

PRELIMINARY DETERMINATION

PERMIT RENEWAL

The Solid Waste Disposal Authority of Baldwin County Alabama, Inc.
15093 Landfill Drive
Summerdale, Alabama 36580

MacBride Landfill
Permit No. 02-11

November 1, 2024

CDG, Inc. has submitted to the Alabama Department of Environmental Management (ADEM), on behalf of the Baldwin County Solid Waste Disposal Authority, an application for renewal of the Solid Waste Disposal Facility Permit for the MacBride Landfill (Permit No. 02-11). The MacBride Landfill is described as being located in Section 16, Township 5 South, Range 3 East, and located on 14200 County Road 64 in Baldwin County, Alabama. The MacBride Landfill permitted area will remain approximately 192.6 acres with the disposal area consisting of approximately 88.8 acres.

The waste stream for the MacBride Landfill will remain non-hazardous construction and demolition waste, waste building material, packaging, and rubble resulting from construction, remodeling, repair, or demolition of pavements, houses, commercial buildings and other structures. Such waste includes, but are not limited to, masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, wood products, yard cleaning waste, discarded tires and storm debris. The service area for the MacBride Landfill will remain Baldwin County, Alabama including all municipalities. The maximum average daily volume of waste disposed at the MacBride Landfill will remain 500 tons per day.

The Land Division has determined that the permit application complies with the requirements of ADEM Administrative Code Division 335-13 regulations for a construction and demolition waste landfill.

Technical Contact:
Mr. Blake Holden
Solid Waste Engineering Section
Land Division
(334) 274-4248



SOLID WASTE DISPOSAL FACILITY PERMIT

PERMITTEE: The Solid Waste Disposal Authority of Baldwin County Alabama, Inc.

FACILITY NAME: MacBride Landfill

FACILITY LOCATION: A part of Section 16, Township 5 South, Range 3 East, and is located at 142000 County Road 64 in Baldwin County, Alabama. The total permitted area is approximately 192.6 acres with 88.8 acres approved for disposal.

PERMIT NUMBER: 02-11

PERMIT TYPE: Construction and Demolition Waste Landfill

WASTE APPROVED FOR DISPOSAL: Non-hazardous construction and demolition waste, waste building material, packaging, and rubble resulting from construction, remodeling, repair, or demolition of pavements, houses, commercial buildings and other structures. Such waste includes, but are not limited to, masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, wood products, yard cleaning waste, discarded tires and storm debris.

APPROVED WASTE VOLUME: Maximum Average Daily Volume of 500 tons per day

APPROVED SERVICE AREA: Baldwin County, Alabama

In accordance with and subject to the provisions of the Alabama Solid Wastes and Recyclable Materials Management Act, as amended, Code of Alabama 1975, SS 22-27-1 to 22-27-27 ("SWRMMA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, SS 22-22A-1 to 22-22A-15, and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to dispose of the above-described solid wastes at the above-described facility location.

ISSUANCE DATE: XXXXXXXXX

EFFECTIVE DATE: XXXXXXXXX

EXPIRATION DATE: XXXXXXXXX

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
SOLID WASTE PERMIT**

Permittee: The Solid Waste Disposal Authority of Baldwin County Alabama, Inc.
15093 Landfill Drive
Summerdale, Alabama 36580

Landfill Name: MacBride Landfill

Landfill Location: Section 16, Township 5 South, Range 3 East, and located on 14200 County Road 64 in Baldwin County, Alabama

Permit Number: 02-11

Landfill Type: Construction/Demolition

Pursuant to the Alabama Solid Wastes & Recyclable Materials Management Act, Code of Alabama 1975, Section 22-27-1, *et seq.*, as amended, and attendant regulations promulgated there under by the Alabama Department of Environmental Management (ADEM), this permit is issued to The Solid Waste Disposal Authority of Baldwin County Alabama, Inc. (hereinafter called the Permittee), to operate a solid waste disposal facility, known as the MacBride Landfill.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions set forth herein (including those in any attachments), and the applicable regulations contained in Chapters 335-13-1 through 335-13-16 of the ADEM Administrative Code (hereinafter referred to as the "ADEM Admin. Code"). Rules cited are set forth in this document for the purpose of Permittee reference. Any Rule that is cited incorrectly in this document does not constitute grounds for noncompliance on the part of the Permittee. Applicable ADEM Administrative Codes are those that are in effect on the date of issuance of this permit or any revisions approved after permit issuance.

This permit is based on the information submitted to the Department on October 10, 2024, for permit renewal and as amended (hereby incorporated by reference and hereinafter referred to as the Application). Any inaccuracies found in this information could lead to the termination or modification of this permit and potential enforcement action). The Permittee must inform the Department of any deviation from or changes in the information in the Application that would affect the Permittee's ability to comply with the applicable ADEM Admin. Code or permit conditions.

This permit is effective as of XXXXXXXXXXXX and shall remain in effect until XXXXXXXXXXXX, unless suspended or revoked.

Alabama Department of Environmental Management

Date Signed

SECTION I. STANDARD CONDITIONS

A. Effect of Permit

The Permittee is allowed to dispose of nonhazardous solid waste in accordance with the conditions of this permit and ADEM Admin. Code 335-13. Issuance of this permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local laws or regulations. Except for actions brought under Code of Alabama 1975, Section 22-27-1, *et seq.*, as amended, compliance with the conditions of this permit shall be deemed to be compliance with applicable requirements in effect as of the date of issuance of this permit and any future revisions.

B. Permit Actions

This permit may be suspended, revoked or modified for cause. The filing of a request for a permit modification or the notification of planned changes or anticipated noncompliance on the part of the Permittee, and the suspension or revocation does not stay the applicability or enforceability of any permit condition.

C. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

D. Definitions

For the purpose of this permit, terms used herein shall have the same meaning as those in ADEM Admin. Code 335-13, unless this permit specifically provides otherwise; where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

1. "EPA" for purposes of this permit means the United States Environmental Protection Agency.
2. "Permit Application" for the purposes of this permit, means all permit application forms, design plans, operational plans, closure plans, technical data, reports, specifications, plats, geological and hydrological reports, and other materials which are submitted to the Department in pursuit of a solid waste disposal permit.

E. Duties and Requirements

1. Duty to Comply

The Permittee must comply with all conditions of this permit except to the extent and for the duration such noncompliance is authorized by a variance granted by the Department. Any permit noncompliance constitutes a violation of Code of Alabama 1975, Section 22-27-1 *et seq.*, as amended, and is grounds for enforcement action, permit suspension, revocation, modification, and/or denial of a permit renewal application.

2. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The renewal application must be submitted to the Department at least 180 days before this permit expires.

3. Permit Expiration

This permit and all conditions therein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application as required by Section I.,E.,2., and, through no fault of the Permittee, the Department has not made a final decision regarding the renewal application.

4. Need to Halt or Reduce Activity Not A Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

5. Duty to Mitigate

In the event of noncompliance with this permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with the conditions of this permit.

7. Duty to Provide Information

If requested, the Permittee shall furnish to the Department, within a reasonable time, any information that the Department may reasonably need to determine whether cause exists for denying, suspending, revoking, or modifying this permit, or to determine compliance with this permit. If requested, the Permittee shall also furnish the Department with copies of records kept as a requirement of this permit.

8. Inspection and Entry

Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the employees of the Department or their authorized representative to:

- a. Enter at reasonable times the Permittee's premises where the regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
- d. Sample or monitor, at reasonable times, any substances or parameters at any location for the purposes of assuring permit compliance or as otherwise authorized by Code of Alabama 1975, Section 22-27-1 *et seq.*

9. Monitoring, Corrective Actions, and Records

- a. Samples and measurements taken for the purpose of monitoring or corrective action shall be representative of the monitored activity. The methods used to obtain representative samples to be analyzed must be the appropriate method from ADEM Admin. Code 335-13-4 or the methods as specified in the Application attached hereto and incorporated by reference. Laboratory methods must be those specified in Standard Methods for the Examination of Water and Wastewater (American Public Health Association, latest edition), Methods for Chemical

Analysis of Water and Wastes (EPA-600/4-79-020), Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (EPA Publication SW-846, latest edition), other appropriate EPA methods, or as specified in the Application. All field tests must be conducted using approved EPA test kits and procedures.

- b. The Permittee shall retain records, at the location specified in Section I.,I., of all monitoring, or corrective action information, including all calibration and maintenance records, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or record or for periods elsewhere specified in this permit. These periods may be extended by the request of the Department at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.
 - c. Records of monitoring and corrective action information shall include.
 - i. The exact place, date, and time of sampling or measurement.
 - ii. The individual(s) and company who performed the sampling or measurements.
 - iii. The date(s) analyses were performed.
 - iv. The individual(s) and company who performed the analyses.
 - v. The analytical techniques or methods used.
 - vi. The results of such analyses.
 - d. The Permittee shall submit all monitoring and corrective action results at the interval specified elsewhere in this permit.
10. Reporting Planned Changes

The Permittee shall notify the Department, in the form of a request for permit modification, at least 120 days prior to any change in the permitted service area, increase in the waste received, or change in the design or operating procedure as described in this permit, including any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

11. Transfer of Permit

This permit may be transferred to a new owner or operator. All requests for transfer of permits shall be in writing and shall be submitted on forms provided by the Department. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of this permit.

12. Certification of Construction

Before the Permittee may commence disposal of waste in any new cell or phase:

- a. The Permittee must submit a letter to the Department signed by both the Permittee and a professional engineer stating that the facility has been constructed in compliance with the permit.
- b. The Department must inspect the new cells or phases unless the Permittee is notified that the Department will waive the inspection.
- c. The Permittee may not commence disposal activities in any new cells or phases until approval of

the new cells or phases is granted by the Department.

14. Noncompliance

The Permittee shall report all instances of noncompliance with the permit at the time noncompliance is discovered.

15. Other Information

If the Permittee becomes aware that information required by the Application was not submitted or was incorrect in the Application or in any report to the Department, the Permittee shall promptly submit such facts or information. In addition, upon request, the Permittee shall furnish to the Department, within a reasonable time, information related to compliance with the permit.

F. Design and Operation of Facility

The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of contaminants (including leachate and explosive gases) to air, soil, groundwater, or surface water, which could threaten human health or the environment.

G. Inspection Requirements

1. The Permittee shall comply with all requirements of ADEM Admin. Code r. 335-13-4-.21(1)(b).
2. The Permittee shall conduct random inspections of incoming loads.
3. Records of all inspections shall be included in the operating record.

H. Recordkeeping and Reporting

1. The Permittee shall maintain a written operating record at the location specified in Section I.,1. The operating record shall include:
 - a. Documentation of inspection and maintenance activities.
 - b. Daily Volume reports.
 - c. Personnel training documents and records.
 - d. Solid/Hazardous Waste Determination Forms for Industrial Wastes, and associated ADEM disposal approval correspondence for industrial waste and special waste.
 - e. Groundwater monitoring records.
 - f. Explosive gas monitoring records.
 - g. Surface water and leachate monitoring records.
 - h. Copies of this Permit and the Application.
 - i. Copies of all variances granted by the Department, including copies of all approvals of special operating conditions.

2. Quarterly Volume Report

Beginning with the effective date of this permit, the Permittee shall submit, within thirty (30) days after the end of each calendar quarter, a report summarizing the daily waste receipts for the previous (just ended) quarter. Copies of the quarterly reports shall be maintained in the operating record.

3. Monitoring and Corrective Action Reports

The Permittee shall submit reports on all monitoring and corrective action activities conducted pursuant to the requirements of this permit, including, but not limited to, groundwater, surface water, explosive gas and leachate monitoring. The groundwater monitoring shall be conducted in March and September of each year, or as directed by the Department, and the reports shall be submitted at least semi-annually, or as directed by the Department. The reports should contain all monitoring results and conclusions from samples and measurements conducted during the sampling period. Explosive gas monitoring must be submitted on an annual basis, and the reports should be submitted to the Department and placed in the operating record within 30 days of the monitoring event. Copies of the groundwater and explosive gas monitoring reports shall be maintained in the operating record.

4. Availability, Retention, and Disposition of Records

- a. All records, including plans, required under this permit or Division 13 must be furnished upon request, and made available at reasonable times for inspection by any officer, employee, or representative of the Department.
- b. All records, including plans, required under this permit or Division 13 shall be retained by the Permittee for a period of at least three years. The retention period for all records is extended automatically during the course of any unresolved enforcement action regarding the facility, or as requested by the Department.
- c. A copy of records of waste disposal locations and quantities must be submitted to the Department and local land authority upon closure of the facility.

I. Documents to be Maintained by the Permittee

The Permittee shall maintain, at the MacBride Landfill office, the following documents and amendments, revisions and modifications to these documents until an engineer certifies closure of the permitted landfill.

1. Operating record.
2. Closure Plan.

J. Mailing Location

All reports, notifications, or other submissions which are required by this permit should be sent via signed mail (i.e. certified mail, express mail delivery service, etc.) or hand delivered to:

Mailing Address.
Chief, Solid Waste Branch, Land Division
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130-1463

Physical Address.
Chief, Solid Waste Branch, Land Division
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, Alabama 36110-2400

K. Signatory Requirement

All applications, reports or information required by this permit, or otherwise submitted to the Department, shall be signed and certified by the owner as follows:

1. If an individual, by the applicant.
2. If a city, county, or other municipality or governmental entity, by the ranking elected official, or by a duly authorized representative of that person.
3. If a corporation, organization, or other legal entity, by a principal executive officer, of at least the level of Vice President, or by a duly authorized representative of that person.

L. Confidential Information

The Permittee may claim information submitted as confidential pursuant to ADEM Admin. Code 335-1-1-.06.

M. State Laws and Regulations

Nothing in this permit shall be construed to preclude the initiation of any legal action or to relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

SECTION II. GENERAL OPERATING CONDITIONS

A. Operation of Facility

The Permittee shall operate and maintain the disposal facility consistent with the Application, this permit, and ADEM Admin. Code 335-13.

B. Open Burning

The Permittee shall not allow open burning without prior written approval from the Department and other appropriate agencies. A burn request should be submitted in writing to the Department outlining why that burn request should be granted. This request should include, but not be limited to, specifically what areas will be utilized, types of waste to be burned, the projected starting and completion dates for the project, and the projected days and hours of operation. The approval, if granted, shall be included in the operating record.

C. Prevention of Unauthorized Disposal

The Permittee shall follow the approved procedures, as provided in the Application, for detecting and preventing the disposal of free liquids, regulated hazardous waste, PCB's, regulated medical waste, and other unauthorized waste streams at the facility.

D. Unauthorized Discharge

The Permittee shall operate the disposal facility in such a manner that there will be no water pollution or unauthorized discharge. Any discharge from the disposal facility or practice thereof may require a National Pollutant Discharge Elimination System permit under the Alabama Water Pollution Control Act.

E. Industrial Waste Disposal

The Permittee shall not dispose of industrial waste at this landfill. Only those wastes shown in Section III.B are allowed for disposal in this landfill.

F. Boundary Markers

The Permittee shall ensure that the facility is identified with a sufficient number of permanent boundary markers that are at least visible from one marker to the next.

G. Certified Operator

The Permittee shall be required to have an operator certified by the Department on-site during hours of operation, in accordance with the requirements of ADEM Admin. Code 335-13-12.

SECTION III. SPECIFIC REQUIREMENTS FOR C/D LANDFILLS

A. Waste Identification and Management

1. Subject to the terms of this permit, the Permittee may dispose of the nonhazardous solid wastes listed in III.B. Disposal of any other wastes is prohibited, except waste granted a temporary or one time waiver by the Director.
2. The total permitted area for the MacBride Landfill is 192.6 acres with the disposal area comprising of 88.8 acres.
3. The maximum average daily volume of waste disposed at the facility shall not exceed 500 tons per day, except as provided under ADEM Admin. Code r. 335-13-5-.06(2)(b)2. The average daily volume shall be computed as specified by ADEM Admin. Code r. 335-13-4-.23(2)(f).

B. Waste Streams

Non-hazardous construction and demolition waste, waste building material, packaging, and rubble resulting from construction, remodeling, repair, or demolition of pavements, houses, commercial buildings and other structures. Such waste include, but are not limited to, masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, wood products, yard clearing waste, discarded tires and storm debris.

C. Service Area:

The service area for MacBride Landfill is Baldwin County, Alabama and all municipalities within the county.

D. Waste Placement, Compaction, and Cover

All waste shall be confined to an area as small as possible within a single working face and spread to a depth not exceeding two feet prior to compaction, and such compaction shall be accomplished on a face slope not to exceed 4 to 1 (25%) or as otherwise approved by the Department. All waste shall be spread in layers two feet or less in thickness and compacted weekly with adequate landfill equipment prior to placing additional layers of waste or placing the weekly cover. A minimum of six inches of compacted earth or other alternative cover

material approved by the Department and listed in Section VIII shall be added at the conclusion of each Friday's operation. The Permittee is approved to use shredded green waste/soil mixture as an alternate weekly cover material. When using alternate cover material, it is required that a minimum of six inches of compacted earth be added at the conclusion of the last Friday of each month's operation. (See Section VIII.1.) These are minimum requirements for waste placement, compaction and cover unless a variance is granted in Section VIII.

E. Liner Requirements

The Permittee shall not be required to install a composite liner system at this time. The bottom of the construction and demolition waste shall be a minimum of five (5) feet above the highest measured groundwater level as determined by ADEM Admin. Code r. 335-13-4-.11(2)(a).

F. Security

The Permittee shall provide artificial and/or natural barriers, which prevent entry of unauthorized vehicular traffic to the facility.

G. All Weather Access Roads

The Permittee shall provide an all-weather access road to the dumping face that is wide enough to allow passage of collection vehicles.

H. Adverse Weather Disposal

The Permittee shall provide for disposal activities in adverse weather conditions.

I. Personnel

The Permittee shall maintain adequate personnel to ensure continued and smooth operation of the facility.

J. Environmental Monitoring and Treatment Structures

The Permittee shall provide protection and proper maintenance of environmental monitoring and treatment structures.

K. Vector Control

The Permittee shall provide for vector control as required by ADEM Admin. Code 335-13.

L. Bulk or Noncontainerized Liquid Waste

The Permittee shall not dispose of bulk or noncontainerized liquid waste, or containers capable of holding liquids, unless the conditions of ADEM Admin. Code r. 335-13-4-.23(1)(j) are met.

M. Empty Containers

Empty containers larger than 10 gallons in size must be rendered unsuitable for holding liquids prior to disposal in the landfill unless otherwise approved by the Department.

N. Other Requirements

The Department may enhance or reduce any requirements for operating and maintaining the landfill as deemed necessary by the Land Division.

O. Other Permits

The Permittee shall operate the landfill according to this and any other applicable permits.

P. Scavenging and Salvaging Operations

The Permittee shall prevent scavenging and salvaging operations, except as part of a controlled recycling effort. Any recycling operation must be in accordance with plans submitted and approved by the Department.

Q. Signs

If the landfill is available to the public or commercial haulers, the Permittee shall provide a sign outlining instructions for use of the site. The sign shall be posted and have the information required by ADEM Admin. Code r. 335-13-4-.23(1)(f).

R. Litter Control

The Permittee shall control litter.

S. Fire Control

The Permittee shall provide fire control measures.

SECTION IV. GROUNDWATER MONITORING REQUIREMENTS

Groundwater monitoring is not required at this landfill if the waste stream is in accordance with Section III.B. Should any waste be disposed other than the waste streams indicated in Section III.B., the Department may require that groundwater-monitoring wells be installed.

SECTION V. GAS MONITORING REQUIREMENTS

The permittee must install and maintain an explosive gas monitoring system in accordance with ADEM Admin. Code 335-13.

SECTION VI. SURFACE WATER MANAGEMENT REQUIREMENTS

The Permittee shall construct and maintain run-on and run-off control structures to control the discharge of pollutants in stormwater. Any discharges from drainage control structures shall be permitted through a discharge permit issued by the ADEM Water Division.

SECTION VII. CLOSURE AND POST-CLOSURE REQUIREMENTS

The Permittee shall close the landfill and perform post-closure care of the landfill in accordance with Division 13.

A. Final Cover

The Permittee shall grade final soil cover such that surface water does not pond over the permitted area as specified in the Application. The final cover system shall comply with ADEM Admin. Code 335-13.

B. Vegetative Cover

The Permittee shall establish a vegetative or other appropriate cover within 90 days after completion of final grading requirements in the Application. Preparation of a vegetative cover shall include, but not be limited to, the placement of seed, fertilizer, mulch, and water.

C. Notice of Intent

The Permittee shall place in the operating record and notify the Department of their intent to close the landfill prior to beginning closure.

D. Completion of Closure Activities

The Permittee must complete closure activities of each landfill unit in accordance with the Closure Plan within 180 days of the last known receipt of waste.

E. Certification of Closure

Following closure of each unit, the Permittee must submit to the Department a certification, signed by a registered professional engineer, verifying the closure has been completed according to the Closure Plan.

F. Post-Closure Care Period

Post-closure care activities shall be conducted after closure of each unit throughout the life of this permit and continuing for a period of a minimum of thirty (30) years following closure of the facility. The Department may shorten or extend the post-closure care period applicable to the solid waste disposal facility.

G. Post-Closure Maintenance

The Permittee shall provide post closure maintenance of the facility to include regularly scheduled inspections. This shall include maintenance of the cover, vegetation, monitoring devices and pollution control equipment and correction of other deficiencies that may be observed by the Department. Monitoring requirements shall continue throughout the post closure period as determined by the Department unless all waste is removed and no unpermitted discharge to waters of the State have occurred.

H. Post-Closure Use of Property

The Permittee shall ensure that post closure use of the property never be allowed to disturb the integrity of the final cover, liner, or any other component of the containment system. This shall preclude the growing of deep-rooted vegetation on the closed area.

I. Certification of Post-Closure

Following post-closure of each unit, the Permittee must submit to the Department a certification, signed by a registered professional engineer, verifying the post-closure has been completed according to the Post-Closure Plan.

J. Recording Instrument

The Permittee must provide documentation of compliance with the requirements of the Uniform Environmental Covenants Program in ADEM Admin. Code 335-5 and shall execute the following:

1. Record a notation onto the land deed within 90 days from the certification of closure. This notation shall state that the land has been used as a solid waste disposal facility, the name of the Permittee, type of disposal activity, location of the disposal facility, and beginning and closure dates of the disposal activity.
2. File the covenant at the courthouse where the land deed is held thirty (30) days of receipt of the covenant signed by ADEM's Land Division Chief.
3. The Permittee shall submit a certified copy of the recording instrument to the Department within 120 days after permit expiration, revocation, or as directed by the Department as described in the Application.

K. Removal of Waste

If the Permittee, or any other person(s), wishes to remove waste, waste residues, or any liner or contaminated soils, the owner must request and receive prior approval from the Department.

SECTION VIII. VARIANCES & SPECIAL CONDITIONS

1. The Permittee is approved to use shredded green waste/soil mixture as an alternate weekly cover material and applied per the Application. The alternate weekly cover should be mixed in the ratio of 50% shredded green waste: 50% soil. It is required that a minimum of six inches of compacted earth be added at the conclusion of the last Friday of each month's operation. (See Section III.D.)

Any variance granted by the Department may be terminated by the Department whenever the Department finds, after notice and opportunity for hearing, that the petitioner is in violation of any requirement, condition, schedule, limitation or any other provision of the variance, or that operation under the variance does not meet the minimum requirements established by state and federal laws and regulations or is unreasonably threatening the public health.

APPLICATION



11 West Court Square
Andalusia, AL 36420
Post Office Box 278
Andalusia, AL 36420
Tel (334) 222-9431
Fax (334) 222-4018

cdge.com

October 10, 2024

Blake Holden
Solid Waste Engineering Section
Land Division
1400 Coliseum Blvd.
Post Office Box 301463
Montgomery, AL 36130

**Re: MacBride Landfill Permit Renewal Application
Permit No. 02-11**

Dear Mr. Holden,

The following is in response to the Department's email dated May 8, 2024 and the Comment Letter dated October 1, 2024 requesting the following additional information:

- Revised ADEM Form 439 to reflect the new Permittee (Baldwin County Solid Waste Disposal Authority) and requested service area.
 - *Revised and signed Form 439, included in Appendix B of the attached updated Operations Manual, dated June 2024.*
- Boundary Plat and Legal Description for the 40-acre expansion.
 - Attached is a Boundary Plat for the entire facility, including the 40-acre expansion, as well as the permitted disposal areas.
- Revised Operations Plan to reflect the approved alternate weekly cover material and correct disposal area.
 - *Operational Plan is included in Section 4.0 of the attached updated Operations Manual, dated June 2024.*
 - *The correct disposal area acreage is included in Section 1.0 of the attached updated Operations Manual, dated June 2024.*
 - *Explosive Gas Monitoring Plan, dated May 24, 2024, attached.*
 - *Section 3.4 of the Operations Plan had language added to clarify groundwater monitoring at the facility.*
- A certification statement by a professional engineer and the facility owner/operator certifying that the information being submitted is accurate and correct.
- Updated adjacent landowner list and map.
- The most recent set of engineering drawings approved for current operations.



Please let me know if you need any additional information.

Sincerely,

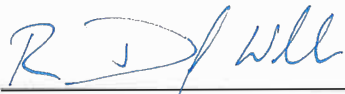
CDG, Inc.

A handwritten signature in black ink, appearing to read 'J. Anders', written over a light blue horizontal line.

Brad Anders, P.G.
Project Manager

CERTIFICATION STATEMENT

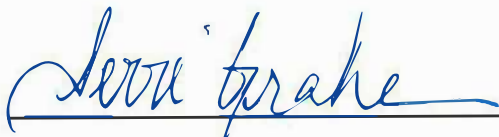
"I certify under penalty of law that I am a registered professional engineer familiar with the design and operation of the MacBride Landfill. The activities and procedures discussed in the following Permit (02-11) Renewal for the MacBride Landfill, in my opinion, meet the regulatory requirements Per ADEM Admin. Code r. 335-13-5-.02(1)(d) as they apply to the MacBride Landfill facility. The information submitted herein, to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information."



Daniel Wells, P.E.

Alabama Professional Engineer #27032-E

"The activities and procedures discussed in the following Permit (02-11) Renewal for the MacBride Landfill, in my opinion, meet the regulatory requirements Per ADEM Admin. Code r. 335-13-5-.02(1)(d) as they apply to the MacBride Landfill facility. The information submitted herein to the best of my knowledge and belief, is true, accurate, and complete."



Terri Graham, CEO

Solid Waste Authority of Baldwin County

SOLID WASTE APPLICATION

PERMIT APPLICATION
SOLID WASTE DISPOSAL FACILITY
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
(Submit in Triplicate)

1. Facility type: Municipal Solid Waste Landfill (MSWLF)
 Industrial Landfill (ILF)
 Construction and Demolition Landfill (C/DLF)
 CCR Landfill (CCRLF)
 CCR Surface Impoundment (CCRSI)
 Other (explain) _____

2. Facility Name MacBride Landfill (Permit No. 02-11)

3. Applicant/Permittee:

Name: Baldwin County Solid Waste Disposal Authority

Address: 15093 Landfill Dr.
Summerdale, Alabama 36580

Telephone: (251) 972-6878

If applicant/permittee is a Corporation, please list officers:

4. Location: (include county highway map or USGS map)

Township 5 South Range 3 East
Section 16 County Baldwin

5. Land Owner:

Name: Same as Permittee

Address: _____

Telephone: _____

(Attach copy of agreement from landowner if applicable.)

Solid Waste Permit Application
Page 2

6. Contact Person:

Name Terri Graham

Position or Affiliation Chief Executive Officer

Address: 15093 Landfill Drive
Summerdale, AL 36580

Telephone: (251) 972-6878

7. Size of Facility: 192.6 Acres Size of Disposal Area(s): 86.4 Acres

8. Identify proposed service area or specific industry that waste will be received from:

Baldwin County, Alabama

9. Proposed maximum average daily volume to be received at landfill (choose one):

500 Tons/Day _____ Cubic Yards/Day

10. List all waste streams to be accepted at the facility (i.e., household solid waste, wood boiler ash, tires, trees, limbs, stumps, etc.):

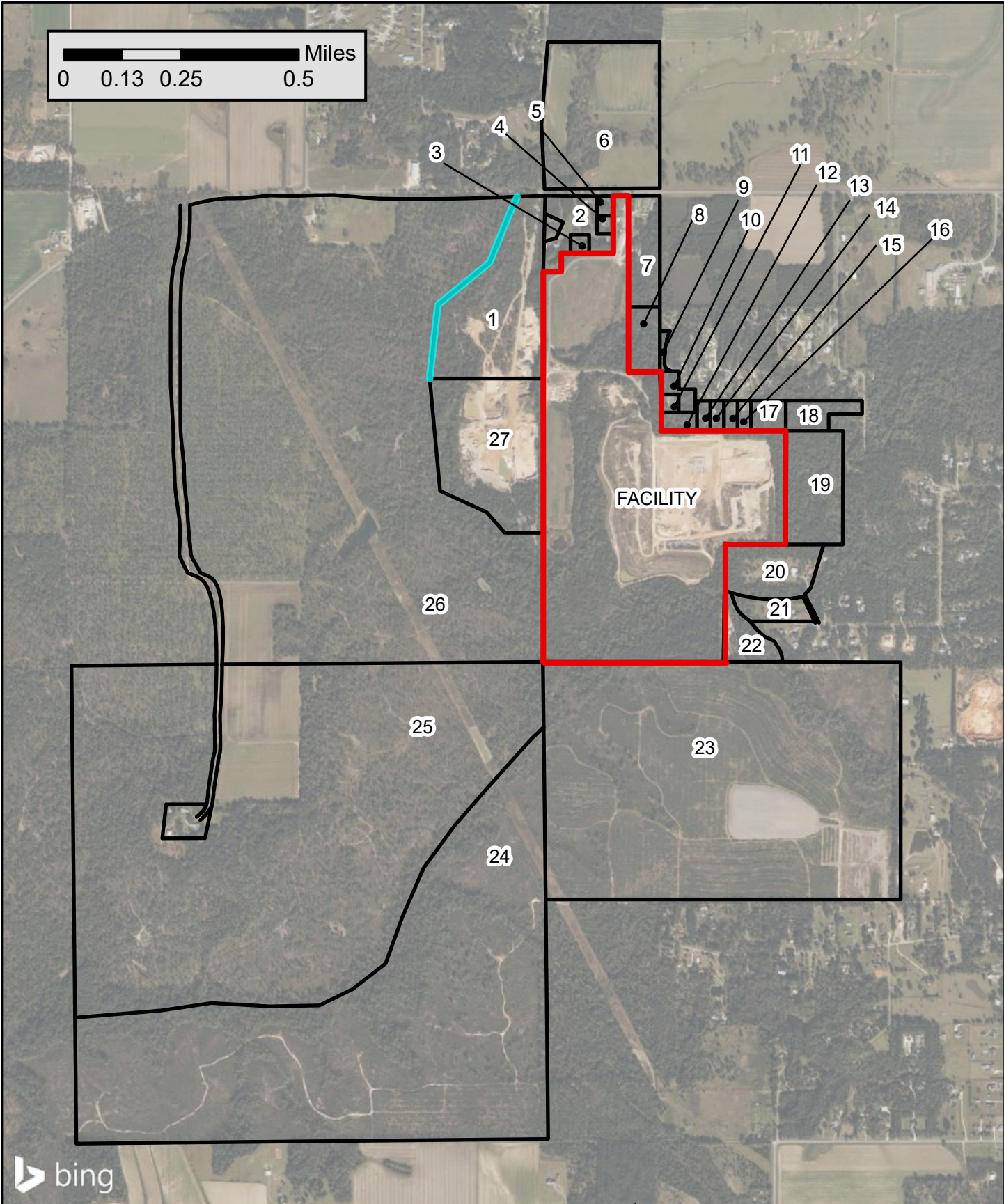
Construction and demolition waste, waste building materials, packaging, and rubble resulting from the construction and remodeling, repair, or demolition on pavements, houses, commercial buildings, and other structures. Such waste includes, but are not limited to masonry materials, sheet rock, roofing waste, insulation tires, scrap metal, rebar, paving materials, yard cleaning waste, wood products, scrap tires, and storm debris.

SIGNATURE (Responsible official of permit applicant):

 TITLE: CEO

Terri Graham DATE: 6.11.2024

(please print or type name)



Adjacent Landowners Map
MacBride Landfill (02-11)
 Loxley, AL



Sheet No.
 1

Drawn By: SEJ
 Checked By: JRA
 Date: SEPTEMBER 2023

**MacBride Landfill
Permit No. 02-11**

Land Owners Adjacent to Landfill				
Number	Name	Address	Parcel Number	Date Checked
1	HWY 64 DIRT INC	P O BOX 2200, ROBERTSDALE, AL 36567	42-04-17-0-000-001.005	10/2/2024
2	BLACKMON, J LYNN ETUX MARGO	14150 CO RD 64, LOXLEY, AL 36551	42-05-16-0-000-008.000	10/2/2024
3	GREGORIUS, CHRISTOPHER TAYLOR ETAL MELTO AND N, LEAH	14150-D CO RD 64, LOXLEY, AL 36551	42-05-16-0-000-008.004	10/2/2024
4	STEPHENS, MICHAEL B	14150A CO RD 64, LOXLEY, AL 365515350	42-05-16-0-000-008.001	10/2/2024
5	BLACKMON CHRISTOPHER LYNN AND BLACKMON JENNIFER LEIGH	14150 COUNTY ROAD 64, LOXLEY, AL 36551	42-05-16-0-000-008.002	10/2/2024
6	LOVELL, JAMES ANTHONY ETUX TRINE MARIE	14510 COUNTY ROAD 66, LOXLEY, AL 365514136	42-02-09-0-000-019.000	10/2/2024
7	KOEN, PATRICIA A ETAL CURRY, THEOTHUS; AND URRY, JESSIE MARIE; CURRY, RAYCHARLES; AND CURRY, GEORGINE; CURRY,RODNEY; CURRY, R AND ONALD; CURRY,ROY; CURRY, GARY; CURRY, M AND ICHAEAL; CURRY, JEROME	26880 A MCBRIDE RD, LOXLEY, AL 36551	42-05-16-0-000-009.001	10/2/2024
8	KOEN, PATRICIA A ETAL KOEN, RICKY TERREL AND L; CULBRETH, GWEN LOUISE KOEN	P O BOX 24, LOXLEY, AL 36551	42-05-16-0-000-010.001	10/2/2024
9	DAVIS, LARRY ETUX CARLA A	P O BOX 235, LOXLEY, AL 36551	42-05-16-0-000-010.000	10/2/2024
10	DAVIS, LARRY ETUX CARLA A	P O BOX 235, LOXLEY, AL 36551	42-05-16-0-000-031.000	10/2/2024
11	KNIGHT, CLODIA MAE S	P O BOX 255, LOXLEY, AL 36551	42-05-16-0-000-031.001	10/2/2024
12	STEELE OLLIE	PO BOX 576, LOXLEY, AL 365510576	42-05-16-0-000-033.000	10/2/2024
13	DAVIS, DENNIS	P O BOX 576, LOXLEY, AL 36551	42-05-16-0-000-034.000	10/2/2024
14	EDWARD, ENNIS EARL	PO BOX 21, LOXLEY, AL 365510021	42-05-16-0-000-035.000	10/2/2024
15	WILLIAMS, WILLIE	806 E VERBENA AVE, FOLEY, AL 365353348	42-05-16-0-000-036.000	10/2/2024
16	COX, RUTHIE MAE ETAL RUDOLPH, MELODY; AND CHARDSON, SHELIA; COX, IZEL; COX, CLAUDE AND JR	16694 SWEET GUM BLVD, FOLEY, AL	42-05-16-0-000-037.000	10/2/2024
17	SMITH, MELVIN V ETAL HOLLINGS, LATASHA M AND ; HOLLINGS, KAREN L; HOLLINGS, CLINTON L AND ; HOLLINGS, TYMIRA V	P O BOX 307, LOXLEY, AL 36551	42-05-16-0-000-038.000	10/2/2024
18	OKORO, ANNETTE	26555 LOXLEY HEIGHTS RD, LOXLEY, AL 36551	42-05-16-0-000-045.003	10/2/2024

MacBride Landfill**Permit No. 02-11**

Land Owners Adjacent to Landfill				
Number	Name	Address	Parcel Number	Date Checked
19	SOLID WASTE DISPOSAL AUTHORITY OF BALDWIN COUNTY ALABAMA INC	15093 LANDFILL DR, SUMMERDALE, AL 36580	42-05-16-0-000-053.000	10/2/2024
20	PIERCE, CYNTHIA L	14291 TIMBER RIDGE DR, LOXLEY, AL 365515427	42-05-16-0-000-052.000	10/2/2024
21	JACOBS STEPHEN WAYNE AND JACOBS MICHELE ANTONETTE	14281 TIMBER RIDGE DR, LOXLEY, AL 36551	42-05-16-0-000-052.026	10/2/2024
22	GILLEY, MATTHEW G ETAL GILLEY, DAWN MARI AND E	14290 TIMBER RIDGE DR, LOXLEY, AL 365515424	42-05-16-0-000-052.025	10/2/2024
23	SOLID WASTE DISPOSAL AUTHORITY OF BALDWIN COUNTY ALABAMA INC	15093 LANDFILL DR, SUMMERDALE, AL 36580	42-05-21-0-000-003.000	10/2/2024
24	SOLID WASTE DISPOSAL AUTHORITY OF BALDWIN COUNTY ALABAMA INC	15093 LANDFILL DR, SUMMERDALE, AL 36580	42-04-20-0-000-001.004	10/2/2024
25	STAPLETON FAMILY LIMITED PARTNERSHIP	13600 CO RD 64, LOXLEY, AL 36551	42-04-20-0-000-001.000	10/2/2024
26	STAPLETON FAMILY LIMITED PARTNERSHIP	13600 CO RD 64, LOXLEY, AL 36551	42-04-17-0-000-001.000	10/2/2024
27	HWY 64 DIRT INC	P O BOX 2200, ROBERTSDALE, AL 36567	42-04-17-0-000-001.006	10/2/2024



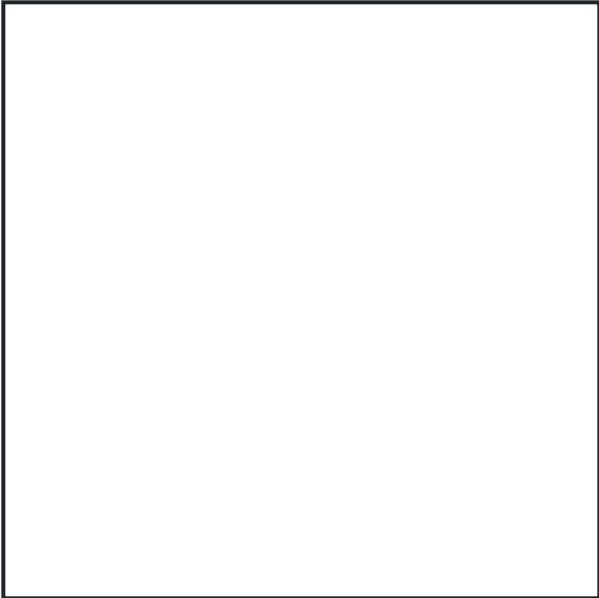
PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 381171
PARCEL 42-04-17-0-000-001.005
ACCOUNT NUMBER 356828
OWNER HWY 64 DIRT INC
MAILING ADDRESS P O BOX 2200, ROBERTSDALE, AL 36567
PROPERTY ADDRESS 0 CO RD 64
LEGAL DESCRIPTION 31.3 AC LOT 1 STAPLETON FAMILY DIRT PIT
DIVISION SLIDE 2672- E SEC 17-T5S-R3E
(WD)
EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
381171	2023	REAL	\$ 1,031.06	\$ 0.00	\$ 1,031.06

Total Due: \$ 1,031.06

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 31.30
Use Value \$0
Land Value \$332,600
Improvement Value \$0
Total Appraised Value \$332,600
Total Taxable Value \$332,600
Assessment Value \$33,260

Subdivision Information

Code STPLFAMDIR
Name STAPLETON FAMILY DIRT PIT
DIV
Lot 1
Block
Type / Book / Page IN / N/A / 1897522
S/T/R 17-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	31.300 Acres	9100-UNDEVELOPED AND UNUSED LAND	3	N	N	\$332,600

Building Components

Tax Sales

NO TAX SALES FOUND

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PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

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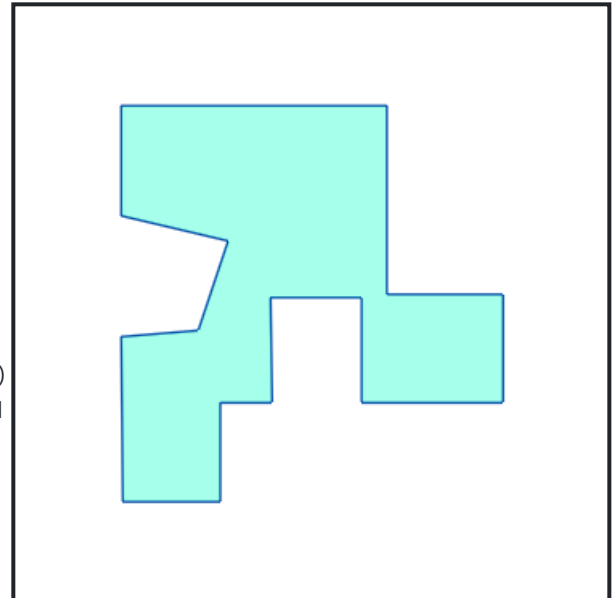
Parcel Info

PIN 8622
PARCEL 42-05-16-0-000-008.000
ACCOUNT NUMBER 28870

OWNER BLACKMON, J LYNN ETUX MARGO
MAILING ADDRESS 14150 CO RD 64, LOXLEY, AL 36551
PROPERTY ADDRESS 14150 CO RD 64

LEGAL DESCRIPTION 8.6 AC(C) BEG AT NW COR OF SEC 16 TH RUN S 40' FOR POB RUN T H E 570'5', S 398'(S), TH E 250', TH S 230'(S), TH W 305'(S) , TH N 225'(S), TH W 194'(S), TH S 225'(S) TH W 112'(S), TH S 210', TH W 210', TH N 874' TO THE POB SEC 16-T5S-R3E (COR R WD) (SURVIVORSHIP) RP589 PG659

EXEMPT CODE H4
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
8622	2023	REAL	\$ 1,173.66	\$ 0.00	\$ 1,173.66

Total Due: \$ 1,173.66

LAST PAYMENT DATE **N/A**

PAID BY

Property Values

Total Acres 8.60
Use Value \$0
Land Value \$164,200
Improvement Value \$322,400
Total Appraised Value \$486,600
Total Taxable Value \$486,600
Assessment Value \$48,680

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page RP / 759 / 1968
S/T/R 16-5S-3E

Detail Information

TYPE	REF DESCRIPTION	LAND USE	TC HS PN	APPRAISED VALUE
LAND	5 1.000 Acres	6990-OTHER SERVICES	3 Y N	\$18,700
LAND	6 7.600 Acres	9100-UNDEVELOPED AND UNUSED LAND	3 Y N	\$141,900
LAND	7 0.000 Acres	9320-LAKES AND PONDS	3 Y N	\$3,600
RES/COM	1 111 - SINGLE FAMILY RESIDENCE	-	3 Y N	\$204,700
UTILITY	2 26WCC - UTILITY WOOD OR C.B.	-	3 Y N	\$3,500
POOL	4 29-SPGUN - POOL GUNITE	-	3 Y N	\$34,100
PAVING	5 34PCR06 - PAVEMENT CONCRETE REINFORCED 6" COM	-	3 Y N	\$6,700
BARN	6 B21 - BARN SHED B-21	-	3 Y N	\$1,700
PAVING	7 34PCR04 - PAVEMENT CONCRETE REINFORCED 4" COM	-	3 Y N	\$600
BARN	8 B21 - BARN SHED B-21	-	3 Y N	\$5,300
CARPORT/SHED	9 25WDWF - CARPORT WOOD FLOOR	-	3 Y N	\$6,500
UTILITY	10 26WDHOM - UTILITY WOOD HOMEMADE	-	3 Y N	\$2,200
UTILITY	11 26WCC - UTILITY WOOD OR C.B.	-	3 Y N	\$57,100

Building Components

Improvement

Year Built	1997
Year Remodeled	2021
Structure	SINGLE FAMILY RESIDENCE
Structure Code	111
Total Living Area	1968
Building Value	\$204,700

Computations

Stories	1.0
1st Level Sq. Ft.	1968
Add'l Level Sq. Ft.	0
Total Living Area	1968
Total Adjusted Area	2473

Improvement

Year Built	1998
Structure	UTILITY WOOD HOMEMADE
Structure Code	26WDHOM
Total Living Area	160
Building Value	\$2,200

Computations

Stories	1.0
1st Level Sq. Ft.	160
Add'l Level Sq. Ft.	0
Total Living Area	160
Total Adjusted Area	160

Materials and Features

Foundation	SLAB - 100
Exterior Walls	VINYL SIDING - 100
Roof Type	HIP-GABLE - 100
Roof Material	ASPH.SHINGLE HVY - 100
Floors	TILE, CERAMIC - 25
Floors	CARPET & UNDERLA - 50
Floors	HARDWOOD, SELECT - 25
Interior Finish	DRYWALL - 100
Plumbing	AVERAGE - 100
Plumbing	BATH 2FIX - 1
Heat/AC	FHA/AC - 1968

Materials and Features

** No Materials / Features For This Improvement **

Improvement

Year Built 1998
Structure PAVEMENT CONCRETE REINFORCED 4" COM
Structure Code 34PCR04
Total Living Area 103
Building Value \$600

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 103
Add'l Level Sq. Ft. 0
Total Living Area 103
Total Adjusted Area 103

Improvement

Year Built 1997
Structure PAVEMENT CONCRETE REINFORCED 6" COM
Structure Code 34PCR06
Total Living Area 928
Building Value \$6,700

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 928
Add'l Level Sq. Ft. 0
Total Living Area 928
Total Adjusted Area 928

Improvement

Year Built 2010
Structure CARPORT WOOD FLOOR
Structure Code 25WDWF
Total Living Area 570
Building Value \$6,500

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 570
Add'l Level Sq. Ft. 0
Total Living Area 570
Total Adjusted Area 570

Improvement

Year Built 1997
Structure UTILITY WOOD OR C.B.
Structure Code 26WCC
Total Living Area 160
Building Value \$3,500

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 160
Add'l Level Sq. Ft. 0
Total Living Area 160
Total Adjusted Area 160

Improvement

Year Built 1997
Structure UTILITY WOOD OR C.B.
Structure Code 26WCC
Total Living Area 790
Building Value \$57,100

Materials and Features

Plumbing KITCHEN SINK SINGLE - 1
Plumbing BATH 3FIX - 1
Other MISC STRUCTURE LIVING AREA-AVG - 790

Computations

Stories 1.0
1st Level Sq. Ft. 790
Add'l Level Sq. Ft. 0
Total Living Area 790
Total Adjusted Area 790

Improvement

Year Built 1998
Structure BARN SHED B-21
Structure Code B21
Total Living Area 320
Building Value \$1,700

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 320
Add'l Level Sq. Ft. 0
Total Living Area 320
Total Adjusted Area 320

Improvement

Year Built	2010
Structure	BARN SHED B-21
Structure Code	B21
Total Living Area	1200
Building Value	\$5,300

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories	1.0
1st Level Sq. Ft.	1200
Add'l Level Sq. Ft.	0
Total Living Area	1200
Total Adjusted Area	1200

Improvement

Year Built	1997
Structure	POOL GUNITE
Structure Code	29-SPGUN
Total Living Area	512
Building Value	\$34,100

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories	1.0
1st Level Sq. Ft.	512
Add'l Level Sq. Ft.	0
Total Living Area	512
Total Adjusted Area	512

Tax Sales

NO TAX SALES FOUND



PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

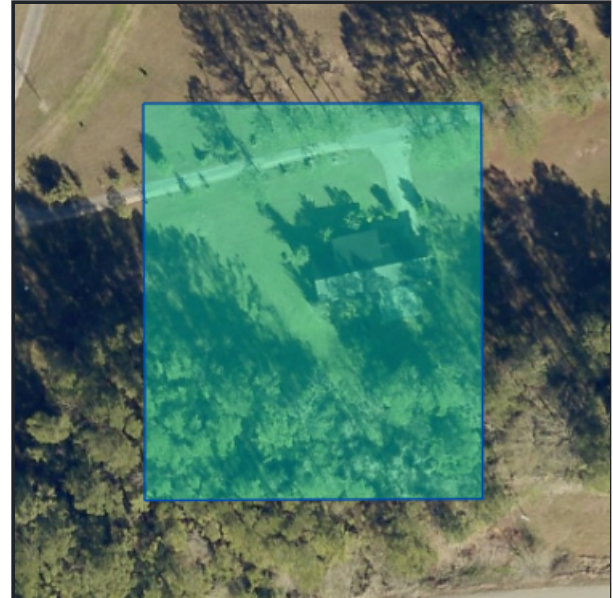
PIN 275329
PARCEL 42-05-16-0-000-008.004
ACCOUNT NUMBER 394992

OWNER GREGORIUS, CHRISTOPHER TAYLOR ETAL
 MELTO AND N, LEAH

MAILING ADDRESS 14150-D CO RD 64, LOXLEY, AL 36551
PROPERTY ADDRESS 14150 CO RD 64

LEGAL DESCRIPTION 193' X 225' BEG AT NW COR OF SEC 16 TH
 RUN S 874', TH E 210', TH N 210', TH E
 112'(S) FOR THE POB TH N 225', TH E 193.6'
 , TH S 225', TH W 193' TO THE POB SEC 16-
 T5S-R3E (WD/SURVIVO RSHIP)

EXEMPT CODE H1
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
275329	2023	REAL	\$ 584.30	\$ 0.00	\$ 584.30

Total Due: \$ 584.30

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 1.00
Use Value \$0
Land Value \$50,600
Improvement Value \$152,400
Total Appraised Value \$203,000
Total Taxable Value \$203,000
Assessment Value \$20,300

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 2011494
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	2	1.000 Acres	1110-SINGLE FAMILY RESIDENCE	3	Y	N	\$50,600
RES/COM	1	111 - SINGLE FAMILY RESIDENCE	-	3	Y	N	\$152,400

Building Components

Improvement

Year Built	2006
Structure	SINGLE FAMILY RESIDENCE
Structure Code	111
Total Living Area	1200
Building Value	\$152,400

Computations

Stories	1.0
1st Level Sq. Ft.	1200
Add'l Level Sq. Ft.	0
Total Living Area	1200
Total Adjusted Area	1494

Materials and Features

Foundation	SLAB - 100
Exterior Walls	HARDIE PLANK - 100
Roof Type	HIP-GABLE - 100
Roof Material	ASPH.SHINGLE HVY - 100
Floors	HARDWOOD - 100
Interior Finish	DRYWALL - 100
Plumbing	AVERAGE - 100
Adjustment	HARDIE - 100
Plumbing	BATH 3FIX - 1
Heat/AC	FHA/AC - 1200

Tax Sales

NO TAX SALES FOUND



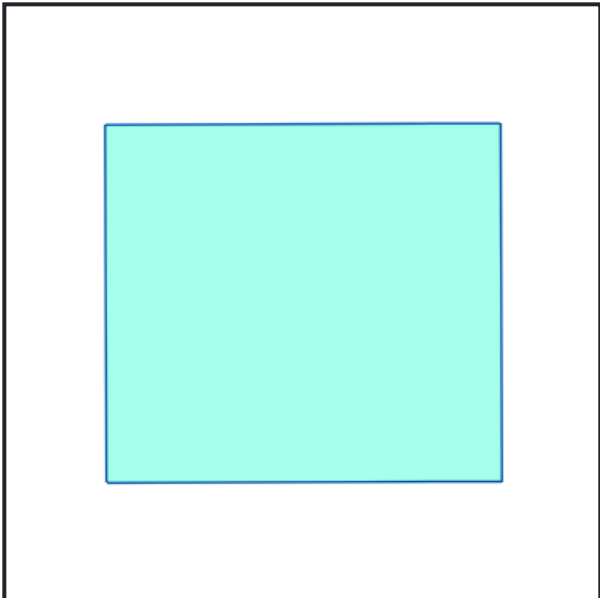
PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 216812
PARCEL 42-05-16-0-000-008.001
ACCOUNT NUMBER 215996
OWNER STEPHENS, MICHAEL B
MAILING ADDRESS 14150A CO RD 64, LOXLEY, AL 365515350
PROPERTY ADDRESS 14150 CO RD 64
LEGAL DESCRIPTION 225' X 250' COM AT THE NW COR OF SEC 16 RUN TH E 810.5', TH S 213.8' TO POB TH RUN W 250', TH S 225', TH E 250', TH N 22 5' TO POB SEC 16-T5S-R3E (WD)
EXEMPT CODE H1
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
216812	2023	REAL	\$ 1,079.06	\$ 0.00	\$ 1,079.06

Total Due: \$ 1,079.06

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 1.29
Use Value \$0
Land Value \$58,400
Improvement Value \$304,100
Total Appraised Value \$362,500
Total Taxable Value \$362,500
Assessment Value \$36,260

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 1521072
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	1.290 Acres	1110-SINGLE FAMILY RESIDENCE	3	Y	N	\$58,400
RES/COM	1	111 - SINGLE FAMILY RESIDENCE	-	3	Y	N	\$304,100

Building Components

Improvement

Year Built	1997
Year Remodeled	2012
Structure	SINGLE FAMILY RESIDENCE
Structure Code	111
Total Living Area	2148
Building Value	\$304,100

Computations

Stories	1.0
1st Level Sq. Ft.	2148
Add'l Level Sq. Ft.	0
Total Living Area	2148
Total Adjusted Area	2880

Materials and Features

Foundation	PIERS - 100
Exterior Walls	HARDBOARD-LAP - 100
Roof Type	HIP-GABLE - 100
Roof Material	ASPH.SHINGLE HVY - 100
Floors	HARDWOOD, SELECT - 25
Floors	CARPET & UNDERLA - 50
Floors	TILE, CERAMIC - 25
Interior Finish	DRYWALL - 100
Plumbing	AVERAGE - 100
Plumbing	BATH 4FIX - 1
Plumbing	BATH 2FIX - 1
Heat/AC	FHA/AC - 2148

Tax Sales

NO TAX SALES FOUND



PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ NOTICE: THIS PARCEL HAS TAX SALE HISTORY. SEE THE TAX SALE SECTION FOR DETAILS.

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

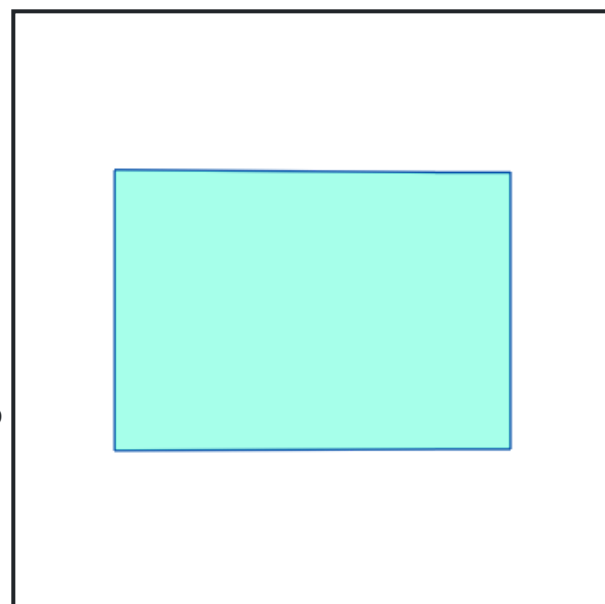
Parcel Info

PIN 222701
PARCEL 42-05-16-0-000-008.002
ACCOUNT NUMBER 33106

OWNER BLACKMON, JACK L JR
MAILING ADDRESS 27417 MAGNOLIA DR, ORANGE BEACH, AL 365613965
PROPERTY ADDRESS 14150 CO RD 64

LEGAL DESCRIPTION 250' X 173' COM AT NW COR OF SEC 16 RUN E 560.5', TH S 40' T O POB TH E 250', TH S 173'(S), TH W 250', TH N 173'(S) TO PO B CONTAINING .7 ACRES LYING IN NW1/4 OF SEC 16-T5S-R3E (WD)

EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
222701	2023	REAL	\$ 1,339.20	\$ 0.00	\$ 1,339.20

Total Due: \$ 1,339.20

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 0.70
Use Value \$0
Land Value \$44,900
Improvement Value \$171,100
Total Appraised Value \$216,000
Total Taxable Value \$216,000

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page RP / 854 / 449
S/T/R 16-5S-3E

Assessment Value \$43,200

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	0.700 Acres	1110-SINGLE FAMILY RESIDENCE	2	N	N	\$44,900
RES/COM	1	111 - SINGLE FAMILY RESIDENCE	-	2	N	N	\$171,100

Building Components

Improvement

Year Built	1998
Structure	SINGLE FAMILY RESIDENCE
Structure Code	111
Total Living Area	1956
Building Value	\$171,100

Materials and Features

Foundation	PIERS - 100
Exterior Walls	HARDBOARD-LAP - 100
Roof Type	HIP-GABLE - 100
Roof Material	ASPH.SHINGLE HVY - 100
Floors	HARDWOOD - 50
Floors	CARPET & UNDERLA - 25
Floors	TILE, CERAMIC - 25
Interior Finish	DRYWALL - 100
Plumbing	AVERAGE - 100
Plumbing	BATH 4FIX - 1
Heat/AC	FHA/AC - 1956

Computations

Stories	1.0
1st Level Sq. Ft.	1956
Add'l Level Sq. Ft.	0
Total Living Area	1956
Total Adjusted Area	2177

Tax Sales

YEAR	PARCEL STATUS DATE	TAX SALE STATUS	OWNER NAME(S)	PURCHASER NAME(S)	TRUE MKT VAL	TAXES DUE	PURCHASED AMT	PARCEL STATUS
1999	6/29/2000	REDEEMED	BLACKMON, JACK L JR			547.09	1547.09	FULLY PAID
2020	1/10/2022	REDEEMED	BLACKMON, JACK L JR		155600.00	455.52	455.52	FULLY PAID

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PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

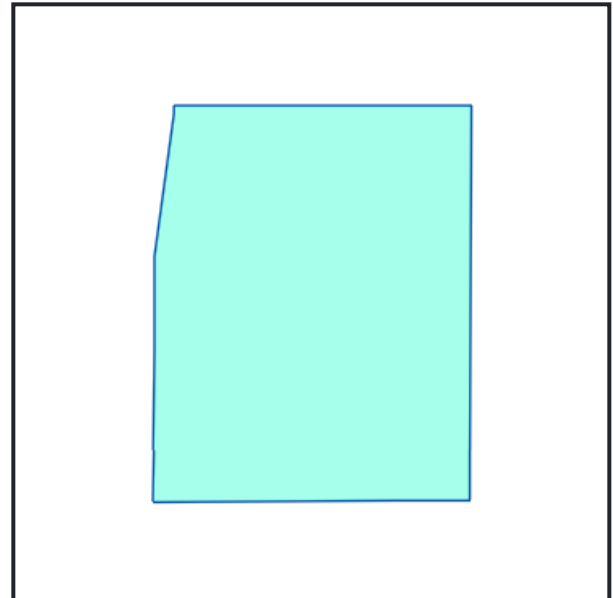
Parcel Info

PIN 26495
PARCEL 42-02-09-0-000-019.000
ACCOUNT NUMBER 22616

OWNER LOVELL, JAMES ANTHONY ETUX TRINE MARIE
MAILING ADDRESS 14510 COUNTY ROAD 66, LOXLEY, AL 365514136
PROPERTY ADDRESS 0 CO RD 64

LEGAL DESCRIPTION 49 AC(C) SW1/4 OF SW1/4 AND S1/2 OF S1/2 OF NW1/4 OF SW1/4 L ESS RD ROW SEC 9-T5S-R3E (QCD/WD - SURVIVORSHIP) IN#793240

EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
26495	2023	REAL	\$ 65.98	\$ 0.00	\$ 65.98

Total Due: \$ 65.98

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 49.00
Use Value \$20,791
Land Value \$419,000
Improvement Value \$0
Total Appraised Value \$419,000
Total Taxable Value \$20,791
Assessment Value \$2,080

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 1343839
S/T/R 09-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	5	18.000 Acres	8120-CROP (AVG A2)	3	N	N	\$153,900
LAND	6	16.000 Acres	8130-CROP (POOR A3)	3	N	N	\$136,800
LAND	7	8.000 Acres	8320-TIMBER (AVG. C2)	3	N	N	\$68,400
LAND	8	7.000 Acres	8330-TIMBER (POOR C3)	3	N	N	\$59,900

Building Components

Tax Sales

NO TAX SALES FOUND

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PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

NOTICE: THIS PARCEL HAS TAX SALE HISTORY. SEE THE TAX SALE SECTION FOR DETAILS.

Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 107470
PARCEL 42-05-16-0-000-009.001
ACCOUNT NUMBER 42633

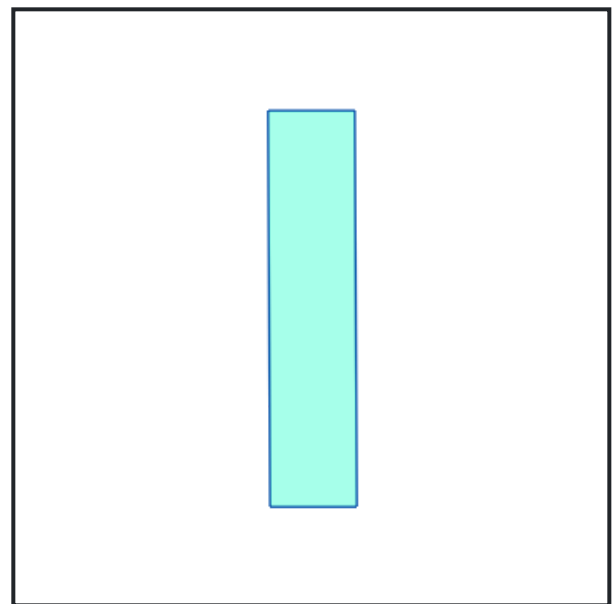
OWNER KOEN, PATRICIA A ETAL CURRY, THEOTHUS;
AND URRY, JESSIE MARIE; CURRY, RAY
CHARLES; AND CURRY, GEORGINE; CURRY,
RODNEY; CURRY, R AND ONALD; CURRY,
ROY; CURRY, GARY; CURRY, M AND ICHAEAL;
CURRY, JEROME

MAILING ADDRESS 26880 A MCBRIDE RD, LOXLEY, AL 36551
PROPERTY ADDRESS 26880 MCBRIDE RD (A)

LEGAL DESCRIPTION 8 AC(C) E1/2 OF E1/2 OF NW1/4 OF NW1/4
SEC 16-T5S-R3E LESS & EXCEPT A 60' STRIP
FOR R/W ALG W EDGE OF SAID PROPERTY
SEC 16- T5S R3E CV-92-466

EXEMPT CODE H3

TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
107470	2023	REAL	\$ 391.22	\$ 0.00	\$ 391.22

Total Due: \$ 391.22

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 8.00
Use Value \$0
Land Value \$123,900
Improvement Value \$71,500

Subdivision Information

Code
Name
Lot
Block

Total Appraised Value \$195,400
Total Taxable Value \$195,400
Assessment Value \$19,580

Type / Book / Page N/A / 499 / 1797
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	6	3.000 Acres	9100-UNDEVELOPED AND UNUSED LAND	3	Y	N	\$46,400
LAND	7	1.000 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	3	N	N	\$15,500
LAND	8	1.000 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	3	N	N	\$15,500
LAND	9	1.000 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	3	N	N	\$15,500
LAND	10	1.000 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	3	N	N	\$15,500
LAND	11	1.000 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	3	N	N	\$15,500
MANUF HOME	1	MHD - MOBILE HOME CLASS D	-	3	N	N	\$12,300
MANUF HOME	4	MHD - MOBILE HOME CLASS D	-	3	Y	N	\$14,100
MANUF HOME	6	MHD - MOBILE HOME CLASS D	-	3	N	N	\$9,500
MANUF HOME	9	MHD - MOBILE HOME CLASS D	-	3	N	N	\$10,100
MANUF HOME	10	MHD - MOBILE HOME CLASS D	-	3	N	N	\$13,500
CARPORT/SHED	3	25MPFN - CARPORT METAL PREFAB NO FLOOR	-	3	Y	N	\$2,000
UTILITY	5	26WCC - UTILITY WOOD OR C.B.	-	3	Y	N	\$6,900
UTILITY	8	26WDHOM - UTILITY WOOD HOMEMADE	-	3	N	N	\$1,000
UTILITY	11	26SAPF - UTILITY STEELOR ALUM. PREFAB	-	3	N	N	\$2,100

Building Components

Improvement

Year Built 1990
Structure MOBILE HOME CLASS D
Structure Code MHD
Total Living Area 924
Building Value \$12,300

Materials and Features

Skirting MH SKIRTING - 160

Computations

Stories 1.0
1st Level Sq. Ft. 924
Add'l Level Sq. Ft. 0
Total Living Area 924
Total Adjusted Area 943

Improvement

Year Built 1990
Structure MOBILE HOME CLASS D
Structure Code MHD
Total Living Area 1056
Building Value \$14,100

Materials and Features

Skirting MH SKIRTING - 164

Computations

Stories 1.0
1st Level Sq. Ft. 1056
Add'l Level Sq. Ft. 0
Total Living Area 1056
Total Adjusted Area 1110

Improvement

Year Built 1978
Structure MOBILE HOME CLASS D
Structure Code MHD
Total Living Area 924
Building Value \$9,500

Materials and Features

Skirting MH SKIRTING - 160

Computations

Stories 1.0
1st Level Sq. Ft. 924
Add'l Level Sq. Ft. 0
Total Living Area 924
Total Adjusted Area 943

Improvement

Year Built 1970
Structure MOBILE HOME CLASS D
Structure Code MHD
Total Living Area 1064
Building Value \$10,100

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 1064
Add'l Level Sq. Ft. 0
Total Living Area 1064
Total Adjusted Area 1064

Improvement

Year Built 1984
Structure MOBILE HOME CLASS D
Structure Code MHD
Total Living Area 1216
Building Value \$13,500

Materials and Features

Skirting MH SKIRTING - 184

Computations

Stories 1.0
1st Level Sq. Ft. 1216
Add'l Level Sq. Ft. 0
Total Living Area 1216
Total Adjusted Area 1257

Improvement

Year Built 2015
Structure UTILITY WOOD HOMEMADE
Structure Code 26WDHOM
Total Living Area 80
Building Value \$1,000

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 80
Add'l Level Sq. Ft. 0
Total Living Area 80
Total Adjusted Area 80

Improvement

Year Built 2014
Structure CARPORT METAL PREFAB NO FLOOR
Structure Code 25MPFN
Total Living Area 360
Building Value \$2,000

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 360
Add'l Level Sq. Ft. 0
Total Living Area 360
Total Adjusted Area 360

Improvement

Year Built 2015
Structure UTILITY STEELOR ALUM. PREFAB
Structure Code 26SAPF
Total Living Area 128
Building Value \$2,100

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 128
Add'l Level Sq. Ft. 0
Total Living Area 128
Total Adjusted Area 128

Improvement

Year Built 1990
Structure UTILITY WOOD OR C.B.
Structure Code 26WCC
Total Living Area 320
Building Value \$6,900

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 320
Add'l Level Sq. Ft. 0
Total Living Area 320
Total Adjusted Area 320

Tax Sales

YEAR	PARCEL STATUS DATE	TAX SALE STATUS	OWNER NAME(S)	PURCHASER NAME(S)	TRUE MKT VAL	TAXES DUE	PURCHASED AMT	PARCEL STATUS
2003	7/16/2004	REDEEMED	KOEN, PATRICIA A ETAL CURRY, THEOTHUS;			398.22	1148.22	FULLY PAID
2004	7/22/2005	REDEEMED	KOEN, PATRICIA A ETAL CURRY, THEOTHUS;			396.89	10896.89	FULLY PAID

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PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

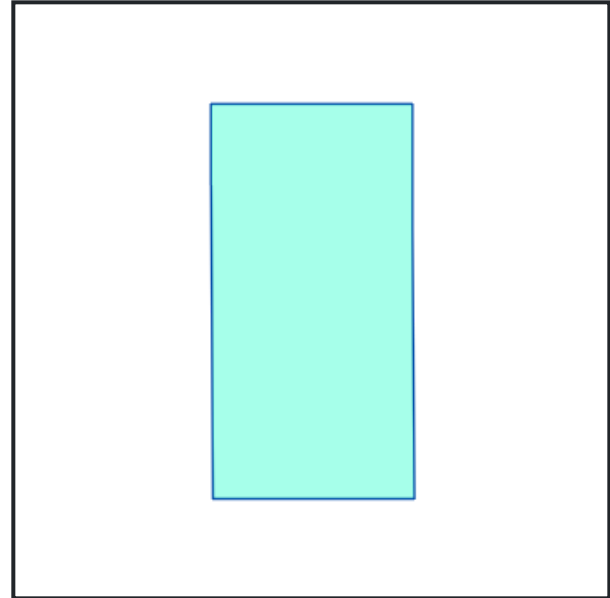
PIN 13967
PARCEL 42-05-16-0-000-010.001
ACCOUNT NUMBER 378583

OWNER KOEN, PATRICIA A ETAL KOEN, RICKY TERREL AND L; CULBRETH, GWEN LOUISE KOEN

MAILING ADDRESS P O BOX 24, LOXLEY, AL 36551
PROPERTY ADDRESS 14286 LOXLEY HEIGHTS RD W

LEGAL DESCRIPTION 330' X 660' E1/2 OF NE 1/4 OF SW1/4 OF NW1/4 SEC 16-T5S-R3E (WD/SURVIVORSHIP)

EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
13967	2023	REAL	\$ 355.26	\$ 0.00	\$ 355.26

Total Due: \$ 355.26

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 5.00
Use Value \$0
Land Value \$57,300
Improvement Value \$0
Total Appraised Value \$57,300
Total Taxable Value \$57,300
Assessment Value \$11,460

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 1913382
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	4	5.000 Acres	9110-VACANT RESIDENTIAL	2	N	N	\$57,300

Building Components

Tax Sales

NO TAX SALES FOUND

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PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

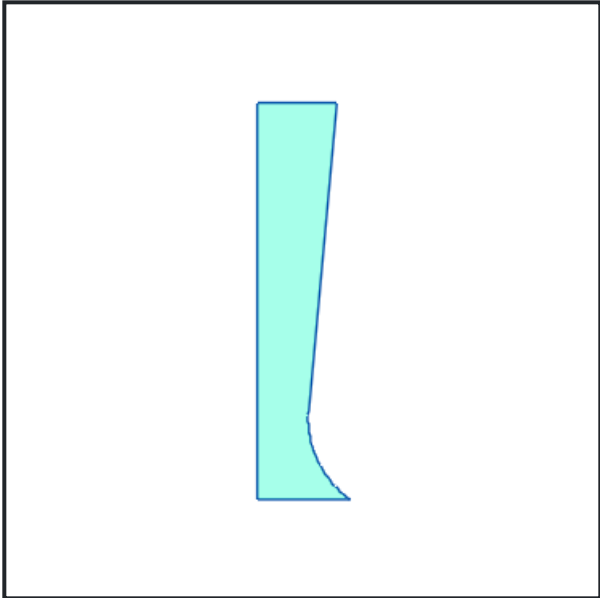
PIN 48625
PARCEL 42-05-16-0-000-010.000
ACCOUNT NUMBER 250897
OWNER DAVIS, LARRY ETUX CARLA A
MAILING ADDRESS P O BOX 235, LOXLEY, AL 36551
PROPERTY ADDRESS 0

LEGAL DESCRIPTION

210' X 450'S IRR BEG AT SW COR OF NW1/4 OF SE1/4 OF NW1/4 RUN N 450' E 210' S 450' W 210' TO POB SEC 16 T5S R3E (WD/SU RVIVORSHIP)

EXEMPT CODE

TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
48625	2023	REAL	\$ 150.04	\$ 0.00	\$ 150.04

Total Due: \$ 150.04

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 1.96
Use Value \$0
Land Value \$24,200
Improvement Value \$0
Total Appraised Value \$24,200
Total Taxable Value \$24,200
Assessment Value \$4,840

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 1078948
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	1.960 Acres	9100-UNDEVELOPED AND UNUSED LAND	2	N	N	\$24,200

Building Components

Tax Sales

NO TAX SALES FOUND

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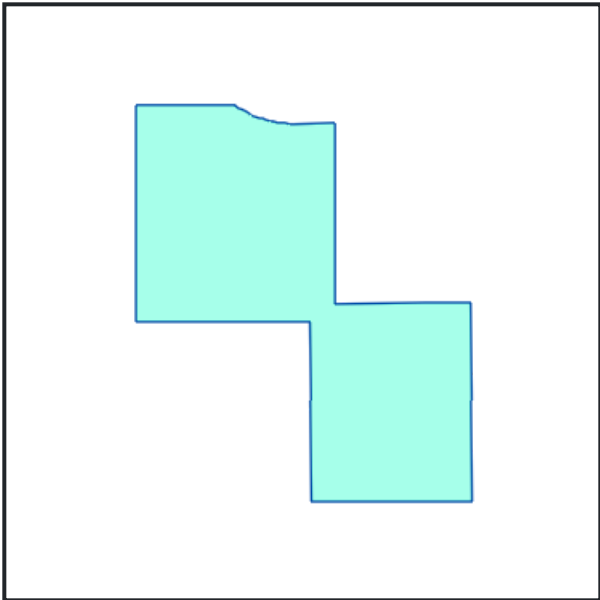
PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 46395
PARCEL 42-05-16-0-000-031.000
ACCOUNT NUMBER 250897
OWNER DAVIS, LARRY ETUX CARLA A
MAILING ADDRESS P O BOX 235, LOXLEY, AL 36551
PROPERTY ADDRESS 14290 LOXLEY HEIGHTS ROAD WEST



LEGAL DESCRIPTION 95'(S) X 252'(S) IRR BEG AT THE NW COR OF SW1/4 OF SE1/4 OF NW1/4 RUN TH E 95'(S), TH SE 30', TH SE 80'(S), TH S 208.6', TH E 171.6', TH S 236.7', TH W 187'(S), TH N 203', TH W 215 ', TH N 252'(S) TO THE POB SEC 16-T5S-R3E (QCD)

EXEMPT CODE
TAX DISTRICT County - Central School Tax

Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
46395	2023	REAL	\$ 166.78	\$ 0.00	\$ 166.78

Total Due: \$ 166.78

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 2.18
Use Value \$0
Land Value \$26,900
Improvement Value \$0
Total Appraised Value \$26,900
Total Taxable Value \$26,900
Assessment Value \$5,380

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 1077121
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	2	2.180 Acres	1110-SINGLE FAMILY RESIDENCE	2	N	N	\$26,900

Building Components

Tax Sales

NO TAX SALES FOUND

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PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 111531
PARCEL 42-05-16-0-000-031.001
ACCOUNT NUMBER 91710
OWNER KNIGHT, CLODIA MAE S
MAILING ADDRESS P O BOX 255, LOXLEY, AL 36551
PROPERTY ADDRESS 0

LEGAL DESCRIPTION
203'X215' BEG AT THE NW COR OF SW1/4 OF SE1/4 OF NW1/4 RUN TH S252'(S) FOR POB TH RUN E215' TH S203' TH W215' TH N203' TO THE POB SEC16 T5S R3E

EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
111531	2023	REAL	\$ 218.24	\$ 0.00	\$ 218.24

Total Due: \$ 218.24

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 1.00
Use Value \$0
Land Value \$50,600
Improvement Value \$19,800
Total Appraised Value \$70,400
Total Taxable Value \$70,400
Assessment Value \$7,040

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page N/A / 448 / 789
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	1.000 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	3	N	N	\$50,600
MANUF HOME	1	MHD - MOBILE HOME CLASS D	-	3	N	N	\$8,600
MANUF HOME	2	MHD - MOBILE HOME CLASS D	-	3	N	N	\$11,200

Building Components

Improvement

Year Built	1965
Structure	MOBILE HOME CLASS D
Structure Code	MHD
Total Living Area	840
Building Value	\$8,600

Materials and Features

Skirting	MH SKIRTING - 164
----------	-------------------

Computations

Stories	1.0
1st Level Sq. Ft.	840
Add'l Level Sq. Ft.	0
Total Living Area	840
Total Adjusted Area	840

Improvement

Year Built	1985
Structure	MOBILE HOME CLASS D
Structure Code	MHD
Total Living Area	980
Building Value	\$11,200

Materials and Features

Skirting	MH SKIRTING - 168
----------	-------------------

Computations

Stories	1.0
1st Level Sq. Ft.	980
Add'l Level Sq. Ft.	0
Total Living Area	980
Total Adjusted Area	980

Tax Sales

NO TAX SALES FOUND



PROPERTY TAX
Baldwin County, Alabama

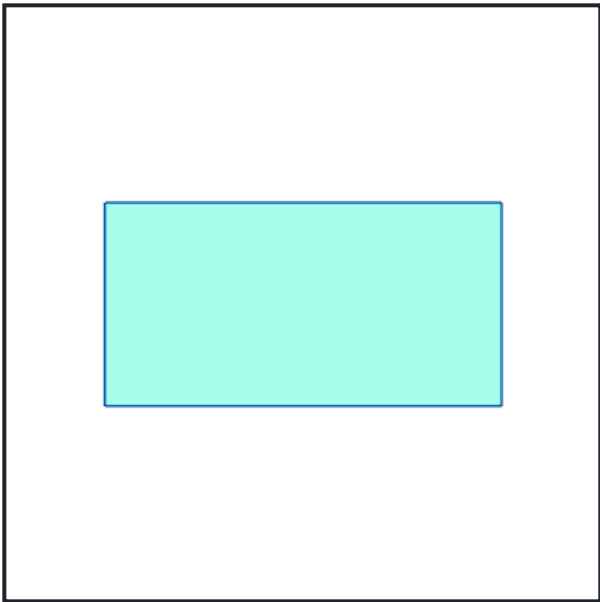
Current Date: 9/13/2023 Tax Year: 2023

NOTICE: THIS PARCEL HAS TAX SALE HISTORY. SEE THE TAX SALE SECTION FOR DETAILS.

Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 3389
PARCEL 42-05-16-0-000-033.000
ACCOUNT NUMBER 516733
OWNER STEELE OLLIE
MAILING ADDRESS PO BOX 576, LOXLEY, AL 365510576
PROPERTY ADDRESS 14301 WOLF RUN
LEGAL DESCRIPTION 208.6' X 417.2' BEG AT THE SW COR OF SW1/4 OF SE1/4 OF NW1/4 OF SEC 16 RUN TH N 208.6', TH E 417.2', TH S 208.6', TH W 417.2' TO POB SEC 16-T5S-R3E (UNREC AFF OF HEIR) FE DEATH CERT
EXEMPT CODE H3
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
3389	2023	REAL	\$ 0.00	\$ 0.00	\$ 0.00

Total Due: \$ 0.00

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 2.00
Use Value \$0
Land Value \$50,600
Improvement Value \$16,900
Total Appraised Value \$67,500
Total Taxable Value \$67,500

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page FE / N/A / N/A
S/T/R 16-5S-3E

Assessment Value \$6,760

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	2	1.000 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	3	Y	N	\$25,300
LAND	3	1.000 Acres	1110-SINGLE FAMILY RESIDENCE	3	Y	N	\$25,300
RES/COM	2	111 - SINGLE FAMILY RESIDENCE	-	3	Y	N	\$6,200
MANUF HOME	3	MHD - MOBILE HOME CLASS D	-	3	Y	N	\$10,700

Building Components

Improvement

Year Built	1938
Structure	SINGLE FAMILY RESIDENCE
Structure Code	111
Total Living Area	750
Building Value	\$6,200

Computations

Stories	1.0
1st Level Sq. Ft.	750
Add'l Level Sq. Ft.	0
Total Living Area	750
Total Adjusted Area	763

Materials and Features

Foundation	PIERS - 100
Exterior Walls	COMPOSITION - 100
Roof Type	HIP-GABLE - 100
Roof Material	ASPHALT SHINGLES - 100
Floors	PINE, SINGLE - 100
Interior Finish	WALL BOARD - 100
Plumbing	POOR - 100
Heat/AC	NO HEAT - 750

Improvement

Year Built	1980
Structure	MOBILE HOME CLASS D
Structure Code	MHD
Total Living Area	1120
Building Value	\$10,700

Computations

Stories	1.0
1st Level Sq. Ft.	1120
Add'l Level Sq. Ft.	0
Total Living Area	1120
Total Adjusted Area	1120

Materials and Features

** No Materials / Features For This Improvement **

Tax Sales

YEAR	PARCEL STATUS DATE	TAX SALE STATUS	OWNER NAME(S)	PURCHASER NAME(S)	TRUE MKT VAL	TAXES DUE	PURCHASED AMT	PARCEL STATUS
2015	10/28/2016	REDEEMED	BLACKMON, OLLIE MAE & WILLIS, MARY LEE			190.36	1190.36	FULLY PAID



PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

NOTICE: THIS PARCEL HAS TAX SALE HISTORY. SEE THE TAX SALE SECTION FOR DETAILS.

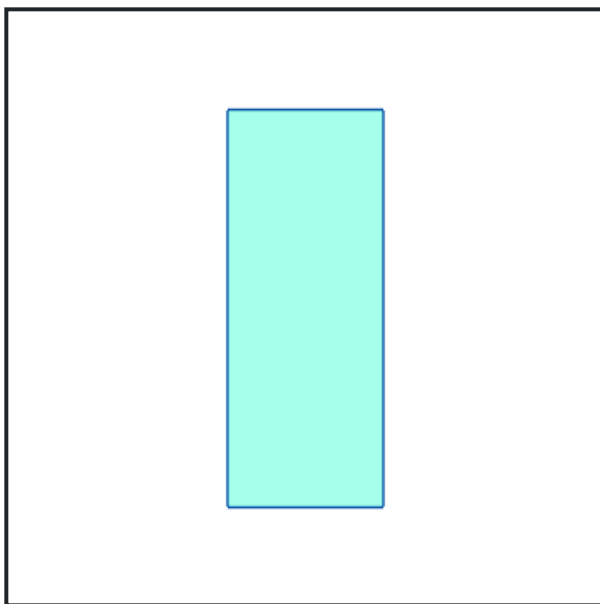
Values and Taxes are estimates and are subject to change. Click here for the current amount due.

Parcel Info

PIN 22627
PARCEL 42-05-16-0-000-034.000
ACCOUNT NUMBER 222651
OWNER DAVIS, DENNIS
MAILING ADDRESS P O BOX 576, LOXLEY, AL 36551
PROPERTY ADDRESS 14375 WOLF RUN

LEGAL DESCRIPTION 132' X 330' FROM SE COR OF SE OF NW SEC 16-5-3 TH W 924' TO POB TH N 330' E 132' S 330' W 132' TO BEG SEC 16-5-3 CONTG 1 AC

EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

Table with 6 columns: PPIN, YEAR, TAX TYPE, TAX DUE, PAID, BALANCE. Row 1: 22627, 2023, REAL, \$ 156.86, \$ 0.00, \$ 156.86

Total Due: \$ 156.86

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 1.00
Use Value \$0
Land Value \$25,300
Improvement Value \$0
Total Appraised Value \$25,300
Total Taxable Value \$25,300

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page DB / 210 / 1395
S/T/R 16-5S-3E

Assessment Value \$5,060

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	1.000 Acres	1110-SINGLE FAMILY RESIDENCE	2	N	N	\$25,300

Building Components

Improvement

Year Built	1935
Structure	SINGLE FAMILY RESIDENCE
Structure Code	111
Total Living Area	1395
Building Value	\$4,500

Materials and Features

Foundation	PIERS - 100
Exterior Walls	WOOD FRAME ASBES - 100
Roof Type	HIP-GABLE - 100
Roof Material	ASPHALT SHINGLES - 100
Floors	PINE, SINGLE - 100
Interior Finish	WALL BOARD - 100
Plumbing	AVERAGE - 100
Heat/AC	NO HEAT - 1395

Computations

Stories	1.0
1st Level Sq. Ft.	1395
Add'l Level Sq. Ft.	0
Total Living Area	1395
Total Adjusted Area	1395

Tax Sales

YEAR	PARCEL STATUS DATE	TAX SALE STATUS	OWNER NAME(S)	PURCHASER NAME(S)	TRUE MKT VAL	TAXES DUE	PURCHASED AMT	PARCEL STATUS
1990	2/10/2015	REDEEMED				133.63	133.63	FULLY PAID
2017	5/10/2021	REDEEMED	DAVIS, DENNIS			139.21	839.21	FULLY PAID

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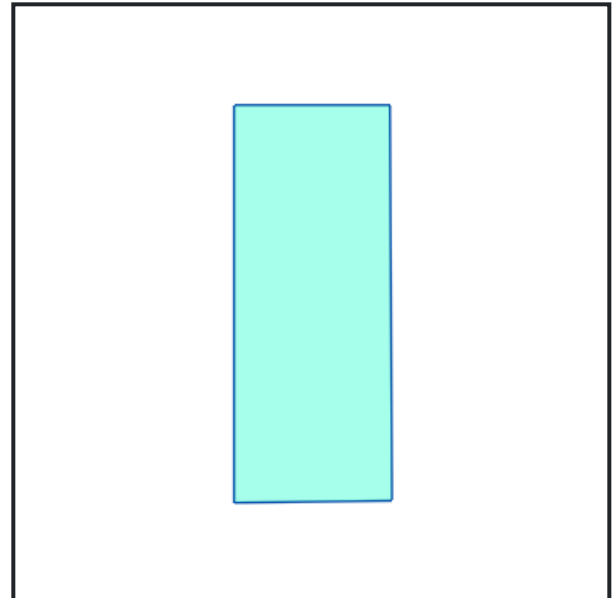
PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 22656
PARCEL 42-05-16-0-000-035.000
ACCOUNT NUMBER 183223
OWNER EDWARD, ENNIS EARL
MAILING ADDRESS PO BOX 21, LOXLEY, AL 365510021
PROPERTY ADDRESS 14372 WOLF RUN
LEGAL DESCRIPTION 132' X 330' COMM AT SE COR OF SE1/4 OF NW1/4 OF SEC 16, TH W 792' FOR POB; TH N330', TH E132', TH S330', TH W132' TO TH E POB SEC 16-T5S-R3E (WD)
EXEMPT CODE H1
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
22656	2023	REAL	\$ 113.10	\$ 0.00	\$ 113.10

Total Due: \$ 113.10

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 1.00
Use Value \$0
Land Value \$25,300
Improvement Value \$25,600
Total Appraised Value \$50,900
Total Taxable Value \$50,900
Assessment Value \$5,100

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page RP / 877 / 559
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	1.000 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	3	Y	N	\$25,300
MANUF HOME	1	MHD - MOBILE HOME CLASS D	-	3	Y	N	\$25,600

Building Components

Improvement

Year Built	1998
Structure	MOBILE HOME CLASS D
Structure Code	MHD
Total Living Area	1960
Building Value	\$25,600

Materials and Features

Skirting	MH SKIRTING - 196
----------	-------------------

Computations

Stories	1.0
1st Level Sq. Ft.	1960
Add'l Level Sq. Ft.	0
Total Living Area	1960
Total Adjusted Area	1960

Tax Sales

NO TAX SALES FOUND

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PROPERTY TAX
Baldwin County, Alabama

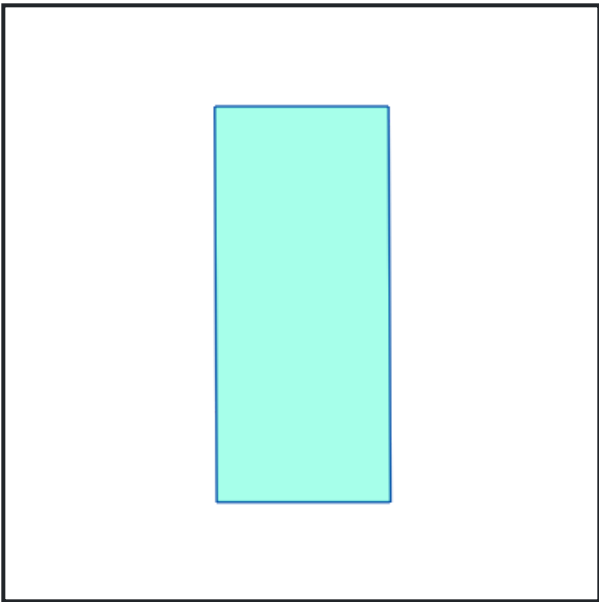
Current Date: 9/13/2023 Tax Year: 2023

NOTICE: THIS PARCEL HAS TAX SALE HISTORY. SEE THE TAX SALE SECTION FOR DETAILS.

Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 3647
PARCEL 42-05-16-0-000-036.000
ACCOUNT NUMBER 221116
OWNER WILLIAMS, WILLIE
MAILING ADDRESS 806 E VERBENA AVE, FOLEY, AL 365353348
PROPERTY ADDRESS 0 SMITH LN
LEGAL DESCRIPTION 132' X 330' BEG SE COR OF SE OF NW SEC 16 RUN W 660' N 330' E 132' S 330' W 132' TO POB SEC 16-T5S-R3E (WD)
EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
3647	2023	REAL	\$ 156.86	\$ 0.00	\$ 156.86

Total Due: \$ 156.86

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 1.00
Use Value \$0
Land Value \$25,300
Improvement Value \$0
Total Appraised Value \$25,300
Total Taxable Value \$25,300

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 848893
S/T/R 16-5S-3E

Assessment Value \$5,060

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	1.000 Acres	9100-UNDEVELOPED AND UNUSED LAND	2	N	N	\$25,300

Building Components

Tax Sales

YEAR	PARCEL STATUS DATE	TAX SALE STATUS	OWNER NAME(S)	PURCHASER NAME(S)	TRUE MKT VAL	TAXES DUE	PURCHASED AMT	PARCEL STATUS
2001	6/21/2002	REDEEMED	SMITH, SHAWNDA S			101.59	101.59	FULLY PAID
2013	6/12/2014	REDEEMED	WILLIAMS, WILLIE	TYLER MONTANA JUL PRESCOTT		111.88	111.88	FULLY PAID

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PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

NOTICE: THIS PARCEL HAS TAX SALE HISTORY. SEE THE TAX SALE SECTION FOR DETAILS.

Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 22647
PARCEL 42-05-16-0-000-037.000
ACCOUNT NUMBER 54842

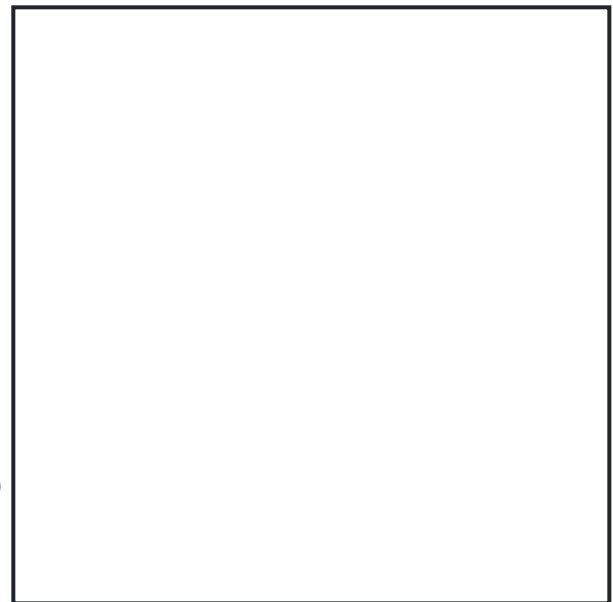
OWNER COX, RUTHIE MAE ETAL RUDOLPH,
MELODY; AND CHARDSON, SHELIA; COX,
IZEL; COX, CLAUDE AND JR

MAILING ADDRESS 16694 SWEET GUM BLVD, FOLEY, AL
365358632

PROPERTY ADDRESS 14420 SMITH LN

LEGAL DESCRIPTION 132' X 330' BEG SE COR OF SE OF NW1/4
SEC 16-5-3 TH W 528' N 330' E 132' S 330'
W 132' TO BEG CONT 1 AC (SURVIVORSHIP)

EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
22647	2023	REAL	\$ 163.06	\$ 0.00	\$ 163.06

Total Due: \$ 163.06

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 1.00
Use Value \$0
Land Value \$12,600
Improvement Value \$13,700
Total Appraised Value \$26,300
Total Taxable Value \$26,300

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page N/A / 510 / 1309
S/T/R 16-5S-3E

Assessment Value \$5,260

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	0.500 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	2	N	N	\$6,300
LAND	2	0.500 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	2	N	N	\$6,300
MANUF HOME	2	MHD - MOBILE HOME CLASS D	-	2	N	N	\$13,700

Building Components

Improvement

Year Built 1970
Structure MOBILE HOME CLASS D
Structure Code MHD
Total Living Area 232
Building Value \$2,400

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 232
Add'l Level Sq. Ft. 0
Total Living Area 232
Total Adjusted Area 232

Improvement

Year Built 1997
Structure MOBILE HOME CLASS D
Structure Code MHD
Total Living Area 924
Building Value \$13,700

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 924
Add'l Level Sq. Ft. 0
Total Living Area 924
Total Adjusted Area 940

Improvement

Year Built 1974
Structure UTILITY STEELOR ALUM. PREFAB
Structure Code 26SAPF
Total Living Area 80
Building Value \$1,300

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 80
Add'l Level Sq. Ft. 0
Total Living Area 80
Total Adjusted Area 80

Tax Sales

PARCEL YEAR STATUS DATE	TAX SALE STATUS	OWNER NAME(S)	PURCHASER NAME(S)	TRUE MKT VAL	TAXES DUE	PURCHASED AMT	PARCEL STATUS
1998 6/11/1999	REDEEMED	COX, RUTHIE MAE ETAL RUDOLPH, MELODY;			84.98	84.98	FULLY PAID
2019 2/22/2021	REDEEMED	COX, RUTHIE MAE ETAL RUDOLPH, MELODY; AND CHARDSON, SHELIA; COX, IZEL; COX, CLAUDE AND JR		19100.00	73.95	73.95	FULLY PAID

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PROPERTY TAX
Baldwin County, Alabama

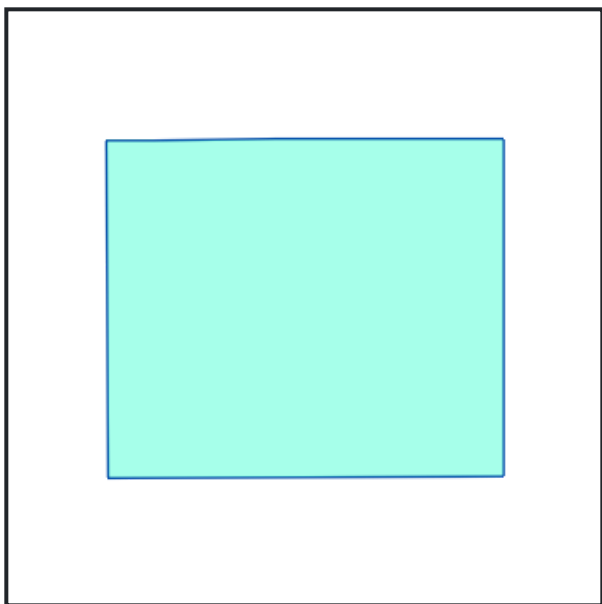
Current Date: 9/13/2023 Tax Year: 2023

NOTICE: THIS PARCEL HAS TAX SALE HISTORY. SEE THE TAX SALE SECTION FOR DETAILS.

Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 21355
PARCEL 42-05-16-0-000-038.000
ACCOUNT NUMBER 361777
OWNER SMITH, MELVIN V ETAL HOLLINGS, LATASHA M AND ; HOLLINGS, KAREN L; HOLLINGS, CLINTON L AND ; HOLLINGS, TYMIRA V
MAILING ADDRESS P O BOX 307, LOXLEY, AL 36551
PROPERTY ADDRESS 14478 SMITH LN (A)
LEGAL DESCRIPTION 396' X 330' BEG SE COR OF SE OF NW SEC 16 FOR POB RUN TH W 3 96', N 330', E 396', S 330' TO POB CONTAINING 2.8 ACRES IN S E1/4 OF NW1/4 OF SEC 16-T5S-R3E (STAT WD/TENANTS IN COMMON)
EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
21355	2023	REAL	\$ 320.54	\$ 0.00	\$ 320.54

Total Due: \$ 320.54

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 2.80
Use Value \$0
Land Value \$42,000
Improvement Value \$32,600
Total Appraised Value \$74,600
Total Taxable Value \$74,600

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 1778177
S/T/R 16-5S-3E

Assessment Value \$10,340

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	3	1.400 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	3	N	N	\$21,000
LAND	4	1.400 Acres	1410-MOBILE HOMES (SINGLE TRAILER)	2	N	N	\$21,000
MANUF HOME	1	MHD - MOBILE HOME CLASS D	-	3	N	N	\$18,600
MANUF HOME	2	MHD - MOBILE HOME CLASS D	-	2	N	N	\$7,800
M H PARK	3	47TPLOW - TRAILER PARK LOW COST	-	3	N	N	\$6,200

Building Components

Improvement

Year Built 2000
Structure MOBILE HOME CLASS D
Structure Code MHD
Total Living Area 1232
Building Value \$18,600

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 1232
Add'l Level Sq. Ft. 0
Total Living Area 1232
Total Adjusted Area 1232

Improvement

Year Built 2000
Structure MOBILE HOME CLASS D
Structure Code MHD
Total Living Area 480
Building Value \$7,800

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 480
Add'l Level Sq. Ft. 0
Total Living Area 480
Total Adjusted Area 480

Improvement

Year Built 2013
Structure TRAILER PARK LOW COST
Structure Code 47TPLOW
Total Living Area 1
Building Value \$6,200

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 1
Add'l Level Sq. Ft. 0
Total Living Area 1
Total Adjusted Area 1

Tax Sales

YEAR	PARCEL STATUS DATE	TAX SALE STATUS	OWNER NAME(S)	PURCHASER NAME(S)	TRUE MKT VAL	TAXES DUE	PURCHASED AMT	PARCEL STATUS
2018	1/16/2020	REDEEMED	HOLLINGS, REGINA		46300.00	138.63	138.63	FULLY PAID

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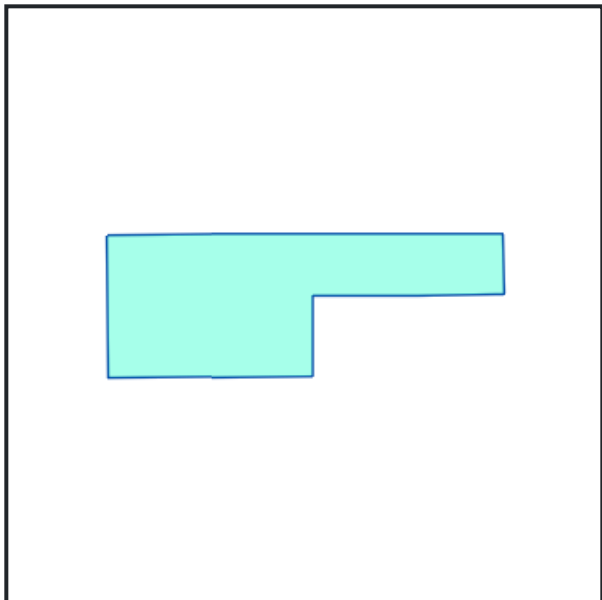
PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 90530
PARCEL 42-05-16-0-000-045.003
ACCOUNT NUMBER 378156
OWNER OKORO, ANNETTE
MAILING ADDRESS 26555 LOXLEY HEIGHTS RD, LOXLEY, AL 36551
PROPERTY ADDRESS 26555 LOXLEY HEIGHTS RD
LEGAL DESCRIPTION 5.1 AC(C) BEG AT THE SW COR OF THE S 1/2 OF THE S1/2 OF THE SW1/4 OF THE NE1/4 SEC 16, TH N 330', TH E 930'(S), TH S 143'(S), TH W 450'(S), TH S 190', TH W 480'(S) TO POB LYING IN THE NE1/4 SEC 16-T5S-R3E (QCD)
EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
90530	2023	REAL	\$ 143.84	\$ 0.00	\$ 143.84

Total Due: \$ 143.84

LAST PAYMENT DATE **N/A**

PAID BY

Property Values

Total Acres 5.10
Use Value \$0
Land Value \$46,400
Improvement Value \$0
Total Appraised Value \$46,400
Total Taxable Value \$46,400
Assessment Value \$4,640

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 1890640
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	2	5.100 Acres	9100-UNDEVELOPED AND UNUSED LAND	3	N	N	\$46,400

Building Components

Tax Sales

NO TAX SALES FOUND

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PROPERTY TAX
Baldwin County, Alabama

Current Date: 10/2/2024 Tax Year: 2024 (Billing Year: 2024) ▼

Parcel Info

PIN 62849
PARCEL 42-05-16-0-000-053.000
ACCOUNT NUMBER 522337

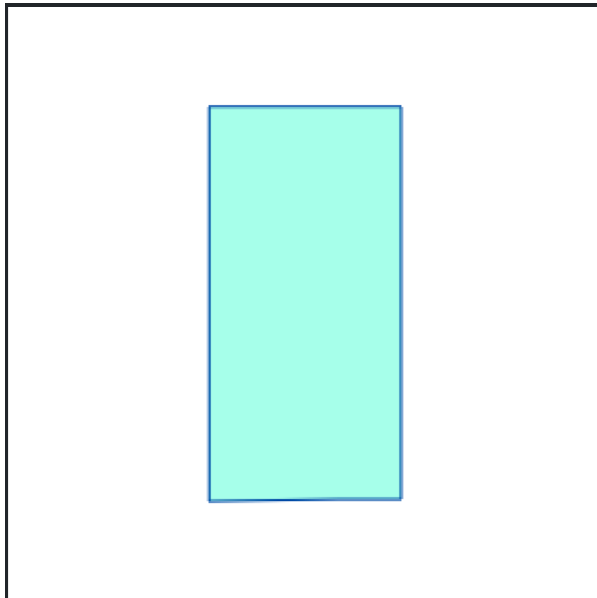
OWNER BALDWIN COUNTY
 COMMISSION
 322 COURTHOUSE SQ,
MAILING ADDRESS BAY MINETTE, AL
 365074809

PROPERTY ADDRESS 0

LEGAL DESCRIPTION 20 AC W1/2 OF NW1/4
 OF SE1/4 SEC 16-T5S-
 R3E

EXEMPT CODE S

TAX DISTRICT County - Central School
 Tax



Tax Information

TAXES WERE DUE ON 10/1/2024

PPIN	YEAR	TAX TYPE	TAXES	PENALTIES / INTEREST	SUBTOTAL	AMT PAID	BALANCE DUE
62849	2024	REAL	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

Total Due: \$ 0.00

LAST PAYMENT DATE **N/A**

PAID BY

Property Values

Total Acres 40.00
Use Value \$0
Land Value \$604,000
Improvement Value \$0
Total Appraised Value \$604,000
Total Taxable Value \$604,000
Assessment Value \$120,800

Subdivision Information

Code Name
Lot
Block
Type / Book / Page WD / 0 / 2045474
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	3	20.000 Acres	8100-AGRICULTURAL	2	N	N	\$162,200
LAND	2	11.000 Acres	8320-TIMBER (AVG. C2)	2	N	N	\$237,900
LAND	4	9.000 Acres	8330-TIMBER (POOR C3)	2	N	N	\$203,900

Building Components

Tax Sales

NO TAX SALES FOUND



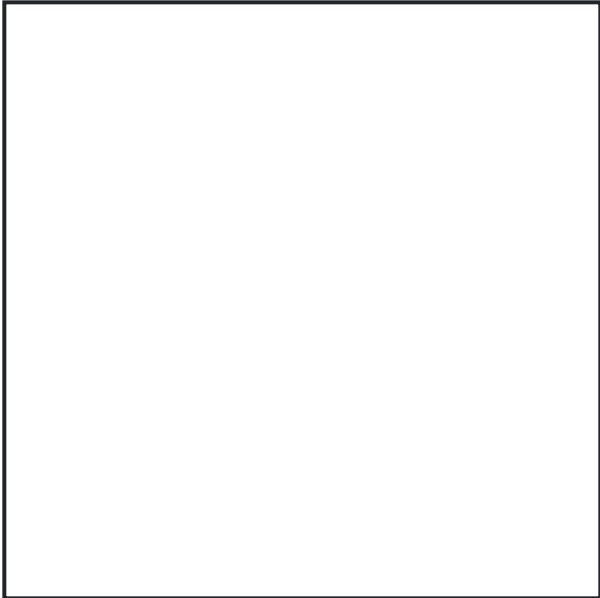
PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 6959
PARCEL 42-05-16-0-000-052.000
ACCOUNT NUMBER 294957
OWNER PIERCE, CYNTHIA L
MAILING ADDRESS 14291 TIMBER RIDGE DR, LOXLEY, AL 365515427
PROPERTY ADDRESS 14291 TIMBER RIDGE DR
LEGAL DESCRIPTION 14 AC PT OF LOT 50 TIMBER RIDGE UNIT THREE SLIDE 2089-C ALSO DESCRIBED AS COM AT THE NW COR OF LOT 50 TIMBER RIDGE UNIT THREE SLIDE 2089 TH RUN E 1103'(S), TH RUN SW 520'(S), TH RU N SW 68'(S), TH RUN SE 319'(S), TH SW ALONG CURVE 60', TH RU N NW 333'(S), TH RUN SW'LY 400'(S), TH CONT NW'LY 506'(S), T H RUN N 544' LYING IN S1/2 OF SE1/4 LYING IN THE CITY OF LOX LEY SEC 16-T5S-R3E (WD)
EXEMPT CODE H1
TAX DISTRICT Loxley - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
6959	2023	REAL	\$ 1,619.42	\$ 0.00	\$ 1,619.42

Total Due: \$ 1,619.42

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 14.00
Use Value \$5,641
Land Value \$140,400
Improvement Value \$433,900

Subdivision Information

Code TIMRID
Name TIMBER RIDGE UNIT THREE
Lot PT 50
Block

Total Appraised Value \$574,300
Total Taxable Value \$449,541
Assessment Value \$44,960

Type / Book / Page IN / N/A / 1928926
S/T/R 16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	3	4.000 Acres	8230-PASTURE (POOR B3)	3	N	N	\$40,100
LAND	4	3.000 Acres	8320-TIMBER (AVG. C2)	3	Y	N	\$30,100
LAND	7	6.000 Acres	8330-TIMBER (POOR C3)	3	Y	N	\$60,200
LAND	9	1.000 Acres	1110-SINGLE FAMILY RESIDENCE	3	N	N	\$10,000
RES/COM	2	111 - SINGLE FAMILY RESIDENCE	-	3	Y	N	\$388,300
BARN	1	B44 - BARN B-44	-	3	Y	N	\$43,100
PAVING	3	34PCR04 - PAVEMENT CONCRETE REINFORCED 4" COM	-	3	Y	N	\$2,500

Building Components

Improvement

Year Built 2018
Structure SINGLE FAMILY RESIDENCE
Structure Code 111
Total Living Area 3468
Building Value \$388,300

Computations

Stories 1.5
1st Level Sq. Ft. 2312
Add'l Level Sq. Ft. 1156
Total Living Area 3468
Total Adjusted Area 4125

Materials and Features

Foundation SLAB - 100
Exterior Walls METAL, CORRUGATE - 100
Roof Type HIP-GABLE - 100
Roof Material ENAMEL METAL SHI - 100
Floors LUXURY VINL PLA - 100
Interior Finish DRYWALL - 100
Plumbing AVERAGE - 100
Plumbing BATH 5FIX - 1
Plumbing BATH 3FIX - 1
Heat/AC FHA/AC - 3468

Improvement

Year Built 2005
Structure PAVEMENT CONCRETE REINFORCED 4" COM
Structure Code 34PCR04
Total Living Area 450
Building Value \$2,500

Computations

Stories 1.0
1st Level Sq. Ft. 450
Add'l Level Sq. Ft. 0
Total Living Area 450
Total Adjusted Area 450

Materials and Features

** No Materials / Features For This Improvement **

Improvement

Year Built	2005
Structure	BARN B-44
Structure Code	B44
Total Living Area	1800
Building Value	\$43,100

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories	1.0
1st Level Sq. Ft.	1800
Add'l Level Sq. Ft.	0
Total Living Area	1800
Total Adjusted Area	1800

Tax Sales

NO TAX SALES FOUND

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PROPERTY TAX
Baldwin County, Alabama

Current Date: 10/2/2024 **Tax Year:** 2024 (Billing Year: 2024) ▼

Parcel Info

PIN 247973
PARCEL 42-05-16-0-000-052.026
ACCOUNT NUMBER 525265

OWNER JACOBS STEPHEN
WAYNE AND JACOBS
MICHELE ANTONETTE

MAILING ADDRESS 14281 TIMBER RIDGE
DR, LOXLEY, AL 36551

PROPERTY ADDRESS 14281 TIMBER RIDGE DR

LEGAL DESCRIPTION 5.8AC(C) LOT 41 TIMBER
RIDGE UNIT THREE SLIDE
2089-C

EXEMPT CODE H1

TAX DISTRICT Loxley - Central School
Tax



Tax Information

TAXES WERE DUE ON 10/1/2024

PPIN	YEAR	TAX TYPE	TAXES	PENALTIES / INTEREST	SUBTOTAL	AMT PAID	BALANCE DUE
247973	2024	REAL	\$ 2,584.22	\$ 0.00	\$ 2,584.22	\$ 0.00	\$ 2,584.22

Total Due: \$ 2,584.22

LAST PAYMENT DATE **N/A**

PAID BY

Property Values

Total Acres	3.21
Use Value	\$0
Land Value	\$88,800
Improvement Value	\$621,800
Total Appraised Value	\$710,600
Total Taxable Value	\$710,600
Assessment Value	\$71,060

Subdivision Information

Code	TIMRID
Name	TIMBER RIDGE UNIT THREE
Lot	41
Block	
Type / Book / Page	WD/SURV / 0 / 2055263
S/T/R	16-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	3.210 Acres	1110-SINGLE FAMILY RESIDENCE	3	Y	N	\$88,800
RES/COM	2	111 - SINGLE FAMILY RESIDENCE	-	3	Y	N	\$507,800
PAVING	4	34PCR04 - PAVEMENT CONCRETE REINFORCED 4" COM	-	3	Y	N	\$8,900
BARN	1	B44 - BARN B-44	-	3	Y	N	\$38,500
OUTDOOR	6	OUTKT - OUTDOOR KITCHEN	-	3	Y	N	\$16,100
POOL	3	29-SPVIN - POOL VINYL	-	3	Y	N	\$25,300
PAVILION	5	PAV - PAVILION	-	3	Y	N	\$25,200

Building Components

Improvement

Year Built	2005
Year Remodeled	2021
Structure	SINGLE FAMILY RESIDENCE
Structure Code	111
Total Living Area	3319
Building Value	N/A

Computations

Stories	2.0
1st Level Sq. Ft.	2969
Add'l Level Sq. Ft.	350
Total Living Area	3319
Total Adjusted Area	3778

Materials and Features

Foundation	SLAB - 100
Exterior Walls	BRICK ON WOOD - 100
Roof Type	HIP-GABLE - 100
Roof Material	ENAMEL METAL SHI - 100
Floors	TILE, CERAMIC - 25
Floors	HARDWOOD, SELECT - 75
Floors	CONCRETE, STAMPE - 0
Interior Finish	DRYWALL - 100
Plumbing	AVERAGE - 100
Plumbing	BATH 2FIX - 1
Plumbing	BATH 5FIX (WHIRLPOOL TUB) - 1
Plumbing	BATH 4FIX - 1
Plumbing	JANITOR SINK/MOP SINK - 1
Plumbing	WETBAR SINK - 1
Plumbing	BATH 3FIX - 1
Fireplaces	FIREPLACE +1 PREFAB - 1
Heat/AC	FHA/AC - 3319

Improvement

Year Built 2006
Structure PAVEMENT CONCRETE
REINFORCED 4" COM
Structure Code 34PCR04
Total Living Area 1640
Building Value N/A

Computations

Stories 1.0
1st Level Sq. Ft. 1640
Add'l Level Sq. Ft. 0
Total Living Area 1640
Total Adjusted Area 1640

Materials and Features

** No Materials / Features For This
Improvement **

Improvement

Year Built 2004
Year Remodeled 2021
Structure BARN B-44
Structure Code B44
Total Living Area 1680
Building Value N/A

Computations

Stories 1.0
1st Level Sq. Ft. 1680
Add'l Level Sq. Ft. 0
Total Living Area 1680
Total Adjusted Area 1680

Materials and Features

** No Materials / Features For This
Improvement **

Improvement

Year Built 2015
Structure OUTDOOR KITCHEN
Structure Code OUTKT
Total Living Area 15
Building Value N/A

Computations

Stories 1.0
1st Level Sq. Ft. 15
Add'l Level Sq. Ft. 0
Total Living Area 15
Total Adjusted Area 15

Materials and Features

** No Materials / Features For This
Improvement **

Improvement

Year Built 2006
Structure POOL VINYL
Structure Code 29-SPVIN
Total Living Area 648
Building Value N/A

Computations

Stories 1.0
1st Level Sq. Ft. 648
Add'l Level Sq. Ft. 0
Total Living Area 648
Total Adjusted Area 648

Improvement

Year Built 2015
Structure PAVILION
Structure Code PAV
Total Living Area 560
Building Value N/A

Computations

Stories 1.0
1st Level Sq. Ft. 560
Add'l Level Sq. Ft. 0
Total Living Area 560
Total Adjusted Area 560

Tax Sales

NO TAX SALES FOUND

Materials and Features

** No Materials / Features For This
Improvement **

Materials and Features

Plumbing BATH 2FIX - 1



PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

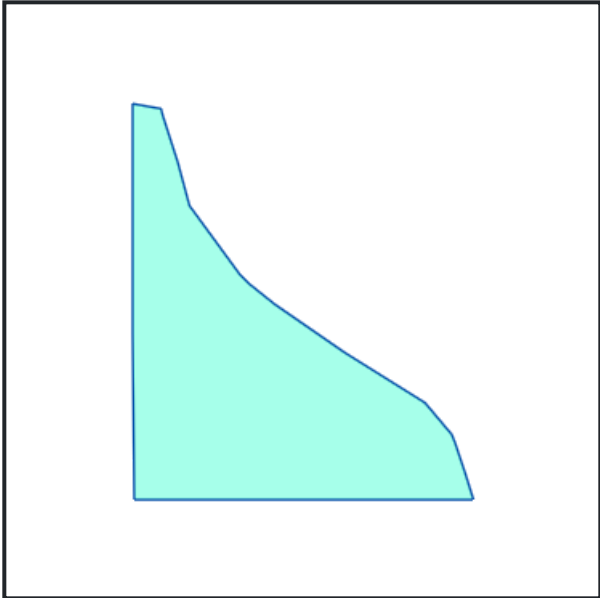
Parcel Info

PIN 247972
PARCEL 42-05-16-0-000-052.025
ACCOUNT NUMBER 197661

OWNER GILLEY, MATTHEW G ETAL GILLEY, DAWN MARI AND E
MAILING ADDRESS 14290 TIMBER RIDGE DR, LOXLEY, AL 365515424
PROPERTY ADDRESS 14290 TIMBER RIDGE DR

LEGAL DESCRIPTION 6AC LOT 49 TIMBER RIDGE UNIT THREE SLIDE 2089-C LYING IN SE1 /4 SEC 16-T5S-R3E (WD/SURVIVORSHIP)

EXEMPT CODE
TAX DISTRICT Loxley - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
247972	2023	REAL	\$ 2,886.74	\$ 0.00	\$ 2,886.74

Total Due: \$ 2,886.74

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 6.00
Use Value \$0
Land Value \$61,800
Improvement Value \$718,200
Total Appraised Value \$780,000
Total Taxable Value \$780,000
Assessment Value \$78,020

Subdivision Information

Code TIMRID
Name TIMBER RIDGE UNIT THREE
Lot 49
Block
Type / Book / Page IN / N/A / 1668378
S/T/R 16-5S-3E

Detail Information

TYPE	REF DESCRIPTION	LAND USE	TC HS PN	APPRAISED VALUE
LAND	1 6.000 Acres	1110-SINGLE FAMILY RESIDENCE	3 N N	\$61,800
RES/COM 1	111 - SINGLE FAMILY RESIDENCE	-	3 N N	\$608,700
PAVILION 3	PAV - PAVILION	-	3 N N	\$12,900
PAVING 4	34PBRPC - PAVEMENT BRICK PAVERS ON CONCRETE COM	-	3 N N	\$34,600
POOL 5	29-SPGIR - POOL GUNITE IRREGULAR	-	3 N N	\$54,900
BARN 6	B23 - BARN SHED B-23	-	3 N N	\$7,100

Building Components

Improvement

Year Built	2021
Structure	SINGLE FAMILY RESIDENCE
Structure Code	111
Total Living Area	3670
Building Value	\$608,700

Computations

Stories	2.0
1st Level Sq. Ft.	2770
Add'l Level Sq. Ft.	900
Total Living Area	3670
Total Adjusted Area	4906

Improvement

Year Built	2020
Structure	PAVEMENT BRICK PAVERS ON CONCRETE COM
Structure Code	34PBRPC
Total Living Area	1892
Building Value	\$34,600

Computations

Stories	1.0
1st Level Sq. Ft.	1892
Add'l Level Sq. Ft.	0
Total Living Area	1892
Total Adjusted Area	1892

Materials and Features

Foundation	SLAB - 100
Exterior Walls	BRICK ON WOOD - 25
Exterior Walls	METAL, CORRUGATE - 75
Roof Type	HIP-GABLE - 100
Roof Material	ENAMEL METAL SHI - 100
Floors	HARDWOOD, SELECT - 100
Interior Finish	DRYWALL - 100
Plumbing	AVERAGE - 100
Plumbing	BATH 5FIX - 1
Plumbing	BATH 2FIX - 1
Fireplaces	FIREPLACE +1 PREFAB - 1
Heat/AC	FHA/AC - 3670

Materials and Features

** No Materials / Features For This Improvement **

Improvement

Year Built 2022
Structure BARN SHED B-23
Structure Code B23
Total Living Area 828
Building Value \$7,100

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 828
Add'l Level Sq. Ft. 0
Total Living Area 828
Total Adjusted Area 828

Improvement

Year Built 2020
Structure POOL GUNITE IRREGULAR
Structure Code 29-SPGIR
Total Living Area 680
Building Value \$54,900

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 680
Add'l Level Sq. Ft. 0
Total Living Area 680
Total Adjusted Area 680

Improvement

Year Built 2020
Structure PAVILION
Structure Code PAV
Total Living Area 288
Building Value \$12,900

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories 1.0
1st Level Sq. Ft. 288
Add'l Level Sq. Ft. 0
Total Living Area 288
Total Adjusted Area 288

Tax Sales

NO TAX SALES FOUND



PROPERTY TAX
Baldwin County, Alabama

Current Date: 10/2/2024 **Tax Year:** 2024 (Billing Year: 2024)

Parcel Info

PIN 71622
PARCEL 42-05-21-0-000-003.000
ACCOUNT NUMBER 52769

OWNER BALDWIN COUNTY
ALABAMA
ATTN: CO COMMISSION
OFFICE, 312

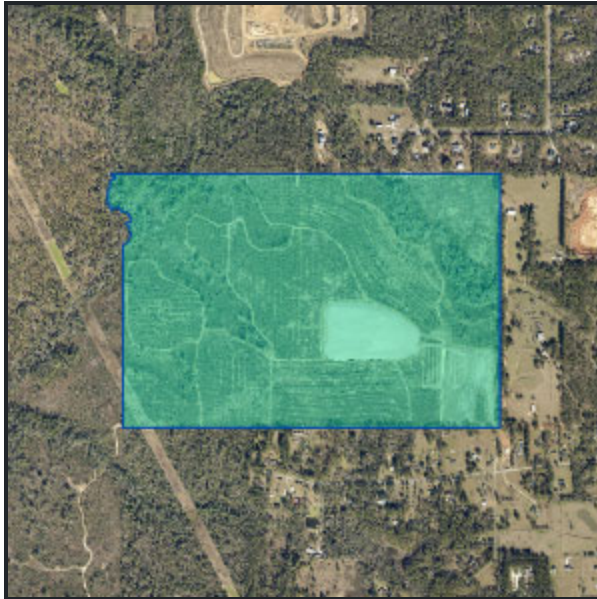
MAILING ADDRESS COURTHOUSE SQUARE
STE 12 , BAY MINETTE,
AL 36507

PROPERTY ADDRESS 0 SIMS LN

LEGAL DESCRIPTION 244 AC(C) THE NW1/4 &
THE W1/2 OF NE1/4 OF
SEC 21 ALSO BEG A T
THE NW COR OF SEC 21
RUN TH W 121'(S) TO
THE CENTERLINE OF
CORN BRANCH, TH RUN
S & SE'LY ALG BRANCH
634'(S), TH N 398' (S) TO
POB LESS & EXCEPT
DESC AS: COM AT THE
NW COR OF SEC 2 1
RUN TH S 398'(S) FOR
POB TH RUN SE'LY &
SW'LY ALG THE CENT
ERLINE OF CORN
BRANCH 510'(S), TH N
354'(S) TO POB SEC 21-
T5 S-R3E (ST WD)

EXEMPT CODE S

TAX DISTRICT County - Central School
Tax



Tax Information

TAXES WERE DUE ON 10/1/2024

PPIN	YEAR	TAX TYPE	TAXES	PENALTIES / INTEREST	SUBTOTAL	AMT PAID	BALANCE DUE
71622	2024	REAL	\$ 0.00		\$ 0.00	\$ 0.00	\$ 0.00

Total Due: \$ 0.00

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres	244.00
Use Value	\$0
Land Value	\$722,200
Improvement Value	\$0
Total Appraised Value	\$722,200
Total Taxable Value	\$722,200
Assessment Value	\$72,220

Subdivision Information

Code	
Name	
Lot	
Block	
Type / Book / Page	IN / N/A / 1767448
S/T/R	21-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND 3	244.000 Acres	9100-UNDEVELOPED AND UNUSED LAND 3		N	N		\$722,200

Building Components

Tax Sales

NO TAX SALES FOUND

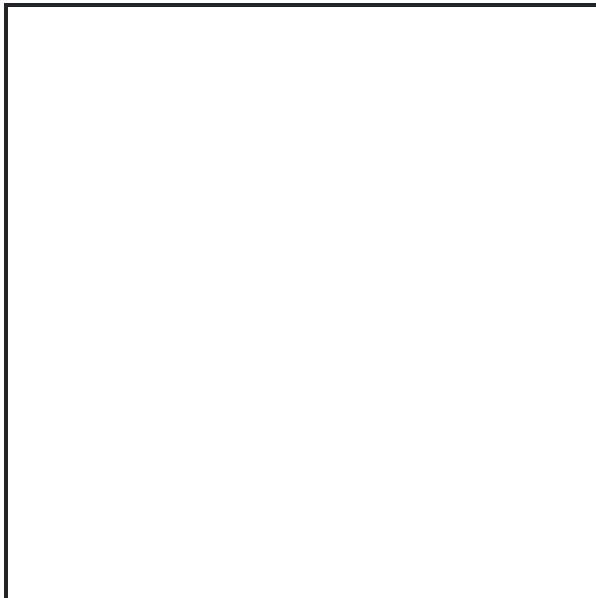


PROPERTY TAX
Baldwin County, Alabama

Current Date: 10/2/2024 **Tax Year:** 2024 (Billing Year: 2024)

Parcel Info

PIN	383841
PARCEL	42-04-20-0-000-001.004
ACCOUNT NUMBER	52769
OWNER	BALDWIN COUNTY ALABAMA ATTN: CO COMMISSION OFFICE, 312
MAILING ADDRESS	COURTHOUSE SQUARE STE 12 , BAY MINETTE, AL 36507
PROPERTY ADDRESS	25655 STAPLETON LN
LEGAL DESCRIPTION	264 AC(C) ALL THAT PT OF SEC 20 LYING S OF CORN BRANCH SEC 2 0- T5S-R3E (ST WD)
EXEMPT CODE	S
TAX DISTRICT	County - Central School Tax



Tax Information

TAXES WERE DUE ON 10/1/2024

PPIN	YEAR	TAX TYPE	TAXES	PENALTIES / INTEREST	SUBTOTAL	AMT PAID	BALANCE DUE
383841	2024	REAL	\$ 0.00		\$ 0.00	\$ 0.00	\$ 0.00

Total Due: \$ 0.00

LAST PAYMENT DATE **N/A**

PAID BY

Property Values

Total Acres	264.00
Use Value	\$0
Land Value	\$625,100
Improvement Value	\$0
Total Appraised Value	\$625,100
Total Taxable Value	\$625,100
Assessment Value	\$125,020

Subdivision Information

Code	
Name	
Lot	
Block	
Type / Book / Page	IN / N/A / 1767448
S/T/R	20-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND 1	264.000	Acres	9100-UNDEVELOPED AND UNUSED LAND 2	N	N		\$625,100

Building Components

Tax Sales

NO TAX SALES FOUND



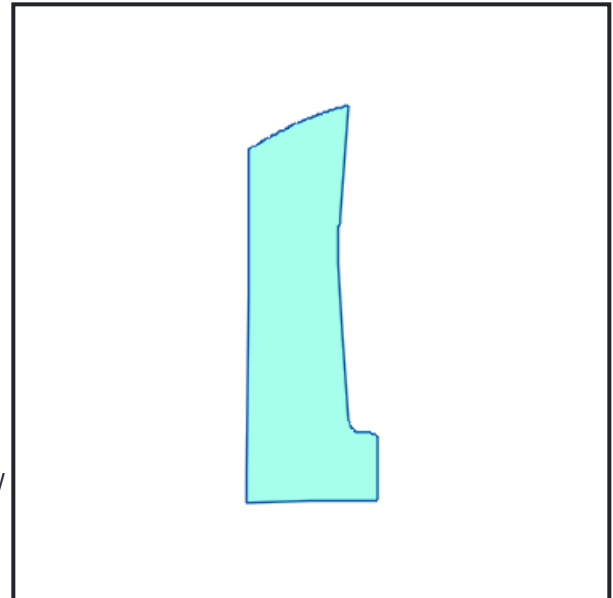
PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 40320
PARCEL 42-04-17-0-000-001.000
ACCOUNT NUMBER 225089
OWNER STAPLETON FAMILY LIMITED PARTNERSHIP
MAILING ADDRESS 13600 CO RD 64, LOXLEY, AL 36551
PROPERTY ADDRESS 0 CO RD 64



LEGAL DESCRIPTION
524 AC(C) COM AT THE NE COR OF SEC 17 TH W 210'(S) TO POB TH W 1111'(S), TH S 602'(S), TH W 1321'(S), TH N 595'(S), TH W 231'(S), TH S 629'(S), TH W 702'(S), TH N 565'(S), TH SW'LY ALG R/W 1671'(S), TH S 4530'(S), TH E 5310'(S), TH N 1450'(S), TH W 224', TH NW'LY 1671'(S), TH N 797'(S), TH NE'LY 114 8'(S), TH NW 137'(S), TH NE 259'(S) TO POB LESS 60' R/W SEC 17-T5S-R3E (DEED)

EXEMPT CODE
TAX DISTRICT County - Central School Tax

Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
40320	2023	REAL	\$ 1,125.62	\$ 0.00	\$ 1,125.62

Total Due: \$ 1,125.62

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 524.00
Use Value \$326,269
Land Value \$1,129,600
Improvement Value \$9,200
Total Appraised Value \$1,138,800
Total Taxable Value \$346,169

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 1000316
S/T/R 17-5S-3E

Assessment Value \$34,620

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	11	141.000 Acres	8310-TIMBER (GOOD C1)	3	N	N	\$301,100
LAND	15	0.000 Acres	9320-LAKES AND PONDS	3	N	N	\$10,700
LAND	16	283.000 Acres	8320-TIMBER (AVG. C2)	3	N	N	\$604,300
LAND	17	100.000 Acres	8330-TIMBER (POOR C3)	3	N	N	\$213,500
DOCK/DECK	1	31-PUN - PIER	-	3	N	N	\$9,200

Building Components

Improvement

Year Built	2010
Structure	PIER
Structure Code	31-PUN
Total Living Area	472
Building Value	\$9,200

Materials and Features

** No Materials / Features For This Improvement **

Computations

Stories	1.0
1st Level Sq. Ft.	472
Add'l Level Sq. Ft.	0
Total Living Area	472
Total Adjusted Area	472

Tax Sales

NO TAX SALES FOUND



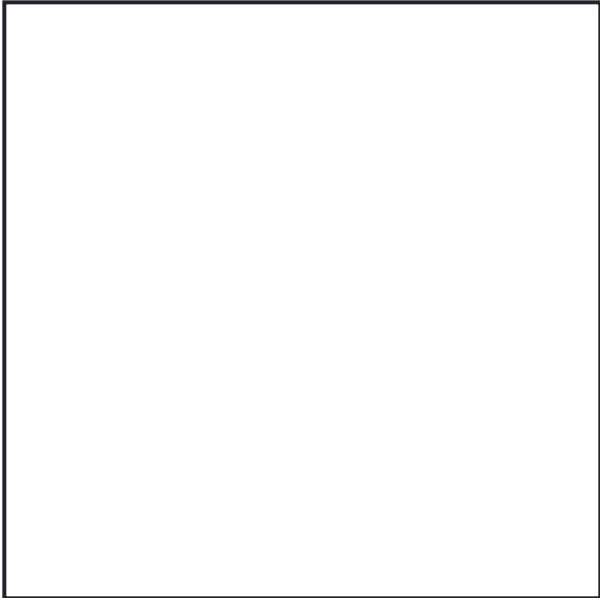
PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 40301
PARCEL 42-04-20-0-000-001.000
ACCOUNT NUMBER 225089
OWNER STAPLETON FAMILY LIMITED PARTNERSHIP
MAILING ADDRESS 13600 CO RD 64, LOXLEY, AL 36551
PROPERTY ADDRESS 25655 STAPLETON LN



LEGAL DESCRIPTION 381 AC(C) ALL THAT PT OF SEC 20 LYING N & W OF CORN BRANCH A ND ALSO BEG AT THE NE COR OF SEC 20 RUN TH S 398'(S) FOR POB TH RUN SE'LY & SW'LY ALG THE CENTERLINE OF CORN BRANCH 510' (S), TH N 354'(S) TO POB LESS & EXCEPT DESC AS: COM AT THE N W COR OF SEC 20 RUN TH S 1514'(S), TH E 1139'(S) FOR POB TH CONT E 543'(S), TH SW 407'(S), TH W 541'(S), TH NE 404'(S) T O POB ALSO LESS RD R/W SEC 20-T5S-R3E (DEED)

EXEMPT CODE
TAX DISTRICT County - Central School Tax

Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
40301	2023	REAL	\$ 690.66	\$ 0.00	\$ 690.66

Total Due: \$ 690.66

LAST PAYMENT DATE **N/A**

PAID BY

Property Values

Total Acres 381.00
Use Value \$211,607
Land Value \$723,100
Improvement Value \$0
Total Appraised Value \$723,100

Subdivision Information

Code
Name
Lot
Block
Type / Book / Page IN / N/A / 1000316

Total Taxable Value \$211,607

S/T/R

20-5S-3E

Assessment Value \$21,160

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	7	34.000 Acres	8210-PASTURE (GOOD B1)	3	N	N	\$64,500
LAND	8	54.000 Acres	8310-TIMBER (GOOD C1)	3	N	N	\$102,500
LAND	9	140.000 Acres	8320-TIMBER (AVG. C2)	3	N	N	\$265,700
LAND	10	153.000 Acres	8330-TIMBER (POOR C3)	3	N	N	\$290,400

Building Components

Tax Sales

NO TAX SALES FOUND



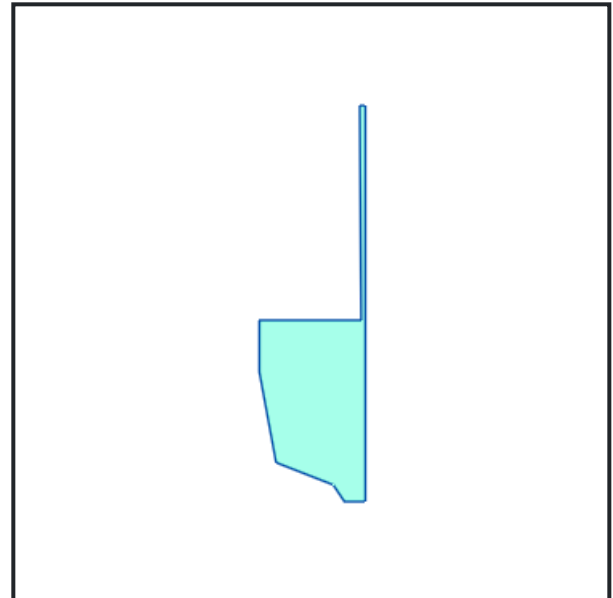
PROPERTY TAX
Baldwin County, Alabama

Current Date: 9/13/2023 Tax Year: 2023

⚠ Values and Taxes are estimates and are subject to change. [Click here](#) for the current amount due.

Parcel Info

PIN 381172
PARCEL 42-04-17-0-000-001.006
ACCOUNT NUMBER 356828
OWNER HWY 64 DIRT INC
MAILING ADDRESS P O BOX 2200, ROBERTSDALE, AL 36567
PROPERTY ADDRESS 0 CO RD 64
LEGAL DESCRIPTION 37.4 AC LOT 2 STAPLETON FAMILY DIRT PIT
DIVISION SLIDE 2672- E SEC 17-T5S-R3E
(WD)
EXEMPT CODE
TAX DISTRICT County - Central School Tax



Tax Information

TAXES ARE DUE ON 10/1/2023

PPIN	YEAR	TAX TYPE	TAX DUE	PAID	BALANCE
381172	2023	REAL	\$ 3,286.62	\$ 0.00	\$ 3,286.62

Total Due: \$ 3,286.62

LAST PAYMENT DATE **N/A**
PAID BY

Property Values

Total Acres 37.40
Use Value \$0
Land Value \$530,100
Improvement Value \$0
Total Appraised Value \$530,100
Total Taxable Value \$530,100
Assessment Value \$106,020

Subdivision Information

Code STPLFAMDIR
Name STAPLETON FAMILY DIRT PIT
DIV
Lot 2
Block
Type / Book / Page IN / N/A / 1750569
S/T/R 17-5S-3E

Detail Information

TYPE	REF	DESCRIPTION	LAND USE	TC	HS	PN	APPRAISED VALUE
LAND	1	17.000 Acres	8600-DIRT PIT	2	N	N	\$242,300
LAND	2	20.400 Acres	9100-UNDEVELOPED AND UNUSED LAND	2	N	N	\$287,800

Building Components

Tax Sales

NO TAX SALES FOUND

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BALDWIN COUNTY COMMISSION

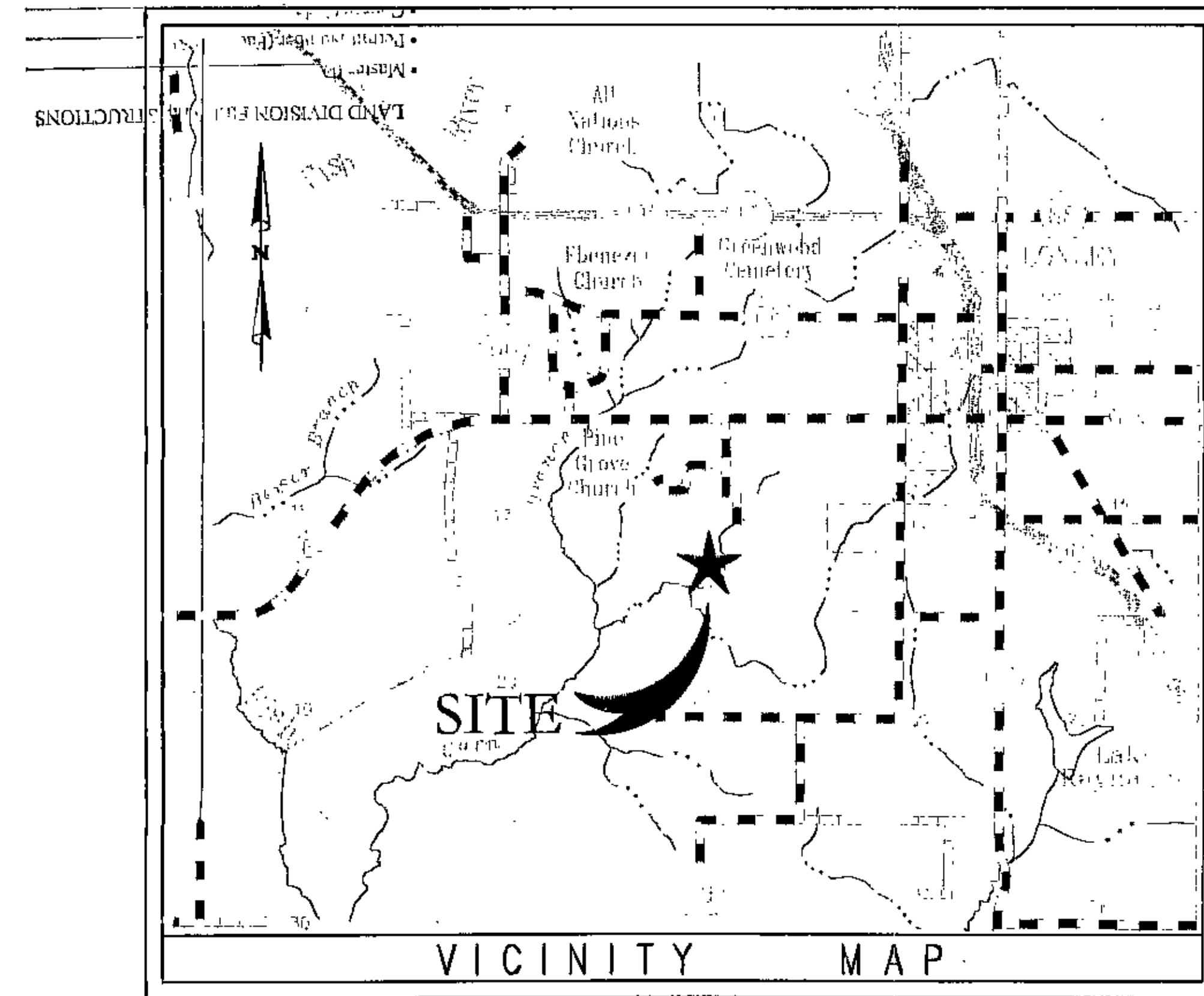
MacBride Landfill

40 ACRE EXPANSION & MODIFICATION



- Section
- Date
- Location
- Description
- Drawing

JULY 2007



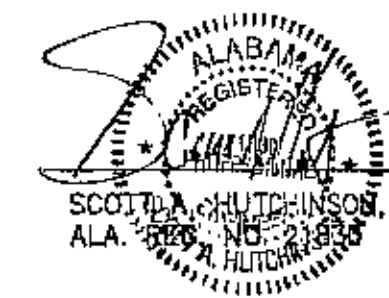
VICINITY MAP (NOT TO SCALE)

INDEX TO SHEETS

SHEET	DESCRIPTION
1	TITLE SHEET
2	CELL LAYOUT - OVERALL SITE
3	FINAL GRADE - OVERALL SITE
4-5	BOTTOM OF CELL GRADES
6-7	FINISH GRADES
8	CONSTRUCTION DETAILS
9	EROSION CONTROL DETAILS
10-10D	CROSS SECTIONS

LAND DIVISION FILING INSTRUCTIONS

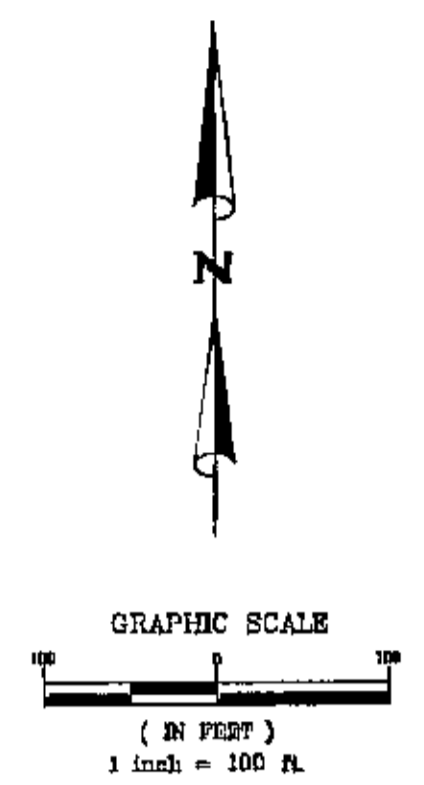
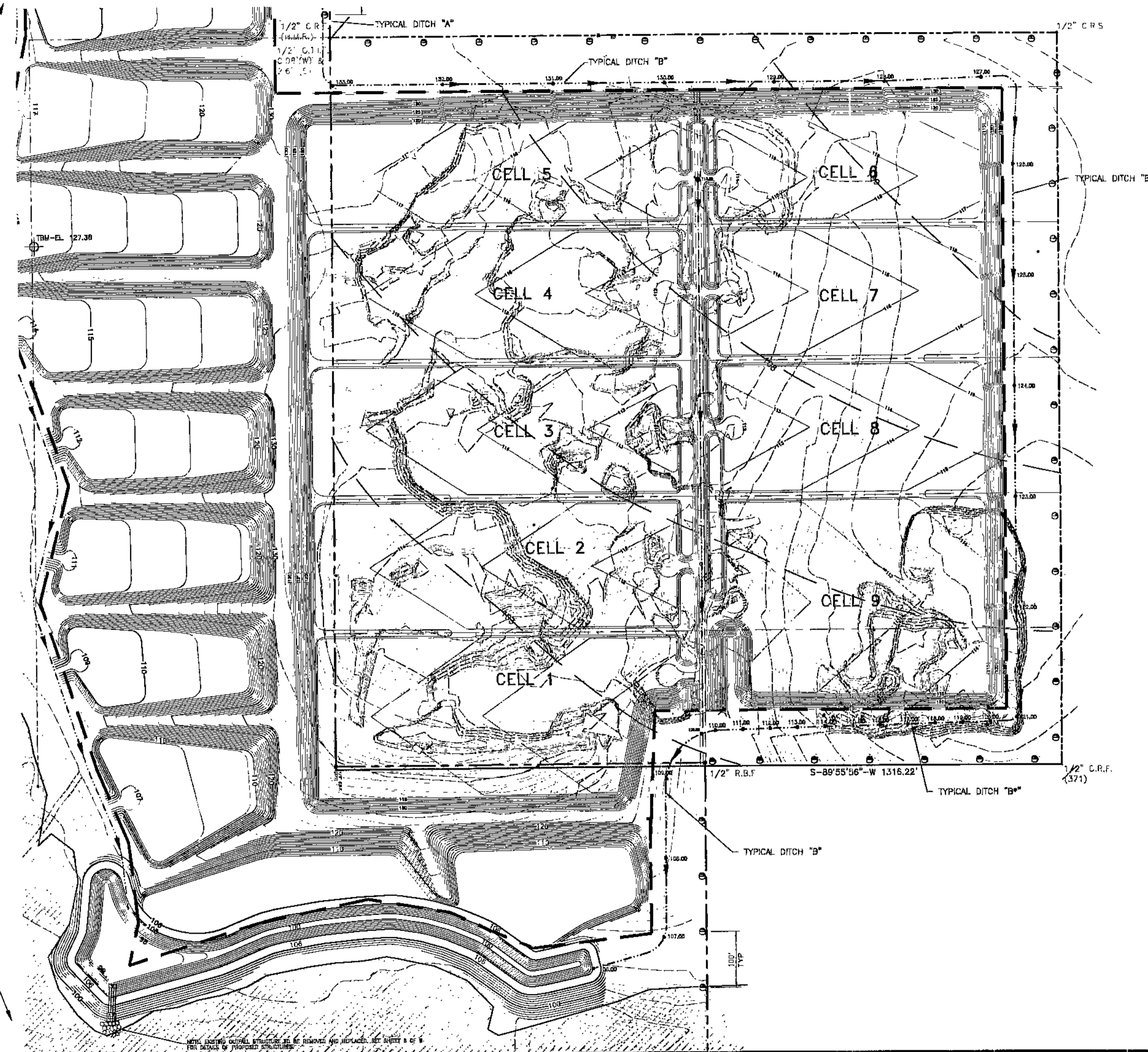
- Master ID 01391
- Permit Number (Facility ID) 02-11
- County Code 003
- Document Date 10/19/07
- Document Type PERM
- Document Title Modification Drawings
- Scanner _____



10/8/07
DATE



EXISTING PERMITTED LANDFILL



LEGEND

- PROPERTY LINE
- DISPOSAL AREA BOUNDARY
- - - 150 EXISTING CONTOUR
- - - 110 PROPOSED CONTOUR
- - - PROPOSED DITCH FLOW LINE
- - - GROUND WATER CONTOUR
- O.T.I.F. OPEN TOP IRON FOUND
- C.T.I.F. CRIMP TOP IRON FOUND
- C.R.F. CAPPED REBAR FOUND
- R.F. REBAR FOUND
- C.R.S. CAPPED REBAR SET
- C.M.F. CONC. MON. FOUND
- ⊕ TBM TEMPORARY BENCHMARK
- RCP REINFORCED CONCRETE PIPE

NOTE: EXISTING OUTFALL STRUCTURES ARE TO BE REMOVED AND REPLACED. SEE SHEET A OF 8 FOR DETAILS OF PROPOSED STRUCTURES.

NO.	REVISION	DATE	ENGR.



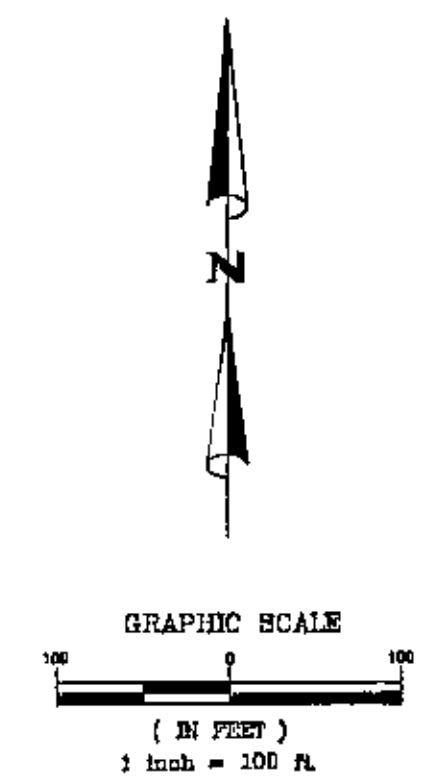
HUTCHINSON, MOORE & RAUCH, LLC
 2039 MAIN STREET
 DAPHNE, ALABAMA 36526
 ENGINEERS • SURVEYORS
 LAND PLANNERS
 TEL (251) 626-2626
 FAX (251) 626-6934
 daphne@hmrengineers.com



2791-CELL-GRAD
 8/12/00-2791-10.25

CELL LAYOUT- OVERALL SITE
MACBRIDE LANDFILL-40 ACRE EXPANSION & MODIFICATION
BALDWIN COUNTY COMMISSION

SCALE 1" = 100'	DATE JULY 2007	DRAWN BY CLH	CHECKED BY	SHEET 2 OF 8
--------------------	-------------------	-----------------	------------	-----------------



LEGEND

- PROPERTY LINE
- DISPOSAL AREA BOUNDARY
- - - EXISTING CONTOUR
- - - PROPOSED CONTOUR
- - - PROPOSED DITCH FLOW LINE
- - - GROUND WATER CONTOUR
- T.I.F. OPEN TOP IRON FOUND
- C.T.I.F. CRIMP TOP IRON FOUND
- C.R.F. CAPPED REBAR FOUND
- R.F. REBAR FOUND
- C.R.S. CAPPED REBAR SET
- C.M.F. CONC. MON. FOUND
- ⊕ T.B.M. TEMPORARY BENCHMARK
- R.C.P. REINFORCED CONCRETE PIPE

NO.	REVISION	DATE	ENGR.

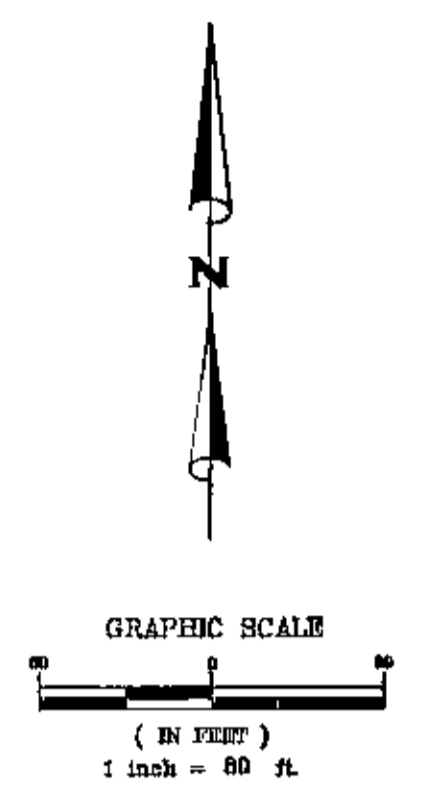
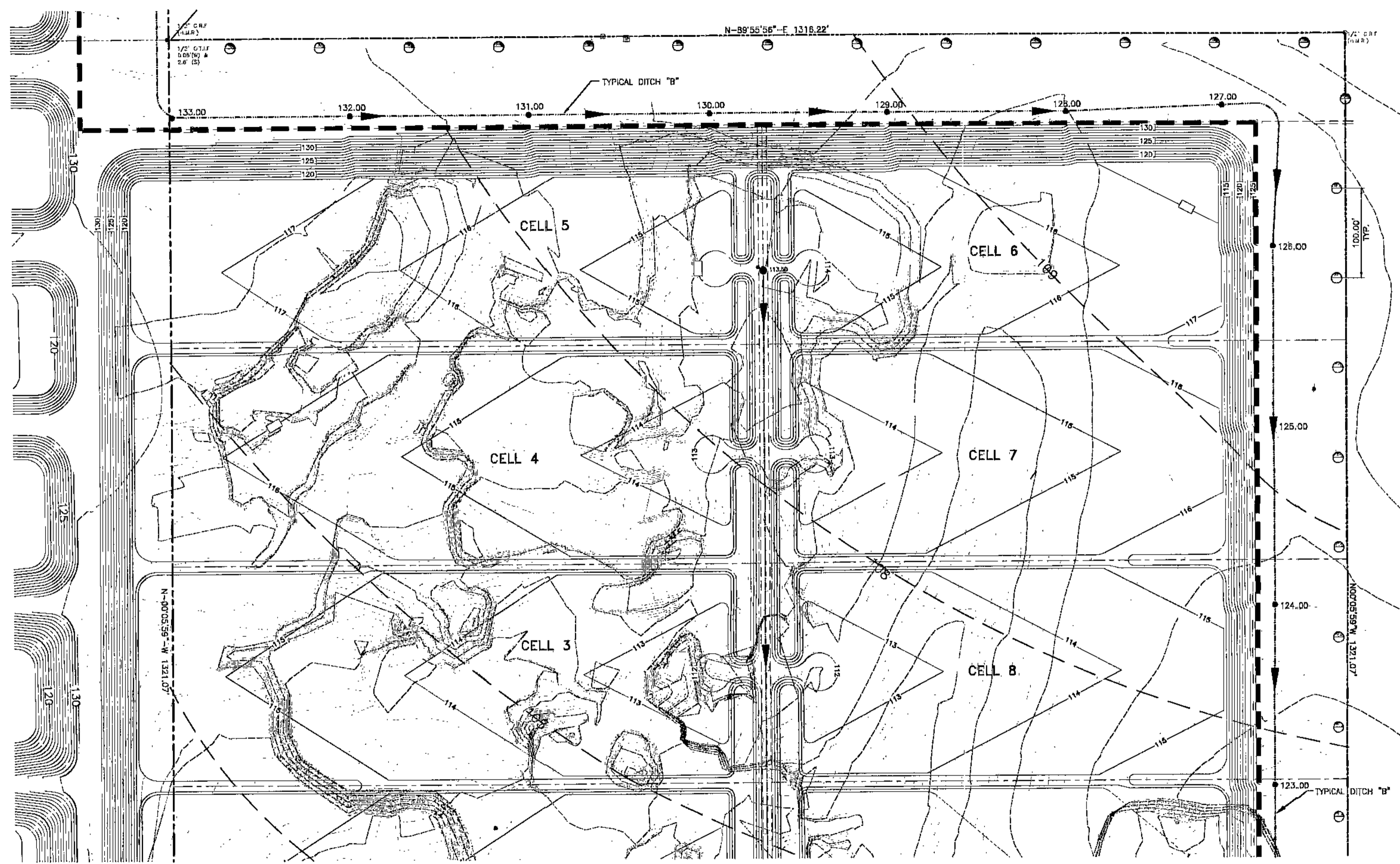


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 daphne@hmrengineers.com



FINAL GRADING PLAN-OVERALL SITE
MACBRIDE LANDFILL - 49 ACRE EXPANSION & MODIFICATION
BALDWIN COUNTY COMMISSION

SCALE: 1" = 100'
 DATE: JULY 2007
 DRAWN BY: GLH
 CHECKED BY: []
 SHEET: 3 OF 9



LEGEND

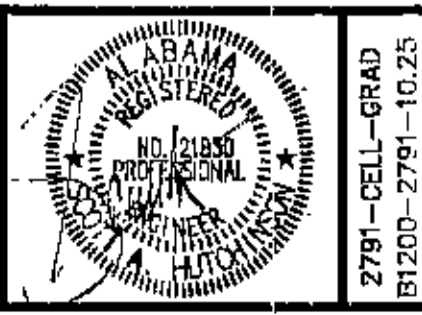
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	DISPOSAL AREA BOUNDARY
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED DITCH FLOW LINE
	GROUND WATER CONTOUR
	OPEN TOP IRON FOUND
	CRIMP TOP IRON FOUND
	CAPPED REBAR FOUND
	REBAR FOUND
	CAPPED REBAR SET
	CONC. MON. FOUND
	TEMPORARY BENCHMARK
	REINFORCED CONCRETE PIPE

MATCHLINE (SEE SHEET 5 OF 9)

NO.	REVISION	DATE	ENGR.

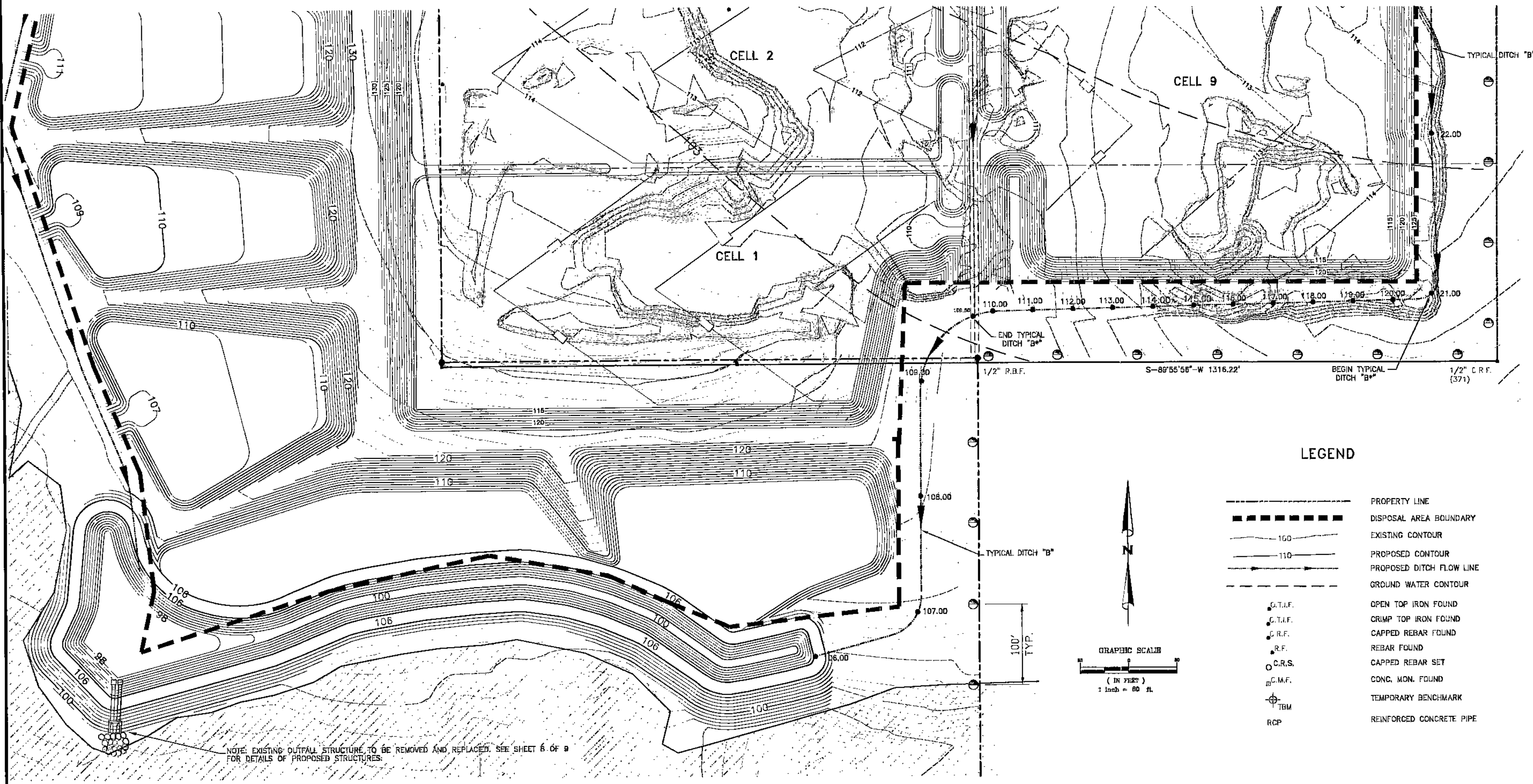


HUTCHINSON, MOORE & RAUCH, LLC
 2039 MAIN STREET
 DAPHNE, ALABAMA 36526
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 LAND PLANNERS
 TEL (251) 626-2626
 FAX (251) 626-6934
 daphne@hmrengineers.com



BOTTOM OF CELL GRADES			
MACBRIDE LANDFILL - 40 ACRE EXPANSION & MODIFICATION			
BALDWIN COUNTY COMMISSION			
SCALE 1" = 60'	DATE JULY 2007	DRAWN BY GLH	CHECKED BY
SHEET 4 OF 9			

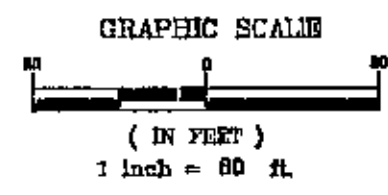
MATCHLINE (SEE SHEET 4 OF 9)



NOTE: EXISTING OUTFALL STRUCTURE TO BE REMOVED AND REPLACED. SEE SHEET 6 OF 9 FOR DETAILS OF PROPOSED STRUCTURES.

