

April 2, 2019

Mr. Steven Morgan, Air & Solid Waste Permitting Manager
Permitting & Waste Cleanup Program
Florida Department of Environmental Protection
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

RE: Supplemental Information for Response to First Request for Additional Information (RAI)
Facility Name: Enterprise Road Class III Recycling and Disposal
Facility Site ID: 87895
DEP Application No.: 177982-025-SC/T3

Dear Steve:

We would like to thank you and Mr. Justin Chamberlain for meeting with John Locklear and me on March 4, 2019 to review and discuss supplemental permit information for the above referenced application. Per our discussion we have attached the following supplemental permit information, Checklist Support, Engineering Report Appendices, Groundwater Monitoring Plan attachments, Engineering Plan Set and Financial Assurance Cost Estimates for your review and acceptance:

- | | |
|----------------|---|
| Attachment 1: | Revised Application Form |
| Attachment 2: | Revised Section 2 Checklist Support – Part E |
| Attachment 3: | Revised Section 2 Checklist Support – Part E Appendix E-2 |
| Attachment 4: | Revised Section 2 Checklist Support – Part G |
| Attachment 5: | Revised Section 2 Checklist Support – Part I Appendix I-1 |
| Attachment 6: | Revised Section 3 Engineering Report - Appendix 3-A (replace previously submitted Appendix 3-A in its entirety) |
| Attachment 7: | Revised Section 3 Engineering Report- Appendix 3-B (replace previously submitted Appendix 3-B in its entirety) |
| Attachment 8: | Revised Section 4 Cell 17 and Vertical Expansion Construction Permit Plan Set |
| Attachment 9: | Groundwater Monitoring Plan (replace previously submitted report in its entirety) |
| Attachment 10: | Revised Section 7 Closure and Reclamation Plan - Appendix 7-A (replace previously submitted Appendix 7-A in its entirety) |

Please feel free to call me or John Locklear at (352) 672-6867 with any questions regarding this submittal.

Sincerely,

Lisa Baker

Lisa J. Baker, P.E.
Locklear & Associates

cc: John Arnold, Angelo's Recycled Materials

ATTACHMENT 1
Revised Application Form



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(1), F.A.C.

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

Effective Date: February 15, 2015

Incorporated in Rule: 62-701.330(3), F.A.C.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

APPLICATION INSTRUCTIONS AND FORMS

Northwest District
160 Governmental Street
Suite 308
Pensacola, FL 32502-5794
850-595-8300

Northeast District
7777 Baymeadows Way West
Suite 100
Jacksonville, FL 32256-7590
904-256-1700

Central District
3319 Maguire Boulevard
Suite 232
Orlando, FL 32803-3767
407-897-4100

Southwest District
13051 North Telecom Pkwy
Temple Terrace, FL 33637
813-470-5700

South District
2295 Victoria Ave, Suite 364
P.O. Box 2549
Fort Myers, FL 33901-3881
239-344-5600

Southeast District
3301 Gun Club Road
MSC 7210-1
West Palm Beach, FL 33406
561-681-6600

INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT

I. General

Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes (FS) and in accordance with Florida Administrative Code (FAC) Chapter 62-701. A permit application shall be submitted in accordance with the requirements of Rule 62-701.320(5)(a), F.A.C., to the appropriate Department office having jurisdiction over the facility. The appropriate fee in accordance with Rule 62-701.315, FAC, shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP).

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

II. Application Parts Required for Construction and Operation Permits

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

NOTE: Portions of some Parts may not be applicable.

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

III. Application Parts Required for Closure Permits

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

NOTE: Portions of some Parts may not be applicable.

IV. Permit Renewals

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

V. Application Codes

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

VI. Listing of Application Parts

PART A:	GENERAL INFORMATION
PART B:	DISPOSAL FACILITY GENERAL INFORMATION
PART C:	PROHIBITIONS
PART D:	SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL
PART E:	LANDFILL PERMIT REQUIREMENTS
PART F:	GENERAL CRITERIA FOR LANDFILLS
PART G:	LANDFILL CONSTRUCTION REQUIREMENTS
PART H:	HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS
PART I:	GEOTECHNICAL INVESTIGATION REQUIREMENTS
PART J:	VERTICAL EXPANSION OF LANDFILLS
PART K:	LANDFILL OPERATION REQUIREMENTS
PART L:	WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS
PART M:	SPECIAL WASTE HANDLING REQUIREMENTS
PART N:	GAS MANAGEMENT SYSTEM REQUIREMENTS
PART O:	LANDFILL CLOSURE REQUIREMENTS
PART P:	OTHER CLOSURE PROCEDURES
PART Q:	LONG-TERM CARE
PART R:	FINANCIAL ASSURANCE
PART S:	CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

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

Please Type or Print

PART A. GENERAL INFORMATION

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

- | | |
|--|--|
| <input type="checkbox"/> Class I Landfill | <input type="checkbox"/> Ash Monofill |
| <input checked="" type="checkbox"/> Class III Landfill | <input type="checkbox"/> Asbestos Monofill |
| <input type="checkbox"/> Industrial Solid Waste | |
| <input type="checkbox"/> Other (describe): | |
-
-
-

NOTE: Waste Processing Facilities should apply on Form 62-701.900(4), FAC;
Yard Trash Disposal Facilities should notify on Form 62-701.900(3), FAC;
Compost Facilities should apply on Form 62-709.901(1), FAC; and
C&D Disposal Facilities should apply on Form 62-701.900(6), FAC

2. Type of application:

- ☒ Construction
☐ Operation
☐ Construction/Operation
☐ Closure
☐ Long-term Care Only

3. Classification of application:

- | | |
|---|--|
| <input checked="" type="checkbox"/> New | <input type="checkbox"/> Substantial Modification |
| <input type="checkbox"/> Renewal | <input type="checkbox"/> Intermediate Modification |
| | <input type="checkbox"/> Minor Modification |

4. Facility name: Enterprise Road Class III Recycling and Disposal Facility

5. DEP ID number: SWD/51/87895 County: Pasco

6. Facility location (main entrance):

The main entrance gate is on the north side of Enterprise Road, 1.5 miles east
C.R. 35 Alt. The address is 41111 Enterprise Road in Dade City, Florida 33525.

7. Location coordinates:

Section: 5 and 8 Township: 25 S Range: 22 E
Latitude: 28 ° 19 ' 53 " Longitude: 82 ° 08 ' 06 "
Datum: NGVD 29 Coordinate method: State Plane West
Collected by: Professional Land Surveyor Company/Affiliation: Picket Surveying and Photogrammetry

8. Applicant name (operating authority): Angelo's Aggregate Materials, Ltd.
Mailing address: 855 28th St. South St. Petersburg FL 33712
Street or P.O. Box City State Zip
Contact person: John Arnold, P.E. Telephone: (813) 477-1719
Title: Director of Engineering & Facilities
john.phillip.arnold@gmail.com
E-Mail address (if available)
9. Authorized agent/Consultant: Locklear & Associates, Inc.
Mailing address: 4140 NW 37th Place, Suite A Gainesville FL 32606
Street or P.O. Box City State Zip
Contact person: Lisa Baker, P.E. Telephone: (352) 672-6867
Title: Engineering Division Director
lisa@locklearconsulting.com
E-Mail address (if available)
10. Landowner (if different than applicant): Same as Applicant
Mailing address: _____
Street or P.O. Box City State Zip
Contact person: _____ Telephone: (____) _____

E-Mail address (if available)
11. Cities, towns, and areas to be served:
Pasco County and surrounding areas

12. Population to be served:
Current: 515,077 (Pasco County 2018 Census Est) Five-Year Projection: 554,625 (Pasco County 2023 Projections)
13. Date site will be ready to be inspected for completion: N/A
14. Expected life of the facility: 11+ years
15. Estimated costs:
Total Construction: \$ N/A Closing Costs: \$ _____
16. Anticipated construction starting and completion dates:
From: Ongoing To: Ongoing
17. Expected volume or weight of waste to be received:
_____ yds³/day 550 +/- tons/day _____ gallons/day

PART B. DISPOSAL FACILITY GENERAL INFORMATION

1. Provide brief description of disposal facility design and operations planned under this application:
This application is submitted for the construction of a horizontal and vertical
expansion for an existing Class III landfill. Please refer to the introduction
for details of this application.
2. Facility site supervisor: Alfredo "Freddie" Martinez
Title: Landfill Manager Telephone: (352) 567-7676
N/A
E-Mail address (if available): _____
3. Disposal area: Total acres: 81.4 Used acres: 50.5 Available acres: 30.9
4. Weighing scales used: ☒ Yes ☐ No
5. Security to prevent unauthorized use: ☒ Yes ☐ No
6. Charge for waste received: +/- \$9.00 \$/yds³ _____ \$/ton _____
7. Surrounding land use, zoning:
☐ Residential ☐ Industrial
☒ Agricultural ☐ None
☐ Commercial ☐ Other (describe): _____
Surrounding zoning is AC (Agricultural Commercial) and AR (Agricultural Residential).
8. Types of waste received:
☐ Household ☒ C & D debris
☐ Commercial ☒ Shredded/cut tires
☐ Incinerator/WTE ash ☒ Yard trash
☐ Treated biomedical ☐ Septic tank
☐ Water treatment sludge ☐ Industrial
☐ Air treatment sludge ☐ Industrial sludge
☐ Agricultural ☐ Domestic sludge
☒ Asbestos ☒ Other (describe): _____
Class III waste

9. Salvaging permitted: ☐ Yes ☒ No

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

11. Trained spotters: ☒ Yes ☐ No Number of spotters used: 1 - 2

12. Site located in: ☐ Floodplain ☐ Wetlands ☒ Other (describe):
Orange groves

13. Days of operation: Monday through Friday, Saturday

14. Hours of operation: 7 am to 6 pm (M-F); 7 am - 2 pm (Sat)

15. Days working face covered: Once per week

16. Elevation of water table: 55 - 70 ft. Datum Used: NGVD 29

17. Number of monitoring wells: 32

18. Number of surface monitoring points: 0

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

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

20. Landfill unit liner type:

<input type="checkbox"/> Natural soils	<input type="checkbox"/> Double geomembrane
<input checked="" type="checkbox"/> Single clay liner	<input type="checkbox"/> Geomembrane & composite
<input type="checkbox"/> Single geomembrane	<input type="checkbox"/> Double composite
<input type="checkbox"/> Single composite	<input type="checkbox"/> None
<input type="checkbox"/> Slurry wall	<input type="checkbox"/> Other (describe):

21. Leachate collection method:

<input type="checkbox"/> Collection pipes	<input type="checkbox"/> Double geomembrane
<input type="checkbox"/> Geonets	<input type="checkbox"/> Gravel layer
<input type="checkbox"/> Well points	<input type="checkbox"/> Interceptor trench
<input type="checkbox"/> Perimeter ditch	<input type="checkbox"/> None
<input checked="" type="checkbox"/> Other (describe):	

Gravity drainage to the northern boundary of Cells 16 and 17, which is pumped to the adjacent IW pond.

22. Leachate storage method:

☐ Tanks ☐ Surface impoundments

☐ Other (describe):

None

23. Leachate treatment method:

☐ Oxidation ☐ Chemical treatment

☐ Secondary ☐ Settling

☐ Advanced ☐ None

☒ Other (describe):

As described in the IW permit application, the leachate will be treated by dilution and evaporation.

24. Leachate disposal method:

☐ Recirculated ☐ Pumped to WWTP

☐ Transported to WWTP ☐ Discharged to surface water/wetland

☐ Injection well ☒ Percolation ponds

☐ Evaporation ☐ Spray irrigation

☐ Other (describe):

Leachate will be disposed in a percolation pond.

25. For leachate discharged to surface waters:

Name and Class of receiving water:

N/A

26. Storm Water:

Collected: ☒ Yes ☐ No

Type of treatment:

100 year, 24-hour storm event retained on-site without discharge.

Name and Class of receiving water:

None

27. Environmental Resources Permit (ERP) number or status:

ERP 51-0172489-006

PART C. PROHIBITIONS (62-701.300, FAC)

LOCATION

- | | | | |
|----------------------------------|------------------------------|---|---|
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 1. Provide documentation that each of the siting criteria will be satisfied for the facility; (62-701.300(2), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 2. If the facility qualifies for any of the exemptions contained in Rules 62-701.300(12), (13) and (16) through (18), FAC, then document this qualification(s); |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 3. Provide documentation that the facility will be in compliance with the burning restrictions; (62-701.300(3), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 4. Provide documentation that the facility will be in compliance with the hazardous waste restrictions; (62-701.300(4), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 5. Provide documentation that the facility will be in compliance with the PCB disposal restrictions; (62-701.300(5), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 6. Provide documentation that the facility will be in compliance with the biomedical waste restrictions; (62-701.300(6), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 7. Provide documentation that the facility will be in compliance with the Class I surface water restrictions; (62-701.300(7), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 8. Provide documentation that the facility will be in compliance with the special waste for landfills restrictions; (62-701.300(8), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 9. Provide documentation that the facility will be in compliance with the liquid restrictions; (62-701.300(10), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 10. Provide documentation that the facility will be in compliance with the used oil and oily waste restrictions; (62-701.300(11), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 11. Provide documentation that the facility will be in compliance with the CCA treated wood restrictions; (62-701.300(14), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> | N/C <input checked="" type="checkbox"/> | 12. Provide documentation that the facility will be in compliance with the dust control restrictions; (62-701.300(15), FAC) |

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

LOCATION

- | | |
|---|--|
| <p>S <input checked="" type="checkbox"/> <u>Section 1</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>1. A minimum of one completed electronic application form, all supporting data and reports; (62-701.320(5)(a), FAC)</p> |
| <p>S <input checked="" type="checkbox"/> <u>Sections 1,3,5,6,7</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>2. Engineering and/or professional certification (signature, date, and seal) provided on the applications and all engineering plans, reports, and supporting information for the application; (62-701.320(6), FAC)</p> |
| <p>S <input checked="" type="checkbox"/> <u>Cover Letter</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>3. A letter of transmittal to the Department; (62-701.320(7)(a), FAC)</p> |
| <p>S <input checked="" type="checkbox"/> <u>Section 1</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>4. A completed application form dated and signed by the applicant; (62-701.320(7)(b), FAC)</p> |
| <p>S <input checked="" type="checkbox"/> <u>Cover Letter</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>5. Permit fee specified in Rule 62-701.315, FAC in check or money order, payable to the Department; (62-701.320(7)(c), FAC)</p> |
| <p>S <input checked="" type="checkbox"/> <u>Section 3</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>6. An engineering report addressing the requirements of this rule and with the following format: a cover sheet, text printed on 8 ½ inch by 11 inch consecutively numbered pages, a table of contents or index, the body of the report and all appendices including an operation plan, contingency plan, illustrative charts and graphs, records or logs of tests and investigations, engineering calculations; (62-701.320(7)(d), FAC)</p> |
| <p>S <input checked="" type="checkbox"/> <u>Sec. 3, App 3-A & Sec. 7</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>7. Operation Plan and Closure Plan; (62-701.320(7)(e)1, FAC)</p> |
| <p>S <input checked="" type="checkbox"/> <u>Section 3, App 3-B</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>8. Contingency Plan; (62-701.320(7)(e)2, FAC)</p> |
| <p>S <input checked="" type="checkbox"/> <u>Section 4</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>9. Plans or drawings for the solid waste management facilities in appropriate format (including sheet size restrictions, cover sheet, legends, north arrow, horizontal and vertical scales, elevations referenced to NGVD 1929) showing: (62-701.320(7)(f), FAC)</p> |
| <p>S <input type="checkbox"/> _____ N/A <input type="checkbox"/> N/C <input checked="" type="checkbox"/></p> | <p>a. A regional map or plan with the project location in relation to major roadways and population centers;</p> |
| <p>S <input checked="" type="checkbox"/> <u>Section 4</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>b. A vicinity map or aerial photograph no more than one year old showing the facility site and relevant surface features located within 1000 feet of the facility;</p> |
| <p>S <input checked="" type="checkbox"/> <u>Section 4</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>c. A site plan showing all property boundaries certified by a Florida Licensed Professional Surveyor and Mapper;</p> |
| <p>S <input checked="" type="checkbox"/> <u>Section 4</u> N/A <input type="checkbox"/> N/C <input type="checkbox"/></p> | <p>d. Other necessary details to support the engineering report, including referencing elevations to a consistent, nationally recognized datum, and identifying the method used for collecting latitude and longitude data;</p> |

LOCATION**PART D CONTINUED**S ☐ _____ N/A ☐ N/C ☒

10. Documentation that the applicant either owns the property or has legal authority from the property owner to use the site; (62-701.320(7)(g), FAC)

S ☐ _____ N/A ☒ N/C ☐

11. For facilities owned or operated by a county, provide a description of how, if any, the facilities covered in this application will contribute to the county's achievement of the waste reduction and recycling goals contained in Section 403.706, FS; (62-701.320(7)(h), FAC)

S ☐ _____ N/A ☐ N/C ☒

12. Provide a history and description of any enforcement actions taken by the Department against the applicant for violations of applicable statutes, rules, orders, or permit conditions relating to the operation of any solid waste management facility in the state; (62-701.320(7)(i), FAC)

S ☒ Section 2, Part D-2 N/A ☐ N/C ☐

13. Proof of publication in a newspaper of general circulation of notice of application for a permit to construct or substantially modify a solid waste management facility; (62-701.320(8), FAC)

S ☐ _____ N/A ☐ N/C ☒

14. Provide a description of how the requirements for airport safety will be achieved, including proof of required notices if applicable. If exempt, explain how the exemption applies; (62-701.320(13), FAC)

S ☐ _____ N/A ☐ N/C ☒

15. Explain how the operator and spotter training requirements and special criteria will be satisfied for the facility; (62-701.320(15), FAC)

PART E. LANDFILL PERMIT REQUIREMENTS (62-701.330, FAC)**LOCATION**S ☐ _____ N/A ☐ N/C ☒

1. Regional map or aerial photograph no more than five years old showing all airports that are located within five miles of the proposed landfill; (62-701.330(3)(a), FAC)

S ☒ Section 4 N/A ☐ N/C ☐

2. Plot plan with a scale not greater than 200 feet to the inch showing: (62-701.330(3)(b), FAC)

S ☒ Section 4 N/A ☐ N/C ☐

a. Dimensions;

S ☒ Section 5 N/A ☐ N/C ☐

b. Locations of proposed and existing water quality monitoring wells;

S ☒ Section 2 Part I-1 N/A ☐ N/C ☐

c. Locations of soil borings;

S ☒ Section 4 N/A ☐ N/C ☐

d. Proposed plan of trenching or disposal areas;

S ☒ Section 4 N/A ☐ N/C ☐

e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets;

LOCATION**PART E CONTINUED**S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☐ _____ N/A ☐ N/C ☒S ☐ _____ N/A ☐ N/C ☒S ☐ _____ N/A ☐ N/C ☒

f. Any previously filled waste disposal areas;

g. Fencing or other measures to restrict access;

3. Topographic maps with a scale not greater than 200 feet to the inch with five foot contour intervals showing: (62-701.330(3)(c), FAC)

a. Proposed fill areas;

b. Borrow areas;

c. Access roads;

d. Grades required for proper drainage;

e. Cross sections of lifts;

f. Special drainage devices if necessary;

g. Fencing;

h. Equipment facilities;

4. A report on the landfill describing the following: (62-701.330(3)(d), FAC)

a. The current and projected population and area to be served by the proposed site;

b. The anticipated type, annual quantity, and source of solid waste expressed in tons;

c. Planned active life of the facility, the final design height of the facility, and the maximum height of the facility during its operation;

d. The source and type of cover material used for the landfill;

5. Provide evidence that an approved laboratory shall conduct water quality monitoring for the facility in accordance with Chapter 62-160, FAC; (62-701.330(3)(g), FAC)

6. Provide a statement of how the applicant will demonstrate financial responsibility for the closing and long-term care of the landfill; (62-701.330(3)(h), FAC)

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

LOCATION

S ☐ _____ N/A ☐ N/C ☒

1. Describe (and show on a Federal Insurance Administration flood map, if available) how the landfill or solid waste disposal unit shall not be located in the 100 year floodplain where it will restrict the flow of the 100 year flood, reduce the temporary water storage capacity of the floodplain unless compensating storage is provided, or result in a washout of solid waste; (62-701.340(3)(b), FAC)

S ☒ Section 4 N/A ☐ N/C ☐

2. Describe how the minimum horizontal separation between waste deposits in the landfill and the landfill property boundary shall be 100 feet, measured from the toe of the proposed final cover slope; (62-701.340(3)(c), FAC)

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

LOCATION

S ☒ Section 3 N/A ☐ N/C ☐

1. Describe how the landfill shall be designed so the solid waste disposal units will be constructed and closed at planned intervals throughout the design period of the landfill, and shall be designed to achieve a minimum factor of safety of 1.5 using peak strength values to prevent failures of side slopes and deep-seated failures; (62-701.400(2), FAC)

S ☒ Section 2, part G-1 N/A ☐ N/C ☐

2. Landfill liner requirements; (62-701.400(3), FAC)

S ☒ Section 2, part G-1 N/A ☐ N/C ☐

a. General construction requirements; (62-701.400(3)(a), FAC)

S ☒ Section 2, part G-1 N/A ☐ N/C ☐

(1) Provide test information and documentation to ensure the liner will be constructed of materials that have appropriate physical, chemical, and mechanical properties to prevent failure;

S ☒ Section 2, part G-1 N/A ☐ N/C ☐

(2) Document foundation is adequate to prevent liner failure;

S ☒ Section 2, part G-1 N/A ☐ N/C ☐

(3) Constructed so bottom liner will not be adversely impacted by fluctuations of the ground water;

S ☐ _____ N/A ☒ N/C ☐

(4) Designed to resist hydrostatic uplift if bottom liner located below seasonal high ground water table;

S ☐ _____ N/A ☒ N/C ☐

(5) Installed to cover all surrounding earth which could come into contact with the waste or leachate;

LOCATIONS ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐**PART G CONTINUED**

b. Composite liners; (62-701.400(3)(b), FAC)

- (1) Upper geomembrane thickness and properties;
- (2) Design leachate head for primary leachate collection and removal system (LCRS) including leachate recirculation if appropriate;
- (3) Design thickness in accordance with Table A and number of lifts planned for lower soil component;

c. Double liners; (62-701.400(3)(c), FAC)

- (1) Upper and lower geomembrane thickness and properties;
- (2) Design leachate head for primary LCRS to limit the head to one foot above the liner;
- (3) Lower geomembrane sub-base design;
- (4) Leak detection and secondary leachate collection system minimum design criteria ($k \geq 10$ cm/sec, head on lower liner ≤ 1 inch, head not to exceed thickness of drainage layer);

d. Standards for geosynthetic components; (62-701.400(3)(d), FAC)

- (1) Factory and field seam test methods to ensure all geomembrane seams achieve the minimum specifications;
- (2) Geomembranes to be used shall pass a continuous spark test by the manufacturer;
- (3) Design of 24-inch-thick protective layer above upper geomembrane liner;
- (4) Describe operational plans to protect the liner and leachate collection system when placing the first layer of waste above a 24-inch-thick protective layer;
- (5) HDPE geomembranes, if used, meet the specifications in GRI GM13, and LLDPE geomembranes, if used, meet the specifications in GRI GM17;
- (6) PVC geomembranes, if used, meet the specifications in PGI 1104;

LOCATIONS ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐**PART G CONTINUED**

- (7) Interface shear strength testing results of the actual components which will be used in the liner system;
- (8) Transmissivity testing results of geonets if they are used in the liner system;
- (9) Hydraulic conductivity testing results of geosynthetic clay liners if they are used in the liner system;
- e. Geosynthetic specification requirements; (62-701.400(3)(e), FAC)
- (1) Definition and qualifications of the designer, manufacturer, installer, QA consultant and laboratory, and QA program;
- (2) Material specifications for geomembranes, geocomposites, geotextiles, geogrids, and geonets;
- (3) Manufacturing and fabrication specifications including geomembrane raw material and roll QA, fabrication personnel qualifications, seaming equipment and procedures, overlaps, trial seams, destructive and non-destructive seam testing, seam testing location, frequency, procedure, sample size, and geomembrane repairs;
- (4) Geomembrane installation specifications including earthwork, conformance testing, geomembrane placement, installation personnel qualifications, field seaming and testing, overlapping and repairs, materials in contact with geomembranes, and procedures for lining system acceptance;
- (5) Geotextile and geogrids specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying materials;
- (6) Geonet and geocomposites specifications including handling and placement, conformance testing, stacking and joining, repair, and placement of soil materials and any overlying materials;
- (7) Geosynthetic clay liner specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying materials;

LOCATIONS ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐**PART G CONTINUED**

f. Standards for soil liner components; (62-701.400(3)(f), FAC)

- (1) Description of construction procedures including over-excavation and backfilling to preclude structural inconsistencies and procedures for placing and compacting soil components in layers;
- (2) Demonstration of compatibility of the soil component with actual or simulated leachate in accordance with EPA Test Method 9100, or an equivalent test method;
- (3) Procedures for testing in situ soils to demonstrate they meet the specifications for soil liners;
- (4) Specifications for soil component of liner including at a minimum:
 - (a) Allowable particle size distribution, and Atterberg limits including shrinkage limit;
 - (b) Placement moisture and dry density criteria;
 - (c) Maximum laboratory-determined saturated hydraulic conductivity using simulated leachate;
 - (d) Minimum thickness of soil liner;
 - (e) Lift thickness;
 - (f) Surface preparation (scarification);
 - (g) Type and percentage of clay mineral within the soil component;
- (5) Procedures for constructing and using a field test section to document the desired saturated hydraulic conductivity and thickness can be achieved in the field;

g. If a Class III landfill is to be constructed with a bottom liner system, provide a description of how the minimum requirements for the liner will be achieved;

LOCATION**PART G CONTINUED**S ☒ **Section 3** N/A ☐ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐

3. Leachate collection and removal system (LCRS); (62-701.400(4), FAC)

a. The primary and secondary LCRS requirements; (62-701.400(4)(a), FAC)

- (1) Constructed of materials chemically resistant to the waste and leachate;
- (2) Have sufficient mechanical properties to prevent collapse under pressure;
- (3) Have granular material or synthetic geotextile to prevent clogging;
- (4) Have a method for testing and cleaning clogged pipes or contingent designs for reducing leachate around failed areas;

b. Other LCRS requirements; (62-701.400(4)(b), (c) and (d), FAC)

- (1) Bottom 12 inches having hydraulic conductivity $\geq 1 \times 10^{-3}$ cm/sec;
- (2) Total thickness of 24 inches of material chemically resistant to the waste and leachate;
- (3) Bottom slope design to accommodate for predicted settlement and still meet minimum slope requirements;
- (4) Demonstration that synthetic drainage material, if used, is equivalent or better than granular material in chemical compatibility, flow under load, and protection of geomembranes liner;
- (5) Schedule provided for routine maintenance of LCRS.

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

a. Describe general procedures for recirculating leachate;

b. Describe procedures for controlling leachate runoff and minimizing mixing of leachate runoff with storm water;

c. Describe procedures for preventing perched water conditions and gas buildup;

LOCATION**PART G CONTINUED**S ☐ _____ N/A ☒ N/C ☐

d. Describe alternate methods for leachate management when it cannot be recirculated due to weather or runoff conditions, surface seeps, wind-blown spray, or elevated levels of leachate head on the liner;

S ☐ _____ N/A ☒ N/C ☐

e. Describe methods of gas management in accordance with Rule 62-701.530, FAC;

S ☐ _____ N/A ☒ N/C ☐

f. If leachate irrigation is proposed, describe treatment methods and standards for leachate treatment prior to irrigation over final cover, and provide documentation that irrigation does not contribute significantly to leachate generation;

S ☐ _____ N/A ☒ N/C ☐

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

S ☐ _____ N/A ☒ N/C ☐

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

S ☐ _____ N/A ☒ N/C ☐

(1) Documentation that the design of the bottom liner will not be adversely impacted by fluctuations of the ground water;

S ☐ _____ N/A ☒ N/C ☐

(2) Designed in segments to allow for inspection and repair, as needed, without interruption of service;

S ☐ _____ N/A ☒ N/C ☐

(3) General design requirements;

S ☐ _____ N/A ☒ N/C ☐

(a) Double liner system consisting of an upper and lower 60-mil minimum thickness geomembrane;

S ☐ _____ N/A ☒ N/C ☐

(b) Leak detection and collection system with hydraulic conductivity ≥ 1 cm/sec;

S ☐ _____ N/A ☒ N/C ☐

(c) Lower geomembrane placed on subbase ≥ 6 inches thick with $k \leq 1 \times 10^{-5}$ cm/sec or on an approved geosynthetic clay liner with $k \leq 1 \times 10^{-7}$ cm/sec;

S ☐ _____ N/A ☒ N/C ☐

(d) Design calculation to predict potential leakage through the upper liner;

S ☐ _____ N/A ☒ N/C ☐

(e) Daily inspection requirements, and notification and corrective action requirements if leakage rates exceed that predicted by design calculations;

S ☐ _____ N/A ☒ N/C ☐

(4) Description of procedures to prevent uplift, if applicable;

LOCATIONS ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐**PART G CONTINUED**

(5) Design calculations to demonstrate minimum two feet of freeboard will be maintained;

(6) Procedures for controlling vectors and off-site odors;

b. Above-ground leachate storage tanks; (62-701.400(6)(c), FAC)

(1) Describe tank materials of construction and ensure foundation is sufficient to support tank;

(2) Describe procedures for cathodic protection for the tank, if needed;

(3) Describe exterior painting and interior lining of the tank to protect it from the weather and the leachate stored;

(4) Describe secondary containment design to ensure adequate capacity will be provided and compatibility of materials of construction;

(5) Describe design to remove and dispose of stormwater from the secondary containment system;

(6) Describe an overfill prevention system, such as level sensors, gauges, alarms, and shutoff controls to prevent overfilling;

(7) Inspections, corrective action, and reporting requirements;

(a) Weekly inspection of overfill prevention system;

(b) Weekly inspection of exposed tank exteriors;

(c) Inspection of tank interiors when tank is drained, or at least every three years;

(d) Procedures for immediate corrective action if failures detected;

(e) Inspection reports available for Department review;

c. Underground leachate storage tanks; (62-701.400(6)(d), FAC)

LOCATIONS ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐**PART G CONTINUED**

(1) Describe materials of construction;

(2) A double-walled tank design system to be used with the following requirements:

(a) Interstitial space monitoring at least weekly;

(b) Corrosion protection provided for primary tank interior and external surface of outer shell;

(c) Interior tank coatings compatible with stored leachate;

(d) Cathodic protection inspected weekly and repaired as needed;

(3) Describe an overfill prevention system, such as level sensors, gauges, alarms, and shutoff controls to prevent overfilling, and provide for weekly inspections;

(4) Inspection reports available for Department review;

6. Liner systems construction quality assurance (CQA); (62-701.400(7), FAC)

a. Provide CQA Plan including:

(1) Specifications and construction requirements for liner system;

(2) Detailed description of quality control testing procedures and frequencies;

(3) Identification of supervising professional engineer;

(4) Identify responsibility and authority of all appropriate organizations and key personnel involved in the construction project;

(5) State qualifications of CQA professional engineer and support personnel;

LOCATION**PART G CONTINUED**S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☒ Section 3 N/A ☐ N/C ☐S ☐ _____ N/A ☒ N/C ☐

(6) Description of CQA reporting forms and documents;

b. An independent laboratory experienced in the testing of geosynthetics to perform required testing;

7. Soil liner CQA; (62-701.400(8), FAC)

a. Documentation that an adequate borrow source has been located with test results, or description of the field exploration and laboratory testing program to define a suitable borrow source;

b. Description of field test section construction and test methods to be implemented prior to liner installation;

c. Description of field test methods, including rejection criteria and corrective measures to insure proper liner installation;

8. For surface water management systems at aboveground disposal units, provide documentation showing the design of any features intended to convey stormwater to a permitted or exempted treatment system; (62-701.400(9), FAC)

9. Gas control systems; (62-701.400(10), FAC)

a. Provide documentation that if the landfill is receiving degradable wastes, it will have a gas control system complying with the requirements of Rule 62-701.530, FAC;

10. For landfills designed in ground water, provide documentation that the landfill will provide a degree of protection equivalent to landfills designed with bottom liners not in contact with ground water; (62-701.400(11), FAC)

PART H. HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS (62-701.410(2), FAC)**LOCATION**S ☒ Section 2 Part G-1 N/A ☐ N/C ☐S ☒ Section 2 Part G-1 N/A ☐ N/C ☐S ☒ Section 2 Part G-1 N/A ☐ N/C ☐

1. Submit a hydrogeological investigation and site report including at least the following information:

a. Regional and site specific geology and hydrology;

b. Direction and rate of ground water and surface water flow including seasonal variations;

LOCATION

- S ☒ Section 2 Part G-1 N/A ☐ N/C ☐
- S ☒ Section 2 Part G-1 N/A ☐ N/C ☐
- S ☒ Section 2 Part G-1 N/A ☐ N/C ☐
- S ☒ Section 2 Part G-1 N/A ☐ N/C ☐
- S ☐ _____ N/A ☐ N/C ☒
- S ☐ _____ N/A ☐ N/C ☒
- S ☒ Section 3, App 3-C N/A ☐ N/C ☐
- S ☒ Section 2 Part G-1 N/A ☐ N/C ☐

PART H CONTINUED

- c. Background quality of ground water and surface water;
- d. Any on-site hydraulic connections between aquifers;
- e. Site stratigraphy and aquifer characteristics for confining layers, semi-confining layers, and all aquifers below the site that may be affected by the disposal facility;
- f. Description of topography, soil types, and surface water drainage systems;
- g. Inventory of all public and private water wells within a one mile radius of the site including, where available, well top of casing and bottom elevations, name of owner, age and usage of each well, stratigraphic unit screened, well construction technique, and static water level;
- h. Identify and locate any existing contaminated areas on the site;
- i. Include a map showing the locations of all potable wells within 500 feet of the waste storage and disposal areas;

2. Report signed, sealed, and dated by P.E. and/or P.G.

PART I. GEOTECHNICAL INVESTIGATION REQUIREMENTS (62-701.410(3) and (4), FAC)**LOCATION**

- S ☒ Section 2 Part I-1 N/A ☐ N/C ☐
- S ☒ Section 2 Part I-1 N/A ☐ N/C ☐
- S ☒ Section 2 Part I-1 N/A ☐ N/C ☐
- S ☒ Section 2 Part I-1 N/A ☐ N/C ☐
- S ☒ Section 2 Part I-1 N/A ☐ N/C ☐
- S ☒ Section 2 Part I-2 N/A ☐ N/C ☐

1. Submit a geotechnical site investigation report defining the engineering properties of the site including at least the following:

- a. Description of subsurface conditions including soil stratigraphy and ground water table conditions;
- b. Investigate for the presence of muck, previously filled areas, soft ground, and lineaments;
- c. Estimates of average and maximum high water table across the site;
- d. Evaluation of potential for fault areas and seismic impact zones;
- e. Foundation analysis including:

LOCATION**PART I CONTINUED**S ☒ Section 2 Part I-2 N/A ☐ N/C ☐S ☒ Section 2 Part I-2 N/A ☐ N/C ☐S ☒ Section 2 Part I-2 N/A ☐ N/C ☐S ☒ Section 2 Part I-2 N/A ☐ N/C ☐S ☒ Section 2, Part I N/A ☐ N/C ☐S ☒ Sec. 2 Part G-1 & I-2 N/A ☐ N/C ☐

(1) Foundation bearing capacity analysis;

(2) Total and differential subgrade settlement analysis;

(3) Slope stability analysis;

f. Evaluation of potential for sinkholes and sinkhole activity at the site that is based upon the investigations required in Rule 62-701.410(3)(f), F.A.C.;

g. A geotechnical report providing a description of methods used in the investigation, and includes soil boring logs, laboratory results, analytical calculations, cross sections, interpretations, conclusions, and a description of any engineering measures proposed for the site;

2. Report signed, sealed, and dated by P.E. and/or P.G.

PART J. VERTICAL EXPANSION OF LANDFILLS (62-701.430, FAC)**LOCATION**S ☒ SECTION 3 N/A ☐ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☒ SECTION 2, PART I-2 N/A ☐ N/C ☐S ☒ SECTION 2, PART I-2 N/A ☐ N/C ☐S ☒ SECTION 2, PART I-2 N/A ☐ N/C ☐S ☒ SECTION 3 N/A ☐ N/C ☐S ☐ _____ N/A ☒ N/C ☐

1. Describe how the vertical expansion shall not cause or contribute to any violations of water quality standards or criteria, shall not cause objectionable odors, or adversely affect the closure design of the existing landfill;

2. Describe how the vertical expansion over unlined landfills will meet the requirements of Rule 62-701.400, FAC with the exceptions of Rule 62-701.430(1)(c), FAC;

3. Provide foundation and settlement analysis for the vertical expansion;

4. Provide total settlement calculations demonstrating that the final elevations of the lining system, gravity drainage, and no other component of the design will be adversely affected;

5. Minimum stability factor of safety of 1.5 for the lining system component interface stability and for deep stability;

6. Provide documentation to show the surface water management system will not be adversely affected by the vertical expansion;

7. Provide gas control designs to prevent accumulation of gas under the new liner for the vertical expansion;

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

LOCATION

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

1. Provide documentation that the landfill will have at least one trained operator during operation and at least one trained spotter at each working face; (62-701.500(1), FAC)

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

2. Provide a landfill operation plan including procedures for: (62-701.500(2), FAC)

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

a. Designating responsible operating and maintenance personnel;

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

b. Emergency preparedness and response, as required in subsection 62-701.320(16), FAC;

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

c. Controlling types of waste received at the landfill;

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

d. Weighing incoming waste;

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

e. Vehicle traffic control and unloading;

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

f. Method and sequence of filling waste;

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

g. Waste compaction and application of cover;

S ☒ Section 3, App 3-A N/A ☐ N/C ☐

h. Operations of gas, leachate, and stormwater controls;

S ☒ Section 5 N/A ☐ N/C ☐

i. Water quality monitoring;

S ☒ Section 3 N/A ☐ N/C ☐

j. Maintaining and cleaning the leachate collection system;

S ☒ Section 3, App 3-A N/A ☐ N/C ☒

3. Provide a description of the landfill operation record to be used at the landfill, details as to location of where various operational records will be kept (i.e. DEP permit, engineering drawings, water quality records, etc.); (62-701.500(3), FAC)

S ☒ Section 3, App 3-A N/A ☐ N/C ☒

4. Describe the waste records that will be compiled monthly and provided to the Department annually; (62-701.500(4), FAC)

S ☒ Section 3, App 3-A N/A ☐ N/C ☒

5. Describe methods of access control; (62-701.500(5), FAC)

S ☒ Section 3, App 3-A N/A ☐ N/C ☒

6. Describe load checking program to be implemented at the landfill to discourage disposal of unauthorized waste at the landfill; (62-701.500(6), FAC)

LOCATION**PART K CONTINUED**S ☐ _____ N/A ☐ N/C ☒

7. Describe procedures for spreading and compacting waste at the landfill that include: (62-701.500(7), FAC)

S ☐ _____ N/A ☐ N/C ☒

a. Waste layer thickness and compaction frequencies;

S ☐ _____ N/A ☒ N/C ☐

b. Special considerations for first layer of waste placed above the liner and leachate collection system;

S ☐ _____ N/A ☐ N/C ☒

c. Slopes of cell working face and side grades above land surface, and planned lift depths during operation;

S ☐ _____ N/A ☐ N/C ☒

d. Maximum width of working face;

S ☐ _____ N/A ☐ N/C ☒

e. Description of type of initial cover to be used at the facility that controls:

S ☐ _____ N/A ☐ N/C ☒

(1) Vector breeding/animal attraction;

S ☐ _____ N/A ☐ N/C ☒

(2) Fires;

S ☐ _____ N/A ☐ N/C ☒

(3) Odors;

S ☐ _____ N/A ☐ N/C ☒

(4) Blowing litter;

S ☐ _____ N/A ☐ N/C ☒

(5) Moisture infiltration;

S ☐ _____ N/A ☐ N/C ☒

f. Procedures for applying initial cover, including minimum cover frequencies;

S ☐ _____ N/A ☐ N/C ☒

g. Procedures for applying intermediate cover;

S ☐ _____ N/A ☐ N/C ☒

h. Time frames for applying final cover;

S ☐ _____ N/A ☐ N/C ☒

i. Procedures for controlling scavenging and salvaging;

S ☐ _____ N/A ☐ N/C ☒

j. Description of litter policing methods;

S ☐ _____ N/A ☐ N/C ☒

k. Erosion control procedures;

LOCATION**PART K CONTINUED**S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐

8. Describe operational procedures for leachate management including: (62-701.500(8), FAC)

a. Leachate level monitoring;

b. Operation and maintenance of leachate collection and removal system, and treatment as required;

c. Procedures for managing leachate if it becomes regulated as a hazardous waste;

d. Identification of treatment or disposal facilities that may be used for off-site discharge and treatment of leachate;

e. Contingency plan for managing leachate during emergencies or equipment problems;

f. Procedures for recording quantities of leachate generated in gal/day and including this in the operating record;

g. Procedures for comparing precipitation experienced at the landfill with leachate generation rates and including this information in the operating record;

h. Procedures for water pressure cleaning or video inspecting leachate collection systems;

9. Describe how the landfill receiving degradable wastes shall implement a gas management system meeting the requirements of Rule 62-701.530, FAC; (62-701.500(9), FAC)

10. Describe procedures for operating and maintaining the landfill stormwater management system to comply with the requirements of Rule 62-701.400(9), FAC; (62-701.500(10), FAC)

11. Equipment and operation feature requirements; (62-701.500(11), FAC)

a. Sufficient equipment for excavating, spreading, compacting, and covering waste;

b. Reserve equipment or arrangements to obtain additional equipment within 24 hours of breakdown;

c. Communications equipment;

LOCATIONS ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐**PART K CONTINUED**

d. Dust control methods;

e. Fire protection capabilities and procedures for notifying local fire department authorities in emergencies;

f. Litter control devices;

g. Signs indicating operating authority, traffic flow, hours of operation, and disposal restrictions;

12. Provide a description of all-weather access road, inside perimeter road, and other on-site roads necessary for access at the landfill; (62-701.500(12), FAC)

13. Additional record keeping and reporting requirements; (62-701.500(13), FAC)

a. Records used for developing permit applications and supplemental information maintained for the design period of the landfill;

b. Monitoring information, calibration and maintenance records, and copies of reports required by permit maintained for at least 10 years;

c. Maintain annual estimates of the remaining life of constructed landfills, and of other permitted areas not yet constructed, and submit this estimate annually to the Department;

d. Procedures for archiving and retrieving records which are more than five years old;

PART L. WATER QUALITY MONITORING REQUIREMENTS (62-701.510, FAC)**LOCATION**S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐

1. A water quality monitoring plan shall be submitted describing the proposed ground water and surface water monitoring systems, and shall meet at least the following requirements:

a. Based on the information obtained in the hydrogeological investigation and signed, dated, and sealed by the P.G. or P.E. who prepared it; (62-701.510(2)(a), FAC)

LOCATIONS ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐S ☒ Section 5 N/A ☐ N/C ☐**PART L CONTINUED**

b. All sampling and analysis performed in accordance with Chapter 62-160, FAC; (62-701.510(2)(b), FAC)

c. Ground water monitoring requirements; (62-701.510(3), FAC)

- (1) Detection wells located downgradient from and within 50 feet of disposal units;
- (2) Downgradient compliance wells as required;
- (3) Background wells screened in all aquifers below the landfill that may be affected by the landfill;
- (4) Location information for each monitoring well;
- (5) Well spacing no greater than 500 feet apart for downgradient wells and no greater than 1500 feet apart for upgradient wells, unless site specific conditions justify alternate well spacings;
- (6) Properly selected well screen locations;
- (7) Monitoring wells constructed to provide representative ground water samples;
- (8) Procedures for properly abandoning monitoring wells;
- (9) Detailed description of detection sensors, if proposed;

d. Surface water monitoring requirements; (62-701.510(4), FAC)

- (1) Location of and justification for all proposed surface water monitoring points;
- (2) Each monitoring location to be marked and its position determined by a registered Florida land surveyor;

e. Initial and routine sampling frequency and requirements; (62-701.510(5), FAC)

- (1) Initial background ground water and surface water sampling and analysis requirements;

LOCATION**PART L CONTINUED**

- | | | |
|--|---|---|
| S <input checked="" type="checkbox"/> <u>Section 5</u> | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | (2) Routine monitoring well sampling and analysis requirements; |
| S <input checked="" type="checkbox"/> <u>Section 5</u> | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | (3) Routine surface water sampling and analysis requirements; |
| S <input checked="" type="checkbox"/> <u>Section 5</u> | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | f. Describe procedures for implementing evaluation monitoring, prevention measures, and corrective action as required; (62-701.510(6), FAC) |
| S <input checked="" type="checkbox"/> <u>Section 5</u> | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | g. Water quality monitoring report requirements; (62-701.510(8), FAC) |
| S <input checked="" type="checkbox"/> <u>Section 5</u> | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | (1) Semi-annual report requirements; (see paragraphs 62-701.510(5)(c) and (d), FAC for sampling frequencies) |
| S <input checked="" type="checkbox"/> <u>Section 5</u> | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | (2) Documentation that the water quality data shall be provided to the Department in an electronic format consistent with requirements for importing into Department databases, unless an alternate form of submittal is specified in the permit; |
| S <input checked="" type="checkbox"/> <u>Section 5</u> | N/A <input type="checkbox"/> N/C <input type="checkbox"/> | (3) Two and one-half year, or annual, report requirements, or every five years if in long-term care, signed dated, and sealed by P.G. or P.E.; |

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

- | | | |
|----------------------------------|--|--|
| S <input type="checkbox"/> _____ | N/A <input checked="" type="checkbox"/> N/C <input type="checkbox"/> | 1. Describe procedures for managing motor vehicles; (62-701.520(1), FAC) |
| S <input type="checkbox"/> _____ | N/A <input checked="" type="checkbox"/> N/C <input type="checkbox"/> | 2. Describe procedures for landfilling shredded waste; (62-701.520(2), FAC) |
| S <input type="checkbox"/> _____ | N/A <input type="checkbox"/> N/C <input checked="" type="checkbox"/> | 3. Describe procedures for asbestos waste disposal; (62-701.520(3), FAC) |
| S <input type="checkbox"/> _____ | N/A <input checked="" type="checkbox"/> N/C <input type="checkbox"/> | 4. Describe procedures for disposal or management of contaminated soil; (62-701.520(4), FAC) |
| S <input type="checkbox"/> _____ | N/A <input checked="" type="checkbox"/> N/C <input type="checkbox"/> | 5. Describe procedures for disposal of biological wastes; (62-701.520(5), FAC) |

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

LOCATION

S ☒ Section 3 N/A ☐ N/C ☐

1. Provide documentation for a gas management system that will: (62-701.530(1), FAC)

S ☒ Section 3 N/A ☐ N/C ☐

a. Be designed to prevent concentrations of combustible gases from exceeding 25% the LEL in structures and 100% the LEL at the property boundary;

S ☒ Section 3 N/A ☐ N/C ☐

b. Be designed for site specific conditions;

S ☒ Section 3 N/A ☐ N/C ☐

c. Be designed to reduce gas pressure in the interior of the landfill;

S ☒ Section 3 N/A ☐ N/C ☐

d. Be designed to not interfere with the liner, leachate control system, or final cover;

S ☒ Section 3 N/A ☐ N/C ☐

2. Provide documentation that will describe locations, construction details, and procedures for monitoring gas at ambient monitoring points and with soil monitoring probes; (62-701.530(2), FAC)

S ☐ _____ N/A ☐ N/C ☒

3. Provide documentation describing how the gas remediation plan and odor remediation plan will be implemented; (62-701.530(3), FAC)

S ☐ _____ N/A ☒ N/C ☐

4. Landfill gas recovery facilities; (62-701.530(5), FAC)

S ☐ _____ N/A ☒ N/C ☐

a. Provide information required in Rules 62-701.320(7) and 62-701.330(3), FAC;

S ☐ _____ N/A ☒ N/C ☐

b. Provide information required in Rule 62-701.600(4), FAC, where relevant and practical;

S ☐ _____ N/A ☒ N/C ☐

c. Provide estimates of current and expected gas generation rates and description of condensate disposal methods;

S ☐ _____ N/A ☒ N/C ☐

d. Provide description of procedures for condensate sampling, analyzing, and data reporting;

S ☐ _____ N/A ☒ N/C ☐

e. Provide closure plan describing methods to control gas after recovery facility ceases operation, and any other requirements contained in Rule 62-701.400(10), FAC;

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

LOCATION

S ☒ Section 7 N/A ☐ N/C ☐

S ☒ Section 7 N/A ☐ N/C ☐

S ☒ Section 7 N/A ☐ N/C ☐

S ☒ Section 7 N/A ☐ N/C ☐

S ☒ Section 7 N/A ☐ N/C ☐

S ☒ Section 7 N/A ☐ N/C ☐

S ☒ Section 7, App. 7-A N/A ☐ N/C ☐

S ☒ Section 4 N/A ☐ N/C ☐

S ☒ Section 4 N/A ☐ N/C ☐

S ☒ Section 4 N/A ☐ N/C ☐

S ☒ Section 4 N/A ☐ N/C ☐

S ☒ Section 4 N/A ☐ N/C ☐

S ☒ Section 4 N/A ☐ N/C ☐

S ☐ _____ N/A ☒ N/C ☐

S ☐ _____ N/A ☒ N/C ☐

S ☐ _____ N/A ☒ N/C ☐

S ☐ _____ N/A ☒ N/C ☐

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

a. Application submitted to the Department at least 90 days prior to final receipt of wastes;

b. Closure plan shall include the following:

(1) Closure design plan;

(2) Closure operation plan;

(3) Plan for long-term care;

(4) A demonstration that proof of financial assurance for long-term care will be provided;

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

a. Plan sheet showing phases of site closing;

b. Drawings showing existing topography and proposed final grades;

c. Provisions to close units when they reach approved design dimensions;

d. Final elevations before settlement;

e. Side slope design including benches, terraces, down slope drainage ways, energy dissipaters, and description of expected precipitation effects;

f. Final cover installation plans including:

(1) CQA plan for installing and testing final cover;

(2) Schedule for installing final cover after final receipt of waste;

(3) Description of drought resistant species to be used in the vegetative cover;

LOCATION**PART O CONTINUED**S ☒ Section 4 N/A ☐ N/C ☐S ☐ _____ N/A ☐ N/C ☒S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☐ _____ N/A ☒ N/C ☐S ☒ Section 4 N/A ☐ N/C ☐S ☒ Section 2 Part I-2 N/A ☐ N/C ☐S ☒ Section 3, App 3-A N/A ☐ N/C ☐S ☐ _____ N/A ☐ N/C ☒S ☐ _____ N/A ☐ N/C ☒S ☐ _____ N/A ☐ N/C ☒S ☐ _____ N/A ☐ N/C ☒S ☐ _____ N/A ☐ N/C ☒S ☐ _____ N/A ☐ N/C ☒S ☐ _____ N/A ☐ N/C ☒S ☐ _____ N/A ☐ N/C ☒

(4) Top gradient design to maximize runoff and minimize erosion;

(5) Provisions for cover material to be used for final cover maintenance;

g. Final cover design requirements;

(1) Protective soil layer design;

(2) Barrier soil layer design;

(3) Erosion control vegetation;

(4) Geomembrane barrier layer design;

(5) Geosynthetic clay liner design, if used;

(6) Stability analysis of the cover system and the disposed waste;

h. Proposed method of stormwater control;

i. Proposed method of access control;

j. Description of the proposed or existing gas management system which complies with Rule 62-701.530, FAC;

3. Closure operation plan shall include: (62-701.600(4), FAC)

a. Detailed description of actions which will be taken to close the landfill;

b. Time schedule for completion of closing and long-term care;

c. Describe proposed method for demonstrating financial assurance for long-term care;

d. Operation of the water quality monitoring plan required in Rule 62-701.510, FAC;

e. Development and implementation of gas management system required in Rule 62-701.530, FAC;

LOCATION**PART O CONTINUED**

- S ☐ _____ N/A ☐ N/C ☒ 4. Certification of closure construction completion and final reports including: (62-701.600(6), FAC)
- S ☐ _____ N/A ☐ N/C ☒ a. Survey monuments; (62-701.600(6)(a), FAC)
- S ☐ _____ N/A ☐ N/C ☒ b. Final survey report; (62-701.600(6)(b), FAC)
- S ☐ _____ N/A ☐ N/C ☒ c. Closure construction quality assurance report; (62-701.400(7), FAC)
- S ☐ _____ N/A ☐ N/C ☒ 5. Declaration to the public; (62-701.600(7), FAC)
- S ☐ _____ N/A ☐ N/C ☒ 6. Official date of closing; (62-701.600(8), FAC)
- S ☐ _____ N/A ☐ N/C ☒ 7. Justification for and detailed description of procedures to be followed for temporary closure of the landfill, if desired; (62-701.600(9), FAC)

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

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

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

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

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

LOCATION

S ☒ Section 7, App 7-A N/A ☐ N/C ☐

1. Provide cost estimates for closing, long-term care, and corrective action costs estimated by a P.E. for a third party performing the work, on a per unit basis, with the source of estimates indicated; (62-701.630(3) & (7), FAC)

S ☐ _____ N/A ☐ N/C ☒

2. Describe procedures for providing annual cost adjustments to the Department based on inflation and changes in the closing, long-term care, and corrective action plans; (62-701.630(4) & (8), FAC)

S ☐ _____ N/A ☐ N/C ☒

3. Describe funding mechanisms for providing proof of financial assurance and include appropriate financial assurance forms. (62-701.630(5), (6), & (9), FAC)

PART S. CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

1. Applicant:

The undersigned applicant or authorized representative of Angelos Aggregate Materials, LTD

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

John Arnold
Signature of Applicant or Agent

John Arnold, P.E., Director of Engineering & Facilities

Name and Title (please type)

John.Phillip.Arnold@gmail.com

E-Mail Address (if available)

855 28th Street South

Mailing Address

St. Petersburg, FL 33712

City, State, Zip Code

(813) 477-1719

Telephone Number

Date: 1/24/19

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

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

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

Lisa Baker
Signature

Lisa Baker, P.E., Engineering Division Director

Name and Title (please type)

74652

Florida Registration Number (please affix seal)

4140 NW 37th Place, Suite A

Mailing Address

Gainesville, FL 32606

City, State, Zip Code

lisa@locklearconsulting.com

E-Mail Address (if available)

(352) 672-6867

Telephone Number

Date: 1-24-19

ATTACHMENT 2

Revised Section 2 Checklist Support Part E

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

1. Regional map or aerial photograph no more than 5 years old showing all airports that are located within five miles of the proposed landfill; (62-701.330(3)(a),FAC).

RESPONSE: No airports are located within 5 miles of the Enterprise Class III Landfill. A regional map no more than 5 years old showing the facility and a 5-mile radius is provided in the 2018 permit renewal application as Figure S-4 in Appendix 3-C to the Engineering Report in Section 3.

2. Plot plan with a scale not greater than 200 feet to the inch showing; (62-701.330(3)(b),FAC):

- a. Dimensions;

RESPONSE: The Cell 17 and Vertical Expansion Construction Plan Set is provided in Section 4.

- b. Locations of proposed and existing water quality monitoring wells;

RESPONSE: The Site Map is provided as Figure 1 of the Groundwater Monitoring Plan provided in Section 5.

- c. Locations of soil borings;

RESPONSE: The location of soil borings is located in Section 2, Part I.

- d. Proposed plan of trenching or disposal areas;

RESPONSE: The Enterprise Class III Landfill Phasing Plans are provided in the Cell 17 and Vertical Expansion Construction Plan Set, provided in Section 4.

- e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets;

RESPONSE: Cross Sections of the Class III Landfill are provided in the Cell 17 and Vertical Expansion Construction Plan Set, provided in Section 4.

- f. Any previously filled waste disposal areas;

RESPONSE: At the time of preparing this permit application, Cells 1 – 7, 15 and 16 have been approved by the Department to accept waste. These Cells are identified in the Cell 17 and Vertical Expansion Construction Plan Set provided in Section 4.

- g. Fencing or other measures to restrict access.

RESPONSE: Site fencing and the landscaping berm are identified in the Cell 17 and Vertical Expansion Construction Plan Set provided in Section 4.

3. Topographic maps with a scale not greater than 200 feet to the inch with 5-foot contour intervals showing; (62-701.330(3)(c),FAC):

The Cell 17 and Vertical Expansion Construction Plan Set includes a topographic survey provided in Section 4.

The signed and sealed topographic survey is provided in Attachment E-2.

- a. Proposed fill areas;

RESPONSE: Cells 1 – 7, 15 and 16 are identified in the Cell 17 and Vertical Expansion Construction Plan Set provided in Section 4.

- b. Borrow areas;

RESPONSE: The Enterprise Recycling and Disposal Facility is permitted by Pasco County for mining. Borrow soils needed for the Class III Landfill may be obtained as needed in accordance with the mining permit, and therefore no specific borrow areas have been identified on the site plan.

- c. Access roads;

RESPONSE: The site access roads are shown in the Cell 17 and Vertical Expansion Construction Plan Set provided in Section 4.

- d. Grades required for proper drainage;

RESPONSE: Stormwater runoff from the Class III Landfill is controlled by overland flow down the slopes of the landfill, and intermediate stormwater terraces. The terraces and landfill slopes are shown in the Cell 17 and Vertical Expansion Construction Plan Set provided in Section 4.

- e. Cross sections of lifts;

RESPONSE: Cross Sections of the Class III landfill are provided in the Cell 17 and Vertical Expansion Construction Plan Set, provided in Section 4.

- f. Special drainage devices if necessary;

RESPONSE: Special drainage devices are not part of the stormwater management system at the Enterprise Class III Landfill; this item is not applicable.

- g. Fencing;

The site perimeter fence is shown on the Cell 17 and Vertical Expansion Construction Plan Set, provided in Section 4.

- h. Equipment facilities.

RESPONSE: Ancillary equipment facilities are shown on the Cell 17 and Vertical Expansion Construction Plan Set, provided in Section 4.

4. A report on the landfill describing the following; (62-701.330(3)(d),FAC)

- a. The current and projected population and area to be served by the proposed site;

RESPONSE: Population estimates for the general area served by the Enterprise Class III Landfill are provided in Section 3.8.3 of the Engineering Report in Section 3.

- b. The anticipated type, annual quantity, and source of solid waste, expressed in tons;

RESPONSE: There are no changes to the type and source of solid waste for the facility, which is provided in Section 3.8 of the Engineering Report in Section 3. An updated waste quantity estimate is also provided in Section 3.8 of the Engineering Report to reflect recent tonnage data.

- c. Planned active life of the facility, the final design height of the facility and the maximum height of the facility during its operation;

RESPONSE: A revised design life estimate is provided in Section 3.8.3 of the Engineering Report in Section 3. This permit application includes a vertical expansion to a maximum height of 220' and is provided in 3.8.1 of the Engineering Report in Section 3. The remaining capacity for the site was updated based on the September 2018 topographic survey and the Cell 17 and Vertical Expansion Construction Plan Set.

- d. The source and type of cover material used for the landfill.

RESPONSE: Onsite material will be used and has shown previously to comply with the maximum permeability requirements of 1×10^{-8} cm/sec. Cover material for the Enterprise Class III Landfill is addressed in Section 9.0 of the Operations Plan, which has been provided in Appendix A to the Engineering Report in Section 3 of this permit application. No changes have been made to Section 9.0 related to the source or type of cover material as part of this permit renewal application.

5. Provide evidence that an approved laboratory shall conduct water quality monitoring for the facility in accordance with Chapter 62-160,FAC; (62-701.330(3)(g),FAC);

RESPONSE: ENCO Laboratories conducts water quality analysis for the Facility. ENCO's Jacksonville and Orlando laboratories are listed on the Florida Department of Health website as certified under NELAP. Documentation from the Florida Department of Health website is provided as Attachment E-1 of the 2018 permit renewal application.

6. Provide financial assurance documentation required by Rule 62-701.630, FAC; (62-701.330(3)(h),FAC).

RESPONSE: A letter of credit is the financial assurance mechanism for the Facility. Financial responsibility is detailed in Section 7.

ATTACHMENT 3

Revised Section 2 Checklist Support

Part E

Appendix E-2

SURVEYOR'S REPORT

ENTERPRISE ROAD LANDFILL

Prepared for:



Prepared by:



PICKETT AND ASSOCIATES PROJECT NO.: 14094-9

TITLE/TYPE OF SURVEY: Topographic Survey

DATE OF SURVEY: This Map is based on LiDAR data & aerial imagery flown
09/17/18

NOTE: THIS REPORT AND ACCOMPANYING MAP TITLED ENTERPRISE ROAD LANDFILL, ARE NOT FULL AND COMPLETE WITHOUT THE OTHER AND ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

DATUM:**HORIZONTAL:**

Coordinates are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83, and were provided by Simmons and Beall Surveying.

VERTICAL:

Elevations are to National Geodetic Vertical Datum of 1929 and were provided by Simmons and Beall Surveying

Control Points Used:

<u>Pt#</u>	<u>Easting</u>	<u>Northings</u>	<u>Elevation</u>
4000	612277.73	1454997.54	105.81
4001	612338.97	1452175.37	139.98
4002	614249.29	1452235.24	113.56
4003	614271.09	1454880.23	85.32

ACCURACY STATEMENT: The following stated plus or minus tolerances encompass a minimum of 90% of the difference between photogrammetrically measured values and any ground truth of all well-identified features. Mapped features will meet or exceed the Florida Standards of Practice.

VERTICAL:

Contours have an estimated vertical positional accuracy of 0.5'. Spot elevations, on paved surfaces, have an estimated vertical positional accuracy of 0.25'.

HORIZONTAL:

Well-identified features have an estimated horizontal positional accuracy of 1.66'. All measurements are in U.S. Survey Feet.

Measurement Methods:


The planimetrics shown are limited to those features visible on aerial imagery. Color digital imagery was acquired at an average altitude of 2100' using a metric precision digital camera whose focal length is 51.58mm. Mapping was performed using LiDAR and softcopy photogrammetric techniques. The LiDAR data has an estimated point sample distance of 0.4 foot and a density of 6.4 points per square foot (± 68.889 points per square meter). For a vertical accuracy check, the LiDAR data was compared to the four (4) points set as targets for aerial imagery. The Root Mean Square Error of the Elevations (RMSEZ) is 0.074 foot, being the equivalent of 0.145' FGDC/NSSDA Vertical Accuracy. All measurements are in U.S. Survey Feet.

Limitations:

This mapping should be used for preliminary design work only and should not replace an actual field survey where the required accuracy is greater than the accuracy stated in this report. No responsibility is assumed for areas outside the contracted scope or for the control provided by Simmons and Beall Surveying, Dade City, Florida.

MAP PLOTTING:

This map may be displayed at a scale of 1" = 50' (1:600) or smaller.



T. JEFFREY YOUNG, PSM, CP
FLORIDA REGISTRATION NO. 5440
PICKETT AND ASSOCIATES, INC.
FLORIDA REGISTRATION NO. 364

9/17/18

SURVEY DATE

Attachment 4

Revised Section 2 Checklist Support Part G

PART G

LANDFILL CONSTRUCTION REQUIREMENTS (62-701.400,FAC)

1. Planned construction and closure. All landfills shall be designed so that solid waste disposal units will be constructed and subsequently closed at planned intervals throughout the design period of the landfill. Designs to prevent failures of side slopes, and designs to prevent deep-seated failures through the waste, along liner systems, and through foundation soils, shall achieve a minimum factor of safety of 1.5 using peak strength values; (62-701.400(2), FAC).

RESPONSE: The Reclamation and Closure Plan has been updated and is provided in Section 7 of this permit application.

2. Landfill liner requirements. Class I Landfills shall be constructed with composite or double liners, and a leachate collection and removal system.; (62-701.400(3),FAC)

- a. Liner requirements; (62-701.400(3)(a),FAC);

RESPONSE: Geosynthetic liner exemption has been established for the permitted cells of the landfill throughout the permitting and modification process. The most recent Liner exemption study was submitted to the Department as part of this permit application.

- b. Composite liners; (62-701.400(3)(b),FAC)

RESPONSE: The Enterprise Class III Landfill is not constructed with a composite liner; this item is not applicable.

- c. Double liners; (62-701.400(3)(c),FAC)

RESPONSE: The Enterprise Class III Landfill is not constructed with a double liner; this item is not applicable.

- d. Standards for geosynthetic components; (62-701.400(3)(d),FAC)

RESPONSE: The Enterprise Class III Landfill does not have a geosynthetic liner; this item is not applicable.

- e. Geosynthetic specification requirements; (62-701.400(3)(e),FAC)

RESPONSE: The Enterprise Class III Landfill does not have a geosynthetic liner; this item is not applicable.

- f. Standards for soil liner components (62-710.400(3)(f),FAC)

RESPONSE: Specifically, barrier layer construction information is provided in Section 3.7 and 3.15 of the Engineering Report, which has been updated as part of this permit application and is provided in Section 3. There are no changes requested to the permitted barrier layer design or methods of construction as part of this permit application.

- g. Class III landfills. A Class III landfill shall be constructed with a bottom liner consisting of a single 60-mil minimum average thickness HDPE geomembrane. In the sumps located inside the landfill footprint and in the leachate collection trenches, the geomembrane shall be placed on a GCL with a hydraulic conductivity of less than or equal to 1×10^{-7} cm/sec, or on a compacted clay liner which is a minimum six inches thick with a saturated hydraulic conductivity of less than or equal to 1×10^{-7} cm/sec. The liner shall be placed on a prepared subgrade that will not damage the geomembrane liner or the GCL. A primary leachate collection and removal system and a drainage layer shall be installed above the geomembrane liner. Except in sumps and leachate collection trenches, the system shall be designed to limit leachate head above the liner during routine landfill operation after placement of initial cover to no greater than 12 inches. An applicant may request exemption from the requirements of this paragraph in accordance with paragraph 62-701.340(2)(b), F.A.C; (62-710.400(3)(g),FAC)

RESPONSE: The Enterprise Class III Landfill is constructed with a 3-foot thick clay barrier layer with maximum permeability of 1×10^{-8} cm/sec. Onsite material will be used and has shown previously to comply with the maximum permeability requirements of 1×10^{-8} cm/sec. Specifically, barrier layer construction information is provided in Section 3.7 and 3.15 of the Engineering Report, which has been updated as part of this permit application and is provided in Section 3. There are no changes requested to the permitted barrier layer design or methods of construction as part of this permit application.

3. Leachate collection and removal system. Landfills shall have a leachate collection and removal system that is designed, constructed, maintained, and operated to collect leachate and convey it to collection points for removal; (62-701.400(4),FAC)

RESPONSE: Leachate collection and removal information is provided in Section 3.10.2 of the Engineering Report, which has been updated as part of this permit application and is provided in Section 3.

4. Leachate recirculation. Leachate shall be recirculated only at solid waste disposal units which have a leachate recirculation system included in their operation plan, and which have been constructed and operated in a manner consistent with that system. If leachate is recirculated after closure, the operation plan shall be included as part of the approved closure plan. The leachate recirculation system shall include estimated impacts on the head of leachate over the liner, subsidence of the waste, and gas production, and shall meet the following requirements unless otherwise approved in the operation plan; (62-701.400(5),FAC)

RESPONSE: The Enterprise Class III Landfill does not recirculate leachate and this item is not applicable to the facility.

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

RESPONSE: The Enterprise Class III Landfill does not utilize leachate storage tanks or surface water impoundments; this item is not applicable.

6. Liner systems construction quality assurance (CQA); (62-701.400(7),FAC)

RESPONSE: This item is not applicable to the Enterprise Class III Landfill.

7. Soil liner construction quality assurance. In addition to the requirements of subsection (7), above, the following requirements apply to construction of the soil component of liner systems. All required testing and analysis shall be performed in accordance with generally accepted engineering procedures, such as those promulgated by the American Society for Testing and Materials (ASTM); (62-701.400(8)FAC)

RESPONSE: Onsite material will be used and has shown previously to comply with the maximum permeability requirements of 1×10^{-8} cm/sec. Specifically, barrier layer construction information is provided in Sections 3.7 and 3.15 of the Engineering Report, which has been updated as part of this permit renewal application and is provided in Section 3. There are no changes requested to the permitted barrier layer design or methods of construction as part of this permit renewal application.

8. Surface water management systems; (62-701.400(9),FAC)
- a. For aboveground disposal units, the design of any features intended to convey stormwater to a permitted or exempted treatment system shall be included in the solid waste construction permit; (62-701.400(9)(a),FAC)
 - b. Stormwater or other surface water which comes into contact with the landfilled solid waste or mixes with leachate shall be considered leachate and is subject to the requirements of subsection 62-701.500(8), F.A.C; (62-701.400(9)(b),FAC)

RESPONSE: The most recent Environmental Resource Permit has been submitted to the Department.

9. Gas control systems. Landfills that receive degradable wastes shall be designed and constructed with a gas management system that complies with the requirements of Rule 62-701.530, F.A.C.; (62-701.400(10),FAC)
- a. Provide documentation that if the landfill is receiving degradable wastes, it will have a gas control system complying with the requirements of Rule 62-701.530, FAC.

RESPONSE: The information required is included in Section 3.10.1 of the Engineering Report and provided in Section 3 of this permit application. There is no change requested to the method of gas control at the facility.

10. Landfills in ground water. A landfill constructed so that the bottom liner is constantly in contact with ground water is not prohibited by this rule. However, an applicant proposing such a design shall include special design features that demonstrate that the landfill will provide an equivalent degree of protection for the environment as would a similar landfill whose bottom liner is not in contact with ground water.

Such a design is not entitled to the presumption of compliance with performance standards that is set forth in subsection (1), of this rule. In addition to any other financial assurance responsibilities for closure, an applicant shall provide financial assurance in accordance with Rule 62-701.630, F.A.C., sufficient to ensure long-term maintenance and operation of the leachate collection system; (62-701.400(11), FAC).

RESPONSE: This item is not applicable to the Enterprise Class III Landfill.

Attachment 5

Revised Section 2 Checklist Support

Part I

Appendix I-1



UNIVERSAL ENGINEERING SCIENCES

Consultants In: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Construction Materials Testing • Threshold Inspection
Building Inspection • Plan Review • Building Code Administration

LOCATIONS:

- Atlanta
- Daytona Beach
- Fort Myers
- Fort Pierce
- Gainesville
- Jacksonville
- Miami
- Ocala
- Orlando (Headquarters)
- Palm Coast
- Panama City
- Pensacola
- Rockledge
- Sarasota
- St. Petersburg
- Tampa
- Tifton
- West Palm Beach

August 30, 2017
(Revised, March 15, 2019)

Angelo's Materials
c/o Locklear & Associates
4140 NW 37th Place, Suite A
Gainesville, FL 32606

Attention: John Locklear, P.E.

Reference: Geotechnical Services
Enterprise Landfill, Cell #17
NWC of Enterprise Rd. and Auton Rd.
Dade City, Pasco County, Florida
UES Project No. 0830.1500202
UES Report No. 1485772 – v5

Dear Mr. Locklear:

Universal Engineering Sciences, Inc. (UES) has completed the review and analysis of information provided by Locklear & Associates, Inc. (L&A) related to the Enterprise Landfill Cell #17 Permit modification.

This report contains the results of our study, an engineering interpretation of the subsurface data obtained with respect to the project characteristics described to us, geotechnical design recommendations, and general construction and site preparation considerations.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association with Angelo's Materials. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.

Certificate of Authorization No. 549

Dušan Jovanović
Senior Project Manager

Mark K Hardy

2019.03.15

'00'04- 15:35:55

Mark K. Hardy, P.E.

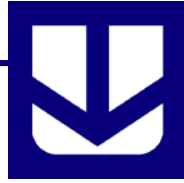
Regional Manager

Professional Engineer No. 57233

Date: _____



This item has been electronically signed and sealed by Mark K. Hardy, PE using a Digital Signature and date. Printed copies of this document are not considered signed and sealed until the signature must be verified on any electronic copies.



UNIVERSAL ENGINEERING SCIENCES

GEOTECHNICAL EXPLORATION

**Proposed Enterprise Class III Landfill Cell #17
NWC of Enterprise Rd. and Auton Rd.
Dade City, Florida**

UES Project No. 0830.1500202

PREPARED FOR:

Angelo's Materials
c/o Locklear & Associates
4140 NW 37th Place, Suite A
Gainesville, FL 32606

PREPARED BY:

Universal Engineering Sciences
9802 Palm River Road
Tampa, Florida 33619
(813) 740-8506

August 30, 2017
(Revised, March 15, 2019)

Consultants in: Geotechnical Engineering • Environmental Sciences • Construction Materials Testing • Threshold Inspection
Offices in: Orlando • Daytona Beach • Fort Myers • Gainesville • Jacksonville • Ocala • Palm Coast • Rockledge • Sarasota • Miami
St. Augustine • Panama City • Fort Pierce • Leesburg • Tampa • West Palm Beach • Atlanta, GA

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1.0 INTRODUCTION

1.1 GENERAL

In this report we present the results of our most recent update to the initial geotechnical evaluation report for the Enterprise Class III Landfill located on NWC of Enterprise Rd. and Auton Rd. in Dade City, Pasco County, Florida. Since 2000, Universal has evaluated additional geotechnical data for multiple horizontal landfill cell expansions at the facility. This report contains the results of our review, an engineering interpretation of the subsurface data obtained with respect to the project characteristics described to us, and our recommendations for geotechnical design and general site preparation. Our scope of services was in general accordance with email request provided by Locklear & Associates, Inc. (L&A).

1.2 PROJECT DESCRIPTION

We understand that the project consists of a horizontal and vertical expansion. Specifically, the horizontal expansion includes a new landfill cell, referred to as Cell #17. The proposed Cell #17 footprint is comprised of two formerly planned cells, Cell #13 and Cell #14. The vertical expansion includes changes to the final landfill elevations including above all existing disposal cells and the proposed Cell #17. Universal was provided the following information for use in our evaluation:

- Geologic logs for SPT borings completed within the proposed Cell #17 footprint (provided by L&A);
- An updated "Historical Geotechnical Data Summary" which includes geologic boring logs for the northern portion of the facility as well as geologic cross sections (provided by L&A). Note that this document was originally provided to Universal as part of the Cell #16 horizontal expansion and has been updated to include new geologic data collected in the proposed Cell #17 footprint. A copy of the updated document is provided in Appendix B.
- A summary table of groundwater elevation data collected between 2007 and 2017 (provided by L&A). A copy of the table is provided in Appendix C.;
- A geotechnical report entitled "Slope Stability, Settlement, and Bearing Capacity Analysis Report" (provided by Civil Design Services).

Our analyses are based upon the above considerations. If any of this information is incorrect, or if you anticipate any changes, please inform Universal Engineering Sciences so that we may review our recommendations, and make revisions as needed.

A general location map of the project area appears in Appendix A: Site Location Map. Also included in Appendix A for your reference are a Site Aerial Photograph, USGS Site Topographic Map and SCS Soil Survey Map.



2.0 PURPOSE AND METHODOLOGIES

2.1 PURPOSE

The purpose of our services was:

- to review general subsurface conditions at the site using Standard Penetration Test (SPT) borings provided by the Client;
- to interpret and review the subsurface conditions with respect to the proposed landfill construction;
- to evaluate the general potential for sinkhole development at the subject site;
- to provide a geotechnical engineering report which summarizes all relevant data and presents results of our geotechnical evaluation;

2.2 FIELD EXPLORATION

Geologic boring logs were provided to Universal by L&A. The subsurface conditions were explored with fourteen (14) borings advanced to depths ranging from 25 to 65 feet, while performing the Standard Penetration Test.

2.3 LABORATORY TESTING

No laboratory testing was conducted as part of this evaluation.

3.0 FINDINGS

3.1 SURFACE CONDITIONS

At the start of our geotechnical exploration, we reviewed aerial photographs available from the Pasco County Property Appraiser's office and TerraServer USA, USGS topographic quadrangle maps, and the USDA Soil Conservation Service (SCS) Soil Survey of Pasco County for relevant information about the site. According to USGS topographic information, the elevation across the property is on the order of +80 feet to +125 feet NGVD. The site is presently vacant land with portions of the site used for ongoing landfill activities.

3.2 GEOLOGY/HYDROLOGY

The regional geology of Pasco County consists of unconsolidated sands with intervals of silts and clay of Pleistocene to recent age. The underlying bedrock is massive limestone of the Eocene Age.

According to the Geologic Map of the State of Florida, 2001, the surficial deposits underlying the site and the general vicinity are classified as the Hawthorn Group (Th) of Miocene geologic age.



The Hawthorn Group sediments are light olive gray and blue gray, poorly to moderately consolidated, clayey sands to silty clays.

The Oligocene Suwannee Limestone (Ts) generally lies below the Hawthorn Group sediments in the region. The Suwannee Limestone generally consists of a white to cream, poorly to well indurated, fossiliferous limestone. The upper portion of the limestone is highly variable due to paleo-weathering it is not uncommon for limestone to be found at relatively shallow depths (< 50 feet) or at depths greater than 100 feet below the land surface.

Two aquifer systems provide water supplies to Pasco County. These two aquifers consist of an uppermost “non-artesian” surficial aquifer and the underlying artesian (Floridan) aquifer.

The “non-artesian” surficial aquifer lies within the unconsolidated quartz sands of Pleistocene to Recent age. The approximate thickness of the “non-artesian” system is forty feet. The regional artesian groundwater flow direction is generally west towards the Gulf of Mexico. The “non-artesian” aquifer which is considered not potable is a source of water for small volume irrigation wells of two-inch diameter or less. The Floridan aquifer lies in massive limestone bedrock and produces high volumes of fresh water.

3.3 SUBSURFACE CONDITIONS

3.3.1 SOIL SURVEY

According to SCS, there are two native, surficial soil groups underlying this site. A summary of selected properties for the identified soil groups on the site is included below in Table 1. The location of these groups can be observed on the SCS Soil Survey Map provided in the Appendix A.

