE BASED ON FEBRUARY 2022 AERIAL PHOTOGRAPHY BY FIRMATEK.
3. CROSS SECTION LITHOLOGIC DEPICTIONS AND STRATIGRAPHIC UNIT CORRELATIONS REPRODUCED FROM 2020 GEOLOGIC CROSS SECTION BY GEOSYNTEC CONSULTANTS, INC. AND MODIFIED TO ACCOMMODATE EXISTING SITE CONDITIONS AND PROPOSED FACILITY RECONFIGURATION.
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11143
LICENSED
PROFESSIONAL GEOSCIENTIST

06/05/2023

0 150 300
HORIZONTAL SCALE IN FEET

0 15 30
VERTICAL SCALE IN FEET

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REVIEWED BY: AKE

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MAJOR PERMIT AMENDMENT
CROSS SECTION B–B'

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TARRANT COUNTY, TEXAS

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FIGURE IIIG–C–3

LEGEND

PERMIT BOUNDARY
PERMITTED LIMITS OF WASTE
PROPOSED LIMITS OF WASTE
STATIC GROUNDWATER ELEVATION (NOTE 4)
MONITORING WELL OR PIEZOMETER WITH RISER (TOP) AND FILTER PACK/SCREENED INTERVAL (BOTTOM)
H NORTH

WOODBINE FORMATION
ALLUVIUM
GRAYSON SHALE
MAIN STREET LIMESTONE
PAW PAW FORMATION
FILL

STATE OF TEXAS
AARON K. EVANS
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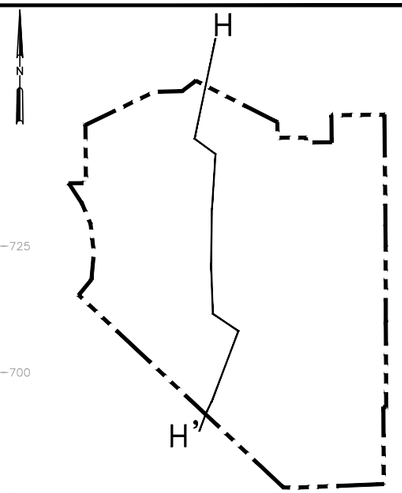
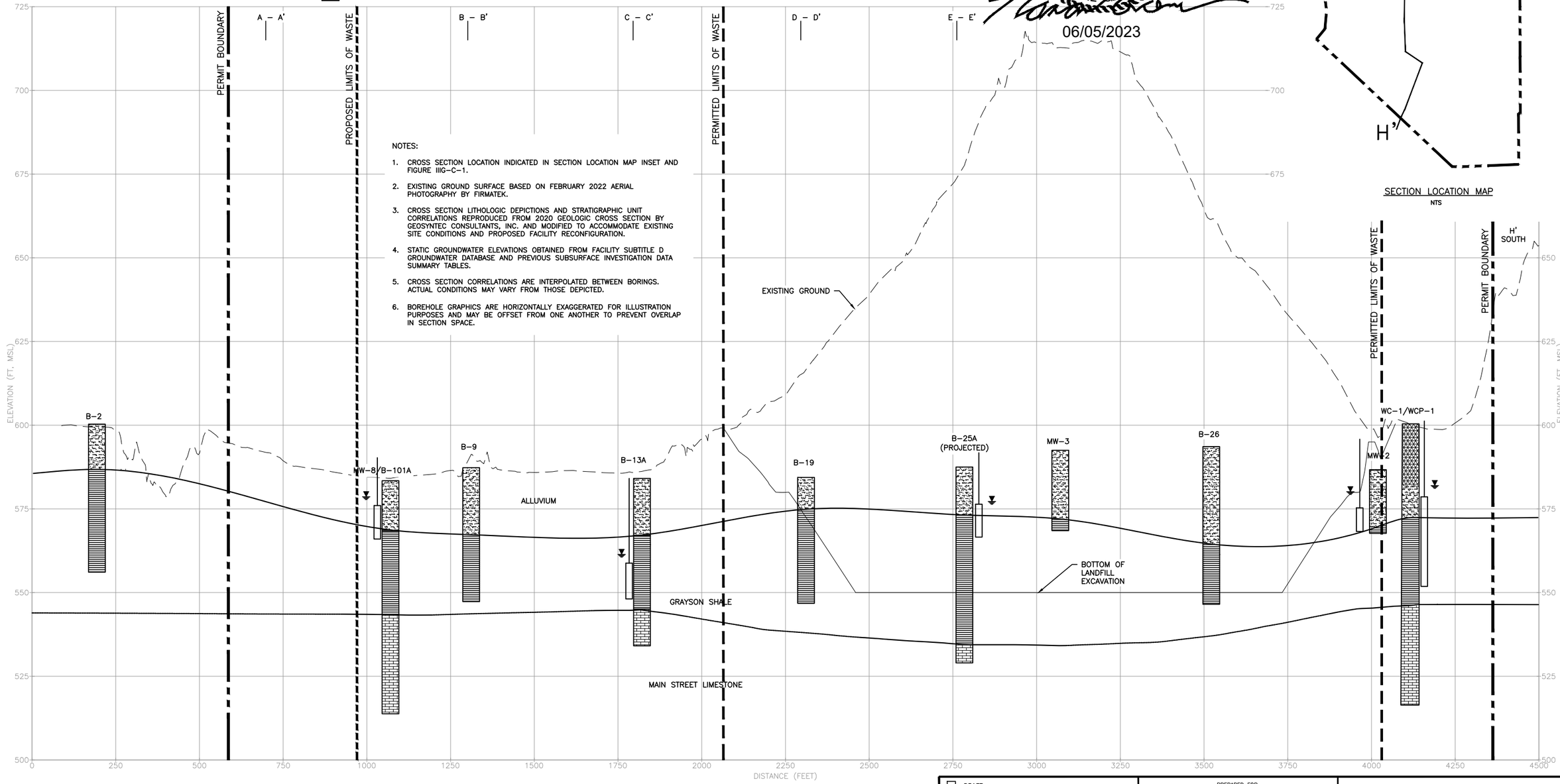


SECTION LOCATION MAP
NTS



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0 150 300
HORIZONTAL SCALE IN FEET
0 15 30
VERTICAL SCALE IN FEET

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CROSS SECTION H–H'

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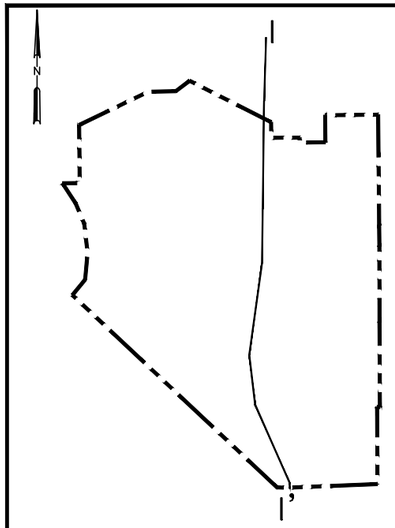
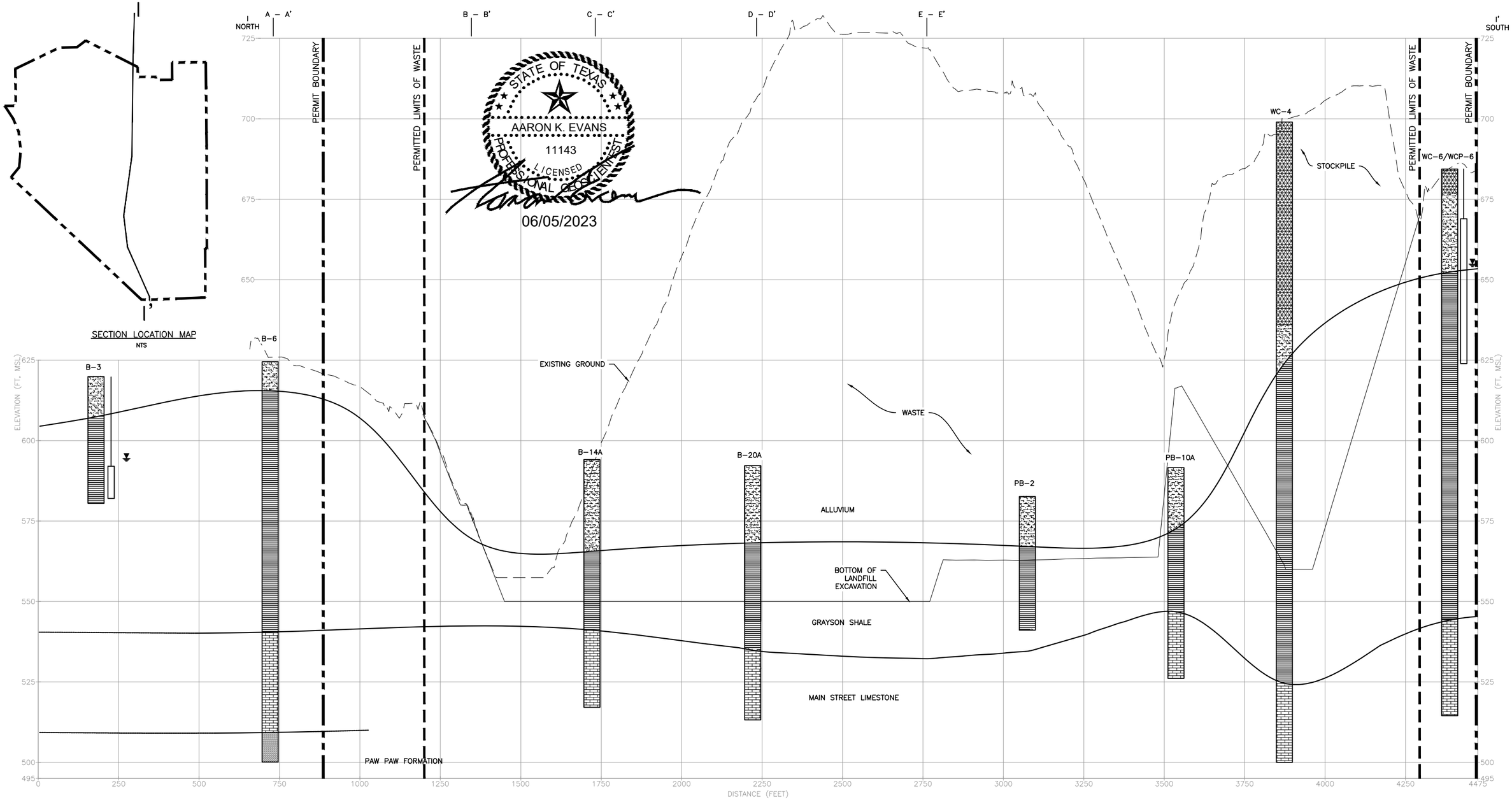
FIGURE IIIG–C–9



SECTION LOCATION MAP
NTS



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06/05/2023

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- STATIC GROUNDWATER ELEVATION (NOTE 4)
- MONITORING WELL OR PIEZOMETER WITH RISER (TOP) AND FILTER PACK/SCREENED INTERVAL (BOTTOM)

- WOODBINE FORMATION
- ALLUVIUM
- GRAYSON SHALE
- MAIN STREET LIMESTONE
- PAW PAW FORMATION
- FILL

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0 150 300
HORIZONTAL SCALE IN FEET
0 15 30
VERTICAL SCALE IN FEET

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MAJOR PERMIT AMENDMENT
CROSS SECTION I-I'

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TARRANT COUNTY, TEXAS

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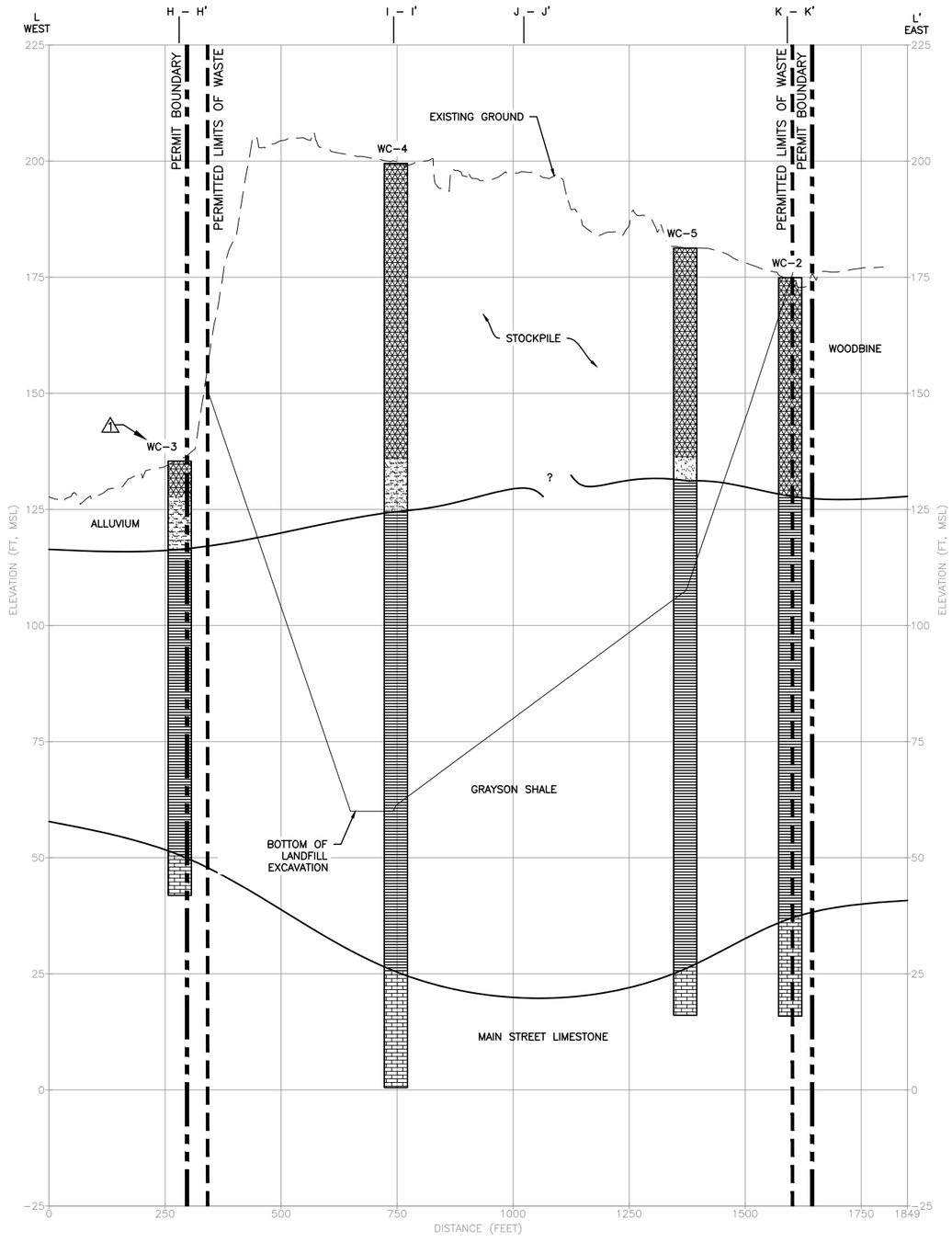
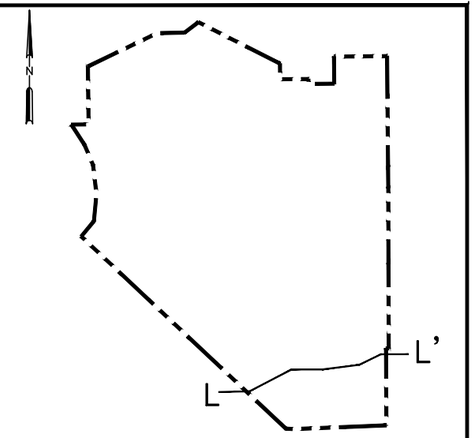
FIGURE IIIG-C-10





