

**OPERATION PLAN  
PHASES I-VI AND THE  
CAPACITY EXPANSION AREA  
(SECTIONS 7, 8, AND 9)  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

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## **PART K      INTRODUCTION**

The Southeast County Facility (Facility) includes the Southeast County Landfill (SCLF), which is permitted by the Florida Department of Environmental Protection (FDEP) as a Class I landfill for Phases I-VI and the Capacity Expansion Area. This Operation Plan includes Phases I-VI and Sections 7, 8, and 9 of the Capacity Expansion Area.

The Facility is the final depository for municipal solid waste (MSW) ash residues, non-processables, and bypass wastes from the Solid Waste Management System of Unincorporated Hillsborough County. The Facility also receives solid waste from the cities of Temple Terrace and Tampa, as well as MSW ash residues and bypass wastes from the Waste-to-Energy Incinerator Facilities of the City of Tampa and Hillsborough County. Hazardous waste will not be accepted at the Facility.

This operation plan was prepared in conjunction with an operation permit application; as such, the format follows the requirements of Part K of the Permit Application Form.

### **K.1      TRAINING**

In accordance with Rule 62-701.320(15), Florida Administrative Code (FAC), key supervisory personnel at the Facility have received Landfill Operator Certification training. Operator training includes a 24-hour initial course and 16 hours of continuing education every three years. Spotter training includes an 8-hour initial course and four hours of continuing education every three years. Operator and Spotter training courses are offered by the University of Florida Center for Training, Research and Education for Environmental Occupations (TREEO) and through other FDEP-approved sources. Landfill personnel are encouraged to attend these courses after discussions with the Landfill Manager. The currently available TREEO training courses and schedule are listed in Appendix A. The listing is also available at [www.treeo.ufl.edu](http://www.treeo.ufl.edu). Documentation demonstrating that the facility operators and spotters have received the required continuing education is presented in Attachment D.15 of the Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9) Permit Renewal Application dated June 2013.

As required by Rule 62-701.500(1), FAC, a certified Landfill Operator will be on site when waste is received for disposal at the landfill, and a trained spotter will be on site during all times when waste is deposited at the landfill working face to detect any unauthorized wastes. In addition, the equipment operators have sufficient training and knowledge to move waste and soil and to develop the site in accordance with the design and operational standards described in the operation permit application.



## **K.2 LANDFILL OPERATION PLAN**

### **K.2.a. SWMG Organization and Responsibilities**

Hillsborough County (County) owns the Facility and is the applicant for the operation permit. A Landfill Contractor (Contractor), currently Waste Management, Inc. of Florida (WMIF), will operate and maintain the Facility in accordance with the permit conditions under the contract that exists between the County and the Contractor.

The following Hillsborough County Public Utilities Department, Solid Waste Management Group (SWMG) and Contractor personnel are currently responsible for the operations at this Facility:

- Larry E. Ruiz, Landfill Operations Manager (SWMG)
- Ernest Ely, District Landfill Manager (Contractor)

In addition, the following positions are maintained at the Facility: scale-house clerks (SWMG), waste monitors (SWMG), equipment operators (Contractor), spotters (Contractor), laborers (Contractor), security personnel (Contractor), and mechanic (Contractor). At least one trained operator familiar with the landfill operations will be on site at all times while the Facility is open in accordance with Rules 62-701.320(15) and 62-701.500(1), FAC.

### **K.2.b. Contingency Plan**

The contingency plan for the Facility is based upon addressing two potential emergencies:

- Equipment failure.
- Large influx of material resulting from a natural disaster such as a hurricane, fire, or from a breakdown at local waste-to-energy facilities.

Sufficient backup equipment will be provided on site for equipment breakdowns and downtime for normal routine equipment maintenance. If primary and backup major equipment (i.e., landfill compactor or bulldozer) fail, one or both of the following contingency measures will be implemented:

- Use existing contracts with contractors and rental equipment dealers to furnish rental equipment on short notice (Appendix B).
- Establish arrangements with other County agencies to furnish equipment.

The Contractor will be responsible for providing equipment and a working force of adequate size and skill to maintain the landfill operation in compliance with all applicable federal, state, and local regulations. If sufficient local personnel are not available, the Contractor will relocate from other facilities sufficient personnel with the proper skills to maintain operations.

Given that a large volume of wastes requiring disposal from a natural disaster is non-putrescible, it can be stored on site temporarily (adjacent to the working face) and landfilled after the state of emergency has ended.

In the case of a large fire, bomb threat, or other unforeseen situation requiring specialized emergency response personnel, 911 will be called for the local Fire Department or Sheriff's Department. Waste handling will be suspended and the affected area will be evacuated, if necessary. The landfill will be temporarily closed until the responding Department determines that the landfill is safe for re-entry. If the Facility will remain closed for more than 48 hours, the incoming waste will be diverted to an alternate facility in an adjacent county.

In case of an accidental spill of oil, fuel, leachate, or chemicals, the spill will be minimized by controlling the source immediately (e.g., by closing the valve, turning-off switch, or taking any other necessary action). The affected area will be protected by diverting vehicular traffic. Building a berm, plugging a drain or ditch, or adding absorbent material will control runoff from the affected area. The affected area will be cleaned, and the effectiveness of the cleanup confirmed by sampling, as needed, depending on the nature of the spilled material. For spill countermeasures of secondary containment at the Leachate Treatment and Reclamation Facility (LTRF) and the effluent/leachate storage tank, refer to Section 11.0 of the Leachate Management Plan (LMP).

### **K.2.c. Waste Type Control**

The automated accounting system, clerks at the scalehouse, and the site security fence help discourage unauthorized entry and uncontrolled disposal of unauthorized waste. A sign at the entrance states the general regulations including the types of prohibited solid waste.

A minimum of three random load inspections of solid waste per week will be conducted at the active landfill (See Part K.6 and Appendix C). As an additional control, the SWMG has one waste monitor and the Contractor has at least one trained spotter at the working face to visually inspect each load of waste as it is unloaded and deposited. If any unauthorized special waste (i.e., lead-acid batteries, used oil, yard trash, white goods, and whole tires) is found at the working face during the random inspection or as part of routine operations, the waste will be segregated and removed from the site for recycling or other processing in accordance with FDEP regulations. Items that may contain liquids or gases will be stored upright, undamaged, and in a container as appropriate. The maximum on-site storage will be as follows:

- 50 batteries in a secondary containment covered tray.
- 20 gallons of used oil placed upright in an undamaged container.
- 40 cubic yards (cy) yard trash in one 40-cy roll-off container.
- 75 white goods and lawnmowers placed upright (on the ground) until all liquids, chlorofluorocarbons (CFCs), and Freon are removed. After the metal recycling contractor removes all liquids, CFCs, and Freon, the white goods are marked with

spray paint to indicate that they are ready to be placed in the scrap metal containers.

- Scrap metal in two 40-cy roll-off containers (including processed white goods).

These special wastes will be stored next to the working face and removed from the site within 30 days.

Whole tires will be stored and managed at the on-site Waste Tire Processing Facility (WTPF). Lead-acid batteries will be collected by the SWMG's contracted battery recycler. Scrap metal, including white goods and lawnmowers, will be collected and processed by the SWMG's metals recycling contractor. Propane tanks will be collected by the recycling contractor. Until the SWMG develops a beneficial use for landfill gas, yard trash will be rejected, required to be reloaded, and directed to be taken to the yard trash processing facility at the South County Transfer Station.

If unauthorized waste (i.e., hazardous, polychlorinated biphenyl's (PCBs), untreated biomedical, or free liquid) is found at the working face, the waste will be isolated and the Landfill Manager will be immediately notified. The Landfill Manager is trained in the proper procedure to follow, including notifying the FDEP. Similarly, if suspect waste is found, the waste will be isolated and the Landfill Manager notified. The Landfill Manager will prepare a suspect waste report and ensure that the waste is properly managed (Appendix C). If hazardous wastes are found, the FDEP will be notified immediately and the 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 Facility within 24 hours.

#### **K.2.c.(1) Waste Profile Program**

The Waste Profile Program, administered by the SWMG, establishes policies, procedures, and guidelines for managing waste to comply with federal, state, and local regulations for minimizing risks to the environment, public health, and employees posed by non-hazardous and unregulated waste. The Waste Profile Program includes an internal structured reporting format, guidelines, and procedures to assist customers to comply with waste disposal requirements. The SWMG does not accept unauthorized waste for disposal at the landfill. The following are the objectives of the waste profile program:

- Preclude the entry and disposal of hazardous waste into the Facility.
- Preclude leachate developing hazardous waste characteristics.
- Protect the landfill liner.
- Prevent objectionable odors from becoming a problem.
- Ensure that delivered materials can be handled safely.

### **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 K.2.c.

### **K.2.c.(3) Shredded Waste**

The Facility will accept shredded tires. As provided by Chapter 62-711 FAC, the SWMG will use shredded tires for initial cover since shredded tires are an effective initial cover for controlling disease, vectors, odors, litter, and scavenging.

### **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). The location, quantity and source of asbestos containing material will be documented. Copies of the asbestos waste shipment records complying with 40 CFR 61-Subpart M will be maintained on site.

### **K.2.c.(5) Wastewater Treatment Biosolids**

Biosolids (industrial and domestic sludge) from wastewater treatment systems are accepted for disposal in the landfill. Biosolids will be applied to the working face of the landfill and daily cover applied in accordance with Section K.2.g to control odors. Disposal operations of biosolids will not occur within 50 feet of exterior side slopes

Biosolids from the wastewater treatment facility (WWTF) will be required to pass the paint filter test which will be based on the percent solids of the biosolids produced by the WWTF.

A paint filter test will be initially performed on the biosolids to demonstrate the minimum percent solids content that will pass the paint filter test. Thereafter, the WWTF will be required to provide a report of the percent solids content of the biosolids delivered each day to the Facility. Biosolids from the WWTFs with percent solids content at or above the minimum solids content passing the paint filter test will be accepted at the Facility. In the event the percent solids content from a WWTF is below the minimum solids content, the WWTF must, before disposal at the SCLF, perform and provide documentation that the lower percent solids content passes the paint filter test.

In addition to landfilling, the County manages a solid waste composting operation at the SCLF. The operation co-composts together, a mix of dewatered biosolids received from local,

Hillsborough County municipal wastewater treatment plants and yard waste received directly at the landfill from commercial and residential customers. The compost operation covers approximately 7 acres of an inactive area on top of the Capacity Expansion Area (CEA).

Yard waste is ground-up and mixed with biosolids at the facility and formed into windrows on an asphalt pad where it cures over a period of weeks. The material is periodically turned with a mechanical turner and after initial curing, is transferred to a final curing pile on the asphalt pad. Following a few more months of curing the material is put through a mechanical screen for size control and moved to another area on the pad for temporary storage until it is taken away by the customer. The finished compost product is distributed to local farmers and the general public. A more complete description of the compost operation is included in the Composting Operation and Maintenance Plan.

#### **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.

#### **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 as needed between Phases I-VI to the CEA. It is intended that only one working face will be active at a time at either Phases I-VI or the CEA.

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 unload within the designated area.

#### **K.2.f. Method and Sequence of Filling Waste**

Each phase will be landfilled as shown in the Operating Sequence Plans provided with the Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9) Permit Renewal Application and in Appendix E. 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.

### **K.2.f.(1) Phases I-VI**

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 initial filling in Phases I-VI was completed in 2010. Waste filling will continue over the existing area as shown on the operating sequence plans. Existing intermediate cover placed over the Phase I-VI area will be removed as landfilling progresses. The remaining air space in Phases I-VI is divided into eleven lifts (13-23) as shown on the drawings.

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 by a registered engineer, land-surveyor, or by an authorized agent.

Landfilling in Lifts 13-16 (Sheet 4) begins on the west side of Phase I and proceeds counter clockwise over Phases I, II, III and IV.

Landfilling in Lift 17 (Sheet 5) begins on the west side of Phase III and proceeds from east to west over Phases IV, V and VI.

Landfilling in Lifts 18-21 (Sheet 6) begins on the south side of Phase I and proceeds counter clockwise over Phases I, II, III and IV.

Landfilling in Lift 22 (Sheet 7) begins on the south side of Phase IV and proceeds from east to west over Phases IV, V and VI.

Landfilling in Lift 23 (Sheet 8) begins in the center of Phases I-VI, near Phase II and proceeds from east to west over Phases I through VI, to the permitted final grades (Elev 255) of the landfill. Upon completion of filling operations in Lift 23, final cover will be placed over the entire Phase I-VI area as described in Section K.7.h.

### **K.2.f.(2) Section 7 of the Capacity Expansion Area**

The initial filling in Section 7 was complete as of May 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 during waste filling operations in Section 9.

The east and south sideslopes as well as most of the top of Section 7 have received intermediate cover. Stormwater runoff from the top of Section 7 sheet flows to a downchute on the southeast corner that discharges to a culvert leading to sedimentation basin C (Sed C). Stormwater runoff from the sideslopes of Section 7 drains to the perimeter ditches, eventually flowing to the culvert to Sed C. Any stormwater that does not infiltrate into the ground at Sed C discharges to Pond C

for additional attenuation prior to flowing through the on-site stormwater management system described in Section K.10.

#### **K.2.f.(3) Section 8 of the Capacity Expansion Area**

The initial filling in Section 8 was completed as of May 2007. Similar to Section 7, 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 during waste filling operations in Section 9.

The east and north sideslopes, as well as most of the top of Section 8 have received intermediate cover. Stormwater runoff from the top of Section 8 discharges to Sed C. Stormwater runoff on the east sideslope drains to perimeter ditches, eventually flowing to the culvert to Sed C. Stormwater runoff on the north sideslope of Section 8 flows easterly along perimeter ditches around the CEA eventually discharging through the culvert to Sed C. Any stormwater that does not infiltrate into the ground in Sed C discharges to Pond C for additional attenuation prior to flowing through the on-site stormwater management system described in Section K.10.

#### **K.2.f.(4) Section 9 of the Capacity Expansion Area**

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.

The proposed filling sequence for Section 9 is presented in the drawings provided in Appendix E. The initial filling in Section 9 was completed as of July 2009.

Waste placement in Section 9 has proceeded against the west sideslopes of Sections 7 and 8 and landfilling of fill sequence 9-15 has been completed (CEA Sheet 6). Waste filling will continue incorporating areas of both Sections 7 and 8. As the Operations Fill Sequence Drawings show, filling will proceed to bring the sideslopes of Sections 7, 8, and 9 to their design slope of 3H:1V slopes as shown on fill sequence 16-18 (CEA Sheets 6 and 7). The filling of Section 7, 8, and 9 areas will bring the combined areas to an approximate elevation of 285 feet as shown on Sheet 8.

#### **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 or tarp will be placed over the waste at the end of each operation day in accordance with 62-701.500(7)(f)1. Auto shredder residue, alone or mixed with soil, recovered screen material street sweepings, screened ditch cleaning soil, and

solid waste combustor ash residue may be used as initial cover as allowed by 62-701.500 (7)(e). 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.

#### **K.2.h. Operation of Leachate, Gas and Stormwater Controls**

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

#### **K.2.i. Water Quality Monitoring**

##### **K.2.i.(1) Phases I-VI**

Water quality monitoring for Phase I-VI is included in Section L of the Operation Permit Intermediate Modification Application, dated April 2015.

##### **K.2.i.(2) Capacity Expansion Area**

Water quality monitoring for Sections 7, 8, and 9 is included in Section L of the Operation Permit Intermediate Modification Application, dated April 2015.

#### **K.2.j. Leachate Collection and Removal System Maintenance**

Refer to the current LMP Report in Appendix C of the April 2015 Operation Permit Intermediate Modification Application.

### **K.3 OPERATING RECORD**

The operating record will be maintained on site in the Administration Building or at the SWMG 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

## **K.4 WASTE RECORDS**

### **K.4.a. Amount and Origin of Waste**

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, including the amount received and county of origin, for the waste types listed in Section K.4(b) will be compiled monthly and provided annually to the FDEP.

### **K.4.b. Waste Types**

All reports will contain a minimum of the following waste types:

- Class I waste
- Class III waste
- Ash residue
- Other waste

### **K.4.c. Construction and Demolition Debris**

If dedicated loads of construction and demolition debris (C&D) are received, an annual report will be submitted to the FDEP as required in subsection 62-701.730(12), FAC and form 62-701.900(7). This report will include tonnage of material types received and recovered based on county of origin.

## **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 SWMG 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.

## **K.6 LOAD-CHECKING PROGRAM**

The SWMG has established a random-load-checking program as referenced in Part K.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 K.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 from 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 C).

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 SWMG 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 SWMG 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 Part K.1, inspectors, scale-house attendants, equipment operators, and landfill spotters will be trained to identify unacceptable wastes and hazardous wastes.

## **K.7 SPREADING AND COMPACTING WASTE**

All loads coming into the Facility, including small-volume 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 K.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 50/50 soil/mulch mix may be used for initial cover. Stormwater runoff will not be allowed from waste-filled areas covered with tire chips or ash. 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 a tarp or 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.

#### **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.

#### **K.7.b. First Layer Thickness**

For Phases I-VI and Sections 7, 8, and 9, 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 future permitted sections at the Capacity Expansion Area will protect the integrity of the liner and leachate collection system. Traffic directly on the protective layer will be prohibited, and the first lift will be accessed by vehicles from the top of the working face. An initial 4-foot-thick lift of selected waste will be placed over the protective layer. 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.

#### **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) Operation Permit Renewal Application as shown in Appendix E.

#### **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 alternate as needed between Phases I-VI to the CEA. The working face will be bermed with soil or a 50/50 soil/mulch mix (no ash). The berm will be constructed to prevent the mixing of leachate with stormwater.

#### **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 wood mulch and 50 percent soil (or ash), ash, chipped tires, tarps or other materials as approved in 62-701.500(7)(e) FAC, in accordance with 62-701.500(7)(f)1. 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.

#### **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 in accordance with 62-701.500(7)(f)1. Initial cover material is discussed in Part K.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. Additionally, 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 50/50 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. 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.
4. The trucks will deliver the load to the working face. As the loads are deposited, additional mixing will occur.

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

#### **K.7.g. Intermediate 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)(g), FAC. Recovered screen material or a mixture of soil and ground or chipped yard trash provided that soil makes up at least 50 percent by volume of the mixture may be utilized as intermediate cover. 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 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 initial or 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.

#### **K.7.h. Final Cover**

##### **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 and/or the CEA which will not receive additional solid waste. The temporary final cover will consist of a 12-inch layer of soil with a hydraulic conductivity of  $1.0 \times 10^{-5}$  cm/sec. Vegetative cover will be placed on areas which have reached interim final grade in Phases I-VI. These areas will not receive additional waste until the end of the consolidation period before waste can be filled on top of the area. In CEA Sections 7, 8, and 9, the temporary final cover will be installed on the south and east side slopes as shown on the drawings. As required, temporary drainage berms and downchutes will be placed at the working face to control and direct stormwater runoff away from disposal areas.

##### **K.7.h.(2) Final Cover**

When portions of the Facility are brought to design grades, final cover will be placed over the areas that have attained final elevation within 180 days in accordance with Rule 62-701.500(7)(h), 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.

### **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. If the volume of recyclable goods is sufficient, as determined by the Landfill Manager, those items may be separated from the waste which is to be disposed.

During waste placement on the landfill, recyclable items such as wood, concrete, metals, cardboard, and other recyclables may be manually pulled from the active face, segregated, and placed in the staging area/roll-off containers adjacent to the working face area. With the exception of clean concrete, the remaining materials will be transferred off-site for recycling. The clean concrete will be stored on site until sufficient quantity is stockpiled and used for on-site road base or other on-site uses.

After the recyclable materials have been removed, the remaining materials will be disposed in the active Class I waste disposal area of the landfill.

Any recycling method, other than manual extraction, will only be implemented following review and concurrence by the FDEP.

### **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)(j), FAC.

### **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.

## **K.8 LEACHATE MANAGEMENT**

Please see the revised LMP (Appendix B of the Operation Permit Intermediate Modification dated September 2015).

## **K.9 GAS MONITORING AND MANAGEMENT PROGRAM**

### **K.9.a. Gas Monitoring**

SWMG personnel shall monitor and record landfill gas (LFG) readings 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 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 SWMG 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 SWMG 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 SWMG will immediately take appropriate actions to protect human health. The SWMG will notify FDEP and will re-monitor the location during each of the next 3 days. During this time the SWMG 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 SWMG will submit a remediation plan to FDEP in accordance with Rule 62-701.530(3)(a) FAC.



Landfill Gas Monitoring Points	
I.D.	Probe/Building Location
LFG-1	Property boundary probe: South property boundary
LFG-2	Property boundary probe: Southwest property boundary
LFG-3	Property boundary probe: Northwest property boundary
LFG-4	Property boundary probe: North property boundary
SP-1	Scalehouse/Administration Building
SP-2	Scalehouse/Administration Building
SP-3	Scalehouse/Administration Building
SP-4	Scalehouse/Administration Building
SP-5	Scalehouse/Administration Building
SP-6	Scalehouse/Administration Building
SP-7	Scalehouse/Administration Building
SP-8	Scalehouse/Administration Building
SP-9	Maintenance Building
SP-10	Maintenance Building
SP-11	Maintenance Building
SP-12	Maintenance Building
SP-13	Leachate Treatment Facility Building
SP-14	Leachate Treatment Facility Building
SP-15	Leachate Treatment Facility Building

As described in Part K.7, the SWMG 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 SWMG will assess the presence of ambient objectionable odors at the perimeter monitoring points shown in Appendix F. If objectionable odors are detected at the property line, the SWMG will implement an odor-monitoring program as required by Rule 62-701.530(3)(b) FAC.

#### **K.9.b. Landfill Gas Collection System**

The design of the Landfill Gas (LFG) collection system and the subsequent operation is in accordance with the federal New Source Performance Standards (NSPS) for municipal solid waste landfills (Subpart WWW) and Subpart AAAA of the National Emission Standards for Hazardous Air Pollutants (NESHAP), which dictates the operational procedures for the gas collection and control (GCCS).

Landfill gas that is generated in the landfill is currently collected by the system GCCS in Phases I-VI and Sections 7, 8, and 9. Permit No. 35435-016-SC/08 details the requirements of the GCCS. The SCLF continues to remain in compliance with the GCCS operation and Title V permit requirements. The repairs and upgrades to the GCCS in the area of the former sinkhole

have been completed and were designed to provide landfill gas collection and extraction per the pre-sinkhole conditions and in accordance with the previously permitted GCCS design intent.

The facility maintains all operational and manufacturer procedural documentation for the blower, flare, control devices, and LFG system components on site in the “LFG Specialties User Manual for Utility Flare System Unit 2162”, dated September 2009.

For additional information on the GCCS operating and maintenance procedures and safety protocols, refer to the GCCS Design Plan, the Startup, Shutdown and Malfunction Report (SSM), and current Title V Air Operation Permit.

## **K.10 STORMWATER-MANAGEMENT SYSTEM**

### **K.10.a. Leachate Reduction**

#### **K.10.a.(1) Stormwater Diversion**

##### **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 K.7.k of the Operation 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 provided separately with the Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9).
- Downchutes constructed on the side slopes of the landfill will transport stormwater flow to the perimeter stormwater ditches.
- The perimeter stormwater ditches collect surface water runoff around the site, prevent offsite drainage from entering the landfill area, and drain runoff to the appropriate stormwater ponds and sedimentation basins located around the site.

#### **K.10.a.(1).2 Phases I-VI**

The Phases I-VI stormwater collection system directs stormwater runoff from the landfill and surrounding sub-shed areas and into stormwater sedimentation basins and detention ponds. The sedimentation basins are designated A-2, A-3, B, C, 2, 3, 4, and 8. The ponds are designated as Ponds A-1, B, C, D, and E, and an evaporation area. As the Phase I-VI areas are filled with waste, daily and intermediate cover (clean fill) is applied over the waste which promotes drainage away from the waste material. This minimizes the amount of water that is allowed to infiltrate into the waste. Stormwater that comes in contact with the waste in the active working area is considered leachate and will not be allowed to run off into the stormwater management system. The size of the working area will be kept to a minimum to minimize leachate and berms around the working area will separate stormwater from leachate. The runoff will be directed toward downchutes that will be conveyed to one of the basins.

#### **K.10.a.(1).3 Capacity Expansion Area**

The CEA stormwater collection system directs stormwater runoff from the landfill and surrounding sub-shed areas and into the existing stormwater sedimentation basins and detention ponds. The receiving basins are designated as Sed C and Seds 2, 3, 4, and 8, which flow into Ponds C and D, respectively. As the CEA, currently Sections 7, 8 and 9, is filled with waste, it will then be covered with daily and intermediate cover (clean fill) to allow drainage away from the waste. This minimizes the amount of water that is allowed to infiltrate into the waste. Stormwater that comes in contact with the waste (now considered leachate) in the active working area will not be allowed to run off into the stormwater management system. The size of the working area will be kept to a minimum to minimize leachate. Berms around the working area will separate stormwater from leachate. The runoff will be directed toward downchutes and transported via stormwater ditches to Sed C and Pond C. The undeveloped areas of the CEA will collect and drain stormwater runoff to sedimentation basin D (Sed D) and Pond D.

#### **K.10.a.(1).4 Stormwater Management System Improvements**

Improvements to the Stormwater management System (SWMS) at the SCLF were completed in March 2012, see figure in Appendix H. Improvements to the existing SWMS as part of the Stormwater Improvements Project consisted of the following:

1. Conversion of dry retention Basins A, B and C from underdrain systems to wet detention systems (Basin C was converted from dry retention with underdrain system to wet detention system as part of Section 9 construction in April 2008).
2. Restructuring of evaporation areas located north of the scale house and WMIF's maintenance building to increase attenuation with a wet pool design. New Ponds A-1, A-2 and A-3, and existing Basins F and G are interconnected and function as one system that ultimately discharges through modified control structures in

Pond B. New Ponds A-2 and A-3 increase retention times of runoff from Phases I-VI with treatment provided in Pond B.

3. Sedimentation ponds between Phases I-VI and the CEA, SED-2, SED-3, SED-4 and SED-8, were constructed provide additional settling areas and reduce sediment transport into Basin D. These sedimentation swales and ponds provide some treatment, but most of the treatment will continue to be provided by the existing Basin D.

#### **K.10.a.(1).5 Other Site Stormwater Basins**

Several other basins located around the site collect stormwater runoff; however, they do not collect runoff from disposal areas. The other basins are mentioned in this plan for informational purposes. Basins E, F and G collect runoff from the scalehouse. Stormwater Detention Basin H collects runoff from the LTRF.

#### **K.10.a.(2) Rain Tarps**

Rain tarps will be used to cover open areas (areas that have not received waste material yet but are connected to the leachate collection system) to keep stormwater out of the leachate collection system. Water that has collected on top of the rain tarp is considered stormwater and can be pumped to the appropriate stormwater basin that was designed for that area. Before placement of waste, all rain tarps will be removed.

#### **K.10.a.(3) Stabilized Slopes**

As filling progresses, the top and side slopes that will not receive additional solid waste for 2 or more months will be stabilized. First, compacted fill will be placed over the waste material to keep stormwater from infiltrating into the waste and to promote runoff. The slopes can then be stabilized with vegetative cover, seed, and mulch, or rain tarp covers. Exterior side slopes that are constructed to design grade and interior side slopes that will not receive waste for longer than 180 days will be covered with intermediate cover and either vegetative cover or hydroseed.

#### **K.10.a.(4) Closure**

As disposal areas reach final elevations as discussed in Part K.7.h, areas may have a final or temporary final cover placed over the waste material that will provide a low permeability cover over the waste and thus minimize long-term infiltration of stormwater into the waste materials as described in Section K.7.h.(1). As stormwater infiltration is cut off, water within the waste will drain to the leachate collection system within the lined area of the landfill. Since infiltration of stormwater will be minimal, the amount of leachate resulting from stormwater infiltration will reduce over time.