TABLE 1						
SUMMARY OF SOIL INFORMATION						
Soil Map Unit & Name	Hydrologic Soil Group	Water Table Type	SHWT Depth	Shrink-Swell Potential	Corrosion Risk	
					Steel	Concrete
32-Lake fine sand, 0 to 5 percent slopes	A	---	>6'	Low	Low	High
72-Orlando fine sand, 0 to 5 percent slopes	A	---	>6'	Low	Low	High

3.3.2 SOIL BORINGS

The boring locations and subsurface conditions are illustrated in Appendix B. L&A was responsible for and has verified to Universal that boring data was under the direction of a Florida-licensed Professional Geologist and the data provided is accurate. Universal has relied on this data for our geotechnical evaluation. The general



subsurface soil profile on the site, based on the soil boring information provided, is described below. For more detailed information, please refer to the boring logs.

The subsurface stratigraphy encountered at the boring locations (June 2017) generally consists of clayey sand and sandy clay followed by limestone. In Borings B-102 and B-105 sand stratum was found above the upper limestone surface. In Borings 102, 104 and 106 limestone was not encountered within the reach of the borings. These borings were extended to 50 or 55 feet of depth. The limestone was found at shallower depths of 12 to 15 feet within the eastern portion of the proposed Cell #17 area compared to the western portion where it ranged from 30 to 55+ feet.

The subsurface soil conditions appear not to vary significantly across the site based upon a review of the Historical Geotechnical Data Summary Plan provided by Locklear & Associates.

3.4 GROUNDWATER

During the initial geotechnical investigation done in 2000, a Seasonal High Groundwater Table (SHGWT) elevation of 72 feet, NGVD was determined to be appropriate for the site. Since that time, all design and construction efforts have utilized 72 feet, NGVD as the SHGWT. Since the SPT borings performed in the Cell #17 footprint were conducted using mud rotary drilling, it was not possible to determine water table elevations at the time of drilling. Therefore, the historically accepted SHGWT was re-evaluated using site groundwater elevation data. Groundwater elevation data collected at the site between 2007 and 2017 was provided to Universal by L&A. A summary of the data is provided in Appendix C. As shown in the table, the average water table elevation in all site monitoring wells over the 10-year period was 72 feet, NGVD or below (with the exception of three wells which have been previously identified as localized perched aquifer wells). In particular, all of the wells in the vicinity of the proposed Cell #17 footprint showed averages below 71 feet, NGVD. Therefore, the original SHGWT value of 72 feet NGVD remains an appropriate value for this investigation.

3.5 SINKHOLE POTENTIAL EVALUATION

A sinkhole can be defined as “a depression caused by soil and other materials subsiding into an open hole or void below the ground surface.” This phenomenon is not uncommon in karst geology, where soils are underlain by limestone material which has been partially dissolved by the groundwater. The resulting voids in the rock provide paths through which water can travel, taking erodible soil with it.

In much of the Central and Western Florida vicinity, the soil which occurs in close proximity above the limestone consists of a light green to gray clay to silty or clayey sand resulting from marine deposits, commonly termed the “Hawthorn Formation.” This confining layer tends to form a barrier to the vertical movement of groundwater. The groundwater level in the limestone in this area is termed the Florida aquifer and is under pressure. The groundwater level or piezometric surface in the soils above the confining layer frequently differs from that which exists in the underlying porous limestone because the confining layer prevents an interconnected hydrostatic condition. Provided the confining layer remains intact, the two groundwater regimes can remain independent.



The shallow water table is located within the upper sands and rests on top of the confining layer. The upper water table is not confined or under pressure. The water pressure above the top of the confining layer is simply defined by the height, or depth of groundwater which lies above the confining layer. If a well or standpipe were to penetrate the confining layer into the underlying rock, then the water pressure in the deep water table could be evaluated as the level of water within the standpipe. If the pressure causes the water to rise higher than the level of the shallow water table, then the groundwater regime can be described as having a “net upward gradient.” If, however, the water in the upper water table is higher than the water in the standpipe, then the condition exhibits a “net downward gradient.”

If an opening develops in the confining layer, connecting the voids or caverns in the limestone bedrock below to the relatively sandy soils above, then the soil and groundwater conditions might become unbalanced. In some instances, the clay in the confining layer soils may crack, either from shrinkage, such as may result from dry periods when the shallow water table is absent, or from shifting of the limestone bedrock. In other cases, these soils have little clay content, and are inherently more susceptible to erosion. The result can be a breach in the confining layer. If the groundwater has a net downward gradient, then the erodible soils lying both above and below the confining layer can “ravel” through the opening in the confining layer and/or into cavities and fractures in the bedrock, similar to the behavior of sand falling through the orifice of an hourglass. Over a period ranging from hours to possibly many years, the loss of material causes the soil above to loosen until it is incapable of supporting the material above, and it subsides under the weight. The resulting sinkhole can damage or destroy man-made structures on the near-surface soils.

Although breaches of the confining layer are fairly common, it generally takes a long time for the loose zone to extend to the surface and cause a sinkhole. Therefore, even in areas of “high sinkhole potential”, the incidence of surface expressions (sinkholes) can be infrequent. Although some notable Florida sinkholes have been large, most of the sinkholes observed within the Central Florida area have been smaller than 25 feet in diameter. In Western Florida, sinkholes typically can be even smaller, generally in the range of 10 feet in diameter or less.

Sinkhole activity may be indicated by the presence of some of the following conditions or occurrences:

- a loose or raveled zone within the sandy overburden soil, or clay confining layer, indicating movement of the soils into voids into the limestone below;
- the presence of an opening in the confining layer, as indicated by boring through the layer and finding either little or no thickness of clay;
- reduced water pressure in the soil voids (“pore pressure”) with increasing depth, indicating downward flow of water;
- depressed, or absent groundwater table;
- depression of the top of, or opening, or voids within, the limestone bedrock; and



- loss of drilling fluid circulation while advancing a borehole.

No loose or ravelled soil zones were noted above the upper limestone surface in the borings provided to us by L&A (June 2017). The majority of the borings completed to limestone exhibit a competent protective cohesive soil stratum above the limestone. In addition, none of the borings appear to have experienced total loss of drilling fluid circulation. Based on the provided boring data the upper limestone zone appears to be competent. The majority of the borings exhibit N-values of 20 or higher within the upper limestone zone. Based on our experience the limestone with N-values less than 10 can be considered weathered. Of the borings reviewed, borings B-3A, MW 3B, B-33, B-36 and B-40 had low N values at the limestone surface and B-35 had a N value of 2 at 25 feet bls within the limestone, B-44 with N values of 3 and 5 and DCLOI-13 with N values 2 and 3, and B-103 encountered N-values of 4 or less at the limestone surface. All of the borings terminated within the limestone were terminated with N-value of 5 or higher with the majority of the borings terminated in Limestone with an N value of 20 or higher.

Over 30 feet of medium stiff to stiff clay was encountered in boring B-131 with N-values ranging from 19 to 8 indicating no breach within this confining unit. While the N-values decreased with depth in the clay, no loss of drilling fluid was noted within this layer and again stiff clay was noted directly above the limestone. Additionally, B-131 encountered N-values of 6 and 8 within the upper limestone zone which was followed by limestone with N-value of 54. However, no clay or sand was encountered within the weathered limestone indicating no raveling of above soil has occurred into the rock formation. A partial loss of drilling fluid was noted in B-131 at 38 feet bls (Elev. 41.6 NGVD); however this loss was noted within the limestone which is a common occurrence within the rock formations in west central Florida and is not indicative of systematic weakening, raveling, or potential sinkhole activity.

The potential for sinkhole occurrence is low based upon no recorded loss of circulations coincidental with low strength soils. This is also based upon no voids being detected within the limestone and sample recovery with no raveled soils. While N values of less than 10 were noted at the boring locations above, coincidental factors indicative of sinkhole activity were not encountered, i.e. raveled soils, voids, loss of circulation etc.

4.0 CONCLUSIONS

Our conclusions are made based upon a review of the information referenced herein and our understanding of the proposed construction. If the landfill plan, sections, or grading plans change from those discussed previously, we request the opportunity to review and possibly amend our conclusions with respect to those changes.

5.0 LIMITATIONS

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible subsurface variations. An Association of Engineering Firms Practicing in the Geosciences (ASFE) publication, "Important Information About This Geotechnical Engineering Report" appears in Appendix D, and will help explain the nature of geotechnical issues. Further, we present



documents in Appendix D: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

Do not apply any of this report's conclusions or recommendations if the nature, design, or location of the facilities is changed. If changes are contemplated, UES must review them to assess their impact on this report's applicability. This report presents an evaluation of based upon data provided by L&A. Universal was not involved in direct supervision of the field work as it was performed and therefore assumes that work performed and data provided is accurate. Also, note that UES is not responsible for any claims, damages, or liability associated with any other party's interpretation of this report's subsurface data or reuse of this report's subsurface data or engineering analyses without the express written authorization of UES.

* * * * *



APPENDIX A





UNIVERSAL
ENGINEERING SCIENCES

PROPOSED CLASS III LANDFILL, CELL 17
NWC OF ENTERPRISE ROAD AND AUTON ROAD
DADE CITY, PASCO COUNTY, FLORIDA

SITE LOCATION MAP

CLIENT: ANGELO'S MATERIALS

DRAWN BY: SC

DATE: AUGUST 25, 2017

SCALE: NOT TO SCALE

PROJECT NO: 0830.1500202

REVIEWED BY: DJ

APPENDIX: A



UNIVERSAL
ENGINEERING SCIENCES

PROPOSED CLASS III LANDFILL, CELL 17
NWC OF ENTERPRISE ROAD AND AUTON ROAD
DADE CITY, PASCO COUNTY, FLORIDA

SITE AERIAL PHOTOGRAPH

CLIENT: ANGELO'S MATERIALS

DRAWN BY: SC

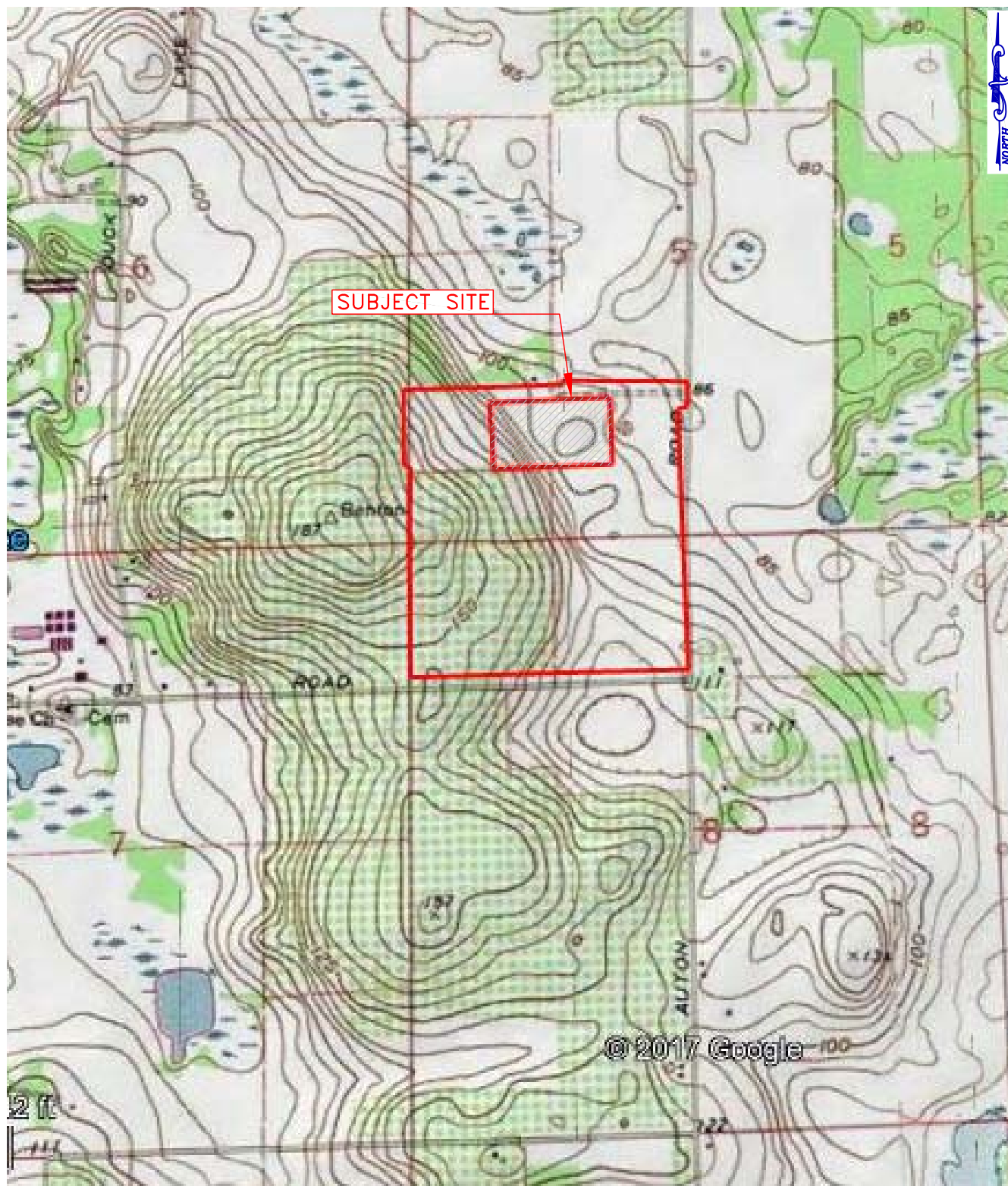
DATE: AUGUST 25, 2017

SCALE: NOT TO SCALE

PROJECT NO: 0830.1500202

REVIEWED BY: DJ

APPENDIX: A



UNIVERSAL
ENGINEERING SCIENCES

PROPOSED CLASS III LANDFILL, CELL 17
NWC OF ENTERPRISE ROAD AND AUTON ROAD
DADE CITY, PASCO COUNTY, FLORIDA

SITE TOPOGRAPHIC MAP

CLIENT: ANGELO'S MATERIALS	DRAWN BY: SC	DATE: AUGUST 25, 2017
SCALE: NOT TO SCALE	PROJECT NO: 0830.1500202	REVIEWED BY: DJ
		APPENDIX: A



UNIVERSAL
ENGINEERING SCIENCES

PROPOSED CLASS III LANDFILL, CELL 17
NWC OF ENTERPRISE ROAD AND AUTON ROAD
DADE CITY, PASCO COUNTY, FLORIDA

SCS SOIL SURVEY MAP

CLIENT: ANGELO'S MATERIALS

DRAWN BY: SC

DATE: AUGUST 25, 2017

SCALE: NOT TO SCALE

PROJECT NO: 0830.1500202

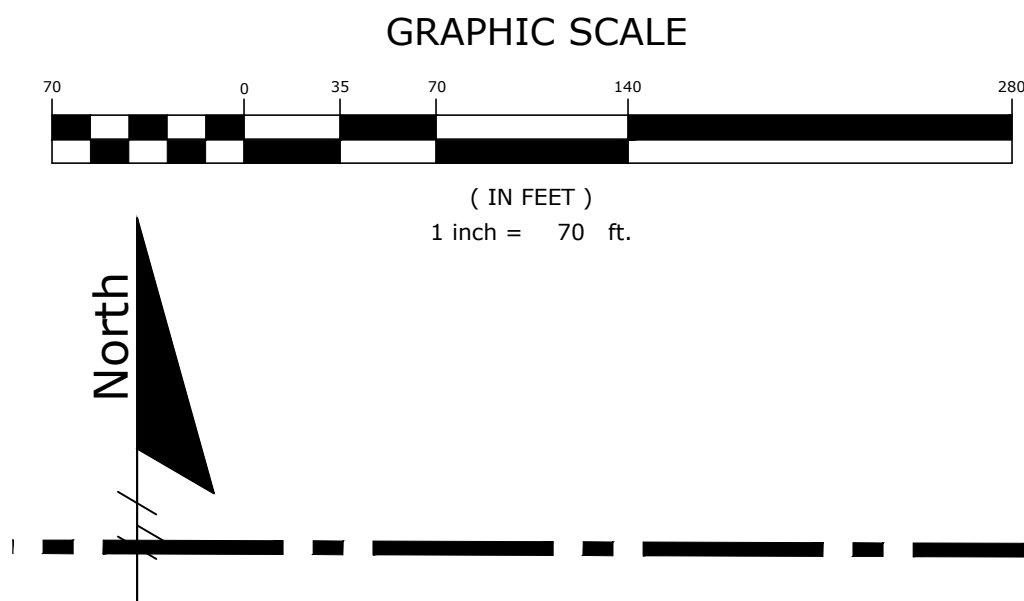
REVIEWED BY: DJ

APPENDIX: A

APPENDIX B



C:\Civil 3D Projects\02000-144-14_MONITORING WELLS\CADD\Site\ACAD-02000-144-14 Boring Locations.dwg PLOT DATE 6/7/2018 11:36 AM BY MAF



LEGEND

— x — x — x — x — PERIMETER FENCE

— — — — — PROPERTY BOUNDARY

— — — — — LANDFILL FOOTPRINT (AT BUILD OUT)

— · — · — · — · — LANDFILL CELLS

⊙ GAS PROBE LOCATION

⊕ BORING LOCATION

● PIEZOMETER LOCATION

⊗ PIEZOMETER AND BORING LOCATION

⊕ GROUNDWATER MONITORING WELL LOCATION

ANGELO'S RECYCLED MATERIALS BORINGS

BORINGS DONE AS PART OF 2004 SUBSIDENCE REMEDIATION

MINING EXPLORATION BORINGS PERFORMED PRIOR TO 2000

BORINGS PERFORMED DURING ORIGINAL 2000 GEOTECHNICAL INVESTIGATION

NO.	DATE	REVISION DESCRIPTION	BY



**Locklear
& Associates**

4140 NW 37th Place, Suite A
Gainesville, Florida 32606
Phone: 352.672.6867 Fax: 352.692.5390
Certificate of Authorization No. 30066

PROJECT TITLE:

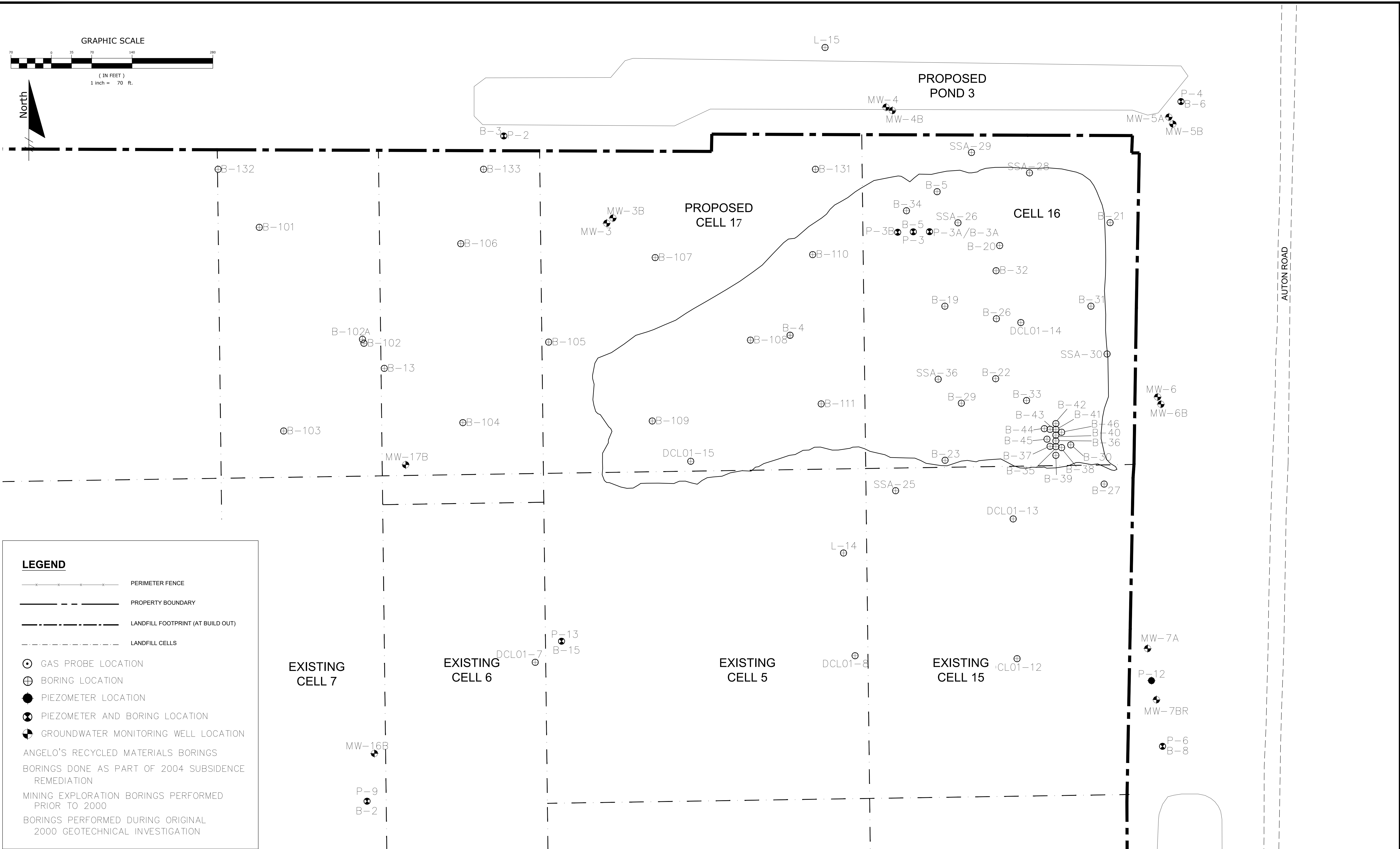
HISTORICAL GEOTECHNICAL DATA SUMMARY PLAN
ENTERPRISE RECYCLING & DISPOSAL FACILITY
CLASS III LANDFILL MODIFICATION
DADE CITY, PASCO COUNTY, FLORIDA

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

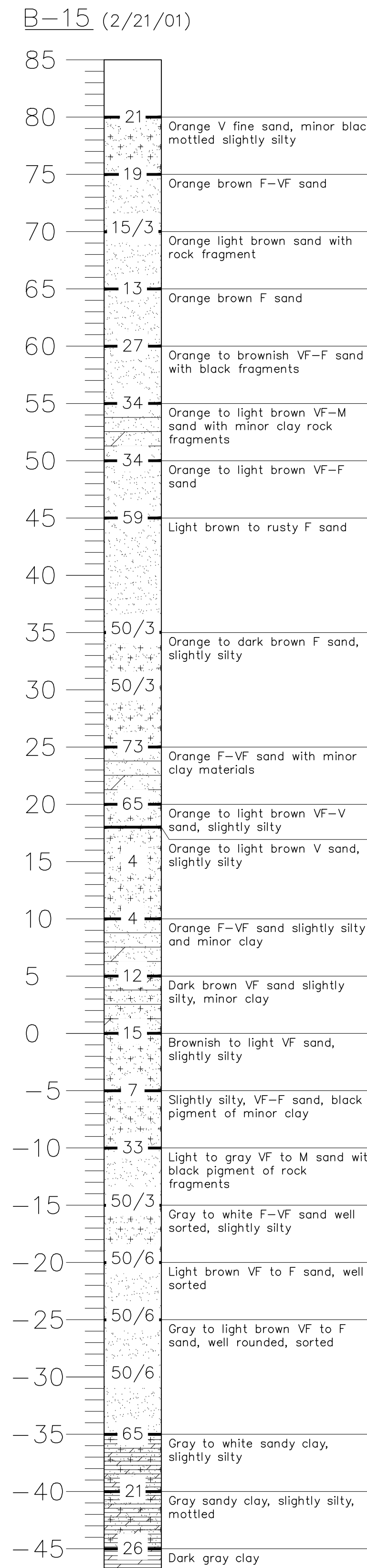
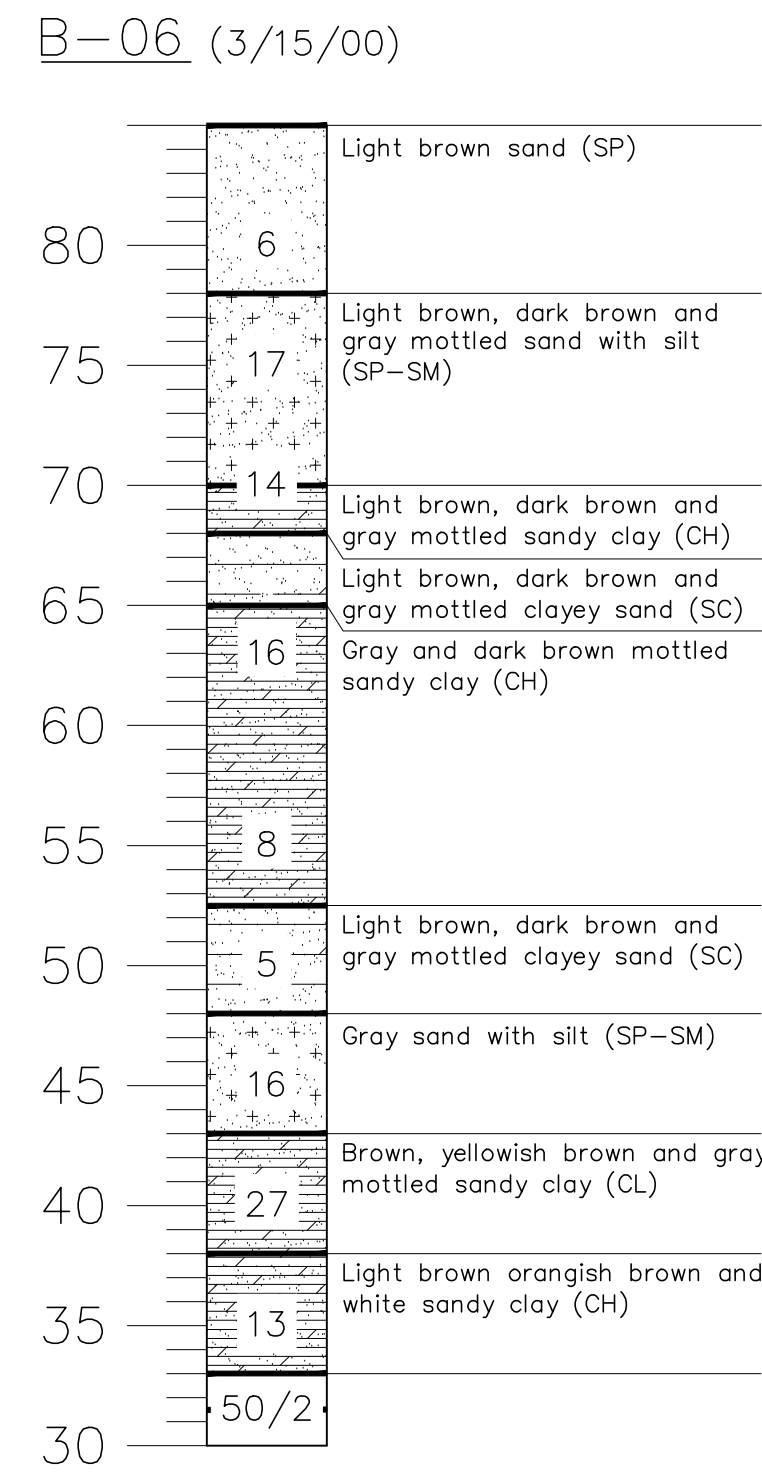
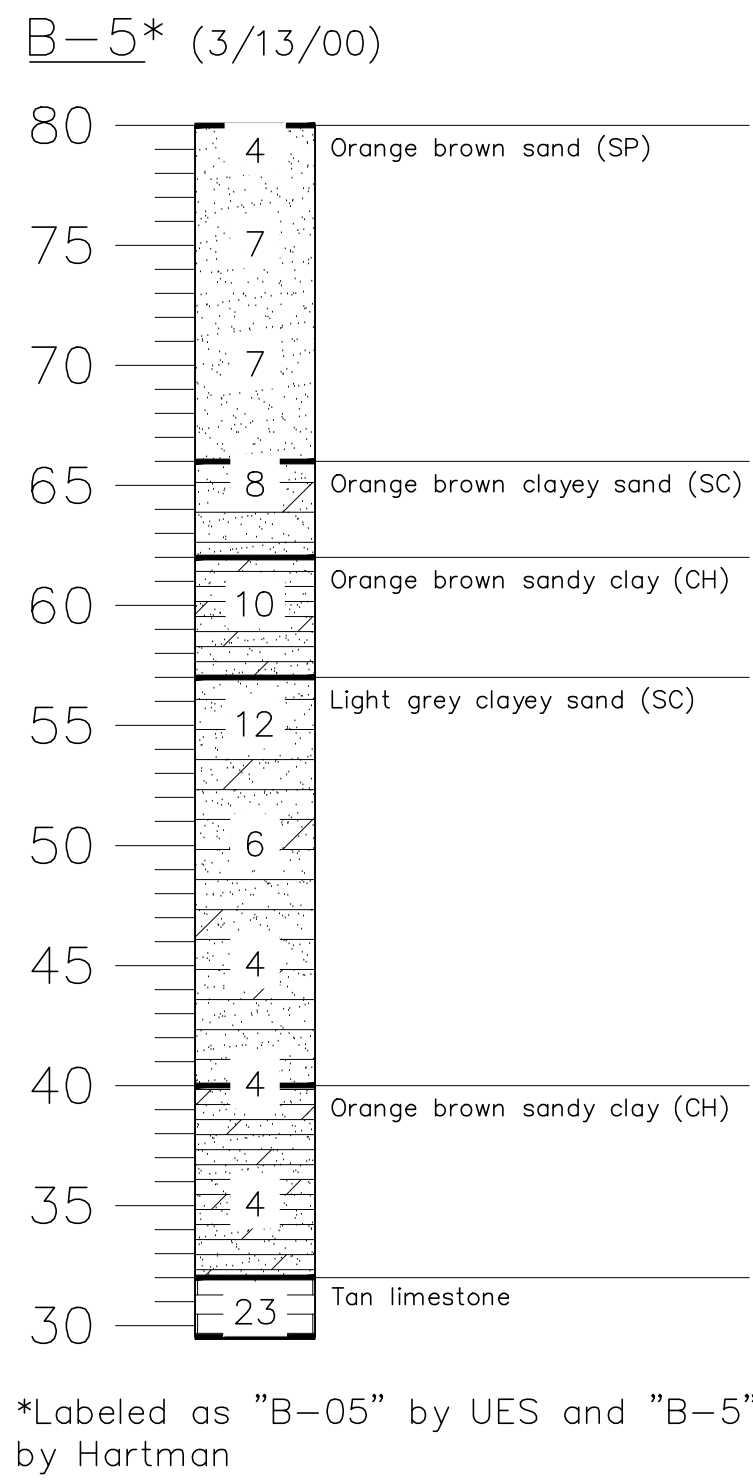
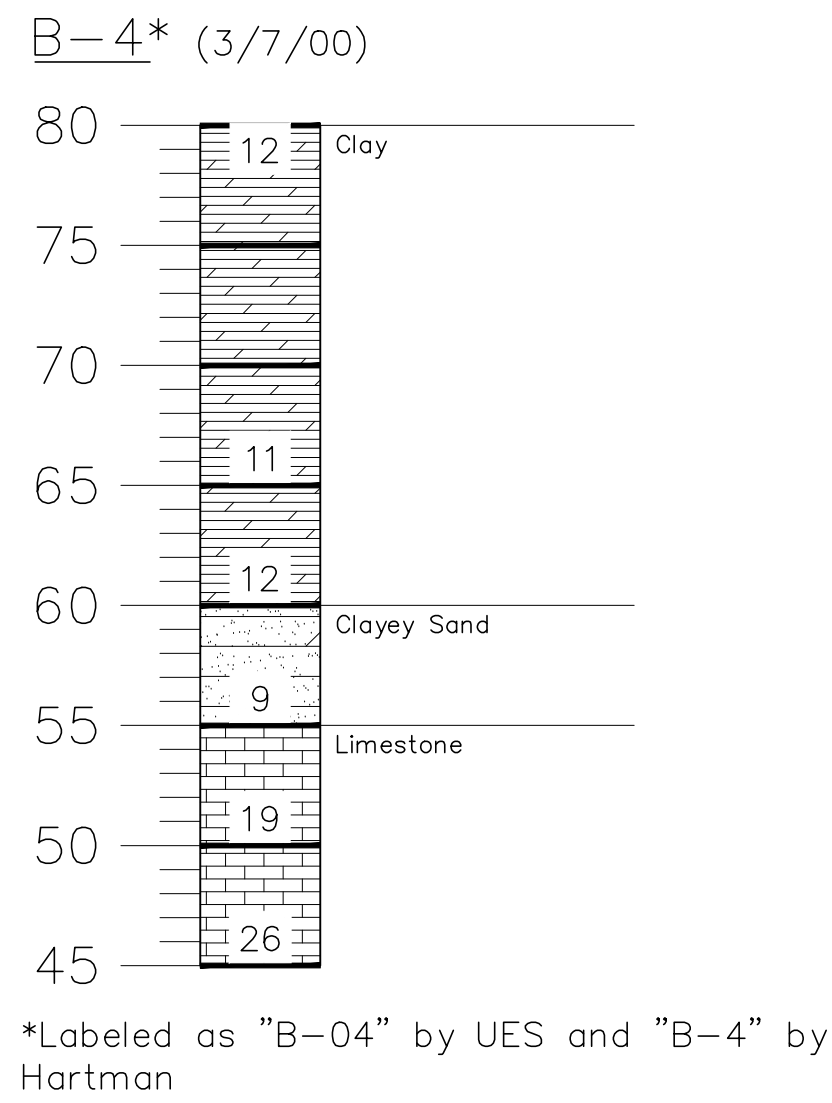
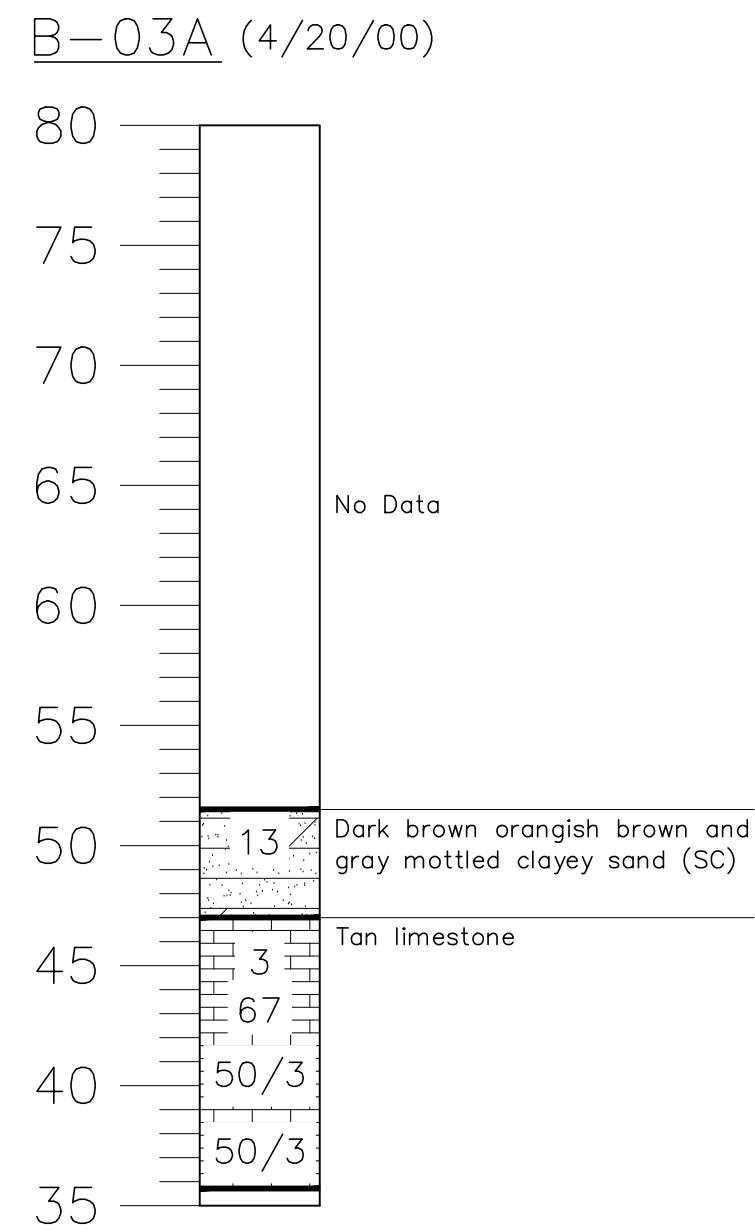
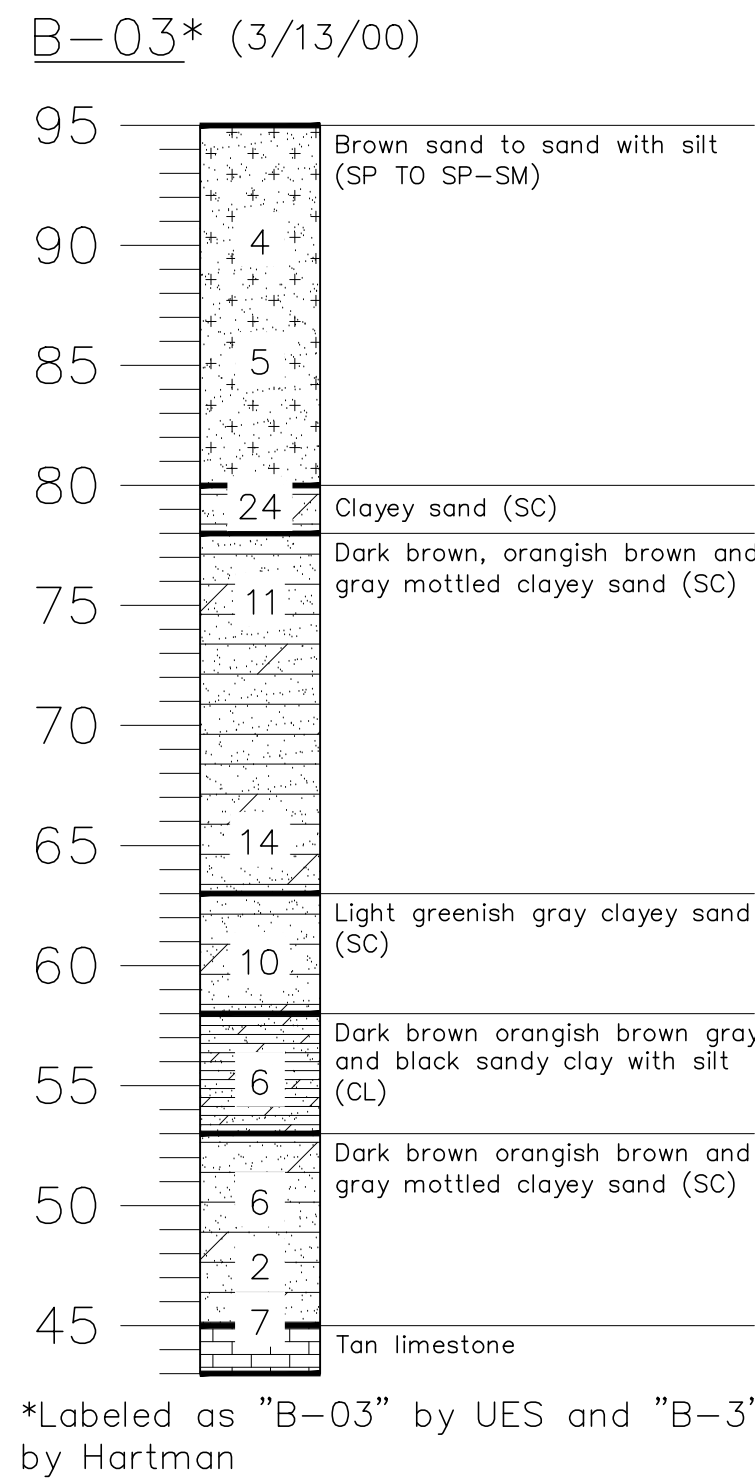
SHEET TITLE:

REV BORING LOCATION MAP

PROJECT NO.:	02000-144-14
SCALE:	AS SHOWN
DATE:	DECEMBER 2014
DRAWING:	C1.10

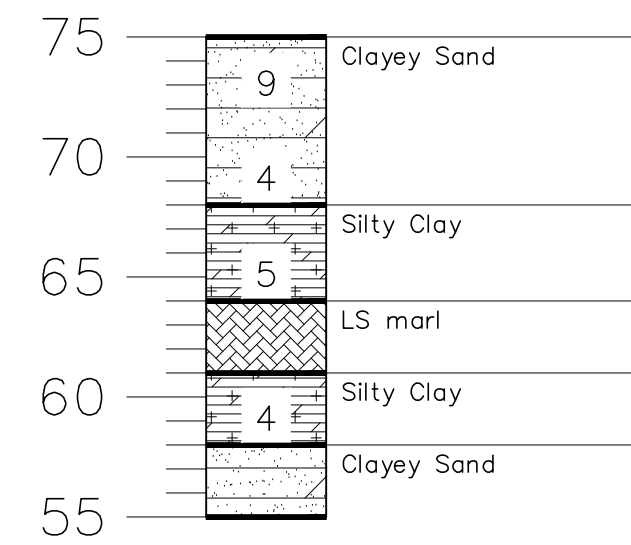


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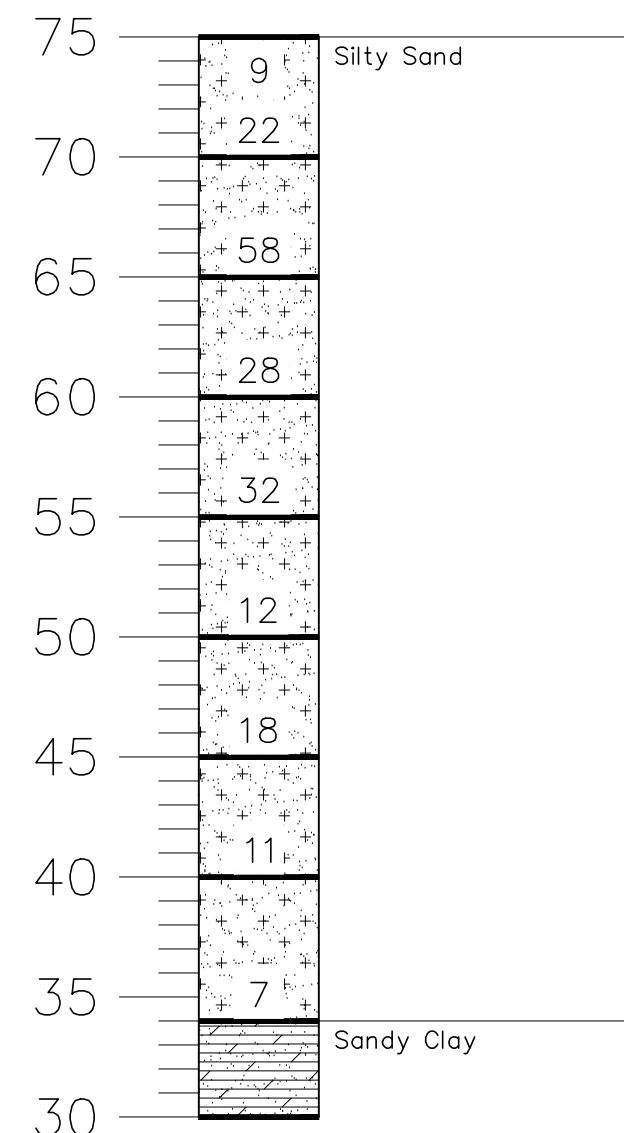


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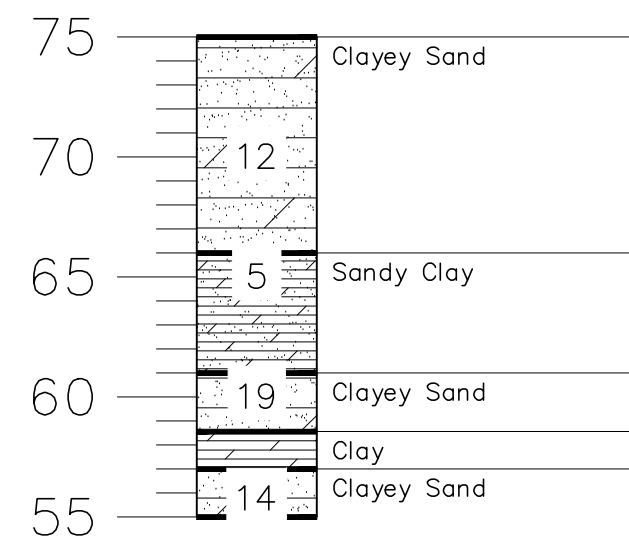
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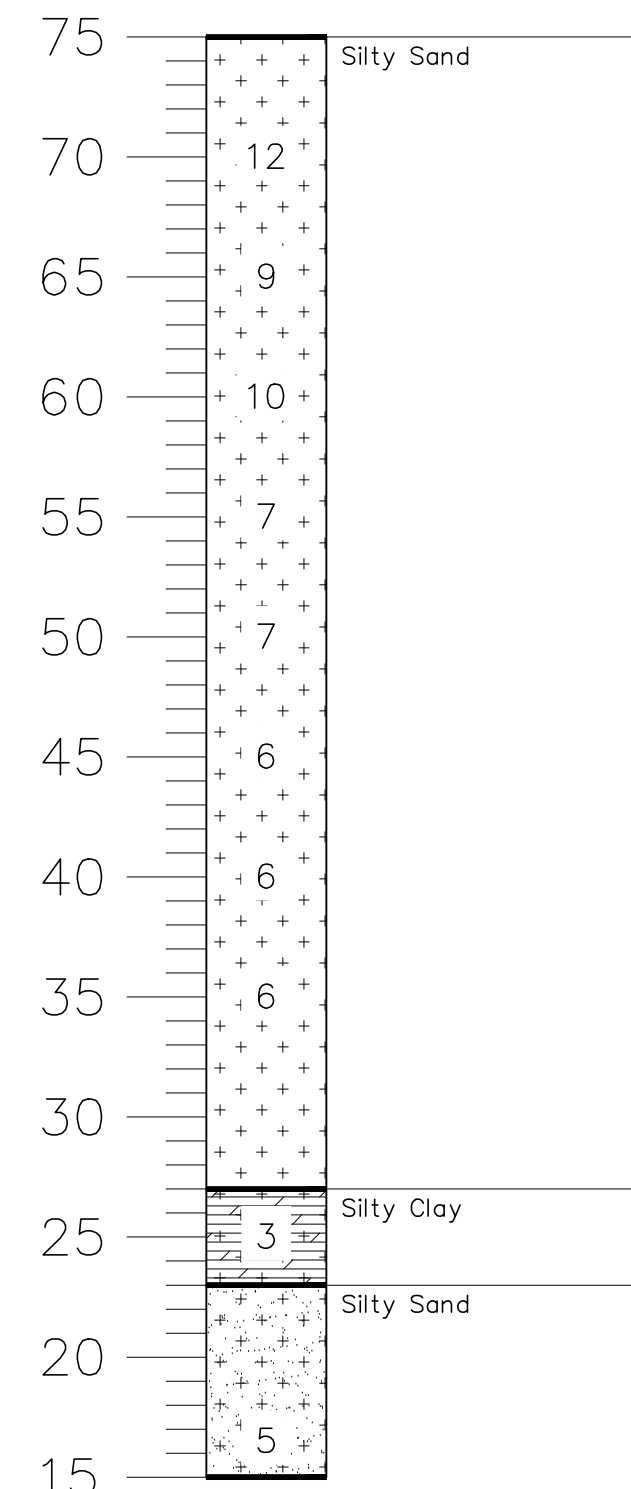
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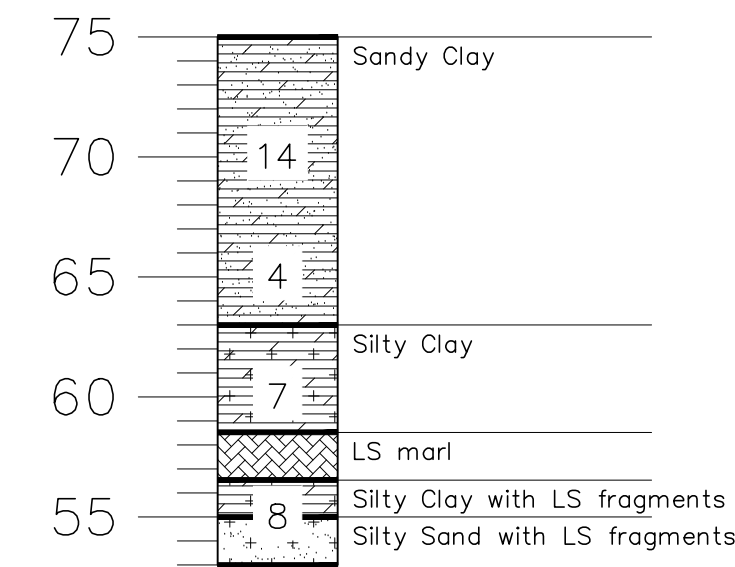
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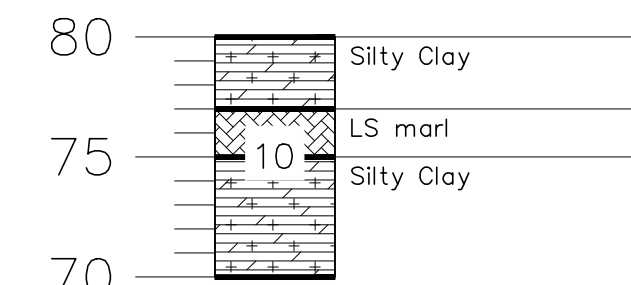
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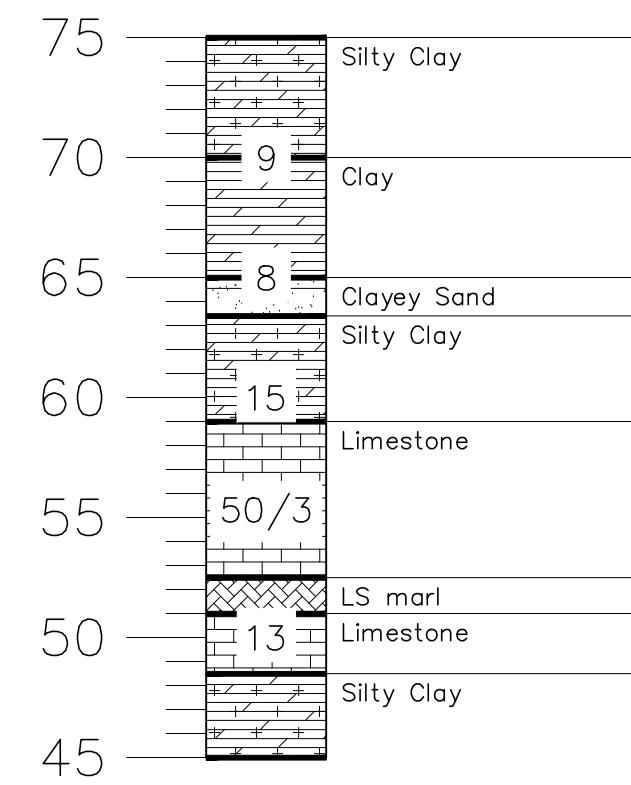
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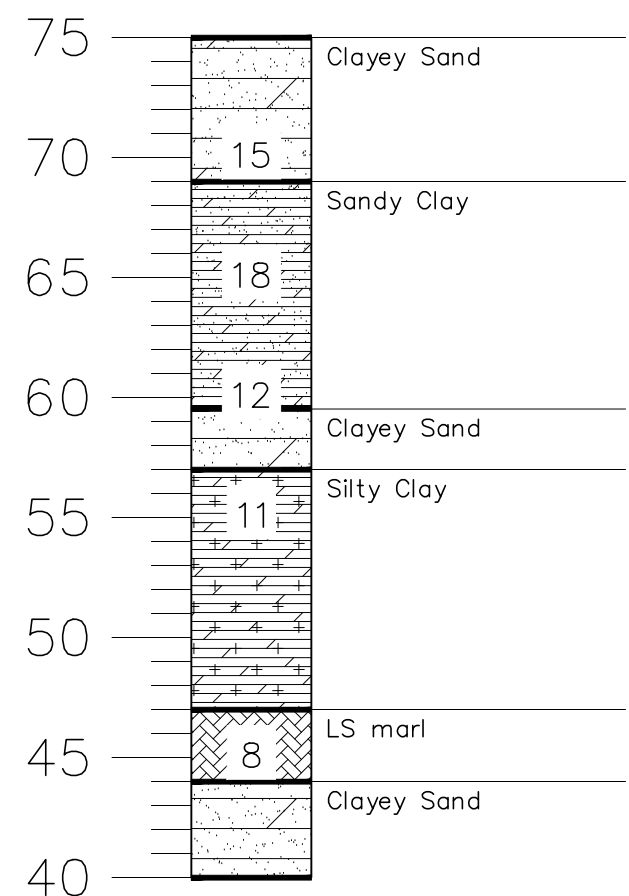
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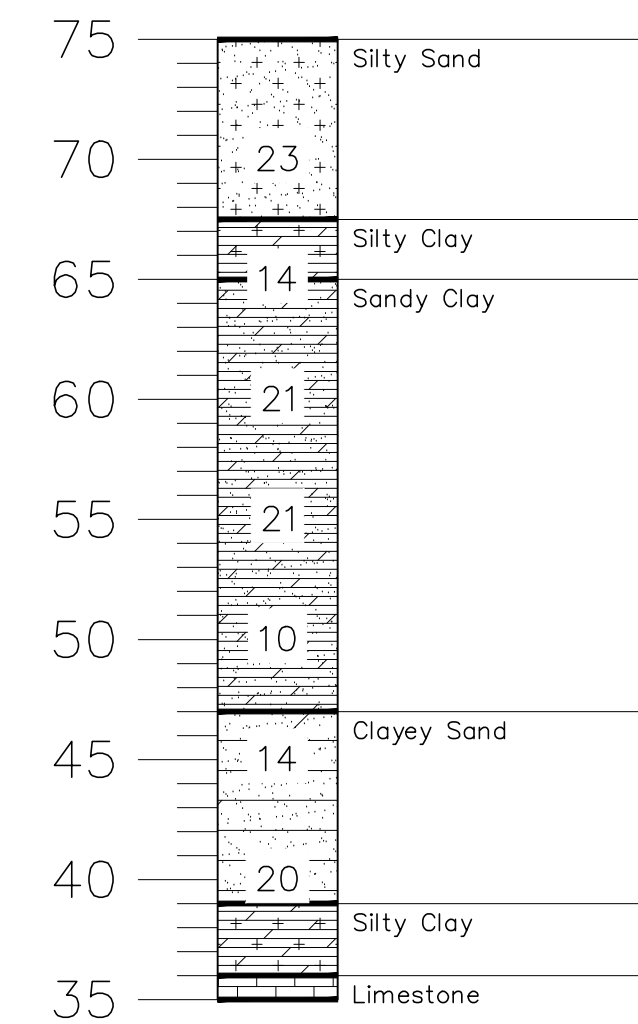
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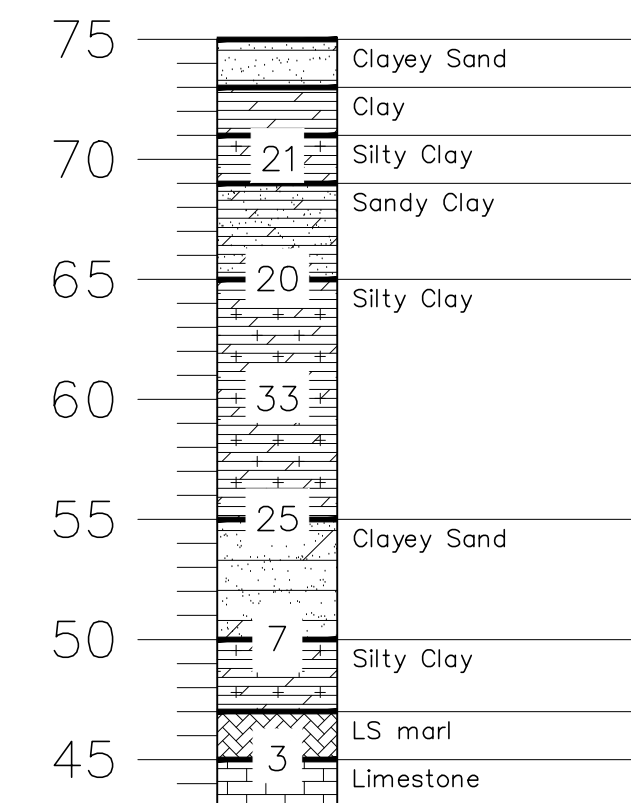
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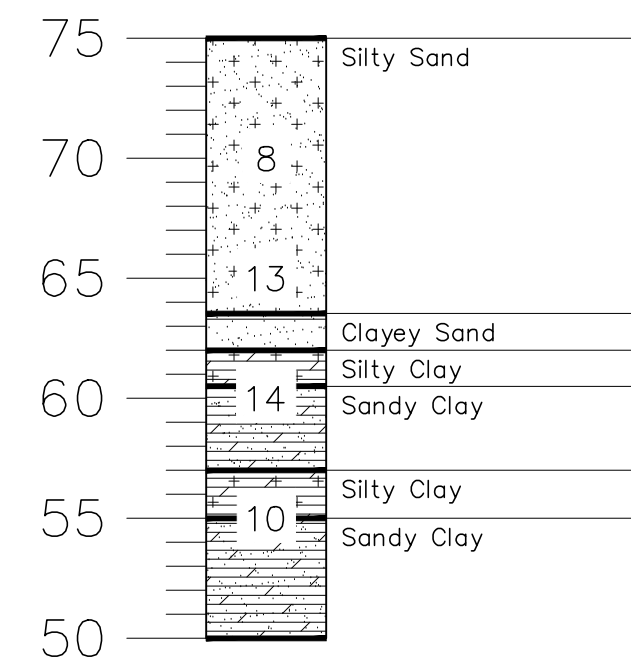
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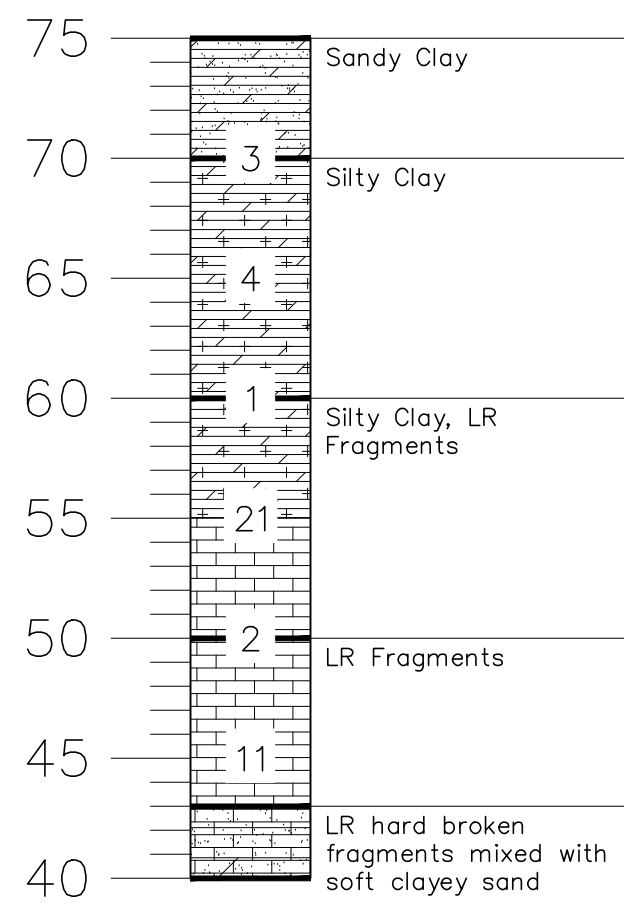
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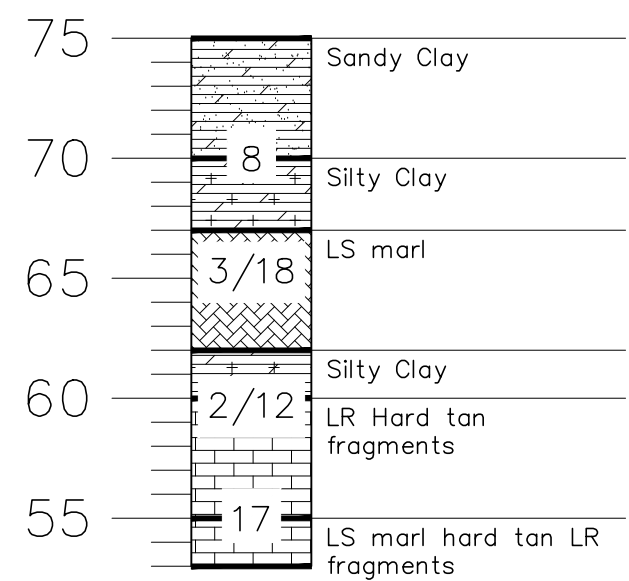
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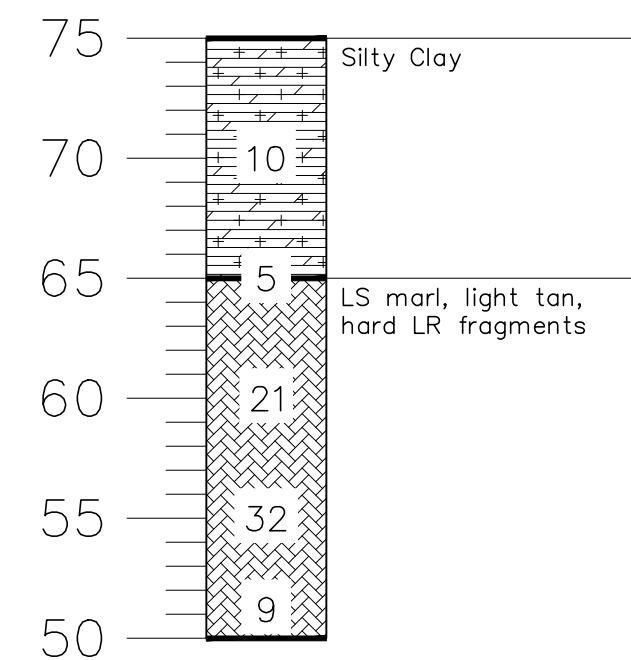
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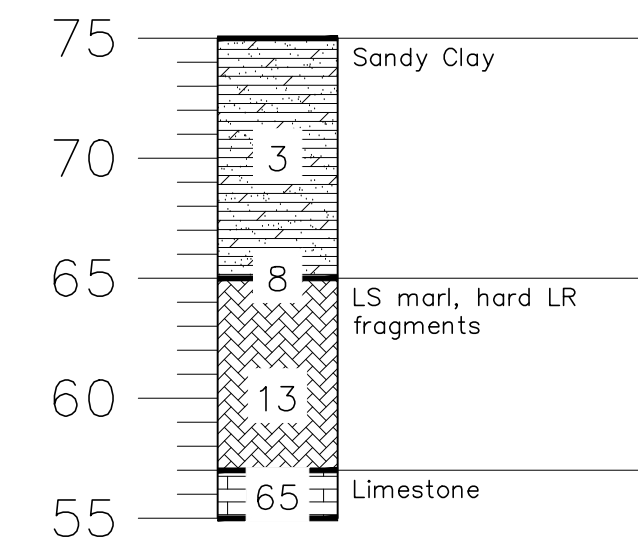
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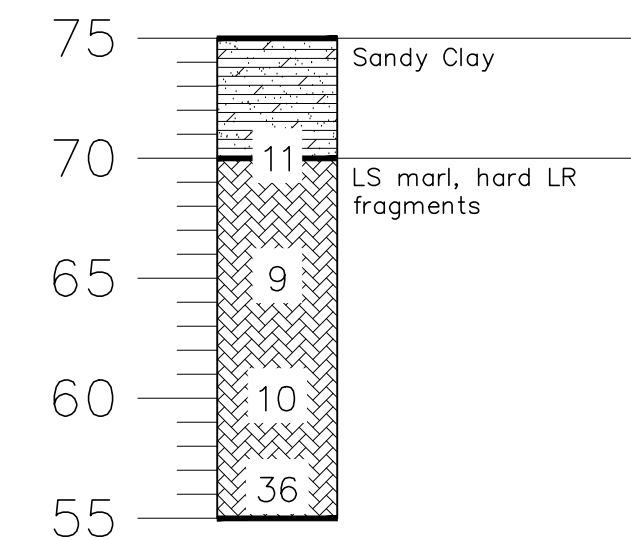
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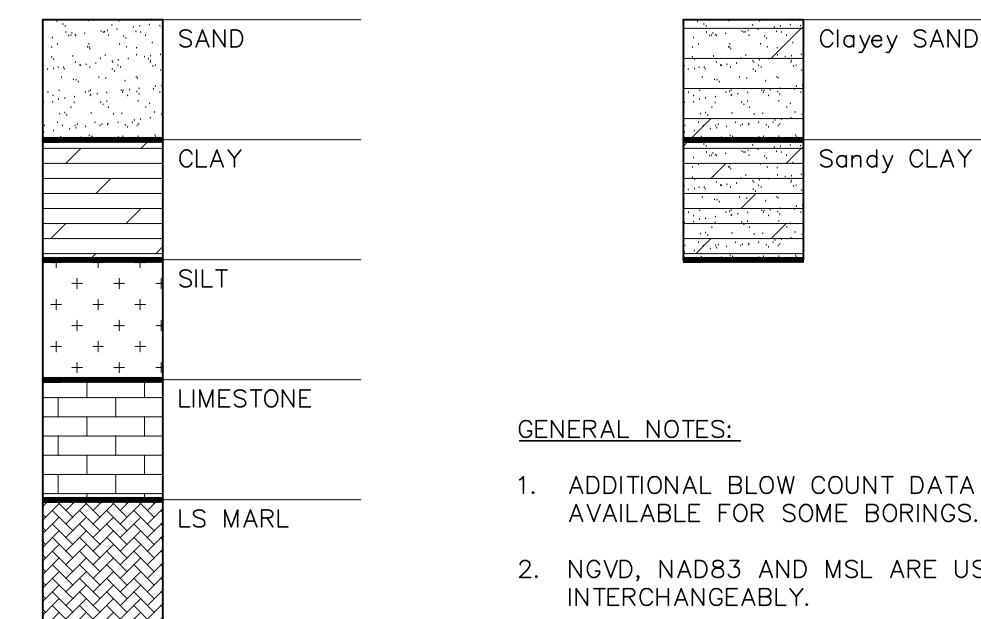
B-38 (1/16/04)



B-39 (1/16/04)



BORING LOG LEGEND



GENERAL NOTES:

- ADDITIONAL BLOW COUNT DATA IS AVAILABLE FOR SOME BORINGS.
- NGVD, NAD83 AND MSL ARE USED INTERCHANGEABLY.

