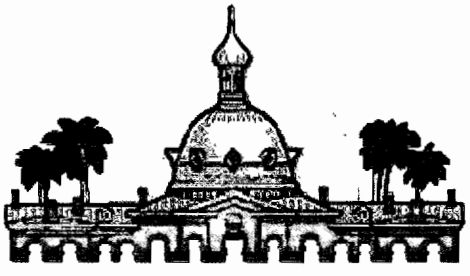
OPERATIONS PERMIT MODIFICATION APPLICATION PHASES I-VI, CAPACITY EXPANSION AREA (SECTIONS 7, 8, AND 9), AND EFFLUENT STORAGE TANK OF THE SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY, FLORIDA

Prepared for:

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
601 E. Kennedy Blvd., 24th Floor
Tampa, Florida 33601



Prepared by:

JONES EDMUNDS & ASSOCIATES, INC.
324 S. Hyde Park Avenue, Suite 250
Tampa, Florida 33606

JONES EDMUNDS

Certificate of Authorization #1841

May 2010

JONES EDMUNDS

May 19, 2010

Ms. Susan J. Pelz, P.E.
Florida Department of Environmental Protection
Southwest District
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

RE: Operations Permit Modification Application Phases I-VI, Capacity Expansion Area (Sections 7, 8, and 9), and the Effluent Storage Tank
FDEP Permit No.35435-014-SO/01
Southeast County Landfill
Hillsborough County, Florida
FDEP ID No.: SWD/29/41193
Jones Edmunds Project No. 08449-030-04-1200

Dear Ms. Pelz:

On behalf of the Hillsborough County Solid Waste Management Department (SWMD), Jones Edmunds is submitting an Operations Permit Modification Application for Phases I-VI, Capacity Expansion Area (Sections 7, 8, and 9), and the Effluent Storage Tank at the Southeast County Landfill, Hillsborough County, Florida (see enclosures) as part of the completion and transfer to operations of the Active Gas Collection and Control System (GCCS) as required by FDEP Construction Permit No. 35435-016-SC/08. This submittal package includes the following:

Four Operation Permit Modification Applications and supporting documentation for Phases I-VI, Capacity Expansion Area (Sections 7, 8, and 9), and the Effluent Storage Tank, Southeast County Landfill, Hillsborough County, Florida, signed and sealed by a Professional Engineer registered in the state of Florida. In accordance with Specific Condition C.1.b.2) of Permit No. 35435-016-SC/08, this Operation Permit Minor Modification Application includes the following documents for operation of the GCCS:

- Updated Operations Plan pages to include reference to the operations plan for GCCS (Attachment A).

730 NE Waldo Rd
Gainesville, FL 32641

352.377.5821 Phone
352.377.3166 Fax
www.jonesedmunds.com

- Updated Phases I-VI and Sections 7 and 8 fill sequence plans to show GCCS at the current lift and at the final lift (Attachments B and C). The temporary final cover has also been extended through all interim lifts until the final lift when the geomembrane final cover will be installed. Due to the installation of the GCCS, partial closure of the side slopes and phases that reach final elevation will not be possible given the settlement and construction of the final GCCS system.

- Request to remove 9,700 gallons per day from permit Specific Condition C.8.j.5).

- Request to re-word Specific Condition C.8.k to match language provided in LMP for clay strength testing program.

- Abandon TH-56 30 feet to the north to allow for construction of Sedimentation Pond 3.

A check in the amount of $250.00 for the required permit modification fee of Phases I-VI and Sections 7, 8, and 9 made payable to FDEP is attached.

In addition, one complete copy of each of the above documents has been delivered to the Environmental Protection Commission (EPC).

Please call us if you require any information relating to the above referenced permit application.

Sincerely,

Don Hullings, P.E.
Director – Civil/Environmental Engineering

W:\08449\030041200\PermitMod\Cover_Letter.doc

cc: Patricia V. Berry, SWMD
Larry Ruiz, SWMD
Ron Cope, HCEPC

Enclosures

THIS CHECK IS VOID WITHOUT A COLORED BACKGROUND AND ARTIFICIAL WATERMARK CERTIFICATION SEAL ON THE BACK • HOLD AT AN ANGLE TO VIEW

000053
100050

BOARD OF COUNTY COMMISSIONERS

HILLSBOROUGH COUNTY, FLORIDA
P. O. Box 1110
Tampa, FL 33601

Wachovia Bank, N A
Charlotte, NC
Member FDIC
63-751 / 631

Warrant Number	Date
03243373	12/11/2009

Net Amount

$ ********250.00

PAY ***Two Hundred Fifty and 00/100 Dollars***

TO THE ORDER OF

FL DEPT ENVIRONMENTAL PROTECTION
13051 N TELECOM PARKWAY
TEMPLE TERRACE FL 33637

Authorized In Open Session

FLORIDA SEAL

[redacted]

CLERK

SIGNATURE HAS A COLORED BACKGROUND • BORDER CONTAINS MICROPRINTING

[redacted]

Please carefully detach the check from the remittance advice at the perforation

Vendor Number: 596007353 11 HILLSBOROUGH COUNTY, FLORIDA Check Date: 12/11/2009 Check Number: 03243373

Document Number	Document Reference Number	Description	Net Amount
VFSW10003005 01		*SOUTHEAST CNTY LANDFILL MODIFICATION PERMIT 2009*	250.00

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT TAMPA

Total >>> ********250.00

858

OPERATION PERMIT MODIFICATION APPLICATION
PHASES I-VI, CAPACITY EXPANSION AREA (SECTIONS 7, 8, AND 9)
AND
EFFLUENT STORAGE TANK
OF THE
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

FDEP ID No.: SWD/29/41193

Prepared for:

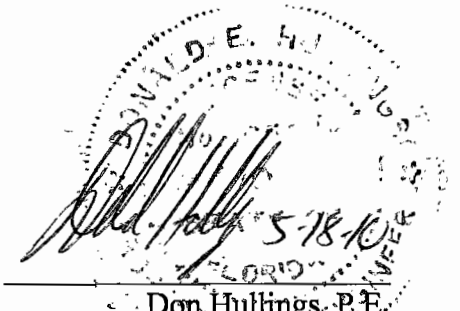
HILLSBOROUGH COUNTY SOLID WASTE MANAGEMENT DEPARTMENT
601 E. Kennedy Boulevard, 24th Floor
Tampa, Florida 33602

Prepared by:

JONES EDMUNDS & ASSOCIATES, INC.
324 S. Hyde Park Avenue, Suite 250
Tampa, Florida 33606

P.E. Certificate of Authorization #1841
P.G. Certificate of Authorization #133

May 2010



Don Hullings, P.E.
Florida P.E. No. 65058

TABLE OF CONTENTS

PERMIT APPLICATION

SUPPORTING INFORMATION

PART D SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL

TABLE D.1 ENFORCEMENT ACTION HISTORY, HILLSBOROUGH COUNTY SOLID WASTE MANAGEMENT DEPARTMENT

PART G LANDFILL CONSTRUCTION REQUIREMENTS

PART K LANDFILL OPERATION REQUIREMENTS

PART N GAS MANAGEMENT SYSTEM REQUIREMENTS

ATTACHMENTS

ATTACHMENT A UPDATED OPERATIONS PLAN

ATTACHMENT B PHASES I-VI UPDATED OPERATING SEQUENCE DRAWINGS

ATTACHMENT C CAPACITY EXPANSION AREA (SECTIONS 7, 8, AND 9) UPDATED OPERATING SEQUENCE DRAWINGS

PERMIT APPLICATION

Department of
Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(1)

Form Title: Application to Construct, Operate, Modify, or Close a Solid Waste Management Facility

Effective Date: January 6, 2010

Incorporated in Rule: 62-701.330(3)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION TO CONSTRUCT, OPERATE, MODIFY, OR CLOSE A SOLID WASTE MANAGEMENT FACILITY

APPLICATION INSTRUCTIONS AND FORMS

INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT

I. General

Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes, (FS) and in accordance with Florida Administrative Code (FAC) Chapter 62-701. A minimum of four copies of the application shall be submitted to the Department's District Office having jurisdiction over the facility. The appropriate fee in accordance with Rule 62-701.315, FAC, shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP).

Complete appropriate sections for the type of facility for which application is made. Entries shall be typed or printed in ink. All blanks shall be filled in or marked "not applicable" or "no substantial change". Information provided in support of the application shall be marked "submitted" and the location of this information in the application package indicated. The application shall include all information, drawings, and reports necessary to evaluate the facility. Information required to complete the application is listed on the attached pages of this form.

II. Application Parts Required for Construction and Operation Permits

A. Landfills and Ash Monofills - Submit Parts A through S
B. Asbestos Monofills - Submit Parts A,B,C,D,E,F,I,K,M, O through S
C. Industrial Solid Waste Disposal Facilities - Submit Parts A through S

NOTE: Portions of some Parts may not be applicable.

NOTE: For facilities that have been satisfactorily constructed in accordance with their construction permit, the information required for A, B and C type facilities does not have to be resubmitted for an operation permit if the information has not substantially changed during the construction period. The appropriate portion of the form should be marked "no substantial change".

III. Application Parts Required for Closure Permits

A. Landfills and Ash Monofills - Submit Parts A,B,L, N through S
B. Asbestos Monofills - Submit Parts A,B,M, O through S
C. Industrial Solid Waste Disposal Facilities - Submit Parts A,B, L through S

NOTE: Portions of some Parts may not be applicable.

IV. Permit Renewals

The above information shall be submitted at time of permit renewal in support of the new permit. However, facility information that was submitted to the Department to support the expiring permit, and which is still valid, does not need to be re-submitted for permit renewal. Portions of the application not re-submitted shall be marked "no substantial change" on the application form.

V. Application Codes

S	-	Submitted
LOCATION	-	Physical location of information in application
N/A	-	Not Applicable
N/C	-	No Substantial Change

VI. LISTING OF APPLICATION PARTS

PART A: GENERAL INFORMATION

PART B: DISPOSAL FACILITY GENERAL INFORMATION

PART C: PROHIBITIONS

PART D: SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL

PART E: LANDFILL PERMIT REQUIREMENTS

PART F: GENERAL CRITERIA FOR LANDFILLS

PART G: LANDFILL CONSTRUCTION REQUIREMENTS

PART H: HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS

PART I: GEOTECHNICAL INVESTIGATION REQUIREMENTS

PART J: VERTICAL EXPANSION OF LANDFILLS

PART K: LANDFILL OPERATION REQUIREMENTS

PART L: WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS

PART M: SPECIAL WASTE HANDLING REQUIREMENTS

PART N: GAS MANAGEMENT SYSTEM REQUIREMENTS

PART O: LANDFILL CLOSURE REQUIREMENTS

PART P: OTHER CLOSURE PROCEDURES

PART Q: LONG-TERM CARE

PART R: FINANCIAL ASSURANCE

PART S: CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
APPLICATION FOR A PERMIT TO CONSTRUCT, OPERATE, MODIFY OR CLOSE
A SOLID WASTE MANAGEMENT FACILITY

Please Type or Print

PART A. GENERAL INFORMATION

1. Type of disposal facility (check all that apply):

[☒] Class I Landfill
[☐] Class III Landfill
[☐] Industrial Solid Waste
[☐] Other Describe: _____
[☐] Ash Monofill
[☐] Asbestos Monofill

NOTE: Waste Processing Facilities should apply on Form 62-701.900(4), FAC;
Land Clearing Disposal Facilities should notify on Form 62-701.900(3), FAC;
Compost Facilities should apply on Form 62-701.900(10), FAC; and
C&D Disposal Facilities should apply on Form 62-701.900(6), FAC

2. Type of application:
[☐] Construction
[☒] Operation
[☐] Construction/Operation
[☐] Closure
[☐] Long-term Care Only

3. Classification of application:
[☐] New
[☐] Renewal
[☐] Substantial Modification
[☐] Intermediate Modification
[☒] Minor Modification

4. Facility name: Southeast County Landfill: Phases I-VI and Capacity Expansion Area (Permit No. 35435-014-SO/01)

5. DEP ID number: SWD/29/41193 County: Hillsborough

6. Facility location (main entrance): 8.8 miles east of US Highway 301 on CR 672

7. Location coordinates:

Section: 13, 14, 15, 18, 19, 22, 23, 24 Township: 31S Range: 21E, 22E

Latitude: 27° 46' 26" Longitude: 82° 11' 01" **(Phases I-VI)**

Latitude: 27° 46' 39" Longitude: 82° 10' 34" **(Section 7, 8, and 9)**

Latitude: 27° 46' 42" Longitude: 82° 10' 20" **(Effluent Storage Tank)**

Datum: _____ Coordinate Method: _____

Collected by: _____ Company/Affiliation: _____

8. Applicant name (operating authority): Hillsborough County Solid Waste Management Department

Mailing address: 601 E. Kennedy Boulevard, 24th Floor (Street or P.O. Box) Tampa (City) Florida (State) 33602 (Zip)

Contact person: Mr. Barry M. Boldissar Telephone: (813) 272-5680

Title: Director

boldissarb@hillsboroughcounty.org (E-Mail address (if available))

9. Authorized agent/Consultant: Jones Edmunds & Associates, Inc.

Mailing address: 324 S. Hyde Park Avenue, Suite 250 (Street or P.O. Box) Tampa (City) Florida (State) 33606 (Zip)

Contact person: Don Hullings Telephone: (352) 377-5821

Title: Director - Civil/Environmental Engineering Department

dhullings@jonesedmunds.com (E-Mail address (if available))

10. Landowner (if different than applicant): N/A

Mailing address: N/A (Street or P.O. Box) N/A (City) N/A (State) N/A (Zip)

Contact person: N/A Telephone: ( ) N/A

N/A (E-Mail address (if available))

11. Cities, towns and areas to be served: City of Tampa, Temple Terrace, and Hillsborough County

12. Population to be served:

Current: 1,138,150 Five-Year Projection: 1,247,040

13. Date site will be ready to be inspected for completion: N/A

14. Expected life of the facility: 9.7 years (Phases I-VI), 2.5 years (Sections 7, 8 ,9) years

15. Estimated costs:

Total Construction: $N/A Closing Costs: $N/A

16. Anticipated construction starting and completion dates:

From: N/A To: N/A

17. Expected volume or weight of waste to be received:

_____ yds³/day 2,200 (3,000 max) tons/day _____ gallons/day

PART B. DISPOSAL FACILITY GENERAL INFORMATION

1. Provide brief description of disposal facility design and operations planned under this application:

This Operation Permit Minor Modification Application presents information supporting the application to modify the Operations Plan for Phases I-VI and at the Capacity Expansion Area (Sections 7, 8, and 9), at the Southeast County Landfill facility in Hillsborough County, Florida, to include the completed active gas collection and control system authorized for construction under Permit No. 35435-016-SC/08. This modification is required by Specific Condition C.1.b.2.

2. Facility site supervisor: Mr. Larry E. Ruiz, AIA

Title: General Manager Telephone: (813) 671-7707

ruizle@hillsboroughcounty.org
E-Mail address (if available)

3. Disposal area: Total 162.4 acres; Used 162.4 acres; Available 162.4 acres. **(Phases I-VI)**

Disposal area: Total 34.5 acres; Used 34.5 acres; Available 34.5 acres. **(Sections 7, 8, 9)**

4. Weighing scales used: [☒] Yes [☐] No

5. Security to prevent unauthorized use: [☒] Yes [☐] No

6. Charge for waste received: _____ $/yds^3 $30.60 (yard waste) to $124.20 (mixed load) $/ton

7. Surrounding land use, zoning:

[☒] Residential
[☒] Agricultural
[☐] Commercial
[☐] Industrial
[☐] None
[☐] Other Describe: _____

8. Types of waste received:

[☒] Household
[☒] Commercial
[☒] Incinerator/WTE ash
[☐] Treated biomedical
[☒] Water treatment sludge
[☒] Air treatment sludge
[☒] Agricultural
[☒] Asbestos
[☒] C & D debris
[☒] Shredded/cut tires
[☐] Yard trash
[☐] Septic tank
[☒] Industrial
[☒] Industrial sludge
[☐] Domestic sludge
Other Describe: _____

9. Salvaging permitted: [☐] Yes [☒] No

10. Attendant: [☒] Yes [☐] No Trained operator: [☒] Yes [☐] No

11. Trained spotters: [☒] Yes [☐] No Number of spotters used: 1 minimum

12. Site located in: [☐] Floodplain [☐] Wetlands [☒] Other: upland, closed phosphate mine

13. Days of operation: Monday - Saturday

14. Hours of operation: 7:30AM - 5:30PM

15. Days Working Face covered: Monday - Saturday

16. Elevation of water table: 123.72 SHGWT Ft. Datum Used: NGVD 1929

17. Number of monitoring wells: 14 (Phases I-VI), 8 (Sections 7 and 8), 3 (Section 9)

18. Number of surface monitoring points: 5 (Phases I-VI), 6 (Sections 7, 8, and 9)

19. Gas controls used: [☒] Yes [☐] No Type controls: [☒] Active [☐] Passive

Gas flaring: [☒] Yes [☐] No Gas recovery: [☐] Yes [☒] No

20. Landfill unit liner type:

[☐] Natural soils
[☐] Single clay liner
[☐] Single geomembrane
[☐] Single composite
[☐] Slurry wall
[☒] Other Describe: Phosphatic Clay, 4-18 feet in thickness (Phases I-VI only)
[☒] Double geomembrane **(Section 7, 8, and 9 only)**
[☐] Geomembrane & composite **(Section 7, 8, and 9 only)**
[☒] Double composite
[☐] None

21. Leachate collection method:

[☒] Collection pipes
[☒] Geonets **(Sections 7, 8, and 9 only)**
[☐] Well points
[☐] Perimeter ditch
[☒] Other Describe: Pump Station and Chipped Tire Layer
[☒] Sand layer
[☒] Gravel layer
[☒] Interceptor trench
[☐] None

22. Leachate storage method:

[☒] Tanks
[☐] Surface impoundments
[☐] Other Describe:

23. Leachate treatment method:

[☐] Oxidation
[☐] Secondary
[☐] Advanced
[☐] None
[☒] Other Biological Treatment System On-Site
[☐] Chemical treatment
[☐] Settling

24. Leachate disposal method:

[☐] Recirculated
[☒] Transported to WWTP
[☐] Injection well
[☒] Evaporation
[☒] Other Storage pond evaporation or spray irrigation after treatment at the on-site treatment facility
[☐] Pumped to WWTP
[☐] Discharged to surface water/wetland
[☐] Percolation ponds
[☐] Spray Irrigation

25. For leachate discharged to surface waters:

Name and Class of receiving water: Leachate is not discharged to surface waters

26. Storm Water:

Collected: [☒] Yes [☐] No

Type of treatment: Detention/Filtration

Name and Class of receiving water: A tributary of Long Flat Creek

27. Environmental Resources Permit (ERP) number or status: Permit No. 29-0270881-004

PART C. PROHIBITIONS (62-701.300, FAC)

S	LOCATION	N/A	N/C		
☐	_____	☒	☐	1.	Provide documentation that each of the siting criteria will be satisfied for the facility; (62-701.300(2), FAC)
☐	_____	☒	☐	2.	If the facility qualifies for any of the exemptions contained in Rules 62-701.300(12) through (18), FAC, then document this qualification(s).
☐	_____	☒	☐	3.	Provide documentation that the facility will be in compliance with the burning restrictions; (62-701.300(3), FAC)
☐	_____	☒	☐	4.	Provide documentation that the facility will be in compliance with the hazardous waste restrictions; (62-701.300(4), FAC)
☐	_____	☒	☐	5.	Provide documentation that the facility will be in compliance with the PCB disposal restrictions; (62-701.300(5), FAC)
☐	_____	☒	☐	6.	Provide documentation that the facility will be in compliance with the biomedical waste restrictions; (62-701.300(6), FAC)
☐	_____	☒	☐	7.	Provide documentation that the facility will be in compliance with the Class I surface water restrictions; (62-701.300(7), FAC)
☐	_____	☒	☐	8.	Provide documentation that the facility will be in compliance with the special waste for landfills restrictions; (62-701.300(8), FAC)
☐	_____	☒	☐	9.	Provide documentation that the facility will be in compliance with the liquid restrictions; (62-701.300(10), FAC)
☐	_____	☒	☐	10.	Provide documentation that the facility will be in compliance with the used oil and oily waste restrictions; (62-701.300(11), FAC)

PART D. SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL (62-701.320, FAC)

S	LOCATION	N/A	N/C		
☒	Part D.1	☐	☐	1.	Four copies, at minimum, of the completed application form, all supporting data and reports; (62-701.320(5)(a),FAC)
☒	Part D.2	☐	☐	2.	Engineering and/or professional certification (signature, date and seal) provided on the applications and all engineering plans, reports and supporting information for the application; (62-701.320(6),FAC)
☒	Part D.3	☐	☐	3.	A letter of transmittal to the Department; (62-701.320(7)(a),FAC)

S	LOCATION	N/A	N/C		PART D CONTINUED
☒	Part D.4	☐	☐	4.	A completed application form dated and signed by the applicant; (62-701.320(7)(b),FAC)
☒	Part D.5	☐	☐	5.	Permit fee specified in Rule 62-701.315, FAC in check or money order, payable to the Department; (62-701.320(7)(c),FAC)
☒	Part D.6	☐	☐	6.	An engineering report addressing the requirements of this rule and with the following format: a cover sheet, text printed on 8 1/2 inch by 11 inch consecutively numbered pages, a table of contents or index, the body of the report and all appendices including an operation plan, contingency plan, illustrative charts and graphs, records or logs of tests and investigations, engineering calculations; (62-701.320(7)(d),FAC)
☒	Part D.7	☐	☐	7.	Operation Plan and Closure Plan; (62-701.320(7)(e)1,FAC)
☐		☒	☐	8.	Contingency Plan; (62-701.320(7)(e)2,FAC)
				9.	Plans or drawings for the solid waste management facilities in appropriate format (including sheet size restrictions, cover sheet, legends, north arrow, horizontal and vertical scales, elevations referenced to NGVD 1929) showing; (62-701.320(7)(f),FAC)
☒	Part D.9	☐	☐		a. A regional map or plan with the project location in relation to major roadways and population centers;
☒	Part D.9	☐	☐		b. A vicinity map or aerial photograph no more than 1 year old showing the facility site and relevant surface features located within 1000 feet of the facility;
☒	Part D.9	☐	☐		c. A site plan showing all property boundaries certified by a Florida Licensed Professional Surveyor and Mapper; and
☒	Part D.9	☒	☐		d. Other necessary details to support the engineering report, including referencing elevations to a consistent, nationally recognized datum and identifying the method used for collecting latitude and longitude data.
☐		☐	☒	10.	Documentation that the applicant either owns the property or has legal authority from the property owner to use the site; (62-701.320(7)(g),FAC)
☐		☐	☒	11.	For facilities owned or operated by a county, provide a description of how, if any, the facilities covered in this application will contribute to the county's achievement of the waste reduction and recycling goals contained in Section 403.706,FS; (62-701.320(7)(h),FAC)

S	LOCATION	N/A	N/C		PART D CONTINUED
☒	Part D.12	☐	☐	12.	Provide a history and description of any enforcement actions taken by the Department against the applicant for violations of applicable statutes, rules, orders or permit conditions relating to the operation of any solid waste management facility in this state; (62-701.320(7)(i),FAC)
☒	Part D.13	☐	☐	13.	Proof of publication in a newspaper of general circulation of notice of application for a permit to construct or substantially modify a solid waste management facility; (62-702.320(8),FAC)
☐	_____	☒	☐	14.	Provide a description of how the requirements for airport safety will be achieved including proof of required notices if applicable. If exempt, explain how the exemption applies; (62-701.320(13),FAC)
☐	_____	☒	☐	15.	Explain how the operator and spotter training requirements and special criteria will be satisfied for the facility; (62-701.320(15), FAC)

PART E. LANDFILL PERMIT REQUIREMENTS (62-701.330, FAC)

S	LOCATION	N/A	N/C		
☐	_____	☒	☐	1.	Regional map or aerial photograph no more than 5 years old showing all airports that are located within five miles of the proposed landfill; (62-701.330(3)(a),FAC)
☐	_____	☒	☐	2.	Plot plan with a scale not greater than 200 feet to the inch showing; (62-701.330(3)(b),FAC)
☐	_____	☒	☐		a. Dimensions;
☐	_____	☒	☐		b. Locations of proposed and existing water quality monitoring wells;
☐	_____	☒	☐		c. Locations of soil borings;
☐	_____	☒	☐		d. Proposed plan of trenching or disposal areas;
☐	_____	☒	☐		e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets;
☐	_____	☒	☐		f. Any previously filled waste disposal areas;
☐	_____	☒	☐		g. Fencing or other measures to restrict access.
				3.	Topographic maps with a scale not greater than 200 feet to the inch with 5-foot contour intervals showing; (62-701.330(3)(c),FAC):
☐	_____	☒	☐		a. Proposed fill areas;
☐	_____	☒	☐		b. Borrow areas;
☐	_____	☒	☐		c. Access roads;

S	LOCATION	N/A	N/C		PART E CONTINUED
☐	_____	☒	☐	d.	Grades required for proper drainage;
☐	_____	☒	☐	e.	Cross sections of lifts;
☐	_____	☒	☐	f.	Special drainage devices if necessary;
☐	_____	☒	☐	g.	Fencing;
☐	_____	☒	☐	h.	Equipment facilities.
				4.	A report on the landfill describing the following; (62-701.330(3)(d),FAC)
☐	_____	☒	☐	a.	The current and projected population and area to be served by the proposed site;
☐	_____	☒	☐	b.	The anticipated type, annual quantity, and source of solid waste, expressed in tons;
☐	_____	☒	☐	c.	Planned active life of the facility, the final design height of the facility and the maximum height of the facility during its operation;
☐	_____	☒	☐	d.	The source and type of cover material used for the landfill.
☐	_____	☒	☐	5.	Provide evidence that an approved laboratory shall conduct water quality monitoring for the facility in accordance with Chapter 62-160,FAC; (62-701.330(3)(g),FAC)
☐	_____	☒	☐	6.	Provide a statement of how the applicant will demonstrate financial responsibility for the closing and long-term care of the landfill; (62-701.330(3)(h),FAC)

PART F. GENERAL CRITERIA FOR LANDFILLS (62-701.340,FAC)

☐	_____	☒	☐	1.	Describe (and show on a Federal Insurance Administration flood map, if available) how the landfill or solid waste disposal unit shall not be located in the 100-year floodplain where it will restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain unless compensating storage is provided, or result in a washout of solid waste; (62-701.340(3)(b),FAC)
☐	_____	☒	☐	2.	Describe how the minimum horizontal separation between waste deposits in the landfill and the landfill property boundary shall be 100 feet, measured from the toe of the proposed final cover slope; (62-701.340(3)(c),FAC)

PART G. LANDFILL CONSTRUCTION REQUIREMENTS (62-701.400,FAC)

	LOCATION	N/A	N/C		
☐	_____	☒	☐	1.	Describe how the landfill shall be designed so that solid waste disposal units will be constructed and closed at planned intervals throughout the design period of the landfill and shall be designed to achieve a minimum factor of safety of 1.5 using peak strength values to prevent failures of side slopes and deep-seated failures; (62-701.400(2),FAC)
				2.	Landfill liner requirements; (62-701.400(3),FAC)
				a.	General construction requirements; (62-701.400(3)(a),FAC):
☐	_____	☒	☐	(1)	Provide test information and documentation to ensure the liner will be constructed of materials that have appropriate physical, chemical, and mechanical properties to prevent failure;
☐	_____	☒	☐	(2)	Document foundation is adequate to prevent liner failure;
☐	_____	☒	☐	(3)	Constructed so bottom liner will not be adversely impacted by fluctuations of the ground water;
☐	_____	☒	☐	(4)	Designed to resist hydrostatic uplift if bottom liner located below seasonal high ground water table;
☐	_____	☒	☐	(5)	Installed to cover all surrounding earth which could come into contact with the waste or leachate.
				b.	Composite liners; (62-701.400(3)(b),FAC)
☐	_____	☒	☐	(1)	Upper geomembrane thickness and properties;
☐	_____	☒	☐	(2)	Design leachate head for primary LCRS including leachate recirculation if appropriate;
☐	_____	☒	☐	(3)	Design thickness in accordance with Table A and number of lifts planned for lower soil component.
				c.	Double liners; (62-701.400(3)(c),FAC)
☐	_____	☒	☐	(1)	Upper and lower geomembrane thicknesses and properties;
☐	_____	☒	☐	(2)	Design leachate head for primary LCRS to limit the head to one foot above the liner;
☐	_____	☒	☐	(3)	Lower geomembrane sub-base design;

S	LOCATION	N/A	N/C	PART G CONTINUED
☐	_____	☒	☐	(4) Leak detection and secondary leachate collection system minimum design criteria ($k \geq 10$ cm/sec, head on lower liner ≤ 1 inch, head not to exceed thickness of drainage layer);
				d. Standards for geosynthetic components; (62-701.400(3)(d),FAC)
☐	_____	☒	☐	(1) Factory and field seam test methods to ensure all geomembrane seams achieve the minimum specifications;
☐	_____	☒	☐	(2) Geomembranes to be used shall pass a continuous spark test by the manufacturer;
☐	_____	☒	☐	(3) Design of 24-inch-thick protective layer above upper geomembrane liner;
☐	_____	☒	☐	(4) Describe operational plans to protect the liner and leachate collection system when placing the first layer of waste above 24-inch-thick protective layer.
☐	_____	☒	☐	(5) HDPE geomembranes, if used, meet the specifications in GRI GM13 and LLDPE geomembranes, if used, meet the specifications in GRI GM17;
☐	_____	☒	☐	(6) PVC geomembranes, if used, meet the specifications in PGI 1104;
☐	_____	☒	☐	(7) Interface shear strength testing results of the actual components which will be used in the liner system;
☐	_____	☒	☐	(8) Transmissivity testing results of geonets if they are used in the liner system;
☐	_____	☒	☐	(9) Hydraulic conductivity testing results of geosynthetic clay liners if they are used in the liner system;
				e. Geosynthetic specification requirements; (62-701.400(3)(e),FAC)
☐	_____	☒	☐	(1) Definition and qualifications of the designer, manufacturer, installer, QA consultant and laboratory, and QA program;
☐	_____	☒	☐	(2) Material specifications for geomembranes, geocomposites, geotextiles, geogrids, and geonets;

S	LOCATION	N/A	N/C	PART G CONTINUED
☐	_____	☒	☐	(3) Manufacturing and fabrication specifications including geomembrane raw material and roll QA, fabrication personnel qualifications, seaming equipment and procedures, overlaps, trial seams, destructive and nondestructive seam testing, seam testing location, frequency, procedure, sample size and geomembrane repairs;
☐	_____	☒	☐	(4) Geomembrane installation specifications including earthwork, conformance testing, geomembrane placement, installation personnel qualifications, field seaming and testing, overlapping and repairs, materials in contact with geomembrane and procedures for lining system acceptance;
☐	_____	☒	☐	(5) Geotextile and geogrid specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying materials;
☐	_____	☒	☐	(6) Geonet and geocomposite specifications including handling and placement, conformance testing, stacking and joining, repair, and placement of soil materials and any overlying materials;
☐	_____	☒	☐	(7) Geosynthetic clay liner specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil material and any overlying materials;
				f. Standards for soil liner components (62-710.400(3)(f),FAC):
☐	_____	☒	☐	(1) Description of construction procedures including overexcavation and backfilling to preclude structural inconsistencies and procedures for placing and compacting soil component in layers;
☐	_____	☒	☐	(2) Demonstration of compatibility of the soil component with actual or simulated leachate in accordance with EPA Test Method 9100 or an equivalent test method;
☐	_____	☒	☐	(3) Procedures for testing in-situ soils to demonstrate they meet the specifications for soil liners;
				(4) Specifications for soil component of liner including at a minimum:
☐	_____	☒	☐	(a) Allowable particle size distribution, Atterberg limits, shrinkage limit;

S	LOCATION	N/A	N/C	PART G CONTINUED
☐	_____	☒	☐	(b) Placement moisture and dry density criteria;
☐	_____	☒	☐	(c) Maximum laboratory-determined saturated hydraulic conductivity using simulated leachate;
☐	_____	☒	☐	(d) Minimum thickness of soil liner;
☐	_____	☒	☐	(e) Lift thickness;
☐	_____	☒	☐	(f) Surface preparation (scarification);
☐	_____	☒	☐	(g) Type and percentage of clay mineral within the soil component;
☐	_____	☒	☐	(5) Procedures for constructing and using a field test section to document the desired saturated hydraulic conductivity and thickness can be achieved in the field.
☐	_____	☒	☐	g. If a Class III landfill is to be constructed with a bottom liner system, provide a description of how the minimum requirements for the liner will be achieved.
				3. Leachate collection and removal system (LCRS); (62-701.400(4),FAC)
				a. The primary and secondary LCRS requirements; (62-701.400(4)(a),FAC)
☐	_____	☒	☐	(1) Constructed of materials chemically resistant to the waste and leachate;
☐	_____	☒	☐	(2) Have sufficient mechanical properties to prevent collapse under pressure;
☐	_____	☒	☐	(3) Have granular material or synthetic geotextile to prevent clogging;
☐	_____	☒	☐	(4) Have method for testing and cleaning clogged pipes or contingent designs for rerouting leachate around failed areas;
				b. Other LCRS requirements; (62-701.400(4)(b) and (c),FAC)
☐	_____	☒	☐	(1) Bottom 12 inches having hydraulic conductivity $\geq 1 \times 10^{-3}$ cm/sec;
☐	_____	☒	☐	(2) Total thickness of 24 inches of material chemically resistant to the waste and leachate;
☐	_____	☒	☐	(3) Bottom slope design to accommodate for predicted settlement and still meet minimum slope requirements;

S	LOCATION	N/A	N/C	PART G CONTINUED
☐	_____	☒	☐	(4) Demonstration that synthetic drainage material, if used, is equivalent or better than granular material in chemical compatibility, flow under load and protection of geomembrane liner.