The methods described above represent the current plan; however, as operations continue, they may be modified if alternate methods prove more efficient or allow a higher percentage of stormwater runoff, thus resulting in greater leachate minimization.

## **K.11 EQUIPMENT AND OPERATION**

Landfill operation was discussed in Part K.2.

### **K.11.a. Operating Equipment**

The landfill is typically operated with the following on-site equipment:

- Steel-wheeled compactors.
- Bulldozers.
- Articulated dump truck.
- Water tank truck.
- Motor grader.
- Excavator.
- Several pickup trucks.
- Other miscellaneous construction and maintenance equipment.

Where appropriate, equipment is fitted with safety cabs and fire extinguishers. The Contractor is required to have back-up equipment available within 24 hours.

#### **K.11.a.(1) Equipment Care**

Routine preventive maintenance minimizes equipment downtime and increases equipment service life. Therefore, the appropriate operation and maintenance (owner's) manual should be consulted. However, applicable maintenance activities implemented at the site include:

- A routine inspection program;
- Routine lubrication; and,
- Maintenance records up-keep.

Minimal equipment washing using low-volume, high-pressure technique may be performed on lined areas of the landfill that do not have intermediate or final cover. The activity is exempt from industrial wastewater permitting since the wash water is collected by the leachate collection system. Washing will occur within, or adjacent to, the active working face. Runoff will be contained within the limits of the lined landfill and not allowed to comeingle with stormwater runoff.

### **K.11.b. Reserve Equipment**

Sufficient backup equipment will be provided on site for equipment breakdowns and downtime for normal routine equipment maintenance. Pre-arrangements with contractors and rental equipment dealers will be made to furnish equipment on short notice in the case of a major equipment failure. The Reserve Equipment Agreement is presented in Appendix B.

### **K.11.c. Communications Equipment and Personnel Facilities**

Telephones are located at the Administrative and Maintenance Buildings for use in emergencies. Cellular telephones and two-way radios are also used. The Administration Building is equipped with water supply, toilet facilities, emergency first-aid supplies, and electricity. The building also provides shelter for employees in case of inclement weather. The Maintenance Building is equipped with spare parts, tools, equipment, and electrical services for operations and repair.

### **K.11.d. Dust Control**

#### **K.11.d.(1) Phases I-VI**

Dust control outside of the landfill will be provided by applying water sprayed from a water tank truck and will be applied to the unpaved access roads as required to control dust generation. Dust control inside of the landfill will be provided by applying small quantities of leachate as described in Section 8.4 of the LMP.

#### **K.11.d.(2) Capacity Expansion Area**

Dust control outside of the landfill will be provided by applying water sprayed from a water tank truck and will be applied to the unpaved access roads as required to control dust.

Dust control inside the active waste disposal areas will be provided by applying small quantities of leachate from a spray bar mounted on the rear of a tank truck. Leachate will be sprayed onto the active fill areas of the CEA, including the working face, which includes a berm to prevent runoff, and areas with the required 6 inches of initial cover as required to control dust.

Leachate used as dust control reduces the amount of fresh pond water that would otherwise be sprayed from tanker trucks to control dust on the active fill areas and provides for leachate evaporation. Leachate quantities used for dust control will continue to be reported in the leachate balance report submitted to the FDEP.

The SWMG will monitor the rate of application, soil moisture conditions, and the specific landfill areas used so that this leachate disposal method does not generate runoff. Spray bar leachate spraying will be applied under the following conditions:

- Leachate will only be sprayed on active-fill areas, including the working face that includes a berm to prevent runoff and areas with the required 6 inches of compacted initial cover.
- Leachate will not be sprayed on areas with intermediate or final cover, seeded or unseeded, or on areas that do not have a berm to prevent runoff.
- The maximum grade leachate will be sprayed on is 10H:1V slope. Areas within 150 feet of a 4H:1V or steeper sideslope will not be sprayed. Areas receiving leachate will be controlled at all times to prevent leachate runoff from entering the stormwater system.
- Leachate will not be sprayed during a rainfall event.
- The tank truck spray bar method maximizes evaporation. The application rate of leachate will be such that leachate does not accumulate on the landfill surface nor infiltrate quickly into the covered refuse. The main goal of this leachate disposal method is evaporation rather than recirculation of leachate.
- Leachate will not be sprayed at the end of the day on the initial cover of the working face or other areas. Spraying should be done early in the morning after any dew evaporates and continue until early afternoon or until all available areas have been used.

#### **K.11.e. Fire Protection and Chemical Fires**

A charged fire extinguisher is kept at the scalehouse, Administration Building, Maintenance Building, and with all landfill equipment all times. Excavated soil will be used for fire control at the working face.

If a load of waste delivered to the site is smoking or on fire, landfill personnel direct the load to the "hot spot" area (an area within the landfill footprint with at least 12 inches of soil cover) where appropriate fire fighting procedures are followed.

Water for fire protection will be supplied from the fire hydrant and intake structure located east of Phase II. A second fire hydrant and intake structure is located south of the LTRF. If there is a small fire at the working face, waste handling will continue on an alternate working face until the fire is suppressed. If a fire cannot be controlled using materials and personnel already on site, the Fire Department will be immediately contacted and the emergency response plan described in Part K.2.b will be followed. See Part K.2.b for spills and containment of contaminated water such as from fire fighting.

No chemicals will be accepted at the landfill. All waste coming through the scale house will be observed to eliminate unwanted chemicals capable of starting a fire. If a chemical accident does occur, the following steps will be taken:

- Call the local Fire Department (911).
- Contain the fire in a small area until Fire Department arrives. To eliminate inhalation of potentially toxic fumes, fight fire from the upwind side.
- Take appropriate steps to contain and control the fire to the greatest extent possible while protecting human life and health.

#### **K.11.f. Litter Control Devices**

See Part K.7.j of this Operation Plan.

#### **K.11.g. Signs**

A sign indicating the hours of operation is located at the Facility entrance. Signs indicating the name of the operating authority, charges for disposal, and identifying the asbestos disposal site are located near the scalehouse area. Traffic flow and speed limit signs are located at various points along the landfill access road.

### **K.12 ALL-WEATHER ACCESS ROAD**

The access roadway enters the site from CR 672. An asphalt paved road travels north from CR 672 and turns east into the Facility. The access road location was selected to minimize impacts to residential and agricultural areas along CR 672. There is a gate on the access roadway at CR 672 and fencing to prevent unauthorized access.

The main access road is a 40-foot-wide roadway with a 24-foot-wide asphalt paved section and 8-foot-wide shoulders constructed within the 100-foot-wide right-of-way. The main access road is paved and extends into the Facility through the property entrance, runs along the south side of the site, and turns north along the east side of the Facility area.

Other on-site roadways will be required on a temporary and permanent basis to serve the borrow area and for maintenance and services of on-site facilities. A stockpile of materials to construct and maintain all-weather roads to the active working face is available on site.



### **K.13 ADDITIONAL RECORDKEEPING**

Operation records, such as permits, plans, inspections and others, are maintained at the Facility and at the SWMG office. The active area of Phases I-VI will be surveyed monthly and the active area of the CEA will be surveyed twice each year to calculate the volume used and to estimate the in-place density.

#### **K.13.a. Permit Application Development**

The SWMG keeps all information including site investigations, construction records, operation records, inspections, and permits.

#### **K.13.b. Monitoring Information Records**

The SWMG also keeps all monitoring records on groundwater, surface water, weather, and landfill gas. Copies are regularly submitted to the FDEP and the Environmental Protection Commission of Hillsborough County.

#### **K.13.c. Remaining Site Life Estimates**

An estimate of the remaining site life for the permitted area will be prepared annually for submission to the FDEP.

#### **K.13.d. Archiving and Retrieving Records**

Records of the landfill that are more than 3 years old will be available at the Facility.

**APPENDIX A**  
**TRAINING COURSES**

**CEUS Currently Approved by the Florida SWMTC for 1/2013-12/2015 for Solid Waste Operators/Spotter**  
<http://landfill.treeo.ufl.edu/Courses.aspx>

Course #	Course Title	Course Provider	Landfill	Construction & Demolition Debris	Transfer Station	Materials Recovery Facility	Spotter	
203	8-Hour Initial Training Course for Spotters at Class I,II,III Facilities, Waste Processing Facilities, and C&D Sites	Kohl Consulting, Inc.	8	8	8	8	8	Initial
214	Spotter Training Plan for Land Clearing Debris Site	Wetland Solutions	8	8	8	8	8	Initial
219	8 Hour Initial Training for Spotter	Consolidated Resource Recovery, Inc.	8	8	8	8	8	Initial Restricted
248	Spotter Training for Solid Waste Facilities	University of Florida TREEO Center	8	8	8	8	8	Initial
442	24-Hour Initial Training Course for Landfill Operators of Class I, Class II, Class III, and C&D Sites	UF TREEO	16	16	8	8	4	Initial
443	16-Hour Initial Training Course for Operators of Transfer Stations and Material Recovery Facilities	UF TREEO	12	12	8	8	4	Initial
444	SWANA-Transfer Station Design & Operations	SWANA	8	8	8	0	8	Initial
462	8-hour Training Course for Spotters at Landfills, C&D Sites and Transfer Stations	UF TREEO	8	8	8	8	8	Initial
488	8-Hour Spotter Training Class I II III Landfill C&D Sites and Transfer Facilities	Safety Consulting and Training	8	8	8	8	8	Initial
582	16-Hour Initial Training Course for Transfer Station and MRF Operators	Kohl Consulting Inc	10	10	8	8	4	Initial
608	24-Hour Initial Training Course for Landfill Operators (Class I III and C&D Sites)	Kohl Consulting, Inc.	16	16	8	8	4	Initial
598	SWANA - Manager of Landfill Operations [MOLO] & Exam	SWANA	16	16	8	8	4	Initial
706	The SWM Combo Class: 24-Hour Initial Training Course for Landfill Operators (Class I, II, III and C&D Sites) with 16-Hour Initial MRF/TS Operator Class and 8-Hour Spotter Class <i>[Initial Only]</i>	Kohl Consulting Inc.	24	24	16	16	8	Initial
700	Construction and Demolition Debris Recycling and Management Workshop	FDEP & SWIX	4	4	4	4	4	
701	SWANA-FL 2012 Summer Conference	SWANA-FL	8	8	4	4	4	
702	2012 NAHMMMA Florida Chapter HHW/SQG Workshop and General Session	NAHMMMA-Florida Chapter	4	4	4	4	2	
703	16-hour Landfill Operator Refresher Course	Kohl Consulting Inc	16	16				
704	SWANA - WasteCon 2013	SWANA	8	8	7	5	2	
705	The Nitty Gritty of Native Vegetation on Landfills - eCourse	SWANA	1	1				
706	The SWM Combo Class: 24-Hour Initial Training Course for Landfill Operators (Class I, II, III and C&D Sites) with 16-Hour Initial MRF/TS Operator Class and 8-Hour Spotter Class <i>[Initial Only]</i>	Kohl Consulting Inc.	24	24	16	16	8	
707	OSHA 1910.120 HazWoper Refresher	Burt McKee	4	4	4	4	4	
708	Train-the-Trainer: How to Design & Deliver Effective Training	University of Florida TREEO Center	7	7	7	7	2	
709	Fundamentals of Slope Stability and Settlement for Solid Waste Disposal Facilities	University of Florida TREEO Center	16	16				
710	Basic Water and Wastewater Pump Maintenance	University of Florida TREEO Center	4	4				
711	Pumping Systems Operation and Maintenance	University of Florida TREEO Center	4	4				
712	Basic Electricity for the Non Electrician	American Trainco	2	2	2	2		
713	24-hour HAZWOPER OSHA Training course - online	University of South Florida - OSHA Training Institute	6	6	6	6	3	
714	8-hour HAZWOPER Refresher Training course - Online	Safety Unlimited Inc	4	4	4	4	4	

Course #	Course Title	Course Provider	Landfill	Construction & Demolition Debris	Transfer Station	Materials Recovery Facility	Spotter	
715	8-hour HazWoper Refresher - Operations Level	American Compliance Technologies	4	4	4	4	4	
716	8-hr Hazwoper OSHA Refresher	FDEP	4	4	4	4	4	
717	4-hour OSHA Hazardous Materials Awareness Level Course	Local Environmental Planning Council - District 5 and Citrus County Solid Waste Dept	4	4	4	4	4	
718	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	University of Florida TREEO Center	4	4	4	4	4	
719	Waste Screening Refresher	University of Florida TREEO Center	4	4	4	4	4	
720	Hazardous Waste Regulations in Solid Waste Operations and Recycling	University of Florida TREEO Center	8	8	8	8	4	
721	Hazardous Waste Regulations in Solid Waste Operations	University of Florida TREEO Center	4	4	4	4	4	
722	Health and Safety for Solid Waste Workers [am]	University of Florida TREEO Center	4	4	4	4	4	
723	Health and Safety for Solid Waste Workers [pm]	University of Florida TREEO Center	4	4	4	4	4	
724	Health and Safety for Solid Waste Workers [am+pm]	University of Florida TREEO Center	4	4	4	4	4	
725	Solid Waste Workplace Health and Safety Training - 4 hours	University of Florida TREEO Center	4	4	4	4	4	
726	IS-00340 Hazardous Materials Management	FEMA Emergency Management Institute	4	4	4	4	4	
727	Is-271.a Anticipating Hazardous Weather & Community Risk, 2nd Edition	FEMA Emergency Management Institute	2	2				
728	Managing Composting Operations	Solid Waste Association of North America [SWANA]	16	16				
729	Personal Protection Equipment (PPE) and Safety Procedures	University of Florida TREEO Center	4	4	4	4	4	
730	Heavy Equipment Safety	University of Florida TREEO Center	4	4	4	4	4	
731	Supervisor Safety Training for Solid Waste Operations Staff	University of Florida TREEO Center	4	4	4	4	4	
732	Permit Required Confined Space Awareness	University of Florida TREEO Center	4	4	4	4	4	
733	8-hour OSHA HazWoper Annual Refresher	University of Florida TREEO Center	4	4	4	4	4	
734	40-Hour OSHA HAZWOPER Training Course	University of Florida TREEO Center	8	8	8	8	4	
735	Hazardous Waste Regulations for Generators	University of Florida TREEO Center	4	4	4	4	4	
736	Exposure to Blooborne and Airborne Pathogens	University of Florida TREEO Center	6	6	6	6	4	
737	Bird and Wildlife Management for Utilites	University of Florida TREEO Center	4	4	4	4	2	
738	Beyond 40% - Florida's Pathway to Sustainability"	Solid Waste Association of North America [SWANA] + Recycle Florida Today [RFT]	6	6	6	6	2	
739	Getting Back to Basics with Landfill Gas	University of Florida TREEO Center	8	8			4	
740	Is-632.s Introduction to Debris Operation	Emergency Management Institute	2	2	2	2	2	
741	SI:300 Introduction to Air Pollution Toxicology (1994)	US EPA Air Pollution Training Institute (APTII)	4	4	4	4		
742	4-Hour Spotter Refresher Course for Spotters at Solid Waste Management Facilities in Florida	Kohl Consulting Inc	4	4	4	4	4	
743	Health & Safety Issues for Solid Waste Management Facilities	Kohl Consulting Inc.	8	8	8	8	4	

Course #	Course Title	Course Provider	Landfill	Constructio n & Demolition Debris	Transfer Station	Materials Recovery Facility	Spotter	
744	The Sense of Smell, Odor, Theory and Odor Control	Kohl Consulting Inc.	4	4	4	4	2	
745	Spotters at Landfills and Transfer Stations: Safety Awareness Review	Kohl Consulting Inc.	4	4	4	4	4	
746	Landfill and Transfer Station Operators: Waste Acceptability and Safety Issues Review	Kohl Consulting Inc.	4	4	4	4	4	
747	Improving Landfill Operations	Kohl Consulting Inc.	4	4				
748	Fires at Landfills and Other Solid Waste Management Facilities	Kohl Consulting Inc.	4	4	4	4	4	
749	Improving Transfer Station Efficiency	Kohl Consulting Inc.			4	4		
750	Landfill Gas Collection and Re-Use	Kohl Consulting Inc.	4	4				
751	Landfills: Past, Present and Future	Kohl Consulting Inc.	4	4			4	
752	Landfills and Transfer Stations: Past, Present and Future	Kohl Consulting Inc.	4	4	4		4	
753	Wet Weather Operations	Kohl Consulting Inc.	4	4	2	2	4	
754	Topics in Solid Waste Management for Landfill Operators, MRF Operators and Transfer Station Operators	Kohl Consulting Inc.	4	4	2	2	2	
755	Wildlife and Plants at Florida Solid Waste Management Facilities	Kohl Consulting Inc.	4	4	4	4	2	
756	Measurement and Improvement of Performance at Solid Waste Management Facilities ("If you Can't Measure it, You Can't Manage It")	Kohl Consulting Inc.	4	4	4	4		
757	CPR / AED	American Safety & Health Institute - American Health Association - American Red Cross	2	2	2	2	2	
758	First Aid	American Safety & Health Institute - American Health Association - American Red Cross	2	2	2	2	2	
759	Refresher Training Course for Experienced Solid Waste Operators - 16hrs	University of Florida TREEO Center	16	16				
760	Refresher Training Course for Experienced Solid Waste Operators - 8hrs	University of Florida TREEO Center	8	8	8	8		
761	Refresher Training Course for Experienced Solid Waste Operators - 4hrs	University of Florida TREEO Center	4	4	4	4	4	
762	U.S. DOT Hazardous Materials/Waste Transportation	University of Florida TREEO Center	6	6	6	6	4	
763	OSHA 10-hour General Industry Safety Outreach Training	Training Consultants Inc.	4	4	4	4	4	
764	NAHMMMA 2013 Florida Chapter Annual Conference – General Sessions	North American Hazardous Materials Management Association	10	10	8	8	4	
765	Road-e-o: Heavy Equipment Safety Training	SWANA-FL	4	4	4	4	2	
766	North American Waste-To-Energy Conference NAWTEC 21st Annual	SWANA	4	4		4		
767	Food Waste Recycling Workshop	SWIX & FDEP	5		3		2	
768	Florida Stormwater, Erosion, and Sedimentation Control Inspector Training and Certification Program	FDEP	3	3				

**APPENDIX B**

**RESERVE EQUIPMENT AGREEMENT**

Ring Power Corporation  
10421 Fern Hill Drive  
Riverview, FL 33578

Waste Management Inc. /Southeast Landfill  
P.O. Box 627  
Balm, FL 33503  
Location: Hillsborough County Landfill

2/21/2013

Rental Rates effective through 12/31/13

Waste Management is responsible for maintenance and all damages to rental equipment.

Equipment rental is subject to availability.

Transportation cost quoted upon request.

<u>Make</u>	<u>Model</u>	<u>Description</u>	<u>Day Rate</u>	<u>Week Rate</u>	<u>Month Rate</u>	<u>Cleaning Fee</u>
CAT	D8T	Dozer(w/o waste handling arrangement)	\$1,900.00	\$5,800.00	\$16,400.00	\$ 2,400.00
CAT	D6T	Dozer(w/o waste handling arrangement)	\$1,100.00	\$3,300.00	\$ 9,100.00	
CAT	D6N	Dozer(w/o waste handling arrangement)	\$ 900.00	\$2,700.00	\$ 7,400.00	
CAT	D5K	Dozer(w/o waste handling arrangement)	\$ 620.00	\$1,760.00	\$ 5,040.00	
CAT	725	Articulated dump truck 18.8 cyd capacity	\$1,100.00	\$3,200.00	\$ 8,700.00	
CAT	329EL	Hydraulic Excavator 2.5 cyd bucket capacity	\$ 900.00	\$2,600.00	\$ 6,900.00	
CAT	613	Scraper 11 cyd bowl capacity	\$1,100.00	\$3,200.00	\$ 8,700.00	
CAT	12M	Motor Grader 14' mold board	\$ 800.00	\$2,300.00	\$ 6,000.00	
CAT	938K	Wheel Loader 3.05 cyd bucket capacity	\$ 700.00	\$2,000.00	\$ 5,000.00	
CAT	416E	Loader Backhoe	\$ 200.00	\$ 500.00	\$ 1,500.00	
CAT	CS56	Single Drum Roller 84" wide drum	\$ 500.00	\$1,400.00	\$ 3,400.00	

\*Plus tax & Insurance

Ring Power guarantees Waste Management a suitable rental machine delivered to Hillsborough County Landfill within 24 hours of their request.

## **APPENDIX C**

### **RANDOM INSPECTION AND VIOLATION REPORT**



# SOLID WASTE FACILITY INSPECTION / VIOLATION REPORT

REPORT TYPE: ☐ INSPECTION ☐ VIOLATION ☐ LF RANDOM INSPECTION

LOCATION: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

DELIVERING COMPANY: \_\_\_\_\_ FRANCHISE COLLECTOR: ☐ WMI ☐ EB ☐ KR  
OTHER: \_\_\_\_\_

DRIVER NAME: \_\_\_\_\_ VEHICLE #: \_\_\_\_\_

VEHICLE TYPE ☐ FEL ☐ RO ☐ RL ☐ SL ☐ SEMI ☐ DUMP  
OTHER: \_\_\_\_\_

CUSTOMER / GENERATOR: \_\_\_\_\_ TRANSACTION #: \_\_\_\_\_

## TYPE OF WASTE:

<input type="checkbox"/> YARD WASTE	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> AUTO PARTS	<input type="checkbox"/> BY PASS WASTE
<input type="checkbox"/> C & DD	<input type="checkbox"/> INSULATION	<input type="checkbox"/> ASH RESIDUE	<input type="checkbox"/> ANIMAL WASTE
<input type="checkbox"/> FURNITURE	<input type="checkbox"/> AG WASTE	<input type="checkbox"/> ROOFING	<input type="checkbox"/> SPECIAL WASTE
<input type="checkbox"/> CARDBOARD	<input type="checkbox"/> FIELD PLASTIC	<input type="checkbox"/> METALS	
<input type="checkbox"/> COMMERCIAL WASTE	<input type="checkbox"/> HOUSEHOLD GARBAGE		
<input type="checkbox"/> OTHER: _____			

TYPE OF VIOLATION: ☐ FACILITY ☐ LOAD ☐ SAFETY ☐ CONTAINER  
DETAILS: \_\_\_\_\_

DRIVER COMMENTS: \_\_\_\_\_

RESULTS: ☐ ACCEPTED ☐ REJECTED ☐ RELOAD ☐ ALREADY IN PIT

INSPECTOR'S SIGNATURE: \_\_\_\_\_

ADDITIONAL COMMENTS: \_\_\_\_\_

## **APPENDIX D**

**NOT USED**

## **APPENDIX E**

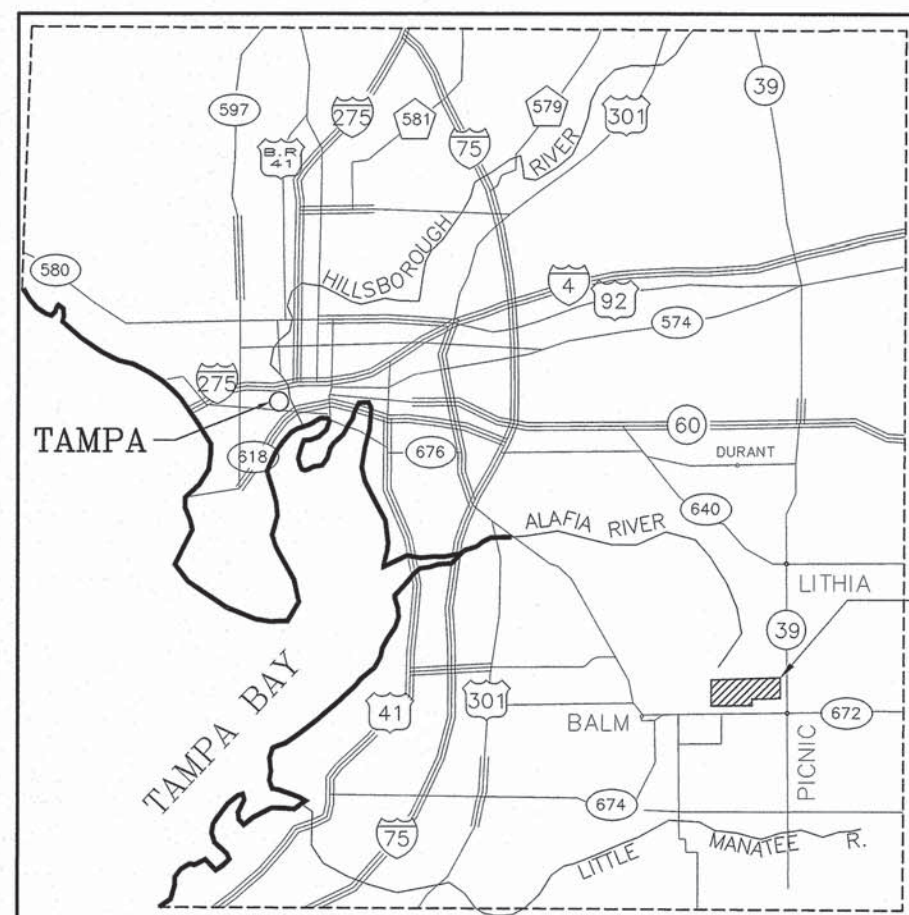
### **PHASES I-VI AND CAPACITY EXPANSION AREA FILL SEQUENCING PLANS**



BOARD OF COUNTY COMMISSIONERS:  
KEVIN BECKNER  
VICTOR CRIST  
KEN HAGAN  
AL HIGGINBOTHAM  
LESLEY MILLER  
SANDRA MURMAN  
MARK SHARPE

**HDR**

HDR Engineering, Inc.  
5426 Bay Center Drive  
Suite 400  
Tampa, FL 33609-3444  
HDR CA# 4213



NOT TO SCALE

Drawings For

# PHASES I-VI OPERATING SEQUENCE

## SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY, FLORIDA

Project No.  
096-193806-001

LITHIA, FLORIDA  
JUNE 2013

### DRAWING INDEX

Sheet Number	Sheet Title
1	COVER SHEET
2	INDEX, LEGENDS AND GENERAL NOTES
3	FACILITY SITE PLAN AND EXISTING TOPOGRAPHY
4	PHASES I TO IV - LIFTS 13 TO 16
5	PHASES V AND VI - LIFT 17
6	PHASES I TO IV - LIFTS 18 TO 21
7	PHASES V AND VI - LIFT 22
8	PHASES V AND VI - LIFT 23 (FINAL LIFT)
9	SINKHOLE REMEDIATION PLAN
10	LANDFILL CROSS SECTIONS
11	SINKHOLE REMEDIATION CROSS SECTION
12	DETAILS 1
13	DETAILS 2
14	DETAILS 3
15	DETAILS 4



ROBERT B. CURTIS, P.E.  
LICENSE NO. 73758  
HDR CA# 4213

6/7/13



ENGINEERING SYMBOLOGY		GENERAL SYMBOLOGY		ABBREVIATIONS		GENERAL NOTES	
<div><div><div><div><div><div></div><div>9A</div></div><div></div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div>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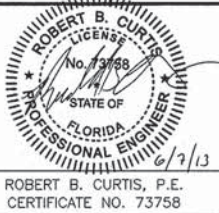
**HDR**

HDR Engineering, Inc.  
5426 Bay Center Drive  
Suite 400  
Tampa, FL 33609-3444  
HDR CNA# 4213

6/2013	FDEP SUBMITTAL
ISSUE	DATE DESCRIPTION

PROJECT MANAGER	R. SIEMERING
REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ

PROJECT NUMBER 0096-193806-001



**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

**INDEX, LEGENDS AND GENERAL NOTES**



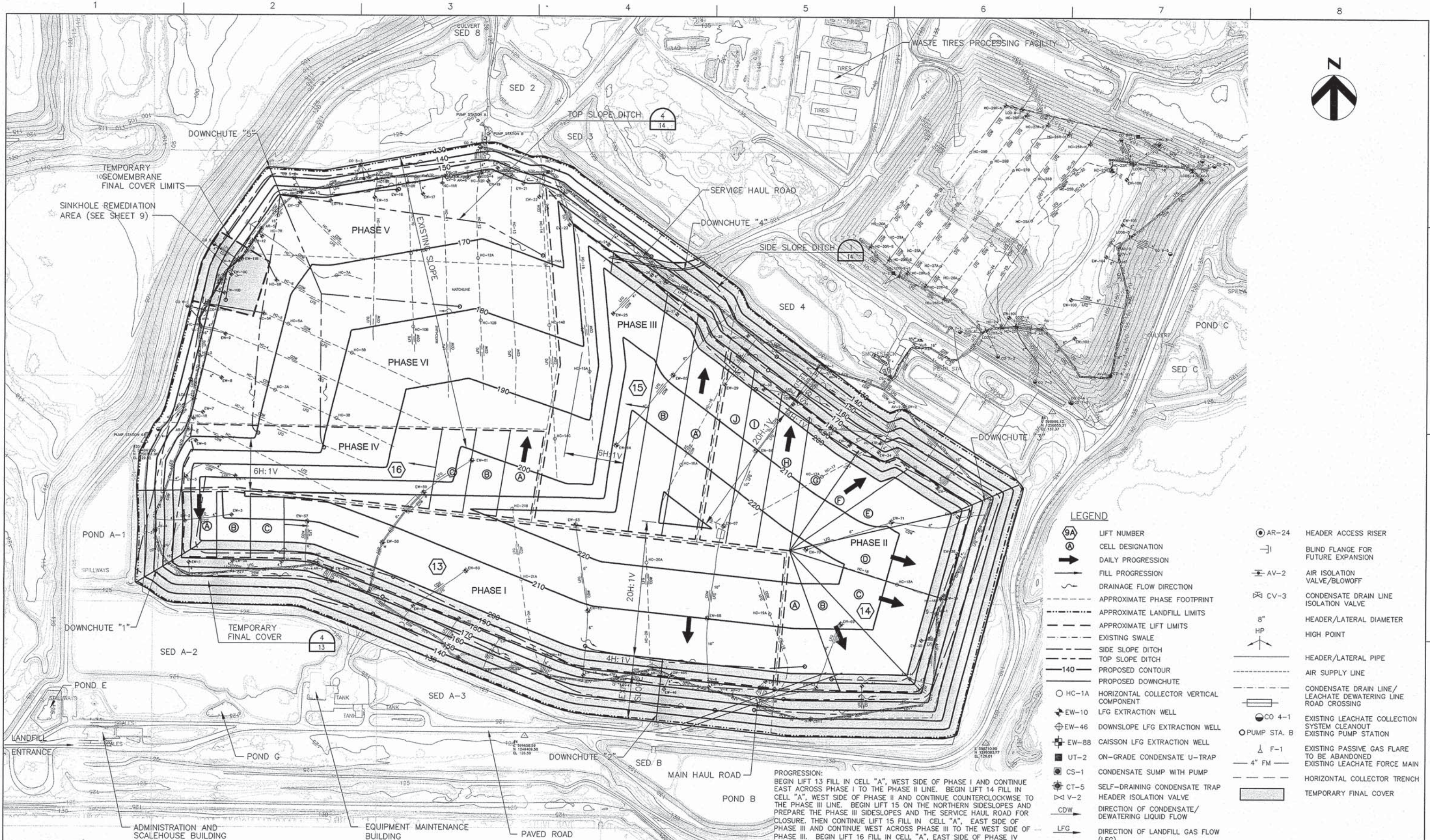
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SCALE	AS SHOWN

DWG No.	2
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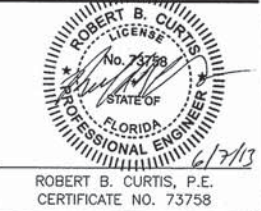


PROGRESSION:  
BEGIN LIFT 13 FILL IN CELL "A", WEST SIDE OF PHASE I AND CONTINUE EAST ACROSS PHASE I TO THE PHASE II LINE. BEGIN LIFT 14 FILL IN CELL "A", WEST SIDE OF PHASE II AND CONTINUE COUNTERCLOCKWISE TO THE PHASE III LINE. BEGIN LIFT 15 ON THE NORTHERN SIDESLOPES AND PREPARE THE PHASE III SIDESLOPES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



<b>HDR</b> HDR Engineering, Inc. 5426 Bay Center Drive Suite 400 Tampa, FL 33609-3444 HDC CAF 4213	
6/2013	FDEP SUBMITTAL
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REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

**PHASES I TO IV - LIFTS 13 TO 16**

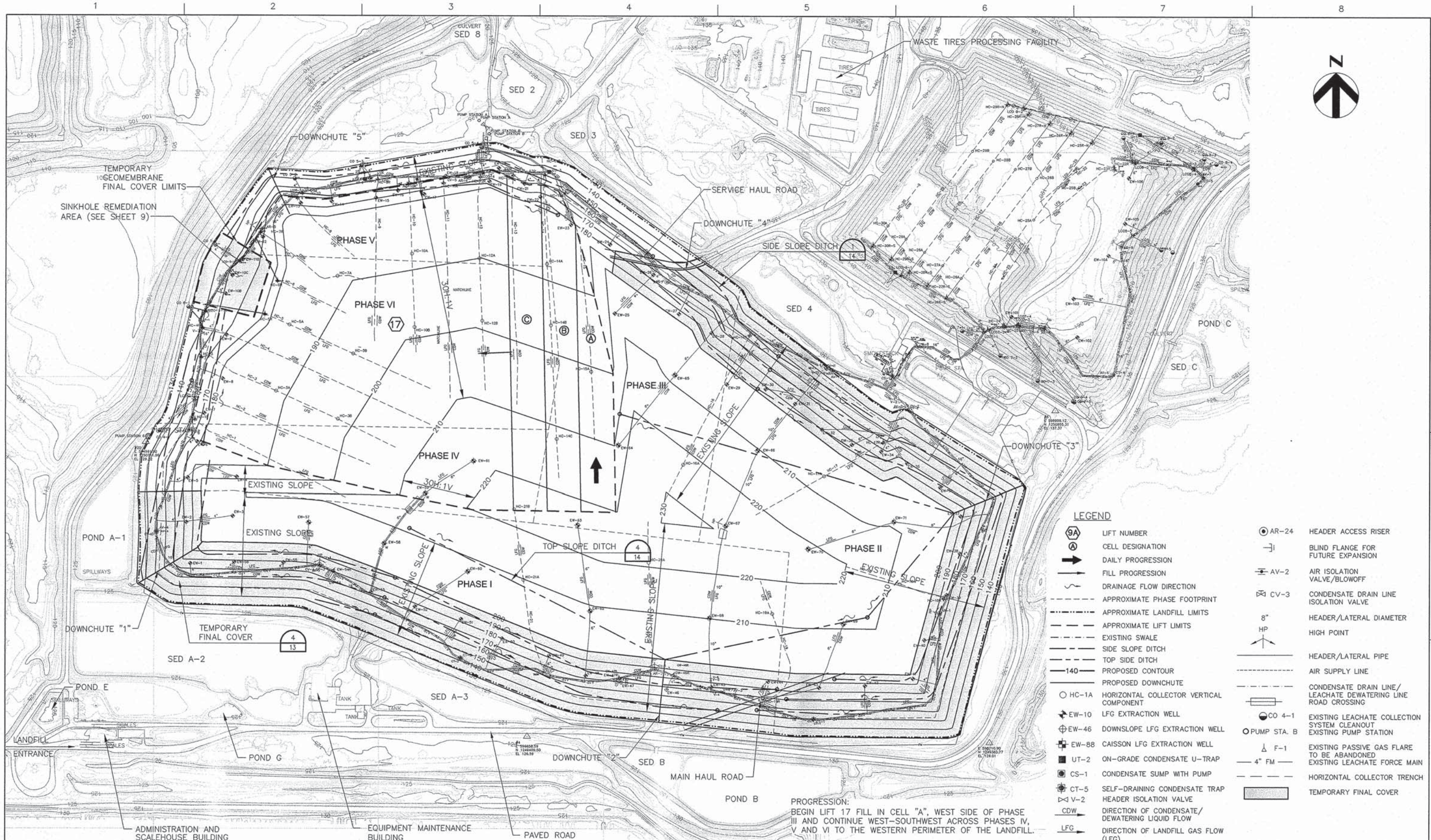
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FILENAME: OOC-04.DWG  
SCALE: 1"=200'

DWG No. **4**

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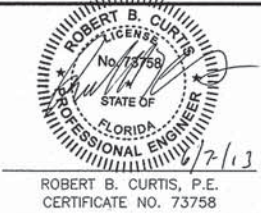
PROGRESSION:  
BEGIN LIFT 17 FILL IN CELL "A", WEST SIDE OF PHASE  
III AND CONTINUE WEST-SOUTHWEST ACROSS PHASES  
IV, V AND VI TO THE WESTERN PERIMETER OF THE LANDFILL.



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Tampa, FL 33609-3444  
HDR C#48 4213

ISSUE	DATE	DESCRIPTION
	6/2013	FDEP SUBMITTAL

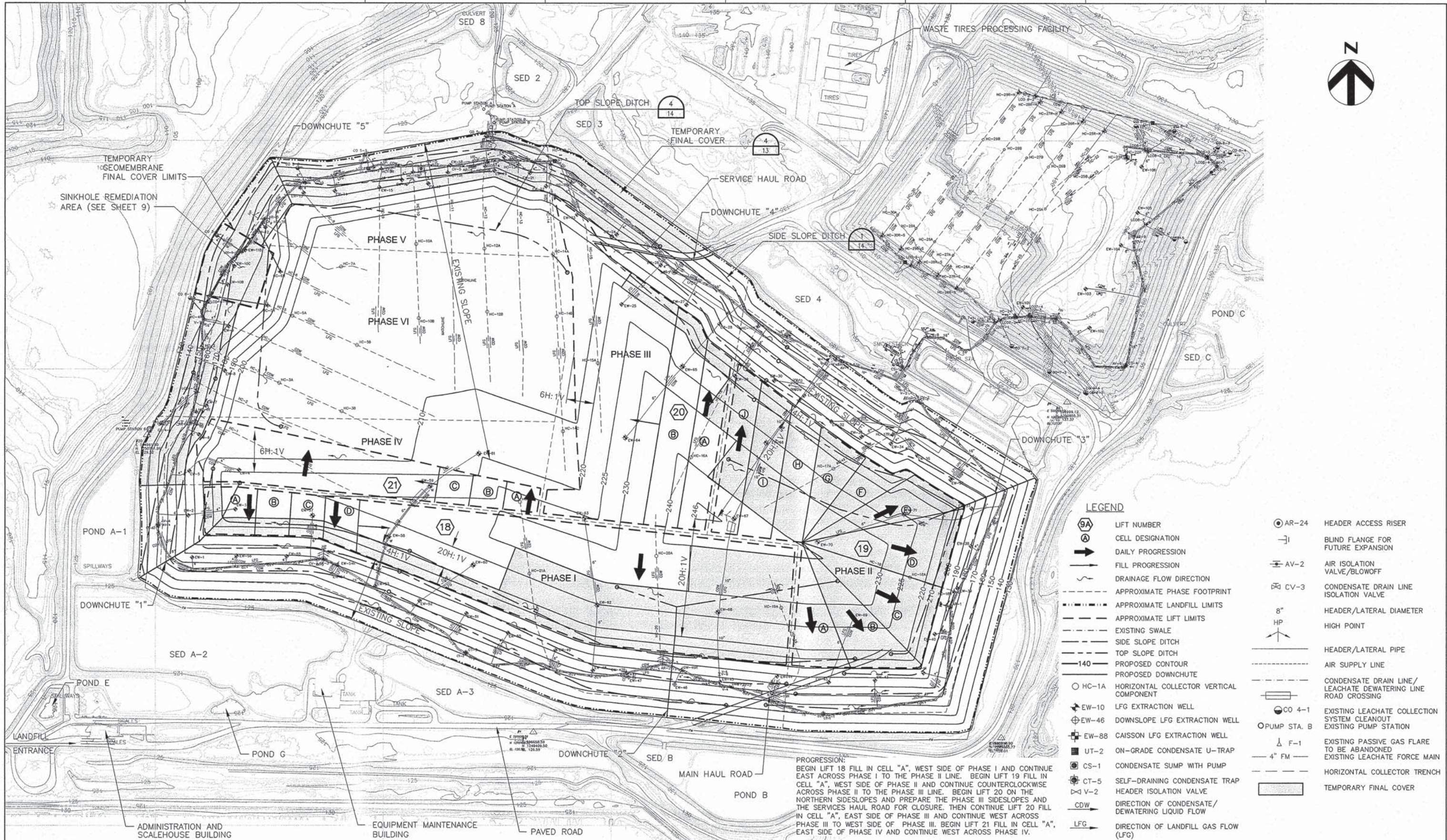
PROJECT MANAGER	R. SIEMERING
REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

<b>PHASES V AND VI - LIFT 17</b>	
FILENAME	00C-05.DWG
SCALE	1"=200'
DWG No.	5

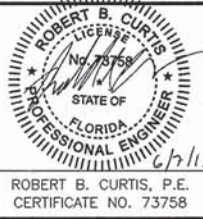




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HDR CA# 4213

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DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



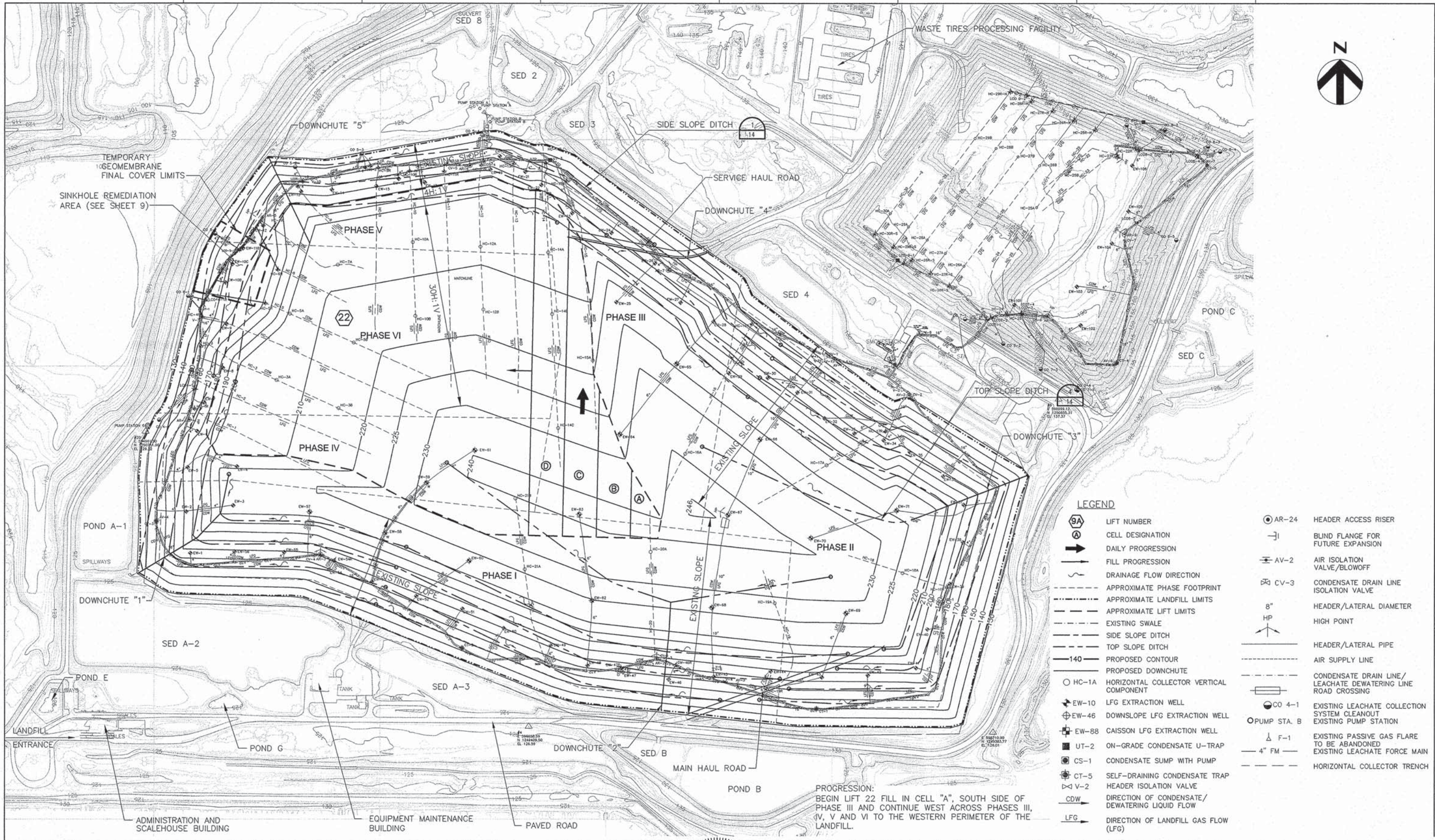
**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

**PHASES I TO IV - LIFTS 18 TO 21**



FILENAME	OOC-06.DWG	DWG No.
SCALE	1"=200'	6





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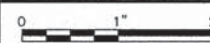
ISSUE	DATE	DESCRIPTION
6/2013	FDEP SUBMITTAL	

PROJECT MANAGER	R. SIEMERING
REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001

**ROBERT B. CURTIS**  
 LICENSE  
 No. 73758  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 7/13  
 ROBERT B. CURTIS, P.E.  
 CERTIFICATE NO. 73758

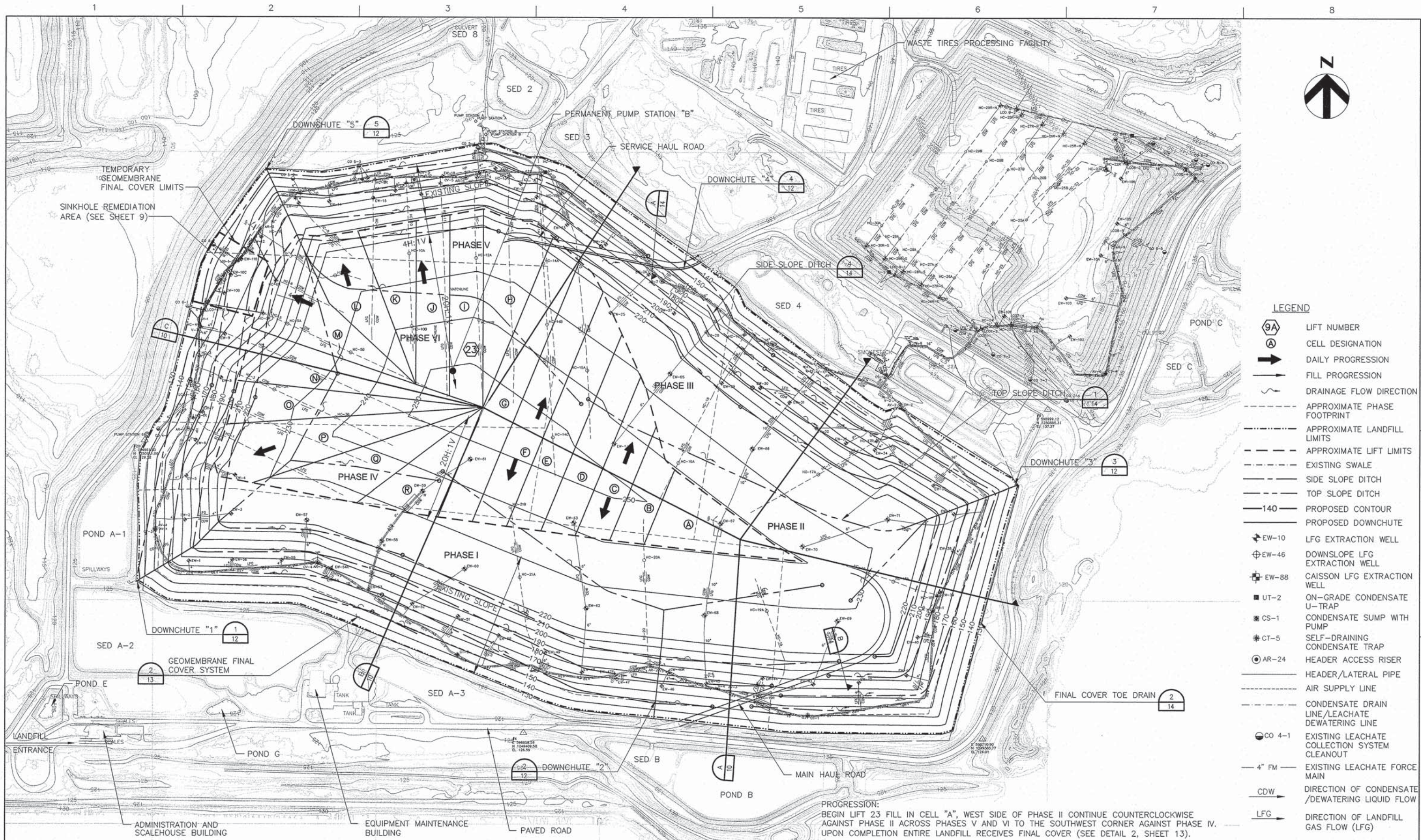
**PHASES I-VI OPERATING SEQUENCE  
 SOUTHEAST COUNTY LANDFILL  
 HILLSBOROUGH COUNTY, FLORIDA**

**PHASES V AND VI - LIFT 22**



FILENAME	OOC-07.DWG	DWG No.
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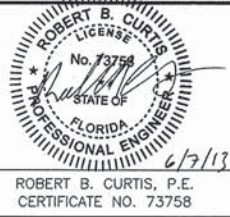




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ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	R. SIEMERING
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**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

**PHASES V AND VI - LIFT 23 (FINAL LIFT)**



FILENAME	OOC-08.DWG
SCALE	1"=200'

DWG No.	8
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LIMITS OF FINAL COVER			
DESCRIPTION	NORTHING	EASTING	ELEVATION
W1	1,251,380.1	595,181.34	129.32
W2	1,251,332.6	595,169.56	129.21
W3	1,251,312.3	595,247.07	142.69
W4	1,251,291.4	595,336.55	158.01
W5	1,251,265.5	595,442.88	162.72
W6	1,251,385.8	595,481.43	162.31
W7	1,251,505.8	595,517.36	162.22
W8	1,251,545.4	595,453.35	159.23
W9	1,251,597.7	595,367.51	145.05
W10	1,251,642.4	595,291.38	126.82
W11	1,251,548.6	595,233.61	128.73
W12	1,251,484.4	595,207.36	129.31

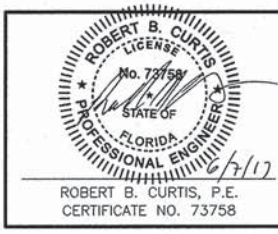
- LEGEND:
- (W1) (W2) WOODEN MARKER POST (LOCATIONS ON TABLE THIS SHEET)
- TD TOE DRAIN
- 155 EXISTING CONTOUR
- 155 PROPOSED CONTOUR
- NOTES:
1. EXISTING TOPOGRAPHY PROVIDED BY PICKETT AND ASSOCIATES, INC. FROM AERIAL PHOTOGRAPHY DATED JANUARY 5, 2013.
2. LFG SYSTEM NOT SHOWN FOR CLARITY OF DRAWING.
3. EXISTING STORMWATER PIPES TO BE RELOCATED PER STORMWATER PLANS.