NO.	DATE	REVISION DESCRIPTION	BY



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Phone: 352.672.6867 Fax: 352.692.5390
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PROJECT TITLE:
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ENTERPRISE RECYCLING & DISPOSAL FACILITY
CLASS III LANDFILL MODIFICATION
DADE CITY, PASCO COUNTY, FLORIDA**

LISA J. BAKER

DESIGNED BY

LIB

DRAWN BY

MAF

CHECKED BY

JDL

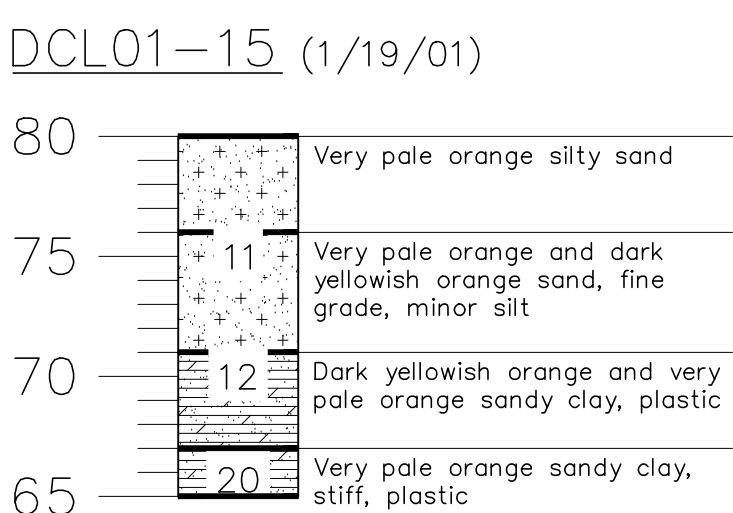
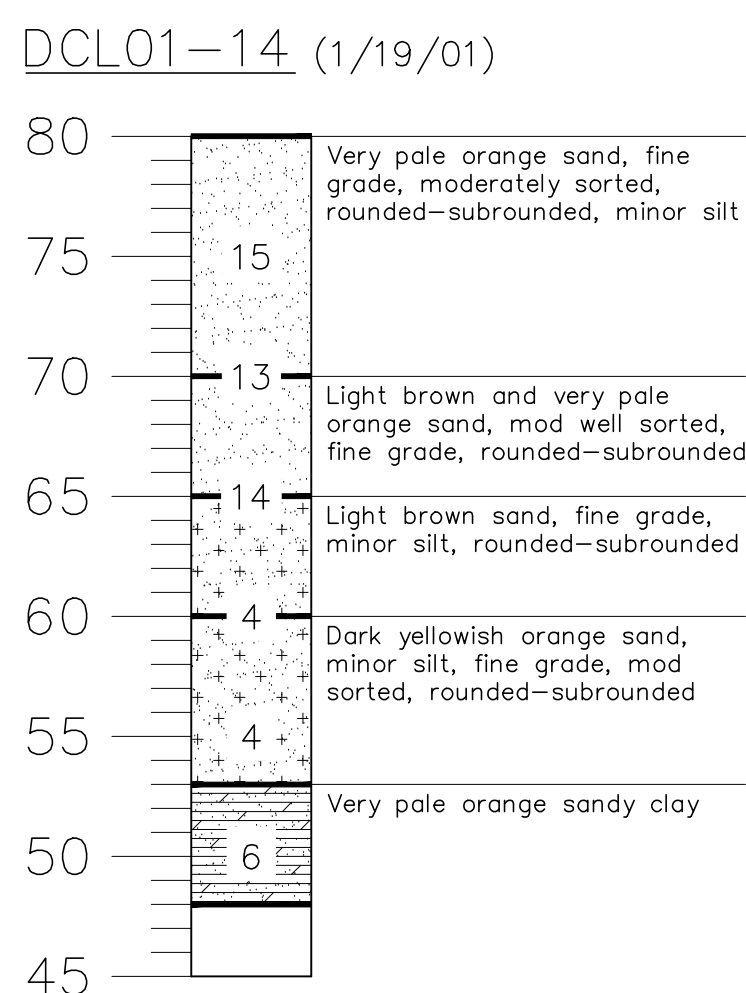
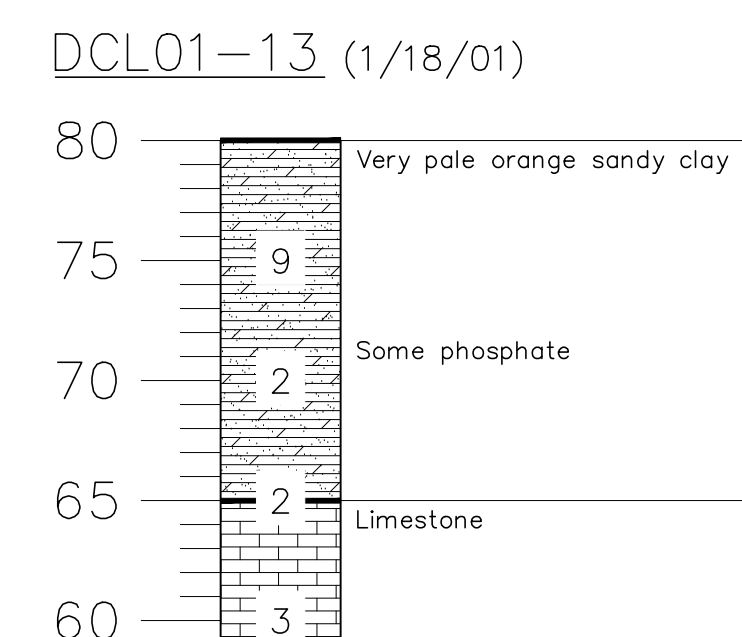
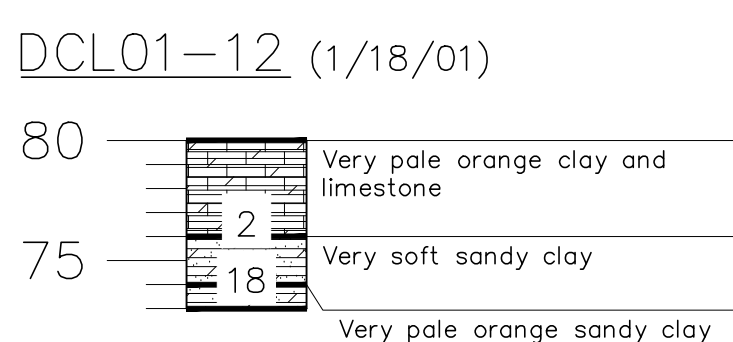
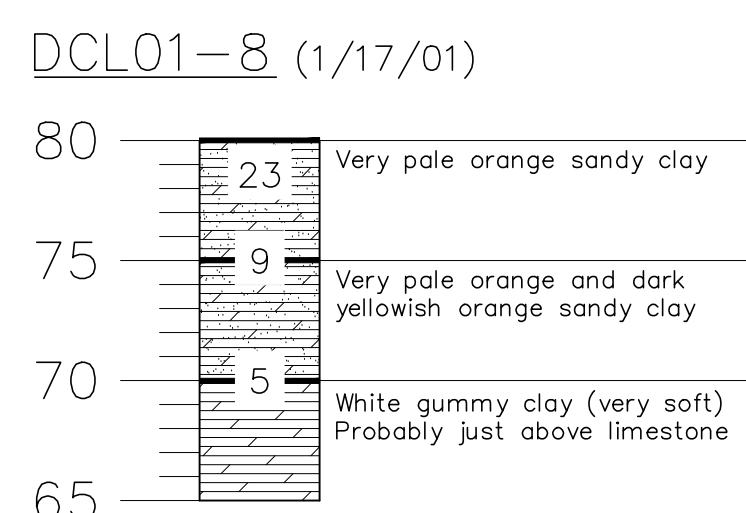
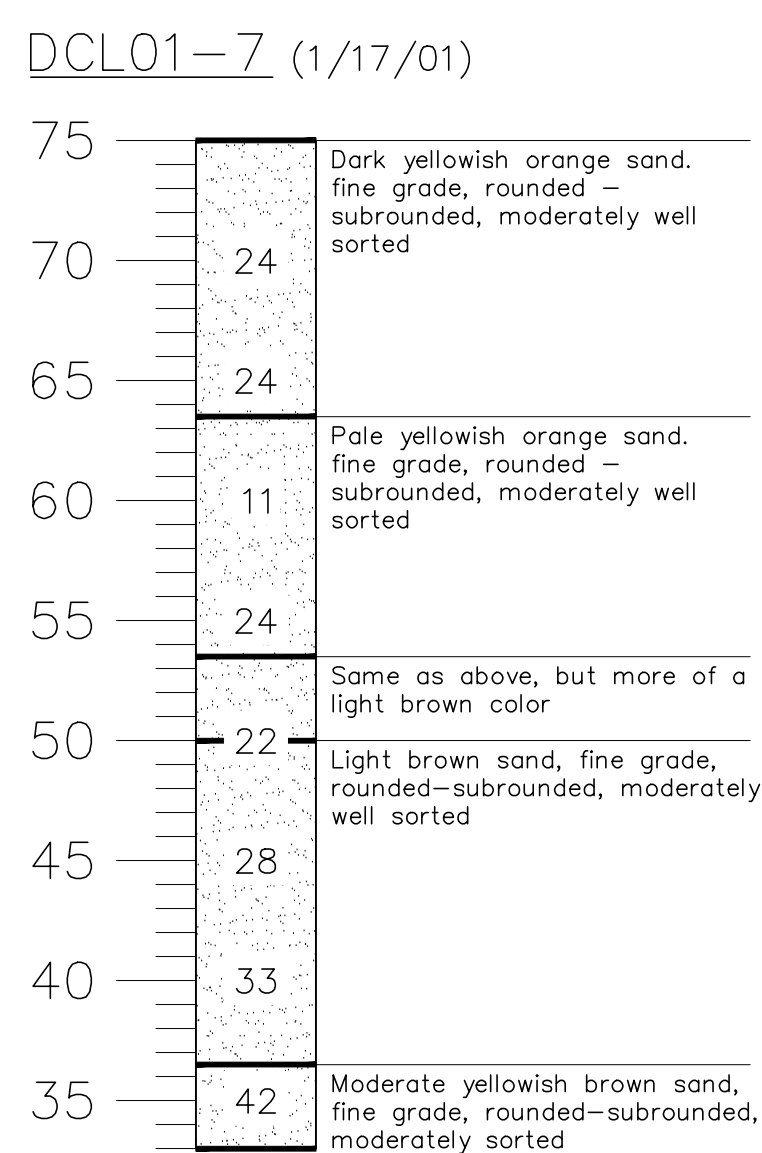
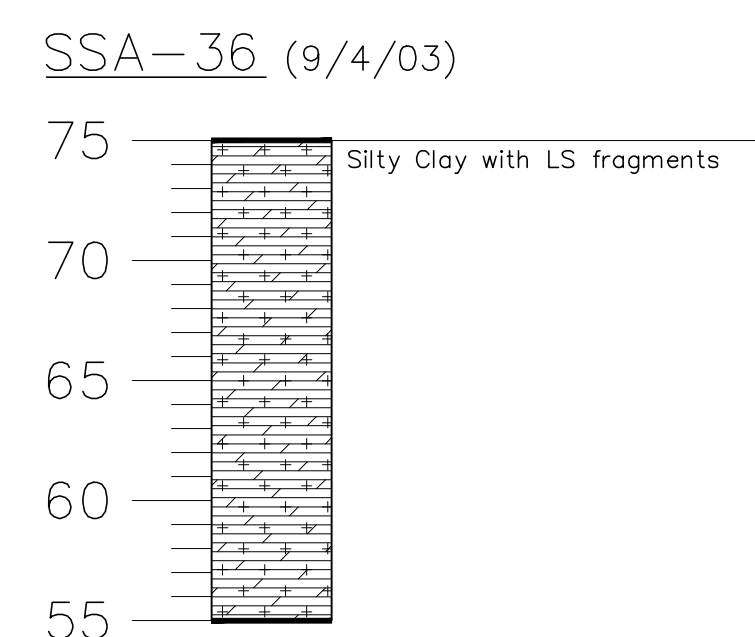
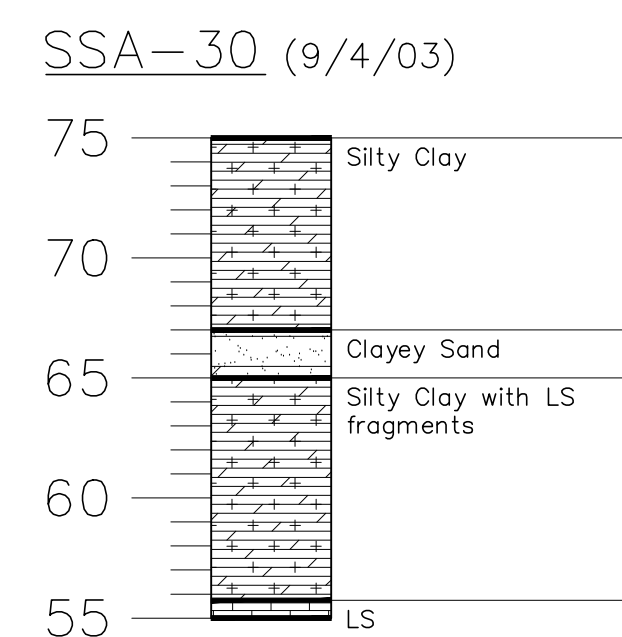
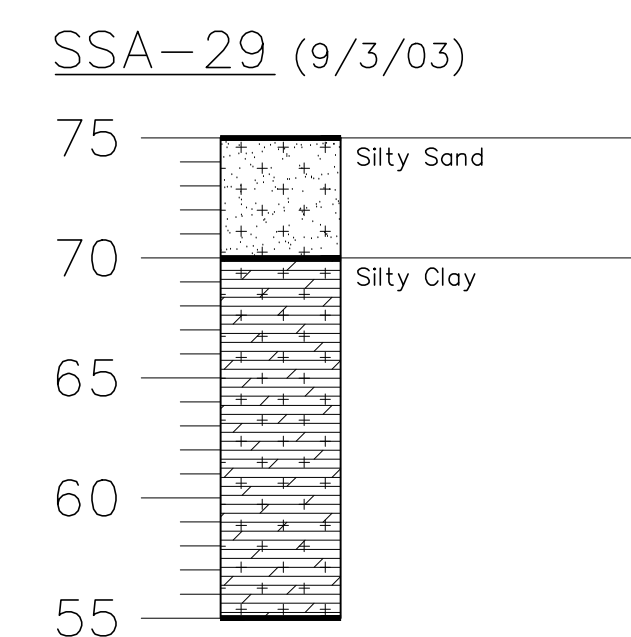
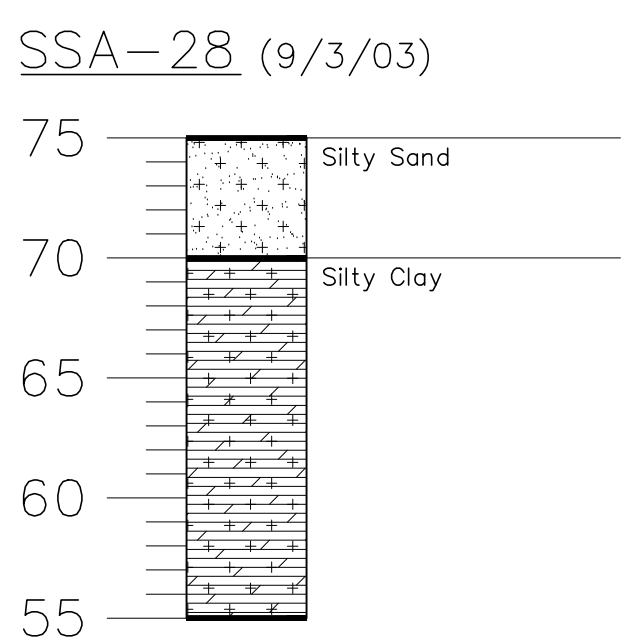
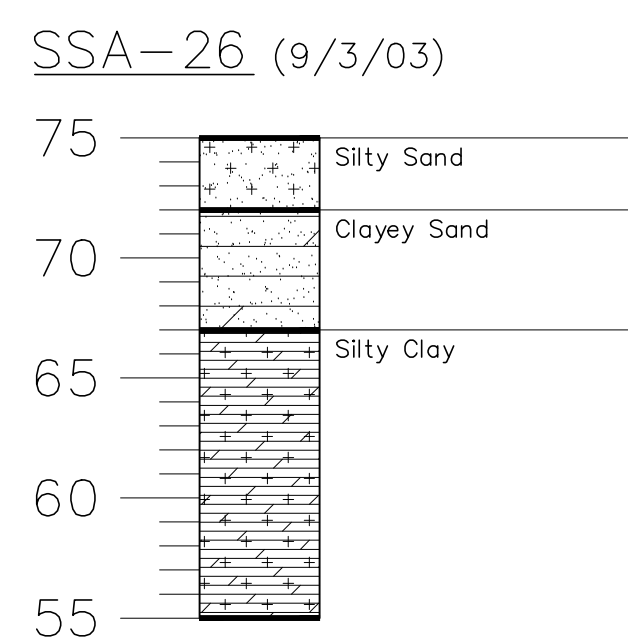
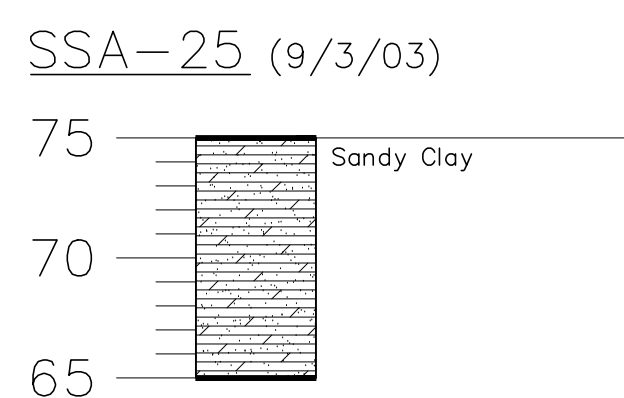
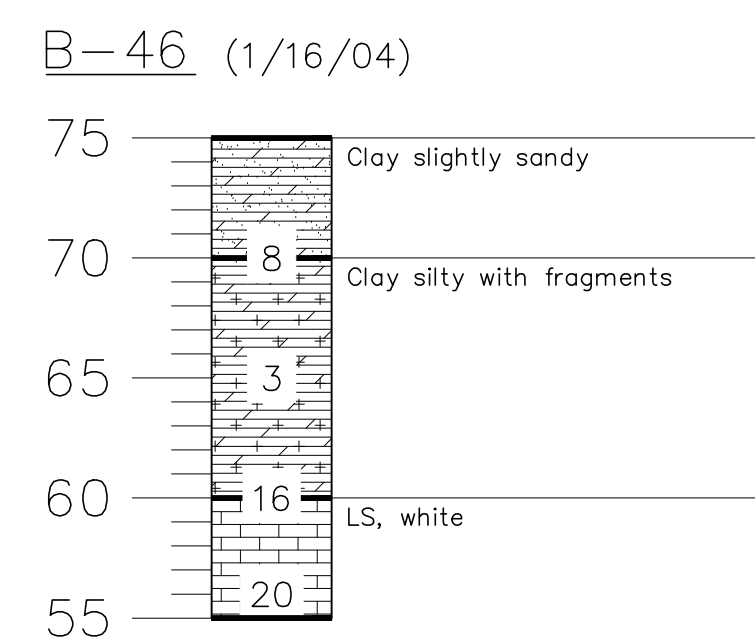
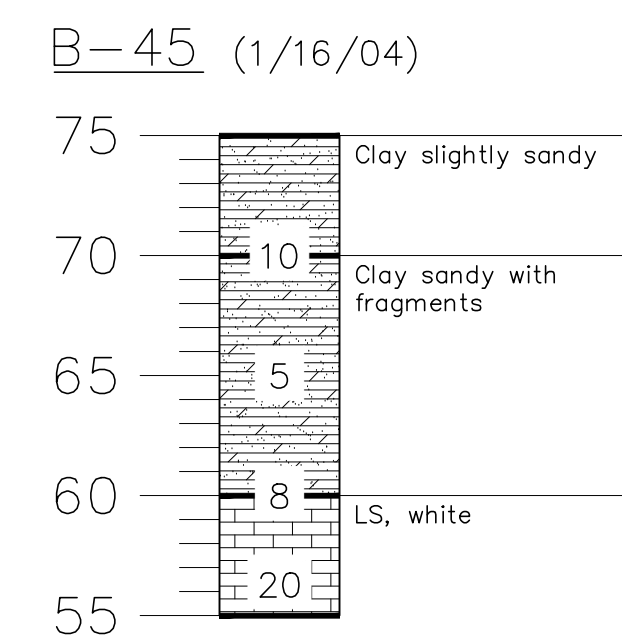
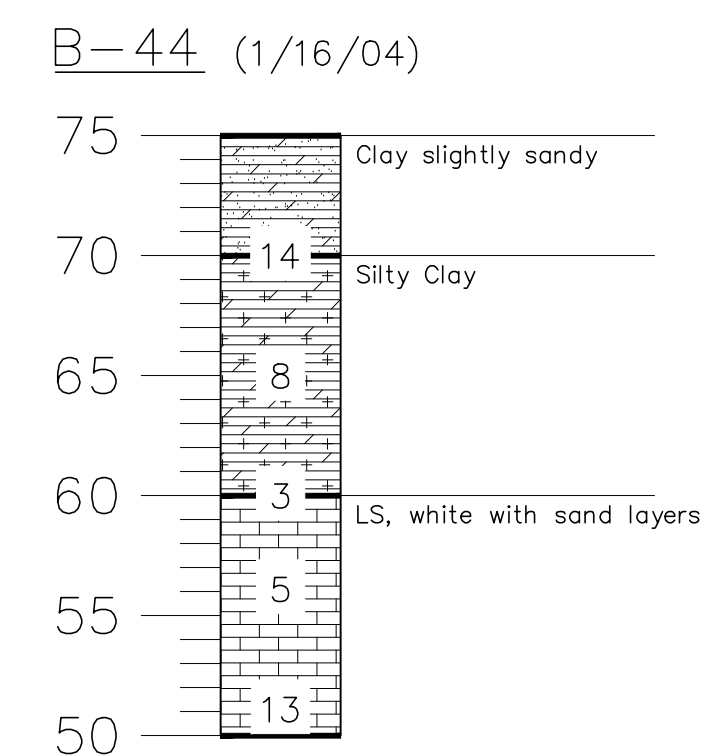
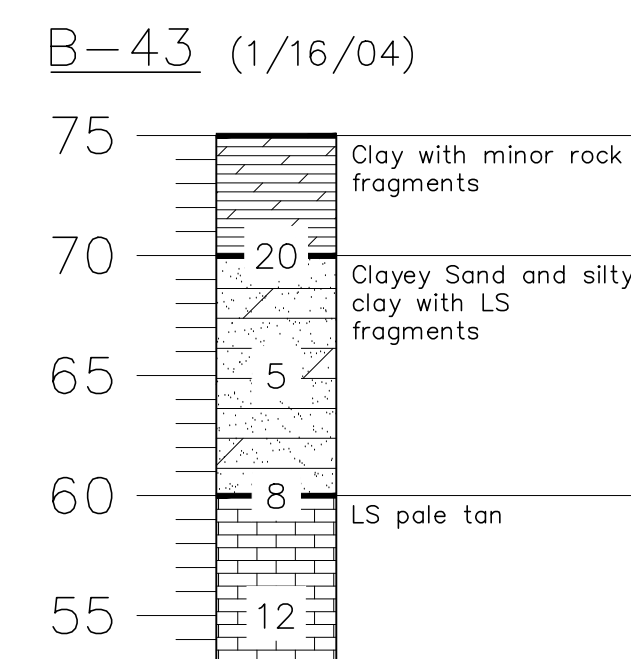
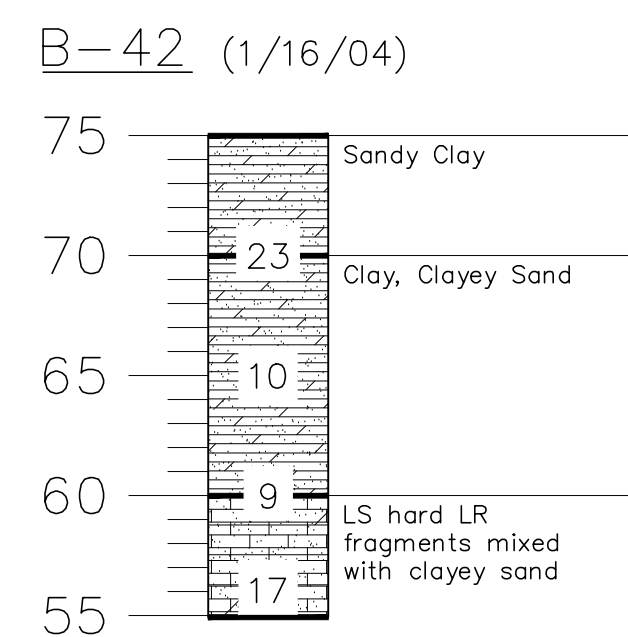
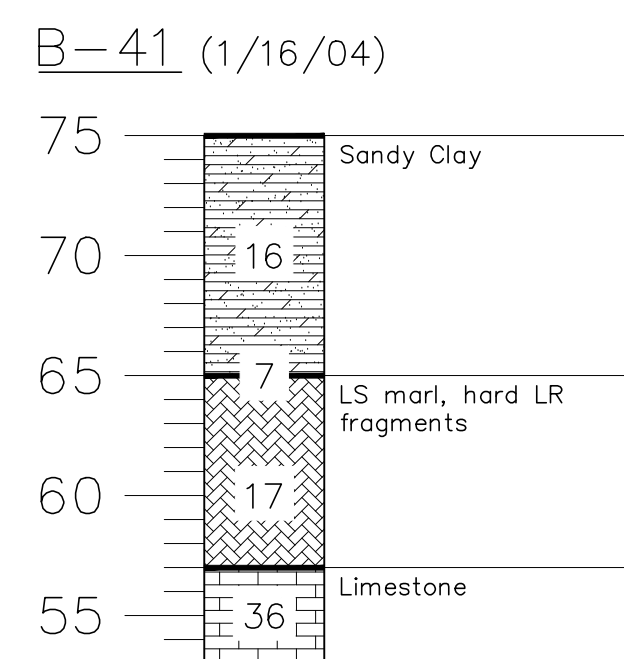
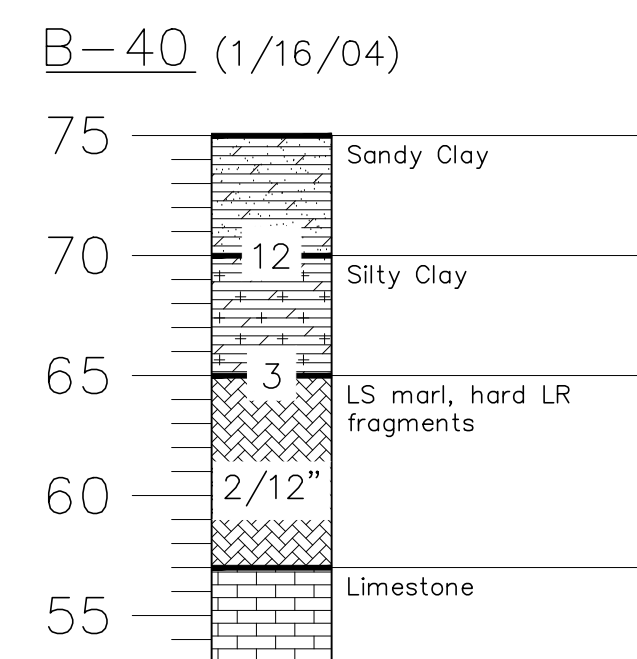
APPROVED BY

LIB

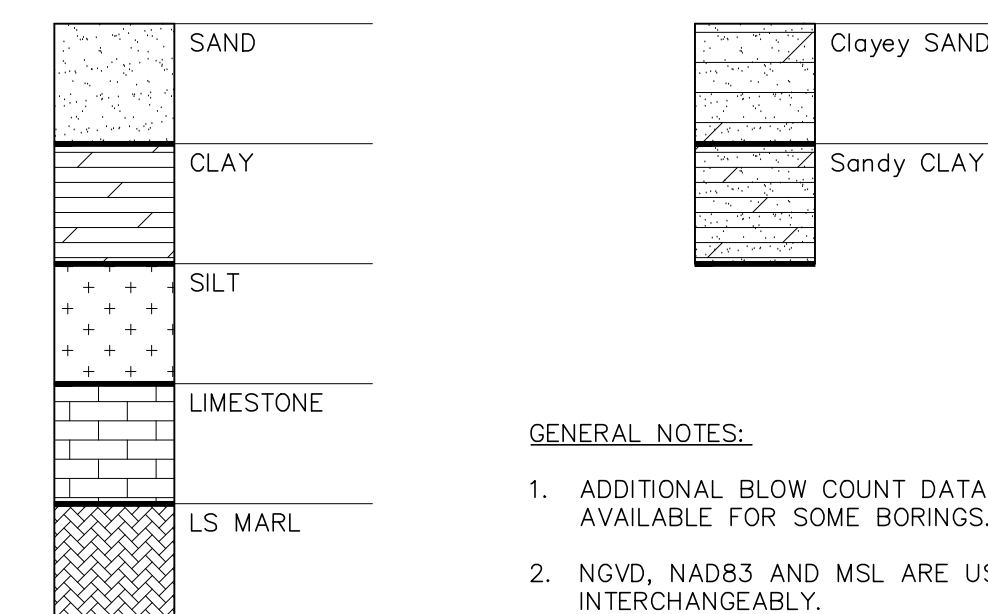
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BORING LOGS

PROJECT NO.:
02000-144-14
SCALE:
AS SHOWN
DATE:
DECEMBER 2014
DRAWING:
C1.12



BORING LOG LEGEND

[illegible]

4140 NW 37th Place, Suite A
Gainesville, Florida 32606
Phone: 352.672.6867 Fax: 352.692.5390
Certificate of Authorization No. 30066

PROJECT TITLE:
HISTORICAL GEOTECHNICAL DATA SUMMARY PLAN
ENTERPRISE RECYCLING & DISPOSAL FACILITY
CLASS III LANDFILL MODIFICATION
DADE CITY, PASCO COUNTY, FLORIDA

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

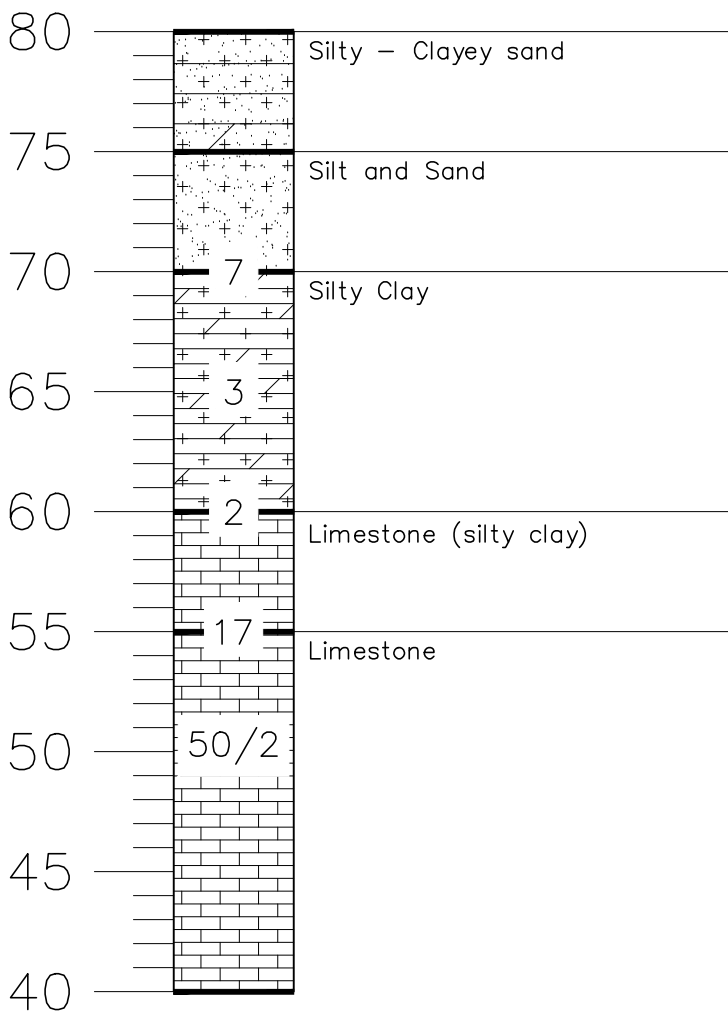
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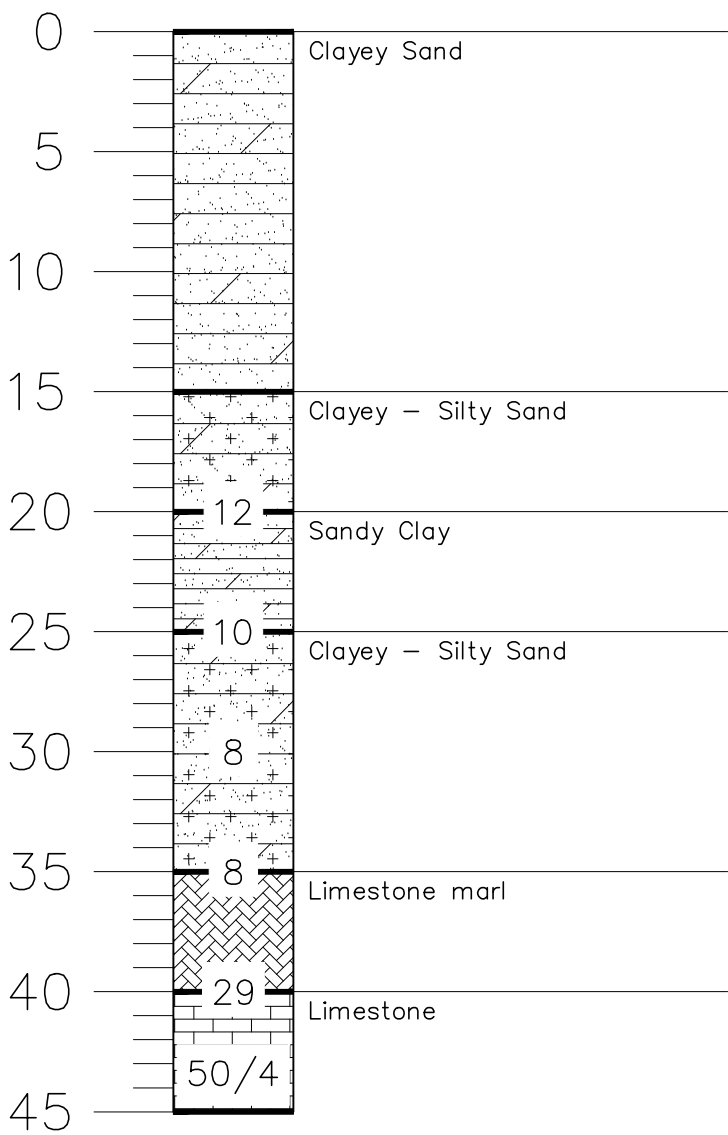
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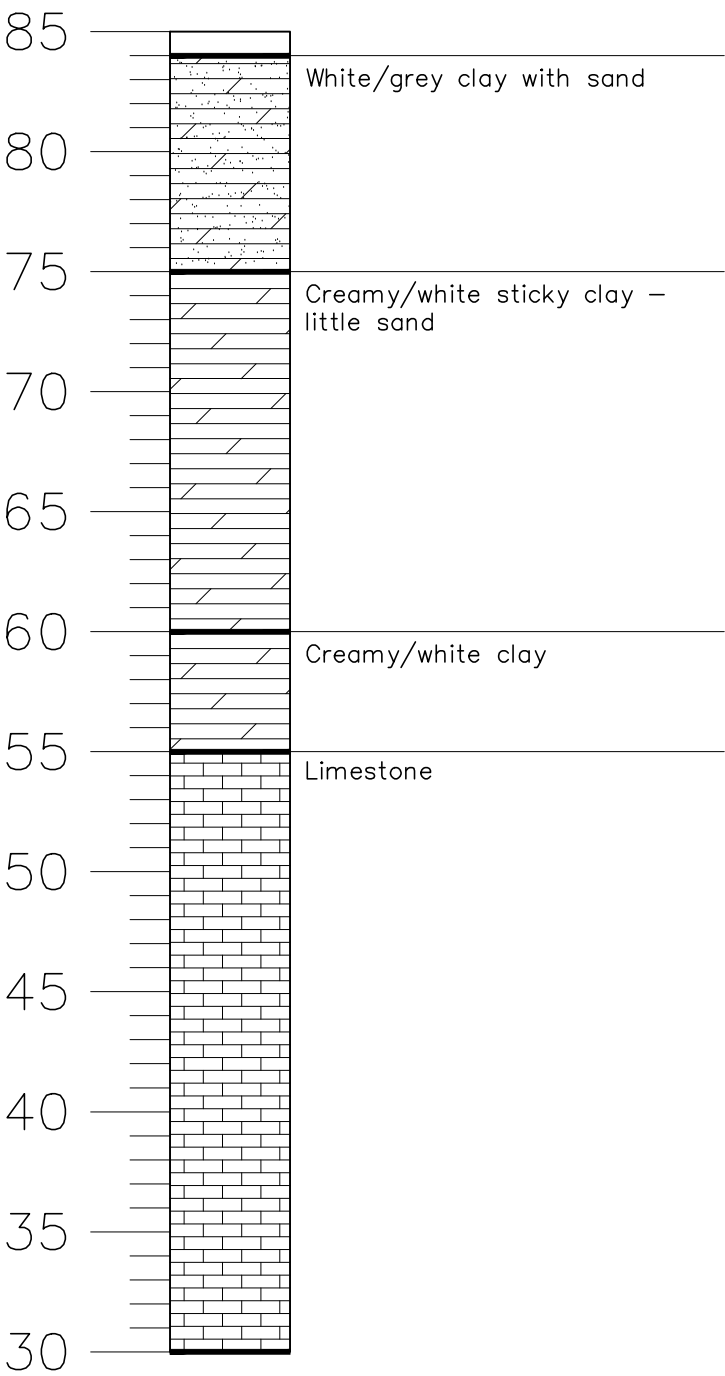
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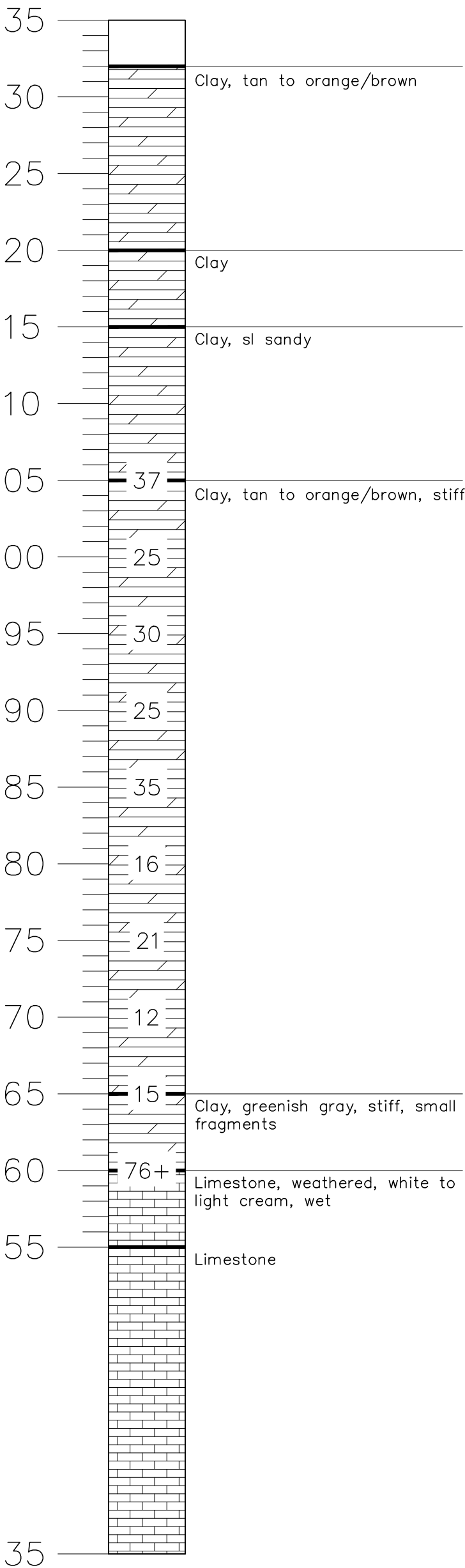
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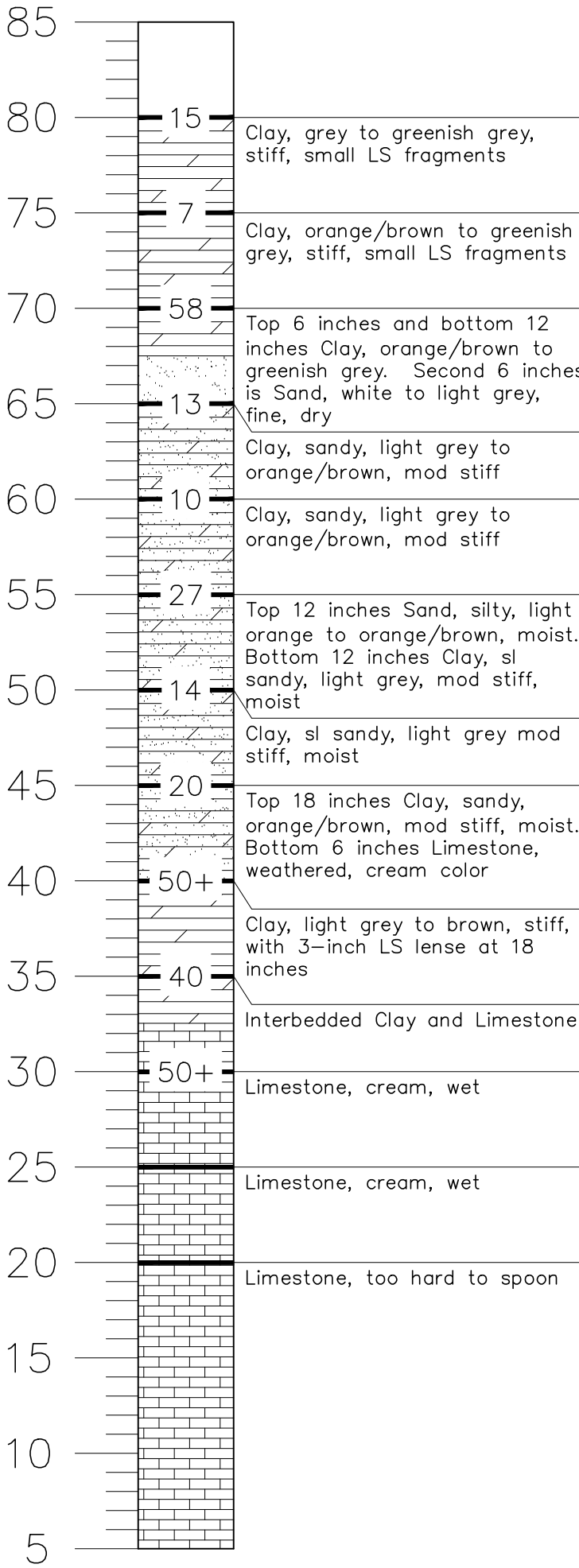
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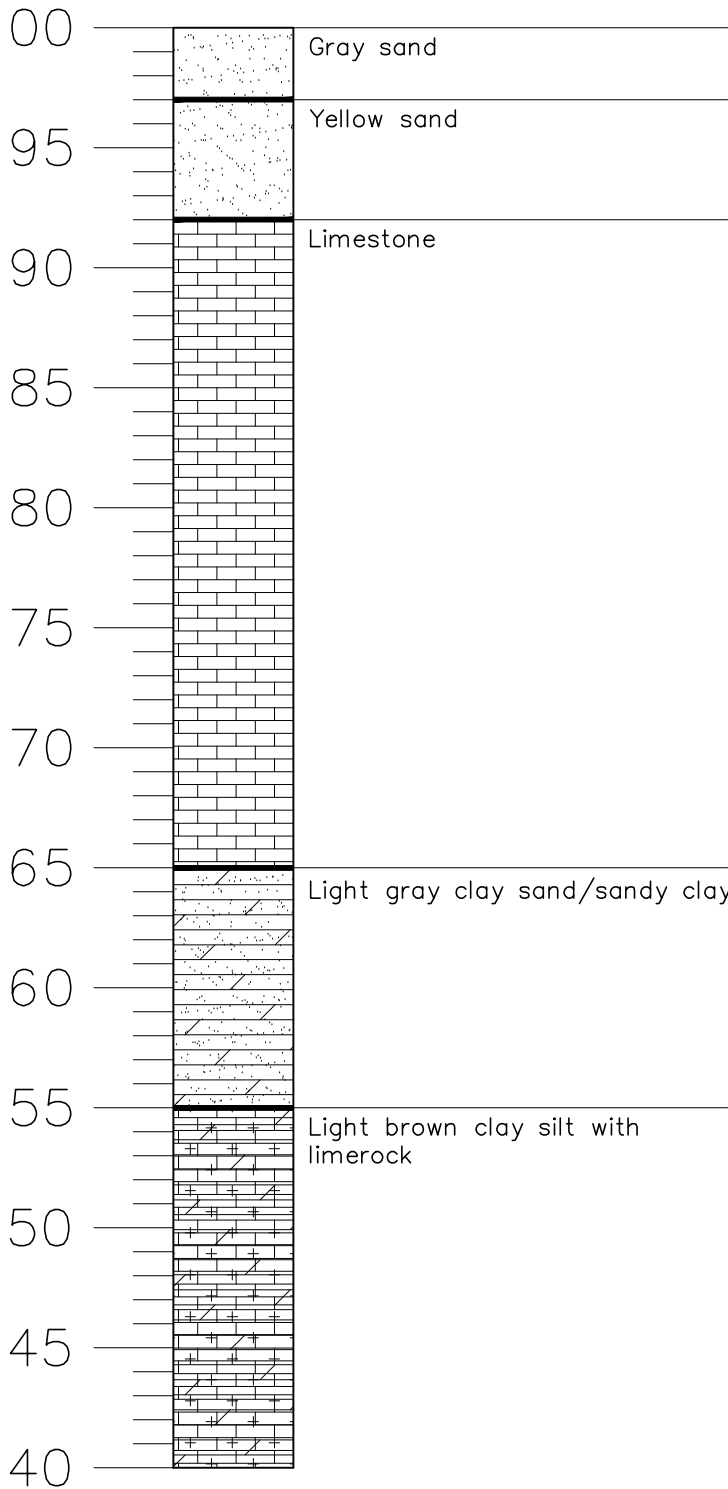
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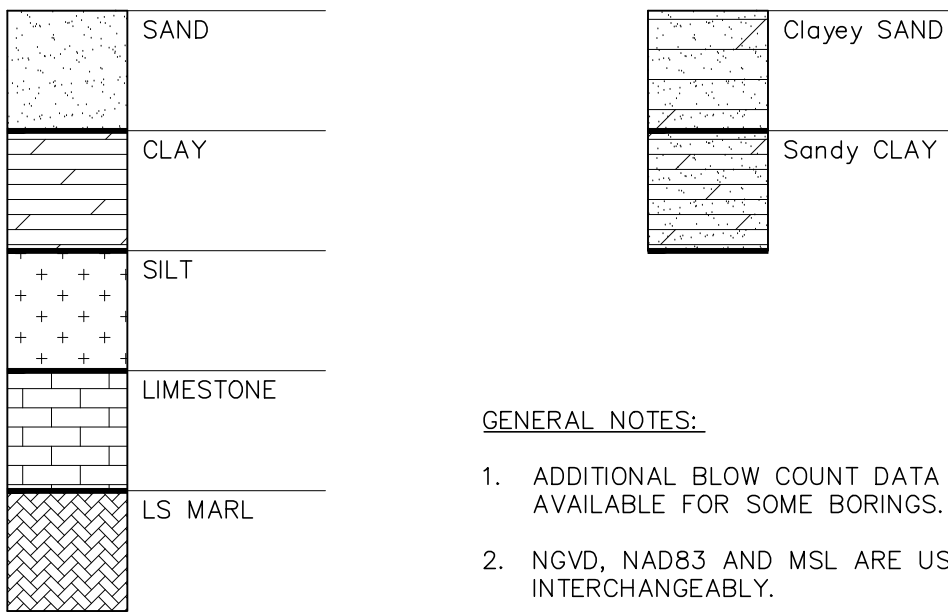
MW 17B (2/27/12)



MW P-12 (3/9/01)



BORING LOG LEGEND



- GENERAL NOTES:
- ADDITIONAL BLOW COUNT DATA IS AVAILABLE FOR SOME BORINGS.
 - NGVD, NAD83 AND MSL ARE USED INTERCHANGEABLY.



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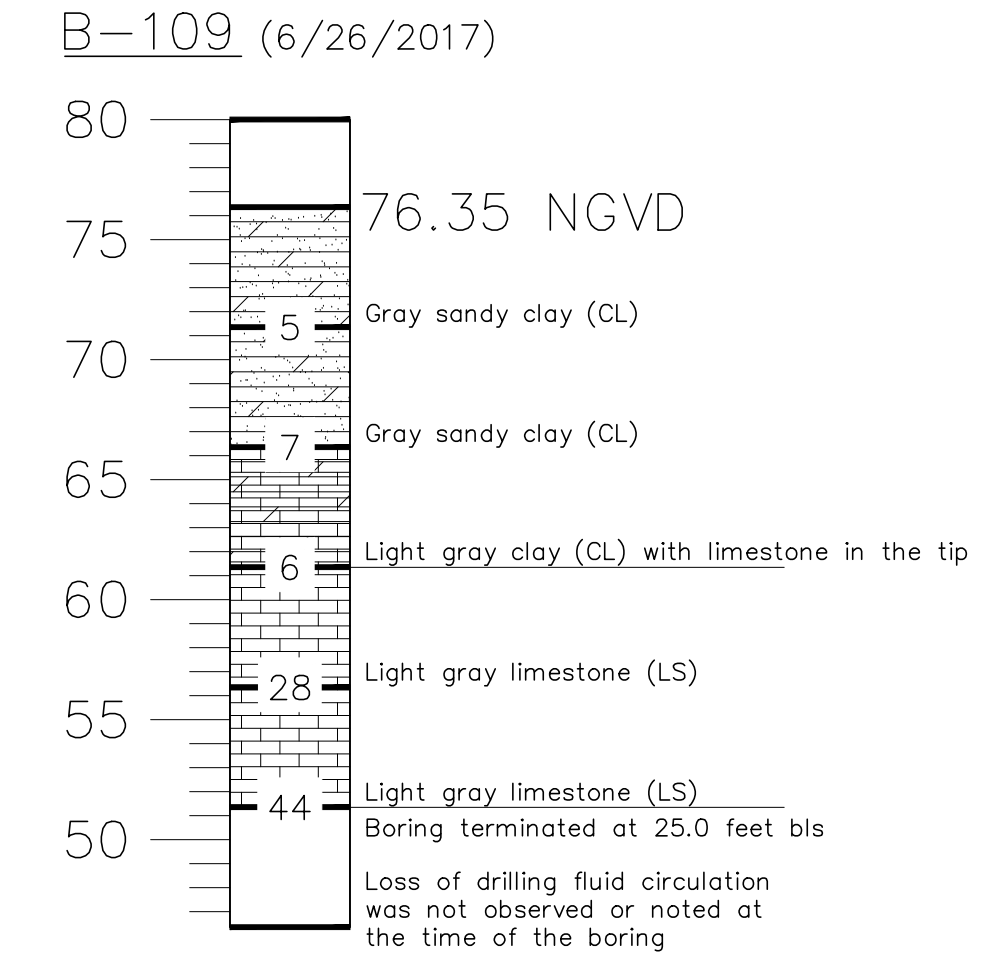
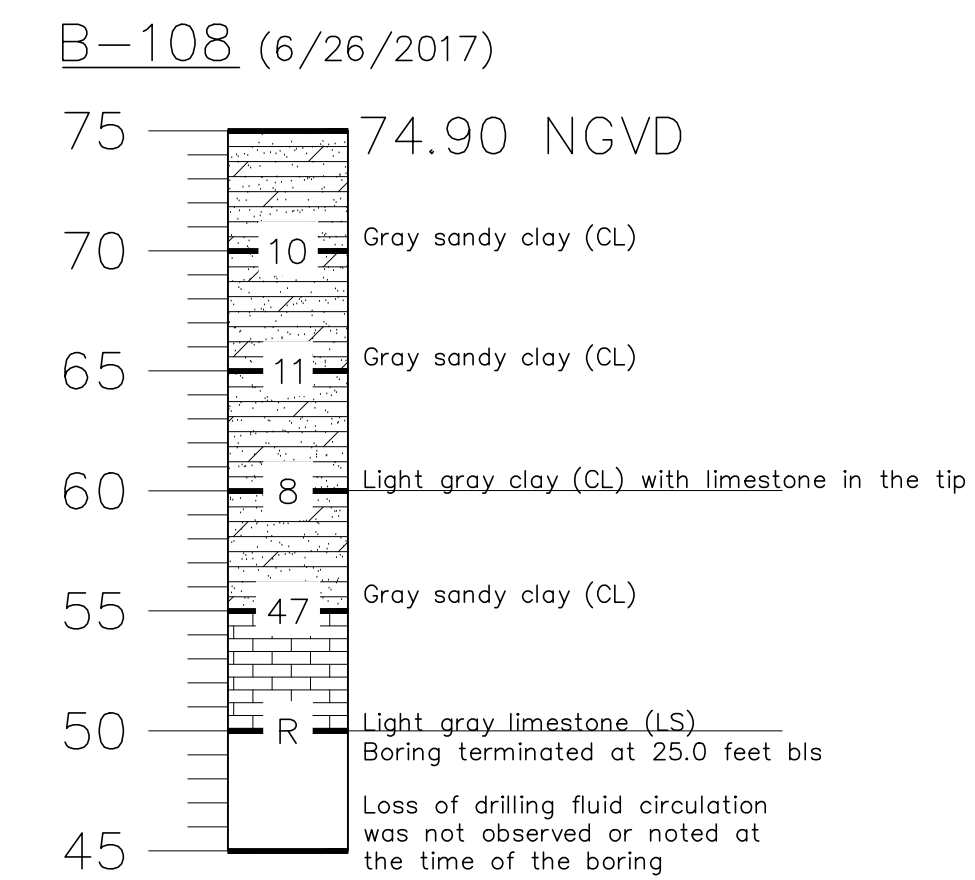
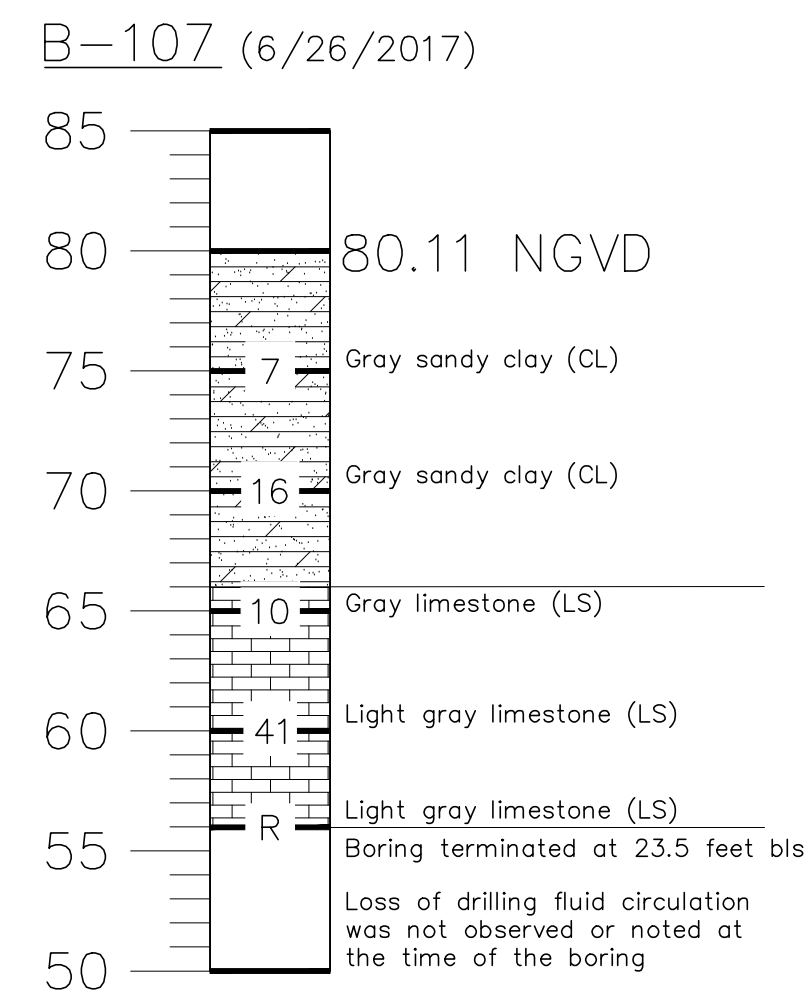
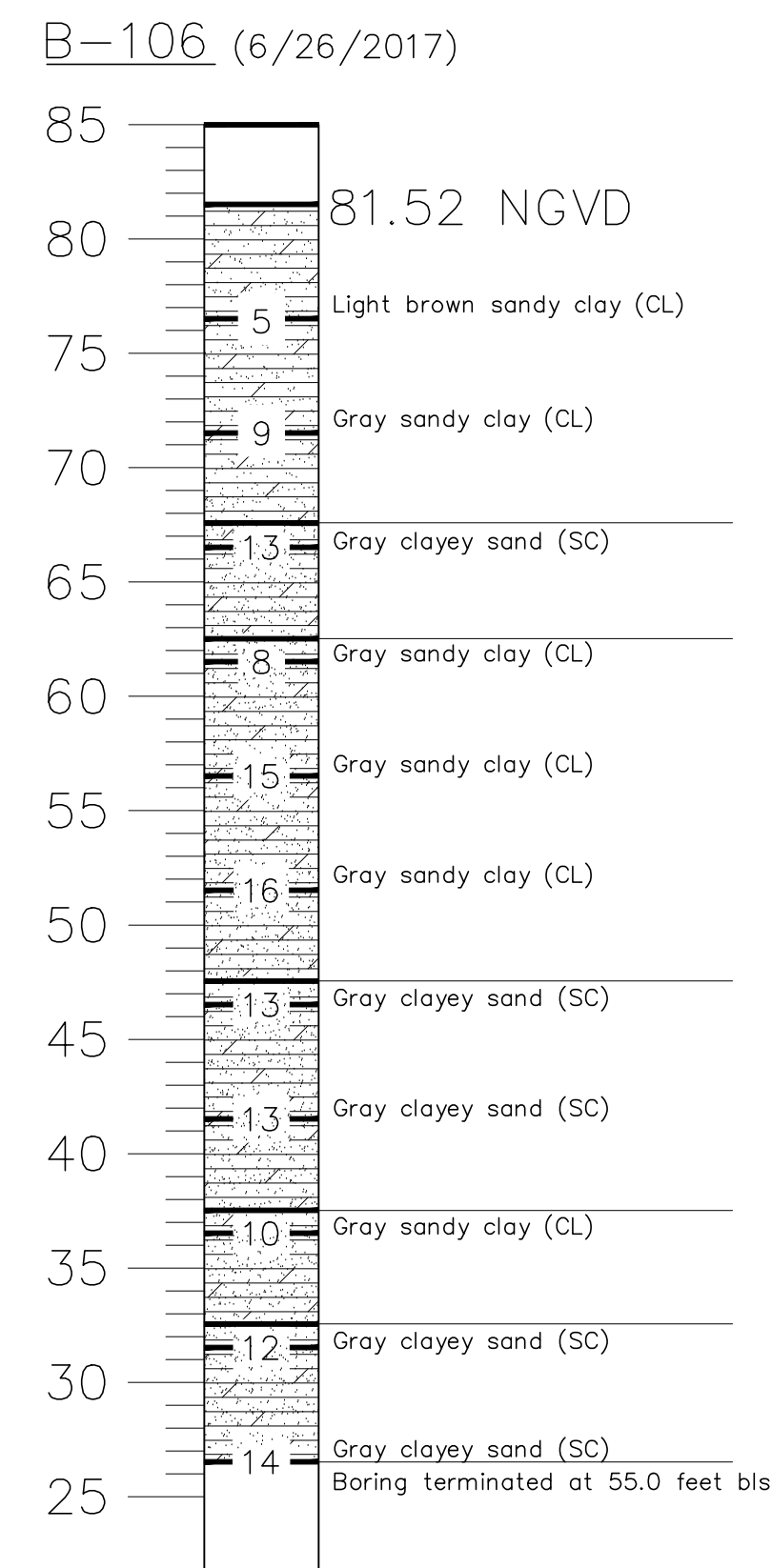
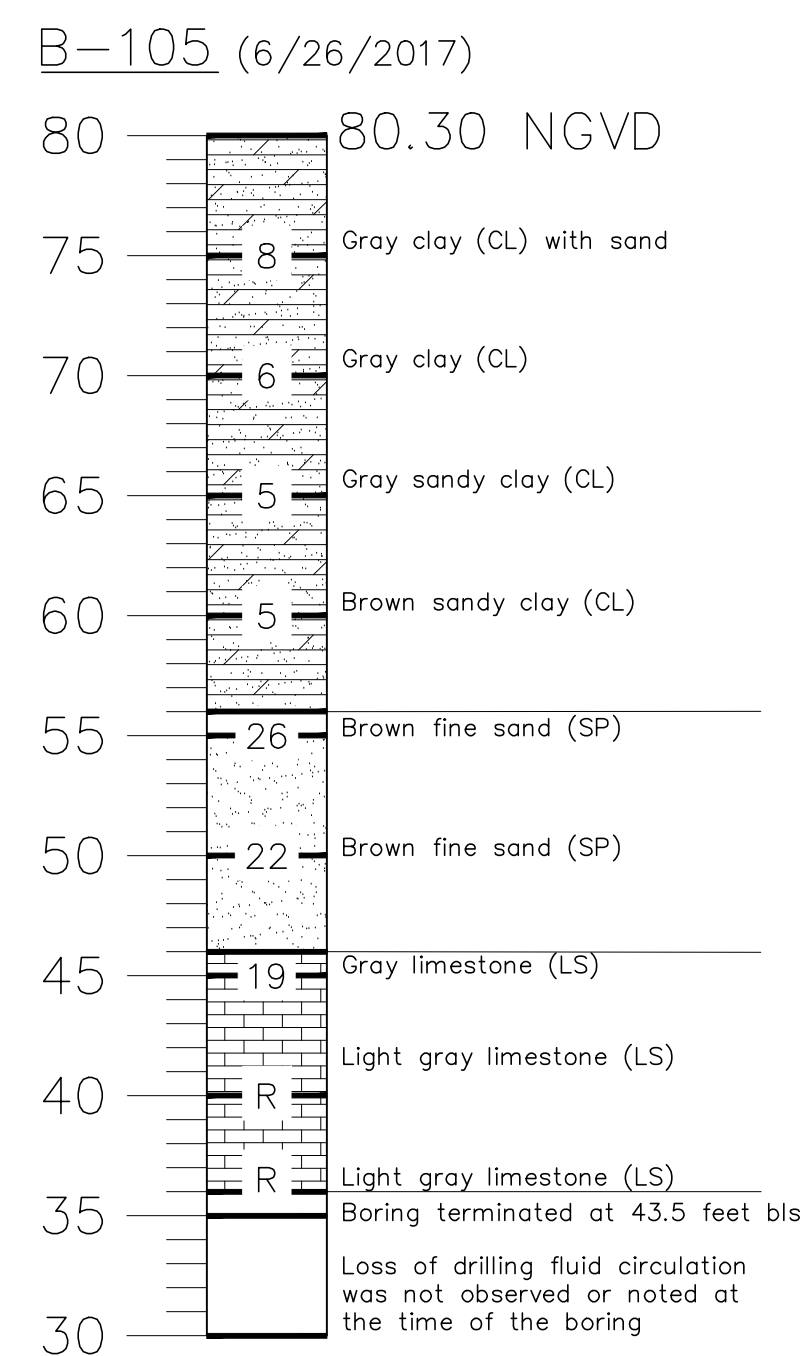
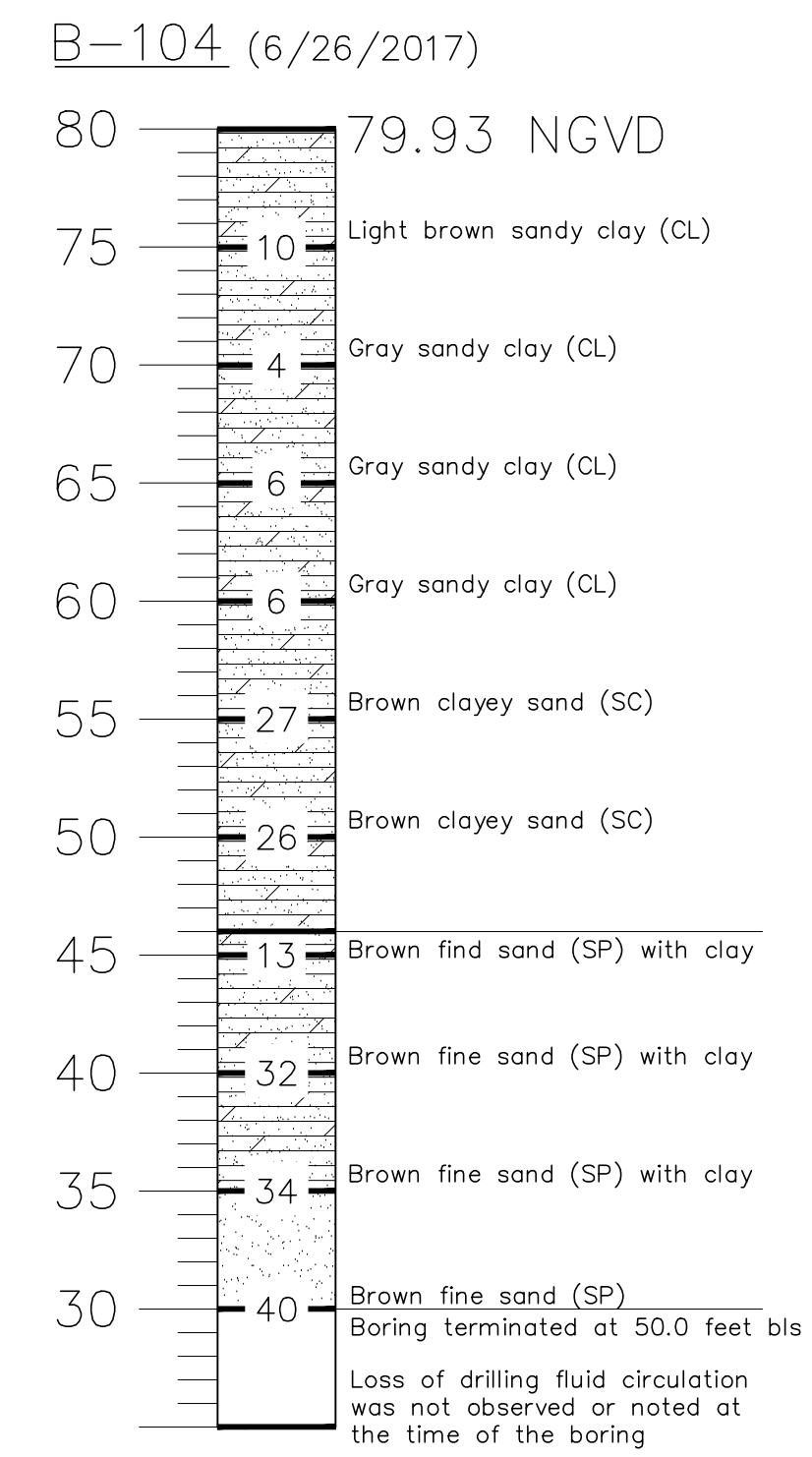
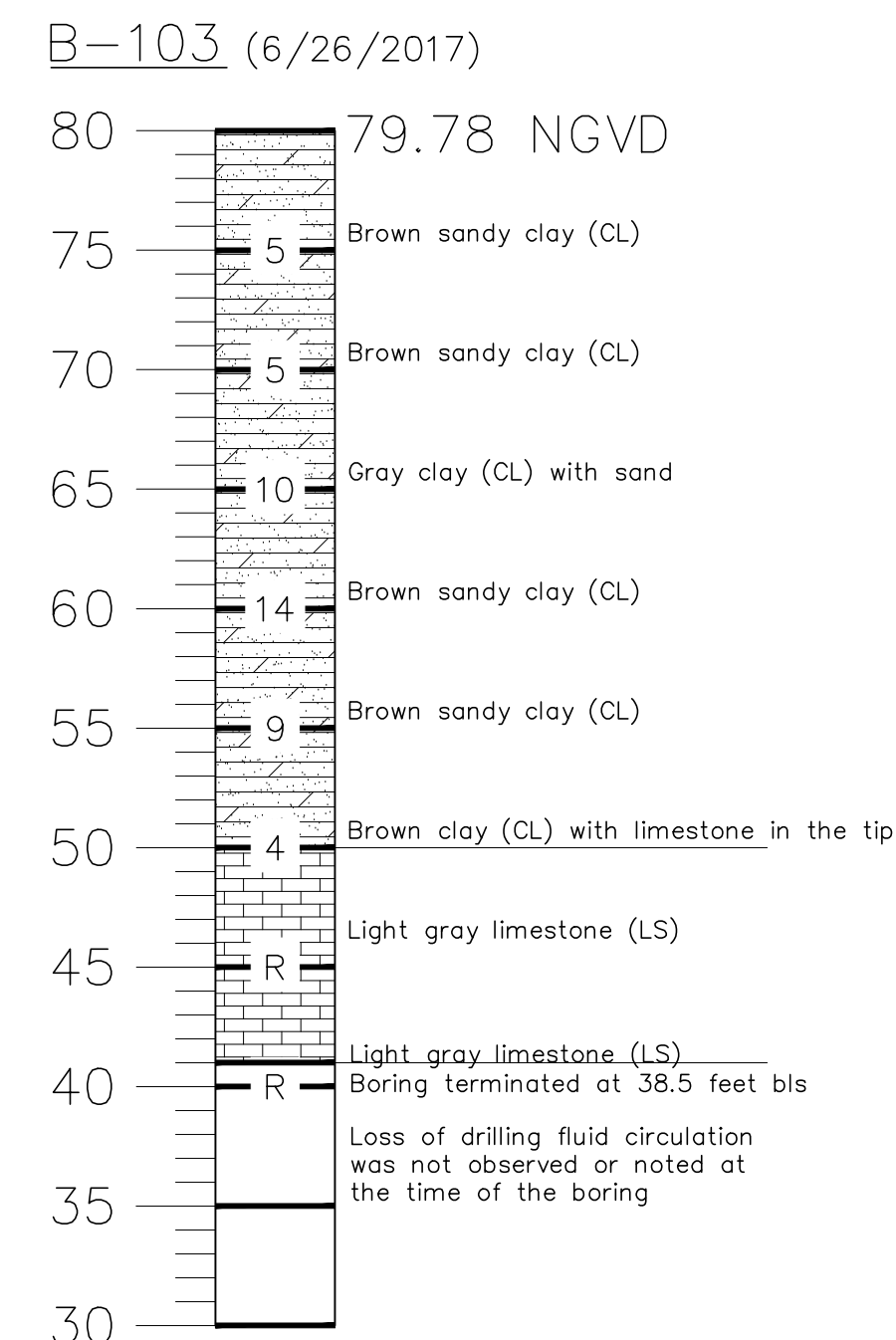
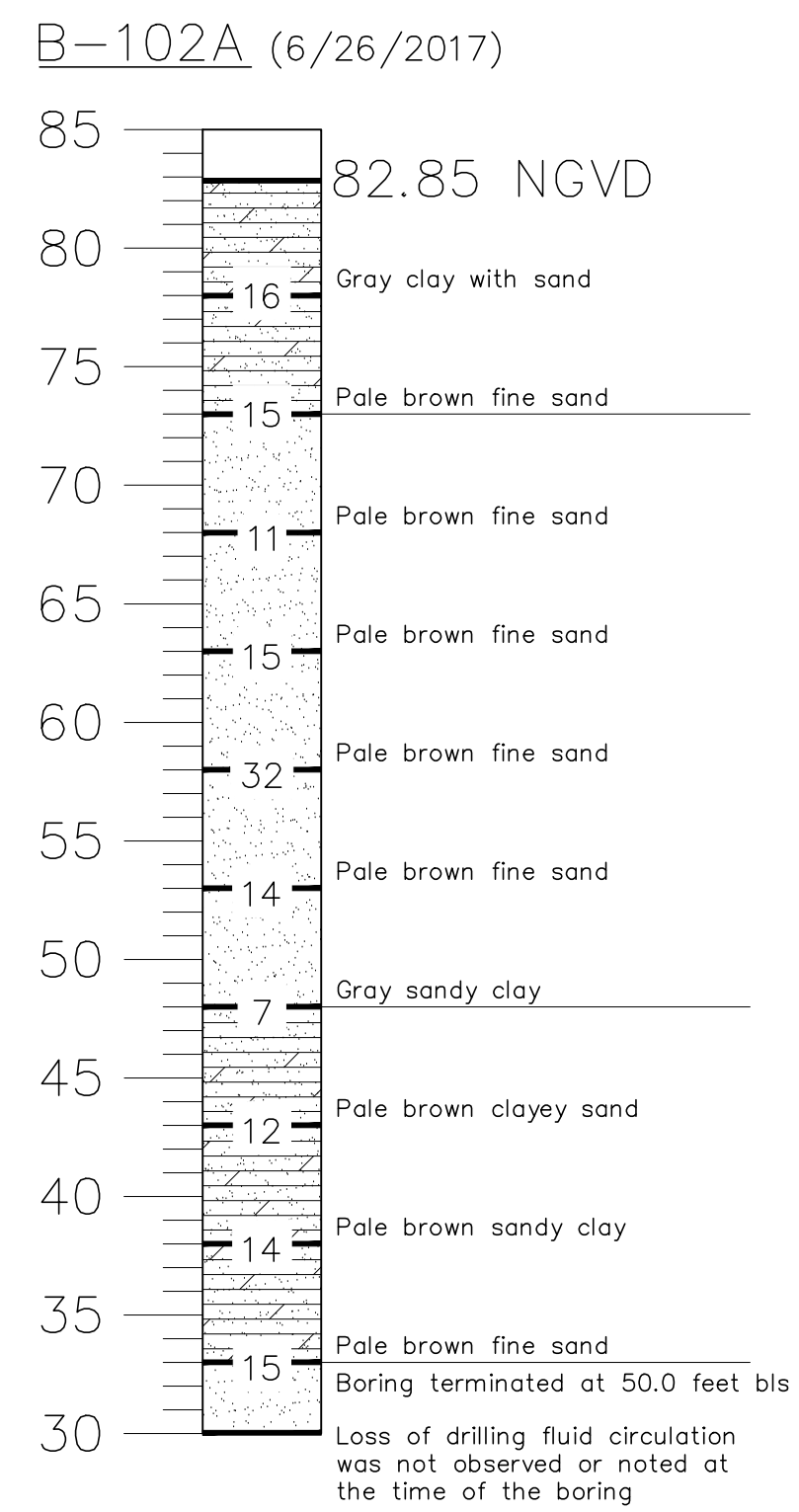
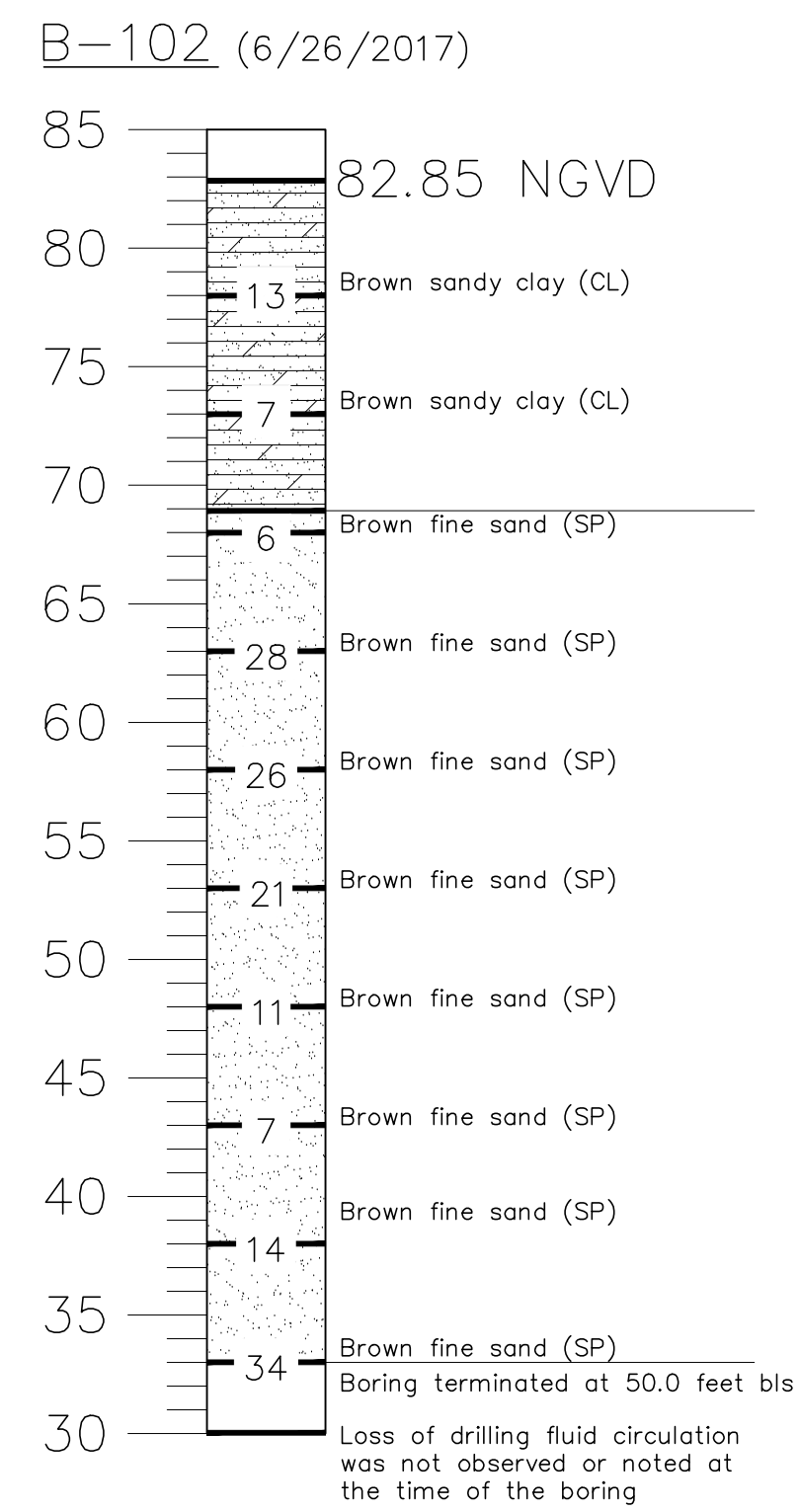
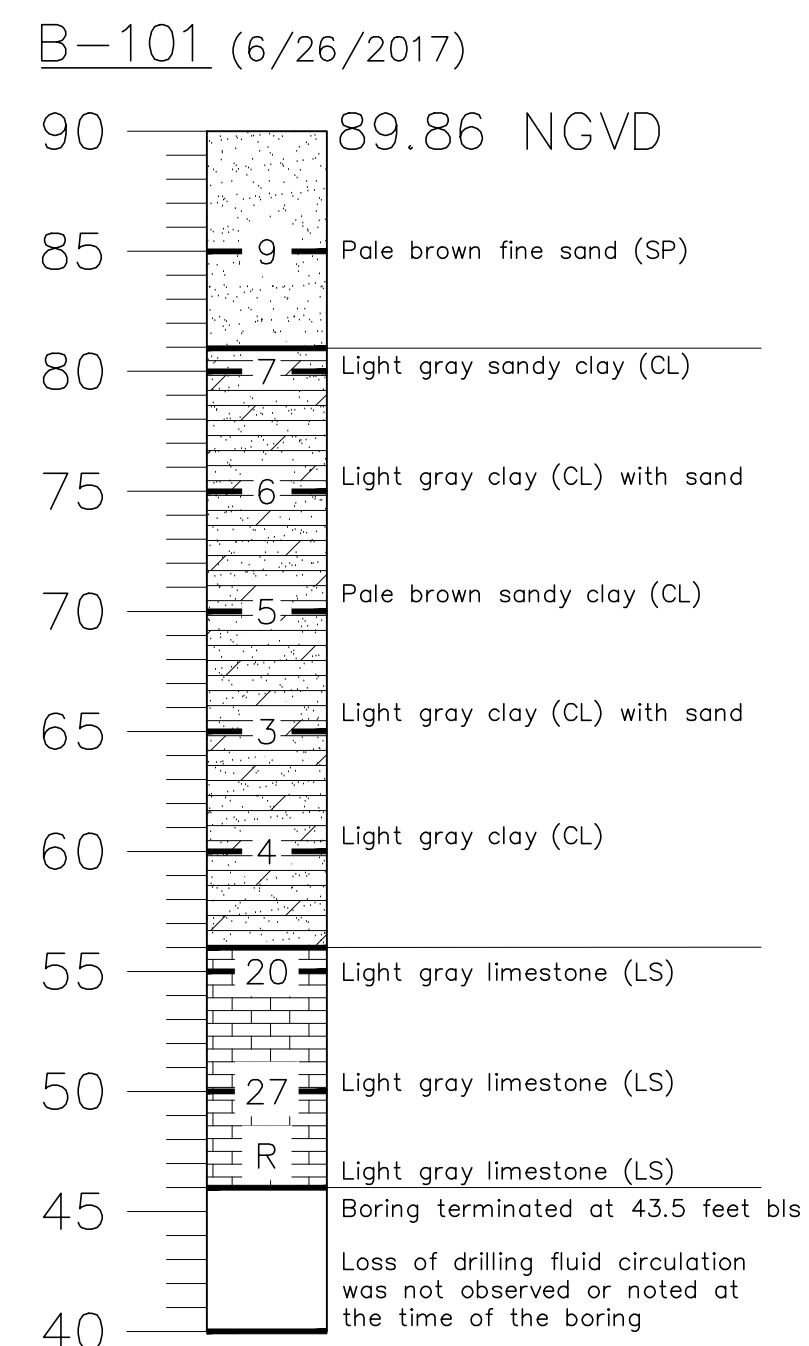
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LJB



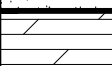
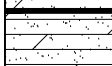
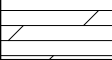
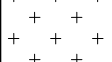
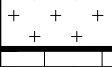
SHEET TITLE:

BORING LOGS

PROJECT NO.:
02000-144-14
SCALE:
AS SHOWN
DATE:
DECEMBER 2014
DRAWING:
C1.14




BORING LOG LEGEND

	SAND		Clayey SAND
	CLAY		Sandy CLAY
	SILT		
	LIMESTONE		
	LS MARL		

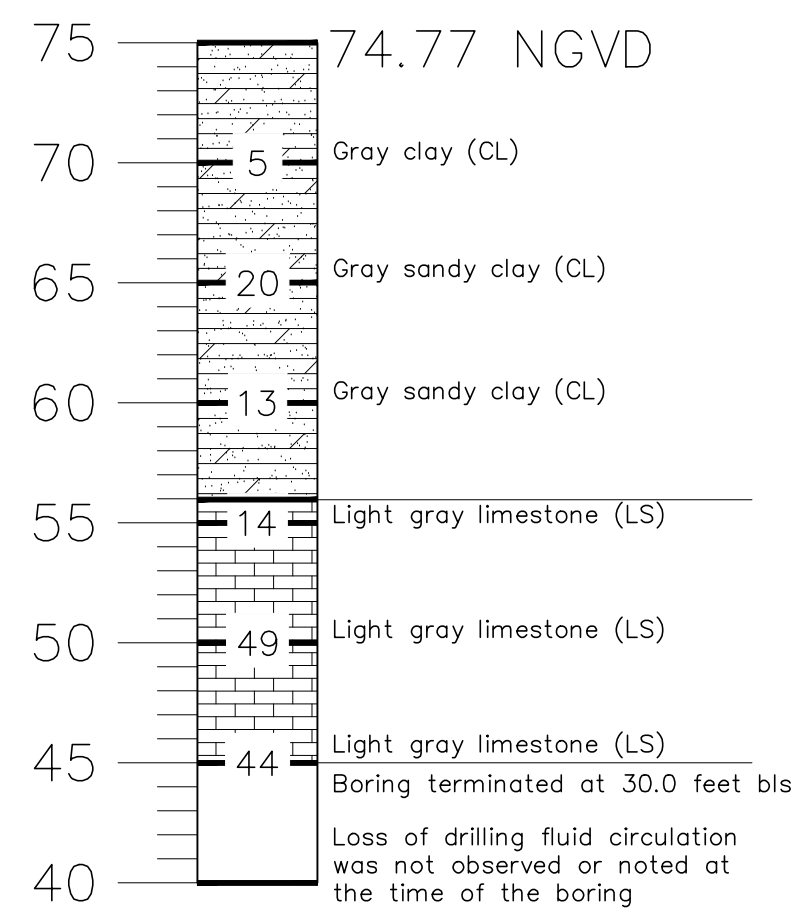
GENERAL NOTES:

1. ADDITIONAL BLOW COUNT DATA IS AVAILABLE FOR SOME BORINGS.
2. NGVD, NAD83 AND MSL ARE USED INTERCHANGEABLY.

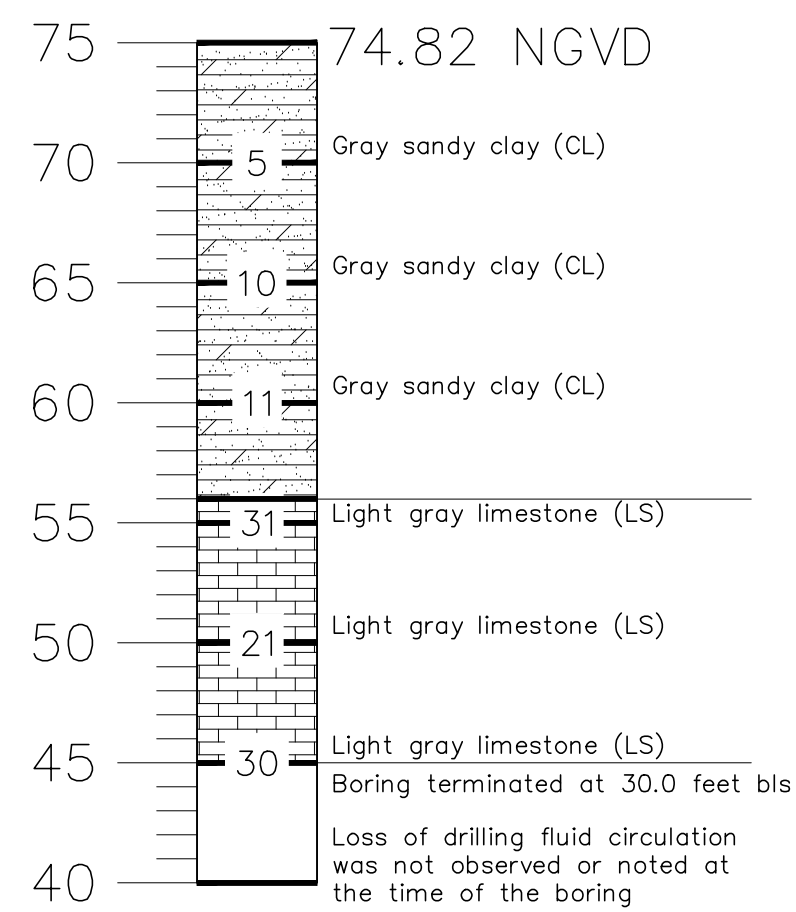
NO.	DATE	REVISION DESCRIPTION	BY	<div><div><div>Locklear & Associates</div><div>4140 NW 37th Place, Suite A Gainesville, Florida 32606 Phone: 352.672.6867 Fax: 352.692.5390 Certificate of Authorization No. 30066</div></div></div>	PROJECT TITLE: HISTORICAL GEOTECHNICAL DATA SUMMARY PLAN ENTERPRISE RECYCLING & DISPOSAL FACILITY CLASS III LANDFILL MODIFICATION DADE CITY, PASCO COUNTY, FLORIDA	LISA J. BAKER	DESIGNED BY	LIB	SHEET TITLE: BORING LOGS	PROJECT NO.: 02000-144-14
						DRAWN BY	MAF	SCALE: AS SHOWN		
						CHECKED BY	JDL	DATE: DECEMBER 2014		
						FL PE NO. 74652	APPROVED BY	LIB		DRAWING: C1.15