LEGEND

- PROPERTY LINE
- - - - DISPOSAL AREA BOUNDARY
- 120 --- EXISTING CONTOUR
- 110 --- PROPOSED CONTOUR
- >--- PROPOSED DITCH FLOW LINE
- GROUND WATER CONTOUR
- G.T.I.F. OPEN TOP IRON FOUND
- G.T.I.F. CRIMP TOP IRON FOUND
- C.R.F. CAPPED REBAR FOUND
- R.F. REBAR FOUND
- C.R.S. CAPPED REBAR SET
- C.M.F. CONC. MON. FOUND
- ⊕ TBM TEMPORARY BENCHMARK
- RCP REINFORCED CONCRETE PIPE



NO.	REVISION	DATE	CHKD



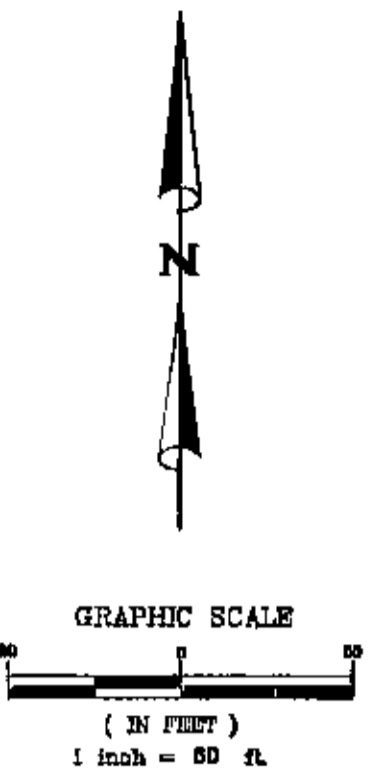
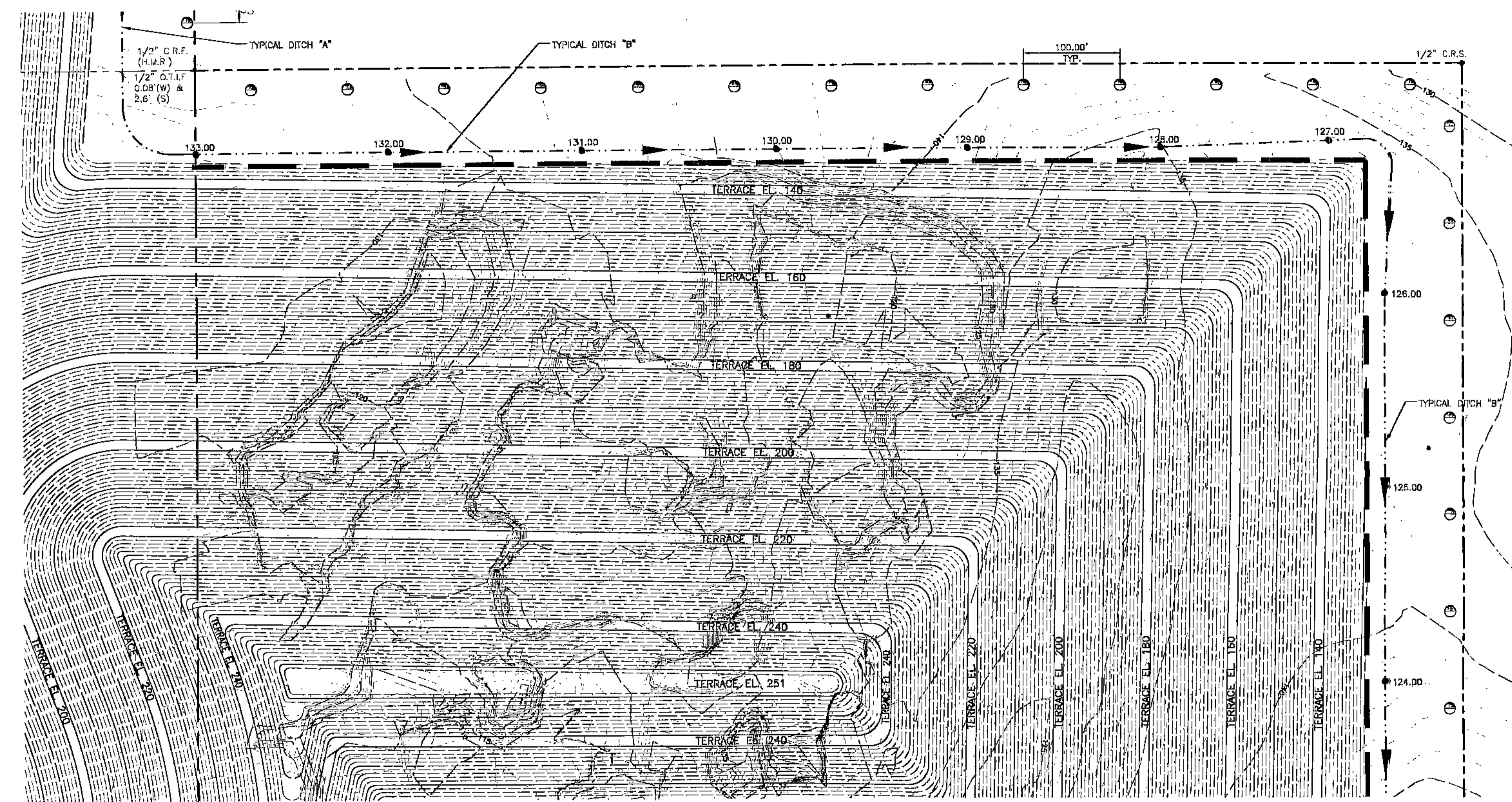
HUTCHINSON, MOORE & RAUCH, LLC
 2039 MAIN STREET
 DAPHNE, ALABAMA 36526
 ENGINEERS • SURVEYORS
 LAND PLANNERS
 TEL (251) 626-2626
 FAX (251) 626-6934
 daphne@hmrengineers.com



2791-CELL-65AD
81200-2791-10.25

BOTTOM OF CELL GRADES
MACBRIDE LANDFILL- 40 ACRE EXPANSION & MODIFICATION
BALDWIN COUNTY COMMISSION

SCALE: 1" = 60'
 DATE: JULY 2007
 DRAWN BY: GLH
 CHECKED BY: []
 SHEET: 5 OF 9



LEGEND

- PROPERTY LINE
- DISPOSAL AREA BOUNDARY
- - - 160 - - - EXISTING CONTOUR
- - - 110 - - - PROPOSED CONTOUR
- - - PROPOSED DITCH FLOW LINE
- - - GROUND WATER CONTOUR
- O.T.I.F. OPEN TOP IRON FOUND
- C.T.I.F. CRIMP TOP IRON FOUND
- C.R.F. CAPPED REBAR FOUND
- R.F. REBAR FOUND
- C.R.S. CAPPED REBAR SET
- C.M.F. CONC. MON. FOUND
- ⊕ TBM TEMPORARY BENCHMARK
- ⊕ RCP REINFORCED CONCRETE PIPE

MATCHLINE (SEE SHEET 7 OF 9)

NO.	REVISION	DATE	ENGR.



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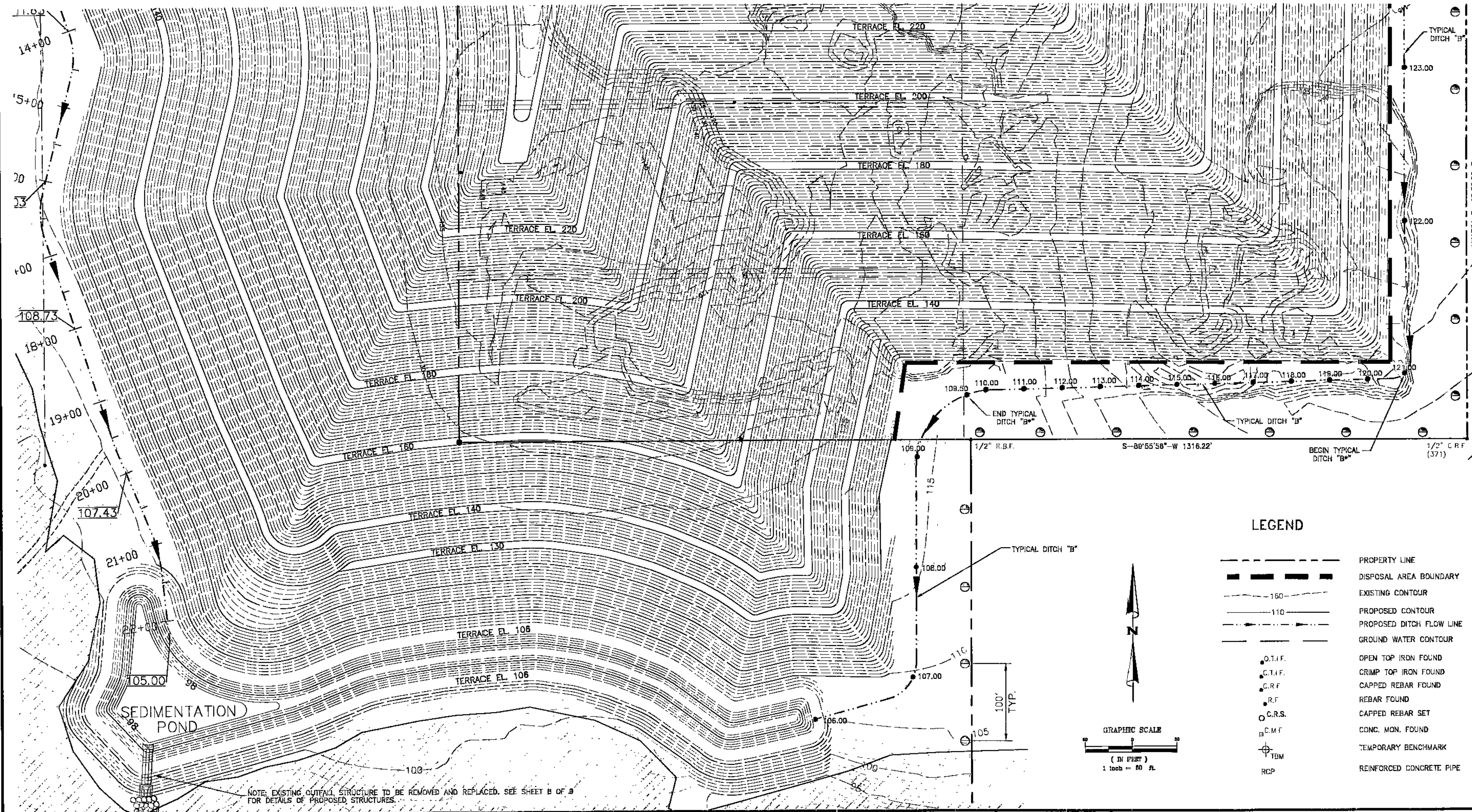


2791-CELL-GRAD
 01200-2791-1029

FINISH GRADES
MACBRIDE LANDFILL - 40 ACRES EXPANSION & MODIFICATION
BALDWIN COUNTY COMMISSION

SCALE 1" = 60'	DATE JULY 2007	DRAWN BY GLH	CHECKED BY	SHEET 6 OF 9
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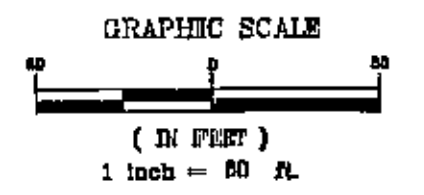
MATCHLINE (SEE SHEET 6 OF 9)



NOTE: EXISTING OUTFALL STRUCTURE TO BE REMOVED AND REPLACED. SEE SHEET B OF 9 FOR DETAILS OF PROPOSED STRUCTURES.

LEGEND

- PROPERTY LINE
- DISPOSAL AREA BOUNDARY
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED DITCH FLOW LINE
- GROUND WATER CONTOUR
- O.T.I.F. OPEN TOP IRON FOUND
- C.T.I.F. CRIMP TOP IRON FOUND
- C.R.F. CAPPED REBAR FOUND
- R.F. REBAR FOUND
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NO.	REVISION	DATE	ENGR.



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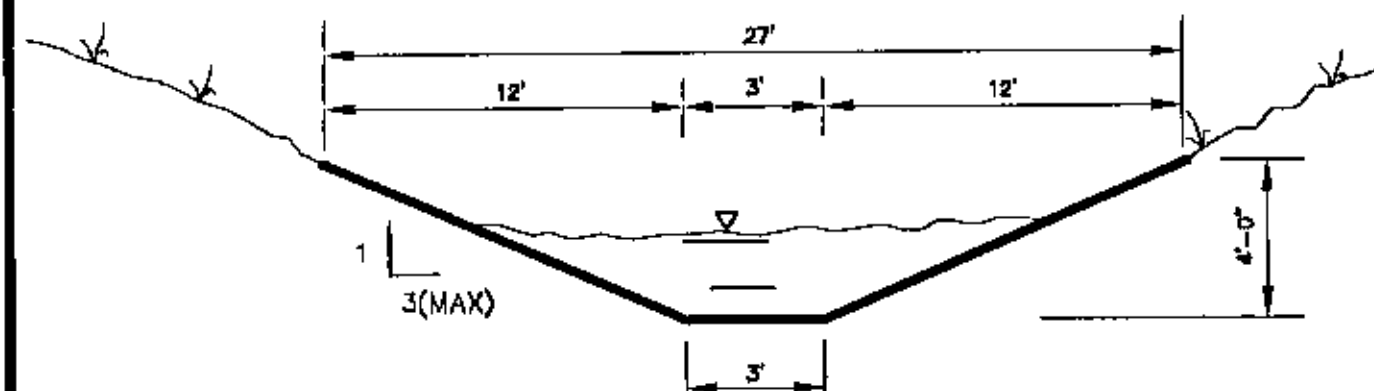
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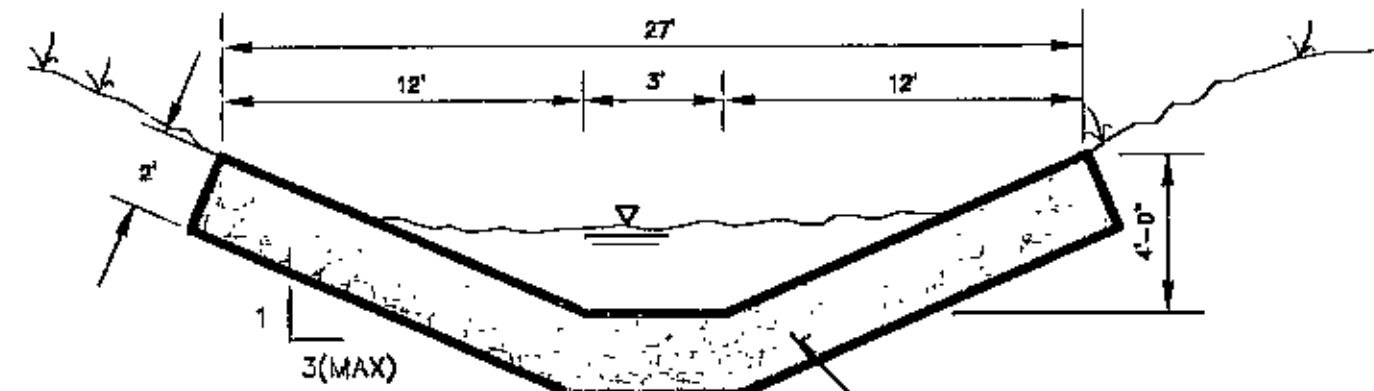


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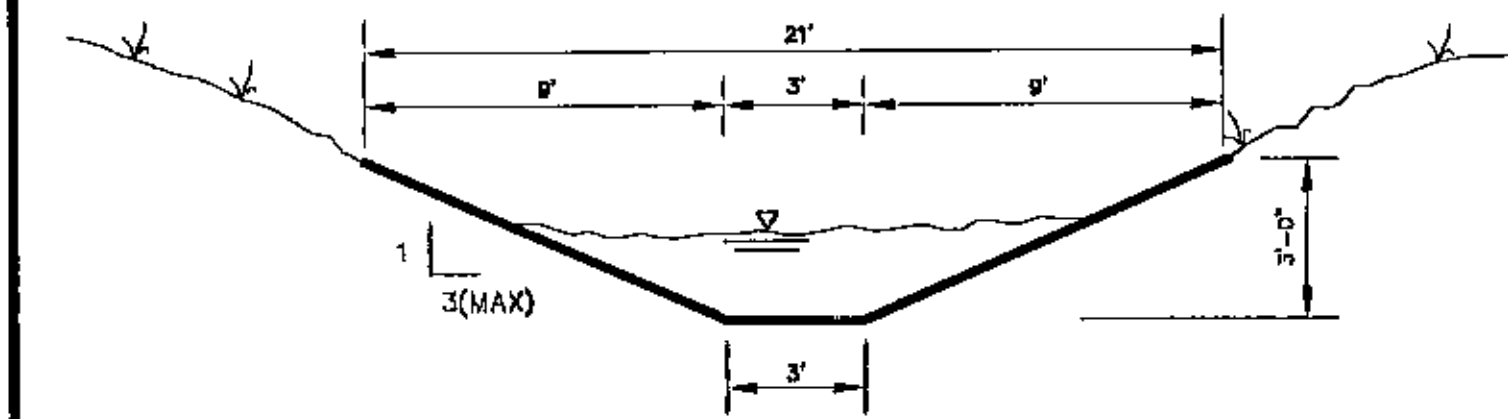
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MACBRIDE LANDFILL - 40 ACRES EXPANSION & MODIFICATION				
BALDWIN COUNTY COMMISSION				
SCALE	DATE	DRAWN BY	CHECKED BY	SHEET
1" = 80'	JULY 2007	GLH		7 OF 9



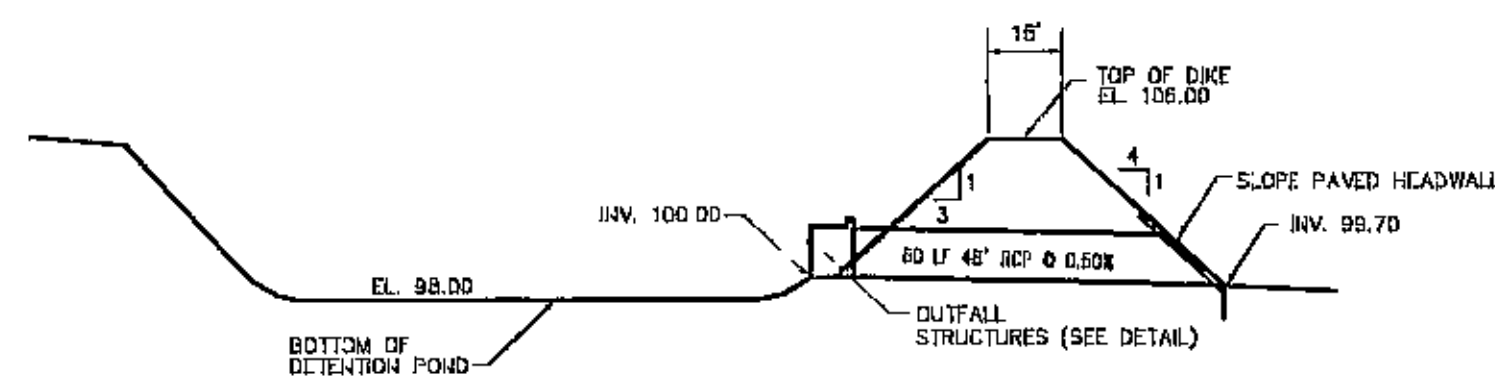
DITCH SECTION "B"



DITCH SECTION "B*"



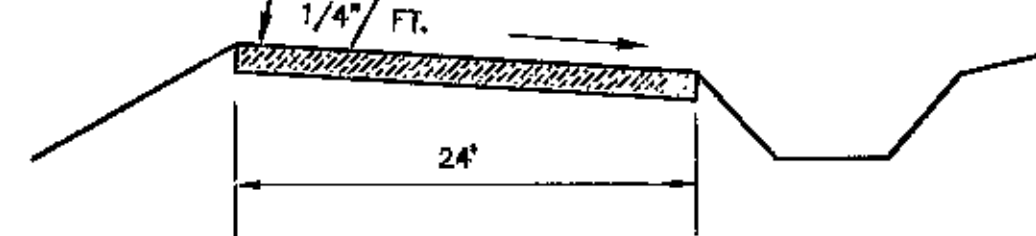
DITCH SECTION "A"



DETENTION POND DETAILS

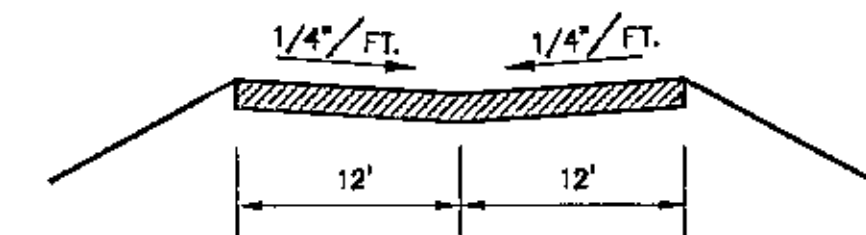
NTS

6" COMPACTED NATURAL SOILS (PLACE CRUSHED LIMESTONE OR GRAVEL ON ROADWAY SURFACE AS NEEDED FOR WET-WEATHER CONDITIONS)



DIRECTING RAINWATER TO ONE SIDE

NTS

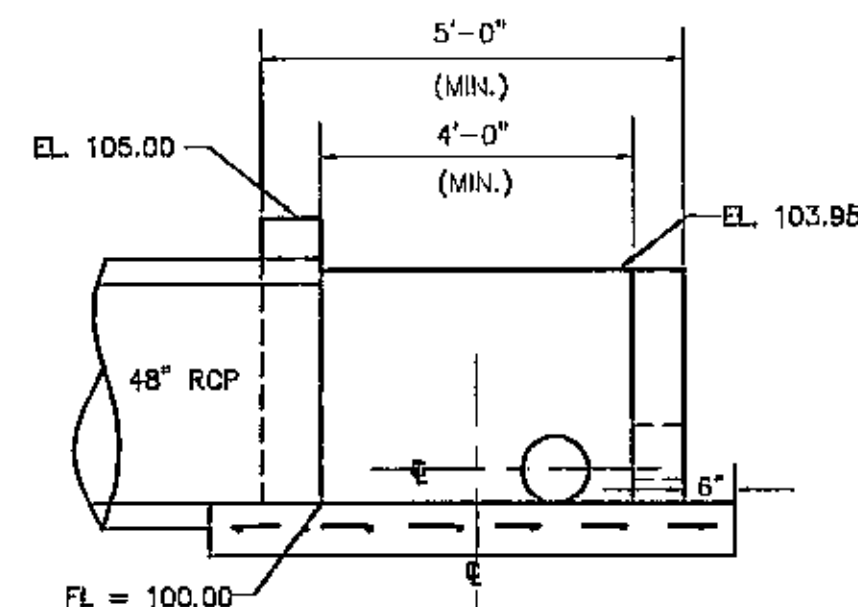


CHANNELING RAINWATER DOWN ROADWAY

NTS

NOTE: MAXIMUM DESIGN SPEED OF ON-SITE ROADS IS 10 MPH.

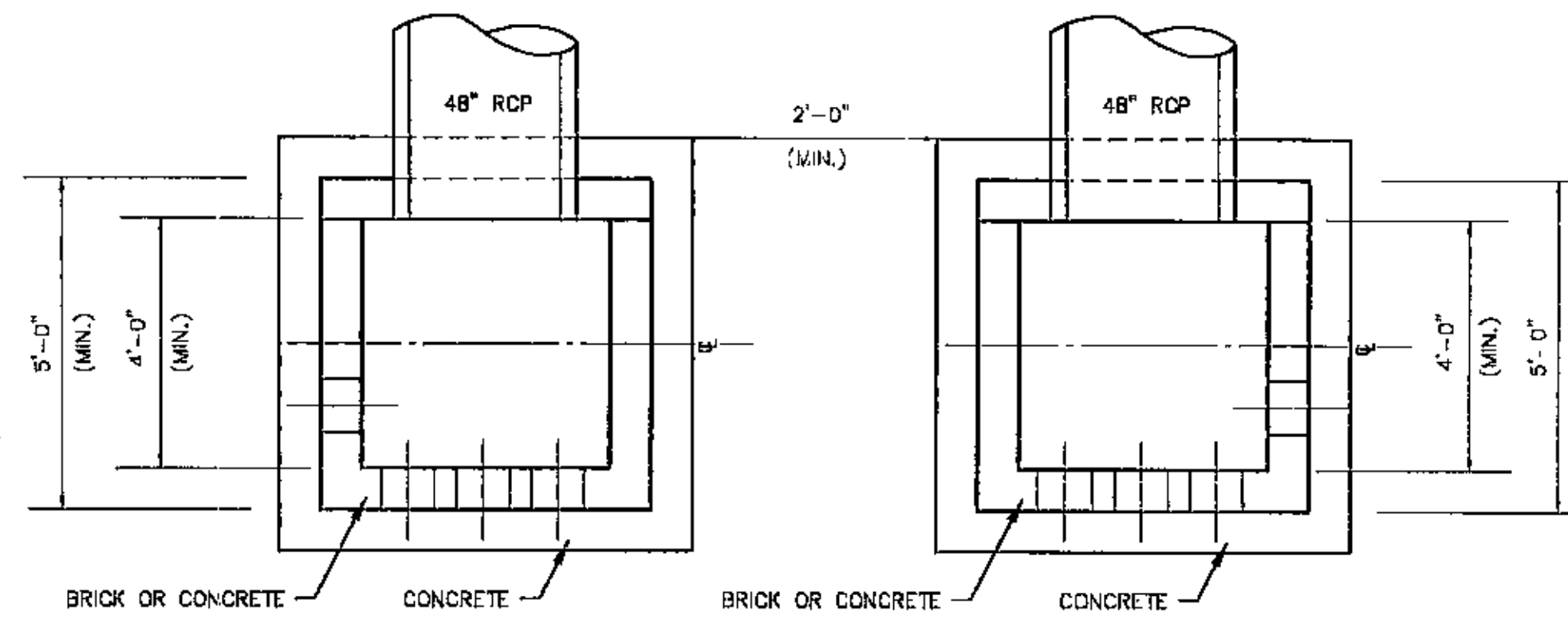
TYPICAL ROADWAY SECTIONS



SECTION "B"- "B"

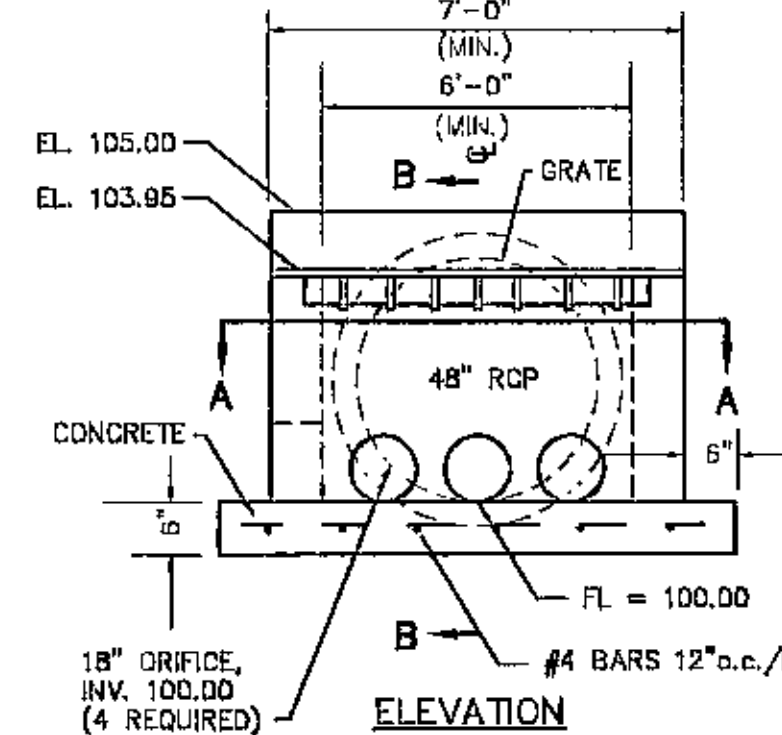
OUTFALL STRUCTURE #1

NTS

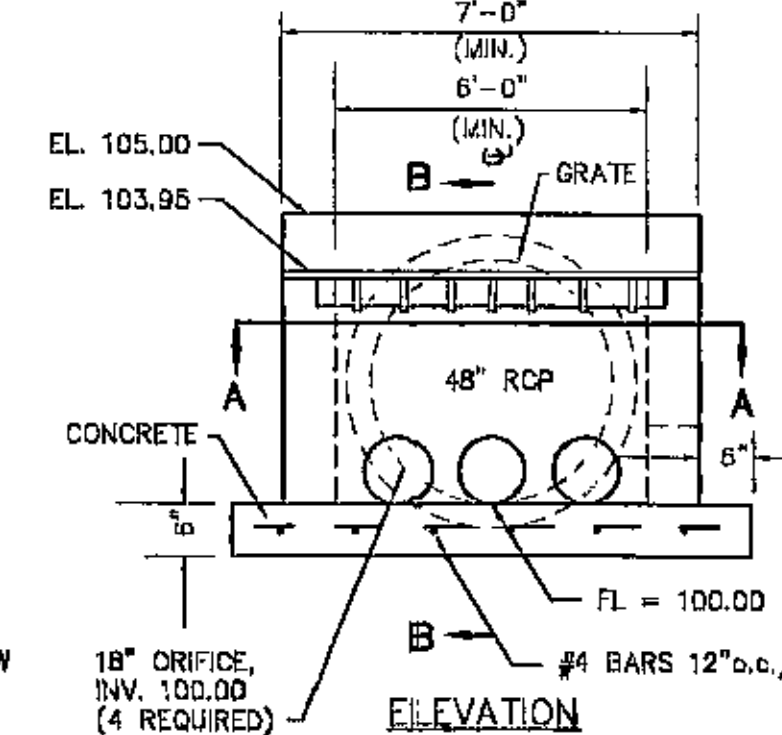


SECTION A-A

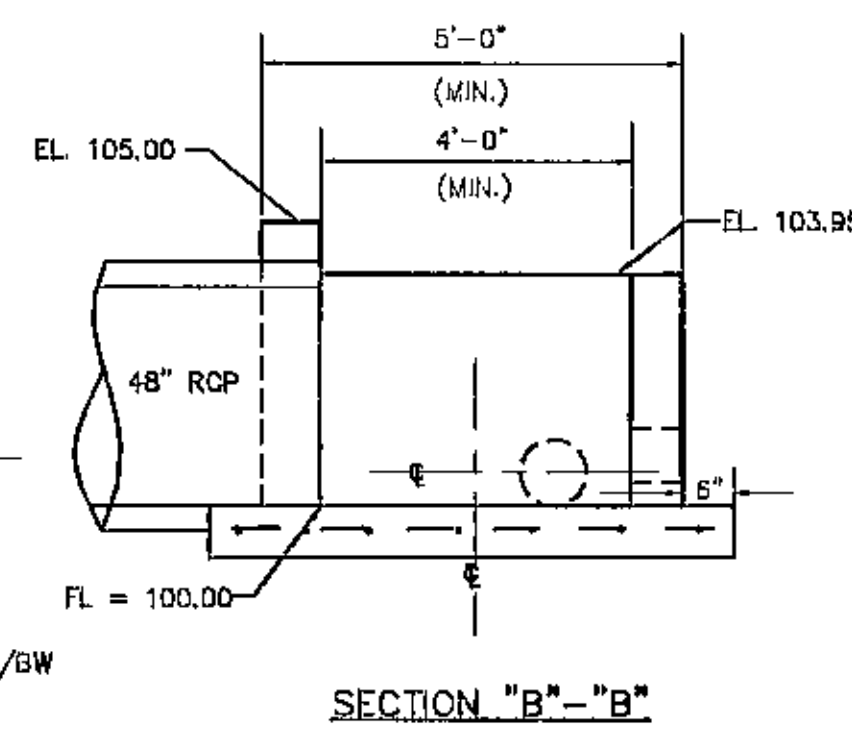
SECTION A-A



ELEVATION



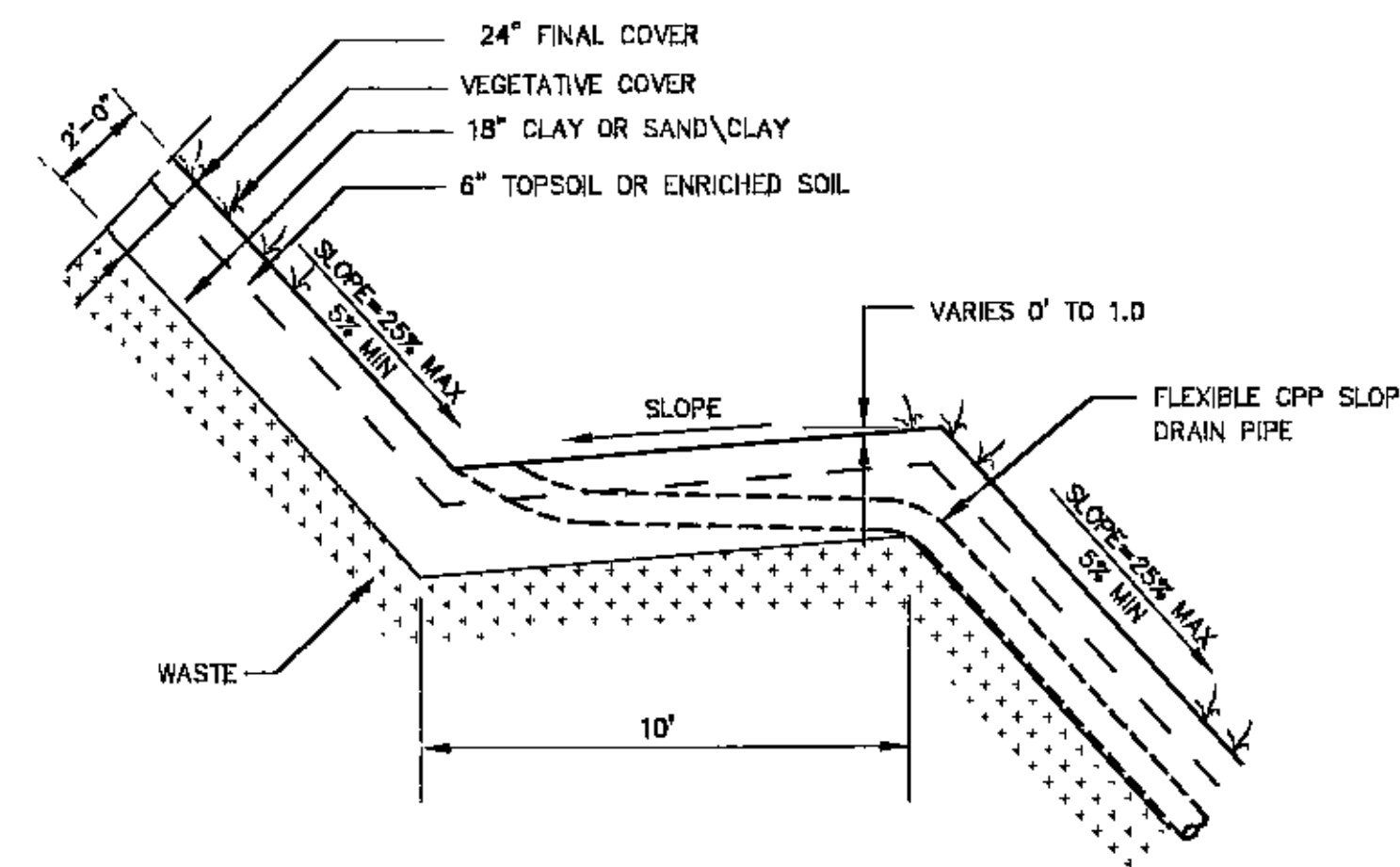
ELEVATION



SECTION "B"- "B"

OUTFALL STRUCTURE #2

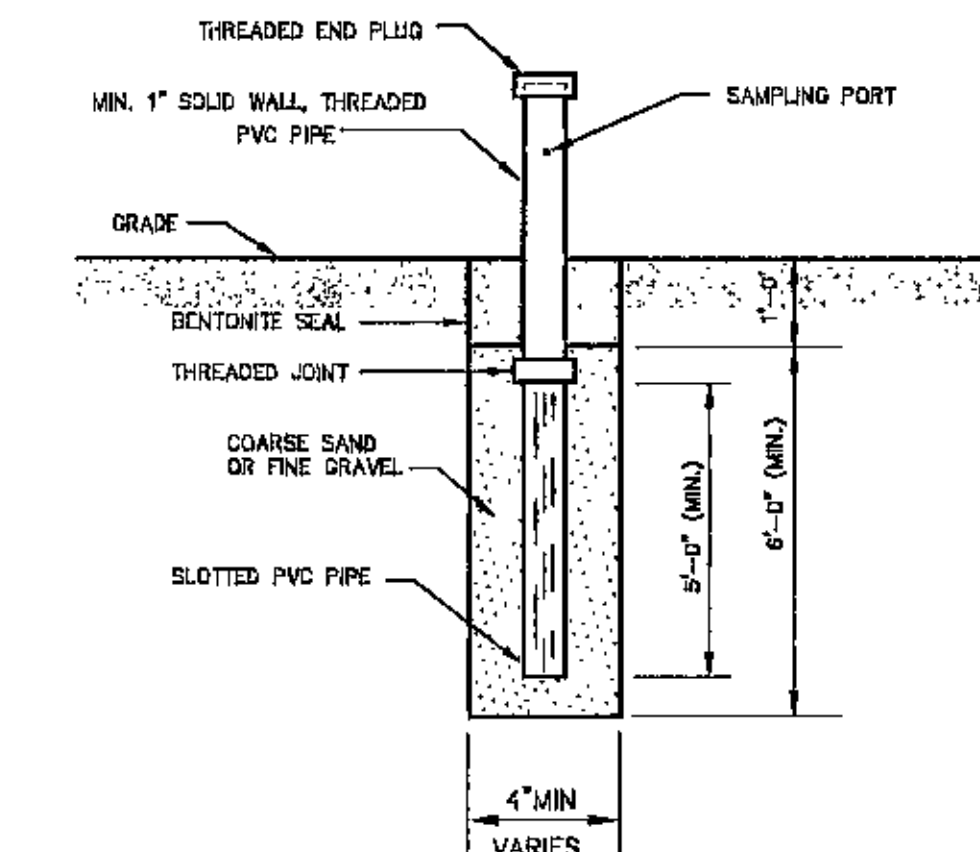
NTS



TYPICAL TERRACE DRAIN AND FINAL COVER

NTS

1. DRILL OR DIG A HOLE TO A MINIMUM DEPTH OF APPROXIMATELY SEVEN (7) FEET.
2. PLACE A PVC PIPE WITHIN THE BORE HOLE. THE LOWER FIVE (5) FOOT SECTION OF PIPE SHOULD BE SLOTTED. THE PIPE SHOULD BE OF SUFFICIENT LENGTH TO EXTEND THREE (3') TO FOUR (4') FEET ABOVE THE GROUND SO AS TO BE EASILY VISIBLE AND PREVENT INADVERTENT DAMAGE DURING SITE MAINTENANCE.
3. BACKFILL THE HOLE WITH COARSE SAND OR FINE GRAVEL TO WITHIN ONE (1) FOOT OF GROUND ELEVATION.
4. PLACE A SEAL OF CONCRETE OR OTHER SUITABLE MATERIAL IN THE FINAL ONE (1) FOOT OF THE BOREHOLE.
5. CAP THE PVC PIPE WITH THREADED END PLUG.
6. DRILL SAMPLING PORT IN RISER PIPE AND PLACE REMOVABLE PLUG IN PORT.
7. PERMANENTLY MARK THE CONCRETE AND RISER WITH IDENTIFICATION CODE.



TYPICAL GAS MONITORING PROBE

NTS

NOTE: A CONTINUOUS LENGTH OF SOLID WALL PVC PIPE, WITH SLOTS OR HOLES CUT IN THE LOWER SECTION, MAY BE USED IN PLACE OF THE THREADED PIPE. DO NOT USE GLUE IN CONSTRUCTION OF GAS MONITORING PROBES. THE GLUE COULD AFFECT MONITORING DATA.

NO.	REVISION	DATE	ENGR.

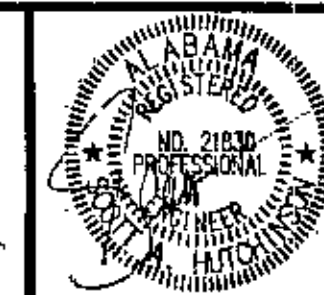


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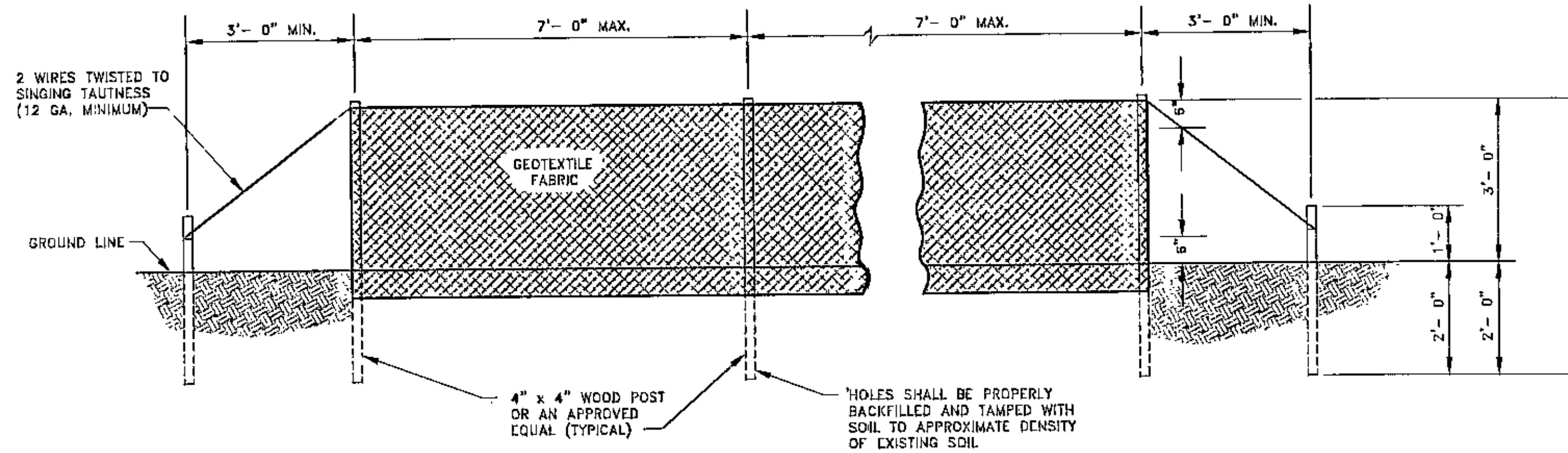
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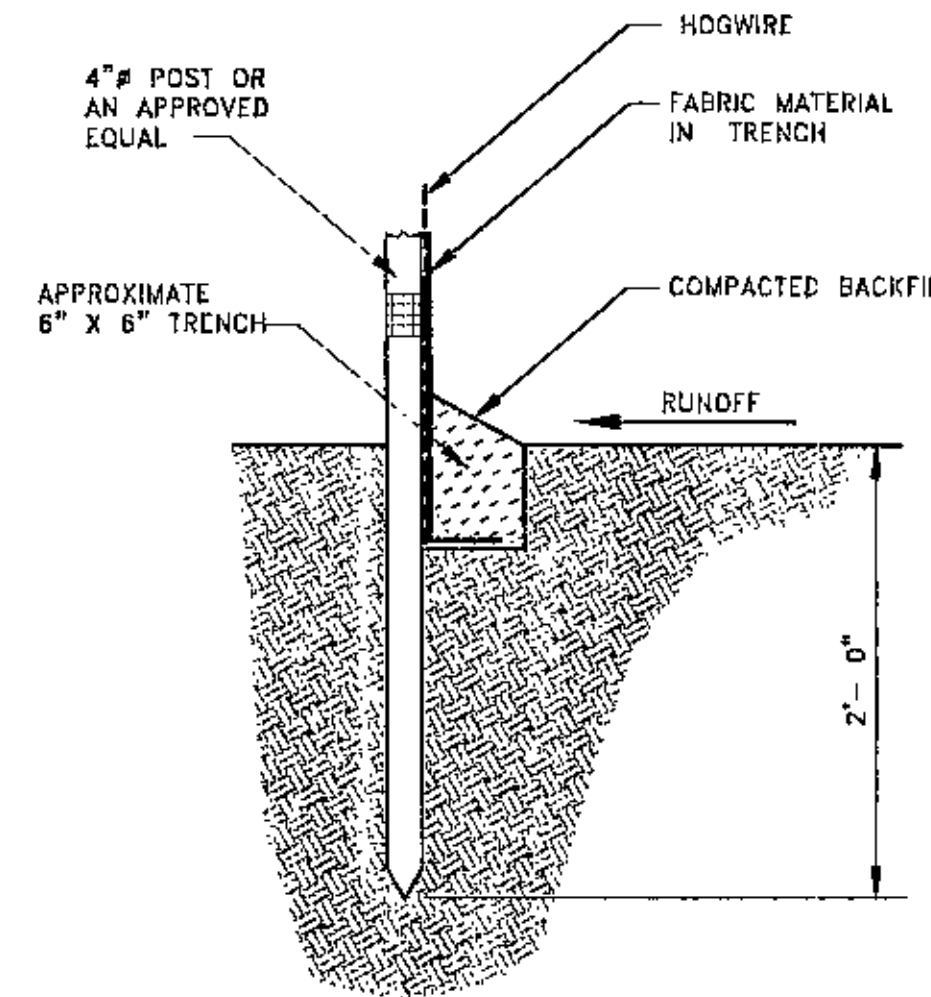


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CONSTRUCTION DETAILS			
MACBRIDE LANDFILL - 40 ACRE EXPANSION & MODIFICATION			
BALDWIN COUNTY COMMISSION			
SCALE	DATE	DRAWN BY	CHECKED BY
SHOWN	JULY 2007	GLH	
SHEET			8 OF 9



SILT FENCE



SECTION

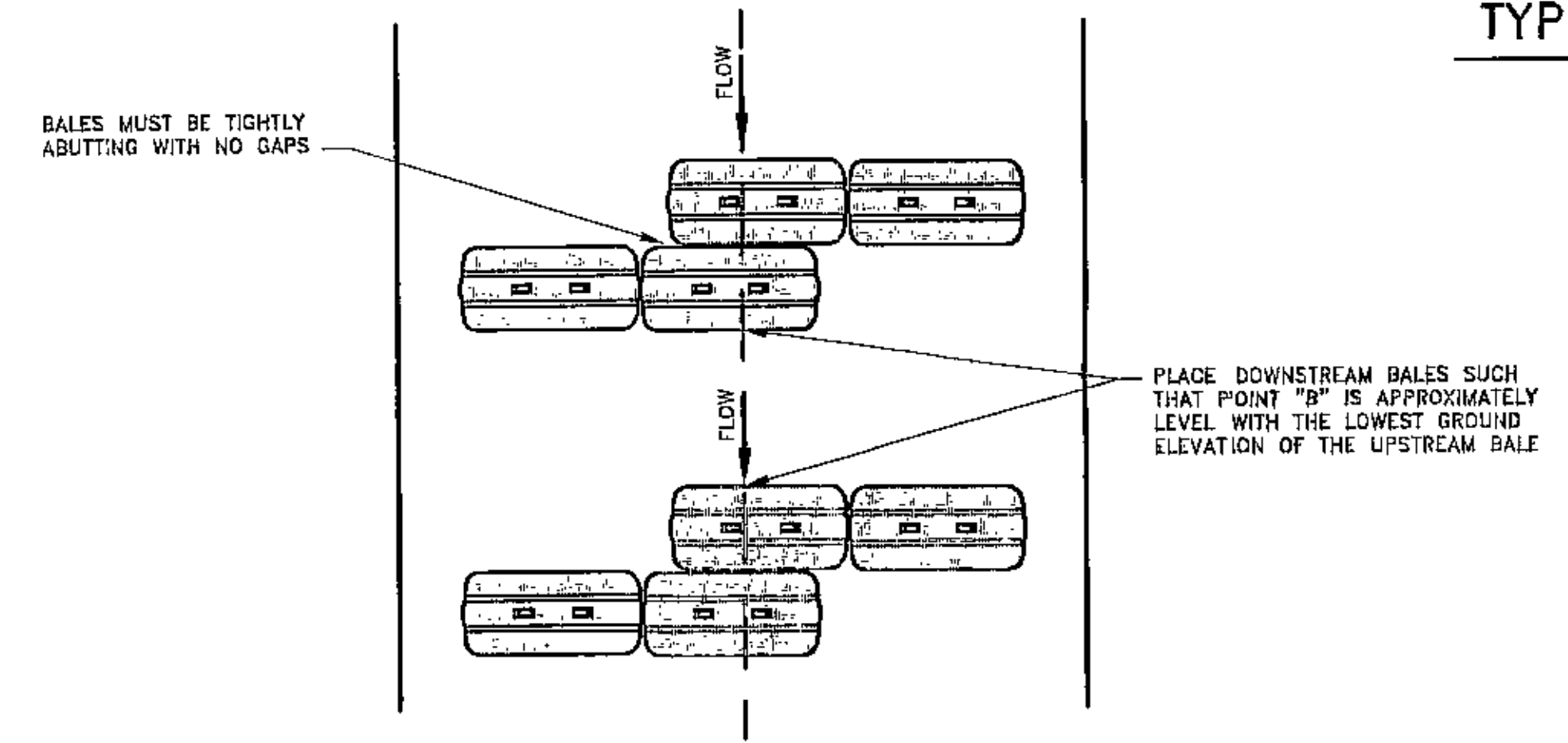
GENERAL NOTES

1. TYPE "A" SILT FENCE SHALL BE USED IN AREAS OF CONCENTRATED FLOW.
2. SILT FENCES ARE TEMPORARY EROSION CONTROL ITEMS THAT SHALL BE ERECTED OPPOSITE ERODIBLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STREAMS AND CHANNELS.
3. SILT FENCE SHOULD BE PLACED WELL INSIDE PROPERTY BOUNDARY AND ALONG EDGE OF CLEARING LIMITS. THIS WILL ALLOW ROOM FOR A BACK-UP FENCE IF FIRST BECOMES FULL. SILT FENCES SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION OPERATION.
4. WHEREVER POSSIBLE, SILT FENCES SHALL BE CONSTRUCTED ACROSS A FLAT AREA IN THE SHAPE OF A HORSESHOE. THIS AIDS IN PONDING OF RUNOFF AND FACILITATES SEDIMENTATION.
5. AFTER THE CONSTRUCTION AREA IS STABILIZED AND EROSION ACTIVITY CURTAILED, SILT FENCES SHALL BE REMOVED.
6. RING FASTENERS USED TO SECURE GEOTEXTILES TO WOVEN WIRE SHALL BE 13 GA. (AMERICAN).
7. IF WOOD POSTS ARE USED, STAPLES FOR SECURING WOVEN WIRE TO POSTS SHALL BE NINE (9) GAUGE, GALVANIZED, 1 1/2" LONG, FIVE (5) PER POST @ APPROXIMATELY 1'-0" ON CENTER.
8. WOVEN WIRE TO BE 12 1/2 GAUGE (MINIMUM).

SPECIFICATIONS

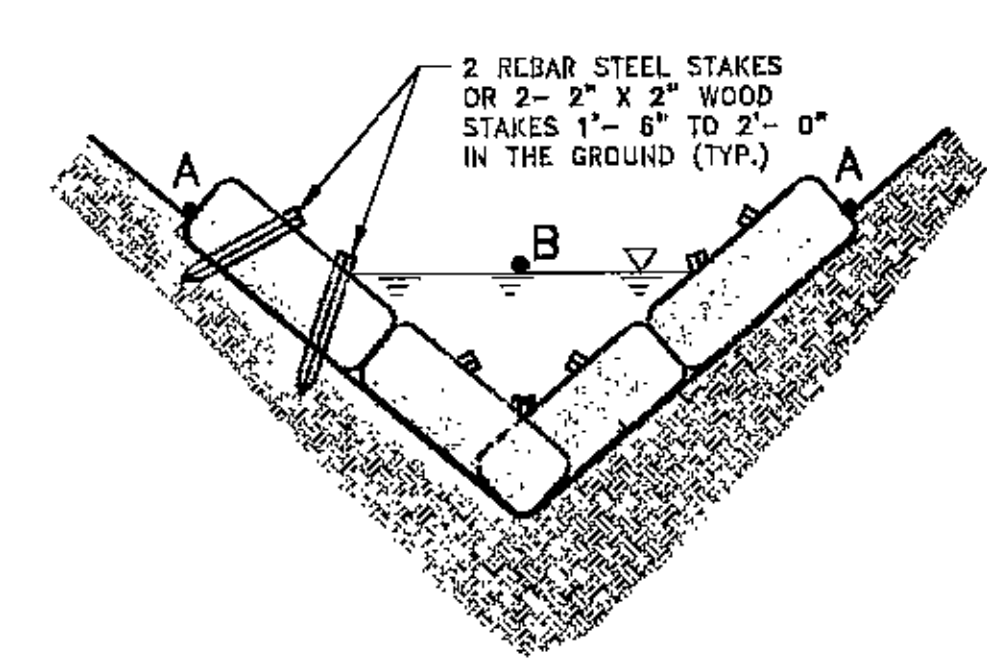
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

TYPICAL SILT FENCE INSTALLATION



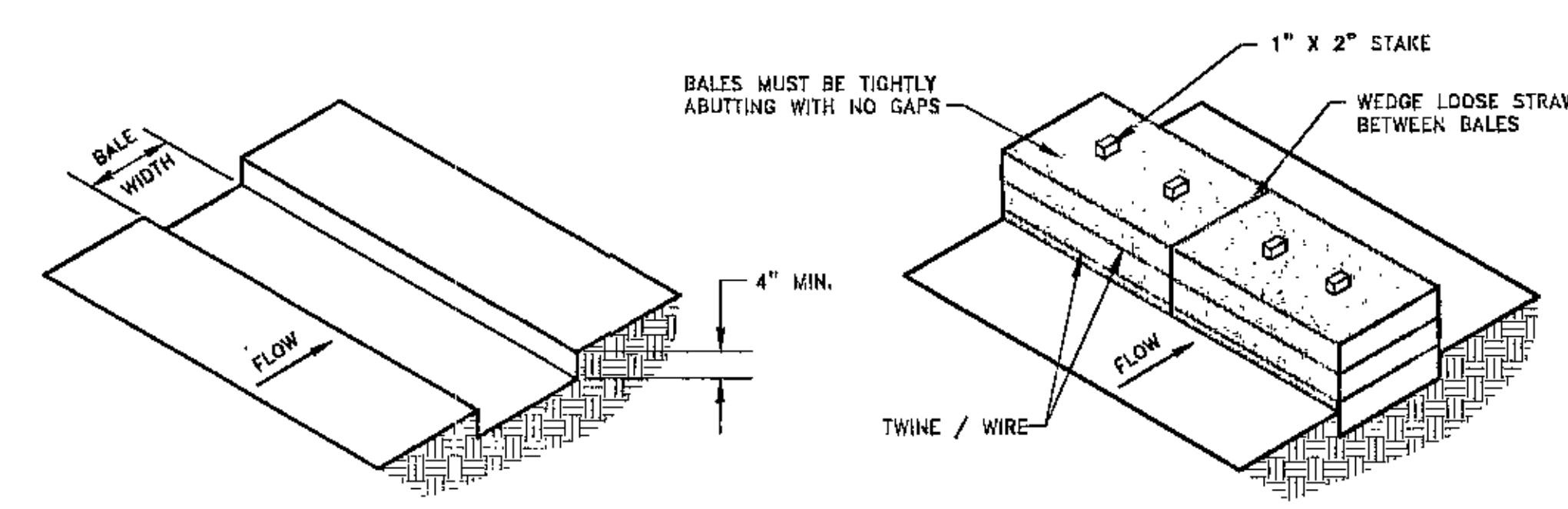
PLAN VIEW

NOTE:
THE END POINTS OF HAYBALES PLACED IN DITCHES MUST BE HIGHER THAN THE WATER FLOW OF THE DITCH.



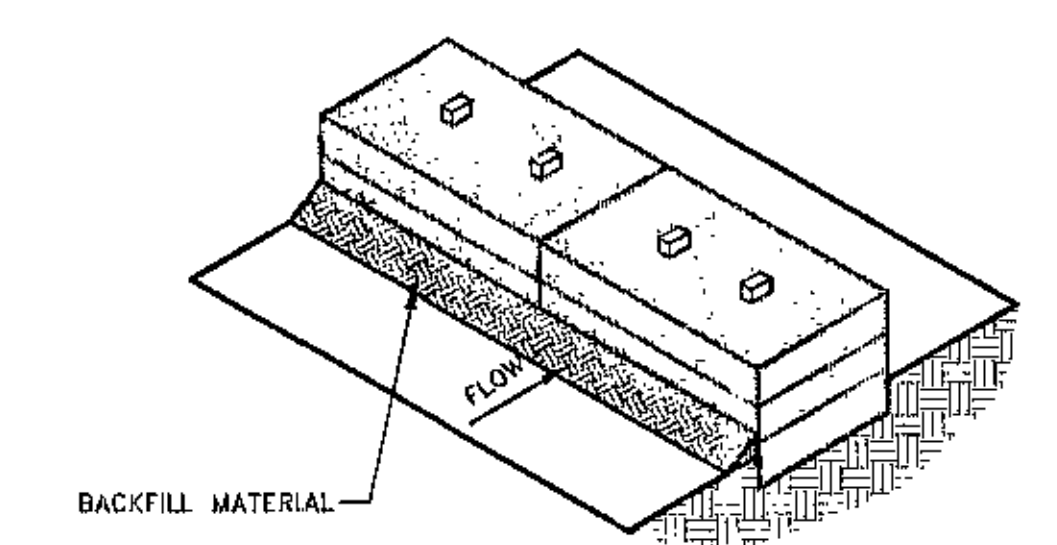
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TYPICAL STRAW BALE INSTALLATION



1. EXCAVATE THE TRENCH.

2. PLACE AND STAKE STRAW BALES.

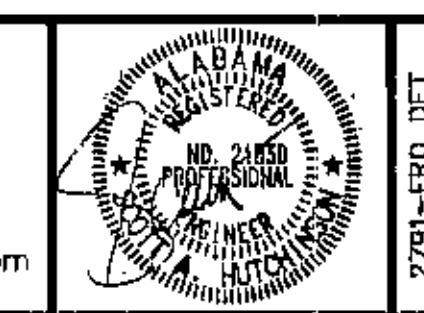


3. BACKFILL AND COMPACT EXCAVATED SOIL.

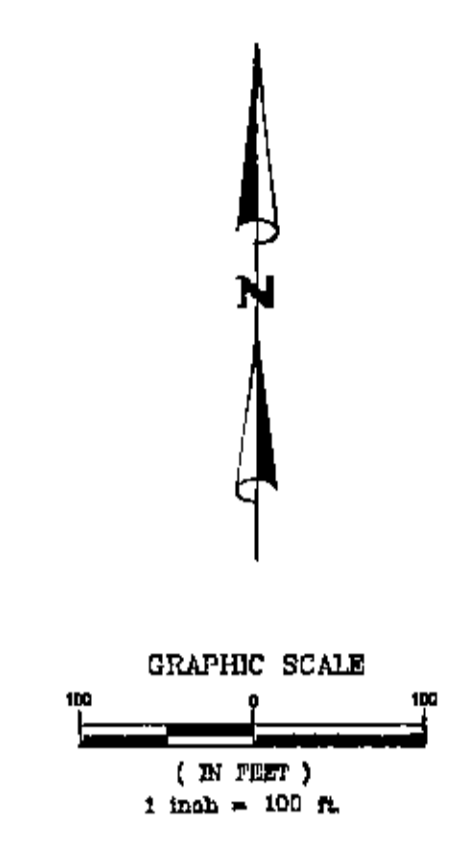
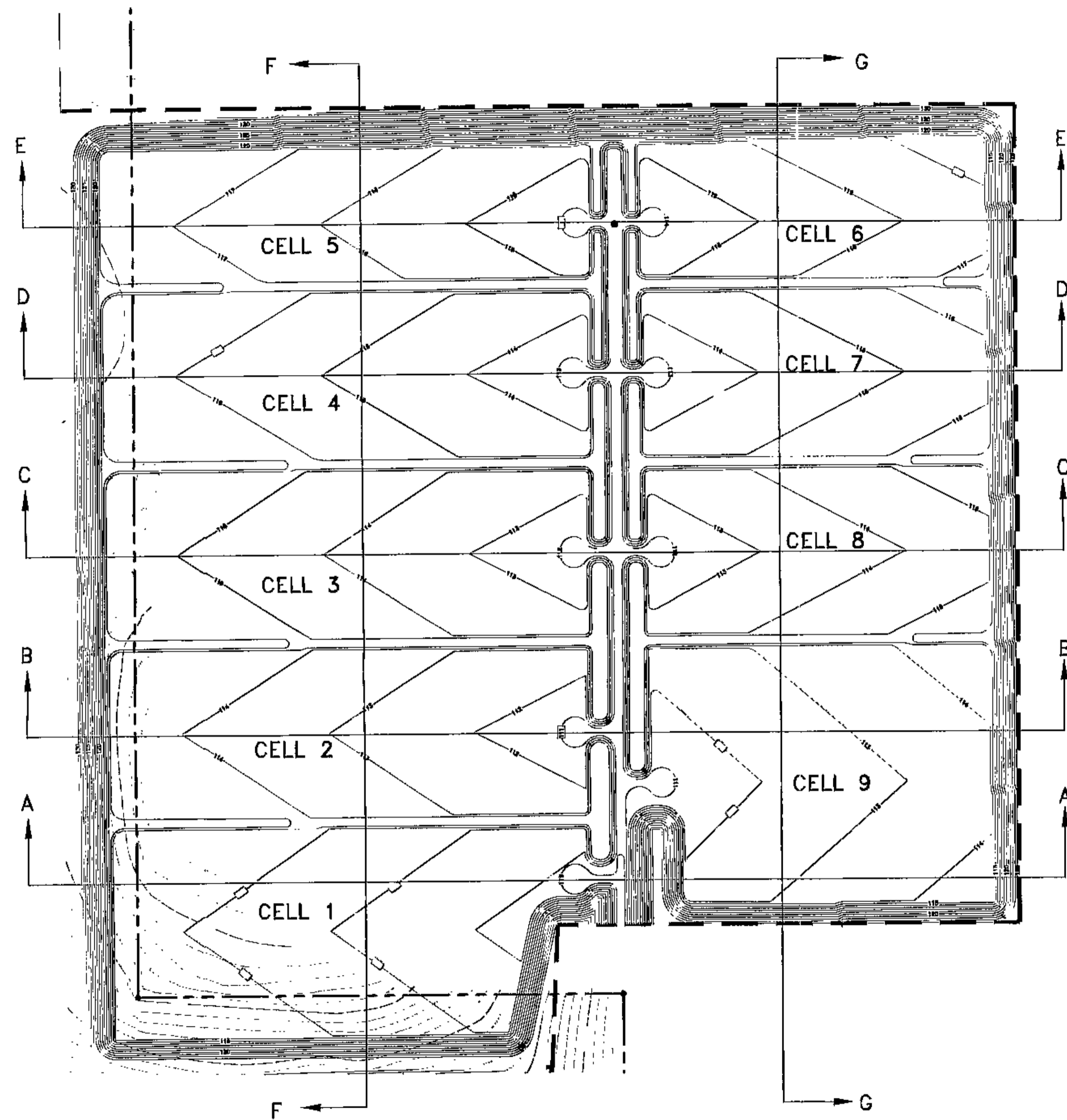
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EROSION CONTROL DETAILS				
MACBRIDE LANDFILL - 40 ACRE EXPANSION & MODIFICATION				
BALDWIN COUNTY COMMISSION				
SCALE	DATE	DRAWN BY	CHECKED BY	SHEET
NONE	JULY 2007	GLH		9 OF 9



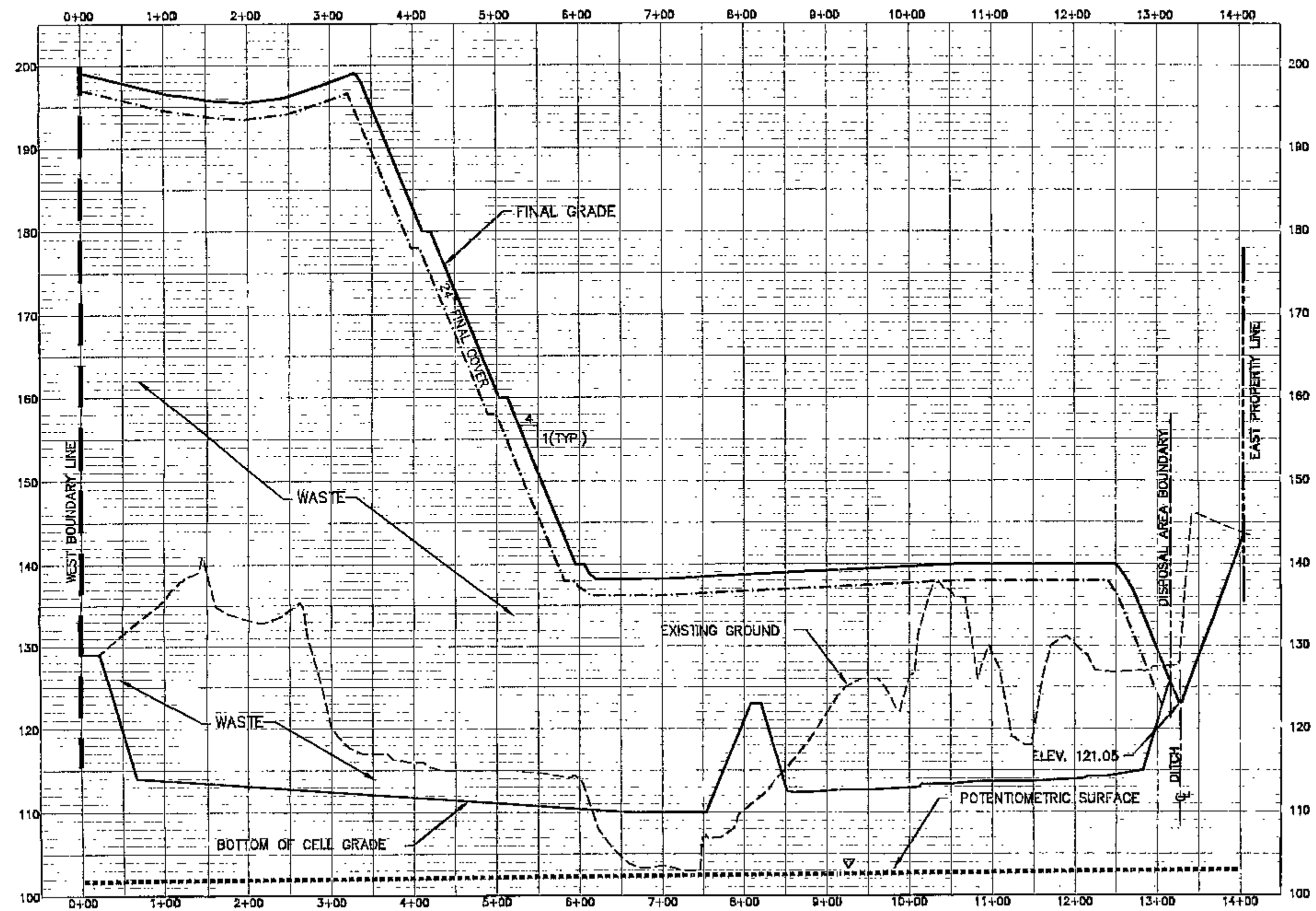
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CROSS SECTION PLAN SHEET MACBRIDE LANDFILL BALDWIN COUNTY COMMISSION			
SCALE 1" = 100'	DATE AUGUST 2007	DRAWN BY GLH	CHECKED BY GLH
SHEET 10 OF 10			



WEST ——— EAST
SECTION "A-A"

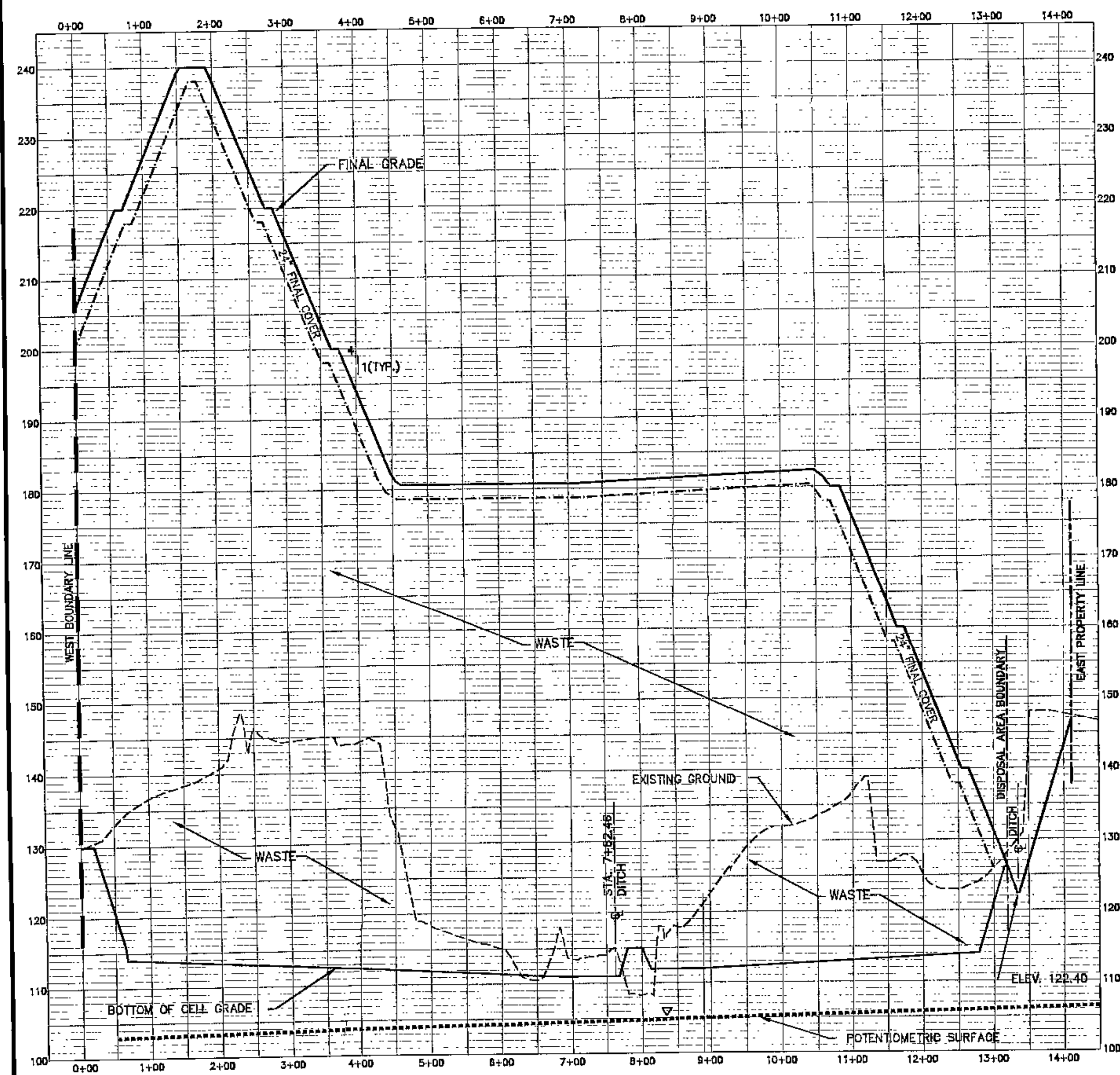
NO	REVISION	DATE	ENR



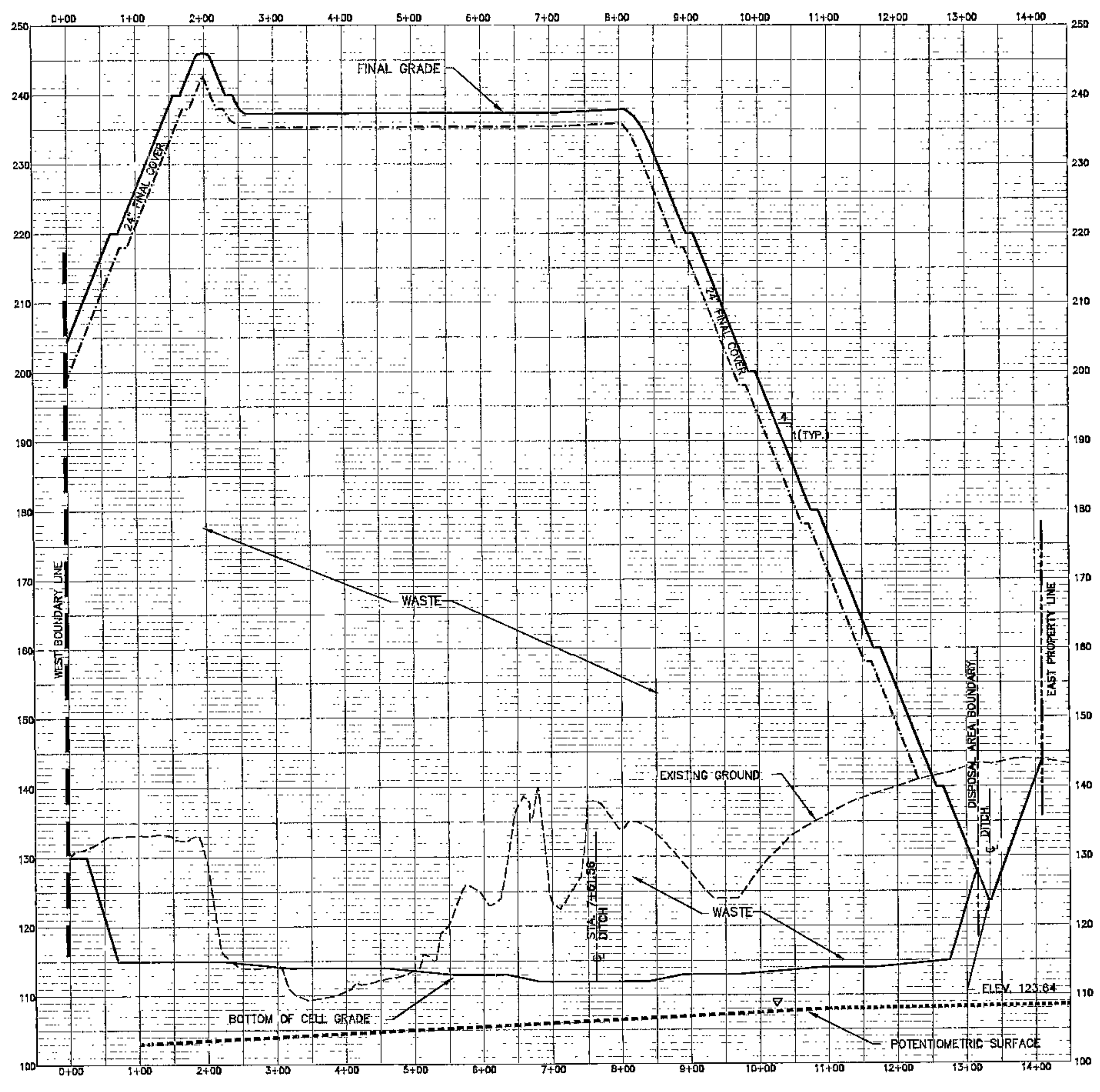
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 LAND PLANNERS
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2791-XSECT-1 R1200-2791-10.25				CROSS SECTION OF CELL MACBRIDE LANDFILL			
SCALE 1" = 100'				BALDWIN COUNTY COMMISSION			
DATE	DRAWN BY	CHECKED BY	SHEET	DATE	DRAWN BY	CHECKED BY	SHEET
AUGUST 2007	GLH		10A OF 10				



WEST → EAST
SECTION "B-B"

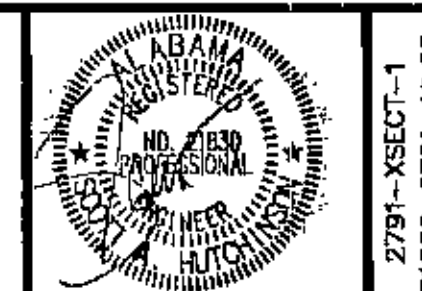


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SECTION "C-C"

NO.	REVISION	DATE	ENGR.