SECTION LOCATION MAP
NTS

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- WOODBINE FORMATION
- ALLUVIUM
- GRAYSON SHALE
- MAIN STREET LIMESTONE
- PAW PAW FORMATION
- FILL
- STATIC GROUNDWATER ELEVATION (NOTE 4)
- MONITORING WELL OR PIEZOMETER WITH RISER (TOP) AND FILTER PACK/SCREENED INTERVAL (BOTTOM)

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0 150 300
HORIZONTAL SCALE IN FEET

0 15 30
VERTICAL SCALE IN FEET

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MAJOR PERMIT AMENDMENT
CROSS SECTION L-L'

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TARRANT COUNTY, TEXAS

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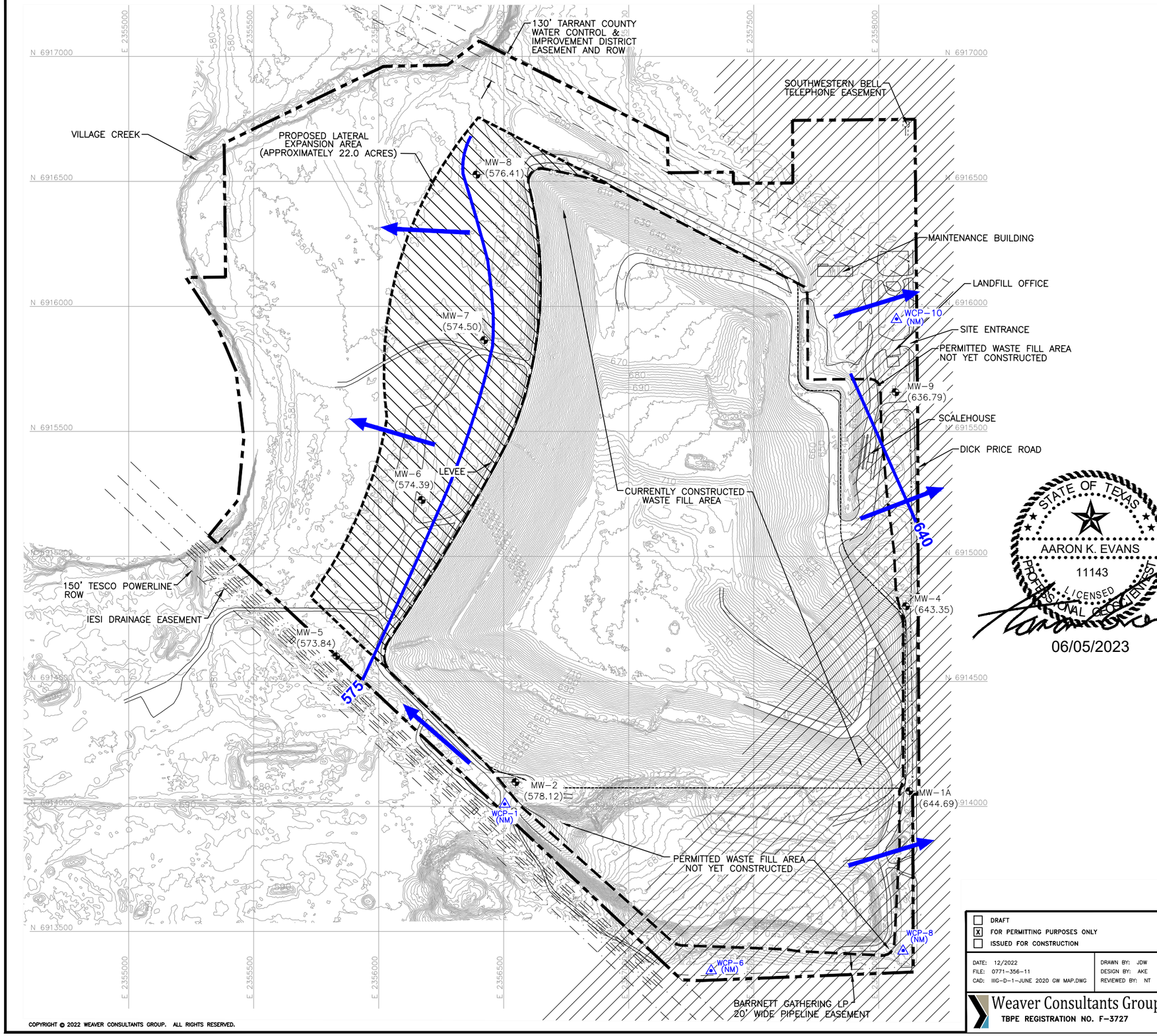
FIGURE IIIG-C-13

APPENDIX IIIG-D

SITE HYDROGEOLOGIC DATA

CONTENTS



0 200 400
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- EASEMENT
- PROPOSED LATERAL EXPANSION AREA
- MW-4 (643.35) — EXISTING GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- WCP-1 (NM) — EXISTING GROUNDWATER PIEZOMETER WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- 640 — GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR IN FT-MSL
- DIRECTION OF GROUNDWATER FLOW
- WOODBINE FORMATION OUTCROP (APPROXIMATE)

STATE OF TEXAS
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11143
PROFESSIONAL GEOSCIENTIST
LICENSED

06/05/2023

NOTES:

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3. GROUNDWATER MONITORING WELL LOCATION COORDINATES OBTAINED FROM MAY 2023 MONITORING WELL ASBUILT SURVEY REPORT BY WEAVER CONSULTANT GROUP (SEE GWSAP PAGE IIIH-A-22). PIEZOMETER LOCATION COORDINATES OBTAINED FROM APPENDIX 4 (GEOLOGY REPORT) OF THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN PREPARED BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
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6. ALLUVIUM GROUNDWATER FLOWS TO THE WEST TOWARD TOWARD VILLAGE CREEK. WOODBINE FORMATION GROUNDWATER FLOWS TOWARD THE EAST/NORTHEAST IN DIRECTION OF FORMATIONAL DIP.
7. NM = GROUNDWATER ELEVATION NOT MEASURED.

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DESIGN BY: AKE
REVIEWED BY: NT

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MAJOR PERMIT AMENDMENT JUNE 2020 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP

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TARRANT COUNTY, TEXAS

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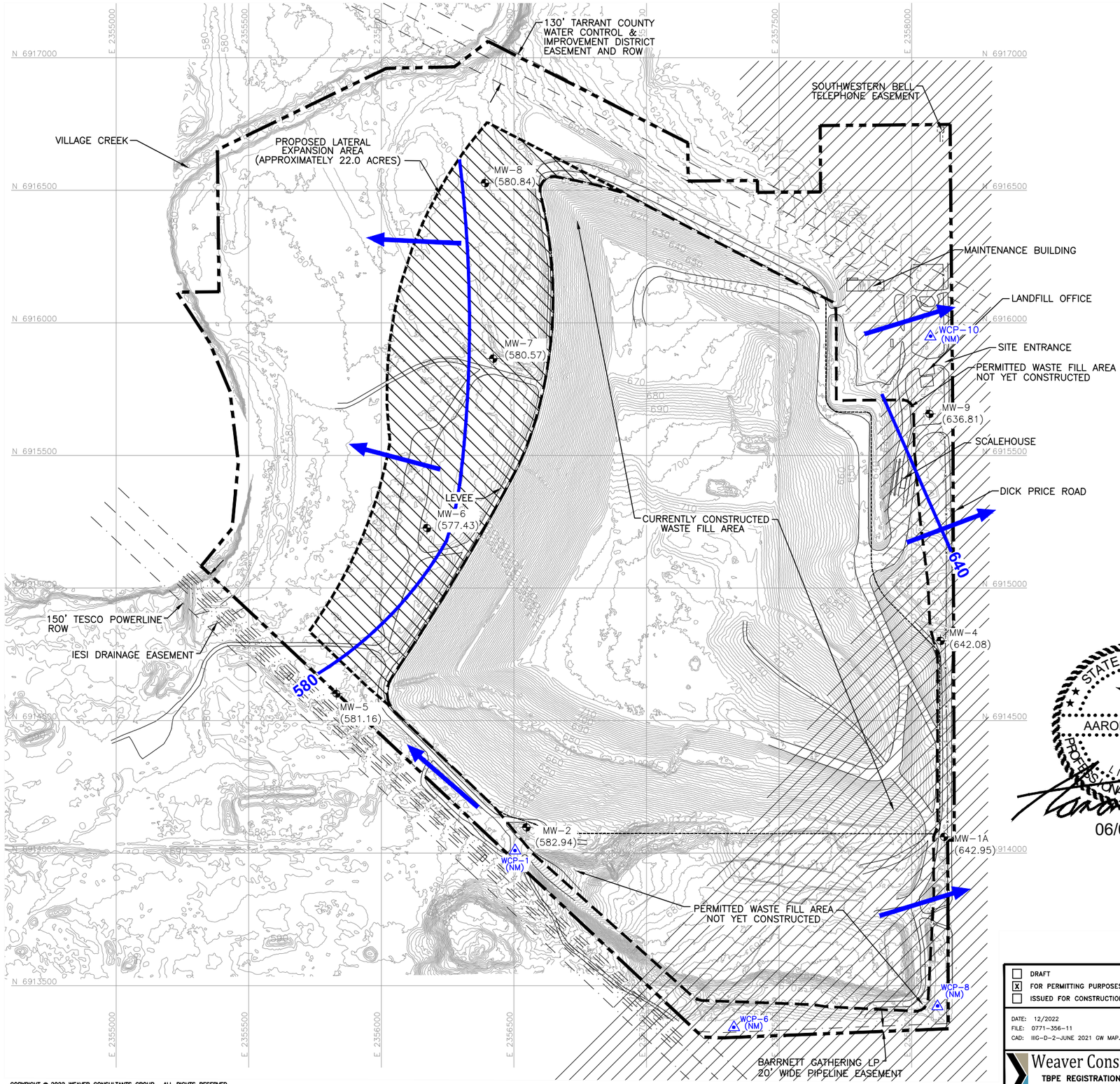
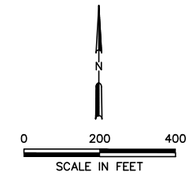
FIGURE IIIG-D-1





LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- EASEMENT
- PROPOSED LATERAL EXPANSION AREA
- MW-4 (642.08) — EXISTING GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
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- DIRECTION OF GROUNDWATER FLOW
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06/05/2023

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MAJOR PERMIT AMENDMENT JUNE 2021 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

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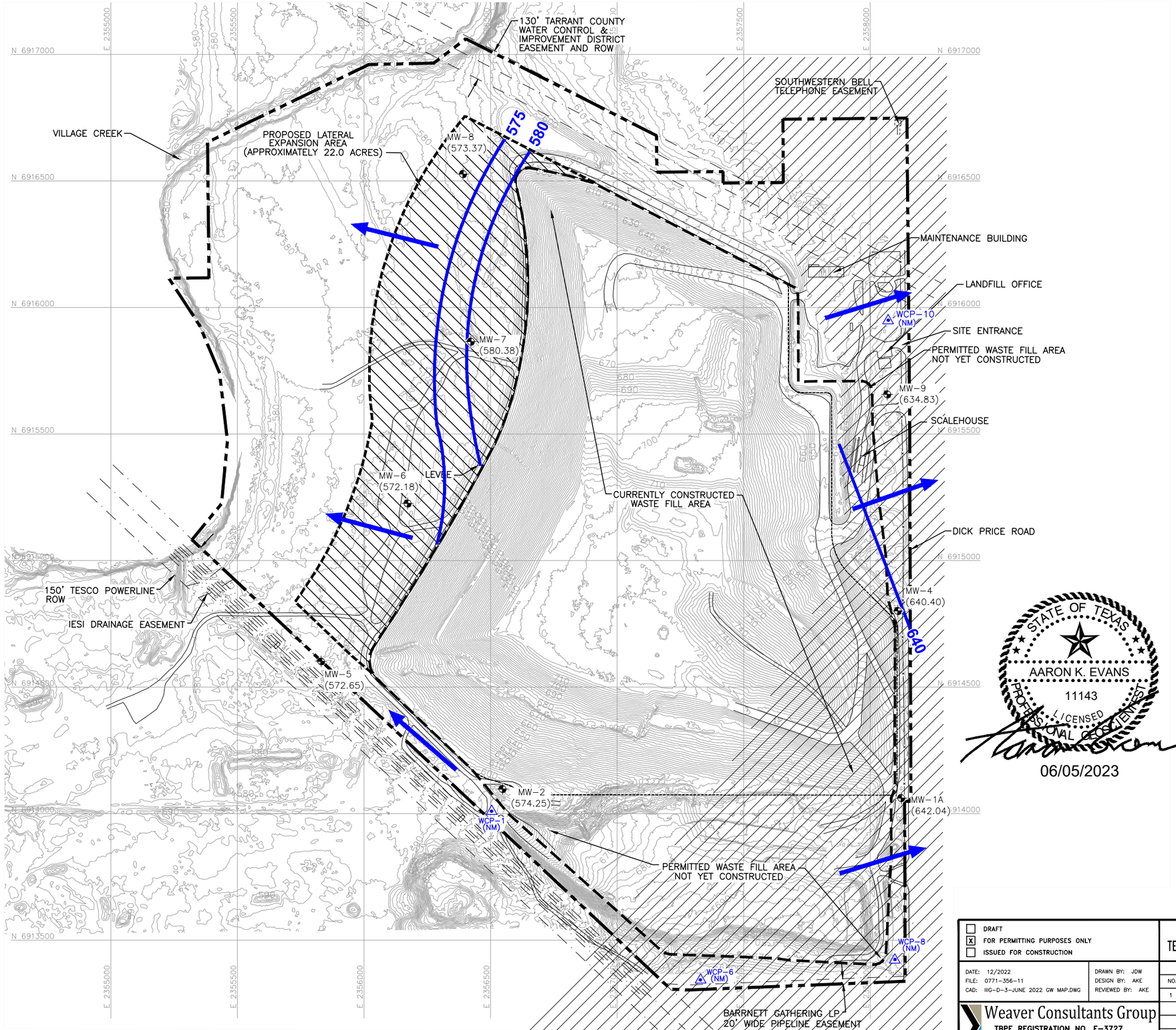
FIGURE IIIG-D-2



N

0 200 400

SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
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STATE OF TEXAS
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REVIEWED BY: AKE

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REVISIONS		
NO.	DATE	DESCRIPTION
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MAJOR PERMIT AMENDMENT JUNE 2022 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP

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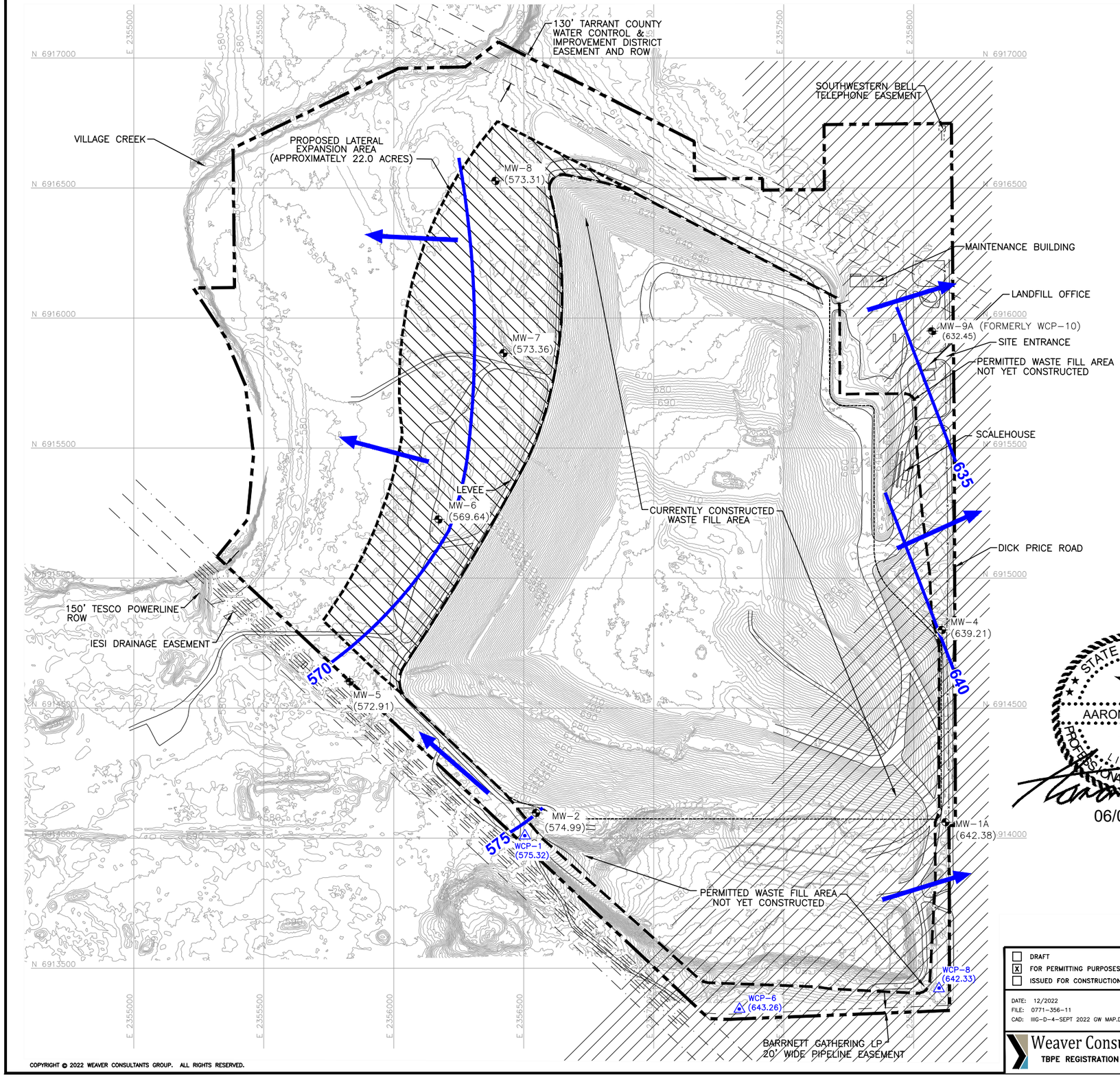
FIGURE IIIG-D-3



N

0 200 400

SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- EASEMENT
- PROPOSED LATERAL EXPANSION AREA
- MW-9A (632.45) — EXISTING GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- WCP-1 (575.32) — EXISTING GROUNDWATER PIEZOMETER WITH GROUNDWATER ELEVATION POSTED IN FT-MSL
- 640 — GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR IN FT-MSL
- DIRECTION OF GROUNDWATER FLOW
- WOODBINE FORMATION OUTCROP (APPROXIMATE)

STATE OF TEXAS
AARON K. EVANS
11143
LICENSED PROFESSIONAL GEOSCIENTIST

06/05/2023

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK, FROM AERIAL PHOTOGRAPHY FLOWN 02-17-2022. GRID COORDINATES BASED ON TEXAS STATE PLANE COORDINATE SYSTEM NAD 83.
2. THE EXISTING PERMIT BOUNDARY REPRODUCED FROM THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
3. GROUNDWATER MONITORING WELL LOCATION COORDINATES OBTAINED FROM MAY 2023 MONITORING WELL ASBUILT SURVEY REPORT BY WEAVER CONSULTANT GROUP (SEE GWSAP PAGE IIIH-A-22). PIEZOMETER LOCATION COORDINATES OBTAINED FROM APPENDIX 4 (GEOLOGY REPORT) OF THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN PREPARED BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
4. APPROXIMATE WOODBINE FORMATION OUTCROP REPRODUCED FROM APPENDIX 5, DRAWING 5A-1 OF THE CURRENTLY APPROVED SITE DEVELOPMENT PLAN PREPARED BY GEOSYNTEC CONSULTANTS, INC., DATED DECEMBER 2020.
5. GROUNDWATER ELEVATIONS GAUGED BY WCG IN SEPTEMBER 2022 AND POSTED IN FT-MSL BY EACH MONITORING WELL AND PIEZOMETER LOCATION.
6. ALLUVIUM GROUNDWATER FLOWS TO THE WEST TOWARD TOWARD VILLAGE CREEK. WOODBINE FORMATION GROUNDWATER FLOWS TOWARD THE EAST/NORTHEAST IN DIRECTION OF FORMATIONAL DIP.

- [ ] DRAFT
- [X] FOR PERMITTING PURPOSES ONLY
- [ ] ISSUED FOR CONSTRUCTION

DATE: 12/2022
FILE: 0771-356-11
CAD: IIIG-D-4-SEPT 2022 GW MAP.DWG

DRAWN BY: JDW
DESIGN BY: AKE
REVIEWED BY: AKE

Weaver Consultants Group
TBPE REGISTRATION NO. F-3727

PREPARED FOR
TEXAS REGIONAL LANDFILL COMPANY, LP

REVISIONS

NO.	DATE	DESCRIPTION
1	06/2023	1ST TCEQ COMMENT RESPONSE

MAJOR PERMIT AMENDMENT SEPTEMBER 2022 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR MAP

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

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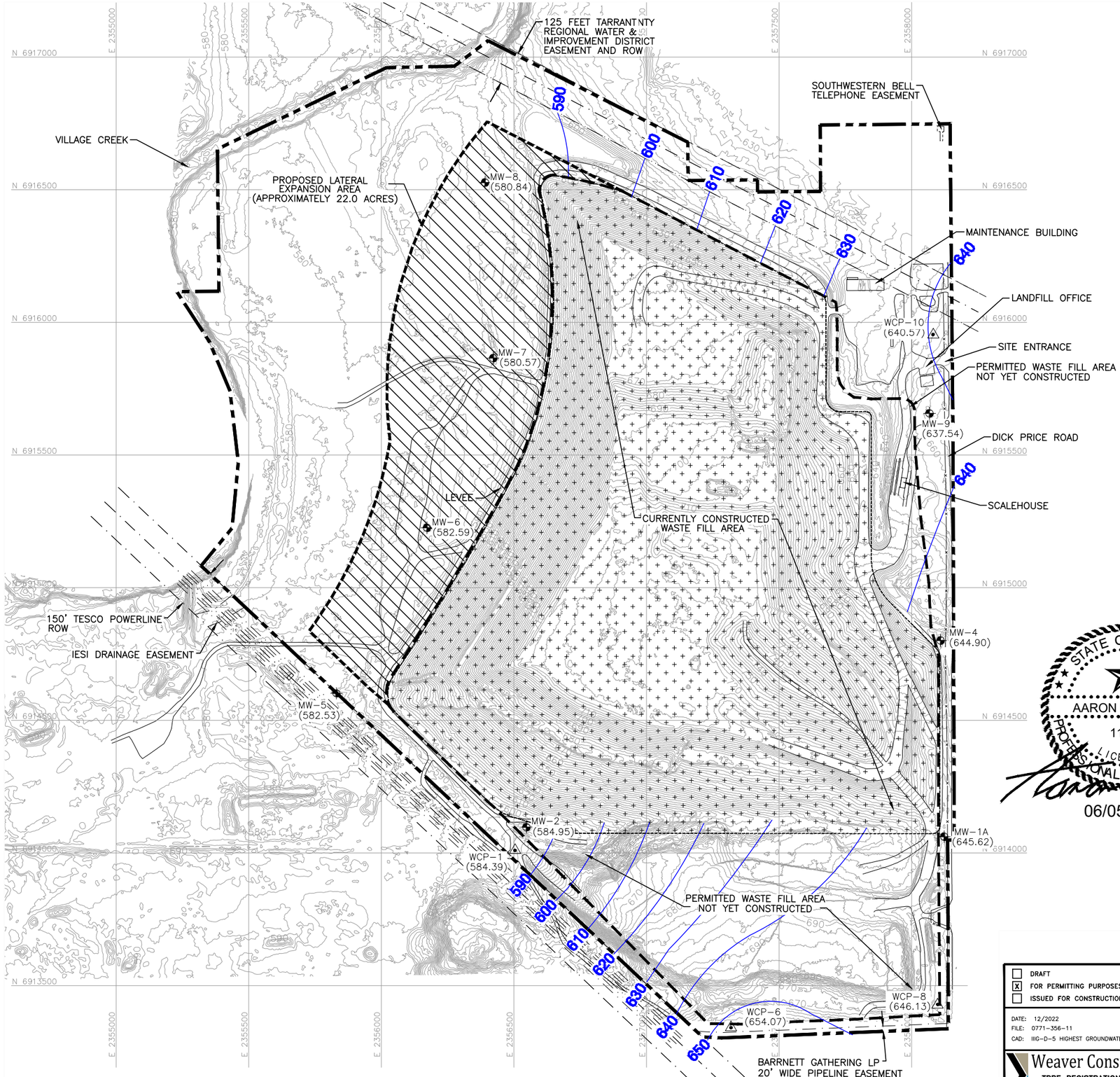
FIGURE IIIG-D-4

0:\0771\356\EXPANSION 2022\PART IIIG\IIIG-CLEAN\IIIG-D-4 SEPT 2022 GW MAP.dwg, jpmhr, 1:2



0 200 400
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- PERMITTED LIMITS OF WASTE
- PROPOSED LIMITS OF WASTE
- 630 — EXISTING CONTOUR
- N 6915000 — STATE PLANE COORDINATE
- MW-2 (583.95) — EXISTING GROUNDWATER MONITORING WELL
- WCP-1 (584.39) — EXISTING GROUNDWATER PIEZOMETER
- 640 — HIGHEST MEASURED GROUNDWATER ELEVATION SURFACE CONTOUR (SEE NOTE 4)
- CURRENTLY CONSTRUCTED WASTE FILL AREA
- PROPOSED LATERAL EXPANSION AREA

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK FROM AERIAL PHOTOGRAPHY FLOWN 02-17-2022.
2. GROUNDWATER MONITORING WELL LOCATION COORDINATES OBTAINED FROM MAY 2023 MONITORING WELL ASBUILT SURVEY REPORT BY WEAVER CONSULTANT GROUP (SEE GWSAP PAGE IIIH-A-22).
3. GROUNDWATER ELEVATION DATA FOR MONITORING WELLS OBTAINED FROM THE FACILITY'S SUBTITLE D GROUNDWATER MONITORING DATABASE. GROUNDWATER DATA FOR PIEZOMETERS OBTAINED FROM INVESTIGATION REPORTS.
4. GROUNDWATER CONTOURS WERE PRODUCED USING EACH POINTS HISTORICALLY HIGHEST MEASURED GROUNDWATER ELEVATION AND DO NOT REPRESENT A SINGLE GROUNDWATER MONITORING EVENT OR ACTUAL GROUNDWATER FLOW.

STATE OF TEXAS
AARON K. EVANS
11143
LICENSED
PROFESSIONAL GEOSCIENTIST

06/05/2023

Highest Measured Groundwater Data

Measurement Point	Groundwater Elevation (FT-MSL)	Measurment Date
MW-1A	645.62	7/19/2019
MW-2	583.95	5/17/2019
MW-4	644.90	5/17/2019
MW-5	582.53	6/23/2004
MW-6	582.89	6/21/2016
MW-7	580.57	6/1/2021
MW-8	580.84	6/1/2021
MW-9	637.54	5/17/2019
WCP-1	584.39	5/17/2019
WCP-6	654.07	6/25/2019
WCP-8	646.13	5/17/2019
WCP-10	640.57	5/17/2019

☐ DRAFT
☒ FOR PERMITTING PURPOSES ONLY
☐ ISSUED FOR CONSTRUCTION

DATE: 12/2022
FILE: 0771-356-11
CAD: IIIG-D-5 HIGHEST GROUNDWATER.DWG
DRAWN BY: JDW
DESIGN BY: CRM
REVIEWED BY: AKE

Weaver Consultants Group
TBPE REGISTRATION NO. F-3727

PREPARED FOR
TEXAS REGIONAL LANDFILL COMPANY, LP

REVISIONS		
NO.	DATE	DESCRIPTION
1	06/2023	1ST TCEQ COMMENT RESPONSE

MAJOR PERMIT AMMENDMENT
HIGHEST MEASURED GROUNDWATER ELEVATION MAP

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

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FIGURE IIIG-D-5

ADDITIONAL GROUNDWATER ELEVATION DATA TABLES

Table 4-14(a)
Fort Worth C&D Landfill
Water Level Elevations – Monitoring Wells

Event Date	MW-1A	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9
8/13/97	636.15	576.94	576.78	633.99					
12/8/97	635.7	574.96	574.96	636.3					
5/9/98	636	581.1	589.1	633.8					
6/26/98	635.6	577.08	576.62	633.26					
6/28/99	635.1	577.2	575.2	633.19					
6/27/00	636.3	583.25	573.6	633.5					
6/25/01	636.13	570.82	573.6	633.9					
10/9/01	637.65	571.04	572.70	634.51	570.64	570.48	568.89	568.86	629.39
3/12/03	N/A	N/A		N/A	574.88	572.67	575.70	575.94	611.32
6/18/03	636.05	574.04		628.95	574.07	570.92	574.31	574.01	610.43
9/18/03	N/A	N/A		N/A	572.92	DRY	570.30	570.64	610.23
12/18/03	N/A	N/A		N/A	573.08	DRY	571.85	570.83	610.31
3/8/04	N/A	N/A		N/A	N/A	572.49	N/A	N/A	N/A
6/23/04	637.13	575.19		634.06	582.53	574.91	577.80	577.07	611.42
9/9/04	N/A	N/A		N/A	N/A	573.30	N/A	N/A	N/A
6/21/05	639.46	572.27		635.35	572.21	573.17	572.97	572.50	613.02
6/13/06	638.15	573.08		635.77	572.95	573.17	573.53	573.20	612.75
6/29/07	638.09	579.51		636.38	578.60	576.73	576.60	579.84	614.26
11/7/07	638.17	575.66		636.77	572.80	573.10	572.48	572.57	614.32
1/1/08	638.04	575.81		636.98	573.06	573.18	572.32	572.60	614.64
6/26/08	638.25	571.98		637.46	573.06	573.57	574.41	576.32	614.62
8/27/08	638.48	571.59		637.04	572.15	572.66	571.66	571.25	614.12
6/18/09	636.54	571.38		636.45	572.55	DRY	574.51	574.38	614.01
6/3/10	637.45	573.89		638.70	573.23	573.84	575.68	577.30	616.30
6/9/11	638.72	562.99		638.35	572.65	572.31	574.52	576.12	614.96
6/5/12	640.07	572.69		639.28	572.87	573.41	573.35	575.96	634.96
6/20/13	638.50	570.97		636.89	DRY	DRY	571.27	570.39	617.06
7/1/2014	637.50	561.84		635.58	572.10	DRY	572.01	573.65	617.06

