CLOSURE PLAN – REVISION 02
40 C.F.R. SECTION 257.102(b)
GULF CLEAN ENERGY CENTER – ASH LANDFILL #1
FLORIDA POWER & LIGHT COMPANY

This Closure Plan was prepared for Florida Power & Light Company's (FPL's) Gulf Clean Energy Center (GCEC, formerly Plant Crist) Ash Landfill #1, located in Pensacola, Florida. This Closure Plan was prepared in accordance with the United States Environmental Protection Agency's (EPA) "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments" Final Rule (40 C.F.R. Part 257, Subpart D) and meets the requirements of 40 C.F.R. §257.102(b) for closure of CCR units.

Facility details are as follows:

Site Name / Address
Gulf Clean Energy Center (GCEC)
11999 Pate Street
Pensacola, FL 32520

Owner Name / Address
Florida Power & Light Company
700 Universe Boulevard, JES/JB
Juno Beach, Florida 33408

CCR Unit
GCEC Ash Landfill #1

Closure Method
Closure In-Place

CLOSURE PLAN

The purpose of this Closure Plan is to outline the methods and procedures under consideration for the Gulf Clean Energy Center (GCEC) Ash Landfill #1 consistent with recognized and generally accepted good engineering practices. This Closure Plan may be amended in accordance with the requirements of 40 C.F.R. §257.102(b)(3) should there be a change in operation or unanticipated events that would substantially affect the written Closure Plan.

Methods and Procedures

The GCEC Ash Landfill #1 area is approximately 60 acres which includes the fly ash landfill and associated stormwater collection pond. The CCR unit will be closed by Closure in Place following completion of ash reclaim for beneficial reuse. During closure, CCR will be graded within the footprint of the unit to create the subgrade for the final cover system. In accordance with 40 C.F.R. §257.102(d), the final cover system will be designed to meet the following standards:

- Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere;
- Preclude the probability of future impoundment of water, sediment, or slurry;
- Include measures that provide for major slope stability to prevent the sloughing or movement of the final cover system during the closure and post-closure care period;
- Minimize the need for further maintenance of the CCR unit; and

Be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices.

See Appendix 1 for the proposed closure design drawings for GCEC Ash Landfill #1.

CCR Material Estimate

The GCEC Ash Landfill #1 currently has 3,619,700 cubic yards of CCR in place, and CCR is currently being reclaimed for beneficial reuse. The material estimate for closure in place will be updated when reclaim is completed.

Final Cover System

The final cover system will be designed to minimize infiltration and erosion for the CCR unit. The final cover system design will meet the requirements of 40 C.F.R. §257.102(d)(3)(i) for traditional cover system. The final cover system will ensure the disruption of the integrity of the final cover system is minimized through a design that accommodates for settlement and subsidence and prevents the future impoundment of water, in addition to providing protection from wind or water erosion. The post-closure CCR limits, accounting for the largest area requiring a final cover, is approximately 49.6 acres.

The engineered final cover system consists of the following minimum components, listed from bottom to top.

- 40-mil (min.) textured LLDPE or HDPE geomembrane liner
- Double-sided geocomposite drainage layer
- 18-inch protective soil layer
- 6-inch vegetative soil layer

Approximately 8 acres of the northern face of Landfill #1 were partially closed in 2014. This final cover system meets the requirements of the CCR Rule, consisting of:

- 18-inch compacted clay cap
- 6-inch vegetative soil layer

Prior to the placement of the final cover system for the remainder of Landfill #1, the cover system in the northern face of Landfill 1 will be inspected and confirmed to meet requirements of 40 C.F.R. §257.102(d)(3).

SCHEDULE

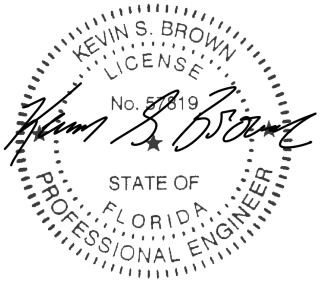
Closure activities for the GCEC Ash Landfill #1 are outlined in the schedule presented in Table 1. Closure milestones and activities are approximate and some of the activities will overlap. Milestones reflect approximate - time to implement closure. The closure completion date has not yet been established.