**HDR**  
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Tampa, FL 33609-3444  
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**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

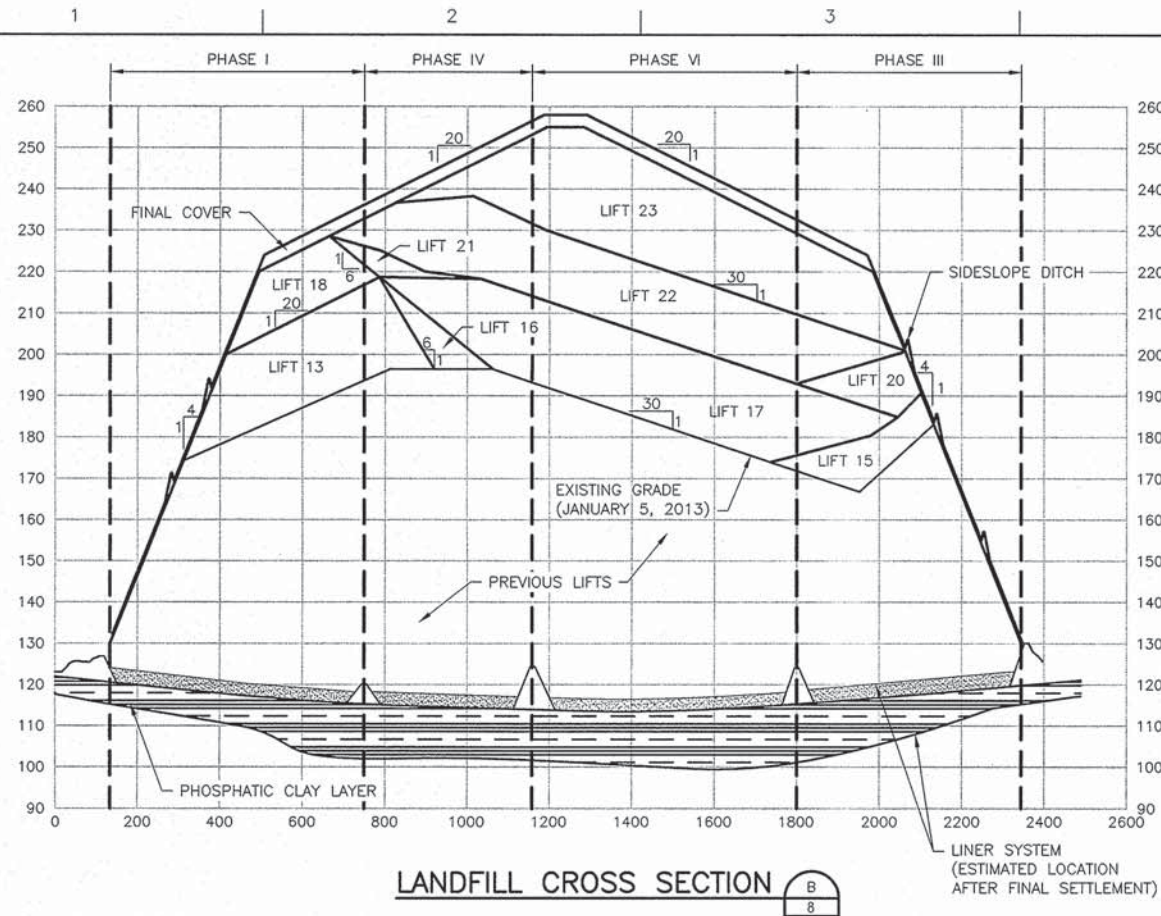
**SINKHOLE REMEDIATION PLAN**



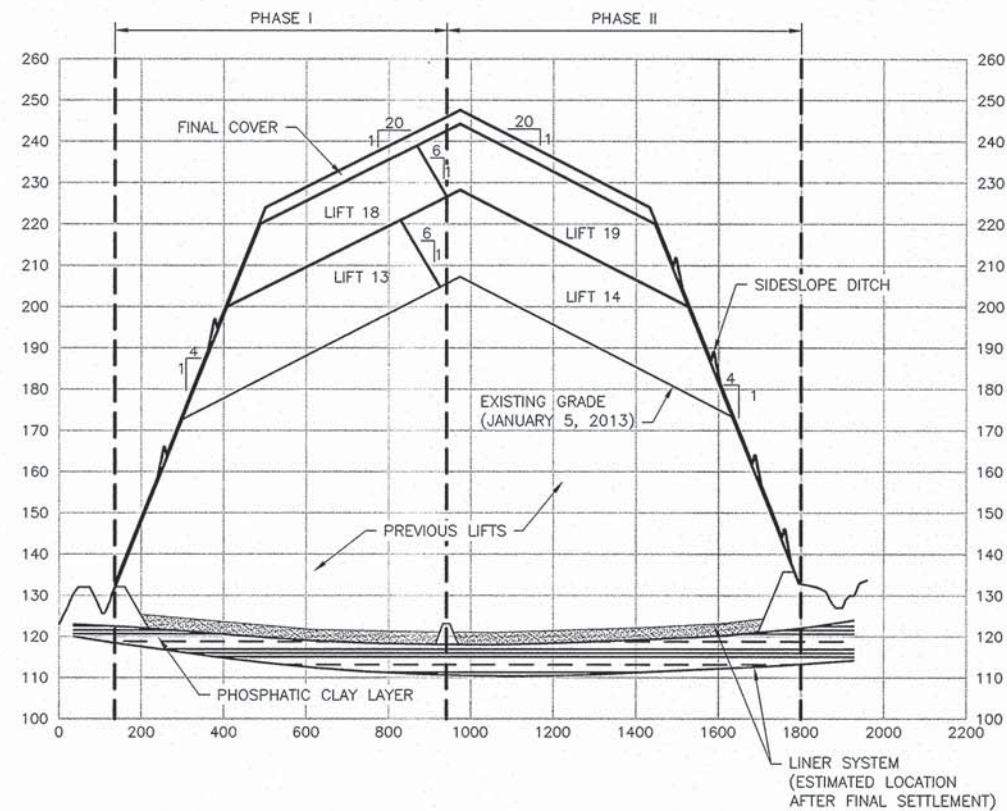
FILENAME 00C-09.dwg  
SCALE 1"=50'

DWG No.  
**9**

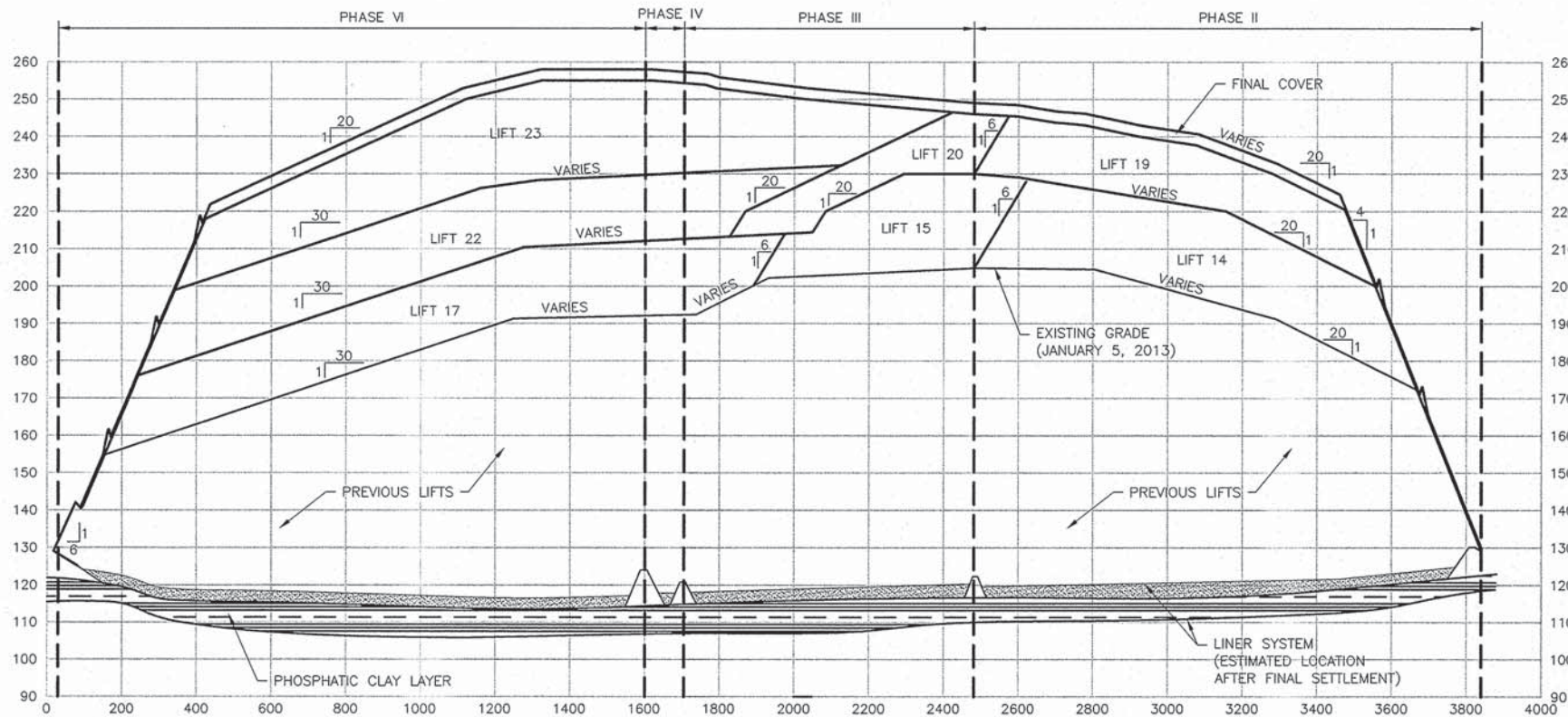




LANDFILL CROSS SECTION B-B

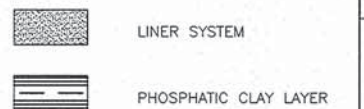


LANDFILL CROSS SECTION A-A



LANDFILL CROSS SECTION C-C

LEGEND:

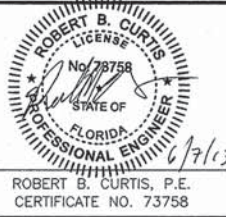


NOTE:  
SOME SLOPES AND LIFT SIZE VARY DUE  
TO SECTION CUT ORIENTATION. SEE SHEET  
C-08 FOR SECTION LOCATIONS.



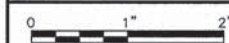
ISSUE	DATE	DESCRIPTION
6/2013	FDEP SUBMITTAL	

PROJECT MANAGER	R. SIEMERING
REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA

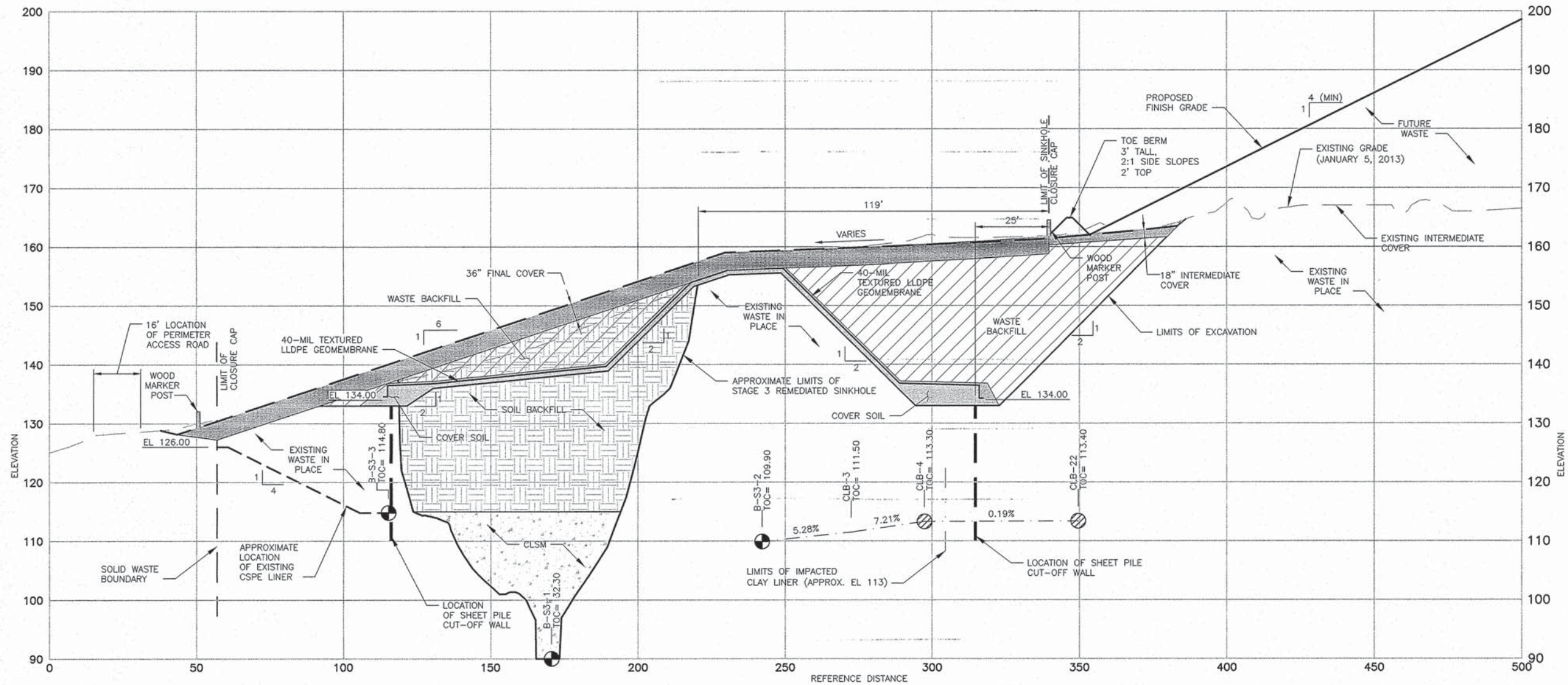
LANDFILL CROSS SECTIONS



FILENAME	00C-10.DWG
SCALE	NOT TO SCALE

DWG No.	10
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# SECTION

SCALE: 1"=20' (HORIZONTAL)  
1"=10' (VERTICAL)



## LEGEND:

- GEOTECHNICAL BORING LOCATION (SDII)
- GEOTECHNICAL BORING LOCATION (TIERRA)
- TOC = TOP OF CLAY ELEVATION
- CLSM = CONTROLLED LOW STRENGTH MATERIAL



**HDR**

HDR Engineering, Inc.  
5426 Bay Center Drive  
Suite 400  
Tampa, FL 33609-3444  
HDR CA# 4213

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PROJECT MANAGER	R. SIEMERING
REVIEWED BY	T. YANOSCHAK
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PROJECT NUMBER 0096-193806-001



**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

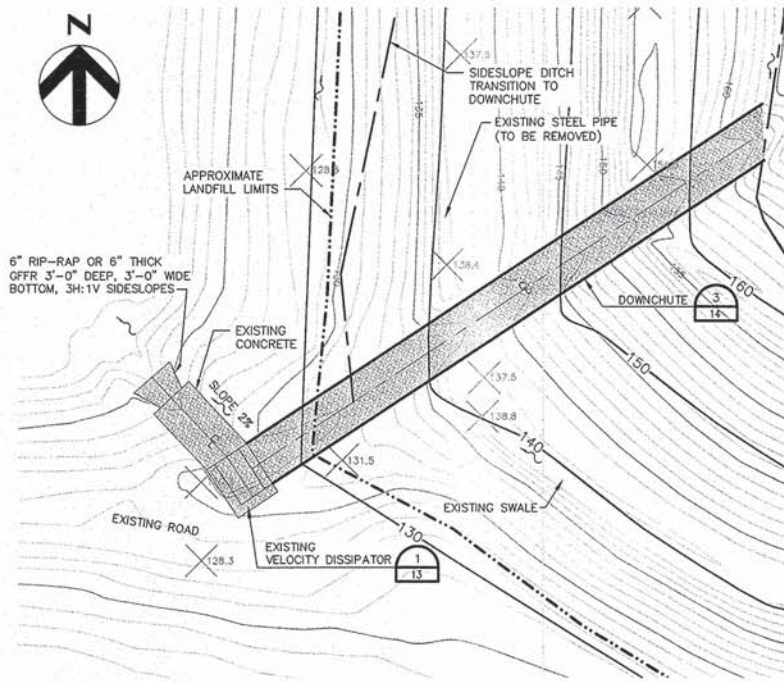
**SINKHOLE REMEDIATION CROSS SECTION**



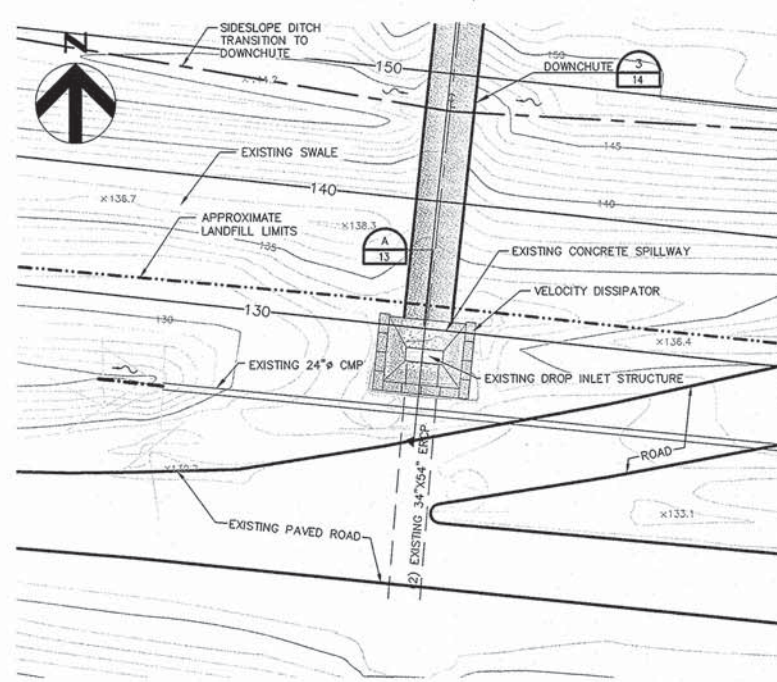
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DWG No.  
**11**

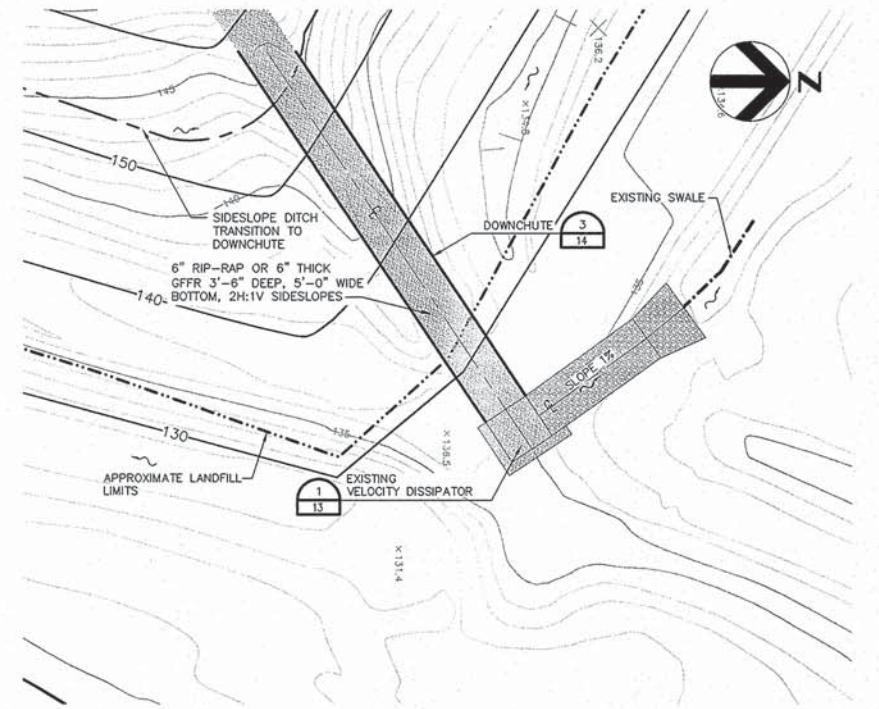




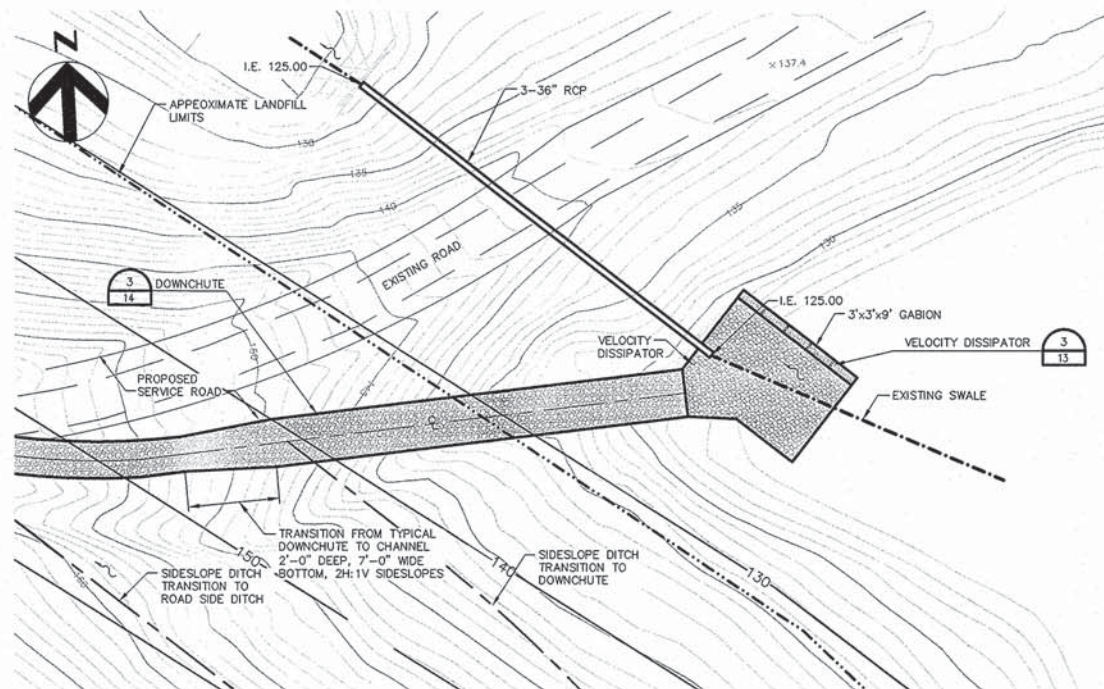
DOWNCHUTE "1" - PLAN DETAIL 1  
8



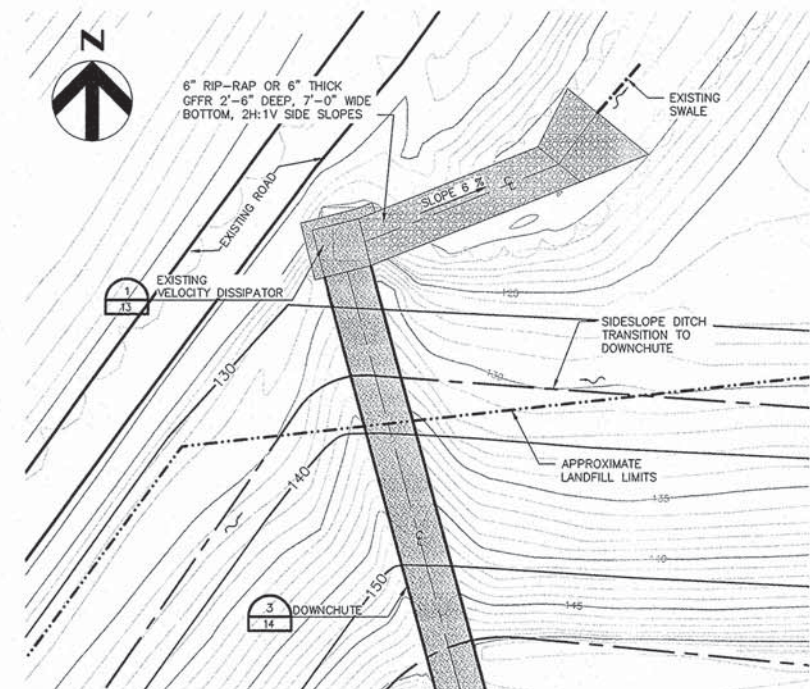
DOWNCHUTE "2" - PLAN DETAIL 2  
8



DOWNCHUTE "3" - PLAN DETAIL 3  
8



DOWNCHUTE "4" - PLAN DETAIL 4  
8

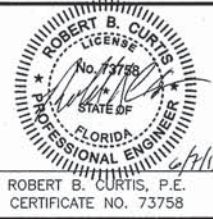


DOWNCHUTE "5" - PLAN DETAIL 5  
8



ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	R. SIEMERING
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DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

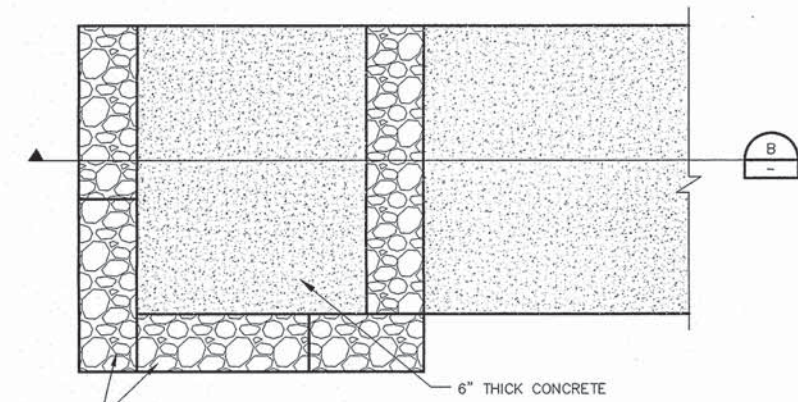
**DETAILS 1**



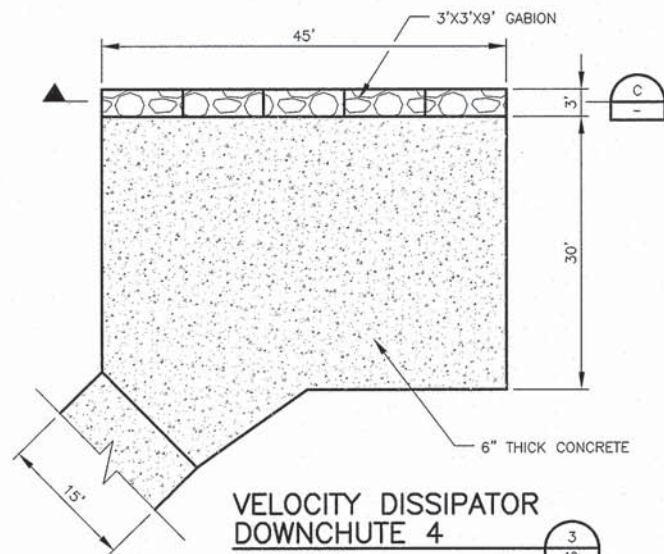
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SCALE	1"=30'

DWG No.	12
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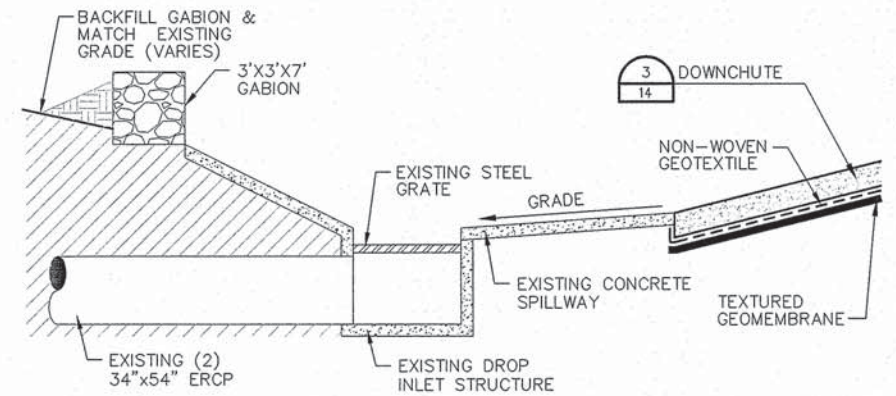




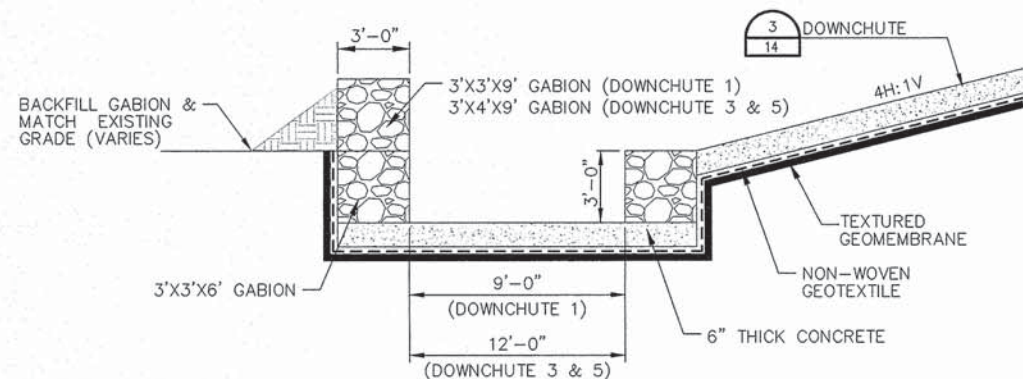
VELOCITY DISSIPATOR  
DOWNCHUTES 1, 3 & 5  
NOT TO SCALE



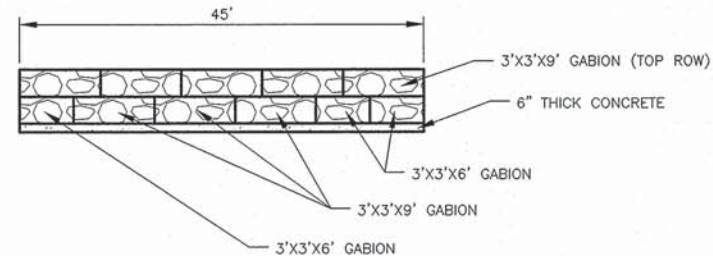
VELOCITY DISSIPATOR  
DOWNCHUTE 4  
NOT TO SCALE



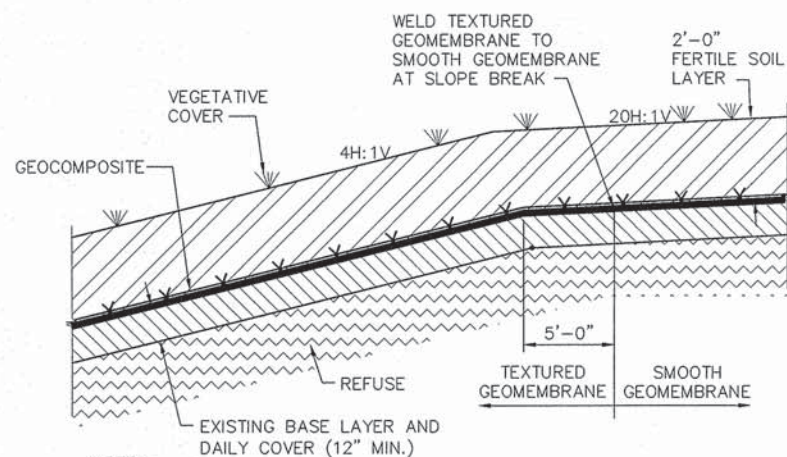
VELOCITY DISSIPATOR SECTION  
NOT TO SCALE