Table 4-14(b)
Fort Worth C&D Landfill
Water Level Elevations – Piezometers

Event Date	B-1	B-3	B-10	B-10A	B-11	B-13	B-13A	B-17	B-21A	B-22	B-24A	B-25	B-28
7/28/89	567.00	593.00	580.00	575.13	570.00	576.00	*	573.00	587.89	631.00	550.23	578.00	577.54
8/14/89	569.00	592.00	*	573.29	572.00	576.00	572.73	572.00	586.12	631.00	549.99	578.00	585.18
8/25/89	566.00	590.00	577.00	575.52	572.00	575.00	572.02	572.00	586.23	631.00	549.98	578.00	568.68
9/25/89	565.50	589.00	576.00	575.75	571.00	575.00	571.60	572.00	591.53	631.00	550.84	577.00	569.08
6/26/91	565.00	596.00	578.00	574.65	571.00	574.00	575.09	571.00	601.97	630.00	552.59	576.00	571.78
7/5/91	567.20	595.10	577.09	573.98	570.95	574.52	580.25	570.74	609.07	631.21	554.55	575.53	574.25
7/19/91	*	*	577.28	573.19	*	573.59	581.58	*	[537.6]	*	557.30	*	574.17
7/29/91	565.35	595.10	576.93	528.50	570.11	573.16	579.87	570.15	606.77	*	557.52	574.21	574.12
8/23/91	*	*	577.33	*	570.02	572.68	579.05	*	603.75	*	*	*	573.95
11/11/91	569.65	596.27	577.80	573.03	572.84	574.94	578.64	572.32	592.45	630.92	558.22	576.26	573.87
12/31/91	570.89	590.34	577.78	578.92	574.73	580.06	579.95	573.08	592.30	631.33	558.6	582.60	574.48
3/10/92	570.43	586.73	577.77	578.90	573.66	580.52	578.92	572.56	592.90	631.97	559.10	583.42	573.12
3/17/92	569.48	595.07	577.69	578.92	573.17	579.69	578.14	572.29	596.87	632.13	560.15	582.91	573.39
3/25/92	*	*	*	578.93	*	578.81	578.25	*	597.45	*	561.18	*	574.37
4/2/92	568.39	598.45	577.86	579.25	572.34	578.46	576.38	571.99	595.36	632.40	562.52	581.47	574.19
4/17/92	567.67	595.08	571.49	572.38	570.20	575.52	575.18	571.55	592.81	632.51	563.78	580.78	574.10
5/7/92	566.77	593.32	572.08	572.50	571.27	574.53	574.33	571.20	591.78	632.49	565.03	579.93	573.68
6/12/92	567.90	593.33	571.08	Dry	572.03	577.94	573.66	571.55	590.99	632.67	566.06	581.08	573.39
7/7/92	*	595.47	570.63	578.88	572.40	578.00	575.10	571.95	593.13	632.78	568.84	580.77	573.38
8/4/92	566.30	599.73	570.89	578.92	571.18	576.13	577.12	570.94	598.25	633.05	570.05	579.20	573.26
9/3/92	565.55	600.93	577.72	571.90	570.43	574.99	575.27	570.33	592.90	632.76	573.10	577.97	574.35
10/2/92	564.98	596.32	577.81	571.70	570.07	574.12	573.00	569.99	590.98	632.65	572.88	577.17	572.42
10/29/92	565.02	593.63	577.68	571.70	569.79	573.46	572.45	569.60	590.57	632.45	572.95	576.37	572.27
12/24/92	566.39	598.83	Dry	*	570.83	574.93	*	570.50	*	632.76	*	576.81	*
2/24/93	567.14	*	570.46	*	571.96	576.96	*	571.32	*	632.99	*	579.01	*
7/19/93	*	*	577.68	*	571.28	574.96	*	571.09	*	633.01	*	577.50	*
9/6/93	*	*	577.68	*	569.60	572.81	*	569.45	*	632.38	*	575.25	*
10/8/93	*	*	577.68	*	569.32	572.28	*	569.10	*	632.33	*	574.78	*

*Indicates that water level was not taken

[Anomalous data – likely a typographical error carried forward from 1993 report]

Note: Original piezometers P-7, P-8, and P-11 on the existing site are not included on this table because they were apparently screened across several different lithologic units and no construction details are available for these piezometers. In addition, no water levels are available for these piezometers.

4.3 Water Levels Observed During Drilling

This section discusses groundwater observed during drilling. Table 4-14(c) lists groundwater observations noted on the boring, piezometer, or monitor well drilling logs. Borings that are not listed in this table had no groundwater observation on the boring log. The depth at which groundwater was encountered and records of after-equilibrium measurements noted are included in Tables 4-14(a) and 4-14(b). Borehole water level data are generally noted on logs. However, because some of the borings were drilled with water, it was not generally possible to distinguish between drilling water and formation water. Borehole fluid level data were not used in engineering calculations because the piezometers were properly constructed and screened to provide water level data on individual strata; these data are much more reliable than borehole data.

Table 4-14(c)
Fort Worth C&D Landfill
Groundwater Observed During Drilling

Boring No.	Boring Date	Boring Depth (ft)	Surface Elevation (msl)	Water Level During Drilling Depth to Water (ft)
B-205	12-20-2013	32.6	600.45	29.1
B-206	12-28-2013	39.5	657.0	22.5
B-101 (MW-8)	8-29-2001	20.0	583.4	15.0
B-102 (MW-7)	8-29-2001	15.0	582.4	11.8
B-103 (MW-6)	8-29-2001	15.0	584.6	13.1
B-104 (MW-5)	8-29-2001	15.0	583.1	11.4
B-105 (MW-9)	8-29-2001	40.0	660.9	30.0
B-28	5-28-1991	50.0	583.0	9.0
B-1 (PB-1)	8-12-1986	28.0	589.5	11.0
B-8 (PB-8)	8-11-1986	45.5	586.5	11.5
B-1	7-15-1989	16.8	573.9	8.4
B-2	7-13-1989	44.2	600.3	12.0
B-4	7-14-1989	20.0	578.2	7.9
B-5	7-12-1989	34.5	578.0	8.0
B-7	6-21-1989	22.0	583.1	8.7
B-8	7-22-1989	69.0	580.7	6.0
B-9	6-23-1989	40.0	587.3	16.0
B-11	6-21-1989	22.0	582.4	7.0
B-12	6-20-1989	33.2	581.5	4.0
B-13	6-20-1989	23.5	584.1	9.0
B-15	6-15-1989	36.0	626.0	28.0
B-16A	6-19-1989	42.5	645.3	15.0
B-17	7-10-1989	25.7	586.5	14.8
B-18	7-6-1989	34.3	583.5	6.3
B-23	7-5-1989	64.5	582.5	5.0
B-24	7-7-1989	17.4	582.4	3.8
B-25	7-10-1989	21.1	587.5	10.0

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIH
GROUNDWATER SAMPLING AND ANALYSIS PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
TBPE Registration No. F-3727
6420 Southwest Blvd., Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 0771-356-11-35

data. These data are summarized in Figure IIIH-A-2 (Groundwater Monitoring Well Details) in Appendix IIH-A. Typical groundwater monitoring well specifications are depicted in Figure IIIH-A-3 in Appendix IIIH-A. Review of monitoring well installation records indicate that the facility's existing monitoring wells were constructed in accordance with the requirements of Title 30 TAC §330.421.

All parts of the groundwater monitoring system will be operated and maintained so that they perform to design specifications throughout the life of the monitoring program. Any monitoring well that is damaged to the extent that it is no longer suitable for sampling will be reported to the TCEQ who may make a determination about whether to repair or replace the well. Well plugging and abandonment will be performed by a Texas-licensed monitoring well driller in accordance with TCEQ and any other applicable regulatory requirements. No monitoring well will be plugged and abandoned without prior written authorization from TCEQ. Any replacement monitoring well installation will be performed in accordance with Title 30 TAC §330.421 by a Texas-licensed monitoring well driller. Monitoring well construction will provide for the maintenance of the integrity of the borehole, collection of representative groundwater samples from the uppermost aquifer, and prevention of migration of groundwater and surface water within the borehole in accordance with Title 30 TAC §330.421(a).

New or replacement monitoring well installations will be surveyed for horizontal and vertical control by a Texas-licensed Registered Professional Land Surveyor prior to initiation of groundwater sampling in accordance with Title 30 TAC §330.421(d).

2.3 Groundwater Monitoring Program

Facility detection monitoring wells will be sampled annually for the detection monitoring parameters listed in 40 Code of Federal Regulations (CFR), Part 258, Appendix I, which are also listed in Table 5-1 in Section 5.1. Details regarding groundwater sampling, analyses, and statistical comparison procedures are discussed in the following sections of Appendix IIIH.

In accordance with Title 30 TAC §403(e)(3), the facility will promptly notify the executive director, and any local pollution agency with jurisdiction that has requested to be notified, in writing of changes in facility construction or operation or changes in adjacent property that affect or are likely to affect the direction and rate of groundwater flow and the potential for detecting groundwater contamination and that may require the installation of additional monitoring wells or sampling points. Such additional wells or sampling points require a modification of the site development plan which will be requested in accordance with Title 30 TAC §305.70(j).

APPENDIX IIIH-A

GROUNDWATER MONITORING SYSTEM

CONTENTS

GROUNDWATER MONITORING SYSTEM CERTIFICATION

General Site Information

Site: Fort Worth C&D Landfill

Site Location: Tarrant County

MSW Permit No.: 1983E

Qualified Groundwater Scientist Statement

I, Aaron K. Evans, am a registered professional geoscientist in the State of Texas and a qualified groundwater scientist as defined in Title 30 TAC §330.3(120). I have reviewed the groundwater monitoring system and supporting details contained herein. In my professional opinion, the groundwater monitoring system design and construction details are in compliance with the groundwater monitoring requirements specified in Title 30 TAC §§330.401, 330.403, 330.405, 330.407, 330.409, 330.419, and 330.421. This system has been designed for the Fort Worth C&D Landfill. The only warranty made by me in connection with this document is that I have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of my profession, practicing in the same or similar locality. No other warranty, expressed or implied, is intended.

Firm/Address: Weaver Consultants Group, LLC
6420 Southwest Boulevard, Suite 206
Fort Worth, Texas 76109

Signature: _____

Aaron K. Evans, P.G., Texas License No. 11143

06/05/2023

Date: 6/5/2023

GROUNDWATER MONITORING WELL LITHOLOGIC LOGS AND MONITOR WELL DATA SHEETS

WEAVER CONSULTANTS GROUP, LLC

LOG OF BORING: MW-9A

Project Title: Fort Worth C&D Landfill Expansion

Project No: 0771-356-11

Geologist: Aaron K. Evans, P.G.

Driller: CASCADE

Boring Start Date: 1/8/2019 Northing: 6915949

Boring End Date: 1/10/2019 Easting: 2358071

Ground Elevation: 652.0 ft-msl TOC Elevation: 654.1 ft-msl

Remarks: 6" diameter boring advanced and continuously sampled via sonic core drilling techniques and 2" diameter PVC groundwater piezometer installed. Static water level gauged on 03-30-2019.

▽ = First Water Encountered At Time of Drilling = Not Observed

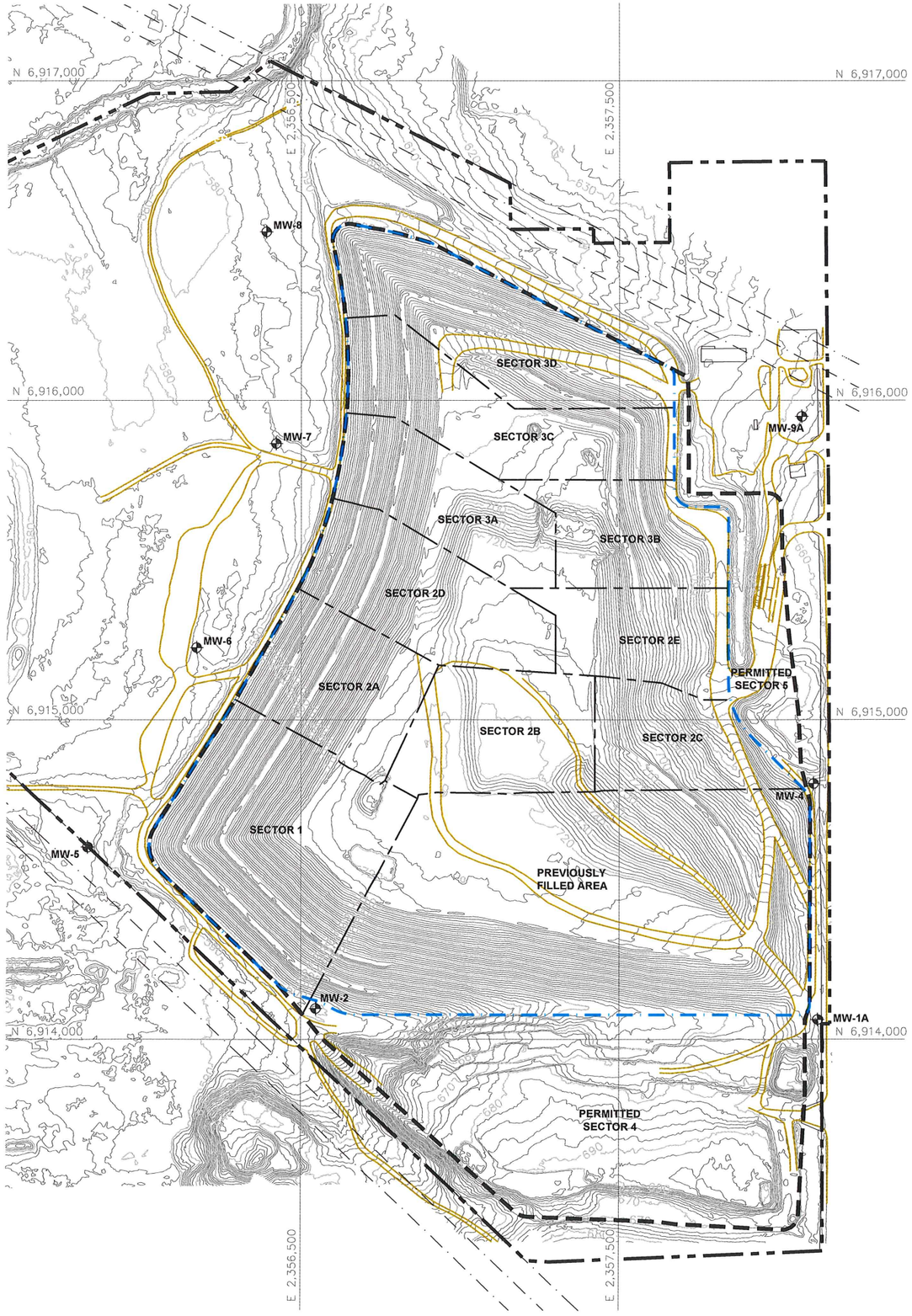
▼ = Static Water Level Elevation = 640.81 ft-msl