Table 1: GCEC Ash Landfill #1 Closure Milestones Schedule

Closure Activity	Duration of Closure Activity
Closure Regulatory Interface and Permitting	6 months
Subgrade Grading and Preparation	6 months
Closure Construction (Installation of Final Cover System)	1 Year
End Final Closure Construction Activities	--

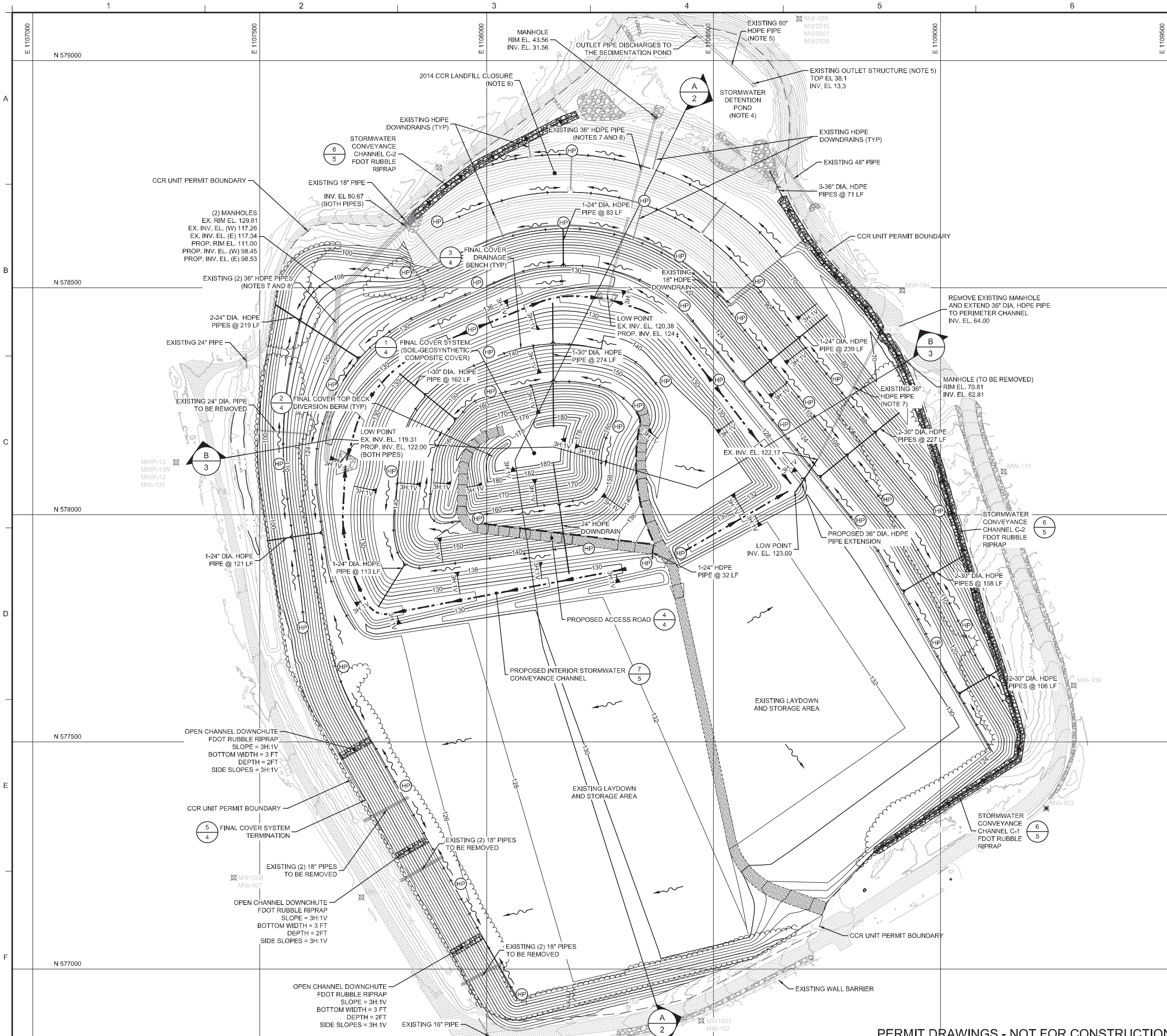
CERTIFICATION

I certify that this Closure Plan for the Gulf Clean Energy Center Ash Landfill #1 was prepared in accordance with 40 C.F.R. 257.102(b).