4. Leachate recirculation; (62-701.400(5),FAC)

☐	_____	☒	☐	a. Describe general procedures for recirculating leachate;
☐	_____	☒	☐	b. Describe procedures for controlling leachate runoff and minimizing mixing of leachate runoff with storm water;
☐	_____	☒	☐	c. Describe procedures for preventing perched water conditions and gas buildup;
☐	_____	☒	☐	d. Describe alternate methods for leachate management when it cannot be recirculated due to weather or runoff conditions, surface seeps, wind-blown spray, or elevated levels of leachate head on the liner;
☐	_____	☒	☐	e. Describe methods of gas management in accordance with Rule 62-701.530, FAC;
☐	_____	☒	☐	f. If leachate irrigation is proposed, describe treatment methods and standards for leachate treatment prior to irrigation over final cover and provide documentation that irrigation does not contribute significantly to leachate generation.

5. Leachate storage tanks and leachate surface impoundments; (62-701.400(6),FAC)

a. Surface impoundment requirements; (62-701.400(6)(b),FAC)

☐	_____	☒	☐	(1) Documentation that the design of the bottom liner will not be adversely impacted by fluctuations of the ground water;
☐	_____	☒	☐	(2) Designed in segments to allow for inspection and repair as needed without interruption of service;
				(3) General design requirements;
☐	_____	☒	☐	(a) Double liner system consisting of an upper and lower 60-mil minimum thickness geomembrane;
☐	_____	☒	☐	(b) Leak detection and collection system with hydraulic conductivity ≥ 1 cm/sec;

S	LOCATION	N/A	N/C	PART G CONTINUED
☐	_____	☒	☐	(c) Lower geomembrane placed on subbase ≥ 6 inches thick with k ≤ $1x10^{-5}$ cm/sec or on an approved geosynthetic clay liner with k ≤ $1x10^{-7}$ cm/sec;
☐	_____	☒	☐	(d) Design calculation to predict potential leakage through the upper liner;
☐	_____	☒	☐	(e) Daily inspection requirements and notification and corrective action requirements if leakage rates exceed that predicted by design calculations;
☐	_____	☒	☐	(4) Description of procedures to prevent uplift, if applicable;
☐	_____	☒	☐	(5) Design calculations to demonstrate minimum two feet of freeboard will be maintained;
☐	_____	☒	☐	(6) Procedures for controlling vectors and off-site odors.
				b. Above-ground leachate storage tanks; (62-701.400(6)(c),FAC)
☐	_____	☒	☐	(1) Describe tank materials of construction and ensure foundation is sufficient to support tank;
☐	_____	☒	☐	(2) Describe procedures for cathodic protection if needed for the tank;
☐	_____	☒	☐	(3) Describe exterior painting and interior lining of the tank to protect it from the weather and the leachate stored;
☐	_____	☒	☐	(4) Describe secondary containment design to ensure adequate capacity will be provided and compatibility of materials of construction;
☐	_____	☒	☐	(5) Describe design to remove and dispose of stormwater from the secondary containment system;
☐	_____	☒	☐	(6) Describe an overfill prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overfilling;
				(7) Inspections, corrective action and reporting requirements;
☐	_____	☒	☐	(a) Overfill prevention system weekly;
☐	_____	☒	☐	(b) Exposed tank exteriors weekly;

S	LOCATION	N/A	N/C	PART G CONTINUED
☐	_____	☒	☐	(c) Tank interiors when tank is drained or at least every three years;
☐	_____	☒	☐	(d) Procedures for immediate corrective action if failures detected;
☐	_____	☒	☐	(e) Inspection reports available for department review.
				c. Underground leachate storage tanks; (62-701.400(6)(d),FAC)
☐	_____	☒	☐	(1) Describe materials of construction;
☐	_____	☒	☐	(2) A double-walled tank design system to be used with the following requirements;
☐	_____	☒	☐	(a) Interstitial space monitoring at least weekly;
☐	_____	☒	☐	(b) Corrosion protection provided for primary tank interior and external surface of outer shell;
☐	_____	☒	☐	(c) Interior tank coatings compatible with stored leachate;
☐	_____	☒	☐	(d) Cathodic protection inspected weekly and repaired as needed;
☐	_____	☒	☐	(3) Describe an overfill prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overfilling and provide for weekly inspections;
☐	_____	☒	☐	(4) Inspection reports available for department review.
☐	_____	☒	☐	d. Schedule provided for routine maintenance of LCRS; (62-701.400(6)(e),FAC)
				6. Liner systems construction quality assurance (CQA); (62-701.400(7),FAC)
☐	_____	☒	☐	a. Provide CQA Plan including:
☐	_____	☒	☐	(1) Specifications and construction requirements for liner system;
☐	_____	☒	☐	(2) Detailed description of quality control testing procedures and frequencies;
☐	_____	☒	☐	(3) Identification of supervising professional engineer;
☐	_____	☒	☐	(4) Identify responsibility and authority of all appropriate organizations and key

S	LOCATION	N/A	N/C	
				personnel involved in the construction project; **PART G CONTINUED**
☐	_____	☒	☐	(5) State qualifications of CQA professional engineer and support personnel;
☐	_____	☒	☐	(6) Description of CQA reporting forms and documents;
☐	_____	☒	☐	b. An independent laboratory experienced in the testing of geosynthetics to perform required testing;
				7. Soil Liner CQA (62-701.400(8)FAC)
☐	_____	☒	☐	a. Documentation that an adequate borrow source has been located with test results or description of the field exploration and laboratory testing program to define a suitable borrow source;
☐	_____	☒	☐	b. Description of field test section construction and test methods to be implemented prior to liner installation;
☐	_____	☒	☐	c. Description of field test methods including rejection criteria and corrective measures to insure proper liner installation.
				8. Surface water management systems; (62-701.400(9),FAC)
☐	_____	☒	☐	a. Provide a copy of a Department permit for stormwater control or documentation that no such permit is required;
☐	_____	☒	☐	b. Design of surface water management system to isolate surface water from waste filled areas and to control stormwater run-off;
☐	_____	☒	☐	c. Details of stormwater control design including retention ponds, detention ponds, and drainage ways;
				9. Gas control systems; (62-701.400(10),FAC)
☒	Part G.9.a	☐	☐	a. Provide documentation that if the landfill is receiving degradable wastes, it will have a gas control system complying with the requirements of Rule 62-701.530, FAC;
☐	_____	☒	☐	10. For landfills designed in ground water, provide documentation that the landfill will provide a degree of protection equivalent to landfills designed with bottom liners not in contact with ground water; (62-701.400(11),FAC)

PART H. HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS (62-701.410(1), FAC)

	LOCATION	N/A	N/C		
				1.	Submit a hydrogeological investigation and site report including at least the following information:
☐	_____	☒	☐	a.	Regional and site specific geology and hydrogeology;
☐	_____	☒	☐	b.	Direction and rate of ground water and surface water flow including seasonal variations;
☐	_____	☒	☐	c.	Background quality of ground water and surface water;
☐	_____	☒	☐	d.	Any on-site hydraulic connections between aquifers;
☐	_____	☒	☐	e.	Site stratigraphy and aquifer characteristics for confining layers, semi-confining layers, and all aquifers below the landfill site that may be affected by the landfill;
☐	_____	☒	☐	f.	Description of topography, soil types and surface water drainage systems;
☐	_____	☒	☐	g.	Inventory of all public and private water wells within a one-mile radius of the landfill including, where available, well top of casing and bottom elevations, name of owner, age and usage of each well, stratigraphic unit screened, well construction technique and static water level;
☐	_____	☒	☐	h.	Identify and locate any existing contaminated areas on the site;
☐	_____	☒	☐	i.	Include a map showing the locations of all potable wells within 500 feet of the waste storage and disposal areas;
☐	_____	☒	☐	2.	Report signed, sealed and dated by PE and/or PG.

PART I. GEOTECHNICAL INVESTIGATION REQUIREMENTS (62-701.410(2),FAC)

S	LOCATION	N/A	N/C		
				1.	Submit a geotechnical site investigation report defining the engineering properties of the site including at least the following:
☐	_____	☒	☐	a.	Description of subsurface conditions including soil stratigraphy and ground water table conditions;
☐	_____	☒	☐	b.	Investigate for the presence of muck, previously filled areas, soft ground, lineaments and sink holes;

S	LOCATION	N/A	N/C		PART I CONTINUED
☐	_____	☒	☐	c.	Estimates of average and maximum high water table across the site;
				d.	Foundation analysis including:
☐	_____	☒	☐		(1) Foundation bearing capacity analysis;
☐	_____	☒	☐		(2) Total and differential subgrade settlement analysis;
☐	_____	☒	☐		(3) Slope stability analysis;
☐	_____	☒	☐	e.	Description of methods used in the investigation and includes soil boring logs, laboratory results, analytical calculations, cross sections, interpretations and conclusions;
☐	_____	☒	☐	f.	An evaluation of fault areas, seismic impact zones, and unstable areas as described in 40 CFR 258.13, 40 CFR 258.14 and 40 CFR 258.15.
☐	_____	☒	☐	2.	Report signed, sealed and dated by PE and/or PG.

PART J. VERTICAL EXPANSION OF LANDFILLS (62-701.430,FAC)

S	LOCATION	N/A	N/C		
☐	_____	☒	☐	1.	Describe how the vertical expansion shall not cause or contribute to leachate leakage from the existing landfill, shall not cause objectionable odors, or adversely affect the closure design of the existing landfill;
☐	_____	☒	☐	2.	Describe how the vertical expansion over unlined landfills will meet the requirements of Rule 62-701.400, FAC with the exceptions of Rule 62-701.430(1)(c),FAC;
☐	_____	☒	☐	3.	Provide foundation and settlement analysis for the vertical expansion;
☐	_____	☒	☐	4.	Provide total settlement calculations demonstrating that the final elevations of the lining system, that gravity drainage, and that no other component of the design will be adversely affected;
☐	_____	☒	☐	5.	Minimum stability safety factor of 1.5 for the lining system component interface stability and deep stability;
☐	_____	☒	☐	6.	Provide documentation to show the surface water management system will not be adversely affected by the vertical expansion;
☐	_____	☒	☐	7.	Provide gas control designs to prevent accumulation of gas under the new liner for the vertical expansion.

PART K. LANDFILL OPERATION REQUIREMENTS (62-701.500,FAC)

	LOCATION	N/A	N/C		
☐	_____	☐	☒	1.	Provide documentation that landfill will have at least one trained operator during operation and at least one trained spotter at each working face; (62-701.500(1),FAC)
				2.	Provide a landfill operation plan including procedures for: (62-701.500(2), FAC)
☐	_____	☐	☒	a.	Designating responsible operating and maintenance personnel;
☐	_____	☐	☒	b.	Emergency preparedness and response, as required in subsection 62-701.320(16), FAC;
☐	_____	☐	☒	c.	Controlling types of waste received at the landfill;
☐	_____	☐	☒	d.	Weighing incoming waste;
☐	_____	☐	☒	e.	Vehicle traffic control and unloading;
☐	_____	☐	☒	f.	Method and sequence of filling waste;
☐	_____	☐	☒	g.	Waste compaction and application of cover;
☒	Part K.2.h	☐	☐	h.	Operations of gas, leachate, and stormwater controls;
☐	_____	☐	☒	i.	Water quality monitoring.
☒	Part K.2.j	☐	☐	j.	Maintaining and cleaning the leachate collection system;
☐	_____	☐	☒	3.	Provide a description of the landfill operation record to be used at the landfill; details as to location of where various operational records will be kept (i.e. FDEP permit, engineering drawings, water quality records, etc.) (62-701.500(3),FAC)
☐	_____	☐	☒	4.	Describe the waste records that will be compiled monthly and provided to the Department annually; (62-701.500(4),FAC)
☐	_____	☐	☒	5.	Describe methods of access control; (62-701.500(5),FAC)
☐	_____	☐	☒	6.	Describe load checking program to be implemented at the landfill to discourage disposal of unauthorized wastes at the landfill; (62-701.500(6),FAC)
				7.	Describe procedures for spreading and compacting waste at the landfill that include: (62-701.500(7),FAC)
☐	_____	☐	☒	a.	Waste layer thickness and compaction frequencies;

S	LOCATION	N/A	N/C	PART K CONTINUED
☐	_____	☐	☒	b. Special considerations for first layer of waste placed above liner and leachate collection system;
☐	_____	☐	☒	c. Slopes of cell working face and side grades above land surface, planned lift depths during operation;
☐	_____	☐	☒	d. Maximum width of working face;
				e. Description of type of initial cover to be used at the facility that controls:
☐	_____	☐	☒	(1) Vector breeding/animal attraction
☐	_____	☐	☒	(2) Fires
☐	_____	☐	☒	(3) Odors
☐	_____	☐	☒	(4) Blowing litter
☐	_____	☐	☒	(5) Moisture infiltration
☐	_____	☐	☒	f. Procedures for applying initial cover including minimum cover frequencies;
☐	_____	☐	☒	g. Procedures for applying intermediate cover;
☐	_____	☐	☒	h. Time frames for applying final cover;
☐	_____	☐	☒	i. Procedures for controlling scavenging and salvaging.
☐	_____	☐	☒	j. Description of litter policing methods;
☐	_____	☐	☒	k. Erosion control procedures.
				8. Describe operational procedures for leachate management including; (62-701.500(8),FAC)
☐	_____	☐	☒	a. Leachate level monitoring, sampling, analysis and data results submitted to the Department;
☐	_____	☐	☒	b. Operation and maintenance of leachate collection and removal system, and treatment as required;
☐	_____	☐	☒	c. Procedures for managing leachate if it becomes regulated as a hazardous waste;
☐	_____	☐	☒	d. Identification of treatment or disposal facilities that may be used for off-site discharge and treatment of leachate;
☐	_____	☐	☒	e. Contingency plan for managing leachate during emergencies or equipment problems;

S	LOCATION	N/A	N/C	PART K CONTINUED
☐	_____	☐	☒	f. Procedures for recording quantities of leachate generated in gal/day and including this in the operating record;
☐	_____	☐	☒	g. Procedures for comparing precipitation experienced at the landfill with leachate generation rates and including this information in the operating record;
☐	_____	☐	☒	h. Procedures for water pressure cleaning or video inspecting leachate collection systems.
☒	Part K.9	☐	☐	9. Describe how the landfill receiving degradable wastes shall implement a gas management system meeting the requirements of Rule 62-701.530, FAC; (62-701.500(9),FAC)
☐	_____	☐	☒	10. Describe procedures for operating and maintaining the landfill stormwater management system to comply with the requirements of Rule 62-701.400(9); (62-701.500(10),FAC)
				11. Equipment and operation feature requirements; (62-701.500(11),FAC)
☐	_____	☐	☒	a. Sufficient equipment for excavating, spreading, compacting and covering waste;
☐	_____	☐	☒	b. Reserve equipment or arrangements to obtain additional equipment within 24 hours of breakdown;
☐	_____	☐	☒	c. Communications equipment;
☐	_____	☐	☒	d. Dust control methods;
☐	_____	☐	☒	e. Fire protection capabilities and procedures for notifying local fire department authorities in emergencies;
☐	_____	☐	☒	f. Litter control devices;
☐	_____	☐	☒	g. Signs indicating operating authority, traffic flow, hours of operation, disposal restrictions.
☐	_____	☐	☒	12. Provide a description of all-weather access road, inside perimeter road and other roads necessary for access which shall be provided at the landfill; (62-701.500(12),FAC)
				13. Additional record keeping and reporting requirements; (62-701.500(13),FAC)
☐	_____	☐	☒	a. Records used for developing permit applications and supplemental information maintained for the design period of the landfill;

S	LOCATION	N/A	N/C		PART K CONTINUED
☐	_____	☐	☒	b.	Monitoring information, calibration and maintenance records, copies of reports required by permit maintained for at least 10 years;
☐	_____	☐	☒	c.	Maintain annual estimates of the remaining life of constructed landfills and of other permitted areas not yet constructed and submit this estimate annually to the Department;
☐	_____	☐	☒	d.	Procedures for archiving and retrieving records which are more than five year old.

PART L. WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS (62-701.510, FAC)

S	LOCATION	N/A	N/C		
☐	_____	☒	☐	1.	Water quality and leachate monitoring plan shall be submitted describing the proposed ground water, surface water and leachate monitoring systems and shall meet at least the following requirements;
☐	_____	☒	☐	a.	Based on the information obtained in the hydrogeological investigation and signed, dated and sealed by the PG or PE who prepared it; (62-701.510(2)(a),FAC)
☐	_____	☒	☐	b.	All sampling and analysis preformed in accordance with Chapter 62-160, FAC; (62-701.510(2)(b),FAC)
				c.	Ground water monitoring requirements; (62-701.510(3),FAC)
☐	_____	☒	☐	(1)	Detection wells located downgradient from and within 50 feet of disposal units;
☐	_____	☒	☐	(2)	Downgradient compliance wells as required;
☐	_____	☒	☐	(3)	Background wells screened in all aquifers below the landfill that may be affected by the landfill;
☐	_____	☒	☐	(4)	Location information for each monitoring well;
☐	_____	☒	☐	(5)	Well spacing no greater than 500 feet apart for downgradient wells and no greater than 1500 feet apart for upgradient wells unless site specific conditions justify alternate well spacings;
☐	_____	☒	☐	(6)	Well screen locations properly selected;
☐	_____	☒	☐	(7)	Monitoring wells constructed to provide representative ground water samples;
☐	_____	☒	☐	(8)	Procedures for properly abandoning monitoring wells;

S	LOCATION	N/A	N/C	PART L CONTINUED
☐	_____	☒	☐	(9) Detailed description of detection sensors if proposed.
				d. Surface water monitoring requirements; (62-701.510(4),FAC)
☐	_____	☒	☐	(1) Location of and justification for all proposed surface water monitoring points;
☐	_____	☒	☐	(2) Each monitoring location to be marked and its position determined by a registered Florida land surveyor;
☐	_____	☒	☐	e. Leachate sampling locations proposed; (62-701.510(5),FAC)
				f. Initial and routine sampling frequency and requirements; (62-701.510(6),FAC)
☐	_____	☒	☐	(1) Initial background ground water and surface water sampling and analysis requirements;
☐	_____	☒	☐	(2) Routine leachate sampling and analysis requirements;
☐	_____	☒	☐	(3) Routine monitoring well sampling and analysis requirements;
☐	_____	☒	☐	(4) Routine surface water sampling and analysis requirements.
☐	_____	☒	☐	g. Describe procedures for implementing evaluation monitoring, prevention measures and corrective action as required; (62-701.510(7),FAC)
☐	_____	☒	☐	h. Water quality monitoring report requirements;(62-701.510(9),FAC)
☐	_____	☒	☐	(1) Semi-annual report requirements (see paragraphs 62-701.510(6)(c),(d)and (e) for sampling frequencies);
☐	_____	☒	☐	(2) Documentation that the water quality data shall be provided to the Department in an electronic format consistent with requirements for importing into Department databases, unless an alternate form of submittal is specified in the permit.
☐	_____	☒	☐	(3) Two and one-half year report requirements, or every five years if in long-term care, signed, dated and sealed by PG or PE.

PART M. SPECIAL WASTE HANDLING REQUIREMENTS (62-701.520, FAC)

S	LOCATION	N/A	N/C		
☐	_____	☒	☐	1.	Describe procedures for managing motor vehicles; (62-701.520(1),FAC)
☐	_____	☒	☐	2.	Describe procedures for landfilling shredded waste; (62-701.520(2),FAC)
☐	_____	☒	☐	3.	Describe procedures for asbestos waste disposal; (62-701.520(3),FAC)
☐	_____	☒	☐	4.	Describe procedures for disposal or management of contaminated soil; (62-701.520(4), FAC)
☐	_____	☒	☐	5.	Describe procedures for disposal of biological wastes; (62-701.520(5), FAC)

PART N. GAS MANAGEMENT SYSTEM REQUIREMENTS (62-701.530,FAC)

				1.	Provide the design for a gas management system that will (62-701.530(1), FAC):
☐	Part N.1.a	☐	☒	a.	Be designed to prevent concentrations of combustible gases from exceeding 25% the LEL in structures and 100% the LEL at the property boundary;
☐	Part N.1.b	☐	☒	b.	Be designed for site-specific conditions;
☐	Part N.1.c	☐	☒	c.	Be designed to reduce gas pressure in the interior of the landfill;
☐	Part N.1.d	☐	☒	d.	Be designed to not interfere with the liner, leachate control system or final cover.
☐	Part N.2	☐	☒	2.	Provide documentation that will describe locations, construction details and procedures for monitoring gas at ambient monitoring points and with soil monitoring probes; (62-701.530(2), FAC):
☐	Part N.3	☐	☒	3.	Provide documentation describing how the gas remediation plan and odor remediation plan will be implemented; (62-701.530(3), FAC):
				4.	Landfill gas recovery facilities; (62-701.530(5), FAC):
☐	Part N.4.a	☐	☒	a.	Information required in Rules 62-701.320(7) and 62-701.330(3), FAC supplied;
☐	Part N.4.b	☐	☒	b.	Information required in Rule 62-701.600(4), FAC supplied where relevant and practical;
☐	Part N.4.c	☐	☒	c.	Estimate of current and expected gas generation rates and description of condensate disposal methods provided;
☐	Part N.4.d	☐	☒	d.	Description of procedures for condensate sampling, analyzing and data reporting provided;

S	LOCATION	N/A	N/C	PART N CONTINUED
☐	Part N.4.e	☐	☒	e. Closure plan provided describing methods to control gas after recovery facility ceases operation and any other requirements contained in Rule 62-701.400(10), FAC;
☐	_____	☒	☐	f. Performance bond provided to cover closure costs if not already included in other landfill closure costs.

PART O. LANDFILL FINAL CLOSURE REQUIREMENTS (62-701.600,FAC)

1. Closure permit requirements; (62-701.600(2),FAC)

☐	_____	☒	☐	a. Application submitted to Department at least 90 days prior to final receipt of wastes;
				b. Closure plan shall include the following:
☐	_____	☒	☐	(1) Closure design plan;
☐	_____	☒	☐	(2) Closure operation plan;
☐	_____	☒	☐	(3) Plan for long-term care;
☐	_____	☒	☐	(4) A demonstration that proof of financial responsibility for long-term care will be provided.

2. Closure design plan including the following requirements: (62-701.600(3),FAC)

☐	_____	☒	☐	a. Plan sheet showing phases of site closing;
☐	_____	☒	☐	b. Drawings showing existing topography and proposed final grades;
☐	_____	☒	☐	c. Provisions to close units when they reach approved design dimensions;
☐	_____	☒	☐	d. Final elevations before settlement;
☐	_____	☒	☐	e. Side slope design including benches, terraces, down slope drainage ways, energy dissipaters and discussion of expected precipitation effects;
				f. Final cover installation plans including:
☐	_____	☒	☐	(1) CQA plan for installing and testing final cover;
☐	_____	☒	☐	(2) Schedule for installing final cover after final receipt of waste;
☐	_____	☒	☐	(3) Description of drought-resistant species to be used in the vegetative cover;

S	LOCATION	N/A	N/C	PART O CONTINUED
☐	_____	☒	☐	(4) Top gradient design to maximize runoff and minimize erosion;
☐	_____	☒	☐	(5) Provisions for cover material to be used for final cover maintenance.
				g. Final cover design requirements:
☐	_____	☒	☐	(1) Protective soil layer design;
☐	_____	☒	☐	(2) Barrier soil layer design;
☐	_____	☒	☐	(3) Erosion control vegetation;
☐	_____	☒	☐	(4) Geomembrane barrier layer design;
☐	_____	☒	☐	(5) Geosynthetic clay liner design if used;
☐	_____	☒	☐	(6) Stability analysis of the cover system and the disposed waste.
☐	_____	☒	☐	h. Proposed method of stormwater control;
☐	_____	☒	☐	i. Proposed method of access control;
☐	_____	☒	☐	j. Description of the proposed or existing gas management system which complies with Rule 62-701.530, FAC.
				3. Closure operation plan shall include: (62-701.600(4),FAC)
☐	_____	☒	☐	a. Detailed description of actions which will be taken to close the landfill;
☐	_____	☒	☐	b. Time schedule for completion of closing and long-term care;
☐	_____	☒	☐	c. Describe proposed method for demonstrating financial assurance for long-term care;
☐	_____	☒	☐	d. Operation of the water quality monitoring plan required in Rule 62-701.510, FAC.
☐	_____	☒	☐	e. Development and implementation of gas management system required in Rule 62-701.530, FAC.
				4. Certification of closure construction completion including: (62-701.600(6),FAC)
☐	_____	☒	☐	a. Survey monuments; (62-701.600(6)(a),FAC)
☐	_____	☒	☐	b. Final survey report; (62-701.600(6)(b),FAC)
☐	_____	☒	☐	5. Declaration to the public; (62-701.600(7),FAC)
☐	_____	☒	☐	6. Official date of closing; (62-701.600(8),FAC)

S	LOCATION	N/A	N/C		PART O CONTINUED
☐	_____	☒	☐	7.	Justification for and detailed description of procedures to be followed for temporary closure of the landfill, if desired; (62-701.600(9),FAC)

PART P. OTHER CLOSURE PROCEDURES (62-701.610,FAC)

S	LOCATION	N/A	N/C		
☐	_____	☒	☐	1.	Describe how the requirements for use of closed solid waste disposal areas will be achieved; (62-701.610(1),FAC)
☐	_____	☒	☐	2.	Describe how the requirements for relocation of wastes will be achieved; (62-701.610(2), FAC)

PART Q. LONG-TERM CARE (62-701.620,FAC)

☐	_____	☒	☐	1.	Maintaining the gas collection and monitoring system; (62-701.620(5), FAC)
☐	_____	☒	☐	2.	Stabilization report requirements; (62-701.620(6),FAC)
☐	_____	☒	☐	3.	Right of access;(62-701.620(7),FAC)
☐	_____	☒	☐	4.	Requirements for replacement of monitoring devices; (62-701.620(8),FAC)
☐	_____	☒	☐	5.	Completion of long-term care signed and sealed by professional engineer (62-701.620(9), FAC).

PART R. FINANCIAL ASSURANCE (62-701.630,FAC)

☐	_____	☒	☐	1.	Provide cost estimates for closing, long-term care, and corrective action costs estimated by a PE for a third party performing the work, on a per unit basis, with the source of estimates indicated; (62-701.630(3)&(7), FAC).
☐	_____	☒	☐	2.	Describe procedures for providing annual cost adjustments to the Department based on inflation and changes in the closing, long-term care, and corrective action plans; (62-701.630(4)&(8), FAC).
☐	_____	☒	☐	3.	Describe funding mechanisms for providing proof of financial assurance and include appropriate financial assurance forms; (62-701.630(5),(6),&(9), FAC).
☐	_____	☒	☐	4.	Provide documentation and the appropriate forms for delaying submitting proof of financial assurance for solid waste disposal units that qualify; (62-701.630(2)(c), FAC).

PART S. CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

1. Applicant:

The undersigned applicant or authorized representative of Hillsborough County Solid Waste Management Department is aware that statements made in this form and attached information are an application for a Operations Modification Permit from the Florida Department of Environmental Protection and certifies that the information in this application is true, correct and complete to the best of his/her knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes, and all rules and regulations of the Department. It is understood that the Permit is not transferable, and the Department will be notified prior to the sale or legal transfer of the permitted facility.

Signature of Applicant or Agent

Mr. Barry M. Boldissar, Director
Name and Title (please type)

boldissarb@hillsboroughcounty.org
E-Mail address (if available)

601 E. Kennedy Boulevard, 24th Floor
Mailing Address

Tampa, Florida 33602
City, State, Zip Code

(813) 272-5680
Telephone Number

Date: _____

Attach letter of authorization if agent is not a governmental official, owner, or corporate officer.

2. Professional Engineer registered in Florida (or Public Officer if authorized under Sections 403.707 and 403.7075, Florida Statutes):

This is to certify that the engineering features of this solid waste management facility have been designed/examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, this facility, when properly maintained and operated, will comply with all applicable statutes of the State of Florida and rules of the Department. It is agreed that the undersigned will provide the applicant with a set of instructions of proper maintenance and operation of the facility.

Signature

Don Hullings, P.E., Director - Civil/Environmental Engineering Department
Name and Title (please type)

65058
Florida Registration Number
(please affix seal)

STATE OF FLORIDA PROFESSIONAL ENGINEER

Jones Edmunds & Associates, Inc.
324 S. Hyde Park Avenue, Suite 250
Mailing Address

Tampa, Florida 33606
City, State, Zip Code

dhullings@jonesedmunds.com
E-Mail address (if available)

(352) 377-5821
Telephone Number

Date: 5-18-10

SUPPORTING INFORMATION

PART D
SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL

1. APPLICATION FORM AND ALL SUPPORTING DATA AND REPORTS

Four copies of the completed application form and all supporting data and reports have been submitted to the Southwest District Office of the Florida Department of Environmental Protection as part of this permit application. In addition, copies of this permit application and supporting documents have been submitted to the Hillsborough County Environmental Protection Commission.

2. PROFESSIONAL CERTIFICATIONS

Jones Edmunds & Associates, Inc. has prepared this permit application and is an authorized engineering firm in Florida (Certificate of Authorization #1841). This permit application has been certified, signed, and sealed by Mr. Don Hullings, P.E., a licensed Engineer in Florida (Professional Engineer License No. 65058), for completeness.

As required by regulation, this application may contain supporting technical reports that have been prepared, reviewed, and signed and sealed by either a professional engineer or geologist as appropriate.

3. LETTER OF TRANSMITTAL

A letter of transmittal is included at the beginning of this permit application.

4. APPLICATION FORM

FDEP Form No. 62-701.900(1), effective date of January 6, 2010, has been completed and is included with this permit application submittal. This form has been signed and sealed by the professional engineer listed in Part D.2 and by the owner/operator of the facility.

5. PERMIT FEE

A check in the amount of $250 has been submitted with this minor permit modification application.

6. ENGINEERING REPORT

This permit application and supporting documentation meets the requirements of an engineering report required by Rule 62-701.320(7)(d), FAC.

- Information that has been previously submitted and is on file with FDEP will be referenced in this permit application by document names and date of the submittal.

7. OPERATION PLAN AND CLOSURE PLAN

The Operations Plan has been modified to include the operations of the landfill gas collection and control system recently permitted for construction. In addition, the temporary cover and final cover sections have been modified for clarifications.

8. CONTINGENCY PLAN

N/A

9. PLANS OR DRAWINGS

Revisions are proposed to the Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9) Operating Sequence drawings. Refer to Appendices B and C for updated drawings. These revisions include:

- Update the drawings to include the As-Built Gas Collection and Control System piping and well system.
- Revise final cover to have temporary final cover installed on Phases I-VI and the Capacity Expansion Area until final elevations have been reached.
- Include the temporary final cover cross-section details with the phasing plans.

10. DOCUMENTATION FROM PROPERTY OWNER

The property is owned by the Hillsborough County Board of County Commissioners. The legal description, plot plan, and deeds were previously submitted in Attachment E.3 of the Section 7 Operation Permit dated September 13, 2002. No changes to the property occurred since the Section 7 permit application.

11. WASTE REDUCTION AND RECYCLING GOALS

No changes to the Hillsborough County's recycling program have occurred since the Permit Renewal Application submitted January 17, 2007.

12. HISTORY AND DESCRIPTION OF ENFORCEMENT ACTIONS

Table D.1 summarizes enforcement history for the applicant, the Hillsborough County Solid Waste Management Department (SWMD). Based on a review of the SWMD files and information provided by SWMD's staff responsible for the SCLF, the applicant is not aware of any other enforcement actions relative to the County's other solid waste operations. Any errors

or omissions are not to be construed as a misrepresentation of the facts. Should FDEP have additional information in its files, the SWMD will concede to FDEP's data.