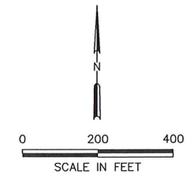
Depth (ft)	Samples	Graphic Log	Description	FT MSL	Hand Penetrometer Test (tsf)	Water at Time of Drilling	Static Water Level	Percent Passing No. 200	Percent Moisture Content	Unit Dry Weight (pcf)	Liquid Limit	Plastic Limit	Plasticity Index	Well Details
			FILL, predominatey clay and silt with intermixed gravel, moist, firm, low to medium plasticity in zones, intermixed, dark brown andark reddish brown, with rootlets.	648.0										649.99
5			SILT, sandy, trace clay, moist, firm, low plasticity, thinly bedded, brown, very fine grained.	647.0										646.99
			SAND, silty, clayey, moist, stiff, low plasticity, thinkly bedded, reddish yellow with red mottling.	644.0										
10			SAND, moist, very stiff, non-plastic, thickly to thinly bedded, reddish yellow, with red and gray mottling, fine grained.											641.99
			- Sand becomes dark reddish brown below 12'.	639.0			▼							
15			CLAY, silty, moist, very stiff, high plasticity, moderately bedded, dark reddish brown and red with reddish yellow and gray mottling.	638.0										
			SILT, clayey, moist, stiff, low plasticity, very thinly bedded, dark reddish brown and red with gray mottling.	636.0										
			CLAY, silty, moist, hard, high plasticity, laminated, dark reddish brown, red, and gray, with iron staining and gradational contact to underlying shale.	634.0										
20			SHALE, clayey, moist, hard, medium to high plasticity, laminated, dark reddish brown, red, and gray, with iron staining.											
25			- Shale becomes silty, with medium plsticity, dark brown, dark reddish brown, and red, with calcareous nodules below 24'.											
			- Shale becomes gray to dark gray below 26.5'.											
30			- Shale contains trace silt and no calcareous nodules, and becomes dark gray with high plasticity below 28'.											
35			- Shale becomes calcareous and interbedded with limestone laminations below 35'.	616.5 616.0										616.99 615.99
			SHALE, clayey, dry, hard, plastic when moistened, thinly bedded to laminated, gray and dark gray, calcareous, fossiliferous, interbedded with occassional thin limestone seams and laminations.											
40														
45														

STATE OF TEXAS
AARON K. EVANS
11143
LICENSED PROFESSIONAL GEOLOGIST

06/05/23

FTWC&D - LOG OF BORING (PIEZOS) FTWC&D - PROJECT DATABASE.GPJ FTWC&D - DATA TEMPLATE (AE).GDT 6/15/19





LEGEND

- PERMIT BOUNDARY
- LIMIT OF WASTE
- LIMITS OF CONSTRUCTED LINER
- N 6,917,000 — SITE GRID (SEE NOTE 2)
- SECTOR LIMITS
- MW–7 — EXISTING GROUNDWATER MONITORING WELL
- LID — TOP OF PROTECTIVE COVER
- PVC — TOP OF PVC WELL CASING (DATUM)
- CONC — SURFACE OF WELL PAD
- NG — NEAREST NATURAL GROUND

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY FIRMATEK FROM AERIAL PHOTOGRAPHY FLOWN 02–21–2023.
2. COORDINATES SHOWN HEREON RELATIVE TO THE TEXAS COORDINATE SYSTEM OF 1983, NORTH AMERICAN DATUM OF 1983, NORTH CENTRAL ZONE, AND HELD FIXED BY LOCAL SITE CONTROL POINTS. (SEE TABLE LOWER RIGHT).
3. ELEVATIONS SHOWN HEREON RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88) AND AS HELD FIXED BY LOCAL SITE CONTROL. (SEE TABLE LOWER RIGHT).
4. MONITORING WELL AS–BUILT LOCATIONS AND ELEVATIONS SHOWN HEREON BASED ON A FIELD SURVEY PERFORMED BY WEAVER CONSULTANTS GROUP, LLC. ON MAY 18, 2023. (SEE TABLE AT RIGHT).

SURVEYOR CERTIFICATION

THAT I, ANDREW J. WIDOLFF, A REGISTERED PROFESSIONAL LAND SURVEYOR BY THE STATE OF TEXAS, AFFIRM THAT THIS DOCUMENT AND DATA DEPICTED HEREON IS BASED UPON A FIELD SURVEY ON MAY 18, 2023 UNDER MY DIRECT SUPERVISION.

ANDREW J. WIDOLFF, RPLS #6771
WEAVER CONSULTANTS GROUP, LLC
6420 SOUTHWEST BLVD #206
FORT WORTH, TX 76103 817–735–9770
TBPELS SURV FIRM NO. 10095400

Well ID	Northing	Easting	Latitude	Longitude	Elevation	Description
MW-1A	6914061.07	2358118.25	32.62883135N	97.23436280W	673.85	NG
	6914061.47	2358122.13	32.62883234N	97.23435020W	673.11	CONC
	6914061.53	2358122.47	32.62883248N	97.23434910W	675.77	PVC
	6914061.54	2358122.54	32.62883252N	97.23434887W	676.11	LID
MW-2	6914092.21	2356545.05	32.62896901N	97.23947131W	595.37	NG
	6914096.48	2356546.67	32.62898068N	97.23946587W	596.05	CONC
	6914096.69	2356547.14	32.62898123N	97.23946433W	598.84	PVC
	6914096.64	2356546.96	32.62898110N	97.23946493W	599.25	LID
MW-4	6914796.30	2358107.79	32.63085245N	97.23436799W	654.71	NG
	6914800.31	2358109.29	32.63086341N	97.23436295W	655.03	CONC
	6914800.81	2358109.22	32.63086479N	97.23436317W	657.67	PVC
	6914800.79	2358109.12	32.63086476N	97.23436350W	658.71	LID
MW-5	6914606.22	2355825.89	32.63040544N	97.24178709W	583.01	NG
	6914602.15	2355830.63	32.63039411N	97.24177184W	583.91	CONC
	6914601.85	2355830.68	32.63039327N	97.24177170W	586.11	PVC
	6914601.87	2355830.79	32.63039333N	97.24177135W	586.75	LID
MW-6	6915227.16	2356167.52	32.63210080N	97.24065326W	584.50	NG
	6915225.95	2356171.74	32.63209735N	97.24063961W	585.35	CONC
	6915226.06	2356172.06	32.63209762N	97.24063858W	587.88	PVC
	6915226.14	2356172.00	32.63209786N	97.24063875W	588.33	LID
MW-7	6915862.16	2356421.77	32.63383768N	97.23980267W	583.79	NG
	6915865.09	2356422.10	32.63384573N	97.23980150W	582.81	CONC
	6915865.37	2356422.40	32.63384648N	97.23980048W	585.77	PVC
	6915865.41	2356422.25	32.63384660N	97.23980097W	586.22	LID
MW-8	6916522.80	2356392.07	32.63565441N	97.23987337W	583.43	NG
	6916526.95	2356391.26	32.63566583N	97.23987584W	583.63	CONC
	6916527.18	2356391.50	32.63566645N	97.23987505W	586.18	PVC
	6916527.30	2356391.44	32.63566678N	97.23987523W	586.55	LID
MW-9A	6915953.54	2358071.56	32.63403426N	97.23444033W	651.80	NG
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	6915949.65	2358071.44	32.63402359N	97.23444088W	654.10	PVC
	6915949.58	2358071.58	32.63402337N	97.23444042W	654.67	LID

FTW C&D CONTROL				
POINT#	NORTHING	EASTING	ELEVATION	DESCRIPTION
7	6915867.06	2356421.33	582.79	MW-7 "X" CUT
104	6914801.41	2358109.38	654.99	MW-4 DISK SITE BM
120	6914060.72	2358122.69	673.34	MW-1A DISK

☐ DRAFT
☒ FOR INFORMATIONAL PURPOSES ONLY
☐ ISSUED FOR CONSTRUCTION

DATE: 05/2023
FILE: 0771–356–11
CAD: 0771–356–09–81 As–Builts.DWG

DRAWN BY: EA/CS
DESIGN BY:
REVIEWED BY: AJW

Weaver Consultants Group
TBPE REGISTRATION NO. F–3727

PREPARED FOR
WASTE CONNECTIONS

REVISIONS

NO.	DATE	DESCRIPTION

GROUNDWATER MONITORING WELL AS–BUILT REPORT

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS

WWW.WCGRP.COM

DRAWING A

P:\SBI Survey\Solid Waste\0771 (Waste Connections, Inc-former IESI)\356 (Fort Worth C&D Landfill)\2023\0771-356-11-41 (Mon Well As-Built)\2. Exhibit\0771-356-09-81 As-Builts.dwg

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

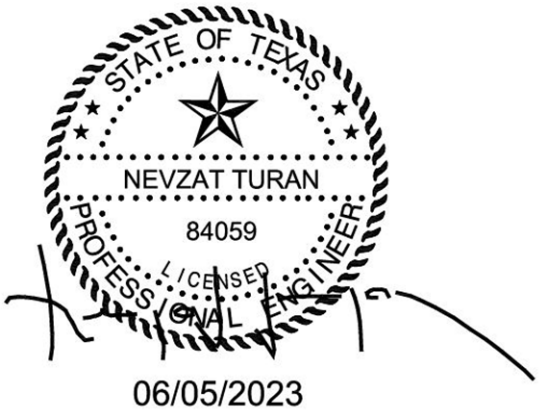
VOLUME 4 OF 4

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



Prepared by

Weaver Consultants Group, LLC
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817-735-9770

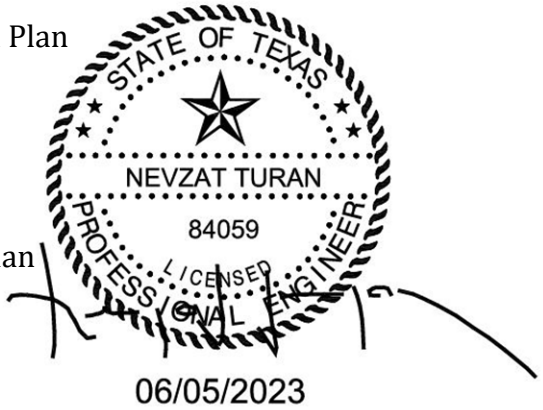
WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

CONTENTS



FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PART III – SITE DEVELOPMENT PLAN
APPENDIX III I
LANDFILL GAS MANAGEMENT PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
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1 INTRODUCTION

1.1 Scope

This Landfill Gas Management Plan (LGMP) has been developed for the Fort Worth C&D Landfill consistent with the requirements set forth in the Texas Commission on Environmental Quality (TCEQ) Municipal Solid Waste (MSW) regulations Title 30 Texas Administrative Code (TAC) §330.371, §330.159, and RCRA Subtitle D regulations in 40 CFR §258.23. The existing landfill is owned and operated by Texas Regional Landfill Company, LP.

This LGMP describes the existing and proposed upgrades to the landfill gas (LFG) monitoring network. It also discusses the operation and monitoring of this network, notification procedures, and possible remediation activities, if required.

1.2 Purpose

Title 30 TAC §330.159 requires landfills to develop a LGMP in accordance with Title 30 TAC §330.371. Compliance with Title 30 TAC §330.371 requires landfills to implement a routine monitoring program for methane to verify that (1) the concentration of methane gas generated by the facility does not exceed 1.25% by volume in facility structures (excluding LFG control or recovery system components) within the permit boundary, and (2) the concentration of methane gas does not exceed 5% by volume in monitoring points, probes, subsurface soils, or other matrices at the facility boundary as defined by the legal description in the permit or permit by rule.

The purpose of the LGMP is to provide guidelines for management of LFG at the site. These guidelines cover the evaluation of LFG migration at the permit boundary and in structures within the permit boundary. The presence of LFG will be verified by monitoring LFG concentrations in monitoring probes near the facility's permit boundary and within on-site occupied structures. LFG migration may be controlled by various options which are discussed in Section 5.

The LFG monitoring (postclosure care period) program will continue for a period of 5 years after final closure of the facility or until the owner or operator receives written authorization from TCEQ to revise or discontinue the program.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

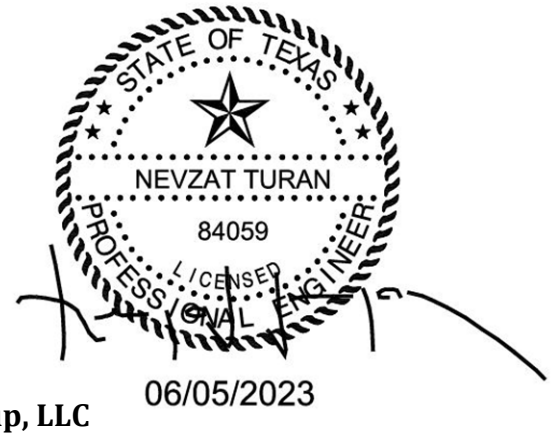
PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIJ
CLOSURE PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



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Weaver Consultants Group, LLC
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WCG Project No. 0771-356-11-35

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- Engineering plans will be developed to address site closure at the time of discontinued waste filling.
- The final waste received will be placed and properly compacted.
- Excavations will be filled with suitable material, and the site will be graded to promote runoff and prevent ponding.
- The final cover system will be constructed according to specifications.
- The top of the landfill will be regraded and reshaped as needed to provide the proper slope for positive drainage.
- As noted above (first bullet), a revised final closure plan will be developed and submitted to the TCEQ for approval.
- Following application of final cover, the site will be vegetated with appropriate grasses to minimize erosion. The established grasses will provide a minimum of 90 percent coverage of the final cover system.
- A surface water management system will be constructed to minimize erosion.
- A closure certification will be prepared by an independent licensed professional engineer and submitted to TCEQ for approval.
- All proper notices and documentation will be filed with the appropriate agencies.
- If corrective action at the site is required, a corrective action plan will be developed in accordance with §330.509 and submitted to TCEQ for approval.

3.2.1 Estimate of Largest Active Disposal Area

The largest area that could be open within the next year is shown on Figure IIIL-1 in Appendix IIIL. Consistent with this rule and TCEQ guidelines for financial assurance to complete closure and postclosure activities, financial assurance will be posted for the current active area as discussed in Appendix IIIL – Cost Estimate for Closure and Postclosure Care. As additional liner areas developed, Appendix IIIL will be updated (closure plan does not need to be updated) per §305.70(j) to ensure continued compliance with financial assurance requirements. The entire 184.3-acre site will also need to be administratively closed.

Supporting calculations are presented in Appendix IIIL – Cost Estimate for Closure and Postclosure Care.

3.2.2 Estimate of Maximum Inventory of Waste Ever On Site

The estimate of maximum inventory of waste (defined as waste and daily cover) ever on site over the active life of the facility is approximately 31.3 million cubic yards. The site life calculations (Appendix IIIB – Site Life Calculations) show that approximately 18,300,000 cubic yards of airspace remain (using the February 17, 2022 topographic map and the proposed closure plan).

4 SCHEDULE OF UNIT CLOSURE AND FACILITY FINAL CLOSURE

4.1 Final Closure Requirements

Consistent with §330.457(f), the site will be closed implementing the following steps.

- No later than 45 days prior to initiation of final closure activities for the Type IV municipal solid waste landfill (MSWLF) unit, the Executive Director of the TCEQ will be notified that a notice of the intent to close the unit has been placed in the operating record.
- No later than 90 days prior to initiation of final closure activities for the Type IV MSWLF unit, a public notice of facility closure which contains the name, address, and physical location of the facility, the permit number, and the last date of intended receipt of waste, will be provided in the newspaper of the largest circulation in the vicinity of the facility (e.g., the Dallas Morning News). The Fort Worth C&D Landfill will also make available a copy of the approved final closure and postclosure plan at the landfill office for public access and review.
- Following notification of the Executive Director of the TCEQ, a minimum of one sign will be posted at the main entrance notifying all persons utilizing the facility of the closure date or date after which further receipt of waste is prohibited. In addition, barriers or gates will be installed at access points following the closure date to prevent unauthorized dumping of solid waste at the facility.
- Final closure activities will commence at the Type IV MSWLF unit no later than 30 days after the date the Type IV MSWLF unit receives the known final receipt of waste. If the Type IV MSWLF unit has remaining capacity and there is a reasonable likelihood that the Type IV MSWLF unit will receive additional waste, final closure activities will commence no later than one year after the most recent receipt of wastes.
- Final closure activities of the Type IV MSWLF unit will be completed in accordance with the Final Closure Plan within 180 days following the beginning of closure.
- Following completion of final closure activities, a documented certification, signed by an independent licensed professional engineer, will be submitted to the TCEQ for review and approval. This certification will verify that final

closure has been completed in accordance with the final closure plan and will include all applicable documentation necessary for certification of final closure. Once approved, this application will be placed in the operating record.