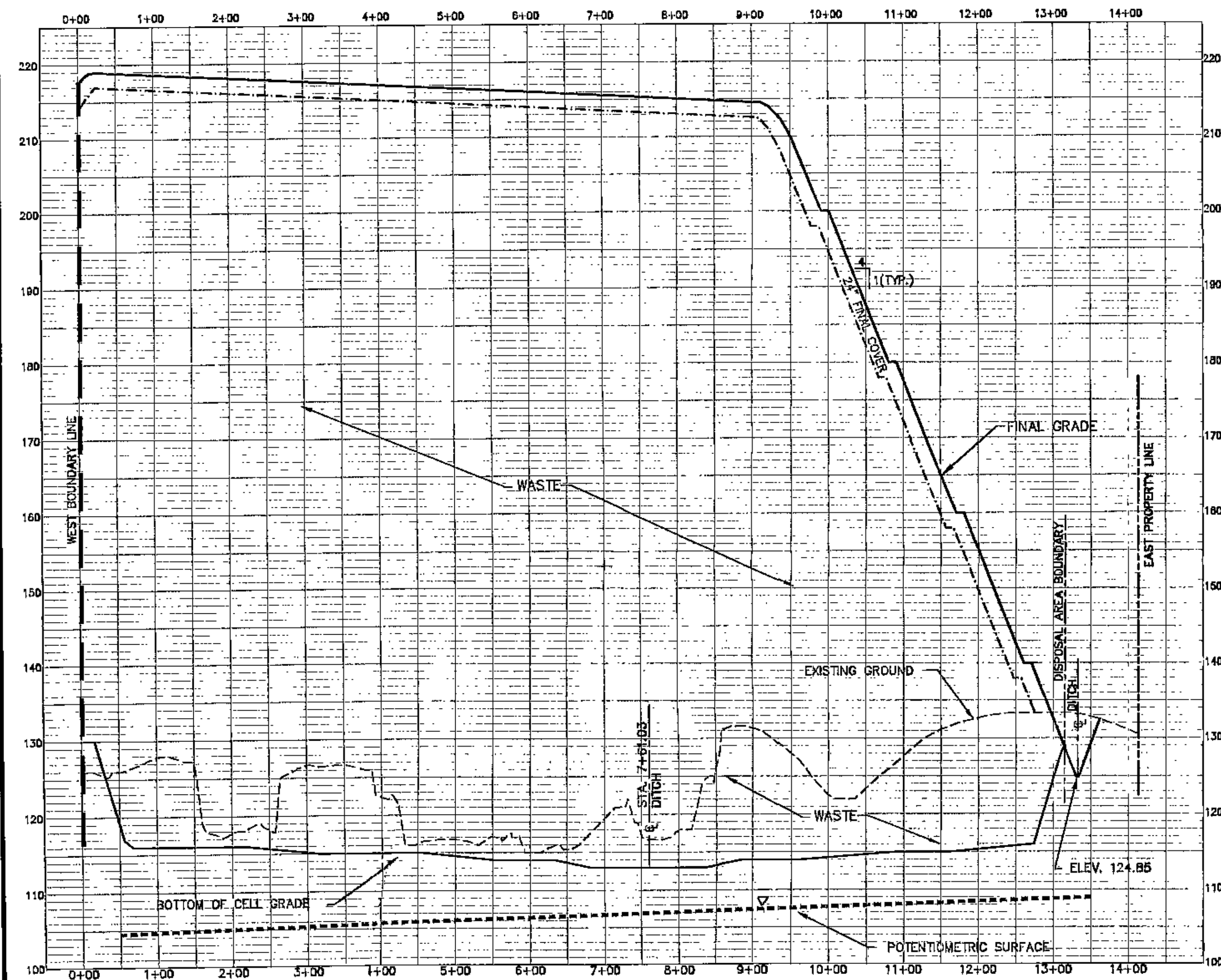


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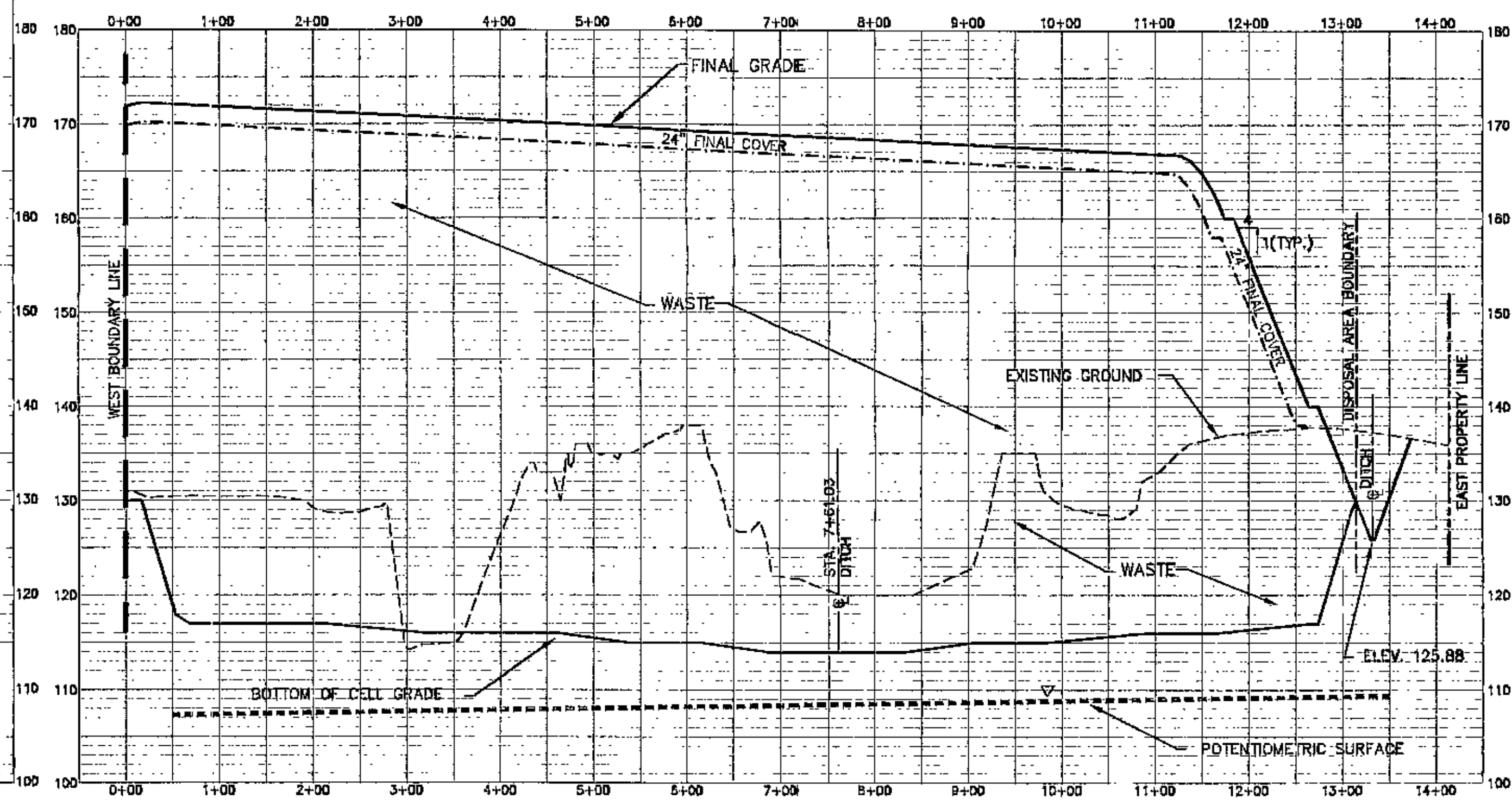


**CROSS SECTION OF CELL
 MACBRIDE LANDFILL
 BALDWIN COUNTY COMMISSION**

SCALE: 1" = 100'
 DATE: AUGUST 2007
 DRAWN BY: GLH
 CHECKED BY:
 SHEET: 10B OF 10



WEST → EAST
SECTION "D-D"



WEST → EAST
SECTION "E-E"

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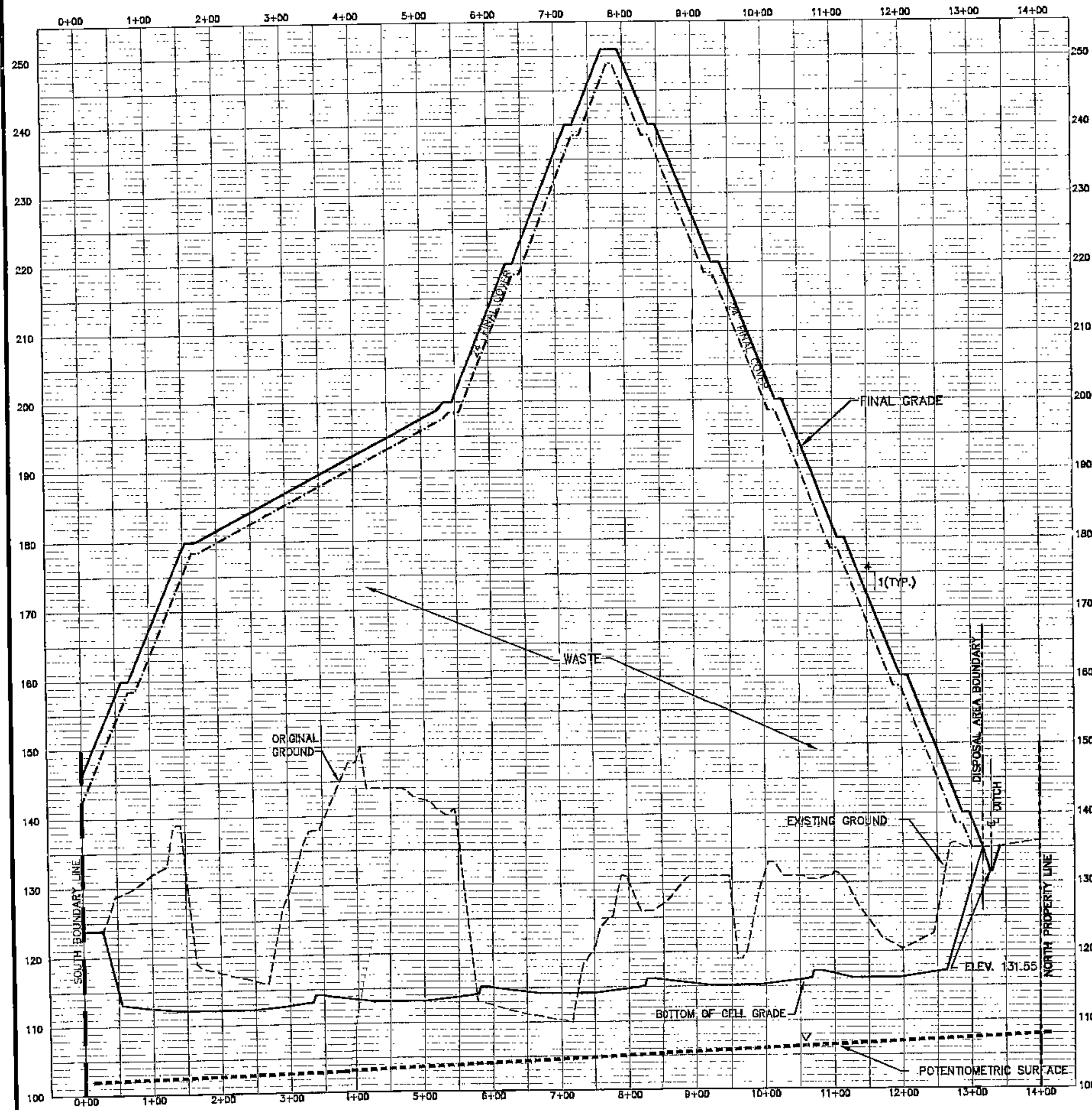


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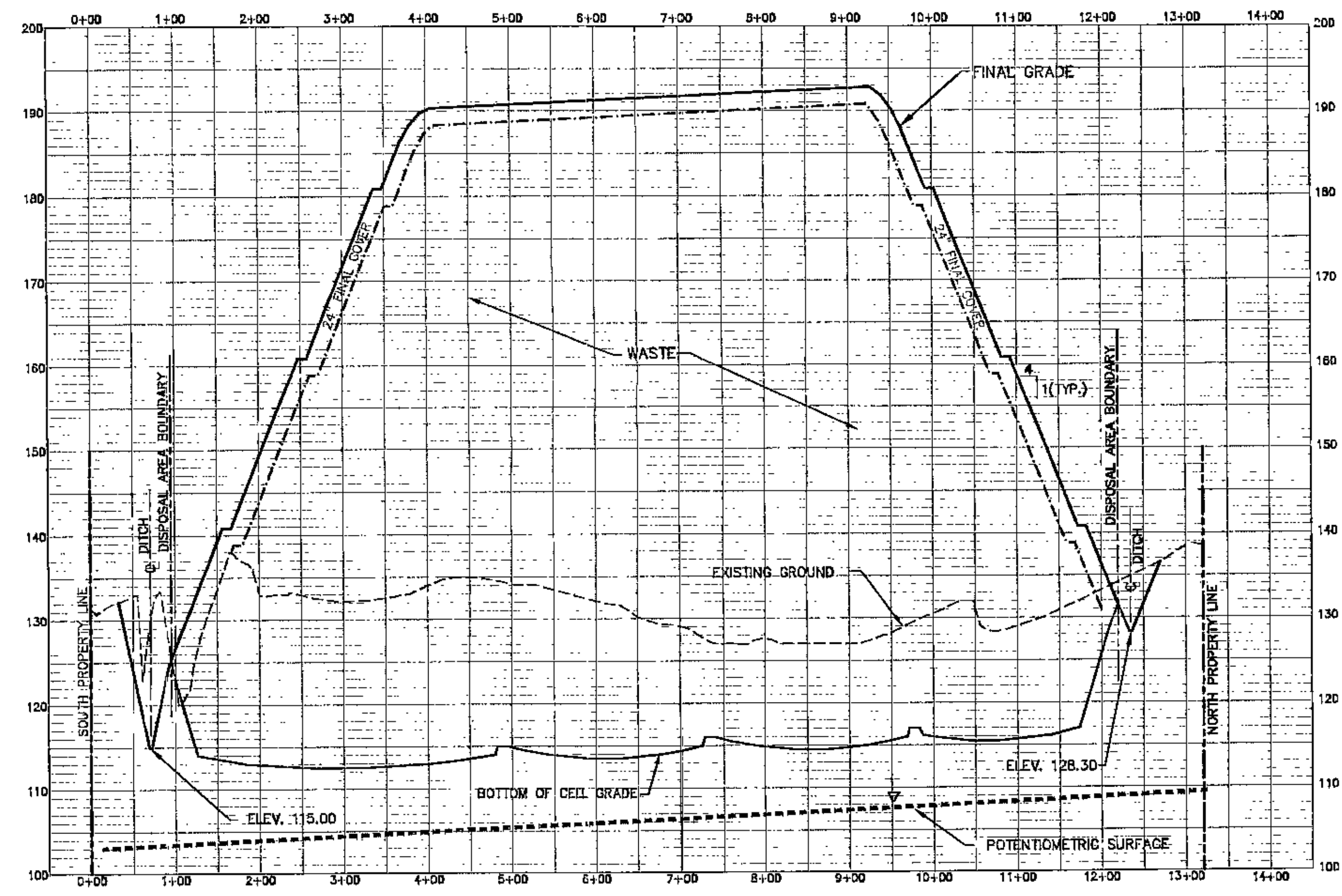
**CROSS SECTION OF CELL 6 THRU 9
MACBRIDE LANDFILL**

BALDWIN COUNTY COMMISSION

SCALE 1" = 100'	DATE AUGUST 2007	DRAWN BY GLH	CHECKED BY	SHEET 10C OF 10
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SOUTH → NORTH
SECTION "F-F"



SOUTH → NORTH
SECTION "G-G"

NO.	REVISION	DATE	ENGR



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**CROSS SECTION OF CELL 1 THRU 5
 MACBRIDE LANDFILL**
BALDWIN COUNTY COMMISSION

SCALE: 1" = 100' DATE: AUGUST 2007 DRAWN BY: GLH CHECKED BY: SHEET: 10 OF 10



MACBRIDE LANDFILL

OPERATIONS MANUAL
UPDATED FOR PERMIT RENEWAL



MacBride Landfill
Baldwin County, Alabama
Permit No. 02-11

DATE
JUNE 2024

PREPARED BY
CDG, Inc.
11 West Court Square
Andalusia, AL 36420

OPERATIONS MANUAL

FOR

MACBRIDE LANDFILL
BALDWIN COUNTY, ALABAMA

UPDATED FOR PERMIT RENEWAL

Prepared for:

BALDWIN COUNTY SOLID WASTE DISPOSAL AUTHORITY

JUNE 2024

CONSULTING ENGINEER



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- APPENDIX B – ADEM FORM 439
- APPENDIX C – VARIANCE REQUESTS & MODIFICATIONS

1 INTRODUCTION

1.1 PURPOSE AND SCOPE

In recognition of the need to provide for proper disposal of waste generated in Baldwin County, Alabama, the Baldwin County Commission is currently operating the MacBride Landfill for the disposal of yard waste, demolition material, construction debris, rubbish and like materials which do not contain household garbage or other putrescible waste. The purpose of this manual is to provide guidelines for properly operating and maintaining the existing facility. The procedures set forth herein comprise a plan for the orderly use of the facility while protecting the environment.

The Landfill will be managed by the Baldwin County Solid Waste Disposal Authority (BCSWDA). BCSWDA is experienced in landfill operations and has equipment and trained personnel available for this purpose.

Where appropriate, descriptions of landfill features have been provided to give a clear understanding of the operational objectives. Personnel responsible for operating and maintaining the Landfill should be thoroughly familiar with this operational plan and related documents. This manual should be used in conjunction with the following documents, including any future revisions thereto:

- MacBride Landfill Plans prepared by Hutchinson, Moore & Rauch, LLC (HMR) for the existing facility and the lateral expansion (referred to herein as Engineering Plans).
- Alabama Department of Environmental Management Solid Waste Disposal Facility permit for MacBride Landfill, including all permit conditions.
- All Local, State and Federal rules and regulations governing solid waste disposal.

The Operating Record is compiled by the Landfill Manager throughout the life of the facility and includes documentation of daily activities, inspections, monitoring, and other applicable information.

The Landfill Manager should maintain all volumes of the Project Manual and the Permit Plans in the Landfill Office for review by ADEM personnel during periodic site inspections.

1.2 GENERAL FACILITY INFORMATION

The site is located in the Northwest quarter of Section 16, Township S South, Range 3 East in Baldwin County, Alabama. It is south of County Highway Number 64 approximately one and one-quarter miles west of Loxley, Alabama, in unincorporated area of the County. The property is outside of the zoning jurisdiction of any local government.

Previous use of the existing site has predominately been for farmland and silviculture, with approximately six (6) acres of the west-southwest portion of the property having been used as

a borrow pit. Previous use of the new 40-acre lateral expansion has been surface mining operations.

The service area of MacBride Landfill will be limited to Baldwin County, Alabama, including the municipalities therein. It is not required that all acceptable waste generated or collected in the service area be accepted for disposal at the Landfill. Defining the service area only serves to limit the area the Landfill may serve. The County reserves the sole right to specify what waste from within the defined service area will be accepted at the site.

The facility is permitted to dispose of five hundred (500) tons per day of waste. The site contains approximately 192.6 acres. The waste disposal area consists of approximately 86.4 acres.

1.3 WASTE STREAM

- Waste building materials, packaging, and rubble resulting from construction, remodeling, repair, or demolition operations on pavements, houses, commercial buildings, and other structures. Such wastes include, but are not limited to, masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, and wood products.
- Clearing, landscaping, and storm debris.
- Solid waste generated by manufacturing processes that is not hazardous waste and is not classified as industrial waste. No manufacturing waste will be disposed of at this facility without prior written approval from ADEM.

1.4 CONTACT PERSONS

BALDWIN COUNTY SOLID WASTE DISPOSAL AUTHORITY:

Terri Graham <i>Chief Executive Officer</i> 15093 Landfill Dr. Summerdale, AL 36580 Phone: (251) 972-6878 TGraham@baldwincountyswda.org	Ed Fox <i>Chief Operating Officer</i> 15093 Landfill Dr. Summerdale, AL 36580 Phone: (251) 972-6878 EFox@baldwincountyswda.org
---	--

CDG, INC.

R. Daniel Wells, P.E.
P.O. Box 278
Andalusia, AL 36420
Phone: (334) 222-9431
daniel.wells@cdge.com

2 SITE EVALUATION

Siting standards addressed in this section are presented as demonstrations that the facility complies with regulatory standards in accordance with Rule 335-13-4-.01

2.1 WETLANDS

An area of natural wetlands is located in a portion of the existing site. The wetlands have been delineated by the U.S. Army Corps of Engineers. Approval of the development of this landfill has been granted by the Corps, which can be found in Appendix 2.1. There are no wetlands on the 40-acre expansion.

No loss of wetlands are anticipated for development of the Landfill. No activities are planned within the limits of the wetlands and no waste will be placed within one hundred (100') feet of the wetlands. The wetlands have been surveyed and mapped and the exact location is shown in the Engineering Plans.

2.2 ENDANGERED OR THREATENED SPECIES OR HABITAT

The site has been inspected by U.S. Fish and Wildlife Service to determine that development of the landfill will not have an adverse effect on endangered or threatened species or habitat. Written confirmation from U.S. Fish and Wildlife Service, concurring with the development of the Landfill, has been obtained and can be found in Appendix 2.2.

2.3 ARCHAEOLOGICAL OR HISTORICAL SIGNIFICANCE

The site has been surveyed to determine that no historically or archeologically sensitive areas are present. The Alabama Historical Commission (AHC) has reviewed the findings and concluded that development of the Landfill will have no adverse effect on cultural resources. This concurrence can be found in Appendix 2.3.

2.4 UNSTABLE AREAS

The site is not located in a zone of active faults, seismic impact zones, sinkholes or karst terrain.

A site-specific hydrogeological evaluation has been conducted by Southern Earth Sciences, Inc. on the new lateral expansion, which can be found in Appendix 2.4. This investigation concluded that the site is hydrogeologically acceptable for the development of a Landfill. A vertical separation of at least five (5') feet will be maintained between the seasonal high groundwater table and waste.

2.5 FLOODPLAINS

The majority of the site is located in flood zone "C", an area outside the one hundred year flood boundary. However, a portion of the existing site is located in flood zone "A2", areas of the 100-year flood. No disposal will take place within these 100-year flood areas. Therefore, the

facility will not restrict the flow of the base flood, reduce the temporary water storage capacity of the floodplain or result in a washout of solid waste by waters of the base flood, so as to pose a hazard to human health, wildlife, land or water resources.

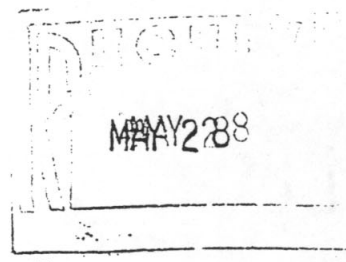
2.6 AIRPORTS

The facility will not dispose of putrescible waste that may attract birds and therefore will not be operated in such a manner so as to pose a bird hazard to air traffic.

APPENDIX 2.1
U.S. ARMY CORPS OF ENGINEERS
CONCURRENCE



DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001



May 22, 1992

REPLY TO
ATTENTION OF:

Regulatory Branch

SUBJECT: Wetland Delineation at Baldwin County Reclamation
Project Number 1, Jurisdictional Number ALJ92-00962-W,

Ms. Peggy Z. McCrory
Post Office Drawer 2067
Daphne, Alabama 36526

Dear Ms. McCrory:

Per your request, this office has completed a field inspection of the proposed landfill site located within Section 16, Township 5 South, Range 3 East, in Baldwin County, Alabama.

The inspection disclosed that the property contains wetlands subject to our Federal permitting authority pursuant to Section 404 of the Clean Water Act of 1977 (33 USC 1344). Section 404 prohibits the placement of dredged or fill material into waters of the United States, including wetlands, unless the work has been authorized by a Department of the Army permit.

The use of less than one acre of this wetland drain as a sedimentation basin is within the scope of Nationwide Permit 26. No further Department of the Army authorization will be required provided you limit the fill and impoundment area to less than one acre of this wetland area and limit the landfill to the upland portion of the property. A copy of the Nationwide Permit is enclosed for your information and use. Please send a copy of the site plan for the proposed landfill which includes the wetland boundary and location and size of the sedimentation basin, for our file.

The wetland boundary has been marked on-site using surveyor's flagging. The exact limits can only be established by a site survey which is beyond the services

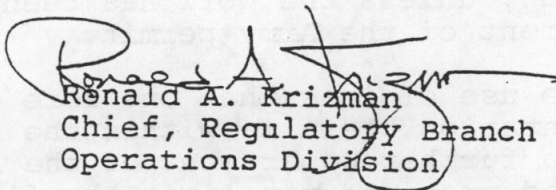
provided by our office. When the wetland boundary is surveyed for inclusion on the site plan, please submit such a survey to this office for a review and sign-off in order to formally document this determination.

Please be advised that this jurisdictional determination reflects current policy and regulation and is based upon criteria contained in the January 1987 U. S. Army Corps of Engineers Wetlands Delineation Manual. If after a 3-year period, this jurisdictional determination has not been specifically revalidated by the U. S. Army Corps of Engineers, it shall automatically expire.

This letter grants no property rights and does not obviate the necessity for you to obtain any other local, State, or Federal authorization that may be required for this activity.

Thank you for your cooperation with our permit program. If you have any questions or require further information concerning this matter, please contact Mr. Art Hosey of the Jurisdiction and Enforcement Section at (205) 694-3781.

Sincerely,


Ronald A. Krizman
Chief, Regulatory Branch
Operations Division

Enclosure

APPENDIX 2.2
U.S. FISH AND WILDLIFE SERVICES
CONCURRENCE



United States Department of the Interior
FISH AND WILDLIFE SERVICE



Daphne, AL 36526

March 12, 1992

RECEIVED

MAR 16 1992

PROPERTY - WILDLIFE

Ms. Peggy Z. McCrory
McCrory & Williams
P.O. Box 2067
Daphne, AL 36526

Dear Ms. McCrory:

This responds to your letter dated 02\21\92, requesting endangered species information for the project listed below. Our report is submitted under the provisions of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

<u>Project</u>	<u>County</u>
Baldwin Reclamation Project #1	Baldwin

Our records indicate no endangered, threatened or proposed species or their critical habitat occurring in the project area. Therefore, no further endangered species consultation is required for this project as currently described.

Sincerely,

Larry E. Goldman
Field Supervisor

APPENDIX 2.3
ALABAMA HISTORICAL COMMISSION
CONCURRENCE



F LAWRENCE OAKS
EXECUTIVE DIRECTOR

STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION

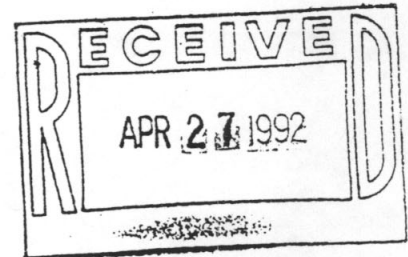
725 MONROE STREET
MONTGOMERY, ALABAMA 36130-5101



TELEPHONE NUMBER
242-3184

April 23, 1992

Ms. Peggy Z. McCrory
McCrory & Williams
P. O. Drawer 2067
Daphne, AL 36526



Re: Cultural Resource Assessment
Baldwin County Reclamation Project
Baldwin County, AL

Dear Ms. McCrory:

Based upon the cultural resource assessment conducted by Diane Mueller, the State Historic Preservation Officer concludes that the above referenced project will have no effect on any cultural resources included in or eligible for nomination to the National Register of Historic Places. Therefore, our office concurs with the proposed project activities.

We appreciate your consideration in the protection of Alabama's nonrenewable cultural resources. If this office can be of further assistance, please do not hesitate to write or call.

Sincerely,

F. Lawrence Oaks
State Historic Preservation Officer

FLO/LAL/gtj

A CULTURAL RESOURCES ASSESSMENT OF A 31.5 ACRE PARCEL
AS THE PROPOSED LOCATION OF BALDWIN COUNTY RECLAMATION PROJECT
NUMBER 1, IN BALDWIN COUNTY, ALABAMA

For
McCrorry & Williams, Inc.

By
Diane Silvia Mueller

April 1992
Mobile, Alabama

A CULTURAL RESOURCES ASSESSMENT OF A 31.5 ACRE PARCEL
AS THE PROPOSED LOCATION OF BALDWIN COUNTY RECLAMATION PROJECT
NUMBER 1, IN BALDWIN COUNTY, ALABAMA

For: McCrory & Williams, Inc.

Consulting Engineers & Land Surveyors

Project Description: Baldwin County, Alabama plans to use a 31.5 acre parcel west of Loxley, Alabama as the location of its Reclamation Project Number 1. On behalf of Baldwin County, McCrory & Williams, Inc. requested a cultural resources assessment to satisfy the requirements of the Alabama Historical Commission. The cultural resources assessment included a file search, pedestrian survey, and limited shovel testing .

Location: NW 1/4 of Section 16, Township 5 South, Range 3 E
U.S.G.S. 7.5' topographic - Silverhill, Ala.
Baldwin County. Alabama

Introduction:

On March 26, 1992, Peggy Z. McCrory contracted Diane Silvia Mueller to conduct an archeological/historical assessment of a 31.5 acre parcel in Baldwin County Alabama as the proposed site of Baldwin County Reclamation Project Number 1. The County intends to use this property as an inert landfill. The project area lies on a northeast to southwest trending finger ridge formed by two small branches that drain south into Corn Branch (Figure 1).

Elevation on the ridge extends to 150 feet above mean sea level. Access into the area is by a dirt road that runs northeast to southwest along the southeastern edge of the ridge (Figure 2). Southeast of the ridge, elevation drops rapidly. At present, most of the west half of the project area is a dirt pit known as the McBride Dirt Pit. The southeast end of the pit is currently being mined. North and east of the dirt pit the land was used for agriculture. This area is overgrown with grasses and low brambles and has been used for dumping large bales of paper material, old tires, and household trash (Figures 3-10).

The project area is bounded on the west by the Stapleton Dirt Pit. To the north, several residential trailers and Baldwin County Highway 64 are present. A tributary of Corn Branch is near the eastern property boundary. Mixed hardwood and pine forest lies to the south.

Files Search

A search was made with Eugene Futato of the Alabama State Site Files located at the Division of Archaeology Laboratory at Moundville Archaeological Park. This search showed that no sites have been previously recorded in the vicinity of the project area. Only two sites were recorded in the general area of the project (1BA299 and 1BA300), and these are more than six miles away.

Results of Fieldwork

A map of the project area was provided by McCrory & Williams, Inc. to provide orientation in the field. Fieldwork included pedestrian survey and limited shovel testing. The ground surface in the fallow field was carefully searched. Surface visibility in the field was considered good over most of the area. Upper wall profiles of the dirt pit were also examined. In addition, an overgrown road and several small trails in the wooded area south and east of the dirt pit provided some surface visibility. No archaeological or historical remains were noted during the survey.

Ten shovel tests were excavated throughout the project area (Figure 11). Excavated fill was sifted through 1/4" hardware cloth and soil profiles were recorded. The locations of the shovel tests are shown in Figure 2.

Shovel tests 1 and 2 were excavated in the northwest corner of the property in an area of mixed hardwood forest. Soil

profiles consisted of a well developed root mat, underlain by a stratum of brown silty loam 15 to 23 cm thick. Beneath this soil was an orange-brown silty sand. With the exception of a plastic shot gun shell recovered from shovel test 2, no cultural material was recovered. Based on the topography and its pristine condition, this area appeared to have the greatest potential for yielding cultural deposits. A freshly graded road along the south and west edge of this corner of the property was searched with negative results.

Shovel Tests 3 and 4 were placed in the piney woods south of the dirt pit. Profiles here were comprised of a thinner root mat directly over orange-brown silty sand. The layer of brown silty loam encountered in the first tests just west of these was absent. In shovel test 3, orange clay was present at 9 cm.

The remaining shovel tests were excavated in the fallow field. Shovel tests 5 and 6 were comprised of root mat over mottled tan and brown silty loam plow zone to depths of 16-20cm. Beneath this orange clay is present. The upper stratum of Shovel tests 7-10 was a very shallow and consisted of dry and powdery silt. From 3 to 11 cm in depth, orange clay was encountered. Sandstone scree was present all over the ground surface and it appears that some mechanical removal of the top soil and subsequent erosion have occurred. No artifacts were found in any of the excavated tests.

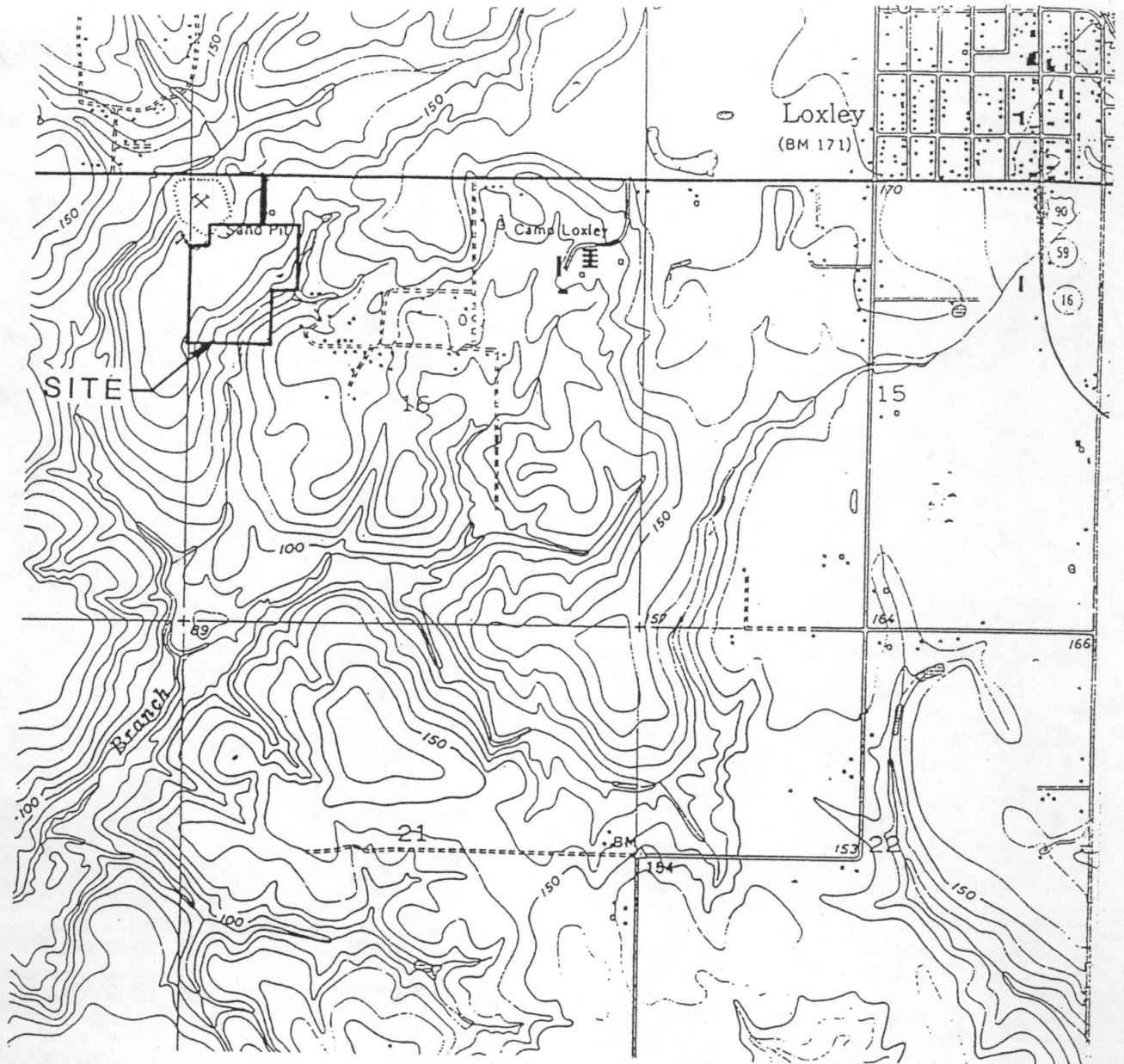
Recommendations

The proposed Baldwin County Reclamation Project Number 1 is located in an area that has undergone considerable previous disturbance. The area within the McBride dirt pit has no potential for intact buried deposits. The on-site pedestrian survey of the property, and the limited shovel testing in those areas of the project south, east, and north of the dirt pit failed to locate any archaeological or historical remains. The top soil over most of the upper part of the ridge has been removed or is disturbed. This part of the property and the area of decreasing elevation towards the tributaries at the northwest corner and along the east side of the project area are deemed to have low potential for yielding buried cultural deposits.

Archaeological clearance is recommended for the proposed reclamation project as planned. This recommendation should be considered provisional, and is subject to the approval of the Alabama State Historic Preservation Officer. In the event that any cultural remains are encountered during any phase of the proposed work, this office should be notified immediately.

Diane Silvia Mueller

Diane Silvia Mueller, Archaeologist



SCALE: 1"=2000'

Silverhill Quadrangle
 Section 16, Township 5 South, Range 3 East
 Baldwin County, Alabama

Figure 1.

U.S.G.S. MAP

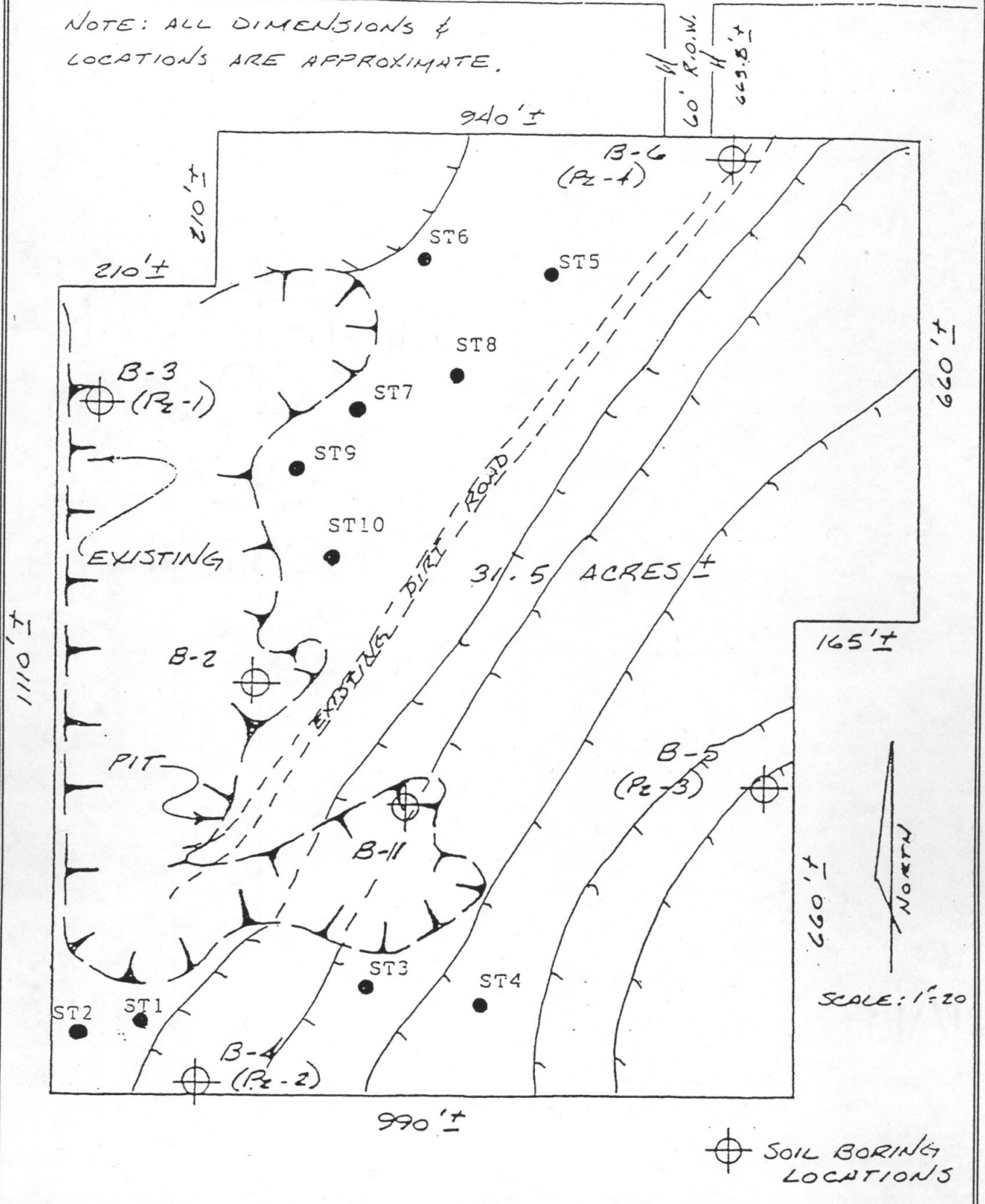
BALDWIN COUNTY RECLAMATION PROJECT NUMBER 1

McCRORY & WILLIAMS, INC.

CONSULTING ENGINEERS & LAND SURVEYORS

BALDWIN COUNTY HIGHWAY No. 64

NOTE: ALL DIMENSIONS & LOCATIONS ARE APPROXIMATE.



SKETCH PLAN

BALDWIN COUNTY RECLAMATION PROJECT NUMBER 1

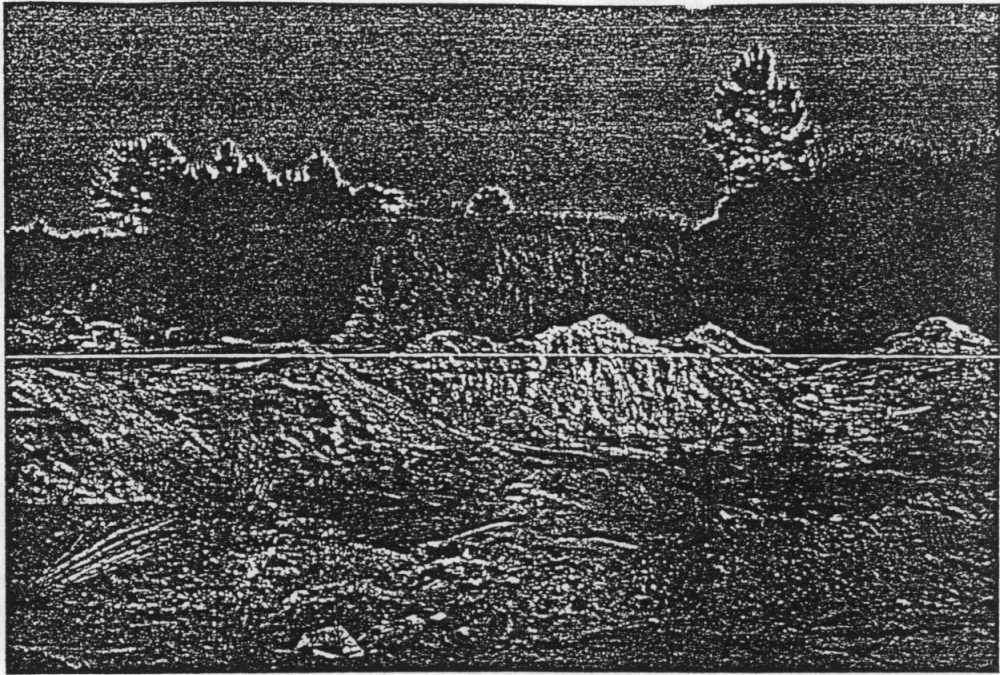


Figure 3. McBride dirt pit, facing north.

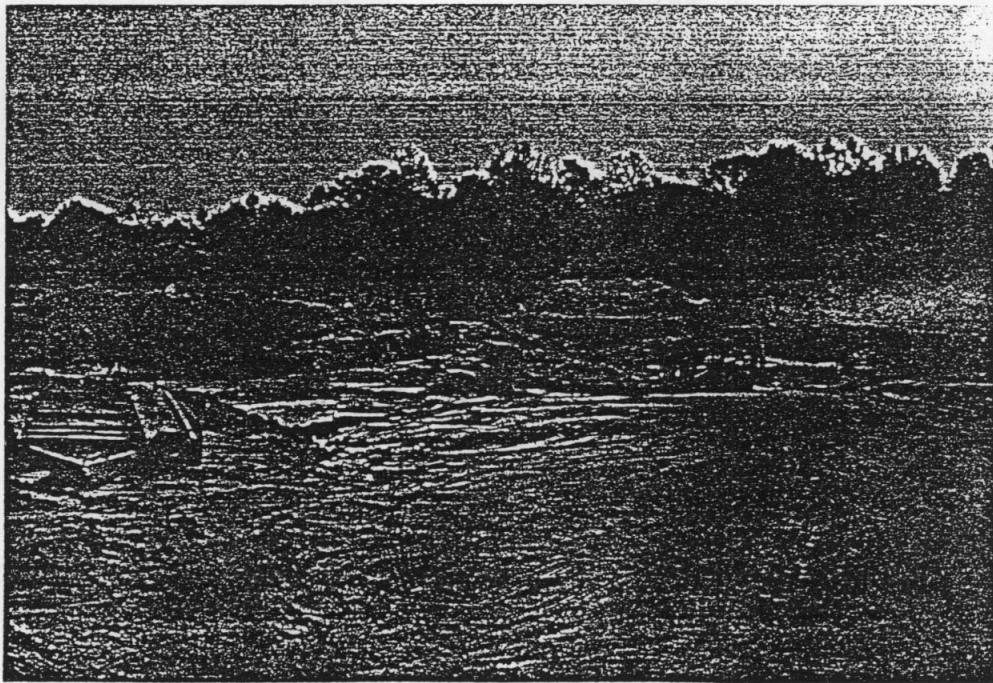


Figure 4. Southeast end of McBride dirt pit.

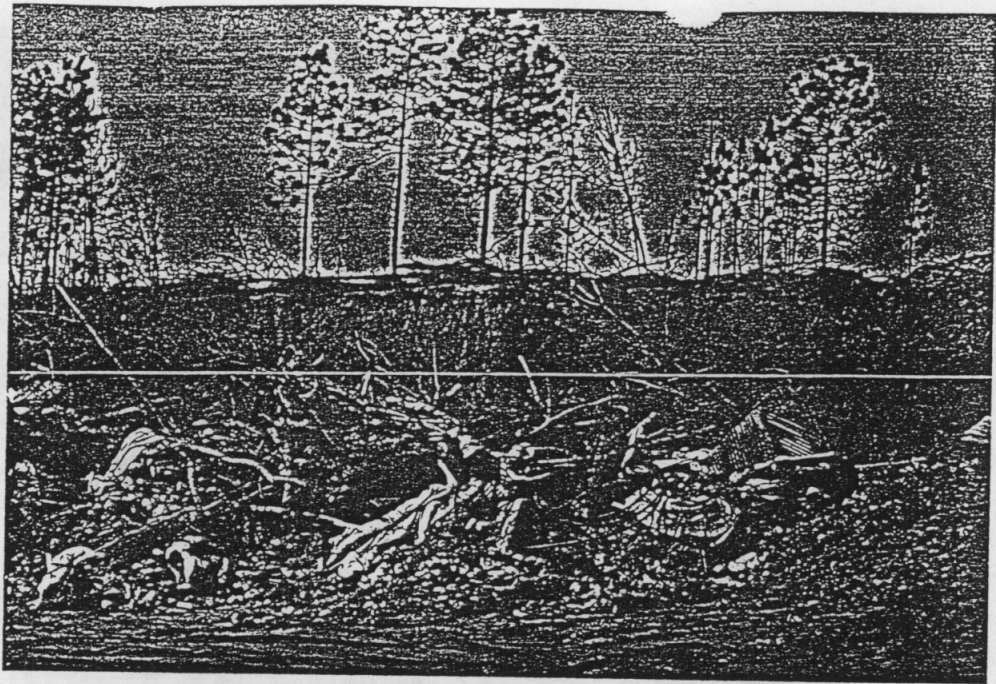


Figure 5. Discarded trash at the south end of dirt pit.

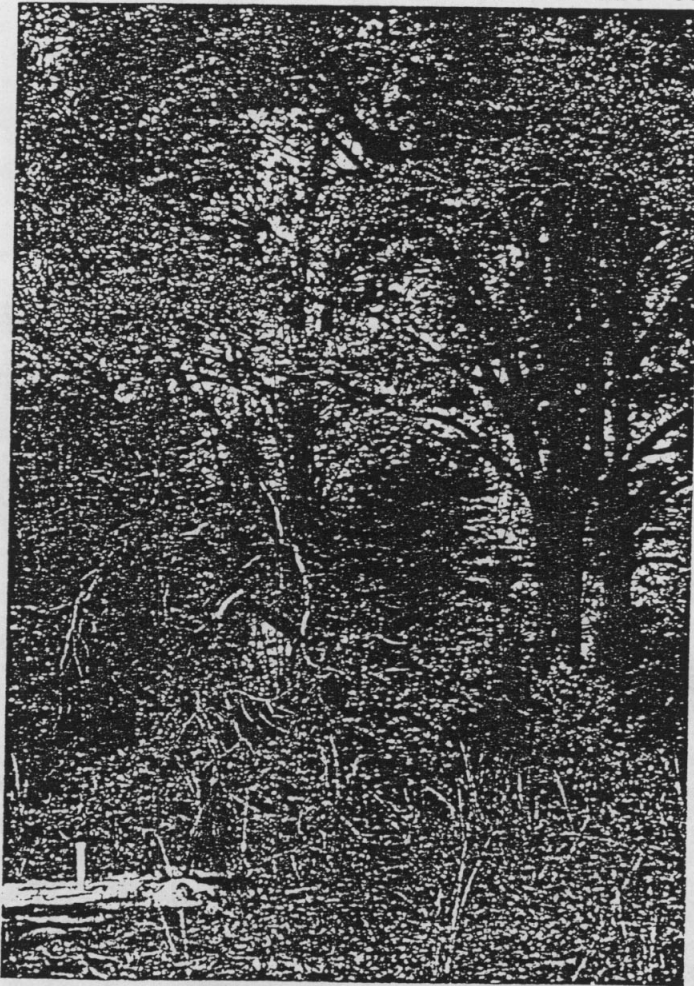


Figure 6. Undisturbed area with large trees at southwest corner of property. Marker for B-4 is in foreground.



Figure 7. North end of project area, facing south-southeast.

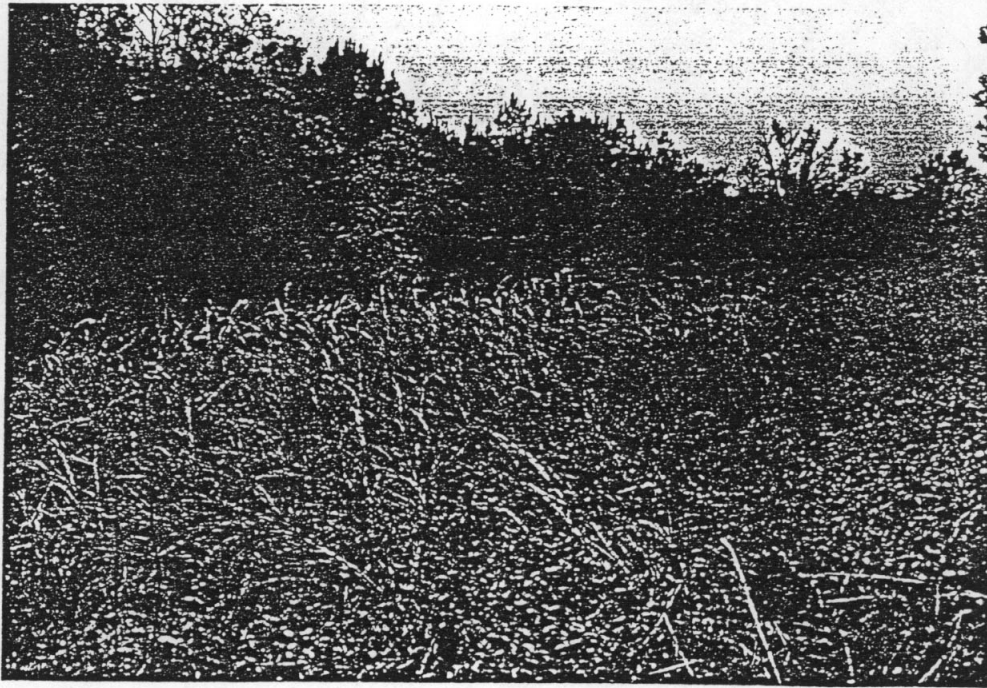
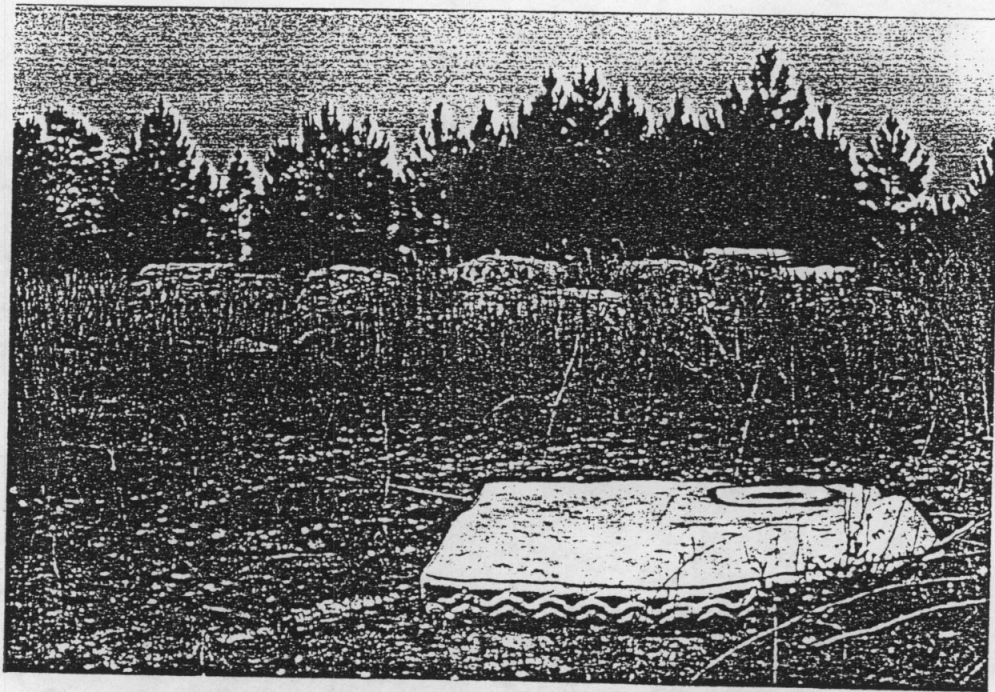


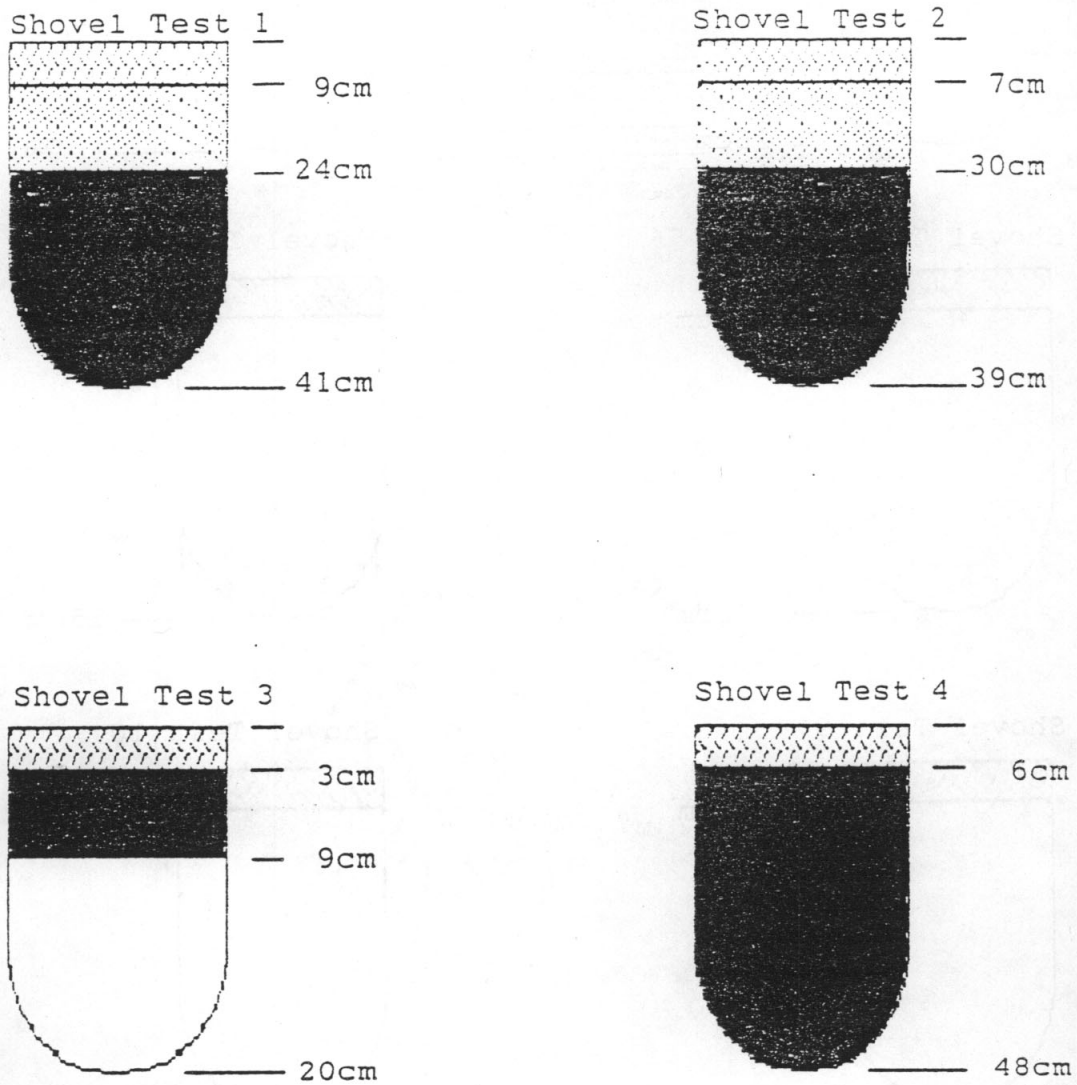
Figure 8. Northeast end of project area facing south-southeast.

Trees mark decreasing elevation towards branch.



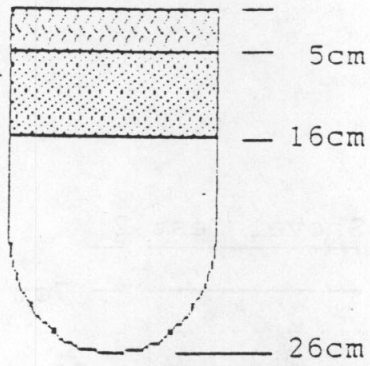
Figures 9 and 10. Discarded trash in project area. Pines mark edge of dirt pit.

Figure 11. Shovel Test Profiles.

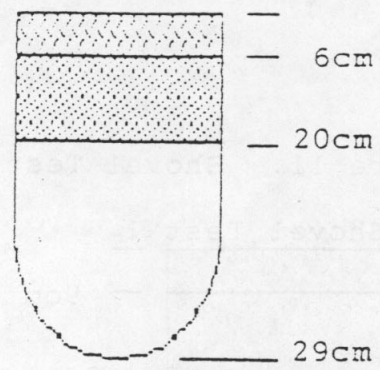


root mat
 brown silty loam
 orange-brown silty sand
 orange clay

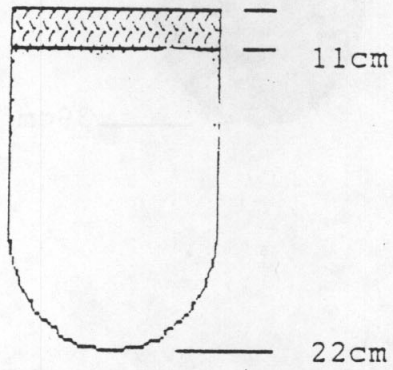
Shovel Test 5



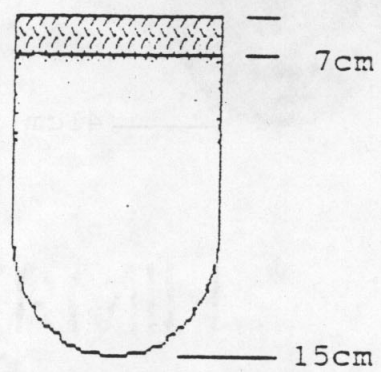
Shovel Test 6



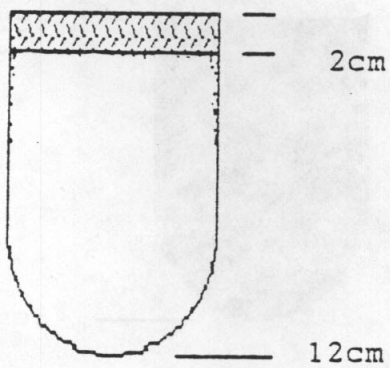
Shovel Test 7



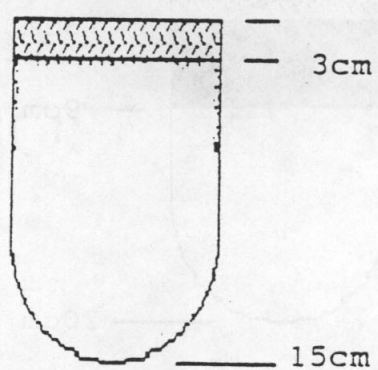
Shovel Test 8



Shovel Test 9



Shovel Test 10



Shovel Tests 7-10= upper stratum very dry and powdery

APPENDIX 2.4

HYDROGEOLOGICAL EVALUATION



Leigh Pegues, Director

Guy Hunt
Governor

1751 Cong. W. L.
Dickinson Drive
Montgomery, AL
36130
(205) 271-7700
FAX 271-7950
270-5612

July 20, 1992

MEMORANDUM

TO: Gerald Hardy, Chief
Engineering Services Branch

FROM: R.E.Hicks, Geologist
Hydrogeology Unit

RE: Baldwin County Proposed Inert Landfill Site Evaluation, Baldwin
County, Alabama.

SUMMARY:

A hydrogeological evaluation of the proposed Baldwin County Inert Landfill was requested by the Engineering Services Branch, ADEM Land Division pursuant to a permit request, and is the subject of this report. This Landfill site evaluation is one component of the overall permit review process, over which the Land Division of ADEM has primary authority. The recommendations and conclusions presented in this report are in no way offered as a sole determination of the suitability of the site for permitting.

The hydrogeologic evaluation of the Baldwin County Inert Landfill site was conducted on June 17, 1992. Mr. Henry Wilson, Director of Environmental Management Department, Baldwin County, and Ms. Peggy McCrory, Consultant, McCrory & Williams, assisted in the evaluation.

The proposed inert landfill is located in the recharge zone of the Pliocene-Miocene Aquifer, which is a major regional aquifer.

LOCATION:

The site is located in the west half of the northwest quarter of Section 16 Township 5 South, Range 3 East of the Silverhill, Alabama 7.5 quadrangle (Figure 1). The site is approximately 1.5 miles west of Loxley, Alabama and can be accessed from County Highway 64.

TOPOGRAPHY and SURFACE WATER:

Regionally, the terrain is gently rolling to flat laying. Slopes range from 0 to 8 percent. Regionally, elevations range from approximately 80 to 180 feet above mean sea level (MSL). The flat uplands are cultivated for farm use and have closed contour depressions while the stream channels are flat laying swamp lands. The elevation of the proposed disposal site ranges from approximately 110 to 160 feet above MSL.

The regional drainage pattern is dendritic. The site drains to an area classified as a wetland by the U.S. Corps of Engineers at the southeast corner of the property (McCrorry, 1992). The wetland is drained by Fish River. Water of Fish River flows into Weeks Bay.

SOIL:

Regionally, soils are described by the Soil Survey of Baldwin County (McBride et al, 1964) as Carnegie very fine sandy loam (Figure 2). This deep, well drained, sandy clay loam to sandy clays are found on uplands. The surface layer of these soils is dark yellow-brown, dark brown, and very dark grayish-brown very fine sandy loam. Their subsoils range from yellowish-red to red sandy clay loam to clay loam. Many concretions of iron occur throughout the profile. Carnegie soil profiles are more than 50 inches thick. Slopes range from 0 to 12 percent. Permeability ranges from 7.05×10^{-3} to 1.41×10^{-4} centimeters per second.

A pit was excavated on site and exposed a soil profile consistent with the Soil Conservation Service description and soil boring data provided by Southern Earth Science Inc. The soil profile was logged as follows:

0 to 2 Feet	Red, silty loamy soil, damp.
2 to 6 Feet	Mottled red and white clayey sand, damp.
6 to 8 feet	White with red streaks clay.
8 to 10 feet	White, tight clay, dry. No refusal.

GEOLOGY:

The proposed landfill site is located in the Southern Pine Hills district of the East Gulf Coastal Plain physiographic section. The geologic formation underlying the site is the Citronelle Formation of Pliocene age.

Regionally, The Citronelle Formation overlays the Miocene series, undifferentiated. The Citronelle Formation is 50 to 200 feet thick consisting of gravelly sands and sandy clays. In many areas, lenses of sandy clay and clayey sand, which range in thickness from 5 to 15 feet, are interbedded with gravelly sand (Mooty, 1988). The Citronelle Formation strikes northwestward and dips southwestward 5 to 50 feet per mile (Reed, 1971).

GEOLOGY (continued)

Based on outcrop patterns displayed on the Geologic Map of Baldwin County (Reed, 1971) the top of the Miocene undifferentiated is estimated to be between 50 and 100 feet below ground surface at the proposed landfill site (Figure 3). Local excavations and road cuts expose cross bedded unconsolidated interbedded sandy to clayey lenses similar to regional descriptions.

HYDROGEOLOGY

The Pliocene-Miocene aquifer consists of the Citronelle Formation and the undifferentiated deposits of the Miocene Series. No continuous confining units exist between the Citronelle Formation and the Miocene series undifferentiated, and as a result, the two units are hydraulically connected and are one aquifer (Mooty, 1988).

Regionally, discontinuous lenses of clay within the deposits retard vertical movement of water but do not separate the aquifers. Sand and gravel beds in the Citronelle Formation are hydraulically connected to land surfaces; therefor the aquifer is unconfined (Mooty, 1988).

The site is located in the recharge zone of the Pliocene-Miocene aquifer (Figure 3). Groundwater moves to the south and southwest from areas of recharge to areas of natural discharge or areas of groundwater withdrawal. The potentiometric surface is at approximately 100 feet above MSL (Mooty, 1988).

Piezometer water levels were measured during the site visit. Water level data is listed on Table 2 and piezometer locations are shown on Figure 1. Depth to the first zone of saturation on site is between 16 feet and 27 feet below the surface. Differences in groundwater levels between February 1992 and June 1992 can be attributed to seasonal fluctuations.

Clay lenses on site were recorded by Thomas J. Powers and observed during the site evaluation. There is not sufficient evidence to conclude that a clay lens serves as a confining layer for the site.

A water well inventory conducted during the evaluation located private drinking water wells northwest and southeast of the site. Water levels in local wells are generally consistent with the regional potentiometric surface projection. A summary of the well inventory is listed on Table 2, and well locations are shown on Figure 1.

Public drinking water is not available to local residents along Highway 64 west of the site. Public water is available to other residents in the area from the Loxley Water Department. The Loxley Water Department water wells are approximately 2 miles east of the site.

CONCLUSIONS

1. Soil profiles are thick with moderate to rapid permeability. The saturated zone as defined by piezometers 1 thru 4 ranges from 12 to 27 feet below the surface.
2. The site is in the recharge zone of the Citronelle Formation, which is part of the Pliocene-Miocene aquifer. The Citronelle Formation consists of unconsolidated sandy material. Sand and gravel channels in the Citronelle Formation are hydraulically connected to the surface.
3. Clay lenses within the Pliocene-Miocene aquifer are not continuous and are not regional confining layers. There is not sufficient data to comment on the extent of local clay lenses and their influence as local confining layers.
4. Groundwater flow is to the south and southwest with seeps discharging in the streams below the site.
5. Domestic wells north of the site are upgradient and would not be affected by activity on the site. Domestic wells southeast of the site are at the same potentiometric level as the site but are separated from the site by a stream channel and therefore have a low potential for being affected by the proposed landfill.
6. A small area in the southeast part of the site has been classified as a wetland by the U.S. Corps of Engineers.

REFERENCES

- McBride, E.H., L.H. Burges, 1964, Soil Survey of Baldwin County, Alabama, U.S. Department of Agriculture, 110 p.
- Mooty, Will S., 1988, Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama; Area 13, U.S. Geological Survey, 29 p.
- Reed, Phillip C., 1971, Geology of Baldwin County, Alabama, Geological Survey of Alabama, 5 p.
- Powers, Thomas J., 1992, Report of Preliminary Subsurface Investigation Baldwin County Reclamation Project #1, McBride Dirt Pit Baldwin County, Alabama SES Project MO. 92-014, Southern Earth Sciences, Inc., 7 p.
- McCrary, Peggy, 1992, Conversations During Site Review, Unpublished.

Table 1 Piezometric Readings, Baldwin County Reclamation Project #1,
July 18, 1992

Piezometer Number	Date of Reading	Ground Elevation	Depth to Water (Ft)	Total Depth (Ft)
1	2/14/92	131.68	19.06	30
1	6/17/92		17.4	30
2	2/14/92	131.24	24.47	40
2	6/17/92		27.07	40
3	2/14/92	131.48	12.58	29
3	6/17/92		22.96	28
4	2/14/92	157.44	18.20	30
4	6/17/92		26.00	30

* Ground Elevation is in feet above mean sea level

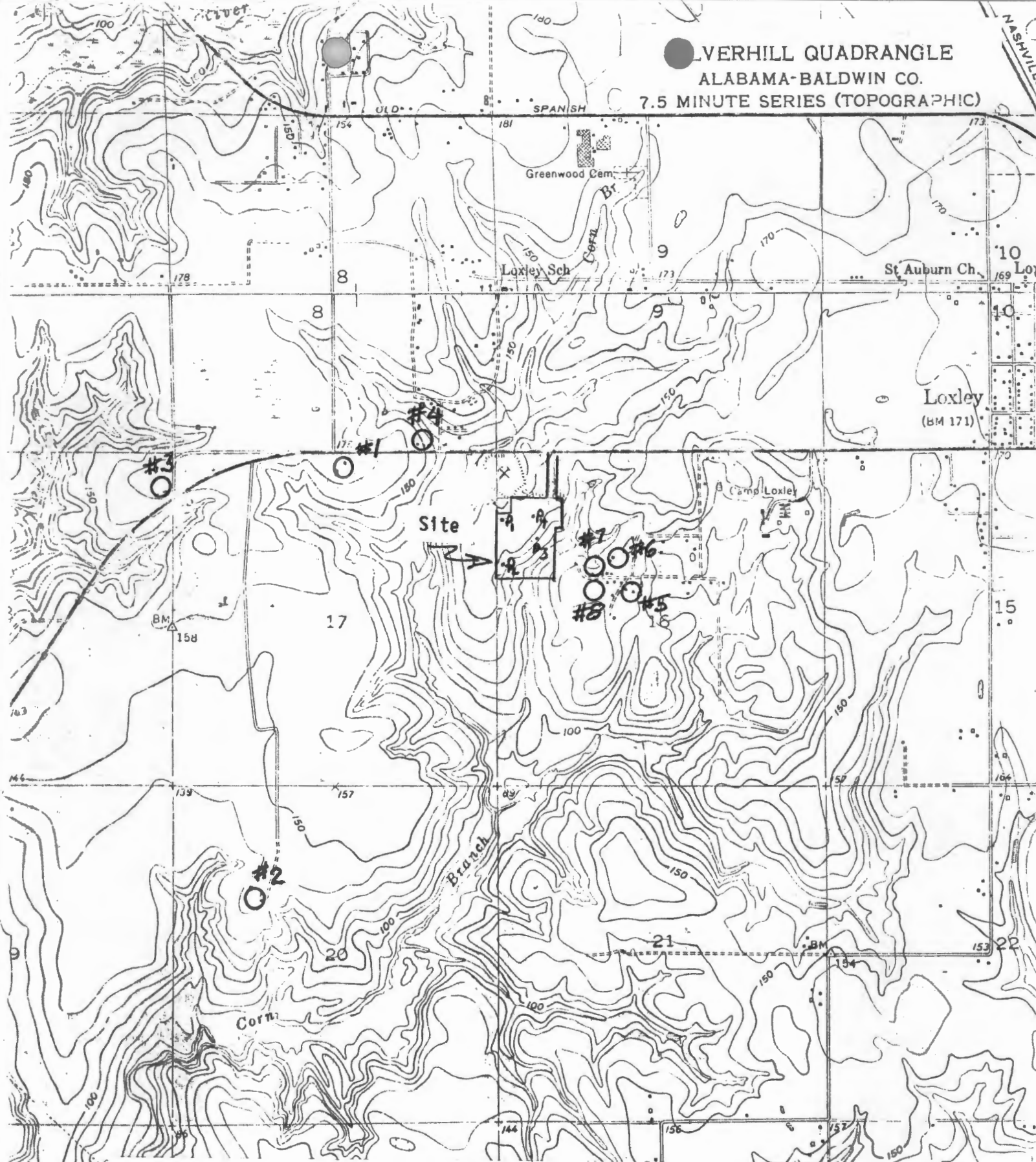
Table 2 Water Well Inventory, Baldwin County Reclamation Project #1,
July 18, 1992.

Well Number	Surface Elev.	Depth to Water Feet	Total Depth Feet	Comments
1	170	Unknown	86	Slight iron taste, never does dry.
2	140	Unknown	Unknown	
3	170	65	90	Clear, some iron, never goes dry.
4	150	Unknown	Unknown	Went dry 10 years ago, filled in.
5	140	Unknown	34	Never goes dry, clear, no taste, abandoned.
6	140	Unknown	Unknown	Water is clear, no taste, well does not go dry.
7	140	35	86	Water is clear, no taste, well does not go dry.
8	140	35	86	Water is clear, no taste, well does not go dry.

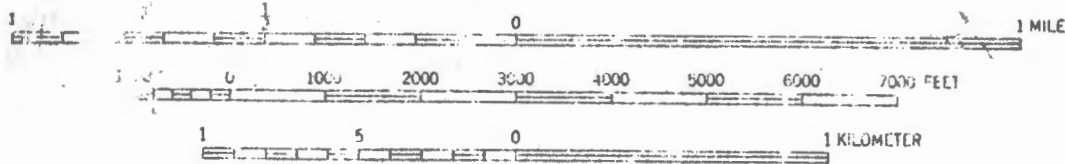
Note: Elevation is in feet above mean sea level.

Note: Several other wells in the community southeast of the site, few are used but most are still usable.

VERHILL QUADRANGLE
ALABAMA-BALDWIN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



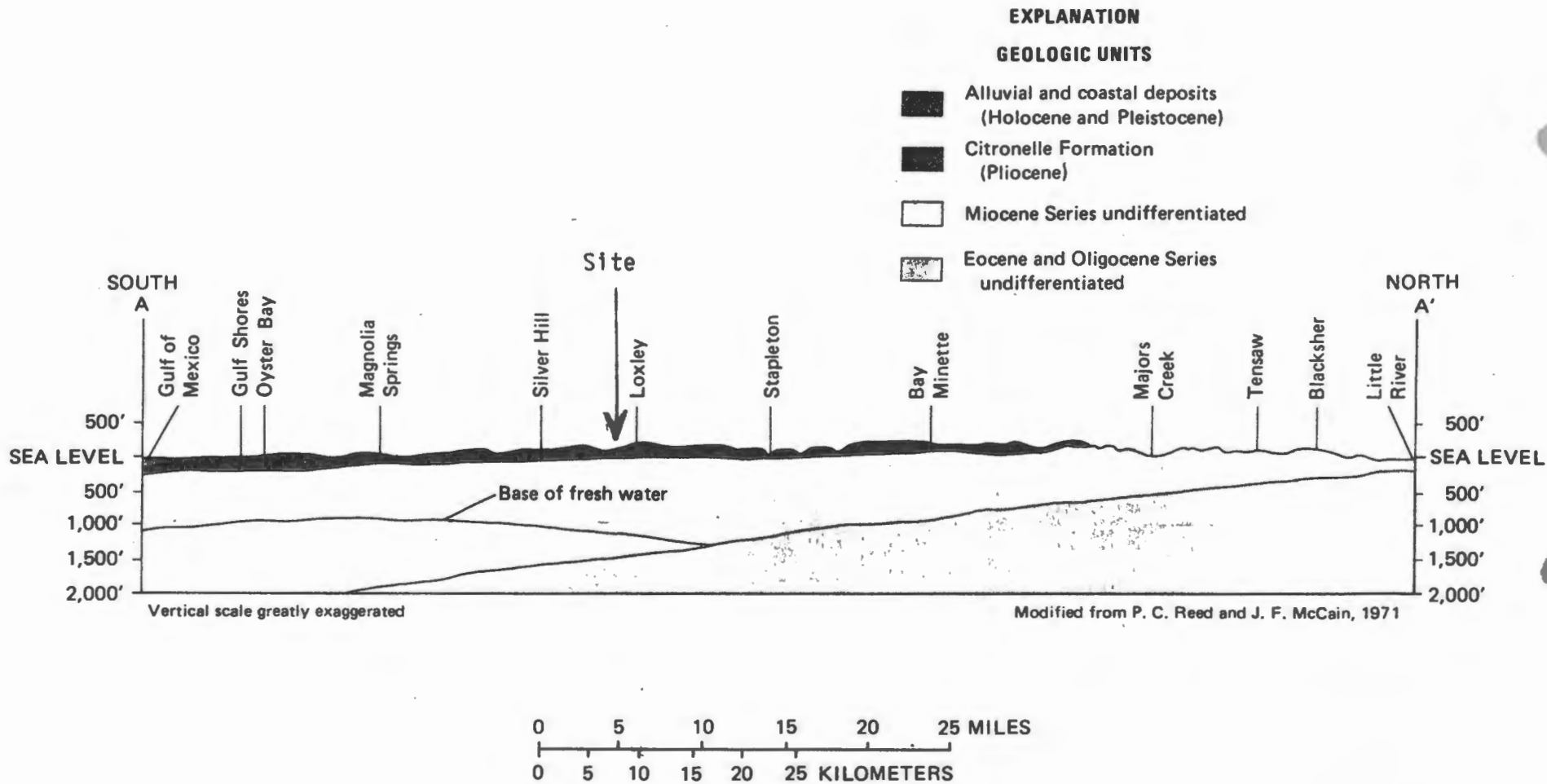
SCALE 1:24000



CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

Location Map

Figure 1



Geologic Cross Section

Figure 3

ALABAMA

Mobile

762 Downtowner Loop W.
Suite 300
P. O. Box 160745
Mobile, AL 36616
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2711 West 15th Street
Panama City, FL 32401
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Tallahassee, FL 32304
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SOUTHERN EARTH SCIENCES, inc.