Table D.1 Enforcement Action History, Hillsborough County Solid Waste Management Department

Facility	Action	Status
Southeast County Landfill (SCLF)	FDEP Warning Letter Regarding Turbidity and Consent Agreement issued #WLO2-2223SW29SWD 12/9/02	County responded 2/3/03. Measures implemented to reduce turbidity.
Southeast County Landfill (SCLF)	FDEP Warning Letter regarding Leachate Discharge #WL08-0013SW29SWD 9/30/08	Closed
Southeast County Landfill (SCLF)	FDEP Consent Order No. 08-1907-29-RO for NPDES violation (missed sampling event)	Closed
Hillsborough Heights/Taylor Road Landfills	EPA Consent Decree 6/15/83 Hillsborough Heights issued EPC Short Form Consent Order, Case No. 09-3366DW, 10/20/09	Replaced with ROD and Consent Decree No. 98-239-CIV-T-25F Case closed 11/3/09
Northwest Landfill	FDEP Consent Order No. 89-0108	Replaced with Water Quality Monitoring Permit No SF29-288170
	#WL92-001 1SW29SWD	Closed
Falkenburg Yard and WW	#WL92-OO1OSW29SWD	Closed
	#WL93-0006SW29SWD	Closed
	EPCWN#15372	Closed
Northwest Transfer Station	#WL93-OOI4SW29SWD	Closed
	#WL94-OOI2SW29SWD	Closed, replaced by general permit #126750-001-SO
South County Transfer Station	EPC Warning Notice, dated August 19,2005 #2005-2532H	In-kind project has been completed. Case currently in close out process.
Resource Recovery Facility	EPC Warning Notice #14629	Closed
	EPC Warning Notice #14697	Closed

13. PROOF OF PUBLICATION

Upon submittal of this permit application to FDEP, the SWMD will publish a Notice of Application as required by the 62-701.320(8) in the *Tampa Tribune*. Once published, a copy of the notice will be forwarded to FDEP.

In addition, the Hillsborough County Board of County Commissions, State Senator, and Representatives will be notified of the permit application upon submittal of this permit application. Proof of notification will be forwarded to FDEP.

14. AIRPORT SAFETY

N/A

15. OPERATOR TRAINING REQUIREMENTS

N/A

PART G
LANDFILL CONSTRUCTION REQUIREMENTS

9. GAS CONTROL SYSTEMS

a. Please refer to Section K.9 of the updated Operations Plan in Attachment A for information regarding the gas control system.

PART K
LANDFILL OPERATION REQUIREMENTS

2. LANDFILL OPERATION PLAN

h. Control Operations (Leachate, Gas, Stormwater)

Please refer to Section K.2.h of the updated Operations Plan in Attachment A for information regarding the operations associated with the management of leachate, stormwater, and gas, respectively.

j. Maintenance of Leachate Collection System

Please refer to Section K.2.j of the updated Operations Plan in Attachment A for information regarding maintaining and cleaning the leachate collection system.

9. IMPLEMENTING THE GAS MANAGEMENT SYSTEM

Please refer to Section K.9 of the updated Operations Plan in Attachment A for information regarding implementing the gas management system.

PART N
GAS MANAGEMENT SYSTEM REQUIREMENTS

1. GAS MANAGEMENT SYSTEM DESIGN

a. Preventative Design

Please refer to Section K.9 of the updated Operations Plan in Attachment A for information regarding the gas management system design.

b. Site-Specific Conditions

Please refer to Section K.9 of the updated Operations Plan in Attachment A for information regarding the gas management system design.

c. Gas Pressure

Please refer to Section K.9 of the updated Operations Plan in Attachment A for information regarding the gas management system design.

d. Non-Interference

Please refer to Section K.9 of the updated Operations Plan in Attachment A for information regarding the gas management system design.

2. GAS MONITORING POINTS AND SOIL MONITORING PROBES

Please refer to Section K.9 of the updated Operations Plan in Attachment A for information regarding gas monitoring points and soil monitoring probes.

3. GAS REMEDIATION PLAN AND ODOR REMEDIATION PLAN

Please refer to Section K.9 of the updated Operations Plan in Attachment A for information regarding gas and odor remediation.

4. LANDFILL GAS RECOVERY FACILITIES

a. Information Required in Rules 62-701.320(7) and 62-701.330(3)

Please refer to Section K.9 of the updated Operations Plan in Attachment A.

b. Information Required in Rule 62-701.600(4)

Please refer to Section K.9 of the updated Operations Plan in Attachment A.

c. Gas Generation Rates and Condensate Disposal Methods

Please refer to Section K.9 of the updated Operations Plan in Attachment A.

d. Condensate Sampling and Analyzing Procedures

Please refer to Section K.9 of the updated Operations Plan in Attachment A.

e. Closure Plan

Please refer to Section K.9 of the updated Operations Plan in Attachment A.

ATTACHMENT A

UPDATED OPERATIONS PLAN

TABLE OF CONTENTS

PART K INTRODUCTION 1
K.1 TRAINING 1
K.2 LANDFILL OPERATION PLAN 1
K.2.a SWMD Organization and Responsibilities 1
K.2.b Contingency Plan 2
K.2.c Waste Type Control 3
K.2.c.(1) Special Waste 4
K.2.c.(2) Motor Vehicles 5
K.2.c.(3) Shredded Waste 5
K.2.c.(4) Asbestos Waste 5
K.2.d Weighing Incoming Waste 5
K.2.e Traffic Control 5
K.2.f Method and Sequence of Filling Waste 6
K.2.f.(1) Phases I-VI 6
K.2.f.(2) Section 7 of the Capacity Expansion Area 6
K.2.f.(3) Section 8 of the Capacity Expansion Area 7
K.2.f.(4) Section 9 of the Capacity Expansion Area 9
K.2.g Waste Compaction and Application of Cover 9
K.2.h Operation of Leachate, Gas and Stormwater Controls 10
K.2.i Water Quality Monitoring 10
K.2.i.(1) Phases I-VI 10
K.2.i.(2) Capacity Expansion Area 10
K.2.j Leachate Collection and Removal System Maintenance 10
K.3 OPERATING RECORD 10
K.4 WASTE RECORDS 11
K.5 ACCESS CONTROLS 11
K.6 LOAD-CHECKING PROGRAM 11
K.7 SPREADING AND COMPACTING WASTE 12
K.7.a Waste Layer Thickness and Compaction Frequencies 13
K.7.b First Layer Thickness 14
K.7.c Slopes and Lift Depth 14
K.7.d Working Face 14
K.7.e Initial Cover Controls 14
K.7.f Initial Cover Frequency 15
K.7.g Intermediate Cover 15
K.7.h Final Cover 16
K.7.h.(1) Temporary Final Cover 16
K.7.h.(2) Final Cover 16
K.7.i Scavenging and Salvaging 16
K.7.j Litter Policing 16
K.7.k Erosion-Control Procedures 16
K.8 LEACHATE MANAGEMENT 17
K.9 GAS MONITORING and management PROGRAM 17

K.10 STORMWATER-MANAGEMENT SYSTEM 18
K.10.a Leachate Reduction 18
K.10.a.(1) Stormwater Diversion 18
K.10.a.1.1 Site Stormwater System 18
K.10.a.1.2 Phases I-VI 19
K.10.a.1.3 Capacity Expansion Area 19
K.10.a.1.4 Other Site Stormwater Basins 19
K.10.a.(2) Rain Tarps 20
K.10.a.(3) Stabilized Slopes 20
K.10.a.(4) Closure 20
K.11 EQUIPMENT AND OPERATION 20
K.11.a Operating Equipment 20
K.11.b Reserve Equipment 21
K.11.c Communications Equipment and Personnel Facilities 21
K.11.d Dust Control 21
K.11.d.(1) Phases I-VI 21
K.11.d.(2) Capacity Expansion Area 21
K.11.e Fire Protection and Chemical Fires 22
K.11.f Litter Control Devices 23
K.11.g Signs 23
K.12 ALL-WEATHER ACCESS ROAD 23
K.13 ADDITIONAL RECORDKEEPING 24
K.13.a Permit Application Development 24
K.13.b Monitoring Information and Background Water Quality 24
K.13.c Remaining Site Life Estimates 24
K.13.d Archiving and Retrieving Records 24

APPENDICES

APPENDIX A TRAINING COURSES
APPENDIX B RESERVE EQUIPMENT AGREEMENT
APPENDIX C COMPREHENSIVE EMERGENCY MANAGEMENT PLAN
APPENDIX D RANDOM INSPECTION AND VIOLATION REPORT
APPENDIX E SPECIAL WASTE PROGRAM
~~APPENDIX F TABLE 1. FILLING SEQUENCE AND PROJECTED DISPOSAL RATEAPPENDIX REMOVED~~
~~APPENDIX G APPENDIX REMOVEDSECTION 7 AND 8 CONNECTION DETAILS~~
APPENDIX ~~H~~F LANDFILL GAS MONITORING POINTS

~~L.2.e.(2)~~K.2.c.(2) Motor Vehicles

Motor vehicles will not be accepted at the facility; however, mobile homes will be accepted for disposal in the landfill at the active working face if they cannot be recycled. Appliances (white goods) and waste tires from mobile homes must be removed before being accepted at the facility and processed as stated in Section L.2.c.

~~L.2.e.(3)~~K.2.c.(3) Shredded Waste

The Facility will accept shredded tires from the on-site tire-shredding facility. The SWMD uses shredded tires for initial cover since shredded tires are an effective initial cover for controlling disease, vectors, odors, litter, and scavenging. This practice benefits the County by conserving valuable landfill space and recycling materials.

~~L.2.e.(4)~~K.2.c.(4) Asbestos Waste

Asbestos waste will be accepted at the Facility. The entire footprint of Phases I-VI and the Capacity Expansion Area will be designated as an asbestos disposal area. Before landfilling, the material must be wetted and placed in a leak-tight wrapping. The bags will be placed in a prepared trench at the working face. Materials such as transite paneling and pipe insulation must be wrapped sufficiently to maintain their integrity during disposal. After placement, the bags will be immediately covered with 6 inches of asbestos-free material (i.e., soil or select waste without large or sharp objects that may damage the asbestos packaging). Copies of the asbestos waste shipment records complying with 40 CFR 61-Subpart M will be maintained on site.

~~L.2.d~~K.2.d Weighing Incoming Waste

All incoming waste will be weighed before disposal in the landfill. The existing scales are fully automated and computerized, with the capability for data storage and retrieval for daily record keeping and reporting. All customers are issued receipts upon exiting the Facility.

~~L.2.e~~K.2.e Traffic Control

The working face area is the most equipment-intensive area of operation for the Facility. In this area, solid waste transportation vehicles arrive, turn around, back up to the working face, and unload the solid waste. Landfill operation equipment will continually spread and compact the solid waste as it is received. During normal operating conditions, only one working face will be active at any given time, with the solid waste at all other areas within the landfill secured by a minimum of 6 inches of initial cover. The working face may alternate from month to month from Phases I-VI to the active cells at the Capacity Expansion Area and back. It is intended that only one working face will be active at a time at either Phases I-VI or the CEA. However, during the initial placement of selected waste in Section 8 Lift 1 Cell A or in Section 9, a temporary working face will be maintained at Phases I-VI for the placement of large rigid objects and construction demolition debris.

The approach to the working face will be maintained in an accessible condition so that two or more vehicles may safely unload simultaneously side by side. When unloading is complete, the vehicles will immediately leave the working face area. Entrance and exit haul roads will be provided (both temporary and permanent) and maintained to facilitate future unloading operations. Contractor personnel will direct traffic as necessary to expedite safe movement of vehicles and to ensure that all waste transport vehicles dump within the designated area.

~~L.2.f~~K.2.f Method and Sequence of Filling Waste

~~L.2.f.(1)~~K.2.f.(1) Phases I-VI

Each phase will be landfilled as shown in the Operating Sequence Plans provided separately with the Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9) Permit Renewal Application. The lifts in each of the several phases are shown on one sheet to minimize the number of sheets, but each lift is independent of the others.

One working face will be maintained for the anticipated traffic maneuvering during waste fill operations. Typical lifts consist of two lifts 8 to 10 feet high, to reach the maximum elevation shown on the operating sequence drawings including daily and intermediate cover. Because of the phosphatic clay liner stability in Phases I-VI, at no time shall a lift exceed the maximum height shown on the operating sequence drawings. The cells will be placed as shown on the operating sequence drawings and will be filled moving from west to east across Phase I to the line dividing Phase I from Phase II. Phase II will be filled beginning on the east side of Phase II and proceeding from east to west across Phase II to the line dividing Phase II from Phase III. The filling of cells in Phase III will begin on the east side of Phase III and proceed from east to west across Phase III to the line dividing Phase III from Phases I, IV, V, and VI.

The cells in Phase IV will be filled from the center of the site (east side of Phase IV) against Phases I and III, proceeding from east to west across Phase IV to the western perimeter of the landfill. The filling of cells in Phases V and VI will proceed counterclockwise from the northeast corner against Phase III around across Phases V and VI to the southwest corner of the landfill against Phase I-VI. The Contractor will prepare filling plans in accordance with the sequence drawings 45 days before the development of a new lift. Subsequently, grades for the new lift will be set on grade stakes by a registered engineer, land-surveyor, or by an authorized agent.

~~Refer to Table 1 Southeast Landfill Filling Sequence for Phase I-VI and Project Disposal Rate Diversion to the Capacity Expansion Area provided in Appendix F.~~

~~L.2.f.(2)~~K.2.f.(2) Section 7 of the Capacity Expansion Area

The temporary filling in Section 7 was complete as of June 2005. The outer sideslopes have not reached their final design 3H:1V slope. The temporary sideslopes of Section 7 will be filled to reach their maximum design slope of 3H:1V upon construction of Section 9.

~~L.2.f.(3)~~K.2.f.(3) Section 8 of the Capacity Expansion Area

The temporary filling in Section 8 was completed as of May 2007. The outer sideslopes have not reached their final design slope of 3H:1V. The temporary sideslopes of Section 8 will be filled to reach their design slope upon construction of Section 9.

Initial Waste Placement

In general, the initial waste placement will begin in the southwest corner and proceed northeast until it reaches the temporary stormwater separation berm. Refer to Part L.7.b for requirements for the first layer of waste. Waste placement will continue up to a crest elevation of 150.8 feet NGVD with exterior sideslopes no steeper than 4 feet horizontal to 1 foot vertical (4H:1V). The working face will be adequate for the anticipated traffic maneuvering during waste-filling operations. Cover soil will be brought from the existing borrow area north of the Section 8 area. Daily lifts of the waste will be no thicker than 8 to 12 feet including cover soils.

Two temporary stormwater separation berms were used to separate leachate from stormwater in the interior of the Section 8. The middle and eastern leachate collection pipes in Section 8 were plugged with a removable air ball plug. Stormwater which does not come in contact with waste material will be pumped into the perimeter stormwater ditch on the eastside of Section 8. The stormwater in the ditch will then drain to Basin C.

A rain tarp was used to cover the sideslopes of the Section 8 area to minimize erosion and washout of the slopes. Before placement of waste, all rain tarps were removed from the sideslopes.

Before placement of waste in the middle and eastern portions of Section 8, the air ball plug was removed from the leachate collection pipe.

Filling of Lift 1

Access to the Section 8 area will continue from the southwest corner for Lift 1. Filling in this area has begun in the southwest corner and will continue in a back-and-forth pattern in Lift 1A. The waste in Lift 1A will be placed against the previously placed waste in Section 7, moving northeast until it reaches the temporary perimeter ditch located on the north and west side of Section 8. Filling will continue in a similar pattern for Lifts 1B and 1C beginning at the southwest corner of each cell, overlapping the slopes of Section 7, and progressing northeast until it reaches the temporary perimeter ditch. The entire Section 8 will be filled and raised so stormwater can sheet flow to the perimeter ditch. Lift 1 will eventually be raised to a crest elevation of 156 feet NGVD.

Stormwater runoff west of the crest will sheet flow into the perimeter ditch located north of the Capacity Expansion Area to Basin C. As filling progresses to the east, stormwater collected east of the temporary stormwater separation berms will be considered stormwater and pumped to the

perimeter ditch east of Section 7. The temporary stormwater separation berms will be used to separate leachate from stormwater. Once waste material has been placed east of the temporary stormwater separation berms or if stormwater comes in contact with waste material, the stormwater in this area will be considered leachate.

When filling of the entire base of Section 8 is complete, stormwater runoff from the west and north slopes of the fill area will sheet flow into the perimeter ditch located north of the cell to Basin C.

SPECIAL SECTION 7 AND 8 CELL CONNECTION

Before filling across the leachate collection lines in Cell A of the initial lift and Cell B of Lift 1, the east-west separation berm between Sections 7 and 8 was removed (only in the immediate area of the leachate collection pipe) to provide additional redundancy should the leachate pipe become clogged or collapse. The removal of the berm allows leachate to flow freely from Section 8 into Section 7. ~~Refer to the berm removal figures in Appendix G.~~

Filling of Lift 2

Filling in Lift 2 will proceed beginning in Lift 2D at the southwest corner. Lift 2D will be placed against the previously placed waste in Section 7. Lifts 2D, 2E, and 2F filling will proceed from the southwest to the northeast, reaching a crest elevation of approximately 175 feet NGVD with 4H:1V exterior sideslopes and a 20H:1V top slope. Vehicle traffic will continue to access the landfill by the temporary haul road previously constructed. As an alternative access route to the Section 8 area, a second temporary access road will be constructed on the south side of Section 7. Traveling across the top of Section 7 will provide access to Section 8.

Stormwater for Lift 2 will drain from the crest to the temporary sideslope stormwater swale installed at approximately elevation 165 feet NGVD. Stormwater for the Lift 2 area will be conveyed to the northeast corner where a temporary stormwater downchute will be constructed. Stormwater conveyed in the temporary stormwater downchute will discharge into the perimeter ditch that leads to Basin C.

Filling of Lift 3

Waste filling will continue in Lift 3 beginning in the southwest corner with Lift 3G. Lift 3G filling will continue from the crest elevation of 165 feet NGVD moving north until it reaches grade elevation 190 feet NGVD. Lift 3G filling will progress toward the northeast reaching an approximate crest elevation of 190 feet NGVD. Lifts 3G will consist of waste filling overlapping the top area of Section 7 and will be graded to 4H:1V sideslopes. Filling will continue on the upper portion of Sections 7 and 8 with a final 20H:1V top slope. Sections 7 and 8 will be filled to a final elevation of 196 feet NGVD.

Stormwater for Lift 3 will drain from the crest to the temporary sideslope stormwater swale installed at approximately elevation 190 feet NGVD. Stormwater for this lift area will be conveyed to the northeast corner where the temporary downchute from Lift 2 will be extended to Lift 3. Stormwater conveyed in the temporary stormwater downchute will discharge into the perimeter ditch that leads to Basin C.

~~L.2.f.(4)~~K.2.f.(4) Section 9 of the Capacity Expansion Area

The proposed filling sequence for Section 9 is presented in the drawings provided with the May 2007 RAI Response document for the facility operations permit renewal. The Section 9 area has been divided into three cells by separation berms to manage the amount of leachate generated and stormwater. Filling of the Section 9 area will begin on the southern end of the cell. Waste placement will continue in the southern cell until 20 feet of waste has been placed in the cell. Waste placement will begin with an initial 4-foot lift of select waste. The other two cells will have rain tarps so stormwater can be pumped from these cells. After 20 feet of waste is placed in the southern cell, the filling operation will proceed to the center cell. Again, 20 feet of waste will be placed in the cell with the first 4 feet being select waste, and the filling operation will proceed to the last cell. Once 20 feet of waste has been placed across all of Section 9, the filling operation will resume on the north ~~south~~side and proceed south~~north~~ across the area.

The filling will also be placed against the west sideslopes of Sections 7 and 8. The filling in Section 9 will proceed south to north and against the sideslopes of both Sections 7 and 8. As the Operations Fill Sequence Drawings show, filling will occur to bring the sideslopes of Sections 7, 8, and 9 to their design slope of 3(h) to 1(v) slopes. The filling of Section 7, 8, and 9 areas will bring the combined areas to an approximate elevation of 285 feet.

~~L.2.g~~K.2.g Waste Compaction and Application of Cover

Waste will be placed at the top or bottom of the working face and spread toward the bottom or top, respectively. Waste will be spread in approximately 2-foot-thick layers and compacted with a minimum of three to five passes of the landfill compactor. The spreading and compacting is intended to be a continuous operation. A minimum in-place waste density of 1,000 pounds/cubic yard (lb/cy) will be achieved.

A minimum of 6 inches of compacted initial cover will be placed over the waste at the end of each operation day. Before the working face between landfills is moved, the area that will remain inactive will be covered with compacted initial cover, soil, or a mixture of 50 percent unscreened wood mulch and 50 percent soil (no ash), with sufficient thickness (minimum 6 inches) to prevent erosion and the mixing of leachate with stormwater. A minimum of 1 foot of intermediate cover, in addition to the 6-inch initial cover, will be applied and maintained within 7 days of cell completion if additional solid waste will not be deposited within 180 days of cell completion.

When landfilling operations begin again in areas with intermediate cover, the intermediate cover (free of waste) will be stripped from the surface (upper 12 inches) and reused over other areas

needing intermediate cover. The stripped intermediate cover will be pushed ahead and used as perimeter berms around the active working face area. The intermediate areas are graded to promote drainage (minimum 2 percent slope) and seeded to prevent erosion.

~~L.2.h~~K.2.h Operation of Leachate, Gas and Stormwater Controls

See Sections L.8, L.9, and L.10 for leachate, gas, and stormwater controls, respectively.

~~L.2.i~~K.2.i Water Quality Monitoring

~~L.2.i.(1)~~K.2.i.(1) Phases I-VI

Groundwater and surface monitoring is included in Section 2 of the Monitoring Plan Evaluation Phases I-VI and the Capacity Expansion Area (Sections 7, 8 and 9). Leachate monitoring is included in Section 9.0, the effluent monitoring is included in Section 9.1.2, and the biosolids monitoring is included in Section 9.1.3 of the Leachate Management Plan.

~~L.2.i.(2)~~K.2.i.(2) Capacity Expansion Area

Water quality monitoring for Sections 7, 8, and 9 is included in Section M of the Permit Application. The proposed monitoring plan is designed to be consistent with the conceptual sequencing plan for build-out of the Capacity Expansion Area.

~~L.2.j~~K.2.j Leachate Collection and Removal System Maintenance

Refer to the current LMP Report.

~~L.3~~K.3 OPERATING RECORD

The operating record will be maintained on site in the Administration Building or at the SWMD office. The operating record will be accessible to the Facility operation personnel and will be available for inspection by FDEP. The records include the following:

- Waste reports
- Operation permits
- Construction and closure permits including any modifications
- Monitoring results, such as water quality testing
- Notifications to FDEP
- Engineering drawings
- Training certifications as required by Chapter 62-701.320(15), FAC

~~L.4~~K.4 WASTE RECORDS

The amount of solid waste received at the landfill will be weighed and recorded in tons per day in accordance with Rule 62-701.500(4), FAC. Waste reports will be compiled monthly and kept on site with the operating record. Waste will be listed by the following types and the amount of tons received will be recorded:

- Processable, to include
  - Household waste
  - Treated biomedical waste

- Non-processable, to include
  - Industrial waste
  - Industrial sludge
  - Air/water treatment sludge
  - Commercial waste
  - Incinerator by-pass waste
  - Agricultural waste
  - Ash
  - Waste tires
  - Construction and demolition debris
  - Asbestos
  - Yard trash

All records will be retained at the SWMD administration office. Report types include daily, month-to-date, and year-to-date totals of waste received from the various haulers. The records will be available to the FDEP for review.

~~L.5~~K.5 ACCESS CONTROLS

The perimeter fence and berms around the Facility prevent the entry of livestock, protect the public from exposure to potential health and safety hazards, and discourage unauthorized entry or uncontrolled disposal of unauthorized materials. 'No trespassing' signs are also posted along the perimeter fence. The SWMD and Contractor personnel will inspect the premises daily. The gate at the Facility entrance and all other gates will be kept locked at all times the landfill is closed, and the Contractor will provide security personnel to guard the Facility during non-operating hours.

~~L.6~~K.6 LOAD-CHECKING PROGRAM

The SWMD has established a random-load-checking program as referenced in Part L.2.c to detect and prevent disposal of unauthorized wastes into the landfill. In addition, site access control discourages the disposal of unauthorized and hazardous wastes. A sign at the entrance of the Facility explains the types of waste prohibited at the landfill.

In accordance with Rule 62-701.500(6)(a), FAC, a minimum of three random loads will be checked at the active working face(s) each week. The selected drivers will be directed to discharge their loads at a designated location next to the working face. If any unauthorized special waste (i.e., lead-acid batteries, used oil, yard trash, white goods, and whole tires) is found during the random inspection or as part of routine operations, the waste will be segregated and removed from the site for recycling as described in Part L.2.c. These special wastes will be stored next to the working face and removed from the site within 30 days.

If an unauthorized waste (i.e., hazardous, PCBs, untreated biomedical, or free liquid) is found, the generator of the waste, if known by the driver, will be contacted to determine the waste source. Either the hauling company or the generator of the waste will be directed to remove the unauthorized waste. The random load inspections will be documented on a report form which includes the date and time, name of the hauling company and the driver of the vehicle, the vehicle license number, the source of the waste or generator, and any observations or notes made by the inspector (Appendix D). The inspector will identify and note all unauthorized waste found during the random load inspection, estimated quantity, and the action taken. The inspector will sign the inspection form that will be retained at the Facility.

If the waste owner cannot be identified, the waste will be evaluated by Contractor personnel in charge. The waste will be isolated and contained and will not be moved until the waste is determined to be acceptable. If it is determined that the waste is not suitable for disposal, the SWMD will be notified for additional assessment and testing of the waste. Subsequently, a record of the decision will be placed into the daily operations file for the Facility.

If any regulated hazardous waste is discovered in a random load check or is identified by an operator or spotter, the Landfill Manager and the FDEP will be notified immediately as well as the generator or hauler, if known. The Landfill Manager is trained in the proper procedure to follow including notifications. If the generator or hauler is not known, the SWMD will be responsible for disposing of the hazardous waste at a properly permitted Facility. The hazardous waste will be isolated and restricted from access until it is removed from the landfill by a qualified hazardous waste contractor. Hazardous wastes will be removed from the site within 24 hours.

As required in Rule 62-701.320(15), FAC and discussed in Park L.1, inspectors, scale-house attendants, equipment operators, and landfill spotters will be trained to identify unacceptable wastes and hazardous wastes.

~~L.7~~K.7 SPREADING AND COMPACTING WASTE

All loads coming into the Facility, including small-volume unloading containers, will be delivered to the working face daily. To preserve the prepared base area and to protect the leachate collection system, traffic will be prohibited to operate directly on the chipped tires overlying the drainage layer. Traffic will only be allowed to maneuver on top of the compacted and covered waste. Therefore, the initial lift of all new disposal areas will be accessed by

vehicles from the top of the working face. The waste will be spread and compacted from the top, keeping all heavy equipment off the prepared base.

For all subsequent lifts, the waste placement will vary depending on field conditions. Some lifts will be built from the bottom of the active working face. At the discretion of the operator, waste will also be placed from the top of the active working face and spread toward the bottom. Waste will be placed against the covered working face of the previous day's waste. The first cell will act as a means of access and as a berm to guide the placement of waste for the remaining cells. See Part L.2.g for additional information on waste compaction.

The following guidelines will provide an efficient and environmentally sound method of operation for the Facility:

- Portable litter fencing will be placed at the working face where needed to reduce windblown litter.

- Cracks or eroded sections in the surface of any filled and covered area will be repaired and a regular maintenance program will be followed to eliminate pockets or depressions that may develop as waste settles.

- If 12 inches of intermediate cover (free of waste) has been placed over a partially filled area, it will be removed, reused, and stockpiled for later use before the placement of a new lift.

- Tire chips, ash residue from incinerated MSW, tarps, soil, or a mixture of soil/mulch may be used for initial cover. Stormwater runoff will not be allowed from waste-filled areas covered with tire chips, ash, or tarp. Runoff from outside the bermed working face area will be considered stormwater only if the flow passes over areas that have no exposed waste and have been adequately covered with at least 6 inches of compacted soil (or a mixture of soil/mulch) which is free of waste and has been stabilized to control erosion.

- Sufficient cover material will be stockpiled near the working face to provide an adequate supply for initial cover operations. In some areas, daily stockpiling may not be necessary because of the proximity of the borrow area.

~~L.7.a~~K.7.a Waste Layer Thickness and Compaction Frequencies

Landfill personnel will direct all incoming waste to be unloaded at the toe or top of the working face. Waste will be spread in approximately 2-foot-thick layers and compacted with a minimum of three to five passes of the landfill compactors. The spreading and compacting is intended to be a continuous operation, and waste will not be placed in a layer until the previous layer is compacted.

~~L.7.b~~K.7.b First Layer Thickness

For Phases I-VI, the initial waste layer has been placed. To protect the integrity of the leachate collection system of the landfill, traffic and heavy equipment were not allowed directly on the sand drainage layer.

The procedure for filling and compacting the first layer of waste for the permitted sections at the Capacity Expansion Area will protect the integrity of the liner and leachate collection system. Traffic directly on the chipped tires will be prohibited, and the first lift will be accessed by vehicles from the top of the working face. An initial 4-feet-thick lift of selected waste will be placed over the protective layer (i.e., chipped tires). The selected waste will be MSW and ash not containing large rigid objects and will be spread and compacted from the top of the working face.

~~L.7.e~~K.7.c Slopes and Lift Depth

The working face slope will be maintained at a slope no steeper than 3H:1V. Each cell will be constructed in a horizontal lift to an approximate height of 8 to 12 feet, with the maximum height as shown on the Drawings provided separately with the Phases I-VI and the Capacity Expansion Area (Sections 7, 8, and 9) Operations Permit Renewal Application.

~~L.7.d~~K.7.d Working Face

Cells will be constructed with slopes no steeper than 3H:1V, and a working face will be maintained to provide unhindered vehicle access to the working face while minimizing exposed areas and unnecessary use of cover material. The working face may move from month to month from Phases I-VI to the active cells at the Capacity Expansion Area. The working face will be bermed with soil or a mixture of 50 percent unscreened wood mulch and 50 percent soil (no ash) to prevent the mixing of leachate with stormwater.

~~L.7.e~~K.7.e Initial Cover Controls

At the end of each working day, the waste will be covered with a 6-inch lift of compacted cover material such as soil, a mixture of 50 percent unscreened wood mulch and 50 percent soil (or ash), ash, chipped tires, or tarps. These cover materials will provide vector control, mitigate windblown litter, reduce the potential for fire, and reduce odors and moisture infiltration into the waste. The initial cover material will be spread over the exposed waste and, with the exception of tarps, compacted by the equipment used to spread the cover (i.e., bulldozer or scraper). The initial cover material will not be removed before placement of successive lifts of waste, with the exception of tarps, which will be removed before placement of successive lifts. Any remaining litter and cleanings from equipment will be placed at the bottom of the completed cell and covered.

Before the working face between landfills is moved, the area that will remain inactive will be covered with compacted cover (free of waste), soil, or a mixture of 50 percent unscreened wood

mulch and 50 percent soil (no ash), with sufficient thickness (minimum 6 inches) to prevent erosion and the mixing of leachate with stormwater.

~~L.7.f~~K.7.f Initial Cover Frequency

At the end of each day's operation, the active landfill working face will be thoroughly compacted, and cover material will be spread and compacted to a depth of 6 inches over the day's entire working face and sideslopes. Initial cover material is discussed in Part L.7.e. If needed, the portable barriers that define the working face will be moved to the positions required to define the next day's operation.

The Facility is equipped to excavate and haul cover materials from on-site borrow areas to the working face. Normally, an elevating scraper is used to excavate and haul cover material from the borrow area to the working face where it can be spread by a scraper or bulldozer.

When using a mixture of soil and mulch the following process will be used:

1. The area to be excavated will be identified in advance. The area used for mulch mixing will not be larger than 15 acres.

2. A 4-foot layer of mulch will be placed over the designated excavation area.

3. The mulch placed in a given area will not be allowed to remain in place longer than 2 years.

4. As the area is excavated, the excavator will take bucket loads of the mulch layer plus 4 feet of soil, mixing the load as it is placed in the dump trucks.

5. The trucks will deliver the load to the working face. As the loads are deposited, additional mixing will occur.

6. The soil/mulch mixture will be spread over the working face using a bull dozer, causing additional mixing.

~~L.7.g~~K.7.gIntermediate Cover

Intermediate cover will be placed and maintained over cells which will not receive additional solid waste or final cover within 180 days as required in Rule 62-701.500(7)(f), FAC. The working face will be bermed to reduce stormwater impacts. Sideslopes will be well maintained to minimize erosion. Intermediate cover material will be placed over the landfill surface within 7 days of cell completion if additional waste will not be placed within 180 days. Intermediate cover will be placed to a minimum compacted thickness of 12 inches on top of the 6 inches of compacted initial cover. On-site material free from organic matter, roots, and branches will be used for intermediate cover. Specifically, phosphatic waste clays available on site will be mixed with sand and used for intermediate cover.