- Within 10 days after completion of final closure activities of the facility, a certified copy of an Affidavit to the Public (most current format provided by the TCEQ will be used) will be submitted to the TCEQ and placed in the operating record. In addition, a certified notation will be recorded in the Denton County Deed records that will in perpetuity notify any potential purchaser of the property that the land has been used as a landfill facility and the use of the land is restricted according to the provisions specified in Attachment 13 – Postclosure Care Plan. Within 10 days after completion of final closure activities of the facility, a certified copy of the modified deed will be submitted to the TCEQ and placed in the operating record.

Following receipt of the required final closure documents and an inspection report from the TCEQ district office verifying proper closure of the Type IV MSWLF facility according to this Final Closure Plan, the Executive Director may acknowledge the termination of operation and closure of the facility and deem it properly closed. The steps in the closure process are depicted on Figure 12.3 – Final Closure Schedule.

4.2 Provisions for Extending Closure Period

If the Fort Worth C&D Landfill has remaining capacity at the time of its closure, final closure activities will begin no later than one year after the most recent receipt of waste. A request for an extension beyond the one-year deadline for the initiation of final closure may be submitted to the Executive Director for review and approval and will include all applicable documentation to demonstrate that; (1) the unit or site has the capacity to receive additional waste, and (2) the Fort Worth C&D Landfill has taken all steps necessary to prevent threats to human health and the environment.

Closure activities will be completed within 180 days following the initiation of final closure activities. If necessary, a request for an extension of the completion of final closure activities will be submitted to the Executive Director for approval. This request will include all applicable documentation necessary to demonstrate that final closure will take longer than 180 days and all steps have been taken and will continue to be taken to prevent threats to human health and the environment from the unclosed site. In accordance with §330.457(f)(4), post-closure care maintenance will begin immediately upon the date of final closure as approved by the Executive Director.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PART III – SITE DEVELOPMENT PLAN
APPENDIX IIIK
POSTCLOSURE CARE PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023

Prepared by

Weaver Consultants Group, LLC
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6420 Southwest Blvd., Suite 206
Fort Worth, Texas 76109
817-735-9970

WCG Project No.0771-356-11-35

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2 POSTCLOSURE ACTIVITIES

2.1 Monitoring and Maintenance

In accordance with §330.463(b)(1), postclosure care maintenance will commence upon completion of final closure requirements set forth in Appendix IIIJ – Closure Plan. Postclosure care maintenance will continue for a period of 5 years unless the TCEQ approves a postclosure period of a different duration. If there is evidence of a release from a municipal solid waste unit, 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 may be performed. Postclosure care maintenance will consist, at a minimum, of the following requirements carried out by Texas Regional Landfill Company, LP:

- Retain the right of entry and maintain all rights-of-way to the closed landfill.
- Conduct site inspections a minimum of twice yearly after closure.
- Conduct maintenance and/or remediation activities, as needed, to maintain the integrity and effectiveness of the final cover, site vegetation, and drainage control systems. Vegetation shall be maintained on the final cover to provide a minimum of 85 percent coverage.
- Manage surface runon and runoff in order to minimize the erosion of the final cover system.
- Correct the effects of settlement, subsidence, ponded water, erosion, or other events or failures in as much as these situations are detrimental to the integrity of the closed landfill.
- Maintain the groundwater monitoring system in accordance with §330.463(a)(2) and §330.463(b)(1)(C) and monitor groundwater in accordance with an approved Groundwater Sampling and Analysis Plan. However, Texas Regional Landfill Company, LP reserves the right to request TCEQ approval of (1) an alternative monitoring frequency, and (2) an alternative list of parameters to be monitored. Such requests will be based on supporting data available at the time of the request.

2.2 Decreasing Postclosure Period

The length of the postclosure care maintenance period may be decreased by the Executive Director if Texas Regional Landfill Company, LP submits, to the Executive Director for review and approval, a documented certification signed by an independent licensed professional engineer. Any such certification would include

3 PERSON RESPONSIBLE FOR CONDUCTING POSTCLOSURE ACTIVITIES

At the time of development of this document, the following position will be responsible for overseeing and/or conducting postclosure care activities at this landfill.

Gary Bartels – Southern Region Engineer
Texas Regional Landfill Company, LP
c/o Waste Connections
3 Waterway Square Place Suite 550
The Woodlands, TX 77380
(832) 442-2900

The position responsible for conducting postclosure activities is subject to change. However, as part of the closure notification to TCEQ, as required by Title 30 TAC §330.463(b)(3)(B), Texas Regional Landfill Company, LP will notify the TCEQ regarding the responsible position.

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

PART III – SITE DEVELOPMENT PLAN

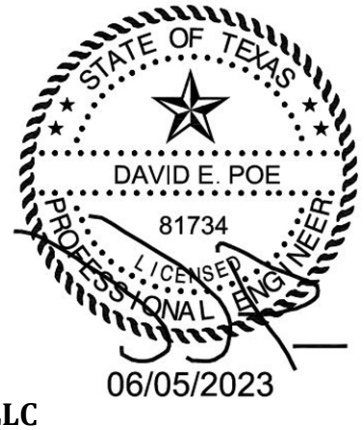
APPENDIX IIIM
GEOTECHNICAL REPORT

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



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WCG Project No. 0771-356-11-35

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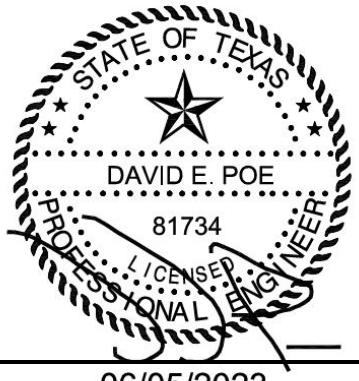


CONTENTS

1 INTRODUCTION

This appendix addresses §330.63(e)(5)(A) and (B).

The purpose of this report is to present the geotechnical analysis and design for the proposed major permit amendment for the vertical and lateral expansion of the Fort Worth C&D Landfill (landfill). The landfill is a Type IV landfill, and accepts brush, construction and demolition waste, and rubbish. Municipal solid waste is not accepted at this landfill. Title 30 TAC §330.337(e) requires that prior to excavating below the seasonal high water table the owner and operator will perform a preliminary foundation evaluation satisfactory to the executive director, and the evaluation will consider stability (Appendix IIIM, Section 5), settlement (Appendix IIIM, Section 1.1), and constructability (Appendix IIID, Section 4.4). This report is based on the geotechnical investigations and testing information that has previously been compiled from the subsurface investigations at the site and additional information obtained during recent investigations.

This report contains a compilation of geotechnical analysis and design information, including:

- Slope and foundation stability analyses of the landfill and landfill foundation based on the geotechnical testing results and subsurface conditions, including groundwater, for landfill excavations, landfill completion, and sequence of development (interim condition analysis) plans. The analysis complies with the requirements of Title 30 TAC §330.337(e) and is presented in Section 5 of this appendix and in Appendix IIIM-A.
- Settlement analysis of the final cover system, which are also based on the landfill excavation and completion plans.
- Settlement of the foundation is discussed in Section 1.1, below.

This report also provides geotechnical recommendations for construction of the landfill components, including bottom liner (for sidewall areas receiving 3-foot-thick recompacted clay liner over alluvium) and final cover systems. The construction quality control and material and construction specifications for the groundwater protection components of the landfill are provided in Appendix IIID – Liner Quality Control Plan (LQCP) and Appendix IIIE – Final Cover System Quality Control Plan (FCSQCP).

1.1 Foundation Settlement Analysis

To address the requirements of Title 30 TAC §330.337(e), WCG reviewed the geological conditions described in Appendix G of this application, specifically as it relates to the competency and compressibility of the geological formation underlying the landfill. Additionally, WCG considered the Type IV landfill design, which does not incorporate leachate collection systems or geosynthetic barrier layers in the floor of the landfill that are susceptible to displacement or damage from potential differential settlement of the landfill foundation. Testing of the in-situ unweathered shale/marl (Grayson Formation) which comprise the landfill floor and portions of sidewalls of the landfill indicate this shale/marl formation will undergo little or no consolidation settlement during future waste loading and will not negatively impact the overall performance of the liner or final cover systems.

Based on the evaluation of the foundation conditions and of the Type IV landfill design, WCG concludes that additional analysis of settlement is not warranted, and the landfill short and long-term performance or environmental protection will not be negatively influenced by waste-induced settlement.

Table 5-4
Summary of Slope Stability Analysis for the Final Cover Landfill Configuration

Slope Designation	Method of Analysis	Minimum Factor of Safety Generated[1]		Acceptable Factor of Safety	
		Effective Stress	Total Stress	Effective	Total
Final Cover Slope B-1	Bishop-Circular	2.01	2.04	YES	YES
Final Cover Slope B-2	Rankine-Block	2.20	2.26	YES	YES
Final Cover Slope D-1	Bishop-Circular	2.03	2.06	YES	YES
Final Cover Slope D-2	Rankine-Block	1.89	1.89	YES	YES

[1] Recommended Minimum Factor of Safety for long-term stability analysis using effective stress is 1.5 and short-term stability analysis using total stress is 1.3.

Computer-generated slope stability analysis output is included in Appendix IIIM-A. The minimum calculated factor of safety for the closed condition is 1.89, which is greater than the recommended minimum factor of safety of 1.5 for long-term slope stability. Note that model sections presenting both the critical failure surface as well as the modeling search surfaces are included in Appendix IIIM-A, which demonstrate that the stability analysis searches considered both landfill and underlying foundation conditions.

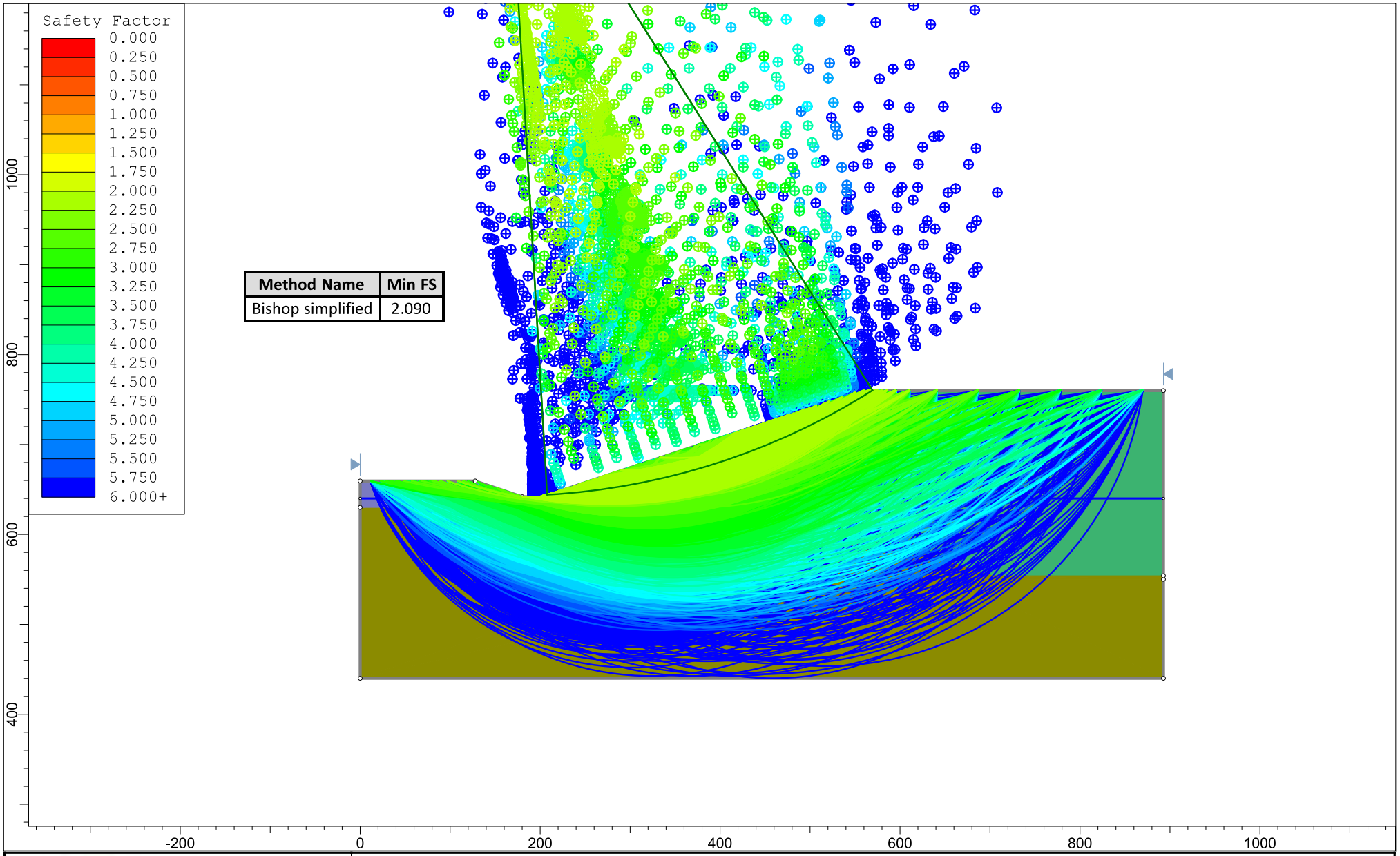
5.5.2 Infinite Slope Stability Analysis

Infinite slope stability analysis for the recompacted clay liner and final cover systems has been included in this design in addition to block method analysis discussed in the previous section. The infinite liner analyses also address shear forces within the geocomposite underdrain system. The infinite final cover slope stability analysis addresses the shear forces within the final cover system. These calculations are presented in Appendix IIIM-A-4. As demonstrated in Appendix IIIM-A-4, the liner and cover systems are structurally stable using the strength parameters shown.