Geotechnical &
Environmental
Consultants



**REPORT OF SUBSURFACE
INVESTIGATION
MACBRIDE LANDFILL
EXPANSION SOUTH
BALDWIN COUNTY, ALABAMA
SESI PROJECT NO: 01-282**

Southern Earth Sciences, Inc.

strives to fully satisfy our clients
by providing quality service in the fields of
Environmental Science,
Geotechnical Engineering,
Construction Materials Testing,
Underground Storage Tanks,
Environmental Site Assessments,
Asbestos Surveys,
Drilling,
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March 27, 2002

HUTCHINSON, MOORE & RAUCH LLC
Post Office Drawer 2067
Daphne, AL 36526

ATTENTION: Mr. Scott Hutchinson

SUBJECT: Report of Subsurface Investigation
Proposed MacBride Landfill Expansion – South
Baldwin County, Alabama
SES Project No: 01-282

Dear Mr. Hutchinson:

Southern Earth Sciences, Inc. has completed the referenced investigation at the proposed expansion of MacBride Landfill, located 1.4 miles west of Loxley in Baldwin County, Alabama.

Two more ground water measuring events will be conducted during the month of April 2002 as required by ADEM. These measurements will be forwarded to you at the end of April.

We appreciate this opportunity to be of service to you and we appreciate your confidence in SOUTHERN EARTH SCIENCES, INC. If you have any questions regarding this investigation or if we may be of service again, please feel free to contact us.

Very truly yours,

SOUTHERN EARTH SCIENCES, INC.

Thomas J. Powers, P.G.
Registered, Alabama 401

TJP/tjp

attachments

**PROPOSED MACBRIDE LANDFILL EXPANSION - SOUTH
HYDROGEOLOGICAL EVALUATION
SES PROJECT NO. 01-282**

PREPARED FOR

**HUTCHINSON, MOORE & RAUCH LLC
DAPHNE, ALABAMA**

PREPARED BY

**SOUTHERN EARTH SCIENCES, INC.
762 DOWNTOWNER LOOP, WEST
MOBILE, ALABAMA 36609**

MARCH 27, 2002

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FIELD INVESTIGATION

Piezometer Locations: Seven (7) piezometers were installed at various locations at the proposed MacBride Landfill expansion (approximately 120.5 acres in area) located adjacent to and south of the existing MacBride Landfill (please refer to the Vicinity Map, Figure 1 in Appendix A). The seven locations were selected in the field by our registered professional geologist, Mr. Tom Powers. The location of the piezometers is presented on the Test Location Plan (Figure 2) and on Plate 1.

The piezometers were installed by Southern Earth Sciences, Inc. (SESI) during the month of November 2001. An eighth piezometer, installed by SESI during February 1992 at the southwest corner of the existing MacBride Landfill, is also utilized in this investigation. This piezometer, labeled B-4 Pz-2, is located approximately 29 feet north and 156 feet east of the northwest corner of the proposed expansion property.

Boring E-1 on the proposed expansion property was advanced with a 4-inch diameter flight auger to determine the depth to water below ground surface (bgs) then overdrilled with 6 7/8-inch outer diameter (O.D.) hollow stem auger. Borings E-2 and E-3 were drilled with 5 7/8-inch O.D. hollow stem auger. The remaining borings were drilled with 6 7/8-inch O.D. hollow stem auger. Borings were drilled and sampled to depths ranging from 11.5 to 41.5 feet bgs.

Soil samples from each of the borings were obtained at regular 5-foot intervals with a 1.4-inch I.D., 2-inch O.D. split spoon sampler. The sampler was first seated 6 inches to penetrate any loose cuttings, then driven an additional foot with blows of a 140-pound hammer falling a distance of 30 inches. The number of hammer blows required to drive the sampler one foot into the undisturbed soil was recorded and is used in the descriptions of the soil to infer its relative packing density. Soil descriptions were made in the field by our geologist and are presented graphically on the Soil Boring Logs included in Appendix B of this report. A Soil Boring Log for piezometer B-4 Pz-2 is also included in Appendix B.

Piezometers E-1 and B-4 Pz-2 (installed in 1992) were constructed of 2-inch diameter PVC pipe. The remaining piezometers were constructed of 1-inch diameter pipe.

Fifteen (15) feet of 0.010-inch machine-slotted PVC screen were placed in boring B-4 Pz-2 in 1992. Five (5) feet of hand slotted screen were placed in the remainder of the borings converted to piezometers during the November 2001 mobilization to the site.

Solid PVC pipe extends from the top of the screened interval to above ground surface for each piezometer. Well-sorted filter sand was placed in each boring annulus adjacent to and extending a height of approximately 2 feet above the screened interval. One to two feet of bentonite pellets were placed above the filter sand to act as a seal. The remaining annular space was filled with borehole cuttings up to ground surface. Construction details of each piezometer are presented on the appropriate Soil Boring Log in Appendix B.

LOCAL GEOLOGY

Based on the Geological Survey of Alabama State Geologic Map (1988), sediment exposed at the surface of the proposed landfill site (Figure 3) is comprised entirely of Citronelle Formation deposits. The Citronelle Formation was deposited during Pliocene to early Pleistocene time.

Regionally, the Citronelle Formation consists of moderate reddish brown deeply weathered fine to very coarse quartz sand, quartz, and chert pebbles, and lenticular beds of varicolored clay and clayey gravel (Geological Survey of Alabama, 1988). Limonite pebbles and limonite lenses occur locally in weathered exposures. The Citronelle Formation ranges from 0 to 200 feet in thickness and generally dips 0.05 to 0.1 degrees (5 to 12 feet per mile) to the southwest.

The Miocene Series undifferentiated underlies the Citronelle Formation in the area of the proposed landfill.

Interpretation of the state geologic map places the top of the Miocene Series (the contact of the Citronelle Formation and the Miocene Series) in the area of the proposed landfill at an elevation of approximately 100 feet above mean sea level. Ground elevations at the site range from approximately 90 to 150 feet above mean sea level.

The state geologic map does not distinguish informal or formal Miocene-aged stratigraphic units which have been identified in the subsurface in southwest Alabama. Informally, the upper to middle Miocene sediments exposed at the surface in southwest Alabama are referred to as the Miocene coarse clastics. Beneath this sequence is the upper to middle Miocene Pensacola Clay (Marsh, 1966) which may be further divided into the Pensacola Clay upper member, the intervening Escambia Sand Member, and the underlying Pensacola Clay lower member. Underlying the Pensacola Clay in southwestern Alabama are Upper Oligocene and Lower Miocene limestones of the Tampa Formation and Chickasawhay Limestone undifferentiated.

According to the Geological Survey of Alabama (1988), sediment of the Miocene Series undifferentiated consists of laminated to massive marine and estuarine deposits of sedimentary origin. The deposits are described as gray, orange, and red very fine to coarse-grained sand, red ferruginous sandstone, and gray, olive, blue, and green sandy silty clay.

A thickness of 1380 feet was determined (Raymond and Copeland, 1987) for the combined Miocene coarse clastics and Pensacola Clay in an oil and gas test well located near Lillian in east Baldwin County. A combined thickness of 2716 feet was determined for the same interval from a location at the mouth of Mobile Bay. The outcrop limit of the Miocene Series (thickness equals 0 ft) extends as far north in the state as Grove Hill in Clarke County, some 80 miles due north of the proposed landfill. Miocene strata generally dip 0.1 to 0.5 degrees (10 to 45 feet per mile) toward the southwest.

The Oligocene Series undifferentiated is situated directly beneath the Miocene. Lithologies within the Oligocene Series include clay, calcareous sand, sand, and limestone.

SITE TOPOGRAPHY

Topographic elevations as surveyed by Hutchinson, Moore & Rauch, LLC for the proposed landfill expansion (Plate 1) range from 149 feet above mean sea level in the northeast corner of the site to 90 feet in southern portions of the site. Topography slopes east and west toward an alluvial valley oriented north-south which runs the length of the site. Relief from the east or west toward the valley is greatest on the northern portion of the property (on the order of 35 feet; relief is on the order of 20 feet in more southern portions of the site). Wetlands occupy the alluvial valley that divides the site east from west.

SOIL DESCRIPTIONS AND SOIL BORING CROSS SECTIONS

Stratigraphic units identified from the soil boring samples (Appendix B) are described below in descending stratigraphic order. The enumeration of the strata for the proposed expansion is a continuation of stratigraphic units previously described in 1992 for the subsurface investigation conducted for the currently existing MacBride Landfill.

Unit 5 is a firm to stiff pale to dark red, pale orange, light gray to white, and medium gray **clay** to **silty clay**. The clay may be plastic or non-plastic in consistency. A complete section was reported in 1992 as having an approximate thickness of 10 feet. Unit 5 was encountered for the current investigation at boring E-4 from ground surface to an approximate depth of 8 feet (refer to Figure 4). Soil encountered over the upper 8 feet in boring B-4 Pz-2 in 1992 may also belong to Unit 5 although it was assigned to Unit 2 (another fine-grained strata) previously. The upper 8 feet in this boring was described as very stiff orange clayey silt with limonite nodules at the top of the sample.

Unit 6 is a loose to very dense pale orange, white to tan, pale red, orange, and pale yellow **silty sand** to **fine sand**. Thin clay lenses or pockets are encountered in this unit. Unit 6 appears to grade upward into the clay and silty clay of Unit 5. Unit 6 is identified in borings B-4 Pz-2 (over depths of 8 to 23 feet bgs) and E-4 (over depths of 8 to 26 feet bgs – refer to Figure 4). Soil descriptions from boring E-4 suggest a fining-upward grain-size sequence for this unit.

Unit 7 is a loose to very dense tan to white, pale orange, pale red, and pale yellow **sand**. This unit is encountered below a depth of 23 feet in boring B-4 Pz-2, over the entire length of boring E-1, below a depth of 26 feet in boring E-4, and below a depth of 16 feet in borings E-5 and E-6 (refer to Figure 5). This unit displays characteristics of a fining-upward nature, also. Where a non-erosional contact with the overlying Unit 6 is inferred, Unit 7 is capped by a 3-foot thick clayey sand to sandy clay. Several thin (1 to 2.5”) clay lenses were logged within the Unit 7 stratum.

Erosional Remnants are inferred where structural and stratigraphic interpretations suggest allochthonous sediment types and where sedimentary structures, such as bedding, are absent. Possible erosional remnants are interpreted in the upper 14 to 16 feet of borings E-5 (refer to Figure 6) and E-6 overlying sediment of Unit 7. Based on expected stratal position inferred from correlations using the base of Unit 5 as a stratigraphic marker, **silty sands** in the upper 14 to 16 feet of borings E-5 and E-6 are interpreted as erosional remnants deposited disconformably above Unit 7 sands. The source of these erosional remnants are expected to be silty sands of Unit 6 once located at higher elevations within the alluvial valley that forms the study area.

Possible erosional remnants are found in the upper 8 to 11 feet in borings E-2 and E-7 (refer to Figures 5 and 6). These borings are located in axial positions within the alluvial valley comprising the study area.

Very soft black **organic silt** to **sandy silt** are interpreted to be the most recent sediment deposited in the study area and formed where vegetative growth proliferated, in axial portions of the alluvial valley forming the study area. Boring E-3 is the northernmost boring within axial portions of the alluvial valley forming the study area. The upper 8 feet of boring E-3 are comprised of very soft, black organic silt to sandy silt. The wetlands area is expected to be underlain by this type of vegetative silt to sandy silt.

Soil boring cross sections are presented in Figures 4, 5, and 6. The cross section in Figure 4 is oriented west to east and depicts the sediment types and ground water levels encountered during drilling on the north side of the proposed landfill. This cross section extends from piezometer B-4 Pz-2 (which was originally installed for the hydrogeological evaluation of the existing landfill) to piezometer E-3 located near the head of the alluvial valley on the property to piezometer E-4 located at the northeast corner of the property.

The cross section in Figure 5 is also oriented west to east (piezometers E-1, E-2, E-7, and E-6) but is located near the south side of the proposed landfill.

The cross section in Figure 6 is oriented north to south from piezometer E-4 to E-5 and then to E-6.

GROUND WATER

Ground water encountered in the monitoring wells at the site is part of the regional Pliocene-Miocene aquifer (Mooty, 1988) which is comprised of the Citronelle Formation and the undifferentiated deposits of the Miocene Series. Mooty (1988) states that the water-bearing sand and gravel beds of the aquifer are hydraulically connected to land surface; therefore the aquifer is unconfined. However, the aquifer in deeper portions of the Miocene Series responds to short-term pumpage as a confined aquifer due to the presence of semi-confining clayey sediment.

For estimating purposes, the total thickness of the Pliocene-Miocene aquifer at the proposed landfill site is assumed to be 1000 feet.

Piezometer ground and top-of-casing elevations, as well as ground water levels and elevations measured to date, are presented in Table 1. Ground and top-of-casing elevations were surveyed by Hutchinson, Moore & Rauch, LLC, Engineers and Surveyors.

Ground Water Depths and Elevations: For the seven piezometers installed on the proposed landfill property, depths to ground water below ground surface range from 2.70 feet at piezometer E-2 (2/8/02) to 37.31 feet at piezometer E-4 (2/8/02) for the six measurements made on and since February 8, 2002. Measured ground water elevations at the seven piezometer locations on proposed landfill property for this period range from 112.01 feet (E-4) to 95.38 feet (E-7) above mean sea level.

Ground water levels were measured twice each during the months of February, March, and April 2002 with an intervening period of at least 12 days between measurements.

Ground water elevation maps for the six measurements made on and since February 8, 2002 are presented in Figures 7 through 12 of this report. These maps depict the direction of ground water flow as toward the south with noticeable curvature (concave downstream) along the north/south axis of a low lying drainage feature that divides the site east from west.

A hydraulic gradient between piezometers E-3 and E-7 is calculated over the 2280-foot distance between the two locations along the length of the wetlands drainage channel and is interpolated and presented at 300-foot intervals on the respective ground water elevation maps.

Ground Water Flow Direction and Horizontal Hydraulic Gradient: The horizontal hydraulic gradient as determined for the February 8, 2002 ground water elevation map between piezometer E-4 on the northeast corner of the proposed landfill and piezometer E-7 in the south-central portion of the site is 0.0071 ft/ft toward the south. The horizontal hydraulic gradient as determined between piezometer E-1 on the west side of the proposed landfill and piezometer E-2 toward the south is 0.0070 ft/ft.

TABLE I
 PIEZOMETER AND GROUND ELEVATIONS AND WATER LEVELS
 PROPOSED MACBRIDE LANDFILL EXPANSION SOUTH
 SES PROJ. 01-282

Piezometer	Ground Elevation, ft above msl	Top of Casing Elevation	2/8/2002		2/23/2002		3/8/2002		3/25/2002		4/ /2002		4/ /2002	
			Depth to Water, ft bgs	Ground Water Elevation, ft above msl	Depth to Water, ft bgs	Ground Water Elevation, ft above msl	Depth to Water, ft bgs	Ground Water Elevation, ft above msl	Depth to Water, ft bgs	Ground Water Elevation, ft above msl	Depth to Water, ft bgs	Ground Water Elevation, ft above msl	Depth to Water, ft bgs	Ground Water Elevation, ft above msl
B-4 Pz-2	138.24	141.49	28.01	110.23	28.24	110.00	28.19	110.05	28.27	109.97				
E-1	127.58	131.50	22.35	105.23	22.27	105.31	22.35	105.23	22.10	105.48				
E-2	102.72	106.35	2.70	100.02	3.05	99.67	3.07	99.65	3.15	99.57				
E-3	115.37	119.27	4.68	110.69	4.95	110.42	4.97	110.40	5.03	110.34				
E-4	149.14	153.03	37.13	112.01	37.15	111.99	37.14	112.00	37.05	112.09				
E-5	125.06	127.63	Dry@27.2	Dry@97.8	Dry@27.2	Dry@97.8	Dry@27.2	Dry@97.8	27.16	Dry@97.8				
E-6	129.50	134.20	31.00	98.50	30.93	98.57	30.89	98.61	30.77	98.73				
E-7	100.36	104.21	4.65	95.71	5.04	95.32	4.98	95.38	5.06	95.30				

Effective Porosity: Effective porosity is the ratio of the volume of interconnected voids through which fluid can flow to the total volume of material. Effective porosity can be determined from the specific yield of an unconfined aquifer. Average specific yields are given according to sediment type by Fetter (1994, p. 91):

<u>Material</u>	<u>Average Specific Yield, %</u>
Clay	2
Sandy Clay	7
Silt	18
Fine Sand	21
Medium Sand	26
Coarse Sand	27
Gravelly Sand	25

Effective porosity for the sediment types encountered within the unconfined aquifer of the site is estimated generally as on the order of 23 percent, midway between fine and medium sand.

Hydraulic Conductivity: Slug tests were conducted at piezometer E-1 and the data analyzed by the Bouwer and Rice method (1989). Slug test data and results are included in Appendix C.

The Hazen method (Fetter, 1994) was also used to estimate hydraulic conductivity for a sample obtained below the water table from piezometer E-6. The effective grain size for this sample is 0.119 millimeters. The Hazen method is applicable to sands with an effective grain size between 0.1 and 3.0 millimeters. Soils laboratory data and graphs are presented in Appendix D.

The top of the screened interval in piezometer E-1 is 2 feet beneath the water table. The screen diameter is 2 inches and the screen length is 5 feet. The borehole diameter is 6 7/8 inches.

The slug test procedure involved several steps. A static water level was determined with the use of an electronic sensing device. A solid aluminum slug of known volume was introduced into the well to displace the water above static water level (slug-in). Water levels were then measured with the electronic sensing device. All measurements were taken from a reference point on top of the well. Measurements were recorded until the water level equilibrated.

After reaching equilibrium, the slug was removed (slug-out) and water levels were measured and recorded until the initial static level or equilibrium was again obtained.

A proprietary computer program utilizing Bouwer and Rice graphical and analytical methods of estimation was used in computing hydraulic conductivity values (Appendix C).

Hydraulic conductivity values for the slug-in portion of the slug test conducted at piezometer E-1 were estimated as 11.37 feet per day (ft/day) by the graphical method and as 9.98 ft/day by the analytical method. The arithmetic average of these two values is 10.68 ft/day.

Hydraulic conductivity values for the slug-out portion of the slug test conducted at piezometer E-1 were estimated as 4.92 feet per day (ft/day) by the graphical method and as 5.90 ft/day by the analytical method. The arithmetic average of these two values is 5.41 ft/day.

The arithmetic mean of these two estimates of hydraulic conductivity at piezometer E-1 is 8.05 ft/day.

By the Hazen method, given a d_{10} value of 0.119 millimeters (refer to Appendix D) and utilizing a coefficient (C) of 80 for fine to medium sands, a hydraulic conductivity value of 32.1 ft/day is estimated for the 35 – 36.5 foot sample from the piezometer E-6 boring.

The geometric mean of the estimated E-1 and E-6 hydraulic conductivity values is 16.1 ft/day.

Ground Water Flow Rate: Assuming an effective porosity of 0.23, utilizing the average (geometric mean) value of estimated hydraulic conductivity values of 16.1 ft/day, and using an average of previously calculated horizontal hydraulic gradients of 0.0070 to 0.0071, the range of estimated ground water flow rates is approximately 0.49 to 0.50 ft/day.

GENERAL COMMENTS

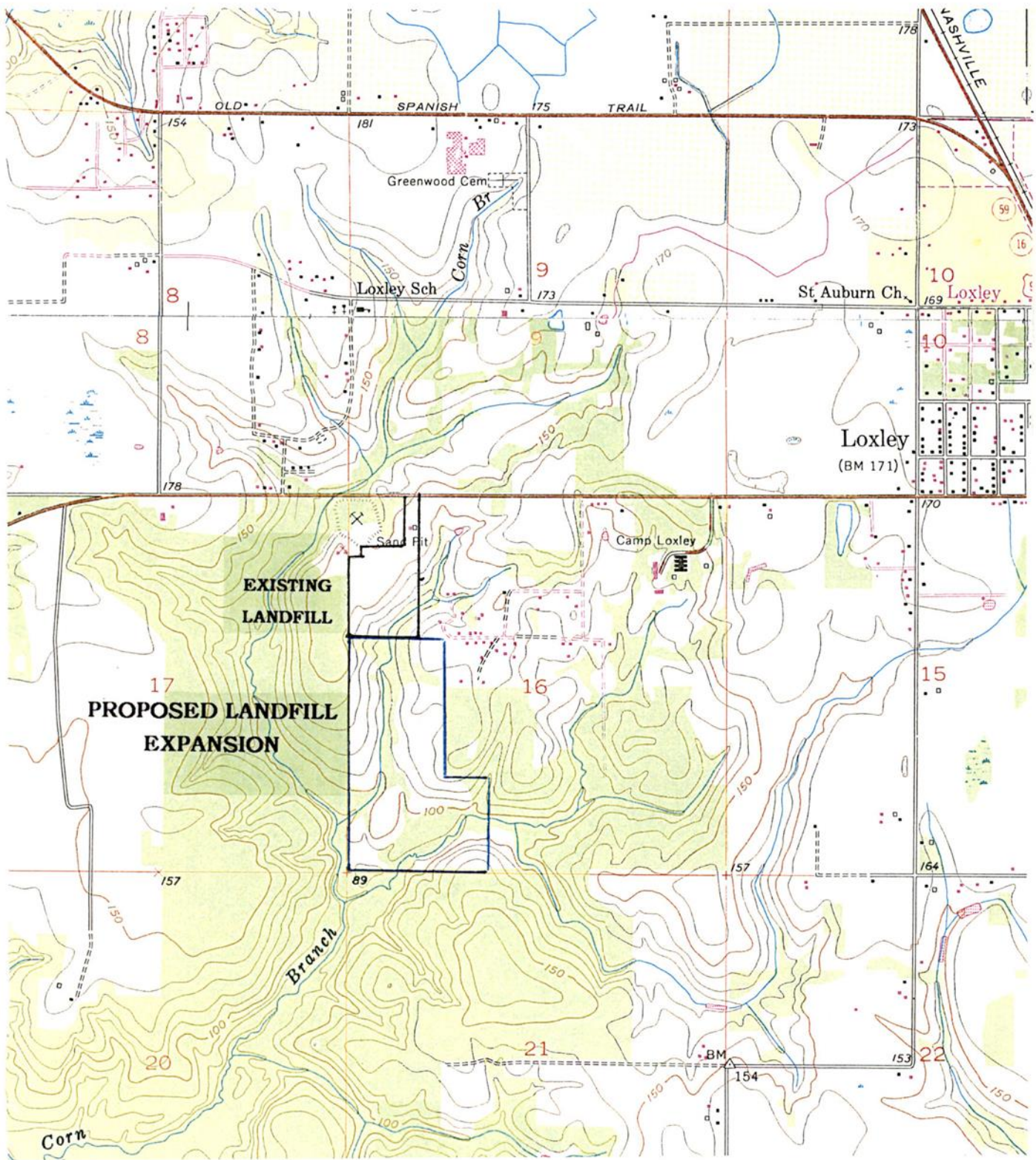
The soil samples obtained during the subsurface investigation will be retained for a period of thirty days. If no instructions are received, they will be disposed of at that time.

While the borings are representative of subsurface conditions at their respective locations and for their respective vertical reaches, local variations characteristic of the subsurface materials of the region are anticipated and may be encountered.

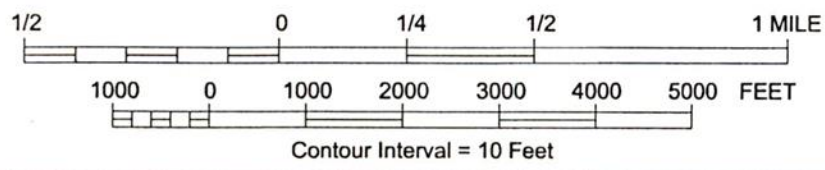
The boring logs and related information are based on the geologist's logs and visual examination of selected samples. The delineation between soil types is approximate and the description represents our interpretation of subsurface conditions at the designated boring location and on the particular date drilled.

APPENDIX A

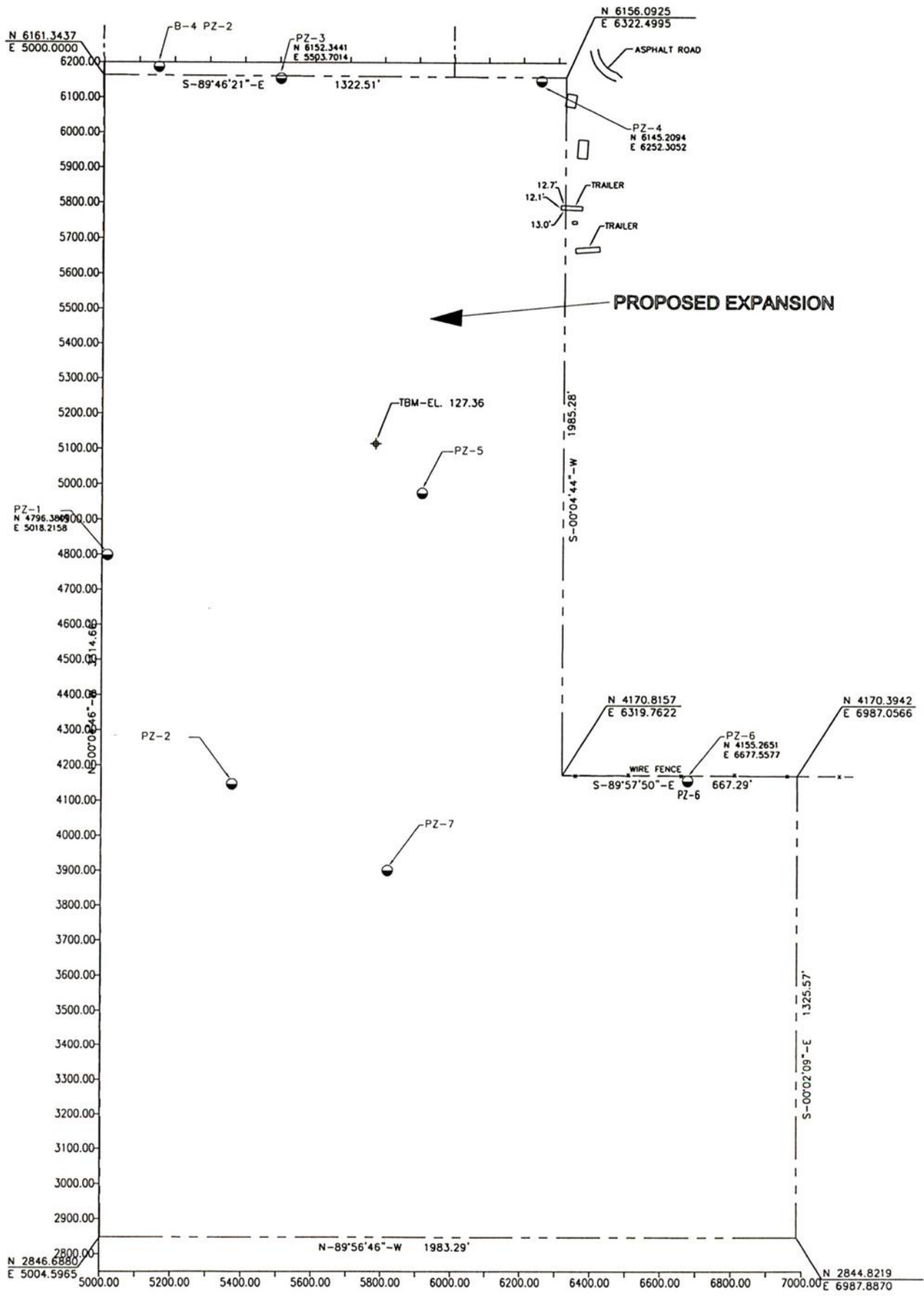
FIGURES



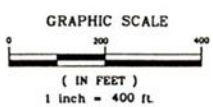
Taken from the Silverhill & Stapleton, ALA. USGS Topo Maps



VICINITY MAP
 PROPOSED MacBRIDE LF EXPANSION
 LOXLEY, BALDWIN CO., ALABAMA
 SES PROJECT NO. 01-282
 FIGURE 1

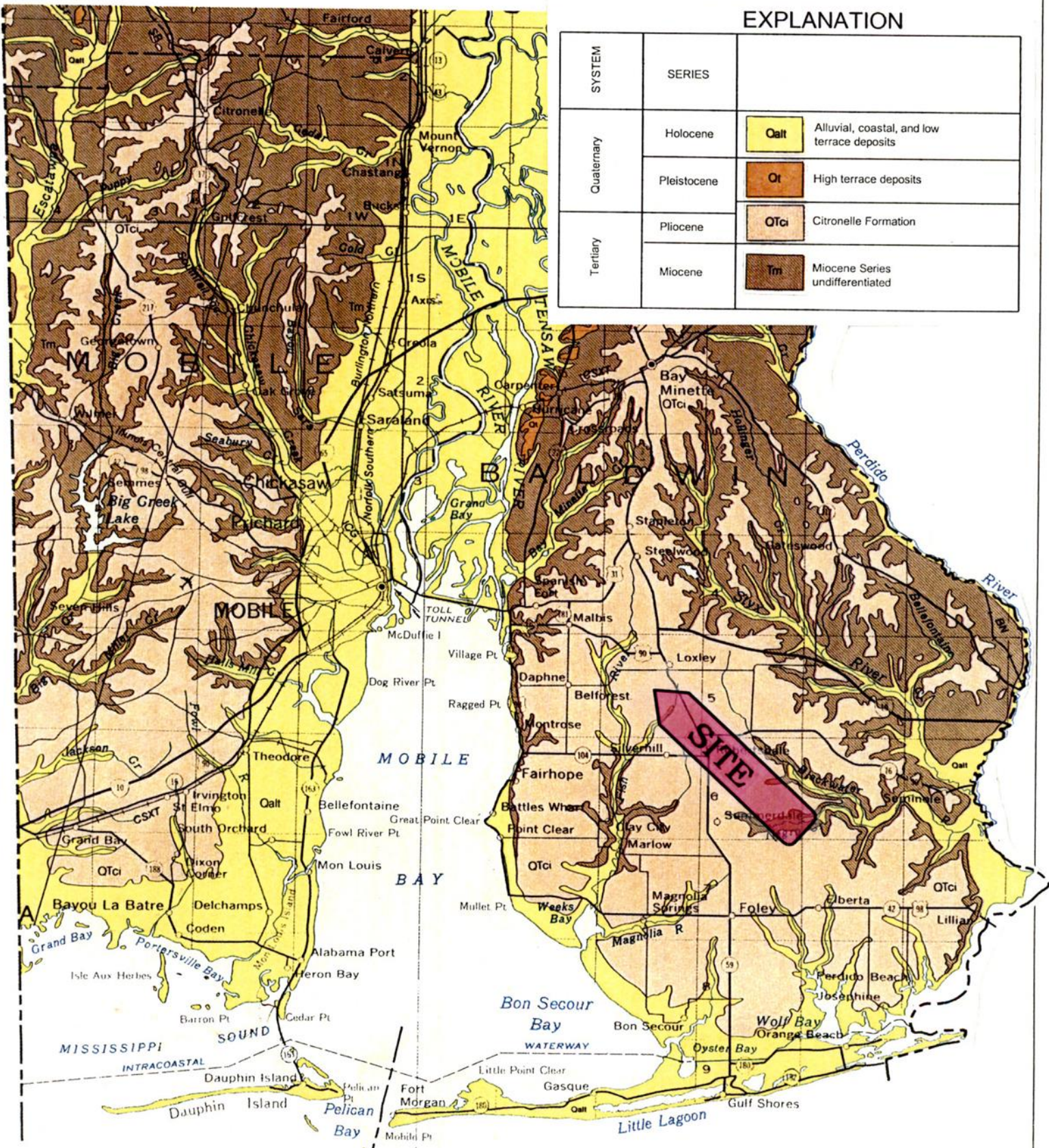


**TEST LOCATION PLAN
 PROPOSED MacBRIDE LF EXPANSION
 LOXLEY, BALDWIN CO., ALABAMA
 SES PROJECT NO. 01-282
 FIGURE 2**



EXPLANATION

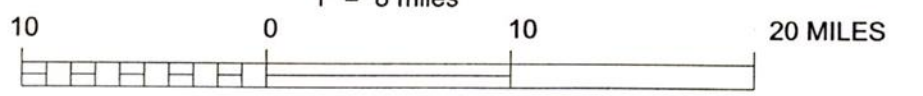
SYSTEM	SERIES		
Quaternary	Holocene	Oalt	Alluvial, coastal, and low terrace deposits
	Pleistocene	Ot	High terrace deposits
Tertiary	Pliocene	OTci	Citronelle Formation
	Miocene	Tm	Miocene Series undifferentiated



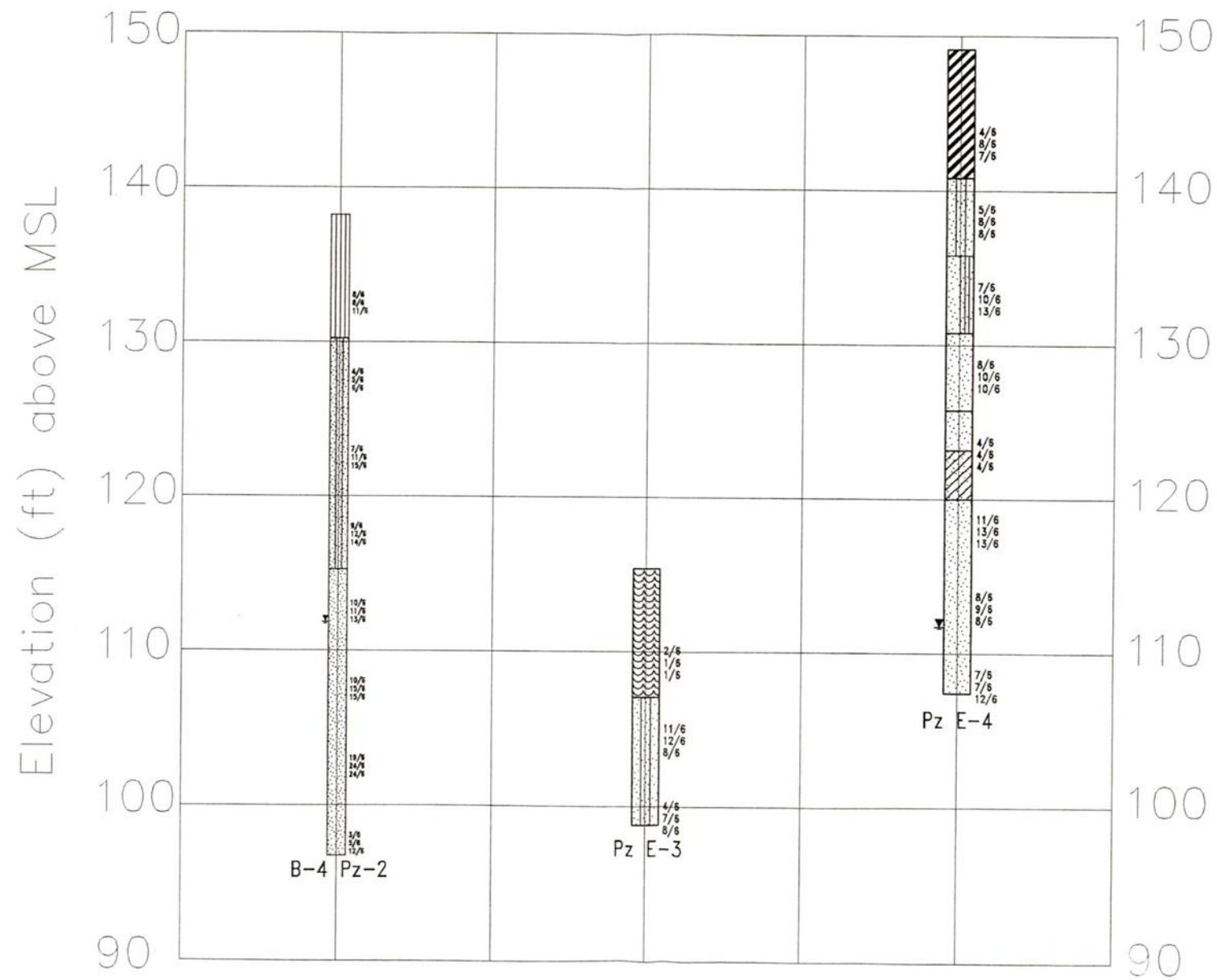
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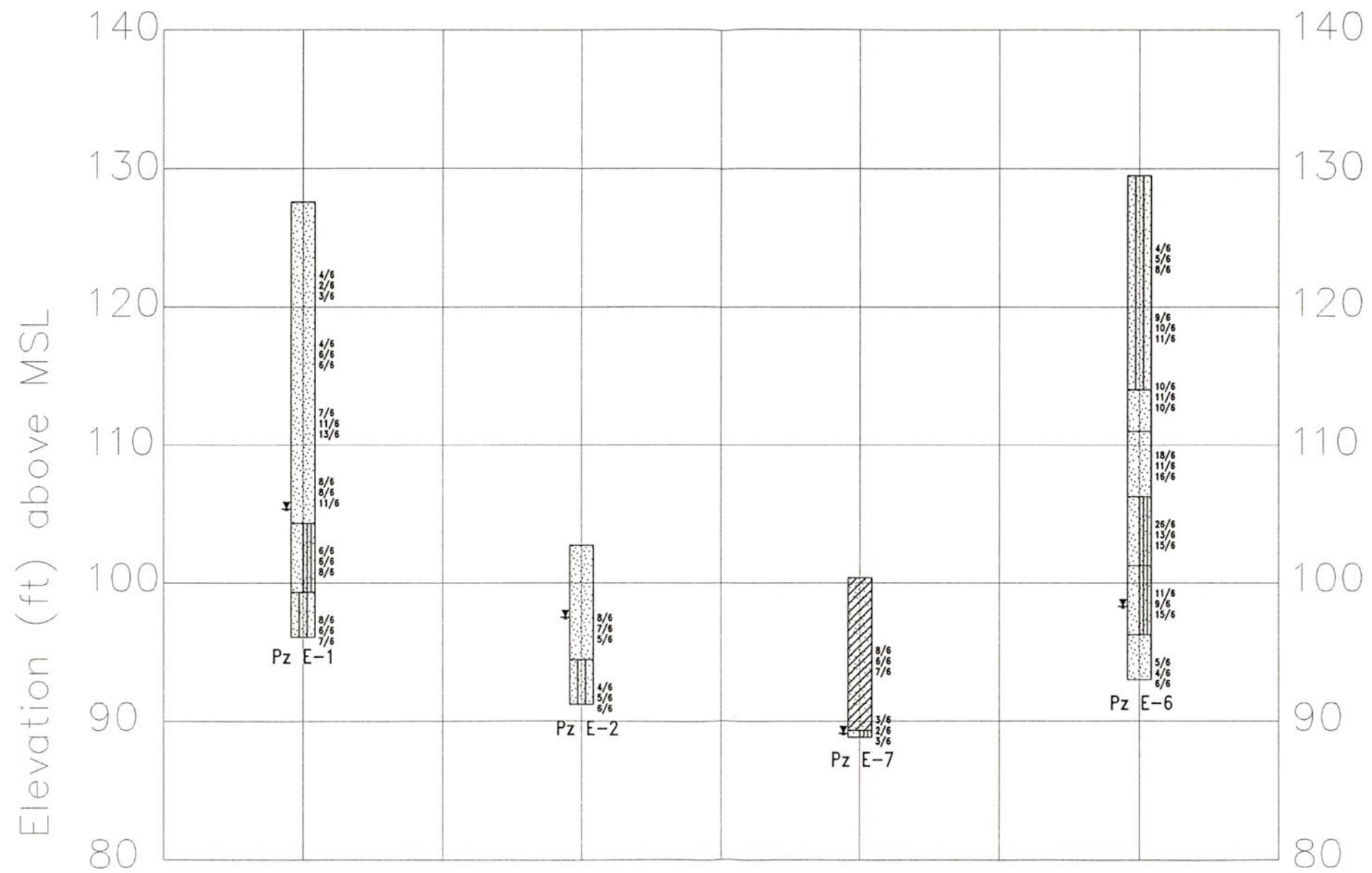
1" = 8 miles



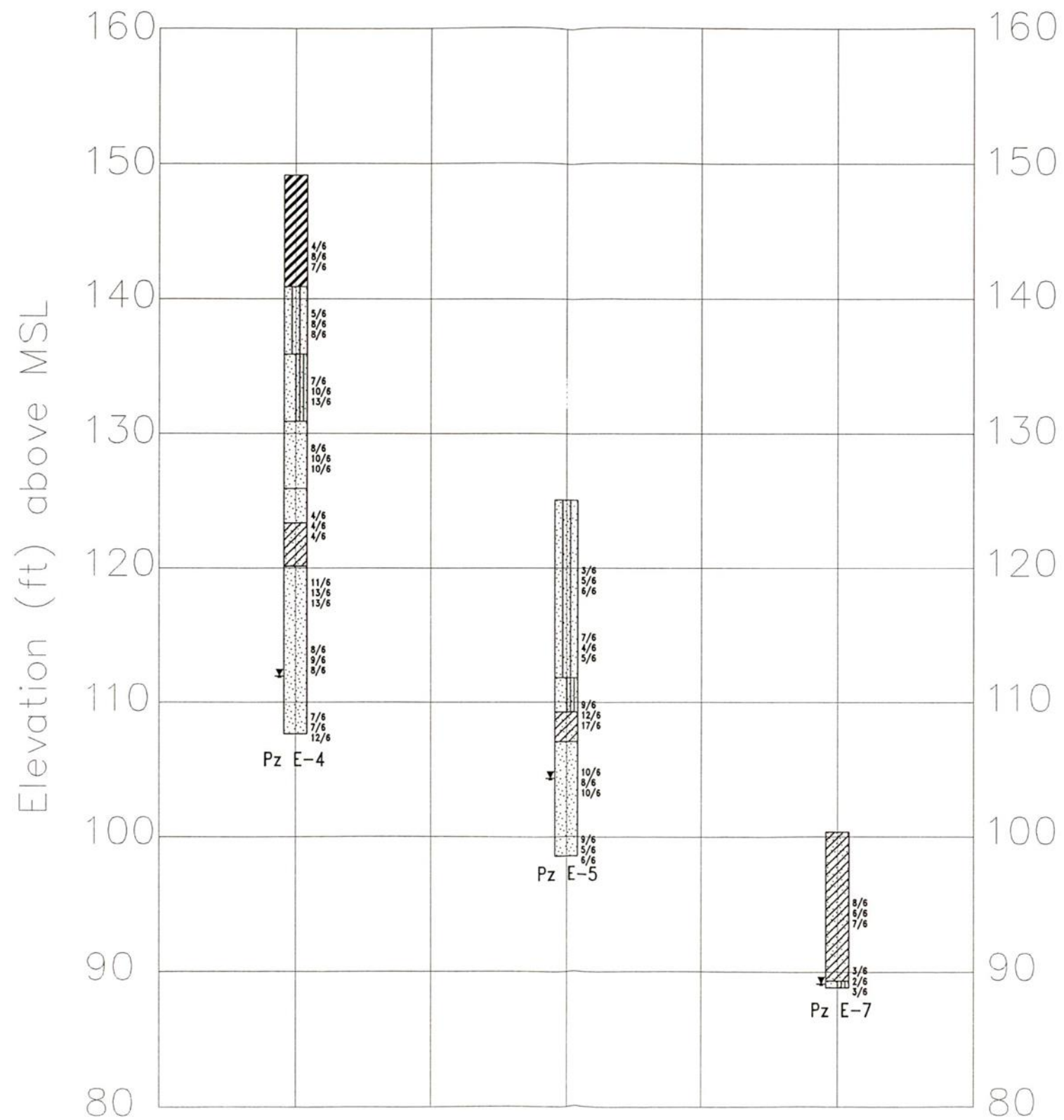
REGIONAL GEOLOGIC MAP
 PROPOSED MacBRIDE LF EXPANSION
 LOXLEY, BALDWIN CO., ALABAMA
 SES PROJECT NO. 01-282
 FIGURE 3



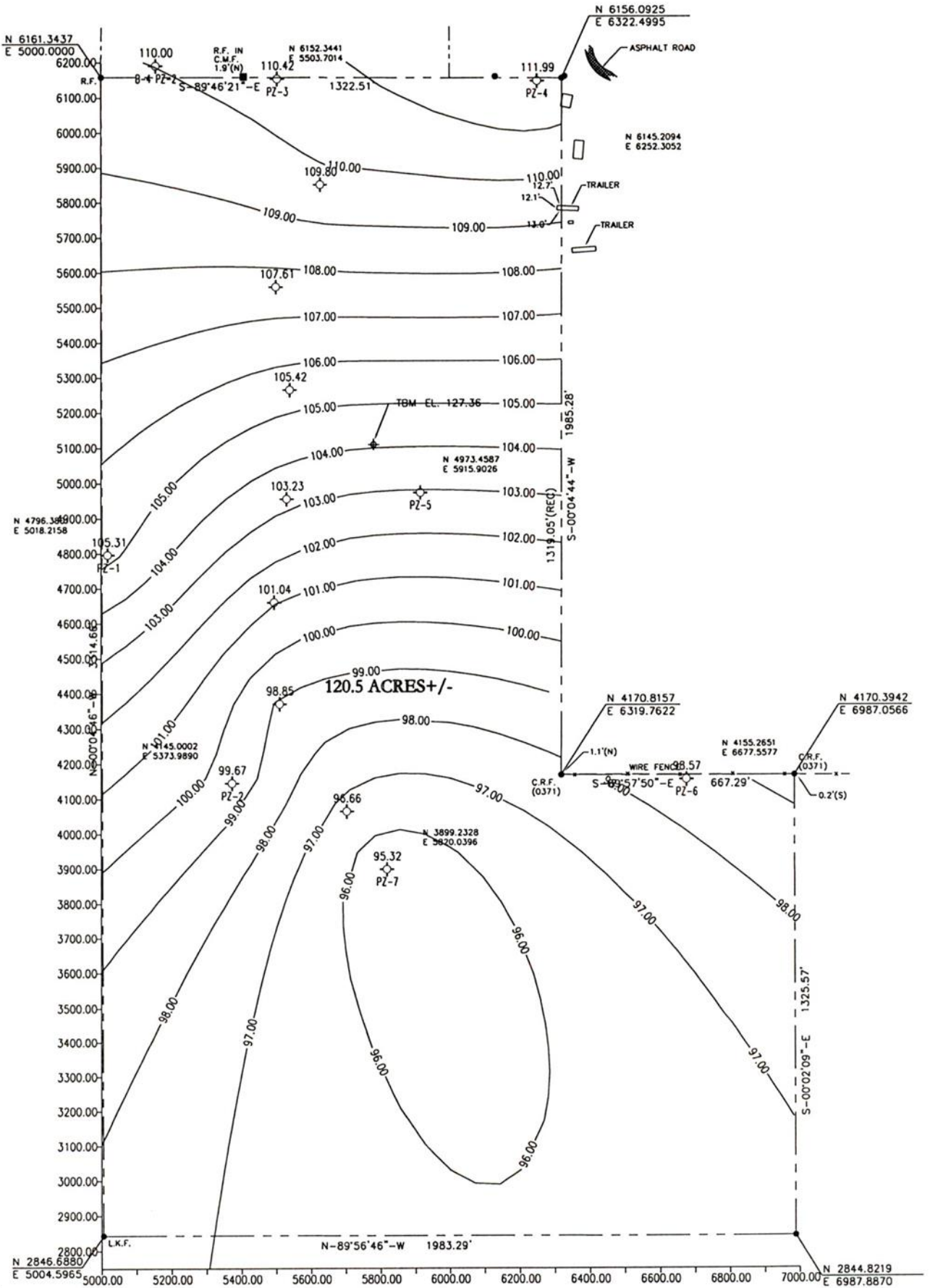
CROSS SECTIONS		
CROSS SECTIONS B4 Pz-2 -- Pz E-4		
SOUTHERN EARTH SCIENCES, Inc. Geotechnical & Environmental Consultants	SHEET NO. 0F	MacBRIDE LANDFILL BALDWIN COUNTY, ALABAMA SES PROJECT NO. 01-282
DRAWN: JES	CHECKED: TJP	DATE: 3/29/02
APPROVED:		DATE:
GEOTECHNICAL ENGINEER		



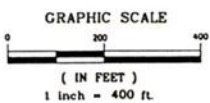
CROSS SECTIONS			
CROSS SECTIONS Pz E-1 -- Pz E-6			
SHEET NO. OF		DATE	
SOUTHERN EARTH SCIENCES, Inc.		3/29/02	
Geotechnical & Environmental Consultants		DATE	
MacBRIDE LANDFILL		DATE	
BALDWIN COUNTY, ALABAMA		DATE	
SES PROJECT NO. 01-282		DATE	
DRAWN: JES	CHECKED: TJP	DATE: 3/29/02	
APPROVED:		DATE:	
GEOTECHNICAL ENGINEER			

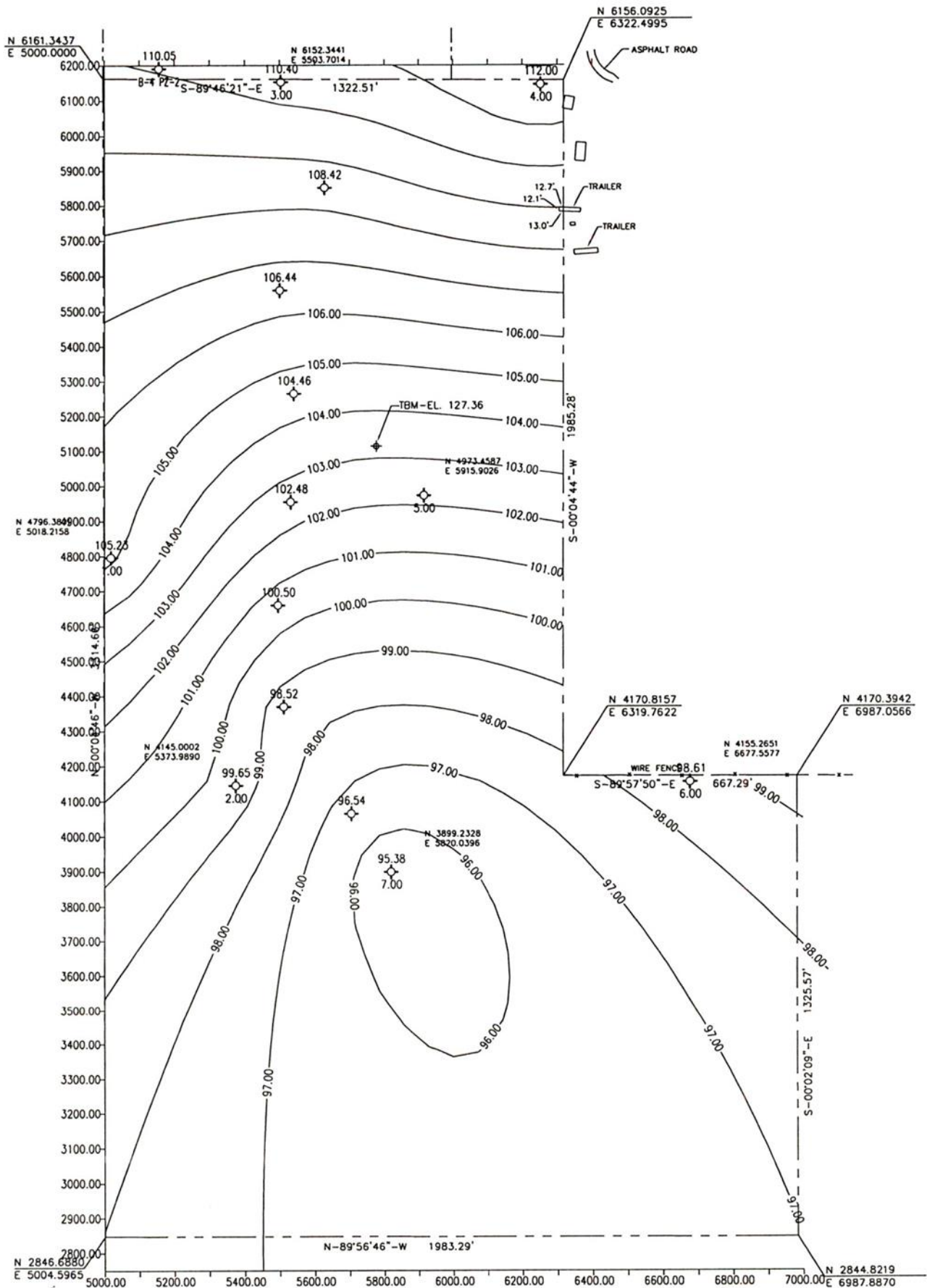


CROSS SECTIONS		
CROSS SECTIONS Pz E-4 -- Pz E-7		
SOUTHERN EARTH SCIENCES, Inc. <small>Geotechnical & Environmental Consultants</small>	SHEET NO. OF	
	MacBRIDE LANDFILL BALDWIN COUNTY, ALABAMA SES PROJECT NO. 01-282	
DRAWN: JES	CHECKED: T.J.P.	DATE: 3/29/02
APPROVED:	DATE:	
<small>GEOTECHNICAL ENGINEER</small>		

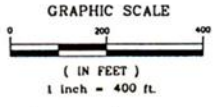


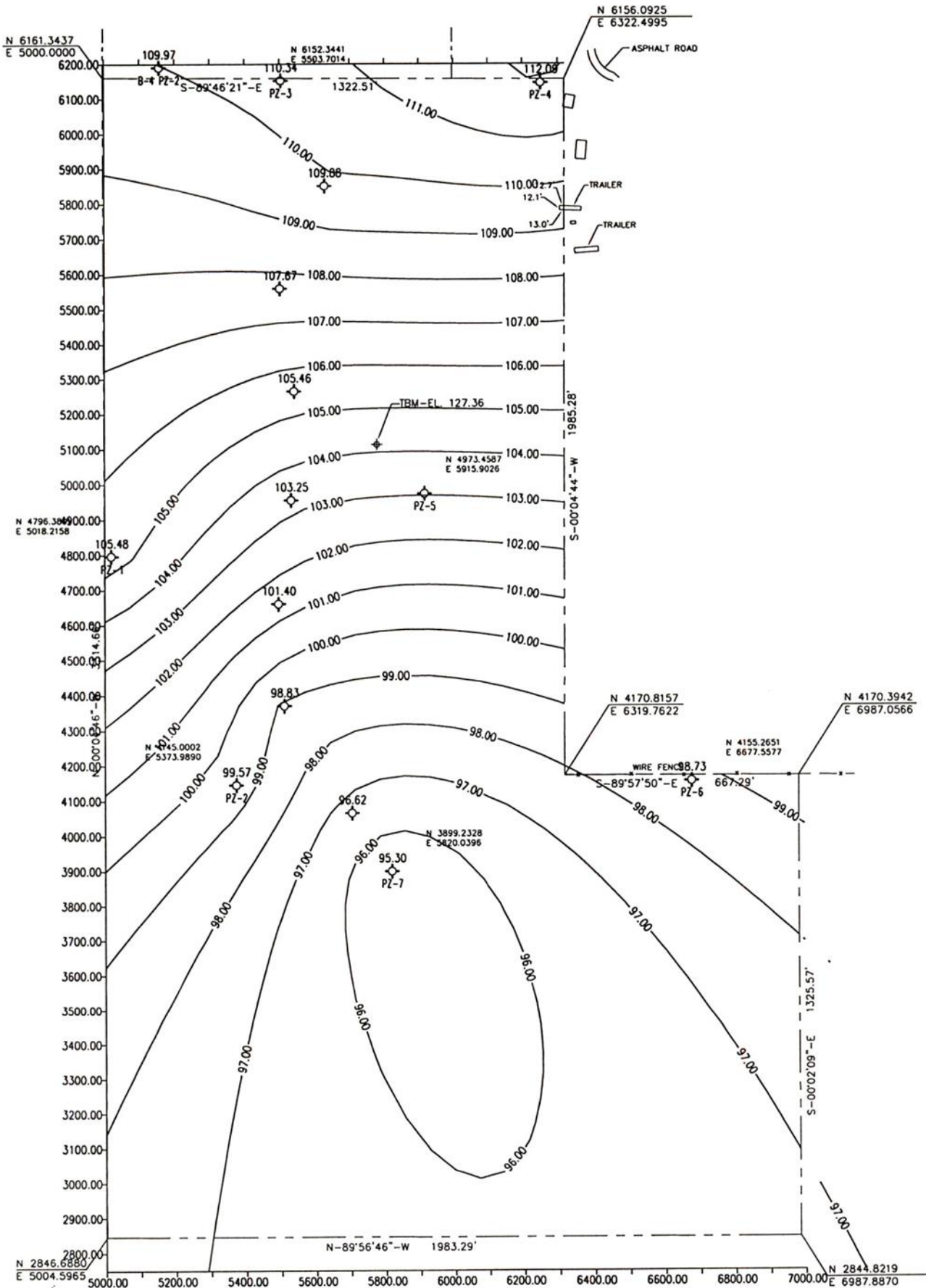
GROUND WATER ELEVATIONS 02/23/02
 PROPOSED MacBRIDE LF EXPANSION
 LOXLEY, BALDWIN CO., ALABAMA
 SES PROJECT NO. 01-282
 FIGURE 8



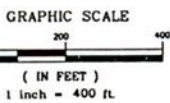


GROUND WATER ELEVATIONS 03/08/02
PROPOSED MacBRIDE LF EXPANSION
LOXLEY, BALDWIN CO., ALABAMA
SES PROJECT NO. 01-282
FIGURE 9





GROUND WATER ELEVATIONS 03/25/02
 PROPOSED MacBRIDE LF EXPANSION
 LOXLEY, BALDWIN CO., ALABAMA
 SES PROJECT NO. 01-282
 FIGURE 10



APPENDIX B

SOIL BORING LOGS

SOIL BORING LOG

BORING NO.: E-1

PROJECT: MACBRIDE LANDFILL EXPANSION

PROJECT NO.: 01-282

PROJECT LOCATION: LOXLEY, AL

METHOD: FLIGHT AUGER

BORING LOCATION: SEE TEST LOCATION PLAN

BORING ELEVATION: 127.58 ft

DATE DRILLED: 11/20/01

DATE COMPLETED: 11/20/01

WATER LEVEL: 22 ft

WATER LEVEL DATE: 11/20/2001

GEOL / ENGR: T. POWERS

TOC: 131.50 ft

DRILLER: T. WILKERSON

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description	SPT N
	<p>TOC = 131.50</p>	<p>SP</p> <hr style="border-top: 1px dashed black;"/> <p>SP-SM</p> <hr style="border-top: 1px dashed black;"/> <p>SM</p>	<p>Loose to Firm Pale Orange SAND</p> <hr style="border-top: 1px dashed black;"/> <p>Firm Orange Silty SAND over 2.5" of Tan CLAY (Elev. Top of Clay @ 102 FT) over Brownish Red SAND</p> <hr style="border-top: 1px dashed black;"/> <p>Firm Orange Silty SAND</p>	<p>5</p> <p>12</p> <p>24</p> <p>19</p> <p>14</p> <p>13</p>

Remarks: SET 5 FT OF 2" DIA. SCREEN @ 29.5 FT, BGS COVERED UP TO 21.3 FT, SAND TO 20 FT, BENTONITE PELLETS TO 19.5 FT, BACK-FILLED W/ CUTTINGS, APX. 3.8 FT STICK-UP

SOIL BORING LOG

BORING NO.: E-2

PROJECT: MACBRIDE LANDFILL EXPANSION

PROJECT LOCATION: LOXLEY, AL

BORING LOCATION: SEE TEST LOCATION PLAN

DATE DRILLED: 11/21/01

WATER LEVEL: 5 ft

GEOL / ENGR: T. POWERS

TOC: 106.35 ft

PROJECT NO.: 01-282

METHOD: HOLLOW-STEM AUGER

BORING ELEVATION: 102.72 ft

DATE COMPLETED: 11/21/01

WATER LEVEL DATE: 11/21/2001

DRILLER: T. WILKERSON

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description	SPT N
	<p>TOC = 106.35</p>	<p>SP</p> <hr/> <p>SM</p>	<p>Firm Tan SAND</p> <hr/> <p>Firm Pale Orange Silty SAND</p>	<p>12</p> <hr/> <p>11</p>

Remarks: SET 5 FT OF 1" DIA. HAND-SLOTTED SCREEN @ 10 FT, COVERED TO 4.5 FT, SAND TO 3.5 FT, BENTONITE PELLETS TO 3 FT, BACK-FILLED WITH CUTTINGS. 3.5 FT STICK-UP

SOIL BORING LOG

BORING NO.: E-3
PROJECT: MACBRIDE LANDFILL EXPANSION
PROJECT LOCATION: LOXLEY, AL
BORING LOCATION: SEE TEST LOCATION PLAN
DATE DRILLED: 11/21/01
WATER LEVEL: UNKNOWN
GEOL / ENGR: T. POWERS

PROJECT NO.: 01-282
METHOD: HOLLOW-STEM AUGER
BORING ELEVATION: 115.37 ft
DATE COMPLETED: 11/21/01
WATER LEVEL DATE: 11/21/2001
DRILLER: T. WILKERSON

TOC: 119.27 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description	SPT N
	<p>TOC = 119.27</p>	<p>OH</p> <hr style="border-top: 1px dashed black;"/> <p>SM</p>	<p>Very soft Black Organic Silt to Sandy Silt</p> <hr style="border-top: 1px dashed black;"/> <p>Firm Light Grayish Tan to Pale Orange Silty SAND</p>	<p>2</p> <hr style="border-top: 1px dashed black;"/> <p>20</p> <hr style="border-top: 1px solid black;"/> <p>15</p>

Remarks: SET 5 FT OF 1" DIA. SCREEN @ 16 FT, COVERED UP TO 11.5 FT, SAND UP TO 5 FT, BENTONITE PELLETS UP TO 4.5 FT, BACK-FILLED W/ CUTTINGS. 4 FT STICK-UP

SOIL BORING LOG

BORING NO.: E-4

PROJECT: MACBRIDE LANDFILL EXPANSION

PROJECT LOCATION: LOXLEY, AL

BORING LOCATION: SEE TEST LOCATION PLAN

DATE DRILLED: 11/21/01

WATER LEVEL: 37 ft

GEOL / ENGR: T. POWERS

TOC: 153.03 ft

PROJECT NO.: 01-282

METHOD: HOLLOW-STEM AUGER

BORING ELEVATION: 149.14 ft

DATE COMPLETED: 11/21/01

WATER LEVEL DATE: 11/21/2001

DRILLER: T. WILKERSON

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description	SPT N
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">TOC = 153.03</div> </div>		<p>CH</p> <p>SM</p> <p>SP-SM</p> <p>SP</p> <p>SP</p> <p>SC</p> <p>SP</p>	<p>Firm Dark Red to Pale Orange Silty Clay</p> <p>Firm Orange Silty SAND</p> <p>Very Firm Orange Silty SAND over Pale Orange and White SAND</p> <p>Firm Pale Red and White SAND</p> <p>Loose Pale Red and Yellow SAND</p> <p>White Pale Orange and Red Clayey SAND</p> <p>Very Firm to Firm White SAND</p>	<p>15</p> <p>16</p> <p>23</p> <p>20</p> <p>8</p> <p>26</p> <p>17</p> <p>19</p>

Remarks: SET 5 FT OF 1" DIA. HAND-SLOTTED SCREEN @ 40 FT, COVERED TO 34 FT, SAND TO 31 FT, BENTONITE PELLETS TO 29 FT. APX. 3.5 FT STICK-UP

SOIL BORING LOG

BORING NO.: E-5

PROJECT: MACBRIDE LANDFILL EXPANSION

PROJECT LOCATION: LOXLEY, AL

BORING LOCATION: SEE TEST LOCATION PLAN

DATE DRILLED: 11/26/01

WATER LEVEL: 20.5 ft

GEOL / ENGR: T. POWERS

PROJECT NO.: 01-282

METHOD: HOLLOW-STEM AUGER

BORING ELEVATION: 125.06 ft

DATE COMPLETED: 11/26/01

WATER LEVEL DATE: 11/26/2001

DRILLER: M. WADE

TOC: 127.63 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description	SPT N
	<p style="text-align: center;">TOC = 127.63</p>	<p>SM</p> <p>SP-SM</p> <p>SC</p> <p>SP</p>	<p>Firm to Loose Pale Orange Silty SAND, No Bedding</p> <p>Very Firm Orange Sand to Silty Sand</p> <p>White and Pale Orange Clayey SAND to Sandy CLAY</p> <p>Firm Pale Orange SAND (2" White CLAY @ Elev. 105.5 FT)</p>	<p>11</p> <p>9</p> <p>29</p> <p>18</p> <p>11</p>

Remarks: SET 5 FT OF 1" DIA. SCREEN @ 27 FT, COVERED TO 20 FT, SAND TO 16 FT, BENTONITE PELLETS TO 11 FT, BACK-FILLED WITH CUTTINGS. 3 FT STICK-UP

SOIL BORING LOG

BORING NO.: E-6
PROJECT: MACBRIDE LANDFILL EXPANSION
PROJECT LOCATION: LOXLEY, AL
BORING LOCATION: SEE TEST LOCATION PLAN
DATE DRILLED: 11/26/01
WATER LEVEL: 31 ft
GEOL / ENGR: T. POWERS

PROJECT NO.: 01-282
METHOD: HOLLOW-STEM AUGER
BORING ELEVATION: 129.5 ft
DATE COMPLETED: 11/26/01
WATER LEVEL DATE: 11/26/2001
DRILLER: M. WADE

TOC: 134.20 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description	SPT N
0	TOC = 134.20			
120	4/6 5/6 8/6	SM	Firm to Very Firm Pale Orange Silty SAND, No Bedding	13
110	9/6 10/6 11/6			21
100	10/6 11/6 10/6	SP	Pale Orange F/M SAND with minor Bedding	21
90	18/6 11/6 16/6	SP	Very Firm Orange to Pale Orange Sand	27
80	26/6 13/6 15/6	SP-SM	Very Firm Very Pale Orange Sand over Pale Red Sand	28
70	11/6 9/6 15/6	SP-SM	Very Firm Red Silty SAND over 1" White Clay (@ Elev. 99 FT) over Very Pale Orange SAND	24
60	5/6 4/6 6/6	SP	Loose Pale Orange SAND	10

Remarks: SET 5 FT OF 1" DIA. SCREEN @ 35 FT, COVERED TO 30.5 FT, SAND TO 27 FT. BENTONITE PELLETS TO 25 FT, BACK-FILLED WITH CUTTINGS

SOIL BORING LOG

BORING NO.: E-7

PROJECT: MACBRIDE LANDFILL EXPANSION

PROJECT LOCATION: LOXLEY, AL

BORING LOCATION: SEE TEST LOCATION PLAN

DATE DRILLED: 11/26/01

WATER LEVEL: 11 ft

GEOL / ENGR: T. POWERS

TOC: 104.21 ft

PROJECT NO.: 01-282

METHOD: HOLLOW-STEM AUGER

BORING ELEVATION: 100.36 ft

DATE COMPLETED: 11/26/01

WATER LEVEL DATE: 11/26/2001

DRILLER: M. WADE

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description	SPT N
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">100 0</div> <div style="margin-top: 10px;">90 10</div> <div style="margin-top: 10px;">80 20</div> <div style="margin-top: 10px;">70 30</div> <div style="margin-top: 10px;">60 40</div> </div>	<p style="text-align: center;">TOC = 104.21</p>	<p>SC</p> <hr style="border-top: 1px dashed black;"/> <p>SP-SM</p>	<p>Firm White Clayey Silty SAND</p> <hr style="border-top: 1px dashed black;"/> <p>Orange SAND to Silty SAND</p>	<p>13</p> <hr style="border-top: 1px dashed black;"/> <p>5</p>

Remarks: SET 5 FT OF 1" DIA. SCREEN @ 13 FT, COVERED TO 8.5 FT, SAND TO 7.5 FT, BENTONITE PELLETS TO 7 FT, BACK-FILLED WITH CUTTINGS

SOIL BORING LOG

BORING NO.: B-4 Pz-2

PROJECT: MacBRIDE DIRT PIT

PROJECT LOCATION: LOXLEY, AL

BORING LOCATION: SEE TEST LOCATION PLAN

DATE DRILLED: 02/10/92

WATER LEVEL: 26.24 ft

GEOL / ENGR: T. POWERS

PROJECT NO.: 92-014

METHOD: FLIGHT AUGER

BORING ELEVATION: 138.24 ft

DATE COMPLETED: 02/11/92

WATER LEVEL DATE: 07/28/1992

DRILLER:

TOC: 141.49 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description	SPT N
0	TOC = 141.49			
130	8/6 8/6 11/6	ML	Very Stiff Orange Clayey SILT; Limonite Nodules at Top of Sample	19
10	4/6 5/6 6/6	SM	Firm to Very Firm Pale Orange, White, Orange, Pale Yellow/Red Silty SAND	11
120	7/6 11/6 15/6			26
20	9/6 12/6 14/6			26
110	10/6 11/6 13/6	SP	Firm to Dense Tan, Pale Orange/Red F/M SAND. Few Clay Pockets to Lenses	24
30	10/6 15/6 15/6			30
100	19/6 24/6 24/6			48
40	3/6 5/6 12/6			17

Remarks: 1.5 Ft Stick-Up

APPENDIX C

SLUG TEST DATA AND RESULTS

Data from file: F:\PERSON~1\POWERS\SUPERSLU\E-1IN.SLG
 Title: E-1 SLUG IN
 Site Name: Proposed MacBride Landfill Expansion
 Location: Loxley, Alabama
 Client: Baldwin County Solid Waste
 Project Number: 01-282
 Test Date: February 8, 2002
 Well Number: Pz E-1
 Casing Radius: 1 inches
 Effective Well Radius: 3.44 inches
 Aquifer Thickness: 1000 feet
 Water Table to Screen Bottom: 7.10001 feet
 Screen Length: 5 feet
 Static Water Level: 26.24 decimal feet
 K ratio is 1
 There are 5 time and drawdown measurements
 Tests starts with trial 1
 Time values will be adjusted by 0.0003125 days (26.999999 seconds)

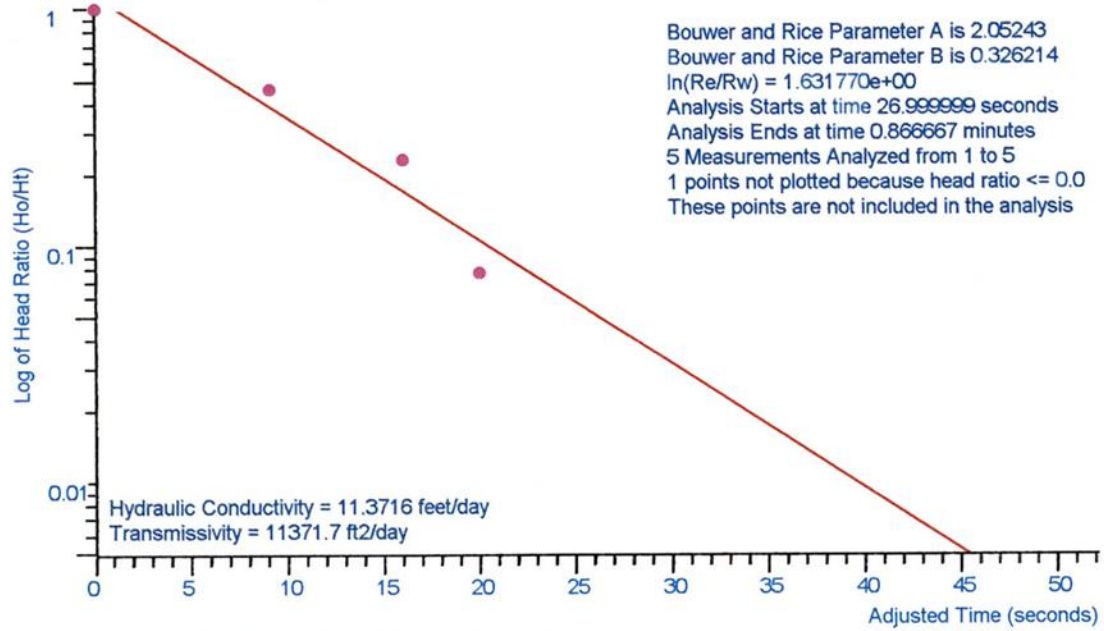
Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
1	0.0003125	0	26.11	0.130019	1
2	0.000416667	0.000104167	26.18	0.060006	0.461515
3	0.000497685	0.000185185	26.21	0.0300194	0.230884
4	0.000543981	0.000231481	26.23	0.0100075	0.0769694
5	0.000601852	0.000289352	26.24	0	0

Data from file: F:\JOBFOL~1\2001\01282\NEWFOL~1\E-1OUT.SLG
 Title: E-1 SLUG OUT
 Site Name: Proposed MacBride Landfill Expansion
 Location: Loxlev, Alabama
 Client: Baldwin County Solid Waste
 Project Number: 01-282
 Test Date: February 8, 2002
 Well Number: Pz E-1
 Casing Radius: 1 inches
 Effective Well Radius: 3.44 inches
 Aquifer Thickness: 1000 feet
 Water Table to Screen Bottom: 7.10001 feet
 Screen Length: 5 feet
 Static Water Level: 26.24 decimal feet
 K ratio is 1
 There are 7 time and drawdown measurements
 Tests starts with trial 1
 Time values will be adjusted by 0.000208333 days (17.999972 seconds)

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
1	0.000208333	0	26.62	0.37998	1
2	0.0003125	0.000104167	26.45	0.210004	0.552672
3	0.000358796	0.000150463	26.39	0.149997	0.394749
4	0.000520833	0.0003125	26.33	0.0899925	0.236835
5	0.00056713	0.000358797	26.32	0.0799866	0.210502
6	0.00260417	0.00239584	26.31	0.0700119	0.184251
7	0.00347222	0.00326389	26.29	0.05	0.131586

E-1 SLUG IN February 8, 2002
Proposed MacBride Landfill Expansion Loxley, Alabama

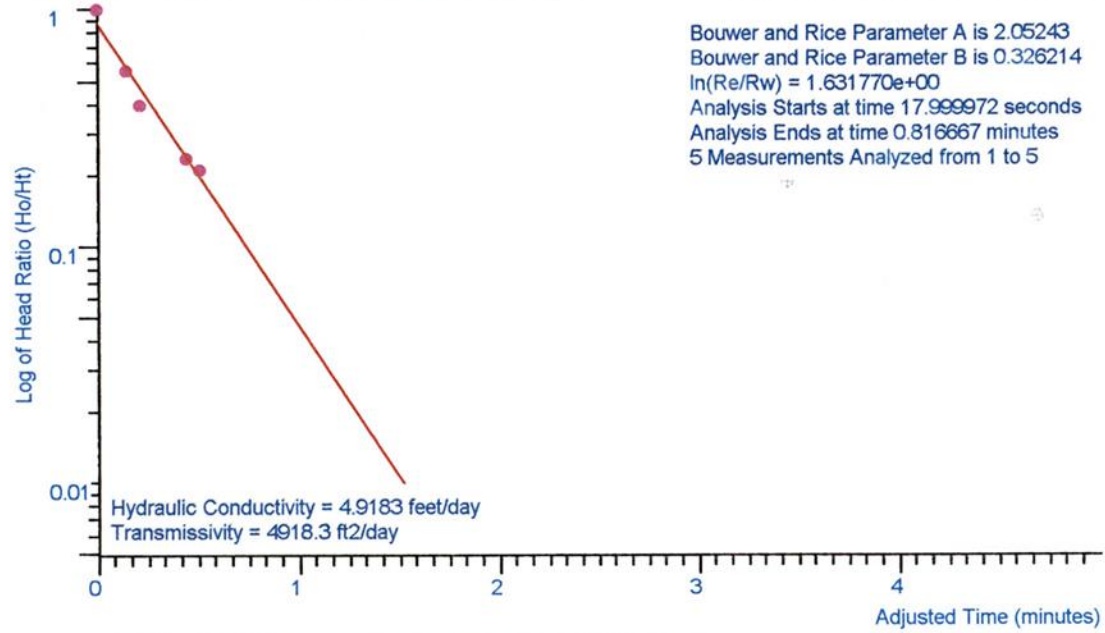
Bouwer and Rice Graph of Pz E-1
Ho is 0.0396304 meters at t = 27 sec



Project Number 01-282 for Baldwin County Solid Waste
Analysis by POWERS of SOUTHERN EARTH SCIENCES, INC.

E-1 SLUG OUT February 8, 2002
Proposed MacBride Landfill Expansion Loxley, Alabama

Bower and Rice Graph of Pz E-1
Ho is 0.115819 meters at t = 18 sec



Project Number 01-282 for Baldwin County Solid Waste
Analysis by POWERS of SOUTHERN EARTH SCIENCES, INC.

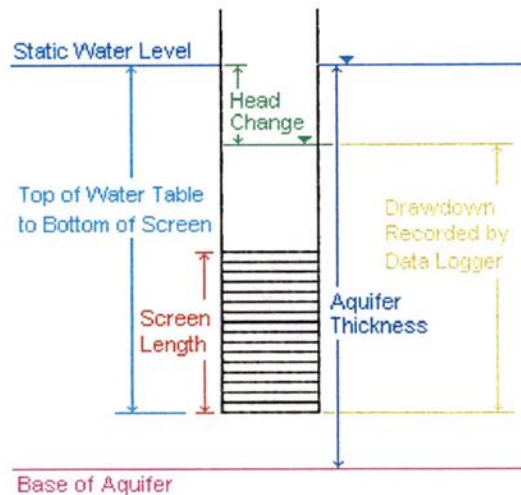
Bouwer and Rice Graphical Method (Full or Partial Penetration)

See Also:

[Excluding Points from Analysis](#)

[Text Boxes](#)

The Bouwer and Rice method applies to the aquifer scenario shown in the figure.



The aquifer can be either fully penetrated or partially penetrated by the screened portion of the well. The Bouwer and Rice method is designed for unconfined aquifer scenario's, however use in confined or leaky aquifer scenario's can give reasonable estimates of hydraulic conductivity.

Value Substitutions:

In some aquifer scenario's, the Bouwer and Rice formula will result in taking the logarithm of a negative number. The following value substitutions will be made to prevent this occurrence.

1. If the distance from the top of the water table to the bottom of the well screen is greater than the aquifer saturated thickness (screen penetrates below the base of the aquifer), the aquifer saturated thickness is used for the distance from the top of the water table to the bottom of the well screen.
2. If the screen length is greater than the distance from the top of the water table to the bottom of the well screen (screen sticks above the water table), then the top of the water table to the bottom of the well screen is used for the screen length.
3. If the screen length is greater than the aquifer saturated thickness, the aquifer saturated thickness is used for the value of screen length.