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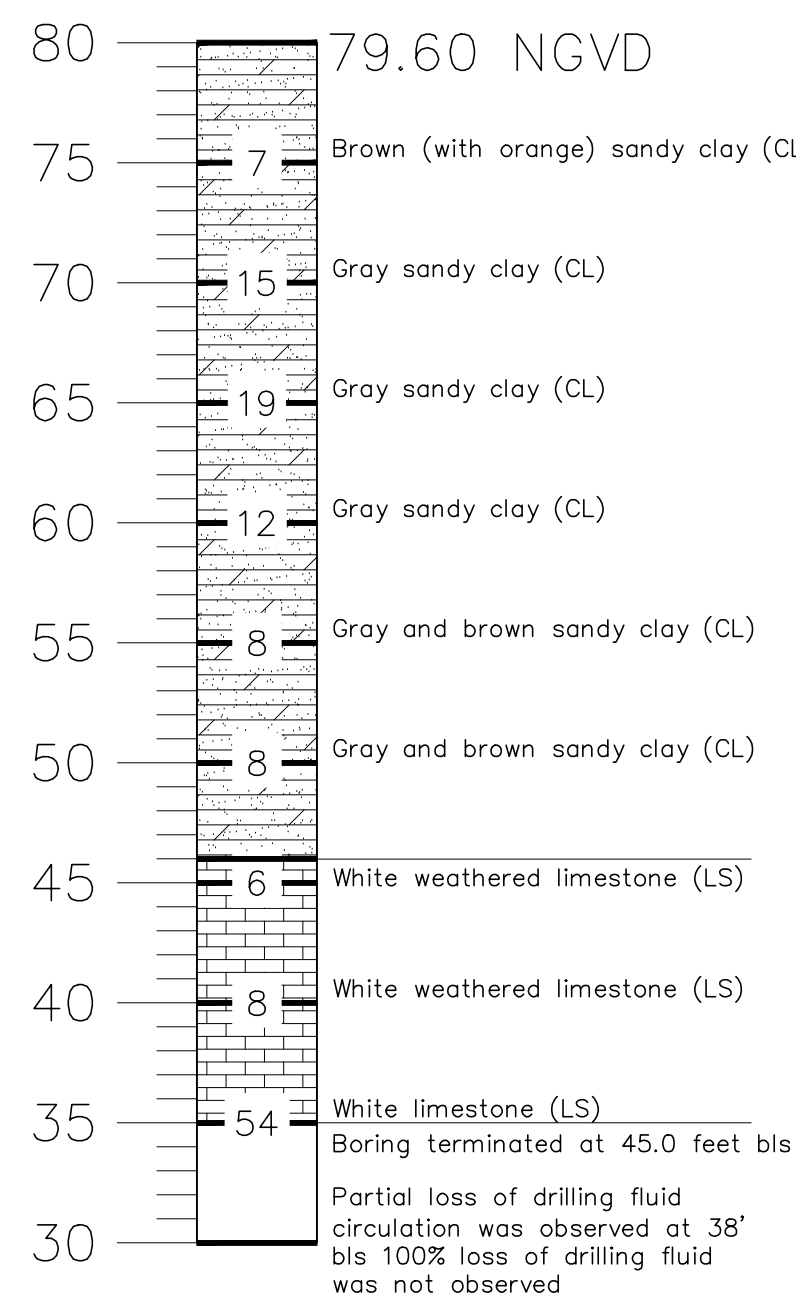
B-110 (6/26/2017)



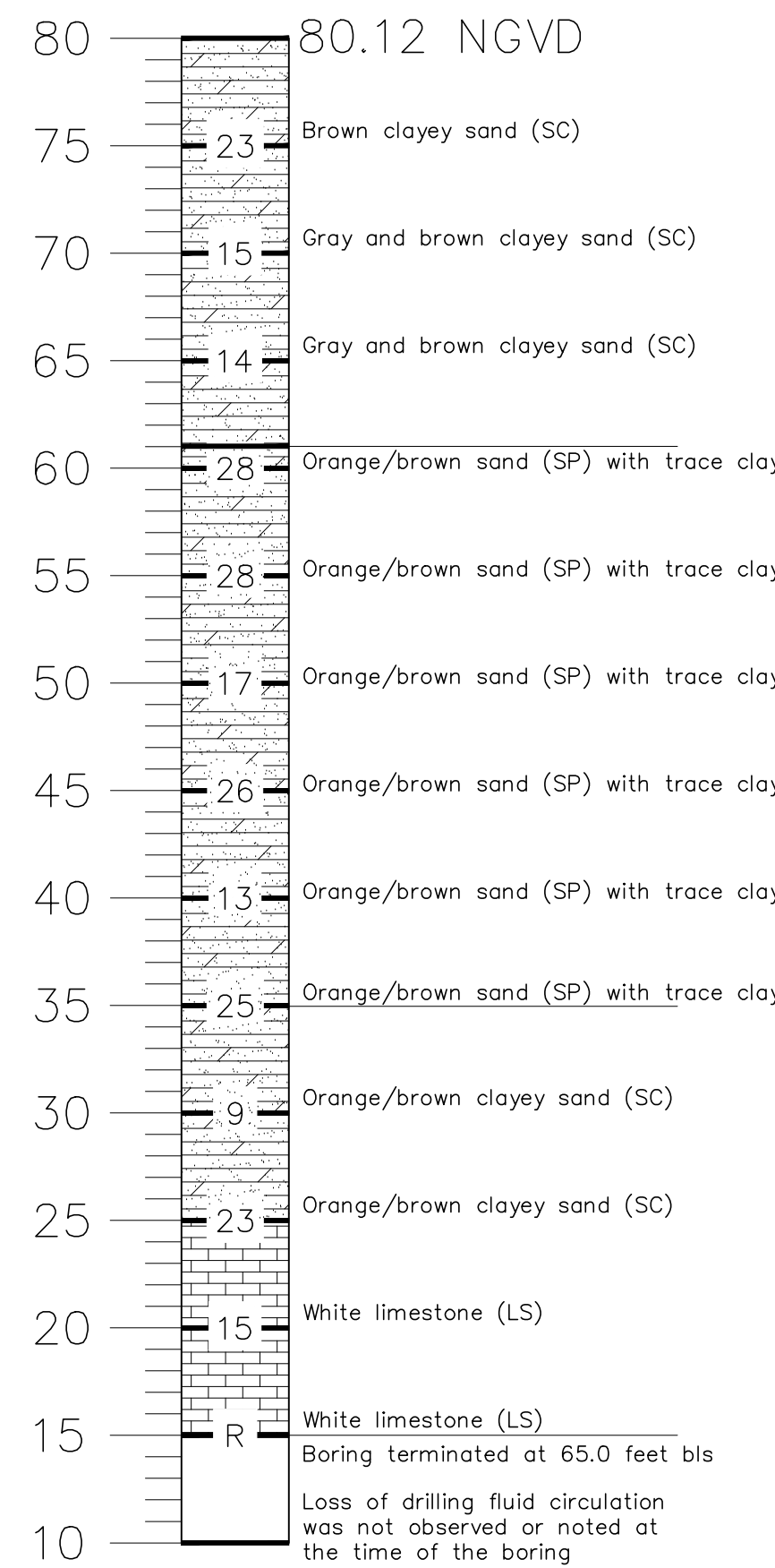
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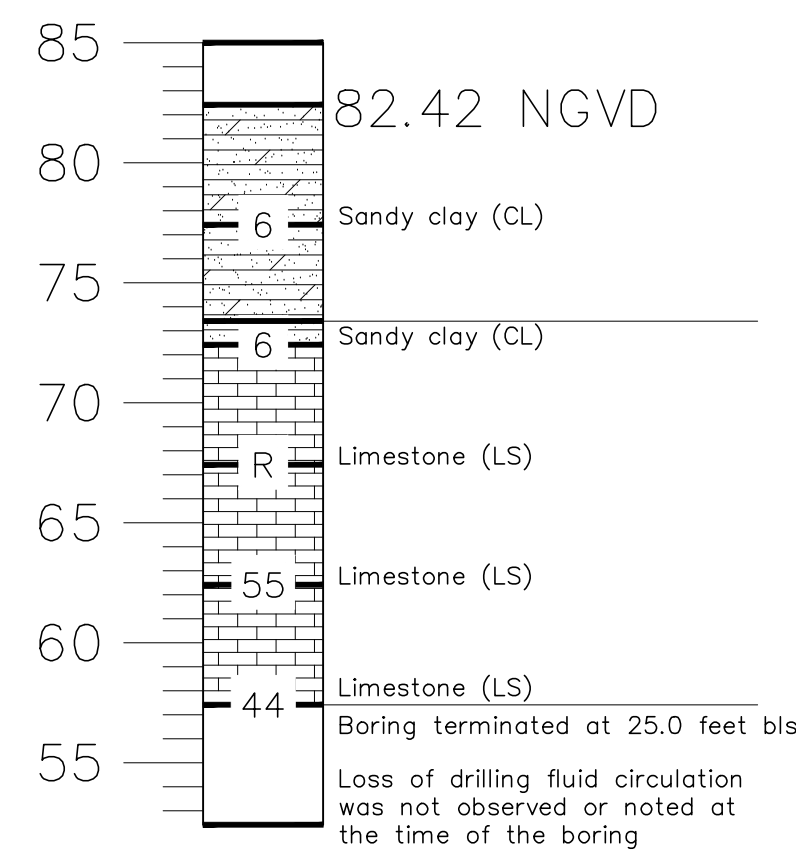
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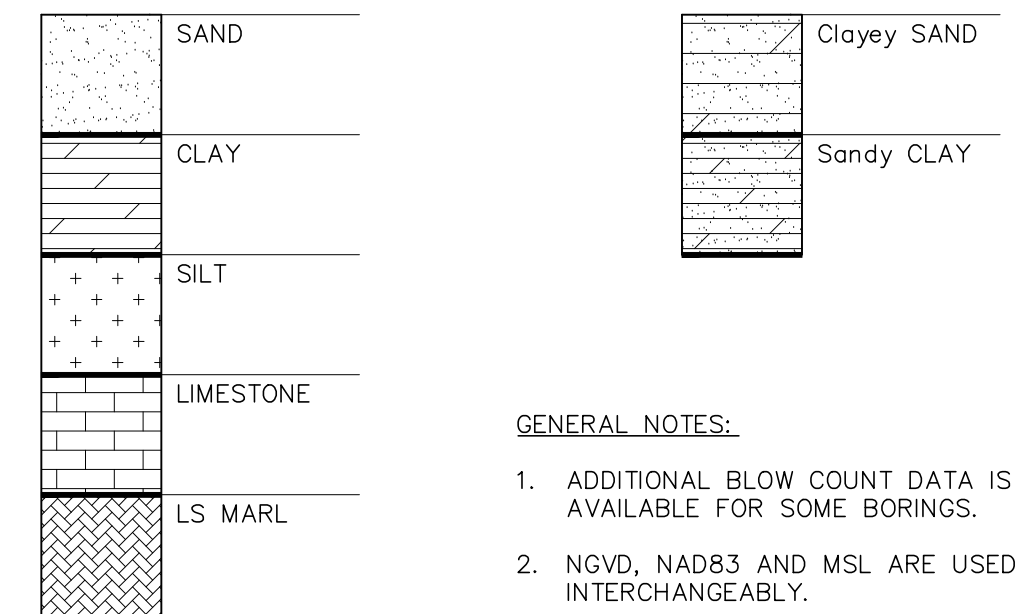
B-132 (6/26/2017)



B-133 (6/26/2017)



BORING LOG LEGEND



4140 NW 37th Place, Suite A
Gainesville, Florida 32606
Phone: 352.672.6867 Fax: 352.692.5390
Certificate of Authorization No. 30066

PROJECT TITLE:

HISTORICAL GEOTECHNICAL DATA SUMMARY PLAN
ENTERPRISE RECYCLING & DISPOSAL FACILITY
CLASS III LANDFILL MODIFICATION
DADE CITY, PASCO COUNTY, FLORIDA

LISA J. BAKER

DESIGNED BY

LJB

DRAWN BY

MAF

CHECKED BY

JDL

FL PE NO. 74652

APPROVED BY

LJB

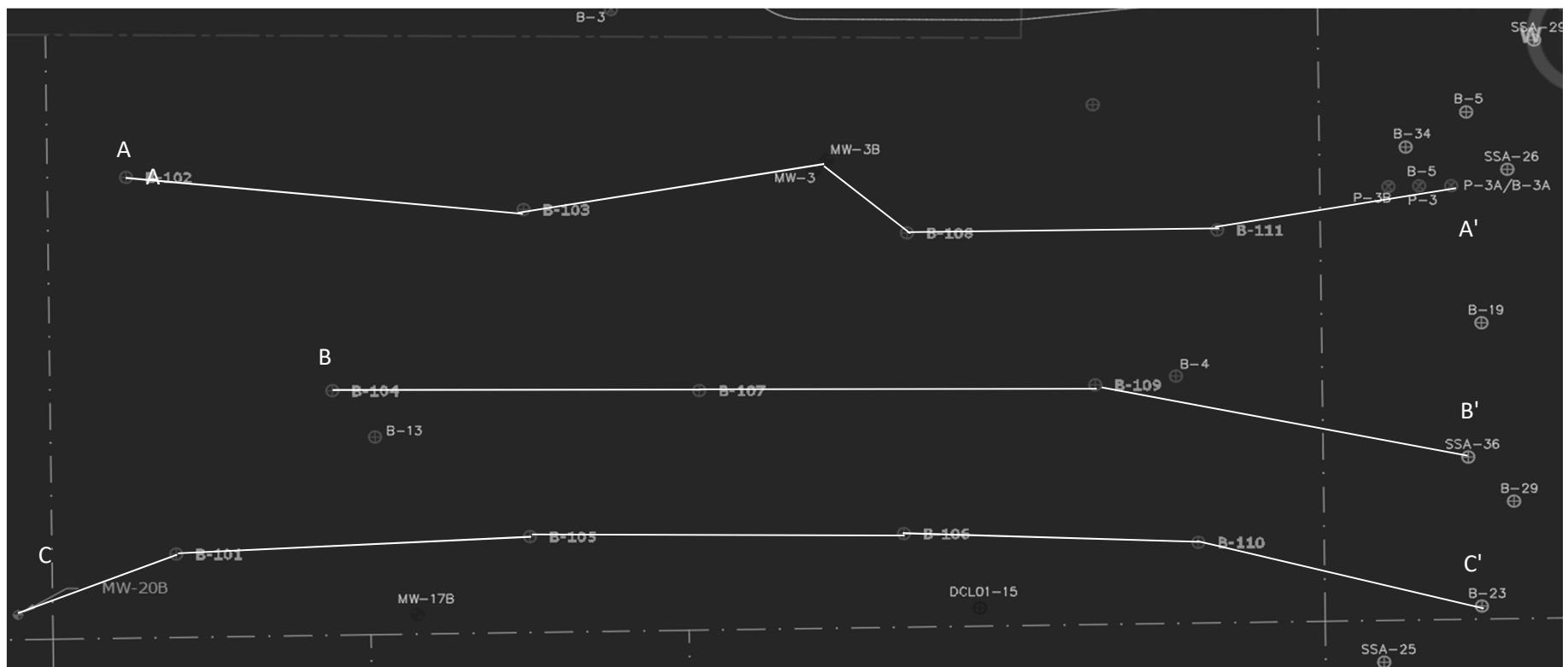
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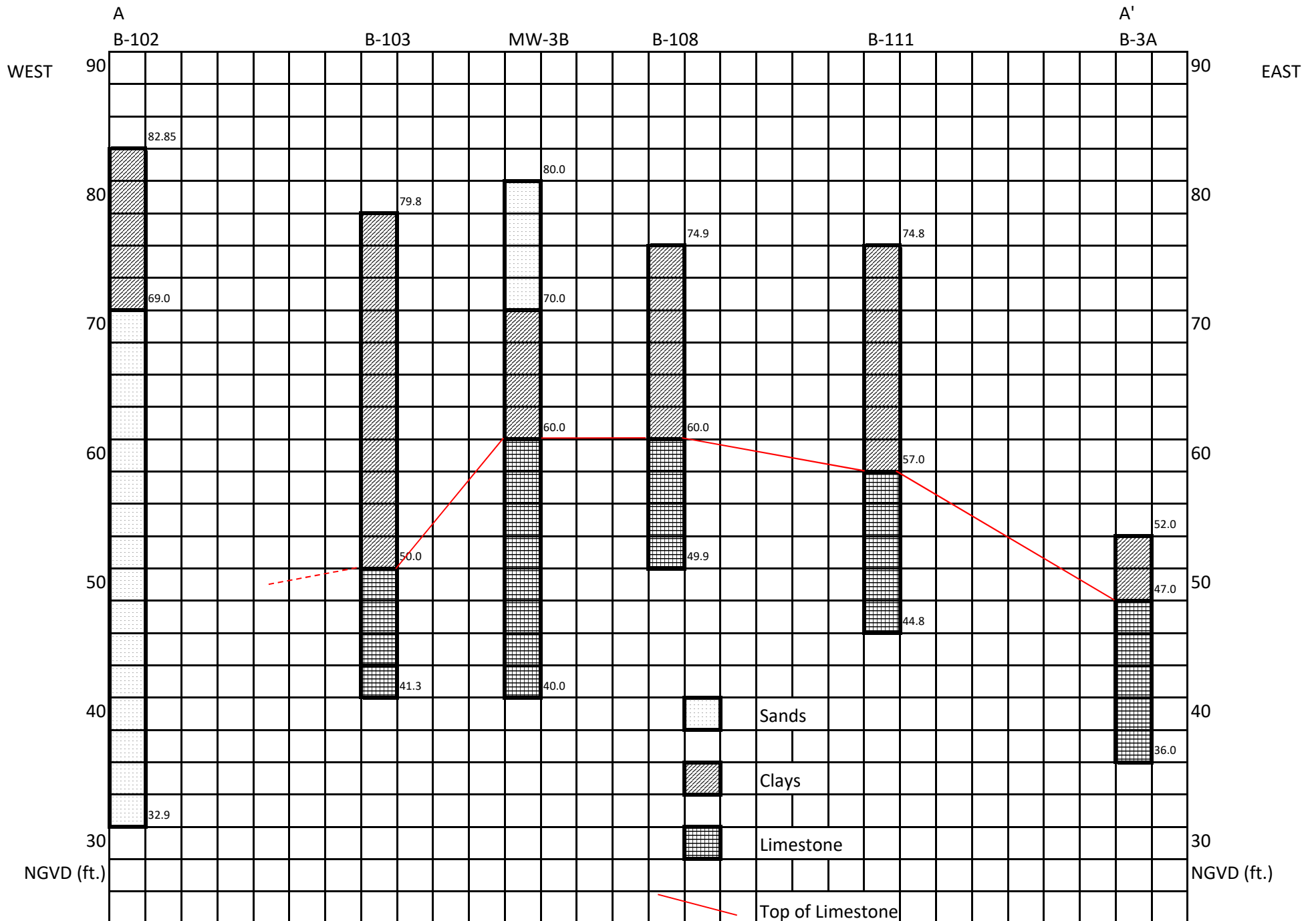
PROJECT NO.:
02000-144-14
SCALE:
AS SHOWN
DATE:
DECEMBER 2014
DRAWING:
C1.16

APPENDIX C

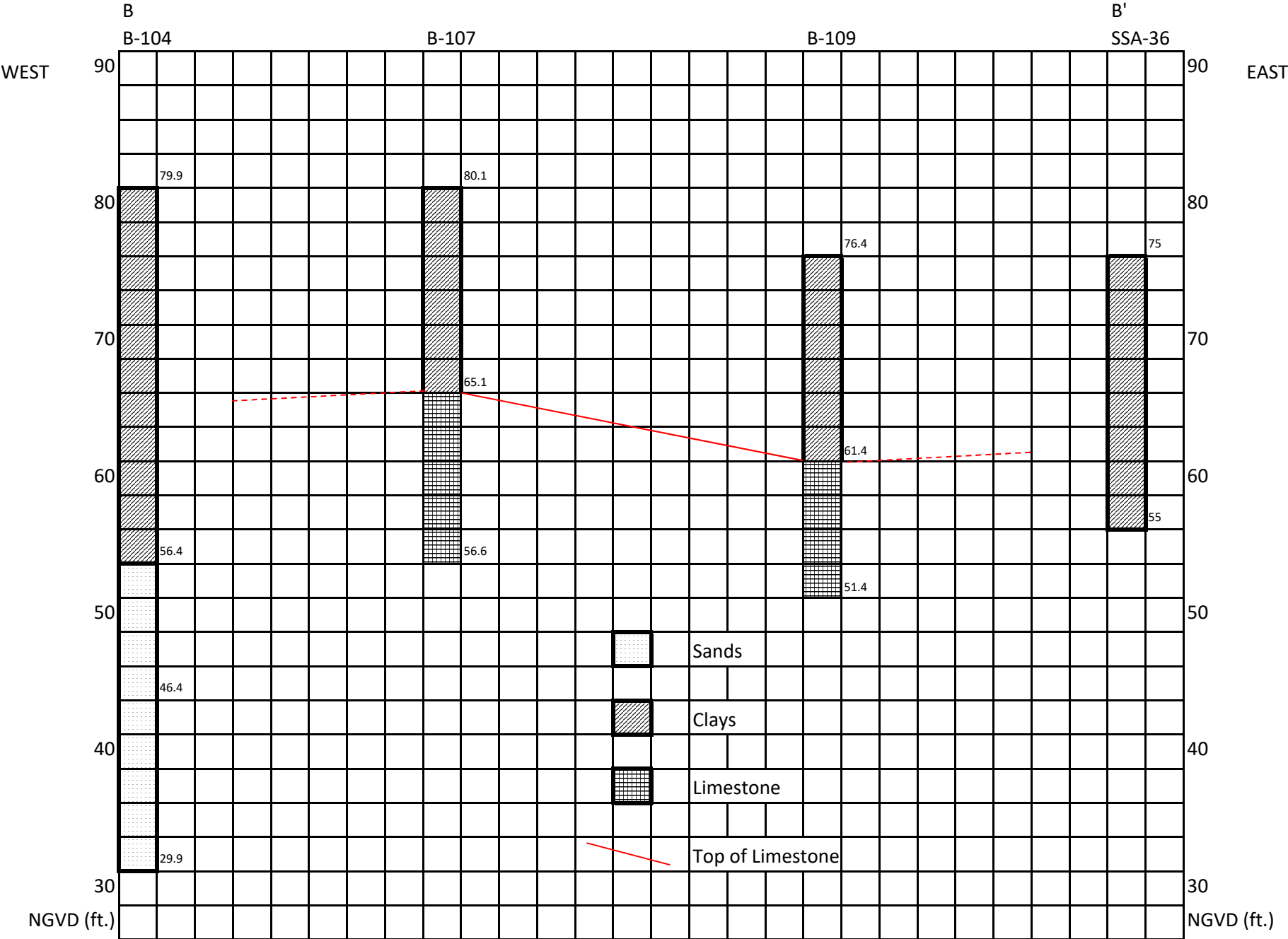




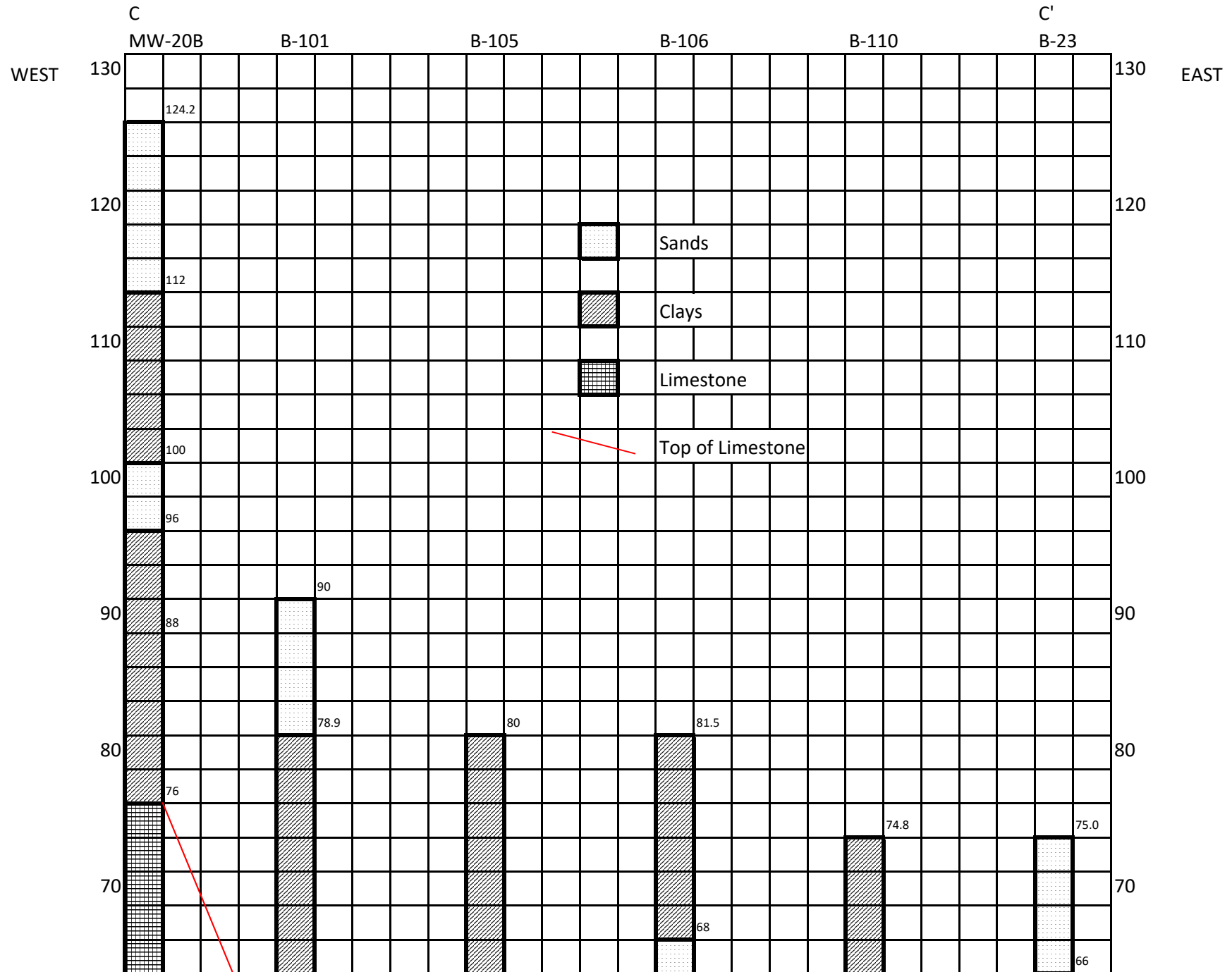
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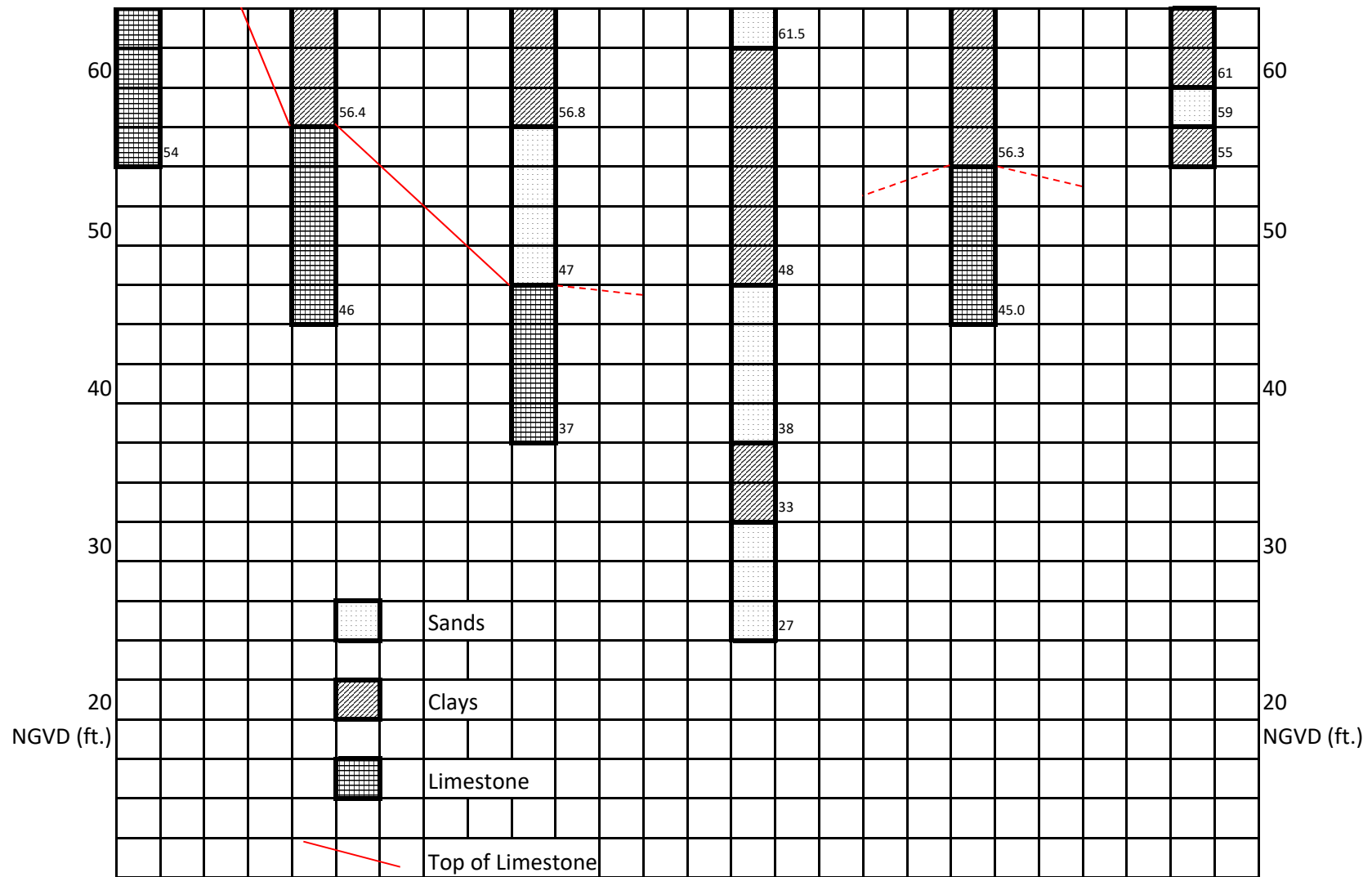


Angelo's - Enterprise Facility Cell 17 Permit Modification



Angelo's - Enterprise Facility Cell 17 Permit Modification







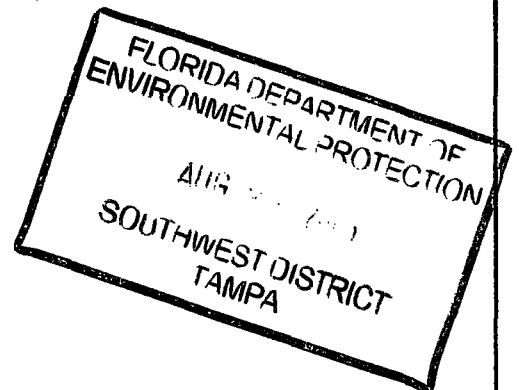
UNIVERSAL

ENGINEERING SCIENCES

GEOTECHNICAL EXPLORATION

**Proposed Dade City - Class III Landfill
NEC of Enterprise Road and Auton Road
Dade City, Florida**

UES File No. 80010-002-01

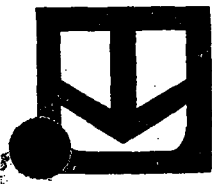


Prepared By:

Universal Engineering Sciences
5804 Breckenridge Parkway, Suite E
Tampa, Florida 33610
(813) 740-8506

May 5, 2000

Consultants in: Geotechnical Engineering • Environmental Sciences • Construction Materials Testing • Threshold Inspections
Offices in: Orlando • Gainesville • Riviera Beach • Rockledge • Daytona Beach • Punta Gorda • St. Augustine • Jacksonville • Ocala • Tampa



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• St. Augustine
• Fort Myers
• West Palm Beach
• DeBary
• Jacksonville
• Tampa

May 5, 2000

Hartman & Associates, Inc.
201 East Pine Street, Suite 1000
Orlando, Florida 32801

Attention: James Golden

Subject: Geotechnical Exploration
Proposed Dade City - Class III Landfill
Dade City, Florida
UES File No. 80010-002-01

Dear Mr. Golden:

Universal Engineering Sciences, Inc. has completed the subsurface exploration of the site for the proposed Class III Landfill in Dade City, Florida. The scope of our services was planned in conjunction with and authorized by, you.

This report contains the results of our study, an engineering interpretation of these with respect to the project characteristics described to us, our conclusions and recommendations.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

Universal Engineering Sciences, Inc.

Dusan Jovanovic
Project Engineer

Wayne Pandorf, P.E.
Tampa Regional Manager
Registered Professional Engineer No. 30254

DJ/WP:df
cc: Client (5)

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 - Soil Conservation Services Map
- B Boring Location Plan
 - Piezometer Location Plan
 - Boring Logs
 - Soil Classification Chart
- C Constraints and Restrictions

1.0 INTRODUCTION

1.1 GENERAL

In this report, we present the results of the subsurface exploration of the site for a proposed Class III Landfill. We have divided this report into the following sections:

- SCOPE OF SERVICES - Defines what we did
- FINDINGS - Describes what we encountered
- RECOMMENDATIONS - Describes what we encourage you to do
- LIMITATIONS - Describes the restrictions inherent in this report
- SUMMARY - Reviews the material in this report
- APPENDICES - Presents support materials referenced in this report.

1.2 PROJECT DESCRIPTION

We understand a Class III Landfill is anticipated at the subject site. We were provided with a faxed and reduced proposed landfill plan and two cross sections prepared by Hartman & Associates, Inc. We used these drawings in preparing our exploration and performing our analyses. In general, the debris fill will be about 60 feet thick. Soil will be mined from the site to create the capacity along the western half of the site.

Although detailed loading information has not been supplied, based on the available literature and verbal consultation with you, we have agreed on a unit weight of landfill material to be 1775 lb/cu yard (65 pcf).

Our analyses are based upon the above considerations. If any of this information is incorrect or if you anticipate any changes, inform Universal Engineering Sciences so that we may review our recommendations.

The site is located at the northwest corner of Enterprise Road and Auton Road in Dade City, Florida. A general location map of the project area appears in Appendix A: Site Location Map.

2.0 SCOPE OF SERVICES

2.1 PURPOSE

The purpose of our services was:

- to explore the general subsurface conditions at the site;
- to interpret and review the subsurface conditions with respect to the proposed landfill construction;

- to evaluate the general potential for sinkhole development at the subject site;
- to evaluate stability of the mine cuts and final landfill slopes;
- to provide a geotechnical engineering report which summarizes all relevant data and presents results of our geotechnical evaluation;

This report presents an evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. Universal Engineering Sciences would be pleased to perform these services, if you desire.

2.2 FIELD EXPLORATION

The subsurface conditions were explored with eleven (11) borings advanced to depths ranging from 45 to 95 feet, while performing the Standard Penetration Test. During the course of the exploration, twelve (12) "undisturbed" Shelby tube samples were obtained at locations and depths selected by Hartman and Associates field representatives.

The boring locations were selected and determined by Hartman and Associates, Inc., at the time of the field exploration.

The boring locations were surveyed upon completion by Hartman & Associates, Inc., and this information made available to us.

Our drilling crew advanced the borings based upon locations staked by others in the field.

In addition, nine (9) piezometers were installed at locations selected by Hartman and Associates, Inc.

Jar samples of the soils encountered will be held in our laboratory for your inspection for 60 days upon issuance of this report unless we are notified otherwise.

2.3 LABORATORY TESTING

The soil samples recovered from the soil test borings were returned to our laboratory and then an engineer visually examined and reviewed the field descriptions. Representative soil samples were subjected to laboratory testing consisting of eighteen (18) Gradation Determinations eleven (11) Percent Fines tests, twenty nine (29) Natural Moisture Content Tests, ten (10) Atterberg Limits Tests and eleven (11) Laboratory Soil Permeability Tests.

We performed these tests to aid in classifying the soils and to help to evaluate the general engineering characteristics of the site soils. The permeability test samples and Gradation Analysis samples were selected by Hartman and Associates. See Appendix B: Boring Logs, Laboratory Test Summary, Soil Classification Chart for further data and explanations.

3.0 FINDINGS

3.1 SURFACE CONDITIONS

A Universal Engineering Sciences engineer performed a visual site inspection of the subject property to gain a "hands-on" familiarity with the project area.

General site topographic information was obtained from the USGS Quadrangle Map and from the site survey drawing provided by Hartman & Associates, inc. It is apparent that the site is hilly, with the highest point on-site at an approximate elevation of 170 feet NGVD. The high ground located is near the mid-point of the west property line and slopes away towards the southeast property corner at an elevation 110 feet and the northeast property corner at elevation 85 feet. Vegetation on the site consists mainly of grass and scattered oak and pine trees on the east portion of the site while the west portion is an orange grove.

We reviewed U.S.G.S. topographic quadrangle maps, and the USDA Soil Conservation Service Soil Survey of Pasco County for relevant information about the site.

3.2 GEOLOGY/HYDROGEOLOGY

The regional geology of Pasco County consists of unconsolidated sands with intervals of silts and clay of Pleistocene to recent age. The underlying bedrock is massive limestone of the Eocene Age.

Two aquifer systems provide water supplies to Pasco County. These two aquifers consist of an uppermost "non-artesian" surficial aquifer and the underlying artesian (Floridan) aquifer.

The "non-artesian" surficial aquifer lies within the unconsolidated quartz sands of Pleistocene to Recent age. The approximate thickness of the "non-artesian" system is forty feet. The regional artesian groundwater flow direction is generally west towards the Gulf of Mexico. The "non-artesian" aquifer (which is considered not potable) is a source of water for small volume irrigation wells of two-inch diameter or less. The Floridan aquifer lies in massive limestone bedrock and produces high volumes of fresh water.

3.3 SUBSURFACE CONDITIONS

The boring locations and detailed subsurface conditions are illustrated in Appendix B: Boring Location Plan and Boring Logs. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples and a limited number

of laboratory tests. Also, see Appendix B: Soils Classification Chart, for further explanation of the symbols and placement of data on the Boring Logs.

Based on the soil boring information, general soil profile can be described as follows:

The surficial sand deposit found throughout the site consists of brown, orangish brown, and dark brown sand. This surficial sand deposit was three to twenty seven feet thick. The surficial sand was loose to medium dense in consistency. The underlying cohesive strata consist of clayey sand to sandy clay. The amount of fines varies with depth and from location to location. Intrusions of sand strata can be found within this predominately cohesive layer. The clayey sands were loose to medium dense while the clay was soft to stiff. The upper limestone surface was found below the clayey sandy/clay layer. The limestone was contacted at depths ranging from 32 to 67 feet. The upper limestone surface generally slopes in the same direction as the existing surficial grade.

For purpose of this study, we reviewed the U.S. Department of Agriculture Soil Conservation Services Pasco County Soil Survey. As shown in Appendix A, the surficial site soils belong to Astatula, Lake, Appredondo and Zolfo formations.

Based on the temporary piezometer readings provided by the client the groundwater at the site varied from 14 to 73 feet below existing grades, as measured at the end of March, 2000. This corresponds to an approximate elevation of 61.3 feet NGVD.

No detectable water was found in the upper sand deposits at the higher elevation of the site. The "non-artesian" ground water table is not present at this time due to lack of rainfall over the past 12 months.

3.4 SINKHOLE POTENTIAL EVALUATION

A sinkhole can be defined as "a depression caused by soil and other materials subsiding into an open hole or void below the ground surface." This phenomenon is not uncommon in karst geology, where soils are underlain by limestone material which has been partially dissolved by the groundwater. The resulting voids in the rock provide paths through which water can travel, taking erodible soil with it.

In much of the Central and Western Florida vicinity, the soil which occurs in close proximity above the limestone consists of a light green to gray clay to silty or clayey sand resulting from marine deposits, commonly termed the "Hawthorn Formation." This confining layer tends to form a barrier to the vertical movement of groundwater. The groundwater level in the limestone in this area is termed the Florida aquifer and is under pressure. The groundwater level or piezometric surface in the soils above the confining layer frequently differs from that which exists in the underlying porous limestone because the confining layer prevents an interconnected hydrostatic condition. Provided the confining layer remains intact, the two groundwater regimes can remain independent.

The shallow water table is located within the upper sands and rests on top of the confining layer. The upper water table is not confined or under pressure. The water pressure above the top of the confining layer is simply defined by the height, or depth of groundwater which lies above the confining layer. If a well or standpipe were to penetrate the confining layer into the underlying rock, then the water pressure in the deep water table could be evaluated as the level of water within the standpipe. If the pressure causes the water to rise higher than the level of the shallow water table, then the groundwater regime can be described as having a "net upward gradient." If, however, the water in the upper water table is higher than the water in the standpipe, then the condition exhibits a "net downward gradient."

If an opening develops in the confining layer, connecting the voids or caverns in the limestone bedrock below to the relatively sandy soils above, then the soil and groundwater conditions might become unbalanced. In some instances, the clay in the confining layer soils may crack, either from shrinkage, such as may result from dry periods when the shallow water table is absent, or from shifting of the limestone bedrock. In other cases, these soils have little clay content, and are inherently more susceptible to erosion. The result can be a breach in the confining layer. If the groundwater has a net downward gradient, then the erodible soils lying both above and below the confining layer can "ravel" through the opening in the confining layer and/or into cavities and fractures in the bedrock, similar to the behavior of sand falling through the orifice of an hourglass. Over a period ranging from hours to possibly many years, the loss of material causes the soil above to loosen until it is incapable of supporting the material above, and it subsides under the weight. The resulting sinkhole can damage or destroy man-made structures on the near-surface soils.

Although breaches of the confining layer are fairly common, it generally takes a long time for the loose zone to extend to the surface and cause a sinkhole. Therefore, even in areas of "high sinkhole potential", the incidence of surface expressions (sinkholes) can be infrequent. Although some notable Florida sinkholes have been large, most of the sinkholes observed within the Central Florida area have been smaller than 25 feet in diameter. In Western Florida, sinkholes typically can be even smaller, generally in the range of 10 feet in diameter or less.

Sinkhole activity may be indicated by the presence of some of the following conditions or occurrences:

- a loose or raveled zone within the sandy overburden soil, or clay confining layer, indicating movement of the soils into voids into the limestone below;
- the presence of an opening in the confining layer, as indicated by boring through the layer and finding either little or no thickness of clay;
- reduced water pressure in the soil voids ("pore pressure") with increasing depth, indicating downward flow of water;
- depressed, or absent groundwater table;

- depression of the top of, or opening, or voids within, the limestone bedrock; and
- loss of drilling fluid circulation while advancing a borehole.

Since the majority of sinkholes develop along the natural joints within the underlying limestone, their surficial expression in the form of small circular/oval depressions can be used to project the rock joint pattern at the ground surface in a form of lineaments. The term "lineament" refers to any natural landscape pattern which may have certain geometric regularity and reflects the underlying rock joint pattern.

The lineament features of the study area as determined by UES are presented on USGS Map in Appendix A. These lineament patterns were determined from land surface features depicted on the Dade City and Branchborough U.S.G.S Quadrangle Topographic Maps. As can be observed on this figure, no significant lineament traverse the site.

No significant loose or ravelled soil zones were detected in our borings above the upper limestone surface.

Based on the above lineament study and subsurface exploration information, it is our opinion that the potential for sinkhole occurrence at the subject site is low.

3.5 STABILITY OF MINE CUT AND LANDFILL SLOPES

Based on the information provided to us by the client, the landfill will have a top elevation between 125 to 170 feet (NGVD) and a side slope of 4.0 horizontal to 1.0 vertical.

Stability of the proposed landfill design section was evaluated by considering circular arc failure mode. The stability analyses were performed using the Modified Bishop's method in the computer program STABL4, which employs an iteration scheme to find the critical slip surface and the corresponding minimum factor of safety. Based on our stability analyses, the minimum factor of safety of the proposed landfill design section was analyzed to be in excess of 3.0.

It is our understanding that a final slope of 1.5 horizontal to 1.0 vertical is anticipated for the mine cuts, prior to placement of landfill material. The stability of these slopes was also evaluated using the same methodology. The safety factor for the mine cut slope assuming subsurface conditions depicted in borings B-1, B-3, B-8, B-9 and B-10 was estimated to be 1.7 or higher.

3.6 BEARING CAPACITY OF SUBGRADE

As part of our geotechnical evaluation, analyses were performed to estimate the bearing capacity of the foundation soil beneath the proposed landfill cells. Considering a final landfill thickness of 80 feet and a total unit weight of refuse of 65 pcf, the differential vertical stress on the foundation soil at the base of the landfill was calculated to vary between -5500 and 1850 psf. Based on the

subsurface profiles encountered in the soil boring, our calculations indicate that the proposed landfill will have a factor of safety much greater than 3 against bearing capacity failure.

3.7 SETTLEMENT OF SUBGRADE AND LANDFILL MASS

Settlement of the soil layers beneath the proposed landfill cell was computed using average N-values obtained from the SPT boring B-5 conducted as part of this study. Based on an average N-value of 6 blows per foot, the total settlement of the foundation soil was estimated to be on the order of magnitude of one inch. Settlement of the foundation soil is expected to decrease to zero at the toe of the landfill slope, and at the points where the net fill load becomes equal to the former native overburden load in mined area. Accordingly, the differential settlement within the foundation soil from the crest to the toe of the proposed landfill design section is expected to be less than one inch. Settlement of the foundation soil will occur in small instantaneous increments as the landfill is raised.

The settlement of landfill mass that occurs due to compression and decomposition of the landfill material is extremely difficult to predict due to many unknowns pertaining to the composition of landfill material, dynamics of fill placement, etc. Based on the available literature, the total settlement of a landfill mass may be as much as 25% of the original landfill thickness. We estimate the post closure settlement of top of the landfill due to compaction and decomposition of landfill material to be on the order of 10-15 feet. This settlement is expected to be uneven and erratic depending on the composition of fill material.

4.0 RECOMMENDATIONS

4.1 GENERAL

The following recommendations are made based upon a review of the attached soil test data and our understanding of the proposed construction. If the landfill plan, sections, or grading plans change from those discussed previously, we request the opportunity to review and possibly amend our recommendations with respect to those changes.

Additionally, if subsurface conditions are encountered during the mining stage, which were not encountered in the borings, e.g., seepage, buried muck, fissured clays, etc., report those conditions immediately to us for observation and recommendations.

In this section of the report, we present our general recommendations for stability of mine cut and landfill slopes.

The permanent mine cut slopes may be as steep as 1.5 horizontal to 1 vertical (1.5H:IV). Run off of stormwater down the slope should be prevented by construction of berms along the top of the slope. Furthermore, ponding of water above the top of the slope should be prevented. Also, for exposed slope heights of over 40 feet, it may be necessary to construct a bench to control surface water runoff and divert the concentration of runoff away from the lower slope areas.

5.0 LIMITATIONS

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible subsurface variations.

Further, we present documents in Appendix C: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

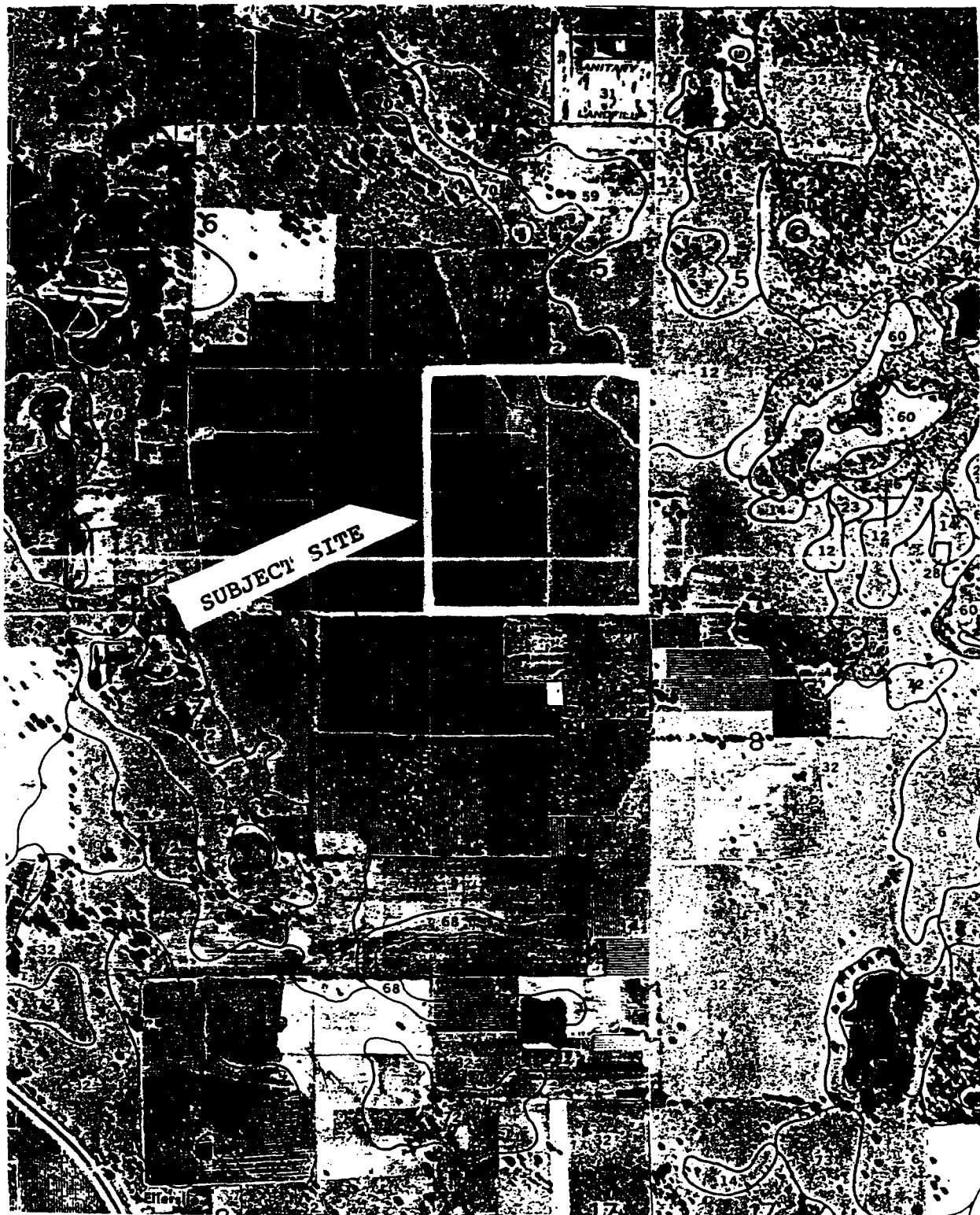
6.0 REFERENCES

David E. Daniel: Municipal Practice for Waste Disposal (1993)
David Gordon Wilson: Handbook of Solid Waste Management (1988)
Dean K. Wall and Chris Zeiss: Municipal Landfill Biodegradation and Settlement (Journal of Environmental Engineering, Vol 121, No. 5 March 1995)
USGS 7.5 Minute Series Quadrangle Maps Dade City, Florida 1960 (photo revised 1988) and Branchborough, Florida 1960 (photo revised 1987).

APPENDIX A

IMAGE QUALITY

AS YOU REVIEW THE NEXT GROUP OF IMAGES,
PLEASE NOTE THAT THE ORIGINAL DOCUMENTS
WERE OF POOR QUALITY.



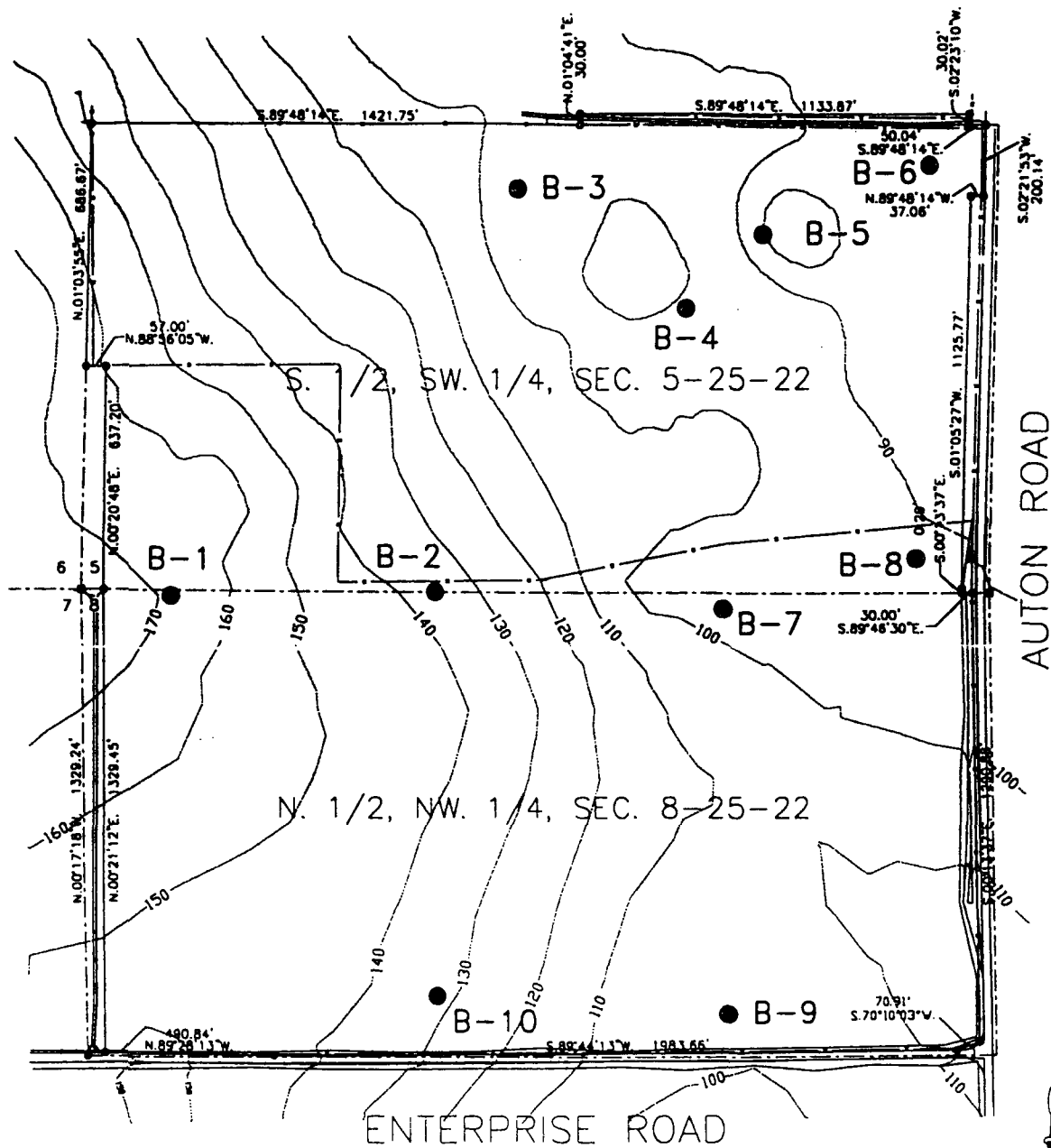
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PROPOSED CLASS III LANDFILL
NWC OF ENTERPRISE RD. AND AUTON RD.
DADE CITY, FLORIDA

SOIL CONSERVATION SERVICES MAP

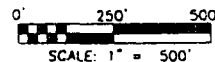
DRAWN BY: D.J.	DATE: MAY, 2000	CHECKED BY: W.P.	DATE: MAY, 2000
SCALE: 1" = 2000'	PROJECT NO: 80010-002-01	REPORT NO:	APPENDIX: A

APPENDIX B



LEGEND:

- B-1 Approximate SPT boring location

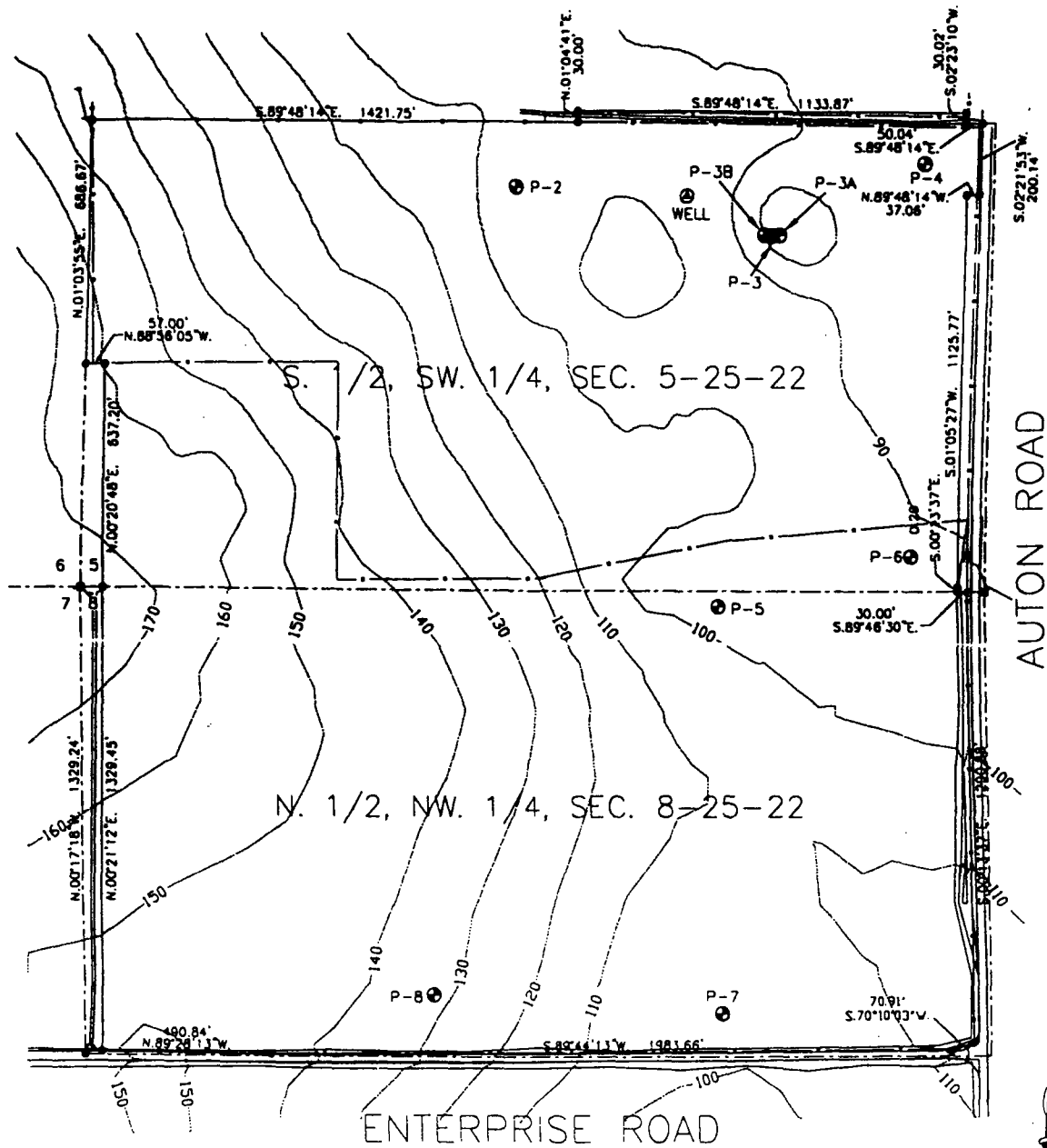


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PROPOSED CLASS III LANDFILL
NWC OF ENTERPRISE RD. AND AUTON RD.
DADE CITY, FLORIDA

BORING LOCATION PLAN

DRAWN BY: D.J.	DATE: MAY, 2000	CHECKED BY: W.P.	DATE: MAY, 2000
SCALE: 1" = 500'	PROJECT NO: 80010-002-01	REPORT NO:	APPENDIX: B



LEGEND:

● P-8

Approximate piezometer location



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ENGINEERING SCIENCES

PROPOSED CLASS III LANDFILL
NWC OF ENTERPRISE RD. AND AUTON RD.
DADE CITY, FLORIDA

PIEZOMETER LOCATION PLAN

DRAWN BY: O.J.	DATE: MAY, 2000	CHECKED BY: W.P.	DATE: MAY, 2000
SCALE: 1" = 500'	PROJECT NO: 80010-002-01	REPORT NO:	APPENDIX: B



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO: 80010-002-01

REPORT NO.:

PAGE: 1

SUBJECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION: **B-01**
SECTION: 8 and 5 TOWNSHIP: 25S

SHEET: **1 of 1**
RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc

G.S. ELEVATION (ft): 169.60 DATE STARTED: 3/3/00

LOCATION:

WATER TABLE (ft): DATE FINISHED: 3/3/00

REMARKS: Hole grouted

DATE OF READING: DRILLED BY: D.E.

EST. W.S.W.T. (ft) TYPE OF SAMPLING: SPT

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT (%)
									LL	PI		
0						Orangish brown sand (SP)						
5	X	2-2-2	4									
10	X	3-4-5	9									
15	X	6-6-8	14			Orangish brown clayey sand (SC)						
20	X	4-4-8	12			Orangish brown sandy clay with cemented sand particles (CH)						
25	X	8-8-11	19									
30	X	7-7-9	16			Gray brown to brown sand (SP)						
35	X	4-4-8	12			Light gray sandy clay with silt and phosphate (CL)						
40	X	4-4-4	8			Light gray and yellowish brown mottled sandy clay with silt (CL)						
45	X	5-8-8	16			Light greenish gray sandy clay with silt (CL)						
50	X	4-5-7	12									
55	X	6-8-12	20									
60	X	15-23-24	47			Tan limestone						
65	X	13-50/2	50/2									
70	X	50/5 5	50/5 5									
75	X	40-50/3	50/3				32.1	17.2				
80	X	50/1 5	50/1 5									
85	X	50/4	50/4			with intrusions of dark brown, yellowish brown and gray mottled clayey sand (SC)						
90	X	32-14-9	23				41	35.9				
95	X	3-3-4	7			Drilling fluid circulation loss @ 93 feet with intrusions of greenish gray sandy clay (CH) Boring Terminated at 95 feet						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO 80010-002-01

REPORT NO.:

PAGE: 2

OBJECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION: **B-02** SHEET: **1 of 1**
SECTION: 8 and 5 TOWNSHIP: 25S RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc

G.S. ELEVATION (ft): 136.90

DATE STARTED: 3/6/00

LOCATION:

WATER TABLE (ft):

DATE FINISHED: 3/6/00

REMARKS: Hole grouted

DATE OF READING:

DRILLED BY: D.E.

EST. W.S.W.T. (ft):

TYPE OF SAMPLING: SPT

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT (%)
									LL	PI		
0						Orangish brown sand (SP)						
5	X	6-8-12	20			Orangish brown clayey sand (SC)						
10	X	11-14-19	33									
15	X	6-8-9	17									
20	X	7-11-14	25			Orangish brown sand with clay (SP-SC)						
25	X	6-7-7	14			Orangish brown clayey sand (SC)						
30	X	6-4-4	8			Orangish brown and gray mottled clayey sand (SC)						
35	X	4-4-4	8			Orangish brown clayey sand (SC)						
40	X	4-3-4	7									
45							42.8	23.7	47	28	7.0E-5	
50		3-4-5	9									
55		3-3-3	6									
60		3-3-4	7			Orangish brown and grayish brown mottled clayey sand (SC)						
65		6-10-12	22				37.5	36.5				
						Drilling fluid circulation loss @ 67 feet						
70		27-50/5.5	50/5.5			Tan limestone						
		50/5	50/5			No recovery						
75						Boring Terminated at 73.5 feet						



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PROJECT NO 80010-002-01

REPORT NO.

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PROJECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION: **B-03** SHEET: **1 of 1**
SECTION 8 and 5 TOWNSHIP: 25S RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc

G.S. ELEVATION (ft): 95.60 DATE STARTED: 3/13/00

LOCATION:

WATER TABLE (ft): DATE FINISHED: 3/15/00

REMARKS: Hole grouted

DATE OF READING:

DRILLED BY: D.E.

EST. W.S.W.T. (ft):

TYPE OF SAMPLING: SPT

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT)	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT (%)
									LL	PI		
0						Brown sand to sand with silt (SP to SP-SM)						
5	X	2-2-2	4									
10	X	2-2-3	5									
15	X	9-10-14	24			Gray and orangish brown mottled clayey sand (SC)						
20	X	6-5-6	11			Dark brown, orangish brown and gray mottled clayey sand (SC)	43.2	31.3				
25	■						48.5	28.6	57	36	1.9E-4	
30	X	3-7-7	14									
35	X	4-5-5	10			Light greenish gray clayey sand (SC)	42.5	56.6				
40	X	3-3-3	6			Dark brown orangish brown gray and black sandy clay with silt (CL)						
45	X	3-3-3	6			Dark brown orangish brown and gray mottled clayey sand (SC)						
50	X	1-1-1/12 3-4-3	2/18 7			Tan limestone						
55						Drilling fluid circulation loss @ 50 feet						



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REPORT NO.:

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PROJECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION **B-03A** SHEET: **1 of 1**
SECTION: 8 and 5 TOWNSHIP: 25S RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc

G.S. ELEVATION (ft) 95.60 DATE STARTED: 4/20/00

LOCATION:

WATER TABLE (ft) 31.0 DATE FINISHED: 4/20/00

REMARKS:

DATE OF READING 4/20/2000 DRILLED BY: D.E

EST. W.S.W.T. (ft) TYPE OF SAMPLING SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W T	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT (%)
									LL	PI		
0						Rotary wash to 43.5 feet						
5												
10												
15												
20												
25												
30												
35												
40												
45	X	5-6-7	13			Dark brown, orangish brown and gray mottled layey sand (SC)						
50	X	2-2-1 15-30-37	3 67			Tan limestone						
55	X	30-42-50/3	50/3									
60	X	42-50/3	50/3			Boring Terminated at 59.2 feet						



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B-04SHEET **1 of 1**

OBJECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION:
SECTION 8 and 5

TOWNSHIP: 25S

RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc

G.S. ELEVATION (ft): 98.10

DATE STARTED: 3/7/00

LOCATION:

WATER TABLE (ft)

DATE FINISHED: 3/7/00

REMARKS: Hole grouted

DATE OF READING:

DRILLED BY: D E

EST. W.S.W.T. (ft)

TYPE OF SAMPLING: SPT

DEPTH (FT)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT (%)
									LL	PI		
0						Orangish brown sand (SP)						
5	X	2-2-3	5									
10	X	5-7-8	15			Orangish brown, dark brown and gray sand with silt and clay (SP-SM to SP-SC)						
15	X	4-5-7	12			Orangish brown, dark brown and gray sandy clay (CH)						
20	X	3-4-5	9				63.6	32.2				
25	■						55.6	29.9	65	45	2.2E-5	
30	X	4-5-6	11									
35	X	3-5-7	12			Orangish brown, dark brown gray and black clayey sand (SC)						
40	X	5-4-5	9									
45	X	10-4-15	19			Tan limestone						
50	X	10-12-14	26									
Boring Terminated at 50 feet												



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PROJECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION: **B-05** SHEET: **1 of 1**
SECTION: 8 and 5 TOWNSHIP: 25S RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc.

G.S. ELEVATION (ft): 77.80 DATE STARTED: 3/15/00

LOCATION:

WATER TABLE (ft): N.F. DATE FINISHED: 3/15/00

REMARKS: Hole grouted

DATE OF READING: DRILLED BY: D.E.

EST. W S W T (ft)

TYPE OF SAMPLING: SPT

DEPTH (FT)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT. (%)
									LL	PI		
0						Orangish brown sand (SP)						
5	X	3-3-3	6			Dark brown sand (SP)						
10	X	2-2-2	4			Orangish brown sand (SP)						
15	X	2-2-2	4									
20	X	3-3-4	7				8.0	26.8				
25	X	4-3-4	7				7.1	26.2				
30	X	2-3-5	3			Orangish brown, brown and gray mottled clayey sand (SC)						
35	X	4-4-6	10			Orangish brown, brown and gray mottled sandy clay (CH)						
40	X	4-5-7	12			Light gray and gray mottled clayey sand (SC)	47.7	24.8	60	41	2.9E-5	
45	X	2-3-3	6									
50	X	3-2-2	4									
55	X	2-2-2	4			No recovery Drilling fluid circulation loss @ 55 feet						
60	X	3-2-2	4			Orangish brown, brown, gray and black mottled sandy clay (CH)						
65	X	2-3-20	23			Tan limestone						



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JECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION: **B-06** SHEET: **1 of 1**
SECTION: 8 and 5 TOWNSHIP: 25S RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc

G.S. ELEVATION (ft): 83.30 DATE STARTED: 3/15/00

LOCATION:

WATER TABLE (ft): 20 DATE FINISHED: 3/15/00

REMARKS:

DATE OF READING: 3/15/2000 DRILLED BY: D.E

EST W S W T (ft) TYPE OF SAMPLING SPT

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT)	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT (%)
									LL	PI		
0						Light brown sand (SP)						
5	X	3-3-3	6									
10	X	7-9-8	17			Light brown, dark brown and gray mottled sand with silt (SP-SM)						
15	X	7-7-7	14									
20	X	6-7-9	16	▼		Light brown, dark brown and gray mottled sandy clay (CH)	52.3	31.1	71	48	4.2E-4	
						Light brown, dark brown and gray mottled clayey sand (SC)	26.5	18.2				
						Gray and dark brown mottled sandy clay (CH)	51.8	30.9	69	51	1.5E-4	
25												
30	X	4-4-4	8				66.9	43.2				
35	X	2-2-3	5			Light brown, dark brown and gray mottled clayey sand (SC)						
40	X	3-6-10	16			Gray sand with silt (SP-SM)						
45	X	4-12-15	27			Brown, yellowish brown and gray mottled sandy clay (CL)						
50	X	4-6-7	13			Light brown orangish brown and white sandy clay (CH)						
55		50/2	50/2			No recovery						
						Boring Terminated at 53.7 feet						



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PROJECT NO 80010-002-01

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JECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION: **B-07**
SECTION: 8 and 5 TOWNSHIP: 25S

SHEET: **1 of 1**
RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc

G.S. ELEVATION (ft): 93.30

DATE STARTED: 3/15/00

LOCATION:

WATER TABLE (ft)

DATE FINISHED: 3/15/00

REMARKS: Hole grouted

DATE OF READING:

DRILLED BY: D.E.

EST. W S W T (ft).

TYPE OF SAMPLING SPT

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG. CONT (%)
									LL	PI		
0						Brown sand with silt (SP-SM)						
5	X	3-3-3	6			Dark brown sand with silt (SP-SM)						
10	X	4-4-4	8			Orangish brown sand with silt (SP-SM)						
15	X	4-5-5	10			Brown sand with silt and clay (SP-SM to SP-SC)						
20	X	4-5-5	10			Brown sandy clay (CH)	57.0	34	73	51	3.0E-5	
25	X	4-5-6	11			No recovery						
30	X	5-5-6	11			Gray, light brown and dark brown mottled clayey sand (SC)	41.8	39.3				
35	X	5-5-7	12				22.2	26.1				
40	X	4-7-8	15			Tan limestone						
45	X	11-5-8	13			Drilling fluid circulation loss @ 40 feet						



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PROJECT NO 80010-002-01

REPORT NO.:

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PROJECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION: **B-08** SHEET: **1 of 1**
SECTION: 8 and 5 TOWNSHIP: 25S RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc

G. S. ELEVATION (ft): 92.90 DATE STARTED: 3/16/00

LOCATION:

WATER TABLE (ft): DATE FINISHED: 3/16/00

REMARKS: Hole grouted

DATE OF READING: DRILLED BY: D E.

EST W S W T (ft): TYPE OF SAMPLING SPT

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT. (%)
									LL	PI		
0						Orangish brown sand with silt and clay (SP-SM to SP-SC)						
5	X	2-3-6	9									
10	X	7-8-13	21									
15	X	8-11-13	24									
20	X	6-7-6	13			Orangish brown and gray mottled clayey sand (SC)						
25	X					Light brown clayey sand (SC)						
30	X	5-4-4	8				23.9	17.1	20	NP	3.7E-3	
35	X	4-3-4	7			Light brown, dark brown and gray mottled sandy clay (CH)	23.1	24.6				
40	X	4-4-4	8			Light brown, orangish brown and gray mottled clayey sand (SC)	57.3	36.5				
45	X	5-7-9	16			Tan limestone						
50	X	10-10-14	24			Boring Terminated at 50 feet						



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PROJECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION **B-09**
SECTION 8 and 5 TOWNSHIP 25S

SHEET **1 of 1**
RANGE 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc

G.S. ELEVATION (ft): 101.10

DATE STARTED:

LOCATION:

WATER TABLE (ft):

DATE FINISHED:

REMARKS: Hole grouted

DATE OF READING

DRILLED BY D.E.

EST. W.S.W.T. (ft)

TYPE OF SAMPLING SPT

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT (%)
									LL	PI		
0						Orangish brown sand (SP)						
5	X	2-2-1	3									
10	X	8-12-13	25			Light gray, light brown and orangish brown, mottled sandy clay with silt (CL)						
15	X	6-5-6	11			Light gray, light brown and orangish brown, mottled clayey sand (SC)						
20	X	6-7-5	12				27.5	19.6	NP	NP	7.6E-3	
25	X	4-4-5	9									
30	X	8-6-7	13			Light gray, light brown and orangish brown, mottled sand with silt and cemented sand particles (SP-SM)						
35	X	6-7-7	14									
40	X	6-5-6	11			Light grayish brown sand with silt to silty sand (SP-SM to SM)						
45	X	5-11-13	24				12.8	24.2				
50	X	7-7-11	23			No recovery						
55	X	11-11-17	28			Light gray, light brown and orangish brown, mottled clayey sand (SC)						
60	X	3-4-25	29			Light brown and yellowish brown mottled clayey sand (SC)	45.3	33.4				
65	X	12-10-13	23			Tan limestone						
70	X	12-12-20	32									
75	X	25-50/2	50/2									
		50/5	50/5									
80	X	50/3	50/3									
85	X	5-6-10	16			Boring Terminated at 85 feet						



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PROJECT NO 80010-002-01

REPORT NO:

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OBJECT: Proposed Class III Landfill
NWC of Enterprise Road and Auton Road
Dade City, Florida

BORING DESIGNATION: B-10

SHEET: 1 of 1

SECTION: 8 and 5

TOWNSHIP: 25S

RANGE: 22E

CLIENT: Sid Larkin and Sons c/o Hartman & Associates, Inc.

G.S. ELEVATION (ft): 132.70

DATE STARTED: 3/16/00

LOCATION:

WATER TABLE (ft):

DATE FINISHED: 3/16/00

REMARKS: Hole grouted

DATE OF READING

DRILLED BY: D.E.

EST. W.S.W.T. (ft):

TYPE OF SAMPLING SPT

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (feet/day)	ORG CONT (%)
									LL	PI		
0						Orangish brown sand with silt (SP-SM)						
5	X	2-2-2	4									
10	X	45-20-26	46			Yellowish brown clayey sand (SC)						
15	X	10-12-17	29			Light brown, orangish brown and dark brown mottled clayey sand (SC)						
20	X	8-10-15	25									
25	X	7-10-8	18									
30	X	7-8-12	20			Yellowish brown sand with silt (SP-SM)						
35	X	6-5-7	12			Light brown, orangish brown and brown mottled clayey sand (SC)						
40	X	10-7-8	15			Yellowish brown sand (SP)						
45	X	5-4-5	9			Light brown and yellowish brown mottled sandy clay (CH)						
50							73.3	47.5	118	81	2.9E-5	
55	X	10-8-7	15			Light brown, yellowish brown and gray mottled clayey sand with cemented sand particles (SC)						
60		4-4-6	10				34.6	41.5				
65		3-2-15	17			Tan limestone						
						Drilling fluid circulation loss @ 65 feet						
70		40-13-22 50/5	35 50/5				13.4	14.3				
75						Boring Terminated at 70 feet						

IMAGE QUALITY

AS YOU REVIEW THE NEXT GROUP OF IMAGES,
PLEASE NOTE THAT THE ORIGINAL DOCUMENTS
WERE OF POOR QUALITY.

LABORATORY TEST SUMMARY

[illegible]

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

STABL4

ORIGINALLY CODED BY:
RONALD A. SIEGEL
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PURDUE UNIVERSITY
WEST LAFAYETTE, INDIANA

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--Slope Stability Analysis--
Simplified Janbu Method of Slices
or Simplified Bishop Method

PROBLEM DESCRIPTION Dade City Landfill, East Side of fill @
B-8, B-7, B-2 & B-1

BOUNDARY COORDINATES

7 Top Boundaries
20 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right Below Bnd	Soil Type
1	400.00	92.00	470.00	92.00	1
2	470.00	92.00	695.00	96.00	1
3	695.00	96.00	810.00	125.00	4
4	810.00	125.00	1215.00	145.00	4
5	1215.00	145.00	1410.00	150.00	4
6	1410.00	150.00	1615.00	161.00	4
7	1615.00	161.00	2800.00	171.00	4
8	695.00	96.00	750.00	80.00	1
9	750.00	80.00	1320.00	80.00	1
10	1320.00	80.00	1950.00	85.00	2
11	1950.00	85.00	2600.00	100.00	2
12	2600.00	100.00	2760.00	155.00	2
13	2760.00	155.00	2800.00	171.00	1
14	400.00	66.00	690.00	66.00	2
15	690.00	66.00	1250.00	75.00	2
16	1250.00	75.00	1320.00	80.00	2
17	400.00	55.00	690.00	55.00	3
18	690.00	55.00	1250.00	57.00	3
19	1250.00	57.00	1850.00	55.00	3
20	1850.00	55.00	2800.00	110.00	3

ISOTROPIC SOIL PARAMETERS

4 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param. (psf)	Pressure Constant	Piez. Surface No.
1	115.0	120.0	.0	32.0	.00	.0	1
2	120.0	125.0	.0	34.0	.00	.0	1
3	120.0	125.0	.0	38.0	.00	.0	1
4	65.0	65.0	.0	40.0	.00	.0	1

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit Weight of Water = 62.40

Piezometric Surface No. 1 Specified by 3 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	400.00	70.00
2	1750.00	70.00
3	2800.00	90.00

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

100 Trial Surfaces Have Been Generated

10 Surfaces Initiate From Each Of 10 Points Equally Spaced
Along The Ground Surface Between X = 600.00 ft.
and X = 800.00 ft.

Each Surface Terminates Between X = 1200.00 ft.
and X = 1400.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 ft.