APPENDIX IIIM-A-2

INTERIM SLOPE CONFIGURATION STABILITY ANALYSIS

Includes pages IIIM-A-2-1 through IIIM-A-2-21



Weaver Consultants Group	Project	FORT WORTH C&D LANDFILL SLOPE STABILITY	
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	Drawn By	PREP BY: MB CHKD BY:DEP	Company: WEAVER CONSULTANTS GROUP
	Date	5/16/2023	File Name: SECTION B-Drained-Circular.slmd

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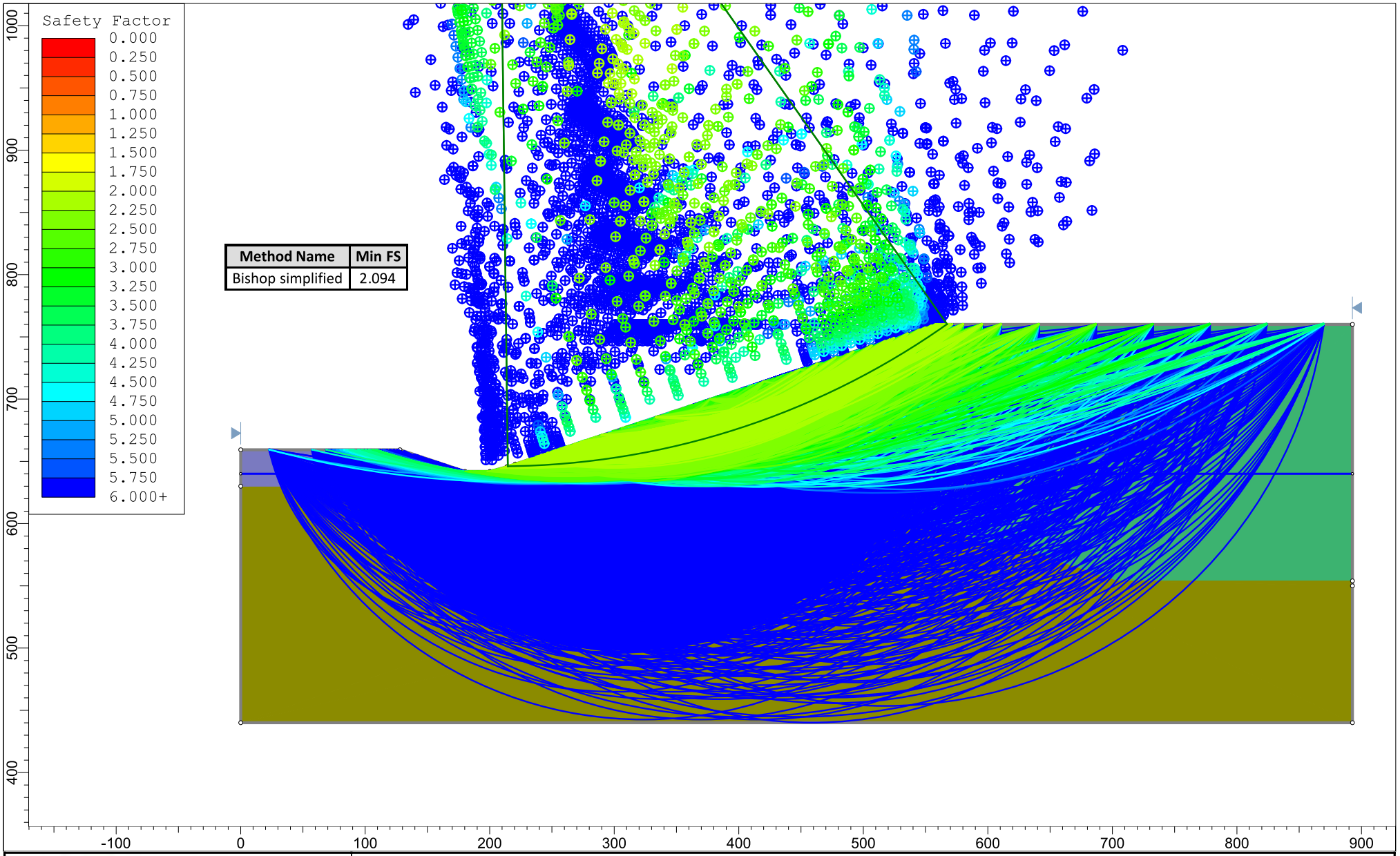
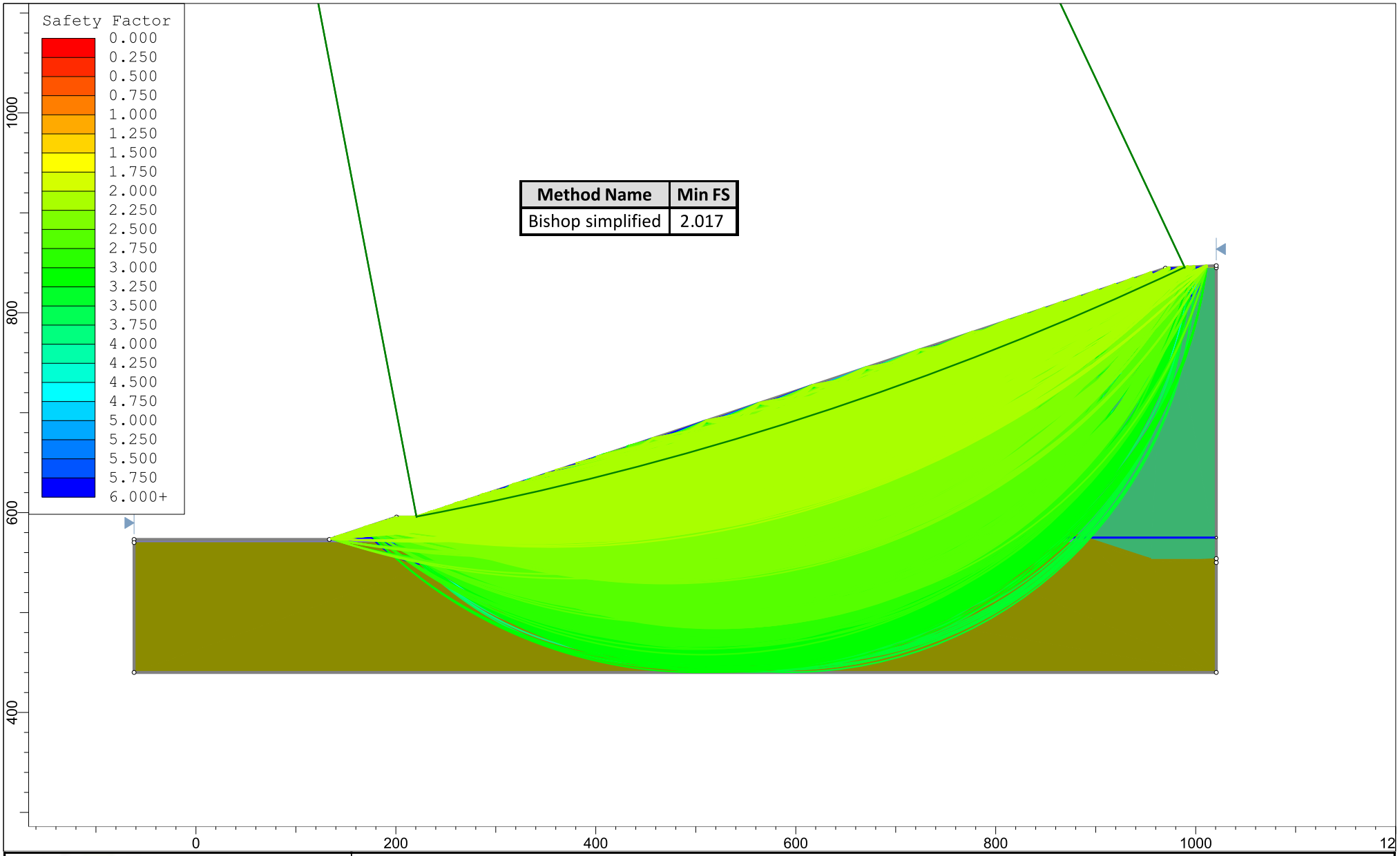


Weaver Consultants Group	Project	FORT WORTH C&D LANDFILL SLOPE STABILITY	
	Group	ENGINEERING	Scenario: UNDRAINED-CIRCULAR
	Drawn By	PREP BY: MB CHKD BY:DEP	Company: WEAVER CONSULTANTS GROUP
SLIDEINTERPRET 9.018	Date	5/16/2023	File Name: SECTION B-Undrained-Circular.slmd

APPENDIX IIIM-A-3

FINAL COVER CONFIGURATION STABILITY ANALYSIS

Includes pages IIIM-A-3-1 through IIIM-A-3-50



Weaver Consultants Group	Project	FORT WORTH C&D LANDFILL SLOPE STABILITY	
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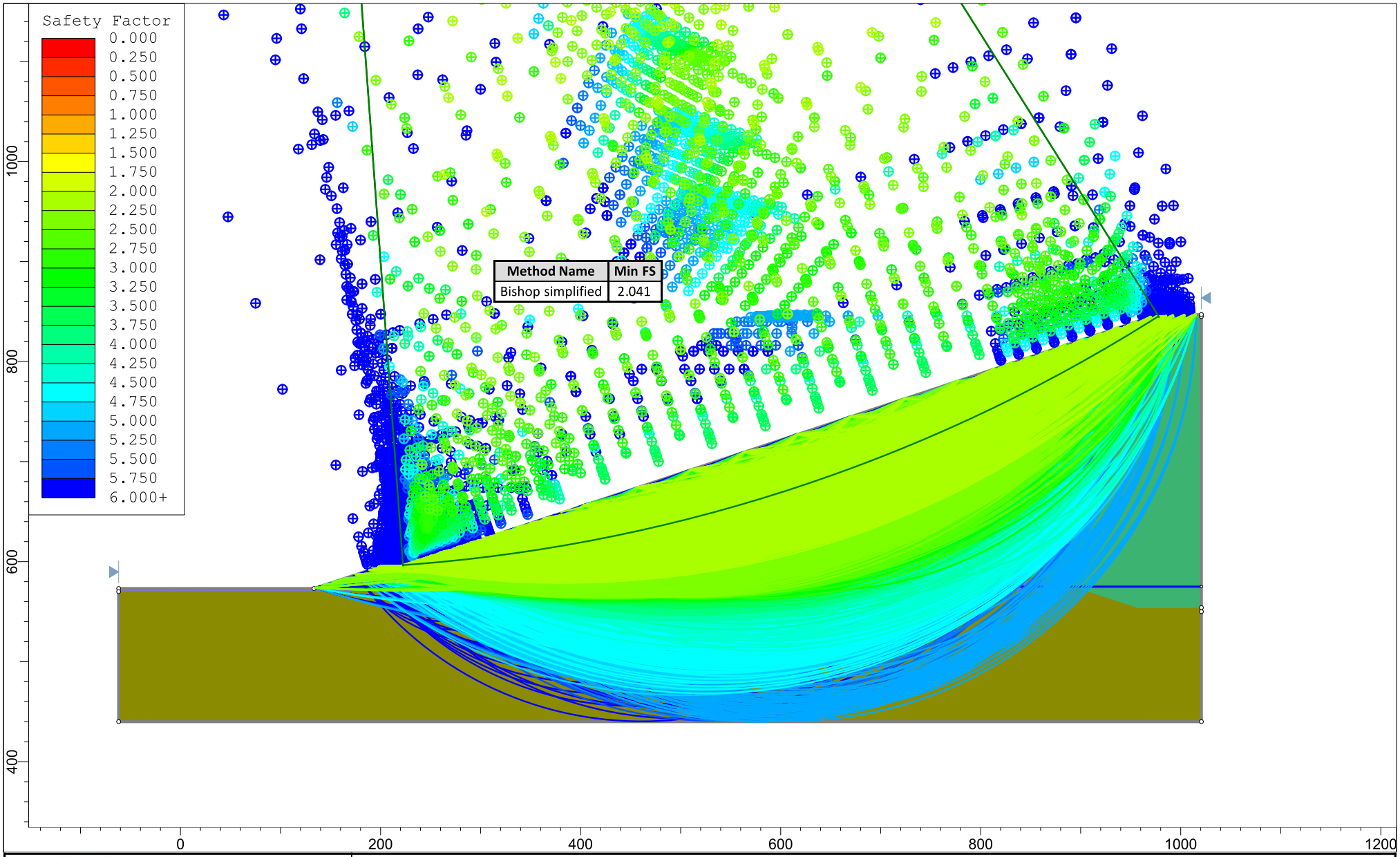
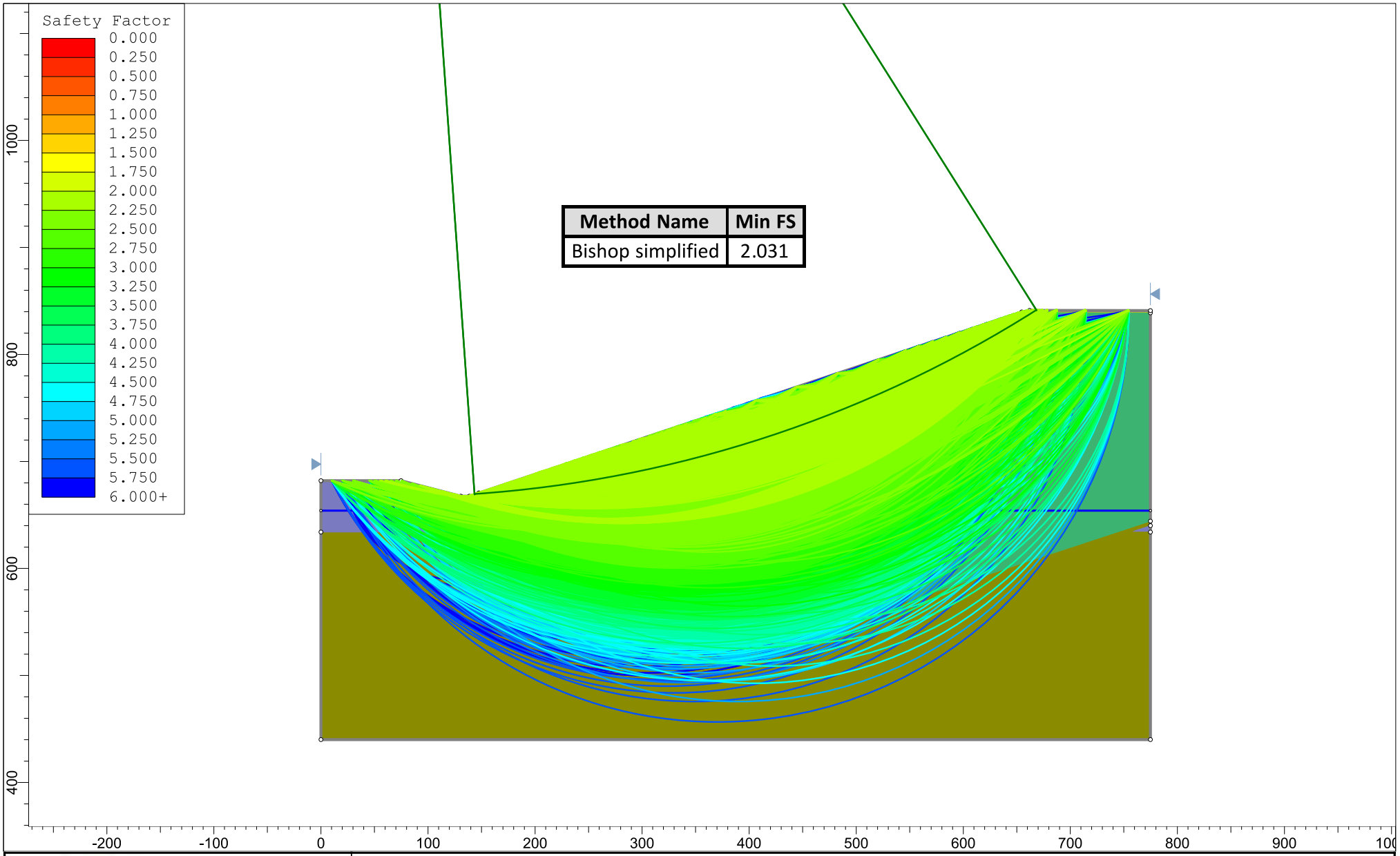
	Drawn By	PREP BY: MB CHKD BY:DEP	Company: WEAVER CONSULTANTS GROUP
	Date	5/16/2023	File Name: SECTION C-Drained-Circular.slmd