To conserve the soil/clay mix, a portion of the intermediate cover will be removed immediately before placement of additional solid waste on top of the lift or before placement of additional waste. The soil/clay mix (free of waste) will be stripped and reused as intermediate cover material. The stripped intermediate cover will be pushed ahead as needed for the perimeter interceptor berms constructed around the active working face area. The intermediate cover areas will be graded to promote drainage (minimum 2-percent slope) and seeded to prevent erosion.

~~L.7.h~~K.7.h Final Cover

~~L.7.h.(1)~~K.7.h.(1) Temporary Final Cover

A temporary final cover consisting of a soil layer will be installed over cells in Phases I-VI or the CEA which will not receive additional solid waste. The temporary final cover will consist of 12 inches of 10^{-5} cm/sec soil. Vegetative cover will be placed on areas which have reached interim final grade in Phases I-VI and the CEA. ~~These areas will not receive additional waste until the end of the consolidation period before waste can be filled on top of the area.~~

~~L.7.h.(2)~~K.7.h.(2) Final Cover

~~When portions of the Facility are brought to design grades,~~ Ffinal cover will be placed ~~over the areas that have~~when Phases I-VI or the CEA has attained final elevation within 180 days in accordance with Rule 62-701.500(7)(g), FAC. Vegetative cover will be established. The final cover system and sequence for final cover placement will be submitted with the application for closure at least 90 days before ~~the partial~~ closure ~~of the sideslopes~~.

~~L.7.i~~K.7.i Scavenging and Salvaging

Except for such operations that are conducted as part of a recycling program, scavenging and salvaging are not permitted at the Facility.

~~L.7.j~~K.7.j Litter Policing

If necessary, portable litter fences will be placed downwind of the immediate working area to confine most of the windblown material. Litter around the site and the entrance roadways will be collected regularly and picked up within 24 hours, in accordance with Rule 62-701.500(7)(i), FAC. In addition, the Contractor maintains a litter crew to provide litter control on State Road (SR) 39 from the Lithia-Pinecrest intersection to CR 672 and on CR 672 to Balm-Boyette Road.

~~L.7.k~~K.7.k Erosion-Control Procedures

The Facility fill sequence and the drainage facilities have been designed to minimize erosion of landfill sideslopes and washout of adjacent areas. The landfill surface will be inspected daily for cracks, eroded areas, and depressions in the landfill surface. Corrective action will be implemented within 7 days of detection. In areas where standing water develops, the area will be

filled, compacted, and graded to provide positive drainage. Where the standing water problem cannot be corrected by proper grading, temporary drainage ditches will be constructed to drain off the standing water. Intermediately covered areas or other areas that discharge to the stormwater management system and which exhibit significant erosion will be repaired as follows:

- If greater than 50 percent of the soil cover material has eroded, the area will be repaired within 7 days.

- If waste or liner is exposed, the area will be repaired by the end of the next working day.

~~L.8~~K.8 LEACHATE MANAGEMENT

Please see the current LMP.

~~L.9~~K.9 GAS MONITORING AND MANAGEMENT PROGRAM

SWMD personnel shall monitor and record landfill gas (LFG) reading quarterly at the perimeter LFG monitoring wells and in the Administration, LTRF, and Maintenance buildings. The locations of the existing LFG monitoring points are included in Appendix ~~H~~F. The ambient air and areas with slab penetration (areas with plumbing for water and drains) will be monitored inside these structures. The monitoring will be conducted for the Lower Explosive Limit (LEL) of methane using a GEM-500 Infrared Landfill Gas Analyzer (or equivalent). The probes will not be purged. Once the GEM is connected to the sampling port, the valve will be opened and the GEM pump will be started. The GEM reading will be observed and the value will be recorded.

When personnel must enter confined spaces or areas where dangerous gases may be present, the SWMD will follow the requirements in the "Code of Federal Regulations Title 29, Part 1910.146 OSHA" and the safety guidelines outlined in "A Compilation of Landfill Gas and Field Practices and Procedures" prepared by the SWANA Landfill Gas Division Health and Safety Task Force.

If methane is detected in concentrations greater than the regulatory limit (100 percent of the lower explosive limit at the property boundary or 25 percent of the lower explosive limit within structures), the SWMD will evaluate potential measures to correct the exceedances. If an unacceptable concentration of methane is detected in a monitoring location (i.e., a well or an on-site structure), the SWMD will immediately take appropriate actions to protect human health. The SWMD will notify FDEP and will re-monitor the location during each of the next 3 days. During this time the SWMD will evaluate potential causes of the exceedance and will implement procedures to remedy the situation if exceedances persist after the third day. Within 7 days of the initial exceedance, the SWMD will submit a remediation plan to FDEP in accordance with Rule 62-701.530(3)(a).

As described in Part L.7, the SWMD has a program for the placement of cover, which is effective for controlling disease, vectors, objectionable odors, and litter. No objectionable odors have been detected or reported by adjacent property owners. At least quarterly, or more frequently if necessary, qualified personnel from the SWMD will assess the presence of ambient objectionable odors at the perimeter monitoring points shown in Appendix ~~H~~F. If objectionable odors are detected at the property line, the SWMD will implement an odor-monitoring program as required by Rule 62-701.530(3)(b) FAC.

~~Passive flares connected to the leachate collection system cleanouts of the access pipes to Permanent Pump Station B (PPS-B) will reduce pressure buildup inside the leachate collection pipes and provide a path of least resistance for the landfill gas (LFG) to vent. The passive flares will also reduce the potential for LFG to accumulate in Permanent Pump Station A (PPS-A) and the pump control panel (see Figures H-5 and H-6 in Appendix H).~~
For information on the gas management program and gas collection and control system, please refer to the approved GCCS Design Plan submitted to FDEP by SCS Engineers dated July 11, 2008.

~~L.10~~K.10 STORMWATER-MANAGEMENT SYSTEM

~~L.10.a~~K.10.a Leachate Reduction

~~L.10.a.(1)~~K.10.a.(1) Stormwater Diversion

~~L.10.a.1.1~~K.10.a.1.1 Site Stormwater System

The stormwater system was designed to transport the maximum expected flows from a 24-hour, 25-year rainfall event and minimize the collection of standing water within the disposal areas. To efficiently collect and transport the stormwater runoff away from the disposal areas, the stormwater system will be maintained in good condition, with the proper slopes and free from obstructions. Erosion control measures and corrective action are described in Part L.7.k of the Operations Plan. In addition, the design maintains conformance with the site's Southwest Florida Water Management District (SWFWMD) Stormwater Permit (a copy was submitted in Volume 3 of the Construction Permit Application for the Capacity Expansion Area, Section 7, September 2002). The major stormwater component designs and operations are as follows:

- Interior Stormwater Separation berms are generally designed to be 3 feet high and 3 feet wide across the top with sideslopes of 3H:1V. The separation berms divide the contributing runoff areas to facilitate the collection and handling of stormwater as well as providing separation from leachate.

- Sideslope swales were designed to convey stormwater flow from the sideslopes to the downchutes as shown on the drawings. Sideslope swales will be constructed where needed and as shown on the sequence drawings

~~APPENDIX F~~

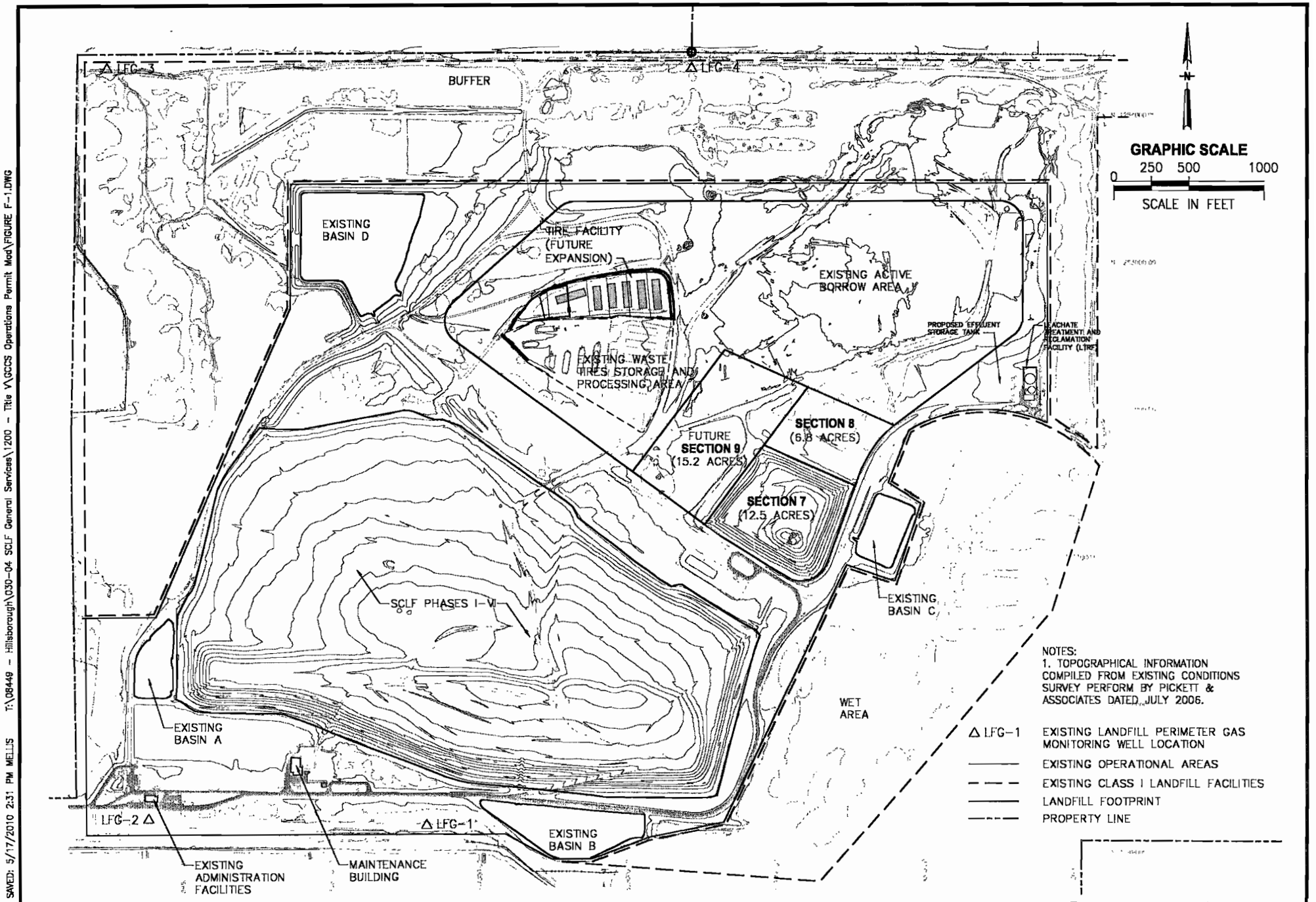
~~TABLE 1 FILLING SEQUENCE AND PROJECTED DISPOSAL RATE~~

~~APPENDIX G~~

~~SECTION 7 7 AND 8 CONNECTION DETAILS~~

APPENDIX ~~H~~F

LANDFILL GAS MONITORING POINTS



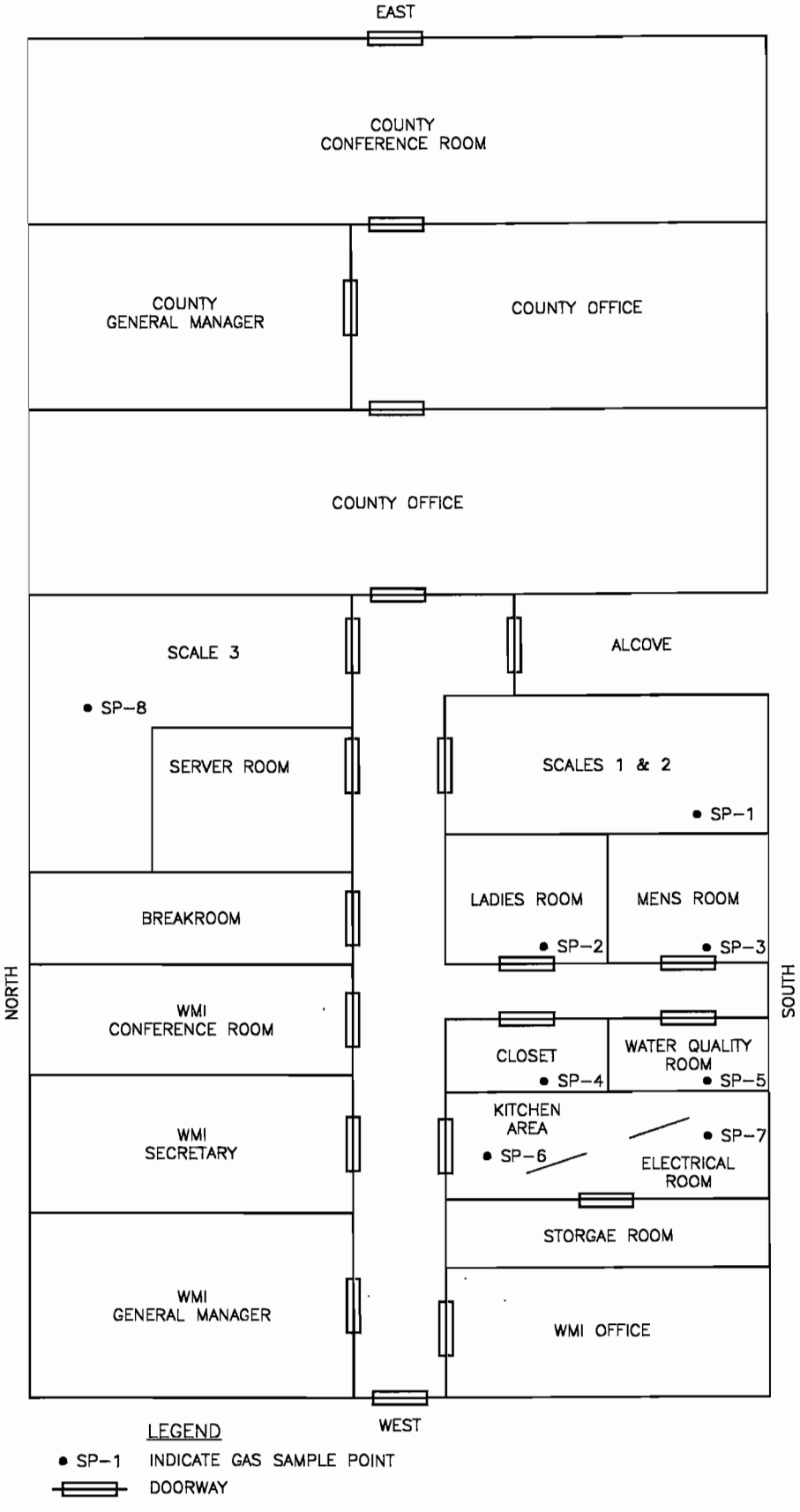
Revised July 2008

LAST SAVED: 5/17/2010 2:31 PM MELLIS T:\08449 - Hillsborough\030-04 SCLF General Services\1200 - Title V\GCCS Operations Permit Mod\FIGURE F-1.DWG

Plotted: 5/17/10 2:31pm mellis

Figure F-1. Landfill Gas Perimeter Monitoring Wells

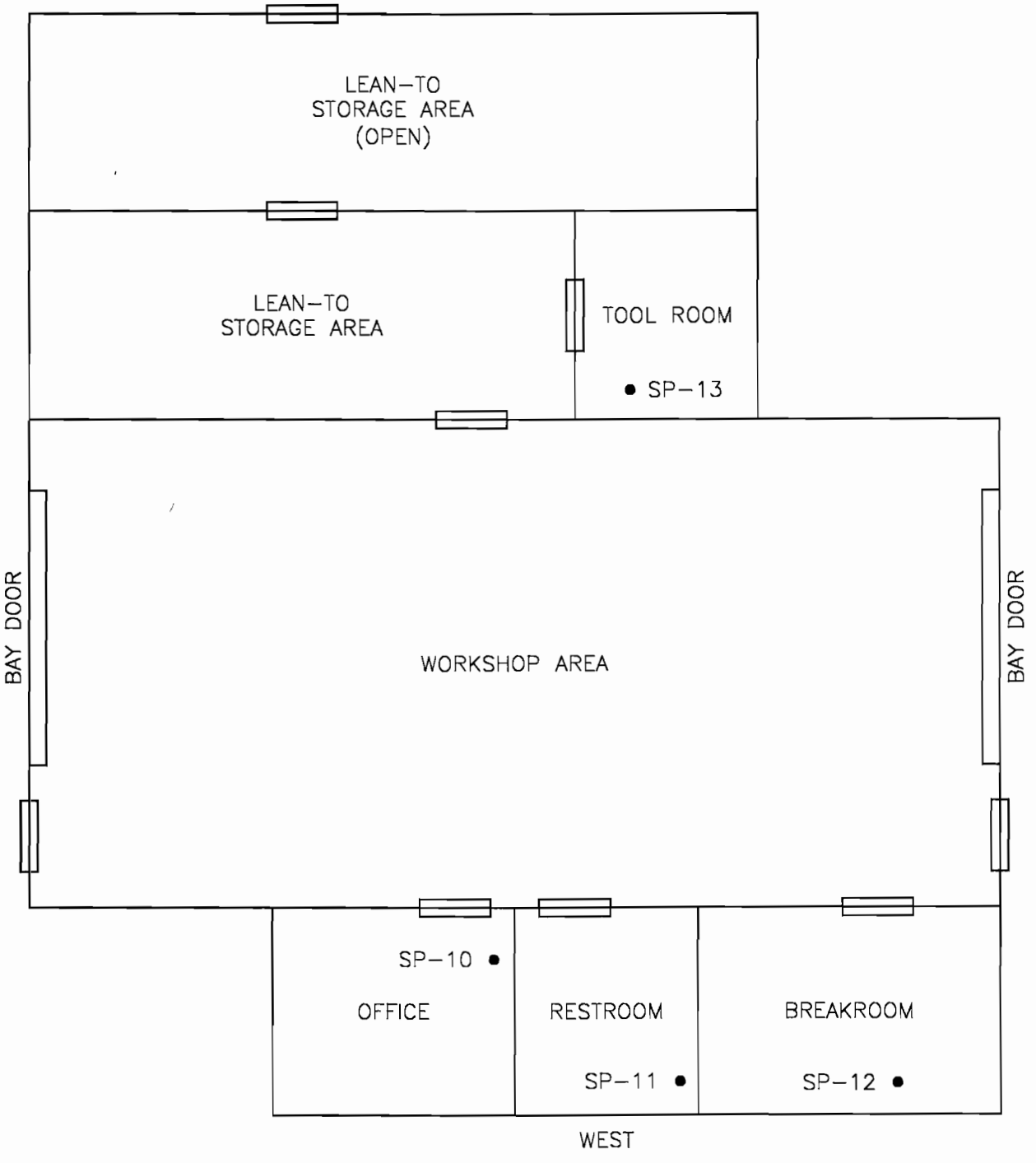
JONES EDMUNDS



Revised May 2010 NOT TO SCALE

Figure F-2 Scalehouse / Administration Building LFG monitoring Points

JONES EDMUNDS



LEGEND

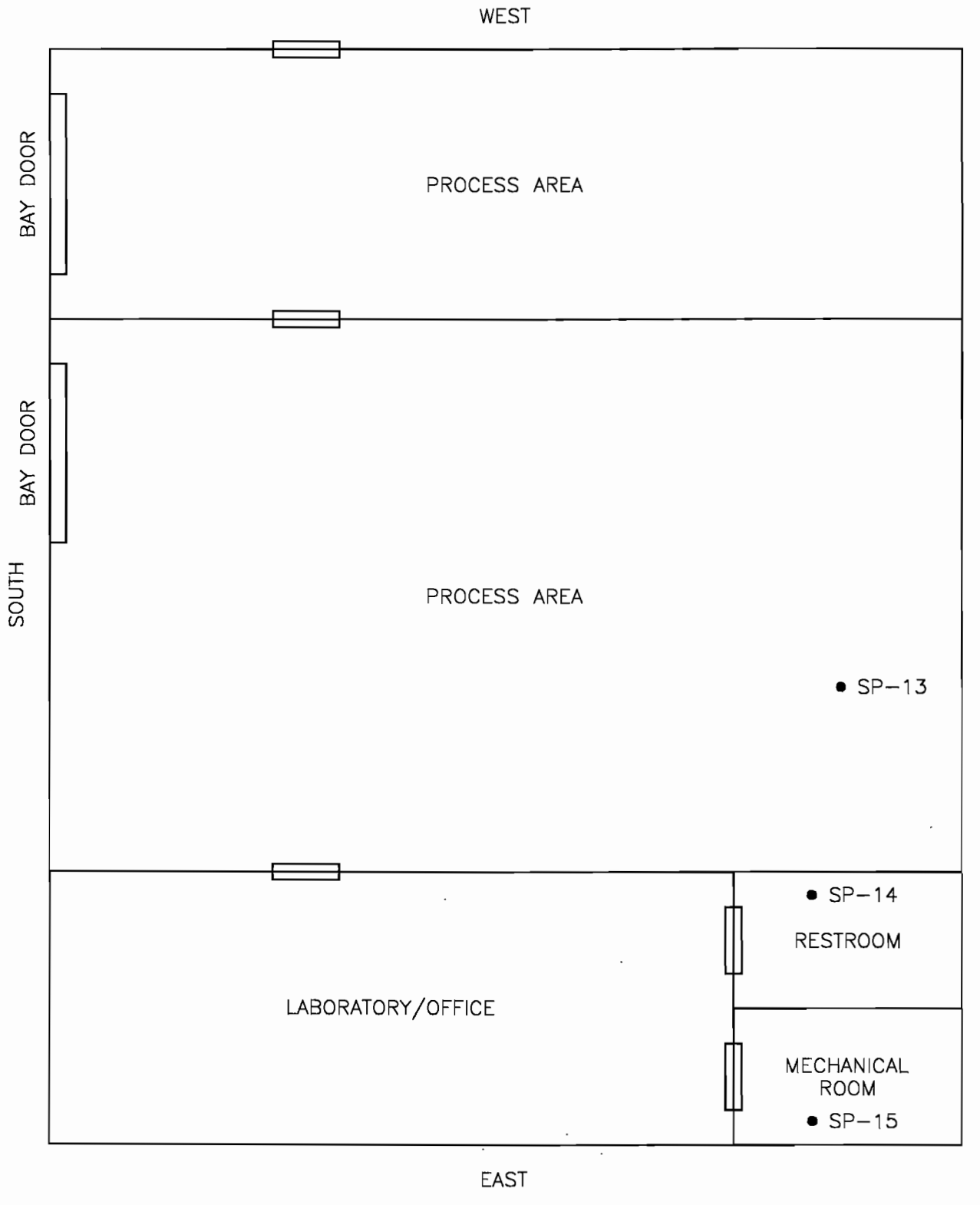
● SP–10 INDICATE GAS SAMPLE POINT

DOORWAY

Revised January 2007 NOT TO SCALE

Figure F–3 Maintenance Building LFG Monitoring Points

JONES EDMUNDS



LEGEND

- SP-14 INDICATE GAS SAMPLE POINT
- DOORWAY

Revised May 2010

NOT TO SCALE

Figure F-4

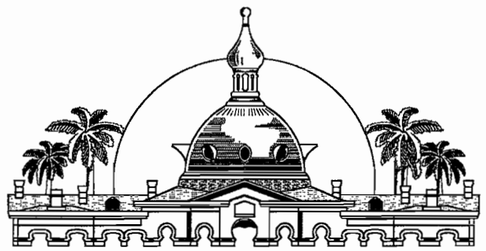
LTRF Office LFG Monitoring Points

JONES EDMUNDS

ATTACHMENT B

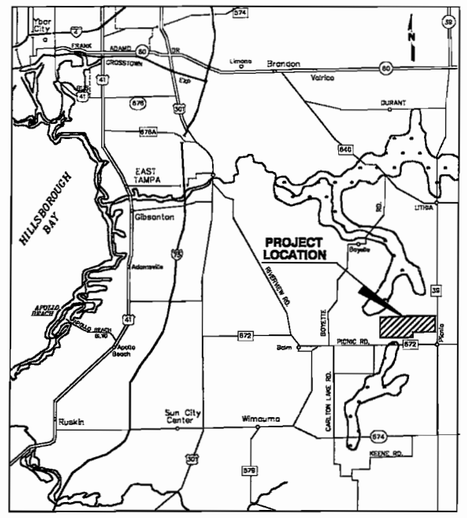
PHASES I-VI UPDATED OPERATING SEQUENCE DRAWINGS

SOUTHEAST COUNTY LANDFILL
PHASES I-VI OPERATING SEQUENCE
HILLSBOROUGH COUNTY SOLID WASTE MANAGEMENT DEPARTMENT
TAMPA, FLORIDA
APRIL 2010



BOARD OF COUNTY COMMISSIONERS

ROSE FERLITA, Commissioner District 1
KEN HAGAN, Commissioner District 2
KEVIN WHITE, Commissioner District 3
AL HIGGINBOTHAM, Commissioner District 4
JIM NORMAN, Commissioner District 5
KEVIN BECKNER, Commissioner District 6
MARK SHARPE, Commissioner District 7



LOCATION MAP

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3012 U.S. HWY. 301 N. SUITE 700
TAMPA, FLORIDA 33619
(813) 621-0080

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

CERTIFICATE OF AUTHORIZATION #1841

NOTE:

THESE OPERATING SEQUENCE DRAWINGS WERE DESIGNED BY SCS ENGINEERS. JONES EDMUNDS HAS REFORMATTED THE ORIGINAL DRAWINGS BUT HAS NOT ALTERED THE ORIGINAL DESIGN.

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E.# 65869

REVISED NOVEMBER 13, 2009 JONES EDMUNDS
ORIGINAL AUGUST 22, 1994 (SCS ENGINEERS)

GENERAL NOTES

1. THE EXISTING TOPOGRAPHY, DATED 7/25/2006, WAS OBTAINED FROM DRAWINGS PROVIDED BY PICKETT & ASSOCIATES, INC.

2. THE PROPOSED OPERATING SEQUENCES (LIFTS 8 – 23) ARE BASED ON THE EXISTING TOPOGRAPHY SHOWN ON THE (7/25/2006) AERIAL SURVEY. ACTUAL OPERATING SEQUENCES MAY NEED TO BE MODIFIED IN THE FIELD TO ALLOW FOR LANDFILL SETTLEMENT. REVISED GRADES WILL BE DETERMINED BASED ON THE MAXIMUM DESIGNED 20–FOOT LIFT HEIGHT.

3. SUFFICIENT TIME MUST BE PROVIDED TO ALLOW CONSOLIDATION TO OCCUR BEFORE ADDITIONAL LOADING CAN BE PLACED.
95 PERCENT CONSOLIDATION FOR A 20–FOOT LIFT OF REFUSE IS APPROXIMATELY 7 YEARS. THEREFORE, DEPENDING ON THE ACTUAL DISPOSAL RATES, THE POSSIBILITY EXISTS THAT THE HCDSW MAY HAVE TO DIVERT WASTE PLACEMENT TO ANOTHER FACILITY IF NOT ENOUGH CONSOLIDATION TIME IS ALLOWED FOR ANY 20–FOOT LIFT. ALL FILL PLACEMENT SCHEDULES SHOWN ON THE DRAWINGS REPRESENT A CONTINUOUS FILLING SEQUENCE BASED ON EXISTING AND PROJECTED DISPOSAL RATES PREPARED BY THE HCDSW.

4. THE LANDFILL LINER AND EXISTING DRAINAGE STRUCTURES WERE SURVEYED BY WEIDENER SURVEY AND MAPPING PA ON 2/23/94.

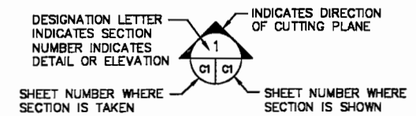
CIVIL LEGEND AND ABBREVIATIONS

9A	LIFT NUMBER
	DAILY PROGRESSION
	FILL PROGRESSION
	DRAINAGE FLOW DIRECTION
	APPROXIMATE PHASE FOOTPRINT
	APPROXIMATE LANDFILL LIMITS
	APPROXIMATE LIFT LIMITS
	APPROXIMATE LIMITS OF BORROW AREA
	APPROXIMATE FINAL COVER AREA AFTER EACH LIFT
	APPROXIMATE GEOMEMBRANE FINAL COVER AREA
	EXISTING SWALE
	SIDESLOPE DITCH
140	PROJECTED EXISTING CONTOUR
140	PROPOSED CONTOUR
	PROPOSED DOWNCHUTE
BVC	BEGIN VERTICAL CURVE
CTRD	CENTERED
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
EVC	END VERTICAL CURVE
150	EXIST. CONTOURS
EXP. JT.	EXPANSION JOINT
I.E.	INVERT ELEVATION
LF	LINEAR FEET
LT	LEFT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
RT	RIGHT
TYP.	TYPICAL
	VEGETATION
VC	VERTICAL CURVE
ø	DIAMETER
'	FOOT
"	INCH
A	CELL DESIGNATION
S–21	EXISTING DRAINAGE STRUCTURE
TS–4	TEMPORARY DRAINAGE STRUCTURE
	PROPERTY LINE
	STORMWATER STRUCTURE
HCDSW	HILLSBOROUGH COUNTY DEPARTMENT OF SOLID WASTE
MIN.	MINIMUM
HDPE	HIGH DENSITY POLYETHYLENE

INDEX OF DRAWINGS

SHEET NUMBER	DESCRIPTION
1	COVER SHEET
2	INDEX, LEGENDS AND GENERAL NOTES
3	FINAL DRAINAGE PLAN
~~4 *~~	~~PHASE IV – LIFT 4 (CURRENT LIFT)~~
~~5 *~~	~~PHASES I AND II – LIFTS 5 AND 6~~
~~6 *~~	~~PHASES V AND VI – LIFTS 7A AND 7B~~
~~7 *~~	~~PHASES V AND VI – LIFTS 7C, 7D AND 7E~~
8	PHASES I TO IV – LIFTS 8 TO 11
9	PHASES V AND VI – LIFT 12
10	PHASES I TO IV – LIFTS 13 TO 16
11	PHASES V AND VI – LIFT 17
12	PHASES I TO IV – LIFTS 18 TO 21
13	PHASES V AND VI – LIFT 22
14	PHASES V AND VI LIFT 23 (FINAL LIFT)
~~15~~	~~SEMI–ANNUAL LANDFILL SECTIONS 1~~
~~16~~	~~SEMI–ANNUAL LANDFILL SECTIONS 2~~
~~1 16B~~	~~SEMI–ANNUAL LANDFILL SECTIONS 3~~
~~1 16C~~	~~SEMI–ANNUAL LANDFILL SECTIONS 4~~
~~1 16D~~	~~SEMI–ANNUAL LANDFILL SECTIONS 5~~
~~1 16E~~	~~SEMI–ANNUAL LANDFILL SECTIONS 6~~
17	LANDFILL SECTIONS
18	DETAILS 1
19	DETAILS 2
20	DETAILS 3
* NOTE 1.)	REFER TO SCS DRAWINGS DATED MAY 2001

GENERAL LEGEND



SECTION AND DETAIL DESIGNATION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT TAMPA