SECTION  
NOT TO SCALE

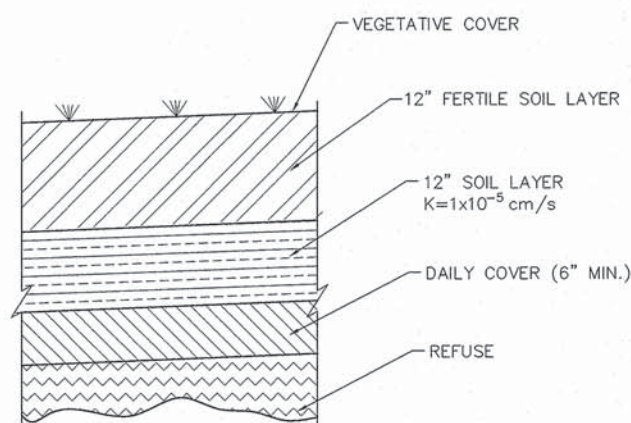


SECTION  
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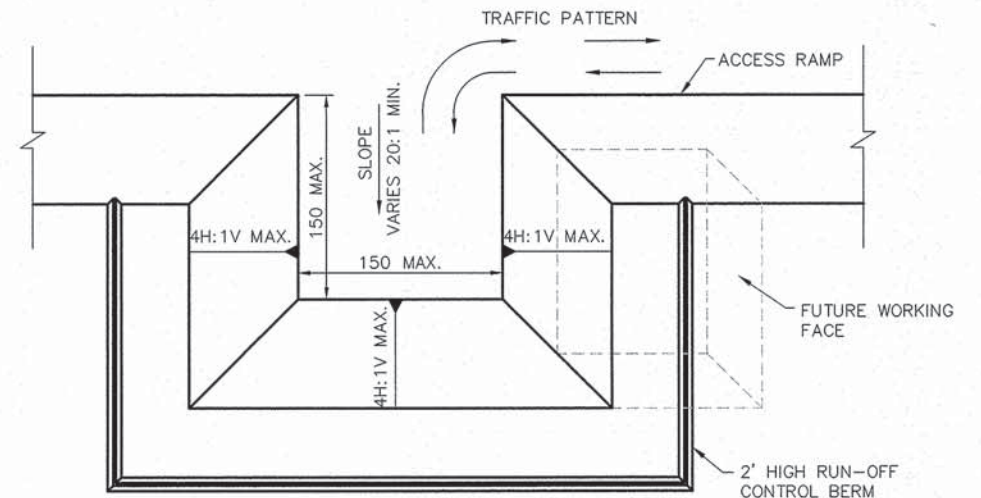


NOTE:  
TEXTURED GEOMEMBRANE TO BE INSTALLED ON SLOPES EXCEEDING 20H:1V AND  
SMOOTH GEOMEMBRANE TO BE INSTALLED ON SLOPES LESS THAN OR EQUAL TO  
20H:1V

TYPICAL GEOMEMBRANE FINAL COVER SYSTEM DETAIL  
NOT TO SCALE



TYPICAL TEMPORARY FINAL COVER DETAIL  
NOT TO SCALE

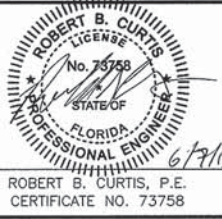


TYPICAL WORKING FACE CELL PLAN  
NOT TO SCALE



ISSUE	DATE	DESCRIPTION
2	6/2013	FDEP SUBMITTAL
8		
14		

PROJECT MANAGER	R. SIEMERING
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CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA

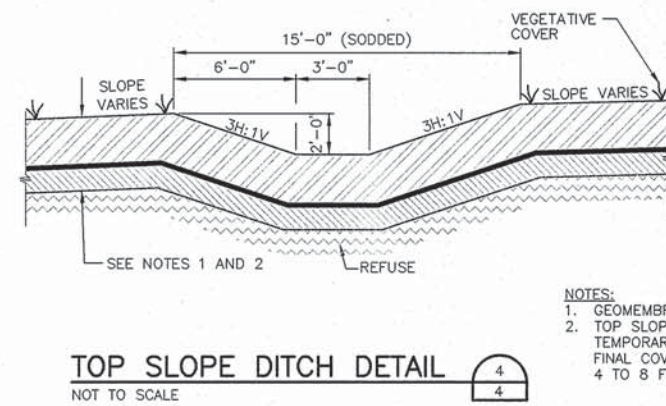
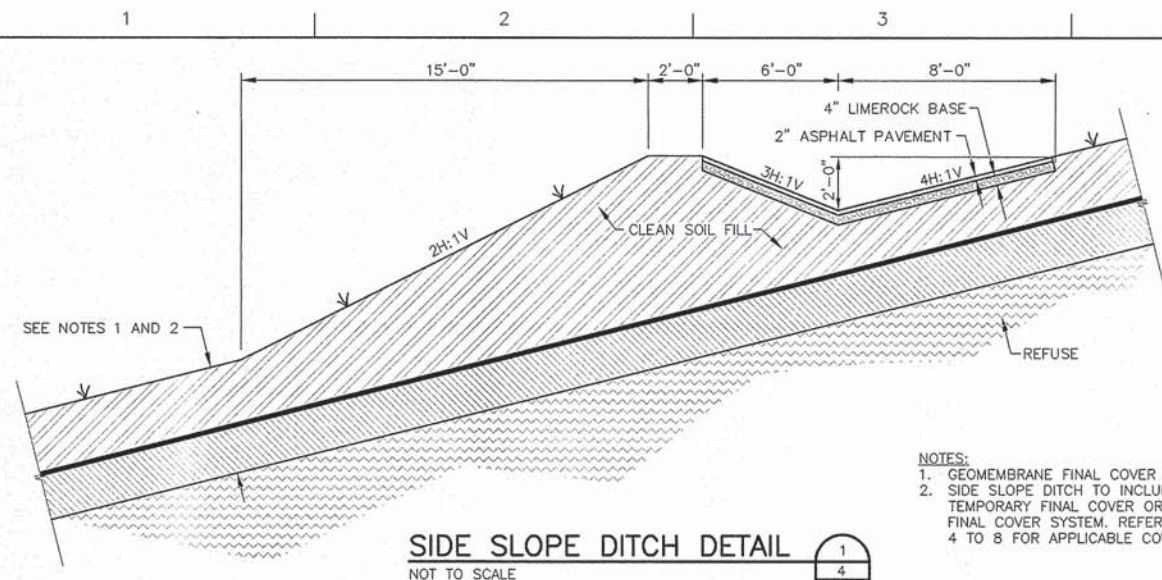


DETAILS 2

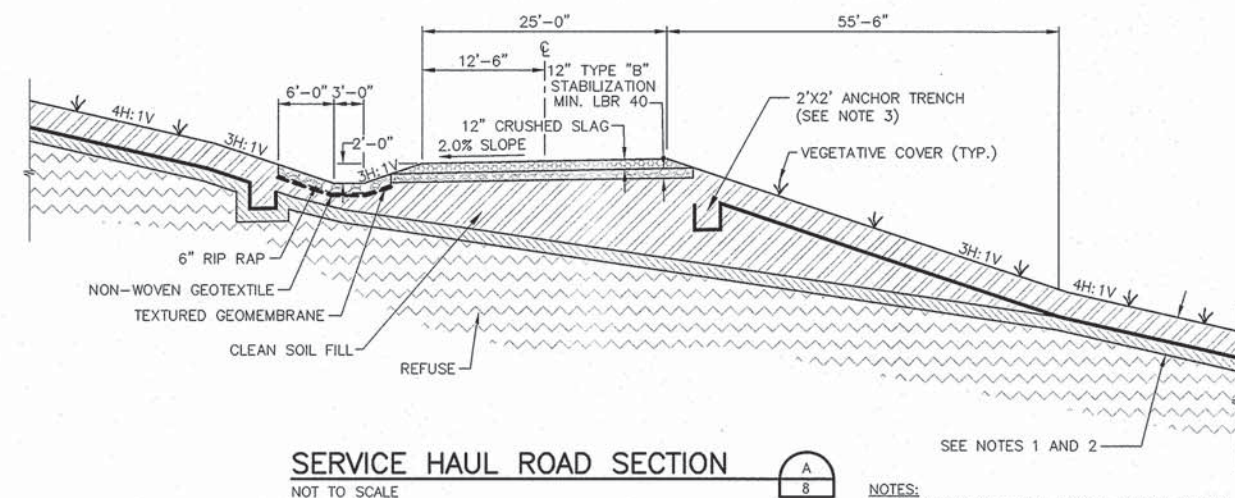
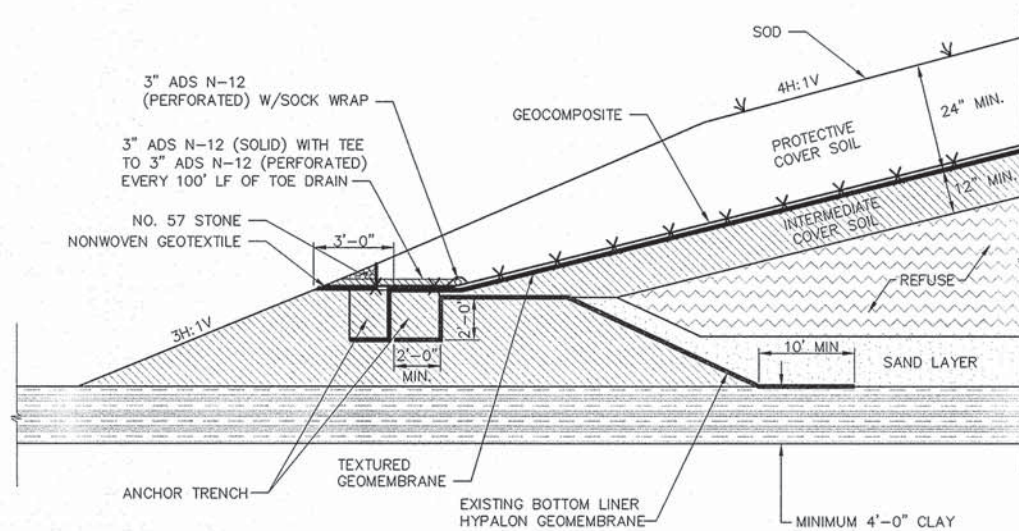
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SCALE	AS SHOWN

DWG No.	13
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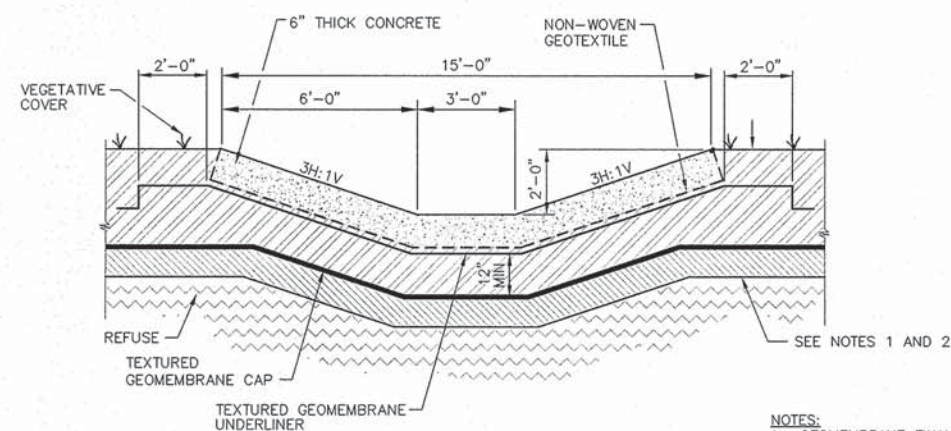




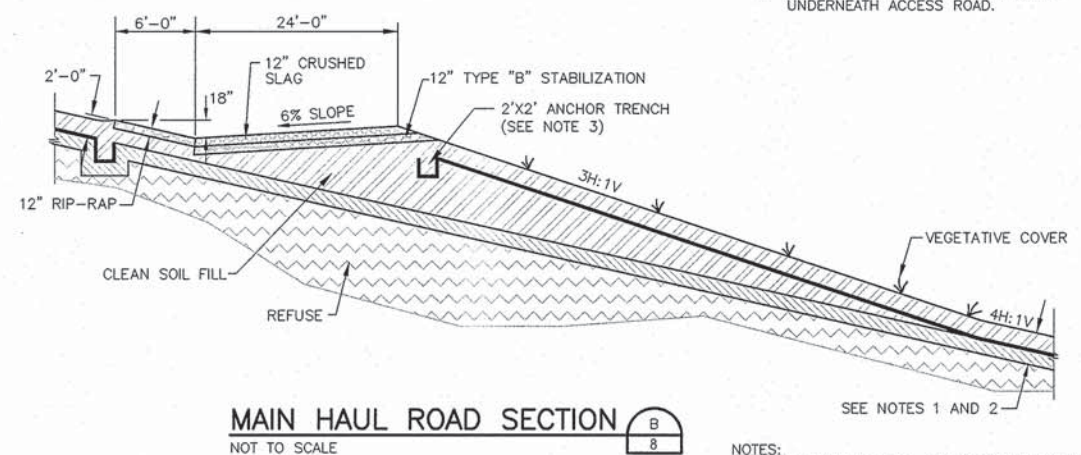
- NOTES:  
1. GEOMEMBRANE FINAL COVER SYSTEM SHOWN.  
2. TOP SLOPE DITCH TO INCLUDE EITHER A TEMPORARY FINAL COVER OR GEOMEMBRANE FINAL COVER SYSTEM. REFER TO DRAWINGS 4 TO 8 FOR APPLICABLE COVER SYSTEM.



- NOTES:  
1. GEOMEMBRANE FINAL COVER SYSTEM SHOWN.  
2. SERVICE HAUL ROAD TO INCLUDE EITHER A TEMPORARY FINAL COVER OR GEOMEMBRANE FINAL COVER SYSTEM. REFER TO DRAWINGS 4 TO 8 FOR APPLICABLE COVER SYSTEM.  
3. GEOMEMBRANE LINER NOT INSTALLED UNDERNEATH ACCESS ROAD.



- NOTES:  
1. GEOMEMBRANE FINAL COVER SYSTEM SHOWN.  
2. TYPICAL DOWNCHUTE TO INCLUDE EITHER A TEMPORARY FINAL COVER OR GEOMEMBRANE FINAL COVER SYSTEM. REFER TO DRAWINGS 4 TO 8 FOR APPLICABLE COVER SYSTEM.

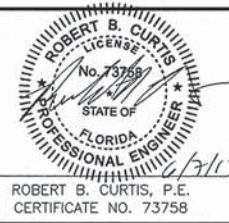


- NOTES:  
1. GEOMEMBRANE FINAL COVER SYSTEM SHOWN.  
2. MAIN HAUL ROAD TO INCLUDE EITHER A TEMPORARY FINAL COVER OR GEOMEMBRANE FINAL COVER SYSTEM. REFER TO DRAWINGS 4 TO 8 FOR APPLICABLE COVER SYSTEM.  
3. GEOMEMBRANE LINER NOT INSTALLED UNDERNEATH ACCESS ROAD.



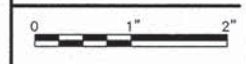
ISSUE	DATE	DESCRIPTION
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REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

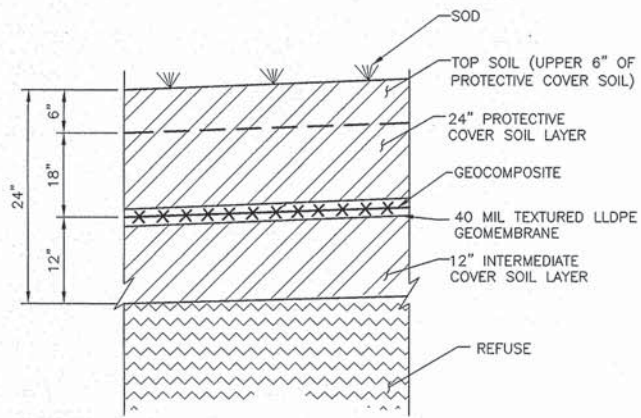
**DETAILS 3**



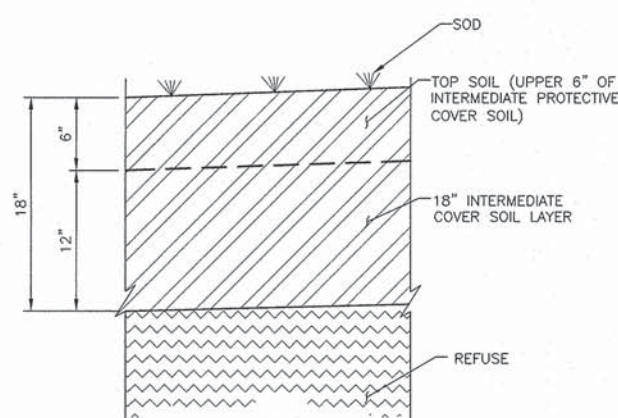
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SCALE	AS SHOWN

DWG No.	14
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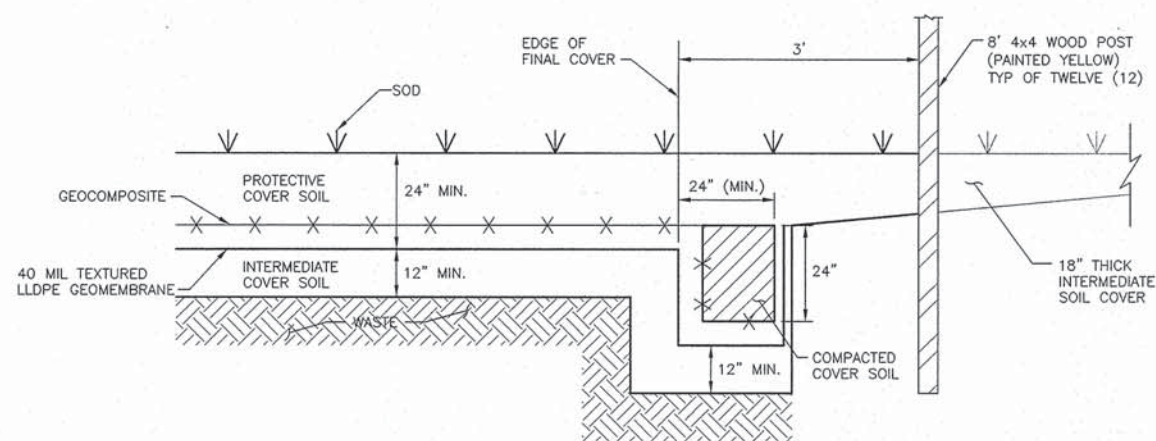




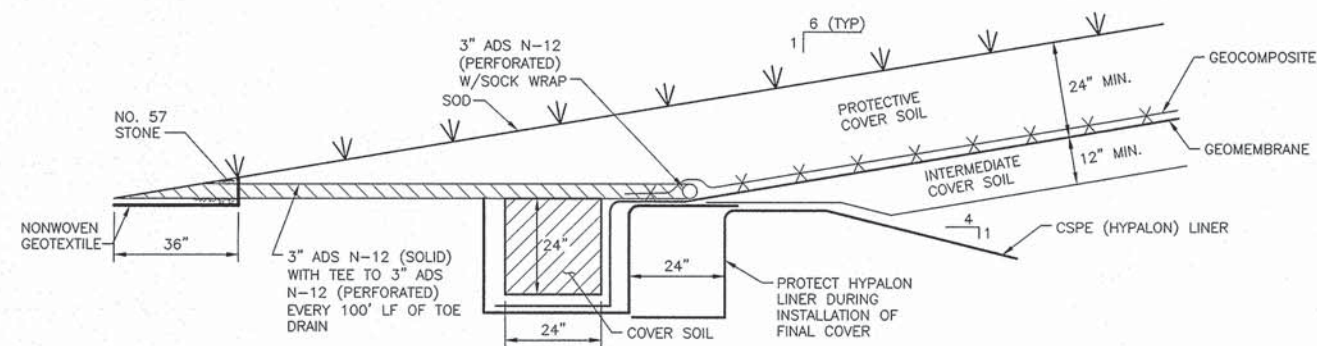
**TEMPORARY GEOMEMBRANE  
FINAL COVER DETAIL**  
NOT TO SCALE



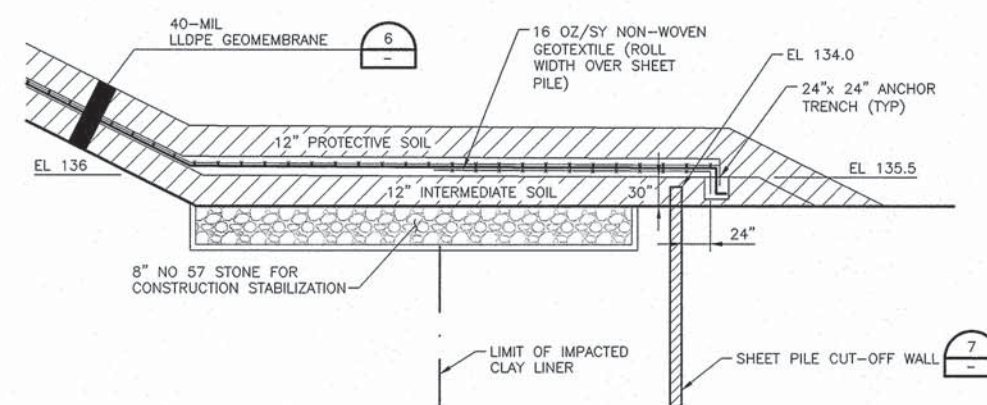
**INTERMEDIATE COVER DETAIL**  
NOT TO SCALE



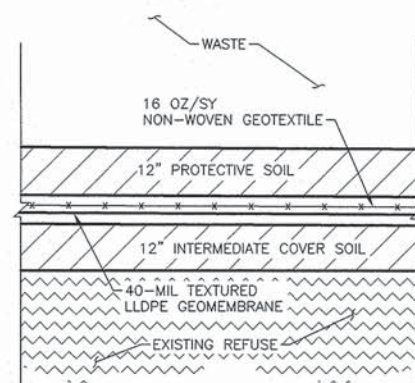
**ANCHOR TRENCH DETAIL**  
NOT TO SCALE



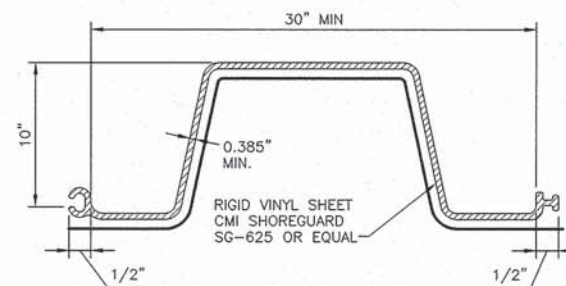
**TEMPORARY TOE DRAIN DETAIL**  
NOT TO SCALE



**40-MIL LLDPE GEOMEMBRANE ANCHOR DETAIL**  
NOT TO SCALE



**40-MIL LLDPE GEOMEMBRANE DETAIL**  
NOT TO SCALE

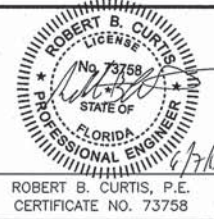


\* STEEL GUIDE METAL THICKNESS SUFFICIENT TO PENETRATE THROUGH MATERIALS SHOWN ON BORINGS.

**TYPICAL SHEET PILE  
CUT-OFF WALL DETAIL**  
NOT TO SCALE




PROJECT MANAGER	R. SIEMERING
REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



**PHASES I-VI OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

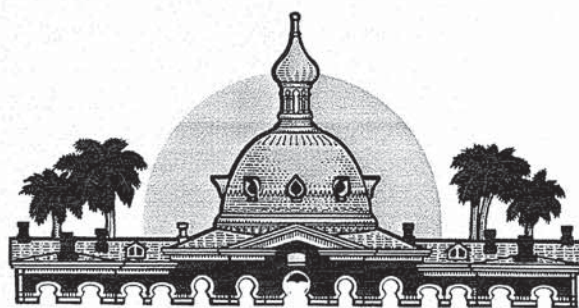
**DETAILS 4**



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SCALE	AS SHOWN

DWG No.	15
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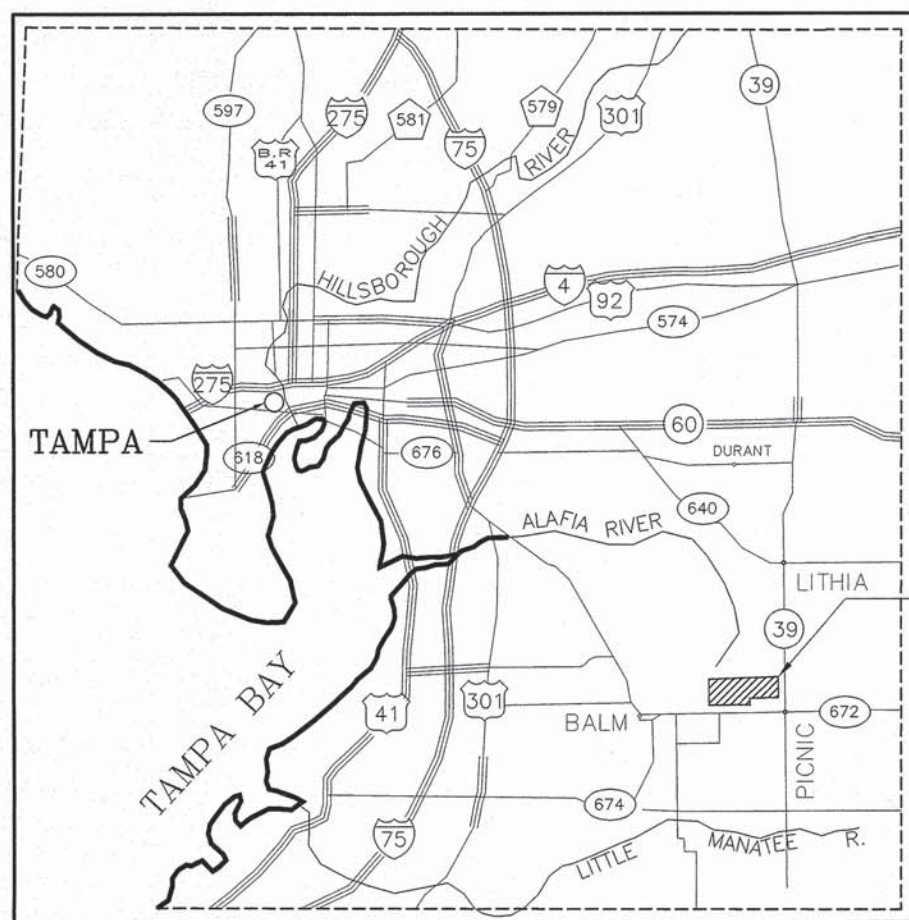




Hillsborough County  
Florida

BOARD OF COUNTY COMMISSIONERS:

KEVIN BECKNER  
VICTOR CRIST  
KEN HAGAN  
AL HIGGINBOTHAM  
LESLEY MILLER  
SANDRA MURMAN  
MARK SHARPE



NOT TO SCALE

PROJECT  
LOCATION

Drawings For

# CAPACITY EXPANSION AREA SECTIONS 7, 8 AND 9 OPERATING SEQUENCE

SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA

Project No.  
096-193806-001

LITHIA, FLORIDA  
JUNE 2013

# HDR

HDR Engineering, Inc.  
5426 Bay Center Drive  
Suite 400  
Tampa, FL 33609-3444  
HDR CA# 4213