SLIDEINTERPRET 9.018



Weaver Consultants Group	Project	FORT WORTH C&D LANDFILL SLOPE STABILITY	
	Group	ENGINEERING	Scenario: UNDRAINED-CIRCULAR
	Drawn By	PREP BY: MB CHKD BY:DEP	Company: WEAVER CONSULTANTS GROUP
SLIDEINTERPRET 9.018	Date	5/16/2023	File Name: SECTION C-Undrained-Circular.slmd



Weaver Consultants Group	Project	FORT WORTH C&D LANDFILL SLOPE STABILITY	
	Group	ENGINEERING	Scenario: DRAINED-CIRCULAR
	Drawn By	PREP BY: MB CHKD BY:DEP	Company: WEAVER CONSULTANTS GROUP
	Date	5/16/2023	File Name: SECTION D-Drained-Circular.slmd

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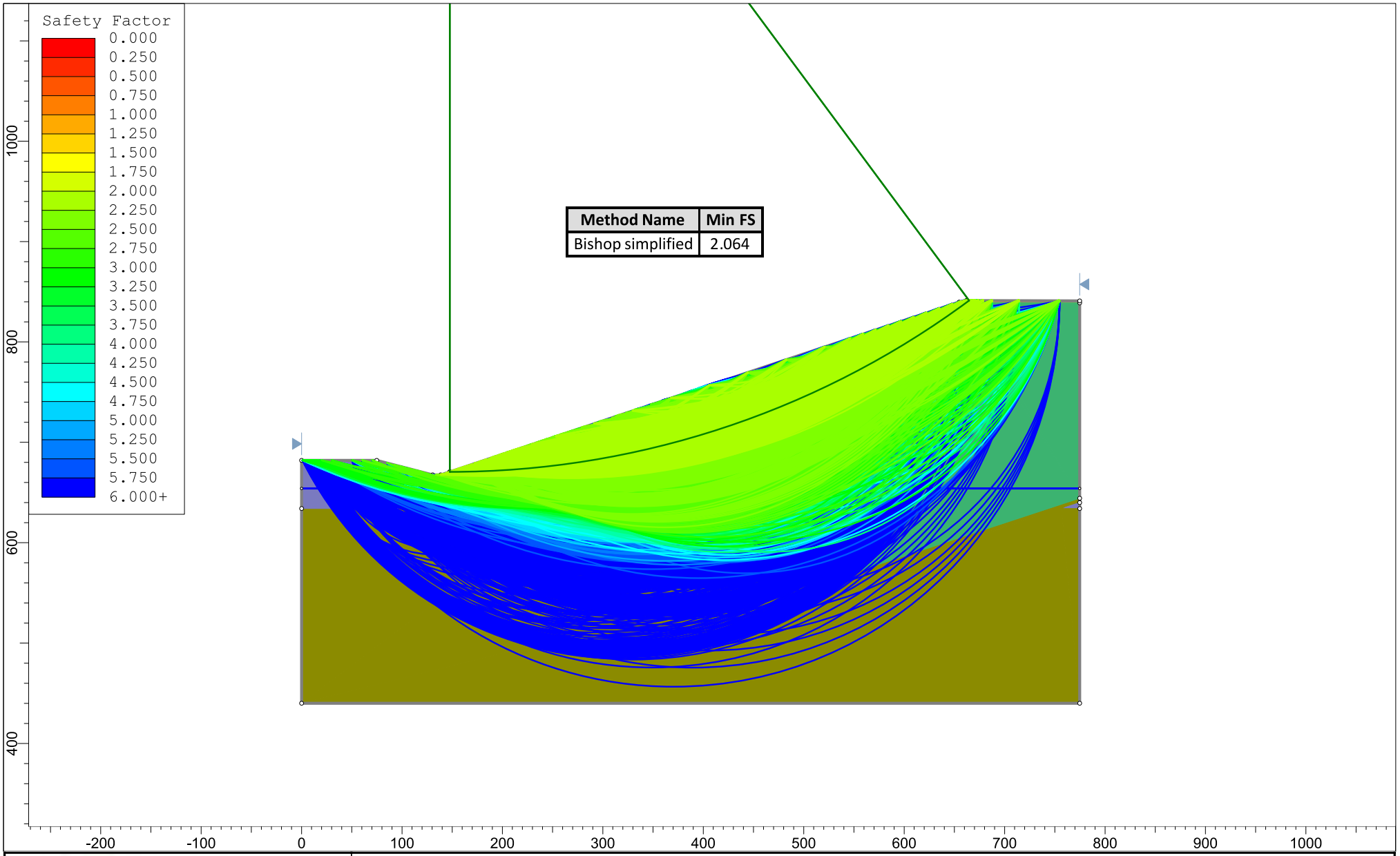

Weaver Consultants Group	Project	FORT WORTH C&D LANDFILL SLOPE STABILITY	
	Group	ENGINEERING	Scenario: UNDRAINED-CIRCULAR
	Drawn By	PREP BY: MB CHKD BY:DEP	Company: WEAVER CONSULTANTS GROUP
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SLIDEINTERPRET 9.018

FORT WORTH C&D LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-1983E

MAJOR PERMIT AMENDMENT APPLICATION

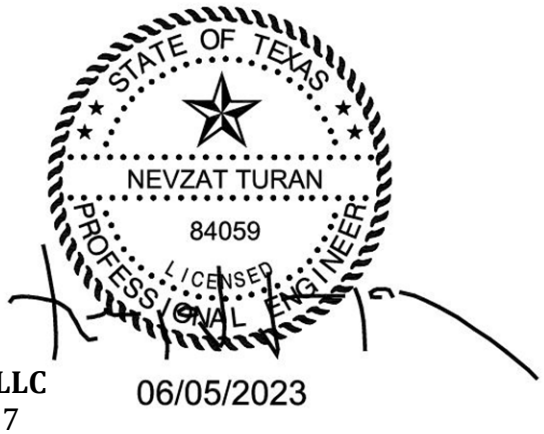
PART IV – SITE OPERATING PLAN

Prepared for

Texas Regional Landfill Company, LP

February 2023

Revised June 2023



Prepared by

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WCG Project No. 0771-356-11-35

This document is intended for permitting purposes only.

Table IV-1
Recordkeeping Requirements

Record Needed	Description of Contents	Rule Citation (30 TAC)	Frequency	For More Information
Permit No. MSW- 1983D (including all modifications and amendments)	a. Site Development Plan b. Site Operating Plan c. Closure Plan d. Post-Closure Plan e. Landfill Gas Management Plan	330.121(a) and 330.125(a)	Upon Issuance of Permit, and Approved Modifications and Amendments	None
Location Restriction Demonstrations	Demonstrations that the site is in compliance with the location restriction criteria.	330.125(b)(1)	Submittal of Permit Amendment Application	Parts I/II of Permit Application
Information on Excluding Prohibited Waste	Record and retain inspection records, training procedures, and notification procedures relating to excluding the receipt of prohibited waste, including a record of unauthorized material incidents (receipt of prohibited waste and removal/remediation of the incident)	330.125(b)(2) and 330.133(b)	Per Occurrence	SOP Sections 5.6, 8.2
Gas Monitoring Results and Remediation Plans	Results from gas monitoring and any remediation plans related to explosive and other gases.	330.125(b)(3)	Gas Monitoring – Quarterly; Remediation Plans – Per Occurrence	SOP Sections 16 and 21. Part III SDP Appendix IIII
Groundwater Monitoring and Corrective Action Information	Demonstrations, certifications, findings, monitoring, testing, and analytical data relating to groundwater monitoring and/or corrective action.	330.125(b)(5)	Monitoring – Annual; Corrective Action and Other Documentation – As Required	Part III SDP Appendix IIIH
Closure and Post- Closure Care Data	Closure and Post-Closure Plans and applicable monitoring, testing, or analytical data relating to post- closure requirements.	330.125(b)(6)	Monitoring and Data – Annual	Part III SDP Appendix IIIJ and IIIK
Cost Estimates and Financial Assurance Documentation	Any and all cost estimates and financial assurance documentation relating to financial assurance for closure and post-closure care.	330.125(b)(7)	Annual	Part III SDP Appendix IIIL
Correspondence	Copies of correspondence and responses relating to the operation of the facility, modifications to the permit, approvals and other matters pertaining to technical assistance.	330.125(b)(9)	Per Occurrence	None
Special Waste Documentation	Documents, manifests, shipping documents, trip tickets, etc., involving special waste.	330.125(b)(10)	Per Occurrence	None
Liner Evaluation Reports, Ballast Evaluation Reports, and Liner Interim Status Reports	Documentation of construction of the liner for a new disposal area, along with evaluation and documentation of ballast (if required), and interim status of liner (if needed).	330.125(b)(12)	Per Occurrence	SOP Section 2; Part III SDP Appendix IIID (SLQCP)
Landfill Gas System Inspections	Documentation of inspection of the landfill gas monitoring system indicating the findings and documenting any repairs made.	330.125(b)(12) and 330.159	Inspect Gas Monitoring System – Quarterly	Part III SDP Appendix IIII
Personnel Training Records	Training records for all personnel will be maintained in accordance with 30 TAC §335.586(d) and (e).	330.125(e)	As Needed (Minimum Annually)	SOP Section 5.4
Required Personnel Operator Licenses	Licensing records will be maintained in accordance with 30 TAC Chapter 30, Subchapter F.	330.125(f)	As Needed	None
Waste Acceptance Rate Documentation	Documentation in the form of quarterly and annual solid waste summary reports will be maintained as required by 30 TAC §330.675.	330.125(h)	Quarterly and Annually, As Appropriate	SOP Section 4.2
Load Inspection Reports	A copy of the load inspection reports will be added to the Site Operating Record. The load inspection reports will include the date and time of inspection, the name and address of the transporter, the type of vehicle, the size and contents of the load, and the results of the inspection.	330.127(5)(B)	Per Occurrence	SOP Section 5.6
Fire Occurrence Notices	Written description of waste-related fire that is not extinguished within 10 minutes of detection, including record of required notifications.	330.129	Per Occurrence	SOP Section 6
Access Control	A record of the required access inspections, findings, and any repairs made and notification of breach if applicable.	330.131	Inspect – Monthly; Repair/ Notification – As Needed, if not repairable within 8 hours of detection	SOP Section 7.2
Records of Alternate Operating Hours	Documentation of any dates, times, and durations when alternate operating hours are utilized.	330.135(d)	As Required	SOP Section 9
Landfill Marker Inspections	A record of the landfill marker inspections, findings, and any repairs.	330.143(a)	Monthly	SOP Section 13.3
Water, Crude Oil, and/or Natural Gas Well Location and Plugging Reports	Documentation of notification, certification of plugging, and a copy of the well plugging report.	330.161(a)-(c)	Within 30 Days of Discovery	SOP Section 22
Cover Inspection Record	A record of the required cover inspections, findings, and any corrective actions (e.g., repairs) taken. Includes inspecting for and remedy of ponded water.	330.165(h)	Active Facility – Weekly (and after storm events); Closed Facility – Per Post-Closure Plan (Semi-Annually)	SOP Section 24.5 and 24.6.2
Cover Application Log	A record showing site grid areas where weekly and/or intermediate cover has been placed each week.	330.165(h)	Weekly (when site is in operation)	SOP Section 24.6.1
Ponded Water Inspections	Inspection of the landfill waste fill areas to check for ponded water, and corrective actions to remove ponded water.	330.167	Part of Cover Inspections (see above)	SOP Sections 24 and 25

8 UNLOADING AREAS

8.1 Unloading at Working Face

Unloading of waste to be placed in the landfill will take place at the designated working face or recycling area under the supervision of trained site personnel. Equipment Operators will maintain the daily working face, the size of which will be limited to be as small an area as practical for the safe operation of the incoming waste hauling vehicles, operation of compaction equipment, and placement of weekly cover. Signs and barricades may be used in addition to instructions from site personnel to direct incoming loads to the designated unloading area.

Maximum Working Face Size[1]

Incoming Waste[2] Accepted	Maximum Working Face Size[2, 3]
0 – 1,500 Tons/Day	150 feet by 175 feet (or 26,250 sf)[5]
1,500 – 3,000 Tons/Day	250 feet by 325 feet (or 81,250 sf)[5]

[1] The working face maximum size listed above is based on the maximum area needed to spread and compact waste in uniform lifts. The working face does not include areas used to move waste from an MSW Tipper to the working face.

[2] During the placement of the first lift of MSW in a newly constructed cell, the maximum working face size listed above does not apply provided that odors, vectors, and windblown litter are controlled consistent with standard operating conditions.

[3] The maximum working face size listed above does not apply to areas that have less than a 6-foot-thick waste column left before the final permitted grades are achieved provided that odors, vectors, and windblown waste are controlled consistent with standard operating conditions.

[4] The width and length shown above is for guidance purposes only. The maximum working face size will be governed by the area listed above.

Equipment Operators and other staff with responsibility for the working face operations will be appropriately trained as specified in Section 5.4 of this SOP with regard to approved waste acceptance procedures and requirements. This will include an understanding of prohibited waste (e.g., putrescible, hazardous, PCB, etc.) recognition and incident management methods. One or more of these trained employees will direct and visually monitor disposal of incoming loads of waste at the working face. Trained personnel will be on duty at all times when wastes are being discharged at the working face and will have the authority and responsibility to reject unauthorized loads, to assess appropriate surcharges, and to have unauthorized material removed by the transporter or on-site personnel or otherwise properly managed by the facility.

8.2 Unloading Unauthorized and Prohibited Wastes

Unloading of waste in unauthorized areas is prohibited. Waste deposited in an unauthorized area will be removed immediately and disposed of properly.

The methods employed at the site to detect and prevent the disposal of prohibited wastes were discussed in Section 5.6 and will be followed during waste unloading. If unauthorized or prohibited waste is detected by site personnel after it has been discharged, the procedures, notifications, and recordkeeping outlined in Sections 5.6.2 and 5.6.3 will be followed for the type of waste involved in the incident.

24.4 Final Cover

Final cover placement will occur in accordance with the Closure Plan (Appendix IIIJ of the Site Development Plan) and Subchapter K of Chapter 330.

The final cover grading plan (i.e., landfill completion plan showing final contours) and final cover system components are presented in the Parts I/II. Specifically, refer to Parts I/II, Figure I/II – 2.1 for the final cover grading plan, and Site Development Plan Appendix IIIJ for the Closure Plan describing the final cover system components.

The Closure Plan presents the specific requirements and schedules for closure activities, and related final cover system specifications, Quality Assurance/Quality Control (QA/QC) requirements, certification requirements, notifications, etc. This includes requirements for establishing vegetation on the final cover. During the early stages of vegetative growth, mulching, slope soil regrading, and mowing will be performed as required to promote a complete vegetative coverage and effective erosion control.

24.5 Cover Inspection, Repair of Erosion, and Final Cover Maintenance

24.5.1 Inspection

During the active life of the landfill, inspection of intermediate and final cover, including checking for erosion and ponded water, will be performed on a weekly basis. The reports of these inspections will be maintained as part of the Site Operating Record.

24.5.2 Repair of Erosion

Erosion gullies or washed-out areas deep enough to jeopardize the intermediate or final cover (i.e., exceeding four inches in depth as measured from the vertical plane of the erosion feature and its 90-degree intersection with the horizontal slope face or surface) shall be repaired within five (5) days of detection unless the TCEQ regional office approves an extension (e.g., due to inclement weather, unfavorable seasonal weather conditions, extent of the damage and resulting repair work needing more time to complete, etc.). Repairs will typically consist of regrading, backfilling, compacting, and seeding, as necessary. The dates of detection of erosion and completion of repairs, and reasons for any delay of repairs, will be documented in the Cover Inspection Record (see Section 24.6).