* SCS ENGINEERS

LTR.	DATE	REVISIONS	BY	APPRD.
1	4/01	ADD SEMI–ANNUAL SECTIONS	*	

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

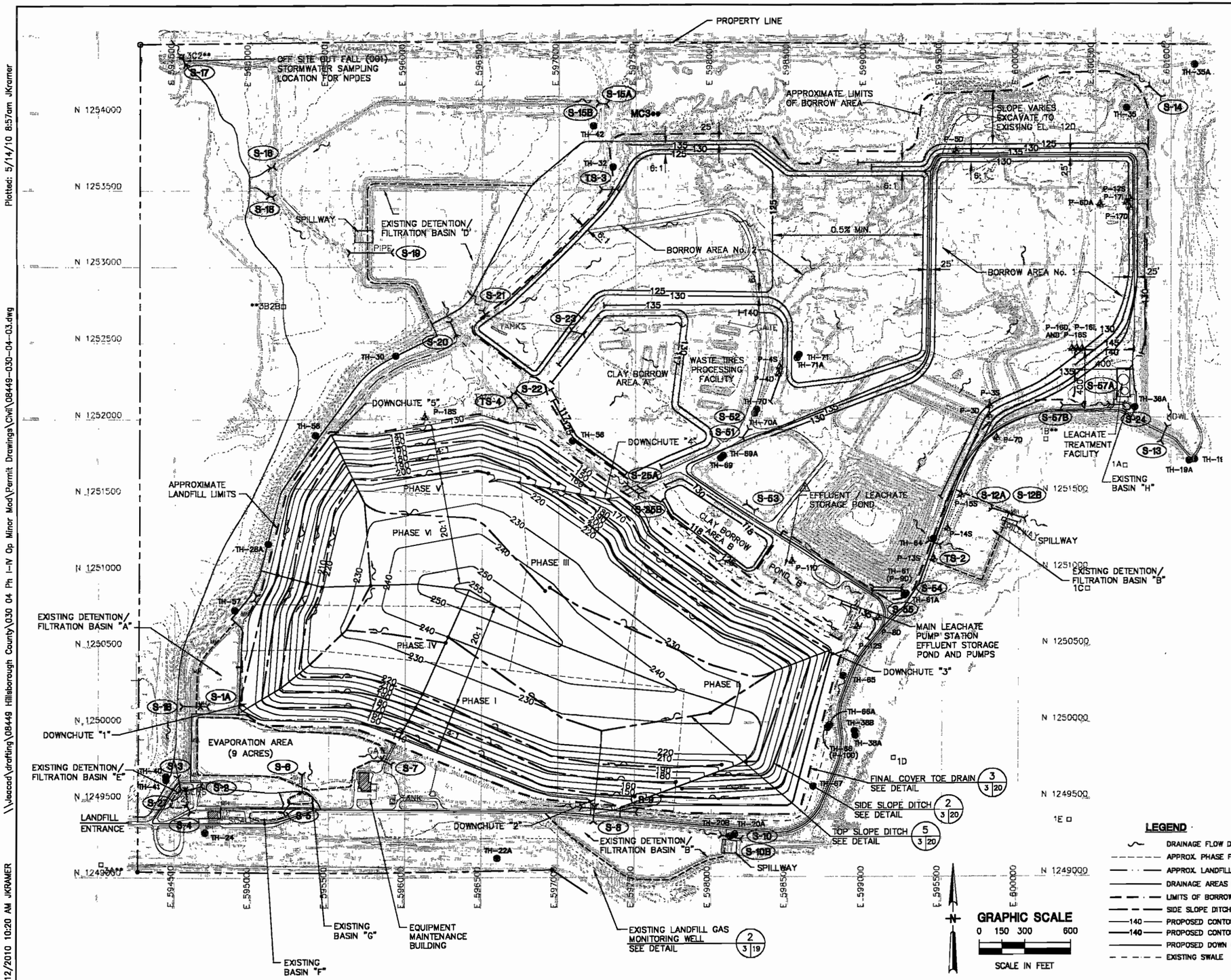
JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I–VI OPERATING SEQUENCE
INDEX, LEGENDS AND GENERAL NOTES

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
SCALE: AS SHOWN
PROJECT NO.: 08449–030–04
DWG. NO.: 2



EXISTING STORMWATER PIPE DATA TABLE

STRUCTURE NO	TYPE OF STRUCTURE	INVERT ELEVATION UPSTREAM	INVERT ELEVATION DOWNSTREAM	DIAMETER (IN)	LENGTH (FT)
S-1A	RCP	116.24 (E)	115.82 (W)	18.00	38.97
S-1B	RCP	115.45 (E)	114.93 (W)	36.00	115.45
S-2	ERCP	124.83 (E)	124.72 (W)	14x22	92.38
S-3	CMP	122.95 (S)	122.07 (N)	36.00	81.19
S-4	ERCP	124.98 (S)	124.91 (N)	14X22	47.87
S-5	ERCP	124.44 (N)	125.34 (S)	14X22	73.39
S-6	ERCP	124.63 (S)	124.08 (N)	14X22	50
S-7	CMP	122.315 (E)	122.065 (W)	24.00	37.00
S-8	ERCP	126.70 (S)	126.51 (N)	34X54	100.67
	ERCP	126.68 (S)	126.51 (N)	34X54	100.39
S-9	CMP	123.90 (W)	123.64 (E)	24.00	343.74
S-10	RCP	121.73 (E)	121.62 (W)	48.00	100.06
S-10B	RCP	121.53 (E)	121.49 (W)	24.00	17.96
S-11	REPLACED BY TS-2				
S-12A	RCP	121.79 (W)	121.35 (E)	30.00	189.40
S-12B	RCP	121.45 (W)	121.39 (E)	48.00	50.37
S-13	RCP	121.69 (S)	120.71 (N)	24.00	104.48
	RCP	121.75 (S)	120.86 (N)	24.00	104.58
S-14	RCP	120.35 (E)	118.806 (W)	24.00	104.90
	RCP	120.43 (E)	118.956 (W)	24.00	104.90
S-15A	RCP	108.852 (W)	108.832 (E)	18.00	48.75
S-15B	RCP	106.772 (E)	106.682 (W)	18.00	47.80
S-16	Steel	94.87 (E)	94.62 (W)	24 (W)–21(E)	22.04
	Steel (E)–ECMP (W)	94.97 (E)	94.81 (W)	21 (E)–22X24 (W)	20.98
S-17	RCP	90.96 (N)	90.69 (S)	48.00	50.51
	RCP	90.87 (N)	90.62 (S)	48.00	50.71
S-18	CMP	95.47 (E)	95.09 (W)	18.00	19.89
S-19	RCP	101.16 (E)	100.91 (W)	48.00	161.35
S-20	CMP	115.32 (N)	114.80 (S)	48.00	90.98
	CMP	115.46 (N)	114.73 (S)	48.00	91.11
S-21	RCP	123.18 (N)	122.93 (S)	36.00	34.84
S-22	RCP	121.112 (S)	120.823 (N)	36.00	88.74
S-23	CMP	131.153 (E)	129.551 (W)	30.00	79.75
S-24	ERCP	146.44 (E)	145.05 (W)	12X18	91.04
S-25A	CMP	127.404 (E)	126.807 (W)	36.00	74.93
S-25B	CMP	127.513 (E)	126.692 (W)	36.00	75.48
S-26	This point is not depicted in the plan				
S-27	CMP	123.03 (E)	123.00 (W)	18.00	24.15
S-28	This point is not depicted in the plan				
S-51	RCP	139.69 (N)	139.54 (S)	36.00	50
S-52	RCP	139.69 (N)	139.54 (S)	36.00	50
S-53	BOX CULVERT	138.00 (W)	138.00 (E)	3X6 BOX	27
S-54	HDPE	132.17 (W)	131.41 (E)	30.00	175
S-55	HDPE	132.28 (W)	131.29 (E)	30.00	175
S-57A	RCP	143.23	142.23	24.00	136
S-57B	RCP	143.23	142.23	24.00	136
TS-2	BOX CULVERT	130.05 (W)	129.18 (E)	48X96	74.73
TS-3	RCP	129.007 (E)	128.157 (W)	18.00	98.07
TS-4	RCP	123.56 (S)	122.355 (N)	36.00	80.83
TS-6	Metal	125.94 (N)	125.55 (S)	20.00	19.59
	CMP	125.90 (N)	125.68 (S)	36.00	19.59

LEGEND

- DRAINAGE FLOW DIRECTION
- APPROX. PHASE FOOTPRINT
- APPROX. LANDFILL LIMITS
- DRAINAGE AREAS BOUNDARY LINE
- LIMITS OF BORROW AREA
- SIDE SLOPE DITCH
- 140 PROPOSED CONTOUR
- 140 PROPOSED CONTOUR
- PROPOSED DOWN CHUTE
- EXISTING SWALE
- S-53 EXISTING DRAINAGE STRUCTURE
- TS-3 TEMPORARY DRAINAGE STRUCTURE TO BE REMOVED AS SEQUENCE PROGRESSES
- STORMWATER STRUCTURE
- TH-35A INACTIVE MONITORING WELL LOCATION AND DESIGNATION
- P-7D EXISTING MONITORING WELL CURRENTLY IN MONITORING PROGRAM
- 1E□ SURFACE WATER MONITORING SITE LOCATION MONITOR WELL

GRAPHIC SCALE
0 150 300 600
SCALE IN FEET

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT TAMPA

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE
FINAL DRAINAGE PLAN / PLOT PLAN

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
PROJECT NO.: 08449-030-04
SCALE: AS SHOWN
DWG. NO.: 3

Plotted: 5/14/10 8:57am JKramer
\\eacad\drafting\08449 Hillsborough County\030 04 Ph I-IV Op Minor Mod\Permit Drawings\Civil\08449-030-04-03.dwg
LAST SAVED: 5/12/2010 10:20 AM JKRAMER

BASIN "D"

WASTE TIRES PROCESSING FACILITY

N

GRAPHIC SCALE
0 100 200 400
SCALE IN FEET
1" = 200'

DOWNCHUTE "5"

SERVICE HAUL ROAD

DOWNCHUTE "4"

PHASE V

PHASE VI

PHASE III

PHASE IV

PHASE II

PHASE I

EXISTING SLOPE

BASIN "C"

DOWNCHUTE "3"

TEMPORARY FINAL COVER SYSTEM SEE DETAIL 5/8|19

BASIN "A"

DOWNCHUTE "1"

BASIN "E"

LANDFILL ENTRANCE

DOWNCHUTE "2"

MAIN HAUL ROAD

BASIN "B"

ADMINISTRATION AND SCALEHOUSE BUILDING

EQUIPMENT MAINTENANCE BUILDING

PAVED ROAD

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT
TAMPA

LEGEND

- 9A — LIFT NUMBER
- A — CELL DESIGNATION
- DAILY PROGRESSION
- FILL PROGRESSION
- DRAINAGE FLOW DIRECTION
- APPROXIMATE PHASE FOOTPRINT
- APPROXIMATE LANDFILL LIMITS
- APPROXIMATE LIFT LIMITS
- EXISTING SWALE
- SIDESLOPE DITCH
- 140 — PROJECTED EXISTING CONTOUR
- 140 — PROPOSED CONTOUR
- PROPOSED DOWNCHUTE
- TEMPORARY FINAL COVER AREA AFTER EACH LIFT

PROGRESSION:
BEGIN LIFT 8 FILL IN CELL "A", WEST SIDE OF PHASE I AND CONTINUE EAST ACROSS PHASE I TO THE PHASE II LINE. BEGIN LIFT 9 FILL IN CELL "A", WEST SIDE OF PHASE II AND CONTINUE OF PHASE COUNTERCLOCKWISE ACROSS PHASE II TO THE PHASE III LINE. BEGIN LIFT 10 FILL IN CELL "A", EAST SIDE OF PHASE III AND CONTINUE WEST ACROSS PHASE III TO THE WEST SIDE III. BEGIN LIFT 11 FILL IN CELL "A", EAST SIDE OF PHASE IV AND CONTINUE WEST ACROSS PHASE IV.

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 256-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE
PHASES I TO IV - LIFTS 8 TO 11

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
PROJECT NO.: 08449-030-04
SCALE: AS SHOWN
DWG. NO.: 8

LAST SAVED: 5/12/2010 10:24 AM JKRAMER
\\Jeacad\drafting\08449 Hillsborough County\030 04 Ph I-IV Op Minor Mod\Permit Drawings\Civil\08449-030-04-08.dwg
Plotted: 5/14/10 9:00am JKramer

BASIN "D"

WASTE TIRES PROCESSING FACILITY

GRAPHIC SCALE
0 100 200 400
SCALE IN FEET
1" = 200'

DOWNCHUTE "5"

SERVICE HAUL ROAD

DOWNCHUTE "4"

PHASE V

PHASE VI

PHASE III

BASIN "C"

DOWNCHUTE "3"

PHASE IV

PHASE II

BASIN "A"

EXISTING SLOPE

PHASE I

DOWNCHUTE "1"

BASIN "E"

LANDFILL ENTRANCE

DOWNCHUTE "2"

MAIN HAUL ROAD

BASIN "B"

ADMINISTRATION AND SCALEHOUSE BUILDING

EQUIPMENT MAINTENANCE BUILDING

PAVED ROAD

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT
TAMPA

LEGEND

- LIFT NUMBER
- CELL DESIGNATION
- DAILY PROGRESSION
- FILL PROGRESSION
- DRAINAGE FLOW DIRECTION
- APPROXIMATE PHASE FOOTPRINT
- APPROXIMATE LANDFILL LIMITS
- APPROXIMATE LIFT LIMITS
- EXISTING SWALE
- SIDESLOPE DITCH
- 140 PROJECTED EXISTING CONTOUR
- 140 PROPOSED CONTOUR
- PROPOSED DOWNCHUTE
- TEMPORARY FINAL COVER AREA AFTER EACH LIFT

PROGRESSION:
BEGIN LIFT 12 FILL IN CELL "A", MIDDLE OF PHASE III AND CONTINUE SOUTHWEST ACROSS PHASES V, VI AND IV TO THE WESTERN PERIMETER F THE LANDFILL.

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

JONES EDMUNDS
7320 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE PHASES V AND VI - LIFT 12

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
PROJECT NO.: 08449-030-04
SCALE: AS SHOWN
DWG. NO.: 9

BASIN "D"

WASTE TIRES PROCESSING FACILITY

GRAPHIC SCALE
0 100 200 400
SCALE IN FEET
1" = 200'

DOWNCHUTE "5"

SERVICE HAUL ROAD

DOWNCHUTE "4"

PHASE V

EXISTING SLOPE

PHASE III

PHASE VI

PHASE IV

PHASE II

PHASE I

BASIN "C"

DOWNCHUTE "3"

BASIN "A"

DOWNCHUTE "1"

TEMPORARY FINAL COVER SYSTEM SEE DETAIL 1 10/19

BASIN "E"

LANDFILL ENTRANCE

DOWNCHUTE "2"

MAIN HAUL ROAD

BASIN "B"

PAVED ROAD

ADMINISTRATION AND SCALEHOUSE BUILDING

EQUIPMENT MAINTENANCE BUILDING

PROGRESSION:
BEGIN LIFT 13 FILL IN CELL "A", WEST SIDE OF PHASE I AND CONTINUE EAST ACROSS PHASE I TO THE PHASE II LINE. BEGIN LIFT 14 FILL IN CELL "A", WEST SIDE OF PHASE II AND CONTINUE COUNTERCLOCKWISE TO THE PHASE III LINE. BEGIN LIFT 15 ON THE NORTHERN SIDESLOPES AND PREPARE THE PHASE III SIDESLOPES AND THE SERVICE HAUL ROAD FOR CLOSURE. THEN CONTINUE LIFT 15 FILL IN CELL "A", EAST SIDE OF PHASE III AND CONTINUE WEST ACROSS PHASE III TO THE WEST SIDE OF PHASE III. BEGIN LIFT 16 FILL IN CELL "A", EAST SIDE OF PHASE IV AND CONTINUE WEST ACROSS PHASE IV.

LEGEND

- 9A — LIFT NUMBER
- A — CELL DESIGNATION
- DAILY PROGRESSION
- FILL PROGRESSION
- DRAINAGE FLOW DIRECTION
- APPROXIMATE PHASE FOOTPRINT
- APPROXIMATE LANDFILL LIMITS
- APPROXIMATE LIFT LIMITS
- EXISTING SWALE
- SIDESLOPE DITCH
- 140 — PROJECTED EXISTING CONTOUR
- 140 — PROPOSED CONTOUR
- PROPOSED DOWNCHUTE
- TEMPORARY FINAL COVER AREA
- HC-1A — HORIZONTAL COLLECTOR VERTICAL COMPONENT
- EW-10 — LFG EXTRACTION WELL
- EW-46 — DOWNSLOPE LFG EXTRACTION WELL
- EW-88 — CAISSON LFG EXTRACTION WELL
- UT-2 — ON-GRADE CONDENSATE U-TRAP
- CS-1 — CONDENSATE SUMP WITH PUMP
- CT-5 — SELF-DRAINING CONDENSATE TRAP
- V-2 — HEADER ISOLATION VALVE
- AR-24 — HEADER ACCESS RISER
- BLIND FLANGE FOR FUTURE EXPANSION
- AV-2 — AIR ISOLATION VALVE/BLOWOFF
- CV-3 — CONDENSATE DRAIN LINE ISOLATION VALVE
- 8" — HEADER/LATERAL DIAMETER
- HP — HIGH POINT
- HEADER/LATERAL PIPE
- AIR SUPPLY LINE
- CONDENSATE DRAIN LINE/ LEACHATE DEWATERING LINE ROAD CROSSING
- CO 4-1 — EXISTING LEACHATE COLLECTION SYSTEM CLEANOUT
- PUMP STA. B — EXISTING PUMP STATION
- F-1 — EXISTING PASSIVE GAS FLARE TO BE ABANDONED
- 4" FM — EXISTING LEACHATE FORCE MAIN
- HORIZONTAL COLLECTOR TRENCH

LTR.	DATE	REVISIONS	BY	APPRD.
1	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
524 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE
PHASES I TO IV - LIFTS 13 TO 16

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
PROJECT NO.: 08449-030-04
SCALE: AS SHOWN
DWG. NO.: 10

LAST SAVED: 5/13/2010 7:53 AM JKRAMER
\\Jeacad\drafting\08449 Hillsborough County\030 04 Ph I-IV Op Minor Mod\Permit Drawings\Civil\08449-030-04-10.dwg
Plotted: 5/14/10 9:09am JKramer

BASIN "D"

WASTE TIRES PROCESSING FACILITY

N

GRAPHIC SCALE
0 100 200 400
SCALE IN FEET
1" = 200'

DOWNCHUTE "5"

EXISTING SLOPE

SERVICE HAUL ROAD

DOWNCHUTE "4"

PHASE V

PHASE VI

PROPERTY LINE

30H:1V

BASIN "C"

PHASE III

DOWNCHUTE "3"

PUMP STA. B-2

PHASE IV

EXISTING SLOPE

BASIN "A"

EXISTING SLOPE

PHASE II

PHASE I

EXISTING SLOPE

DOWNCHUTE "1"

BASIN "E"

LANDFILL ENTRANCE

DOWNCHUTE "2"

MAIN HAUL ROAD

BASIN "B"

ADMINISTRATION AND SCALEHOUSE BUILDING

EQUIPMENT MAINTENANCE BUILDING

PAVED ROAD

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT TAMPA

LEGEND

- 6A — LIFT NUMBER
- A — CELL DESIGNATION
- DAILY PROGRESSION
- FILL PROGRESSION
- DRAINAGE FLOW DIRECTION
- APPROXIMATE PHASE FOOTPRINT
- APPROXIMATE LANDFILL LIMITS
- APPROXIMATE LIFT LIMITS
- EXISTING SWALE
- SIDESLOPE DITCH
- 140 — PROJECTED EXISTING CONTOUR
- 140 — PROPOSED CONTOUR
- PROPOSED DOWNCHUTE
- TEMPORARY FINAL COVER AREA
- HC-1A — HORIZONTAL COLLECTOR VERTICAL COMPONENT
- EW-10 — LFG EXTRACTION WELL
- EW-46 — DOWNSLOPE LFG EXTRACTION WELL
- EW-88 — CAISSON LFG EXTRACTION WELL
- UT-2 — ON-GRADE CONDENSATE U-TRAP
- CS-1 — CONDENSATE SUMP WITH PUMP
- CT-5 — SELF-DRAINING CONDENSATE TRAP
- V-2 — HEADER ISOLATION VALVE
- AR-24 — HEADER ACCESS RISER
- BLIND FLANGE FOR FUTURE EXPANSION
- AV-2 — AIR ISOLATION VALVE/BLOWOFF
- CV-3 — CONDENSATE DRAIN LINE ISOLATION VALVE
- 8" — HEADER/LATERAL DIAMETER
- HP — HIGH POINT
- HEADER/LATERAL PIPE
- AIR SUPPLY LINE
- CONDENSATE DRAIN LINE/ LEACHATE DEWATERING LINE ROAD CROSSING
- CO 4-1 — EXISTING LEACHATE COLLECTION SYSTEM CLEANOUT
- PUMP STA. B — EXISTING PUMP STATION
- F-1 — EXISTING PASSIVE GAS FLARE TO BE ABANDONED
- 4" FM — EXISTING LEACHATE FORCE MAIN
- HORIZONTAL COLLECTOR TRENCH

PROGRESSION:
BEGIN LIFT 17 FILL IN CELL "A", WEST SIDE OF PHASE III AND CONTINUE WEST-SOUTHWEST ACROSS PHASES IV, V AND VI TO THE WESTERN PERIMETER OF THE LANDFILL.

LTR.	DATE	REVISIONS	BY	APPRD.
1	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

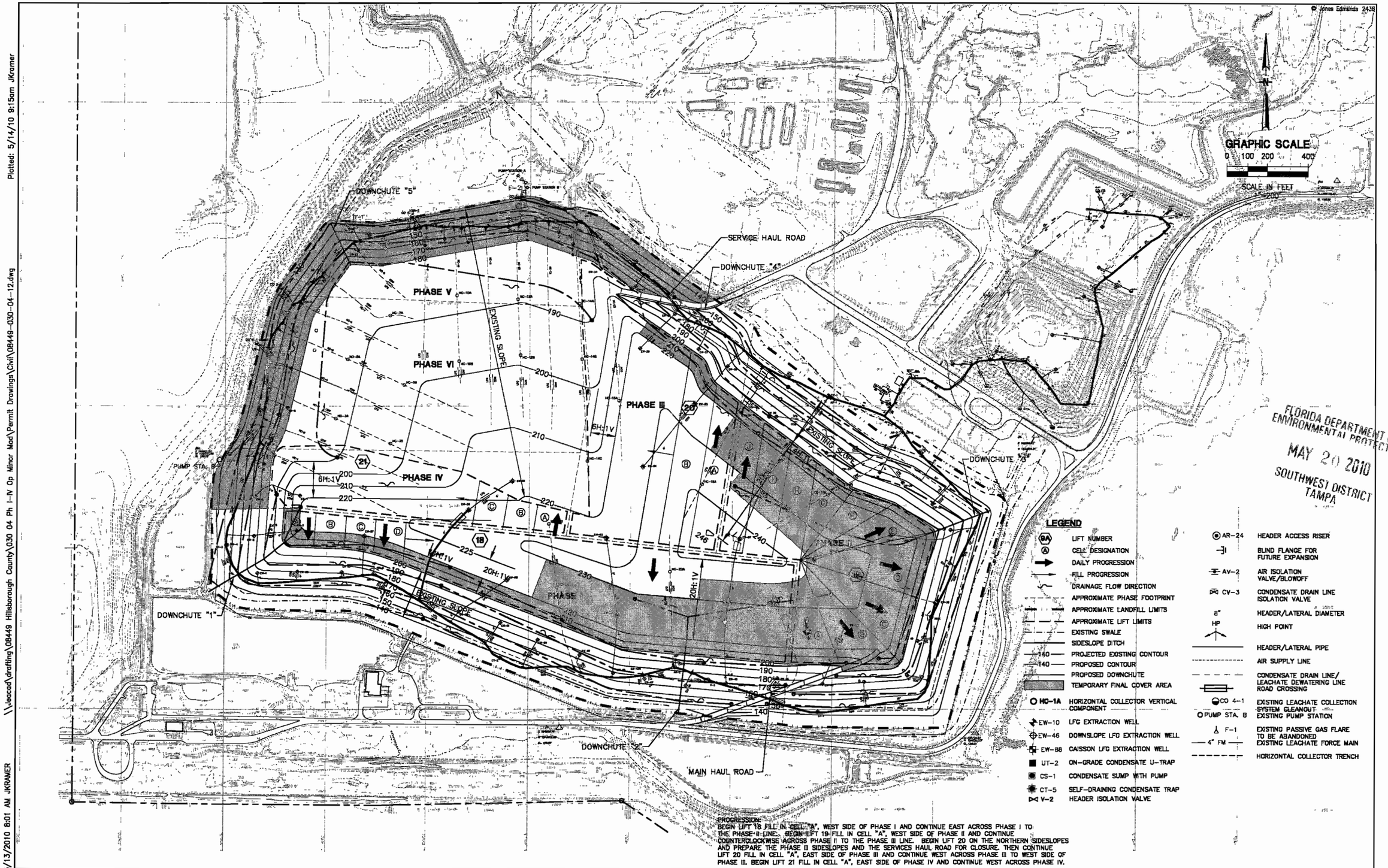
JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-6821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE
PHASES V AND VI - LIFT 17

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
PROJECT NO.: 08449-030-04
SCALE: AS SHOWN
DWG. NO.: 11



PROGRESSION:
BEGIN LIFT 18 FILL IN CELL "A", WEST SIDE OF PHASE I AND CONTINUE EAST ACROSS PHASE I TO THE PHASE II LINE. BEGIN LIFT 19 FILL IN CELL "A", WEST SIDE OF PHASE II AND CONTINUE COUNTERCLOCKWISE ACROSS PHASE II TO THE PHASE III LINE. BEGIN LIFT 20 ON THE NORTHERN SIDESLOPES AND PREPARE THE PHASE III SIDESLOPES AND THE SERVICES HAUL ROAD FOR CLOSURE. THEN CONTINUE LIFT 20 FILL IN CELL "A", EAST SIDE OF PHASE III AND CONTINUE WEST ACROSS PHASE III TO WEST SIDE OF PHASE III. BEGIN LIFT 21 FILL IN CELL "A", EAST SIDE OF PHASE IV AND CONTINUE WEST ACROSS PHASE IV.

LTR.	DATE	REVISIONS	BY	APPRD.
1	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE
PHASES 1 TO IV - LIFTS 18 TO 21

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
PROJECT NO.: 08449-030-04
SCALE: AS SHOWN
DWG. NO.: 12

LAST SAVED: 5/13/2010 8:01 AM JKRAMER
\\Jeacad\drafting\08449 Hillsborough County\030 04 Ph I-IV Op Minor Mod\Permit Drawings\Civil\08449-030-04-12.dwg
Plotted: 5/14/10 9:15am JKramer

BASIN "D"

WASTE TIRES PROCESSING FACILITY

N

GRAPHIC SCALE
0 100 200 400
SCALE IN FEET
1" = 200'

DOWNCHUTE "5"

SERVICE HAUL ROAD

DOWNCHUTE "4"

PHASE V

PHASE VI

PHASE III

PHASE IV

PHASE II

PHASE I

BASIN "C"

DOWNCHUTE "3"

BASIN "A"

DOWNCHUTE "1"

EXISTING SLOPE

BASIN "E"

LANDFILL ENTRANCE

DOWNCHUTE "2"

MAIN HAUL ROAD

BASIN "B"

ADMINISTRATION AND SCALEHOUSE BUILDING

EQUIPMENT MAINTENANCE BUILDING

PAVED ROAD

PROGRESSION:
BEGIN LIFT 22 FILL IN CELL "A", SOUTH SIDE OF PHASE III AND CONTINUE WEST ACROSS PHASES III, IV, V AND VI TO THE WESTERN PERIMETER OF THE LANDFILL.

LEGEND

9A	LIFT NUMBER	AR-24	HEADER ACCESS RISER
A	CELL DESIGNATION		BLIND FLANGE FOR FUTURE EXPANSION
	DAILY PROGRESSION	AV-2	AIR ISOLATION VALVE/BLOWOFF
	FILL PROGRESSION	CV-3	CONDENSATE DRAIN LINE ISOLATION VALVE
	DRAINAGE FLOW DIRECTION	8"	HEADER/LATERAL DIAMETER
	APPROXIMATE PHASE FOOTPRINT	HP	HIGH POINT
	APPROXIMATE LANDFILL LIMITS		HEADER/LATERAL PIPE
	APPROXIMATE LIFT LIMITS		AIR SUPPLY LINE
	EXISTING SWALE		CONDENSATE DRAIN LINE/ LEACHATE DEWATERING LINE
	SIDESLOPE DITCH		ROAD CROSSING
140	PROJECTED EXISTING CONTOUR	CO 4-1	EXISTING LEACHATE COLLECTION SYSTEM CLEANOUT
140	PROPOSED CONTOUR	PUMP STA. B	EXISTING PUMP STATION
	PROPOSED DOWNCHUTE	F-1	EXISTING PASSIVE GAS FLARE TO BE ABANDONED
HC-1A	HORIZONTAL COLLECTOR VERTICAL COMPONENT	4" FM	EXISTING LEACHATE FORCE MAIN
EW-10	LFG EXTRACTION WELL		HORIZONTAL COLLECTOR TRENCH
EW-46	DOWNSLOPE LFG EXTRACTION WELL		
EW-88	CAISSON LFG EXTRACTION WELL		
UT-2	ON-GRADE CONDENSATE U-TRAP		
CS-1	CONDENSATE SUMP WITH PUMP		
CT-5	SELF-DRAINING CONDENSATE TRAP		
V-2	HEADER ISOLATION VALVE		

LTR.	DATE	REVISIONS	BY	APPRD.
1	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE
PHASES V AND VI - LIFT 22

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
PROJECT NO.: 08449-030-04
SCALE: AS SHOWN
DWG. NO.: 13

CENTERLINE SERVICE HAUL ROAD ALIGNMENT				
BEGIN			N=1,251,363	E=441,209
CURVE 1	RADIUS=212.50'		CHORD=155.09'	S78°48'21"W
COURSE	N78°47'28"W	840.71'		
CURVE 2	RADIUS=187.50'		CHORD=78.44'	S89°08'05"W

CENTERLINE MAIN HAUL ROAD ALIGNMENT				
BEGIN			N=1,249,249	E=440,904
COURSE 1	N80°05'16"E	187.26'		
CURVE 1	RADIUS=400'		CHORD=77.44'	N75°31'57"E
COURSE 2	N70°01'57"E	814.41'		
CURVE 2	RADIUS=210.00'		CHORD=402.58'	N03°17'51"E
COURSE 3	N76°44'08"E	416.41'		

BASIN "D"

WASTE TIRES PROCESSING FACILITY

PERMANENT PUMP STATION "B" (1 / 14|21) SEE DETAIL

PUMP STA. A

PUMP STA. B

SERVICE HAUL ROAD

DOWNCHUTE "5" (5 / 14|18) SEE DETAIL

DOWNCHUTE "4" (4 / 14|18) SEE DETAIL

A (14|20)

N

GRAPHIC SCALE
0 100 200 400
SCALE IN FEET
1"=200'

BASIN "C"

PHASE V

PHASE III

PHASE IV

PHASE II

PHASE I

HC-10A HC-12A HC-14A HC-14B HC-14C HC-15A HC-16A HC-17A HC-18A HC-19A HC-20A HC-21A HC-21B HC-3B HC-5A HC-7A

EW-10 EW-14 EW-46 EW-49 EW-54 EW-57 EW-62 EW-63 EW-66 EW-68 EW-70 EW-76 EW-82 EW-86 EW-88 EW-302 EW-303 EW-304 EW-305 EW-306 EW-307 EW-308 EW-309 EW-310 EW-311 EW-312 EW-313 EW-314 EW-315 EW-316 EW-317 EW-318 EW-319 EW-320 EW-321 EW-322 EW-323 EW-324 EW-325 EW-326 EW-327 EW-328 EW-329 EW-330 EW-331 EW-332 EW-333 EW-334 EW-335 EW-336 EW-337 EW-338 EW-339 EW-340 EW-341 EW-342 EW-343 EW-344 EW-345 EW-346 EW-347 EW-348 EW-349 EW-350 EW-351 EW-352 EW-353 EW-354 EW-355 EW-356 EW-357 EW-358 EW-359 EW-360 EW-361 EW-362 EW-363 EW-364 EW-365 EW-366 EW-367 EW-368 EW-369 EW-370 EW-371 EW-372 EW-373 EW-374 EW-375 EW-376 EW-377 EW-378 EW-379 EW-380 EW-381

CO 5-1 CO 5-2 CO 5-3 CO 5-4 CO 6-1 CO 4-1

V-1 V-2 V-3 V-4 V-5 V-6 V-7 V-8 V-9 V-10 V-11 V-12 V-13 V-14 V-15 V-16 V-17 V-18 V-19 V-20 V-21 V-22 V-23 V-24 V-25 V-26 V-27 V-28 V-29 V-30 V-31 V-32 V-33 V-34 V-35 V-36 V-37 V-38 V-39 V-40 V-41 V-42 V-43 V-44 V-45 V-46 V-47 V-48 V-49 V-50 V-51 V-52 V-53 V-54 V-55 V-56 V-57 V-58 V-59 V-60 V-61 V-62 V-63 V-64 V-65 V-66 V-67 V-68 V-69 V-70 V-71 V-72 V-73 V-74 V-75 V-76 V-77 V-78 V-79 V-80 V-81 V-82 V-83 V-84 V-85 V-86 V-87 V-88 V-89 V-90 V-91 V-92 V-93 V-94 V-95 V-96 V-97 V-98 V-99 V-100 V-101 V-102 V-103 V-104 V-105 V-106 V-107 V-108 V-109 V-110 V-111 V-112 V-113 V-114 V-115 V-116 V-117 V-118 V-119 V-120 V-121 V-122 V-123 V-124 V-125 V-126 V-127 V-128 V-129 V-130 V-131 V-132 V-133 V-134 V-135 V-136 V-137 V-138 V-139 V-140 V-141 V-142 V-143 V-144 V-145 V-146 V-147 V-148 V-149 V-150 V-151 V-152 V-153 V-154 V-155 V-156 V-157 V-158 V-159 V-160 V-161 V-162 V-163 V-164 V-165 V-166 V-167 V-168 V-169 V-170 V-171 V-172 V-173 V-174 V-175 V-176 V-177 V-178 V-179 V-180 V-181 V-182 V-183 V-184 V-185 V-186 V-187 V-188 V-189 V-190 V-191 V-192 V-193 V-194 V-195 V-196 V-197 V-198 V-199 V-200 V-201 V-202 V-203 V-204 V-205 V-206 V-207 V-208 V-209 V-210 V-211 V-212 V-213 V-214 V-215 V-216 V-217 V-218 V-219 V-220 V-221 V-222 V-223 V-224 V-225 V-226 V-227 V-228 V-229 V-230 V-231 V-232 V-233 V-234 V-235 V-236 V-237 V-238 V-239 V-240 V-241 V-242 V-243 V-244 V-245 V-246 V-247 V-248 V-249 V-250 V-251 V-252 V-253 V-254 V-255 V-256 V-257 V-258 V-259 V-260 V-261 V-262 V-263 V-264 V-265 V-266 V-267 V-268 V-269 V-270 V-271 V-272 V-273 V-274 V-275 V-276 V-277 V-278 V-279 V-280 V-281 V-282 V-283 V-284 V-285 V-286 V-287 V-288 V-289 V-290 V-291 V-292 V-293 V-294 V-295 V-296 V-297 V-298 V-299 V-300 V-301

DOWNCHUTE "3" (3 / 14|18) SEE DETAIL

LANDFILL GAS VENT SHOWN AT 200' O.C. FINAL LOCATION TO BE DETERMINED BY THE ENGINEER DURING CLOSURE DESIGN AREA 6 (FINAL) (5 / 14|19) SEE DETAIL

BASIN "A"

FINAL COVER SYSTEM (1 / 14|20) SEE DETAIL

DOWNCHUTE "1" (1 / 14|18) SEE DETAIL

BASIN "E"

LANDFILL ENTRANCE

DOWNCHUTE "2" (2 / 14|18) SEE DETAIL

A (14|17)

MAIN HAUL ROAD

BASIN "B"

ADMINISTRATION AND SCALEHOUSE BUILDING

EQUIPMENT MAINTENANCE BUILDING

PAVED ROAD

EXISTING SLOPE

PROGRESSION:
BEGIN LIFT 23 FILL IN CELL "A", WEST SIDE OF PHASE II CONTINUE COUNTERCLOCKWISE AGAINST PHASE II ACROSS PHASES V AND VI TO THE SOUTHWEST CORNER AGAINST PHASE IV.