DRAWING INDEX

Sheet Number	Sheet Title
1	COVER SHEET
2	INDEX, LEGENDS AND GENERAL NOTES
3	FACILITY SITE PLAN AND EXISTING TOPOGRAPHY
4	SECTIONS 7, 8 AND 9 STORMWATER PLAN
5	SECTIONS 7, 8 AND 9 OPERATING SEQUENCE FILL SEQUENCE 9 TO 12
6	SECTIONS 7, 8 AND 9 OPERATING SEQUENCE FILL SEQUENCE 13 TO 16
7	SECTIONS 7, 8 AND 9 OPERATING SEQUENCE FILL SEQUENCE 17 AND 18
8	SECTIONS 7, 8 AND 9 FINAL GRADING PLAN
9	SECTIONS 7, 8 AND 9 CROSS SECTIONS
10	SECTIONS 7, 8 AND 9 OPERATING SEQUENCE DETAILS
11	SECTIONS 7, 8 AND 9 OPERATING SEQUENCE DETAILS



6/7/13  
ROBERT B. CURTIS, P.E.  
LICENSE NO. 73758  
HDR CA# 4213

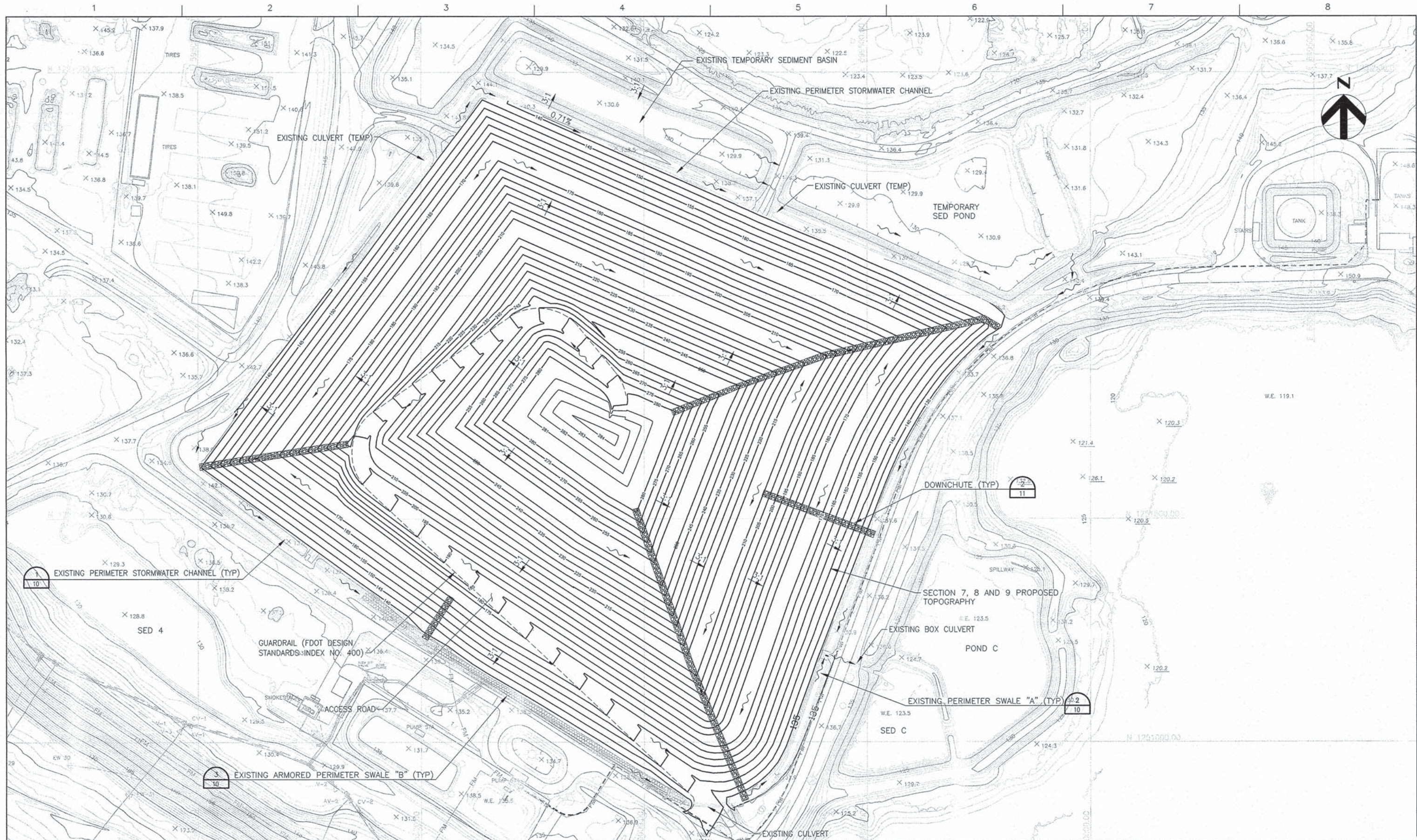








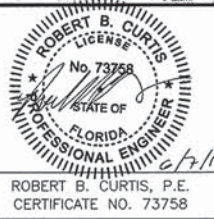




**HDR**  
 HDR Engineering, Inc.  
 5425 Bay Center Drive  
 Suite 400  
 Tampa, FL 33609-3444  
 HDR CAF 4213

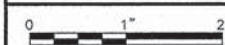
6/2013	FDEP SUBMITTAL	
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	R. SIEMERING
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**CAPACITY EXPANSION AREA  
 SECTIONS 7, 8 AND 9  
 OPERATING SEQUENCE  
 SOUTHEAST COUNTY LANDFILL  
 HILLSBOROUGH COUNTY, FLORIDA**

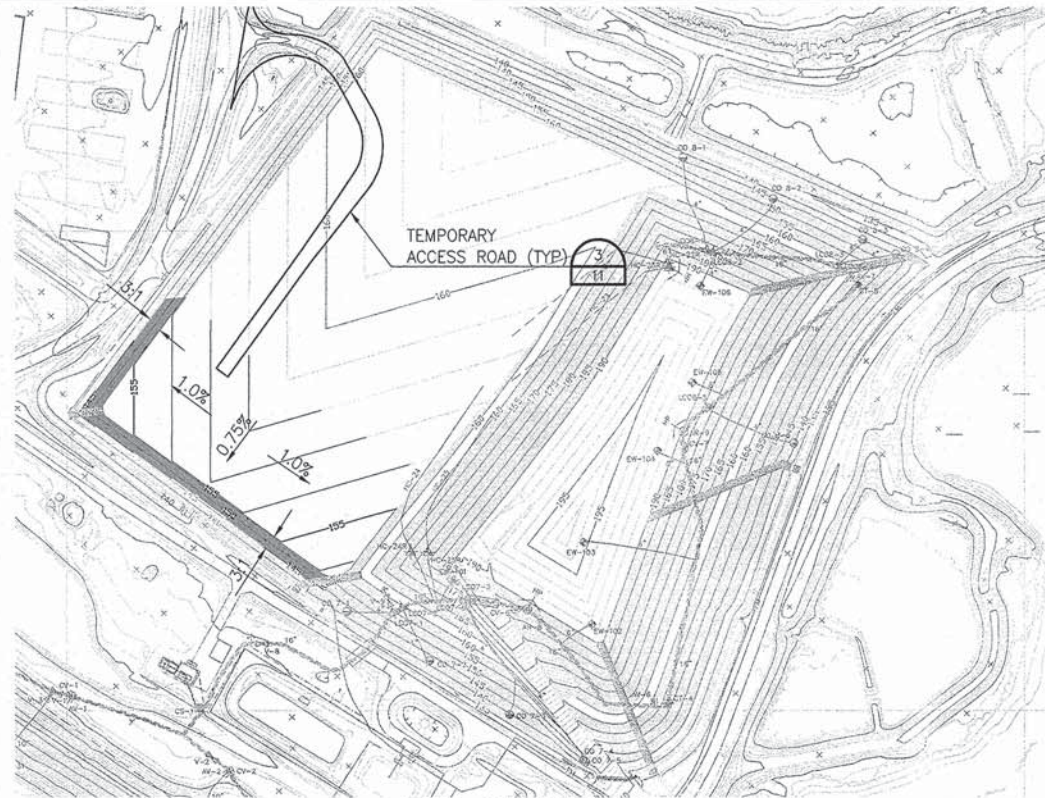
**SECTIONS 7, 8 AND 9 STORMWATER PLAN**



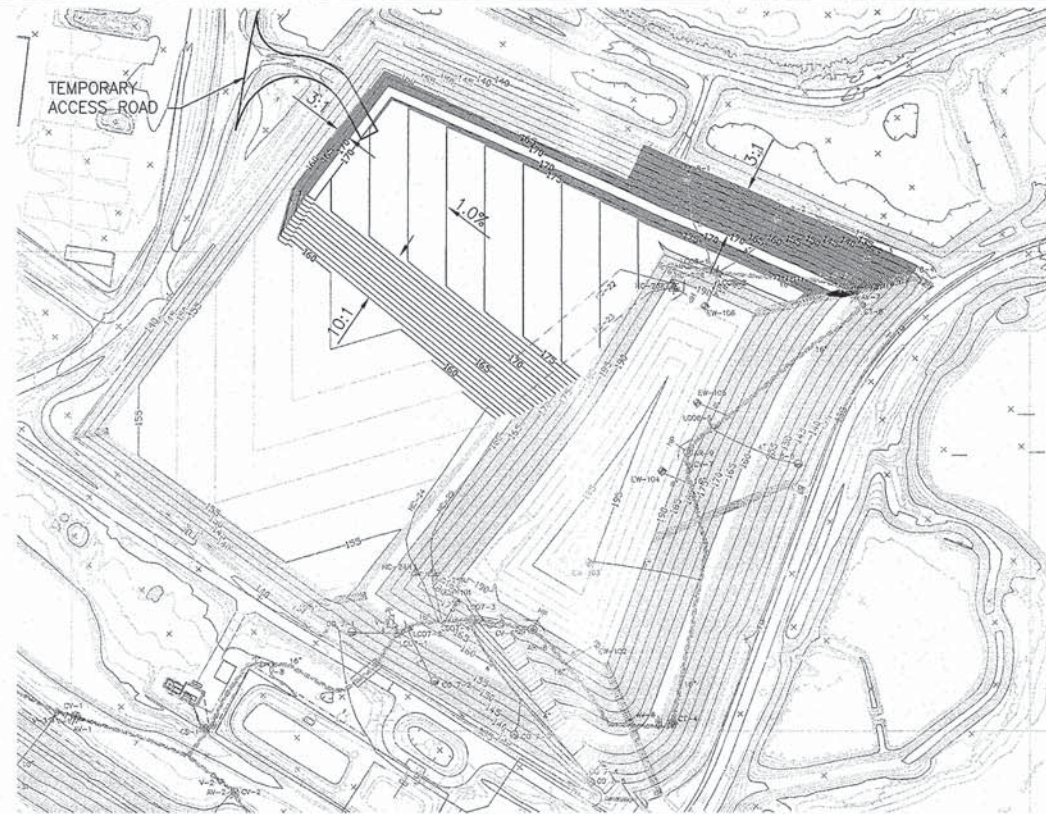
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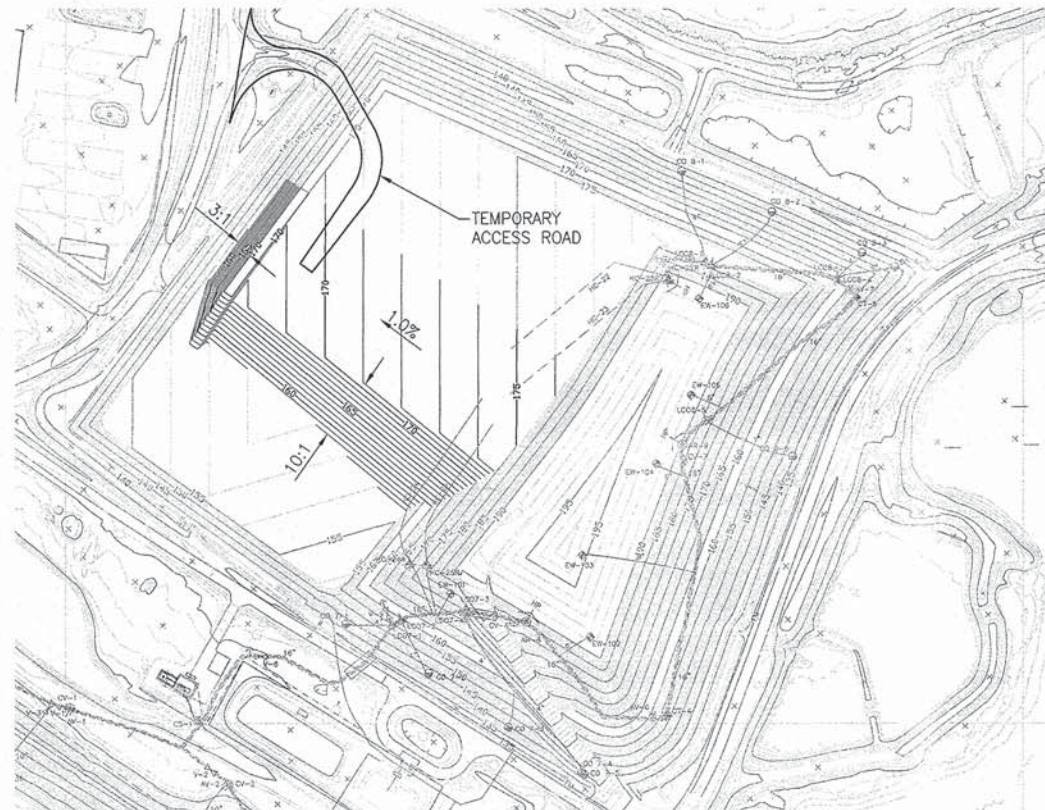




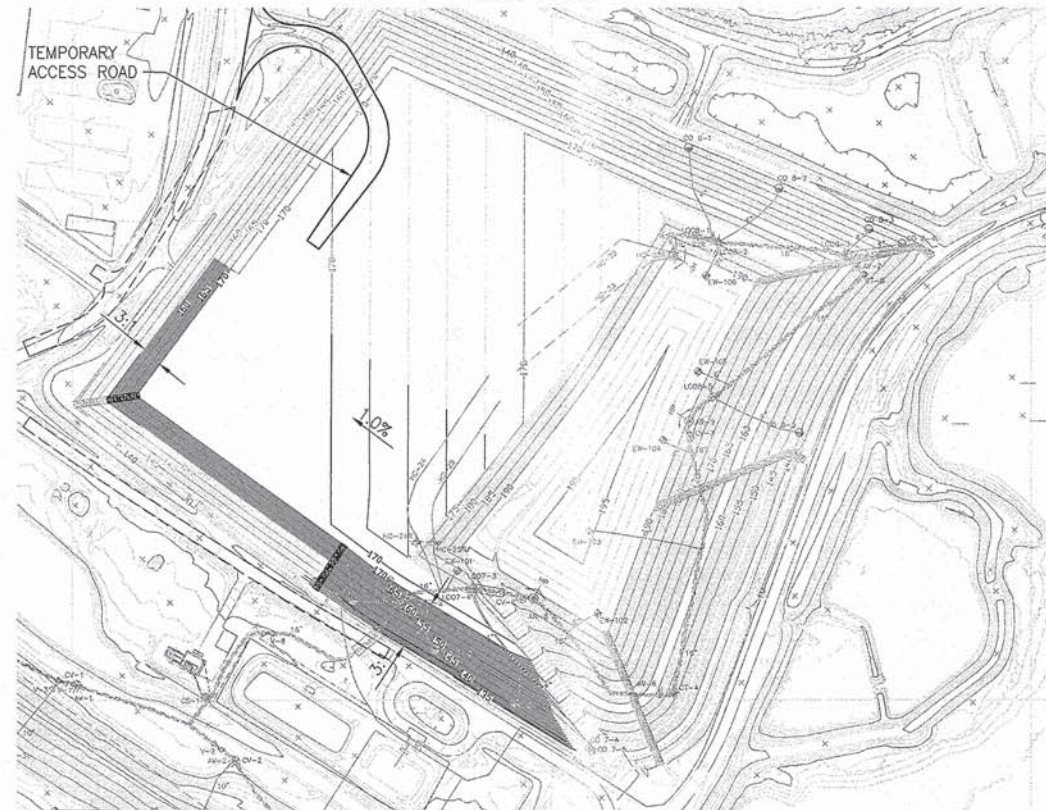
**FILL SEQUENCE 9**  
SCALE 1"=200'



**FILL SEQUENCE 10**  
SCALE 1"=200'



**FILL SEQUENCE 11**  
SCALE 1"=200'



**FILL SEQUENCE 12**  
SCALE 1"=200'

NOTE:  
LOCATION OF ACCESS  
ROAD TO VARY WITH  
OPERATIONS

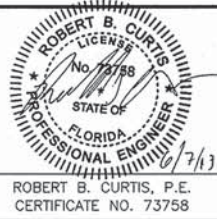


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**CAPACITY EXPANSION AREA  
SECTIONS 7, 8 AND 9  
OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

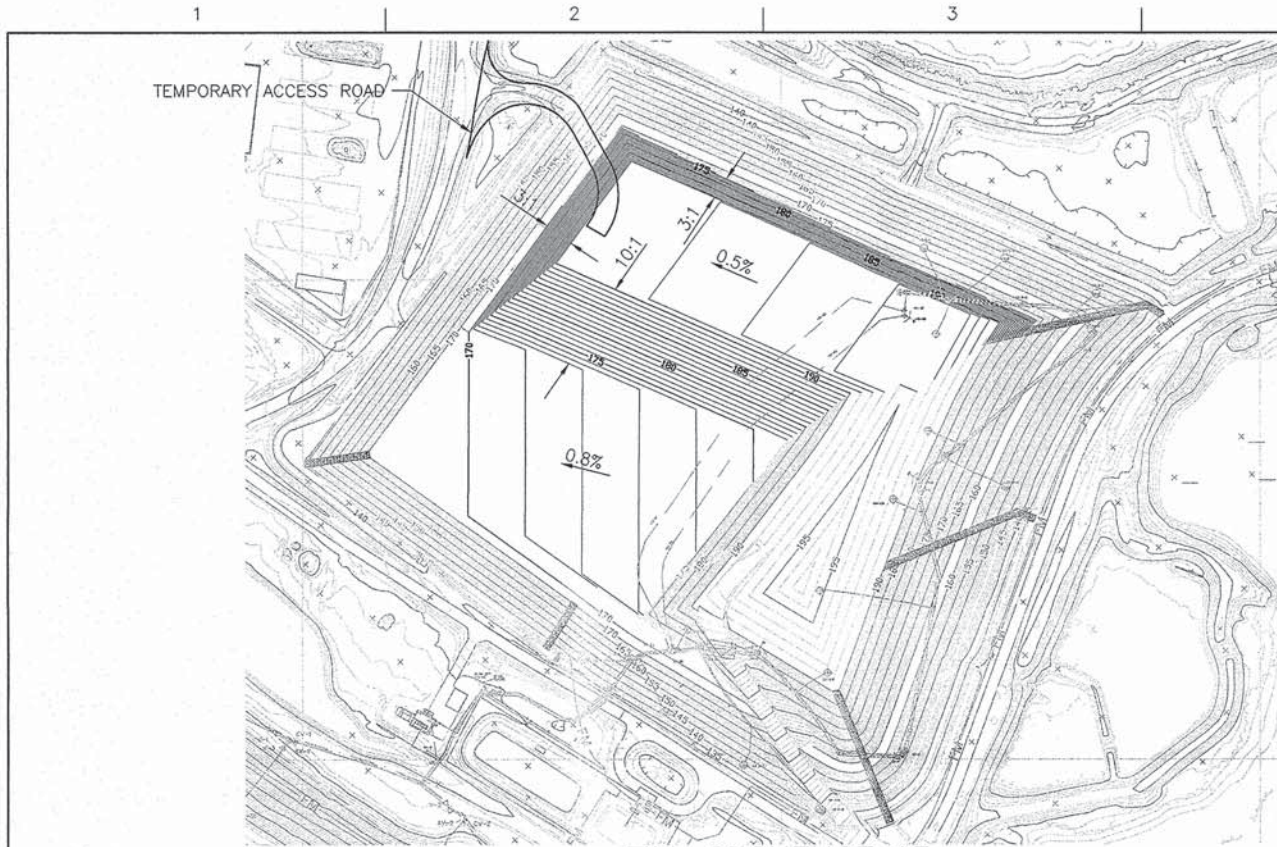
**SECTIONS 7, 8 AND 9 OPERATING SEQUENCE  
FILL SEQUENCE 9 TO 12**



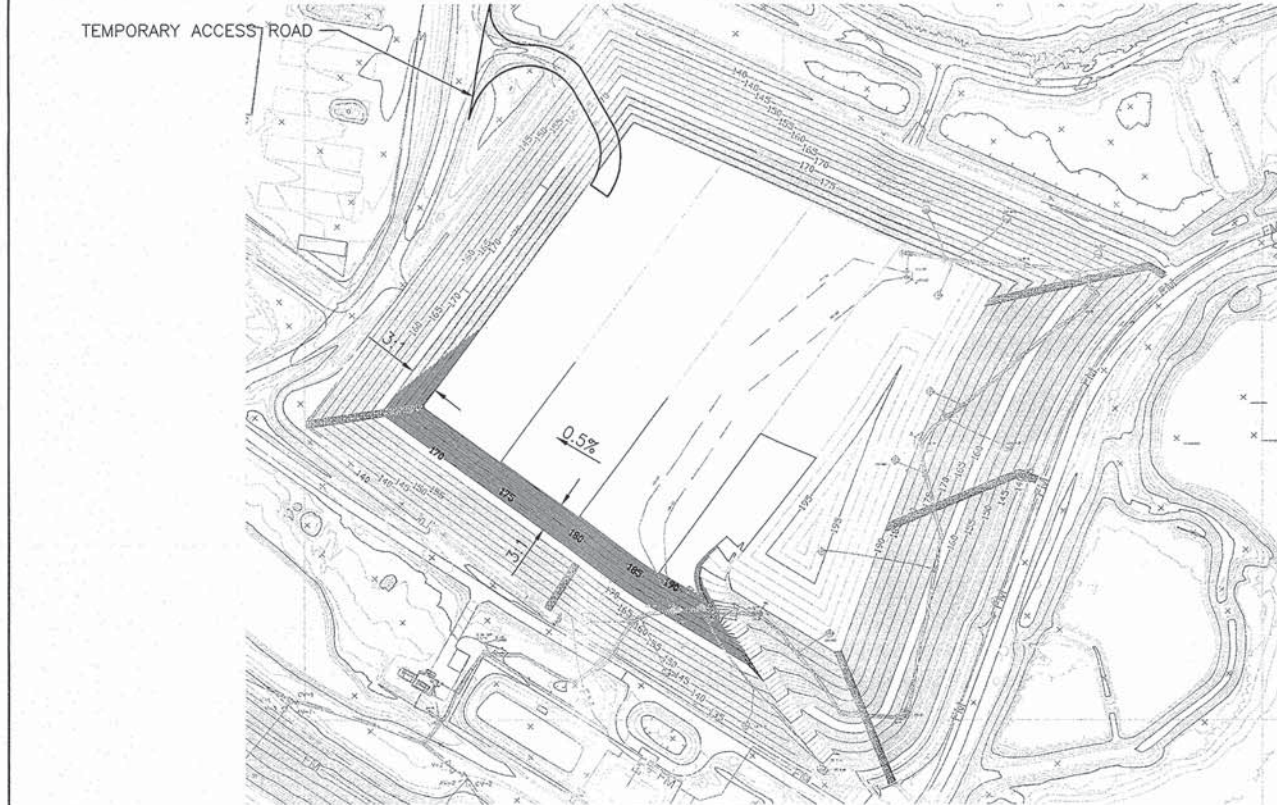
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**5**

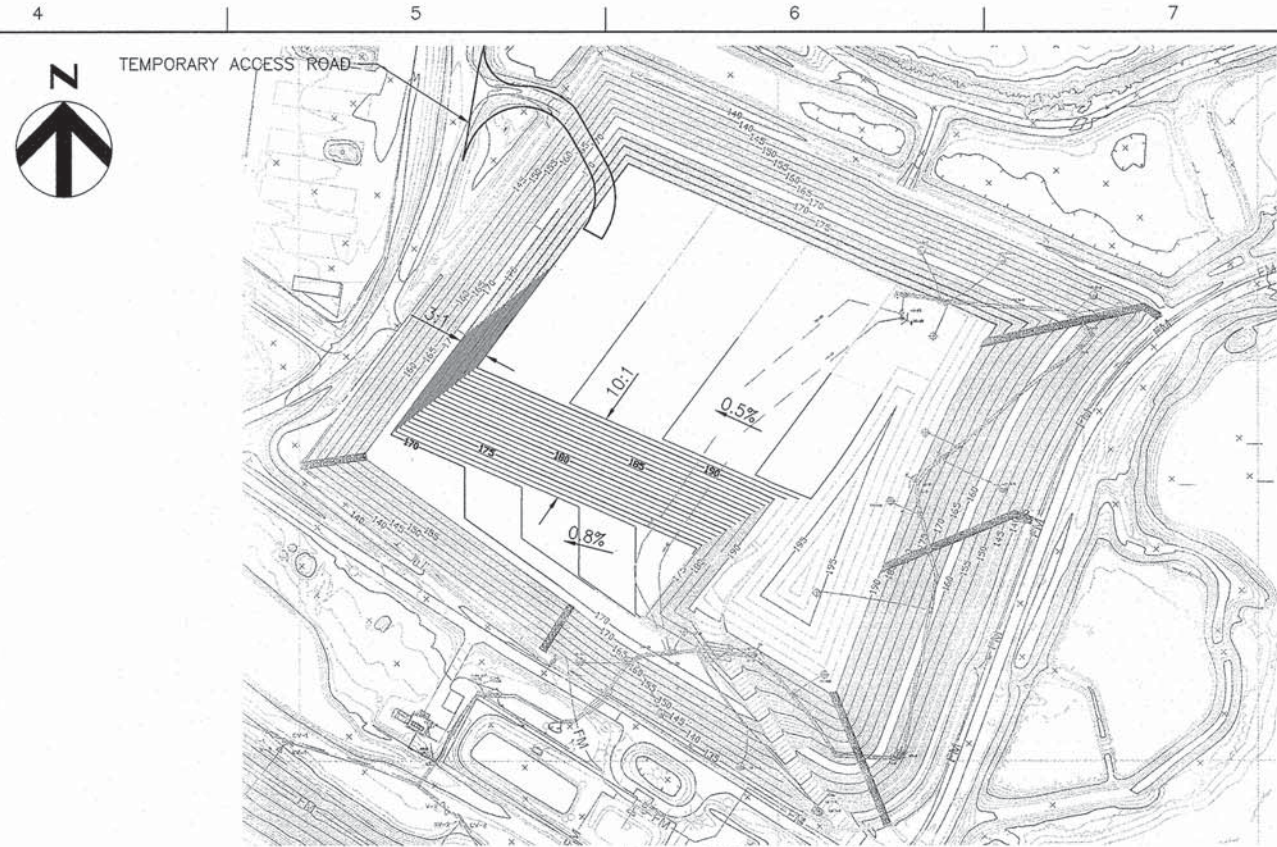




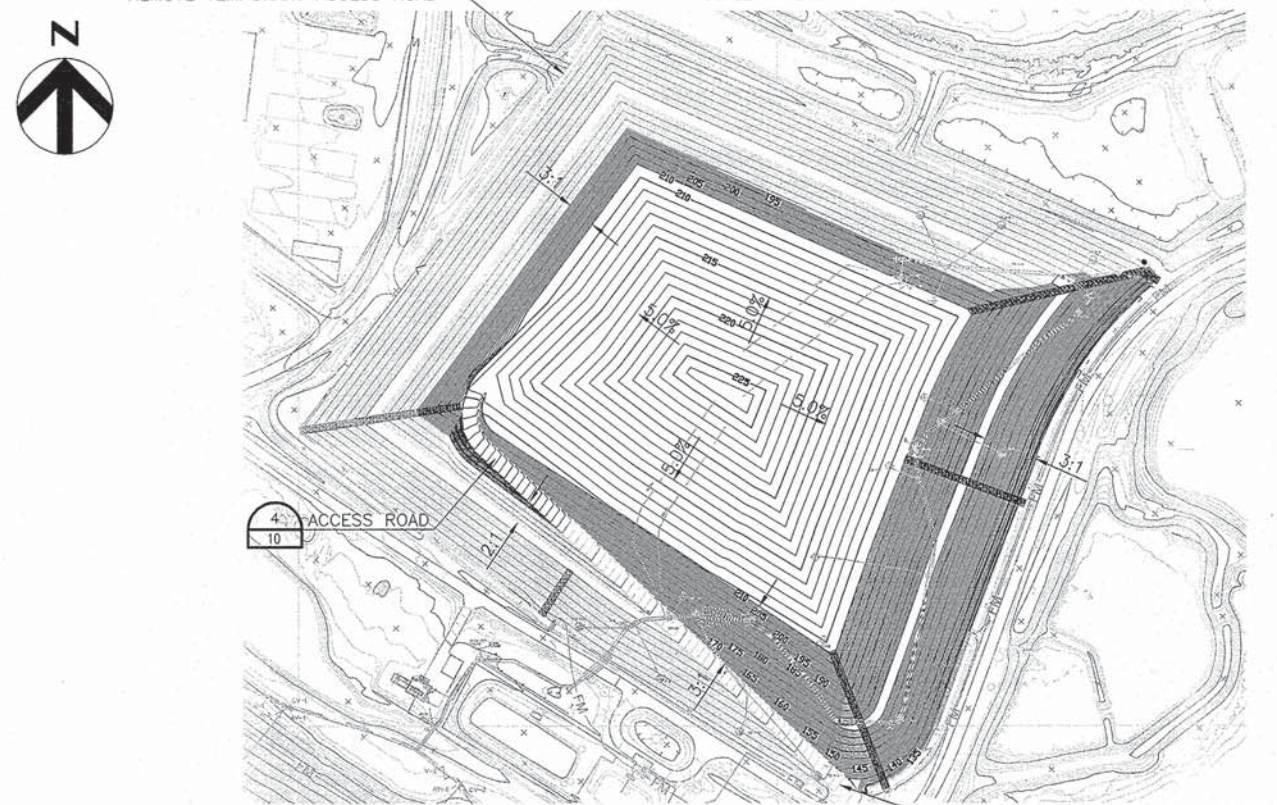
FILL SEQUENCE 13  
SCALE 1"=200'