200.00 ft. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Modified Bishop Method * *

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	711.11	100.06
2	910.40	116.93
3	1109.59	134.95
4	1212.73	144.89

Circle Center At X = ***** ; Y = ***** and Radius, *****

*** 9.566 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	600.00	94.31
2	798.31	68.35
3	998.08	77.93
4	1192.99	122.76
5	1246.89	145.82

Circle Center At X = 844.5 ; Y = 1191.6 and Radius, 1124.2

*** 9.885 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	666.67	95.50
2	864.04	63.16
3	1062.98	83.64
4	1222.89	145.20

Circle Center At X = 886.7 ; Y = 819.9 and Radius, 757.1

*** 10.300 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	666.67	95.50
2	863.46	59.83
3	1062.80	76.12
4	1251.19	143.26
5	1255.21	146.03

Circle Center At X = 901.0 ; Y = 827.9 and Radius, 769.0

*** 10.670 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	600.00	94.31
2	797.57	63.25
3	997.51	68.18
4	1193.32	108.94
5	1286.62	146.84

Circle Center At X = 870.3 ; Y = 1169.9 and Radius, 1109.0

*** 10.963 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	711.11	100.06
2	910.91	109.10
3	1110.20	125.95
4	1276.43	146.58

Circle Center At X = 580.1 ; Y = 5210.1 and Radius, 5111.7

*** 11.183 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	688.89	95.89
2	885.27	57.99
3	1084.45	76.04
4	1264.79	146.28

Circle Center At X = 921.1 ; Y = 771.1 and Radius, 714.1

*** 11.316 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	666.67	95.50
2	861.34	49.62
3	1060.27	70.22
4	1220.35	145.14

Circle Center At X = 899.8 ; Y = 648.9 and Radius, 600.6

*** 11.483 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	622.22	94.71
2	816.83	48.56
3	1016.53	59.52
4	1204.91	126.70
5	1230.54	145.40

Circle Center At X = 878.8 ; Y = 743.4 and Radius, 697.6

*** 11.532 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	644.44	95.10
2	837.97	44.62
3	1037.12	63.04
4	1210.91	144.80

Circle Center At X = 885.0 ; Y = 621.2 and Radius, 578.5

*** 11.733 ***

STABL4

ORIGINALLY CODED BY:
RONALD A. SIEGEL
GRADUATE INSTRUCTOR IN RESEARCH
PURDUE UNIVERSITY
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--Slope Stability Analysis--
Simplified Janbu Method of Slices
or Simplified Bishop Method

PROBLEM DESCRIPTION Dade City Landfill, Mine Slope Stability
@ B-1

BOUNDARY COORDINATES

7 Top Boundaries

12 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	900.00	113.00	914.50	113.00	6
2	914.50	113.00	937.00	128.00	5
3	937.00	128.00	959.50	143.00	4
4	959.50	143.00	974.50	153.00	3
5	974.50	153.00	982.00	158.00	2
6	982.00	158.00	1000.00	170.00	1
7	1000.00	170.00	1700.00	185.00	1
8	982.00	158.00	1700.00	158.00	2
9	974.50	153.00	1700.00	153.00	3
10	959.50	143.00	1700.00	143.00	4
11	937.00	128.00	1700.00	128.00	5
12	914.50	113.00	1700.00	120.00	6

ISOTROPIC SOIL PARAMETERS

6 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param. (psf)	Piez. Pressure Constant (psf)	Piez. Surface No.
1	115.0	120.0	.0	32.0	.00	.0	1
2	120.0	125.0	.0	34.0	.00	.0	1
3	120.0	125.0	2000.0	.0	.00	.0	1
4	120.0	125.0	.0	38.0	.00	.0	1
5	120.0	125.0	2000.0	.0	.00	.0	1
6	125.0	125.0	.0	40.0	.00	.0	1

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit Weight of Water = 62.40

Piezometric Surface No. 1 Specified by 2 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	900.00	70.00

2 1700.00 70.00

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Circular Surfaces, Has Been Specified.

100 Trial Surfaces Have Been Generated.

10 Surfaces Initiate From Each Of 10 Points Equally Spaced
Along The Ground Surface Between X = 900.00 ft.
and X = 950.00 ft.

Each Surface Terminates Between X = 1000.00 ft.
and X = 1100.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = .00 ft.

20.00 ft. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

** Safety Factors Are Calculated By The Modified Bishop Method **

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	900.00	113.00
2	919.71	109.61
3	939.71	110.05
4	959.25	114.30
5	977.62	122.21
6	994.14	133.48
7	1008.21	147.70
8	1019.29	164.35
9	1021.85	170.47

Circle Center At X = 927.4 ; Y = 213.5 and Radius, 104.1

*** 1.736 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	905.56	113.00
2	925.37	110.30
3	945.36	110.85
4	965.00	114.65
5	983.76	121.59
6	1001.14	131.49
7	1016.68	144.08
8	1029.96	159.03
9	1037.39	170.80

Circle Center At X = 932.0 ; Y = 232.7 and Radius, 122.6

*** 1.752 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	900.00	113.00
2	919.62	109.11
3	939.61	109.83
4	958.89	115.12
5	976.45	124.70
6	991.34	138.06
7	1002.77	154.47
8	1008.98	170.19

Circle Center At X = 926.5 ; Y = 195.3 and Radius, 86.5

*** 1.800 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	905.56	113.00
2	925.05	108.51
3	945.02	107.58
4	964.85	110.23
5	983.88	116.37
6	1001.51	125.81
7	1017.18	138.25
8	1030.37	153.28
9	1040.66	170.43
10	1040.83	170.88

Circle Center At X = 940.2 ; Y = 219.1 and Radius, 111.6

*** 1.883 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	911.11	113.00
2	931.00	110.90
3	951.00	111.21
4	970.82	113.90
5	990.17	118.94
6	1008.78	126.27
7	1026.38	135.77
8	1042.71	147.31
9	1057.55	160.73
10	1066.86	171.43

Circle Center At X = 938.5 ; Y = 277.4 and Radius, 166.7

*** 1.903 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	916.67	114.44
2	936.36	110.98
3	956.34	112.06
4	975.54	117.63
5	992.99	127.40
6	1007.78	140.87
7	1019.14	157.33
8	1024.34	170.52

Circle Center At X = 941.6 ; Y = 198.6 and Radius, 87.8

*** 1.920 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	938.89	129.26
2	958.76	131.53
3	977.21	139.25
4	992.77	151.81
5	1004.21	168.22
6	1004.85	170.10

Circle Center At X = 940.8 ; Y = 200.2 and Radius, 71.0

*** 1.959 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	916.67	114.44
2	936.65	113.68
3	956.50	116.18
4	975.67	121.88
5	993.65	130.62
6	1009.98	142.18
7	1024.20	156.24
8	1034.72	170.74

Circle Center At X = 931.3 ; Y = 235.9 and Radius, 122.4

*** 2.050 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	944.44	132.96
2	964.38	131.33
3	983.37	137.59
4	998.43	150.76
5	1007.16	168.75
6	1007.23	170.15

Circle Center At X = 958.4 ; Y = 181.3 and Radius, 50.3

*** 2.106 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	922.22	118.15
2	941.47	112.70
3	961.45	112.00
4	981.03	116.10
5	999.06	124.75
6	1014.50	137.47
7	1026.46	153.50
8	1033.74	170.72

Circle Center At X = 954.3 ; Y = 194.8 and Radius, 83.1

*** 2.118 ***

APPENDIX C

CONSTRAINTS AND RESTRICTIONS

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until construction begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this

report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other explorations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any

such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of exploration. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

APPENDIX D

Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply this report for any purpose or project except the one originally contemplated.*

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an

assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by:* the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help

others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold-prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical-engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.



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TIME

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Attachment 6

Revised Section 3 Engineering Report

Appendix 3-A

(replace previously submitted Appendix 3-A in its entirety)

**ENTERPRISE ROAD CLASS III RECYCLING AND DISPOSAL FACILITY
CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT APPLICATION
LANDFILL OPERATIONS PLAN**

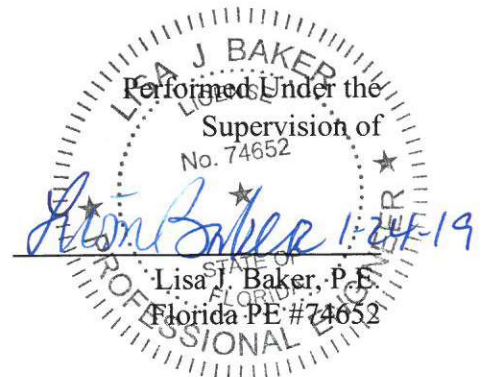
Prepared for:

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Prepared by:

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JANUARY 2019



**ENTERPRISE RECYCLING AND DISPOSAL FACILITY
OPERATIONS PLAN
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ATTACHMENTS

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ATTACHMENT 2	RANDOM LOAD INSPECTION FORM
ATTACHMENT 3	FACILITY TRAINING LOG
ATTACHMENT 4	GAS MONITORING SURVEY FORM
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ATTACHMENT 6	TRAINING CERTIFICATES
ATTACHMENT 7	SOURCE-SEPARATED ORGANICS PROCESSING FACILITY REGISTRATION

1.0 DESIGNATION OF RESPONSIBLE PERSON(S) AND REFERENCES

Mr. John Arnold, P.E. is designated by Angelo's Aggregate Materials, LTD. (Applicant) as the individual responsible for operation and maintenance of the Enterprise Road Class III Recycling and Disposal Facility (Facility) in accordance with Rule 62-701.500, F.A.C. All correspondence and inquiries concerning the Facility permits and operation should be addressed to him at:

Mr. John Arnold, P.E.
Angelo's Aggregate Materials, LTD.
855 28th Street South
St. Petersburg, Florida 33712
Telephone: (813) 477-1719

Updated plan sheets and figures are provided in Sections 3 and 4 of the 2018 Permit Renewal.

2.0 LANDFILL SITE IMPROVEMENTS

The 160 acre landfill site is also permitted by Pasco County to be a Class I mine (Pasco County Petition #CU04-26, approved 9/23/2004). The following site improvements have been installed to continue operation of the Class III Landfill.

2.1 Facilities

An office trailer (gate house) is located onsite for the gate attendant. This trailer has hand washing and toilet facilities. Bottled potable water is used to provide drinking water for the trailer. Electric and telephone services are available to the trailer office. Site entrance improvements also include an all-weather entrance roadway, scales and perimeter road as shown on the Cell 17 Construction Permit Plan Set provided in Section 4.

2.2 Primary Haul Routes

The primary haul routes used to reach the Facility are U.S. 301, S.R. 52, C.R. 35A, U.S. 98, and Clinton Avenue. These routes lead to Enterprise Road, which is used to access the facility.

Enterprise Road was improved by the Applicant to an all-weather, paved access roadway from C.R. 35A to Auton Road. Enterprise Road is a Pasco county owned roadway that is maintained by the county. The Facility has an all-weather, paved access roadway that will be maintained by the Applicant to provide adequate access at all times.

2.3 Effective Barrier

The existing Facility property previously had a five-foot high wire fence along the perimeter of the site. A 6-foot security fence has been constructed along the south and east boundaries. The

security fence consists of a 6-foot high galvanized chain link fence, hereafter referred to as the “security fence.” The five-foot wire fence still exists along the north and west property boundaries. The chain link fence has been installed in accordance with permit issuance in October, 2001. Three (3) foot square “NO TRESPASSING” signs with five-inch letters has been installed at no less than 500-foot spacing and at all corners to notice unauthorized access. The only point of access into the landfill site will be through the ticket gate at the entrance. This gate will be locked during closed hours.

An 8-foot high landscape berm has been constructed along the frontages of Enterprise and Auton roads as a visual and noise buffer.

3.0 OPERATING HOURS

The landfill will have the following operating hours:

Day	Hours of Operation
Monday through Friday	7:00 am to 6:00 pm
Saturday	7:00 am to 2:00 pm

Operational hours may be extended periodically to meet special requests of customers, but at no time will normal operating hours extend beyond 7:00 A.M. to 7:00 P.M. Monday through Saturday. Waste will not be accepted during non-daylight hours.

4.0 CONTINGENCY OPERATIONS

If a natural disaster occurs at the facility rendering it unusable, the waste accepted at the Facility would be rerouted to another permitted landfill. If a storm occurs within the surrounding community, storm debris waste will also be accepted at the facility, providing additional staff if required. In terms of equipment breakdown, there will be two operating pieces of equipment for all stages of landfill operation. Currently, Angelo's has on-site two compactors [Cat 826 (2)], two loaders (Cat 950, Cat 980), two dozers (Cat D5, Cat D8), four excavators [John Deere 450 (2), Komatsu PC1100, Komatsu PC300], and two articulated dump trucks (Volvo). If both should breakdown, replacements can be rented or substituted from onsite or offsite within 24 hours. If power to the landfill is disrupted, temporary power will be made available for emergency power. If any mechanical or electrical component of the leachate collection fails, the contractor/service center listed in the equipment manual or a plumber/electrician is to be contacted for repairs.

The site access roads will be constructed to allow passage of vehicles under all expected weather conditions. See Appendix 3-B of the Engineering Report for the Contingency Plan.

5.0 WASTE STREAM QUALITY CONTROL PLAN

5.1 Visual Inspection

An estimated 550 tons of Class III waste material is currently received at the facility daily. Materials brought onto the Enterprise Road Class III RDF site will be inspected three times. The first inspection takes place at the site entrance. The site will only accept Class III debris (which includes construction and demolition debris by definition); therefore, any vehicles hauling unacceptable waste can be turned away by the attendant at the ticket gate. The gate attendant will question all waste carriers as to the character and origination of their wastes. A mirror is installed overhead and angled to allow gate inspection of all loads after they are untarped. A video camera has been installed over the scale location that allows the gate attendant to visually screen all carrier loads prior to disposal, mainly to identify fire or smoking loads. For loads that are not accepted, a Rejected Load Form will be completed.

The second inspection is a visual inspection that will occur at the working face by a certified, trained spotter. The spotter stationed at the working face will be responsible for spotting trucks bringing in disposal loads. The spotter will show the drivers where to unload, and will also inspect the trucks to make sure unacceptable materials are not unloaded. The spotter will have the authority to ensure that unacceptable materials are reloaded on the truck the material was brought in on.

The third inspection will occur as the waste is spread by the equipment operator. Any unacceptable wastes observed will be placed in the appropriate container located at the working face. The equipment operator may also serve as the spotter and will perform both visual inspections - as the waste is unloaded and as the waste is spread.

The facility will deploy and use spotters based on the volume of waste disposed at the working face. No more than two loads will be allowed to dump simultaneously per spotter at the working face.

5.2 Documentation of Waste Received

Documentation includes recording the name of the company disposing of the waste, driver's signature/information, all vehicle identification numbers, quantity of waste (tons), and type of waste (to meet FDEP and Pasco County's requirements). All vehicles entering the landfill will be weighed. The type of material and location from which the waste was generated will be recorded. This provides a record for tracing ownership of individual loads. See Landfill Operating Records, Section 19.2 for more details.

5.3 Contingency for Unacceptable Materials

If unacceptable waste materials are delivered to the landfill, the truck will be refused entry after inspection at the gate. If the unacceptable waste materials are observed by a spotter while

unloading, they will be reloaded onto the delivery vehicle. Should the vehicle leave before the unacceptable waste has been discovered, Enterprise Road Class III RDF personnel will place the unacceptable material into an appropriate container located at the working face. A maximum of 20 cubic yards of covered dumpster storage for Class I waste will be provided near the active face of the landfill, as shown on the Cell 17 Construction Permit Plan Set provided in Section 4. These containers are transported by Central Carting Disposal (or other qualified vendor) to a disposal facility permitted to accept Class I material. The covered storage containers will control vectors and odors and Class I waste will be removed within 30 days of discovery. If the storage containers cannot be secured to control vectors and odors, the putrescible waste will be stored no longer than 48-hours.

Unacceptable nonputrescible, non-hazardous wastes, such as batteries, paint, chemicals or similar items that are inadvertently accepted will be removed when observed and stored in a roll-off container or pile at the working face and removed daily to a lockable storage unit. A maximum of 40 cubic yards of stored unacceptable, nonputrescible, non-hazardous wastes may be provided near the active face of the landfill, as shown on the Cell 17 Construction Permit Plan Set provided in Section 4. These materials will be removed from the site at least every 30 days (sooner if required) by a qualified vendor and taken to their facility for processing and proper disposal. Class I material is removed by Republic Services; Fluorescent bulbs and other related hazardous materials are removed by US Ecology. This plan should meet the inspection needs for the site to prevent disposal of unacceptable wastes.

If suspect regulated hazardous wastes are identified by operators or spotters by random load inspection or discovered deposited at the landfill, the FDEP will be notified promptly, as well as the hauler and generator of the wastes, if known. The area where the hazardous wastes are stored will immediately be secured from public access. If the generator or hauler cannot be identified, Enterprise Road Class III RDF will assume the cleanup, transportation and disposal of the waste at a permitted hazardous waste management facility.

5.4 Acceptable and Unacceptable Class III Landfill Waste Materials

The Enterprise Road Class III RDF will accept only those solid wastes as defined in Rule 62-701.200 (14), F.A.C. as Class III wastes, except as allowed otherwise by permit.

Acceptable Class III waste materials include the following:

- Land clearing debris
- Demolition debris
- Glass
- Carpet
- Cardboard
- Asbestos
- Construction debris
- Non-Treated Wood Pallets
- Unpainted, painted and untreated wood scraps from manufacturing
- Waste Tires (Processed)*
- Paper
- Furniture other than appliances

- Plastic
 - Automobiles and parts without visible contamination from petroleum products or other chemicals
 - Yard trash
- * Processed waste tires are acceptable for disposal in the Class III Landfill provided that they have been cut into sufficiently small parts. The processed waste tire parts may be disposed of or used as initial cover at a permitted landfill. For use as initial cover, a sufficiently small part means that 70 percent of the waste tire material is cut into pieces of 4 square inches or less and 100 percent of the waste tire material is 32 square inches or less. For purposes of disposal, a sufficiently small part means that the tire has been cut into at least eight substantially equal pieces. Any processed tire which is disposed of in a landfill and which does not meet the size requirement above must receive initial cover, as defined in subsection 62-701.200(53), F.A.C., once every week.

The following is a compilation of unacceptable Class III waste materials:

- Putrescible Household Waste
- Paint (liquid)
- Any toxic or hazardous Materials (i.e., batteries, solvents, oils, etc.)
- Contaminated soils
- Electronics
- Refrigerators, freezers, air conditioners (white goods)
- Biomedical waste
- Automobiles or parts that are contaminated with petroleum products or other chemicals.
- Septic tanks and pumping
- Whole waste tires (except at the waste tire processing facility)
- CCA Treated wood

The site has a visible sign at the site entrance on Enterprise Road as provided in Attachment 1. The sign identifies the accepted wastes, hours of operation, landfill classification, and site's 24-hour emergency contact and telephone number. Industrial or excavated waste will be considered for acceptance on a case by case basis, only with prior consent of the Department.

5.5 Random Load Inspection

In accordance with Rule 62-701.500(6) a., F.A.C., the owner or operator will implement a load-checking program to detect and discourage attempts to dispose of unauthorized wastes at the landfill. The load checking program will consist of the following minimum requirements:

1. The landfill operator will examine at least three random loads of solid waste delivered to the landfill per week. The waste collection vehicle drivers selected by the inspector will be directed to discharge their loads at a designated location in the landfill. A detailed inspection of the discharged material will be made for any unauthorized wastes. The

landfill operator will assure the random inspections will be distributed between both loads originating from the transfer facility and other private waste haulers delivering waste to the landfill.

2. If unauthorized wastes are found, the facility will contact the generator, hauler, or other party responsible for shipping the waste to the landfill to determine the identity of the waste sources.

The following procedures will be followed when inspecting the load:

- A. The load will be "broken apart" by both the spotter and equipment operator to allow for a thorough inspection.
- B. The inspectors will be searching and removing de minimis amounts of unauthorized waste contained in the load.
- C. If the load contains more than de minimis amounts of unauthorized materials, they will immediately be reloaded onto the customer's vehicle for removal from the site. In the event that the transporter will not remove the unacceptable materials, the materials will be loaded into an appropriate container and removed from the site. The customer/generator will be contacted and notified of the site policies as well as charged for the off-site disposal services.
- D. In all cases, if more than minimal unacceptable wastes are found during the inspection, the customer will be notified to assure the prevention of future occurrences.

All inspection will be documented on the site's "Random Load Inspection Form," signed by the inspector, and kept in a current Log Book, see Attachment 2. Log books will be maintained at the landfill for at least 3 years. Inspections will be performed by trained site personnel.

5.6 Asbestos Waste Disposal

Asbestos-containing materials (ACM's) will be accepted for disposal in accordance with 40 CFR Part 61.154. Arrangements for disposal of ACM's between the Facility and the waste generator/hauler will be recorded in the operations record as to the quantity and date of shipment to the landfill. The loads are accepted at pre-arranged times during operational hours.

To ensure that all waste deposited at the Facility meets state and local requirements, all facility personnel will receive training from their supervisor on the identification of unacceptable materials, which is any waste other than properly labeled and bagged ACM. Unregulated, non-friable asbestos containing materials are not required to be bagged, but all other requirements are unchanged.

Each load of ACM arriving at the facility must be accompanied by a completed Waste Shipment Record (WSR) in accordance with 40 CFR 61.150. Each load will be inspected to insure that it is properly bagged, that bags are intact and properly sealed, and that the required warning labels and generator labels are affixed. Bags will not be opened prior to disposal.

ACM arriving at the Facility for disposal will be visually screened by facility personnel a minimum of two times. The first screening will be at the scales, controlling access to the Facility, where the truck drivers will be questioned as to the contents of the load and the shipping documents will be reviewed. The gate attendant will direct the drivers to the appropriate disposal area.

The second screening will be at the working face where a trained inspector/spotter will again question the driver and make a visual examination of the load prior to dumping and as it is dumped. This examination will insure the ACM is properly bagged, the bags are intact and properly sealed, and that the warning labels and generator labels are affixed.

Facility personnel will direct the waste hauler to the designated ACM disposal location in each cell, to be determined by the Operator. The ACM will be covered with 6-inches of soil at the end of any day that ACM is accepted. This designated ACM location will be recorded and updated by the annual topographic survey in accordance with 40 CFR 61.154. ACM disposal records will be maintained for the life of the landfill and disposal locations documented in the Closure Report.

5.7 Incidental Recycling Operations

The Class III landfill does have a separate, dedicated materials recycling area. However, if recyclable wastes are incidentally received, such as metals, concrete rubble, asphalt, and wood wastes, the facility will separate them in stockpiles or in roll-off containers. Concrete and asphalt will be periodically transported to an appropriate location for crushing. Yard and wood wastes may be chipped for use onsite or be placed in roll-off containers for shipment to a wood recycler. These materials will be removed from the site approximately every 6 months. However, if the storage capacity is exceeded, the materials will be removed sooner. Incidental recyclable materials that are identified at the disposal area will be placed in containers located near the working face, as follows and as shown on the Cell 17 Construction Permit Plan Set provided in Section 4.

TYPE	MAX. QTY	STORAGE
Ferrous Metal	500 CY	Roll-off or pile
Aluminum	300 CY	Roll-off or pile
Stainless Steel	300 CY	Roll-off or pile
Copper	25 CY	Trash pail, roll-off or pile
Asphalt	300 CY	Roll-off or pile
Concrete / Rubble	300 CY	Roll-off or pile
Recyclable electronics	8 CY	Covered dumpster

Trucks identified at the entrance as carrying primarily recyclable products, (i.e., concrete, metal, wood, paper) will be refused entrance into the landfill.

5.7.1 Reports

A Recovered Materials report will be submitted by type of waste recovered and tonnage to the FDEP and Pasco County Solid Waste Department. These reports will also be compiled into an annual report to the FDEP.

5.8 Wood Acceptance Area

The facility is a registered Source-Separated Organics Processing Facility and in compliance with the requirements specified in Rule 62-709.320 and Rule 62-709.330. Initial inspection will be performed at the scalehouse by the attendant. Wood wastes are stockpiled until processing takes place every 180 days. Personnel trained to identify and remove any unacceptable wastes will be present during processing. Unacceptable wastes, if found, will be removed prior to wood processing.

5.9 CCA Treated Wood Management Plan

The following serves as the CCA-treated wood management plan required by 62-701.730(20), F.A.C. Employees will be trained in the proper management of CCA-treated wood. CCA-treated (chromate-copper arsenate) wood must be stored in the temporary storage container for waste destined to go to a lined facility. CCA-treated wood is not allowed to be disposed of in the Enterprise Class III Recycling and Disposal Facility.

The following is strictly prohibited:

- Disposal of CCA-treated wood in any unlined landfill or disposal facility
- Burning of CCA-treated wood in an open burn or an air curtain incinerator
- Mulching of CCA-treated wood or use of CCA-treated wood in other soil amendment products

There are several ways for employees to identify CCA-treated wood: 1) determining the place of origin, 2) identification by shape – typically large, dimensioned pieces of wood and 3) identification by color. CCA-treated wood has been used in a variety of applications including fencing, docks, outdoor decks and stairs, playground equipment and landscaping. The wood is typically large – dimensioned 4-inches or larger.

The most common method for visually identifying treated wood among lumber, timber and plywood is to look at the color of the wood. Untreated wood and borate-treated wood typically have a light yellow color. Wood treated with copper varies in color from a very light green to an intense green color depending on the degree of treatment. A higher degree of treatment is typical for marine applications and for structure with a high load-bearing support. Once the wood treated

with copper has been in-service and has weathered, the green color is generally converted to a silver color. It still may be difficult to visually distinguish weathered treated wood from weathered untreated wood.

Employees are cautioned against handling CCA-treated wood. Workers handling wood preserved with CCA should be sure to wash their hands before eating or smoking. CCA-treated wood splinters in the hands and fingers of workers are reported to be very problematic and should be removed as soon as possible. It is important to make sure that the entire splinter is removed. Removal may require medical attention.

The most efficient way to minimize CCA-treated wood disposal in the facility is to communicate with landfill customers. Dedicated, separate suitable temporary container for CCA-treated wood at demolition and construction job sites can be used. At the scale house, personnel will question transporters on the type of wood and direct customers to dispose CCA-treated wood at a Class I landfill. Personnel will also perform a visual inspection at the scale house if necessary especially for loads originating from the construction and demolition of fences and decks.

The facility shall incorporate CCA-treated wood into its spot-checking program. Spotters visually inspect and determine if any dimensioned wood is in the load, such as railroad ties and fence posts or building materials. If CCA-treated wood is found, the load will be diverted to a Class I landfill for disposal. Tipped loads will be spread and inspected for the presence of CCA-treated wood. CCA-treated wood will be adequately protected from rain to prevent leaching of contaminants.

6.0 WEIGHING OR MEASURING INCOMING WASTE

A scale system is used to weigh incoming waste. The scales will be calibrated every six (6) months. Vehicles will be weighed when they enter the disposal site, and based upon the tare weight of the vehicle, the waste tonnage will be determined. Prior to unloading debris, the tonnage or volume of the waste material disposed will be determined and the appropriate fee assessed. Weigh tickets will be kept on-site for a minimum of 5 years.

6.1 Fee Schedule

The fee schedule for disposal varies depending on the client, type of waste and volume received.

Waste Type	Unit	Fee per Unit
Class III	CY	Variable

This fee schedule will be periodically revised according to the prevailing market for waste disposal. The Operator will notify clients immediately in writing of all fee schedule changes.

7.0 VEHICLE TRAFFIC CONTROL AND UNLOADING

Generally, truck traffic will be controlled by first-in, first-out, as directed by the spotter located at the working. There will be adequate space for truck staging at the site's entrance (7-8 trucks) to mitigate any queuing onto Enterprise Road. Enterprise Road Class III RDF will discourage any truck staging prior to landfill opening. Signs will be posted at the entrance gate and on interior roads to guide mining truck traffic vs. landfill truck traffic to their appropriate areas of the site.

8.0 METHOD OF CELL SEQUENCE AND LIFE EXPECTANCY

8.1 Cell Sequence

Angelo's Aggregate Materials is currently (as of January 2019) filling in Cells 1 – 7, 15 and 16 of the Class III Landfill. The cell construction and filling sequence operations will be as follows:

- | | |
|--------------------|---|
| Phasing Sequence 1 | As shown in Cell 17 and Vertical Expansion Construction Permit Plan Set
Continue filling Cells 1-7, 15 and 16 in 10 – 12-foot lifts to waste elevation of 172'
Maximum slope is 3H:1V from base grade to waste elevation 167'; 1% to 2% grade from waste elevation 167' to 172'
Sideslope berms and stormwater appurtenances are to be constructed at final closure.
Construct Cell 17 in accordance with permitted design. |
| Phasing Sequence 2 | As shown in Cell 17 and Vertical Expansion Construction Permit Plan Set
Continue filling Cells 1-7, 15 and 16 in 10 – 12-foot lifts to waste elevation of 172'
Begin filling Cell 17 with 4 – 6 feet lift north of the temporary stormwater and leachate diversion swale until cell is floored out. Remove temporary swale and fill with 4 – 6 feet lift.
Continue filling Cell 17 in 10 – 12 feet lifts from base grade to waste elevation 147'. Maximum slope is 3H:1V from base grade to waste elevation 147'.
A 10-ft wide stormwater bench is to be constructed at elevation 137'.
Sideslope berms and stormwater appurtenances are to be constructed at final closure. |
| Phasing Sequence 3 | As shown in Cell 17 and Vertical Expansion Construction Permit Plan Set
Construct overall landfill vertical expansion to include maximum sideslope of 3H:1V from base grade to waste elevation 137', 187' and 212'; 1% to 2% grade from waste elevation 217' to 212' |

10-ft wide stormwater benches to be constructed at waste elevations 137' and 187'.

Phasing Sequence 4

As shown in Cell 17 and Vertical Expansion Construction Permit Plan Set

Construct final closure cover system over Cells 1, 2, 3, 4, 5, 6, 6B, 7, 15, 16 and 17 in accordance with the revised overall landfill vertical expansion closure design.

Construct sideslope berms and stormwater appurtenances.

Construct landfill gas vents.

Lift height includes cover material. Due to the landfill bottom elevation, some lifts may not be a full 10 feet in height.

As each sequence is active, the following procedures will be followed

- The access road to the working face will be constructed and graded as necessary
- Waste will be compacted as it is placed. General lift height will be 10 feet and will come within three (3) feet of the final elevation to provide for final cover.
- The working face will remain approximately 100 feet in length
- Avoid channelizing stormwater flows
- Use mulch, grass, and maintain intermediate covers
- Weekly cover of six (6) inches of soil will be placed on the working face
- Intermediate cover of 12 inches of soil will be placed in areas that will not receive waste within 180 days. The cover may be removed immediately prior to placement of new waste
- During excavation, construction and waste disposal a 6-foot berm adjacent to active and filled cells retains stormwater from the filling area and diverts stormwater from the excavation area and pumped to stormwater Pond 3. The remaining portion of the temporary stormwater pond will be filled as part of the construction of Cell 17.

8.2 Erosion Control

The following engineering controls will be used to minimize erosion at the working face:

- Regrade a maximum of 100 linear feet of the outer edge slopes at a time to 2H:1V. The purpose of this recommendation is that a relatively small area will be subjected to surface erosion at

any given time.

- Construct a berm along the top of the slope during the regrading to redirect any rainfall runoff away from the face of the slope. The area along the berm should be graded so as to allow rapid runoff along the top of the slope. Ponding of water near the top of the slope should not be allowed, since seepage through the slope may initiate slope erosion.
- As soon as possible following the construction of the clay layer, begin to fill against the 2H:1V slope with the landfill material.
- Avoid channelizing stormwater flows

Vegetative cover will be placed on top of the intermediate cover for erosion control purposes. All or part of the intermediate cover may be removed before placing additional waste or installing final cover

8.3 Life Expectancy.

The capacity and lifespan estimates are provided in Section 3.8.3 of the Engineering Report.

9.0 WASTE COMPACTION AND APPLICATION OF COVER

Waste received will be segregated based on compatibility. Bulky, incompressible items, such as concrete and tree debris, will be separated and stockpiled for future processing. Tree debris is separated from the waste and periodically mulched for on-site uses. The remaining debris is disposed of in designated "cells" using a CAT 826G Compactor, or equivalent to place, spread the waste daily and compact the debris weekly. Initial cover material is planned to be excavated from onsite areas and placed weekly in approximately 6-inch layers on the compacted lifts to control vectors, reduce rain infiltration and provide a more stable working face area. The facility may also use a 50/50 mixture of mulch and soil as cover in accordance with Policy Memo # SWM-05.4 dated April 25, 2001. An intermediate cover of one (1) foot of compacted soil will be applied if final cover or an additional lift is not to be applied within 180 days of cell completion. Cell closure will occur when all permitted cells are filled. For final buildout grade and closure details, see Cell 17 Construction Permit Plan Set provided in Section 4. The Conceptual Closure Plan includes permitted Cells 1-7 and 15, 16, and Cell 17 and vertical expansion.

Cell closure will generally conform to the lines and grades specified in the Landfill Conceptual Closure Plan. The grading plan will conform to the rules and regulation specified in 62-701.600, as well as 62-701.400(7) and 62-701.400(8), Florida Administrative Code. Pesticides when deemed necessary to control rodents, insects and other vectors will be used as specified by the Florida Department of Agriculture and Consumer Services. Uncontrolled and unauthorized scavenging will not be permitted at the landfill site. Controlled recycling may be permitted by the

Site Manager responsible for the operation of the landfill facility. Temporary storage of soil fill or recycling materials may occur in the closed cell areas.

10.0 OPERATION OF GAS, LEACHATE AND STORMWATER CONTROLS

10.1 Gas Monitoring and Control

The type of materials to be disposed in the Class III Landfill are not expected to generate significant amounts of methane or other toxic gases since the landfill's design prevents groundwater contact therefore, a passive gas control system is proposed. The Landfill Manager will conduct daily and weekly inspections of the landfill and will check for objectionable odors or gas by driving around the perimeter of the site, record the results, and notify the FDEP and County of any positive detection and immediately take corrective actions. Corrective actions will include placement of additional soil cover, or mulch, or lime containing materials such as crushed concrete that is documented to abate the odors. Quarterly gas monitoring is currently conducted.

Within 30 days of being notified by the Department that objectionable odors per Rule 62-701.200(77), F.A.C. have been confirmed off-site, the Facility will submit to the Department for approval an odor remediation plan. The plan will describe the nature and extent of the problem and the proposed long-term solution, which will be implemented within 30 days of approval. The plan will include procedures to implement a routine odor monitoring program to determine the timing and extent of objectionable odors and a means of evaluating the effectiveness of the remedy.

The facility only accepts Class III debris for disposal and accepts no putrescible household wastes. Surface water and groundwater contact with the Class III wastes will be prevented by the approved facility design thus preventing possible odor operation. Other best management practices to prevent odors include: 1) closure of each cell as it is completed; 2) weekly soil cover application; and, 3) immediate corrective actions to abate odors.

A system of passive gas vents will be installed to manage landfill gas. The location of the gas vents is shown on the Cell 17 Construction Permit Plan Set provided in Section 4. The construction details of the vents are shown on Figure 3-16, Appendix 3-C of the Engineering Report. The vents will be installed during the final closure and installation of the final cover over each landfill cell.

A system of 16 gas monitoring points will be installed to monitor gas at the site, see Cell 17 Construction Permit Plan Set provided in Section 4. The construction details of a typical gas probe are shown on Figure 3-14, Appendix 3-C of the Engineering Report.

10.1.1 Methane Gas Measurement

In accordance with the requirements of the current FDEP permits, methane gas levels are monitored at each of the active gas monitoring points quarterly, with results submitted to the

FDEP. A lower explosive limit (LEL) meter will be used to measure methane levels from each of the gas probes. LEL meters, such as the MSA Model 260 or GEM 500 or equivalent, will be used to conduct this monitoring. These meters are capable of measuring percent volume of methane in air and the percent LEL level of the methane by volume. The meter shall be calibrated in accordance with manufacturer's specifications prior to each methane monitoring event. Attachment 4 of the Operations Plan provided in Appendix 3A of the Engineering Report presents the proposed gas monitoring probe survey form to be used to conduct the quarterly monitoring at the subject site. This form will document at the time of each gas probe reading, air temperature in degrees Fahrenheit, methane levels in percent volume in air and percent LEL. The reporting action level for methane in air will be considered 5 percent by volume in air as measured by the lower explosive limit. The reporting action limit for methane in structures is 25% of the LEL, or 1.25% methane by volume. The results of each quarterly gas probe survey will be submitted to the Department on the presented form within two weeks of each monitoring event. These events are planned to be coordinated with the semi-annual groundwater monitoring at the subject site.

10.1.2 Gas Contingency Plan

The following Contingency Plan will be implemented if any of the measured gas monitoring points methane levels are detected above the 100% LEL of greater than 5 percent methane in air, or if 25% of the LEL or higher is measured in a structure. If this level of methane or greater is detected in any of the probes, the Facility operator will institute measurement of methane in nearby, at, or below grade structures, i.e., stormwater collection points, or any maintenance or office buildings within 100 feet of the subject gas probe on a weekly basis until these levels go below the 100% LEL at the subject probe. If methane levels measured in any on-site building exceed 25% of the LEL, building windows and/or doors will be opened for ventilation and all personnel evacuated until methane readings are maintained below 25% of the LEL for methane. The monitoring report for any event that detects methane above the LEL will also report methane levels from nearby structures, as indicated above, until the levels go below the methane LEL level or until corrective actions are conducted to reduce methane levels. The FDEP will be notified within seven days of any gas monitoring levels that exceed the reporting action levels.

10.2 Leachate Control

Any leachate that may be produced at the landfill will be controlled with the use of a continuous 3-foot thick clay layer (1×10^{-8} cm/s) that will be placed on the bottom of the cells. The clay layer beneath each individual cell will form a continuous barrier layer that will be graded to direct leachate to the toe drain extending east to west along the northern perimeter of Cell 16 and Cell 17. The toe drain will slope from west to east and terminate in a manhole between Cell 16 and Pond 3. The toe drain will "daylight" approximately 3 feet above the bottom of the manhole. A dedicated pump with float control system will be used to transfer leachate from the manhole to Pond 3 as needed.

As described above, the leachate collection system is designed, constructed, and maintained to prevent clogging of the system. Leachate will be transported off-site to an approved disposal facility. In the unlikely event the contracted facility becomes unable to accept leachate, an alternate disposal facility is available for transport and disposal of the leachate.

In accordance with Rule 62-701.500(8)(h), F.A.C., a video inspection or high-pressure water cleaning of the leachate and detection system collection pipes, laterals and headers for the landfill will be performed every 5 years as part of the permit renewal process.

The controlled method of screening waste also supplements the leachate control. Because the Applicant privately owns the Enterprise Class III Landfill facility, most of the haulers, waste generators, and sources of waste are known to Angelo's and the scale house attendants. For those haulers that are unfamiliar to the Applicant, the scale house attendants question the haulers more intensely to determine the contents of their loads. The spotters and operators add additional monitoring at the active disposal location. The addition of video surveillance to the monitoring process of incoming wastes helps to identify fires or smoking loads. Combined methods of screening waste is an effective method to reduce any possible threat to public health or the environment.

10.3 Stormwater Control

The approved Stormwater Management Plan for the landfill consists of berms, swales, and ponds constructed within the 200-foot landscape buffer zone to divert, collect and contain stormwater runoff from the completed site. These stormwater facilities are designated to retain the 100-year, 24-hour storm volume as required by Pasco County and the FDEP. During excavation, construction and waste disposal a 6-foot berm adjacent to active and filled cells retains stormwater from the filling area and diverts stormwater from the excavation area and pumped to stormwater Pond 3. The remaining portion of the temporary stormwater pond will be filled as part of the construction of Cell 17. Pond 3 has been permitted through the Industrial Wastewater division of FDEP. Additional details concerning the stormwater management system are provided in Drawing Sheet C3.00.

The site manager will perform weekly inspections of the storm water management system. Any areas in need of maintenance will be repaired within seven days.

11.0 SIGNS

Signs will be posted at the entrance to the Facility site which will list the following information:

The operating entity;
Hours of operation;

No scavenging allowed;
No hazardous waste accepted;
List of acceptable and unacceptable waste; and,
24-hour phone number of emergency contact.

The scalehouse attendant will direct each driver to the area appropriate to unload wastes. Signs will also be posted to direct trucks to either the borrow pit or the landfill working face.

12.0 DUST ABATEMENT PLAN

The Facility will provide a water tanker to water the landfill access roads if and when dust becomes a problem. This will also be done whenever the County receives complaints about dust or when a dust problem is observed during a County or State inspection.

13.0 DUST, LITTER, AND VECTOR CONTROL PLAN

The nature of the waste to be disposed in the landfill does not typically create litter and vector problems. Daily placement of waste and/or compaction will be the primary means utilized to control litter and vectors. The facility personnel will perform daily inspections of the facility and the access road to assure litter is controlled. As needed, laborers will pick up blowing debris and dispose of it in appropriate containers and/or on site. Temporary fencing to contain litter at the working face of the landfill may be used as needed. These litter controls will also be implemented whenever the County or State receives a complaint from adjacent landowners or a litter problem is observed during an inspection.

If vectors (rodents, insects, and domestic animals) become a nuisance at the Facility, the Operator may obtain the services of a licensed pest management company to review the operations and recommend control measures.

14.0 FIRE PROTECTION AND FIRE FIGHTING FACILITIES

Fires that originate in landfills are primarily extinguished by soil application. Supplemental fire protection will be furnished by the Dade City Fire Department (Station No. 1). The Fire Department will be notified immediately of all landfill fires. An emergency contact list will be posted at the scalehouse with contact phone numbers.

During a fire, incoming trucks will be directed toward another area of the landfill so that a temporary active face can be established. Once the fire is extinguished, appropriate cover will be applied to the waste and operations will continue at the original active face. If the fire is extensive and a temporary active face cannot be established, incoming trucks will be redirected to another landfill.

Onsite fire prevention facilities will include:

- Fire extinguishers mounted in the cab of all heavy equipment and in the office/ scalehouse;
- Telephones to notify personnel of a fire;
- Onsite equipment (dozer) and fill dirt to extinguish fires on working face; and
- Site water truck

Soil for firefighting purposes will be borrowed from the closest unexcavated area of the site to the fire. Details of all firefighting episodes will be recorded in the landfill operating record.

14.1 Hot Loads and Spills

Any hot load (of authorized material) found will be dumped on an area at least 500 feet away from the active working face. The load will immediately be covered with soil if a fire is imminent. Once the fire is extinguished, the load will be pushed and spread using a dozer, allowing for the load to be inspected by a spotter. The waste will not be disposed of until it has cooled completely, and the fire hazard has been mitigated.

In the event of a fire at the working face, waste acceptance will cease until the fire has been completely extinguished and additional cover material compacted in the area of the fire. If the fire is located elsewhere in the landfill, waste acceptance operations may continue at the manager's discretion.

Since liquid disposal is prohibited in a Class III landfill, spills from waste vehicles are not anticipated. In the case of a fuel spill or leak, the contaminated soil will be collected to the extent possible, contained in a drum or roll off container, and taken offsite within thirty (30) days for proper disposal or treatment.

15.0 LANDFILL PERSONNEL

The scalehouse attendant and certified landfill operator will be onsite during all operating hours. In addition, there will be a minimum of one (1) other person (spotter) onsite, for a total of three (3). The state certified landfill operator will be assigned to manage the daily landfill operations. The personnel will be stationed at the landfill ticket gate and active disposal face. Additional personnel will be assigned to the landfill operation as the demand necessitates. Two spotters are generally located at the working face at all times that waste is accepted. However, there are up to eight spotter-trained or in-house trained spotter employees on-site each day and therefore; additional trained employees can be relocated to the working face as necessary to inspect the incoming waste. Certificates for current trained personnel are attached as Attachment 6 to this plan.

At least one (1) spotter will be at the working face at all times the facility is accepting waste. The spotter will direct vehicle traffic around the working face and will direct drivers where to empty their vehicles. The loads will be inspected as described in Section 5.0. If the load is acceptable, the waste will be spread and compacted as necessary. If the load is unacceptable, the spotter will direct the driver to reload the waste into the vehicle, if possible. If the driver is unable to reload the material, on-site personnel will reload the material for the driver using onsite equipment. The spotter will also discourage scavenging by the public.

The equipment operator spreading waste at the working face may also act as a spotter in accordance with the following:

1. The heavy equipment operator must be trained as a spotter;
2. When unauthorized waste is discovered, the heavy equipment operator must either move the unauthorized waste away from the active area for later removal and proper management, or must stop operation and notify another person on the ground or on other equipment who will come to the active area and remove the unauthorized waste before operations are resumed;
3. Each load of waste must be visually inspected for unauthorized waste prior to being compacted or loaded into a transfer vehicle.

A typical work schedule is as follows:

Day	Operating Hours	Scalehouse Attendant	Certified Operator	Spotter(s)	Equipment Operator*
M-F	7 am – 6 pm	1 (7 am – 6 pm)	1 (7 am – 6 pm)	Min. 1 (7 am – 6 pm) For 2 or more (7 am – 4 pm), (12 pm – 6 pm)	Min. 1 (7 am – 6 pm)
S	7 am – 2 pm	1 (7 am – 3pm)	1 (7 am – 3 pm)		Min. 1 (7 am – 2 pm)

* - Equipment Operator may also serve as a spotter

15.1 Training Plan

The Facility will implement an employee training plan to properly train their landfill operators and spotters to operate the landfill in accordance with this Operations Plan, state and local regulations,

and accepted disposal practices and to properly manage any hazardous or prohibited materials which are received at the landfill.

A trained operator will be at the site during all times that the landfill receives waste. All facility operators will be trained at an approved FDEP training course. Each operator will submit proof of training and documentation to the FDEP upon receipt of their certificates.

Landfill operators must have at least one year of work experience in landfill operation and a high school diploma; or have at least two (2) years' experience at a Class I, II, or III landfill. Each operator will complete at least 24 hours of initial training in an FDEP-approved training course, and will pass an examination as part of that training. Sixteen (16) hours of continuing training will be completed within three (3) years of each operator's initial training from an approved course documented by the form in Attachment 3. A list of FDEP approved training courses for operators and spotters are included in Attachment 5.

The Facility spotters will complete an initial eight (8) hour FDEP-approved course and four (4) hours of continuing training every three (3) years. Records documenting each employee's training course completion and schedule will be maintained and kept at the landfill office at all times.

Interim operators must become trained operators within one year of employment as an interim operator and interim spotters must become trained spotters within 3 months of employment as an interim spotter.

16.0 COMMUNICATIONS FACILITIES

The landfill scalehouse will have both telephone and facsimile facilities. In addition, all landfill operating areas (gate house, working face etc.) will have radio communication or cell phones with the base station at the gate house.

17.0 EQUIPMENT INVENTORY

Equipment currently planned for use at the landfill site includes:

- A. D-8 Caterpillar bulldozer, CAT 826 G Compactor; two 2.5 cud loaders, water truck, 590 John Deer backhoe, or equivalent are sufficient for adequate operation of the facility. A wood chipper/grinding machine (Hogzilla), or equivalent, will be moved to the site periodically (approximately once every six months) to process wood wastes as needed. Additional equipment, such as a grader may be rented as needed.
- B. Arrangements will be made to provide alternate equipment within 24 hours following an equipment breakdown.

Equipment rental companies that may be used to obtain reserve equipment include the following:

Ring Power - Brooksville, Florida
Contact: 352-796-4978

Flagler Equipment - Tampa, Florida
Contact: 813-630-0077

- C. There will be safety devices present on equipment to shield and protect the operators from potential hazards during operation.

17.1 Equipment Maintenance

The Facility will conduct routine heavy equipment and vehicle maintenance onsite. Maintenance includes fueling of heavy equipment with diesel fuel, lubrication, oil changes and, antifreeze changes. Tire repairs will be handled by an outside service company.

A permanent equipment fueling facility will be installed and registered in accordance with F.A.C. 62-761. Pasco County will be copied on the registration.

Oil and antifreeze changes will be contained by large drip pans to catch the waste oils. These wastes will then be transferred either to a 250-gallon waste oil skid tank or to a 55-gallon drum for waste antifreeze, which will be located in a containment area. The containment area is a covered metal storage shed. Enterprise RDF plans to enter into contracts with licensed recyclers to periodically pick up the waste oil and antifreeze. Records of these pickups will be maintained by Enterprise RDF. All virgin lubricants will be stored undercover within the gate house building or suitable enclosure.

18.0 SAFETY DEVICES

All operating equipment which will be utilized at the landfill site will be fitted with rollover protection and fire extinguishers. All landfill personnel will be required to wear safety helmets, safety shoes, eye protective glasses, gloves, and safety vests. The onsite heavy equipment will meet OSHA safety requirements. First aid equipment will be kept in the office trailer and in the operating equipment.

19.0 RECORDS, PERMITS AND REPORTS

A copy of any Florida Department of Environmental Protection (FDEP) and Pasco County approved engineering drawings, permits and supporting information, and topographic survey will be kept at the facility for reference and inspections. Permits will be posted at site per ordinance. A

waste type and quantity intake (in tons) log will be kept daily, compiled monthly and a report will be submitted annually to Pasco County and the FDEP.

An annual estimate of the remaining life and capacity in cubic yards of the landfill will be reported annually to the FDEP.

19.1 Water Quality Monitoring

The Facility will conduct the required initial and semi-annual groundwater monitoring at the sites' monitoring wells as described in the Facility's Groundwater Monitoring Plan. Semi-annual reports of this monitoring will be submitted to Pasco County and FDEP in accordance with this plan. Quarterly monitoring will also be conducted and reported at specific wells per Pasco County conditions.

19.2 Landfill Operating Records

The operating record for the landfill will document daily as a minimum the following activities:

- Self-inspections of landfill conditions, safety equipment and unacceptable waste received, any odor detected;
- Records used to develop permit applications;
- Change in construction, operation or closure permits and supporting designs;
- Water quality sampling events, analytical reports, well installation or repair;
- Employee training;
- Random load checks;
- Facility construction, major maintenance, or demolition;
- Other activities that significantly affect facility operations.

Self-inspections of the landfill conditions are conducted daily, and more extensive inspections are included weekly. Daily inspections include general inspection of site access, site security, and conditions of intermediate cover. Weekly inspections include more detailed inspections of the

conditions of the surface water and stormwater management systems and groundwater monitoring wells.

The Operating Record will be kept at the landfill and be accessible to the landfill operators to maintain and for FDEP or Pasco County inspection at reasonable times.

Operational records will be maintained for the design life of the landfill, with the exception of weigh tickets which will be kept at least 5 years. Water quality monitoring information, maintenance records, and permit reports will be maintained for a minimum of 10 years. Background water quality records will be maintained for the design period of the landfill.

20.0 EROSION CONTROL

The site's inherent design as an excavation pit will prevent stormwater from leaving the property. Stabilization by seeding and mulching of the final fill areas will occur as the fill operations progress from cell to cell.

21.0 FINAL GRADE PLAN

Interim grades of the cells are shown on the plans (Cell 17 and Vertical Expansion Construction Permit Plan Set in Section 4) and in the cross-sections. Permitted mining activities will continue in accordance with the site's Class I mining permit. The final elevations after construction of future cells is planned to reclaim excavated areas back to the grade which existed prior to the site being opened as a mine with allowance for positive drainage. The Landfill Conceptual Closure Plan is provided in the Cell 17 and Vertical Expansion Construction Permit Plan Set.

22.0 CLOSURE AND LONG TERM CARE

The site's Reclamation and Closure Plan details the procedures to properly close and maintain the landfill during the 30-year post-closure period. A Closure Report will be prepared for the landfill that details the site-specific limitations for land use based on geotechnical stability (settlement), potential gas migration, and site access. Long-term maintenance of erosion controls, storm water controls and monitoring devices is discussed in the Closure Plan (Section 7).

23.0 CERTIFICATION

Laboratory testing and observation of cell floor conditions during cell construction completion will consist of the following:

- In-place density testing for each 12-inch thick soil lift, based on laboratory proctor test results for the construction material, will be recorded by a properly trained technician. These tests will be conducted in the location of each permeability test.

- Thickness testing of each lift will be recorded at a minimum frequency of two tests per acre, per lift.
- Confirmation hydraulic conductivity testing of Shelby tube or drive cylinder samples of the compacted cell floor material will be performed at a minimum frequency of one test per lift, per acre.
- Observance for unstable areas such as limestone, sinkholes and soft ground will be performed for each cell.

If the test data from a cell floor section does not meet the requirements of the anticipated conditions of the hydrogeological and geotechnical reports and the requirements of the facility construction permit, additional random samples may be tested from that cell section. If the additional testing demonstrates that the hydraulic conductivity meets the requirements, the cell will be considered acceptable. If not, that cell will be reworked or reconstructed so that it will meet these requirements.

Upon completion of construction of any cell (or cell increment) within the disposal facility, the Applicant will provide the FDEP with the necessary reports, documents, and form 62-701.900(2), F.A.C. demonstrating that the approved construction is complete and in accordance with the submitted plans. The operator will provide the completed form to the FDEP in accordance with Rule 62-701.320(9) a., F.A.C., along with the quality assurance test results described above.

24.0 HISTORY OF ENFORCEMENT ACTION

In 2000, OGC Case No. 00-0009 was opened against the applicant for the Frontier Recycling facility (now Angelo's Recycling Facility) in Largo, Florida. A model consent order was used to resolve the issues of the case. The DEP's database did not include information regarding the subject of the enforcement.

In 2004, OGC Case No. 04-0887 (solid waste) and No. 04-0426 (stormwater) were opened against the applicant for Angelo's Recycling facility in Largo, Florida. ARM requested a minor permit modification to resolve the solid waste enforcement case. Formal enforcement was not taken to resolve the stormwater case. Instead, it was handled through submittal of a new permit application.

In 2006, OGC Case No. 06-0783 was opened against the applicant for the Enterprise Class III Landfill and Recycling Facility in Pasco County, Florida. ARM performed the corrective actions that were required to bring the facility into compliance and the assessed civil penalties were paid.

In 2007, OGC Case No. 07-1985 was opened against the applicant for the Angelo's C&D Recycling Waste Processing Facility in Apopka, Florida. ARM performed the corrective actions that were required to bring the facility into compliance and the assessed civil penalties were paid.

In 2007, Warning Letter #WL07-0019SW51SWD was issued to Angelo's Aggregate Materials, Ltd. for the Enterprise Class III Landfill. The Warning Letter was settled June 5, 2008 for total fines of \$18,397. In the "Proposed Settlement of Warning Letter WL07-0019SW51SWD", the Department acknowledged that Angelo's would not be considered "irresponsible" under FDEP Rule 62-701.320, FAC, as a result of the enforcement action.

In 2007, Warning Letter # WL07-0008SW52SWD was issued to Angelo's Aggregate Materials, Ltd. for the Recycling Waste Processing Facility in Largo, FL. The Warning Letter was settled April, 2009 for total fines of \$24,986. In the "Proposed Settlement of Amended Warning Letter WL07-0008SW52SWD", the Department acknowledged that Angelo's would not be considered "irresponsible" under FDEP Rule 62-701.320, FAC, as a result of the enforcement action.

ATTACHMENT 1
FACILITY ENTRANCE SIGN



Angelo's Recycled Materials

ENTERPRISE CLASS III LANDFILL



OPERATING HOURS: MONDAY - FRIDAY 7:00 am - 5:00 pm
SATURDAY 7 AM - 12 PM
24 Hour Emergency Contacts:
Manager 352 303 5618

ALL CUSTOMERS MUST CHECK IN AT GATE HOUSE

ACCEPTABLE WASTE:

Construction and demolition debris, yard waste, land clearing, glass, carpet, cardboard, plastic, asbestos, paper, furniture, wood pallets, scrap and shredded tires.

UNACCEPTABLE WASTE: Household garbage, toxic and hazardous waste, batteries, appliances, automobile, paint, solvents, drums, septic tanks and pumping, whole tires.

WARNING:

We will be sorting all loads for prohibited waste. Any unacceptable waste/loads may be reloaded onto a vehicle to be taken to an appropriate disposal facility at your expense.

NO SCAVENGING

ATTACHMENT 2
RANDOM LOAD INSPECTION FORM

- 

Note: Forms must be maintained in Inspection Log Book

ENTERPRISE CLASS III LANDFILL**Load Rejection Form**

Date: _____

Time: _____ am/pm

CUSTOMER/GENERATOR

Name _____

Address _____

City/State/Zip _____

TRANSPORTER/HAULER☐ Same as Customer/Generator

Name _____

Address _____

City/State/Zip _____

Vehicle License and State _____

REASON FOR REJECTION☐ Suspected Special Waste☐ Suspected Medical Waste☐ Non-Processable☐ Suspected Hazardous Waste☐ Suspected Asbestos☐ Other (Explain below)

Explanation _____

ACKNOWLEDGEMENT☐ Rejected prior to dumping☐ Rejected After Load was Dumped

Comments _____

Driver's Signature _____ Operator's Signature _____

Customer/Generator Notified? ☐ YES ☐ NOTransporter/Hauler Notified? ☐ YES ☐ NO

If yes, name of person contacted _____

If yes, name of person contacted _____

ATTACHMENT 3
FACILITY TRAINING LOG

ENTERPRISE RECYCLING AND DISPOSAL FACILITY

TRAINING LOG

COURSE	TRAINED OPERATOR INSTRUCTOR	HRS. ATTENDED	SIGNATURES/ DATE

ATTACHMENT 4
GAS MONITORING SURVEY FORM

**ENTERPRISE RECYCLING & DISPOSAL FACILITY
CLASS III LANDFILL
GAS MONITORING SURVEY FORM**

Date: _____
Instrument: _____
Sampler: _____

GAS PROBE NO.	TIME OF READING	AMBIENT AIR TEMP (°F)	AMBIENT AIR OXYGEN CONTENT (%)	AMBIENT AIR METHANE (%) OF LEL	METHANE LEVEL Pre-Purge Measurement			METHANE LEVEL Post-Purge Measurement		
					% O ₂	% by vol.	% of LEL	% O ₂	% by vol.	% of LEL
1	Not installed									
2	Not installed									
3	Not installed									
4	Not installed									
5	Not installed									
6R										
7R										
8R										
9R										
10R										
11R										
12R										
13R										
14R										
15										
16										
Scale house					N/A	N/A	N/A	N/A	N/A	N/A

NR -Not required, no methane indicated in pre-purge measurement

Notes: (wind direction, weather conditions damage to gas probes, adjacent off-site activity observed, etc.)

ATTACHMENT 5
LIST OF APPROVED COURSES

Florida's Solid Waste Operators & Spotters

University of Florida

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Track Detail

Class I, III Landfill Operator

Is a solid waste facility that accepts Class I waste that is not hazardous waste and can be disposed in a lined landfill. The landfill may also accept yard trash, construction and demolition debris, processed tires, asbestos, carpet, cardboard, paper, glass, plastic, furniture other than appliances, or other materials approved by the FDEP that are not expected to produce leachate which poses a threat to public health or the environment. Operators required 24 hours initial course and pass exam with 70% proficiency, then 16 hours of continuing education every 3-year period.

Requirements

Initial Courses

- 24-Hour Initial Training Course for Landfill Operators (Class I, II, III and C&D Sites)
- Initial Training Course for Landfill Operators and C&D Sites - 24 Hour
- SWANA - Manager of Landfill Operations [MOLO] & Exam
- SWANA-Management of Landfill Operations
- SWANA-Manager of Landfill Operations (MOLO) Course and Exam

Hours

Hours Required	Effective Date
15	01/01/1800
16	05/27/2001

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Florida's Solid Waste Operators & Spotters

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Track Detail

Spotter / Waste Screener

Is a person employed at a solid waste management facility whose job it is to inspect incoming waste and to identify and properly manage any hazardous or prohibited materials, which are received at the facility. Spotter required 8 hours initial course, then 4 hours of continuing education every 3-year period.

Requirements

Initial Courses

- 8-Hour Initial Training Course for Spotters at Class I, II, III Facilities, Waste Processing Facilities and C&D Facilities
- 8-hour Initial Training for Spotters
- 8-Hour Spotter Training for Class I II III Landfill C&D Sites and Transfer Facilities
- 8-Hour Training Course for Spotters at Landfills, C&D Sites and Transfer Stations
- Environmental Management Systems: An Introduction
- Spotter Training
- Spotter Training for Solid Waste Facilities
- Spotter Training for Solid Waste Facilities - Spanish
- Spotter Training for Solid Waste Management Staff with Elements of a Solid Waste Operations Plan
- Waste Screening and Identification for Landfill Operators and Spotters
- Waste Screening at MSW Mgmt Facilities [Onsite Delivery]

Hours

Hours Required	Effective Date
4	01/01/1800

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Florida's Solid Waste Operators & Spotters

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Course Information

<u>Course #</u>	<u>Name</u>	<u>Status</u>
582	16-Hour Initial Training Course for Transfer Station and MRF Operators	Active
575	2010 North American Environmental Field Conference and Expo	Active
516	24 Hour HazMat Technician Level	Active
608	24-Hour Initial Training Course for Landfill Operators (Class I, II, III and C&D Sites)	Active
478	40 Hour HazWoper	Active
507	40-Hour HazWoper	Active
626	40-Hour HazWoper Course in Accordance to 29 CFR 1910.120	Active
646	40-Hour OSHA HazWoper	Active
69	40-hour OSHA HAZWOPER Training Course	Active
450	40hr General Site Worker Hazardous Waste Operations	Active
463	4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations	Active
616	6-Hour DOT Regulations	Active
601	8 Hour General Site Worker Refresher Training	Active
623	8 Hour HazWoper Refresher Training	Active
203	8-Hour Initial Training Course for Spotters at Class I, II, III Facilities, Waste Processing Facilities and C&D Facilities	Active
219	8-hour Initial Training for Spotters	Active
62	8-Hour OSHA HazWoper Annual Refresher	Active
644	8-Hour OSHA HazWoper Refresher	Active
488	8-Hour Spotter Training for Class I II III Landfill C&D Sites and Transfer Facilities	Active
462	8-Hour Training Course for Spotters at Landfills, C&D Sites and Transfer Stations	Active
410	Adult CPR	Active
0	Adult CPR	Active
675	Air Regulations and How They Impact MSW Facilities	Active
624	ANSI/AIHA Z10-2006 Occupational Safety and Health Management Systems Training Course Construction Standard	Active
652	Asbestos: Awareness (Class IV)	Active
630	Basic Life Support	Active
639	Bird and Wildlife Management for Utilities	Active
550	Bloodborne Pathogens	Active
618	Carbon Markets, Offsets & Project Level GHG Accounting	Active
614	Chemical Spill Response Training for Hazardous Materials Operations/OSHA Level II	Active
386	Community Hurricane Preparedness - online	Active
525	Composting Wastewater Residuals (Biosolids) in Charlotte County	Active
656	Confined Space Awareness	Active
657	Confined Space Competent Person Training	Active
436	Confined Space Entry Safety Course	Active
440	Construction and Demolition Debris Workshop	Active
485	Contemporary Techniques of Supervision/Management	Active
357	CPR and First Aid	Active

Course Information - Florida's Solid Waste Operators and Spotters

520	Design of Waste Containment Liners and Closure Systems	Active
457	Disaster Debris Management	Active
544	EIA/NSWMA Safety Seminar	Active
542	Electrical Troubleshooting & Preventive Maintenance	Active
596	Emergency Response and Recovery Training	Active
557	Environmental Quality Training Workshop	Active
563	Environmental Safety Occupational Health [EOSH] 2009 Training Symposium	Active
568	Environmental Sampling Field Course	Active
679	Environmental Studies	Active
500	Excavation and Trenching Safety Procedures	Active
100	Excavation and Trenching: Competent Person Training	Active
228	FDEP 8 Hour HazWoper OSHA Refresher	Active
435	FDEP 8 Hour HazWoper OSHA Refresher [DeHate]	Active
433	FDEP Annuals SQG Workshop [5/3-5/06]	Active
434	FDEP Household Hazardous Waste Workshop [5/1-3/06]	Active
445	FEMA Debris Management Course	Active
678	FEMA Debris Management Course - G202	Active
484	Fires at Landfills and Other Solid Waste Management Facilities	Active
411	First Aid (Standard) Workplace Training	Active
634	Florida Composting Facility Operator Training Course: Introduction to Handling Source Separated Organics	Active
491	Florida Construction & Demolition Debris & Management Workshop - May 2008	Active
451	Florida Water & Pollution Control Operators Association Short School - Stormwater Section	Active
579	Food Recycling and Composting Workshop	Active
521	Foundations of Project Management	Active
156	Four Hour Spotter Refresher for Class I, II and III Landfills, Waste Processing Facilities and C&D Facilities	Active
591	Fundamentals of Emergency Management	Active
638	General Site Worker 8-hour Refresher Course Hazardous Waste Operations & Emergency Response	Active
423	Geosynthetic Testing and Landfill Design Issues Short Course	Active
629	Getting Back to Basics With Landfill Gas	Active
545	GHG Reporting for Landfill & Wastewater Treatment - Webinar	Active
558	Greenhouse Gas Accounting	Active
0	Greenhouse Gas Accounting- Measuring an Organization's Carbon Footprint	Active
604	Greenhouse Gas Recovery at Solid Waste Landfills	Active
224	Hazardous Materials in Construction and Demolition Waste OnLine	Active
503	Hazardous Materials Incident & Waste Training - 24 Hours	Active
356	Hazardous Materials Incident Response Operations-40hr	Active
469	Hazardous Materials Operations / OSHA Level II	Active
439	Hazardous Materials Training	Active
510	Hazardous Waste Management Course	Active
535	Hazardous Waste Management: The Complete Course - 16 hour	Active
541	Hazardous Waste Management: The Complete Course - 8 hour	Active
540	Hazardous Waste Operations with Emergency Response	Active
63	Hazardous Waste Regulations for Generators	Active
514	Hazardous/Chemical Safety Training	Active
555	HazMat IQ	Active
216	HazWoper 40-Hour Health & Safety Online	Active
421	HazWoper 40-Hour OSHA Course	Active

Course Information - Florida's Solid Waste Operators and Spotters

218	HazWoper 8-Hour Refresher Online	Active
422	HazWoper 8-Hour Refresher OSHA Course	Active
659	HazWoper Refresher	Active
617	HazWoper Training for Escambia County	Active
170	Health & Safety Issues for Solid Waste Management Facilities	Active
498	Health and Safety for Solid Waste Workers-4 Hours	Active
281	Health and Safety for Solid Waste Workers-8 Hours	Active
149	Health and Safety Training for Landfill Operations	Active
495	Heavy Equipment Safety	Active
492	Hurricane Debris Management Workshop	Active
683	Hydraulic Excavator Operator Training	Active
613	Identification of Unknowns	Active
476	Improving Landfill Operations	Active
517	Improving Transfer Station Efficiency	Active
442	Initial Training Course for Landfill Operators and C&D Sites - 24 Hour	Active
443	Initial Training Course for Transfer Station Operators and Material Recovery Facilities - 16 Hour	Active
628	Innovative Recycling Grant Workshop at Polk County Landfill	Active
574	Integrated Waste Management Workshop	Active
645	Introduction to Debris Operations in FEMA Public Assistance Program IS-632	Active
212	Introduction to Electrical Maintenance	Active
527	Introduction to Heavy Equipment and Skill Testing	Active
0	Introduction to Wastescreening for Spotters-Spanish	Active
546	IS-700.a NIMS An Introduction	Active
472	Landfill and Transfer Station Operators: Waste Acceptability and Safety Issues Review	Active
676	Landfill Design and Construction	Active
518	Landfill Gas Collection and Re-Use	Active
686	Landfill Gas Collection System Operations and Compliance Training Course	Active
511	Landfill Gas Control and Compliance Seminar	Active
650	Landfill Operations	Active
399	Landfill Operator and MRF Operator Training	Active
589	Landfill Operator Training - 2007 Certified Operators Class	Active
588	Landfill Operator Training 2008 - Certified Operators Class	Active
553	Landfills and Transfer Stations: Past, Present and Future	Active
552	Landfills: Past, Present and Future	Active
441	Laws and Rules	Active
277	Laws and Rules for Florida Engineers	Active
677	Leachate and Landfill Gas Management System Design	Active
684	Linear Construction - Stormwater Compliance for Road and Utility Construction	Active
538	Maintenance of Traffic Training	Active
654	Mathematics for Landfill Operators	Active
523	Maximizing Beneficial Use of Disaster Debris	Active
674	Measurement and Improvement of Performance at Solid Waste Management Facilities ("If you Can't Measure it, You Can't Manage It")	Active
3	Military Service Active Duty	Active
528	NAHAMMA Conf HHW / SQG Workshop - 2009 - HazMat IQ Training	Active
528	NAHAMMA Conference HHW / SQG Workshop - 2009 - General Session	Active
609	NAHAMMA 2010 Annual Conference	Active
653	NAHAMMA 2011 Florida Chapter Annual Conference	Active
424	National Incident Management System [NIMS] and Introduction IS-00700	Active

Course Information - Florida's Solid Waste Operators and Spotters

454	North American Hazardous Materials Management Association Conference 2007 - FL Chapter	Active
489	North American Hazardous Materials Management Association Conference 2008- FL Chapter	Active
670	North Carolina Landfill Manager Course	Active
1001	OK per "Current" Class I II III Transcript	Active
621	Online Laws and Rules	Active
438	Operating Considerations for Transfer Stations	Active
655	Operational Techniques and Compliance Inspections for Landfills	Active
412	Operator Certification for Caterpillar Landfill Equipment	Active
0	OSHA 10-Hour General Industry Course	Active
547	OSHA 10-Hour General Industry Outreach Course	Active
619	OSHA 10-Hour Industrial Outreach Safety Training Program	Active
592	OSHA 1910 General Industry 10-Hour Course	Active
0	OSHA 24 Hour Emergency Response Course (Technician Level)	Active
0	OSHA 8-hour HazWoper Refresher Training	Active
561	OSHA Annual Refresher at KSC	Active
515	OSHA Operations Level Course	Active
532	Paint Filter Test - 1 Hour	Active
192	Pedestrian, Vehicles and Equipment Safety at Transfer Stations	Active
494	Permit Required Confined Space Awareness	Active
104	Permit Required Confined Space Entry	Active
0	Permit Required Confined Space Entry Supervisor	Active
497	Personal Protection Equipment (PPE) and Safety Procedures	Active
602	Personal Radiation Detector Course [PRD] PER-243	Active
533	Principles of Landfill Fires E-Course	Active
468	Project Risk Management	Active
603	Recycle Florida Today - 2010 Annual Conference	Active
651	Recycle Florida Today - 2011 Annual Conference	Active
432	Recycle Florida Today 2006 Annual Conf	Active
431	Recycle Florida Today 2006 Issues Forum 1/2006	Active
414	Recycle Florida Today 2006 Issues Forum 1/23-24/06	Active
460	Recycle Florida Today 2007 Annual Conference - 6/4-7/2007	Active
512	Recycle Florida Today 2008 Annual Conference	Active
554	Recycle Florida Today Conference [June 2009]	Active
479	Recycled Florida Today 2007 Issues Forum 1/2007	Active
0	Recycled Florida Today 2007 Issues Forum 1/2007	Active
661	Refresher Training Course for Experienced Solid Waste Operators-16 Hours	Active
663	Refresher Training Course for Experienced Solid Waste Operators-4 Hours	Active
662	Refresher Training Course for Experienced Solid Waste Operators-8 Hours	Active
627	RFT / SWANA FL Winter Meeting & Issues Forum 2011	Active
687	RFT / SWANA FL Winter Meeting & Issues Forum 2012	Active
581	RFT/SWANA-FL Winter Wonderland in Waste - 2010 Issues Forum	Active
565	Sanitary Landfill Design	Active
690	Sector L: Landfills & Land Application Sites	Active
4811	Solid Waste Operator & Spotter Refresher Training - Spring 2008 a	Active
584	Southeast Recycling 2010 Conference & Trade Show	Active
640	Southeast Recycling 2011 Conference & Trade Show	Active
692	Southeast Recycling 2012 Conference & Trade Show	Active
580	Southwest Partners Meeting	Active

Course Information - Florida's Solid Waste Operators and Spotters

605	SPCC - Spill Prevention Control Act - online	Active
526	Spill Prevention, Control, and Countermeasure Regulation Seminar	Active
400	Spotter Training	Active
0	Spotter Training	Active
214	Spotter Training	Active
437	Spotter Training Course for Waste Processing and Transfer Stations	Active
248	Spotter Training for Solid Waste Facilities	Active
378	Spotter Training for Solid Waste Facilities - Spanish	Active
474	Spotter Training for Solid Waste Management Staff with Elements of a Solid Waste Operations Plan	Active
471	Spotters at Landfills and Transfer Stations: Safety Awareness Review	Active
506	Storage Tank Conference - Central Florida 18th Annual	Active
505	Storage Tank Conference - North Florida 14th Annual	Active
578	Storage Tank Conference -16th Annual Central Florida State Conference	Active
453	Storage Tank Conference 17th Annual	Active
475	Storage Tank Conference Central Florida State 13th Annual	Active
647	Stormwater Erosion And Sedimentation Control Inspector Training Program	Active
202	Stormwater Inspector Certification Course	Active
594	Stormwater Matters	Active
632	Supervisor Safety Training for Solid Waste Operations Staff	Active
586	Sustainability and Recycling	Active
429	SWANA - Compost on Subtitle D Landfills - Webinar	Active
416	SWANA - eCourse - Litter Management at Landfills	Active
567	SWANA – Groundwater Monitoring, Sampling, Analysis and Well Construction	Active
636	SWANA - Integrated Solid Waste Management	Active
693	SWANA - Landfill Gas Basics 1-Day Course	Active
635	SWANA - Landfill Gas Systems Operation and Maintenance	Active
694	SWANA - Landfill Gas Systems Operation and Maintenance - 1 day	Active
537	SWANA - Landfill Operations E- Course	Active
543	SWANA - Landfill Symposium 14th Annual (June 2009)	Active
597	SWANA - Manager of Landfill Operations [MOLO]	Active
598	SWANA - Manager of Landfill Operations [MOLO] & Exam	Active
560	SWANA - Manager of Recycling Course	Active
413	SWANA 2006 Recycling and Special Waste Conference	Active
562	SWANA E-Course Just the Math	Active
556	SWANA e-Course Operation Efficiency at Landfills	Active
599	SWANA e-course: Bioreactor Landfill Research & Development Agencies	Active
577	SWANA e-course: Carbon Credit and Production Tax Credits for LFG Projects	Active
576	SWANA e-course: Financing Solid Waste Facilities: The Roller Coaster to Oblivion?	Active
691	SWANA e-course: Traumatic Injury and Fatality Risks in Solid Waste	Active
564	SWANA- Health & Safety E-Study (Home Study Course)	Active
566	SWANA- Managing Landfill Gas at MSW Landfills	Active
297	SWANA Online - Health & Safety at MSW Landfills	Active
296	SWANA Online - Training Sanitary Landfill Operation Personnel	Active
298	SWANA Online - Wastescreening at MSWS Facilities	Active
345	SWANA-Bioreactor Landfill Course	Active
404	SWANA-Bioreactor Landfill Manager	Active
250	SWANA-Construction and Demolition Debris Course	Active
685	SWANA-e Course: Groundwater Monitoring	Active

Course Information - Florida's Solid Waste Operators and Spotters

643	SWANA-e Course: Landfill Gas & Solid Waste Air Contaminant Hazards	Active
252	SWANA-FEMA's Debris Management	Active
425	SWANA-FL 2006 Spring Tri-State Conference [4/2-5/06]	Active
426	SWANA-FL 2006 Summer Conference [7/23-26/06]	Active
447	SWANA-FL 2007 Summer Conference [7/15-18/07]	Active
480	SWANA-FL 2008 Senior Managers Conference [1/2008]	Active
551	SWANA-FL 2009 Summer Symposium	Active
607	SWANA-FL 2010 Summer Conference	Active
658	SWANA-FL 2011 Summer Conference	Active
534	SWANA-FL Managers Meeting - 2009 Winter	Active
606	SWANA-FL Road-e-o: Heavy Equipment Safety Training	Active
94	SWANA-Health & Safety at MSW Landfills	Active
244	SWANA-Landfill Gas Basics	Active
428	SWANA-Landfill Gas Symposium 29th Annual [3/27-30/06]	Active
446	SWANA-Landfill Gas Symposium 30th Annual [3/4-8/07]	Active
483	SWANA-Landfill Gas Symposium 31st Annual [3/2008]	Active
536	SWANA-Landfill Gas Symposium 32nd	Active
689	SWANA-Landfill Gas Symposium 35th Annual - 2012	Active
231	SWANA-Landfill Gas System Operation and Maintenance	Active
539	SWANA-Landfill Gas System Operations Workshop	Active
93	SWANA-Landfill Operational Issues	Active
681	SWANA-Landfill Symposium (16th Annual - 2011)	Active
427	SWANA-Landfill Symposium 11th Annual [6/5-7/06]	Active
465	SWANA-Landfill Symposium 12th Annual [6/25-28/07]	Active
30	SWANA-Management of Landfill Operations	Active
1	SWANA-Manager of Landfill Operations (MOLO) - Exam Only	Active
1600	SWANA-Manager of Landfill Operations (MOLO) Course	Active
160	SWANA-Manager of Landfill Operations (MOLO) Course and Exam	Active
243	SWANA-Managing Composting Programs	Active
251	SWANA-Managing MSW Collection Systems	Active
234	SWANA-Managing MSW Recycling Systems	Active
222	SWANA-Managing Transfer Station Systems	Active
444	SWANA-Transfer Station Design & Operations	Active
42	SWANA-Transfer Station Design & Operations	Active
448	SWANA-WasteCon 2006 [9/19-21/06]	Active
455	SWANA-WasteCon 2007 [10/16-18/07]	Active
509	SWANA-WasteCon 2008	Active
559	SWANA-WasteCon 2009	Active
660	SWANA-WasteCon 2011	Active
570	The Complete Ground Water Monitoring Field Course	Active
572	The Complete Ground Water Monitoring Well Design, Construction and Development Course	Active
569	The Complete Ground Water Sampling Field Course	Active
116	The Complete Ground-Water Monitoring Course	Active
571	The Complete Surface Water and Sediment Field Course	Active
573	The Florida Stormwater Construction Permit-Contractor's Short Course	Active
530	The Original Environmental Bootcamp	Active
406	The Sense of Smell, Odor, Theory and Odor Control	Active
612	Things That Go Boom	Active

625	Topics in Solid Waste Management for Landfill Operators, MRF Operators and Transfer Station Operators	Active
477	Tractor/Mower Operator Safety Training Program	Active
187	Traffic and Equipment Safety at Landfills	Active
680	Train the Trainer: How to Design & Deliver Effective Training	Active
641	Train-the-Trainer for Operator of Heavy Equipment	Active
642	Trenching Shoring Services Safety in Excavation Course	Active
112	U.S. DOT Hazardous Materials/Waste Transportation	Active
519	Understanding Hazardous Waste in Solid Waste Operations	Active
419	Waste Expo [4/4-6/06]	Active
549	Waste Expo 2007	Active
595	Waste Expo 2010	Active
36	Waste Screening and Identification for Landfill Operators and Spotters	Active
9	Waste Screening at MSW Mgmt Facilities [Onsite Delivery]	Active
51	Waste Screening at Municipal Solid Waste [5/23/94, 12/5/01]	Active
0	Waste Screening Introduction-Spanish	Active
524	Waste Screening Refresher for Supervisors and Managers	Active
418	Waste Tech 2006 [2/27-28/06]	Active
508	Waste Tech 2007	Active
587	Waste-to-Fuels 2010 Conference	Active
622	Wet Weather Operations	Active
449	Wetlands Variance Training	Active
673	Wildlife and Plants at Florida Solid Waste Management Facilities	Active
482	Workzone Safety Training	Active

ATTACHMENT 6
TRAINING CERTIFICATES

Florida DEP Landfill Operators

Company Name: angelo
All Districts District Only
Printed: 03/08/2019

1. **Hours Required:** The hours needed before the expiration date in order to keep the certification valid.