LEGEND

- 9A — LIFT NUMBER
- A — CELL DESIGNATION
- DAILY PROGRESSION
- FILL PROGRESSION
- DRAINAGE FLOW DIRECTION
- APPROXIMATE PHASE FOOTPRINT
- APPROXIMATE LANDFILL LIMITS
- APPROXIMATE LIFT LIMITS
- EXISTING SWALE
- SIDESLOPE DITCH
- 140 — PROJECTED EXISTING CONTOUR
- 140 — PROPOSED CONTOUR
- PROPOSED DOWNCHUTE
- FINAL COVER GEOMEMBRANE
- EW-10 — LFG EXTRACTION WELL
- EW-46 — DOWNSLOPE LFG EXTRACTION WELL
- UT-2 — ON-GRADE CONDENSATE U-TRAP
- CS-1 — CONDENSATE SUMP WITH PUMP
- CT-5 — SELF-DRAINING CONDENSATE TRAP
- AR-24 — HEADER ACCESS RISER
- HEADER/LATERAL PIPE
- AIR SUPPLY LINE
- CONDENSATE DRAIN LINE/LEACHATE DEWATERING LINE
- CO 4-1 — EXISTING LEACHATE COLLECTION SYSTEM CLEANOUT
- 4" FM — EXISTING LEACHATE FORCE MAIN

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

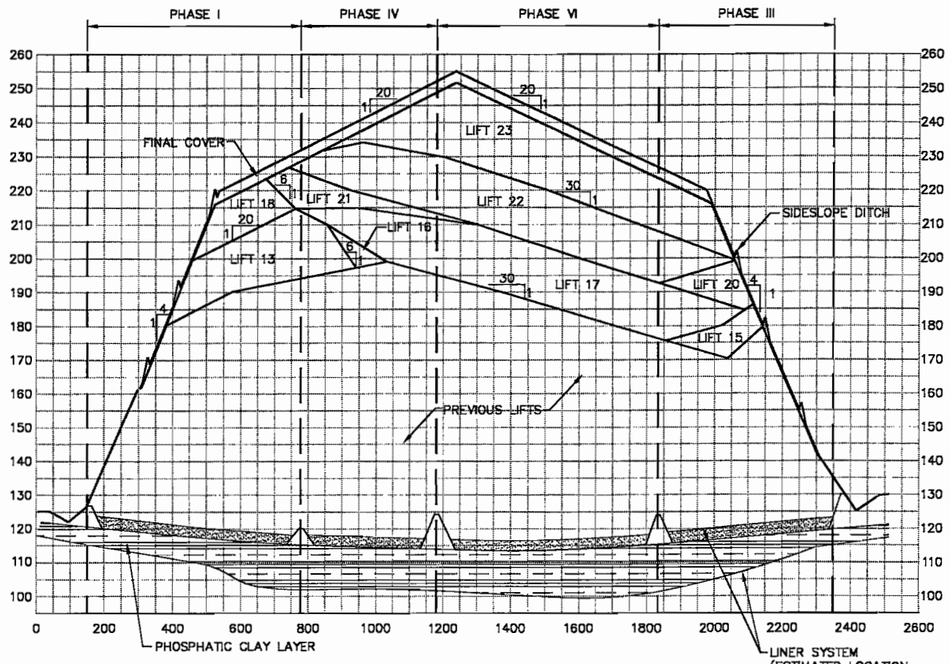
JONES EDMUNDS
7130 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

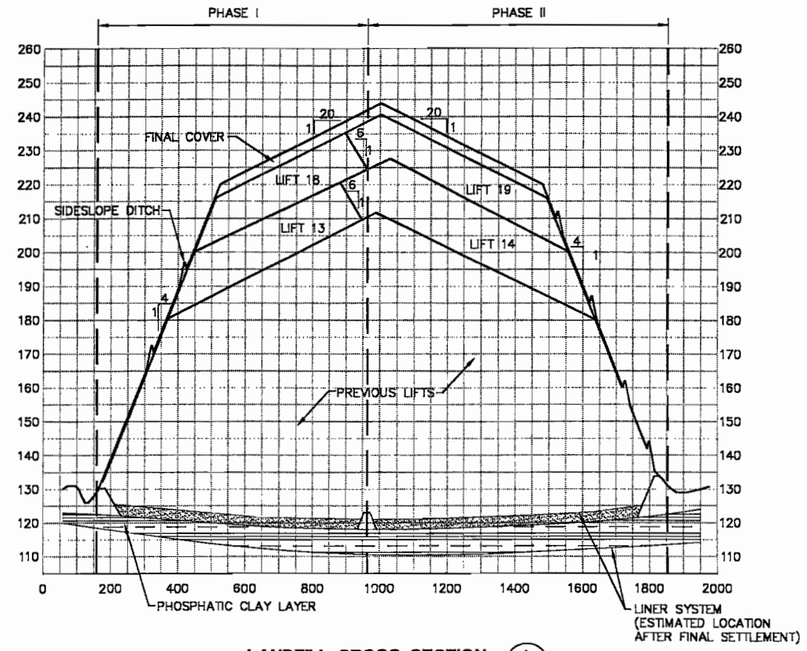
PHASES I-VI OPERATING SEQUENCE
PHASES V AND VI - LIFT 23 (FINAL LIFT)

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

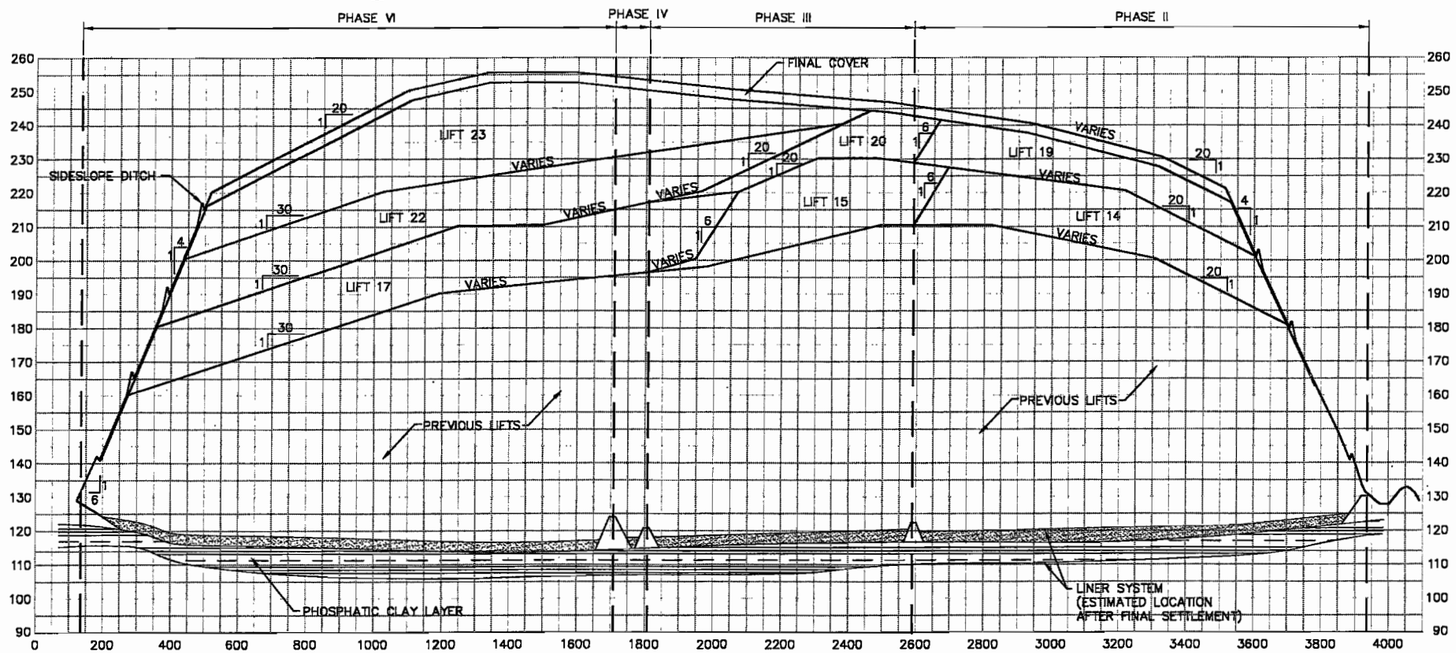
DATE: APRIL 2010
SCALE: AS SHOWN
PROJECT NO.: 08449-030-04
DWG. NO.: 14



LANDFILL CROSS SECTION B 14|17



LANDFILL CROSS SECTION A 14|17



LANDFILL CROSS SECTION C 14|17

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT
TAMPA

NOTE:
SOME SLOPES AND LIFT SIZE VARY DUE TO SECTION CUT ORIENTATION. SEE DRAWING NO. 14 FOR SECTION LOCATIONS

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

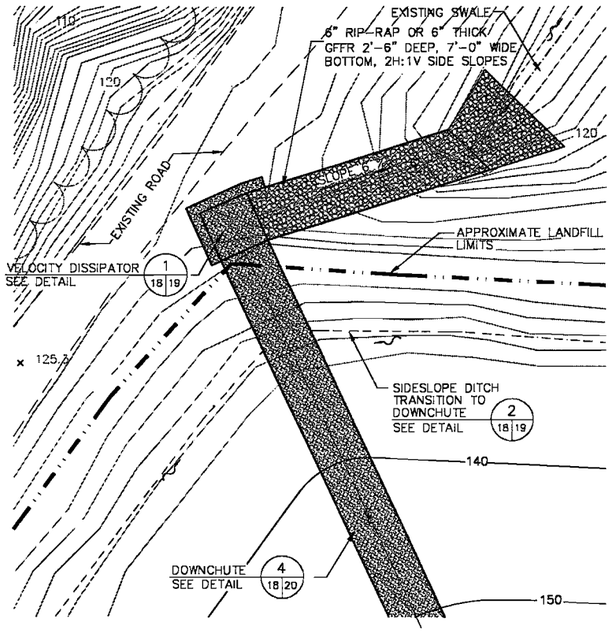
HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE
LANDFILL SECTIONS

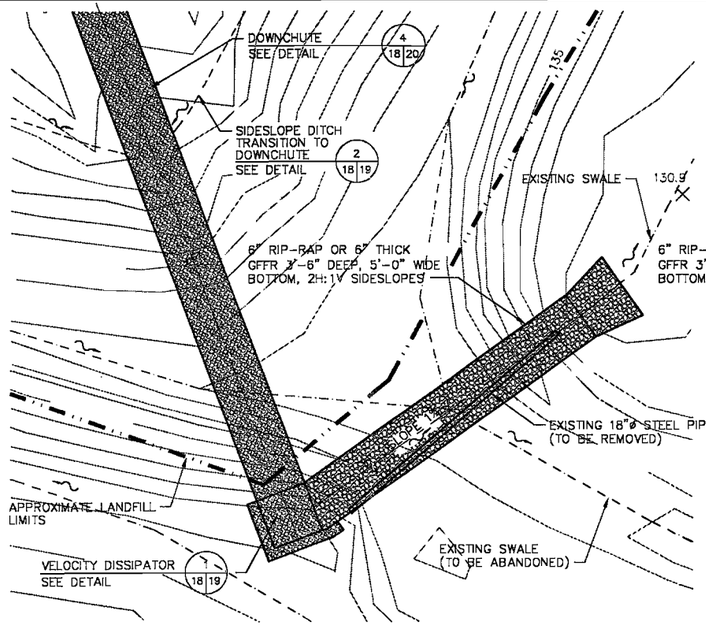
CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
PROJECT NO.: 08449-030-04
SCALE: AS SHOWN
DWG. NO.: 17

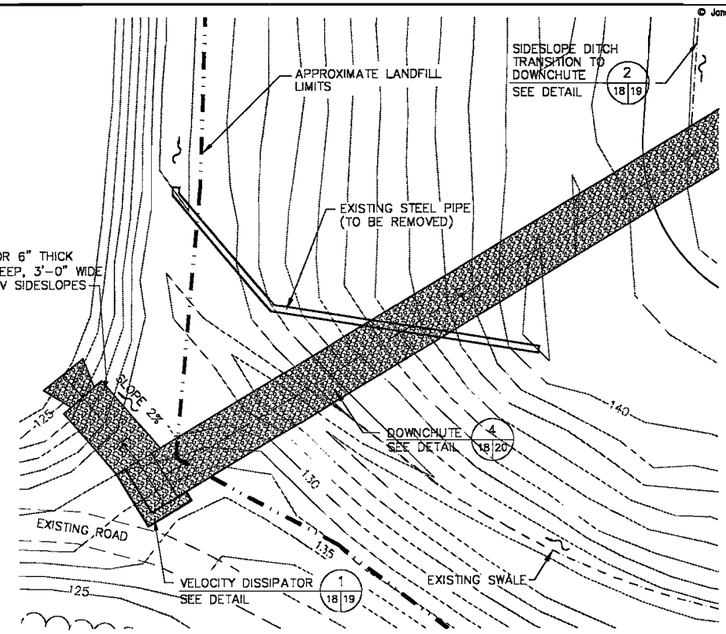
LAST SAVED: 5/13/2010 8:09 AM JKRAMER \\eacad\drafting\08449 Hillsborough County\030 04 Ph I-IV Op Minor Mod\Permit Drawings\Civil\08449-030-04-17.dwg Plotted: 5/14/10 9:22am JKramer



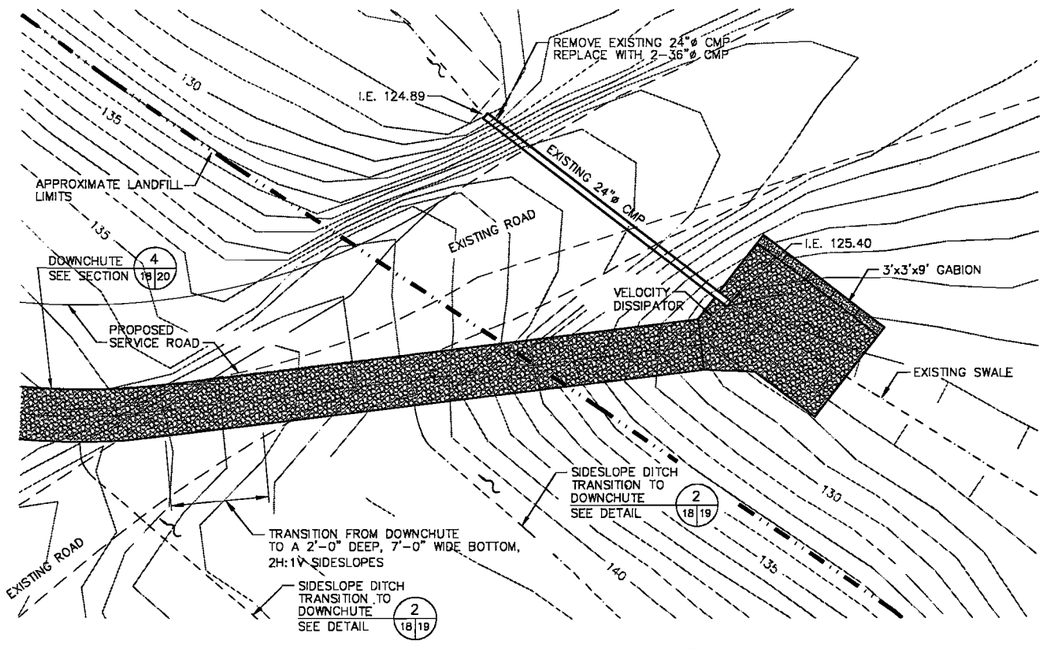
DOWNCHUTE "5" - PLAN DETAIL 5 14|18



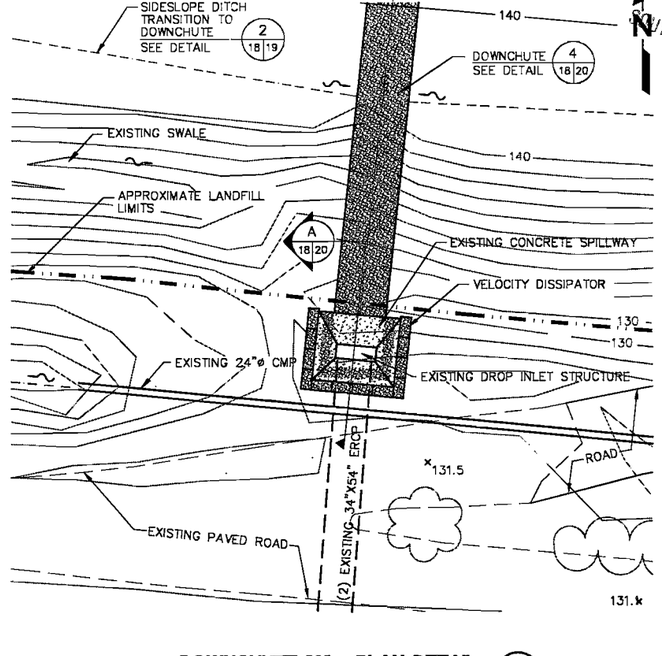
DOWNCHUTE "3" - PLAN DETAIL 3 14|18



DOWNCHUTE "1" - PLAN DETAIL 1 14|18



DOWNCHUTE "4" - PLAN DETAIL 4 14|18



DOWNCHUTE "2" - PLAN DETAIL 2 14|18

*GFFR – GROUT FILLED FABRIC REVETMENT

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

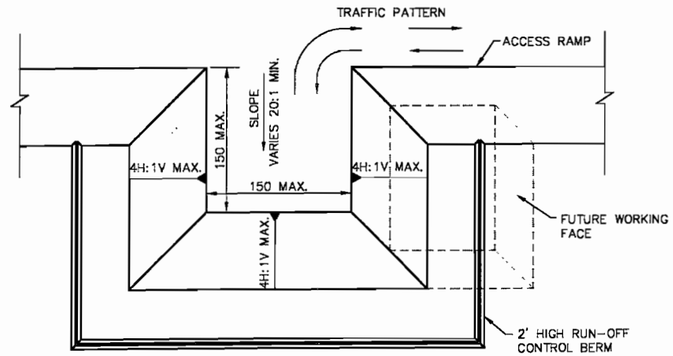
JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 225-0753

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

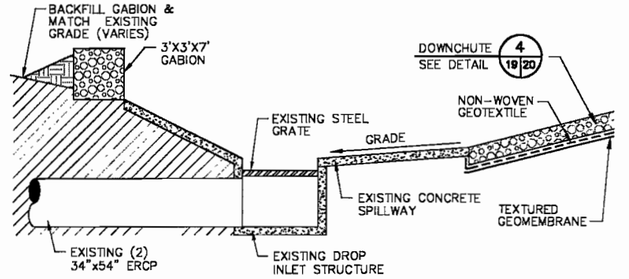
PHASES I-VI OPERATING SEQUENCE
DETAILS 1

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

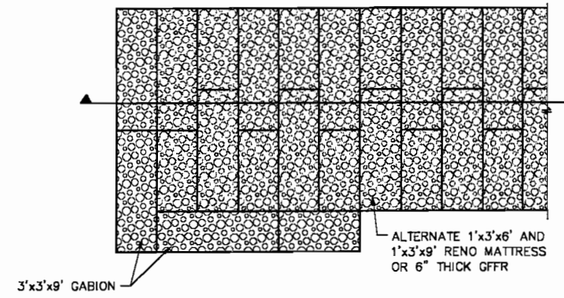
DATE: APRIL 2010
SCALE: AS SHOWN
PROJECT NO.: 08449-030-04
DWG. NO.: 18



TYPICAL WORKING FACE CELL PLAN (3 / 4|19)
NOT TO SCALE

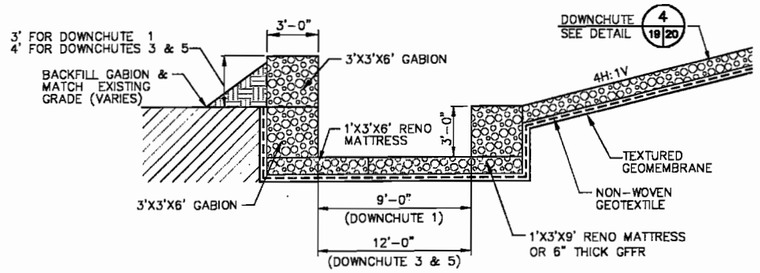


VELOCITY DISSIPATOR SECTION (A / 18|19)
NOT TO SCALE

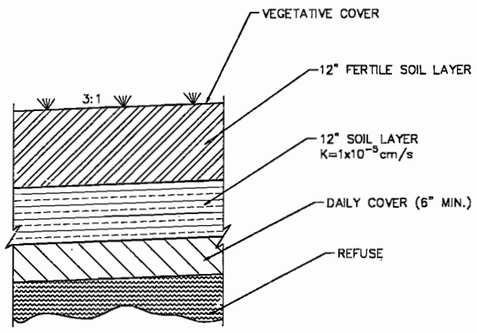


VELOCITY DISSIPATOR (1 / 18|19)
NOT TO SCALE

NOTE: VELOCITY DISSIPATOR DESIGN APPLIES TO DOWNCHUTES 1,3,4,& 5



SECTION (B / 19|19)
NOT TO SCALE



TYPICAL TEMPORARY FINAL COVER DETAIL (5 / 8,10|1)
NOT TO SCALE

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

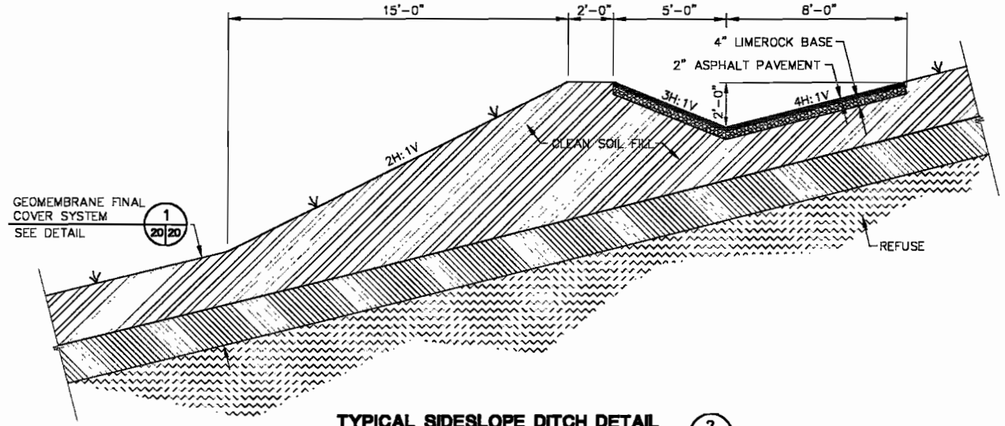
JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 255-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE
DETAILS 2

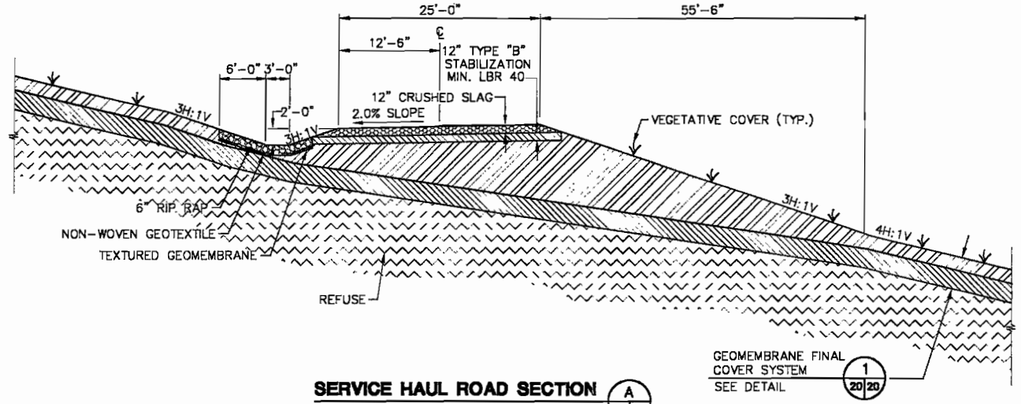
CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
SCALE: AS SHOWN
PROJECT NO.: 08449-030-04
DWG. NO.: 19



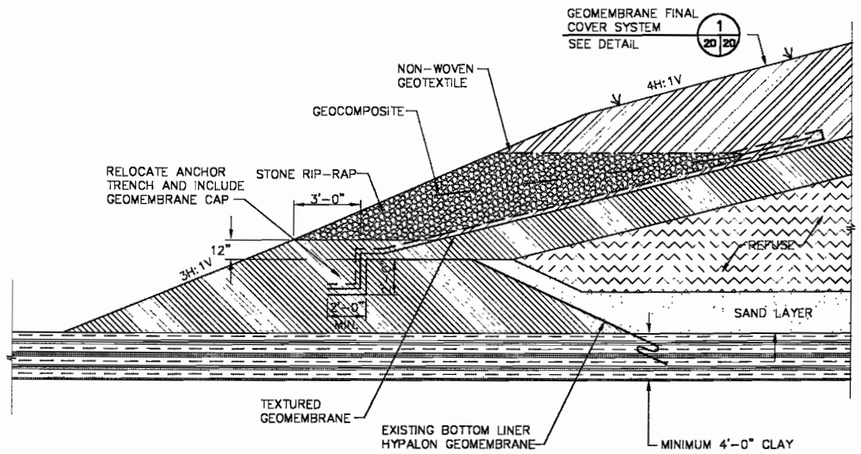
TYPICAL SIDESLOPE DITCH DETAIL 2 (3 20)

NOT TO SCALE



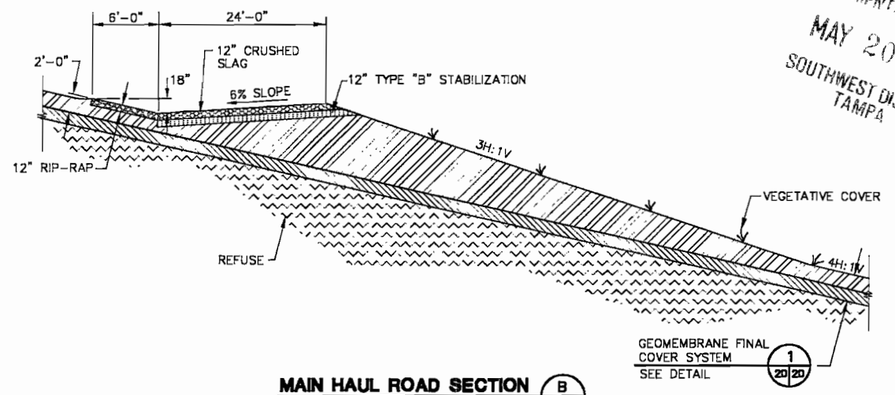
SERVICE HAUL ROAD SECTION A (14 20)

NOT TO SCALE



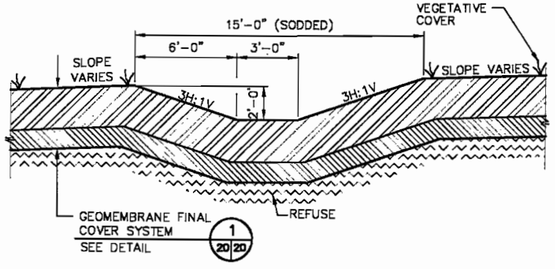
TYPICAL FINAL COVER TOE DRAIN DETAIL 3 (3 20)

NOT TO SCALE



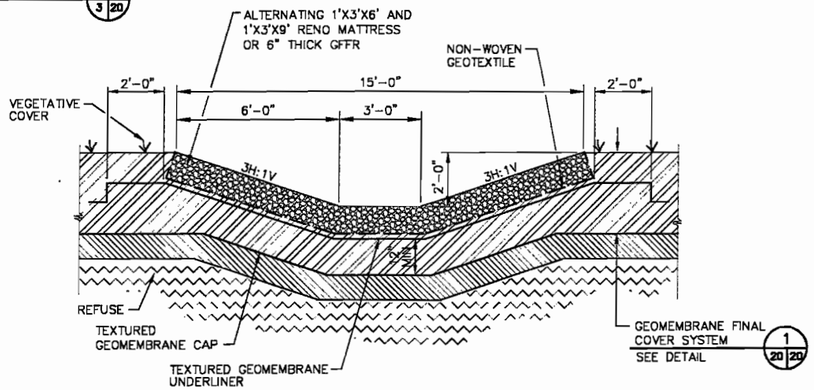
MAIN HAUL ROAD SECTION B (14 20)

NOT TO SCALE



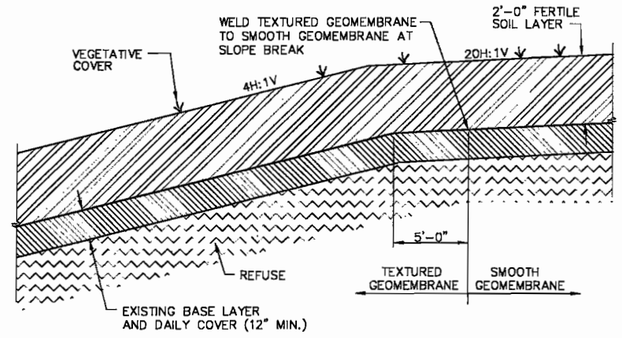
TYPICAL TOP SLOPE DITCH DETAIL 5 (3 20)

NOT TO SCALE



TYPICAL DOWNCHUTE DETAIL 4 (20) 18,19

NOT TO SCALE



NOTE: TEXTURED GEOMEMBRANE TO BE INSTALLED ON SLOPES EXCEEDING 20H:1V AND SMOOTH GEOMEMBRANE TO BE INSTALLED ON SLOPES LESS THAN OR EQUAL TO 20H:1V

TYPICAL GEOMEMBRANE FINAL COVER SYSTEM DETAIL 1 (20) 10,13,14

NOT TO SCALE

*GFFR – GROUT FILLED FABRIC REVETMENT

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT
TAMPA

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED SCS
DRAWN SCS/GRD
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY, FLORIDA
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

PHASES I-VI OPERATING SEQUENCE
DETAILS 3

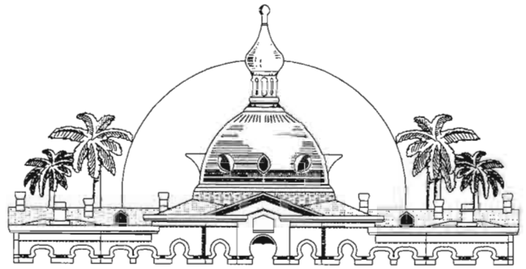
CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JASON E. TIMMONS
P.E. # 65869