7/6/2023

Kevin S. Brown, P.E.
Florida Licensed Professional Engineer No. 57819
Golder Associates Inc.



LEGEND

- EXISTING GROUND MAJOR CONTOUR (10') (NOTE 2)
- EXISTING GROUND MINOR CONTOUR (2') (NOTE 2)
- PROPOSED GRADING MAJOR CONTOURS (10')
- PROPOSED GRADING MINOR CONTOURS (2')
- EXISTING SITE ACCESS ROAD - GRAVEL
- EXISTING SITE ACCESS ROAD - ASPHALT
- EXISTING WALL BARRIER
- WATER EDGE
- EXISTING RIPRAP
- TREE REMOVAL AREAS (NOTE 3)
- CCR UNIT PERMIT BOUNDARY
- N 13674000 E 2080000 — STATE PLANE COORDINATES (NOTE 1)
- PROPOSED ACCESS ROAD
- EXISTING MONITORING WELL
- EXISTING STORMWATER PIPES (NOTES 5 AND 7)
- PROPOSED DOWNDRAIN AND CULVERT
- FINAL COVER DRAINAGE BENCH
- ACCESS ROAD VEE DITCH STORMWATER CONVEYANCE CHANNEL
- EXISTING PERIMETER STORMWATER CONVEYANCE CHANNEL
- PROPOSED INTERIOR STORMWATER CONVEYANCE CHANNEL
- HP — STORMWATER CONVEYANCE CHANNEL HIGH POINT
- FLOW DIRECTION
- PROPOSED RIP RAP

NOTES:

1. NORTHING AND EASTING COORDINATES SHOWN REPRESENT FLORIDA STATE PLANE NORTH ZONE NORTH AMERICAN DATUM OF 1983 (NAD83), THE ELEVATIONS SHOWN REPRESENT NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. TOPOGRAPHY (EXISTING GROUND CONTOURS) BASED ON SURVEY DATA PROVIDED BY GPI GEOSPATIAL, INC. DATED 17 SEPTEMBER 2022.
3. TREES WITHIN LIMITS OF PROPOSED GRADING ARE TO BE REMOVED.
4. THE STORMWATER DETENTION POND RECEIVES STORMWATER RUNOFF FROM AREAS WITH EXPOSED ASH AND VEGETATIVE COVERS. AS PART OF THE CLOSURE, SURFICIAL CCR MATERIAL WITHIN THE FOOTPRINT OF THE POND WILL BE EXCAVATED AND PLACED WITHIN THE LANDFILL. EXCAVATION WILL EXTEND SIX INCHES BELOW THE BOTTOM OF CCR MATERIAL BASED UPON VISUAL OBSERVATION.
5. THE ELEVATIONS SHOWN FOR THE EXISTING PIPE INVERT AND STRUCTURE RIM ELEVATIONS ARE BASED ON ICPR NODE MAP DRAWINGS BY SOUTHERN COMPANY SERVICES INC. FOR GULF POWER COMPANY DATED 09/27/17 (HAR-PLN70984-CV-004) AND HAVE BEEN ADJUSTED DOWN BY 72.69 FEET TO MATCH NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
6. APPROXIMATELY 8 ACRES OF THE NORTHERN FACE OF LANDFILL 1 WAS PARTIALLY CLOSED IN 2014 WITH A FINAL COVER SYSTEM ASSUMED TO MEET THE REQUIREMENTS OF THE FEDERAL CCR RULE WITH AN 18-THICK COMPACTED CLAY CAP AND 6-INCH THICK VEGETATIVE SOIL LAYER. COSTS FOR REPLACING THE COVER SYSTEM OF THE 2014 PARTIAL CLOSURE HAVE NOT BEEN INCLUDED IN THE FINANCIAL ASSURANCE COST ESTIMATE. THE FINAL COVER SYSTEM OF THE 2014 PARTIAL CLOSURE WILL BE CONFIRMED TO MEET THE REQUIREMENTS OF THE FEDERAL CCR RULE PRIOR TO THE PLACEMENT OF THE FINAL COVER SYSTEM OVER THE REMAINDER OF LANDFILL 1.
7. THE ELEVATIONS SHOWN FOR THE EXISTING PIPE INVERT AND STRUCTURE RIM ELEVATIONS ARE BASED ON ASH LANDFILL VERTICAL EXPANSION DRAWINGS BY SOUTHERN COMPANY SERVICES, INC. FOR GULF POWER COMPANY DATED 06/11/2014 (D-40308) AND HAVE BEEN ADJUSTED DOWN BY 72.69 FEET TO MATCH NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
8. THE EXISTING HDPE PIPES AND MANHOLES WILL BE REUSED AND RESET ALONG THE PIPE ALIGNMENTS TO CONFORM TO THE PROPOSED GRADING SURFACE WITH ITS REVISED SLOPE AND BENCH CONFIGURATION.