Hydraulic conductivity is determined with the equation:

Equation 1

$$k = \frac{r_c^2 \ln(R_e/r_w)}{2L_{scr}} \cdot \frac{1}{t} \cdot \ln\left(\frac{H_o}{H_t}\right)$$

Where:

k = aquifer hydraulic conductivity

r_c = radius of the well casing

t = time since slug removal or injection

H_t = head in the well at time t

H_o = initial head change from static water level

R_e = radius of influence of the test

r_w = effective radius of the well (radius of well and gravel pack)

L_{scr} = length of the well screen or open hole

$\ln(R_e/r_w)$ is determined with one of the equations below:

Equation 2

For partially penetrating wells:

$$\ln\left(\frac{R_e}{r_w}\right) = \left[\frac{1.1}{\ln(Z/r_w)} + \frac{A + B \cdot \ln[(D - Z)/r_w]}{(L_{scr}/r_w)} \right]^{-1}$$

Equation 3

For fully penetrating wells:

$$\ln\left(\frac{R_e}{r_w}\right) = \left[\frac{1.1}{\ln(Z/r_w)} + \frac{C}{L_{scr}/r_w} \right]^{-1}$$

Where:

Z = the distance from the water table to the bottom of the well screen or open hole

D = the aquifer thickness

A , B , and C are determined from a graph determined by Bouwer and Rice.

Determining Partial or Full Penetration

Equation 2 is used for partially penetrating wells, and Equation 3 is used for wells that fully penetrate the aquifer.

Super Slug automatically determines if the well is fully or partially penetrating and selects the proper parameters. If the well is greater than 95% fully penetrating, Super Slug will assume full penetration and use Equation 3.

The Graphical Method

Super Slug plots a graph of the log of head ratio (H_t/H_o) on the vertical axis, and the time on the horizontal axis. A straight line is fit through the data points. The slope and the intercept of the line are used to calculate the time for a head ratio of 0.01. The calculated time, the head ratio 0.01, and the other variables described above are used in Equation 1 to determine hydraulic conductivity.

Note that equation 1 uses a head ratio calculated as H_o/H_t . All other methods and graphs (including the Bouwer and Rice graph) use a head ratio calculated as H_t/H_o .

When the graphical method is selected, two pairs of arrow buttons will appear at the bottom of the screen. These buttons are used to control which data points are included in the best fit analysis.

Excluding Data Points

For the end of the test:

- Data adjustments for the end of the test are controlled by the arrow buttons in the lower right corner of the screen.
- The up arrow key and right arrow button increase the number of points to which the line is fit.
- The down arrow key and left arrow button decrease the number of points to which the line is fit.

For the beginning of the test

- Data adjustments for the beginning of the test are controlled by the arrow buttons in the lower left corner of the screen.
- Use shift-up arrow key or the left arrow to increase the number of points to which the line is fit.
- Use shift-down arrow key or the right arrow to decrease the number of points to which the line is fit.

SOUTHERN EARTH SCIENCES, INC.

Client: Baldwin County Solid Waste
 Analysis by: POWERS
 Title: E-1 SLUG IN
 Site Name: Proposed MacBride Landfill Expansion
 Location: Loxley, Alabama
 Test Date: February 8, 2002
 Project Number: 01-282
 Print Time: Fri Mar 22 11:43:47 2002

Analysis by Bouwer and Rice Slug Test

Radius of Well Casing = 1 inches
 Effective Well Radius = 3.44 inches
 Length of Well Screen = 5 feet
 Distance from Top of Water Table to Bottom of Well = 7.1 feet
 Aquifer Thickness = 1000 feet
 Static water level before test = 26.24 decimal feet
 Time to Maximum Displacement = 27 seconds

Radius of Influence of Test = 1.4657 feet

Bouwer and Rice parameter A is 2.05243
 Bouwer and Rice parameter B is 0.326213

RESULTS

Measured Hydraulic Activity feet/day	Adjusted Trans- missivity ft ² /day	Measured Flow Rate Drawdown Into Well feet ³ /day	Head Change decimal feet	Head Ratio	H Cond
27	0	26.11	0.129999		1
8.4111	8411.09	9.71612	0.0599997	0.461539	
8.97286	8972.86	5.18239	0.0299991	0.230764	
12.5563	12556.3	2.41736	0.00999969	0.0769212	
52	25	26.24	0		0
----	----	0			

Geometric Mean of Hydraulic Conductivity
 9.82235 feet/day
 2.99389 meters/day

73.481 gal/day/ft²
0.00346515 cm/second

Arithmetic Mean of Hydraulic Conductivity

9.9801 feet/day
3.04197 meters/day
74.6611 gal/day/ft²
0.0035208 cm/second

Hydraulic Conductivity by Sensitivity Analysis

9.87196 feet/day
3.00901 meters/day
73.8521 gal/day/ft²
0.00348265 cm/second

Arithmetic Mean of Transmissivity

9980.1 ft²/day
927.204 square meters/day
74661.1 gal/day/ft

Geometric Mean of Transmissivity

9822.35 ft²/day
912.549 square meters/day
73481 gal/day/ft

Transmissivity by Sensitivity Analysis

9871.96 ft²/day
917.158 square meters/day
73852.1 gal/day/ft

SOUTHERN EARTH SCIENCES, INC.

Client: Baldwin County Solid Waste
 Analysis by: POWERS
 Title: E-1 SLUG OUT
 Site Name: Proposed MacBride Landfill Expansion
 Location: Loxley, Alabama
 Test Date: February 8, 2002
 Project Number: 01-282
 Print Time: Fri Mar 22 12:21:40 2002

Analysis by Bouwer and Rice Slug Test

Radius of Well Casing 1 inches
 Effective Well Radius 3.44 inches
 Length of Well Screen 5 feet
 Water Table to Well Bottom 7.1 feet
 Aquifer Thickness 1000 feet
 Static water level before test 26.24 decimal feet
 Time to Maximum Displacement 18 seconds
 Radius of Influence of Test 1.4657 feet
 Bouwer and Rice parameter A 2.05243
 Bouwer and Rice parameter B 0.326213

RESULTS

Measured draulic Time ssivity seconds ft ² /day	Adjusted Trans- Time Into Well seconds feet ³ /day	Flow Rate Drawdown decimal feet	Measured Change decimal feet	Ratio feet	Head Conductivity feet/day	Head feet/day	Hy mi
18 4.0024	0	26.62	0.380001	1			-2
27	9	26.45	0.21	0.55263	6.45166	6451.66	26.0844
31 .217	13	26.39	0.150002		0.39474	7.0005	7000.5 20
45 22.97	27 9.05008	26.33	0.0900004		0.236843		5.22297 52
49 21.01	31 7.57947	26.32	0.0800007		0.210528		4.92101 49
225 -4.42155	207	26.31	0.070001		0.184213		
300 -3.15831	282	26.29	0.0500016		0.131583		

Geometric Mean of Hydraulic Conductivity

5.83704 feet/day
1.77915 meters/day
43.6669 gal/day/ft²
0.0020592 cm/second

Arithmetic Mean of Hydraulic Conductivity

5.89903 feet/day
1.79805 meters/day
44.1307 gal/day/ft²
0.00208107 cm/second

Hydraulic Conductivity by Sensitivity Analysis

5.93429 feet/day
1.80879 meters/day
44.3944 gal/day/ft²
0.00209351 cm/second

Arithmetic Mean of Transmissivity

5899.03 ft²/day
548.052 square meters/day
44130.7 gal/day/ft

Geometric Mean of Transmissivity

5837.04 ft²/day
542.292 square meters/day
43666.9 gal/day/ft

Transmissivity by Sensitivity Analysis

5934.28 ft²/day
551.327 square meters/day
44394.4 gal/day/ft

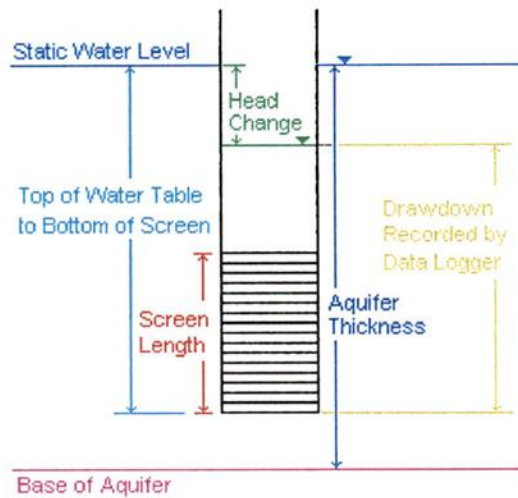
Bouwer and Rice Automatic Parameter Estimation

Auto-Solve | Bouwer and Rice

See Also:

[Excluding Points from Analysis](#)

The Bouwer and Rice method applies to the aquifer scenario shown in the figure.



The aquifer can be either fully penetrated or partially penetrated by the screened portion of the well. The Bouwer and Rice method is designed for unconfined aquifer scenario's, however use in confined or leaky aquifer scenario's can give reasonable estimates of hydraulic conductivity.

Value Substitutions:

In some aquifer scenario's, the Bouwer and Rice formula will result in taking the logarithm of a negative number. The following value substitutions will be made to prevent this occurrence.

1. If the distance from the top of the water table to the bottom of the well screen is greater that the aquifer saturated thickness (screen penetrates below the base of the aquifer), the aquifer saturated thickness is used for the distance from the top of the water table to the bottom of the well screen.
2. If the screen length is greater that the distance from the top of the water table to the bottom of the well screen (screen sticks above the water table), then the top of the water table to the bottom of the well screen is used for the screen length.
3. If the screen length is greater than the aquifer saturated thickness, the aquifer saturated thickness is used for the value of screen length.

Hydraulic conductivity is determined with Equation 1 below:

Equation 1

$$k = \frac{r_c^2 \ln(R_e/r_w)}{2L_{scr}} \cdot \frac{1}{t} \cdot \ln\left(\frac{H_o}{H_t}\right)$$

Where:

k = aquifer hydraulic conductivity

r_c = radius of the well casing

t = time since slug removal or injection

H_t = head in the well at time t

H_o = initial head change from static water level

R_e = radius of influence of the test

r_w = effective radius of the well (radius of well and gravel pack)

L_{scr} = length of the well screen or open hole

Using either Equation 2 or 3 below, and the A, B, or C values for the partial penetration scenario, radius of influence is calculated for Equation 1.

Equation 2

For partially penetrating wells:

$$\ln\left(\frac{R_e}{r_w}\right) = \left[\frac{1.1}{\ln(Z/r_w)} + \frac{A + B \cdot \ln[(D - Z)/r_w]}{(L_{scr}/r_w)} \right]^{-1}$$

Equation 3

For fully penetrating wells:

$$\ln\left(\frac{R_e}{r_w}\right) = \left[\frac{1.1}{\ln(Z/r_w)} + \frac{C}{L_{scr}/r_w} \right]^{-1}$$

Where:

Z = the distance from the water table to the bottom of the well screen or open hole

D = the aquifer thickness

A , B , and C are determined from a graph determined by Bouwer and Rice.

Partial or Full Penetration?

Super Slug automatically determines A , B , and C based on the amount of penetration of the aquifer by the well. Super Slug automatically determines if the well is fully or partially penetrating and selects the proper parameters. If the well is greater than 95% fully penetrating, Super Slug will assume full penetration and use Equation 3.

For the automatic parameter estimation, Super Slug determines hydraulic conductivity for each pair of consecutive time and drawdown values (except for $t = 0$). The output file created for the Bouwer and Rice method will include the hydraulic conductivity of each data set. Both the arithmetic mean and geometric mean of all hydraulic conductivities calculated.

Sensitivity Analysis:

In addition to the geometric and arithmetic means described above, Super Slug also uses a sensitivity analysis to solve the Bouwer and Rice method. This method is described by Kemblowski and Klein (1988). In some test data sets, a divide-by-zero error occurred in the calculations. In these situations, no sensitivity analysis can be performed.

Estimating Volume Rate of Flow into the Well

Bouwer (1989) indicated that the rate of flow into the well during the slug test could be estimated with the formula:

$$Q = 2\pi K L_e \left[\frac{y}{\ln(R_e/r_w)} \right]$$

Where:

Q = Volume rate of flow into the well

K = Hydraulic conductivity of aquifer around the well

Le = length of screened section of well

y = vertical difference between water level inside of well and static water table outside of well

Re = effective radial distance over which y is dissipated

rw = radial distance of undisturbed portion of the aquifer from centerline

For use in Super Slug, K, Re, are calculated by the Bouwer and Rice automatic solution. Other values are input provided by the user. Q is calculated for each time measurement using the K and Re values of that time measurement.

Excluding Unwanted Data

Unwanted data from the beginning and the end of the test can be excluded from the analysis. Select one of the graphical analysis methods and exclude any undesired data. Then run the automatic test.

Output:

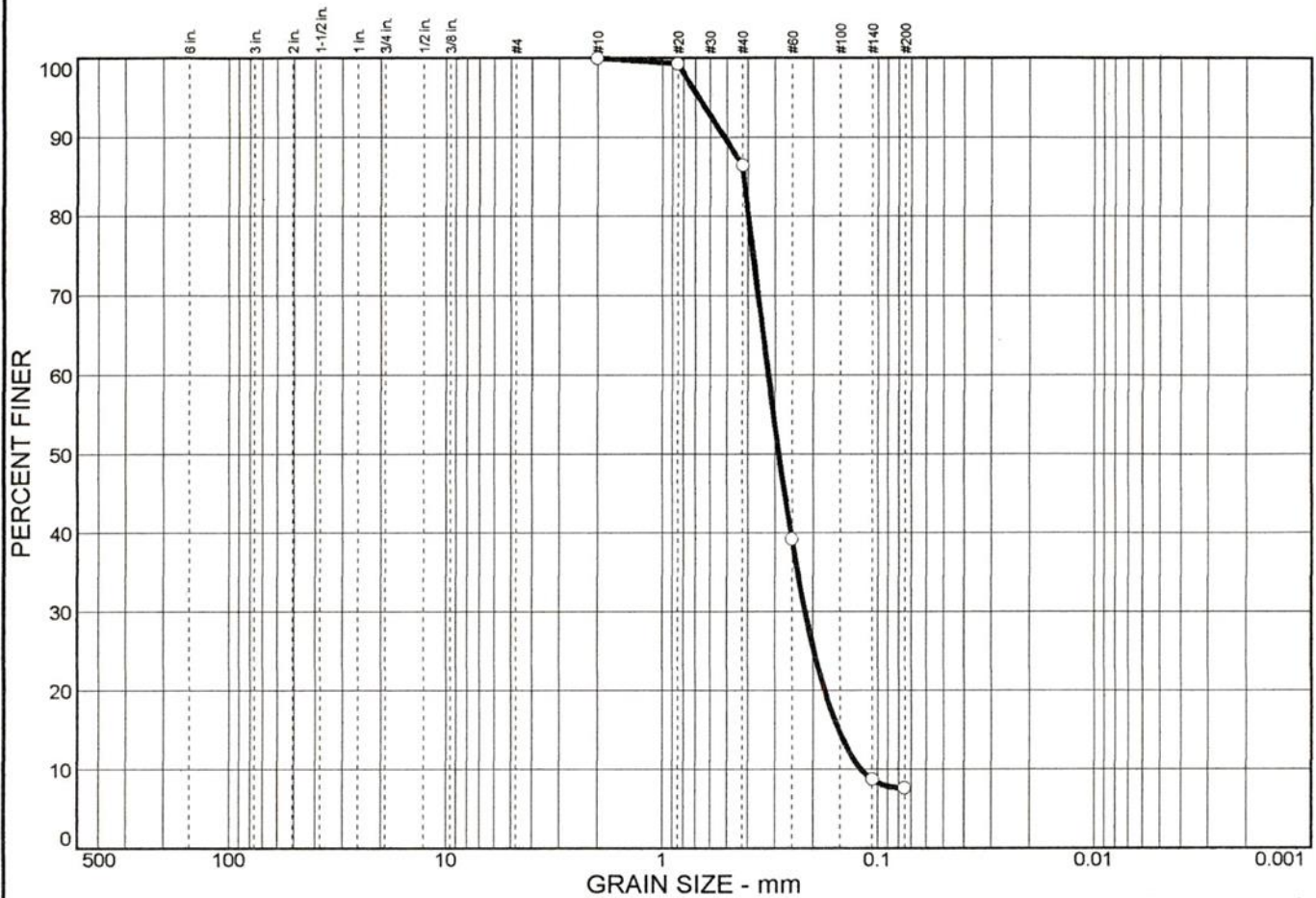
Calculation results are displayed on-screen and can be sent to an output file. Arithmetic mean and geometric mean of hydraulic conductivity are summarized in a variety of units.

If aquifer thickness has been entered by the user, transmissivity will also be estimated.

APPENDIX D

SOILS LABORATORY RESULTS

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	92.4	7.6	7.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.3		
#40	86.5		
#60	39.2		
#140	8.7		
#200	7.6		

Soil Description

ORANGE SILTY SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.419 D₆₀= 0.322 D₅₀= 0.287
D₃₀= 0.217 D₁₅= 0.152 D₁₀= 0.119
C_u= 2.70 C_c= 1.22

Classification

USCS= AASHTO=

Remarks

* (no specification provided)

Sample No.: 3-27
 Location: MB-04 B-6 S-7

Source of Sample:

Date: 3-27-02
 Elev./Depth: 35.0-36.5

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 EARTH
 SCIENCES**

Client:
 Project: MACBRIDE LANDFILL EXPANSION

Project No: 01-282

Plate

HYDROGEOLOGICAL EVALUATION

MCBRIDE CONSTRUCTION AND DEMOLITION LANDFILL EXPANSION

PREPARED FOR


HUTCHINSON, MOORE & RAUCH, LLC.
DAPHNE, ALABAMA

JUNE 2007

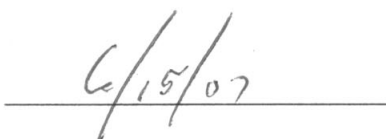
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762 Downtowner Loop, West
Mobile, AL 36609
(251) 344-7711

CERTIFICATION PAGE

I certify under penalty of law that I am an Alabama Registered Professional Geologist experienced in hydrogeologic investigations. The *Hydrogeological Evaluation dated June 15, 2007 for McBride Landfill* was performed by a Geologist experienced in hydrogeologic investigations. The information submitted herein, to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information.


Jonathan D. Culpepper
Staff Geologist


Eric A. Guarino, P.G.
Registered Professional Geologist



Date

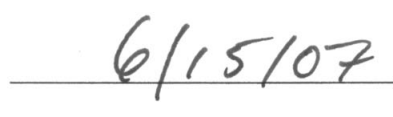

Date



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- II. LOCAL GEOLOGY
- III. SITE TOPOGRAPHY
- IV. SOIL DESCRIPTIONS AND SOIL BORING CROSS SECTIONS
- V. GROUNDWATER ASSESSMENT
- VI. CONCLUSIONS

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- FIGURE 2 SITE PLAN
- FIGURE 3 REGIONAL GEOLOGIC MAP
- FIGURE 4A CROSS SECTION MAP A-A' & B-B'
- FIGURE 4B CROSS SECTION A-A'
- FIGURE 4C CROSS SECTION B-B'
- FIGURE 5 GROUNDWATER ELEVATION MAP (2/5/2007)
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APPENDIX D SLUG TEST DATA AND RESULTS

APPENDIX E SOIL PROPERTIES REPORT

I. FIELD INVESTIGATION

A. The existing McBride Landfill is proposing to expand its disposal area as shown on **Figure 1**. This investigation is performed to satisfy the requirements of ADEM chapter 335-13-4.11 through 335-13-4.14 as required by the Alabama Department of Environmental Management.

The (3) three piezometers (PZ-1 through PZ-3) were installed by Southern Earth Sciences, Inc. (SESI) on January 25 & 26, 2007.

All 3 (three) of the borings on the proposed expansion property were advanced utilizing direct-push technology (Geoprobe®). Borings were advanced and sampled to depths ranging from 35 to 40 feet below ground surface (bgs). The borings were converted to 1.0" piezometers complete with 5 feet of screen.

Soil samples from each of the borings were obtained at regular 5-foot intervals with a dual tube system and disposable Macro-Core® Dual Tube RS60 LB liners. Soil descriptions were made in the field by our geologist and are presented graphically on the Soil Boring Logs (**Appendix C**). In addition, grain size analyses were performed to confirm the visual classification along with establishing porosity for the gradient-velocity calculation.

B. Monitor Well Locations: Two (2) borings were advanced with hollow stem augers. At 2-foot intervals, the drilling rods were removed and soil samples obtained with a standard 1.4-inch I.D., 2 inch O.D. split tube sampler. Both borings were converted into 2" diameter temporary monitor wells labeled MW-1 and MW-2 to aid in the acquisition of groundwater properties through slug testing.

II. LOCAL GEOLOGY

Based on the Geological Survey of Alabama State Geologic Map (1988), sediment exposed at the surface for the proposed landfill site is comprised entirely of Citronelle Formation deposits (**Figure 3**). The Citronelle Formation was deposited during the Pliocene to early Pleistocene.

Regionally, the Citronelle Formation consists of moderate reddish brown deeply weathered fine to very coarse quartz sand, quartz, and chert pebbles, and lenticular beds of varicolored

clay and clayey gravel (Geological Survey of Alabama, 1988). Limonite pebbles and limonite lenses occur locally in weathered exposures. The Citronelle Formation ranges from 0 to 200 feet in thickness and generally dips 0.05 to 0.1 degrees (5 to 12 feet per mile) to the southwest.

The Miocene Series undifferentiated underlies the Citronelle Formation in the area of the proposed landfill.

Interpretation of the state geologic map places the top of the Miocene Series (the contact of the Citronelle Formation and the Miocene Series) in the area of the proposed landfill at an elevation of approximately 100 feet above mean sea level. Ground elevations at the site range from approximately 110 to 140 feet above mean sea level.

The state geologic map does not distinguish informal or formal Miocene-aged stratigraphic units, which have been identified in the subsurface in the southwest Alabama. Informally, the upper to middle Miocene sediments exposed at the surface in southwest Alabama are referred to as the Miocene coarse clastics. Beneath this sequence is the upper to middle Miocene Pensacola Clay (Marsh, 1966), which may be further divided into the Pensacola Clay upper member, the intervening Escambia Sand Member, and the underlying Pensacola Clay lower member. Underlying the Pensacola Clay in southwestern Alabama are Upper Oligocene and Lower Miocene limestones of the Tampa Formation and Chickasawhay Limestone undifferentiated.

According to the Geological Survey of Alabama (1988), sediment of the Miocene Series undifferentiated consists of laminated to massive marine and estuarine deposits of sedimentary origin. The deposits are described as gray, orange, and red very fine to coarse-grained sand, red ferruginous sandstone, and gray, olive, blue, and green sandy silty clay.

A thickness of 1380 feet was determined (Raymond and Copeland, 1987) for the combined Miocene coarse clastics and Pensacola Clay in an oil and gas test well located near Lillian, in east Baldwin County. A combined thickness of 2716 feet was determined for the same interval from a location at the mouth of Mobile Bay. The outcrop limit of the Miocene Series (thickness equals 0 ft) extends as far north in the state as Grove Hill in Clarke County, some 80 miles due north of the proposed landfill. Miocene strata generally dip 0.1 to 0.5 degrees (10 to 45 feet per mile) toward the southwest.

The Oligocene Series undifferentiated is situated directly beneath the Miocene. Lithologies within the Oligocene Series include clay, calcareous sand, sand, and limestone.

III. SITE TOPOGRAPHY

Topographic elevations as surveyed by HMR, LLC for the proposed landfill expansion range from 145 feet above mean sea level in the southwest corner of the site to 110 feet in the interior portions of the site. Topography slopes east and west toward an alluvial valley oriented north-south, which runs the length of the site.

IV. SOIL DESCRIPTIONS AND SOIL BORING CROSS SECTIONS

Stratigraphic units identified from the soil boring samples are described below in descending stratigraphic order (**Appendix C**).

Unit 1 is an organically rich (erosional surface) yellow-pink-red silty sand with an occasional clay bed dispersed throughout. The clay may be plastic or non-plastic in consistency. Unit 1 was encountered for the current investigation at borings PZ-1 from ground surface to an approximate depth of 9 feet and PZ-2 to a depth of 5 feet (**Figure 4**).

Unit 2 is a loose to very dense pale orange, white to tan, pale red, orange, and pale yellow silty sand and sandy silt. Thin clay lenses or pockets are encountered in the unit. Unit 2 appears to grade upward into the clay and silty clay of Unit 1. Unit 2 is identified in borings PZ-1 (9 to 20 feet bgs), PZ-2 (5 to 20 feet bgs), and PZ-3 (0 to 15 feet bgs).

Unit 3 is a loose to very dense tan to white, pale orange, pale red, and pale yellow sand. This unit is encountered below a depth of 23 feet in boring PZ-2, 20 feet in boring PZ-1, and below a depth of 15 feet in boring PZ-3 (**Figure 5**). This unit displays characteristics of a fining-upward nature, also. Unit 3 is capped by a clayey sand to sandy clay. Several thin (1 to 2.5") clay lenses were logged within the Unit 3 stratum.

V. GROUNDWATER ASSESSMENT

Groundwater encountered in the monitoring wells at the site is part of the regional Pliocene-Miocene aquifer (Mooty, 1988), which is comprised of Citronelle Formation and the undifferentiated deposits of the Miocene Series. Mooty (1988) states that the water-bearing sand and gravel beds of the aquifer are hydraulically connected to land surface; therefore, the aquifer is unconfined. However, the aquifer in deeper portions of the Miocene Series responds to short-term pumpage as a confined aquifer due to the presence of semi-confining clayey sediment.

For estimating purposes, the total thickness of the Pliocene-Miocene aquifer at the proposed

landfill site is assumed to be 1000 feet.

Piezometer ground and top-of-casing elevations, as well as groundwater levels and elevations measured to date, are presented in **Table 1**. Ground and top-of-casing elevations were surveyed by HMR, LLC, Engineers and Surveyors.

Groundwater Depths and Elevations: For the three piezometers and two monitor wells installed on the proposed landfill property, depths to groundwater below ground surface range from 11.23 feet at piezometer MW-2 (2/5/2007) to 35.13 feet at piezometer PZ-2 (4/30/2007) for the six measurements made on and since February 5, 2007. Measured groundwater elevations at the piezometer locations on the proposed landfill property for this period range from 98.32 feet (PZ-1) to 109.10 feet (PZ-3) above mean sea level.

Groundwater levels were measured twice each during the months of February, March, and April 2007 with an intervening period of at least 12 days between measurements.

Groundwater elevation maps for the six measurements made on and since February 5, 2007 are presented in Figures 5 through 10 of this report. These maps depict the direction of groundwater flow as toward the south/southwest.

Groundwater Flow Direction and Horizontal Hydraulic Gradient: The horizontal hydraulic gradient as determined for the April 30, 2007 groundwater elevation map between PZ-3 on the northwest corner of the proposed landfill and PZ-1 on the southeast boundary of the site is 0.0154 ft/ft toward the south/southwest (**Figure 11**).

A. Description of Slug Tests: In order to provide an estimate of horizontal hydraulic conductivity, slug tests were conducted on monitoring wells MW-1 and MW-2. The slug tests at this site were conducted electronically to determine the hydraulic conductivity. The slug test data is included in **Appendix F**.

The slug test procedure involved several steps. A static water level was determined with the use of a pressure transducer. A solid aluminum slug of known volume (0.016 cubic feet) was introduced into the well to displace the water above static water level (slug in). Groundwater levels were then measured at one-second intervals through the use of a computer program. All measurements were taken from a reference point on top of the well. Measurements were recorded until the water level equilibrated.

After reaching equilibrium, the slug was removed (slug out) and water levels were measured and recorded at discrete time intervals until the initial static level or equilibrium was again

obtained.

A computer program utilizing the Bouwer and Rice (1989) method of analysis was used in computing the hydraulic conductivity values. To calculate the site average hydraulic conductivity (K), the calculated arithmetic mean hydraulic conductivities were averaged together resulting in 0.0092 cm/sec or 26.11 ft/day.

The Permeability Test (Constant Head-Rigid Wall) in **Appendix E** confirmed the conductivities (K) accuracy. The averaged conductivity generated through laboratory analyses for MW-1 and MW-2 is 0.01516 cm/s or 42.97 ft/day, which is a 16.86 ft/day difference compared to the field data.

B. Flow Rate: The groundwater flow rate may be determined by the equation for seepage velocity, or average linear velocity, V_x :

$$V_x = \frac{K}{n_e} \frac{dh}{dl}$$

Using an assumed soil particle density of 2.65 g/cm³, the effective porosity assumed equal to total porosity (ratio between total void space and bulk volume of the rock), the groundwater flow rate is:

Water table	dh/dl	K	Groundwater Flow Rate
Shallow	0.0154 ft/ft	26.11 ft/day	1.021 ft/day

Assuming an effective porosity of 0.394, utilizing the average value of an estimated hydraulic conductivity of 26.11 ft/day, and using an average of previously calculated horizontal hydraulic gradient of 0.0154 ft/ft, the estimated groundwater flow rate is approximately 1.021 ft/day.

C. Storativity: Storativity is usually taken to be equal to the specific yield of an unconfined aquifer (Fetter, 1994; p. 118). According to Driscoll (1986), specific yields of

unconfined aquifers range from 0.01 to 0.30 (1% to 30%). Average specific yield values are listed according to sediment type by Fetter (1994, p. 91):

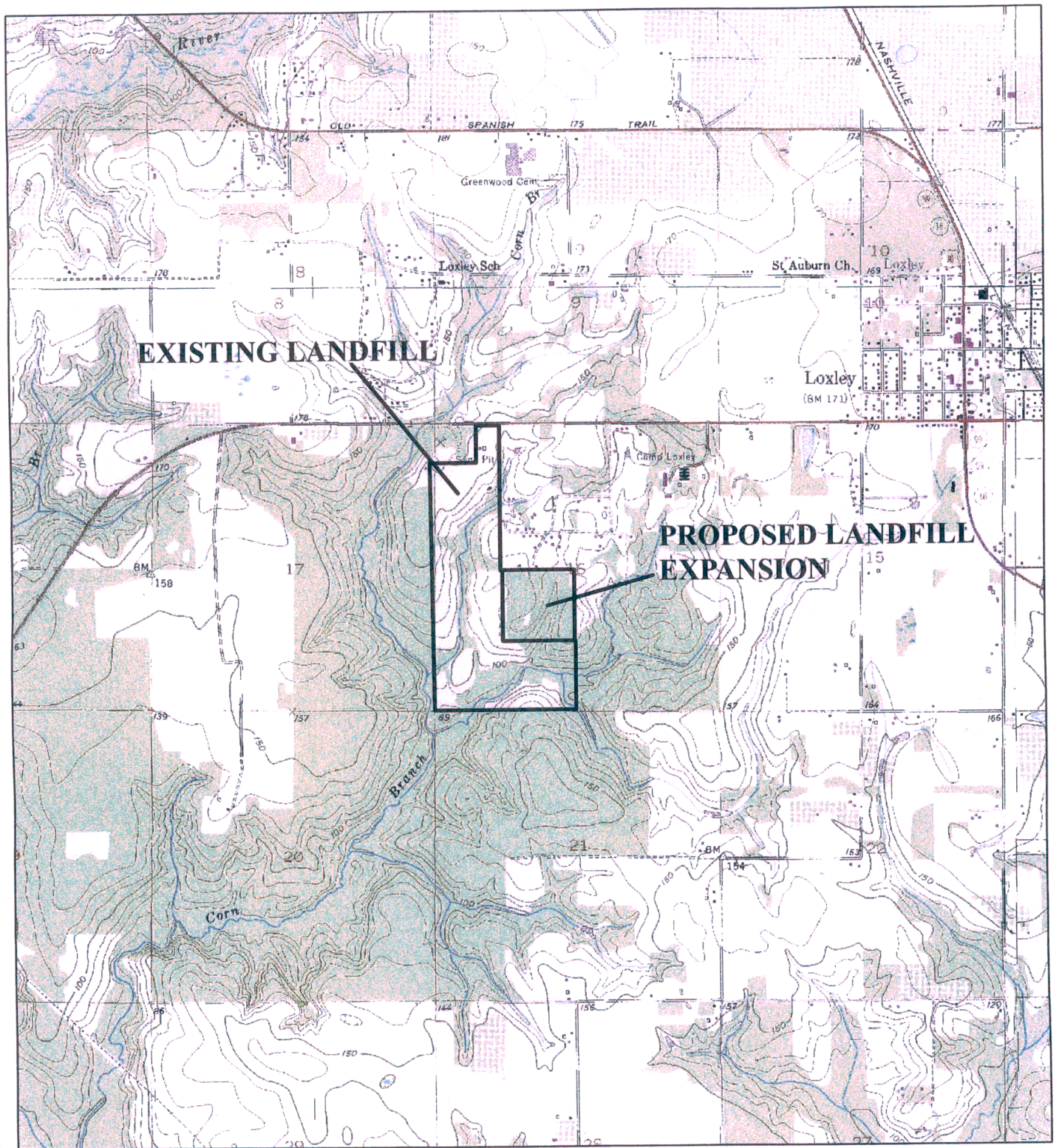
<u>Material</u>	<u>Average Specific Yield, %</u>
Silt	18
Fine Sand	21
Medium Sand	26
Coarse Sand	27

Storativity in the initial saturated stratum at the site is estimated at about 26.5 percent. A Soil Physical Properties Report is included as **Appendix G**.

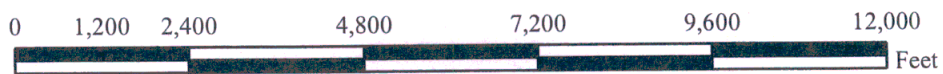
VI. CONCLUSIONS

Groundwater flow direction is toward the south/southwest with an estimated hydraulic gradient of 0.0154 foot per foot for the April 30, 2007 gauging event. The highest groundwater elevation measured throughout February, March, and April was located in PZ-3 at 109.10 feet above mean sea-level (amsl) with a ground elevation of 136.93 feet amsl. ADEM Admin. Code R. 335-13-4-.11 (requires the bottom elevation of the liner to be a minimum of five feet above the highest measured groundwater level) will allow the bottom elevation of the liner to be set at a minimum elevation of approximately 115.0 feet amsl based on the provided survey information.

APPENDIX A
FIGURES



1:30,000



(TOPO MAP PROVIDED BY THE NRCS; TOPOGRAPHIC MOSAIC 7.5 MIN SERIES)

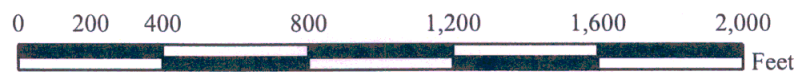
HMR LLC.
MCBRIDE C&D LANDFILL
BALDWIN COUNTY, ALABAMA



FIGURE 1
TOPOGRAPHIC MAP
SESI JOB No.: 07-035



1:6,000



(AERIAL PHOTOGRAPH SUPPLIED BY THE U.S. DEPARTMENT OF AGRICULTURE; BALDWIN COUNTY, ALABAMA MOSAIC-2006)





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BALDWIN COUNTY, ALABAMA

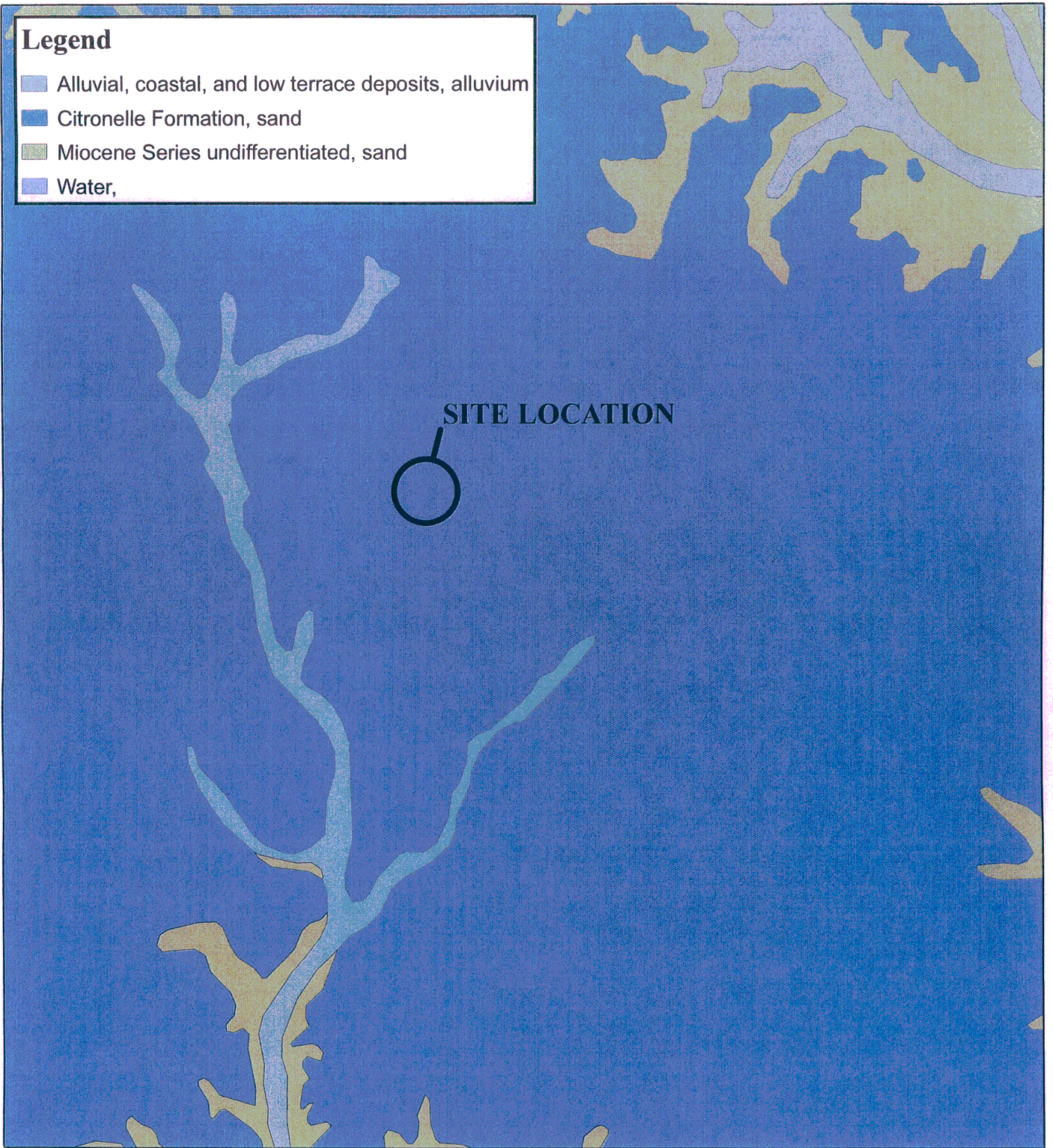
SOUTHERN EARTH SCIENCES, inc.

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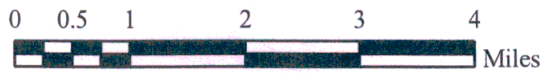
FIGURE 2
SITE PLAN
SESI JOB No.: 07-035

Legend

-  Alluvial, coastal, and low terrace deposits, alluvium
-  Citronelle Formation, sand
-  Miocene Series undifferentiated, sand
-  Water,



1:100,000

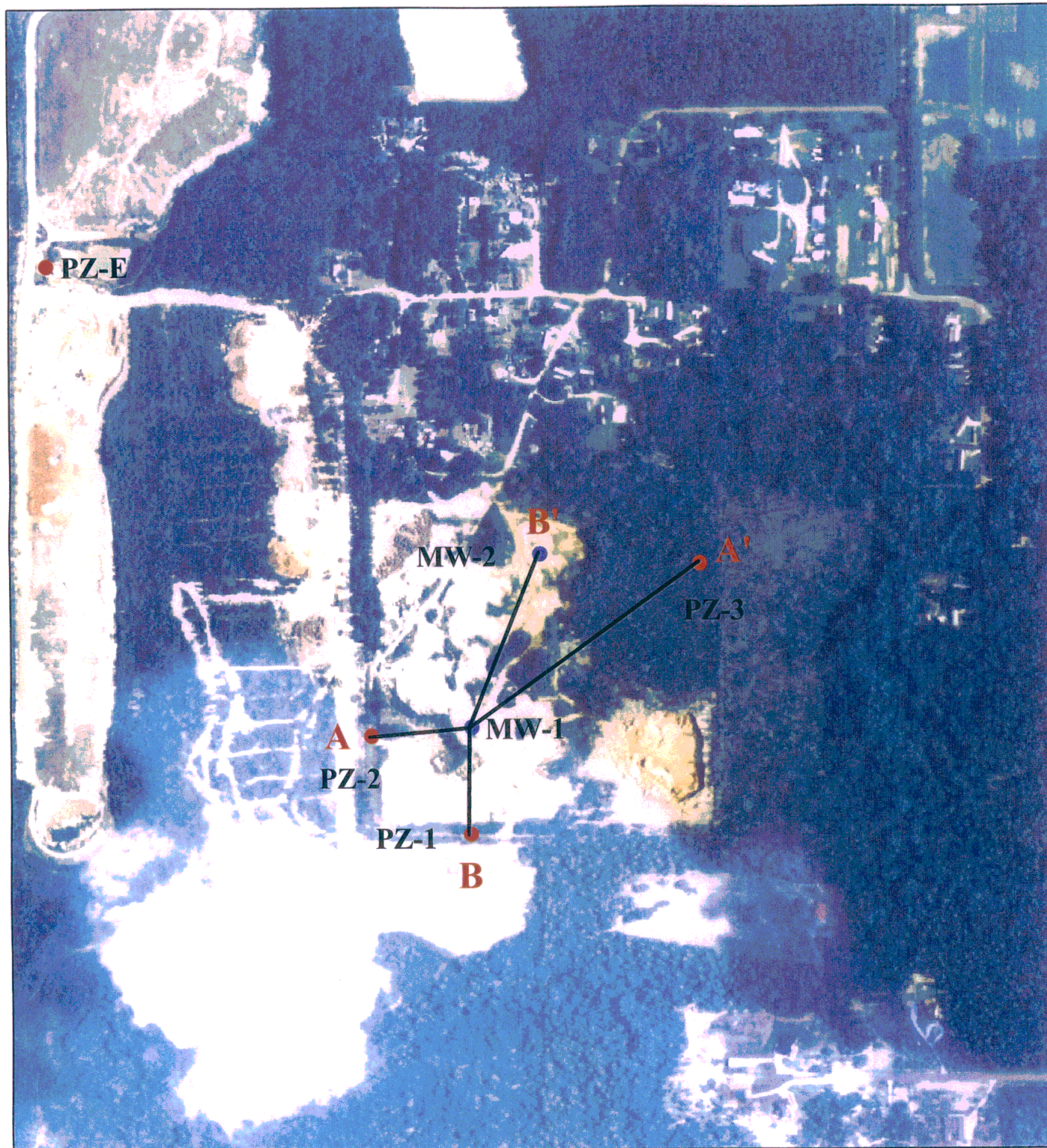


(Digital Geologic Map of Alabama Polygons)

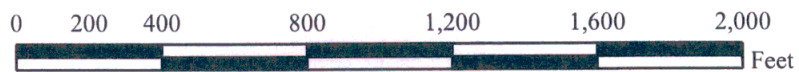
**HMR LLC.
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BALDWIN COUNTY, ALABAMA**



**FIGURE 3
REGIONAL GEOLOGIC MAP
SESI JOB No.: 07-035**



1:6,000

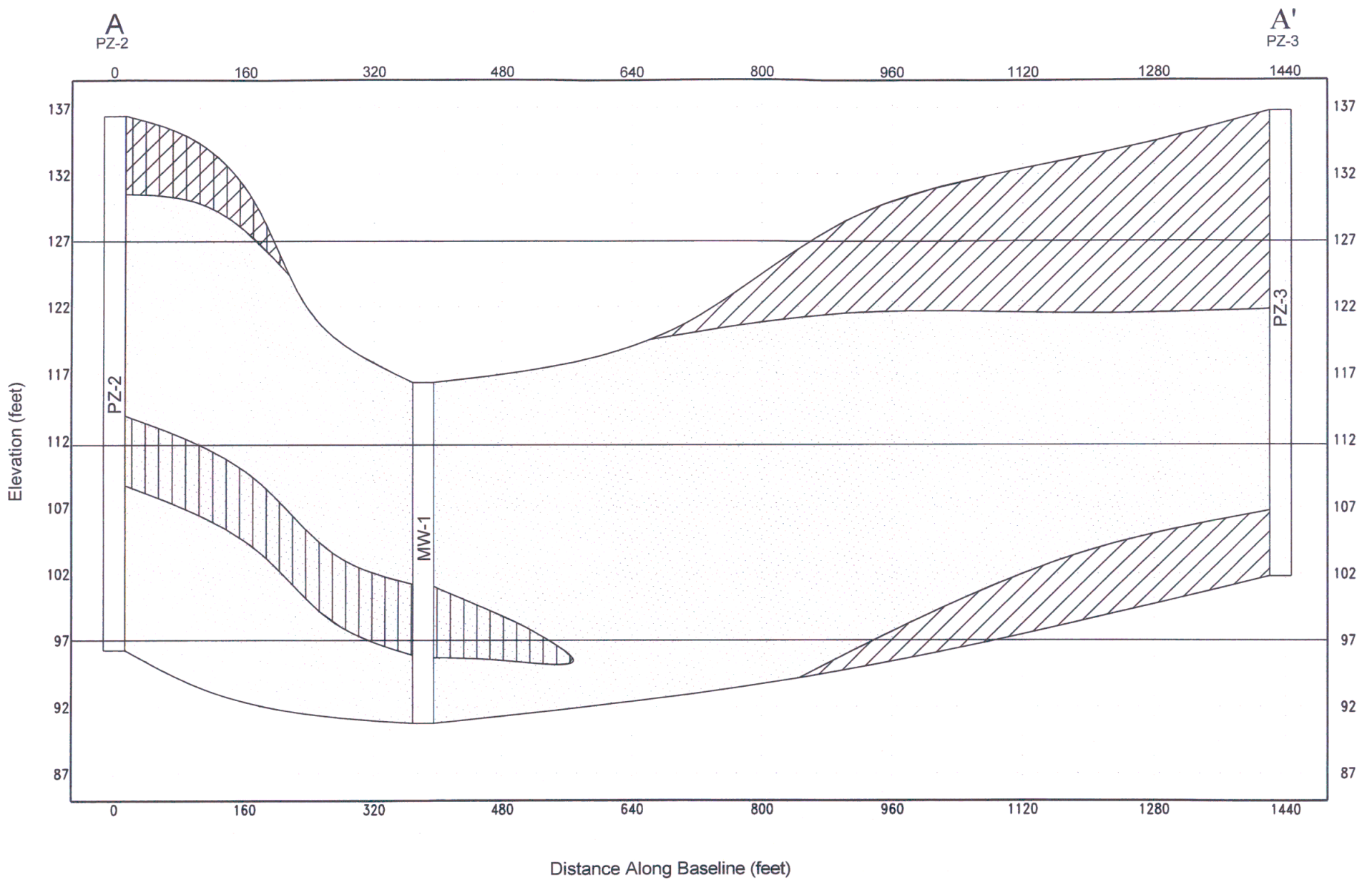


(AERIAL PHOTOGRAPH SUPPLIED BY THE U.S. DEPARTMENT OF AGRICULTURE; BALDWIN COUNTY, ALABAMA MOSAIC-2006)

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FIGURE 4A
CROSS SECTION MAP
SESI JOB No.: 07-035



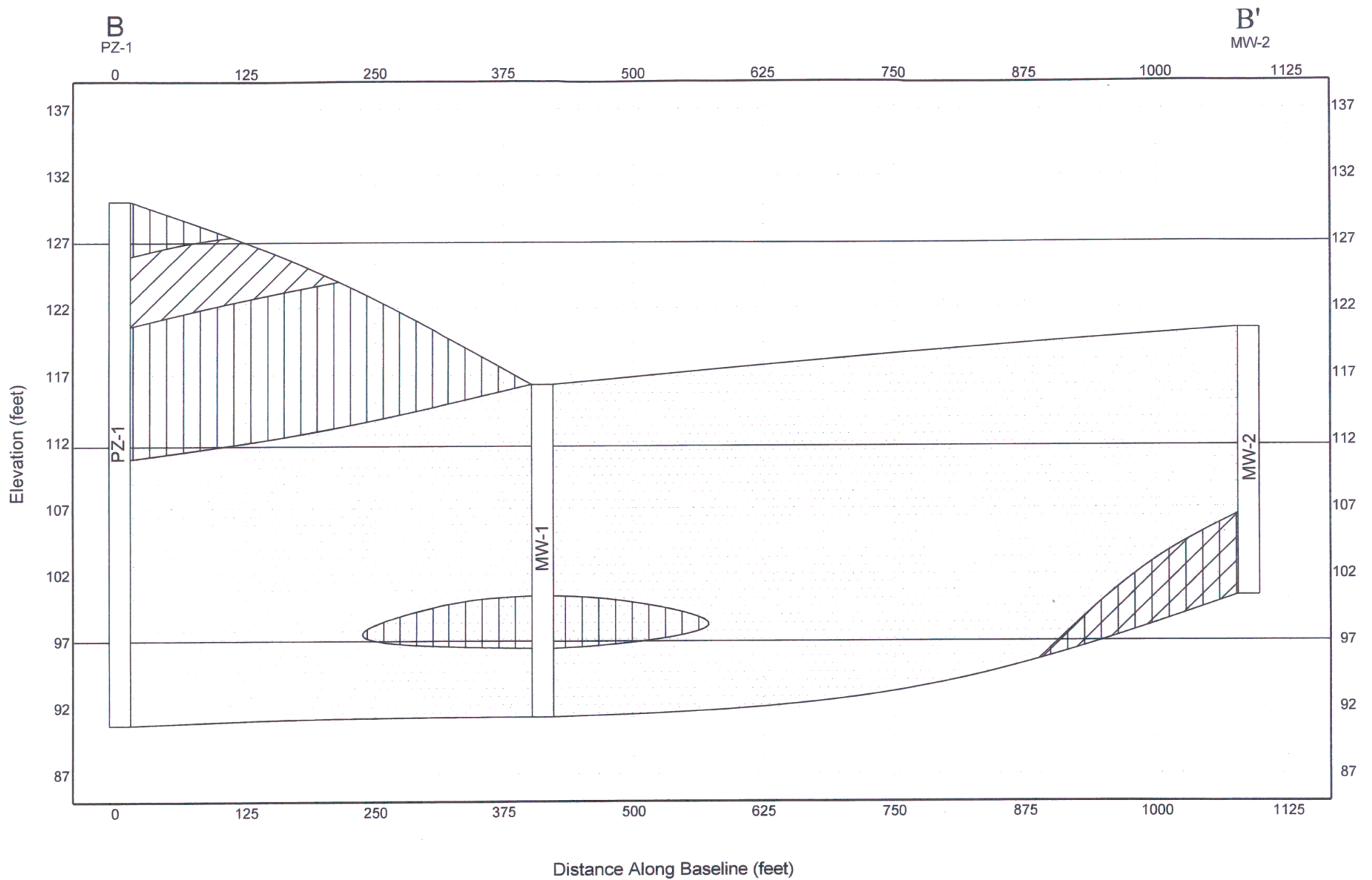
SOILS LEGEND	
	CLAY
	SILTY CLAY
	SILT
	SANDY SILT
	SAND

HMR LLC.
 MCBRIDE C&D LANDFILL
 BALDWIN COUNTY, ALABAMA






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FIGURE 4-B
A-A' STRATIGRAPHIC
CROSS-SECTION
 SESI JOB #: 07-035



SOILS LEGEND

	CLAY		SANDY SILT
	SILTY CLAY		SAND
	SILT		

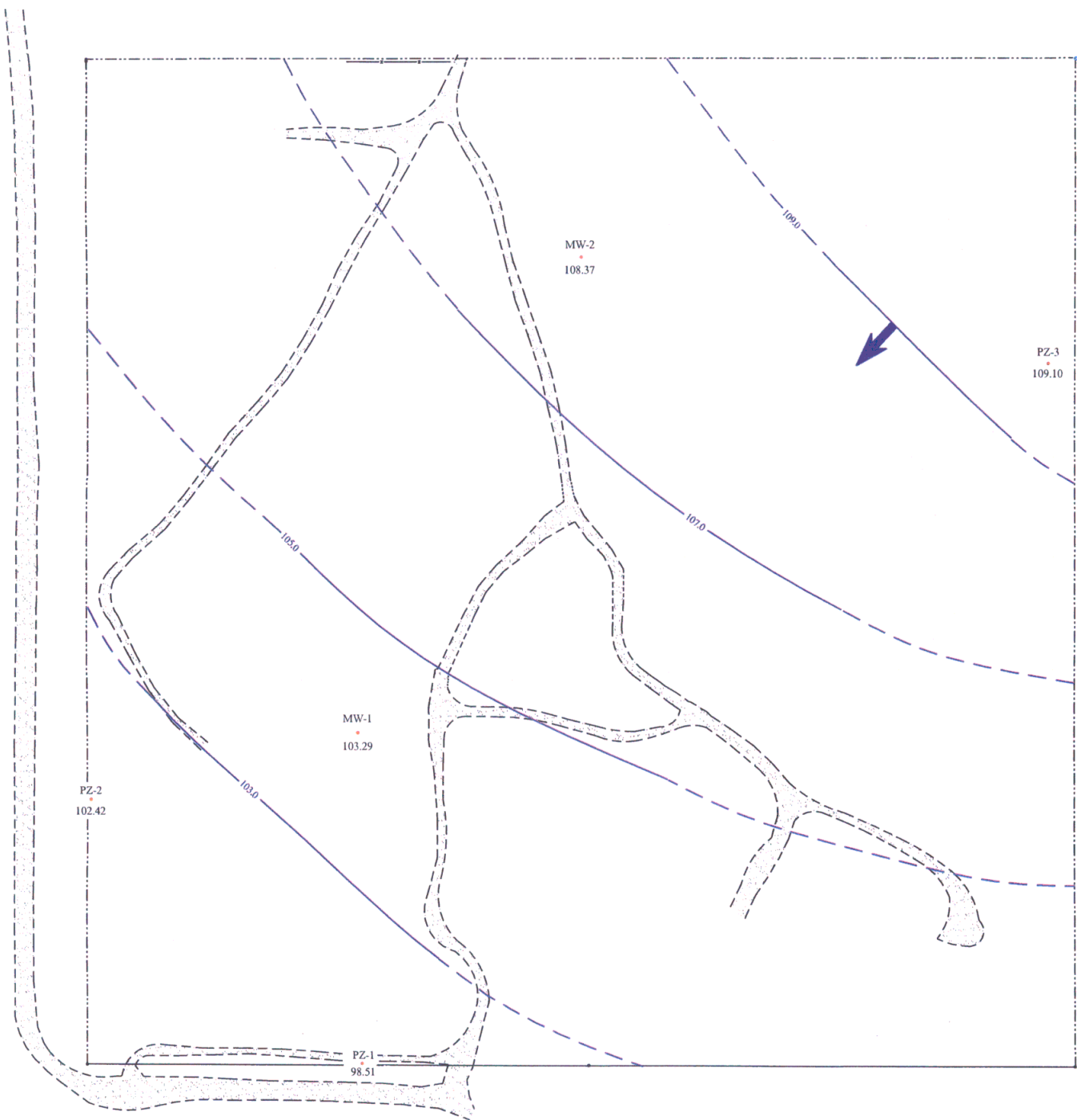
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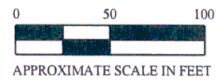
**FIGURE 4-C
B-B' STRATIGRAPHIC
CROSS-SECTION
SESI JOB #: 07-035**



LEGEND

- MONITOR WELL LOCATION
- COMPACTED DIRT ROAD
- ELECTRIC FENCE
- BARBED WIRE FENCE
- GROUNDWATER FLOW DIRECTION

*MODIFIED AFTER HUTCHINSON, MOORE & RAUCH, LLC., 2007.



APPROXIMATE SCALE IN FEET

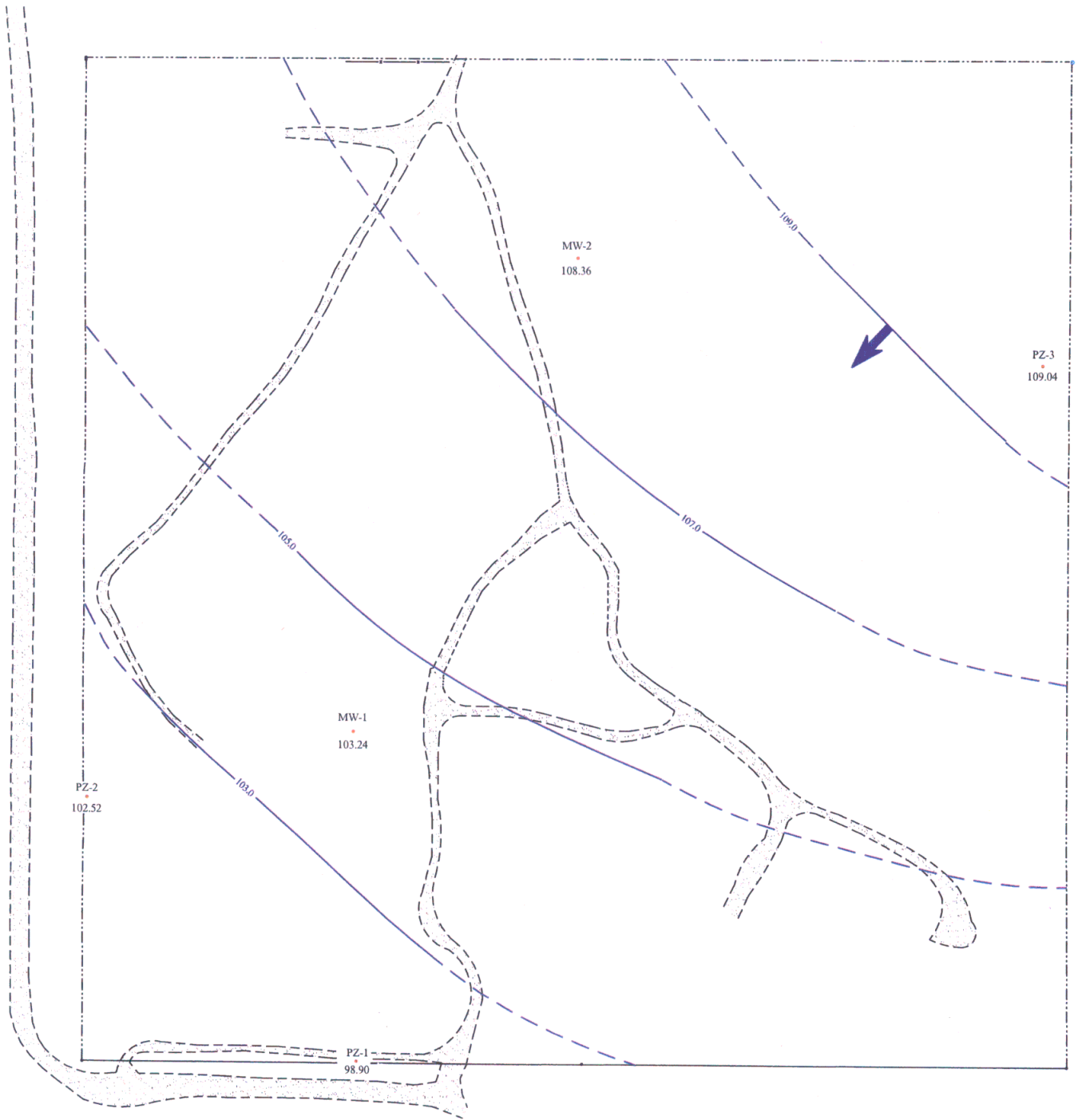
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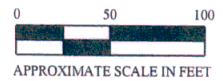
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FIGURE 5
GROUNDWATER ELEVATION
FEBRUARY 5, 2007
SESI JOB #: 07-035



LEGEND	
	MONITOR WELL LOCATION
	COMPACTED DIRT ROAD
	ELECTRIC FENCE
	BARBED WIRE FENCE
	GROUNDWATER FLOW DIRECTION

*MODIFIED AFTER HUTCHINSON, MOORE & RAUCH, LLC., 2007.

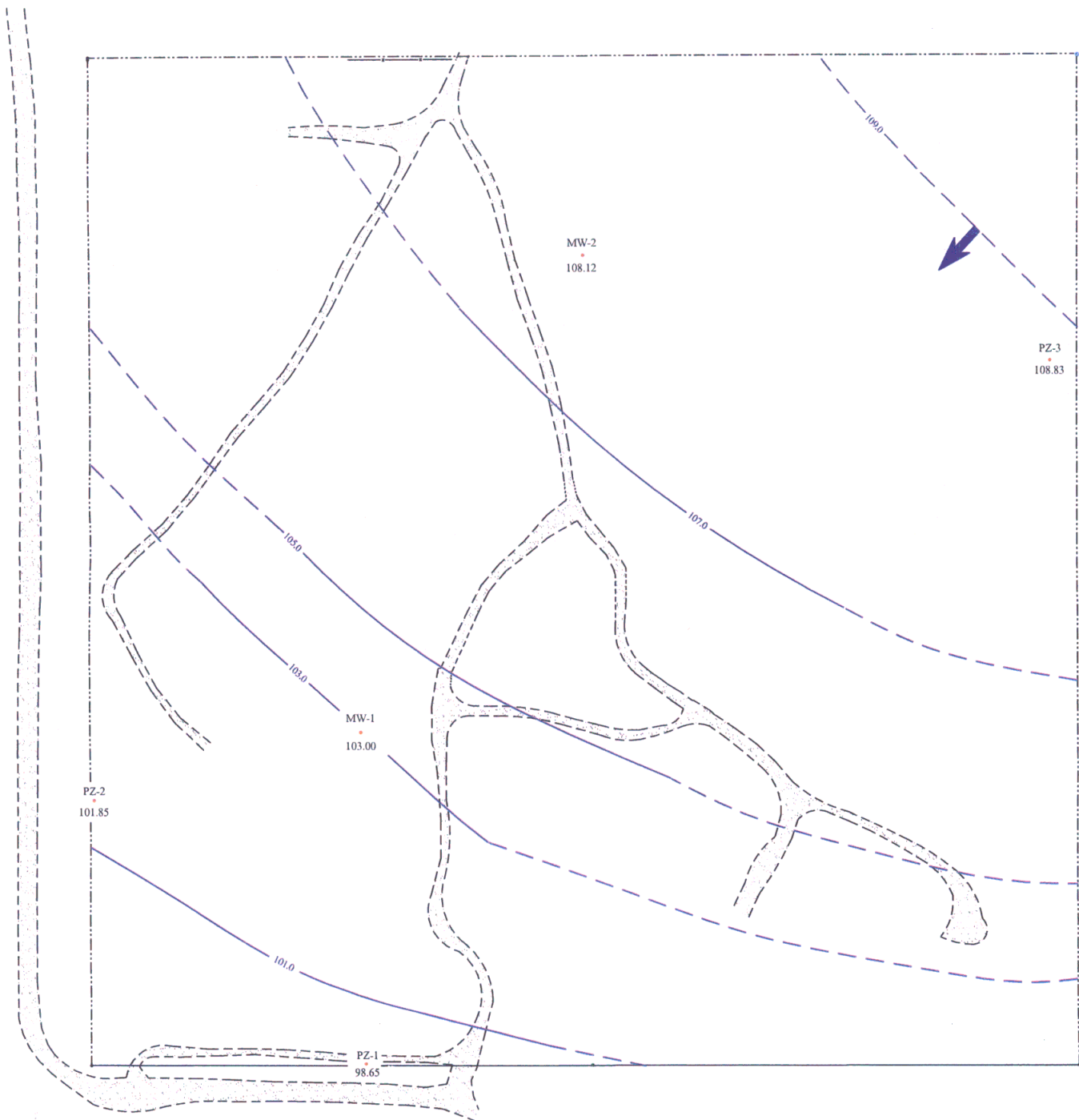


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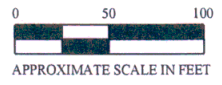
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FIGURE 6
GROUNDWATER ELEVATION
FEBRUARY 19, 2007
SESI JOB #: 07-035



- LEGEND**
- MONITOR WELL LOCATION
 - COMPACTED DIRT ROAD
 - ELECTRIC FENCE
 - BARBED WIRE FENCE
 - GROUNDWATER FLOW DIRECTION

*MODIFIED AFTER HUTCHINSON, MOORE & RAUCH, LLC., 2007.

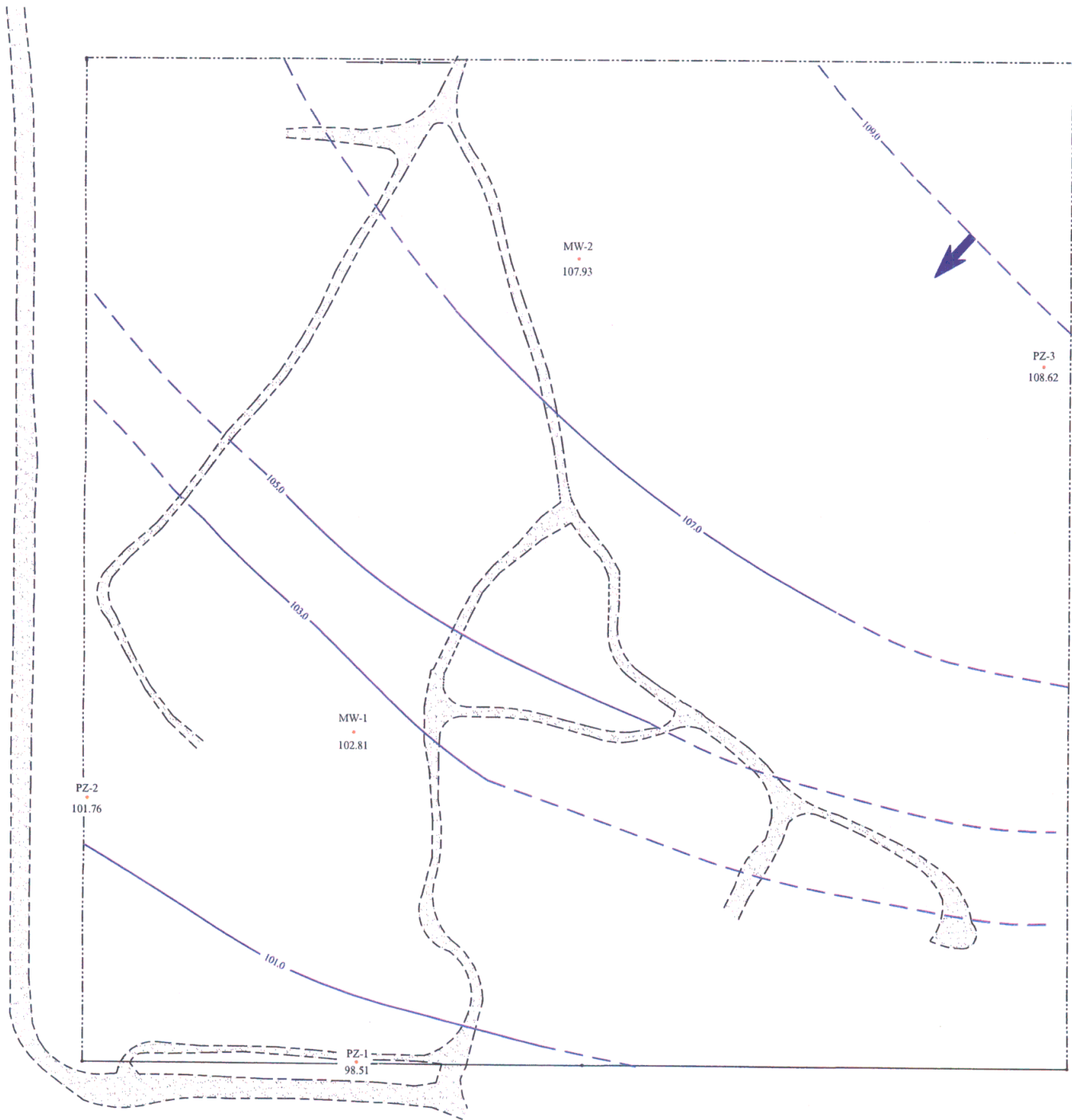


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FIGURE 7
GROUNDWATER ELEVATION
MARCH 12, 2007
SESI JOB #: 07-035



LEGEND

- MONITOR WELL LOCATION
- - - - - COMPACTED DIRT ROAD
- ELECTRIC FENCE
- · - · - BARBED WIRE FENCE
- GROUNDWATER FLOW DIRECTION

*MODIFIED AFTER HUTCHINSON, MOORE & RAUCH, LLC., 2007.

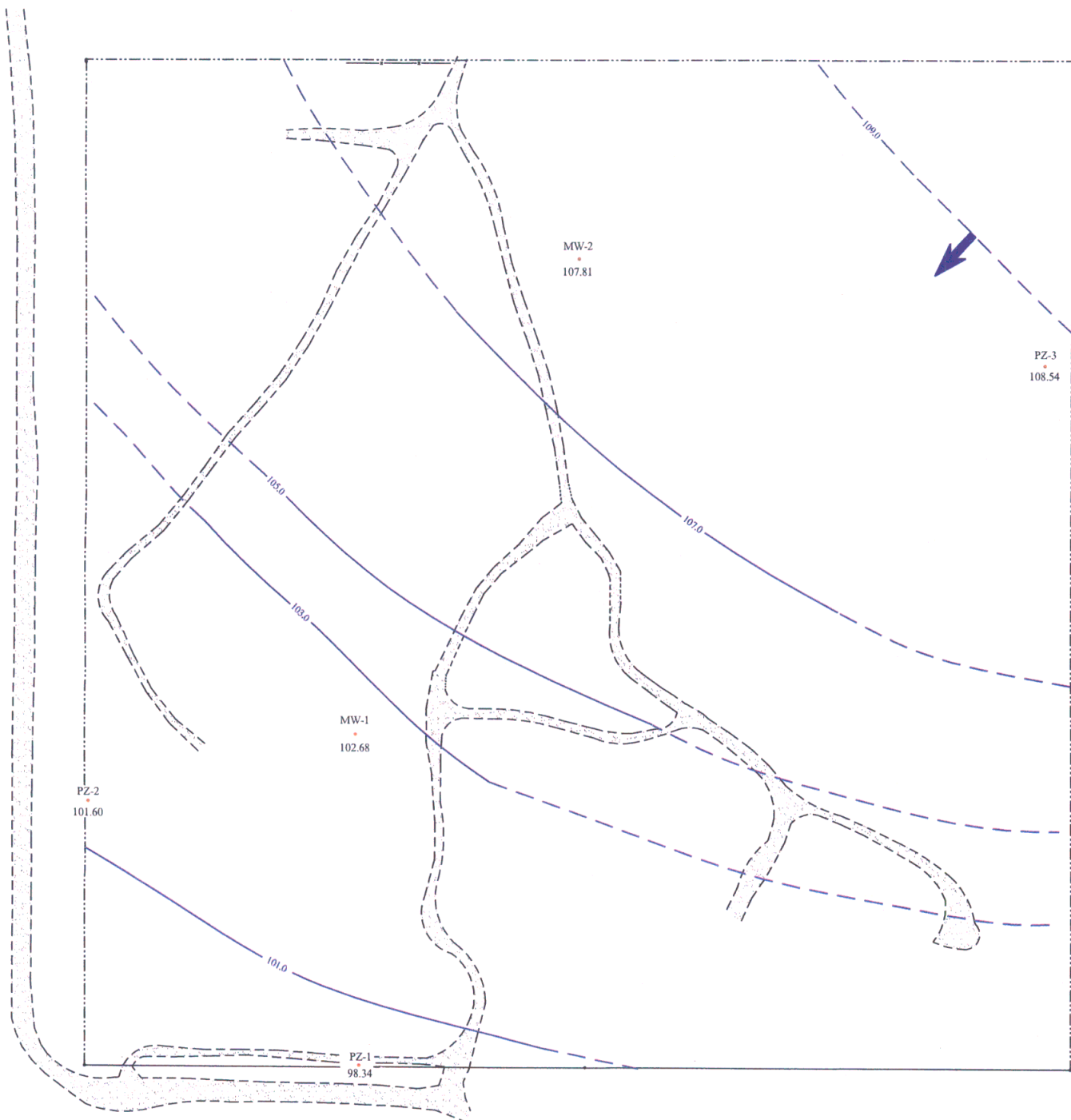
A north arrow pointing upwards and a scale bar showing 0, 50, and 100 feet. Below the scale bar is the text "APPROXIMATE SCALE IN FEET".

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BALDWIN COUNTY, AL

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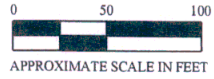
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FIGURE 8
GROUNDWATER ELEVATION
MARCH 26, 2007
SESI JOB #: 07-035



LEGEND	
	MONITOR WELL LOCATION
	COMPACTED DIRT ROAD
	ELECTRIC FENCE
	BARBED WIRE FENCE
	GROUNDWATER FLOW DIRECTION

*MODIFIED AFTER HUTCHINSON, MOORE & RAUCH, LLC., 2007.



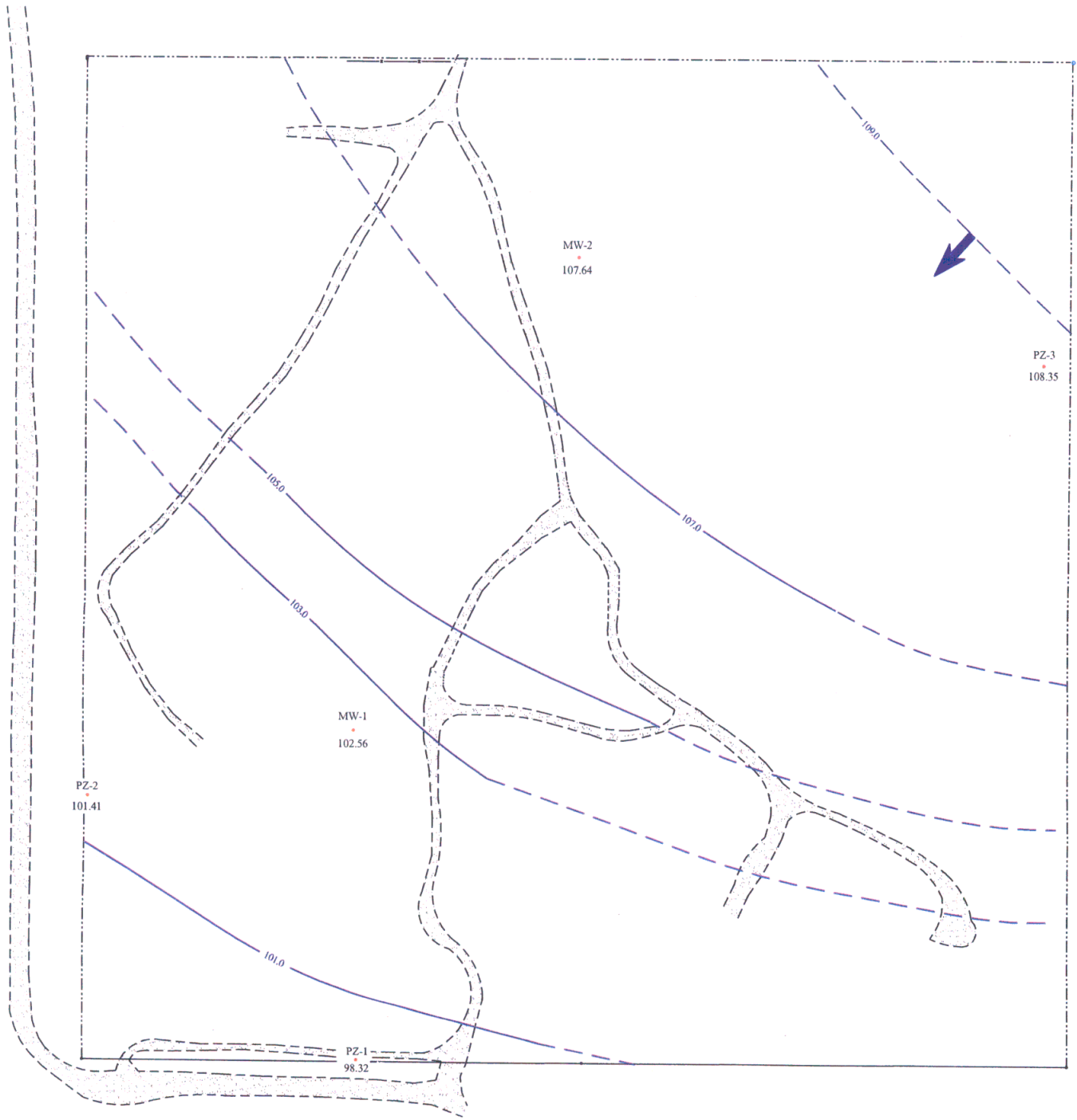
HMR LLC.
McBRIDE LANDFILL
BALDWIN COUNTY, AL

SOUTHERN EARTH SCIENCES, inc.



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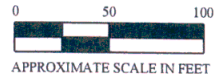
FIGURE 9
GROUNDWATER ELEVATION
APRIL 9, 2007
SESI JOB #: 07-035



LEGEND

- MONITOR WELL LOCATION
- COMPACTED DIRT ROAD
- ELECTRIC FENCE
- BARBED WIRE FENCE
- GROUNDWATER FLOW DIRECTION

*MODIFIED AFTER HUTCHINSON, MOORE & RAUCH, LLC., 2007.