FILL SEQUENCE 15  
SCALE 1"=200'



FILL SEQUENCE 14  
SCALE 1"=200'



FILL SEQUENCE 16  
SCALE 1"=200'

NOTE:  
LOCATION OF ACCESS  
ROAD TO VARY WITH  
OPERATIONS

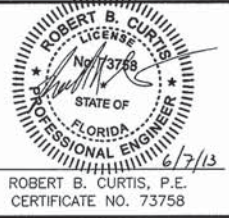


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**CAPACITY EXPANSION AREA  
SECTIONS 7, 8 AND 9  
OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

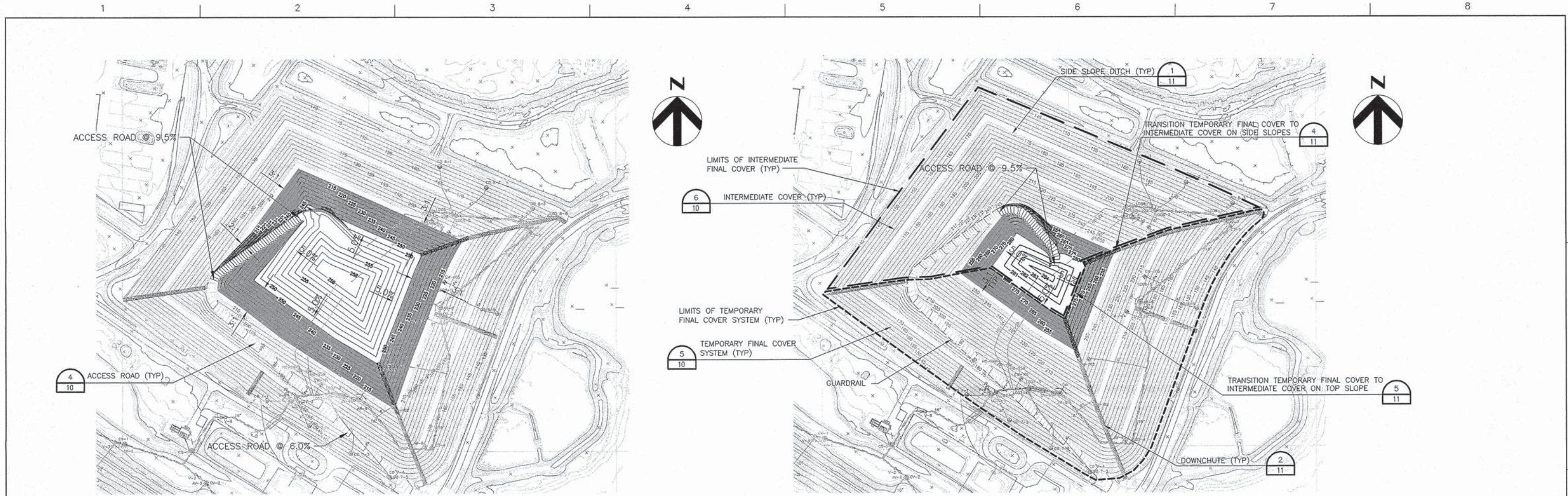
**SECTIONS 7, 8 AND 9 OPERATING SEQUENCE  
FILL SEQUENCE 13 TO 16**



FILENAME	0844902101-C06-SEQ-13_16.DWG
SCALE	AS SHOWN

DWG No.	6
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FILL SEQUENCE 17  
SCALE 1"=200'

FILL SEQUENCE 18  
SCALE 1"=200'

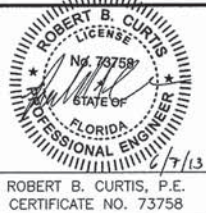
- NOTES:
1. TEMPORARY FINAL COVER TO BE PLACED OVER SOUTH AND EAST SLOPES. INTERMEDIATE COVER TO BE PLACED ON WEST AND NORTH SLOPES TO ALLOW FOR EXPANSION.
  2. LOCATION OF ACCESS ROAD TO VARY WITH OPERATIONS.
  3. UPON COMPLETION OF CAPACITY EXPANSION AREA SECTION 13, A FINAL COVER WILL BE PLACED ON THE SOUTH AND EAST SLOPES. REFER TO DETAIL 7 SHEET 10.



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REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



ROBERT B. CURTIS, P.E.  
CERTIFICATE NO. 73758

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

SECTIONS 7, 8 AND 9 OPERATING SEQUENCE  
FILL SEQUENCE 17 AND 18



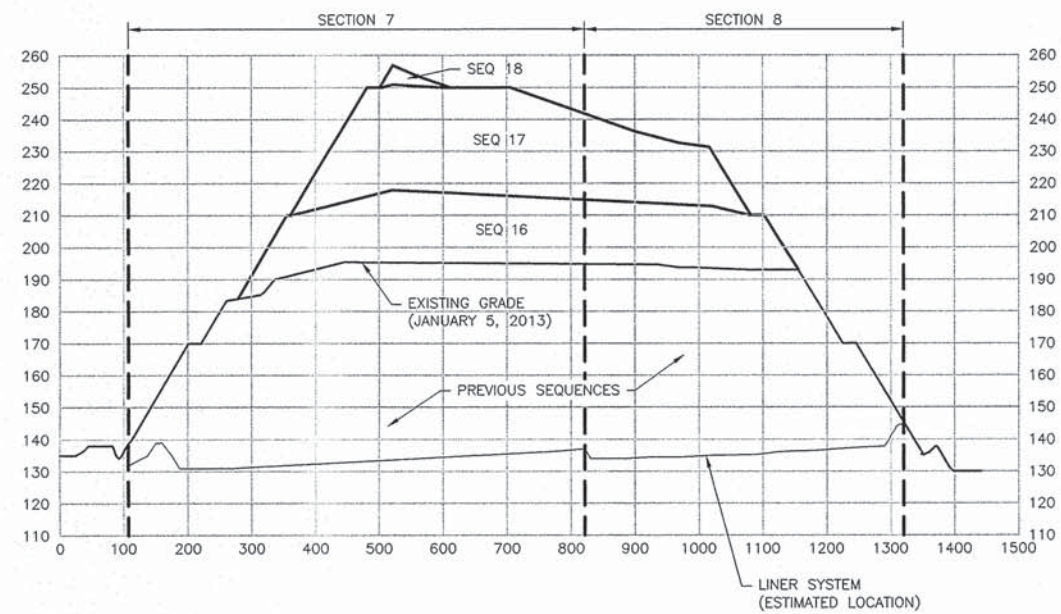
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SCALE AS SHOWN

DWG No.  
7

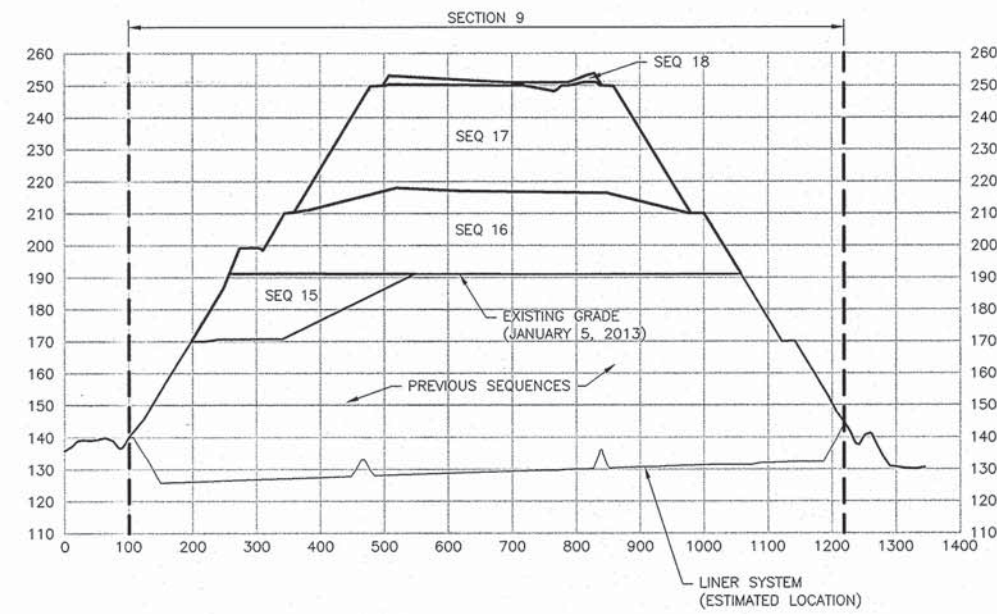




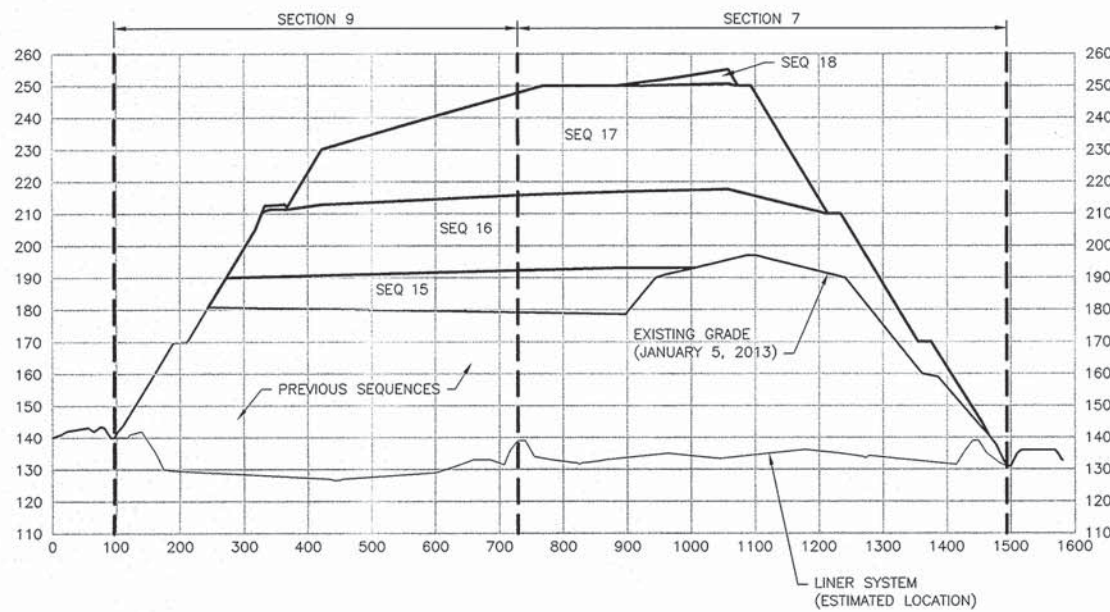




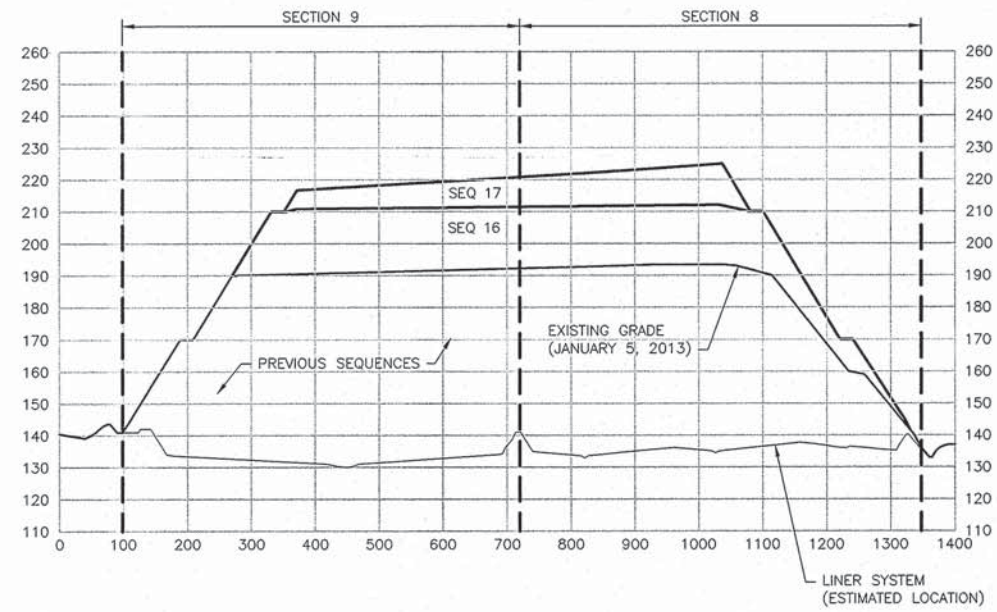
LANDFILL CROSS SECTION A



LANDFILL CROSS SECTION B

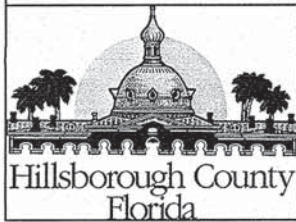


LANDFILL CROSS SECTION C

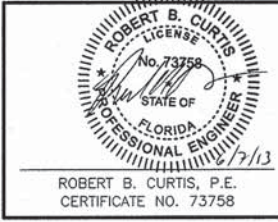


LANDFILL CROSS SECTION D

NOTE:  
SOME SLOPES AND SEQUENCE SIZE VARY  
DUE TO SECTION CUT ORIENTATION. SEE  
SHEET C-08 FOR SECTION LOCATIONS.




PROJECT MANAGER	R. SIEMERING
REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



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

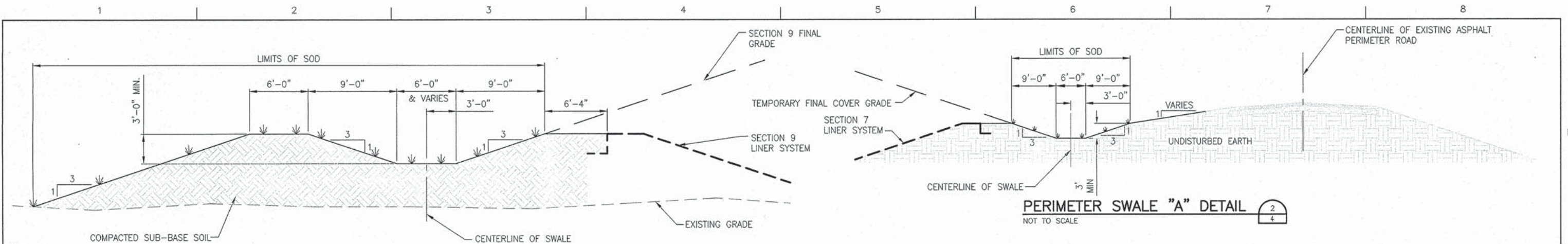
SECTIONS 7, 8 AND 9 CROSS SECTIONS

0 1" 2"

FILENAME 00C-09.DWG  
SCALE NOT TO SCALE

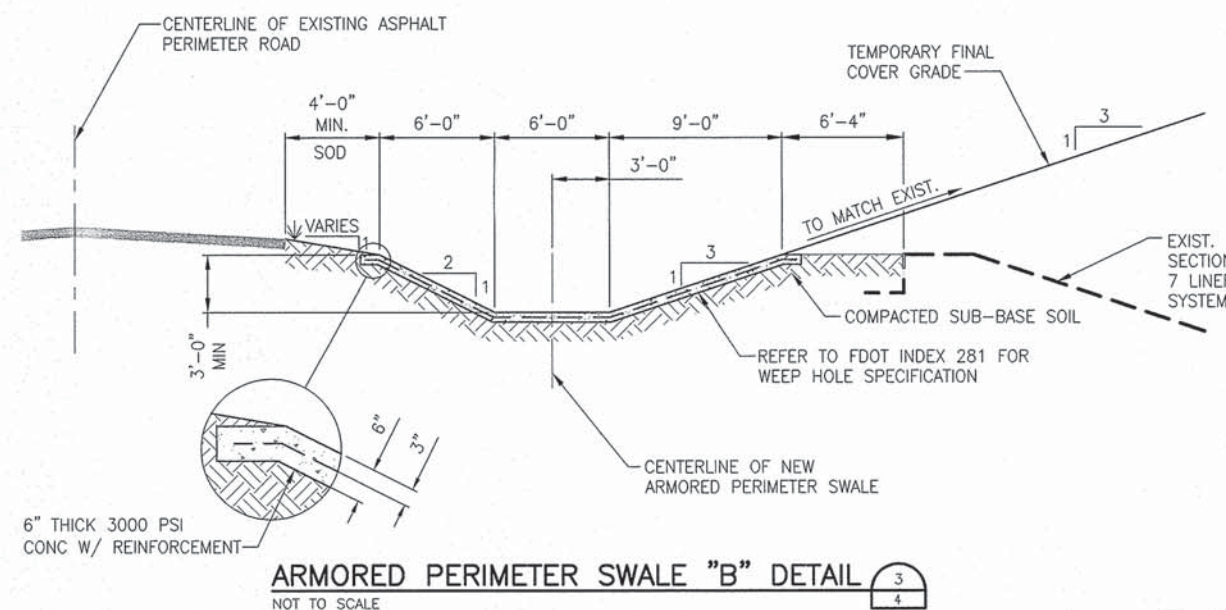
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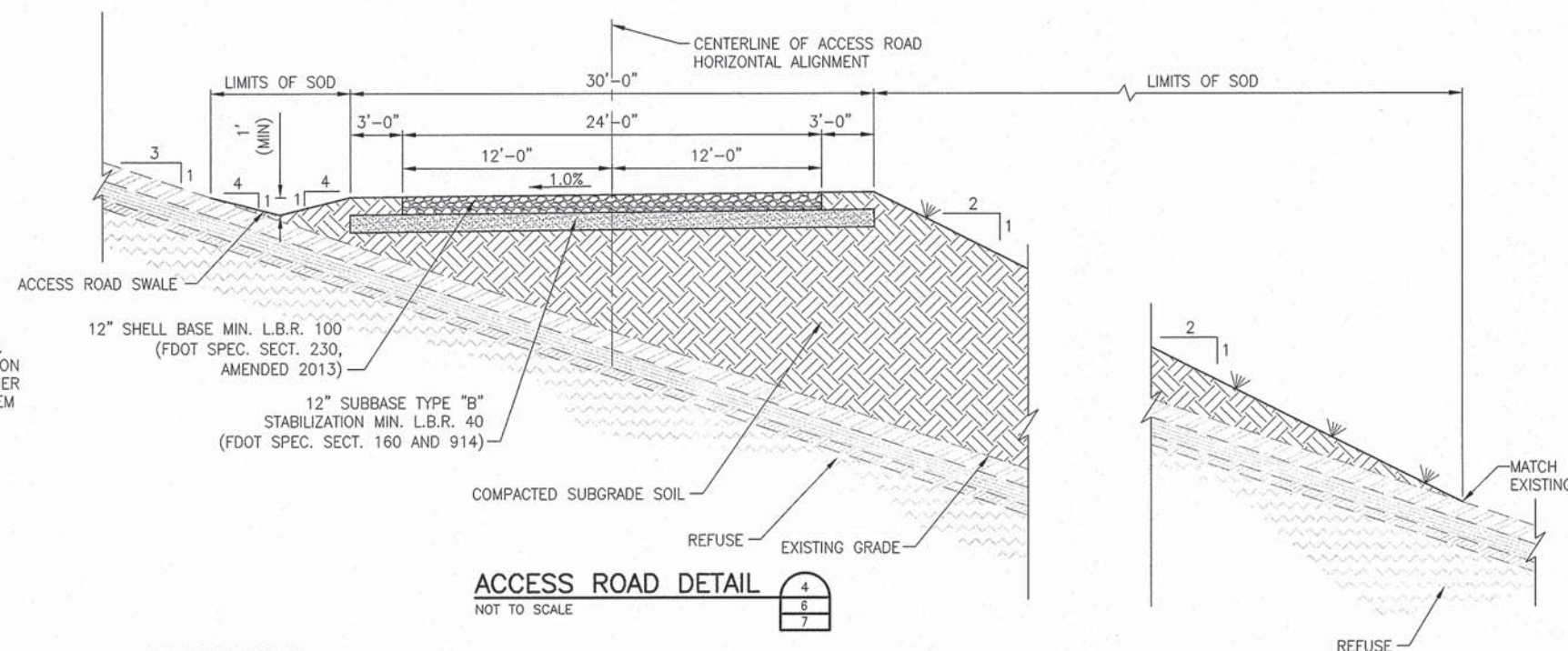


PERIMETER STORMWATER CHANNEL DETAIL  
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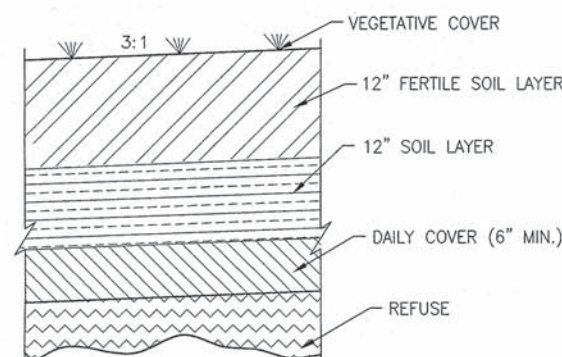
PERIMETER SWALE "A" DETAIL  
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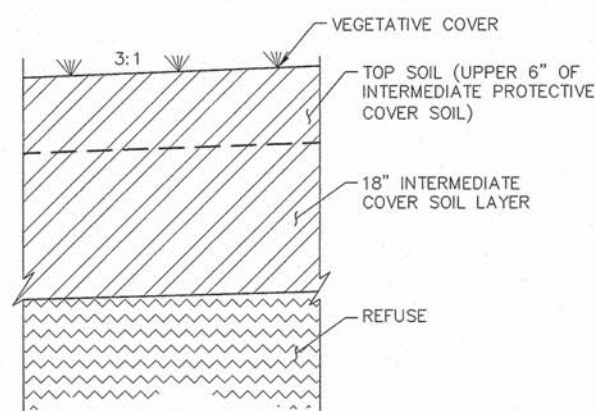
ARMORED PERIMETER SWALE "B" DETAIL  
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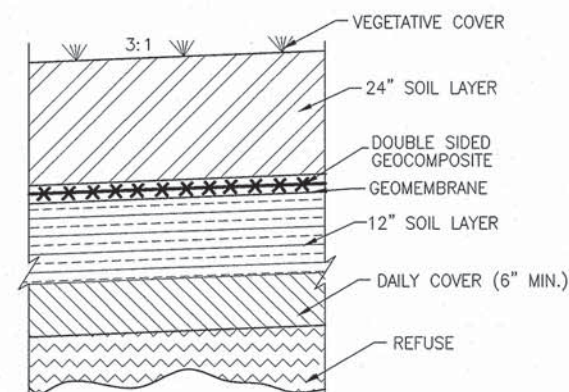
ACCESS ROAD DETAIL  
NOT TO SCALE



TYPICAL TEMPORARY FINAL COVER DETAIL  
NOT TO SCALE



TYPICAL INTERMEDIATE COVER DETAIL  
NOT TO SCALE



FINAL COVER DETAIL  
NOT TO SCALE



**HDR**  
HDR Engineering, Inc.  
5426 Bay Center Drive  
Suite 400  
Tampa, FL 33609-3444  
HDR CA# 4213

ISSUE	DATE	DESCRIPTION
5	6/2013	FDEP SUBMITTAL
7		
11		

PROJECT MANAGER	R. SIEMERING
REVIEWED BY	T. YANOSCHAK
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**CAPACITY EXPANSION AREA  
SECTIONS 7, 8 AND 9  
OPERATING SEQUENCE  
SOUTHEAST COUNTY LANDFILL  
HILLSBOROUGH COUNTY, FLORIDA**