0 100 200
SCALE IN FEET

REV	DATE	DESCRIPTION	DRN	APP
0	03/09/23	100% DESIGN SUBMITTAL	TDR	LD

Geosyntec consultants
1255 ROBERTS BLVD SUITE 200, KENNESAW, GA 30144
PH: 678.202.9500

TITLE: CONCEPTUAL FINAL GRADING AND STORMWATER MANAGEMENT CLOSURE PLAN

PROJECT: ASH LANDFILL NO. 1

SITE: GULF CLEAN ENERGY CENTER

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION UNLESS SEALED.

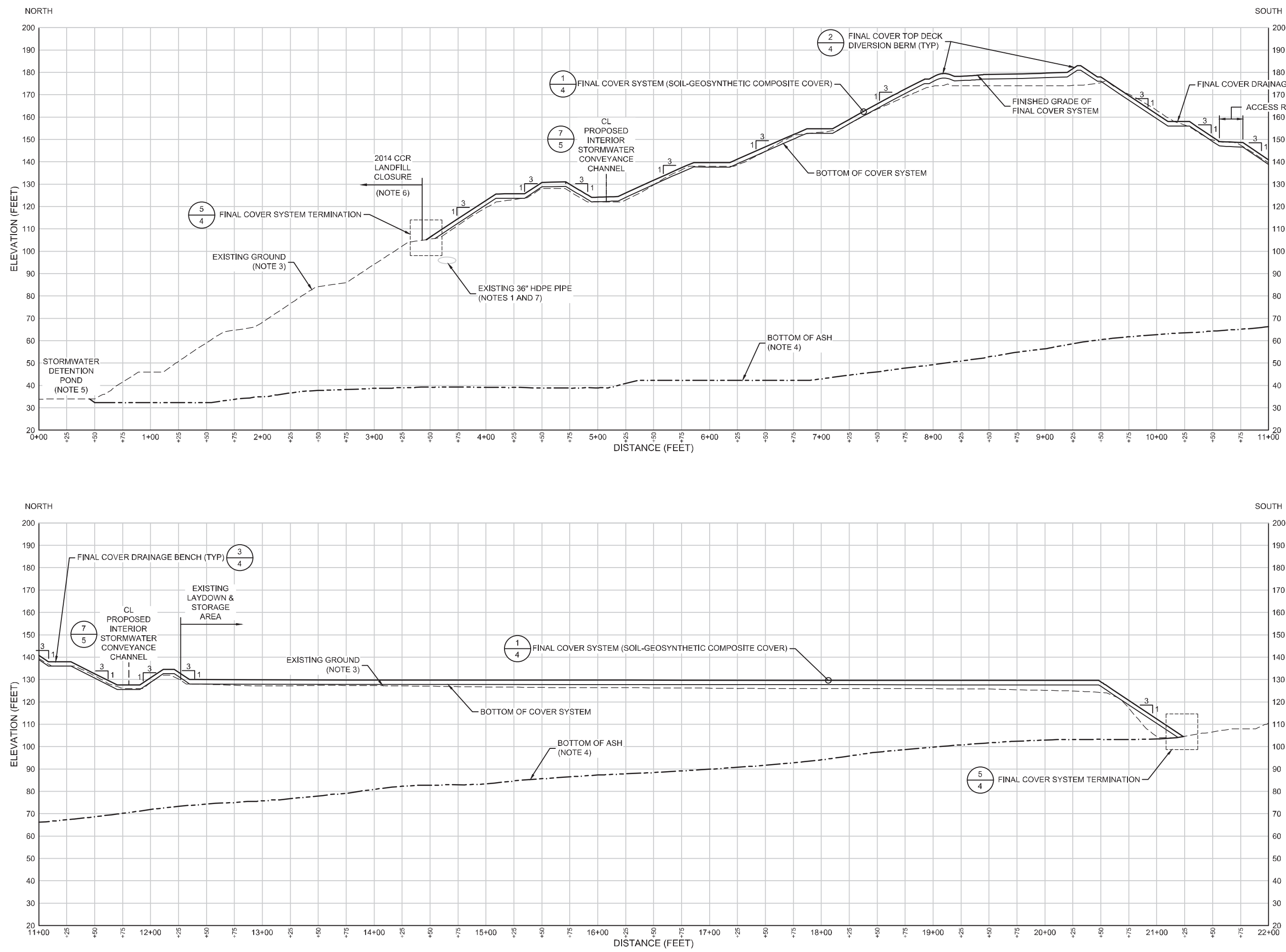
SIGNATURE

03/09/23
DATE

JARED W. EUBANKS, LICENSE No. 90979, STATE OF FLORIDA, PROFESSIONAL ENGINEER

DESIGN BY:	JWE	DATE:	MARCH 2023
DRAWN BY:	TR	PROJECT NO.:	FR9392
CHECKED BY:	KF	FILE:	FR9392.01 - C01
REVIEWED BY:	BG	DRAWING NO.:	
APPROVED BY:	LD	1 OF 5	

PERMIT DRAWINGS - NOT FOR CONSTRUCTION



LF1 SITE SECTION A - STA 11+00 TO 22+00
HORIZONTAL: 1" =50'
VERTICAL: 1" =25'

A/1 SECTION
LF1 SITE SECTION A
SCALE: HORIZONTAL 1" = 50', VERTICAL 1" = 25'

NOTES:

1. THE ELEVATIONS SHOWN FOR THE EXISTING PIPE INVERT AND STRUCTURE RIM ELEVATIONS ARE BASED ON ASH LANDFILL VERTICAL EXPANSION DRAWINGS BY SOUTHERN COMPANY SERVICES, INC. FOR GULF POWER COMPANY DATED 06/11/2014 (D-40308) AND HAVE BEEN ADJUSTED DOWN BY 72.69 FEET TO MATCH NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. THE