Arnold, John P. · Angelos Recycled Materials · Saint Petersburg · Pasco County

Title	Initial Date	Hours Required ¹	Expiration Date
Class I, III Landfill Operator	11/25/2013	16	11/24/2019
Construction and Demolition Debris Landfill Operator	11/25/2013	16	11/24/2019
Material Recovery Facility Operator	11/25/2013	8	11/24/2019
Spotter / Waste Screener	11/25/2013	4	11/24/2019
Transfer Station Operator	11/25/2013	8	11/24/2019

Baglieri, John · Angelo's Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Material Recovery Facility Operator	10/11/2017	8	10/10/2020
Transfer Station Operator	10/11/2017	8	10/10/2020

Blakely, Daniel · Angelo's Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Material Recovery Facility Operator	10/12/2017	8	10/11/2020
Transfer Station Operator	10/12/2017	8	10/11/2020

Bracewell, Brandon · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Material Recovery Facility Operator	01/20/2016	8	01/19/2019
Transfer Station Operator	01/20/2016	8	01/19/2019

Canal, Randy · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Material Recovery Facility Operator	07/23/2014	8	07/22/2020
Transfer Station Operator	07/23/2014	8	07/22/2020

Cox, Luther · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Material Recovery Facility Operator	02/04/2017	8	02/03/2020
Transfer Station Operator	02/04/2017	8	02/03/2020

Curtin, Phillip · Angelo's Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Class I, III Landfill Operator	12/13/2018	4	12/12/2021
Construction and Demolition Debris Landfill Operator	12/13/2018	4	12/12/2021
Material Recovery Facility Operator	12/13/2018	0	12/12/2021
Transfer Station Operator	12/13/2018	0	12/12/2021

De Rubeis, Neiro · Angelos Recycled Materials · St. Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Class I, III Landfill Operator	11/25/2013	16	11/24/2019
Construction and Demolition Debris Landfill Operator	11/25/2013	16	11/24/2019
Material Recovery Facility Operator	11/25/2013	8	11/24/2019
Spotter / Waste Screener	11/25/2013	4	11/24/2019
Transfer Station Operator	11/25/2013	8	11/24/2019

Guajardo, Fabian · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Material Recovery Facility Operator	11/04/2016	8	11/03/2019
Transfer Station Operator	11/04/2016	8	11/03/2019

Hamilton, Lyddon · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Spotter / Waste Screener	11/03/2016	4	11/02/2019

Harris, Erik · Angelo's Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Material Recovery Facility Operator	10/12/2017	8	10/11/2020
Transfer Station Operator	10/12/2017	8	10/11/2020

Harvey, Donald · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Material Recovery Facility Operator	11/04/2016	8	11/03/2019
Transfer Station Operator	11/04/2016	8	11/03/2019

Hendricks, Dondi · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Spotter / Waste Screener	12/13/2018	4	12/12/2021

Iafate, Dominic · Angelos Recycled Materials · Lutz

Title	Initial Date	Hours Required ¹	Expiration Date
Class I, III Landfill Operator	11/21/2008	16	11/20/2020
Construction and Demolition Debris Landfill Operator	11/21/2008	16	11/20/2020
Material Recovery Facility Operator	11/25/2013	8	11/24/2019
Spotter / Waste Screener	11/25/2013	4	11/24/2019
Transfer Station Operator	11/25/2013	8	11/24/2019

Iafate, Stephen M. · Angelos Recycled Materials · Largo

Title	Initial Date	Hours Required ¹	Expiration Date
Class I, III Landfill Operator	11/25/2013	16	11/24/2019
Construction and Demolition Debris Landfill Operator	11/25/2013	16	11/24/2019
Material Recovery Facility Operator	11/25/2013	8	11/24/2019
Spotter / Waste Screener	11/25/2013	4	11/24/2019
Transfer Station Operator	11/25/2013	8	11/24/2019

Jordan, Eddie · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required ¹	Expiration Date
Material Recovery Facility Operator	01/31/2012	8	01/30/2021
Transfer Station Operator	01/31/2012	8	01/30/2021

Martinez, Alfredo T · Angelo's Recycle Materials · Saint Petersburg · Pasco County

Title	Initial Date	Hours Required 1	Expiration Date
Class I, III Landfill Operator	12/13/2018	16	12/12/2021
Construction and Demolition Debris Landfill Operator	12/13/2018	16	12/12/2021
Spotter / Waste Screener	10/10/2009	0	10/09/2015
Spotter / Waste Screener	10/10/2012	0	10/09/2015

Martinez, Saturnino · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Spotter / Waste Screener	12/13/2018	4	12/12/2021

Mathews, Katrina · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	04/12/2017	8	04/11/2020
Transfer Station Operator	04/12/2017	8	04/11/2020

Moore, Robert · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	07/23/2014	8	07/22/2020
Transfer Station Operator	07/23/2014	8	07/22/2020

Nunez, Demetrio · Angelo's Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Spotter / Waste Screener	12/13/2018	4	12/12/2021

Olson, Donna · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	02/04/2017	8	02/03/2020
Transfer Station Operator	02/04/2017	8	02/03/2020

Pedraza, Jesus · Angelos Recycle Materials · Saint Petersburg · Pinellas County

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	10/12/2017	8	10/11/2020
Spotter / Waste Screener	01/14/2006	4	01/13/2021
Transfer Station Operator	10/12/2017	8	10/11/2020

Pryor, Derek · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	04/12/2017	8	04/11/2020
Transfer Station Operator	04/12/2017	8	04/11/2020

Richardson, Frank · Angelo's Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	12/13/2018	8	12/12/2021
Transfer Station Operator	12/13/2018	8	12/12/2021

Ritt, Robert · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	01/20/2016	8	01/19/2019
Transfer Station Operator	01/20/2016	8	01/19/2019

Russo, Brian · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	07/23/2014	8	07/22/2020
Spotter / Waste Screener	01/19/2016	4	01/18/2019
Transfer Station Operator	07/23/2014	8	07/22/2020

Samuels, Howald · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Spotter / Waste Screener	11/03/2016	4	11/02/2019

Santos, Victor Alfonso · Angelos Recycled Materials · Largo

Title	Initial Date	Hours Required 1	Expiration Date
Class I, III Landfill Operator	09/04/2015	16	09/03/2021
Construction and Demolition Debris Landfill Operator	09/04/2015	16	09/03/2021

Scott, Willie · Angelos Recycle Materials · Dade City

Title	Initial Date	Hours Required 1	Expiration Date
Spotter / Waste Screener	10/10/2012	4	10/09/2018

Simmons, James · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	11/04/2016	8	11/03/2019
Transfer Station Operator	11/04/2016	8	11/03/2019

Stanley, Keith · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	02/04/2017	8	02/03/2020
Transfer Station Operator	02/04/2017	8	02/03/2020

Valdiviezo, Mario · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	04/18/2018	8	04/17/2021
Transfer Station Operator	04/18/2018	8	04/17/2021

Wesson, Joyce · Angelo's Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	12/13/2018	8	12/12/2021
Transfer Station Operator	12/13/2018	8	12/12/2021

Westmoreland, Angela · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	02/04/2017	8	02/03/2020
Transfer Station Operator	02/04/2017	8	02/03/2020

Williams, Jim · Angelos Recycled Materials · Saint Petersburg

Title	Initial Date	Hours Required 1	Expiration Date
Material Recovery Facility Operator	11/04/2016	8	11/03/2019
Transfer Station Operator	11/04/2016	8	11/03/2019

Jerry Wood, P.E.

Certifies that

Demetrio Nunez

has successfully completed the 8-Hour Initial Training Course for Solid Waste Management Facility Operators titled:

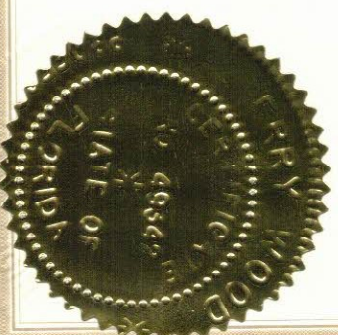
**8-Hour Initial Training Course for Spotters at Solid Waste Management Facilities
in Florida #812**

November 26, 2018

And has Successfully Completed the Required Examination in Accordance with the Initial Training Requirements for Landfill Operators in Florida


Jerry Wood, P.E./Instructor

Signed December 17, 2018



Jerry Wood, P.E.

Certifies that

Saturnino Martinez

has successfully completed the 8-Hour Initial Training Course for Solid Waste Management Facility Operators titled:

**8-Hour Initial Training Course for Spotters at Solid Waste Management Facilities
in Florida #812**

November 26, 2018

And has Successfully Completed the Required Examination in Accordance with the Initial Training Requirements for Landfill Operators in Florida


Jerry Wood, P.E./Instructor

Signed December 17, 2018



Jerry Wood, P.E.

Certifies that

Alfredo Martinez

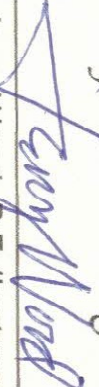
has successfully completed the 24-Hour Initial Training Course for Solid Waste Management Facility Operators entitled:

24-Hour Initial Training for Landfill Operators

(Class I, III and C&D Sites) #608

November 26 and December 12 & 13, 2018

And has Successfully Completed the Required Examination in Accordance with the Initial Training Requirements for Landfill Operators in Florida;
Or has attended ~~for~~ Continuing Education hours.


Jerry Wood, P.E./Instructor
Signed December 17, 2018



Jerry Wood, P.E.

Certifies that

Phillip Curtin

has successfully completed the 24-Hour Initial Training Course for Solid Waste Management Facility Operators entitled:

24-Hour Initial Training for Landfill Operators

(Class I, III and C&D Sites) #608

November 26 and December 12 & 13, 2018

And has Successfully Completed the Required Examination in Accordance with the Initial Training Requirements for Landfill Operators in Florida;
Or has attended ~~for~~ Continuing Education hours.


Jerry Wood, P.E./Instructor

Signed December 17, 2018



ATTACHMENT 7
SOURCE-SEPARATED ORGANICS PROCESSING
FACILITY REGISTRATION



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

Source-Separated Organics Processing Facility Registration Confirmation of Submission

11/13/2018

Waste Registration Section

ANGELO'S AGGREGATE MATERIALS, LTD.

ENTERPRISE LF & RECYC (FKA SID LARKIN & SON, INC.)

41111 Enterprise Rd Dade City, FL 33525 1589

Dear **ANGELO'S AGGREGATE MATERIALS, LTD.**

Your application for Registration of a Source-Separated Organics Processing Facility (SOPF) for ENTERPRISE LF & RECYC (FKA SID LARKIN & SON, INC.) (located at 41111 Enterprise Rd , Dade City) in Pasco County is complete. Your facility identification number (WACS ID) is 87895. This registration is valid until August 1, 2019. The receipt number for the registration fee you paid is 986102

You must comply with the requirements specified in Chapter 62-709, Florida Administrative Code (F.A.C.) in order to maintain qualification for the registration program. A summary of the operating requirements is attached.

If you have any questions or need further assistance, please contact Waste Registration Section at (850) 245-8707 or by e-mail at Waste.Registration@dep.state.fl.us.

Please retain a copy of this confirmation for your records.

Sincerely,

Waste Registration Section

cc: Melissa Madden, Steven Tafuni; Southwest District, Southwest District



Florida Department of Environmental Protection

Solid Waste Section, Mail Station 4565
2600 Blair Stone Road, Tallahassee, Florida 32399-2400

DEP Form # 62-709.901(3)	
Appl for Reg. and Ann Rep for a YT Trans	
Form Title <u>Station or SW Organic Recycling Facility</u>	
Effective Date <u>February 15, 2010</u>	
DEP Facility ID No. <u>87895</u>	(Filled in by DEP)
DEP WACS ID No. <u>87895</u>	(Filled in by DEP)
This form is adopted by reference in subsection 62-709.901(3), F.A.C.	

Application for Registration and Annual Report for a Yard Trash Transfer Station or a Solid Waste Organics Recycling Facility

PART A - GENERAL INFORMATION

1. Type of Application: New ☐ Renewal (due July 1) ☒ Annual report only for facility operating under permit: ☐
2. Type of Facility: Yard trash recycling ☒ Manure blending ☐
Yard trash transfer station ☐ Vegetative, animal byproducts or manure composting ☐
3. Type of Waste Processed: Yard trash ☒ Manure ☐ Animal byproducts ☐ Pre-consumer Vegetative ☐
Vegetative (could/did come into contact with animal products or byproducts or end user) ☐
4. Facility Name: ENTERPRISE LF & RECYC (FKA SID LARKIN & SON, INC.)
5. Registrant Name (or Permittee if annual report only): ENTERPRISE LF & RECYC (FKA SID LARKIN & SON, INC.)
6. Federal Employer Identification Number: 593448428
7. Mailing Address: 855 28th St S
City Saint Petersburg State FL Zip 33712 1916
Street Mailing Address (if different): _____
City _____ State _____ Zip _____
8. Facility Location - Street Address or Property Number: 41111 Enterprise Rd
City Dade City County Pasco
9. Contact Person: ARNOLD,JOHN Telephone: (813) 477-1719

PART B - ADDITIONAL INFORMATION REQUIRED FOR REGISTRATION APPLICATION

10. Records required by Rule 62-709.320, F.A.C., will be kept at the facility? Yes ☒ No ☐
If no, please indicate where these records will be kept and made available upon Department request to review the records:

11. Does the registrant own the facility site? Yes ☒ No ☐
If you answered no, please attach evidence that the facility owner or operator has permission from the landowner to operate a yard trash transfer station or a solid waste organics recycling facility at this site.
12. Has the organic recycling facility begun operations? Yes ☒ No ☐
If this facility was operating in the previous calendar year, the annual report in Part C must be completed.
13. ~~Include a check or money order for the \$35.00 registration fee made payable to the Florida Department of Environmental Protection. Payment of \$35.00 for this registration was received via online transaction.~~

I affirm that I have read Rules 62-709.320, 62-709.330 and 62-709.350, F.A.C., and shall comply with the requirements specified in those rules. I also affirm that the information provided in the application is true, accurate, and correct to the best of my knowledge. I have attached all documents and/or authorizations that are required.

John P. Arnold, Project Manager

John P. Arnold

11/13/2018

Print Name and Title of Registrant or Authorized Agent

Signature

Date

Email address (if available): John.Phillip.Arnold@gmail.com

PART C - ANNUAL REPORT

2017

14. Calendar Year (January 1 through December 31) Covered by this Report:

15. Values used in this report are in (SELECT ONE):

Tons



Cubic Yards



16. **For Existing Facilities that have not reported this information in the past,** Amount of

a. Unprocessed Material On Site at Beginning of Report Year:

0

b. Processed Material On Site at Beginning of Report Year (total):

0

17. Total Quantity of Material Received During Report Year:

12029.00

18. Total Quantity of Material Lost Due to Processing (e.g. grinding, drying, shrinkage, fires, etc.) During Report Year:

0

19. Total Quantity of Material Removed from Site for:

a. Use (e.g., landfill cover, fuel, mulch, compost, etc.):

12029.00

b. Disposal:

0

c. Other (transfer stations)

0

20. Total Quantity On Site at End of Report Year of:

a. Unprocessed Material:

0

b. Processed Material:

0

Note that the total sum of items 16 a and b plus 17 must equal to sum of items 18, plus 19 a, b and c, plus 20 a and b.

Total of items 16 and 17

12029.00

Total of Items 18, 19 and 20

12029.00

I affirm that the information provided in the annual report is true, accurate, and correct to the best of my knowledge.

John P. Arnold, Project Manager

John P. Arnold

11/13/2018

Print Name and Title of Registrant/Permittee or
Authorized Agent

Signature

Date

Email address (if available): John.Phillip.Arnold@gmail.com

~~PART D - MAILING INSTRUCTIONS~~

This registration was completed and payment of \$35.00 (if applicable) was received via online transaction.

~~Remember to include the \$35.00 fee if this is also a registration application. Mail completed form to:~~

~~Department of Environmental Protection
Solid Waste Section, MS 4565
2600 Blair Stone Road
Tallahassee, Florida 32399-2400~~

ATTACHMENT 7

Revised Section 3 Engineering Report

Appendix 3-B

(replace previously submitted Appendix 3-B in its entirety)

**ENTERPRISE ROAD CLASS III RECYCLING AND DISPOSAL FACILITY
CELL 17 AND VERTICAL EXPANSION
CONSTRUCTION PERMIT APPLICATION
EMERGENCY AND CONTINGENCY OPERATIONS**

Prepared for:

ANGELO'S AGGREGATE MATERIALS, LTD
855 28th Street South
St. Petersburg, Florida 33712

Presented to:

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHWEST DISTRICT – SOLID WASTE DIVISION**
13051 N. Telecom Parkway
Temple Terrace, Florida 33637

Prepared by:

LOCKLEAR & ASSOCIATES, INC.
4140 NW 37 Place, Suite A
Gainesville, Florida 32606
Certificate of Authorization #30066

Project No.: 02000-217-17

JANUARY 2019

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1.0 EMERGENCY AND CONTINGENCY OPERATIONS

Angelo's Aggregate Materials, LTD (Applicant) is the Owner and Operator of the Enterprise Road Class III Recycling and Disposal Facility (Facility). Emergency conditions that may require a contingency operation plan may be created by a natural disaster (i.e., hurricane, tornado, and/or flooding), or fire. During emergency conditions normal waste acceptance procedures will continue, as feasible. The following procedures are to be initiated at the onset of a site emergency or major storm:

1.1 Communications

The designated emergency coordinator for the Facility is Mr. Fred Martinez, who may be reached at (352)-303-5618. Mr. Martinez is responsible for implementing emergency and contingency operations or designating an alternate coordinator.

As necessary the emergency coordinator will notify the appropriate emergency response personnel including:

- 911 - Fire/Police/Medical
- Dade City Fire Department- (352) 521-1492
- Dade City Police Department- (352) 521-1493
- Pasco County Hospital - Dade City - (352) 521-1100
- Florida Department of Environmental Protection (813) 470-5700
- Pasco County (727) 847-2411

If needed, the Operator will coordinate with emergency response and Pasco County personnel to notify neighbors and / or local government officials of emergency and contingency conditions that may affect them.

1.2 Major Storm or Disaster

1. All personnel understand their role in an emergency situation. At least one office employee will monitor the telephone. Radio or telephone communication is provided between the office and all operating areas of the landfill at all times.
2. All lightweight signs and equipment are to be collected and stored in a secure area.
3. All depressed and eroded areas are to be protected and the stormwater management system is to be inspected and maintained, as necessary.

4. Work is to begin in dry areas only when operations are resumed; waste materials are not to be deposited in standing water.
5. On-site emergency equipment locations, such as first aid and eye wash stations, are shown on Site Plan.

1.3 Fire

Although open burning is strictly prohibited, several types of fires could occur at the Facility including equipment fires, structure fires, waste fires, buffer zone fires, and receipt of hot loads. The Operator will provide a truck mounted water tank on-site for use in firefighting purposes. A stockpile of soil will be located near the active disposal area at all times for use in smothering waste fires and hot loads. During a fire, incoming trucks will be directed toward another area of the landfill so that a temporary active face can be established. Once the fire is extinguished, appropriate cover will be applied to the waste and operations will continue at the original active face. If the fire is extensive and a temporary active face cannot be established, incoming trucks will be redirected to another landfill.

For all fires, the Florida Department of Environmental Protection (FDEP) and Pasco County will be notified of the fire control plan being implemented if the fire cannot be extinguished or controlled within an hour. If the fire cannot be extinguished or controlled within 48 hours, the emergency coordinator will notify the local Fire Department listed above for assistance and will also notify Pasco County and any neighbors likely to be affected by the fire.

The Operator will take the following procedures if a fire occurs at the Facility:

1.3.1 Equipment and Structural Fires

If the fire is minor in nature, site personnel will attempt to extinguish the fire using available on-site fire fighting equipment. The local Fire Department listed above will be summoned for assistance if site personnel and equipment cannot extinguish the fire.

1.3.2 Waste Fires

Burning waste will be separated from the fill area and immediately covered with soil stockpiled near the disposal area. If necessary, water will also be applied to the burning waste using the on-site truck mounted water tank. The local Fire Department listed above will be summoned for assistance if the site personnel and equipment cannot extinguish the fire.

1.3.3 Buffer Zone Fires

The local Fire Department listed above will be immediately summoned to control and extinguish the fire. Available site personnel will create and maintain fire breaks between the active disposal area and the oncoming fire, and water down areas between the fire and the disposal area using the water tank. Available site personnel will assist the Fire Department as requested.

1.3.4 Hot Load Fires

If a hot load has not been unloaded, the driver will be directed to an isolated area of the Facility and site personnel will use available fire fighting equipment in an attempt to extinguish the load. If a hot load has been unloaded, the load will be spread out and separated from the active disposal area and immediately covered with soil stockpiled near the area. If necessary, water will also be applied to the load using the on-site water tank.

The local Fire Department listed above will be summoned for assistance if site personnel and equipment cannot extinguish the load.

1.3.5 Fire-Fighting Equipment

Fire extinguishers are located in locations indicated below.

- Office / Scale House
- Heavy Equipment Cabs

1.4 Spills

In the event of a spill, the site manager will determine whether on site personnel are capable of the cleanup. For example, if oil is spilled while performing vehicle maintenance, the site manager will direct landfill personnel to use a sorbent material to clean up the spill if spill occurred on an impervious surface. For spills on unpaved areas of the facility, the contaminated soil will be removed and placed in an appropriate container. All cleanup materials will be placed in a drum, stored in the shipping/storage container on-site for proper disposal. If unknown or hazardous chemicals are spilled, the site manager will contact the Department ((813)-470-5700) and Pasco County ((727)-847-2411) for direction.

1.5 Discovery of Hazardous Wastes

The operator will take the following steps if hazardous wastes are discovered at the active disposal area that may pose a serious health and safety risk to site personnel, the public, or the environment. Site personnel will establish a minimum 50-foot perimeter around the suspect waste using pylons and "Caution" and/or "Do Not Enter" tape. The driver and other customers will not be allowed closer than 50 feet to the suspect waste. Site personnel will immediately contact their supervisor.

The supervisor will contact a hazardous waste materials response team to coordinate cleanup and disposal of the hazardous materials.

1.6 Equipment Failure

Arrangements with equipment rental companies will be maintained in order to provide for additional equipment during unanticipated breakdowns.

Equipment rental companies that may be used to obtain reserve equipment include the following:

Ring Power - Brooksville, Florida
Contact: (352)-796-4978

Flagler Equipment - Tampa, Florida
Contact: (813)-630-0077

If power to the landfill is disrupted, temporary power will be made available for emergency power. If any mechanical or electrical component of the leachate collection fails, the contractor/service center listed in the equipment manual or a plumber/electrician is to be contacted for repairs.

1.7 Landfill Shutdown

1. If the landfill should need to be shut down, the Department will be notified and haulers will be directed to another properly permitted facility.
2. Initial cover of six (6) inches will be placed on all waste exposed areas.

The stormwater management system will allow for disposal operations to continue during periods of inclement weather. Temporary berms, ditches, and grading are to be used to drain stormwater away from the active face of the landfill. The following actions should be taken at the landfill following a severe storm, hurricane, or other natural disaster:

- FDEP and Pasco County are to be notified by telephone immediately should any need for emergency and contingency operations arise. The phone number for the Department's Solid Waste Section is (813)-470-5700. The phone number for Pasco County is (727)-847-2411. The calls are to be confirmed by letter.
- Operational hours of the landfill may be extended at the landfill to meet the needs of the community. Pasco County and the Department will be consulted prior to changes in the hours of operation of the landfill.
- Necessary additional equipment, if required, will be rented. Arrangements are in place between the operator of the Landfill and equipment rental companies to facilitate this activity.

- If required, additional equipment operators and/or other personnel will be contracted. Arrangements are in place between the operator of the Landfill and temporary staffing companies to facilitate this activity.
- Appropriate public notices will be issued, including notification of the landfill's customer's by telephone and other media
- Contacts with local governmental bodies and local emergency agencies such as fire and rescue have been established in order to coordinate emergency activities. Fire and rescue personnel responsible for this district have visited the site in order to discuss emergency procedures.
- Site personnel may be trained in CPR and First Aid.

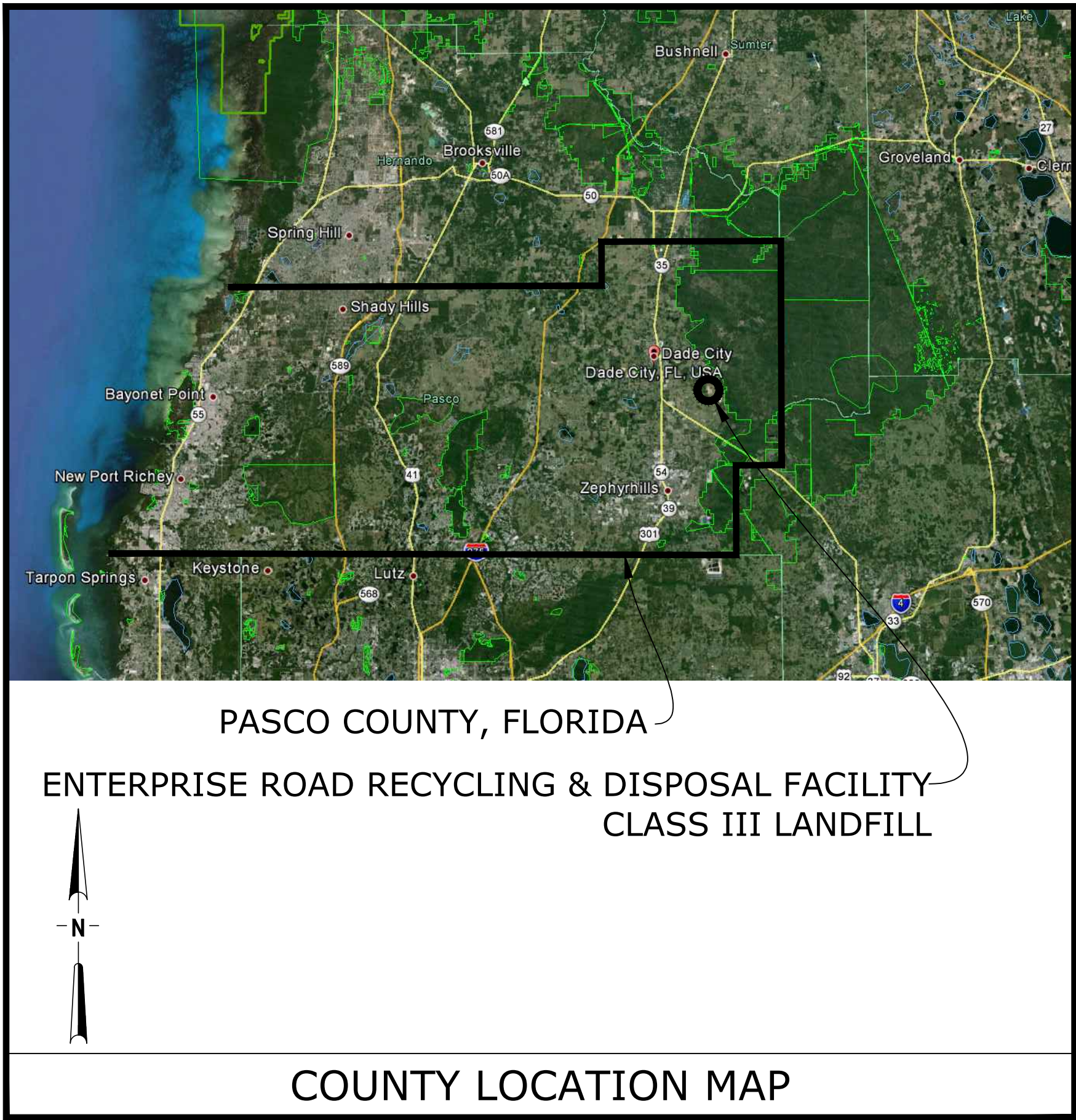
ATTACHMENT 8

Revised Section 4 Cell 17 and Vertical Expansion
Construction Permit Plan Set

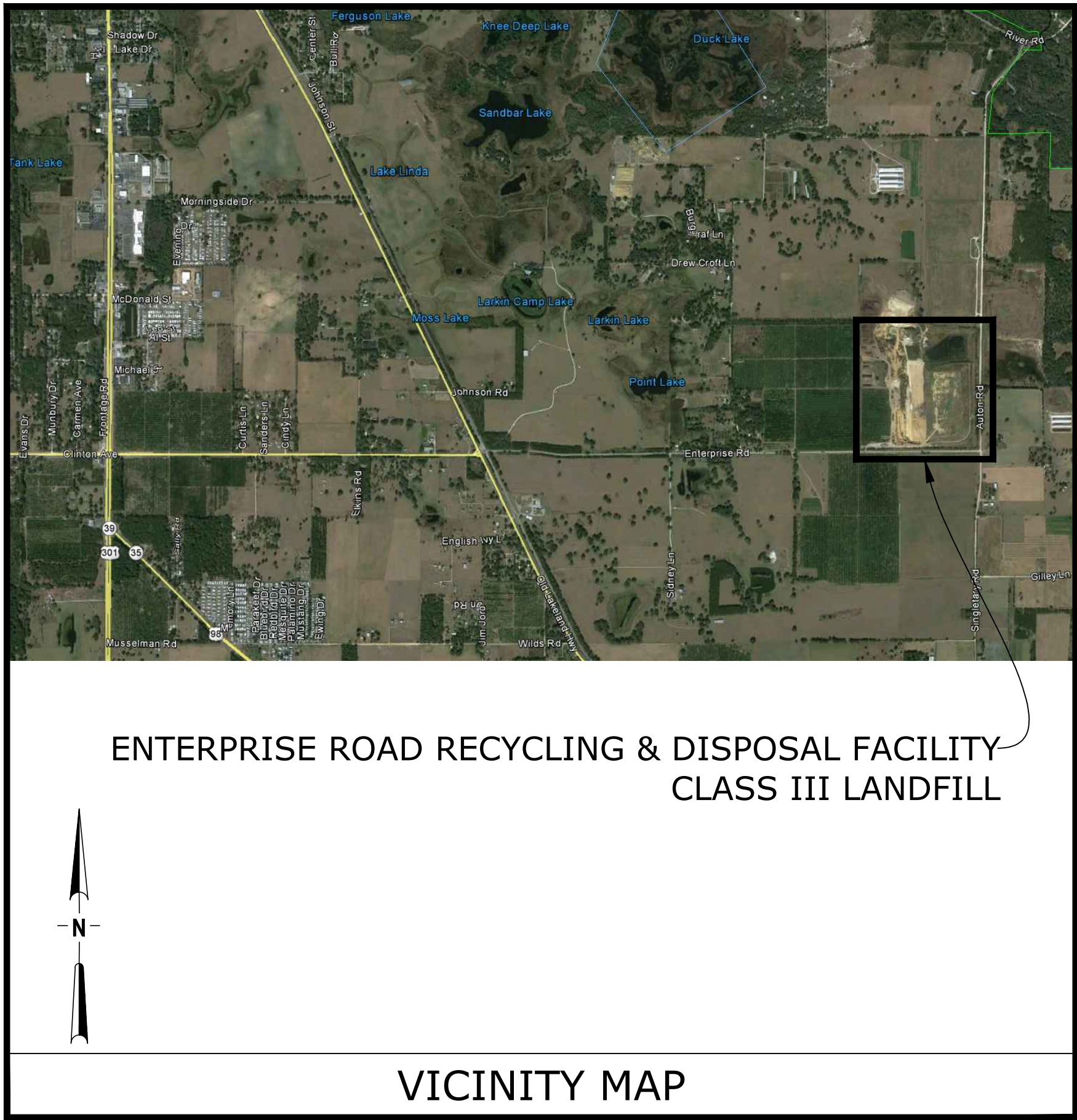
ENTERPRISE ROAD CLASS III LANDFILL RECYCLING & DISPOSAL FACILITY CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT

LOCATED:
DADE CITY, PASCO COUNTY, FLORIDA

SUBMITTED TO:
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Sheet List Table	
Sheet Number	Sheet Title
C0.00	COVER SHEET
C0.01	GENERAL NOTES AND ABBREVIATIONS
C0.02	AERIAL SITE PLAN
C0.03	SITE PLAN
C0.04	CELL FLOOR GRADING PLAN
C1.00	PHASING PLAN SEQUENCE NO. 1
C1.01	PHASING PLAN SEQUENCE NO. 1 SECTIONS
C1.10	PHASING PLAN SEQUENCE NO. 2
C1.11	PHASING PLAN SEQUENCE NO. 2 SECTIONS
C2.00	PHASING PLAN SEQUENCE NO. 3 OVERALL LANDFILL VERTICAL EXPANSION
C2.10	PHASING PLAN SEQ NO 3 OVERALL LANDFILL VERT EXPANSION SECT
C3.00	PHASING PLAN SEQUENCE NO. 4 CONCEPTUAL CLOSURE
C3.10	PHASING PLAN SEQUENCE NO. 4 CONCEPTUAL CLOSURE SECTIONS
C4.00	CLOSURE DETAILS
SHEET 1	TOPOGRAPHIC SURVEY (BY PICKETT SURVEYING & PHOTOGRAMMETRY)
SHEET 2	TOPOGRAPHIC SURVEY (BY PICKETT SURVEYING & PHOTOGRAMMETRY)



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NO.				DATE	REVISION DESCRIPTION	BY	<div><div></div><div>Locklear & Associates</div><div>4140 NW 37th Place, Suite A Gainesville, Florida 32606 Phone: 352.672.6867 Fax: 352.692.5390 Certificate of Authorization No. 30066</div></div>	PROJECT TITLE: PERMIT PLANS ENTERPRISE ROAD CLASS III RECYCLING & DISPOSAL FACILITY CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT DADE CITY, PASCO COUNTY, FLORIDA				LISA J. BAKER	DESIGNED BY	LIB	SHEET TITLE: COVER SHEET	PROJECT NO.: 02000-217-17
1				4/1/2019	RAI 1 SUPPLEMENTAL INFORMATION	LIB					DRAWN BY	MAF	SCALE: AS SHOWN			
											CHECKED BY	JDL	DATE: JANUARY 2019			
													DRAWING: C0.00			
										FL PE NO. 74652	APPROVED BY	LIB				

REVIEW ONLY-NOT FOR CONSTRUCTION

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GENERAL NOTES

- ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929, UNLESS OTHERWISE NOTED.
- THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE PERMITTING AGENCY IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED AT THE SITE.
- CONTRACTOR SHALL CERTIFY IN WRITING TO THE ENGINEER OF RECORD THE ACCURACY OF ALL SURVEY AND OTHER GRADING DATA PRIOR TO BEGINNING WORK.
- LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) AFFECTING THE WORK.
- CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO PROTECT EXISTING PIPING, MONITORING WELLS/PIEZOMETERS FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL REPAIR OR REPLACE PIPING, MONITORING WELLS/PIEZOMETERS DAMAGED DURING CONSTRUCTION WITH EQUIVALENT MATERIALS AND CONSTRUCTION METHODS AS APPROVED BY FACILITY OWNER AT NO ADDITIONAL COST TO THE OWNER.
- FIELD CONDITIONS MAY NECESSITATE SLIGHT ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED CONSTRUCTION TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH EXISTING PASCO COUNTY DESIGN AND CONSTRUCTION STANDARDS UNLESS THOSE STANDARDS CONFLICT WITH THESE CONTRACT DOCUMENTS IN WHICH CASE THESE CONTRACT DOCUMENTS SHALL GOVERN. SUCH CONFLICTS SHALL BE BROUGHT TO THE PROFESSIONAL'S ATTENTION IMMEDIATELY.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PREVAILING FEDERAL, STATE, LOCAL AND OTHER APPLICABLE REGULATIONS.
- CONSTRUCTION MONUMENTS FOR VERTICAL AND HORIZONTAL CONTROL HAVE BEEN PROVIDED AT THE PROJECT SITE.
- PRIOR TO BEGINNING EARTHWORK, THE CONTRACTOR SHALL PROVIDE STORMWATER AND EROSION CONTROL PLANS TO PREVENT PONDING AND CONTROL EROSION AND RUNOFF. NO PONDING OF WATER SHALL BE ALLOWED. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO PREVENT EROSION AND SHALL BE RESPONSIBLE FOR ALL WORK, INCLUDING PROVIDING EQUIPMENT, LABOR, FILL, ETC NECESSARY TO REMEDIATE AND/OR RESTORE ALL AREAS IMPACTED BY EROSION.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH THE OSHA EXCAVATION SAFETY STANDARDS AND TO ABIDE BY THEM.
- THE CONTRACTOR SHALL PROVIDE ALL WARNING SIGNALS, SIGNS, LIGHTS, AND FLAG PERSON AS REQUIRED BY DOT IN THE "MANUAL ON TRAFFIC CONTROL & SAFE PRACTICES."
- ALL PIPING SHALL HAVE MINIMUM COVER OF 24" UNLESS OTHERWISE NOTED.
- WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S RECOMMENDED DEFLECTION ANGLE. MINIMUM PIPE RADIUS SHALL BE A MINIMUM OF 25% GREATER THAN THE MANUFACTURER'S RECOMMENDED MINIMUM RADIUS.
- CONTAMINATED STORMWATER, DEWATERING DISCHARGE, LEACHATE, CONTAMINATED SOILS, OR EXCAVATED WASTE SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE LANDFILL OPERATIONS.
- CONTRACTOR SHALL VERIFY ALL CLEARANCES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND DITCHES DURING ALL PHASES OF CONSTRUCTION AND SHALL UTILIZE WHATEVER MEANS NECESSARY TO MANAGE STORMWATER SUCH THAT IMPACT TO CONSTRUCTION IS MINIMIZED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF DAMAGE DUE TO STORMWATER.
- NO DISTURBANCE SHALL BE ALLOWED OUTSIDE OF THE AREAS SHOWN ON THE FINAL GRADING PLAN UNLESS APPROVED BY THE ENGINEER, OR SPECIFICALLY NOTED ON THE PLANS.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ENVIRONMENTAL PROTECTION DURING THE LIFE OF THE CONTRACT. THE CONTRACTOR'S OPERATIONS SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO WATER, AIR, SOLID WASTE, HAZARDOUS WASTE MATERIALS, OILY SUBSTANCES, AND NOISE POLLUTION. THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENTATION CONTROL MEASURES AS NECESSARY TO COMPLY WITH THESE REGULATIONS FOR BOTH TEMPORARY AND PERMANENT CONSTRUCTION.
- THE CONTRACTOR SHALL COMPLY WITH ALL TERMS, CONDITIONS, AND REQUIREMENTS OF ALL APPLICABLE PERMITS, INCLUDING FDEP PERMITS FOR THE SITE.
- THE CONTRACTOR SHALL REPLACE ALL EXISTING PAVING, LANDFILL COVER MATERIAL, ACCESS ROADS, PIPES, STABILIZED EARTH, FENCES, SIGNS AND OTHER IMPROVEMENTS WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED OR DAMAGED DURING CONSTRUCTION, AS A RESULT OF CONSTRUCTION, OR AS DIRECTED BY THE ENGINEER WITHOUT INCREASE IN THE CONTRACT PRICE OR TIME.
- THE CONTRACTOR SHALL BE AWARE THAT THERE MAY BE SOME UTILITY CONFLICTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT WITHOUT INCREASE IN THE CONTRACT PRICE OR TIME.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED.
- THE CONTRACTOR SHALL COMPLY WITH ALL TERMS, CONDITIONS, AND REQUIREMENTS OF ALL APPLICABLE PERMITS, INCLUDING FDEP AND WATER MANAGEMENT DISTRICT PERMITS FOR THE SITE.

GRADING NOTES

- ALL AREAS WITHIN AND AROUND THE LIMITS OF CONSTRUCTION SHALL BE MAINTAINED AS NEEDED TO CONTROL EROSION DURING THE LENGTH OF THE PROJECT.
- FILL ELEVATIONS SHALL BE SUCH THAT INTERMEDIATE AND FINAL COVER DESIGN ELEVATIONS SHALL BE ACHIEVED ON ALL SLOPES.



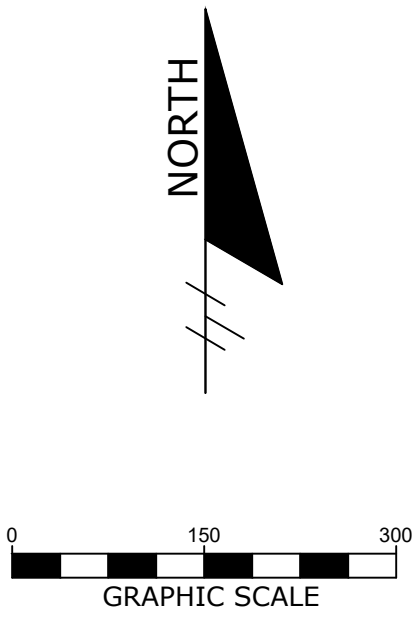
Locklear
& Associates

4140 NW 37th Place, Suite A
Gainesville, Florida 32606
Phone: 352.672.6867 Fax: 352.692.5390
Certificate of Authorization No. 30066

PROJECT TITLE:
PERMIT PLANS
ENTERPRISE ROAD CLASS III
RECYCLING & DISPOSAL FACILITY
CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT
DADE CITY, PASCO COUNTY, FLORIDA

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

GENERAL NOTES AND ABBREVIATIONS	PROJECT NO.:	02000-217-17
	SCALE:	AS SHOWN
	DATE:	JANUARY 2019
	DRAWING:	C0.01



LEGEND

- PERIMETER FENCE
- PROPERTY BOUNDARY
- LANDFILL FOOTPRINT (AT BUILD OUT)
- LANDFILL CELLS

NOTES:

- 1. PROPERTY BOUNDARY SURVEY CONDUCTED BY SIMMONS & BEALL, INC. 3-30-2001, PROVIDED BY ANGELO'S AGGREGATE MATERIALS.
- 2. CLASS III LANDFILL PERMITTED AND FUTURE CELL LAYOUT PER NOVEMBER 2006 ANGELO'S RECYCLED MATERIALS ENTERPRISE RECYCLING & DISPOSAL FACILITY (AS AMENDED FEBRUARY 2008 AND JANUARY 2010 BY JONES EDMUNDS, AS AMENDED MARCH 2013 BY KELNER ENGINEERING AND 2015 AND 2016 BY LOCKLEAR & ASSOCIATES).
- 3. 2017 ORTHOIMAGERY (AERIAL) IS BEING PROVIDED BY THE FDOT WEBSITE AND IS THE MOST RECENT AERIAL VERSION AVAILABLE FOR DOWNLOAD IN A MR.SID FILE FORMAT (SID).

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NO.	DATE	REVISION DESCRIPTION	BY
1	4/1/2019	RAI 1 SUPPLEMENTAL INFORMATION	LJB



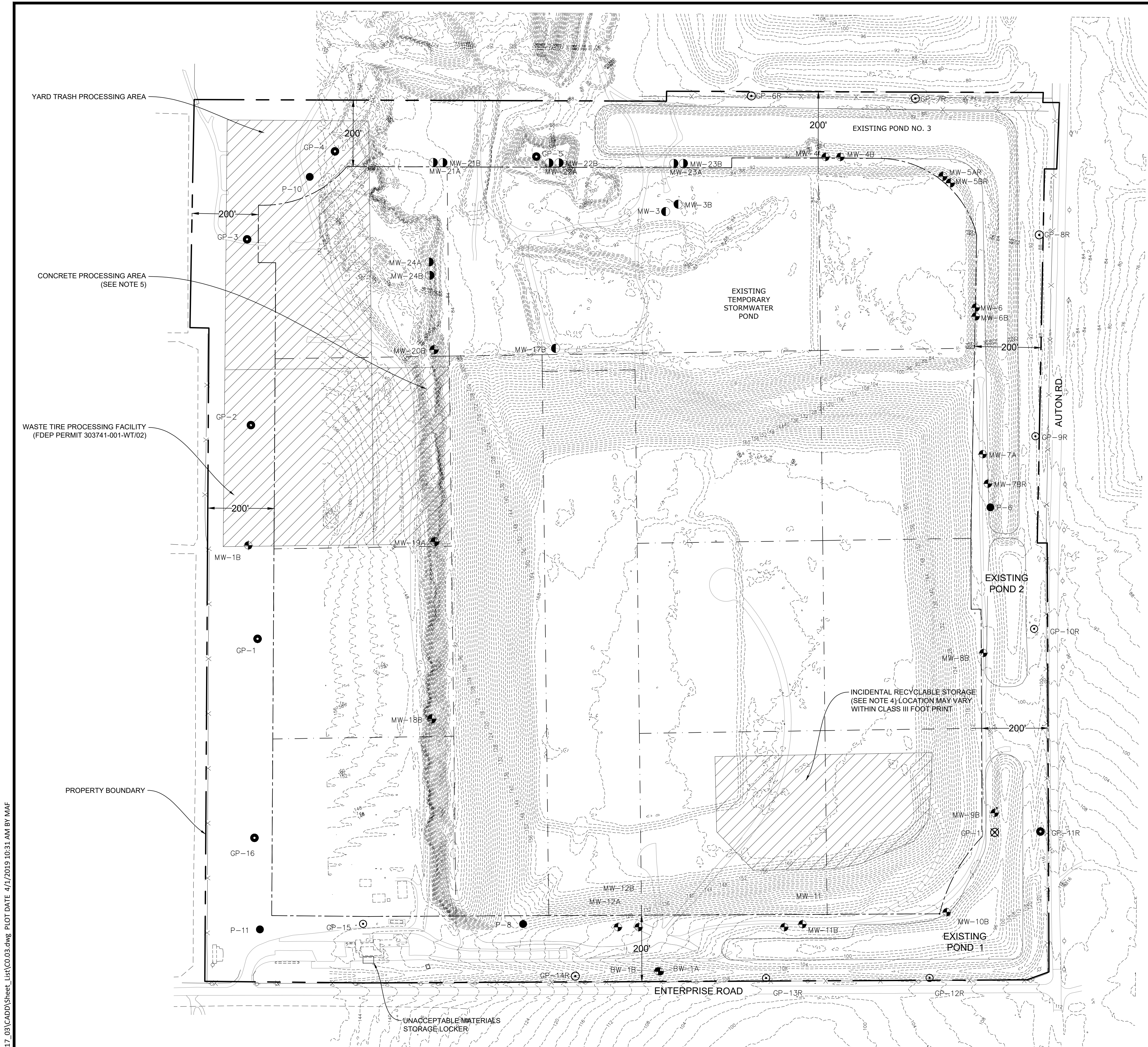
4140 NW 37th Place, Suite A
Gainesville, Florida 32606
Phone: 352.672.6867 Fax: 352.692.5390
Certificate of Authorization No. 30066

PROJECT TITLE:
PERMIT PLANS
ENTERPRISE ROAD CLASS III
RECYCLING & DISPOSAL FACILITY
CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT
DADE CITY, PASCO COUNTY, FLORIDA

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

SHEET TITLE:	PROJECT NO.:
AERIAL SITE PLAN	02000-217-17
	SCALE:
	AS SHOWN
	DATE:
	JANUARY 2019
	DRAWING:
	C0.02

REVIEW ONLY-NOT FOR CONSTRUCTION



LEGEND

	PERIMETER FENCE
	PROPERTY BOUNDARY
	LANDFILL FOOTPRINT (AT BUILD OUT)
	LANDFILL CELLS
	EXISTING CONTOURS
	SPECIAL WASTE MANAGEMENT AREA

LEGEND

	MW-3B	MONITORING WELL LOCATION
	MW-22B	MONITORING WELL TO BE ABANDONED
	MW-5BR	MONITORING WELL TO BE INSTALLED
	GP-1	GAS PROBE LOCATION
	GP-8	GAS PROBE TO BE ABANDONED
	GP-8R	FUTURE GAS PROBE LOCATION
	P-11	PIEZOMETER WELL LOCATION

NOTES:

- PROPERTY BOUNDARY SURVEY CONDUCTED BY SIMMONS & BEALL, INC. 3-30-2001, PROVIDED BY ANGELO'S AGGREGATE MATERIALS.
- CLASS III LANDFILL PERMITTED AND FUTURE CELL LAYOUT PER NOVEMBER 2006 ANGELO'S RECYCLED MATERIALS ENTERPRISE RECYCLING & DISPOSAL FACILITY (AS AMENDED FEBRUARY 2008 AND JANUARY 2010 BY JONES EDMUNDS, AS AMENDED MARCH 2013 BY KELNER ENGINEERING, AND AS AMENDED 2015 AND 2016 BY LOCKLEAR & ASSOCIATES).
- TOPOGRAPHIC SURVEY BY PICKETT SURVEYING & PHOTOGRAMMETRY, DATED 10/01/18.
- TEMPORARY STORAGE OF UNACCEPTABLE MATERIALS AND INCIDENTAL RECYCLABLES WITHIN THE LANDFILL FOOTPRINT AND NEAR WORKING FACE MAY BE PROVIDED AS FOLLOWS:

TYPE	MAX. QTY	STORAGE
INCIDENTAL RECYCLABLES		
FERROUS METAL	500 CY	ROLL-OFF OR PILE
ALUMINUM	300 CY	ROLL-OFF OR PILE
STAINLESS STEEL	300 CY	ROLL-OFF OR PILE
COPPER	25 CY	TRASH PAIL, ROLL-OFF OR PILE
ASPHALT	300 CY	ROLL-OFF OR PILE
CONCRETE / RUBBLE	300 CY	ROLL-OFF OR PILE
ELECTRONICS	8 CY	COVERED DUMPSTER
UNACCEPTABLE MATERIALS		
PAINT, BATTERIES, SOLVENTS, ELECTRONICS, OILS, ETC.	40 CY	ROLL-OFF OR PILE AT WORKING FACE, REMOVED DAILY TO STORAGE LOCKER
CLASS I WASTE	20 CY	COVERED DUMPSTERS

- CONCRETE PROCESSING AREA WILL BE RELOCATED WHEN EXCAVATION OPERATIONS MOVE TO THIS AREA.

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1	4/1/2019	RAI 1 SUPPLEMENTAL INFORMATION	LJB



4140 NW 37th Place, Suite A
Gainesville, Florida 32606
Phone: 352.672.6867 Fax: 352.692.5390
Certificate of Authorization No. 30066

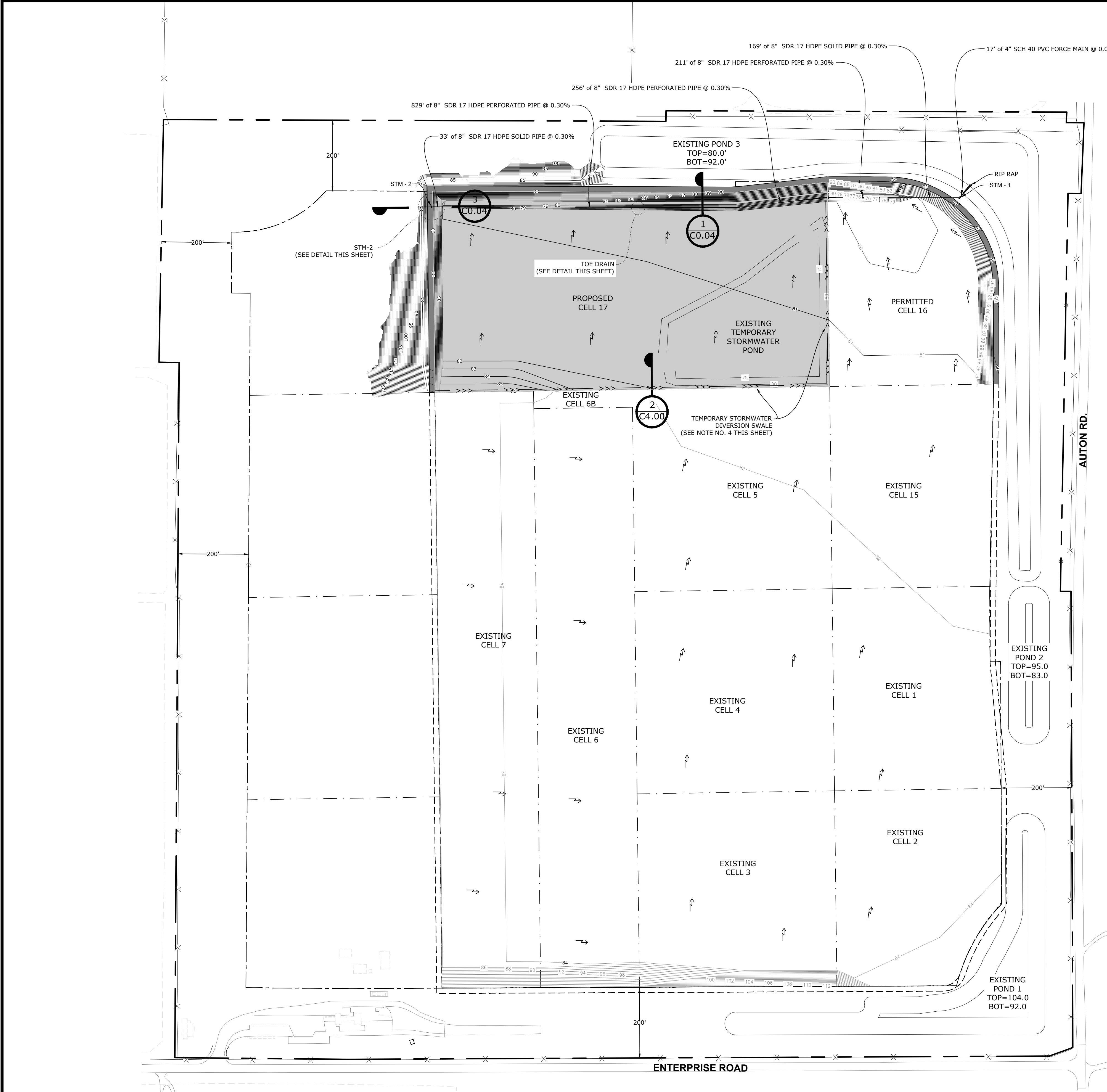
PROJECT TITLE: PERMIT PLANS ENTERPRISE ROAD CLASS III RECYCLING & DISPOSAL FACILITY CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT DADE CITY, PASCO COUNTY, FLORIDA

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

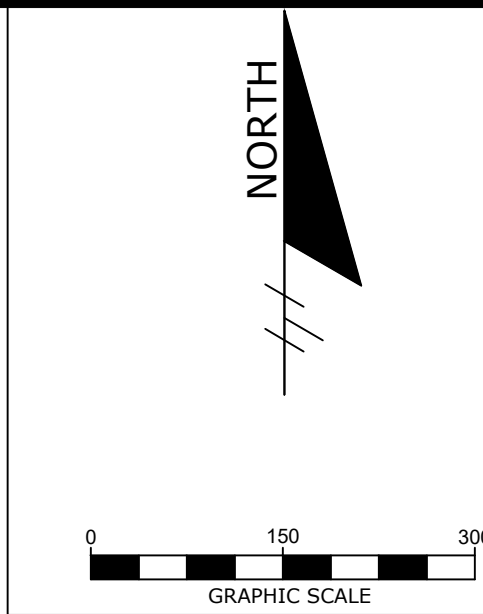
SHEET TITLE: SITE PLAN
PROJECT NO.: 02000-217-17 SCALE: AS SHOWN DATE: JANUARY 2019 DRAWING: C0.03

REVIEW ONLY-NOT FOR CONSTRUCTION

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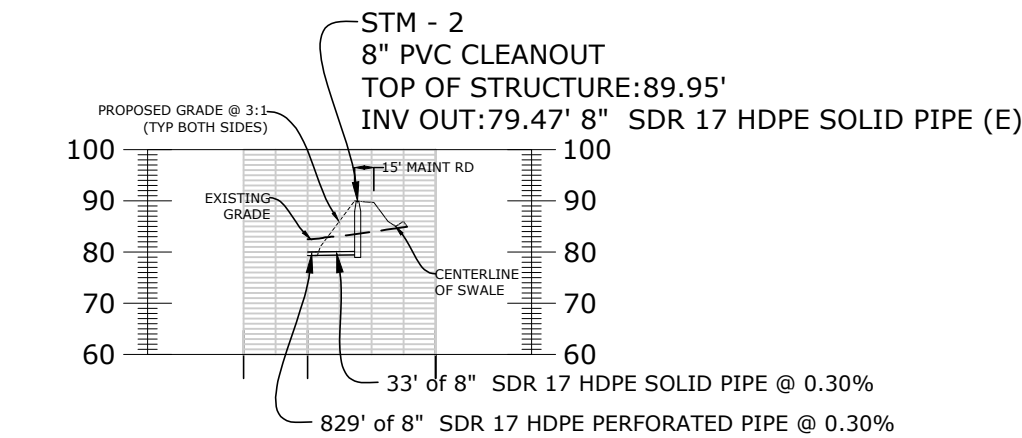


STORM SEWER STRUCTURE TABLE			
STRUCTURE NAME:	DETAILS:	NORTHING	EASTING
STORM SEWER STM - 1	LEACHATE COLLECTION WETWELL (SEE DETAIL ON C4.10) FINISH GRADE RIM EL = 91.92' INV IN = 74.98' 8" SDR 17 HDPE SOLID PIPE SUMP EL = 72.00' INV OUT = 88.50' 4" SCH 40 PVC FORCE MAIN	1,454,654.80	613,925.38
STORM SEWER STM - 2	8" PVC CLEANOUT FINISH GRADE RIM EL = 89.95' INV OUT = 79.47' 8" SDR 17 HDPE SOLID PIPE	1,454,629.15	612,432.13



LEGEND

- PERIMETER FENCE
- PROPERTY BOUNDARY
- LANDFILL FOOTPRINT (AT BUILD OUT)
- LANDFILL CELLS
- EXISTING CLAY LAYER CONTOURS
- PROPOSED CLAY LAYER CONTOURS
- DIRECTIONAL FLOW ARROW
- FLOOR GRADING CLAY AREA (SHADED)

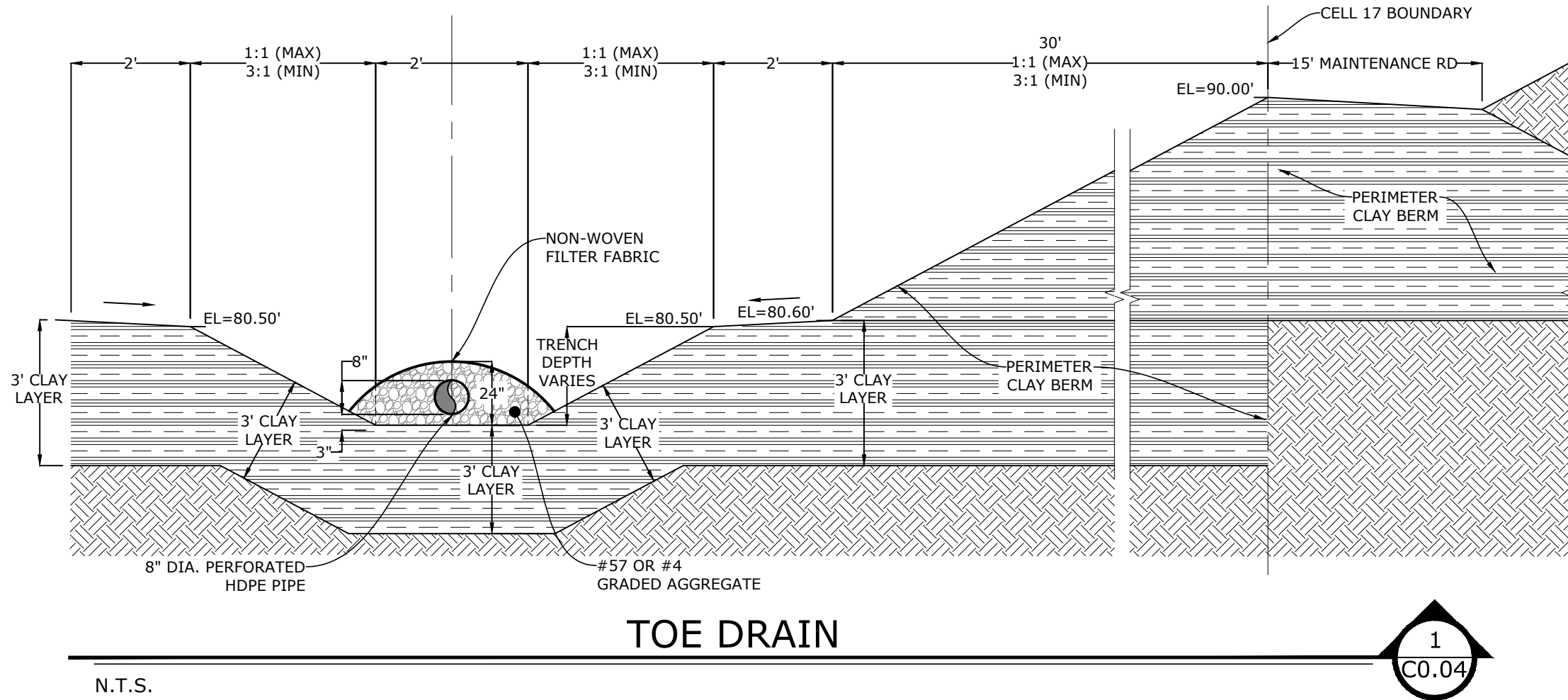


DETAIL STM-2

N.T.S.

NOTES:

- PROPOSED CONTOURS REPRESENT THE TOP OF CLAY (3' BARRIER LAYER) ELEVATION.
- TOPOGRAPHIC SURVEY BY PICKETT SURVEYING & PHOTOGRAMMETRY, DATED 10/01/2018.
- CONSTRUCTION AND FILLING OF CELL 16 AND POND NO. 3 (PREVIOUSLY PERMITTED, CONSTRUCTION IN PROGRESS).
- TEMPORARY STORMWATER DIVERSION SWALE. CONTRACTOR SHALL GRADE TEMPORARY SWALE FOR POSITIVE DRAINAGE TOWARD EXISTING TEMPORARY STORMWATER POND. TEMPORARY SWALE SHALL BE REMOVED AND FILLED WITH CLAY ONCE INITIAL WASTE LIFT REACHES THE SWALE FROM THE NORTH.
- CONSTRUCTION AND FILLING OF CELL 17.
- TEMPORARY STORMWATER DIVERSION SWALE. CONTRACTOR SHALL GRADE TEMPORARY SWALE FOR POSITIVE DRAINAGE ALONG THE SOUTHERN CELL BOUNDARY OF CELL 17 AND RUN NORTH ALONG THE WESTERN BOUNDARY OF CELL 16. TEMPORARY SWALE SHALL BE REMOVED AND FILLED WITH CLAY ONCE INITIAL WASTE LIFT REACHES THE SWALE FROM THE NORTH.



NO.	DATE	REVISION DESCRIPTION	BY
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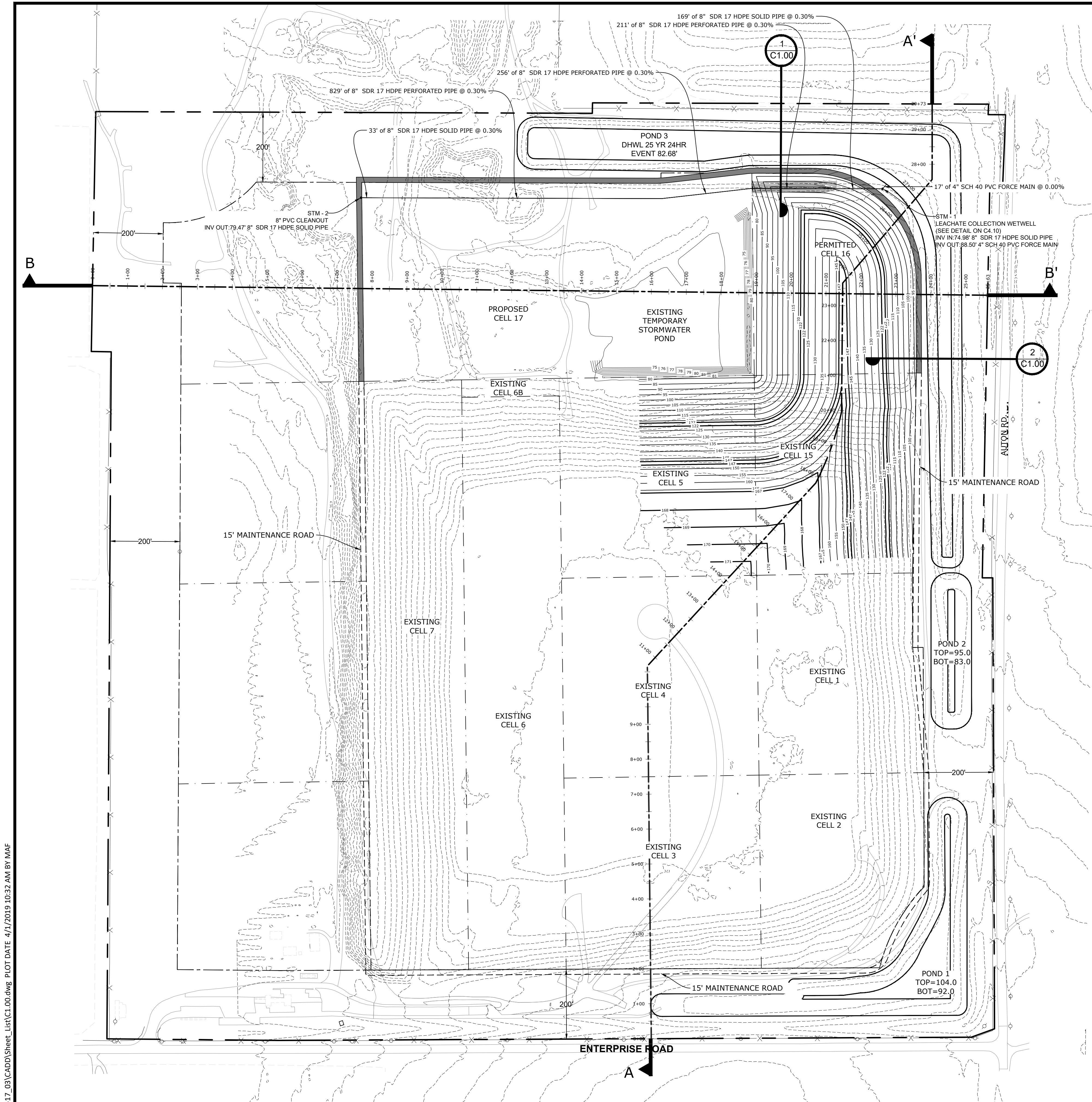
PROJECT TITLE:
PERMIT PLANS
ENTERPRISE ROAD CLASS III
RECYCLING & DISPOSAL FACILITY
CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT
DADE CITY, PASCO COUNTY, FLORIDA

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

SHEET TITLE:		PROJECT NO.:
CELL FLOOR GRADING PLAN		02000-217-17
		SCALE:
		AS SHOWN
		DATE:
		JANUARY 2019
		DRAWING:
		C0.04

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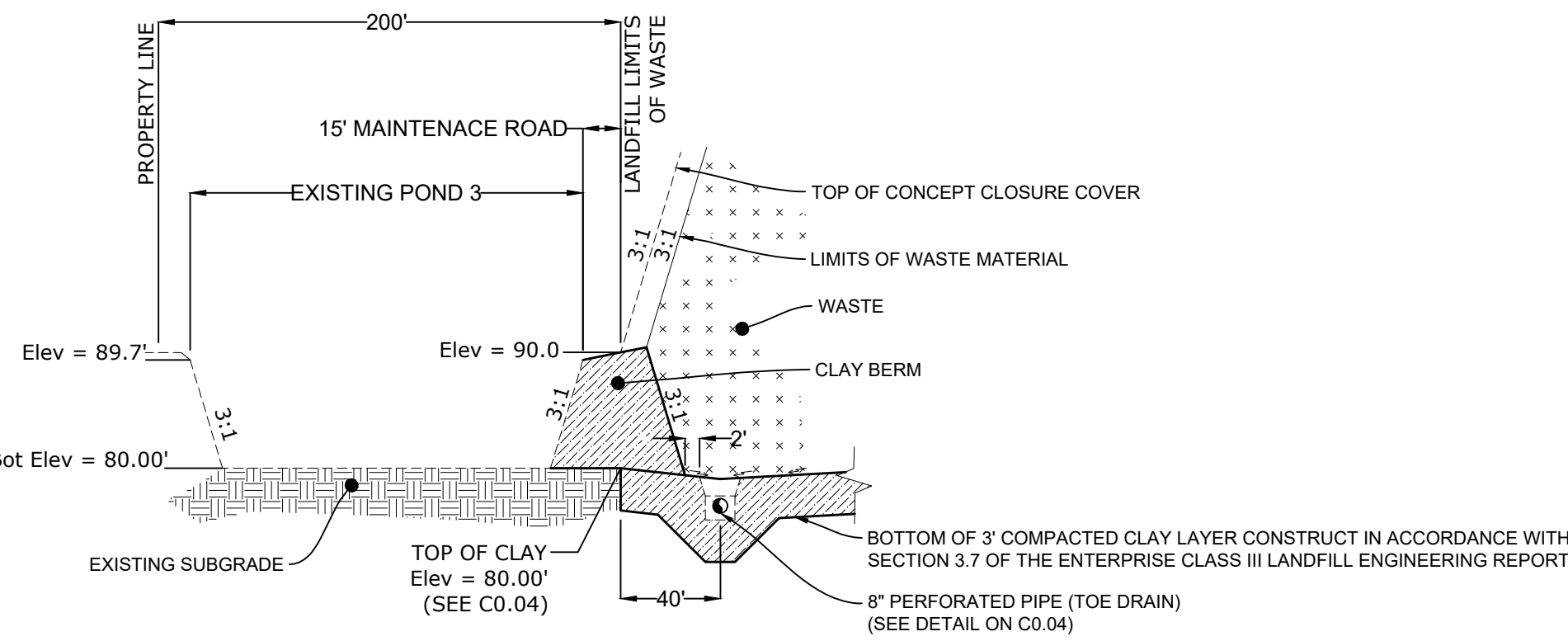
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STORM SEWER STM - 1	LEACHATE COLLECTION WETWELL (SEE DETAIL ON C4.10) FINISH GRADE RIM EL = 91.92' INV IN = 74.98' 8" SDR 17 HDPE SOLID PIPE SUMP EL = 72.00' INV OUT = 88.50' 4" SCH 40 PVC FORCE MAIN	1,454,654.80	613,925.38
STORM SEWER STM - 2	8" PVC CLEANOUT FINISH GRADE RIM EL = 89.95' INV OUT = 79.47' 8" SDR 17 HDPE SOLID PIPE	1,454,629.15	612,432.13

LEGEND

— X —	PERIMETER FENCE
---	PROPERTY BOUNDARY
---	LANDFILL FOOTPRINT (AT BUILD OUT)
---	LANDFILL CELLS
- - - - -	EXISTING CONTOURS
10+00	CROSS SECTION STATIONS

NOTES:

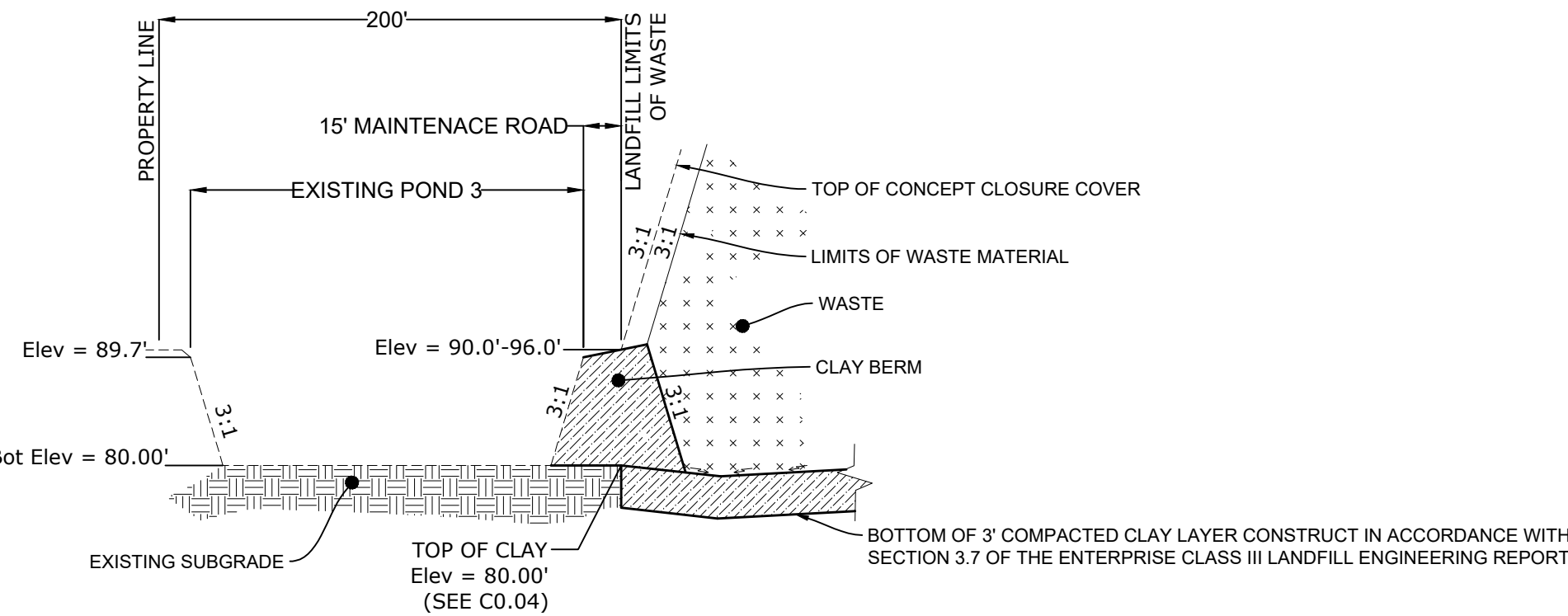
- CONTOURS REPRESENT TOP OF WASTE. FILL ELEVATIONS SHALL BE SUCH THAT FINAL COVER DESIGN ELEVATIONS SHALL BE ACHIEVED ON ALL SLOPES.
- TOPOGRAPHIC SURVEY BY PICKETT SURVEYING & PHOTOGRAMMETRY, DATED 10/01/18.



EXISTING NORTH BERM DETAIL CELL 16

1
C1.00

SCALE: N.T.S.



EXISTING EAST BERM DETAIL CELL 16

2
C1.00

SCALE: N.T.S.