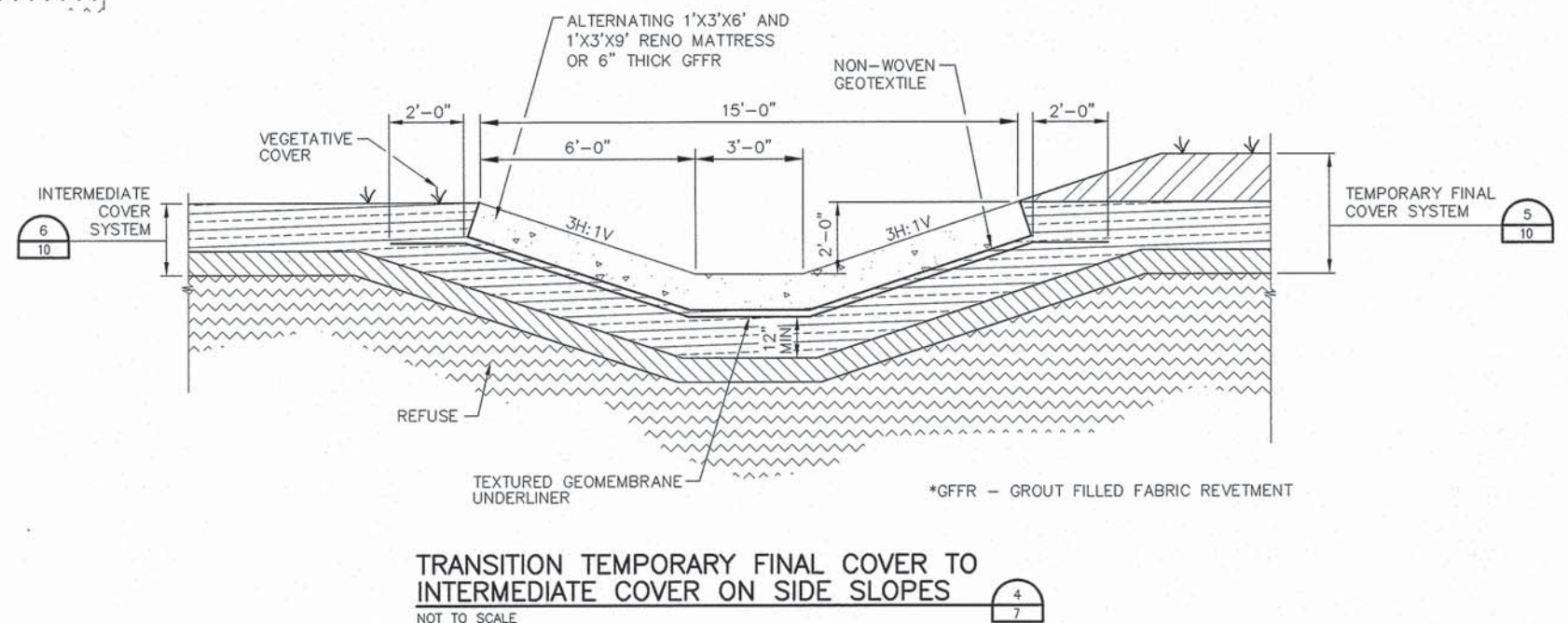
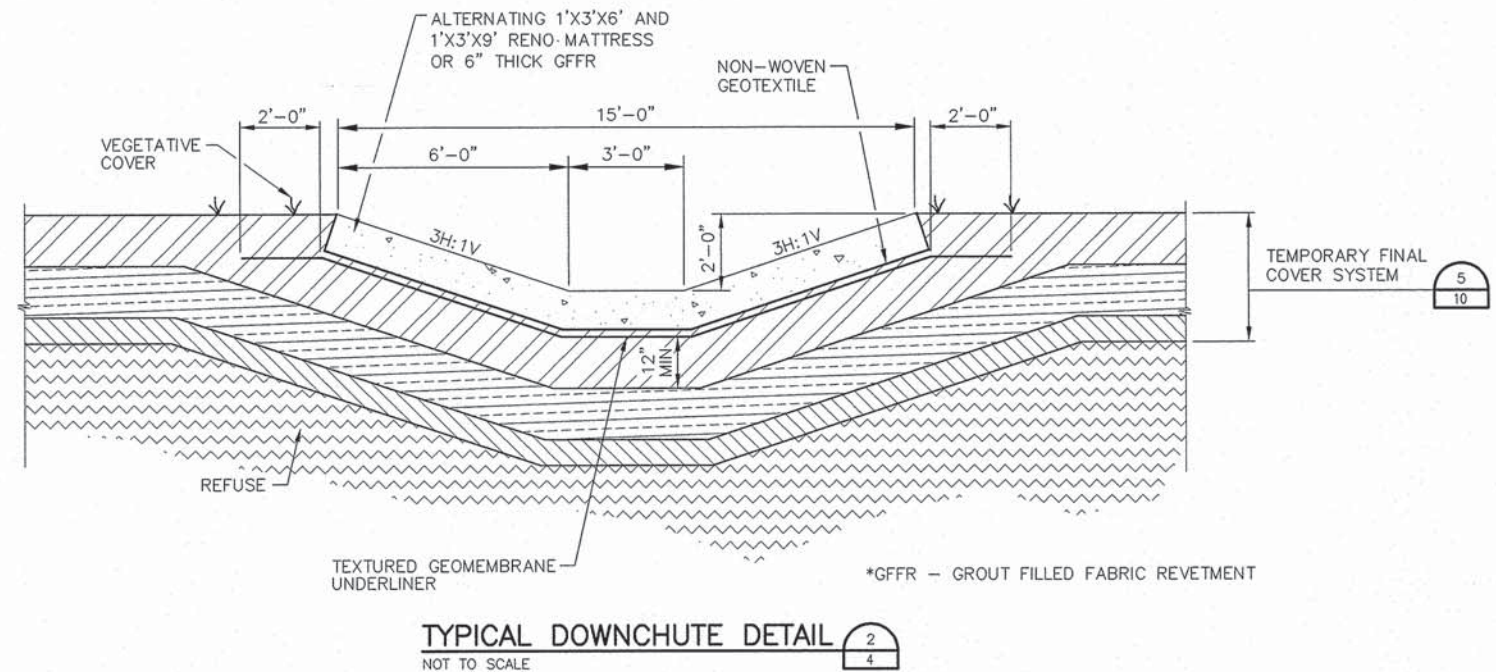
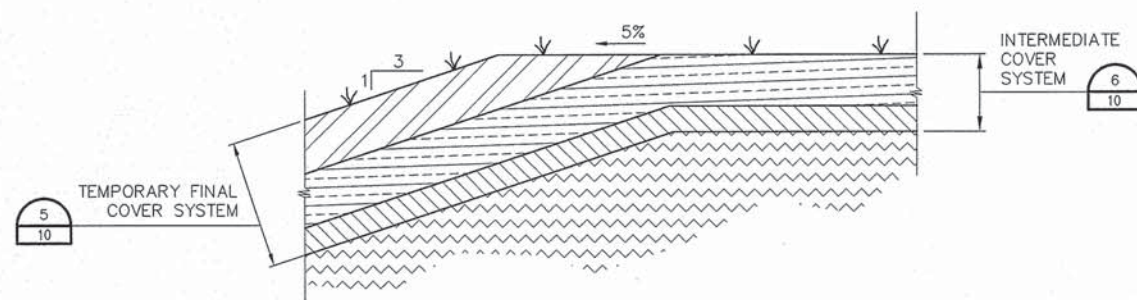
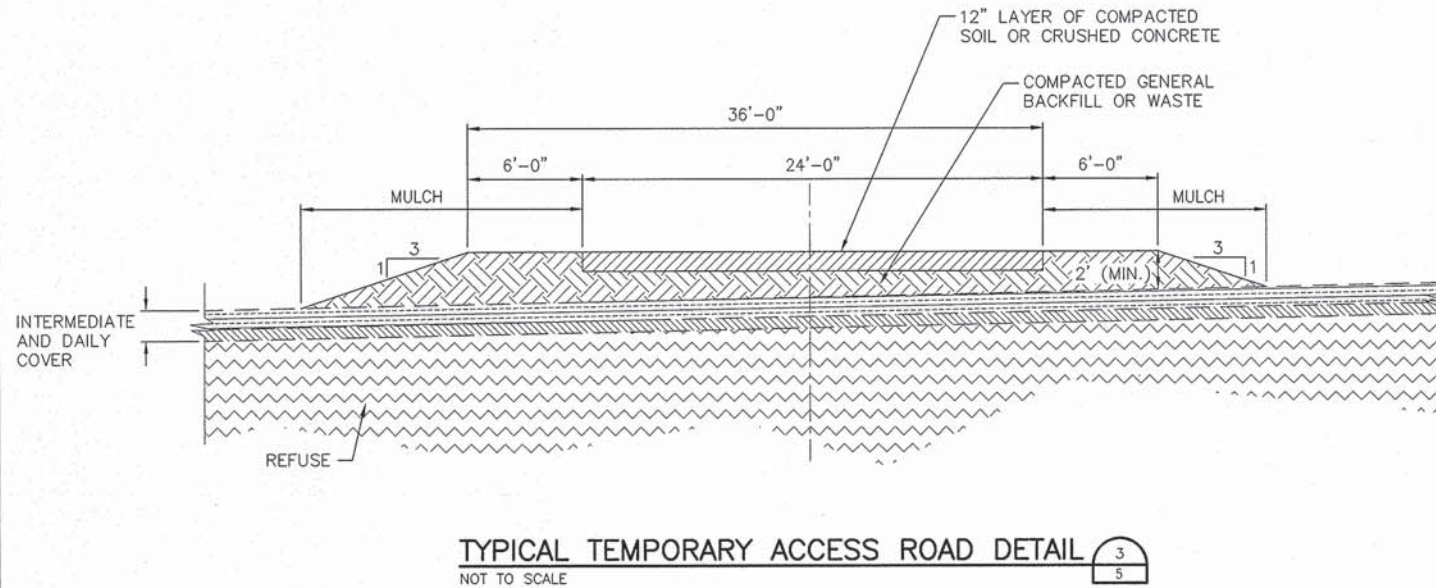
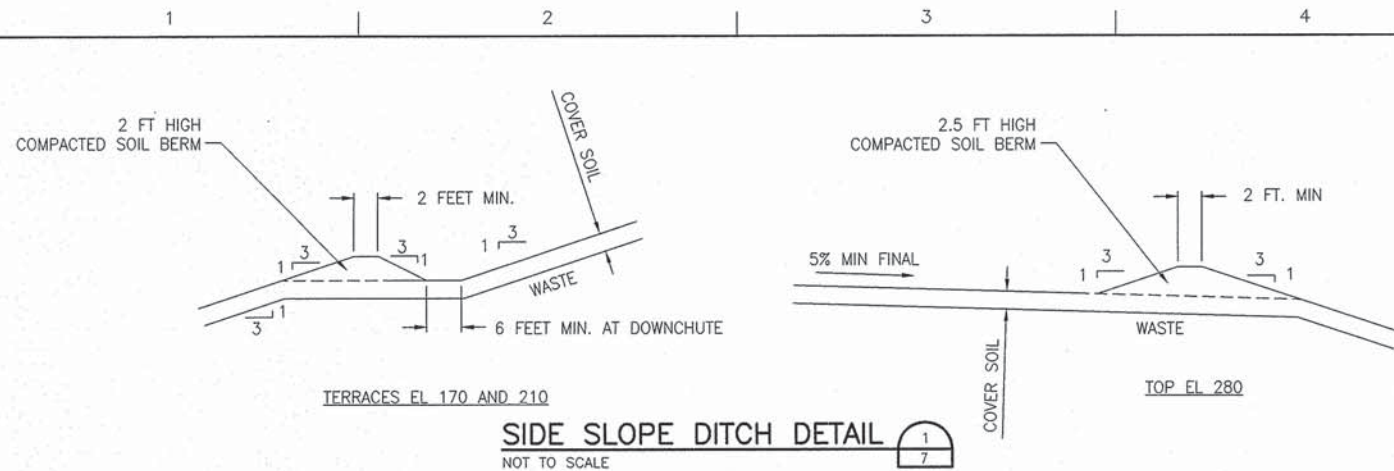
**SECTIONS 7, 8 AND 9 OPERATING SEQUENCE  
DETAILS**



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DWG No.  
**10**

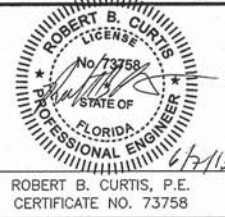




**HDR**  
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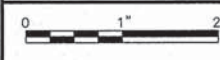
ISSUE	DATE	DESCRIPTION
6/2013	FDEP SUBMITTAL	

PROJECT MANAGER	R. SIEMERING
REVIEWED BY	T. YANOSCHAK
CIVIL DESIGN BY	R. CURTIS
DRAWN BY	L. RODRIGUEZ
PROJECT NUMBER	0096-193806-001



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

**SECTIONS 7, 8 AND 9 OPERATING SEQUENCE  
DETAILS**



FILENAME	0844902101-C11-DET.DWG
SCALE	NOT TO SCALE

DWG No.  
**11**

**APPENDIX F**

**LANDFILL GAS MONITORING POINTS**

**HILLSBOROUGH COUNTY SOLID WASTE MANAGEMENT DEPARTMENT  
SOUTHEAST COUNTY LANDFILL – LFG READINGS**

**ADMINISTRATION BUILDING**

	<b>Methane Gas</b>	<b>LEL</b>	<b>Carbon Dioxide</b>	<b>Oxygen</b>	<b>Balance Gas</b>
SP-1					
SP-2					
SP-3					
SP-4					
SP-5					
SP-6					
SP-7					
SP-8					

**MAINTENANCE BUILDING**

	<b>Methane Gas</b>	<b>LEL</b>	<b>Carbon Dioxide</b>	<b>Oxygen</b>	<b>Balance Gas</b>
SP-9					
SP-10					
SP-11					
SP-12					

**LEACHATE TREATMENT PLAN**

	<b>Methane Gas</b>	<b>LEL</b>	<b>Carbon Dioxide</b>	<b>Oxygen</b>	<b>Balance Gas</b>
SP-13					
SP-14					
SP-15					

**LANDFILL GAS PERIMETER MONITORING POINT**

	<b>Methane Gas</b>	<b>LEL</b>	<b>Carbon Dioxide</b>	<b>Oxygen</b>	<b>Balance Gas</b>	<b>Objectional Ambient Odor (Y/N)</b>
LFG-1						Y/N
LFG-2						Y/N
LFG-3						Y/N
LFG-4						Y/N

**TECHNICIAN SIGNATURE:** \_\_\_\_\_

**SUPERVISOR SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

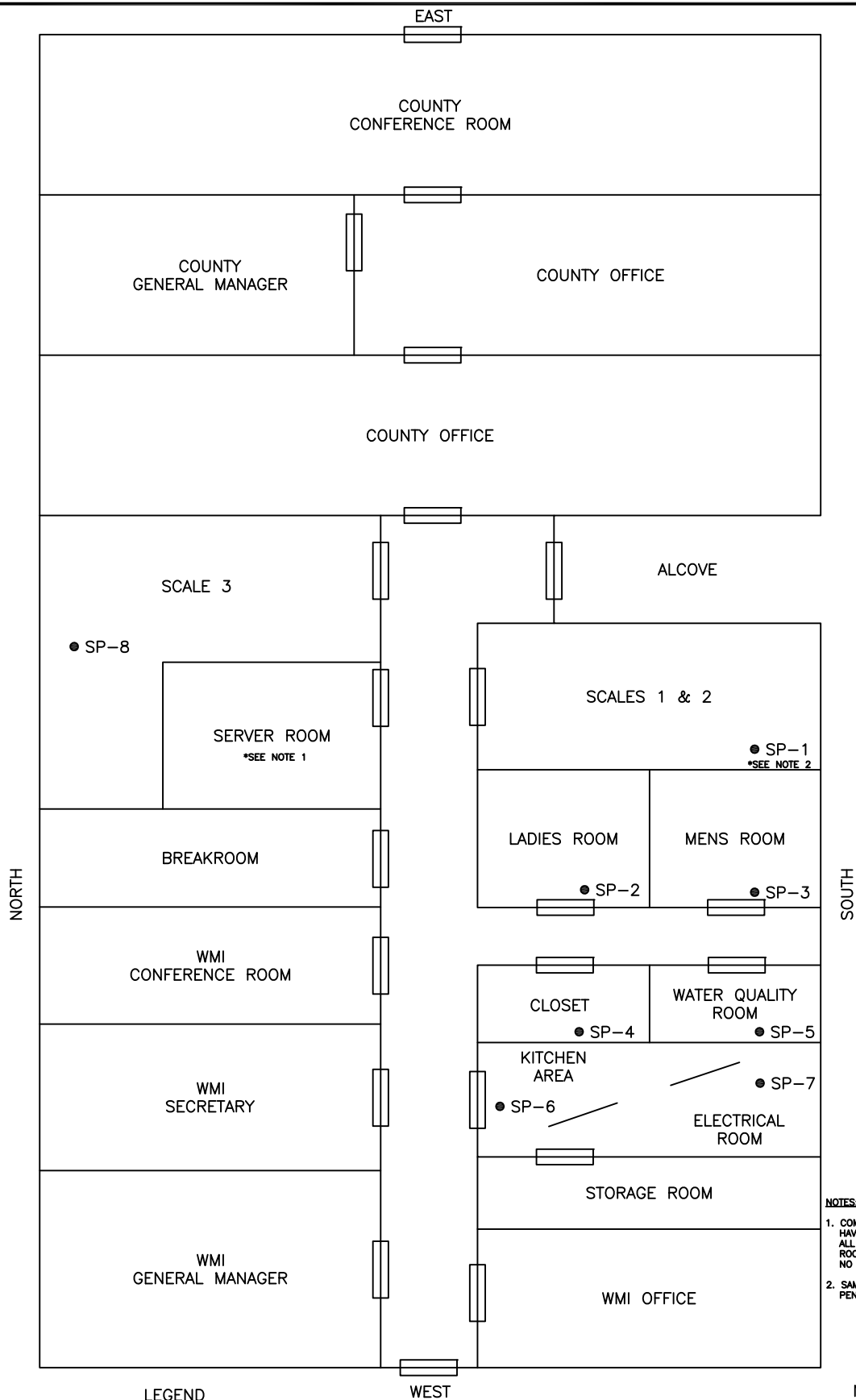
**Legend: SP = Ambient Sample Point**







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**LEGEND**

- SP-1 INDICATE GAS SAMPLE POINT
- DOORWAY

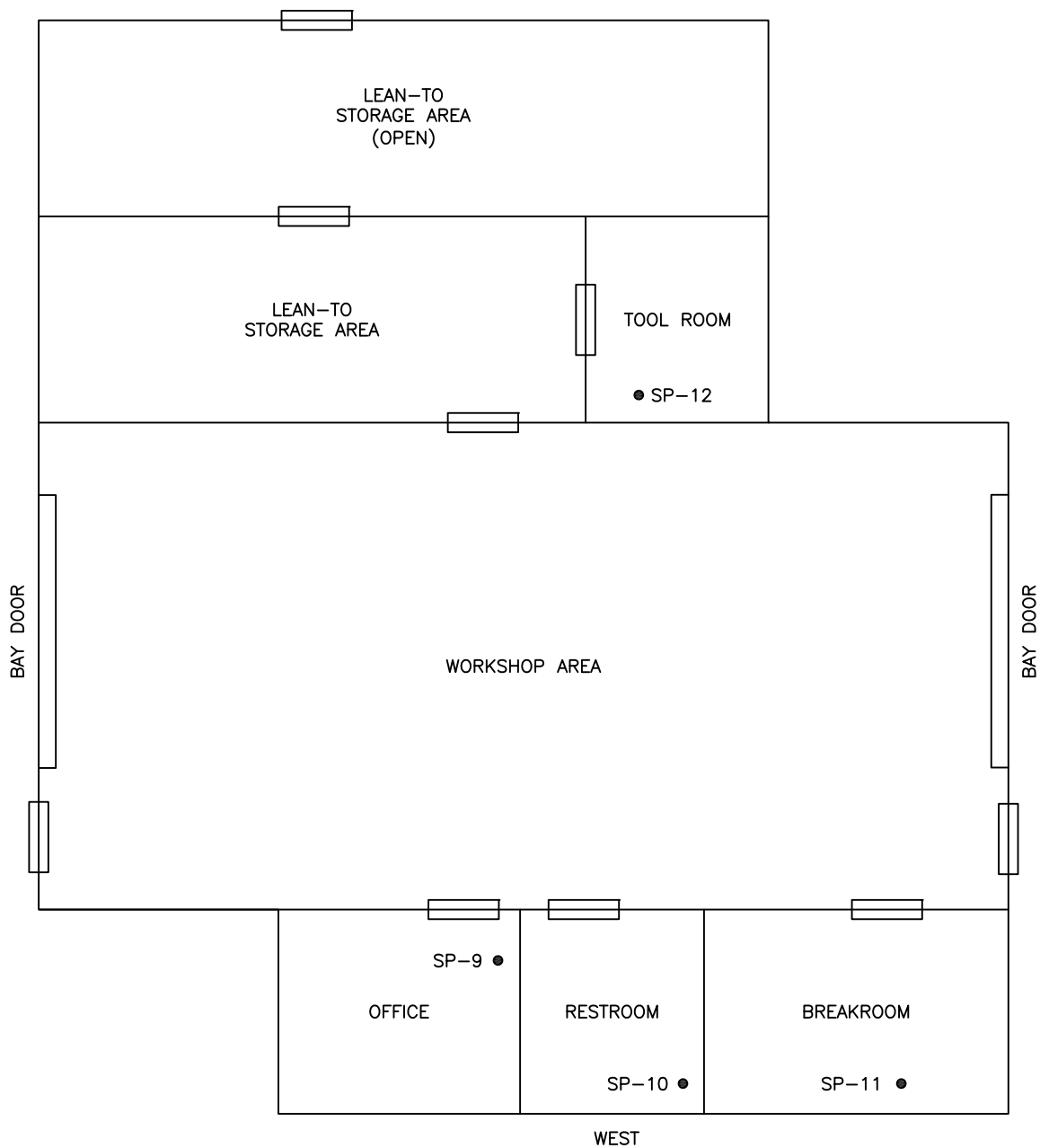
**NOTES:**

1. COMPUTER ROOM DOES NOT HAVE FLOOR PENETRATIONS. ALL CONDUITS ENTER THE ROOM THROUGH THE CEILING. NO GAS SAMPLING REQUIRED.
2. SAMPLE NEAR VACUUM TUBE PENETRATION IN FLOOR.

**ADMINISTRATION BUILDING  
LFG MONITORING POINTS**

HILLSBOROUGH COUNTY, FLORIDA

FIGURE  
F-2



LEGEND

- SP-10 INDICATE GAS SAMPLE POINT
- DOORWAY

NOT TO SCALE

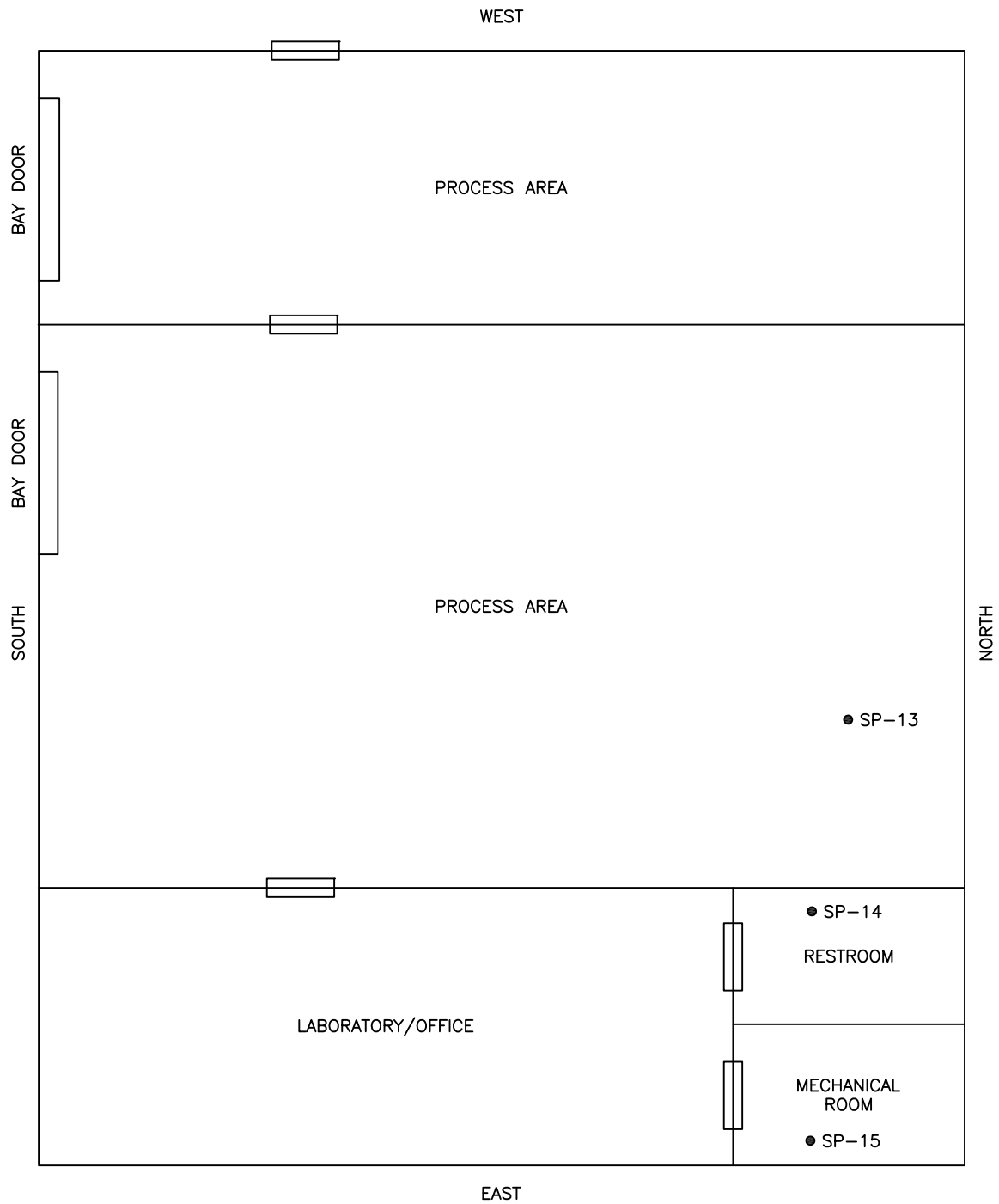


**MAINTENANCE BUILDING  
LFG MONITORING POINTS**

HILLSBOROUGH COUNTY, FLORIDA

**FIGURE  
F-3**

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LEGEND

- SP-14 INDICATE GAS SAMPLE POINT
- DOORWAY

NOT TO SCALE



**LTRF OFFICE  
LFG MONITORING POINTS**

HILLSBOROUGH COUNTY, FLORIDA

FIGURE  
F-4



## **APPENDIX G**

**NOT USED**



**APPENDIX H**

**STORMWATER MANAGEMENT SYSTEM (SWMS)**  
**PLAN**



EXISTING STORMWATER PIPE DATA TABLE					
STRUCTURE NO	TYPE OF STRUCTURE	INVERT ELEVATION DOWNSTREAM	INVERT ELEVATION DOWNSTREAM	DIAMETER (IN)	LENGTH (FT)
S-2	ERCP	124.83 (E)	124.72 (W)	14x22	92.38
S-3	CMP	122.96 (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-8	ERCP	126.70 (S)	126.51 (N)	34x54	100.67
	ERCP	126.66 (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-12A	RCP	121.79 (W)	121.35 (E)	30.00	169.40
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	104.56
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-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	90.98 (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)	114.60 (S)	48.00	90.98
	CMP	115.48 (N)	114.73 (S)	48.00	91.11
S-21	RCP	123.16 (N)	122.95 (S)	36.00	34.84
S-23	HDPE	130.20 (N)	130.00 (S)	8.00	41.00
	HDPE	130.20 (N)	130.00 (S)	8.00	41.00
S-24	ERCP	146.44 (E)	145.05 (W)	12x18	91.04
S-27	CMP	123.02 (E)	123.00 (W)	18.00	24.15
S-29	RCP	119.55 (E)	117.01 (W)	30.00	114.00
	RCP	119.55 (E)	117.01 (W)	30.00	114.00
S-30	RCP	124.96 (E)	125.02 (W)	36.00	119.00
	RCP	124.96 (E)	125.02 (W)	36.00	119.00
	RCP	124.96 (E)	125.02 (W)	36.00	119.00
S-32	ERCP	122.99 (W)	122.02 (E)	24x38	355.00
	ERCP	122.99 (W)	122.02 (E)	24x38	355.00
S-33	RCP	119.95 (W)	119.97 (E)	36.00	81.00
S-44	HDPE	127.11 (N)	125.10 (S)	8.00	60.00
	HDPE	127.11 (N)	125.10 (S)	8.00	60.00
S-45	RCP	121.99 (W)	121.94 (E)	36x60	75.00
S-47	RCP	120.94 (S)	120.01 (N)	30.00	66.00
S-48	RCP	121.67 (W)	121.68 (E)	48.00	29.00
S-49	RCP	107.00 (E)	106.83 (W)	42.00	48.00
S-50	RCP	122.10 (E)	120.07 (W)	30.00	108.00
	RCP	122.10 (E)	120.07 (W)	30.00	108.00
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	RCP	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-6	METAL	125.94 (N)	125.55 (S)	20.00	29.65
	CMP	125.90 (N)	125.68 (S)	36.00	19.59