ELEVATIONS SHOWN REPRESENT NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. TOPOGRAPHY (EXISTING GROUND CONTOURS) BASED ON SURVEY DATA PROVIDED BY GPI GEOSPATIAL, INC. DATED 17 SEPTEMBER 2022.
4. THE ELEVATIONS SHOWN FOR THE BOTTOM OF ASH ARE BASED ON CRIST STEAM PLAN DRAWINGS BY SOUTHERN COMPANY SERVICES, INC. FOR GULF POWER COMPANY DATED 04/02/1980, LAST REVISED 04/13/1988 AND HAVE BEEN ADJUSTED BY DOWN 72.69 FEET TO MATCH NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
5. THE STORMWATER DETENTION POND RECEIVES STORMWATER RUNOFF FROM AREAS WITH EXPOSED ASH AND VEGETATIVE COVERS. AS PART OF THE CLOSURE, SURFICIAL CCR MATERIAL WITHIN THE FOOTPRINT OF THE POND WILL BE EXCAVATED AND PLACED WITHIN THE LANDFILL. EXCAVATION WILL EXTEND SIX INCHES BELOW THE BOTTOM OF CCR MATERIAL BASED UPON VISUAL OBSERVATION.
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7. THE EXISTING HDPE PIPES AND MANHOLES WILL BE REUSED AND RESET ALONG THE PIPE ALIGNMENTS TO CONFORM TO THE PROPOSED GRADING SURFACE WITH ITS REVISED SLOPE AND BENCH CONFIGURATION.

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Geosyntec consultants
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PH: 678.202.9500