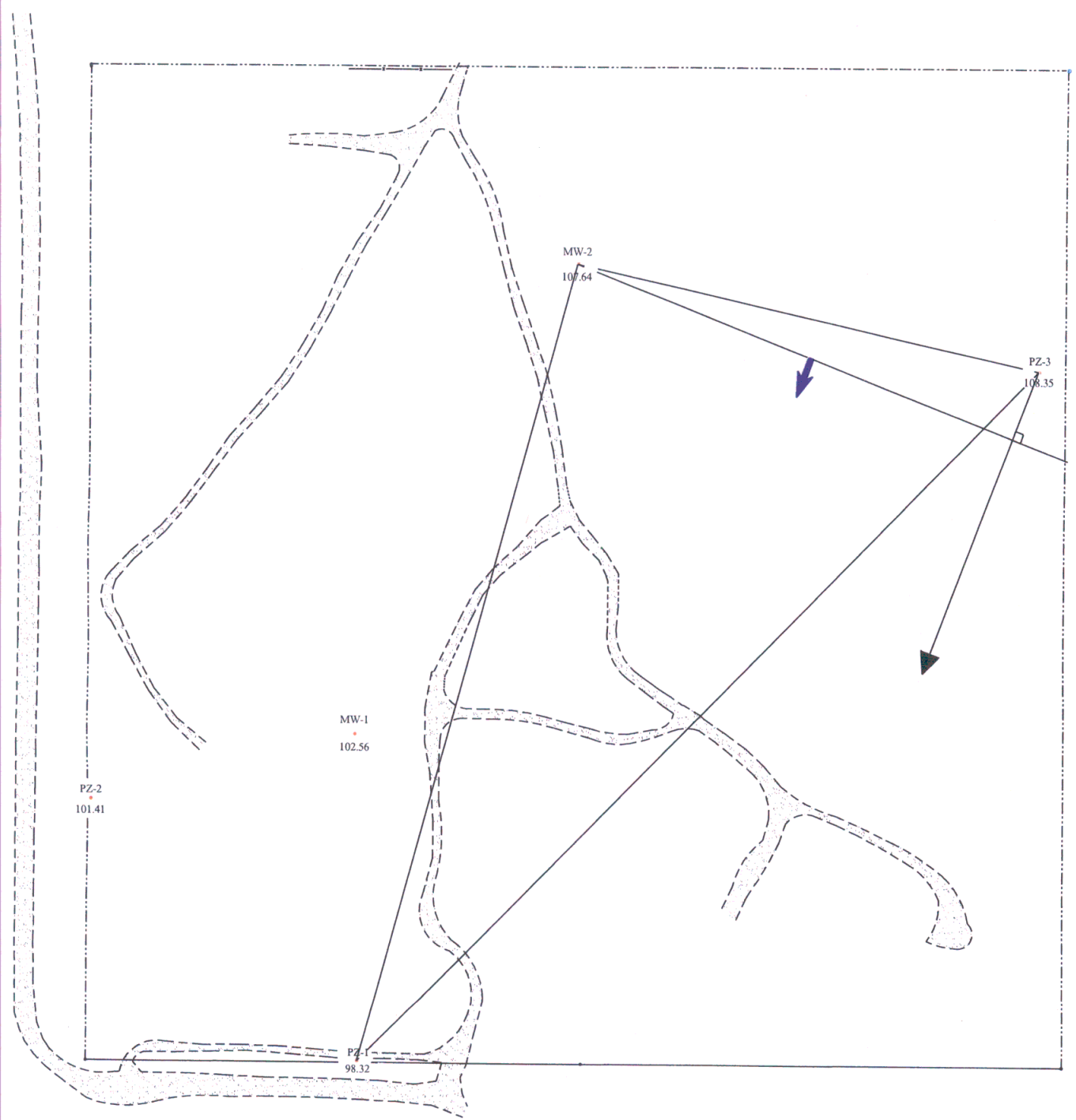


HMR LLC.
McBRIDE LANDFILL
BALDWIN COUNTY, AL

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FIGURE 10
GROUNDWATER ELEVATION
APRIL 30, 2007
SESI JOB #: 07-035



LEGEND

- - MONITOR WELL
- ➔ - ESTIMATED DIRECTION OF FLOW

CALCULATION FOR HYDRAULIC GRADIENT (h/L):
 $h/L = \frac{MW\ 2 - PZ\ 1}{PZ\ 3 - PZ\ 1} = \frac{107.64' - 98.32'}{108.35' - 98.32'}$
 $h/L = 0.929$
 $\Delta h = \frac{PZ\ 3 - MW\ 2}{L} = \frac{108.35' - 107.64'}{46.15'}$
 $\Delta h = 0.0154\ \text{ft/ft}$

0 50 100
 APPROXIMATE SCALE IN FEET

*MODIFIED AFTER HUTCHINSON, MOORE & RAUCH, LLC., 2007.

HMR LLC.
 McBRIDE LANDFILL
 BALDWIN COUNTY, AL

SOUTHERN EARTH SCIENCES, inc.

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FIGURE 11
 GROUNDWATER GRADIENT
 SESI JOB #: 07-035

APPENDIX B
TABLE

**TABLE 1
GROUNDWATER ELEVATION TABLE
McBRIDE C D LANDFILL
SES PROJECT NO. 07-035**

Well No.	MW-1	MW-2	PZ-1	PZ-2	PZ-3
Diameter	2 inch	2 inch	1 inch	1 inch	1 inch
Well Depth	25.0	20.0	35.0	40.0	35.0
Screen Interval	15.0-25.0	10.0-20.0	30.0-35.0	35.0-40.0	30.0-35.0
Ground Elevation	116.27	119.6	130.11	136.54	136.93

Date	DTW	GW ELEVATION	DTW	GW ELEVATION	DTW	GW ELEVATION	DTW	GW ELEVATION	DTW	GW ELEVATION
2/5/2007	12.98	103.29	11.23	108.37	31.60	98.51	34.12	102.42	27.83	109.10
2/19/2007	13.03	103.24	11.24	108.36	31.21	98.90	34.02	102.52	27.89	109.04
3/12/2007	13.27	103.00	11.48	108.12	31.46	98.65	34.69	101.85	28.10	108.83
3/26/2007	13.46	102.81	11.67	107.93	31.60	98.51	34.78	101.76	28.31	108.62
4/9/2007	13.59	102.68	11.79	107.81	31.77	98.34	34.94	101.60	28.39	108.54
4/30/2007	13.71	102.56	11.96	107.64	31.79	98.32	35.13	101.41	28.58	108.35

Notes:

DTW = depth to groundwater

ELEV = groundwater elevation

APPENDIX C
SOIL BORING LOGS

SOIL BORING LOG

BORING NO.: MW-1
PROJECT: MCBRIDE LANDFILL
PROJECT LOCATION:
BORING LOCATION: SEE SITE MAP
DATE DRILLED:
WATER LEVEL: 13.71 ft
GEOL / ENGR: J. CULPEPPER

PROJECT NO.: M07-035
METHOD: AUGER
BORING ELEVATION: EXISTING GROUND
DATE COMPLETED:
WATER LEVEL DATE: 04/30/07
DRILLER: J. CULPEPPER

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description
0		SP	White and Pink SAND with some Organics
10		SP	White SAND with some Saturation to Pink Silty Clay
20		MH	Red Sandy SILT, Saturated
		SP	Pink SAND with Silty Clay Layers
		SP	Yellow SAND intermixed with White Silty Clay, White SAND
30			
40			

Remarks:

SOIL BORING LOG

BORING NO.: MW-2

PROJECT: MCBRIDE LANDFILL

PROJECT LOCATION:

BORING LOCATION: SEE SITE MAP

DATE DRILLED:

WATER LEVEL: 11.96 ft

GEOL / ENGR: J. CULPEPPER

PROJECT NO.: M07-035

METHOD: AUGER

BORING ELEVATION: EXISTING GROUND

DATE COMPLETED:

WATER LEVEL DATE: 04/30/07

DRILLER: J. CULPEPPER

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description
0		SP	Red SAND
10		SP	Yellow and Red SAND with 2" Clay Layer
20		CL-ML	Pink Silty CLAY, Saturated with Sandy Gravel and Red SAND
30			
40			

Remarks:

SOIL BORING LOG

BORING NO.: PZ-1
PROJECT: MCBRIDE LANDFILL
PROJECT LOCATION:
BORING LOCATION: SEE SITE MAP
DATE DRILLED:
WATER LEVEL: 31.79 ft
GEOL / ENGR: J. CULPEPPER

PROJECT NO.: M07-035
METHOD: GEOPROBE
BORING ELEVATION: EXISTING GROUND
DATE COMPLETED:
WATER LEVEL DATE: 04/30/07
DRILLER: J. CULPEPPER

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description
0		ML	Organic Rich Sandy SILT to Pink Sandy SILT
		CL	Organic CLAY to Red Silty SAND
10		ML	Red and Yellow Sandy SILT
		ML	Yellow Sandy SILT to Red SAND with a 3" band of Clay
20		SP	Red SAND to White and Red CLAY
		SP	Red, Pink, and White SAND
30		SP	Pink SAND, Saturated
		SP	Pink and White SAND
40			

Remarks:

SOIL BORING LOG

BORING NO.: PZ-2

PROJECT: MCBRIDE LANDFILL

PROJECT LOCATION:

BORING LOCATION: SEE SITE MAP

DATE DRILLED:

WATER LEVEL: 35.13 ft

GEOL / ENGR: J. CULPEPPER

PROJECT NO.: M07-035

METHOD: GEOPROBE

BORING ELEVATION: EXISTING GROUND

DATE COMPLETED:

WATER LEVEL DATE: 04/30/07

DRILLER: J. CULPEPPER

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description
0		CL-ML	Organic Red Silty CLAY
		SP-SM	Red Sand with some SILT
10		SP	Red and White SAND with Clay Layers
		SP	White and Pink SAND with 3" Clay Layer
20		CL-ML	White Silty CLAY, Saturated to Red SAND
		SP	Red SAND, Saturated at 27', with Sand and Gravel
30		SP	Red and White SAND, Saturated
40			

Remarks:

SOIL BORING LOG

BORING NO.: PZ-3

PROJECT: MCBRIDE LANDFILL

PROJECT LOCATION:

BORING LOCATION: SEE SITE MAP

DATE DRILLED:

WATER LEVEL:

GEOL / ENGR: J. CULPEPPER

PROJECT NO.: M07-035

METHOD: GEOPROBE

BORING ELEVATION: EXISTING GROUND

DATE COMPLETED:

WATER LEVEL DATE:

DRILLER: J. CULPEPPER

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	Description
0		CL	Brown CLAY with some Silt and Organics
		CL	Pink CLAY, Saturated with 3" Organic Layer
10		CL	CLAY to Red and White SAND and Red Silty CLAY
		SP	Red SAND to Red and White CLAY
20		SP	Red SAND
		SP	Red SAND, Saturated
30		CL	White CLAY to White SAND
40			

Remarks:

APPENDIX D
SLUG TEST DATA



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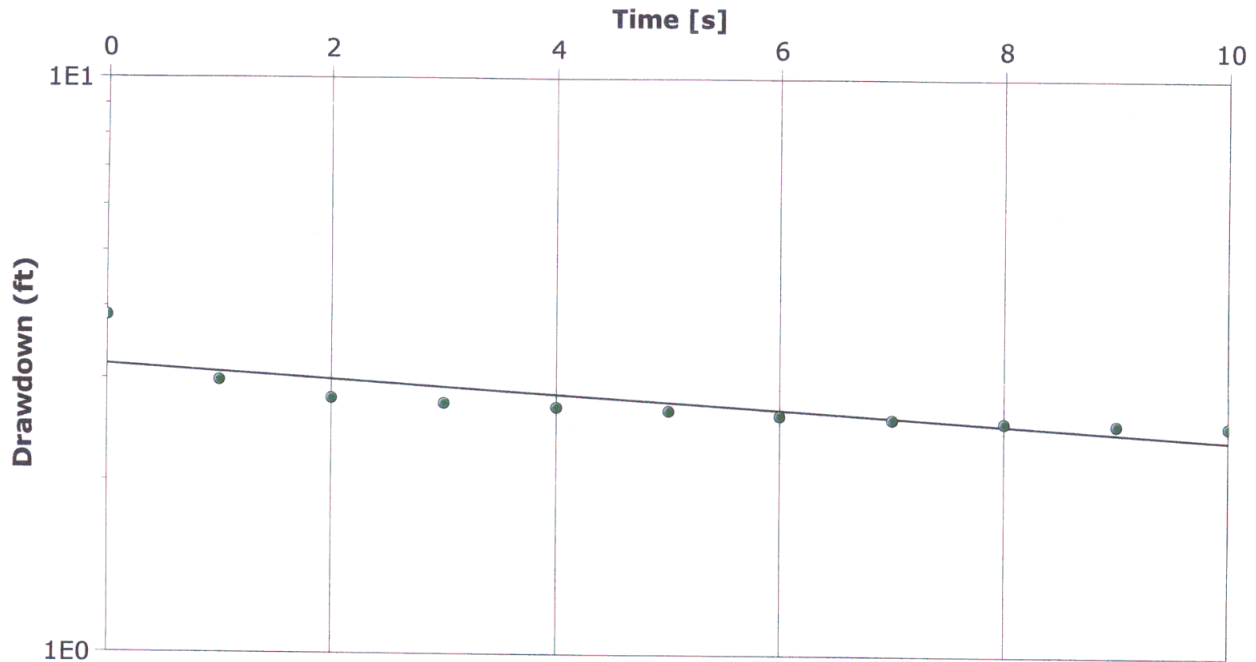
Slug Test Analysis Report

Project: MacBride Landfill

Number: 07-035

Client: HMR, LLC

Location: Baldwin County	Slug Test: MW-1 SLUG IN	Test Well: MW-1 SLUG IN
Test conducted by: JC		Test date: 5/23/2007
Analysis performed by: JC	MW-1 SLUG IN	Date: 5/23/2007
Aquifer Thickness: 100.00 ft		



Calculation after Bouwer & Rice

Observation well	K [ft/d]	
MW-1 SLUG IN	3.27×10^0	



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Slug Test Analysis Report

Project: MacBride Landfill

Number: 07-035

Client: HMR, LLC

Location: Baldwin County

Slug Test: MW-1 SLUG OUT

Test Well: MW-1 SLUG OUT

Test conducted by: JC

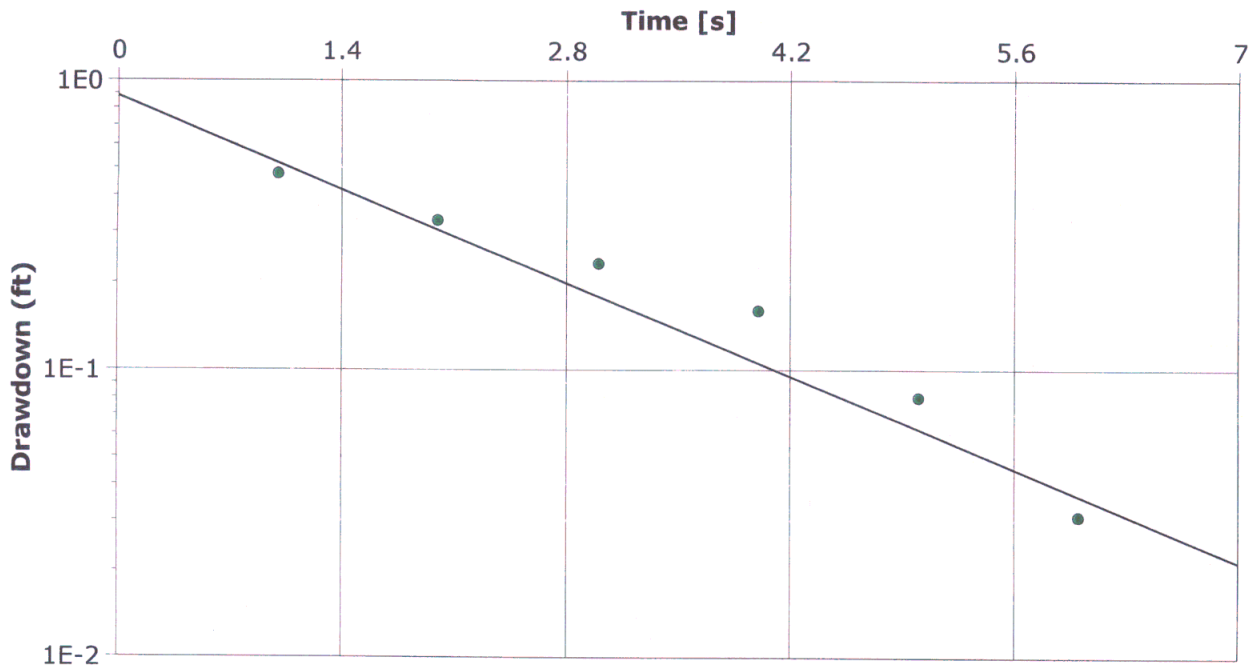
Test date: 5/23/2007

Analysis performed by: JC

MW-1 SLUG OUT

Date: 5/23/2007

Aquifer Thickness: 100.00 ft



Calculation after Bouwer & Rice

Observation well	K [ft/d]
MW-1 SLUG OUT	5.92×10^1



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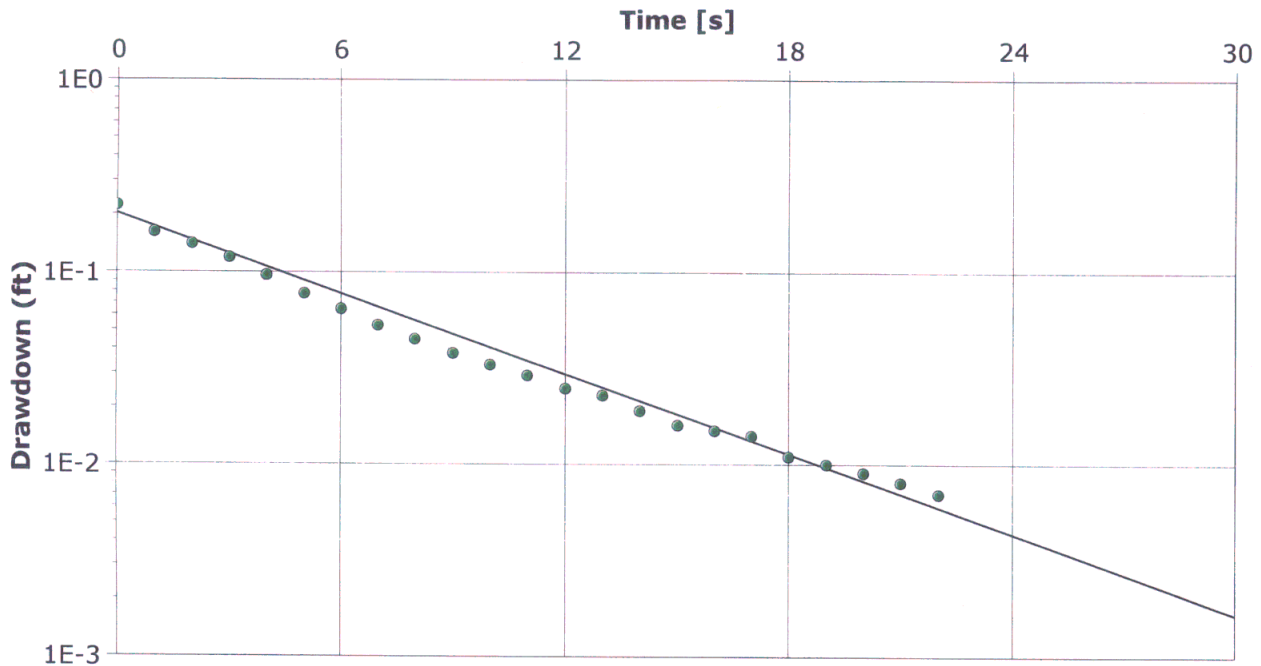
Slug Test Analysis Report

Project: MacBride Landfill

Number: 07-035

Client: HMR, LLC

Location: Baldwin County	Slug Test: MW-2 SLUG IN	Test Well: MW-2 SLUG IN
Test conducted by: JC		Test date: 5/23/2007
Analysis performed by: JC	MW-2 SLUG IN	Date: 5/23/2007
Aquifer Thickness: 100.00 ft		



Calculation after Bouwer & Rice

Observation well	K [ft/d]
MW-2 SLUG IN	1.79×10^1



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Slug Test Analysis Report

Project: MacBride Landfill

Number: 07-035

Client: HMR, LLC

Location: Baldwin County

Slug Test: MW-2 SLUG OUT

Test Well: MW-2 SLUG OUT

Test conducted by: JC

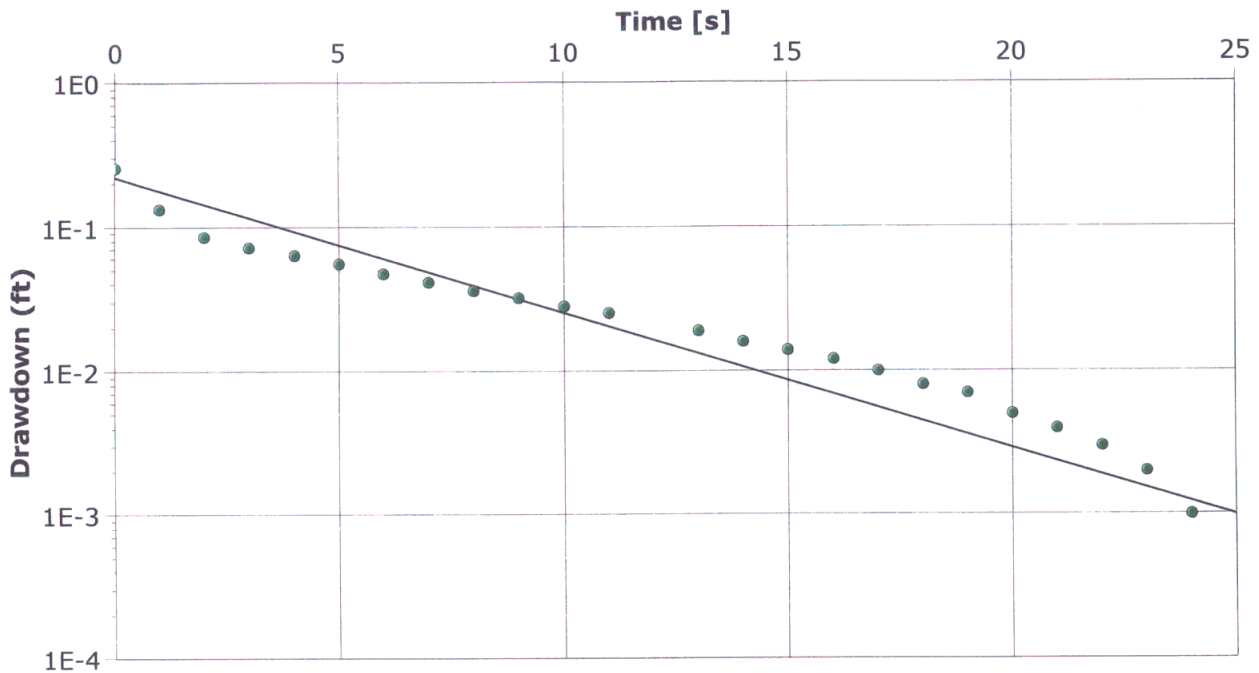
Test date: 5/23/2007

Analysis performed by: JC

MW-2 SLUG OUT

Date: 5/23/2007

Aquifer Thickness: 100.00 ft



Calculation after Bouwer & Rice

Observation well

K

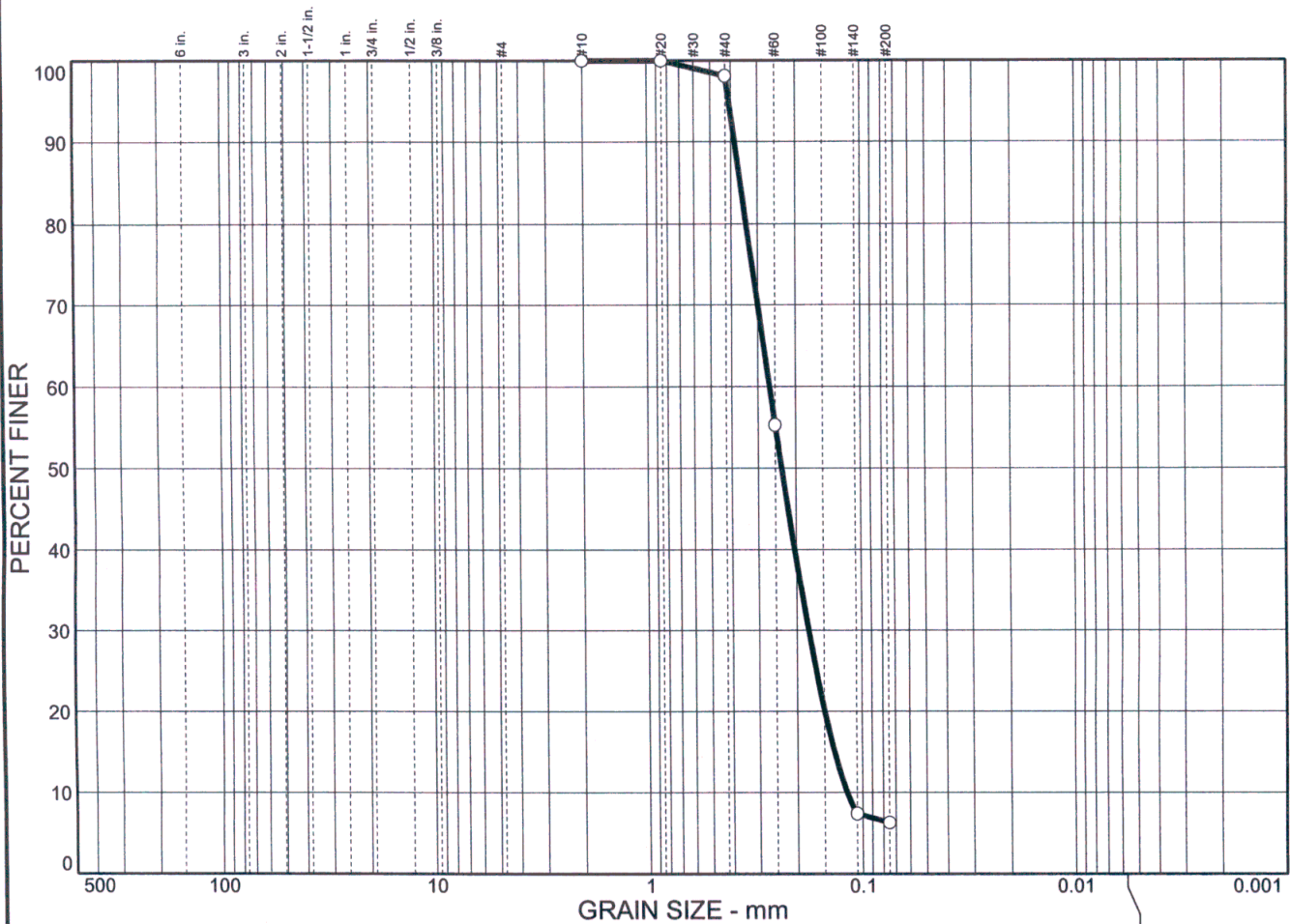
[ft/d]

MW-2 SLUG OUT

2.41×10^1

APPENDIX E
SOIL PROPERTIES

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	93.7	6.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	100.0		
#40	98.1		
#60	55.3		
#140	7.4		
#200	6.3		

Soil Description

Light Red Poorly graded sand with silt

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.362 D₆₀= 0.265 D₅₀= 0.233
D₃₀= 0.177 D₁₅= 0.135 D₁₀= 0.118
C_u= 2.25 C_c= 1.00

Classification

USCS= SP-SM AASHTO=

Remarks

* (no specification provided)

Sample No.: MW-1
 Location:

Source of Sample:

Date: 2-2-07
 Elev./Depth: 15.0-20.0

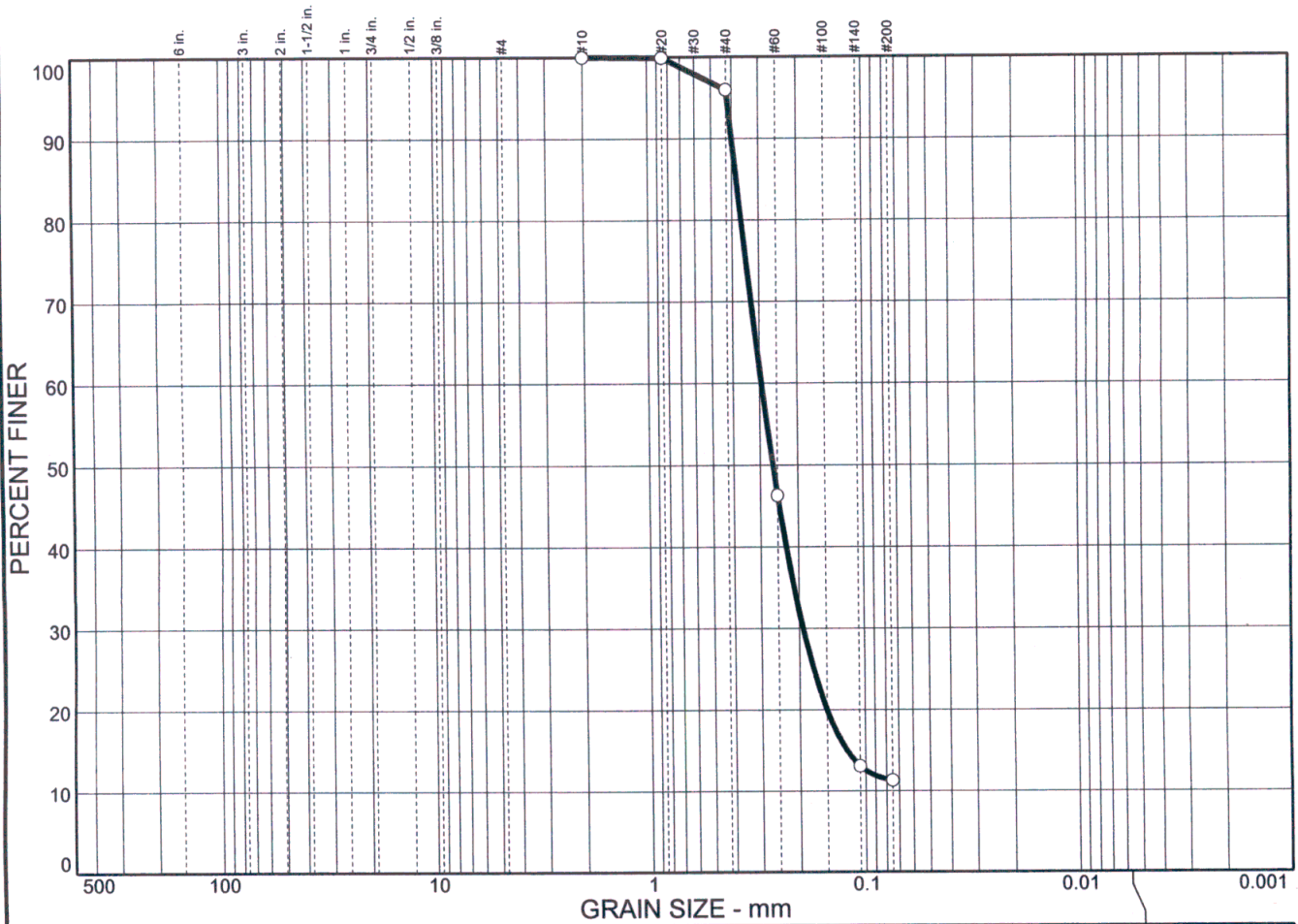
**SOUTHERN
 EARTH
 SCIENCES**

Client: HMR
 Project: McBride C&D Landfill Expansion

Project No: 07-035

Figure

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	88.7	11.3	11.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.9		
#40	96.0		
#60	46.3		
#140	13.1		
#200	11.3		

Soil Description

Tan Poorly graded sand with silt

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 0.382 D₆₀= 0.295 D₅₀= 0.262

D₃₀= 0.192 D₁₅= 0.122 D₁₀=

C_u= C_c=

Classification

USCS= SP-SM AASHTO=

Remarks

* (no specification provided)

Sample No.: MW-2 **Source of Sample:** **Date:** 2-2-07
Location: **Elev./Depth:** 10.0-15.0

PHYSICAL PROPERTIES REPORT



Project: MCBRIDE C&D LANDFILL EXPANSION Project No.: 07-035 DATE: 2/3/2007
Boring No.: MW-1 Sample No.: NA Depth Ft. 15.0-20.0 BY: CH
Description of Soil: LIGHT RED SAND

Moisture Content

Bowl No.	105
Bowl & Wet Wt.	264.85 g
Bowl & Dry Wt.	246.37 g
Bowl Wt.	157.96 g
Sample Wt.	88.41 g
Moisture %	20.9 %
Volumetric Water Content	0.33 cc/cc

Dry Bulk Density

Height	4.161	cm
Diameter	4.17	cm
Wet Wt.	106.89	g
Volume	56.72	cc
Dry Weight	88.41	g
Dry Bulk Density	1.56	g/cc

Assignment

Moisture	x
200	X
Dry Bulk Density	x
Porosity	x

200 WASH

Bowl No.	105
Bowl (+200) Dry Wt.	241.15
Bowl Wt.	157.96
Sample Wt.	83.19
Passing %	5.9

Porosity

n	0.41
---	-------------

PHYSICAL PROPERTIES REPORT



Project: MCBRIDE C&D LANDFILL EXPANSION **Project No.:** 07-035 **DATE:** 2/3/2007
Boring No.: MW-2 **Sample No.:** NA **Depth Ft.** 10.0-15.0 **BY:** CH
Description of Soil: TAN SAND

Moisture Content

Bowl No.	70
Bowl & Wet Wt.	255.23 g
Bowl & Dry Wt.	241.1 g
Bowl Wt.	155.5 g
Sample Wt.	85.6 g
Moisture %	16.5 %
Volumetric Water Content	0.27 cc/cc

Dry Bulk Density

Height	4.735	cm
Diameter	3.76	cm
Wet Wt.	99.73	g
Volume	52.52	cc
Dry Weight	85.60	g
Dry Bulk Density	1.63	g/cc

Assignment

Moisture	x
200	X
Dry Bulk Density	x
Porosity	x

200 WASH

Bowl No.	70
Bowl (+200) Dry Wt.	231.94
Bowl Wt.	155.5
Sample Wt.	76.44
Passing %	10.7

Porosity

n	0.38
---	-------------

PHYSICAL PROPERTIES REPORT



Project: MCBRIDE C&D LANDFILL EXPANSION **Project No.:** 07-035 **DATE:** 2/3/2007
Boring No.: P-1 **Sample No.:** NA **Depth Ft.** 30.0-35.0 **BY:** CH
Description of Soil: LIGHT TAN SAND

Moisture Content

Bowl No.	49
Bowl & Wet Wt.	250.83 g
Bowl & Dry Wt.	234.72 g
Bowl Wt.	162.9 g
Sample Wt.	71.82 g
Moisture %	22.4 %
Volumetric Water Content	0.36 cc/cc

Dry Bulk Density

Height	3.434	cm
Diameter	4.10	cm
Wet Wt.	87.93	g
Volume	45.29	cc
Dry Weight	71.82	g
Dry Bulk Density	1.59	g/cc

Assignment

Moisture	x
200	X
Dry Bulk Density	x
Porosity	x

200 WASH

Bowl No.	49
Bowl (+200) Dry Wt.	232.35
Bowl Wt.	162.9
Sample Wt.	69.45
Passing %	3.3

Porosity

n	0.40
---	------

PHYSICAL PROPERTIES REPORT



Project: MCBRIDE C&D LANDFILL EXPANSION **Project No.:** 07-035 **DATE:** 2/3/2007
Boring No.: P-2 **Sample No.:** NA **Depth Ft.** 25.0-30.0 **BY:** CH
Description of Soil: TAN SAND

Moisture Content

Bowl No.	412
Bowl & Wet Wt.	211.17 g
Bowl & Dry Wt.	208.17 g
Bowl Wt.	171.53 g
Sample Wt.	36.64 g
Moisture %	8.2 %
Volumetric Water Content	0.13 cc/cc

Dry Bulk Density

Height	1.643	cm
Diameter	4.21	cm
Wet Wt.	39.64	g
Volume	22.82	cc
Dry Weight	36.64	g
Dry Bulk Density	1.61	g/cc

Assignment

Moisture	x
200	X
Dry Bulk Density	x
Porosity	x

200 WASH

Bowl No.	412
Bowl (+200) Dry Wt.	205.52
Bowl Wt.	171.53
Sample Wt.	33.99
Passing %	7.2

Porosity

n	0.39
---	------

PHYSICAL PROPERTIES REPORT



Project: MCBRIDE C&D LANDFILL EXPANSION **Project No.:** 07-035 **DATE:** 2/3/2007
Boring No.: P-3 **Sample No.:** NA **Depth Ft.** 30.0.-35.0 **BY:** CH
Description of Soil: LIGHT TAN SAND

Moisture Content

Bowl No.	79
Bowl & Wet Wt.	250.48 g
Bowl & Dry Wt.	232.42 g
Bowl Wt.	151 g
Sample Wt.	81.42 g
Moisture %	22.2 %
Volumetric Water Content	0.36 cc/cc

Dry Bulk Density

Height	3.694	cm
Diameter	4.17	cm
Wet Wt.	99.48	g
Volume	50.42	cc
Dry Weight	81.42	g
Dry Bulk Density	1.61	g/cc

Assignment

Moisture	x
200	X
Dry Bulk Density	x
Porosity	x

200 WASH

Bowl No.	79
Bowl (+200) Dry Wt.	230.64
Bowl Wt.	151
Sample Wt.	79.64
Passing %	2.2

Porosity

n	0.39
---	-------------

3 LANDFILL DESIGN

3.1 DESIGN DOCUMENTS

Standards for the construction, operation, maintenance, closure and post-closure of MacBride Landfill are set forth herein and in the permit drawings and permit documents included as attachments to the permit application. The permit documents are designed to address the permitting requirements of Division 13 Regulations.

3.2 SURFACE DRAINAGE

Stormwater control at the facility is necessary to prevent erosion and sedimentation. Details of the surface water drainage plan and discharge areas are shown in the Engineering Plans.

3.2.1 Run-On Control

The permittee will maintain a run-on control system using berms and diversion ditches to prevent flow onto the active or closed portions of the landfill during the peak discharge from a 25-year, 24-hour storm event.

3.2.2 Run-Off Control

The permittee will maintain a run-off control system using berms, ditches, terraces and sedimentation basins or other control structures to collect and control at least the water volume resulting from a 25-year, 24-hour storm event. Run-off from the landfill will be conveyed through the landfill's NPDES Stormwater Permit discharge point(s). Temporary sediment control features such as intermediate grading and hay bale dams will be used as necessary to control sediment transport.

Drainage Calculations can be found in Appendix 3.1. A Best Management Practices Plan for handling storm water is contained in Section 6 herein.

3.3 AIR CRITERIA

Open burning of waste will not be allowed. Facility practices will comply with State Implementation Plans under the Clean Air Act. Variances for the infrequent burning of land clearing debris, agricultural waste, silvicultural waste, diseased trees and debris from emergency clean-up operations may be granted by the Department. Approval from the Department and appropriate burn permits will be obtained prior to any burning activities.

3.4 GROUNDWATER MONITORING WELLS

If needed, groundwater monitoring wells will be no more than one hundred fifty (150) meters from the waste disposal limits at locations that will yield representative samples of the uppermost aquifer beneath the site. A plan for individual well placement, well depth and construction are shown on the permit drawings. A monitoring well plan is currently not

required by the department, however, if a monitoring well is required in the future, well placement will be approved by the Department prior to implementation.

3.5 FINAL COVER

The final cover of MacBride Landfill will consist of an infiltration layer and an erosion layer. The infiltration layer will consist of soil cover which has a permeability no greater than 1×10^{-5} . The low permeability of the soil cover will reduce the infiltration of storm water into the waste, provide slope stability and provide an adequate base for the erosion layer. The soil cover will consist of eighteen (18") inches of soil, compacted in six (6") inch lifts. The erosion layer will consist of six (6") inches of compacted topsoil or enriched soil capable of supporting vegetation.

Permanent vegetation will be planted over the entire landfill. The vegetation selected will not have roots capable of penetrating the infiltration layer, will have ample density to minimize soil erosion, and will be sufficiently self-supportive to survive and function with little or no maintenance.

Maximum final grades on the land fill will be twenty-five (25%) percent and minimum grades will be live (5%) percent. Details of the final cover design and final and fill grades are shown on the permit drawings.

APPENDIX 3.1

DRAINAGE CALCULATIONS

EAST POND

					PRE-DEVELOPMENT				
<div style="border: 1px solid black; padding: 5px;"> <p>Pond Design Calculations</p> <p>Qo = Pre-Development Flow Qi = Post-Development Inflow from Pond Drainage Area</p> <p>25yr Storm</p> </div>					I (in/hr)	(acres)	C	Qo (cfs)	Tc (min)
					8	11.0	0.2	17.6	10
TIME		I (in/hr)	Post Dev	Drainage	Qi (cfs)	Vi	Vo	Required	Storage
Minutes	T (sec)	25yr	C	Area (acres)				Storage (Ft ^3)	Provided (Ft^3)
5	300	9.2	0.5	11.0	50.6	15180.0	5280.0	9900	
10	600	8	0.5	11.0	44.0	26400.0	10560.0	15840	
15	900	7	0.5	11.0	38.5	34650.0	15840.0	18810	
20	1200	6.2	0.5	11.0	34.1	40920.0	21120.0	19800	63500
25	1500	5.6	0.5	11.0	30.8	46200.0	26400.0	19800	
30	1800	5	0.5	11.0	27.5	49500.0	31680.0	17820	
35	2100	4.6	0.5	11.0	25.3	53130.0	36960.0	16170	
40	2400	4.3	0.5	11.0	23.7	56760.0	42240.0	14520	
45	2700	4	0.5	11.0	22.0	59400.0	47520.0	11880	
50	3000	3.8	0.5	11.0	20.9	62700.0	52800.0	9900	
55	3300	3.6	0.5	11.0	19.8	65340.0	58080.0	7260	
60	3600	3.4	0.5	11.0	18.7	67320.0	63360.0	3960	
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> ORIFICE FLOW: $Q = CdAo(2GH)^{1/2}$ </div>									
Number of	Orifice	Allowable		Per Orifice		Per Orifice	HEAD (ft)	Depth (ft) of water	
Orifices	Description	Pre-dev		Q (cfs)	Cd	Ao(sf)	above center	in pond	
	(dia. Inches)	Q (cfs)					of orifice		
3	12	17.6		5.9	0.62	0.7850	2.26	2.76	
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> EMERGENCY OVERFLOW FOR 100-YR STORM RECTANGULAR WEIR FLOW: $Q = CdL(H)^{1.5}$ </div>									
H (ft)	New Head	New Q (cfs)	Q (cfs)	100 yr Q	Weir		Minimum		
above weir	Above	thru orifice	100 yr	weir must	Cd		Weir		
crest	Orifice (ft)			control			LENGTH (ft)		
0.25	2.51	18.55	24.20	5.65	3.00		15.07		

WEST POND

					PRE-DEVELOPMENT				
<div style="border: 1px solid black; padding: 5px;"> <p>Pond Design Calculations</p> <p>Qo = Pre-Development Flow Qi = Post-Development Inflow from Pond Drainage Area</p> <p>25yr Storm</p> </div>					I (in/hr)	(acres)	C	Qo (cfs)	Tc (min)
					8	26.0	0.2	41.6	10
TIME		I (in/hr)	Post Dev	Drainage	Qi (cfs)	Vi	Vo	Required	Storage
Minutes	T (sec)	25yr	C	Area (acres)				Storage (Ft ^3)	Provided (Ft^3)
5	300	9.2	0.5	25.0	115.0	34500.0	12480.0	22020	
10	600	8	0.5	25.0	100.0	60000.0	24960.0	35040	
15	900	7	0.5	25.0	87.5	78750.0	37440.0	41310	
20	1200	6.2	0.5	25.0	77.5	93000.0	49920.0	43080	132500
25	1500	5.6	0.5	25.0	70.0	105000.0	62400.0	42600	
30	1800	5	0.5	25.0	62.5	112500.0	74880.0	37620	
35	2100	4.6	0.5	25.0	57.5	120750.0	87360.0	33390	
40	2400	4.3	0.5	25.0	53.8	129000.0	99840.0	29160	
45	2700	4	0.5	25.0	50.0	135000.0	112320.0	22680	
50	3000	3.8	0.5	25.0	47.5	142500.0	124800.0	17700	
55	3300	3.6	0.5	25.0	45.0	148500.0	137280.0	11220	
60	3600	3.4	0.5	25.0	42.5	153000.0	149760.0	3240	
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> ORIFICE FLOW: $Q = CdAo(2GH)^{1/2}$ </div>									
Number of	Orifice	Allowable		Per Orifice		Per Orifice	HEAD (ft)	Depth (ft) of water	
Orifices	Description	Pre-dev		Q (cfs)	Cd	Ao(sf)	above center	in pond	
7	12	41.6		5.9	0.62	0.7850	2.32	2.82	
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> EMERGENCY OVERFLOW FOR 100-YR STORM RECTANGULAR WEIR FLOW: $Q = CdL(H)^{1.5}$ </div>									
H (ft)	New Head	New Q (cfs)	Q (cfs)	100 yr Q	Weir		Minimum		
above weir	Above	thru orifice	100 yr	weir must	Cd		Weir		
	Orifice (ft)			control			LENGTH (ft)		
0.5	2.82	45.87	57.20	11.33	3.00		10.68		
(48" @ .5%)									

WEST POND

WITH THE EXISTING LANDFILL'S SEDIMENTATION POND

ABANDONED AND DIRECTED TO NEW POND

					PRE-DEVELOPMENT				
<div style="border: 1px solid black; padding: 5px;"> Pond Design Calculations Qo = Pre-Development Flow Qi = Post-Development Inflow from Pond Drainage Area 25yr Storm </div>					I (in/hr)	(acres)	C	Qo (cfs)	Tc (min)
					7	37.0	0.2	51.8	15
TIME		I (in/hr)	Post Dev	Drainage	Qi (cfs)	Vi	Vo	Required	Storage
Minutes	T (sec)	25yr	C	Area (acres)				Storage (Ft ^3)	Provided (Ft^3)
5	300	9.2	0.5	37.0	170.2	51060.0	15540.0	35520	
10	600	8	0.5	37.0	148.0	88800.0	31080.0	57720	
15	900	7	0.5	37.0	129.5	116550.0	46620.0	69930	
20	1200	6.2	0.5	37.0	114.7	137640.0	62160.0	75480	
25	1500	5.6	0.5	37.0	103.6	155400.0	77700.0	77700	132500
30	1800	5	0.5	37.0	92.5	166500.0	93240.0	73260	
35	2100	4.6	0.5	37.0	85.1	178710.0	108780.0	69930	
40	2400	4.3	0.5	37.0	79.6	190920.0	124320.0	66600	
45	2700	4	0.5	37.0	74.0	199800.0	139860.0	59940	
50	3000	3.8	0.5	37.0	70.3	210900.0	155400.0	55500	
55	3300	3.6	0.5	37.0	66.6	219780.0	170940.0	48840	
60	3600	3.4	0.5	37.0	62.9	226440.0	186480.0	39960	
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> ORIFICE FLOW: $Q = CdAo(2GH)^{1/2}$ </div>									
Number of	Orifice	Allowable		Per Orifice		Per Orifice	HEAD (ft)	Depth (ft) of water	
Orifices	Description	Pre-dev		Q (cfs)	Cd	Ao(sf)	above center	in pond	
	(dia. Inches)	Q (cfs)		Q (cfs)			of orifice		
9	12	51.8		5.8	0.62	0.7850	2.17	2.67	
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> EMERGENCY OVERFLOW FOR 100-YR STORM RECTANGULAR WEIR FLOW: $Q = CdL(H)^{1.5}$ </div>									
H (ft)	New Head	New Q (cfs)	Q (cfs)	100 yr Q	Weir		Minimum		
above weir	Above	thru orifice	100 yr	weir must	Cd		Weir		
	Orifice (ft)			control			LENGTH (ft)		
0.5	2.67	57.45	81.40	23.95	3.00		22.58		
(48" @ .5%)									

DITCH "A"
DESIGN CALCULATIONS

Total Drainage Area = 217800 SF = 5.000 AC

Time of Concentration is 10 MINS

with a weighted 'C' = 0.50

Subarea 1 has an area of 217800 SF = 5.000 AC

and has a Runoff Coefficient = 0.50

Using a 25 year return storm at $T_c = 10$ mins.; Intensity = 8.0 in./hr.

Total discharge = 20.05 CFS

OPEN DITCH PARAMETERS

- 1 Friction coefficient 'N': .025
- 2 Width of ditch bottom in ft.: 2
- 3 Side slope of ditch ('n': 1) lt...: 3
- 4 Side slope of ditch ('n': 1) rt...: 3
- 5 Flow, 'Q' in cfs: 21
- 6 Depth of water in ft.: 1.17 (ok)
- 7 Slope of ditch bottom in ft./ft. ...: .005 (minimum)
- 8 Velocity in ft./sec.: 3.26 (ok)
- 9 Top width at top of water in ft. ...: 9.02

DITCH "B"
DESIGN CALCULATIONS

Total Drainage Area = 725000 SF = 16.644 AC
Time of Concentration is 10 MINS
with a weighted 'C' = 0.50

Subarea 1 has an area of 725000 SF = 16.644 AC
and has a Runoff Coefficient = 0.50

Using a 25 year return storm at Tc= 10 mins.; Intensity = 8.0 in./hr.
Total discharge = 66.74 CFS

OPEN DITCH PARAMETERS

- 1 Friction coefficient 'N': .025
- 2 Width of ditch bottom in ft.: 3
- 3 Side slope of ditch ('n': 1) lt...: 3
- 4 Side slope of ditch ('n': 1) rt...: 3
- 5 Flow, 'Q' in cfs: 67
- 6 Depth of water in ft.: 1.82 (ok)
- 7 Slope of ditch bottom in ft./ft. ...: .005 (minimum)
- 8 Velocity in ft./sec.: 4.37 (ok)
- 9 Top width at top of water in ft. ...: 13.89

DITCH "C"
DESIGN CALCULATIONS

Total Drainage Area = 1402632 SF = 32.200 AC

Time of Concentration is 15 MINS

with a weighted 'C' = 0.50

Subarea 1 has an area of 1402632 SF = 32.200 AC

and has a Runoff Coefficient = 0.50

Using a 25 year return storm at $T_c = 15$ mins.; Intensity = 7.0 in./hr.

Total discharge = 112.95 CFS

OPEN DITCH PARAMETERS

- 1 Friction coefficient 'N': .025
- 2 Width of ditch bottom in ft.: 5
- 3 Side slope of ditch ('n': 1) lt...: 3
- 4 Side slope of ditch ('n': 1) rt...: 3
- 5 Flow, 'Q' in cfs: 113
- 6 Depth of water in ft.: 2.05 (ok)
- 7 Slope of ditch bottom in ft./ft. ...: .005 (minimum)
- 8 Velocity in ft./sec.: 4.94 (ok)
- 9 Top width at top of water in ft. ...: 17.31

4 OPERATIONAL PLAN

4.1 PROTECTION OF HEALTH AND ENVIRONMENT

All operational procedures of MacBride Landfill will be directed toward protection of human health and the environment. The procedures set forth herein are designed with this purpose. Should any condition occur during the life of this facility which would pose a threat to human health or the environment, immediate action will be taken to correct that condition. Environmental monitoring and treatment structures will be located throughout the site. Facility operations will be conducted in a manner that will not compromise the integrity of these structures.

4.2 SITE ACCESS AND SECURITY

4.2.1 *Entrance and Monitoring*

All waste coming to the facility will enter on an entrance road off County Highway Number 64. An office facility is located near the Landfill entrance and vehicles will stop at the office upon entering the Landfill. Sufficient area is provided to allow space for several vehicles near the office facility.

Only persons authorized by the landfill manager will be permitted access to the site. No access will be allowed except when a landfill attendant is on duty.

4.2.2 *Access Barriers*

A significant portion of this boundary is dense timber land through which vehicular access is restricted by natural barriers. Fencing, gates and earthen berms will be used to augment natural barriers in controlling unauthorized vehicular access to the facility and illegal dumping of waste. Gates will be kept locked except when an attendant is on duty.

4.2.3 *Haul Roads*

Temporary haul roads will be utilized to deliver waste to the working face of cells. Because cell locations will change, barricades or other directional indicators will be used as needed to provide safe and efficient access to the working face.

Traffic control and directional signs will be located near the entrance to the facility as required for safe operation.

4.2.4 *Signage*

A sign will be posted at the landfill entrance that includes the name of the Landfill, the permittee and the owner, the days and hours of operation, the disposal fees, and the types of waste which are acceptable for disposal MacBride Landfill. The name and telephone number of the Department will also be given to identify the agency responsible for the facility.

4.2.5 Public Accommodation

No specific area is set aside for use by non-commercial vehicles. However, due to the impermanent nature of the active disposal area, the general public may find certain conditions unsuitable for use.

Should such conditions occur, the Landfill supervisor would initiate measures to allow for the safe and convenient disposal of waste by non-commercial vehicles. This may be accomplished by directing disposal to areas set aside for this purpose or by use of conveniently located dumpsters.

Landfill management may locate a container for household garbage within the facility for the convenience of the public. Such a container will be a sealed unit so that no liquid can leak out and with a cover that will be placed over the container when the facility is closed. Waste placed in the container will be transported to the sanitary landfill for disposal.

4.3 WASTE MANAGEMENT

4.3.1 Acceptable Waste

Waste that is acceptable for disposal at MacBride Landfill is non-hazardous construction and demolition waste, limbs, stumps, inert materials and fines, lawn and garden waste, plastics, rubber products, metal products, cloth, paper products, furniture, wood products and similar material from residential, commercial and industrial sources. All waste accepted for disposal will be generated within Baldwin County SWDA, Alabama and approved by the Department for disposal at MacBride Landfill.

4.3.2 Industrial Waste

Approved industrial users will be identified prior to disposal of industrial waste. Each generator must provide the landfill manager with current written certification from Alabama Department of Environmental Management that the material is acceptable for disposal at MacBride Landfill. At a minimum, generators must renew certification by the Department annually. Copies of such certifications will be placed in the operating records and kept on file at the Landfill office.

4.3.3 Restricted Waste

Free liquids, containers larger than ten (10) gallons that have not been rendered unsuitable for holding liquids, unapproved industrial waste, putrescible waste, regulated hazardous waste, medical waste, or waste which is not bladeable will not be accepted for disposal at the facility.

4.3.4 Waste Monitoring and Inspection

Waste accepted at this facility will be only waste specified by the permit or waste that is otherwise approved by the Department for disposal at MacBride Landfill. Any unapproved waste coming to the site for disposal will be refused.

An area will be set aside where incoming waste can be isolated and inspected prior to accepting it for disposal. Landfill personnel will be trained to conduct visual inspections to identify unacceptable or potentially regulated waste. Landfill attendants and equipment operators will observe waste as it is unloaded at the working face to identify inappropriate materials.

Random inspection of incoming loads will be performed, and a record will be kept of all inspections. Any incoming load that may have containerized, "red bag", or liquid waste will be considered a suspicious load and will immediately be isolated and inspected. The hauler will be required to identify the waste source and/or to provide documentation from the Department verifying the waste is approved for disposal at this facility.

The focus of load inspection will be on vehicles containing industrial and commercial waste. Landfill personnel will receive training in methods to detect unacceptable waste loads. Such loads would include those which may contain waste in drums or other containers not normally used for disposal, loads with DOT or other descriptive labels, loads which may contain medical waste, loads which may contain liquids, and loads which may contain soils or bags contaminated with PCB's or other hazardous material. Any unidentified waste suspected of containing hazardous materials will be handled and stored as hazardous waste until proven otherwise.

Prior to disposing of waste at the Landfill, haulers who regularly collect waste for disposal at the Landfill will be identified. Incoming waste from a hauler not identified, will be inspected and the hauler will be asked to identify the source of the waste before it is accepted for disposal.

Landfill personnel will be instructed in waste inspection, handling, and safety procedures. Unacceptable waste will be refused. Only waste collected within the designated service area of the facility will be accepted. The Department will be immediately notified of any waste found to contain hazardous waste, untreated medical waste, PCB's or other regulated waste and a record of the action will be placed in the operating record.

4.3.5 Recording of Waste Accepted

Each load of waste accepted for disposal will be recorded to show the type of waste (household, commercial, industrial), the volume, the date and time the waste was received, a contact person (current name, address, and telephone number of the transporter or collector), and the identity of the hauler (name of firm, driver, vehicle i.d., etc.). Waste volumes will be measured by the cubic yard.

4.4 SITE INFRASTRUCTURE

4.4.1 Control Points

A coordinate system has been established for the site. The coordinate location of improvements is shown on permit drawings. Horizontal and vertical control points will be set on the ground for construction of the facility. Sufficient control points will be maintained throughout the life of the facility in order to provide accurate construction of the facility in accordance with the permit drawings.

4.4.2 Permanent Boundary Markers

The property boundary is identified by permanent iron markers set at property corners. Posts, fencing and other permanent boundary markers, which are intervisible from one point to the next, will be set at intermediate points along the boundary so that the property limits may be easily identified. A boundary plat and legal description is included in the Permit Drawings.

4.4.3 Open Burning

No burning of waste will be permitted at the Landfill. Burning may be permitted for construction purposes, such as the clearing of trees, stumps, and brush. All such burning will be at least two hundred (200') feet away from the disposal unit. No burning will be allowed on previously filled areas. All burning will be in accordance with regulations and a burn permit will be secured prior to the act.

Ash and residue from such burning will be placed in the waste disposal area when all danger of the waste being "hot" has passed. Large stumps may smolder for long periods and every precaution will be taken to assure no danger of fire exists when disposing of this residue.

4.4.4 Buffer Zones

An area, at least one hundred (100') feet in width, around the perimeter of the site, is designated as the perimeter buffer zone. Additional buffer areas are provided around the flood plain near the northwest corner of the site and along the drainage channel which transects the central portion of the site. No waste will be disposed of within the buffer zones. Roads, drainage structures, personnel facilities, equipment facilities, and other landfill appurtenances may be located within the perimeter buffer zone. The buffer areas will be cleared as needed to construct improvements. Landscaping or berms may be placed within the buffer to provide a visual barrier between the waste disposal unit and adjacent land.

Vegetation will be maintained throughout the buffer zone. Hay bales and/or silt fences will be used as needed to prevent off-site siltation from clearing, excavating or stockpiling activities. Any buffer areas disturbed will be revegetated to prevent erosion.

4.5 LANDFILL MANAGEMENT

4.5.1 Supervision and Personnel

4.5.1.1 Supervision of Operations

Baldwin County SWDA will be responsible for all Landfill operations. A Landfill Manager will supervise daily operations of the facility. The Department will be advised of the name and telephone number of the Landfill Manager and any subsequent changes in the position that may occur.

The Landfill Manager will direct operations in such a manner that no health, nuisance or aesthetic problems result. It will be the Manager's responsibility to ensure that operations are performed in accordance with procedures outlined in this operational plan and in related plans, documents and regulations referenced herein.

4.5.1.2 Adequate Personnel

Landfill management will provide adequate personnel to operate the facility in accordance with the procedures described herein. The number of personnel will vary in proportion to the amount of waste received at the facility. Minimum personnel on duty at the facility will include a gate attendant and an equipment operator.

4.5.1.3 Personnel Training

Landfill management will provide adequate training for all facility personnel so that they may properly and safely perform their job in accordance with the procedures described herein. Records of training received by landfill employees will be placed in the operating record.

4.5.1.4 Personnel Facilities

An office facility will be provided for landfill employees. The facility will be located on-site and will include safe drinking water, sanitary handwashing and toilet facilities. Copies of landfill permit documents, plus other pertinent operating records, will be kept within the facility. The building will be appropriately located and properly vented to eliminate the possibility of landfill gas accumulation.

4.5.2 Equipment and Maintenance

Equipment used to operate the facility will depend on the volume of waste received and will vary throughout the life of the site. Minimum equipment dedicated to landfill use will be a track mounted front-end loader or similar type of equipment, which is capable of spreading waste and cover material, performing minor excavation, and is of adequate size and durability to compact materials as specified herein.

It is not planned to keep equipment on-site for major clearing and excavation of cells or for back-up. County landfill and construction equipment for this work will be brought in as needed. Additional or substitute equipment from County resources will be provided to assure sufficient equipment is available to properly operate the facility and handle the volume of waste received.

Equipment used at MacBride Landfill will require regular maintenance. Routine preventative maintenance will be performed in accordance with accepted County maintenance procedures. It is not planned that major equipment maintenance will be conducted at this facility unless a maintenance facility with flooring is constructed for this purpose. However, routine and emergency maintenance procedures will take place.

When performing equipment maintenance on-site, appropriate measures will be taken to prevent the loss of fluids, oil, grease, gasoline, etc., that could contaminate soils, groundwater or storm water run-off. Such measures will include the placement of visqueen or other impermeable material to contain fluids; the use of absorptive materials to collect spills; the construction of berms to prevent rainwater from running onto the maintenance area; or similar measures. Any potentially contaminated material, or soils contaminated by fluids generated during maintenance activities, will be properly disposed of.

4.5.3 Communications

A telephone will be located in the office facility. Emergency numbers will be posted where they are readily available from the telephone. The Department will be given the telephone number at the facility and will be advised of any subsequent change of the number. Two-way radios may be used on-site to facilitate communications between the office and operators.

4.5.4 Hours of Operation

The hours of facility operation will be set by landfill management. Landfill personnel may be on duty for additional periods to prepare the facility for receipt of waste and to properly close the site after the daily operations.

Standard hours the facility will receive waste will be:

8:00 am to 4:30 pm Monday through Friday

8:00 am to 12:00 pm Saturday

Standard holidays proposed for the facility are:

New Years Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day

The hours for disposal of waste may be adjusted by landfill management to meet the needs of haulers, to respond to emergencies, or other special conditions. A landfill attendant will be on duty during all hours of operation. The standard hours and days the facility is open to the public will be posted at the landfill entrance. The Department will be advised of any change in operating hours.

4.5.5 Accident Prevention and Safety

All landfill employees will be instructed in proper operating and emergency procedures. An adequate inventory of first aid supplies will be maintained at the site. The landfill manager will be capable of administering elementary first aid. Emergency phone numbers will be readily available in the office facility.

Personnel working on a landfill should be made aware that gas emitted from a landfill is potentially explosive and can asphyxiate a person. Gas dispersed into the atmosphere generally poses little threat. However, safety precautions are needed when working around enclosed areas such as pipes, inlets, structures, etc.. Workers should not enter an enclosed space without checking for methane gas and/or wearing a safety harness and have another person standing by to pull him or her to safety. Contained breathing apparatus is advisable when working in conditions where concentrations of gas may be found smoking, sparks or flames should be avoided.

4.6 UNLOADING AND TRAFFIC CONTROL

4.6.1 Traffic Flow and Parking

The office facility will be located near the landfill entrance. All vehicles transporting waste for disposal will stop at the office facility upon entering the landfill. Sufficient area will be provided to allow space for several vehicles to park near the office facility without impeding the flow of traffic.

After the waste has been accepted for disposal, landfill personnel will direct vehicles to the proper disposal area and be responsible for orderly traffic flow. Directional signs, barricades, speed limits or other signals will be posted as needed to assure a safe and orderly flow of traffic.

4.6.2 Working Face

The active working face of the Landfill will be confined to as small an area as possible and coordinated with spreading and compacting operations. The systematic placement of refuse will reduce work, minimize scattering of refuse, and expedite unloading of collection vehicles.

Waste which requires special handling may be directed to an alternate disposal area, away from the primary working face. This would include waste which requires immediate covering such as materials which could easily become airborne, bulk waste, or loads which contain quantities of recyclable materials which can be salvaged.

Special handling needs will be determined as the waste is accepted for disposal and landfill personnel will direct haul vehicles to the proper disposal area.

4.6.3 *Wet Weather Operations*

Except for extreme conditions, landfilling will continue during wet weather. A designated wet weather working face or wet weather haul roads may be provided when direct access to the primary working face is not practical. Landfill personnel will direct vehicles to such disposal areas as needed.

4.7 COVER AND COMPACTION

4.7.1 *Weekly Cover*

Subsurface investigation of the site indicated that on-site soils are suitable for cover material.

All waste will be covered at the conclusion of each week's operation, Friday. The significant function of cover material is to control disease vectors, litter, fire, and moisture in the waste. On-site soil will be used for cover material. Any use of alternative material for cover will be approved by the Department prior to use.

Soil cover will be placed over all exposed waste, spread, and compacted to a minimum depth of six (6") inches. Additional cover material will be placed over waste in the event there are any odor, vector, litter, fire, or erosion problems.

The cover material will be graded to prevent ponding or erosion. Grading of cover should be compatible with the general drainage design of the area and should direct water flow away from the working face.

4.7.2 *Alternate Weekly Cover*

MacBride Landfill has been approved by ADEM for use of a shredded green waste/soil mixture used in conjunction to achieve the weekly cover in the C/D Disposal Area. The proposed mixture shall be achieved using shredded green waste with on-site soil with the mixture consisting of at least 50% daily soil material by volume. The alternate cover may be pre-mixed by incorporating a "windrow" method consisting of mixing the proposed soil and green waste at the working face, with the mixture containing at least 50% soil by volume. This mixing will be achieved using a dozer prior to placement on the working face. The material mixing will be completed by placing a windrow of shredded green waste adjacent to a windrow of soil cover material and making multiple passes through the material with the dozer. After achieving a blend of at least 50% soil by volume the alternate cover will be used to cover the working face following the conclusion of each week's operations, Friday. At the conclusion of each month's operations, a minimum of six inches of compacted earth will be added.

4.7.3 *Intermediate Cover*

The function of intermediate cover is generally the same as daily cover but includes possible service as a road base and stabilizes an area for a longer period of time. On-site soils will be used for intermediate cover and will be applied in the same manner as weekly soil cover to a minimum compacted depth of one (1') foot.

Areas that have not actively received waste for three (3) months will be covered with intermediate cover within thirty (30) days. The cover will be graded to prevent erosion or ponding of surface water and prepared for the establishment of a vegetative cover. It is not necessary to place topsoil over intermediate cover, however, the area should be fertilized, mulched, and seeded to establish a vegetative cover sufficient to prevent erosion.

Periodic grading and compacting may be necessary to repair cracks or depressions that develop because of moisture loss and settlement of the fill. Periodic inspection and maintenance, at least twice a year, of the intermediate cover will be performed in order to assure proper functioning of the cover.

4.7.4 *Final Cover*

The final cover of MacBride Landfill will consist of an infiltration layer and an erosion layer. The infiltration layer will consist of soil cover which has a permeability no greater than 1×10^{-5} . The low permeability of the soil cover will reduce the infiltration of storm water into the waste, provide slope stability and provide an adequate base for the erosion layer. The soil cover will consist of eighteen (18") inches of soil, compacted in six (6") inch lifts. The erosion layer will consist of six (6") inches of compacted topsoil or enriched soil capable of supporting vegetation.

Permanent vegetation will be planted over the entire landfill. The vegetation selected will not have roots capable of penetrating the infiltration layer, will have ample density to minimize soil erosion, and will be sufficiently self-supportive to survive and function with little or no maintenance.

Maximum final grades on the land fill will be twenty-five (25%) percent and minimum grades will be live (5%) percent. Details of the final cover design and final and fill grades are shown on the permit drawings.

4.7.5 *Fill and Compaction Plans*

The sequence of filling is shown in the permit drawings. Clearing will be performed on those areas designated to be excavated or areas used to stockpile cover material. Natural vegetation that does not interfere with construction activities will be left undisturbed. Excavation of cells will conform to the sequence of operations as set forth.

A landfill attendant will direct unloading of waste at the working face in a manner to achieve the most advantageous mixture of materials practical in order to obtain optimum compaction of waste. Loads containing lumber, large limbs or other bulk waste that is not highly

compactable, may be placed to one side of the working face. This waste can later be thoroughly crushed and incorporated into the working face. This mixture of waste materials allows for better compaction and filling of voids.

The waste will be mixed and spread over the working face in layers approximately two (2) feet deep and compacted on a daily basis. Additional waste or cover material may then be placed over the compacted waste. The slope of the working face will not be so steep as to inhibit proper compaction of the waste. In general, it will not exceed 20° or 30°.

4.8 ENVIRONMENTAL AND SAFETY MEASURES

4.8.1 Fire Protection

Fire protection for the MacBride Landfill area is provided by the Volunteer Fire Department. Emergency fire extinguishers will be located within the office facility as well as on each major piece of landfill equipment. The telephone number of the Volunteer Fire Department will be included on the list of emergency numbers maintained in the Landfill office.

Landfill personnel will be trained in fire prevention and protection procedures appropriate to a landfill. Such measures include isolation of "hot loads" and use of soil to smother the fire.

4.8.2 Salvaging/Scavenging

No scavenging will be allowed at the Landfill and no salvaging will be allowed at the working face. Loads containing recyclable materials may be deposited in designated areas of the Land fill for separation and/or storage until such time as the material can be salvaged for recycling.

4.8.3 Odor Control

Due to the nature of waste accepted, it is not anticipated that odor will be significant problem at MacBride Landfill. However, in the event odor problems should occur the and fill manager should determine the source. Odors occurring from waste loads or decomposition of waste will be controlled by placement of additional soil cover. Odors emanating from cracks or other sources will need further investigation. In the event an odor problem occurs, the landfill manager will be responsible for evaluating the source and taking action appropriate to correct the problem.

4.8.4 Dust Control

If necessary, dust raised by traffic will be controlled by wetting roads with water or other acceptable means. Dust generated from stockpiled soils or excavation activities should be minimized by planting temporary vegetation.

As filling above natural ground, maintaining a small working face and prompt placement of cover/vegetation will help to control dust.

4.8.5 Vector Control

Vectors will be controlled by placement of cover and through proper operating practices. In the event a vector problem should occur, it will be the responsibility of the landfill manager to take appropriate measures, such as placement of additional cover or use of a professional exterminator, to control vectors. The Department will be notified of any vector problem and the action taken.

4.8.6 Litter Control

Blowing litter will be kept to a minimum by maintaining a small working face and properly compacting and covering the waste. Litter will be picked up regularly in normal housekeeping activities.

Certain loads of waste are more susceptible to becoming airborne than others. Such loads will be promptly covered with soil or other waste to minimize conditions that generate excessive litter.

In the event that litter problems should occur, appropriate litter barriers will be maintained around the working face or perimeter of the Landfill. Litter barriers may be constructed by using rows of natural materials, such as limbs or brush, or with temporary fencing or screening. As filling progresses above natural ground, it may be necessary to install relatively permanent fencing in some areas to control litter.

The site, and roadway near the entrance to the site, will be policed regularly to pick up litter.

4.9 EMERGENCY AND SPECIAL WASTE HANDLING

4.9.1 Spill Prevention Control and Countermeasures

An above ground tank for storing diesel fuel will be located on-site. All tank valves and containment area valves will remain closed and locked except when in use. A landfill attendant, who is familiar with proper operating procedures and these spill prevention and control measures, will be on duty to unlock valves and will remain on duty to oversee procedures.

A containment area will be constructed around the tanks. It will provide containment that exceeds the total storage volume of the tanks by ten (10%) percent, plus contains storm water from a twenty-five (25) year, twenty-four (24) hour storm event. The containment area will be lined with synthetic liner material or compacted clay. Storm water that collects in the containment areas will be drained by the use of manual valves or pumps. In the event of a spill from either tank, it will be the priority of landfill equipment and personnel to be available to take expeditious action to protect human health and the environment. Alabama Department of Environmental Management should be called to report the spill. The telephone number will be on the list of emergency numbers maintained in the Landfill office.

In filling the diesel tanks, unloading of transport vehicles will meet minimum guidelines and regulations required by the Alabama Department of Transportation. A landfill attendant will make periodic inspections of the unloading and fueling area, tanks, tank supports, hoses, containment berms and yelping to detect signs of minor spills or leakage. If deficiencies are noted, appropriate action will be taken to immediately correct the cause and clean up the area.

Should a diesel fuel spill occur, no material contaminated by the fuel will be disposed of in MacBride Landfill. Absorbent material will be used to collect unusable fuel, or it will be pumped to a transport vehicle and taken to a permitted facility for disposal. Contaminated soil and other materials will be excavated and will be taken to a facility permitted to handle the waste. After all contamination has been removed, the containment area will be reconstructed in accordance with permit drawings and measures will be implemented to prevent recurrence.

A written report will be made of any spill which occurs. The report will include a description of the spill, the cleanup procedures used, identification of the disposal site(s) used for contaminated material, an account of action taken to rebuild the containment area, plans for preventing a recurrence, and any other information pertinent to the event. The written report will be placed in the operating record and a copy of the report will be submitted to the Department.

4.9.2 Special Waste Handling

Vehicles which contain waste which requires special handling will be identified as it is received at the facility and accepted for disposal. For the purposes of this discussion, special waste will include recyclables, bulk waste or waste that could easily become airborne.

Tires, white goods, metals and other materials that may be separated from the waste stream to be recycled will be directed to an area set aside to store such materials until they can be recovered. Bulk waste may be directed to be placed in an area near the working face until it can be incorporated into the active disposal area.

Material that could easily be blown by the wind and become airborne, will be directed to an area where it can be promptly covered with soil or other waste. Such materials could be containerized for transport. The waste may be removed from the containers for disposal and the containers reused if such removal poses no hazard to landfill personnel or operations.

4.9.3 Emergency Response

Landfill attendants will be instructed in procedures to follow in the event of an emergency. A list of emergency telephone numbers will be kept current and placed where it is easily accessible in the office facility.

To the extent possible, MacBride Landfill will respond to community needs in the event of a natural disaster such as a tornado or hurricane, which requires rapid disposal of large volumes of material. The hours of operation may be extended, as appropriate, to respond to a disaster. The landfill attendants will direct waste disposal operations in as orderly a means as practical. Permission may be given by the Department to burn clean-up debris resulting from a catastrophic event. However, no burning of debris at the Landfill will be permitted without prior approval of the Department and other appropriate agencies. The location of burn activities should be consistent with those outlined herein.

4.9.4 Leachate Management

Due to the characteristics of waste disposed of at this facility, no leachate collection system is planned. A minimum five (5') foot vertical separation between waste and groundwater will be maintained.

4.10 RECORD KEEPING AND REPORTING

4.10.1 Operating Record

A permanent operating record of MacBride Landfill will be maintained. It will contain data pertinent to siting, permitting, operating, closure and post-closure of the facility. The purpose of the record is to demonstrate compliance with regulations and to perpetuate an historical account of MacBride Landfill operations. It will be retained at the offices of Baldwin County SWDA Environmental Department. Current records, of the preceding three (3) years, will be kept at the office facility located on the site. The operating record will be available for inspection by the Department at all reasonable times.

Regulations require the Department be notified when documents are placed in the record. The permit application, and all supporting documentation included as attachments to the application, will be placed in the permanent operating record. Submittal of the permit application to the Department will serve as notification that these documents have been placed in the operating record.

This section summarizes the documents and records that will be placed in the permanent operating record of MacBride Landfill. Specific details of the reporting requirements are discussed in appropriate sections herein. The Department will be notified of any amendment, attachment or addition placed in the operating record.

4.10.2 Solid Waste Reports

4.10.2.1 Waste Volume Reports

Daily records will be kept of all waste accepted at the Landfill for disposal in accordance with the applicable sections herein. The landfill manager will be responsible for compiling and submitting a quarterly volume report to the Department. Currently, a report is due on the 15th day of the month following quarters ending in March, June, September, and December.

Volumes will be expressed in cubic yards and calculated on the actual number of days in the reporting period.

4.10.2.2 Water Inspection Reports

A record will be kept of waste load inspections conducted at the Landfill. If regulated hazardous waste or PCB waste is discovered, the Department will be notified, and a record of the inspection will be placed in the operating record. Details of the reporting requirements are discussed in herein.

4.10.2.3 Industrial Waste Certification

Copies of current written certification of approval from the Department to allow disposal of a specific industrial waste at MacBride Landfill will be placed in the operating record and kept in the Landfill office. No industrial waste will be accepted unless Department approval is on file.

4.10.3 Environmental Monitoring Records

4.10.3.1 Explosive Gas Monitoring Reports

Explosive gas monitoring will be conducted at the facility a minimum of once each year. Gas monitoring results will be placed in the operating record and the Department will be notified. Additional requirements of gas monitoring records are discussed in Section 5 herein.

4.10.3.2 Construction Documentation

Construction of the Landfill will be in accordance with the permit documents included as attachments to the permit application. Subsequent to construction of the landfill unit, the Department will be requested to inspect the facility and to grant approval for beginning operations. A copy of written approval from the Department will be placed in the operating record.

4.10.3.3 Storm Water Monitoring

Monitoring of storm water discharge will be conducted in accordance with NPDES permit conditions. Discharge Monitoring Reports (DMR) will be placed in the operating record and submitted to the Department in compliance with the requirements of the permit.

4.10.4 Other Records

Other documents pertinent to the facility's operations will also be placed in the record. Such items may include personnel training records, copies of variances approved by the Department, waivers, special operating conditions, etc.

5 EXPLOSIVE GAS MANAGEMENT PLAN

EXPLOSIVE GAS MONITORING PLAN

MACBRIDE LANDFILL

26941 MACBRIDE ROAD
LOXLEY, BALDWIN COUNTY, ALABAMA

Prepared for:

Baldwin County Solid Waste Disposal Authority
15093 Landfill Drive
Summerdale, Alabama 36580

Prepared by:

CDG, Inc.
11 Court Square
Andalusia, Alabama 36420

CDG Project Number: R079323001

May 24, 2024



Engineering. Environmental. Answers.

1.0 Purpose of Explosive Gas Monitoring Plan

The generation of explosive gases, especially methane (CH₄) can occur when organic wastes at the landfill decompose. Landfill gas migration can result in vegetation damage (i.e. landfill cover vegetation) and can even result in explosions if concentrations exceed 5%. Explosive gas monitoring stations are located at the facility for monitoring explosive gas levels as required by ADEM.

The gas monitoring stations are passive points that rely on natural processes to vent the gasses into the atmosphere. This system may be adapted into an active extraction system by installing blowers to withdraw gas from the landfill. If no changes have occurred, then the plan shall be reviewed and recertified every **five (5)** years and documented.

2.0 FACILITY OWNER AND OPERATOR INFORMATION

2.1 Facility Owner

Baldwin County Solid Waste Disposal Authority
15093 Landfill Drive
Summerdale, Alabama 36580
Office: (251) 972-6878

2.2 Name and Location of Facility

MacBride C/D Landfill
26941 McBride Road
Loxley, AL 36551

2.3 Designated Person Responsible for Spill Prevention

Terri Graham, CEO
Baldwin County Solid Waste Disposal Authority
Office: (251) 972-6878
15093 Landfill Drive
Summerdale, Alabama 36580

3.0 FACILITY DESCRIPTION

MacBride Landfill is located in a rural area at 26941 McBride Road, Loxley, Baldwin County, Alabama. The site is comprised of approximately 192.6 acres of land, with 88.8 acres of land designated for disposal operations. The landfill is bordered by residential properties and undeveloped land. The site includes multiple office and maintenance buildings, which are utilized in the daily operations of the MacBride Landfill. The property was formerly undeveloped land.

The waste stream for the MacBride Landfill is only permitted for non-hazardous construction and demolition wastes. The service is Baldwin County, Alabama only and is only able to receive 500 tons of waste per day.

4.0 Landfill Explosive Gas Monitoring

The explosive gas monitoring stations installed at the facility shall be monitored for methane gas levels in accordance with ADEM requirements and this explosive gas monitoring plan.

4.1. Explosive Gas Monitoring Procedures

Permanent explosive gas monitoring stations are located along the landfill property boundary as shown in **Figure 1**. The monitoring stations were installed no more than 300 feet apart, and no more than 100 feet apart in areas where a dwelling is within 1000 feet of the landfill property boundary. In addition to the monitoring stations, other monitoring locations shall include on-site structures, culverts, drop inlets, and other locations which are conducive to gas accumulation. Bar hole punch locations will be completed in areas where the permanent gas monitoring stations are too far apart. A minimum depth of six feet must be obtained for permanent monitoring structures and four feet when using the bar hole punch method.