DATE: APRIL 2010
PROJECT NO.: 08449-030-04
SCALE: AS SHOWN
DWG. NO.: 20

LAST SAVED: 5/13/2010 8:43 AM JKRAMER
\\Jeacad\drafting\08449 Hillsborough County\030 04 Ph I-IV Op Minor Mod\Permit Drawings\Civil\08449-030-04-20.dwg
Plotted: 5/14/10 9:26am JKramer

ATTACHMENT C

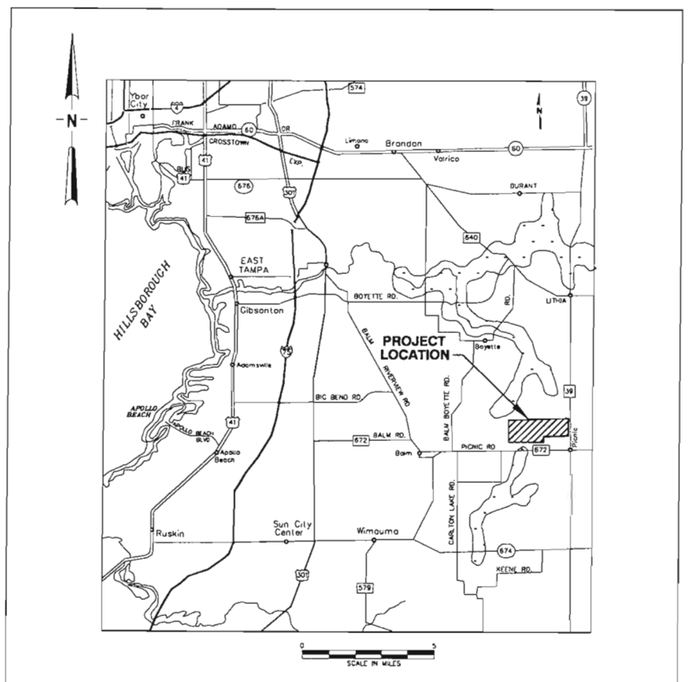
CAPACITY EXPANSION AREA (SECTIONS 7, 8, AND 9)
UPDATED OPERATING SEQUENCE DRAWINGS



SOUTHEAST COUNTY LANDFILL CAPACITY EXPANSION AREA SECTIONS 7, 8, AND 9 OPERATING SEQUENCE

HILLSBOROUGH COUNTY SOLID WASTE MANAGEMENT DEPARTMENT

TAMPA, FLORIDA



SITE VICINITY MAP

DRAWING INDEX

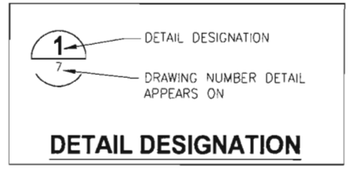
DWG. NO.	DESCRIPTION
1	COVER SHEET
2	FACILITY SITE PLAN AND EXISTING TOPOGRAPHY
3	CAPACITY EXPANSION AREA SITE PLAN
4	SECTION 9 PERIMETER STORMWATER PLANS
6	SECTIONS 7, 8, 9 FILL SEQUENCING SEQUENCES 5 THROUGH 8
7	SECTIONS 7, 8, 9 FILL SEQUENCING SEQUENCES 9 THROUGH12
8	SECTIONS 7, 8, 9 FILL SEQUENCING SEQUENCES 13 THROUGH 16
9	SECTIONS 7, 8, 9 FILL SEQUENCING SEQUENCES 17 THROUGH 18
10	SECTIONS 7, 8, 9 FILL SEQUENCING DETAILS
11	SECTIONS 7, 8, 9 FILL SEQUENCING DETAILS
12	SECTIONS 7, 8, 9 FILL SEQUENCING DETAILS
13	SECTIONS 7, 8, 9 FILL SEQUENCING DETAILS

PREPARED BY:

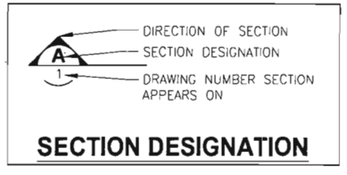
JONES EDMUNDS

730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
CERTIFICATE OF AUTHORIZATION #1841

PROJECT MANAGER'S LOCATION
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703



DETAIL DESIGNATION



SECTION DESIGNATION

PROJECT NO: 08449-030-01

APRIL 2010

-N-

GRAPHIC SCALE

0 150 300 600

SCALE IN FEET

LEGEND

- DRAINAGE FLOW ARROW
- PROPERTY LINE
- FENCING LOCATION
- EDGE OF WATER BODY

STORMWATER DETENTION FILTRATION BASIN "D"

CAPACITY EXPANSION AREA (147 AC)

WASTE TIRE PROCESSING FACILITY

PROPOSED EFFLUENT/LEACHATE STORAGE TANK

200' MIN

SECTION 9 LEACHATE COLLECTION/DETECTION SIDESLOPE RISERS

PHASE V

SECTION 9 (13.1 ACRES)

SECTION 8 (8.8 ACRES)

200' OFFSET FROM WATER (TYP)

SECTIONS 7 AND 8 LEACHATE COLLECTION/DETECTION SIDESLOPE RISERS

SECTION 7 (12.5 ACRES)

STORMWATER DETENTION BASIN "C"

PHASE VI

MAIN LEACHATE PUMP STATION

PHASE III

PHASE IV

EFFLUENT STORAGE PONDS "A" AND "B"

EXISTING CLASS I LANDFILL AREA (162 AC.)

STORMWATER DETENTION FILTRATION BASIN "A"

PHASE I

PHASE II

EQUIPMENT MAINTENANCE BUILDING

EVAPORATION AREA

SCALEHOUSE AND OFFICE

TRAFFIC ROUTE TO SECTION 8

STORMWATER DETENTION FILTRATION BASIN "E"

STORMWATER DETENTION FILTRATION BASIN "F"

STORMWATER DETENTION BASIN "G"

SOURCE:
MAP COMPILED FROM AERIAL PHOTOGRAPHY BY PICKETT & ASSOCIATES
DATED: [illegible]

LTR.	DATE		BY	APPD.

DESIGNED JHO
DRAWN UTR
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

FACILITY SITE PLAN
AND EXISTING TOPOGRAPHY

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H. O'NEILL P.E.
P.E. #052049

DATE: APRIL 2010
PROJECT NO.: 08449-030-01
SCALE: AS SHOWN
DWG. NO.: 2

Plotted: 5/13/10 3:44pm JKromer
\\Jeacad\drafting\08449 Hillsborough County\021 SELF Section 9\FILL SECTION 9 DWGS\0844902101-C02.dwg
Edited: 00/00/00 0:00 login

SECTION 9
STOCKPILE AREA
(4:1 SIDESLOPES)

TEMPORARY
SEDIMENT BASIN

LANDFILL LINER
ANCHOR TRENCH 1/10
SEE DETAIL

TH-71

P-4D

P-4S

LEACHATE COLLECTION
PIPE TRENCH

FLOW (TYP)

1.46%

INV ELEV = 131.48

INV ELEV = 129.1

TH-70

SECTION 9

130

0.75%

INV ELEV = 128.8

TH-69

INV ELEV = 126.4

INV ELEV = 126.1

INTERIOR
SEPARATION BERM 2/10
SEE DETAIL

INV ELEV = 124.3

LEACHATE COLLECTION SYSTEM 1/13
SEE DETAIL

P-11D

LINER TIE-IN
SECTION 7 AND 9 4/11
SEE DETAIL

LIMITS OF PRIMARY LINER

EXIST. SECTION 7 PUMP
STATION NEW GENERATOR
AND TRANSFER SWITCH

SECTION 7
(EXISTING)

SECTION 7 AND 8
PROJECTED TOPOGRAPHY

LINER TIE-IN
SECTION 8 AND 9 5/11
SEE DETAIL

SECTION 8
(EXISTING)

EDGE OF EXISTING LINER

P-3S (ABANDONED)
P-3D (ABANDONED)

P-7D

TH-68

DOWNCHUTE 3/12
SEE DETAIL (TYP)

LANDFILL GAS
PIPING AS-BUILT
SURVEY AS
DEVELOPED BY SCS
ENGINEERS

TEMPORARY
FINAL COVER SYSTEM 3/10
SEE DETAIL (TYP)

TH-64

EXISTING BASIN "C"

TH-61

EXISTING 6"ø FORCEMAIN TO
LEACHATE TREATMENT AND
RECLAMATION FACILITY

P-8D

N

GRAPHIC SCALE
0 50 100 200
SCALE IN FEET
1"=100'

HORIZONTAL AND VERTICAL CONTROL TABLE

POINT #	NORTHING	EASTING	ELEVATION
1	1252431.76	598639.38	143.42
2	1252402.24	598647.23	135.50
3	1252280.91	598897.40	132.49
4	1252275.26	598902.15	131.48
5	1252274.49	598911.62	132.52
6	1252183.48	599141.08	136.00
7	1252193.06	599177.48	143.85
8	1251854.16	598923.61	133.34
9	1251836.09	598912.87	133.22
10	1251691.94	598837.94	140.10
11	1251565.28	598703.22	130.59
12	1251549.06	598689.75	130.42
13	1251314.55	598491.80	127.91
14	1251265.89	598502.91	139.07
15	1251439.02	598267.99	140.05
16	1251464.51	598308.63	125.05
17	1251499.28	598337.64	125.42
18	1251504.13	598320.79	124.26
19	1251525.17	598303.34	125.55
20	1251487.79	598277.87	125.18
21	1251626.33	598083.35	128.09
22	1251619.32	598026.70	141.61
23	1251871.17	598263.42	130.42
24	1251888.04	598275.76	130.58
25	1252043.80	598347.70	143.14
26	1252164.71	598477.65	133.21
27	1252181.41	598490.27	133.37

(27) = HORIZONTAL AND VERTICAL CONTROL POINT

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT
TAMPA

LTR	DATE	REVISIONS	BY	APPRD.
A	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED JHO, JET
DRAWN UTR
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

CAPACITY EXPANSION
AREA SITE PLAN

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H. O'NEILL P.E.
P.E. # 052049

DATE: APRIL 2010
PROJECT NO: 08449-030-01
SCALE: AS SHOWN
DWG NO: 3

Plotted: 5/13/10 3:49pm JKramer
Edited: 00/00/00 0:00 login
\\Jeacad\drafting\08449 Hillsborough County\021 SELF Section 9\FILL SEQ\DWGS\0844902101-C03.dwg

Plotted: 5/13/10 3:54pm JKramer

\\Jeacad\drafting\08449 Hillsborough County\021 SELF Section 9\FILL SEQ\DWGS\0844902101-C04.dwg

Edited 00/00/00 0:00 login

SECTION 9
STOCKPILE AREA
(4:1 SIDESLOPES)

TEMPORARY SEDIMENT BASIN

PERIMETER STORMWATER CHANNEL (1/11) SEE DETAIL

TH-71

P-4D

R-4S

SECTION 9

TH-70

TOP OF SUBGRADE

LIMITS OF 60 MIL HDPE GEOMEMBRANE SUB-LINER INSTALLED BELOW GCL AT ELEV 126.0

TH-69

LIMITS OF SECONDARY LINER SYSTEM

LINER TIE-IN, SECTION 8 AND 9 (5/11) SEE DETAIL

P-3S (ABANDONED)
P-3D (ABANDONED)

SECTION 8
(EXISTING)

P-7D

TH-68

SECTION 7 AND 8 PROJECTED TOPOGRAPHY

LIMITS OF ACCESS ROAD REALIGNMENT

PERIMETER STORMWATER CHANNEL (1/11) SEE DETAIL

SECTION 7
(EXISTING)

LINER TIE-IN SECTION 7 AND 9 (4/11) SEE DETAIL

P-11D
END STORMWATER CHANNEL AND BEGIN ARMORED SWALE "B" TRANSITION 3:1 TO 2:1 147'-0"

TH-64

EXISTING BASIN "C"

PERIMETER SWALE "A" (2/11) SEE DETAIL

ARMORED SWALE "B" 722'-6"

ARMORED PERIMETER SWALE "B" (3/11) SEE DETAIL

TH-61

P-8D

-N-

GRAPHIC SCALE
0 50 100 200
SCALE IN FEET
1"=100'

HORIZONTAL AND VERTICAL CONTROL TABLE

POINT #	NORTHING	EASTING	ELEVATION
1	1252599.93	598713.56	141.00
2	1252560.42	598723.85	130.00
3	1252503.55	598675.14	130.00
4	1252491.40	598626.38	140.00
5	1252458.7	598632.11	140.48
6	1252402.24	598647.23	135.50
7	1252280.91	598897.20	132.49
8	1252275.27	598902.34	131.48
9	1252274.64	598911.26	132.52
10	1252183.48	599141.08	135.99
11	1252223.27	599195.13	135.76
12	1252225.79	599245.81	138.00
13	1252255.67	599234.74	130.00
14	1252314.62	599266.81	130.00
15	1251992.31	599013.79	134.44
16	1251825.63	598905.97	133.13
17	1251703.91	598816.58	132.02
18	1251314.55	598491.80	127.91
19	1251264.47	598504.87	138.67
20	1251256.38	598498.99	138.67
21	1251238.26	598485.93	135.67
22	1251430.01	598270.03	140.02
23	1251450.15	598326.48	125.31
24	1251485.47	598355.95	125.68
25	1251477.96	598306.24	119.99
26	1251504.76	598330.67	125.29
27	1251513.86	598318.74	125.29
28	1251504.28	598320.87	124.24
29	1251527.72	598300.58	125.57
30	1251489.95	598274.84	125.20
31	1251626.49	598083.47	128.09
32	1251619.32	598026.70	141.61
33	1251614.96	597995.79	138.56
34	1252035.99	598314.26	140.07
35	1250903.23	599021.26	132.75
36	1250867.44	599095.01	132.37
37	1250865.92	599195.92	131.90
38	1250899.66	599264.91	131.54
39	1250945.82	599310.76	131.23
40	1250984.57	599331.26	131.03
41	1251192.95	599409.57	130.00

(41) = HORIZONTAL AND VERTICAL CONTROL POINT

LTR	DATE	REVISIONS	BY	APPRD.
1	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED JHO
DRAWN UTR
CHECKED JHO

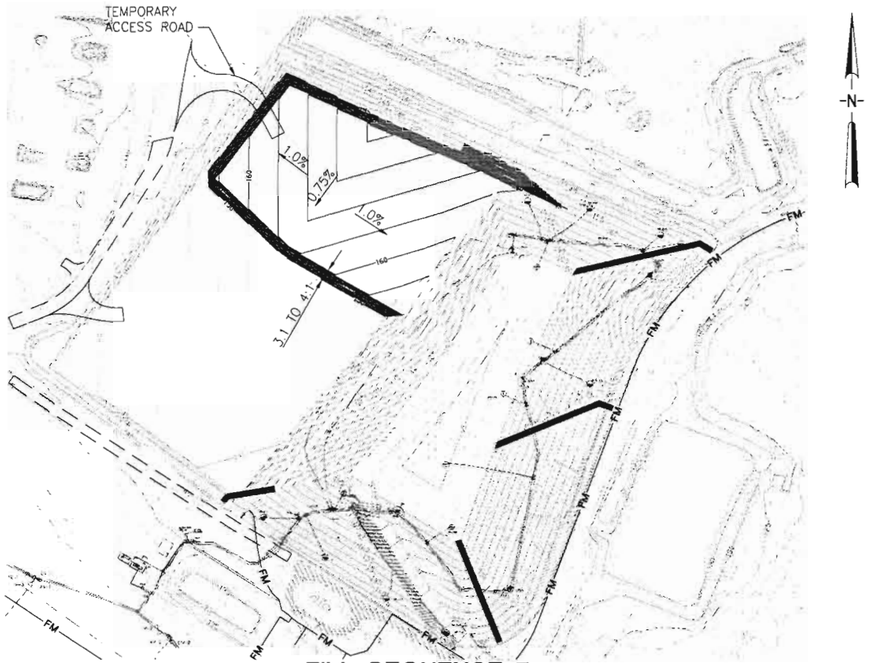
JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-6821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

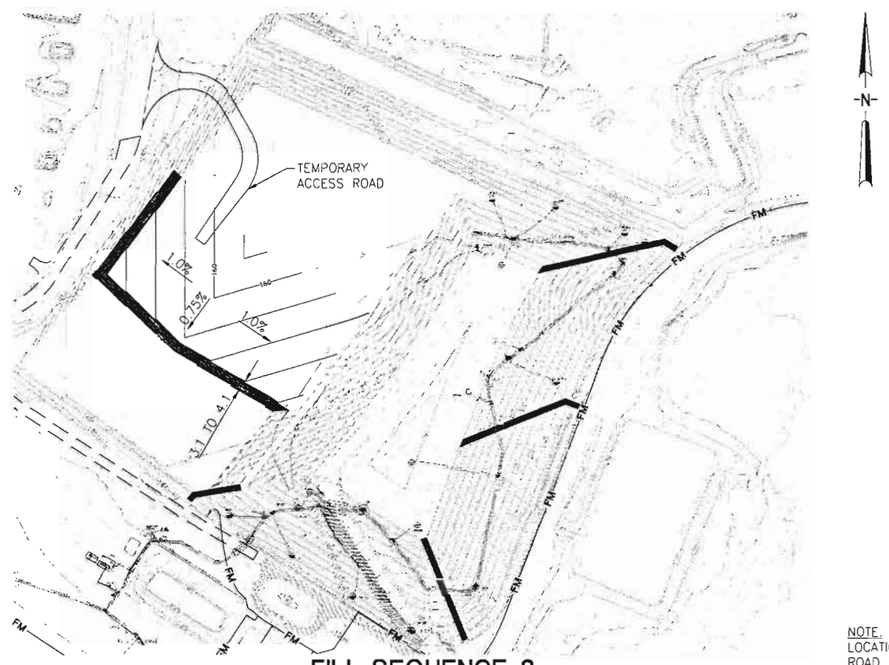
SECTION 9
PERIMETER STORMWATER PLANS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H O'NEILL P.E.
P.E. # 052049

DATE APRIL 2010
SCALE AS SHOWN
DWG NO 4



FILL SEQUENCE 7
SCALE 1"=200'-0"



FILL SEQUENCE 8
SCALE 1"=200'-0"

NOTE.
LOCATION OF ACCESS ROAD TO VARY WITH OPERATIONS

LTR	DATE	REVISIONS	BY	APPRD.
1	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED JHO
DRAWN UTR
CHECKED JHO

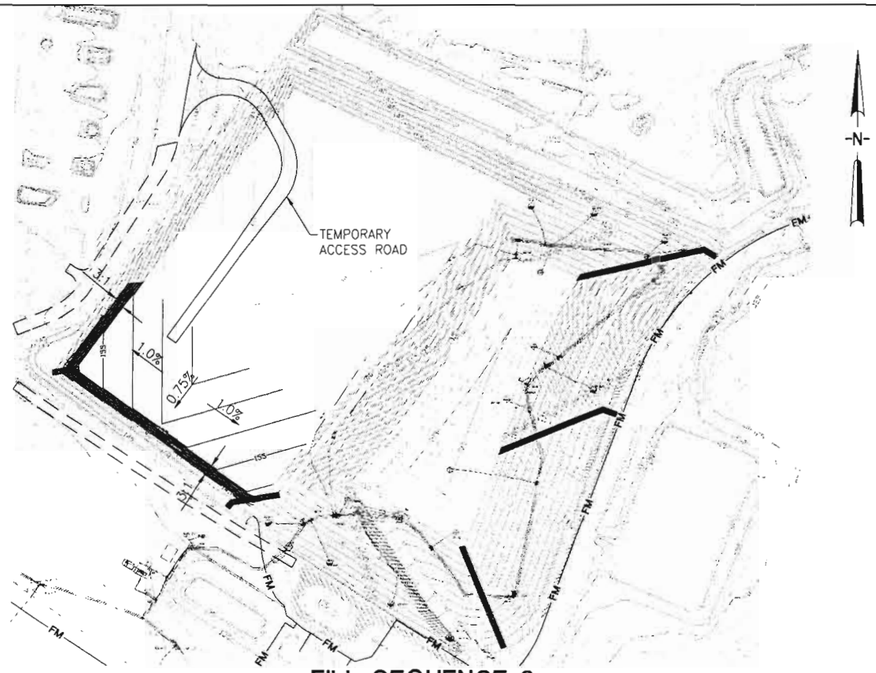
JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

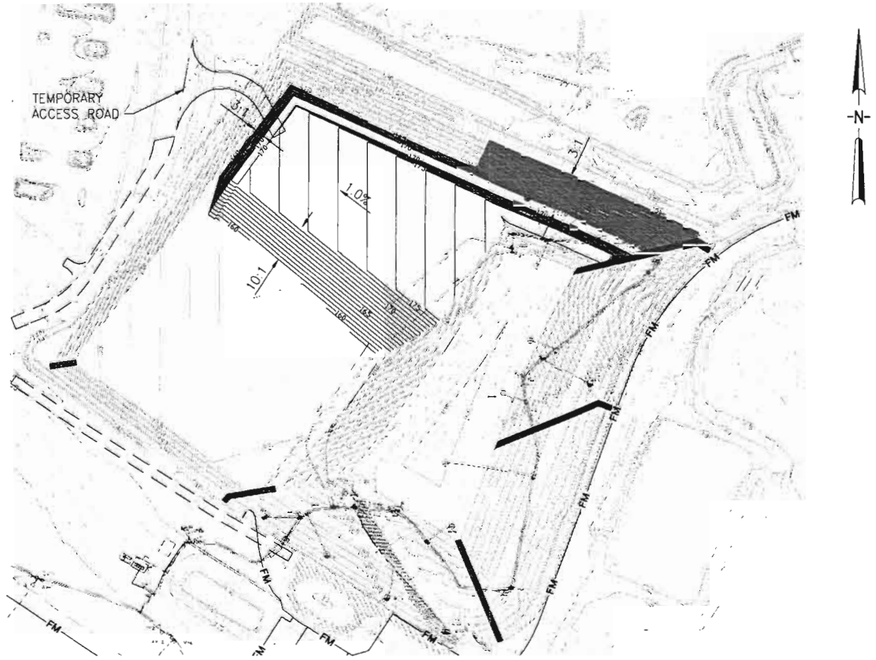
SECTIONS 7, 8, 9 FILL SEQUENCING
SEQUENCES 5 THROUGH 8

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H. O'NEILL P.E.
P.E. # 052049

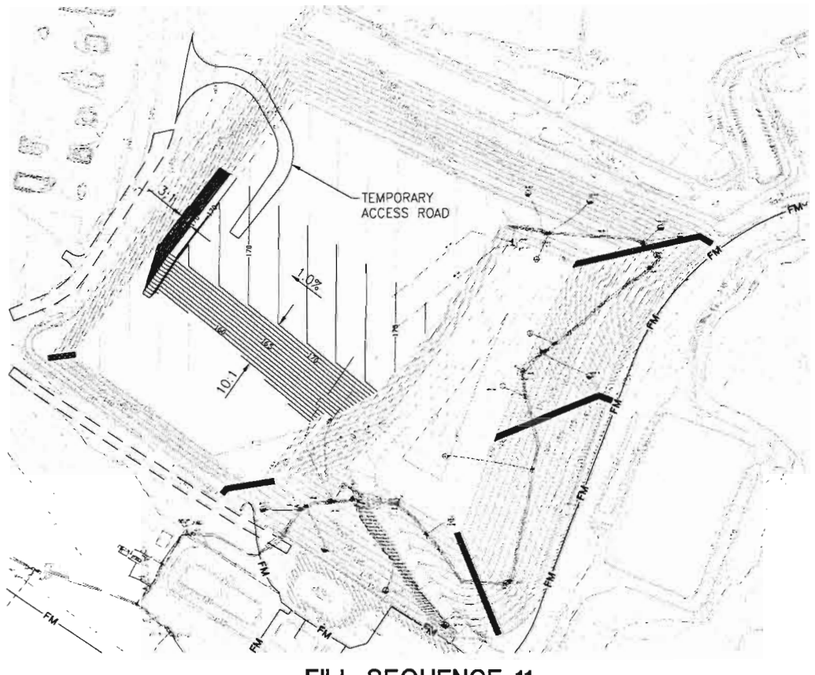
DATE	PROJECT NO
APRIL 2010	08449-030-01
SCALE	DWG NO
AS SHOWN	6



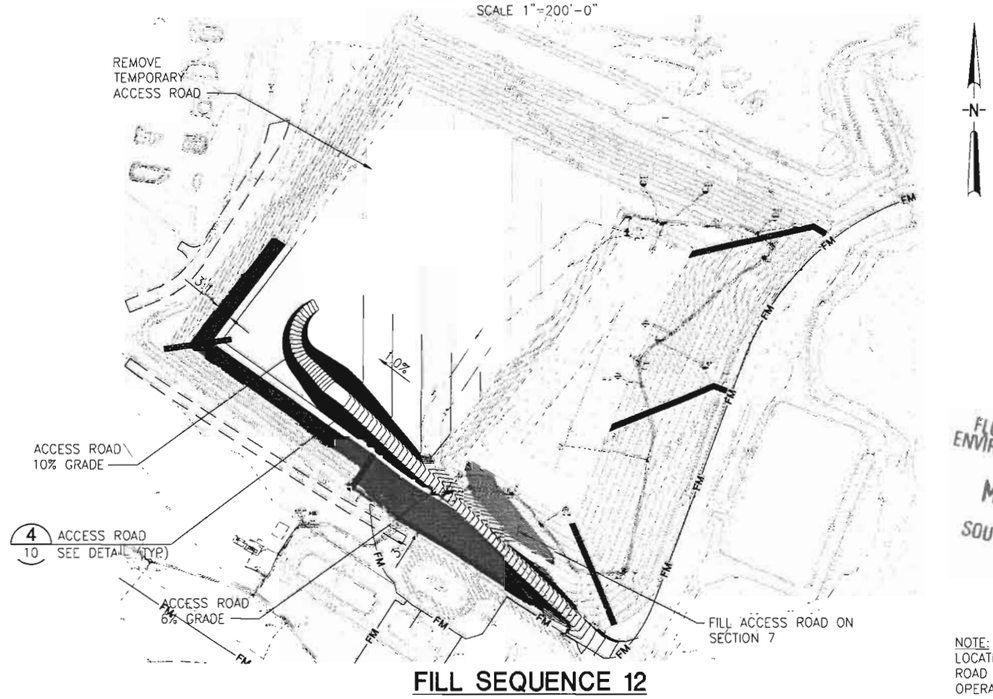
FILL SEQUENCE 9
SCALE 1"=200'-0"



FILL SEQUENCE 10
SCALE 1"=200'-0"



FILL SEQUENCE 11
SCALE 1"=200'-0"



FILL SEQUENCE 12
SCALE 1"=200'-0"

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT
TAMPA

NOTE:
LOCATION OF ACCESS ROAD TO VARY WITH OPERATIONS

LTR.	DATE	REVISIONS	BY	APPRD.
1	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED JHO
DRAWN UTR
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

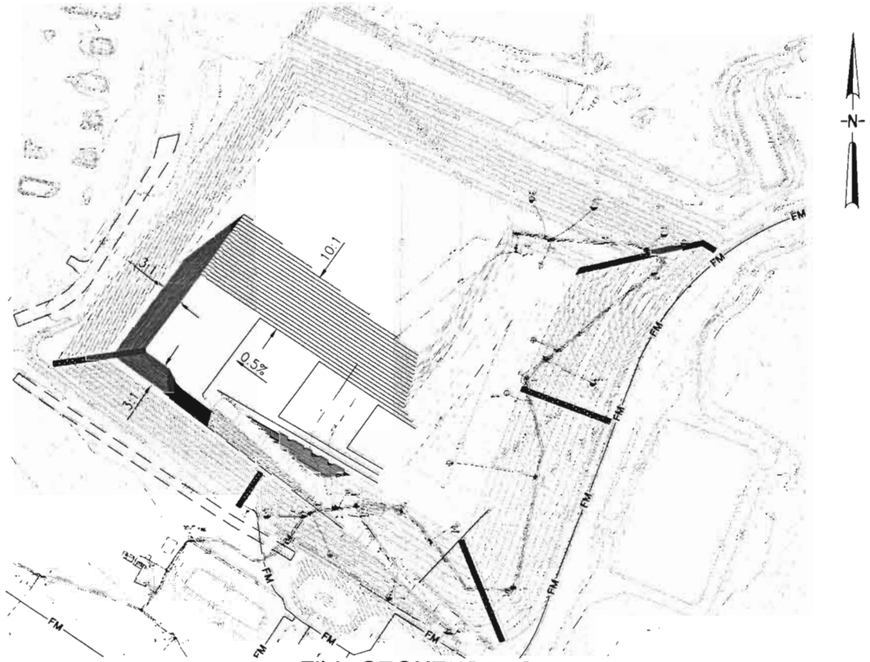
HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

SECTIONS 7, 8, 9 FILL SEQUENCING
SEQUENCES 9 THROUGH 12

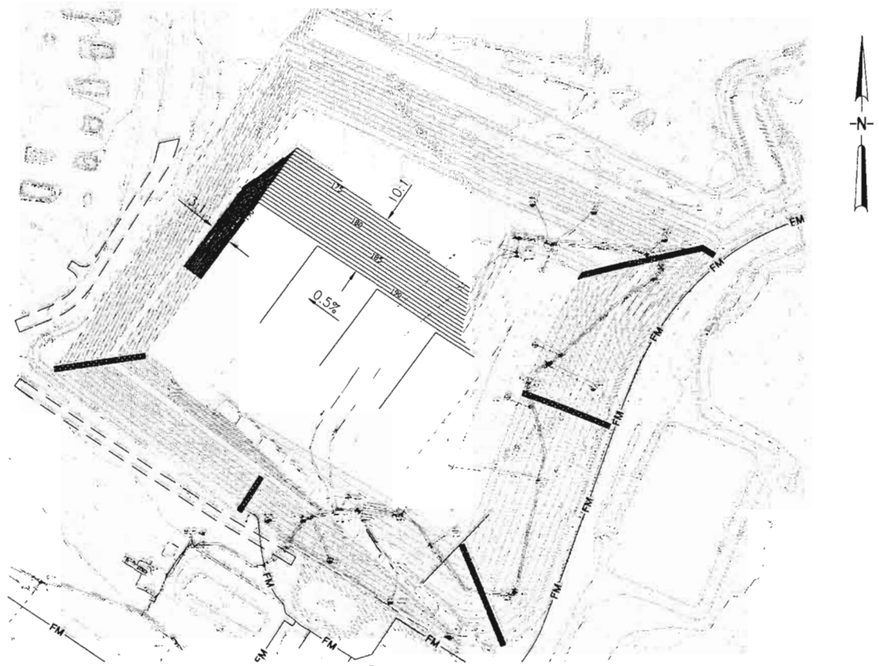
CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H. O'NEILL P.E.
P.E. # 052049

DATE: APRIL 2010
PROJECT NO: 08449-030-01
SCALE: AS SHOWN
DWG NO: 7

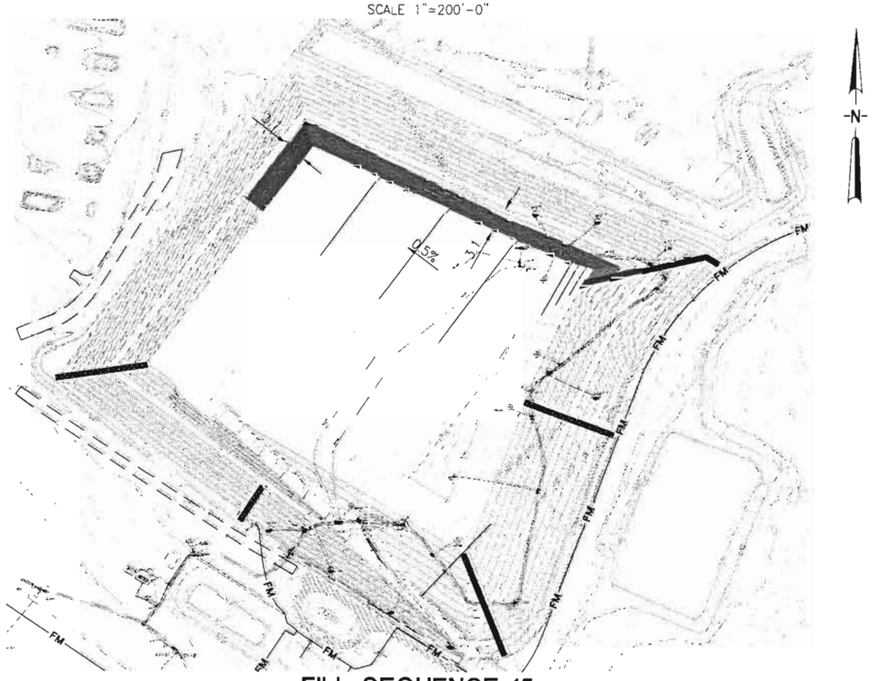
Edited 00/00/00 0:00 login \\Jeacad\drafting\08449 Hillsborough County\021 SELF Section 9\FILL SEQ\DWGS\0844902101--C07-SEQ-9_12.DWG Plotted: 5/13/10 4:00pm JKramer