TITLE: SITE SECTION A
PROJECT: ASH LANDFILL NO. 1
SITE: GULF CLEAN ENERGY CENTER

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03/09/23
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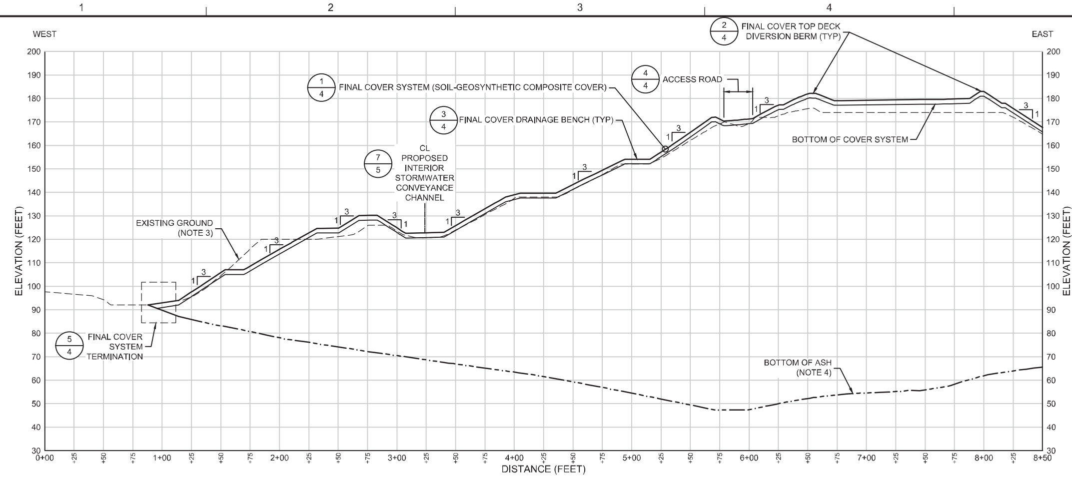

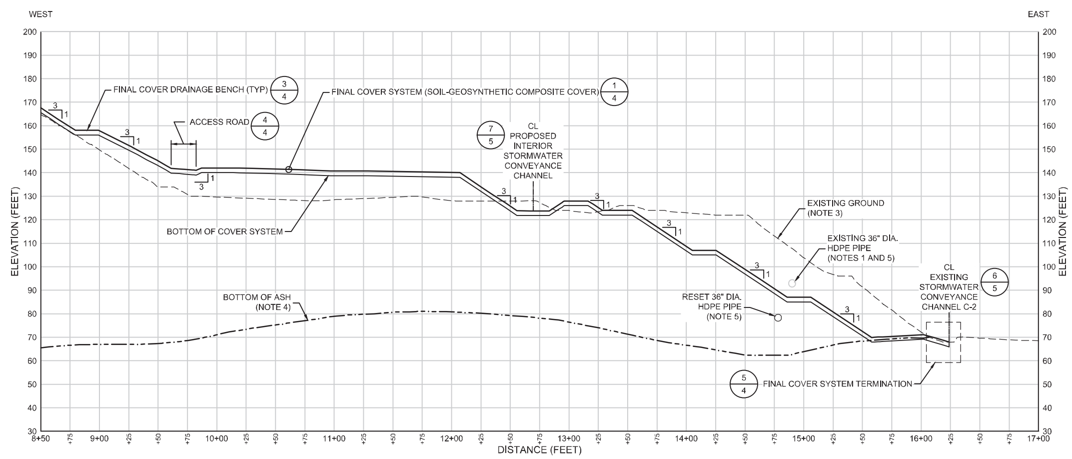

B/1 SECTION
LF1 SITE SECTION B
SCALE: HORIZONTAL 1" = 50', VERTICAL 1" = 25'

SCALE IN FEET (HORIZONTAL) 0 50 100
SCALE IN FEET (VERTICAL) 0 25 50

NOTES:

1. THE ELEVATIONS SHOWN FOR THE EXISTING PIPE INVERT AND STRUCTURE RIM ELEVATIONS ARE BASED ON ASH LANDFILL VERTICAL EXPANSION DRAWINGS BY SOUTHERN COMPANY SERVICES, INC. FOR GULF POWER COMPANY DATED 06/11/2014 (D-40308) AND HAVE BEEN ADJUSTED DOWN BY 72.69 FEET TO MATCH NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
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Geosyntec consultants
1255 ROBERTS BLVD SUITE 200, KENNESAW, GA 30144
PH: 678.202.9500

TITLE: SITE SECTION B

PROJECT: ASH LANDFILL NO. 1

SITE: GULF CLEAN ENERGY CENTER

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03/09/23
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JARED W. EUBANKS LICENSE No. 90979 STATE OF FLORIDA PROFESSIONAL ENGINEER