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PROJECT TITLE:
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RECYCLING & DISPOSAL FACILITY
CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT
DADE CITY, PASCO COUNTY, FLORIDA

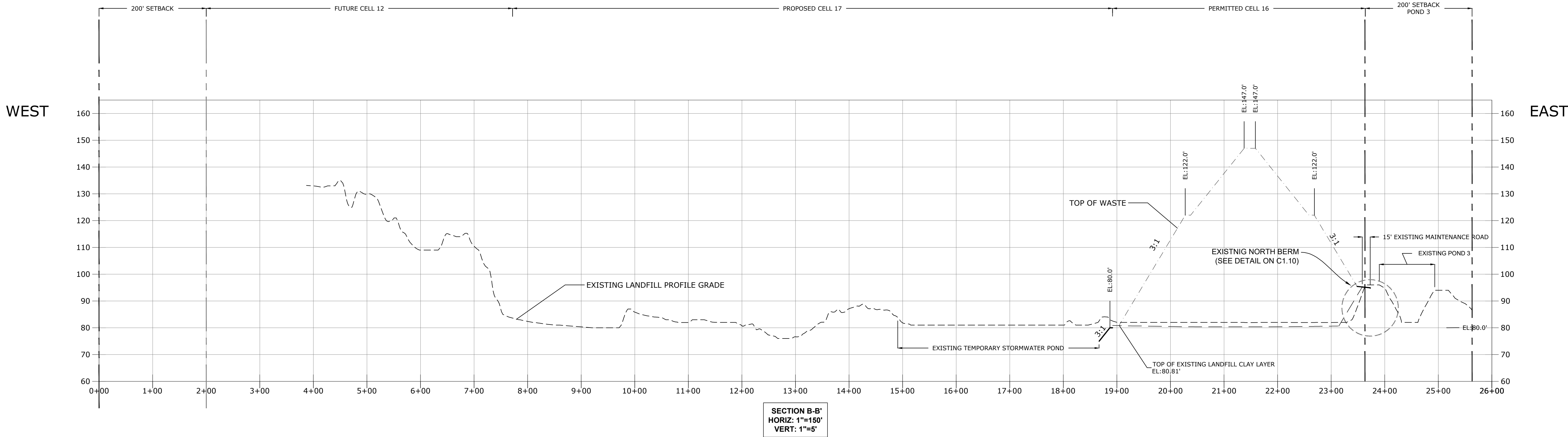
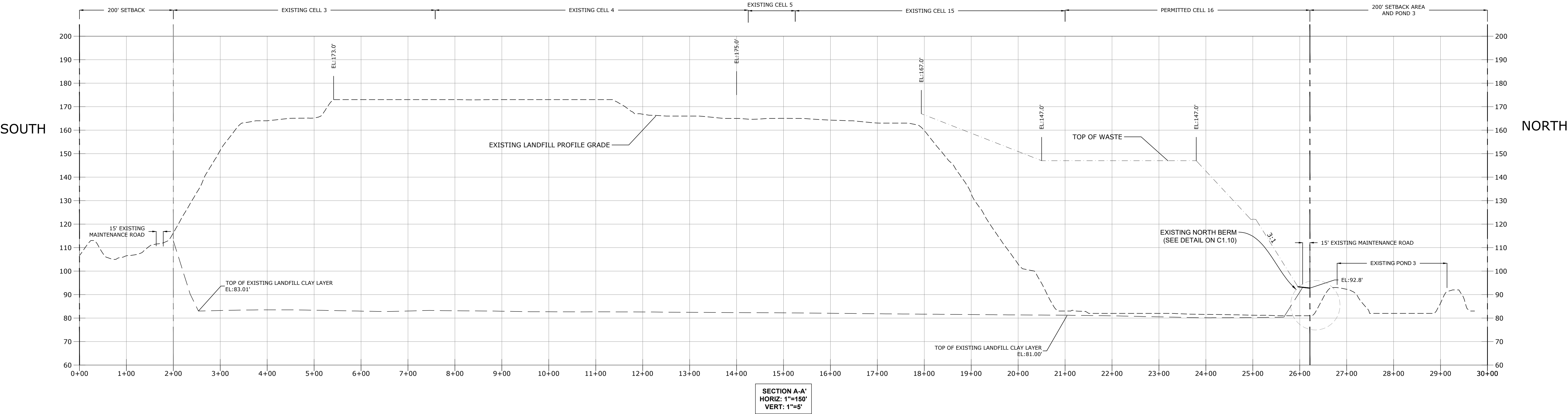
LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

SHEET TITLE:
PHASING PLAN SEQUENCE NO. 1

PROJECT NO.:	02000-217-17
SCALE:	AS SHOWN
DATE:	JANUARY 2019
DRAWING:	C1.00

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SCALES:
HORIZONTAL 1"=100'
VERTICAL 1"= 20'



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PROJECT TITLE: PERMIT PLANS ENTERPRISE ROAD CLASS III RECYCLING & DISPOSAL FACILITY CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT DADE CITY, PASCO COUNTY, FLORIDA

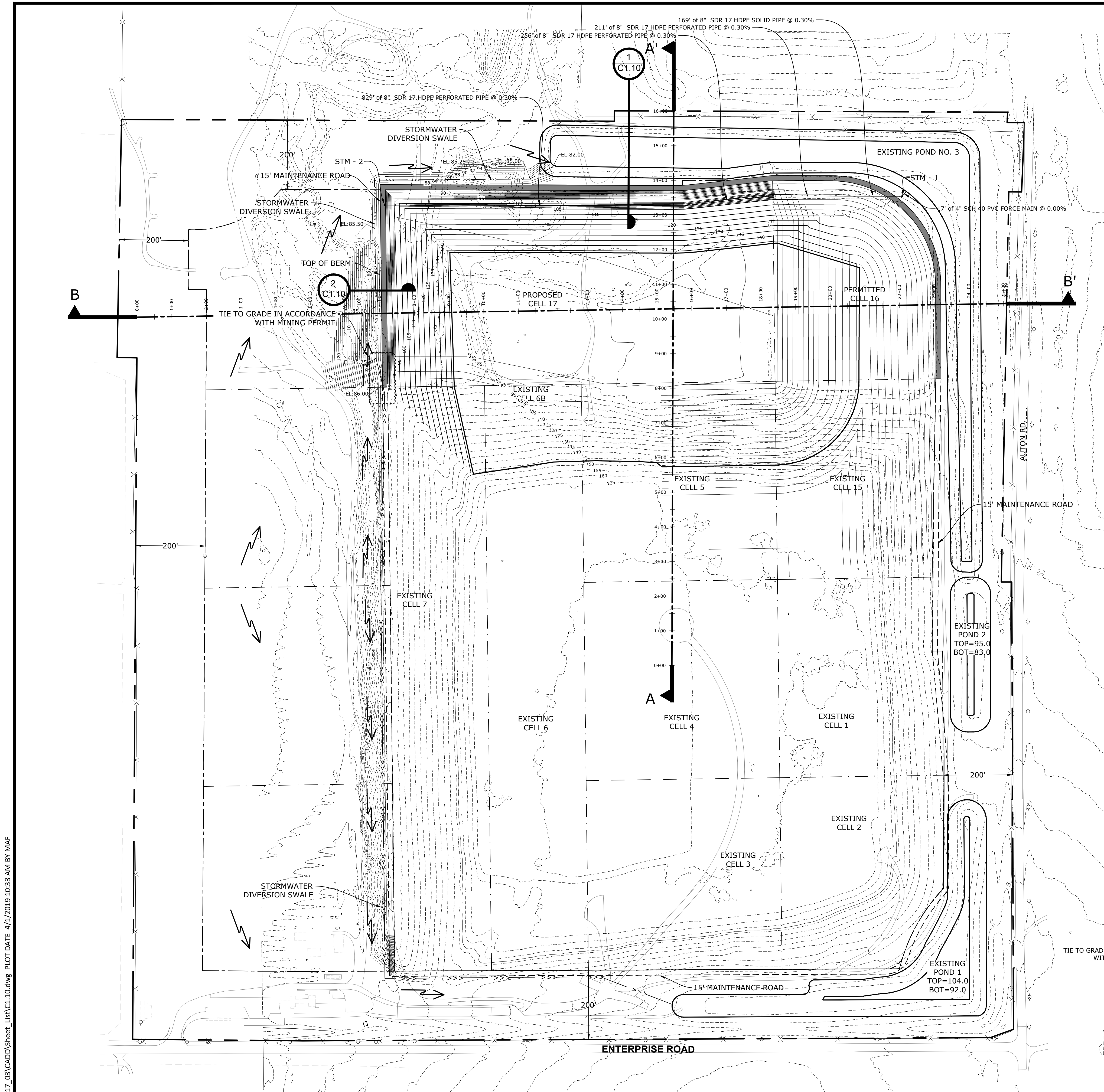
LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

SHEET TITLE: PHASING PLAN SEQUENCE NO. 1 SECTIONS

PROJECT NO.: 02000-217-17
SCALE: AS SHOWN
DATE: JANUARY 2019
DRAWING: C1.01

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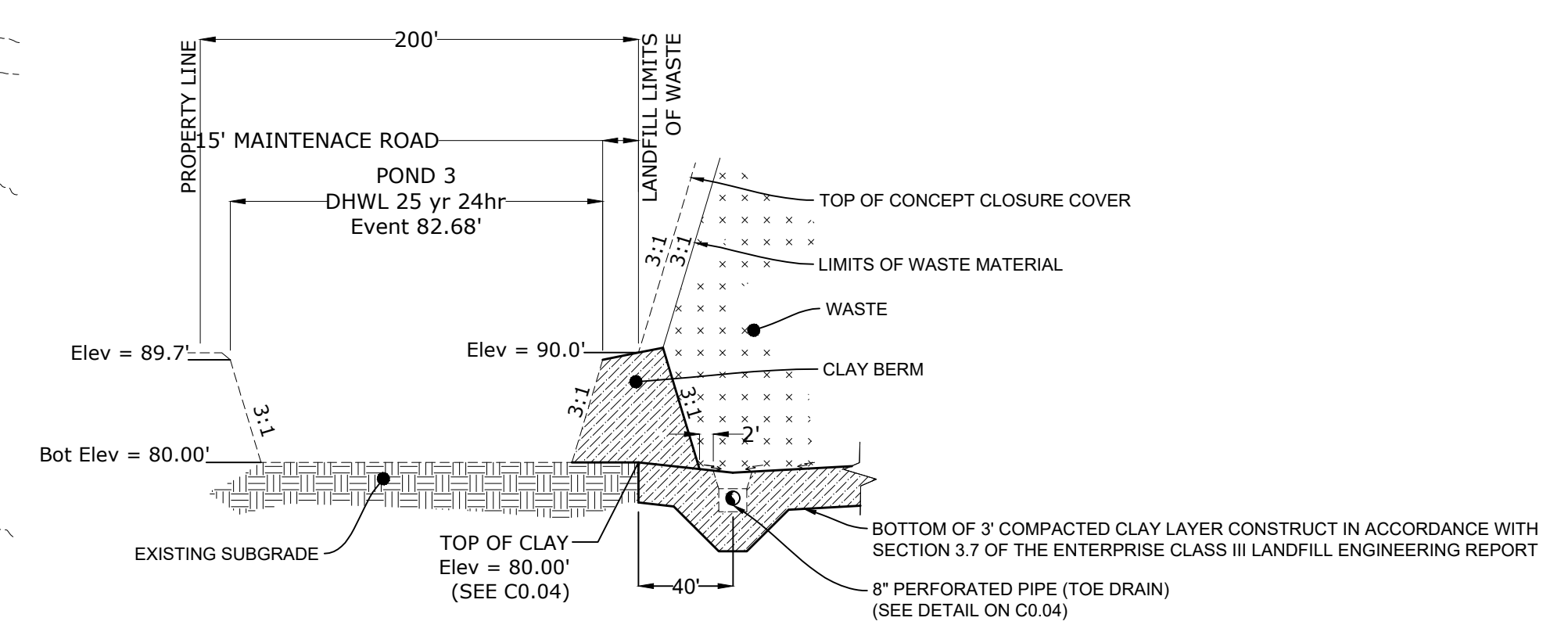
LEGEND

- PERIMETER FENCE
- PROPERTY BOUNDARY
- LANDFILL FOOTPRINT (AT BUILD OUT)
- LANDFILL CELLS
- EXISTING CONTOURS
- TEMPORARY STORMWATER DIVERSION SWALE
- DIRECTIONAL FLOW ARROW
- CROSS SECTION STATIONS

STORM SEWER STRUCTURE TABLE			
STRUCTURE NAME:	DETAILS:	NORTHING	EASTING
STORM SEWER STM - 1	LEACHATE COLLECTION WETWELL (SEE DETAIL ON C4.10) FINISH GRADE RIM EL = 91.92' INV IN = 74.98' 8" SDR 17 HDPE SOLID PIPE SUMP EL = 72.00' INV OUT = 88.50' 4" SCH 40 PVC FORCE MAIN	1,454,654.80	613,925.38
STORM SEWER STM - 2	8" PVC CLEANOUT FINISH GRADE RIM EL = 89.95' INV OUT = 79.47' 8" SDR 17 HDPE SOLID PIPE	1,454,629.15	612,432.13

NOTES:

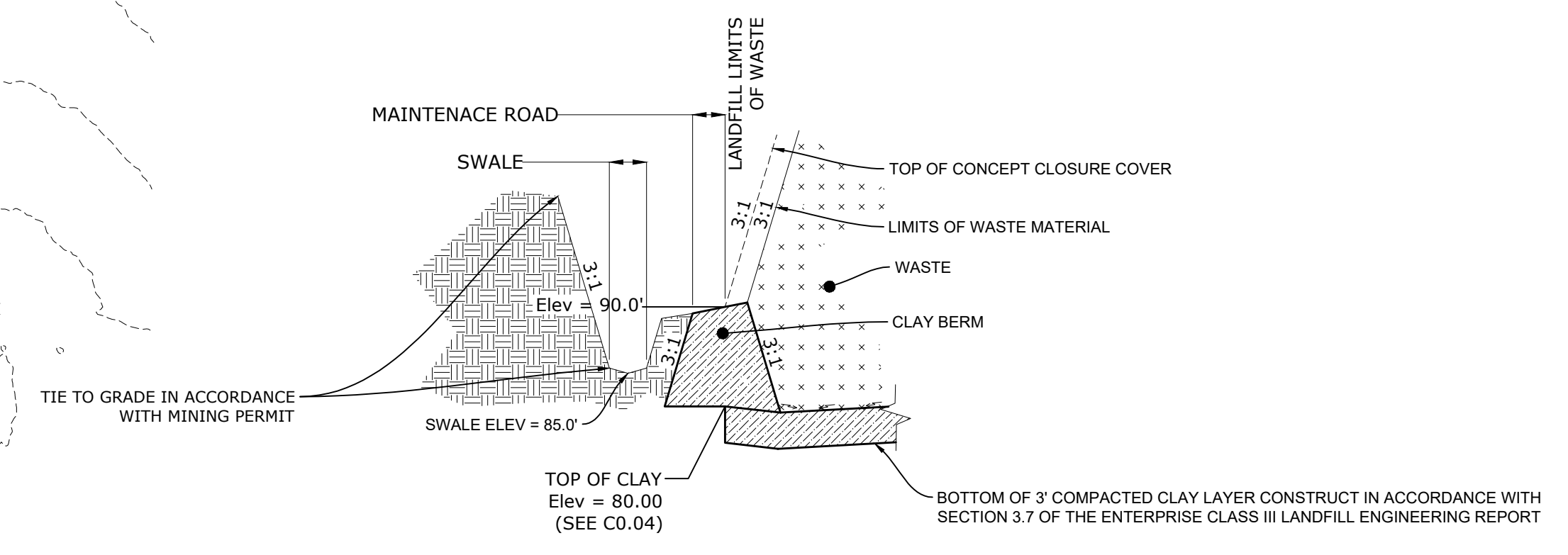
- CONTOURS REPRESENT TOP OF WASTE. FILL ELEVATIONS SHALL BE SUCH THAT FINAL COVER DESIGN ELEVATIONS SHALL BE ACHIEVED ON ALL SLOPES.
- TOPOGRAPHIC SURVEY BY PICKETT SURVEYING & PHOTOGRAMMETRY, DATED 10/01/18.
- PRIOR TO WASTE BEING DISPOSED IN CELL 16, BACKFILL THE CELL 17 TEMPORARY DIVERSION SWALE WITH COMPACTED CLAY TO DRAIN TO NORTH.
- CELL 17 CLAY LAYER TO BE CONSTRUCTED IN ACCORDANCE WITH SECTION 3.7 OF ENTERPRISE CLASS III LANDFILL ENGINEERING REPORT.



PROPOSED NORTH BERM DETAIL CELL 17

1
C1.10

SCALE: N.T.S.



PROPOSED WEST BERM DETAIL CELL 17

2
C1.10

SCALE: N.T.S.

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CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT
DADE CITY, PASCO COUNTY, FLORIDA

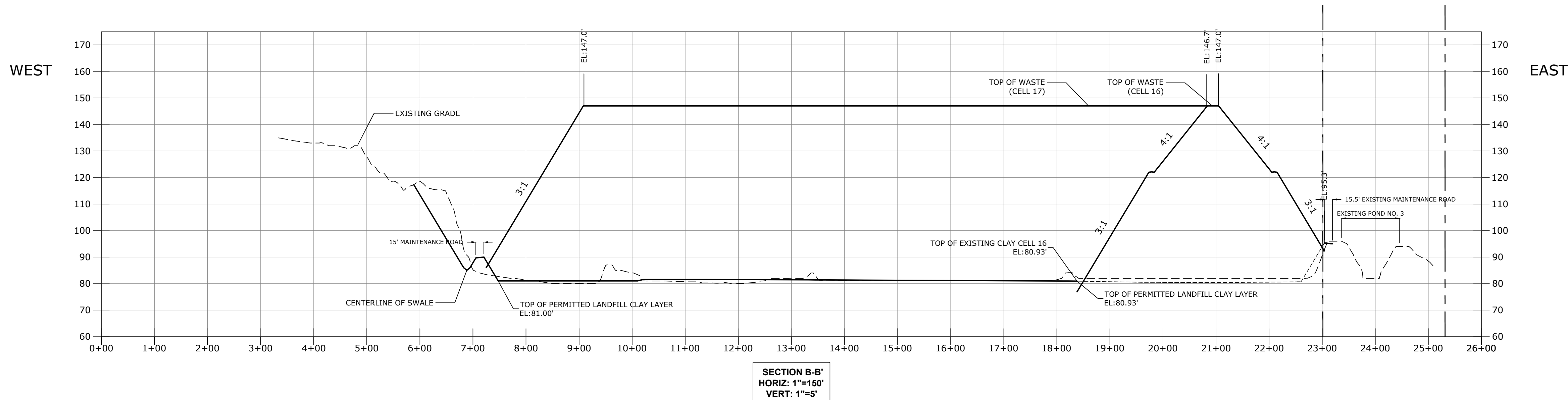
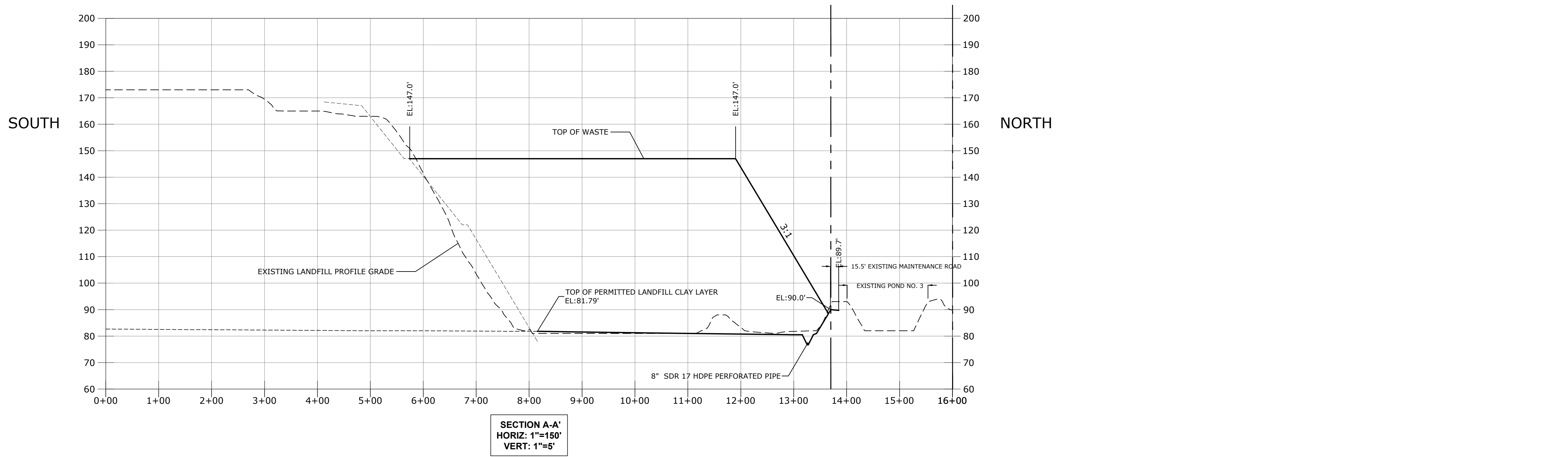
LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

SHEET TITLE:	
PHASING PLAN SEQUENCE NO. 2	

PROJECT NO.:	02000-217-17
SCALE:	AS SHOWN
DATE:	JANUARY 2019
DRAWING:	C1.10

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HORIZONTAL 1"=100'
VERTICAL 1"= 20'





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PROJECT TITLE:
PERMIT PLANS
ENTERPRISE ROAD CLASS III
RECYCLING & DISPOSAL FACILITY
CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT
DADE CITY, PASCO COUNTY, FLORIDA

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

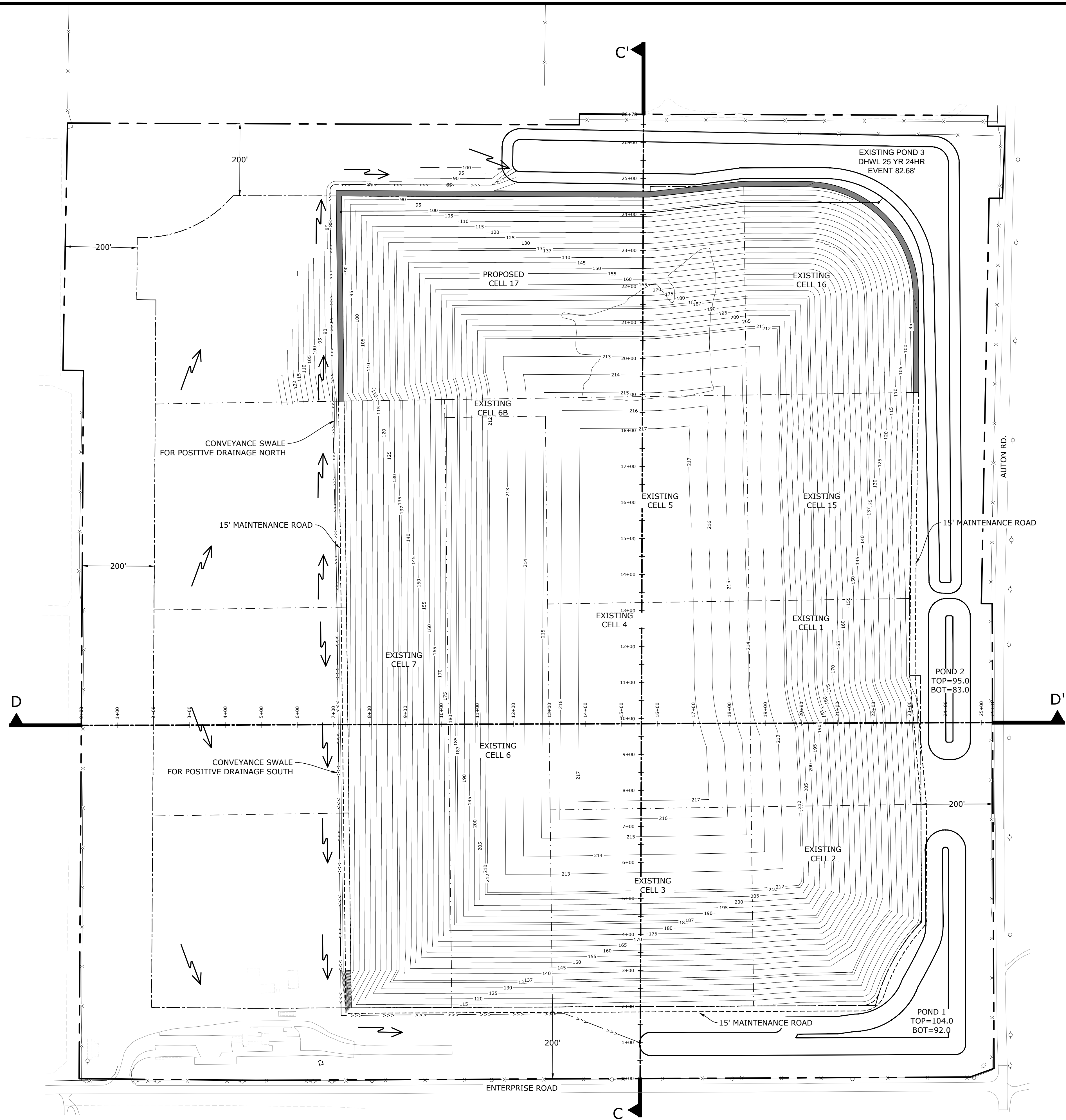
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PROJECT NO.:	02000-217-17
SCALE:	AS SHOWN
DATE:	JANUARY 2019
DRAWING:	C1.11

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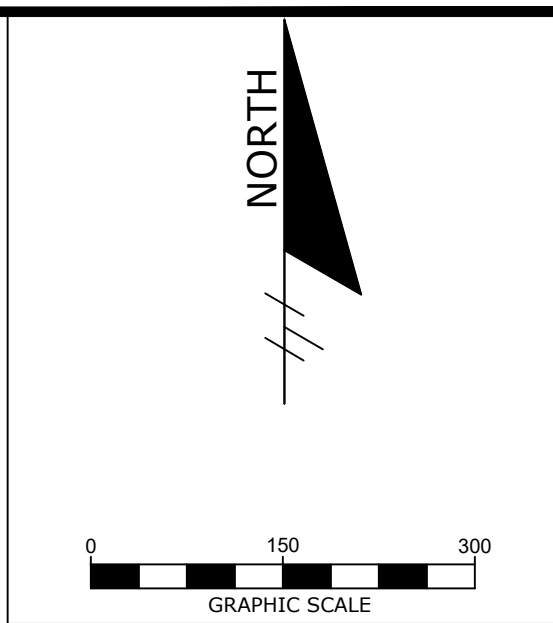


LEGEND

- PERIMETER FENCE
- PROPERTY BOUNDARY
- LANDFILL FOOTPRINT (AT BUILD OUT)
- LANDFILL CELLS
- EXISTING CONTOURS
- CONVEYANCE SWALE
- DIRECTIONAL FLOW ARROW
- CROSS SECTION STATIONS

NOTES:

- CONTOURS REPRESENT TOP OF WASTE. FILL ELEVATIONS SHALL BE SUCH THAT FINAL COVER DESIGN ELEVATIONS SHALL BE ACHIEVED ON ALL SLOPES
- PRIOR TO WASTE BEING DISPOSED IN PROPOSED CELLS, BACKFILL TEMPORARY DIVERSION SWALE WITH COMPACTED CLAY.
- LANDFILL FINAL COVER PER DETAIL 3, SHEET C4.00.
- TOPOGRAPHIC SURVEY BY PICKETT SURVEYING & PHOTOGRAMMETRY, DATED 10/01/18.
- FINAL COVER CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 7.1 OF THE ENTERPRISE RECYCLING & DISPOSAL FACILITY RECLAMATION & CLOSURE PLAN.
- THE FACILITY'S OVERALL STORMWATER MANAGEMENT SYSTEM IS GOVERNED BY THE MINING OPERATIONS AND ERP PERMITS. GRADES AND ELEVATION VARY BASED ONGOING MINING OPERATIONS AND TOPOGRAPHY. A DETAILED DESIGN THAT WILL TIE THE CONCEPTUAL CLOSURE PLAN INTO THE FACILITY'S STORMWATER MANAGEMENT SYSTEM WILL BE SUBMITTED AT THE TIME OF CLOSURE.



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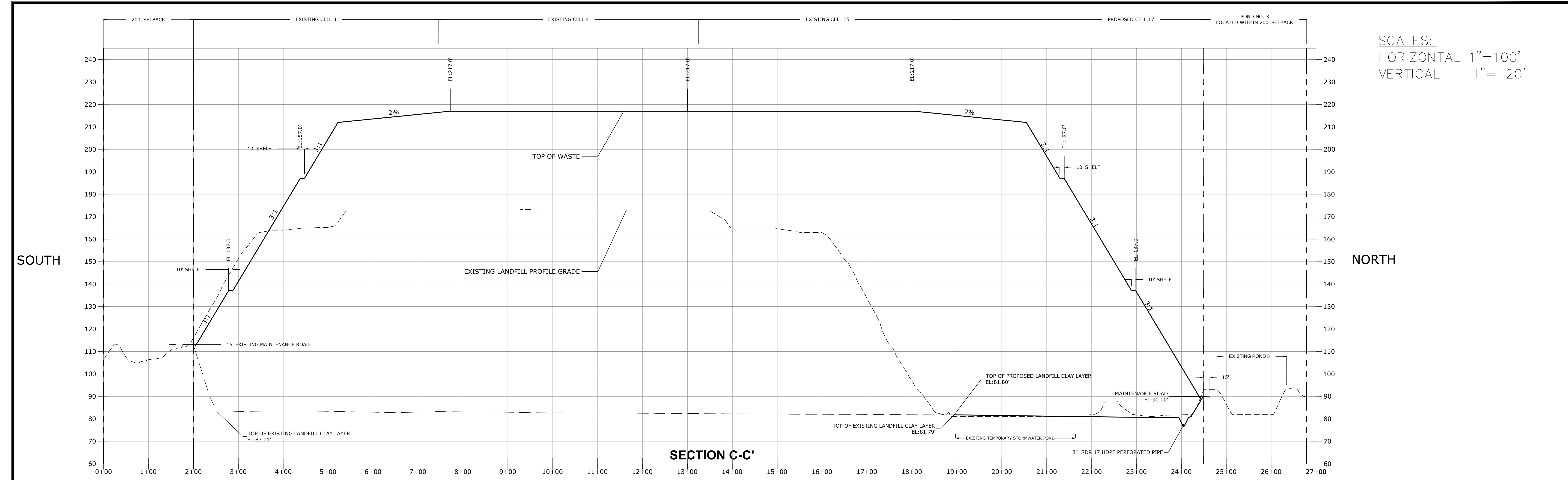
PROJECT TITLE: PERMIT PLANS ENTERPRISE ROAD CLASS III RECYCLING & DISPOSAL FACILITY CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT DADE CITY, PASCO COUNTY, FLORIDA
--

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
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FL PE NO. 74652	APPROVED BY	LJB

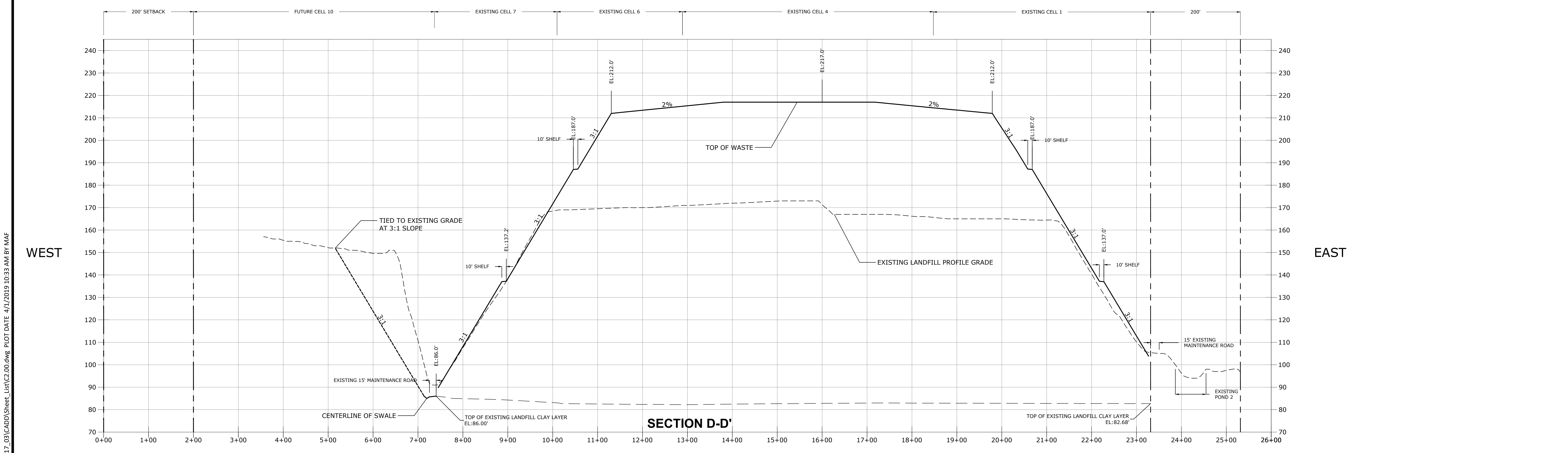
SHEET TITLE: PHASING PLAN SEQUENCE NO. 3 OVERALL LANDFILL VERTICAL EXPANSION
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PROJECT NO.: 02000-217-17
SCALE: AS SHOWN
DATE: JANUARY 2019
DRAWING: C2.00


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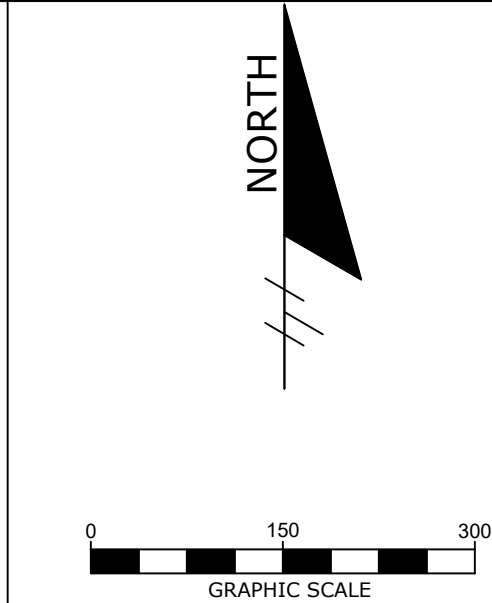
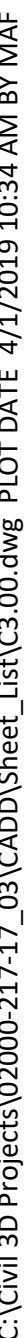
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HORIZONTAL 1"=100'
VERTICAL 1"= 20'



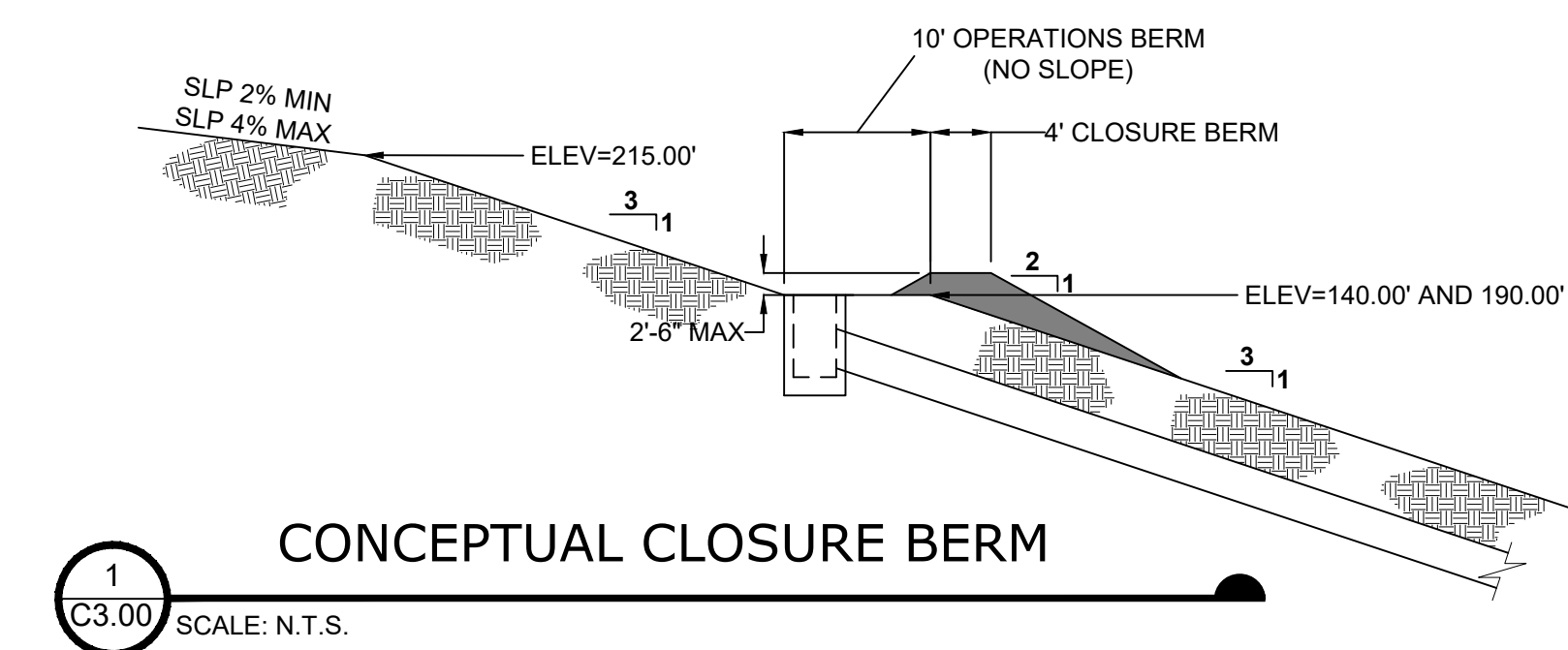
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				 <div>Locklear & Associates</div> <div>4140 NW 37th Place, Suite A Gainesville, Florida 32606 Phone: 352.672.6867 Fax: 352.692.5390 Certificate of Authorization No. 30066</div>	PROJECT TITLE: PERMIT PLANS ENTERPRISE ROAD CLASS III RECYCLING & DISPOSAL FACILITY CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT DADE CITY, PASCO COUNTY, FLORIDA				LISA J. BAKER		DESIGNED BY	LJB	SHEET TITLE: PHASING PLAN SEQ NO 3 OVERALL LANDFILL VERT EXPANSION SECT				PROJECT NO.: 02000-217-17	
NO.	DATE	REVISION DESCRIPTION			BY					DRAWN BY	MAF	SCALE: AS SHOWN				DATE: JANUARY 2019		
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C:\Civil 3D Projects\02000-217-17									FL PE NO. 74652	APPROVED BY	LJB							

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1. CONTOURS REPRESENT FINAL COVER. FILL ELEVATIONS SHALL BE SUCH THAT FINAL COVER DESIGN ELEVATIONS SHALL BE ACHIEVED ON ALL SLOPES
2. PRIOR TO WASTE BEING DISPOSED IN PROPOSED CELLS, BACKFILL TEMPORARY DIVERSION SWALE WITH COMPACTED CLAY.
3. LANDFILL FINAL COVER PER DETAIL 3, SHEET C4.00.
4. TOPOGRAPHIC SURVEY BY PICKETT SURVEYING & PHOTOGRAMMETRY, DATED 10/01/18.
5. FINAL COVER CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 7.1 OF THE ENTERPRISE RECYCLING & DISPOSAL FACILITY RECLAMATION & CLOSURE PLAN.
6. THE FACILITY'S OVERALL STORMWATER MANAGEMENT SYSTEM IS GOVERNED BY THE MINING OPERATIONS AND ERP PERMITS. GRADES AND ELEVATION VARY BASED ONGOING MINING OPERATIONS AND TOPOGRAPHY. A DETAILED DESIGN THAT WILL TIE THE CONCEPTUAL CLOSURE PLAN INTO THE FACILITY'S STORMWATER MANAGEMENT SYSTEM WILL BE SUBMITTED AT THE TIME OF CLOSURE.



Locklear
& Associates

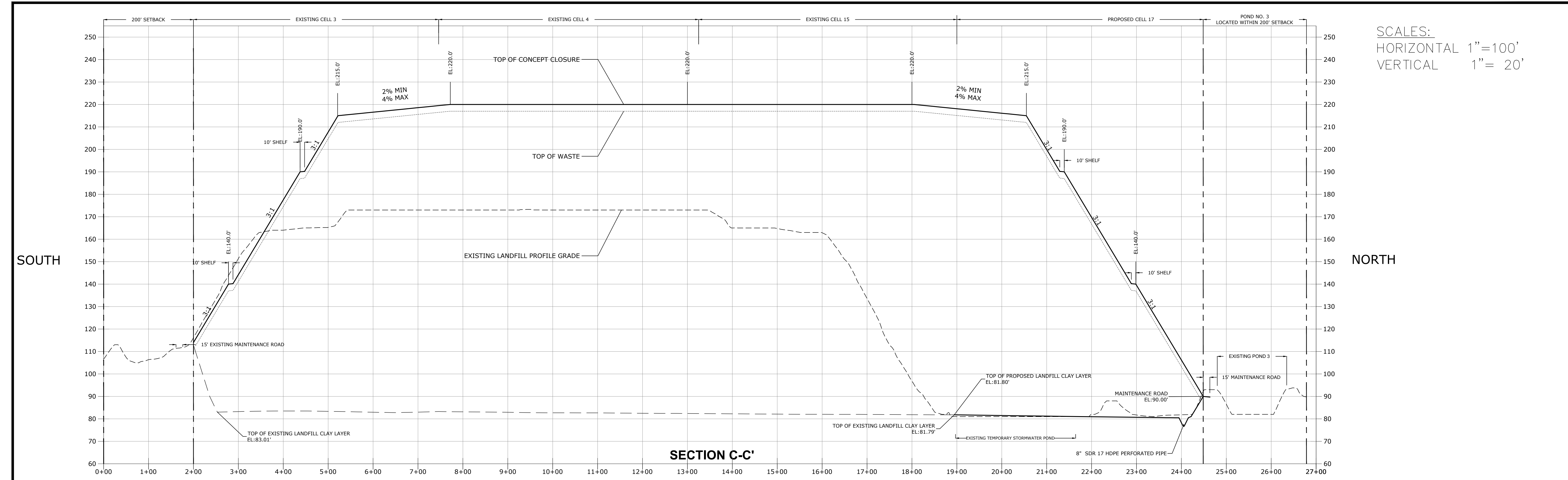
PROJECT TITLE:
PERMIT PLANS
 ENTERPRISE ROAD CLASS III
 RECYCLING & DISPOSAL FACILITY
 CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT
 DADE CITY, PASCO COUNTY, FLORIDA

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
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FL PE NO. 74652	APPROVED BY	LJB

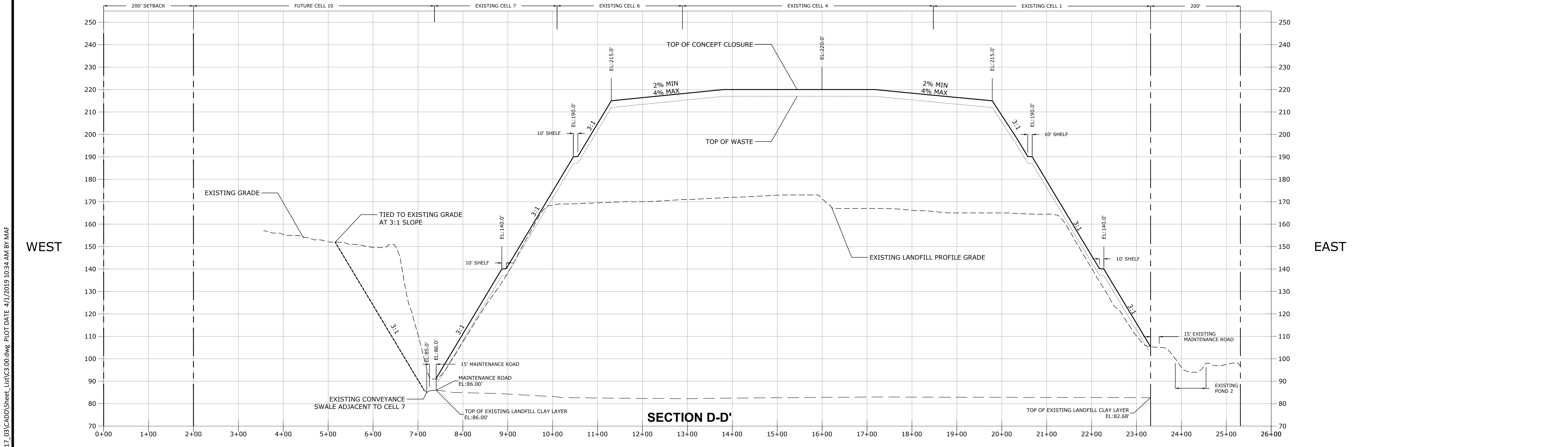
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PHASING PLAN SEQUENCE NO. 4 CONCEPTUAL
CLOSURE

PROJECT NO.:	02000-217-17
SCALE:	AS SHOWN
DATE:	JANUARY 2019
DRAWING:	C3.00




SCALES:
HORIZONTAL 1"=100'
VERTICAL 1"= 20'



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1		4/1/2019	RAI 1 SUPPLEMENTAL INFORMATION	LJB

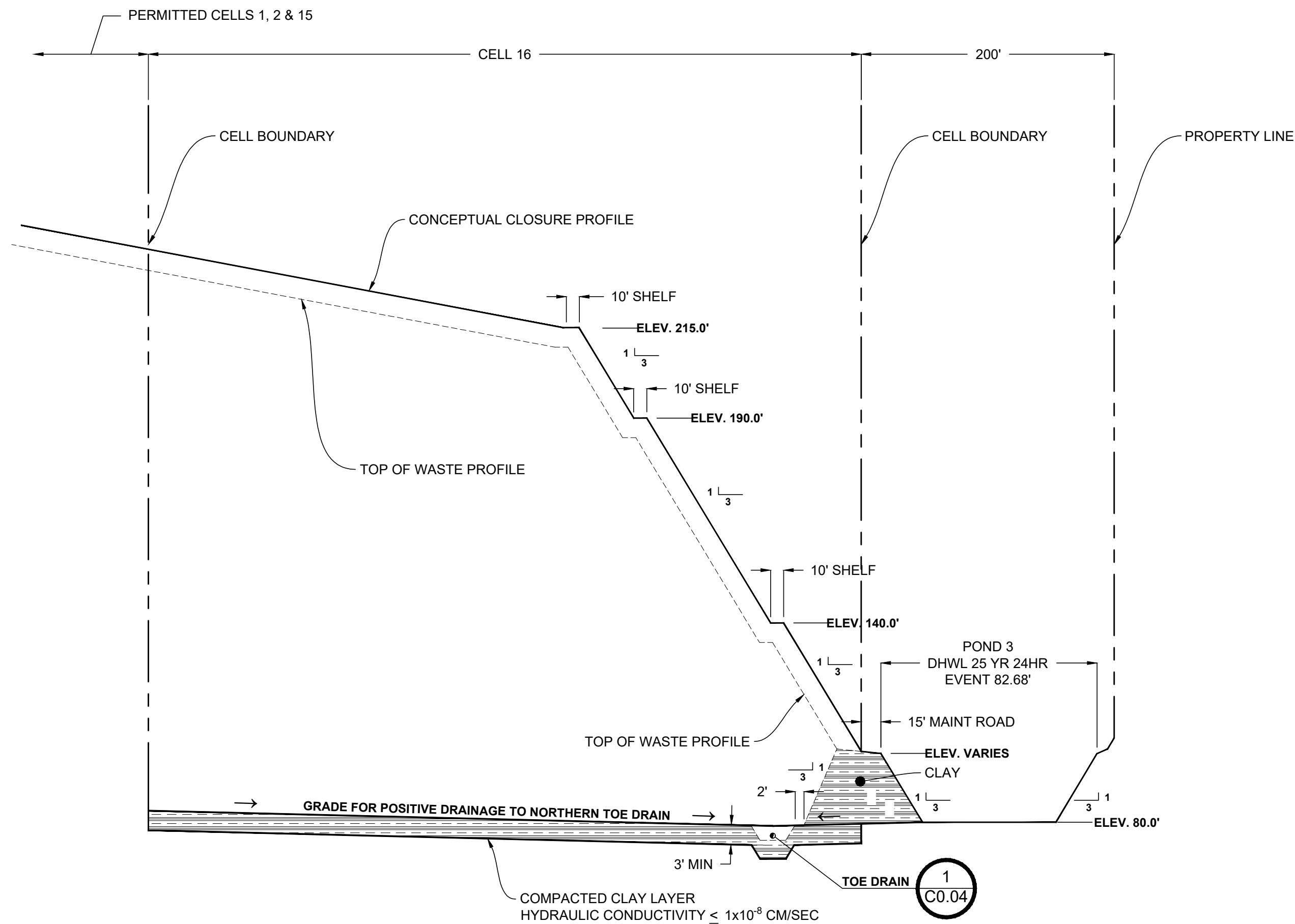
	4140 NW 37th Place, Suite A Gainesville, Florida 32606 Phone: 352.672.6867 Fax: 352.692.5390 Certificate of Authorization No. 30066	
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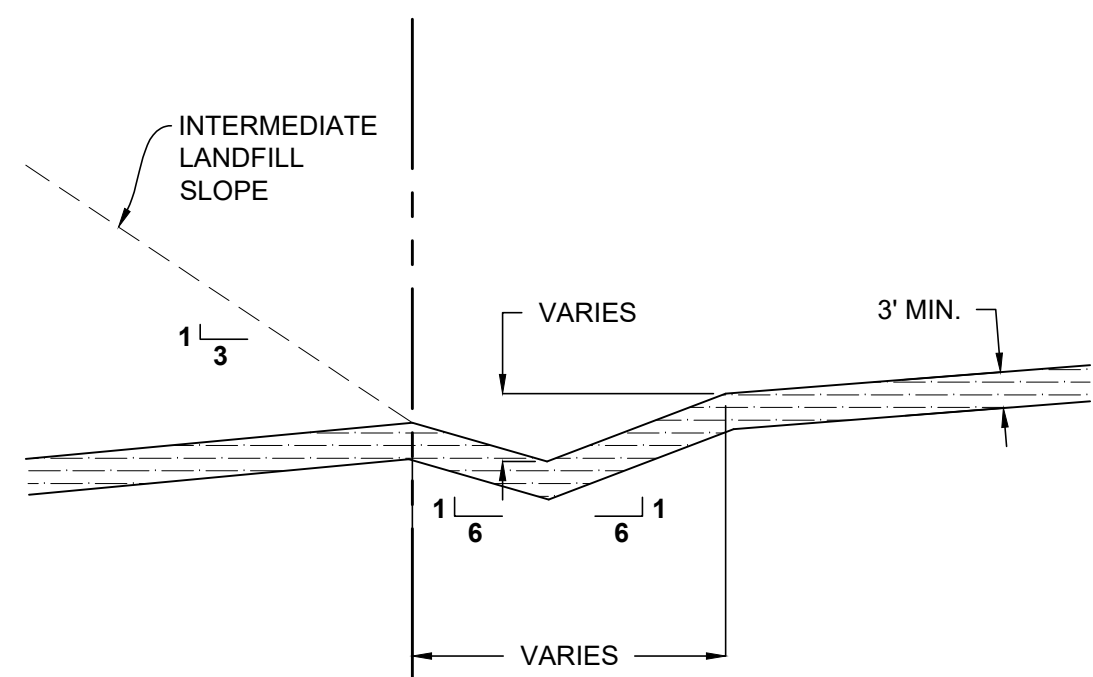
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PROJECT NO.:	02000-217-17
SCALE:	AS SHOWN
DATE:	JANUARY 2019
DRAWING:	C3.10

REVIEW ONLY-NOT FOR CONSTRUCTION



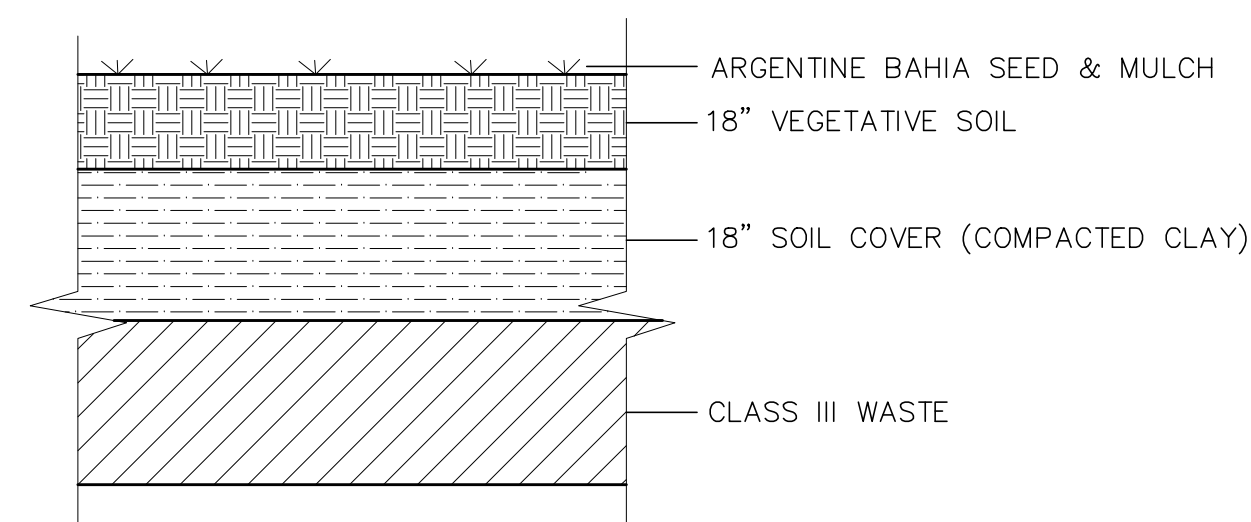
1
C4.00
TYPICAL DISPOSAL AREA DETAIL CELLS 16 & 17
SCALE: N.T.S.



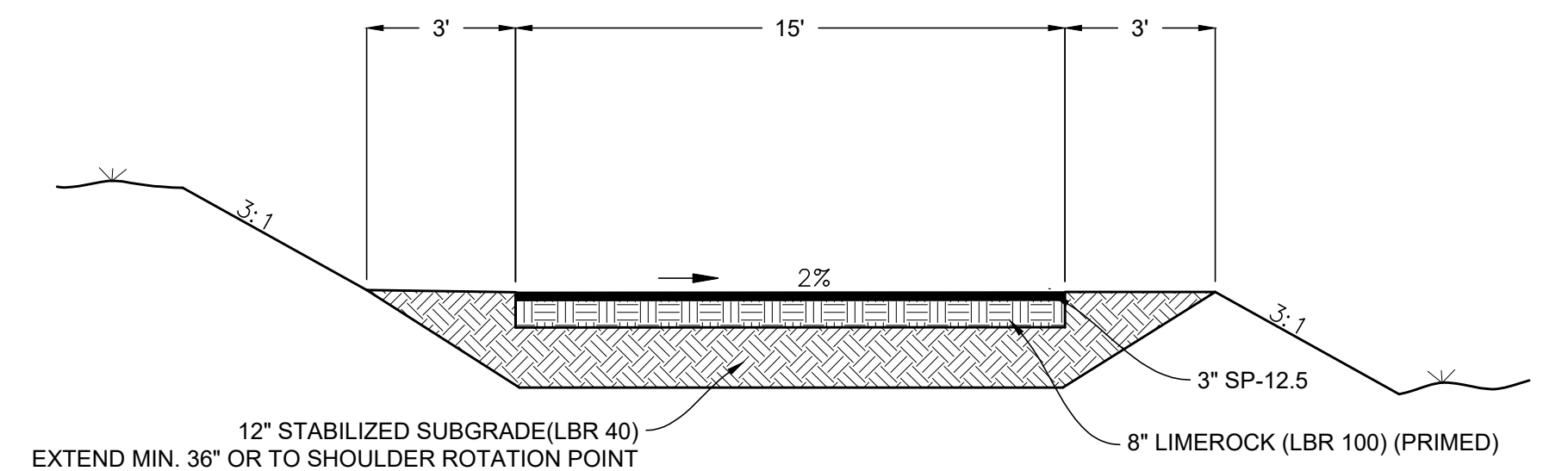
2
C4.00
TEMPORARY STORMWATER DIVERSION SWALE DETAIL
SCALE: N.T.S.

NOTES:

1. FOR CELL 17 THE TEMPORARY DIVERSION SWALE IS CONSTRUCTED PRIOR TO WASTE ACCEPTANCE WITHIN CELL.
2. PRIOR TO WASTE BEING DISPOSED OF ON THE PREVIOUS INTERMEDIATE SLOPE THE TEMPORARY SWALE IS BACKFILLED AND COMPACTED WITH CLAY TO PROVIDE A CONTINUOUS CLAY BARRIER LAYER.
3. CLAY BARRIER LAYER TO BE CONSTRUCTED IN ACCORDANCE WITH SECTION 3.7 OF THE ENTERPRISE CLASS III LANDFILL ENGINEERING REPORT.
4. STEP BACK AND SCARIFY EXISTING CLAY LAYER IN 12" LIFTS PRIOR TO CONSTRUCTION NEW CLAY LAYER ADJACENT TO EXISTING.
5. FINAL COVER CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 7.1 OF THE ENTERPRISE RECYCLING & DISPOSAL FACILITY RECLAMATION & CLOSURE PLAN.



3
C4.00
TYPICAL FINAL COVER
SCALE: N.T.S.



4
C4.00
ACCESS ROAD TYPICAL SECTION
SCALE: N.T.S.

C:\Civil 3D Projects\02000-217-17_03\CADD\Sheet_List\C4.00.dwg PLOT DATE 4/1/2019 10:34 AM BY MAF

NO.	DATE	REVISION DESCRIPTION	BY
1	4/1/2019	RAI 1 SUPPLEMENTAL INFORMATION	LJB



Locklear
& Associates

4140 NW 37th Place, Suite A
Gainesville, Florida 32606
Phone: 352.672.6867 Fax: 352.692.5390
Certificate of Authorization No. 30066

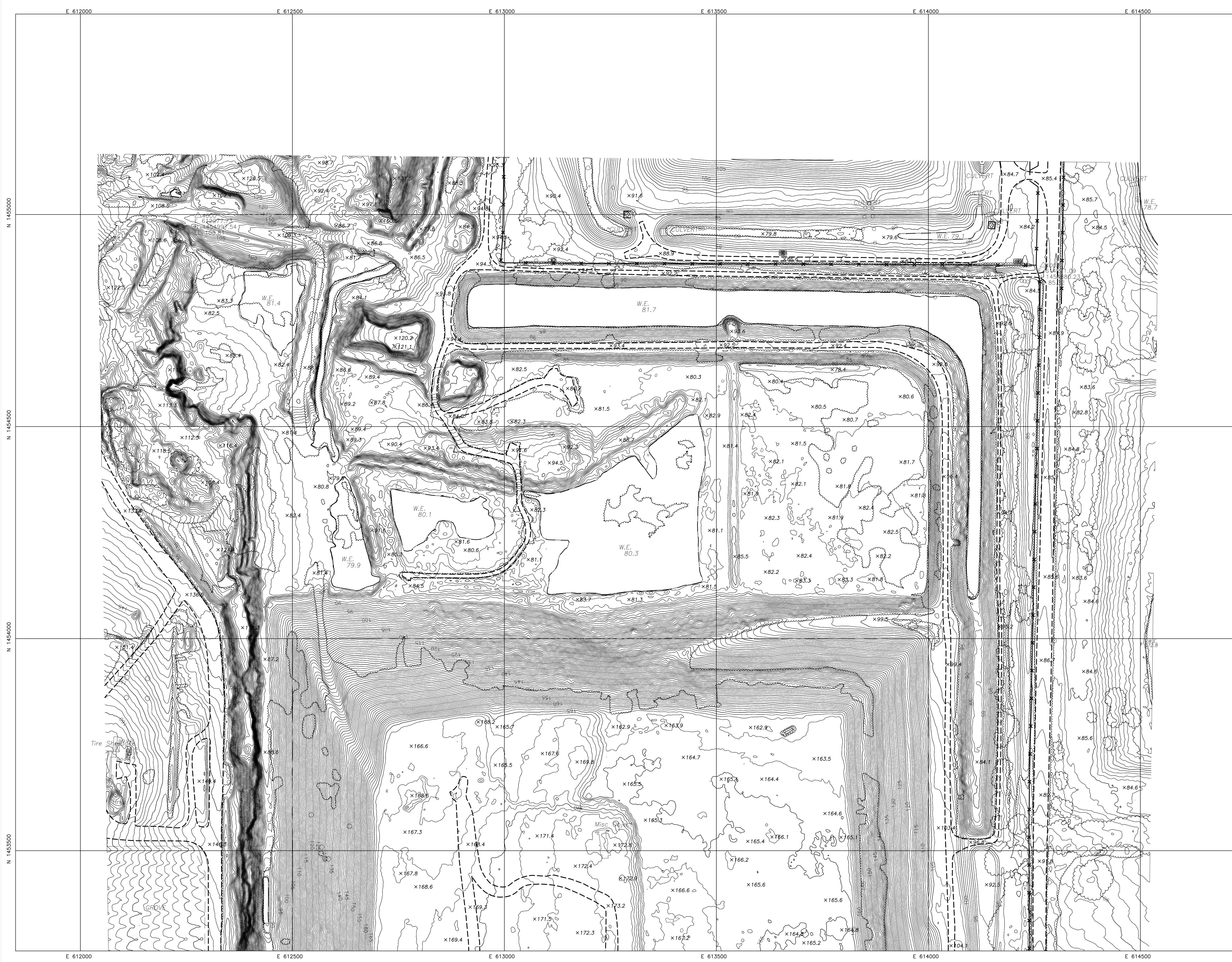
PROJECT TITLE: PERMIT PLANS ENTERPRISE ROAD CLASS III RECYCLING & DISPOSAL FACILITY CELL 17 AND VERTICAL EXPANSION CONSTRUCTION PERMIT DADE CITY, PASCO COUNTY, FLORIDA
--

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	MAF
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

SHEET TITLE: CLOSURE DETAILS

PROJECT NO.: 02000-217-17
SCALE: AS SHOWN
DATE: JANUARY 2019
DRAWING: C4.00

REVIEW ONLY-NOT FOR CONSTRUCTION



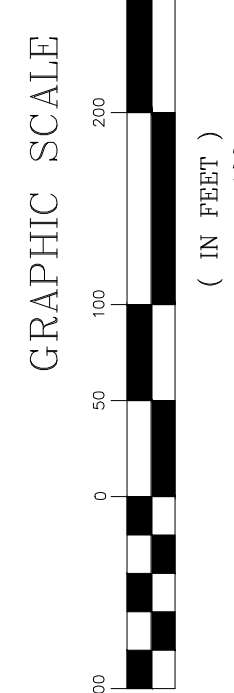
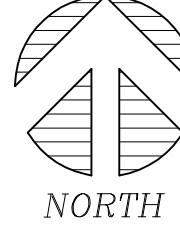
SURVEYOR'S NOTES:

- 1.) North, the grid, and the coordinates shown on this map are based on the Florida State Plane Coordinate System, NAD 83, 1990 adjustment. Elevations are to National Geodetic Vertical Datum of 1929.
- 2.) This topographic survey was prepared using photogrammetric and LIDAR methods. See the attached report for map accuracy and the surveyor's signature and seal. This map is based on those features visible on aerial imagery.
- 3.)

- (THESE FEATURES ARE REPRESENTED BY SYMBOLS NOT TO SCALE)
- CONTROL
 - PT# TARGET NUMBER
 - N NORTHING
 - E EASTING
 - EL ELEVATION
 - UTILITY POLE
 - TRAFFIC LIGHT
 - SIGN
 - POST
 - FLAG
 - MAIL BOX
 - GO WIRE
 - WALVE
 - ELECTRICAL
 - AIR CONDITIONER
 - MISCELLANEOUS SYMBOL
 - CULVERT
 - MANHOLE
 - HYDRANT
 - FREE
 - PALM
 - SHRUB

- (THESE FEATURES ARE TO SCALE)
- CURB
 - PAVED ROAD
 - CONCRETE SURFACE
 - UNPAVED ROAD
 - FENCE
 - RAILROAD
 - STRUCTURE
 - TREE LINE
 - SHRUB LINE

- (THESE INFORMATIVE LABELS ARE NOT SCALE DEPENDENT)
- PIPELINE
 - RECREATION
 - EDGE OF WATER
 - EDGE OF GROVE
 - W.E. WATER ELEVATION
 - X 120.1 SPOT ELEVATION
 - MISC MISCELLANEOUS



No.	DATE	APPROVED	REVISION
1	10/17/18	127	ORIGINAL RELEASE

PICKETT AND ASSOCIATES, INC.
475 SOUTH FIRST AVENUE BARTOW,
FLORIDA 34609
PHONE: (883)-533-8095
FAX: (883)-534-1464
LICENSED BUSINESS NO. 13364

PICKETT
SURVEYING • ENGINEERING

Edited by: RP
Compiled by: PL
Flight Date: 9/17/18
Drawing Name: 14094-9.DWG

Horizontal Scale: 1" = 100'
Contour Interval: 1'

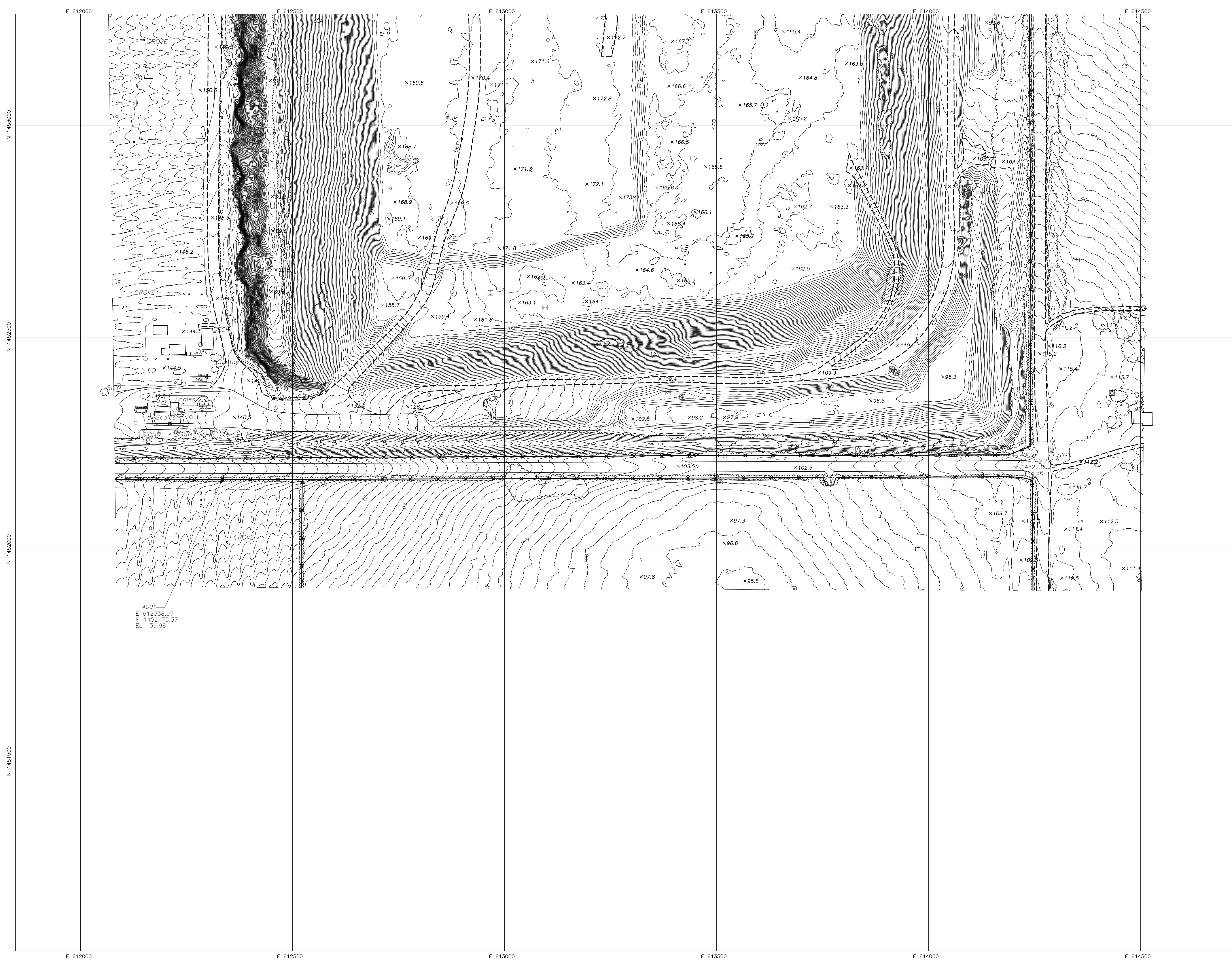
TOPOGRAPHIC SURVEY
ENTERPRISE ROAD LANDFILL

PROJECT No.
14094-9
DRAWING No.
LD-6398

No.
1
OF
2

PREPARED FOR: ANGELO'S RECYCLED MATERIALS

SURVEY DATE
9/17/18
PICKETT AND ASSOCIATES, INC.



SURVEYOR'S NOTES:

1.) North, the grid, and the coordinates shown are based on the National Geodetic Vertical Datum of 1929. Elevations are to National Geodetic Vertical Datum of 1929.

2.) This topographic survey was prepared using photogrammetric and LIDAR methods. See the attached report for map accuracy and the surveyor's signature and seal. This map is based on those features visible on aerial imagery.

3.) This topographic survey was prepared using photogrammetric and LIDAR methods. See the attached report for map accuracy and the surveyor's signature and seal. This map is based on those features visible on aerial imagery.

LEGEND:
(THESE FEATURES ARE TO SCALE)

(THESE FEATURES ARE REPRESENTED BY SYMBOLS NOT TO SCALE)

CONTROL
PT# TARGET NUMBER
N NORTH
E EASTING
EL ELEVATION
UTILITY POLE
LIGHT POLE
TRAFFIC LIGHT
SIGN
POST
FLAG
MAIL BOX
GO WIRE

PIPELINE
RECREATION
EDGE OF GROVE
EDGE OF WATER

CURB
PAVED ROAD
CONCRETE SURFACE
UNPAVED ROAD
FENCE
RAILROAD
RAILROAD
STRUCTURE
TREE LINE
SHRUB LINE

(THESE INFORMATIVE LABELS ARE NOT SCALE DEPENDENT)
W.E. WATER ELEVATION
X 120.1 SPOT ELEVATION
MISC. MISCELLANEOUS

ACTIVITY STATEMENT: The following stated plan or other information was prepared by the surveyor and is based on the photogrammetrically measured values and ground truth of all features shown on the map. The surveyor is not responsible for the accuracy of the information shown on the map.

VERTICAL: Contours have been measured to an estimated vertical positional accuracy of 0.25 feet. Spot elevations have been measured to an estimated vertical positional accuracy of 0.25 feet.

MAP PLOTTING: This map is intended to be displayed at a scale of 1" = 50' (1:600) or smaller.

MEASUREMENT METHODS: This map is limited to those features shown on the map. The surveyor is not responsible for the accuracy of the information shown on the map.

LIMITATIONS: This map should be used for preliminary design work only and should not replace an actual field survey. The map is not to be used for any other purpose without the written consent of the surveyor.

GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.

REVISION

No.	DATE	APPROVED	REVISION
01	10/17/18	JTJ	ORIGINAL RELEASE

PICKETT SURVEYING • ENGINEERING

PICKETT AND ASSOCIATES, INC.
475 SOUTH FIRST AVENUE BARTON,
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PHONE: (883)-534-8995
FAX: (883)-534-1464
LICENSED BUSINESS NO. 13364

Flight Date: 9/17/18
Drawing Name: 14094-9.DWG

Edited by: RP
Compiled by: PL

Horizontal Scale: 1" = 100'
Contour Interval: 1'

TOPOGRAPHIC SURVEY

ENTERPRISE ROAD LANDFILL

PREPARED FOR: ANGELO'S RECYCLED MATERIALS

PROJECT No.
14094-9

DRAWING No.
LD-6398

No.
2

OF
2

ATTACHMENT 9

Groundwater Monitoring Plan
(replace previously submitted report in its entirety)

Enterprise Class III Landfill Groundwater Monitoring Plan

January 2019

Prepared for:

ANGELO'S RECYCLED MATERIALS, LTD.

41111 Enterprise Road
Dade City, Florida 33525

Prepared by:

LOCKLEAR & ASSOCIATES, INC.

4140 NW 37th Place, Suite A
Gainesville, FL 32606



This Groundwater Monitoring Plan (GWMP) has been prepared in accordance with the provisions of Rule 62-701.510, F.A.C., and any non-conflicting provisions of Chapter 62-520, F.A.C. The GWMP was developed based upon an extensive evaluation of site data provided in the 2012 and 2018 Water Quality Monitoring Plan Evaluation Reports prepared by Locklear & Associates, Inc. The 2015 - 2018 Groundwater Technical Report is provided in Section 6 of this application.

1. Water Quality Monitoring Plan

The groundwater monitoring network is shown in Table 1 and in Figure 1.

- a. All groundwater monitoring well installations and abandonments shall be performed in accordance with ASTM D5092-04(2010)e1, Rule 62-532.500(5), F.A.C., and the rules of Southwest Florida Water Management District.

- b. Sign and Seal

The reports shall be signed and sealed in accordance with Chapter 471, Florida Statutes and Chapter 61G15, FAC for engineers or with Chapter 492, Florida Statutes for professional geologists.

- c. Sampling and Analysis

All sampling and analysis shall be performed in accordance with Chapter 62-160, FAC; 62-701.510(2)(b), FAC; the DEP Standard Operating Procedures for Field Activities (DEP-SOP-001/01); and the DEP Standard Operating Procedures for Laboratory Activities (DEP-SOP-002/01).

- d. Groundwater Monitoring Requirements

The groundwater monitoring network consists of detection and compliance monitoring wells located downgradient from and within 100 feet of the disposal units. The detection wells are located no more than 500 feet apart. The network also includes background monitoring wells BW-1A and BW-1B screened within the surficial and Floridan aquifers, respectively. Downgradient compliance monitoring wells will be installed if warranted based on the results of detection monitoring results and Evaluation Monitoring as discussed in Section 1.h. Compliance wells will be located at or immediately adjacent to the compliance line of the zone of discharge.

Monitoring wells shall be constructed to provide representative groundwater samples from the surficial aquifer, where present, and the Floridan aquifer system. Well screen placement will be determined from lithologic information collected at the time of well installation and historic water level elevations as discussed below.

The top and bottom of the screen elevations for proposed surficial aquifer monitoring wells MW-21A, -22A, -23A and -24A are based on the top of clay confining unit elevations encountered during the installation of adjacent borings B-101 through B-111. The clay confining layer was encountered at the surface during 10 out of 11 of these borings. However, the lithology will be assessed at the location of each new well and surficial aquifer wells will be installed if water bearing soils exist above the clay confining layer. The historic range of surficial aquifer water elevations in this area is not available.

The top and bottom of the screen elevations for proposed Floridan aquifer monitoring wells MW-21B, -22B, -23B and -24B are based on the top of limestone elevations encountered during the installation of adjacent borings B-101 through B-111. The top of limestone elevation encountered during these borings was observed from approximately 45 to 65 ft. NGVD. The historical range of Floridan aquifer water elevations in adjacent monitoring wells MW-17B and MW-3B is 66 to 72 ft. NGVD (previous ten sampling events). Proposed top and bottom screen elevations for MW-21B, -22B, -23B and -24B are 65 ft. and 45 ft. NGVD, respectively. Screen elevations will be determined based on field findings during well installation.

Wells shall be constructed in accordance with the details provided in Figures 2 and 3. Documentation of well construction shall be submitted within 30 days of installation using Department Form #62-701.900(30).

Wells scheduled to be abandoned during construction of Cell 17, (MW-17B, -3 and -3B), and wells which become damaged, shall be plugged and abandoned in accordance with Rule 62-532.500(5), F.A.C. and the rules of the Southwest Florida Water Management District. Documentation of abandonment shall be submitted to the Department within 30 days of abandonment.

The location(s) of all new monitoring wells, in degrees, minutes and seconds of latitude and longitude, and the elevation of the top of the well casing to the nearest 0.01 foot, using a consistent, nationally recognized datum, shall be determined by a Florida Licensed Professional Surveyor and Mapper. Wells will be marked with their identification label in the field.

e. Surface Water Monitoring Requirements

Ponds 1, 2 and 3 do not have off-site discharge associated with the 100-year flood event. Therefore, surface water sampling is not required as part of the solid waste operating permit. In the unexpected event of a surface water discharge event, surface water monitoring will occur per Appendix 3, Para. 8.a. and Para. 8.b. of #177982-020-SO/T3. However, surface water in Pond 3 will be sampled in accordance with the Industrial Wastewater pond permit.

f. Leachate Monitoring Requirements

- (1) Leachate monitoring is not applicable to this facility.

g. Sampling Frequency and Requirements

- (1) Water samples from all newly installed monitoring wells (including new wells associated with the construction of Cell 17) will be collected within 7 days of installation and development to determine background groundwater quality. Groundwater samples from the initial sampling of any new wells will be analyzed for parameters listed in Rule 62-701.510(7)(a) and (7)(c), F.A.C. (Table 2).

Table 2 Initial Groundwater Sampling Parameters	
Field Parameters	Laboratory Parameters
Static Water Levels	Total Ammonia – N
Specific Conductivity	Chlorides
pH	Iron
Dissolved Oxygen	Mercury
Turbidity	Nitrate
Temperature	Sodium
Colors and Sheens	Total Dissolved Solids (TDS)
	Those Parameters listed in 40 CFR Part 258, Appendices I and II

- (2) Groundwater samples from all monitoring wells (background, detection, and compliance) and the on-site supply well shall be sampled and analyzed semiannually for the parameters listed in Table 3. A semiannual sampling frequency is adequate to detect potential

groundwater quality standard exceedances based upon the flow velocities provided in Section III of the 2012 WQMPE. Maximum groundwater flow velocities were less than 50 feet per six months within both the surficial and Floridan aquifers. The first semiannual sampling event shall be performed between January 1 and June 30. The second semiannual sampling event shall be performed between July 1 and December 31.

Table 3 Routine Groundwater Sampling Parameters	
Field Parameters	Laboratory Parameters
Static Water Level	Total Ammonia – N
Specific	Chlorides
Conductivity	Iron
pH	Mercury
Dissolved Oxygen	Nitrate
Turbidity	Sodium
Temperature	Total Dissolved Solids (TDS)
Colors, Sheens	Those Parameters listed in 40 CFR Part 258, Appendix I

(3) Surface water sampling shall be conducted at Pond 3 in accordance with the requirements of the separate Industrial Wastewater pond permit.

(4) Leachate sampling is not applicable to this facility.

h. Evaluation Monitoring, Prevention Measures, and Corrective Action

If parameters are detected in detection wells at concentrations that are significantly above background water quality, or that are at concentrations above the FDEP's water quality standards or criteria specified in 62-520, F.A.C., the well will be resampled within 30 days after the initial analytical data are received to confirm the data. If the data are confirmed or the well is not resampled, the FDEP will be notified in writing within 14 days of detection. Evaluation monitoring shall be initiated as follows:

- Routine monitoring of all monitoring wells will continue according to the GWMP.