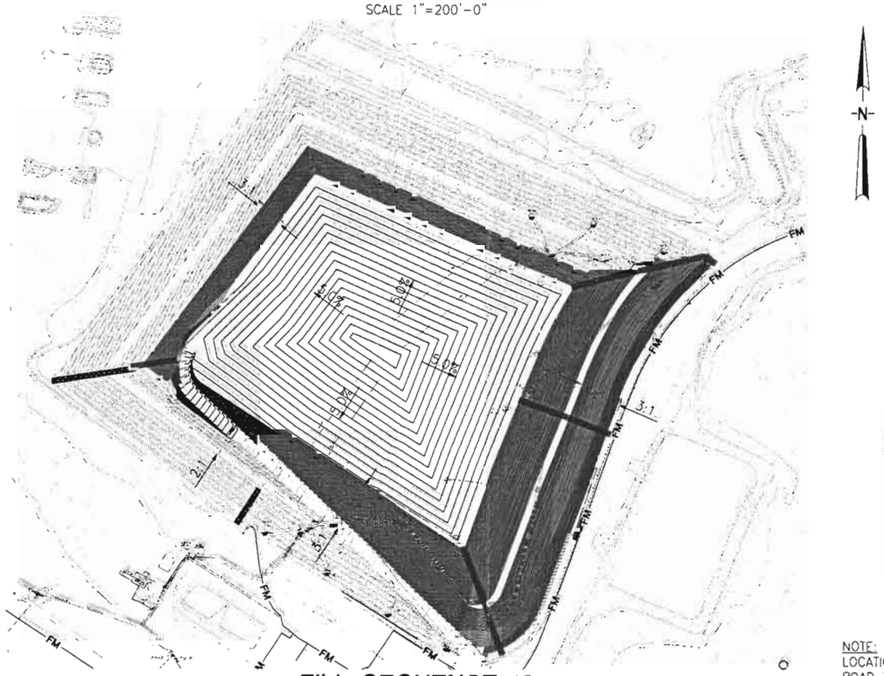
FILL SEQUENCE 13
SCALE 1"=200'-0"



FILL SEQUENCE 14
SCALE 1"=200'-0"



FILL SEQUENCE 15
SCALE 1"=200'-0"



FILL SEQUENCE 16
SCALE 1"=200'-0"

NOTE:
LOCATION OF ACCESS ROAD TO VARY WITH OPERATIONS

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT
TAMPA

LTR	DATE	REVISIONS	BY	APPRD
1	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED JHO, DAD, JET
DRAWN UTR, H2B
CHECKED JHO, JET

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

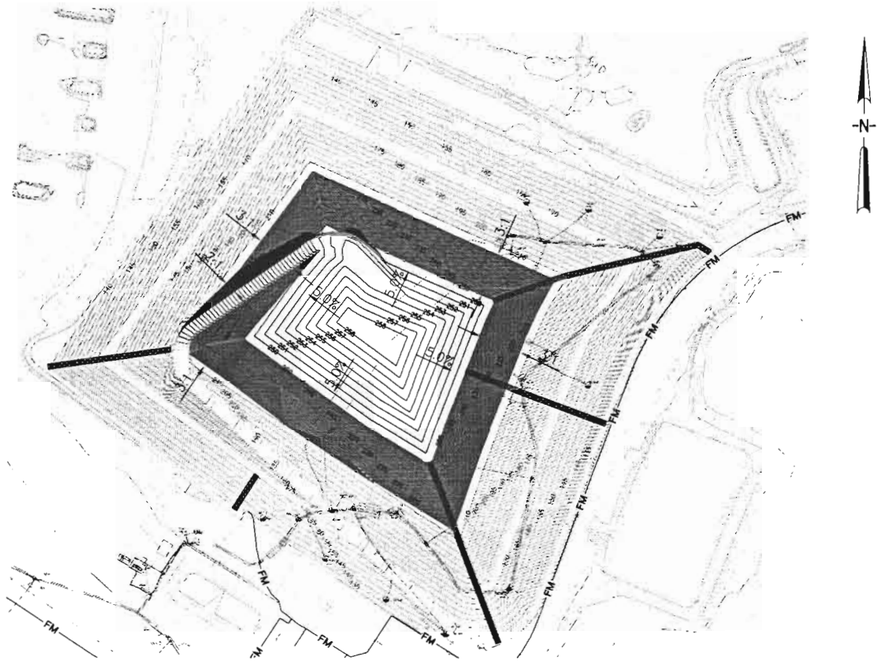
HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

SECTIONS 7, 8, 9 FILL SEQUENCING
SEQUENCES 13 THROUGH 16

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H O'NEILL P.E
P.E #052049

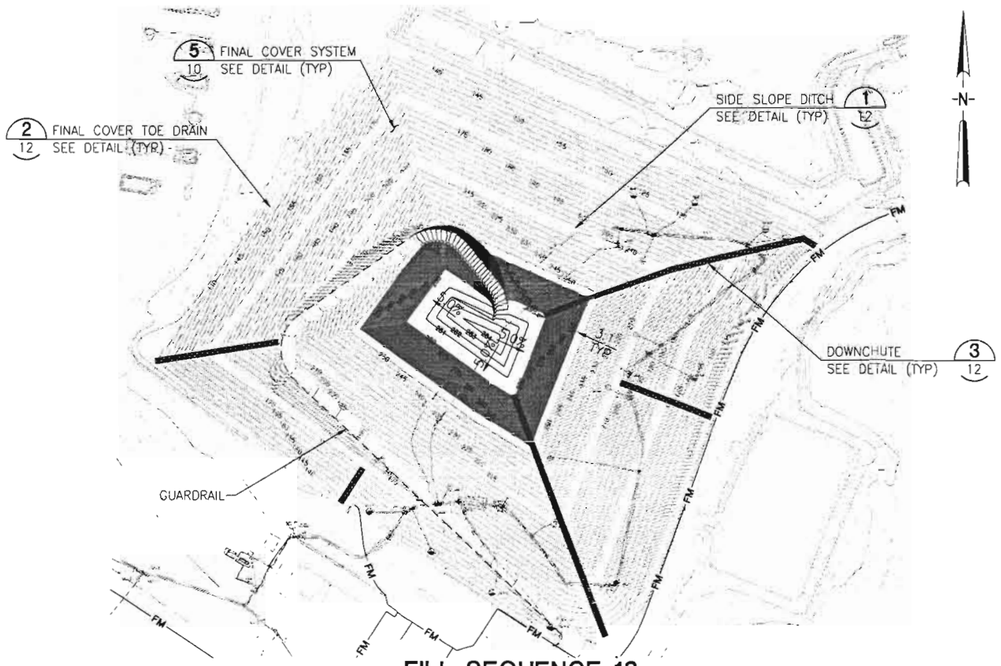
DATE	PROJECT NO
APRIL 2010	08449-030-01
SCALE	DWG NO
AS SHOWN	8

Edited: 00/00/00 0:00 login \\Jeacad\drafting\08449 Hillsborough County\021 SELF Section 9\FILL SEQ\DWGS\0844902101-C08-SEQ-13_16.DWG Plotted: 5/15/10 4:03pm JKramer



FILL SEQUENCE 17

SCALE 1"=200'-0"



FILL SEQUENCE 18

SCALE 1"=200'-0"

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT TAMPA

NOTE.
LOCATION OF ACCESS ROAD TO VARY WITH OPERATIONS

LTR	DATE	REVISIONS	BY	APPRD.
1	4/10	ADDED GAS AS-BUILT DATA	PCR	D2H

DESIGNED JHO, DAD, JET
DRAWN UTR, H2B
CHECKED JHO, JET

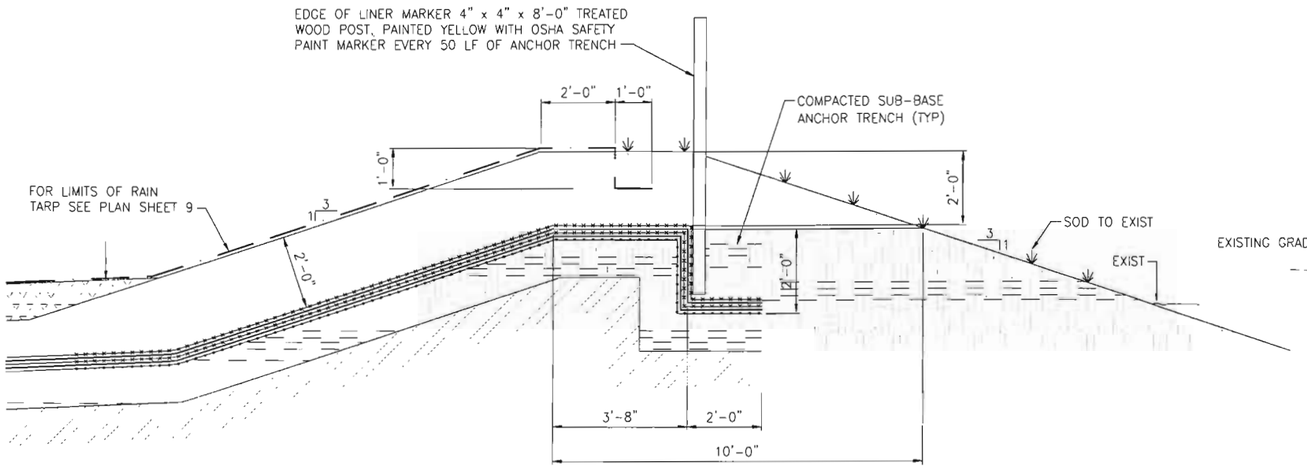
JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

SECTIONS 7, 8, 9 FILL SEQUENCING
SEQUENCES 17 AND 18

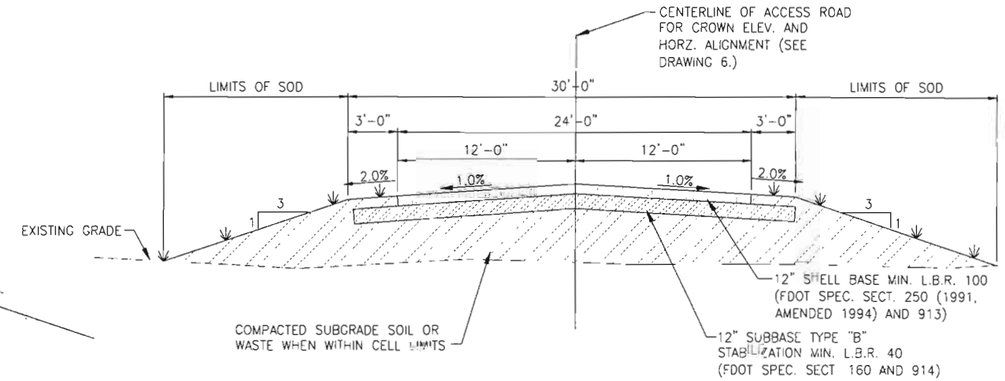
CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H O'NEILL P.E
P.E # 052049

DATE: APRIL 2010
PROJECT NO.: 08449-030-01
SCALE: AS SHOWN
DWG. NO: 9



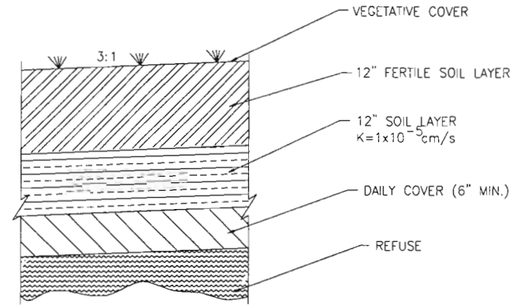
LANDFILL LINER ANCHOR TRENCH DETAIL 1/3

NOT TO SCALE



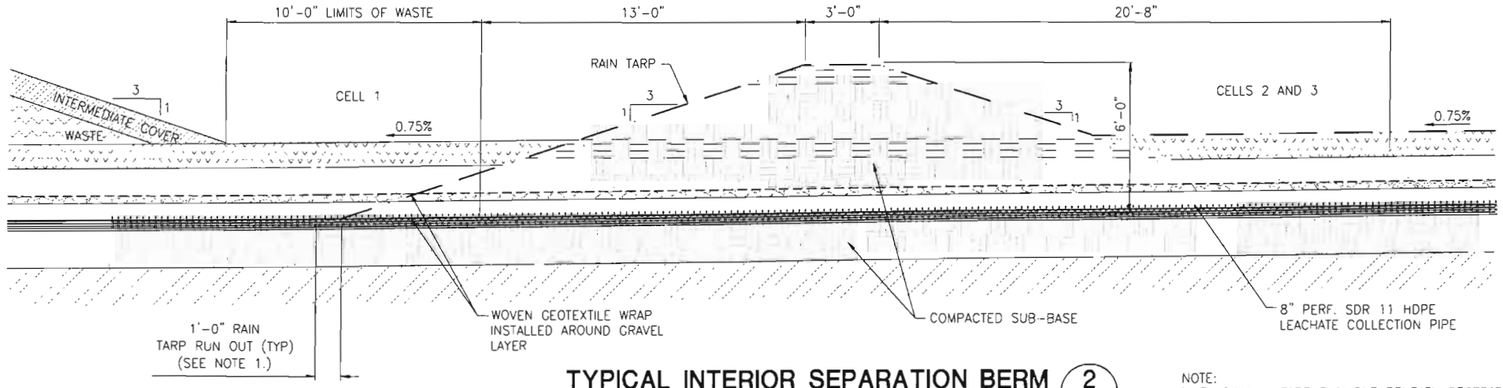
ACCESS ROAD DETAIL 4/7

NOT TO SCALE



TEMPORARY FINAL COVER DETAIL 3/9

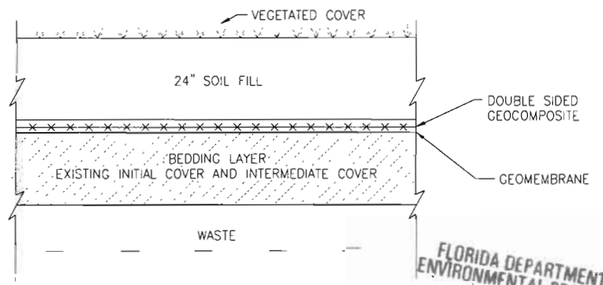
NOT TO SCALE



TYPICAL INTERIOR SEPARATION BERM 2/3

NOT TO SCALE

NOTE:
1 PLACE RAIN TARP RUN OUT BENEATH PROTECTIVE COVER LAYERS ALONG THE ENTIRE LENGTH OF SEPARATION BERM WITH A MIN 1'-0" OVERLAP



FINAL COVER DETAIL 5/9

NOT TO SCALE

LTR.	DATE	REVISIONS	BY	APPRD.
4	4/10	ADDED TEMP FINAL COVER DETAIL	PCR	D2H

DESIGNED JHO
DRAWN UTR
CHECKED JHO

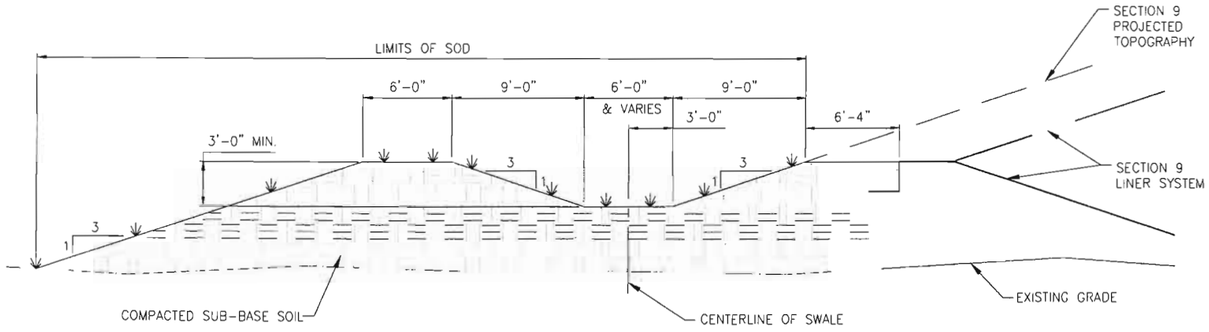
JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

SECTIONS 7, 8, 9 FILL SEQUENCING
DETAILS

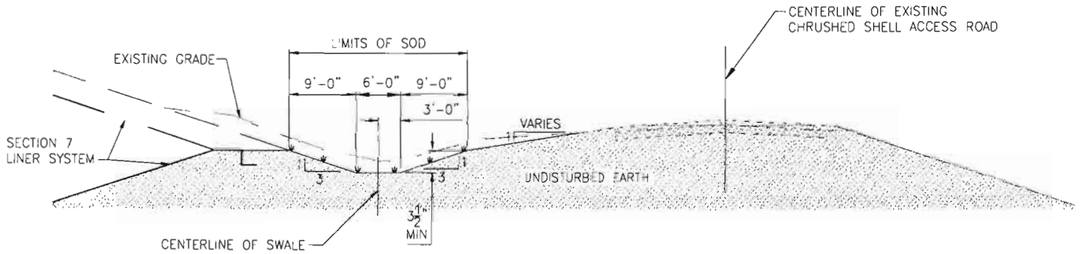
CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H. O'NEILL P.E.
P.E. #052049

DATE: APRIL 2010
PROJECT NO.: 08449-030-01
SCALE: AS SHOWN
DWG. NO.: 10



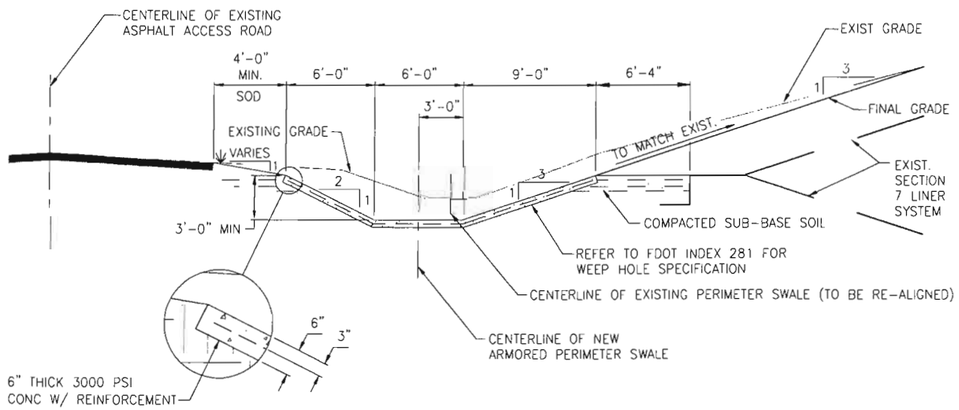
PERIMETER STORMWATER CHANNEL DETAIL 1/4

NOT TO SCALE



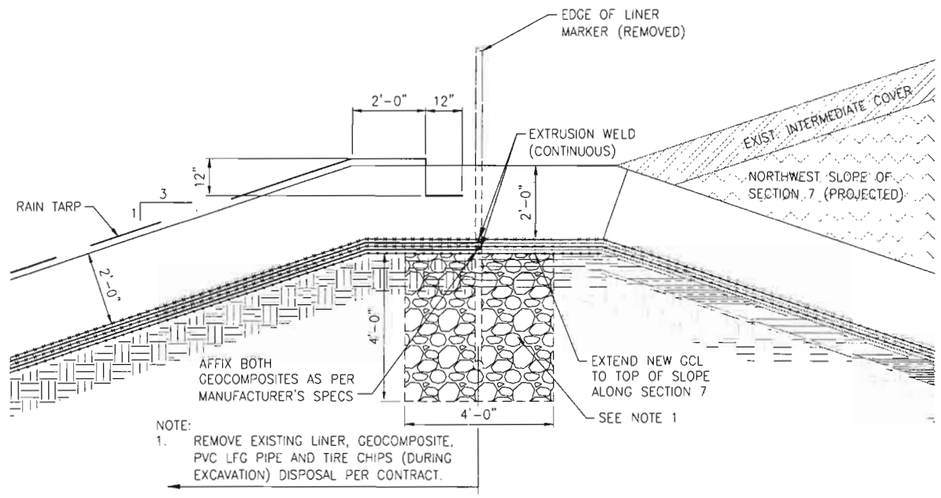
PERIMETER SWALE "A" DETAIL 2/4

NOT TO SCALE



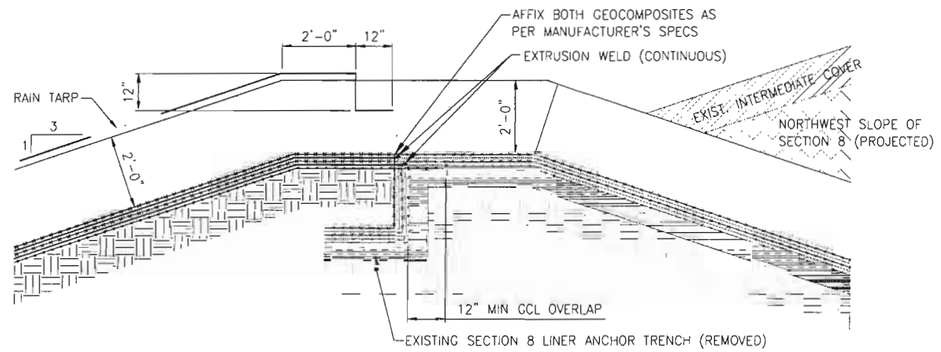
ARMORED PERIMETER SWALE "B" DETAIL 3/4

NOT TO SCALE



LINER TIE-IN SECTION 7 AND 9 DETAIL 4/3,4

NOT TO SCALE



LINER TIE-IN SECTION 8 AND 9 DETAIL 5/3,4

NOT TO SCALE

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT
TAMPA

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED JHO
DRAWN UTR
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

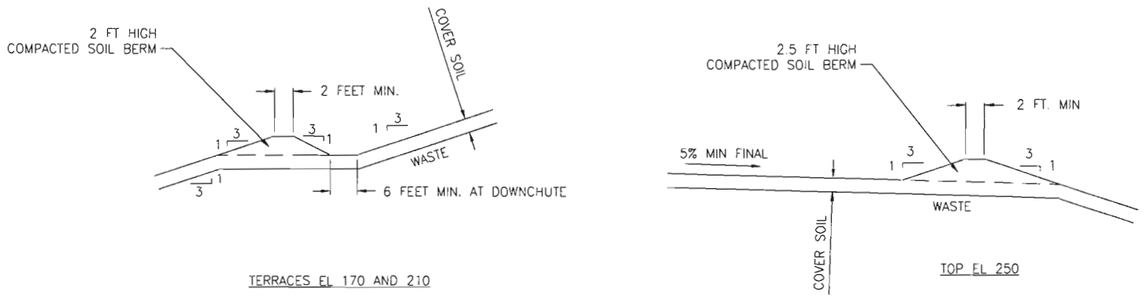
HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

SECTIONS 7, 8, 9 FILL SEQUENCING
DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H. O'NEILL P.E.
P.E. # 052049

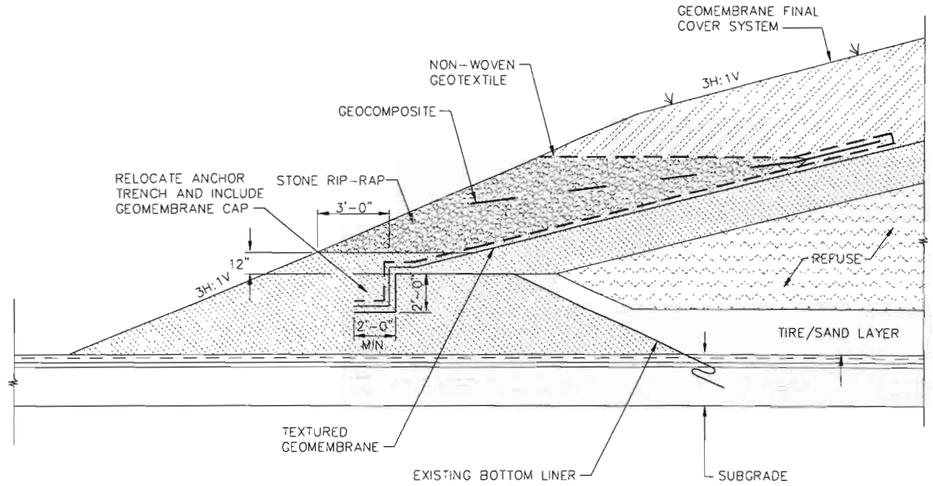
DATE: APRIL 2010
PROJECT NO.: 08449-030-01
SCALE: AS SHOWN
DWG. NO.: 11

Plotted: 5/13/10 4:07pm JKramer
Edited: 00/00/00 0:00 login
\\Jeacad\drafting\08449 Hillsborough County\021 SELF Section 9\FILL SEQ\DWGS\0844902101-c11-det.dwg



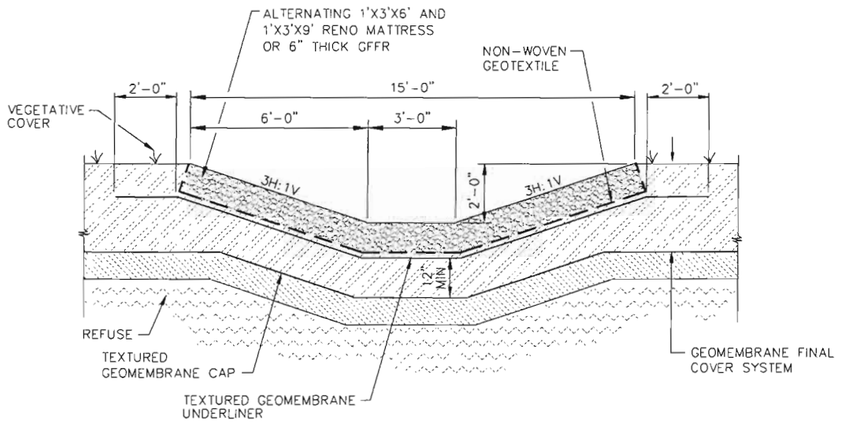
TYPICAL SIDE SLOPE DITCH DETAIL 1/9

NOT TO SCALE



TYPICAL FINAL COVER TOE DRAIN DETAIL 2/9

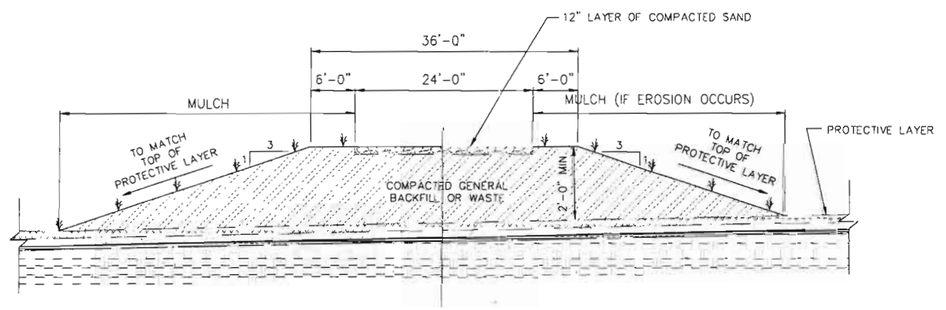
NOT TO SCALE



*GFFR – GROUT FILLED FABRIC REVETMENT

TYPICAL DOWNCHUTE DETAIL 3/9

NOT TO SCALE



TYPICAL SECTION 9 TEMPORARY ACCESS ROAD DETAIL 4/5

NOT TO SCALE

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED JHO
DRAWN UTR
CHECKED JHO

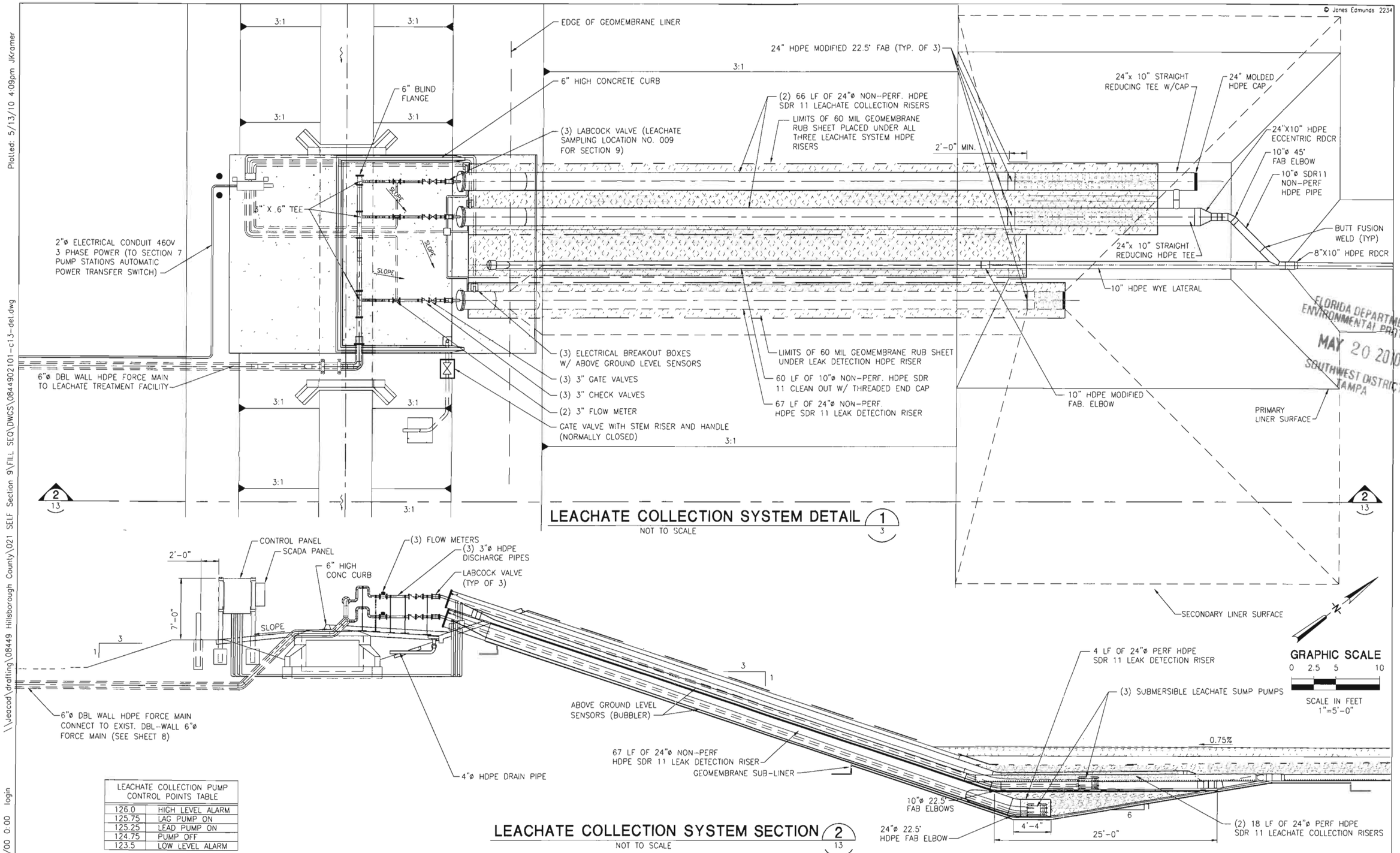
JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

SECTIONS 7, 8, 9 FILL SEQUENCING
DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H. O'NEILL P.E.
P.E. # 052049

DATE: APRIL 2010
PROJECT NO.: 08449-030-01
SCALE: AS SHOWN
DWG NO.: 12



LEACHATE COLLECTION SYSTEM DETAIL 1/3

NOT TO SCALE

LEACHATE COLLECTION SYSTEM SECTION 2/13

NOT TO SCALE

GRAPHIC SCALE

0 2.5 5 10

SCALE IN FEET
1"=5'-0"

LEACHATE COLLECTION PUMP CONTROL POINTS TABLE	
126.0	HIGH LEVEL ALARM
125.75	LAG PUMP ON
125.25	LEAD PUMP ON
124.75	PUMP OFF
123.5	LOW LEVEL ALARM

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
MAY 20 2010
SOUTHWEST DISTRICT TAMPA

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED JHO
DRAWN UTR
CHECKED JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32841 / (352) 377-5821

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT

SECTIONS 7, 8, 9 FILL SEQUENCING DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JOSEPH H. O'NEILL P.E.
P.E. # 052049

DATE: APRIL 2010
PROJECT NO.: 08449-030-01
SCALE: AS SHOWN
DWG. NO.: 13

Plotted: 5/13/10 4:09pm JKramer
\\jeacad\drafting\08449 Hillsborough County\021 SELF Section 9\FILL SEQ\DWGS\0844902101-c13-det.dwg
Edited: 00/00/00 0:00 login