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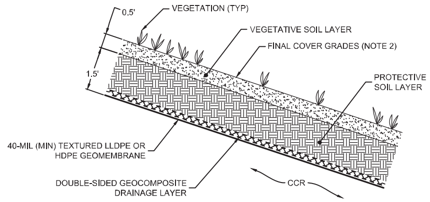
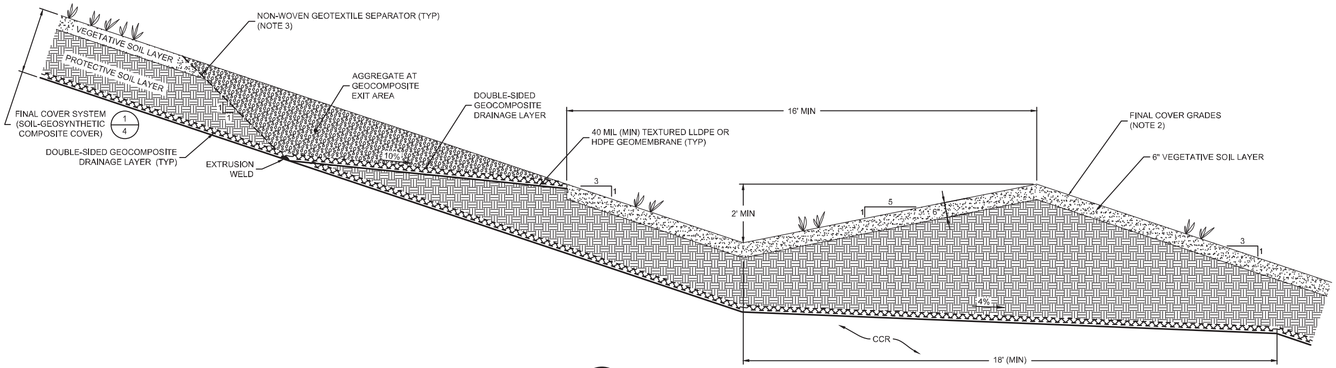
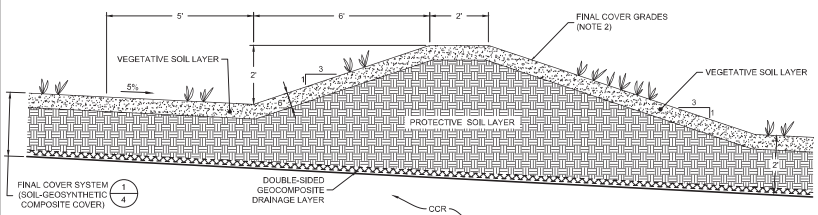


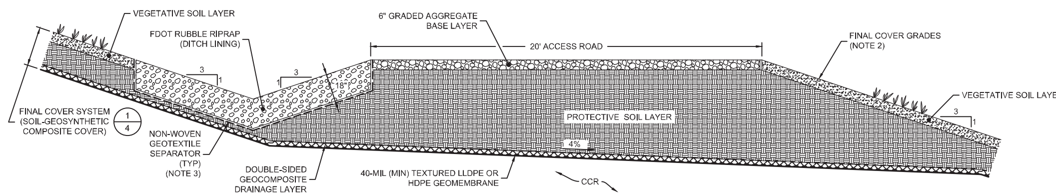
1/1 DETAIL
FINAL COVER SYSTEM (SOIL-GEOSYNTHETIC COMPOSITE COVER)
SCALE: 1" = 2'



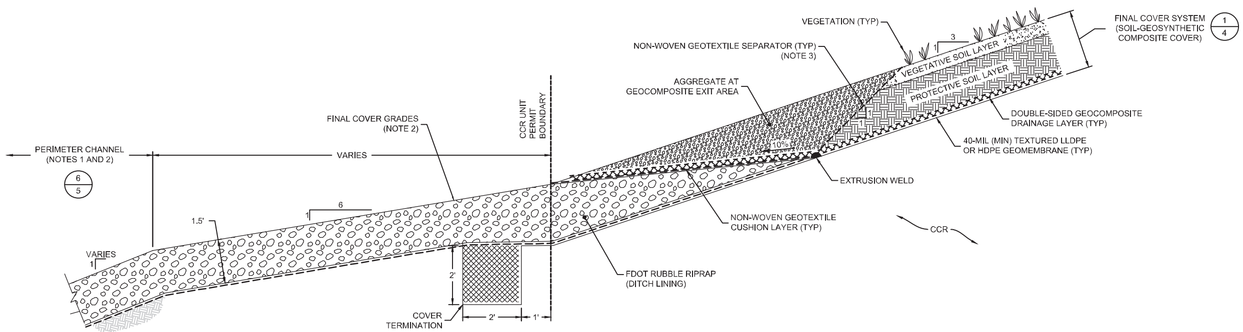
3/1 DETAIL
FINAL COVER DRAINAGE BENCH
SCALE: 1" = 2'