- Within 90 days of notification from the Department to initiate evaluation monitoring and annually thereafter, the background wells and all affected detection wells will be sampled for the parameters listed in 62-701.510(7)(c), F.A.C. Any new parameter detected and confirmed in the downgradient wells will be added to the routine groundwater monitoring parameter list.
- Within 90 days of notification from the Department to initiate evaluation monitoring, compliance monitoring wells will be installed at the compliance line of the zone of discharge and downgradient of the affected detection wells. The compliance wells will be installed in accordance with 62-701.510(3)(d), F.A.C. Compliance wells and affected detection wells shall be sampled quarterly for analysis of the parameters listed in Rule 62-701.510(7)(a), F.A.C. and any other parameters detected in the affected detection and downgradient wells sampled in accordance with Rule 62-701.510(6)(a)2, F.A.C. Compliance wells and affected detection wells shall be sampled annually for analysis of the parameters listed in Rule 62-701.510(7)(c), F.A.C.
- Within 180 days of notification from the Department to initiate evaluation monitoring, a contamination evaluation plan will be submitted to the FDEP. The contamination evaluation plan will be designed to delineate the extent and cause of contamination, to predict the probability that FDEP water quality standards are not violated outside the zone of discharge, and to evaluate methods to prevent any violations. Upon agreement with the FDEP that the plan is so designed, the plan shall be implemented and a contamination evaluation report will be submitted to the FDEP. All reasonable efforts will be made to prevent further degradation of water quality from the landfill activities.
- If the contamination evaluation report indicates that water quality standards or criteria are likely to be violated outside the zone of discharge, a prevention measures plan shall be submitted to the Department within 90 days. Upon approval, the prevention measures shall be initiated.
- Evaluation monitoring shall not be discontinued until authorization to return to routine monitoring only is received from the Department.

i. Water Quality Monitoring Report Requirements

- (1) All representative water quality monitoring results shall be reported to the Department within 60 days from completion of laboratory analyses. In accordance with subsections 62-160.240(3) and 62-160.340(4), F.A.C., water quality data contained in the report shall be provided to the Department in an electronic format consistent with requirements for importing into Department databases.

At a minimum the semiannual report shall include the following:

- The facility name and identification number, sample collection dates, and analysis dates;
 - All analytical results, including all peaks even if below maximum contaminant levels;
 - Identification number and designation of all groundwater monitoring points;
 - Applicable water quality standards;
 - Quality assurance, quality control notations;
 - Method detection limits;
 - STORET code numbers for all parameters;
 - Water levels recorded prior to evaluating wells or sample collection. Elevation reference shall include the top of well casing and the land surface at each well site at a precision of plus or minus 0.01 foot, National Geodetic Vertical Datum (NGVD);
 - Department Form 62-701.900(31);
 - An updated groundwater table contour map signed and sealed by a professional geologist or professional engineer with experience in hydrogeologic investigations, with contours at no greater than one-foot intervals unless site-specific conditions dictate otherwise, which indicates groundwater elevations and flow directions; and
 - A summary of any water quality standards or criteria that are exceeded.
- (2) A technical report will be submitted every two and one-half years summarizing and interpreting the water quality monitoring results and water level measurements collected during that period. The report will be in accordance with Rule 62-701.510(8)(b) and signed and sealed by a Florida licensed Professional Geologist or Professional Engineer. The report shall contain, at a minimum, the following:
 - Tabular displays of any data which shows that a monitoring parameter has been detected, and graphical displays of any leachate key indicator parameters detected (such as pH, specific

conductance, TDS, TOC, sulfate, chloride, sodium and iron), including hydrographs for all monitoring wells;

- Trend analyses of any monitoring parameters consistently detected;
- Comparison among shallow, middle, and deep zone wells;
- Comparisons between background water quality and the water quality in detection and compliance wells;
- Correlations between related parameters such as total dissolved solids and specific conductance;
- Discussion of erratic and/or poorly correlated data;
- An interpretation of the groundwater contour maps, including an evaluation of groundwater flow rates; and
- An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based on site conditions.

C:\Civil3D\Projects\02000-217-17_03\CADD\Misc\CADD Files\Figure 1_RAL1 Response January 2019.dwg PLOT DATE 1/24/2019 5:44 PM BY LJB

LEGEND

- BW-1B

BACKGROUND MONITORING WELL LOCATION
- MW-7A

DETECTION MONITORING WELL LOCATION
- MW-23B

PROPOSED DETECTION MONITORING WELL LOCATION
- SUPPLY WELL LOCATION
- P-11

SOLID WASTE PIEZOMETER WELL LOCATION
- MW-12A

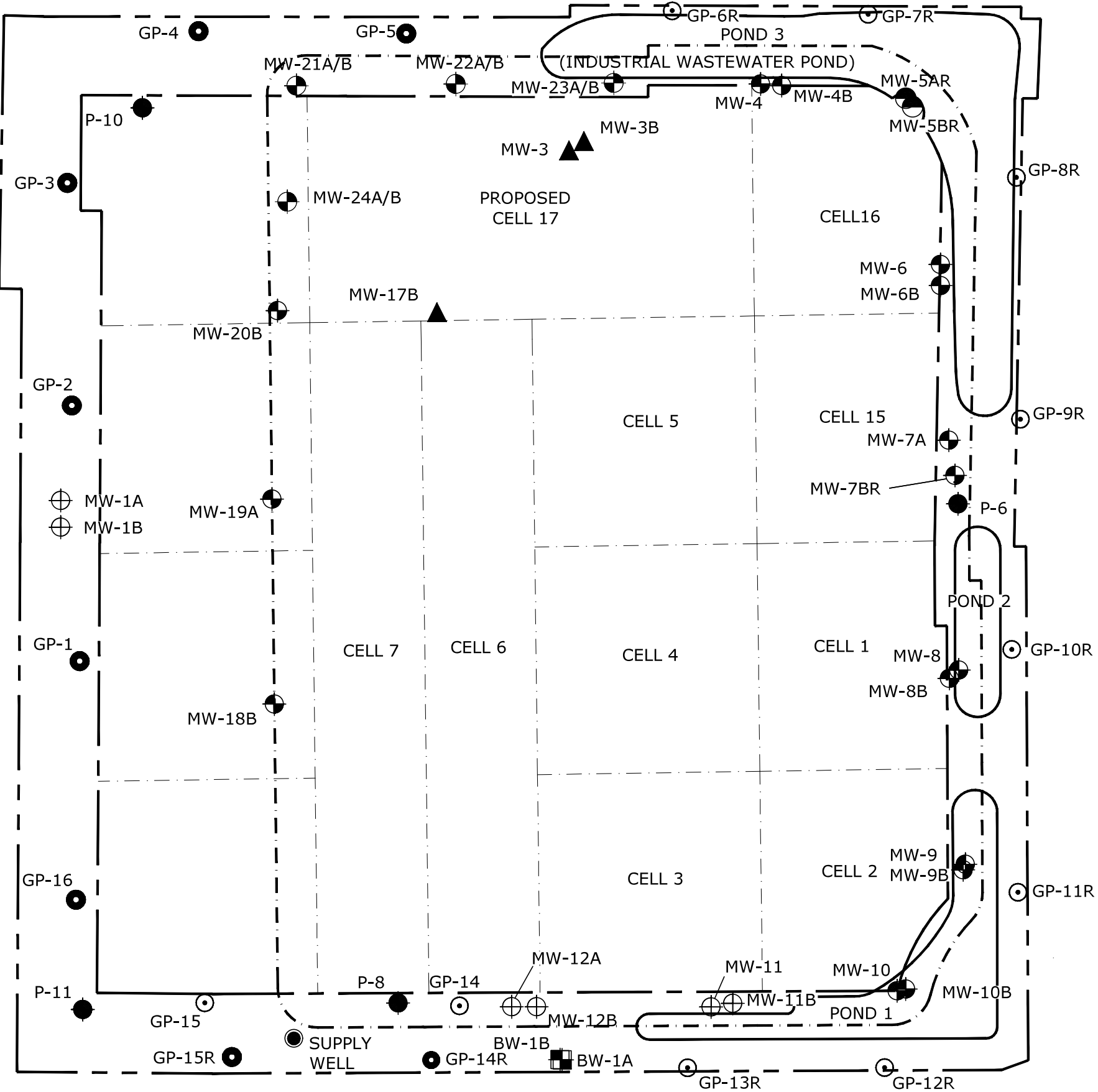
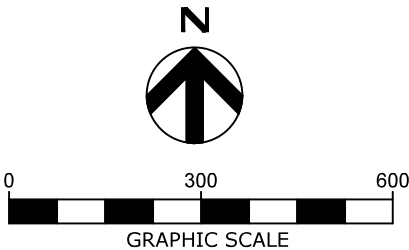
WATER LEVEL ONLY WELL LOCATION
- MW-3

PROPOSED TO BE ABANDONED
- MW-5AR

COMPLIANCE MONITORING WELL LOCATION
- GP-1

GAS PROBE LOCATION
- GP-8R

FUTURE GAS PROBE LOCATION
- PROPERTY BOUNDARY
- LANDFILL LIMITS
- CELL BOUNDARY
- ZONE OF DISCHARGE



NO.	DATE	REVISION DESCRIPTION	BY
1	01.04.18	Figure 1 updated in accordance with 2018 permit renewal revisions	NLD



4140 NW 37th Place, Suite A
Gainesville, Florida 32606
Phone: 352.672.6867 Fax: 352.692.5390
Certificate of Authorization No. 30066

PROJECT TITLE:
ENTERPRISE ROAD CLASS III RECYCLING AND DISPOSAL FACILITY DADE CITY, FLORIDA

LISA J. BAKER	DESIGNED BY	LJB
	DRAWN BY	LJB
	CHECKED BY	JDL
FL PE NO. 74652	APPROVED BY	LJB

SHEET TITLE:
SITE MAP

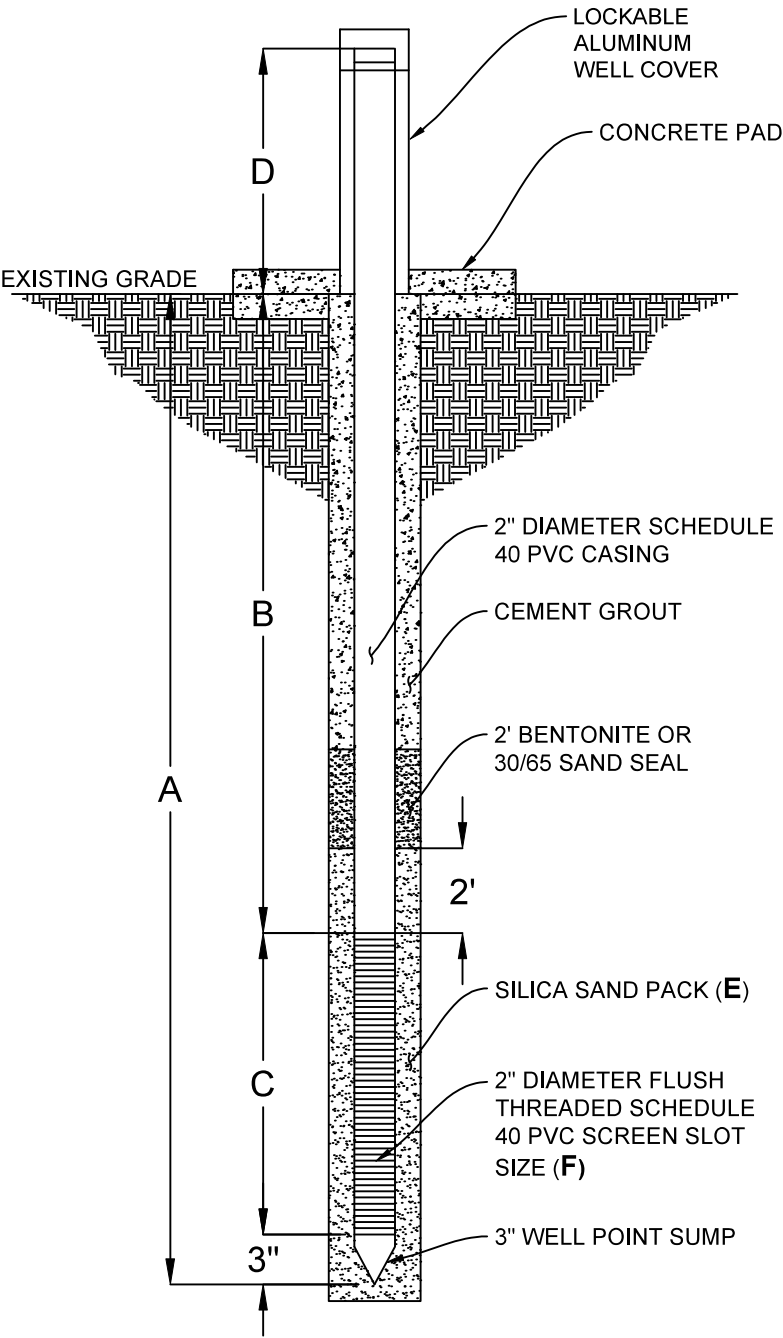
PROJECT NO.: 02000-144-14
SCALE: AS SHOWN
DATE: JAN 2019
DRAWING: FIGURE 1

TABLE 1

Well ID	Well Type	Aquifer	Existing or Future	Notes
BW-1A	Background	Surficial	Existing	
BW-1B	Background	Floridan	Existing	
MW-1A	Water Level	Surficial	Existing	
MW-1B	Water Level	Floridan	Existing	
MW-3	Detection	Surficial	Existing	To be abandoned in conjunction with Cell 17 construction
MW-3B	Detection	Floridan	Existing	To be abandoned in conjunction with Cell 17 construction
MW-4	Detection	Surficial	Existing	
MW-4B	Detection	Floridan	Existing	
MW-5AR	Compliance	Surficial	Existing	
MW-5BR	Compliance	Floridan	Existing	
MW-6	Detection	Surficial	Existing	
MW-6B	Detection	Floridan	Existing	
MW-7A	Detection	Surficial	Existing	
MW-7BR	Detection	Floridan	Existing	
MW-8	Detection	Surficial	Existing	
MW-8B	Detection	Floridan	Existing	
MW-9	Detection	Surficial	Existing	
MW-9B	Detection	Floridan	Existing	
MW-10	Detection	Surficial	Existing	
MW-10B	Detection	Floridan	Existing	
MW-11	Water Level	Surficial	Existing	
MW-11B	Water Level	Floridan	Existing	
MW-12A	Water Level	Surficial	Existing	
MW-12B	Water Level	Floridan	Existing	
MW-17B	Detection	Floridan	Existing	To be abandoned in conjunction with Cell 17 construction
Water	Supply	Floridan	Existing	
MW-18B	Detection	Floridan	Existing	
MW-19A	Detection	Surficial	Existing	
MW-20B	Detection	Floridan	Existing	
MW-21A*	Detection	Surficial	Future	To be installed in conjunction with Cell 17 construction
MW-21B	Detection	Floridan	Future	To be installed in conjunction with Cell 17 construction
MW-22A*	Detection	Surficial	Future	To be installed in conjunction with Cell 17 construction
MW-22B	Detection	Floridan	Future	To be installed in conjunction with Cell 17 construction
MW-23A*	Detection	Surficial	Future	To be installed in conjunction with Cell 17 construction
MW-23B	Detection	Floridan	Future	To be installed in conjunction with Cell 17 construction
MW-24A*	Detection	Surficial	Future	To be installed in conjunction with Cell 17 construction
MW-24B	Detection	Floridan	Future	To be installed in conjunction with Cell 17 construction
P-6	Piezometer	Surficial	Existing	
P-8	Piezometer	Floridan	Existing	
P-10	Piezometer	Floridan	Existing	
P-11	Piezometer	Surficial	Existing	

* To be installed only if water bearing sediments are encountered above the clay units confining the Floridan aquifer system.

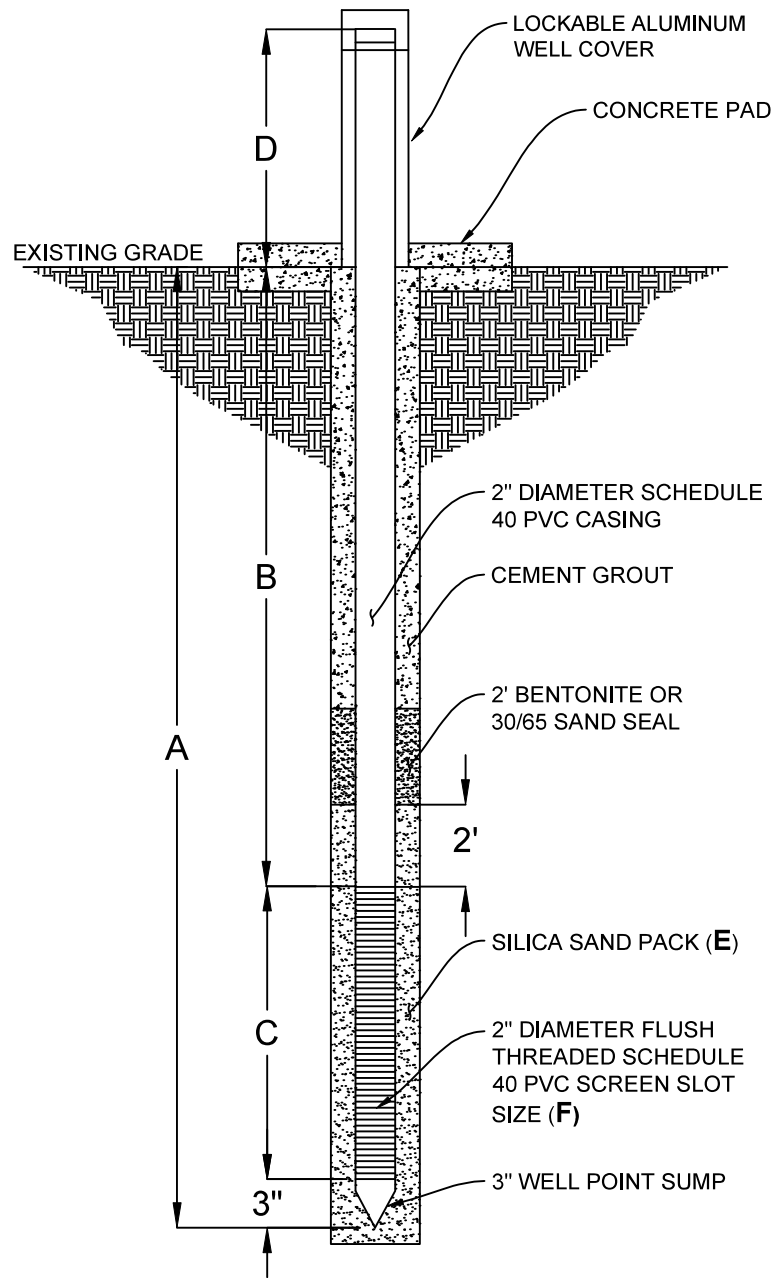
FIGURE NOT TO SCALE



WELL	A	B	C	D	E	F	TOP OF WELL SCREEN ELEVATION FT, NGVD	BOTTOM OF WELL SCREEN ELEVATION FT, NGVD	ASSUMED GROUND SURFACE ELEVATION FT, NGVD	ASSUMED LIMESTONE SURFACE ELEVATION FT, NGVD
MW-21A	25'	5'	20'	3'	20/30	0.010"	119' ⁽¹⁾	99' ⁽³⁾	124' ⁽¹⁾	65' ⁽²⁾
MW-22A	25'	5'	20'	3'	20/30	0.010"	119' ⁽¹⁾	99' ⁽³⁾	124' ⁽¹⁾	65' ⁽²⁾
MW-23A	25'	5'	20'	3'	20/30	0.010"	119' ⁽¹⁾	99' ⁽³⁾	124' ⁽¹⁾	65' ⁽²⁾
MW-24A	<u>25'</u>	<u>5'</u>	<u>20'</u>	<u>3'</u>	<u>20/30</u>	<u>0.010"</u>	<u>119' ⁽¹⁾</u>	<u>99' ⁽³⁾</u>	<u>124' ⁽¹⁾</u>	<u>65' ⁽²⁾</u>

NOTES:
(1) From MW-20 ground elevation
(2) From borings B-101 through B-111 lithology
(3) Based on site-specific lithology and water level data. Subject to change per field findings during well installation.

FIGURE NOT TO SCALE



WELL	A	B	C	D	E	F	TOP OF SCREEN ELEVATION FT, NGVD	BOTTOM OF SCREEN ELEVATION FT, NGVD	ASSUMED GROUND SURFACE ELEVATION FT, NGVD	ASSUMED LIMESTONE SURFACE ELEVATION FT, NGVD
MW-21B	81'	61'	20'	3'	20/30	0.010"	65' (3)	45' (3)	124' (1)	65' (2)
MW-22B	81'	61'	20'	3'	20/30	0.010"	65' (3)	45' (3)	124' (1)	65' (2)
MW-23B	81'	61'	20'	3'	20/30	0.010"	65' (3)	45' (3)	124' (1)	65' (2)
MW-24B	81'	61'	20'	3'	20/30	0.010"	65' (3)	45' (3)	124' (1)	65' (2)

NOTES:

(1) From MW-20 ground elevation

(2) From borings B-101 through B-111 lithology

(3) Based on site-specific lithology and water level data.
Subject to change per field findings during well installation.



ENTERPRISE ROAD RECYCLING
AND DISPOSAL FACILITY
DADE CITY, FLORIDA

PROPOSED
FLORIDAN AQUIFER
MONITOR WELL DETAIL

FIGURE
3

ATTACHMENT 10

Revised Section 7 Closure and Reclamation Plan

Appendix 7-A

(replace previously submitted Appendix 7-A in its entirety)



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(28), F.A.C.

Form Title: Closure Cost Estimating Form
For Solid Waste Facilities

Effective Date: January 6, 2010

Incorporated in Rule 62-701.630(3), F.A.C.

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

Date of DEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: Enterprise Class III Recycling and Disposal Facility WACS ID: 87895
 Permit Application or Consent Order No.: 177982-025-SO/T3 Expiration Date: 7/9/2018
 Facility Address: 41111 Enterprise Road, Dade City, Florida 33525
 Permittee or Owner/Operator: Angelo's Aggregate Materials, LTD.
 Mailing Address: 855 28th Street, South, St. Petersburg, Florida 33712

Latitude: 28 ° 19 ' 53 " Longitude: 82 ° 08 ' 06 "
 Coordinate Method: State Plane Datum: NGVD 29
 Collected by: _____ Company/Affiliation Pickett Surveying

Solid Waste Disposal Units Included in Estimate:

Phase / Cell	Acres	Date Unit Began Accepting Waste	Active Life of Unit From Date of Initial Receipt of Waste	If active: Remaining life of unit	If closed: Date last waste received	If closed: Official date of closing
1-7, 15, 16 and 17	81.4	2004	25	11	N/A	N/A

Total disposal unit acreage included in this estimate: Closure: 81.4 Long-Term Care: 81.4

Facility type: ☐ Class I ☒ Class III ☐ C&D Debris Disposal
 (Check all that apply) ☐ Other: _____

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check type)

- ☒ Letter of Credit* ☐ Insurance Certificate ☐ Escrow Account
☐ Performance Bond* ☐ Financial Test ☐ Form 29 (FA Deferral)
☐ Guarantee Bond* ☐ Trust Fund Agreement

* - Indicates mechanisms that require the use of a Standby Trust Fund Agreement

Northwest District
160 Government Center
Pensacola, FL 32502-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Temple Terrace, FL 33637
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 N. Congress Ave., Ste. 200
West Palm Beach, FL 33401
561-681-6600

III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code, (F.A.C.) sets forth the method of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of closure in current dollars. Select one of the methods of cost estimate adjustment below.

☐ (a) Inflation Factor Adjustment

☒ (b) Recalculated or New Cost Estimates

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflatory by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste website www.dep.state.fl.us/waste/categories/swfr or call the Financial Coordinator at (850) 245-8706.

This adjustment is based on the Department approved closing cost estimate dated: _____

Latest Department Approved
Closing Cost Estimate:

Current Year Inflation
Factor, **e.g. 1.02**

Inflation Adjusted Closing
Cost Estimate:

_____ × _____ = _____

This adjustment is based on the Department approved long-term care cost estimate dated: _____

Latest Department Approved
Annual Long-Term Care
Cost Estimate:

Current Year Inflation
Factor, **e.g. 1.02**

Inflation Adjusted Annual
Long-Term Care Cost
Estimate:

_____ × _____ = _____

Number of Years of Long Term Care Remaining:

_____ × _____

Inflation Adjusted Long-Term Care Cost Estimate:

= _____

Signature by:

☐ Owner/Operator

☐ Engineer

(check what applies)

Signature

Address

Name & Title

City, State, Zip Code

Date

E-Mail Address

Telephone Number

IV. ESTIMATED CLOSING COST (check what applies)

Recalculated Cost Estimate

☐ **New Facility Cost Estimate**

Notes: 1. Cost estimates for the time period when the extent and manner of landfill operation makes closing most exp

2. Cost estimate must be certified by a professional engineer.

3. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.

4. In some cases, a price quote in support of individual item estimates may be required.

Description	Unit	Number of Units	Cost / Unit	Total Cost
1. Proposed Monitoring Wells	(Do not include wells already in existence.)			
	EA			
			Subtotal Proposed Monitoring Wells:	
2. Slope and Fill (bedding layer between waste and barrier layer):				
Excavation	CY			
Placement and Spreading	CY AC.	81.4	\$1,200.00	\$97,680.00
Compaction	CY			
Off-Site Material	CY			
Delivery	CY			
			Subtotal Slope and Fill:	\$97,680.00
3. Cover Material (Barrier Layer):				
Off-Site Clay	CY	196,988	\$9.00	\$1,772,892.00
Synthetics - 40 mil	SY			
Synthetics - GCL	SY			
Synthetics - Geonet	SY			
Synthetics - Other (explain)				
			Subtotal Cover Material:	\$1,772,892.00
4. Top Soil Cover:				
Off-Site Material	CY	196,988	\$4.25	\$837,199.00
Delivery	CY			
Spread	CY			
			Subtotal Top Soil Cover:	\$837,199.00
5. Vegetative Layer				
Sodding	SY	3,000	\$1.25	\$3,750.00
Hydroseeding	AC	81.4	\$9.75	\$793.65
Fertilizer	AC			
Mulch	AC			
Other (explain) <u>Return trips to</u>	EA	2	\$500.00	\$1,000.00
<u>irrigate, establish vegetation</u>			Subtotal Vegetative Layer:	\$5,543.65
6. Stormwater Control System:				
Earthwork	CY			
Grading	SY			
Piping	LF	3,119	\$18.85	\$58,793.15
Ditches	LF	2,000	\$2.00	\$4,000.00
Berms	LF	12,114	\$3.90	\$47,244.60
Control Structures	EA	10	\$1,641.65	\$16,416.50
Other (explain) <u>Drop Inlets</u>	EA	20	\$3,225.39	\$64,507.80
			Subtotal Stormwater Control System:	\$190,962.05

Description	Unit	Number of Units	Cost / Unit	Total Cost
7. Passive Gas Control:				
Wells	EA	12	\$4,649.38	\$55,792.56
Pipe and Fittings	LF			
Monitoring Probes	EA	6	\$1,500.00	\$9,000.00
NSPS/Title V requirements	LS	1		
Subtotal Passive Gas Control:				\$64,792.56
8. Active Gas Extraction Control:				
Traps	EA			
Sumps	EA			
Flare Assembly	EA			
Flame Arrestor	EA			
Mist Eliminator	EA			
Flow Meter	EA			
Blowers	EA			
Collection System	LF			
Other (explain) _____				
Subtotal Active Gas Extraction Control:				
9. Security System:				
Fencing	LF			
Gate(s)	EA			
Sign(s)	EA			
Subtotal Security System:				
10. Engineering:				
Closure Plan Report	LS	1	\$35,000.00	\$35,000.00
Certified Engineering Drawings	LS	1	\$15,000.00	\$15,000.00
NSPS/Title V Air Permit	LS	1		
Final Survey	LS	1	\$10,000.00	\$10,000.00
Certification of Closure	LS	1	\$25,000.00	\$25,000.00
Other (explain) _____				
Subtotal Engineering:				\$85,000.00

Description	Hours	Cost / Hour	Hours	Cost / Hour	Total Cost
11. Professional Services					
	<u>Contract Management</u>		<u>Quality Assurance</u>		
P.E. Supervisor					
On-Site Engineer					
Office Engineer					
On-Site Technician					
Other (explain)	1	\$121.00	1	\$213.00	\$334,714.00
See explanations					

Description	Unit	Number of Units	Cost / Unit	Total Cost
Quality Assurance Testing	LS	1	\$42,912.35	\$42,912.35
Subtotal Professional Services:				\$377,626.35

Subtotal of 1-11 Above: \$3,431,695.61

12. Contingency 10 % of Subtotal of 1-11 Above \$343,169.56

Subtotal Contingency: \$343,169.56

Estimated Closing Cost Subtotal: \$3,774,865.17

Description	Total Cost
13. Site Specific Costs	
Mobilization	<u>\$130,000.00</u>
Waste Tire Facility	<u></u>
Materials Recovery Facility	<u></u>
Special Wastes	<u>\$17,277.68</u>
Leachate Management System Modification	<u></u>
Other (explain) <u></u>	<u></u>
	Subtotal Site Specific Costs: <u>\$147,277.68</u>

TOTAL ESTIMATED CLOSING COSTS (\$): \$3,922,142.85

V. ANNUAL COST FOR LONG-TERM CARE

See 62-701.600(1)a.1., 62-701.620(1), 62-701.630(3)a. and 62-701.730(11)b. F.A.C. for required term length. For landfills certified closed and Department accepted, enter the remaining long-term care length as "Other" and provide years remaining.

(Check Term Length) ☐ 5 Years ☐ 20 Years ☒ 30 Years ☐ Other, ____ Years

Notes: 1. Cost estimates must be certified by a professional engineer.

2. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.

3. In some cases, a price quote in support of individual item estimates may be required.

All items must be addressed. Attach a detailed explanation for all entries left blank.

Description	Sampling Frequency (Events / Year)	Number of Wells	(Cost / Well) / Event	Annual Cost
1. Groundwater Monitoring [62-701.510(6), and (8)(a)]				
Monthly	12	_____	_____	_____
Quarterly	4	_____	_____	_____
Semi-Annually	2	32	\$485.00	\$31,040.00
Annually	1	_____	_____	_____
Subtotal Groundwater Monitoring:				\$31,040.00
2. Surface Water Monitoring [62-701.510(4), and (8)(b)]				
Monthly	12	_____	_____	_____
Quarterly	4	_____	_____	_____
Semi-Annually	2	_____	_____	_____
Annually	1	_____	_____	_____
Subtotal Surface Water Monitoring:				_____
3. Gas Monitoring [62-701.400(10)]				
Monthly	12	_____	_____	_____
Quarterly	4	16	\$136.00	\$8,704.00
Semi-Annually	2	_____	_____	_____
Annually	1	_____	_____	_____
Subtotal Gas Monitoring:				\$8,704.00
4. Leachate Monitoring [62-701.510(5), (6)(b) and 62-701.510(8)c]				
Monthly	12	_____	_____	_____
Quarterly	4	_____	_____	_____
Semi-Annually	2	_____	_____	_____
Annually	1	_____	_____	_____
Other (explain) _____	_____	_____	_____	_____
Subtotal Leachate Monitoring:				_____

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. Leachate Collection/Treatment Systems Maintenance				
<u>Maintenance</u>				
Collection Pipes	LF	_____	_____	_____
Sumps, Traps	EA	_____	_____	_____
Lift Stations	EA	_____	_____	_____
Cleaning	LS	1	\$720.00	\$720.00
Tanks	EA	_____	_____	_____

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. (continued)				
<u>Impoundments</u>				
Liner Repair	SY	_____	_____	_____
Sludge Removal	CY	_____	_____	_____
<u>Aeration Systems</u>				
Floating Aerators	EA	_____	_____	_____
Spray Aerators	EA	_____	_____	_____
<u>Disposal</u>				
Off-site (Includes transportation and disposal)	1000 gallon	_____	_____	_____
Subtotal Leachate Collection / Treatment Systems Maintenance:				<u>\$720.00</u>
6. Groundwater Monitoring Well Maintenance				
Monitoring Wells	LF	_____	_____	_____
Replacement	EA	<u>1</u>	<u>\$3,500.00</u>	<u>\$3,500.00</u>
Abandonment	EA	_____	_____	_____
Subtotal Groundwater Monitoring Well Maintenance:				<u>\$3,500.00</u>
7. Gas System Maintenance				
Piping, Vents	LF	_____	_____	_____
Blowers	EA	_____	_____	_____
Flaring Units	EA	_____	_____	_____
Meters, Valves	EA	_____	_____	_____
Compressors	EA	_____	_____	_____
Flame Arrestors	EA	_____	_____	_____
Operation	LS	<u>1</u>	<u>\$2,500.00</u>	<u>\$2,500.00</u>
Subtotal Gas System Maintenance:				<u>\$2,500.00</u>
8. Landscape Maintenance				
Mowing	AC	<u>325.6</u>	<u>\$24.18</u>	<u>\$7,873.01</u>
Fertilizer	AC	_____	_____	_____
Subtotal Landscape Maintenance:				<u>\$7,873.01</u>
9. Erosion Control and Cover Maintenance				
Sodding	SY	_____	_____	_____
Regrading	AC	_____	_____	_____
Liner Repair	SY	<u>1</u>	<u>\$5,207.60</u>	<u>\$5,207.60</u>
Clay	CY	_____	_____	_____
Subtotal Erosion Control and Cover Maintenance:				<u>\$5,207.60</u>
10. Storm Water Management System Maintenance				
Conveyance Maintenance	LS	<u>1</u>	<u>\$3,691.00</u>	<u>\$3,691.00</u>
Subtotal Storm Water Management System Maintenance:				<u>\$3,691.00</u>
11. Security System Maintenance				
Fences	LS	<u>1</u>	<u>\$3,205.50</u>	<u>\$3,205.50</u>
Gate(s)	EA	_____	_____	_____
Sign(s)	EA	_____	_____	_____
Subtotal Security System Maintenance:				<u>\$3,205.50</u>

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
12. Utilities	LS	<u>1</u>	<u>\$1,800.00</u>	<u>\$1,800.00</u>
			Subtotal Utilities:	<u>\$1,800.00</u>

13. Leachate Collection/Treatment Systems Operation

Operation

P.E. Supervisor	HR	<u> </u>	<u> </u>	<u> </u>
On-Site Engineer	HR	<u> </u>	<u> </u>	<u> </u>
Office Engineer	HR	<u> </u>	<u> </u>	<u> </u>
OnSite Technician	HR	<u> </u>	<u> </u>	<u> </u>
Materials	LS	<u>1</u>	<u> </u>	<u> </u>

Subtotal Leachate Collection/Treatment Systems Operation:

14. Administrative

P.E. Supervisor	HR	<u> </u>	<u> </u>	<u> </u>
On-Site Engineer	HR	<u> </u>	<u> </u>	<u> </u>
Office Engineer	HR	<u>112</u>	<u>\$75.00</u>	<u>\$8,400.00</u>
OnSite Technician	HR	<u> </u>	<u> </u>	<u> </u>
Other 1 - 5 year Report	LS	<u>1</u>	<u>\$4,500.00</u>	<u>\$4,500.00</u>

Subtotal Administrative: \$12,900.00

Subtotal of 1-14 Above: \$81,141.11

15. Contingency	<u>10</u>	% of Subtotal of 1-14 Above	<u>\$8,114.11</u>
		Subtotal Contingency:	<u>\$8,114.11</u>

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
16. Site Specific Costs				
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
			Subtotal Site Specific Costs:	<u> </u>


ANNUAL LONG-TERM CARE COST (\$ / YEAR): \$89,255.22

Number of Years of Long-Term Care: 30

TOTAL LONG-TERM CARE COST (\$): \$2,677,656.56

VI. CERTIFICATION BY ENGINEER

This is to certify that the Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and/or long-term care of the facility and comply with the requirements of Rule 62-701.630 F.A.C. and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Cost Estimates shall be submitted to the Department annually, revised or adjusted as required by Rule 62-701.630(4), F.A.C.


Signature
Lisa Baker, P.E.
Name and Title (please type)
1-24-09
Date
74652
Florida Registration Number
(please affix seal)

4140 NW 37th Place, Suite A
Mailing Address
Gainesville, Florida 32606
City, State, Zip Code
lisa@locklearconsulting.com
E-Mail address (if available)
352-672-6867
Telephone Number

VII. SIGNATURE BY OWNER/OPERATOR


Signature of Applicant
John Arnold, P.E.
Name and Title (please type)
John.Phillip.Arnold@gmail.com
E-Mail address (if available)

855 28th Street South
Mailing Address
St. Petersburg, Florida 33712
City, State, Zip Code
813-477-1719
Telephone Number

FACE - Attachment 1
General Information and Assumptions

**FINANCIAL ASSURANCE
CLOSURE AND LONG-TERM CARE COST ESTIMATES
GENERAL INFORMATION AND ASSUMPTIONS**

For the permit modification application, we have recalculated the closure and long-term care costs for Cells 1 – 7, 15, 16 and 17 and vertical expansion. Closure and Long-term Care costs include material, labor and professional services required for closing and the long-term care of the permitted disposal areas.

The cell capacity and lifespan estimates for Cells 1 – 7, 15, 16 and 17 have been recalculated as 25 years (from start of waste acceptance in 2004).

UNIT COST ESTIMATIONS AND CALCULATIONS:

This section provides detailed information and justification for the unit quantity and cost estimates shown on FDEP Form 62-701.900(28) *Financial Assurance Cost Estimate Form*. Cost references are provided in the Appendix and consist of third party quotes and information from recognized cost-estimating sources, such as the FDOT construction cost database.

Cost Estimate Information and Assumptions - Closure:

Item 1: Proposed Monitoring Wells

No additional monitoring wells are anticipated at this time.

Item 2: Slope and Fill

This item represents the cost of rough grading and sloping of the waste to the closure grades. The volume has been calculated per acre for the two-dimensional closure area. Refer to Reference 1 for unit costs.

Item 3: Cover Material (Barrier Layer)

This item includes purchasing, hauling, placing and compacting 18-inches of 1×10^{-8} off-site clay material to meet the closure specifications in the Closure and Remediation Plan. The volume was calculated for 18-inches of clay over the two-dimensional closure area. Refer to Reference 1 for unit costs.

Item 4: Top Soil Cover

This item includes purchasing, hauling and placing off-site soil material. The quantity represents 18" of soil material, across the 2-dimensional closure area. Refer to Reference 1 for unit costs.

Item 5: Vegetative Layer

This item includes the cost to hydroseed (including materials and installation) the closure area (Cells 1-7, 15, 16 and 17). The per-acre cost is provided in Reference 1.

The site Environmental Resource Permit (ERP) was issued for the site buildout, including cells 9 – 14 that are not included in this permit modification application. We have assumed that, following closure of Cell 6 or Cell 7, an approximately 2,000 LF by 15-ft wide swale will be constructed along the west side of the

landfill to convey runoff to either the temporary stormwater pond to the north, or Pond 1 to the south. We have included the cost of 3,000 yd³ of sod to stabilize the swale sideslopes. The per-yard cost for sod is provided in Reference 1.

Other:

This line item was provided by the earthwork contractor for 2 return trips to irrigate and maintain sod and seed until established. The per-trip cost is provided in Reference 1.

Item 6: Stormwater Control System

This item includes costs associated with constructing conveyance ditches, stormwater downcomers, drop inlets, and energy dissipators.

As discussed in Item 5 above, this closure cost estimate includes the cost of constructing a conveyance swale along the west side of the landfill. The per-foot cost for swale construction is provided in Reference 1.

The piping estimate represents 3,119 linear feet of 18-inch corrugated HDPE downcomer pipe, as conceptually shown on the Cell 17 and Vertical Expansion Construction Permit Plan Set. Please refer to Reference 2 for the per foot cost of corrugated HDPE pipe.

The cost for berms represents construction of approximately 12,114 LF of tack-on berms at elevations 125' and 150' on the conceptual final cover plan shown on the Cell 17 Construction Permit Plan Set. Please refer to the cost for miscellaneous earthwork provided in Reference 1.

The cost for control structures represents the price of U-Endwall, baffles as conceptually shown on the Cell 17 and Vertical Expansion Construction Permit Plan Set. Please refer to Reference 4 for unit prices.

The cost under the "other" heading represents the cost of 20 drop inlet structures to be installed along the stormwater berms shown on the conceptual final cover plan on the Cell 17 Construction Permit Plan Set. Please refer to Reference 3 for unit prices.

Item 7: Gas Control: Passive

Wells:

This item includes the costs associated with constructing and installing 12 passive landfill gas vents, as shown in the Cell 17 and Vertical Expansion Construction Permit Plan Set. It is assumed that each well will be constructed to 20-feet above the bottom of the Cell, for an approximate total of 550 LF of well installation. Refer to Reference 6 for installation costs.

Monitoring Probes:

This item includes costs associated with installing 4 landfill gas monitoring probes on the west property boundary as on the Cell 17 and Vertical Expansion Construction Permit Plan Set as part of the closure procedures. Locklear & Associates proposed this work at \$1500 per probe.

Item 8: Gas Control: Active Extraction

This item is not applicable – the Enterprise Class III RDF does not have active gas extraction.

Item 9: Security System

This item is not applicable – the Facility has perimeter fencing, signage and gates installed.

Item 10: Engineering

The total cost for engineering services associated with final closure have been estimated below and are typical of what would be required for any third party engineering consulting firm to perform these tasks. Locklear & Associates proposed this work as seen below.

The work is broken out as follows:

- Closure Plan (Closure permit application, review and update CQA Plan, Closure Plan, and Long-Term Care Plan): \$35,000
- Closure Drawings: \$15,000
- Closure Survey: \$10,000
- Certification of Construction Completion Report: \$25,000

Item 11: Professional Services

It is estimated that 4% of construction cost will be needed for contract management and construction management: 4% of \$3,042,783.85 = \$121,711.35.

It is estimated that 7% of construction cost will be needed for construction quality assurance and on-site observation: 7% of \$3,042,873.85 = \$213,001.11.

CQA testing for the cover soils has been estimated by a third-party testing company (Reference 5) for the work described in the CQA Plan.

Item 12: Contingency

A contingency amount of 10% of the total cost was used in the cost estimate.

Item 13: Site Specific Costs

Mobilization:

Cost to mobilize for proceeding with closure operations are estimated in Reference 1.

Waste Tire Facility:

The Facility contains a waste tire processing facility (FDEP Permit 303741-001-WT/02). Financial assurance for the waste tire processing facility is submitted separately to FDEP and is not included in this estimate.

Special Wastes:

This line item includes costs associated with removing and disposing of unacceptable materials and/or incidental recyclables that may have been temporarily stored pending appropriate disposal. The Facility Operations Plan allows for storage of the following waste types and amounts: The transportation and disposal costs have been provided by Zimmer Equipment in Reference 7. It is assumed that a loader and operator will be used for one 10-hour day (Reference 2).

TYPE	MAX. QTY
Class I waste	20 CY
Paint, batteries, solvents, oils, etc.	40 CY
Ferrous Metal	500 CY
Aluminum	300 CY
Stainless Steel	300 CY
Copper	25 CY
Asphalt	300 CY
Concrete / Rubble	300 CY
Electronics	8 CY

- (RS Means 2018 015433204650) Rent front end loader, 4WD 1.75 – 2 CY (\$627.68/day)
- (Reference #7) Total summation of maximum quantities of material removed (\$16,650).

$$(\$627.68/\text{day}) + (\$16,650) = \$17,277.68$$

Cost Estimate Information and Assumptions – Long-Term Care:

Item 1: Groundwater Monitoring

This line item is based on total annual costs for two semi-annual monitoring events (sampling, analysis and reporting) of \$31,040 (proposed work by Locklear & Associates).

$$(\$485.00 / \text{event} / \text{well}) \times (2 \text{ events} / \text{year}) \times (32 \text{ wells}) = \$31,040.$$

Item 2: Surface Water Monitoring

Surface water sampling is required in the event that stormwater discharges from the property. We have included the cost associated with sampling and analysis of one stormwater location during each semi-annual event. This cost is included in the total groundwater monitoring cost in Item 1 (proposed work by Locklear & Associates).

Item 3: Gas Monitoring

This item includes third-party costs for field work and reporting associated with quarterly off-site gas migration monitoring. The estimate is based on quarterly sampling of 16 monitoring points and is work provided by Locklear & Associates.

$(\$136.00 / \text{event} / \text{well}) \times (4 \text{ events} / \text{year}) \times (16 \text{ wells}) = \$8,704.$

Item 4: Leachate Monitoring

This item is not applicable.

Item 5: Leachate Collection/Treatment Systems/Maintenance

Approximately 380 LF of will be jet-cleaned and inspected every 5 years. See Reference 9 for the revised estimate pertaining to jet-cleaning and video inspection.

$(\$3,600/\text{event}) / (1 \text{ event} / 5 \text{ years}) = \$720/\text{YR}$

Item 6: Maintenance of Groundwater Monitoring Wells

It is assumed that a lump sum cost of \$3,500 per year will be needed maintenance of groundwater monitoring wells; this will allow the facility to replace approximately 1 groundwater monitoring well every 5 years.

Item 7: Gas System Maintenance

It is assumed that the above ground part of one gas vent will need to be replaced annually at a lump sum cost of \$2,500.

Item 8: Landscape Maintenance

Mowing:

Mowing was assumed for 81.4 acres of closure 4 times per year (total of 325.6 acres). A statewide FDOT average unit cost is provided in Reference 8.

Item 9: Erosion Control and Cover Maintenance

One acre per site per year is assumed to require regrading. Of that one acre per year it is assumed that approximately 100 cubic yards of the clay liner will need to be replaced.

- (RS Means 2018 312216100100) Finish grade Machine Large Area
 $(\$0.89/\text{SY}) \times (4,840 \text{ SY}/\text{AC}) = \$4,307.60/\text{AC}$
- (Reference 1) Material:
 $(\$9.00/\text{CY}) \times (100 \text{ CY}) = \$900.00/\text{YR}$

Item 10: Stormwater Management System Maintenance

It is assumed that a lump-sum cost of \$3,691 per year will be required for dressing and maintenance of the stormwater ponds, control structures and swales.

- (RS Means 2018 312316130050) Excavate common earth, 1'-4' (\$9.25/CY) x 2.66 CY/LF to get (\$17.85/LF) x 150 linear feet of storm water ditch (\$3,691/YR)

Item 11: Security System Maintenance

Fencing repair is assumed to be 75 feet per year at a rate of \$42.745/LF (\$3205.50/YR).

- (RS Means 2018 323113200920) Chain-link Fence Industrial 2-1/2 Diameter line posts.

Item 12: Utilities

It is assumed that lighting pump operating costs will be \$150 per month, or \$1,800 per year.

Item 13: Leachate Collection/Treatment Systems Operation

This item is not applicable.

Item 14: Administrative

It is assumed that long-term annual administrative costs associated with scheduling routine maintenance and monitoring and coordinate unscheduled maintenance will equate to 2 hours per week of administrative time (112 hours at a rate of \$75 / hour).

Other: This item includes costs associated with preparing the 5-year evaluation report on the closure. This work is proposed by Locklear & Associates.

Item 15: Contingency

Contingency costs of 10% were included with this cost estimate for long-term care.

FACE - Attachment 2
Cost References



David Nelson Construction Company
 3483 Alternate US19
 Palm Harbor, Florida 34683
 Ph. 727-784-7624
 Fax 727-786-8894
 Visit our Web Site, www\nelson-construction.com

MR. JOHN ARNOLD
 1530 McDuff AVE S
 Jacksonville, FL 32205

PHONE 352-339-1408

PROJECT **ENTERPRISE ROAD CLASS III FACILITY-CLOSURE CONSTRUCTION ESTIMATE**
 DATE/TIME **December 21, 2018**

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
1	MOBILIZATION	1	LS	\$ 130,000.00	\$ 130,000.00
2	ROUGH GRADING SLOPES SUBLINER	67	AC	\$ 1,200.00	\$ 80,400.00
3	18" CLAY BARRIER 1x10-8 CM/SEC	160,755	CY	\$ 9.00	\$ 1,446,795.00
4	18" VEGETATIVE SOIL INSTALLED	160,755	CY	\$ 4.25	\$ 683,209.00
5	SODDING WORK AREAS AS REQUIRED	3,000	SY	\$ 1.50	\$ 4,500.00
6	GRASSING/HYDR SEEDING	67	AC	\$ 975.00	\$ 65,325.00
7	WATERING GRASS AREAS	67	AC	\$ 500.00	\$ 33,500.00
8	REGRADING OF ERODED AREAS	AS REQUIRED	SY	\$ 0.25	
9	DITCH 15' WIDEx2' DEEP WITH 3:1 SLOPES	AS REQUIRED	LF	\$ 2.00	
10	MISC. EARTHWORK	AS REQUIRED	CY	\$ 3.90	

CONSTRUCTION DURATION WOULD BE 14 WEEKS
 DOES NOT INCLUDE ANY PERMITS FEES

IF YOU SHOULD HAVE ANY QUESTIONS CONCERNING THIS PROPOSAL, PLEASE CONTACT ME AT OUR OFFICE.

BOB CLARK
 NELSON CONSTRUCTION CO
 PHONE 727-784-7624
 FAX 727-786-8894
 E-MAIL BCLARK@NELSON-CONSTRUCTION.COM

Cost Estimate Report

Angelos Recycled Materials

Date: 12/21/2018

Dade City, Florida, 33525

41111 Enterprise Road

Enterprise Renewal RAI 2 Response

Year 2018 Quarter 4

Unit Detail Report

Prepared By: John Locklear

Locklear & Associates, Inc.

LineNumber	Description	Quantity	Unit	Total Incl. O&P	Ext. Total Incl. O&P
Division 01 General Requirements					
015433204650	Rent front end loader, 4WD, art. frame, diesel, 1.75 - 2 CY 130 HP, Incl. Hourly Oper. Cost.	1.00	Day	\$627.68	\$627.68
Division 01	General Requirements Subtotal				\$627.68
Division 31 Earthwork					
312216100100	Fine grading, for roadway, base or leveling course, large area, 6,000 S.Y. or more	1.00	S.Y.	\$0.89	\$0.89
312316130050	Excavating, trench or continuous footing, common earth, 3/8 C.Y. excavator, 1' to 4' deep, excludes sheeting or dewatering	1.00	B.C.Y.	\$9.25	\$9.25
Division 31	Earthwork Subtotal				\$10.14
Division 32 Exterior Improvements					
323113200920	Fence, chain link industrial, galvanized steel, 6 ga. wire, 2-1/2" posts @ 10' OC, 8' high, includes excavation, in concrete, excludes barbed wire	1.00	L.F.	\$42.75	\$42.75
Division 32	Exterior Improvements Subtotal				\$42.75
Division 33 Utilities					
333111203120	Public sanitary utility sewerage piping, piping HDPE Corrugated Type S with watertight gaskets, 18" diameter, excludes excavation or backfill	1.00	L.F.	\$18.85	\$18.85
Division 33	Utilities Subtotal				\$18.85

Florida Department of Transportation
Item Average Unit Cost
From 2017/06/01 to 2018/05/31

Contract Type: CC STATEWIDE
Displaying: VALID ITEMS WITH HITS
From: 0102 1 To: 9999999

Item	No. of Conts	Weighted Average	Total Amount	Total Quantity	Unit Meas	Obs?	Description
0425 1451	14	\$8,804.84	\$246,535.62	28.000	EA	N	INLETS, CURB, TYPE J-5, <10'
0425 1452	3	\$14,575.35	\$58,301.38	4.000	EA	N	INLETS, CURB, TYPE J-5, >10'
0425 1455	2	\$5,202.21	\$15,606.62	3.000	EA	N	INLETS, CURB, TYPE J-5, PARTIAL
0425 1459	2	\$10,255.56	\$92,300.00	9.000	EA	N	INLETS, CURB, TYPE J-5, MODIFY
0425 1461	7	\$10,253.36	\$133,293.67	13.000	EA	N	INLETS, CURB, TYPE J-6, <10'
0425 1462	1	\$15,000.00	\$15,000.00	1.000	EA	N	INLETS, CURB, TYPE J-6, >10'
0425 1469	1	\$10,300.00	\$41,200.00	4.000	EA	N	INLETS, CURB, TYPE J-6, MODIFY
0425 1471	6	\$4,089.40	\$106,324.42	26.000	EA	N	INLETS, CURB, TYPE 7, <10'
0425 1473	1	\$7,125.00	\$7,125.00	1.000	EA	N	INLETS, CURB, TYPE 7, J BOT, <10'
0425 1481	1	\$5,670.59	\$22,682.36	4.000	EA	N	INLETS, CURB, TYPE 8, <10'
0425 1501	3	\$3,323.62	\$39,883.38	12.000	EA	N	INLETS, DT BOT, TYPE A, <10'
0425 1503	1	\$3,975.00	\$15,900.00	4.000	EA	N	INLETS, DT BOT, TYPE A, J BOT, <10'
0425 1505	1	\$2,965.52	\$14,827.60	5.000	EA	N	INLETS, DT BOT, TYPE A, PARTIAL
0425 1511	5	\$4,015.47	\$602,321.12	150.000	EA	N	INLETS, DT BOT, TYPE B, <10'
0425 1512	1	\$6,000.00	\$12,000.00	2.000	EA	N	INLETS, DT BOT, TYPE B, >10'
0425 1513	3	\$7,365.00	\$73,650.00	10.000	EA	N	INLETS, DT BOT, TYPE B, J BOT, <10'
0425 1514	1	\$10,000.00	\$20,000.00	2.000	EA	N	INLETS, DT BOT, TYPE B, J BOT, >10'
0425 1515	2	\$2,644.79	\$55,540.69	21.000	EA	N	INLETS, DT BOT, TYPE B, PARTIAL
0425 1521	38	\$3,225.39	\$461,230.46	143.000	EA	N	INLETS, DT BOT, TYPE C, <10'
0425 1523	5	\$6,028.15	\$120,563.01	20.000	EA	N	INLETS, DT BOT, TYPE C, J BOT, <10'
0425 1525	6	\$3,530.22	\$31,771.94	9.000	EA	N	INLETS, DT BOT, TYPE C, PARTIAL
0425 1529	8	\$4,585.23	\$64,193.29	14.000	EA	N	INLETS, DT BOT, TYPE C, MODIFY
0425 1531	3	\$3,365.05	\$10,095.16	3.000	EA	N	INLETS, DT BOT, TYPE C MOD- BACK, <10'
0425 1533	1	\$8,000.00	\$8,000.00	1.000	EA	N	INLETS, DT BOT, TYPE C, MOD, J BOT, <10'
0425 1541	27	\$3,643.45	\$921,791.71	253.000	EA	N	INLETS, DT BOT, TYPE D, <10'
0425 1542	1	\$8,734.64	\$43,673.20	5.000	EA	N	INLETS, DT BOT, TYPE D, >10'
0425 1543	3	\$4,119.82	\$57,677.43	14.000	EA	N	INLETS, DT BOT, TYPE D, J BOT, <10'
0425 1544	2	\$6,232.93	\$12,465.85	2.000	EA	N	INLETS, DT BOT, TYPE D, J BOT, >10'
0425 1545	3	\$3,915.60	\$15,662.40	4.000	EA	N	INLETS, DT BOT, TYPE D, PARTIAL
0425 1549	8	\$4,961.20	\$158,758.33	32.000	EA	N	INLETS, DT BOT, TYPE D, MODIFY
0425 1551	19	\$3,671.24	\$517,644.78	141.000	EA	N	INLETS, DT BOT, TYPE E, <10'
0425 1552	2	\$4,765.80	\$23,829.00	5.000	EA	N	INLETS, DT BOT, TYPE E, >10'
0425 1553	2	\$5,115.37	\$219,961.00	43.000	EA	N	INLETS, DT BOT, TYPE E, J BOT, <10'
0425 1554	1	\$8,739.00	\$113,607.00	13.000	EA	N	INLETS, DT BOT, TYPE E, J BOT, >10'
0425 1555	1	\$6,250.00	\$6,250.00	1.000	EA	N	INLETS, DT BOT, TYPE E, PARTIAL
0425 1559	2	\$5,543.76	\$44,350.11	8.000	EA	N	INLETS, DT BOT, TYPE E, MODIFY
0425 1561	8	\$3,775.82	\$83,068.00	22.000	EA	N	INLETS, DT BOT, TYPE F, <10'
0425 1563	1	\$7,200.00	\$7,200.00	1.000	EA	N	INLETS, DT BOT, TYPE F, J BOT, <10'
0425 1565	3	\$4,232.57	\$29,628.00	7.000	EA	N	INLETS, DT BOT, TYPE F, PARTIAL
0425 1569	1	\$9,755.00	\$78,040.00	8.000	EA	N	INLETS, DT BOT, TYPE F, MODIFY

Florida Department of Transportation
Item Average Unit Cost
From 2017/06/01 to 2018/05/31

Contract Type: CC STATEWIDE
Displaying: VALID ITEMS WITH HITS
From: 0102 1 To: 9999999

Item	No. of Conts	Weighted Average	Total Amount	Total Quantity	Unit Meas	Obs?	Description
0430175166	2	\$289.93	\$473,463.40	1,633.000	LF	N	PIPE CULV, OPT MATL, ROUND, 66"S/CD
0430175172	1	\$330.00	\$197,010.00	597.000	LF	N	PIPE CULV, OPT MATL, ROUND, 72"S/CD
0430175215	6	\$125.99	\$44,475.85	353.000	LF	N	PIPE CULV, OPT MATL, OTHER, 15"S/CD
0430175218	29	\$91.71	\$1,901,982.39	20,739.000	LF	N	PIPE CULV, OPT MATL, OTHER, 18"S/CD
0430175224	13	\$96.22	\$570,384.68	5,928.000	LF	N	PIPE CULV, OPT MATL, OTHER, 24"S/CD
0430175230	7	\$114.46	\$218,845.58	1,912.000	LF	N	PIPE CULV, OPT MATL, OTHER, 30"S/CD
0430175236	7	\$195.69	\$291,778.87	1,491.000	LF	N	PIPE CULV, OPT MATL, OTHER, 36"S/CD
0430175242	3	\$262.42	\$342,462.69	1,305.000	LF	N	PIPE CULV, OPT MATL, OTHER, 42"S/CD
0430175248	1	\$200.00	\$21,200.00	106.000	LF	N	PIPE CULV, OPT MATL, OTHER, 48"S/CD
0430175254	1	\$226.96	\$45,845.92	202.000	LF	N	PIPE CULV, OPT MATL, OTHER, 54"S/CD
0430175260	1	\$260.00	\$47,840.00	184.000	LF	N	PIPE CULV, OPT MATL, OTHER, 60"S/CD
0430185118	2	\$414.77	\$96,227.04	232.000	LF	N	PIPE CULV, OPT MATL, ROUND, JACK&BORE, 18"
0430185124	4	\$701.54	\$515,630.98	735.000	LF	N	PIPE CULV, OPT MATL, ROUND, JACK&BORE, 24"
0430185130	3	\$819.18	\$542,300.00	662.000	LF	N	PIPE CULV, OPT MATL, ROUND, JACK&BORE, 30"
0430185136	1	\$1,229.00	\$92,175.00	75.000	LF	N	PIPE CULV, OPT MATL, ROUND, JACK&BORE, 36"
0430185142	1	\$850.00	\$106,250.00	125.000	LF	N	PIPE CULV, OPT MATL, ROUND, JACK&BORE, 42"
0430185148	1	\$1,234.00	\$212,248.00	172.000	LF	N	PIPE CULV, OPT MATL, ROUND, JACK&BORE, 48"
0430200 23	1	\$1,800.00	\$3,600.00	2.000	EA	N	FLARED END SECTION, CONCRETE, 15"
0430200 29	1	\$2,638.78	\$5,277.56	2.000	EA	N	FLARED END SECTION, CONCRETE, 24"
0430602123	1	\$1,400.00	\$1,400.00	1.000	EA	N	U-ENDWALL, W \GRATE, STD 260, 1:4 SLP, 15"
0430602129	1	\$8,100.00	\$8,100.00	1.000	EA	N	U-ENDWALL, W \GRATE, STD 260, 1:4 SLP, 24"
0430610025	1	\$2,347.75	\$37,564.00	16.000	EA	N	U-ENDWALL, STD 261, 1:6 SLP, 18"
0430610029	1	\$3,079.84	\$6,159.68	2.000	EA	N	U-ENDWALL, STD 261, 1:6 SLP, 24"
0430610125	1	\$2,700.00	\$5,400.00	2.000	EA	N	U-ENDWALL, STD 261, 1:6 SLP, 24"
0430610225	2	\$3,438.18	\$17,190.88	5.000	EA	N	U-ENDWALL, STD 261, 1:4 SLP, 18"
0430610325	2	\$6,355.00	\$25,420.00	4.000	EA	N	U-ENDWALL, STD 261, 1:3 SLP, 18"
0430611023	1	\$2,800.00	\$2,800.00	1.000	EA	N	U-ENDWALL, STD 261, 1:2 SLP, 18"
0430611029	1	\$2,290.00	\$2,290.00	1.000	EA	N	U-ENDWALL, STD 261, BAFFLES, 1:6 SLP, 15"
0430611125	3	\$1,641.65	\$55,816.21	34.000	EA	N	U-ENDWALL, BAFFLES, STD 261, 1:4 SLP, 18"
0430611129	1	\$1,820.00	\$30,940.00	17.000	EA	N	U-ENDWALL, BAFFLES, STD 261, 1:4 SLP, 24"
0430611133	2	\$3,340.00	\$6,680.00	2.000	EA	N	U-ENDWALL /BAFFLES, STD 261, 1:4 SLP, 30"
0430611225	2	\$1,527.41	\$41,240.00	27.000	EA	N	U-ENDWALL, BAFFLES, STD 261, 1:3 SLP, 18"
0430611229	2	\$1,700.00	\$17,000.00	10.000	EA	N	U-ENDWALL, BAFFLES, STD 261, 1:3 SLP, 24"
0430611233	1	\$1,820.00	\$3,640.00	2.000	EA	N	U-ENDWALL, STD 261, BAFFLES, 1:3 SLP, 30"
0430611325	3	\$2,862.40	\$54,009.68	29.000	EA	N	U-ENDWALL, BAFFLES, STD 261, 1:2 SLP, 18"
0430612025	2	\$3,533.12	\$17,731.86	7.000	EA	N	U-ENDWALL, GRATE, STD 261, 1:6 SLP, 18"
0430612029	1	\$3,820.00	\$15,280.00	4.000	EA	N	U-ENDWALL, GRATE, STD 261, 1:6 SLP, 24"
0430612033	1	\$4,740.00	\$11,760.00	4.000	EA	N	U-ENDWALL, BAF & GRATE, STD 261, 1:6 SLP, 18"
0430613025	1	\$2,940.00	\$3,820.00	1.000	EA	N	U-ENDWALL, BAF & GRATE, STD 261, 1:6 SLP, 24"
0430613029	1	\$3,820.00	\$3,820.00	1.000	EA	N	U-ENDWALL, BAF & GRATE, STD 261, 1:6 SLP, 24"

EXHIBIT I
SCOPE OF WORK AND COST ESTIMATE FOR MATERIALS TESTING SERVICES

Enterprise Class III Landfill
UES Proposal No.: 0810.1118.00030

UES TASK CODE	TASK DESCRIPTION	QTY	UNIT	UNIT COST	COST
1	Moisture Content ASTM D2216 (Borrow Pit)	3	test	\$10.00	\$30.00
2	Percent Fines ASTM D1140 (Borrow Pit)	3	test	\$30.00	\$90.00
3	Permeability Per ASTM D-5084 (Borrow Pit)	3	test	\$350.00	\$1,050.00
4	Atterberg Limits ASTM D4318 (Borrow Pit)	3	test	\$100.00	\$300.00
5	Moisture Content ASTM D2216 (In-place)	50	test	\$10.00	\$500.00
6	Percent Fines ASTM D1140 (In-Place)	50	test	\$30.00	\$1,500.00
7	Permeability Per ASTM D-5084 (In-Place)	50	test	\$350.00	\$17,500.00
8	Atterberg Limits ASTM D4318 (In-Place)	50	test	\$100.00	\$5,000.00
9	In-Place Thickness Check (Hand Augers) (In-Place)	150	each	\$45.00	\$6,750.00
10	Modified/Standard Proctor	1	each	\$80.00	\$80.00
11	In-Place Densities (In-Place)	300	each	\$18.00	\$5,400.00
12	Engineering Technician	10	trips	\$165.00	\$1,650.00
13	Signed and Sealed Completion Reports	3	each	\$35.00	\$255.00
Total					\$40,105.00
Administrative Services 7%					\$2,807.35
Total Construction Materials Testing Cost Estimate					\$42,912.35



AEGL Proposal

PRELIMINARY

From: AMERICAN ENVIRONMENTAL GROUP
3600 Brecksville Road
Suite 100
Richfield, OH 44286
Phone: 330-659-5930

Project: WINFIELD-2011-02-D
Description: Winfield - Drilling Budget
Bid Location: Lake City, FL
Bid Date: February 8, 2011
Revision Date:
Contract #: 2011-D2019

Pricing Revised 12/13/17
by Jeff Enochs

ITEM / DESCRIPTION	BID QTY	U/M	UNIT BID	AMOUNT
			12,500.00	\$12,500.00
MOBILIZATION	1.000	LS	10,000.00	\$10,000.00
MOBILIZATION			43.00	\$98,040.00
DRILLING	2,280.000	LF	35.00	\$79,800.00
WELL DRILLING 36" DIAMETER			27.00	\$61,582.00
WELL COMPLETION	2,280.000	LF	22.00	\$50,160.00
WELL COMPLETION NO MATERIALS			22.50	\$51,300.00
COMPL 6" PVC	2,280.000	LF	17.00	\$38,760.00
WELL COMPLETION 6" PVC PIPE W/ 10' STICKUP CANDY CANE			13.50	\$7,290.00
BENTONITE	540.000	BAG	10.50	\$5,670.00
BENTONITE (1) 2' PLUGS PER WELL			88.50	\$66,375.00
GRAVEL	750.000	TON	68.00	\$51,000.00
GRAVEL GRANITE #4 PROVIDED BY WM			650.00	\$29,250.00
BENCHING	45.000	EA	400.00	\$18,000.00
BENCHING IF REQUIRED			\$7,500.00	\$7,500.00
MATERIAL FREIGHT	1.000	LS	6,000.00	\$6,000.00
MATERIAL FREIGHT				

\$333,837.00

TOTAL BID:

\$259,390.00

Class I (24 vents)
Mobiliz. \$10,000
Drilling 960 LF @ 35/FT = \$33,600
Well Comp. 960 LF @ 22/FT = \$21,120
Well Stickup 960 LF @ 17/FT = \$16,320
Bentonite 288 bags @ 10.50/Bag = \$3,024
Gravel 320 tons @ \$68/ton = \$21,760
benches 15 @ \$400 each = \$6,000
material freight = \$6,000
AMERICAN ENVIRONMENTAL GROUP = \$6,000
totals \$117,824 or \$4,909/vent

Class III (21 vents)
\$10,000
546 LF @ 35/FT = \$19,110
546 LF @ 22/FT = \$12,012
546 LF @ 17/FT = \$9,282
252 bags @ 10.50/Bag = \$2,646
180 tons @ \$68/ton = \$12,240
12 @ \$400 each = \$4,800
\$76,090 or \$3,623/vent

(ITEM)
7

Winfield 2017 Permit Renewal (Item 7)

Passive Gas Vents

Class I (24 vents)	Qty		Cost/ea		Class III (21 vents)	Cost/ea	
					Qty		
Mobilization	1	n/a	\$12,500.00		1	n/a	\$12,500.00
Drilling	960	LF	\$43.00	\$41,280.00	546	LF	\$43.00
Well Completion	960	LF	\$27.00	\$25,920.00	546	LF	\$27.00
Well Stickup	960	LF	\$22.50	\$21,600.00	546	LF	\$22.50
Bentonite	288	Bags	\$13.50	\$3,888.00	252	Bags	\$13.50
Gravel	320	Tons	\$88.50	\$28,320.00	180	Tons	\$88.50
Benching	15	na	\$650.00	\$9,750.00	12	na	\$650.00
Material Freight	1	na	\$7,500.00	\$7,500.00	1	na	\$7,500.00
Total				\$150,758.00			\$97,637.00
Price per Vent				\$6,281.58			\$4,649.38

Nathan Dodge

From: John Arnold <john.phillip.arnold@gmail.com>
Sent: Friday, December 21, 2018 3:19 PM
To: Nathan Dodge
Subject: Fwd: Enterprise Landfill FDEP Closure Cost Estimate

----- Forwarded message -----

From: Daniel Zimmerman <dz@zeiosi.com>
Date: Fri, Dec 21, 2018 at 3:02 PM
Subject: RE: Enterprise Landfill FDEP Closure Cost Estimate
To: John Arnold <john.phillip.arnold@gmail.com>

Good afternoon John I have review the information that you asked about and I believe that those numbers will work with us. If you need a formal proposal we can provide that for you also. Please let me know if you need anything else.

Have a great and safe holiday season.

DZ

Daniel J. Zimmermann

Zimmer Equipment, Inc.

dz@zeiosi.com

(813) 248-5944

From: John Arnold <john.phillip.arnold@gmail.com>
Sent: Friday, December 21, 2018 11:03 AM
To: Daniel Zimmerman <dz@zeiosi.com>
Subject: Fwd: Enterprise Landfill FDEP Closure Cost Estimate

----- Forwarded message -----

From: **John Arnold** <john.phillip.arnold@gmail.com>
Date: Fri, Dec 21, 2018 at 9:19 AM
Subject: Enterprise Landfill FDEP Closure Cost Estimate
To: Daniel Zimmermann <dz@zeiosi.com>

Daniel,

The FDEP would like for us to confirm costs associated with the removal and disposal of the following materials from our landfill located at 41111 Enterprise Road, Dade City, FL 33525.

I've attached the estimate that we received from Choice Environmental (12/6/12) that is in our current estimate. Please provide quotes for the removal and disposal costs.

1. Ferrous Metal (500cy): \$4,125
2. Aluminum (300cy): \$2,500
3. Stainless Steel (300cy): \$2,500
4. Copper (25cy): \$250
5. Asphalt (300cy): \$3,000
6. Consrete/Rubble: \$\$3,000
7. Electronics (8cy): \$300
8. Class I (20cy): \$325
9. Paint/Solvent/Oil/Etc. (40cy): \$650

Thanks

--

John Arnold, P.E.
Ph. (813) 477-1719

Florida Department of Transportation

Item Average Unit Cost

From 2017/06/01 to 2018/05/31

Contract Type: CC STATEWIDE

Displaying: VALID ITEMS WITH HITS

From: 0102 1 To: 999999

Reference #8

Item	No. of Conts	Weighted Average	Total Amount	Total Quantity	Unit Meas	Obs?	Description
0102911 3	8	\$2.49	\$24,257.50	9,733.000	SF	N	PAVT MARKING REMOVABLE TAPE, WH BLK, OTHER
0102912 1	4	\$1.99	\$8,460.02	4,258.000	LF	N	PAVT MARKING REMOVABLE TAPE, YELLOW, SKIP
0102912 2	31	\$1.80	\$391,103.99	216,966.000	LF	N	PAVT MARKING REMOVABLE TAPE, YELLOW, SOLID
0103 1 19	1	\$1,470,000.00	\$1,470,000.00	1.000	LS	N	TEMPORARY WORK STRUCTURE, 41525015201
0104 1	34	\$2.17	\$193,814.08	89,147.000	SY	N	ARTIFICIAL COVERINGS / ROLL EROSION CNTL
0104 6	2	\$4.76	\$12,619.30	2,653.000	LF	N	TEMPORARY SLOPE DRAIN / RUNOFF CONT STR
0104 7	1	\$3,791.47	\$15,165.88	4.000	EA	N	SEDIMENT BASIN / CONTAINMENT SYSTEM
0104 9	2	\$982.76	\$5,896.56	6.000	EA	N	SEDIMENT BASIN / CONTAINMENT SY CLEANOUT
0104 10 3	149	\$1.23	\$2,297,201.80	1,871,905.000	LF	N	SEDIMENT BARRIER
0104 11	63	\$9.63	\$659,321.71	68,441.000	LF	N	FLOATING TURBIDITY BARRIER
0104 12	32	\$3.13	\$482,634.68	154,186.000	LF	N	STAKED TURBIDITY BARRIER- NYL REINF PVC
0104 15	54	\$2,624.27	\$645,569.52	246.000	EA	N	SOIL TRACKING PREVENTION DEVICE
0104 18	164	\$110.59	\$844,251.07	7,634.000	EA	N	INLET PROTECTION SYSTEM
0104 19	5	\$2.14	\$43,642.60	20,349.000	SY	N	CHEMICAL TREATMENT FOR EROSION CONTROL
0107 1	169	\$16.05	\$2,134,166.98	132,951.440	AC	N	LITTER REMOVAL
0107 2	165	\$24.18	\$2,556,953.80	105,748.940	AC	N	MOWING
0108 1	85	\$9,891.13	\$929,765.90	94.000	LS	N	MONITOR EXISTING STRUCTURES- SETTLL
0108 2	52	\$12,164.30	\$681,200.65	56.000	LS	N	MONITOR EXISTING STRUCTURES- VIBRA
0108 3	9	\$20,726.82	\$186,541.34	9.000	LS	N	MONITOR EXISTING STRUCTURES- GROUT
0110 1 1	178	\$10,050.02	\$26,759,438.58	2,662.626	AC	N	CLEARING & GRUBBING
0110 2 2	31	\$18,913.01	\$978,369.75	51.730	AC	N	SELECTIVE CLEARING AND GRUBBING, TREES R
0110 2 3	1	\$10,800.00	\$15,444.00	1.430	AC	N	SELECTIVE CLEARING AND GRUB, PLANT PRES
0110 3	25	\$48.43	\$5,994,695.07	123,772.000	SF	N	REMOVAL OF EXISTING STRUCTURES/BRIDGES
0110 4 10	131	\$15.72	\$3,794,276.72	241,436.000	SY	N	REMOVAL OF EXIST CONC
0110 6	1	\$1,000.00	\$3,000.00	3.000	EA	N	PLUGGING WATER WELLS, NON-ARTESIAN
0110 7 1	51	\$191.67	\$114,618.42	598.000	EA	N	MAILBOX, F&I SINGLE
0110 8 2	1	\$297.54	\$28,266.30	95.000	LF	N	UNDERWATER DEBRIS REMOVAL
0110 71 1	1	\$331.12	\$195,360.80	590.000	LF	N	BRIDGE FENDER SYSTEM, REMOVAL & DISPOSAL
0110 82	2	\$3,368.00	\$42,100.00	12.500	MB	N	REMOVE & DISPOSE OF STRUCTURAL TIMBER
0110 86	35	\$1,220.70	\$57,372.75	47.000	LS	N	DELIVERY OF SALVAGEABLE MATERIAL TO FDOT
0120 1	118	\$4.30	\$8,996,701.79	2,094,462.500	CY	N	REGULAR EXCAVATION
0120 2 2	60	\$12.88	\$1,448,404.71	112,430.800	CY	N	BORROW EXCAVATION, TRUCK MEASURE
0120 3	1	\$8.70	\$15,320.70	1,761.000	CY	N	LATERAL DITCH EXCAVATION
0120 4	29	\$9.87	\$2,642,938.04	267,908.000	CY	N	SUBSOIL EXCAVATION
0120 5	3	\$7.84	\$4,466,962.10	570,046.400	CY	N	CHANNEL EXCAVATION
0120 6	94	\$8.30	\$39,300,724.81	4,735,313.200	CY	N	EMBANKMENT
0120 11	1	\$43.00	\$61,920.00	1,440.000	SY	N	EMBANKMENT- SPECIAL SELECT FOR RIGID PAV
0120 71	35	\$29,530.77	\$1,210,761.76	41.000	LS	N	REGULAR EXCAVATION (3-R PROJECTS ONLY)
0120 74	3	\$3.08	\$365,043.68	118,533.000	CY	N	SURCHARGE EMBANKMENT
0125 1	3	\$71.10	\$23,833.10	335.200	CY	N	EXCAVATION FOR STRUCTURES

FLORIDA JETCLEAN

HIGH PRESSURE WATER JETTING – EXPLOSION PROOF INSPECTION PIPE LOCATING – NO DIG REPAIRS – VACUUM TRUCK SERVICES

7538 Dunbridge Drive
Odessa, FL 33556
www.floridajetclean.com

TEL : 800-226-8013
FAX : 813-926-4616

PROPOSAL

DATE : 12/19/2018
TO : Nathan Dodge – Locklear & Associates
FROM : Ralph Calistri (floridajetclean@yahoo.com)
SUBJECT : LCS Maintenance Proposal for Enterprise Rd Class III Recycling & Disposal Facility

Thank you for your inquiry. We confirm our capability and interest in carrying out this work for Locklear & Associates at the Enterprise Road Class III Recycling & Disposal Facility.

FLORIDA JETCLEAN specializes in leachate collection system maintenance and inspection, and has developed a considerable amount of specific expertise in this field over the last 30+ years. Our company has worked at an extensive number of landfills in Florida, Georgia, the Carolinas, Delaware, and westward to Arkansas. We have worked with most engineering companies active in this field, and have also fostered excellent working relationships with the regulatory authorities. We use modified jetting equipment designed to achieve extended pipe distances found in landfill environments and **our explosion proof camera equipment complies with all OSHA and regulatory mandates for methane piping**. Substantial references are available on request.

Based on the information provided in your email, we propose as follows:

High-pressure water-jetting and explosion-proof video-inspection of roughly 380 LF of existing 8" leachate collection piping \$ 3,600.00

Subject to:

- An adequate, no charge, water supply for jetcleaning.
- 2 wheel drive vehicle access within 10'-15' of each cleanout
- Continuity of access allowing work to be carried out on a single mobilization
- Exposed and opened cleanouts at ground level
- **Our equipment and procedures fully meet OSHA and DEP requirements. In particular our video equipment is certified Class 1, Division 1, Gas Groups C & D (i.e. explosion proof). This is required by OSHA in methane piping.**

- Current technology limitations may preclude the use of tractor video systems (range of 1000'+) in 8" or smaller lines restricted to cleanout access. If a push video system has to be used, we will be limited to a maximum 400' – 500' from each point of entry. This may mean that sections of these pipes cannot be inspected, and successful jetcleaning will therefore have to be evidence of pipe integrity in any inaccessible segments.
- No pumping or vacuum removal is included. Throughput from jetcleaning will be flushed through to pump stations and/or sump areas.
- Pricing is unrelated to actual or achieved footages but on the number of setups required and the time we anticipate being on site.
- All pricing subject to both jetting and video work being carried out by this company.
- Pipes affected by heavy, non-routine silting, requiring more than 1 pass of the jetting nozzle, may require additional hourly billing to complete.
- Payment : Net 30 days

Regards,

A handwritten signature in black ink that reads "Ralph Calistri". The signature is written in a cursive, slightly stylized font.

Ralph Calistri – Florida Jetclean - 800-226-8013