2/1 DETAIL
FINAL COVER TOP DECK DIVERSION BERM
SCALE: 1" = 2'



4/1 DETAIL
ACCESS ROAD
SCALE: 1" = 3'



5/1 DETAIL
FINAL COVER SYSTEM TERMINATION
SCALE: 1" = 2'

NOTES:

1. IF EXISTING CHANNEL IS RIPRAP-LINED, ADDITIONAL LINER IMPROVEMENTS ARE NOT NEEDED. IF EXISTING CHANNEL IS NOT RIPRAP-LINED, RIPRAP LINING IS PROPOSED.
2. TOP OF FINAL COVER GRADES SHOWN ON DRAWING 1 REPRESENT THE TOP OF THE VEGETATIVE SOIL LAYER, ACCESS ROADS, AND THE FDOT RUBBLE RIPRAP (DITCH LINING) FOR THE SOIL-GEOSYNTHETIC COMPOSITE FINAL COVER SYSTEM.
3. THE NON-WOVEN GEOTEXTILE SEPARATOR TO HAVE A MINIMUM WEIGHT OF 8 OUNCES PER SQUARE YARD.

REV	DATE	DESCRIPTION	DRN	APP
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Geosyntec consultants
1255 ROBERTS BLVD SUITE 200, KENNESAW, GA 30144 PH: 678.202.9500

TITLE: DETAILS I

PROJECT: ASH LANDFILL NO. 1

SITE: GULF CLEAN ENERGY CENTER

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03/09/23
DATE

JARED W. EUBANKS LICENSE No. 90979 STATE OF FLORIDA PROFESSIONAL ENGINEER

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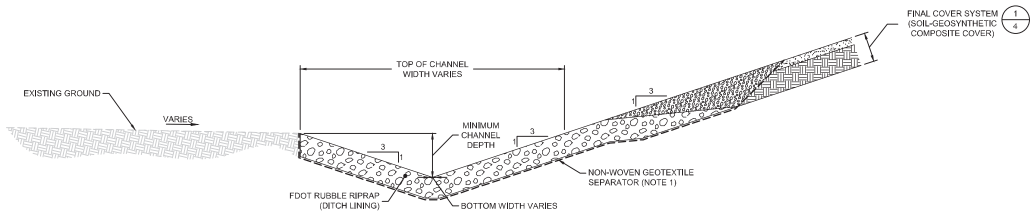
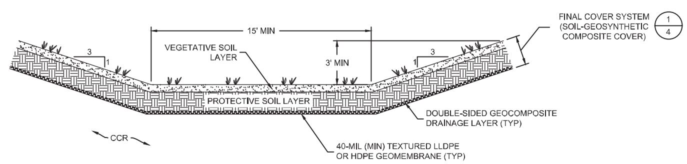


CHANNEL CHARATERISTICS					
CHANNEL ID	SECTION SHAPE	MINIMUM CHANNEL DEPTH (FT)	LENGTH (FT)	MINIMUM BOTTOM WIDTH (FT)	MAXIMUM SIDE SLOPES (RUN:RISE)
C1 (EXISTING)	VEE	3.00	632	0.00	3:1
C2 (EXISTING)	VEE	3.00	1151	0.00	3:1
C3 (EXISTING)	VEE	3.00	403	0.00	3:1

6/1 DETAIL
EXISTING STORMWATER CONVEYANCE CHANNEL
SCALE: 1" = 4'



7/1 DETAIL
PROPOSED INTERIOR STORMWATER CONVEYANCE CHANNEL
SCALE: 1" = 4'

NOTE:

1. THE NON-WOVEN GEOTEXTILE SEPARATOR TO HAVE A MINIMUM WEIGHT OF 8 OUNCES PER SQUARE YARD.

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Geosyntec consultants
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PH: 678.202.9500

TITLE: DETAILS II

PROJECT: ASH LANDFILL NO. 1

SITE: GULF CLEAN ENERGY CENTER

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JARED W. EUBANKS LICENSE No. 90979 STATE OF FLORIDA PROFESSIONAL ENGINEER

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