Monitoring will be conducted at the facility on an annual basis in accordance with the Alabama Department of Environmental Management (ADEM) Administrative code 335-13-4-.16 and Solid Waste Disposal Permit Number 02-11. The collection of explosive gas measurements will be recorded using a Landtec GEM™5000 gas analyzer (or similar portable gas detection instrument) at in each permanent

explosive gas stations. The instrument will be used in accordance with the manufacturer's recommendations, to detect the methane gas concentrations in each monitoring station at the facility. The instrument will be allowed to remain in the gas monitoring port for approximately 45-seconds to obtain a reading for the percent Lower Explosive Limit (LEL) and the percent gas. The instrument will be calibrated prior to use at the landfill.

4.2 Explosive Gas Reporting Plan and Interpretation of Data

The levels of gas detected in each well and any other monitoring stations shall be expressed in percent methane by volume and percent of Lower Explosive Limit (LEL) on the Explosive Gas Monitoring Report. Copies of the monitoring report shall be submitted to ADEM and placed in the Operating Record of the facility within 30 days of the monitoring event.

The Lower Explosive Limit (LEL) of methane is 5% by volume. Explosive gas levels should not exceed the lower explosive limit at the facility boundary and should not exceed 25 percent of the lower explosive limit in facility structures.

If the explosive gas levels at the facility exceed the respective limits, the Landfill Operator shall immediately take necessary steps to ensure the protection of human health and property and shall immediately notify ADEM of the exceeded limits.

4.3 Remediation Plan

Should explosive gas levels exceed the Lower Explosive Limit at any point along the property boundary or twenty five percent around or inside any facility structure, the interval of testing shall be increased to monthly. Should concentrations continue above the established limits, then testing should be increased to weekly or daily to detect dangerous levels of combustible gas. Within 7 days of detection, the Landfill Operator shall place in the Operating Record, the explosive gas levels detected, and the immediate steps taken to protect human health and property.

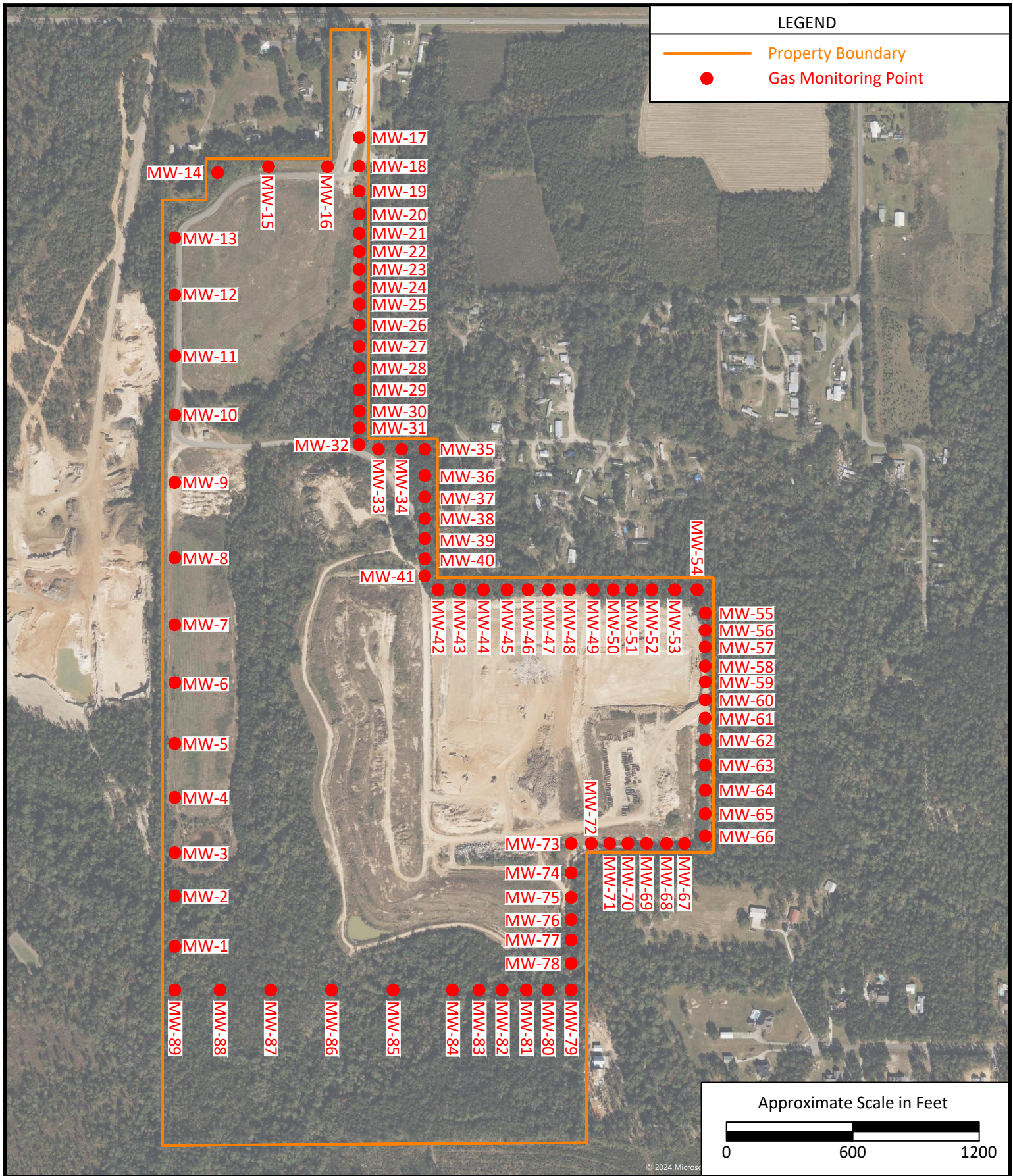
Within 20 days of detection, the Landfill Operator shall submit to ADEM for approval a remedial plan for the explosive gas releases. This plan shall describe the nature and extent of the problem and the proposed remedy. The plan shall be

implemented upon approval by ADEM within 60 days of detection. Within this 60-day period, a copy of the plan shall be placed in the Operating Record and ADEM shall be notified of the plan's implementation.

If the explosive gas levels at the facility exceed the respective limits, the Landfill Operator shall immediately take necessary steps to ensure the protection of human health and property. Specifically, the Landfill Operator shall:

1. Notify ADEM's Solid Waste Branch of the excessive levels and follow any procedures deemed necessary by the Department,
2. Immediately perform explosive gas monitoring in and around nearby residences, and structures which are conducive to gas accumulation,
3. Notify the Loxley Fire Department of the excessive levels

FIGURE



Gas Monitoring Location Map

MacBride Landfill
 26941 McBride Road
 Loxley, Baldwin County, Alabama



MONITORING TABLE

**MacBride C/D Landfill
Explosive Gas Monitoring**

Monitoring Date: _____ Sampler Name: _____ Signature: _____

MONITORING POINT	SAMPLE ID	MONITORING POINT TYPE	TIME	% LOWER EXPLOSIVE LIMIT	% GAS
1	MW-1	Bar Hole			
2	MW-2	Bar Hole			
3	MW-3	Bar Hole			
4	MW-4	Bar Hole			
5	MW-5	Bar Hole			
6	MW-6	Bar Hole			
7	MW-7	Bar Hole			
8	MW-8	Bar Hole			
9	MW-9	Bar Hole			
10	MW-10	Bar Hole			
11	MW-11	Bar Hole			
12	MW-12	Bar Hole			
13	MW-13	Bar Hole			
14	MW-14	Bar Hole			
15	MW-15	Bar Hole			
16	MW-16	Bar Hole			
17	MW-17	Bar Hole			
18	MW-18	Bar Hole			
19	MW-19	Bar Hole			
20	MW-20	Bar Hole			
21	MW-21	Bar Hole			
22	MW-22	Bar Hole			
23	MW-23	Bar Hole			
24	MW-24	Bar Hole			
25	MW-25	Bar Hole			
26	MW-26	Bar Hole			
27	MW-27	Bar Hole			
28	MW-28	Bar Hole			
29	MW-29	Bar Hole			
30	MW-30	Bar Hole			
31	MW-31	Bar Hole			
32	MW-32	Bar Hole			
33	MW-33	Bar Hole			
34	MW-34	Bar Hole			
35	MW-35	Bar Hole			
36	MW-36	Bar Hole			
37	MW-37	Bar Hole			
38	MW-38	Bar Hole			
39	MW-39	Bar Hole			

MONITORING POINT	SAMPLE ID	MONITORING POINT TYPE	TIME	% LOWER EXPLOSIVE LIMIT	% GAS
40	MW-40	Bar Hole			
41	MW-41	Bar Hole			
42	MW-42	Bar Hole			
43	MW-43	Bar Hole			
44	MW-44	Bar Hole			
45	MW-45	Bar Hole			
46	MW-46	Bar Hole			
47	MW-47	Bar Hole			
48	MW-48	Bar Hole			
49	MW-49	Bar Hole			
50	MW-50	Bar Hole			
51	MW-51	Bar Hole			
52	MW-52	Bar Hole			
53	MW-53	Bar Hole			
54	MW-54	Bar Hole			
55	MW-55	Bar Hole			
56	MW-56	Bar Hole			
57	MW-57	Bar Hole			
58	MW-58	Bar Hole			
59	MW-59	Bar Hole			
60	MW-60	Bar Hole			
61	MW-61	Bar Hole			
62	MW-62	Bar Hole			
63	MW-63	Bar Hole			
64	MW-64	Bar Hole			
65	MW-65	Bar Hole			
66	MW-66	Bar Hole			
67	MW-67	Bar Hole			
68	MW-68	Bar Hole			
69	MW-69	Bar Hole			
70	MW-70	Bar Hole			
71	MW-71	Bar Hole			
72	MW-72	Bar Hole			
73	MW-73	Bar Hole			
74	MW-74	Bar Hole			
75	MW-75	Bar Hole			
76	MW-76	Bar Hole			
77	MW-77	Bar Hole			
78	MW-78	Bar Hole			
79	MW-79	Bar Hole			
80	MW-80	Bar Hole			
81	MW-81	Bar Hole			
82	MW-82	Bar Hole			
83	MW-83	Bar Hole			
84	MW-84	Bar Hole			
85	MW-85	Bar Hole			
86	MW-86	Bar Hole			
87	MW-87	Bar Hole			
88	MW-88	Bar Hole			
89	MW-89	Bar Hole			
90	Small Metal Building	Bar Hole			
91	Scale House	Bar Hole			
92	Maintenance Building	Bar Hole			

6 BEST MANAGEMENT PRACTICES PLAN

6.1 GENERAL

Permanent drainage structures of MacBride Landfill are designed to protect water quality by controlling detrimental effects from storm water run-off. However, in addition to these permanent control structures, interim measures to protect water quality must be used during the active life of the facility. The measures described herein comprise best management practices (BMP) that will be used during construction and operation of the facility. The practices discussed address sediment and erosion control, good housekeeping and storm water management.

It is the nature of a landfill for active areas to constantly change location throughout the life of the facility. Therefore, no attempt can be made to locate the exact area in which a BMP should be implemented nor to define which BMP is applicable to a given situation. This plan outlines standard practices which have been shown to be effective in controlling adverse environmental impacts from land disturbing activities. The intent of this plan is to provide information on control measures that will be employed in managing the landfill. The landfill manager will be responsible for the day to day implementation of the BMP plan.

6.2 CRITICAL AREAS

The critical areas for controlling detrimental impacts from storm water are on long, steep slopes, areas with highly erodible soils, and areas where storm water could come in contact with the waste. It is not only important to protect offsite areas from degradation which could be caused by runoff; it is equally important to protect the integrity of landfill containment system.

Each working day and after a heavy rain, the facility will be inspected to ensure that BMPs are continually implemented and are effective. Such inspections will include an investigation of all structures that function to prevent storm water pollution or to remove pollutants from storm water.

6.3 SEDIMENT AND EROSION CONTROL

6.3.1 Vegetation

Sediment and erosion are best controlled at the source and vegetation is the most effective means of protection. It dissipates a large portion of the energy of rain as it falls on the ground surface; it slows and reduces runoff; roots help hold soil in place; and it tends to trap sediment. Temporary or permanent vegetation should be established at the earliest opportunity on all exposed surfaces. This may even include stockpiles of soil that will not be used for long periods of time. Management practices should minimize the area and time period during which bare soil will be exposed. Vegetation in buffers or other undisturbed areas should be protected.

Areas to be seeded should be sufficiently compacted to prevent erosion of the soil and disked, as needed, to assist in germination.

A temporary seed mix should be used in areas that will be exposed for more than a few months. More permanent seeds should be mixed with temporary seeds if areas will be exposed for longer periods. Mulch is often needed on steep slopes. It will reduce runoff, allow more water to infiltrate into the soil and help hold seed in place. Fertilizer or lime may be needed to assure germination and establish vegetation. These should be used in accordance with manufacturer's instructions and State and federal regulations

6.3.2 Control Structures

The facility is designed so that permanent ditches, terraces, inlets and pipes will intercept storm water from disturbed areas. These structures will convey storm water to ponds where sediment will settle out before water is released into natural drainage channels to flow off-site. Landfill construction should not interfere with the control characteristics of the permanent drainage structures. Temporary diversion devices should be compatible with the overall drainage system of the site.

6.4 TYPICAL PRACTICES

6.4.1 Temporary Ditch Pipes

If a temporary haul road or other barrier will obstruct a ditch, measures should be taken to assure that water flow will not be interrupted. A pipe may be laid in the ditch and the haul road built up over the pipe. The pipe must be sized to accommodate the calculated flow. As the location of the haul roads change, pipes may be removed and reused at other locations. Pipes may also be used to provide a positive drain outlet from temporary berms or diversion ditches.

6.4.2 Temporary Diversion Berms

Earthen berms may be constructed at the top of slopes to divert the water away from the slope. This can be accomplished by using a dozer to move soil up the slope, depositing it at the crest to form a ridge, and compacting the soil. Water behind the berm must have a positive outlet with run-off diverted to the overall drainage system of the facility.

6.4.3 Sediment Controls

Hay bales, silt fence, rock checks or other sediment control devices will be used to minimize silt washing into pipes, ditches, or ponds. Details of hay bale or silt fence installation are found in the permit drawings. Such barriers must be carefully placed so they will trap silt and not interfere with construction or water flow. Sediment must be removed on a regular basis to maintain function.

6.4.4 Temporary Energy Dissipators

The velocity of run-off down steep drainage channels can cause scouring and erosion problems. Sandbags, rip rap, gabions or similar materials can be used to dissipate the energy of the water flow. They should be firmly anchored in a stable area at the toe of the slope and may also be placed along the entire length of a slope in a manner that will reduce the speed of the water.

6.4.5 Temporary Diversion Ditches

Temporary ditches can be excavated to intercept water that would run onto slopes, into cells, roads or other areas where it needs to be controlled. Water from temporary diversion ditches will be conveyed to an area where it can be handled by the permanent drainage system. Diversion ditches that could collect large amounts of sediment, should be compacted, vegetated, lined, or otherwise constructed to trap sediment and control erosion.

6.4.6 Temporary Haul Roads

Roads on a landfill must be sufficiently stabilized to allow all weather traffic. Such roadway stabilization will also reduce on-site erosion. Wherever possible, swales should be constructed along the shoulder to control runoff from the roadway. The roadways should be cross sloped to drain into the swales. Sediment collecting in the swales must be removed on a regular basis. Side slopes will be seeded.

6.5 GOOD HOUSEKEEPING

BMPs should also include measures to minimize the transport of pollutants other than sediment. Such materials as pesticides and fertilizers should be applied using proper techniques. Manufacturer's instructions and State and federal regulations should be strictly adhered to when using these materials

Storm water will not be allowed to flow through a vehicle maintenance area. Used oils and other fluids will be collected in containers and disposed of in an approved manner. Paper, rags and other material which have come into contact with fluids will be disposed of in a facility permitted to handle this waste.

Measures will be taken to control litter that could be washed into run-off waters. On-site litter will be picked up on a regular basis and wind screens will be used to minimize blowing litter. Sedimentation ponds are designed to allow water release through a control structure.

6.6 STORM WATER OUTFALL

The storm water system of MacBride Landfill is designed to control run-off from a twenty-five (25) year, twenty-four (24) hour storm event. Water from all disturbed areas will be intercepted by permanent control structures and collected in ponds. In addition to their design capacity, the ponds will have three (3') feet of freeboard. Sediment and debris in the run-off which collects in the bottom of the ponds will be removed when it has accumulated to within eighteen (18")

inches of the lowest openings of the outfall structures. Outfall structures are designed to overflow in a storm event exceeding a twenty-five (25) year storm. Discharge from the ponds will be monitored in accordance with NPDES permit requirements.

7 CLOSURE & POST-CLOSURE PLAN

7.1 CLOSURE PLAN

7.1.1 Closure Sequence

Placement of final cover, construction of drainage structures, and establishing a vegetative cover will be accomplished as each phase reaches final grade. The sequence of operation is shown on the permit drawings.

7.1.2 Final Closure

Upon completion of filling operations, all areas not properly closed will be constructed to final closure requirements as described herein and shown on the permit drawings. Final closure will also be initiated if no more waste will be received or if waste will not be received for a period longer than one (1) year. A notice of intent to close the facility will be placed in the operating record and the Department will be notified. Closure activities will commence within thirty (30) days. Final grading will be completed within ninety (90) days of final receipt of waste. Within ninety (90) days of completion of final grading, final cover will be placed on the landfill unit. Appropriate species of grass or wildflower seeds, fertilizer and/or mulch will be planted in the erosion layer. The planting will be watered and maintained as necessary to establish a permanent vegetative cover.

A sign will be posted at the closed landfill clearly stating that the site is closed and giving the location of the nearest permitted disposal facility. If waste is illegally dumped at the site after closure, it will be removed and taken to an approved facility for disposal. Litter will also be removed and disposed of properly.

The proposed ultimate use of MacBride Landfill is for the site to remain as a "green area". Post-closure use of the property will not disturb the integrity or function of the final cover, drainage system, monitoring system or other component of the containment system.

7.1.3 Closure Records

Upon completion of closure construction, the permittee will request approval from the Department certifying the Landfill has been closed in accordance with regulations. Upon closure approval from the Department, the permittee of the facility will place a notation on the land deed, plat, or other legal instrument that will become part of any future transfer of the property. The notation will be prominently displayed, and the instrument will contain the following information:

- a) The land has been used for a solid waste disposal facility.
- b) Future activities on the property may not disturb the integrity or the function of the containment or monitoring systems.

- c) The location and dimensions of the disposal facility, with respect to permanently surveyed benchmarks, as prepared and sealed by a Professional Land Surveyor registered in the state of Alabama.
- d) The name of the Permittee or operating agency, the type of disposal facility, and the beginning and closure dates of disposal activities.
- e) Certification by a Professional Engineer, registered in the state of Alabama, that all closure requirements have been completed as determined necessary by the Department.

Within ninety (90) days of closure approval from the Department, the permittee or owner will record the legal instrument containing the above information in the office of Judge of Probate, Baldwin County, Alabama. A certified copy of the recorded instrument will be placed in the operating record and submitted to the Department within one hundred twenty (120) days.

7.2 POST-CLOSURE CARE PLAN

7.2.1 General Scope of Work and Maintenance Procedure

Closure of a landfill does not mean that maintenance of the site is no longer necessary. After a landfill is closed, waste that has been buried continues to decompose. This causes several processes to occur that make the site somewhat adaptable for an indefinite period. Therefore, a closed landfill needs to be inspected and maintained on a regular basis to ensure that these conditions do not impair the function of the containment system. Maintenance of the closed landfill is a long-term responsibility of the permittee.

The general requirements of a closed landfill, the associated problems, and procedures to be used to inspect and maintain the closed landfill are discussed herein. Descriptions of construction and the purpose and function of features have been provided to give a clear understanding of maintenance objectives. Personnel responsible for inspecting and maintaining the Landfill should be thoroughly familiar with these guidelines. The Department will be notified of the name, address and telephone number of the contact person responsible for post-closure care of the facility.

7.2.1.1 Landfill Cap

MacBride Landfill will be covered with a clay cap. The site will also be graded so that rainwater will run off the disposal unit and no water will stand on the surface. A vegetative cover will be established over the cap to prevent erosion and further absorb some of the rainwater. The purpose of the cap is to seal the filled area and reduce the amount of water seeping into the waste. It is important that this cap be repaired and maintained so that it continues to keep water out of the waste

Minor surface cracks and trapped pockets of water can be corrected by placing soil on the area, grading the area to provide positive drainage, compacting the soil and reseeding the area. More severe problems will need further action.

7.2.1.2 Settlement

Many different types of waste are disposed of in a landfill. As each waste decomposes, the original volume of that waste is reduced. Some waste decomposes very rapidly and undergoes a large reduction in volume. Other waste decomposes more slowly, and the volume reduction is considerably less.

As this decomposition occurs, settlement of the filled area becomes evident. Some portions of the site may settle fairly rapidly, while other areas appear relatively stable. This results in uneven (differential) settlement of the landfill surface that may cause water to pond, cracks in the surface, and can disrupt proper drainage of the site.

The entire filled area can also settle at a more uniform rate. This is referred to as subsidence and may result in the same problems as differential settlement. The majority of settlement in a landfill usually occurs in the first five (5) years after closure. If settlement is noticeable on a closed landfill, corrective action needs to be taken if any of the following conditions are occurring:

- a) Water is standing over a filled area.
- b) Storm water is not draining in accordance with the final drainage and grading plans for the site.
- c) The landfill cap is damaged.

7.2.1.3 Landfill Gases

Some permanent gas monitoring probes will be located at the facility boundary to monitor the migration of explosive gases. These structures are typically one (1") or two (2") inch PVC pipes rising two (2') to four (4') feet above ground. Care should be taken to see that these structures are not damaged during mowing or maintenance operations. Bumping into these structures with equipment can cause damage below the surface that cannot be seen. Movement in the riser section of the pipe can indicate subsurface damage. Grass control around these structures may be done by hand prior to mowing so they can be easily seen and avoided by the mowers.

7.2.1.4 Safety Practices

Personnel working on a landfill should be made aware that gas entitiled from a landfill is potentially explosive and can asphyxiate a person. Gas dispersed into the atmosphere generally poses little threat. However, safety precautions are needed when working around enclosed areas such as structures, inlets, pipes, etc. Workers should not enter an enclosed space without checking for methane gas and/or wearing a safety harness and have another person standing by to pull him or her to safety. Contained breathing apparatus is advised when working in

conditions where concentrations of gas may be found. Smoking, sparks, or flames should be avoided.

7.2.1.5 Drainage and Erosion Control

Storm water running across the landfill surface can cause erosion. The storm water runoff is controlled by the final grading and drainage plan of the site. Storm water runoff from MacBride Landfill flows to terraces, pipes, ditches and sedimentation ponds that are a part of the overall drainage system. This system has been designed to control storm water runoff and deter erosion.

Sedimentation ponds are designed to trap sediment in the bottom of the pond. This helps prevent siltation from washing off-site. The ponds have outfall structures that control the rate at which water is released. Silt that collects in the bottom of the ponds is normal and indicates that the ponds are functioning properly. However, the silt needs to be removed when it accumulates to within eighteen (18") inches of the lower openings of the inlet. Silt that is relatively dry may be placed on areas of the land fill where it is unlikely to wash away. It should be spread evenly over the surface in thin layers that will not harm vegetation, or the area should be revegetated as needed. Any debris found in the sediment should be removed prior to placing it on the Landfill.

In addition to drainage structures to direct the flow of water, the Landfill is also planted with grass or other vegetation. This vegetation is an integral part of controlling erosion. The vegetative cover should be mowed on a regular basis to maintain it and to prevent the establishment of deep rooted weeds which could penetrate the landfill cover.

The County Agent may be consulted to determine the most advantageous mowing and fertilizing schedule to maintain healthy vegetation at the site. The schedule may vary from year to year and should remain flexible to accommodate weather conditions. However, the following factors should be considered.

- a) Fertilizer needs;
- b) Mowing prior to inspection and/or monitoring;
- c) Regermination; and
- d) Prevention of grass fires

All of these elements of the site's drainage and erosion control system must be maintained in order to work properly. Minor problems such as bald spots in the vegetative cover or minor scouring of ditches or ponds can be corrected by routine maintenance. More severe problems may require further action.

7.2.1.6 Access Control

When the facility is closed, barriers to control vehicular access to the Landfill will be in place. The barriers may consist of fencing, or they may be natural barriers, such as dense vegetation.

The perimeter of the site will be inspected to assure that the site is secure from access by unauthorized vehicles. Any gap found in a perimeter barrier will be repaired.

7.2.1.7 Storm Water Monitoring

Landfill sites are required to monitor storm water leaving the site. Samples of the storm water must be collected and analyzed according to the schedule and conditions stated on the NPDES permit. Analysis must be done by a laboratory certified to perform these services.

7.2.1.8 Miscellaneous

Weeds growing along fence rows, monitoring or venting structures, drainage structures, etc., may cause no specific problems at the site. However, this condition can hinder visual inspection of the facility and make monitor structures more prone to damage; Herbicides may be used to kill weeds if the work is performed by a person certified to use such material, following manufacturer's recommended procedures.

The site will also be inspected for the presence of animal burrows which could damage the Landfill cover and conditions which could attract disease vectors.

7.2.2 General Inspection and Monitoring Procedures and Schedule

All areas of the Landfill will be inspected according to the schedule and procedures set forth herein. A written report of the site inspection, deficiencies found, and maintenance activities will be completed and kept with the facility operating records. The Department will be notified that the report has been placed in the record.

7.2.2.1 Landfill Inspection

The entire property should be walked in order to properly inspect the Landfill and locate problems that need to be addressed. It may also serve as a written report of landfill inspection and maintenance. Inspection can best be conducted shortly after mowing the site so that deficiencies are readily visible. The maintenance required should be performed subsequent to the inspection.

7.2.2.2 Inspection Schedule

For the first year after closure, a thorough inspection of the landfill will be performed monthly. In the event no unforeseeable problems are indicated after closure of the facility, the following schedule for inspecting and maintaining the facility will be followed. Additional inspections will also be conducted after major storm events.

YEAR AFTER CLOSURE	INSPECTION/ MAINTENANCE SCHEDULE
1	Monthly
2	Quarterly
3	Quarterly
4	Semi-Annual
5	Semi-Annual
6	Annually
7	Annually
8	Two Year Interval
10	Two Year Interval
12	Three Year Interval
15	Five Year Interval
20	Five Year Interval
25	Five Year Interval
30	Final Inspection

Subsequent to final inspection, an independent engineer, registered in the State of Alabama, will certify that post-closure care has been conducted in accordance with this plan. Certification will be placed in the operating record and the Department will be notified.

7.2.2.3 Environmental Monitoring

Environmental monitoring should be performed by personnel qualified to monitor and report on conditions at the Landfill. Monitoring parameters and frequencies will be contained in the permit documents. All monitoring will be performed in accordance with regulatory requirements. If after closure, a reduction in monitoring parameters or frequencies is indicated, a specific request for such reduction will be submitted to the Department for approval.

Reports to regulatory authorities must be properly signed and submitted in a format or on a form approved for such reports. The permittee is responsible for seeing that all monitoring and reporting is completed within specified time frames. Environmental monitoring reports will be placed, and the operating record and the Department will be notified.

APPENDIX A
LOCAL APPROVAL DOCUMENTS

Motion by Commissioner Allen, seconded by Commissioner Ward, to fax a memorandum to ADEM today, stating that Baldwin County did exercise it's option to purchase the McBride property located in Loxley, Alabama as an Inert Landfill. She said if the County does this, then ADEM will fax Baldwin County a letter authorizing them to use the inert landfill. She further stated that ADEM said that Baldwin County can store and use the pit just as Baldwin County ordinarily would as an inert landfill. But, if Baldwin County does not acquire the property, then all of the material will have to be moved out of the inert landfill to the Magnolia Landfill. Unanimous.

Commissioner Morrow said that several meetings ago, he made a statement that McCrory and Williams may be dragging their feet on the inert landfill issue. Since that time he has found out that this was an incorrect statement and that in actuality, McCrory & Williams was not dragging their feet but had done everything that this Commission had instructed them to do and were waiting for this Commission to give them instructions. Commissioner Burt asked if it has been identified as to where Baldwin County dropped the ball? The County Attorney said that Baldwin County does not own the inert landfill property and that the less said, the better. The County Administrator cautioned the Press as to how they informed the public about this matter, that Baldwin County is not planning on opening an inert landfill right away, that it would take some time.

As a matter of information, Mr. Henry Wilson, Environmental Management Director, appeared before the Commission and said that he had a meeting with Sue Robinson and Russell Kelly of ADEM, and in this meeting it was discussed that Baldwin County may need three (3) more inert landfills in the approximate areas of Bay Minette, Lillian and Fairhope.

Motion by Commissioner Morrow, seconded by Commissioner Jenkins, to adjourn at 9:22 A.M. Unanimous.

Ally McDaniel

1/5/93

oooooooooooo000000000000oooooooooooo

BE IT REMEMBERED, That at a meeting of the County Commission, Baldwin County, Alabama, held January 5, 1993 in the Baldwin County Courthouse, Bay Minette, Alabama, there were present members Samuel Jenkins, Sr., Frank Burt, Jr., Michael Allegri, Wendy Allen, Mike Harper and Don Koontz, Chairman. Also present were Jerry Boyington, County Administrator and Taylor Wilkins, Jr., County Attorney with Commissioner C. Dean Hansen having been absent due to surgery. The Chairman called the meeting to order at 8:30 A.M. and after the invocation given by Taylor Wilkins, Jr. and the Pledge of Allegiance, led by Commissioner Samuel Jenkins, Sr., the Commission transacted the following business to-wit:

The Chairman welcomed the Press and everyone in attendance.

different mayors of the municipalities and determine if they would help the County with the expense of the Baldwin County Animal facility. Chairman Koontz said as Chairman of the Governmental Affairs Committee, he would be glad to assist with this and establish a meeting with the mayors of the various Baldwin County municipalities in order to discuss this issue.

Mr. Wilson asked for permission to actively pursue three more inert landfill pits, one in the north, one on the east side of Baldwin County and one on the west side of Baldwin County. **Motion by Commissioner Allen, seconded by Commissioner Burt, to allow the Environmental Management Director to actively work through the Natural Resources Committee in order to get this in motion. Unanimous.**

As a matter of information, the County Attorney briefed the Commission on the existing inert landfill located near Loxley, Alabama. He said that the County is closing out it's option and will be buying an interest in this property. He said that the County is substituted as a party in the litigation as a plaintiff. He further stated that the case has been rescheduled by Judge Reid for next Monday, January 11, 1993.

Mr. Byron Calhoun, Personnel Director, appeared before the Commission and asked for permission for he or the Clerk/Treasurer to enter into agreements, when necessary with individuals needed to provide assistance to other individuals in the County in order to comply with the requirements of the American Disability Act. An example he gave of such a service which was needed was with the Board of Equalization. There was a citizen that appeared before the Board of Equalization and was hearing impaired, therefore requesting an individual who knew sign language to be assigned to assist in the board hearing. Mr. Calhoun further stated that the cost is approximately \$14.00 to \$15.00 per hour for such individuals. Commissioner Allen asked about individuals who spoke another language in which Mr. Calhoun said the County is not obligated to supply an interpreter for someone with a language barrier. **Motion by Commissioner Harper, seconded by Commissioner Allen, to comply with the request of the Personnel Director and authorize the Clerk/Treasurer or Personnel Director to enter into agreements, when necessary, with individuals needed to provide specialized assistance to other individuals in the County in order to comply with the requirements of the American Disability Act. Mr. Calhoun did state this would be limited to a few hours of obligation. If the service was going to be anything lengthy and expensive, then this will be dealt with separately. Unanimous.**

Mr. Calhoun informed the Commission that there are two (2) Jailer I positions open and the Sheriff has requested that these two (2) positions be filled with Ms. Lette Jean Morrison and Melanie Chastang at a Grade 11, EL. He did state that Ms. Morrison was hired through the State Employment Service and Ms. Chastang who previously came through the State Employment Service and was a previous County employee that left in good standing. He further stated that these two (2) positions are funded. **Motion by Commissioner Allen, seconded by Commissioner Harper, to honor the request of the Sheriff and hire Ms. Lette Jean Morrison and Ms. Melanie Chastang as Jailer I's at a Grade 11, EL. Unanimous.**

Mr. George Strachan, Emergency Management Agency Director, appeared before the Commission and requested the Commission appoint Mr. Henry Wilson as a member of the Baldwin County Local Emergency Planning Committee (LEPC) and Ms. Linda Lofton to serve as an alternate member. He added that this board was

MOTION BY COMMISSIONER HARPER, SECONDED BY COMMISSIONER ALLEN, TO PLACE THE FOLLOWING DEEDS (MCBRIDE PIT FOR INERT LANDFILL NEAR LOXLEY) INTO THE MINUTES:

STATE OF ALABAMA

COUNTY OF BALDWIN

KNOW ALL MEN BY THESE PRESENTS that ETHEL MCBRIDE, an unmarried woman, and CHARLES MCBRIDE, a married man, hereinafter known as "Grantors", for and in consideration of the sum of TEN AND NO/100 (\$10.00) DOLLARS, cash in hand paid by BALDWIN COUNTY, ALABAMA, hereinafter known as "Grantee", and other good and valuable considerations, receipt of which is acknowledged, do hereby GRANT, BARGAIN, SELL and CONVEY unto the said BALDWIN COUNTY, ALABAMA the following described real property located in the County of Baldwin, State of Alabama, namely:

The South half of the Northwest quarter of the Northwest quarter; the Northwest quarter of the Southwest quarter of the Northwest quarter; and the West half of the Northeast Quarter of the Southwest quarter of the Northwest quarter; the East half of the Northeast quarter of the Northwest quarter of the Northwest quarter of Section 16, Township 5 South, Range 3 East, except 1 acre described as: Begin at the Northwest corner of the South half of the Northwest quarter of the Northwest quarter, run East 210 feet, thence South 210 feet, West 210 feet, North 210 feet to the point of beginning, being 39 acres more or less.

And the following described tract of land: Beginning at the Northwest corner of Section 16, Township 5 South, Range 3 East, run North 89° 30' East, 810.5 feet to a point, the place of beginning, thence South 663.8 feet to a point, thence East 181 feet to a point, thence North 663.8 feet, thence West 181 feet to the place of beginning, less that part used for highway, s containing 3 acres, more or less.

The subject property is not now, nor has it ever been, the homestead of Grantors.

TOGETHER WITH all and singular the rights, tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining;

TO HAVE AND TO HOLD unto the said Grantee, its successors and assigns, forever.

AND EXCEPT for taxes hereafter falling due, which are assumed by the Grantee, and as set forth above, the Grantors covenant with the Grantee, its successors and assigns, that the Grantors are seised of an indefeasible estate in fee simple in said property, that the same is free from all liens and encumbrances and that the Grantors hereby WARRANT AND WILL FOREVER DEFEND the title to and possession of said property unto the Grantee, its successors and assigns, against the lawful claims of all persons.

IN WITNESS WHEREOF, the Grantors have hereunto set their hands and seals this 11th of January, 1993.

Ethel McBride s/s(SEAL)
ETHEL MCBRIDE

2007

40 Acre Lateral Expansion



COUNTY COMMISSION

BALDWIN COUNTY
312 COURTHOUSE SQUARE, SUITE 12
BAY MINETTE, ALABAMA 36507
(251) 937-0264
FAX (251) 580-2500

August 21, 2007

MEMBERS

DIST. 1. FRANK BURT, JR.
2. DAVID E. BISHOP.
3. WAYNE A. GRUENLOH
4. CHARLES F. GRUBER

MICHAEL L. THOMPSON
COUNTY ADMINISTRATOR

Mr. Rao Malladi
Solid Waste Branch
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, Alabama 36110

RE: MacBride Landfill Expansion Local Approval

Dear Mr. Malladi:

The Baldwin County Commission, during its regularly scheduled meeting held on August 21, 2007, approved and adopted the enclosed **original** of *Resolution #2007-155* regarding approval of the Solid Waste Disposal facility siting criteria that will grant local approval of a forty (40) acre lateral expansion of the MacBride Construction and Demolition Landfill. The siting criteria documents for the 40 acre lateral expansion were approved by the Baldwin County Waste Siting Board on August 7, 2007.


Further, the Commission authorized forwarding the enclosed **certified copies** of excerpts of the minutes of the May 15, 2007 and August 21, 2007 Baldwin County Commission Meetings to you, indicating that local approval has been granted for:

- a. the amendments to the Baldwin County Comprehensive Solid Waste Management Plan; and
- b. the Solid Waste Disposal facility siting criteria documents as prepared by Hutchinson, Moore, and Rauch, LLC dated July 17, 2007 that will allow a forty (40) acre lateral expansion of the MacBride Construction and Demolition Landfill.

Lastly, the Commission waived the application fee payable to the Baldwin County Commission as required by §22-27-48.

If you have any questions or need further assistance, please contact James Ransom, Development Environmental Director, at (251) 972-8572

Sincerely,


WAYNE A. GRUENLOH, Chairman
Baldwin County Commission

WAG/met Item C1

cc: Jim Ransom
Buford King

ENCLOSURE(S)

(BALDWIN COUNTY IS AN EQUAL OPPORTUNITY EMPLOYER M/F)



STATE OF ALABAMA

COUNTY OF BALDWIN

RESOLUTION NO. 2007-155

AUTHORIZING SOLID WASTE FACILITY SITING CRITERIA COMPLIANCE FOR THE FORTY (40) ACRE LATERAL EXPANSION OF THE MACBRIDE CONSTRUCTION AND DEMOLITION LANDFILL

WHEREAS, the Baldwin County Commission ("COMMISSION") is required by §22-27, et seq., Code of Alabama 1975 and Alabama Department of Environmental Management ("ADEM") Administrative Code, Division 13 Land Division – Solid Waste Program to revise and submit a solid waste management plan to ADEM; and

WHEREAS, the COMMISSION prepared amendments to the *Baldwin County Comprehensive Solid Waste Plan* which include [1] modifying the solid waste permit for the county MacBride Construction and Demolition debris landfill to include a forty (40) acre lateral expansion and [2] permit modifications related to the expansion of the construction and demolition landfill of the City of Fairhope, Alabama; and

WHEREAS, related to the foregoing referenced amendments to the *Baldwin County Comprehensive Solid Waste Plan*, the *Baldwin County Waste Siting Board*, as required by the *Baldwin County Comprehensive Solid Waste Plan* and §22-27-48 convened August 7, 2007 and approved siting criteria (**Attached as Exhibit "A"**) to allow a forty (40) acre lateral expansion of the Macbride Construction and Demolition Landfill; and

WHEREAS, related to the foregoing referenced siting criteria to allow a forty (40) acre lateral expansion of the Macbride Construction and Demolition Landfill, the COMMISSION has conducted a public hearing to solicit input, and has consolidated citizen comments and concerns into the development of the siting criteria to allow a (40) acre lateral expansion of the Macbride Construction and Demolition Landfill, and

WHEREAS, documents related to the siting criteria to allow a forty (40) acre lateral expansion of the Macbride Construction and Demolition Landfill have been prepared by Hutchinson Moore, and Rauch, LLC dated July 17, 2007; (**Attached as Exhibit "A"**) now therefore

BE IT RESOLVED BY THE BALDWIN COUNTY COMMISSION, IN REGULAR SESSION ASSEMBLED, that siting criteria to allow a forty (40) acre expansion of the Macbride Construction and Demolition Landfill are hereby approved , further, that the Chairman of the COMMISSION is authorized to sign all necessary correspondence, documents, and assurances involved in the submission of the siting criteria to allow a forty (40) acre expansion of the Macbride Construction and Demolition Landfill to the Alabama Department of Environmental Management.

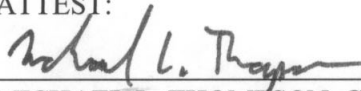
DONE, under the Seal of the County Commission of Baldwin County, Alabama on this the 21st day of August, 2007.

BALDWIN COUNTY COMMISSION



WAYNE A. GRUENLOH, Chairman

ATTEST:



MICHAEL L. THOMPSON, County Administrator





COUNTY COMMISSION

BALDWIN COUNTY
312 COURTHOUSE SQUARE, SUITE 12
BAY MINETTE, ALABAMA 36507
(251) 937-0264
FAX (251) 580-2500

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2. DAVID E. BISHOP
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4. CHARLES F. GRUBER

MICHAEL L. THOMPSON
COUNTY ADMINISTRATOR

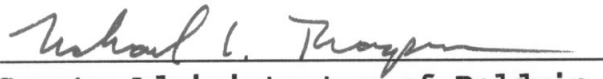
CERTIFICATE

STATE OF ALABAMA

COUNTY OF BALDWIN

I, Michael L. Thompson, County Administrator of Baldwin County, Alabama, and of the Baldwin County Commission, do hereby certify that the foregoing 2 page(s) is (are) a true and correct copy of an excerpt from the Minutes of a Regular Meeting held on May 15, 2007 of the Baldwin County Commission as the same appear(s) of record in the Office of the Baldwin County Commission, and the same is still in force and effect.

WITNESS my hand and the seal of the Baldwin County Commission this 4th day of September, 2007, at Bay Minette, Alabama.


County Administrator of Baldwin County, Alabama and of the Baldwin County Commission

May 15, 2007
 Dec 4/8

MOTION BY COMMISSIONER GRUBER, SECONDED BY COMMISSIONER BISHOP TO AWARD BID #WG07-20 TO THE LOWEST BIDDER, *TRADEMARK CONSTRUCTION CO.*, FOR THE CONSTRUCTION OF THE DHR BUILDING AS FOLLOWS:

BASE BID: \$5,365,686.00
 ADD ALTERNATE 1: \$6,795.00 (UNDERGROUND POWER)
 ADD ALTERNATE 2: \$5,177.00 (SEWER LATERAL FOR
 CENTRAL ANNEX)
 ADD ALTERNATE 3: \$8,871.00 (SOUTH DRIVE)
 UNIT PRICE: \$23.00 PER SQUARE YARD

VOTING YEA, COMMISSIONER BISHOP AND COMMISSIONER GRUBER.
 ABSTAINING, COMMISSIONER GRUENLOH. **MOTION PASSED.**

(C1) – U. S. GARAGE, LLC D/B/A U. S. GARAGE

This being the time set aside for a public hearing at 9:00 A.M. to consider the transfer of (050) – Retail Beer (Off Premises Only) and (070) – Retail Table Wine (Off Premises Only) License Applications from Daniel R. Middleton, Jr. d/b/a *Country Convenience #1* to U. S. Garage, LLC d/b/a *U. S. Garage* located at 26020 U. S. Highway 90, Robertsdale, Alabama 36567, the Applicant, Matthew Franklin, appeared before the Commission and presented a Proof of Publication.

The Chairman opened the public hearing and asked if there was anyone who wished to address the Commission regarding this request?

Mr. Franklin said he bought the business with his wife Megan Franklin approximately six (6) weeks ago and he appreciates if the Commission would grant the transfer of the license for his new business.

There being no other requests to address the Commission, the Chairman closed the public hearing.

MOTION BY COMMISSIONER BISHOP, SECONDED BY COMMISSIONER GRUBER TO APPROVE THE TRANSFER OF (050) - RETAIL BEER – (OFF PREMISES ONLY) AND (070) - RETAIL TABLE WINE (OFF PREMISES ONLY) LICENSE APPLICATIONS FROM DANIEL R. MIDDLETON, JR. D/B/A *COUNTRY CONVENIENCE #1* TO U. S. GARAGE, LLC D/B/A *U. S. GARAGE*, LOCATED AT 26020 U. S. HIGHWAY 90, ROBERTSDALE, ALABAMA, IF THE PUBLIC HEARING DOES NOT REVEAL A LEGITIMATE REASON FOR DENYING THE APPLICATION. UNANIMOUS.

**(C2) – BALDWIN COUNTY COMPREHENSIVE
 SOLID WASTE MANAGEMENT PLAN AMENDMENTS**

This being the time set aside for a public hearing at 9:00 A.M. to consider modifications to the Baldwin County Comprehensive Solid Waste Management Plan, Jim Ransom, Development Environmental Director appeared before the Commission.

On April 3, 2007 the Baldwin County Commission, during its regularly scheduled meeting, authorized the Baldwin County Solid Waste Department to conduct a Public Hearing related to modifications to the Baldwin County Comprehensive Solid Waste Management Plan. The Baldwin County Solid Waste Department wishes to modify the solid waste permit of the Macbride Construction and Demolition debris Landfill to include a 40 acre lateral expansion. On January 2, 2007 the Baldwin County Commission authorized the Solid Waste Department to enter into a professional services agreement with Hutchinson, Moore, and Rauch for the design of the lateral expansion at Macbride. In addition, the City of Fairhope wishes to expand their Construction and Demolition landfill. Because the

Baldwin County Solid Waste Department and the City of Fairhope are participants in the Baldwin County Comprehensive Solid Waste Management plan, any permit modifications to any facilities will require the Solid Waste Management Plan to be amended prior submitting a permit modification.

Mr. Ransom informed the Commission that the public hearing has been advertised as required. Mr. Scott Hutchison with Huthcinson, Moore & Rauch and Mr. Tim Eslava with the City of Fairhope are available to answer any questions the Commissioners may have.

The Chairman opened the public hearing and asked if there was anyone who wished to address the Commission regarding this request?

There being no requests to address the Commission, the Chairman closed the public hearing.

MOTION BY COMMISSIONER GRUBER, SECONDED BY COMMISSIONER BISHOP TO APPROVE AND ADOPT THE FOLLOWING *RESOLUTION #2007-119* REGARDING MODIFICATIONS TO THE BALDWIN COUNTY COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN:

"RESOLUTION #2007-119"
CAN BE FOUND
AT THE END OF THIS MEETING

"Click here to go there!"

UNANIMOUS.

(C3) - PLANNING (ZONING) DISTRICT 10
ZONING ORDINANCES AND REGULATIONS

This being the time set aside for a public hearing at 9:00 A.M. to Consider Planning (Zoning) District 10 Zoning Map and Development Regulations and the adoption of *Resolution #2007-116*, Wayne Dyess, Planning Director appeared before the Commission.

Mr. Dyess informed the Commission that the Applicant is requesting the Commission adopt Resolution # 2007-116, which approves the Planning (Zoning) District 10 zoning ordinances and regulations (i.e. zoning map).

I. PUBLIC HEARINGS:

Planning Commission: January 4, 2007 (sent back to Advisory Committee)
April 23, 2007 (recommended approval)

Attachments: Draft Zoning Map, Text

II. STAFF COMMENTS:

Zoning in Baldwin County is conducted through petitions and referendums in geographically defined areas known as Planning Districts. The County Commission defines the Planning Districts boundaries for the purposes of referendums for zoning. In order for the Judge of Probate to call for an election in a district, a petition with 10% of the registered voters residing in the district must be submitted and verified.

Planning District 10 began this process with volunteers going door to door and acquiring signatures on petitions.

Following the requirements set forth in Section 8 of Act No. 91-719, as amended, which remains the planning and zoning enabling local legislation for Baldwin County, Alabama, and as general background, the Baldwin County Commission accepted a petition to



COUNTY COMMISSION

BALDWIN COUNTY
312 COURTHOUSE SQUARE, SUITE 12
BAY MINETTE, ALABAMA 36507
(251) 937-0264
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2. DAVID E. BISHOP.
3. WAYNE A. GRUENLOH
4. CHARLES F. GRUBER

MICHAEL L. THOMPSON
COUNTY ADMINISTRATOR


CERTIFICATE

STATE OF ALABAMA

COUNTY OF BALDWIN

I, Michael L. Thompson, County Administrator of Baldwin County, Alabama, and of the Baldwin County Commission, do hereby certify that the foregoing 4 page(s) is (are) a true and correct copy of an excerpt from the Minutes of a Regular Meeting held on August 21, 2007 of the Baldwin County Commission as the same appear(s) of record in the Office of the Baldwin County Commission, and the same is still in force and effect.

WITNESS my hand and the seal of the Baldwin County Commission this 4th day of September, 2007, at Bay Minette, Alabama.


County Administrator of Baldwin County, Alabama and of the Baldwin County Commission

8-21-07
BCE
MK**(FBI) – VARIOUS SUBDIVISIONS – ACCEPT ROADS FOR MAINTENANCE**

All required information and documents have been submitted with this request and the roadways have been inspected and found acceptable.

MOTION BY COMMISSIONER GRUBER, SECONDED BY COMMISSIONER BURT TO TAKE THE FOLLOWING ACTIONS:

- 1) ACCEPT THE REQUEST TO MAINTAIN THE FOLLOWING SUBDIVISION ROADS SUBJECT TO THE TWO (2) YEAR MAINTENANCE AGREEMENT AND ANY STATED CONTINGENCIES:

***“LIST OF SUBDIVISION ROADS – ACCEPT FOR MAINTENANCE”
CAN BE FOUND
AT THE END OF THIS MEETING***

"Click here to go there!"

- 2) UPON FULFILLMENT OF TWO (2) YEAR MAINTENANCE PERIOD, AUTHORIZE SAID ROADS TO BE ADDED TO THE COUNTY MAINTAINED ROAD LIST.

Commissioner Burt asked if the roads will be added to the list automatically on August 21, 2009?

Cal Markert, County Engineer appeared before the Commission and said that is correct, as long as there is not a failure on a road that is not repaired by the time the County inspects the roads in two years.

Commissioner Burt asked if these roads have been built for awhile?

Mr. Markert said most of the roads have not been built for a two year period. They are approximately 6-12 months old. One road is over two years old. At the Work Session, staff had recommended for a two year period, but after discussion, it was decided that the two year period would be waived. Most of the roads are less than a year old.

Commissioner Burt asked who the people can call, should they have a problem?

Mr. Market said they should call the developer, but they can also call the County. The Highway Department has the name and contact information of each developer and can also help the citizens with the process. At the moment, it is the developer's responsibility to maintain these roads.

Commissioner Burt said he thought when a subdivision is completed and inspected, the County could accept the roads and then and ask the developer to put up a bond to take care of the roads for the two year period.

Mr. Markert said the change is in the new subdivision regulations, but it has not been approved yet. Mr. Markert said a request was sent to these developers to bond the roads so that the County can take them over.

UNANIMOUS.

(CI) – MACBRIDE LANDFILL EXPANSION LOCAL APPROVAL

This being the time set aside for a public hearing at 9:00 A.M. to consider the approval and adoption of *Resolution # 2007-155* regarding approval of the Solid Waste Disposal facility

siting criteria that would allow a forty (40) acre lateral expansion of the Macbride Construction and Demolition Landfill, Buford King, Operations Manager appeared before the Commission.

Mr. King informed the Commission that the siting criteria for the 40 acre lateral expansion was approved by the *Baldwin County Waste Siting Board* on August 7, 2007. The staff is recommending the Commission take action to forward a certified copy of an excerpt of the minutes of the May 15, 2007 and August 21, 2007 Baldwin County Commission Meetings to Mr. Rao Malladi of the Alabama Department of Environmental Management (ADEM) indicating that local approval has been granted for: 1) the amendments to the Baldwin County Comprehensive Solid Waste Management Plan; and 2) the Solid Waste Disposal facility siting criteria documents as prepared by Hutchinson, Moore, and Rauch, LLC dated July 17, 2007 that will allow a forty (40) acre lateral expansion of the Macbride Construction and Demolition Landfill. Further, waiving the application fee payable to the Baldwin County Commission as required by §22-27-48.

This agenda item seeks to obtain approval of siting criteria documents that will allow a forty (40) acre lateral expansion of the Macbride Construction and Demolition Landfill. The public hearing related to this matter is required by Alabama law. The Baldwin County Solid Waste Department, after review by the Baldwin County Environmental Resources Committee, seeks to obtain the Baldwin County Commission's approval to laterally expand the Macbride Landfill onto a tract of land purchased in May 2006. This proposal consists of obtaining, as required, the Baldwin County Commission's approval (i.e. "Host Government Approval") and the Alabama Department of Environmental Management's (ADEM) approval to authorize the solid waste permit modifications for such an expansion. The Baldwin County Commission entered into a professional services agreement with Hutchinson, Moore, and Rauch, LLC for the engineering design of the expansion on January 2, 2007. Host Government Approval is required before the engineering design may be submitted to ADEM for approval.

The Baldwin County Commission, as the owner/operator of the Macbride Landfill, must be respectful of certain state requirements: The governing Alabama law on this subject remains Act No. 89-824, as codified at §22-27-40 through §22-27-49, Code of Alabama 1975, or what is commonly referred to as the "Solid Waste Management Plan." This Alabama Law requires that the Baldwin County Commission adopt a "local solid waste management plan" which, in Baldwin County is known as the Baldwin County Comprehensive Solid Waste Management Plan. The Baldwin County Comprehensive Solid Waste Management Plan was adopted by the Baldwin County Commission on March 21, 2006. On May 15, 2007 the Baldwin County Commission approved and adopted Resolution Number 2007-119 approving amendments to the Baldwin County Comprehensive Solid Waste Management Plan that include the 40 acre lateral expansion of the Macbride Construction and Demolition Landfill.

The Baldwin County Commission, as the owner/operator of the Macbride Landfill, must, chronologically perform the following:

- 1) Publish; beginning July 21, 2007 and concluding August 18, 2007 in the eight (8) Gulf Coast Newspapers, "Notice of a Public Hearing" outlining certain required information.
- 2) Conduct a "Public Hearing" during the August 21, 2007 regular meeting of the Baldwin County Commission.
- 3) Determine if approval is desired after the conclusion of the public hearing conducted during the August 21, 2007 regular meeting of the Baldwin County Commission. ***If it is the pleasure of the Commission to approve the siting criteria documents to allow a forty (40) acre lateral expansion of the Macbride Construction and Demolition Landfill, authorize the Chairman to sign a transmittal forwarding a certified copy***

of an excerpt of the meeting minutes of the May 15, 2007 and August 21, 2007 Baldwin County Commission meetings to ADEM. Further, approve and adopt Resolution # 2007-155 and authorize the Chairman to sign a transmittal forwarding the approved and adopted resolution to ADEM.

§22-27-48 requires that ".....an application fee payable to the local governing body in an amount equal to 20 percent of the application or permit fee required by the department....." In this instance the body seeking local government approval, the Baldwin County Commission should be waived from the application fee because the Baldwin County Commission is the local governing body.

Mr. King said Scott Hutchinson with Hutchinson, Moore and Rauch, LLC is present at the meeting and will explain the siting requirements to the Commission.

Mr. Hutchinson appeared before the Commission and explained the siting requirements and State Law regarding landfill expansions as stated in his letter to the Commission, dated July 17, 2007, as follows:

***"LETTER TO THE BALDWIN COUNTY COMMISSION FROM
MR. SCOTT A. HUTCHINSON DATED JULY 17, 2007"
CAN BE FOUND
AT THE END OF THIS MEETING***

"Click here to go there!"

Mr. King said the next step after local approval will be the preparation of a permit application and drawings, with the assistance of Mr. Hutchinson's firm, submitting them to the Alabama Department of Environmental Management (ADEM). At that point, the process will be done by ADEM and they will conduct a public hearing if they so choose.

Mr. King said the purpose of the public hearing today is to allow the public to make any statements, ask any questions they may have and express any concerns to the Commission, regarding any aspect of the landfill expansion, considered within the realm of the State Law Siting Criteria and the County Solid Waste Management Plan.

Commissioner Burt asked if this required the Commission to advertise and has staff done that, in which Mr. King explained that this public hearing has been advertised in local newspapers for at least 30 days as required by ADEM and State Law, beginning July 21, 2007.

The Chairman opened the public hearing and asked if there was anyone who wished to address the Commission regarding this request?

There being no requests to address the Commission, the Chairman closed the public hearing.

**MOTION BY COMMISSIONER BURT, SECONDED BY COMMISSIONER GRUBER
TO TAKE THE FOLLOWING ACTIONS:**

1) APPROVE AND ADOPT THE FOLLOWING RESOLUTION # 2007-155 REGARDING APPROVAL OF THE SOLID WASTE DISPOSAL FACILITY SITING CRITERIA THAT WILL ALLOW A FORTY (40) ACRE LATERAL EXPANSION OF THE MACBRIDE CONSTRUCTION AND DEMOLITION LANDFILL:

***"RESOLUTION # 2007-155"
CAN BE FOUND
AT THE END OF THIS MEETING***

"Click here to go there!"

THE SITING CRITERIA FOR THE 40 ACRE LATERAL EXPANSION WAS APPROVED BY THE *BALDWIN COUNTY WASTE SITING BOARD* ON AUGUST 7, 2007; AND

2) FORWARD A CERTIFIED COPY OF AN EXCERPT OF THE MINUTES OF THE MAY 15, 2007 AND AUGUST 21, 2007 BALDWIN COUNTY COMMISSION MEETINGS TO MR. RAO MALLADI OF THE ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM) INDICATING THAT LOCAL APPROVAL HAS BEEN GRANTED FOR:

A) THE AMENDMENTS TO THE BALDWIN COUNTY COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN; AND

B) THE SOLID WASTE DISPOSAL FACILITY SITING CRITERIA DOCUMENTS AS PREPARED BY HUTCHINSON, MOORE, AND RAUCH, LLC DATED JULY 17, 2007 THAT WILL ALLOW A FORTY (40) ACRE LATERAL EXPANSION OF THE MACBRIDE CONSTRUCTION AND DEMOLITION LANDFILL; AND

3) WAIVE THE APPLICATION FEE PAYABLE TO THE BALDWIN COUNTY COMMISSION AS REQUIRED BY §22-27-48.

UNANIMOUS.

(C2) - CASE NO. Z-07045 – HYMAN PROPERTY

This being the time set aside for a public hearing at 9:00 A.M. to consider the request to rezone 6.33 (+/-) acres located at 35770 State Highway 225 (east side of State Highway 225, south of Bromley Road) in Planning (Zoning) District 4 from ER, Single Family Estate Residential District to R-2(b), Single Family District and adoption of *Resolution #2007-153*, Clair Byrd, Planner appeared before the Commission.

Ms. Byrd informed the Commission that the Applicant is requesting the Commission adopt *Resolution #2007-153* regarding Case No. Z-07045 Hyman Property, as located in Planning (Zoning) District 4, which approves the rezoning of the subject property from ER, Single Family Estate Residential District to R-2(b), Single Family District.

Staff recommends that the subject property be rezoned to R-2(b), Single Family District, in accordance with the request of the applicant (*see Section V Discussion of the ISSUES AND STAFF RECOMMENDATION* for the reasons for approval.)

Ms. Byrd provided the Commission with the following background information:

***“BACKGROUND INFORMATION FOR
(C2) - CASE NO. Z-07045 – HYMAN PROPERTY”
CAN BE FOUND
AT THE END OF THIS MEETING***

“Click here to go there!”

The Chairman opened the public hearing and asked if there was anyone who wished to address the Commission regarding this request?

Ms. Charmein Moser appeared before the Commission and said she is a resident of the Bromley/Blakeley area. Ms. Moser is concerned about the historic nature of the property, and even though there may be some questions about this particular property, it is certainly

2002

120 Acre Lateral Expansion



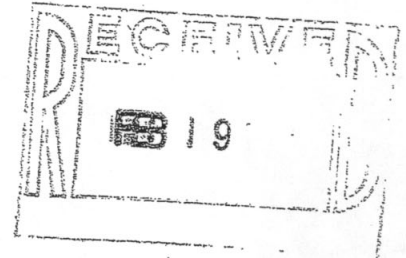
COUNTY COMMISSION

BALDWIN COUNTY
312 COURTHOUSE SQUARE, SUITE 12
BAY MINETTE, ALABAMA 36507
(251) 937-9561
FAX (251) 580-2500
www.co.baldwin.al.us

- MEMBERS
- DIST
1. JONATHAN H. ARMSTRONG
 2. FRANK BURT, JR.
 3. GEORGE A. PRICE
 4. MARY FRANCES STANFORD
 5. CHARLES A. (CHUCK) BROWDY
 6. T. JOE FAUST
 7. ALLEN D. PERDUE
- COUNTY ADMINISTRATOR
ROBERT W KONCAR

February 11, 2002

Mr. Scott Hutchinson, P.E.
Hutchinson, Moore & Rauch
Post Office Box 2067
Daphne, Alabama 36526



RE: Lateral Expansion of the MacBride Landfill

Dear Mr. Hutchinson:

The Baldwin County Commission during the regular scheduled session assembled on February 5, 2002 approved the 120 acre Lateral Expansion of the MacBride Landfill, located south of the existing landfill which is south of CR 64, approximately one and one-quarter miles west of Loxley in an unincorporated area of Baldwin County with a volume of 500 tons per day in a service area of Baldwin County.

If you have any questions, please do not hesitate to give me a call.

Sincerely,

ALLEN D. PERDUE, Chairman
Baldwin County Commission

ADP/klk

cc: Lonell Peacock

MOBILE REGISTER

MORNING

EVENING

SUNDAY

ACCOUNT NO.
PERIOD END

NAME
REP.

BILL TO NAME

BALDWIN COUNTY COMMISSION
P. O. BOX 1488
ATTN: WANDA FAULT GAUTNEY
BAY MINETTE, AL. 36507

QUESTIONS PLEASE CALL 334-433

• CURRENT BALANCE

• AMOUNT ENCLOSED

• PLEASE RETURN SECOND COPY WITH
YOUR PAYMENT TO THE
MOBILE REGISTER
LOCK BOX 1712
MOBILE, ALABAMA 36601

TERMS: DUE ON RECEIPT

REFERENCE NUMBER	DATE	DESCRIPTION OR TAG LINE	RATE INCH/CPM	SIZE OR # PG	CHARGES CREDITS	AMOUNT		
BQVD1R STARTED 12/31	12/31/01	LANDFILL /NOTICE OF P TIMES RUN= 1:WORD- PER AD= 254.0		254.0CW				
		<p>Amanda Morris being sworn, says that she is bookkeeper of the MOBILE PRESS REGISTER, INC. which publishes a daily newspaper in the City and County of Mobile, State of Alabama, and the attached notice appeared in the issue of THE MOBILE REGISTER December 31, 2001</p> <p><i>Amanda S. Morris</i> Sworn to and subscribed before me this 7 day of January 02</p> <p><i>Merita J. Daniels</i> NOTARY PUBLIC</p> <p>FOR QUESTIONS CONCERNING THIS AFFIDAVIT PLEASE CONTACT AMANDA MORRIS AT 674-6771. YOU CAN PLACE A LEGAL NOTICE BY EMAIL OR FAX LEGALS@MOBILEREGISTER.COM OR FAX# 434-8484</p>						
<p>NOTICE OF PUBLIC HEARING AND PUBLIC COMMENT PERIOD</p> <p>Pursuant to Alabama A 89-824, the Baldwin County Commission hereby issues public notification of the intent to consider approval of the 1.1 acre lateral expansion of the MacBride Landfill. The Commission will conduct a public hearing at its regularly scheduled Commission meeting on February 5, 2002, 9:00 a.m. local time at the Baldwin County Commission Chambers. This facility will provide an area for the continued disposal of 500 tons/day nonhazardous and nonpetroleum construction and demolition debris. This facility will not accept household garbage for disposal. The site is generally located in the southwest quarter of Section 16, Township 5 South Range 3 East in Baldwin County, Alabama. The site is located immediately south of the existing landfill which is south of County Highway 64 approximately one and one-quarter miles west of Loxley, Alabama in an unincorporated area of Baldwin County. The property is outside of the zoning jurisdiction of a local government. It is owned and operated by the Baldwin County Commission. The development of this facility is consistent with the Baldwin County Comprehensive Solid Waste Management Plan, as approved November 6, 1990. The Baldwin County Commission solicits public comments and invites all interested local citizens to attend the Commission meeting at which this project will be addressed. Written comments will be received until 5:00 p.m. on February 4, 2002 and should be addressed to:</p> <p>Mr. Lonell Peacock Baldwin County Solid Waste 15140 County Road 49 Summerdale, Alabama 36580 (334) 988-8125 Reg. Dec. 31, 2001.</p>								
<p>WE APPRECIATE YOUR BUSINESS</p> <p>MOBILE REGISTER LOCK BOX 1712, MOBILE, ALABAMA 36601</p> <p>FOR BILLING INQUIRIES - CALL (334) 433-1551 EXT. 113 OR 115</p>								



South Alabama Regional Planning Commission

Tim Russell, Chairman • Samuel L. Jones, Vice-Chairman
William J. Lovett, Secretary • Larry W. White, Treasurer • Russell J. Wimberly, Executive Director

March 21, 2002

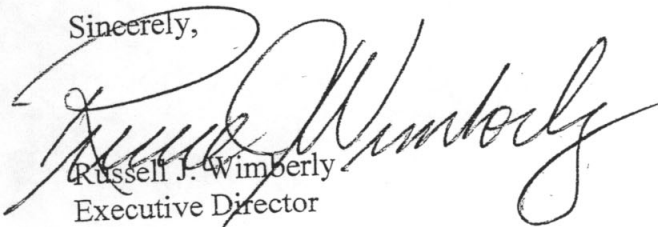
Mr. Scott A. Hutchinson, P.E.
Vice-President, Hutchinson, Moore & Raunch, LLC
1290 Main Street Suite D
Daphne, Alabama 36526

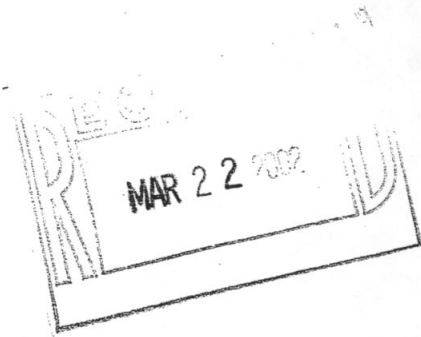
Dear Mr. Hutchinson:

The South Alabama Regional Planning Commission has reviewed your request to provide a statement of consistency for the lateral expansion of the Mac Bride Landfill. In keeping with Act 89, No.89-824, p. 1638-7, the South Alabama Regional Planning Commission, in its capacity as Clearinghouse, hereby certify that the lateral expansion of Mac Bride (Magnolia) Landfill is consistent with the Regional Solid Waste Management Needs Assessment P. 13.

If additional information is needed please advise.

Sincerely,


Russell J. Wimberly
Executive Director



2000

100 to 500 ton/day

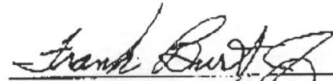
Volume Increase


STATE OF ALABAMA
COUNTY OF BALDWIN

RESOLUTION #2000-59
OF THE
BALDWIN COUNTY COMMISSION

BE IT RESOLVED the Baldwin County Commission approves raising the permitted daily volume at MacBride Landfill, Permit #02-11, from one hundred (100) tons per day to five hundred (500) tons per day.

DONE, Under the Seal of the County Commission of Baldwin County, Alabama on this the 21st day of July, 2000.


FRANK BURT, JR., Chairman
Baldwin County Commission

ATTEST:

LOCKE WILLIAMS, Clerk/Treasurer
Baldwin County Commission

SEAL



MOBILE PRESS REGISTER

PAGE 1

ACCOUNT NO 98821255AL
MO END 05/12/00

NAME BALDWIN COUNTY S
REF 9828

BILL TO SAME

QUESTIONS PLEASE CALL 334-433-1551

BALDWIN COUNTY SOLID WASTE
15140 COUNTY ROAD 49
SUMMERDALE, AL 36580

CURRENT BALANCE

AMOUNT ENCLOSED

PLEASE RETURN SECOND COPY WITH
YOUR PAYMENT TO THE
MOBILE PRESS REGISTER
LOCK BOX 1712
MOBILE, ALABAMA 36601

TERMS: DUE ON RECEIPT

REFERENCE NUMBER	DATE	DESCRIPTION OR TAG LINE	RATE INCH/CPM	SIZE OR PAGE	CHARGES CREDITS	AMOUNT DUE
661R	06/12/00	PUBLIC COM/NOTICE OF P		248.00W	52.00	52.08
		ARTED 06/12 TIMES 20 = 1 WORD - PER AD = 248.00				
<p>JAIME PERRINE being sworn, says that she is the ^{the} owner ^{owner} of the MOBILE PRESS REGISTER, INC. which publishes a daily newspaper in the City and County of Mobile, State of Alabama; and the attached notice appeared in the issue of THE MOBILE REGISTER JUNE 12</p> <p>WITN TO AND SUBSCRIBED before me this 14TH day of JUNE 2000</p> <p><i>[Signature]</i> NOTARY PUBLIC</p>						
<p>FOR QUESTIONS CONCERNING THIS INVOICE OR ANY OTHER LEGAL ADVERTISING PLEASE CONTACT SUZANNE MOORE AT 439-7178.</p> <p>WE APPRECIATE YOUR BUSINESS</p> <p>the MOBILE PRESS REGISTER LOCK BOX 1712, MOBILE ALABAMA 36601</p> <p>FOR BILLING INQUIRIES - CALL (334) 433-1551 EXT. 113 OR 115</p>						
<p>NOTICE OF PUBLIC HEARING AND PUBLIC COMMENT PERIOD</p> <p>Pursuant to Alabama Act 87-824, the Baldwin County Commission hereby issues public notification of its intent to consider approval of a permitted volume increase from sixty (60) tons per day to five hundred (500) tons per day for the AnacBrige Landfill at its regularly scheduled Commission meeting on the 21st day of July, 2000, 9:00 a.m. local time at the Baldwin County Commission Chambers. The facility provides an area to dispose of nonhazardous and non-potentially construction and demolition debris. This facility does not accept household garbage for disposal. The site is located in the Northwest quarter of Section 16, Township 5 South, Range 3 East in Baldwin County, Alabama. It is south of County Highway Number 64 approximately one and one-quarter miles west of Loxley, Alabama, in unincorporated area of the County. The property is within the zoning jurisdiction of any local government. It is owned and operated by the Baldwin County Commission. The development of this facility is consistent with the Baldwin County Comprehensive Solid Waste Management Plan as approved November 6, 1990. The Baldwin County Commission solicits public comments and invites all interested local citizens to attend the Commission meeting of which this project will be addressed. Written comments will be received until the 11th day of July, 2000 and should be addressed to:</p> <p>Mr. Mickey Hamilton Director Baldwin County Solid Waste 15140 County Road 49 Summerdale, AL 36580 (334) 688-4125</p> <p>Reg June 12, 2000</p>						

APPENDIX B
ADEM FORM 439

SOLID WASTE APPLICATION

PERMIT APPLICATION
SOLID WASTE DISPOSAL FACILITY
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
(Submit in Triplicate)

1. Facility type: Municipal Solid Waste Landfill (MSWLF)
 Industrial Landfill (ILF)
 Construction and Demolition Landfill (C/DLF)
 CCR Landfill (CCRLF)
 CCR Surface Impoundment (CCRSI)
 Other (explain) _____

2. Facility Name MacBride Landfill (Permit No. 02-11)

3. Applicant/Permittee:

Name: Baldwin County Solid Waste Disposal Authority

Address: 15093 Landfill Dr.
Summerdale, Alabama 36580

Telephone: (251) 972-6878

If applicant/permittee is a Corporation, please list officers:

4. Location: (include county highway map or USGS map)

Township 5 South Range 3 East
Section 16 County Baldwin

5. Land Owner:

Name: Same as Permittee

Address: _____

Telephone: _____

(Attach copy of agreement from landowner if applicable.)

Solid Waste Permit Application
Page 2

6. Contact Person:

Name Terri Graham

Position or Affiliation Chief Executive Officer

Address: 15093 Landfill Drive
Summerdale, AL 36580

Telephone: (251) 972-6878

7. Size of Facility: 192.6 Acres Size of Disposal Area(s): 86.4 Acres

8. Identify proposed service area or specific industry that waste will be received from:

Baldwin County, Alabama

9. Proposed maximum average daily volume to be received at landfill (choose one):

500 Tons/Day _____ Cubic Yards/Day

10. List all waste streams to be accepted at the facility (i.e., household solid waste, wood boiler ash, tires, trees, limbs, stumps, etc.):

Construction and demolition waste, waste building materials, packaging, and rubble resulting from the construction and remodeling, repair, or demolition on pavements, houses, commercial buildings, and other structures. Such waste includes, but are not limited to masonry materials, sheet rock, roofing waste, insulation tires, scrap metal, rebar, paving materials, yard cleaning waste, wood products, and storm debris.

SIGNATURE (Responsible official of permit applicant):

 TITLE: CEO

Terri Graham DATE: 6.11.2024

(please print or type name)

APPENDIX C
VARIANCE REQUESTS



**BALDWIN COUNTY
SOLID WASTE DEPARTMENT**

**15140 County Road 49
Summerdale, Alabama 36580**

www.baldwincountyal.gov

Terri Graham
Development & Environmental
Director
(251) 972-6878
tgraham@baldwincountyal.gov

November 6, 2020

Alabama Department of Environmental Management
Attn: Blake Holden
PO Box 301463
Montgomery, AL 36130-1463



RE: Magnolia Landfill Permit #02-03 Variance Request
MacBride Landfill Permit #02-11 Variance Request
Eastfork Landfill Permit #02-12 Variance Request

To whom it may concern:

Please find enclosed the request for variance for the following facilities:

Magnolia Sanitary Landfill
MacBride C&D Landfill
Eastfork C&D Landfill

If you have any questions, please contact me anytime.

Terri Graham
Development and Environmental Director



Engineering. Environmental. Answers.

1840 East Three Notch Street
Andalusia, AL 36421
Post Office Box 278
Andalusia, AL 36420
Tel (334) 222-9431
Fax (334) 222-4018

www.cdge.com

October 27, 2020

Blake Holden
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130

**Re: Minor Modification:
Alternate Cover 50/50 Shredded Green Waste/Soil Mixture
MacBride Landfill (No. 02-11)**

Dear Mr. Holden,

Please accept this letter on behalf of the Baldwin County Solid Waste Department as a minor modification to use a shredded green waste/ soil mixture as an alternative cover at the MacBride Landfill. The facility's request is consistent with EPA's previous research and development guidance as outlined in the report titled *The Use of Alternative Materials for Daily Cover at Municipal Solid Waste Landfills (September 1993)*.

A summary of the proposed facility Operating Plan, and the applicable regulatory requirements concerning weekly cover have been addressed below.

I. Regulatory Requirements for Use of Alternative Cover

In accordance with ADEM Admin Code 335-13-4-.23, Section 1.a.1- A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by the Department shall be added at the conclusion of each week's operation or as otherwise specified by the Department to control disease vectors, fires, odors, blown litter and scavenging.

As it relates to the above mentioned regulatory requirements, the proposed alternative cover (shredded green waste/soil mixture consisting of 50% soil by volume) provides protection of public health by controlling vectors, not sustaining a breeding environment, being free of toxic materials, being odorless, and pathogen free.

In addition to the control of vectors by the mechanisms mentioned, the proposed alternate cover will provide odor control through the incorporation of the 50% soil by volume. Previous laboratory tests have shown that mixtures with more than 30% to 50% soil experience performance similar to soil as it relates to hydraulic conductivity, combustibility, resistance to burrowing from birds and rodents, erosion resistance to wind and water, and waste mass

ALBERTVILLE
ANDALUSIA
AUBURN
DOTHAN
GADSDEN
HOOVER
HUNTSVILLE



Engineering. Environmental. Answers.

stability. Therefore, the proposed alternate cover will meet the regulatory requirements for alternate cover as identified in ADEM Rule 335-13-4-.23 (**Specific Requirements for Inert-Construction/Demolition Landfills and Industrial Landfills**)

II. Operational Plan for Proposed Alternative Cover

The proposed alternative cover will consist of a shredded green waste/soil mixture used in conjunction to achieve the weekly cover requirements as stipulated in 335-13-4-.23. The proposed mixture shall be achieved using shredded green waste with on-site soil with the mixture consisting of at least 50% daily soil material by volume. The alternate cover may be pre-mixed by incorporating a "windrow" method consisting of mixing the proposed soil and green waste at the working face, with the mixture containing at least 50% soil by volume. This mixing will be achieved using a dozer prior to placement on the working face. The material mixing will be completed by placing a windrow of shredded green waste adjacent to a windrow of daily soil cover material and making multiple passes through the material with the dozer. After achieving a blend of at least 50% soil by volume the alternate cover will be used to cover the working face following each weekly lift.

If you have any questions, please feel free to call.

Sincerely,
CDG Engineers & Associates, Inc.

A handwritten signature in cursive script that reads "Laura Kate Young".

Laura Kate Young
Project Engineer

cc. Terri Graham and Ed Fox

SECTION III:

LANDFILL OPERATOR:

Name: (1) Ed Fox (2) _____
Address: 15140 County Road 49 _____
Summerdale, AL 36580 _____
Telephone: (251) 331-0596 _____

SECTION IV:

CONTACT PERSON(S):

Name: (1) Ed Fox (2) _____
Address: 15140 County Road 49 _____
Summerdale, AL 36580 _____
Telephone: (251) 331-0596 _____

SECTION V:

LANDOWNER(S):

Name: (1) Same as Permittee (2) _____
Address: _____

Telephone: _____

Attach copy of agreement from landowner giving permission to use site for disposal if landowner is different from applicant.

SECTION VI:

ADJACENT LANDOWNER(S):

- a. Submit a list of all adjacent landowners including name and current mailing address.
- b. Submit a drawing/map identifying the proposed disposal site and the properties of all adjacent landowners listed in "a" above.

SECTION VII:

LOCAL APPROVAL: No Required (Yes or No)
_____ Date Received if needed (attach copy of resolution and proof of publishing public notice)

SECTION VIII:

WASTE DESCRIPTION:

- a. Describe and list all waste streams/types to be accepted at landfill:
Construction and demolition waste, waste building materials, packaging, and
rubble resulting from the construction and remodeling, repair, or demolition on
pavements, houses, commercial buildings, and other structures. Such waste
includes, but are not limited to masonry materials, sheet rock, roofing waste, insulation
tires, scrap metal, rebar, paving materials, yard cleaning waste, wood products, and
storm debris .
- b. List proposed service area (geographic area or location(s)):
Baldwin County
- c. What is the maximum daily volume of waste to be received at the landfill? (Select One)
500 _____ tons per day _____ cubic yards per day

SECTION IX:

SITE DESCRIPTION:

- a. Attach location map with the site clearly identified. Acceptable maps include a USGS 7.5 or 15 minute series, a county highway map published by the Alabama Department of Transportation.
- b. Location:
County: Baldwin
Part: _____ of Section(s): 16
Township(s): 5 South Range(s): 3 East
- c. Attach legal property description and boundary plat of the permitted area and disposal area prepared and signed by a licensed land surveyor.
- d. Size of permitted area: 196.2 _____ acres
- e. Size of disposal area: 88.8 _____ acres

SECTION X:

This Section is to be completed by the applicants/permittees. A copy of all concurrence letters must be attached to this application upon submittal to the Department.

Location Standards (Rule 335-13-4-.01(1)):

- a. Is the landfill located in the 100-year flood plain? (need to have flood plain map)
NO: YES:
- b. Does the proposed landfill disposal area:
- (1.) Jeopardize the continued existence of endangered or threatened species protected under the Endangered Species Act of 1973?
NO: YES: (Attach letter from U.S. Dept. of Interior or Alabama Fish and Wildlife)
- (2.) Result in the destruction or adverse modification of critical habitats protected under the Endangered Species Act of 1973?
NO: YES: (Attach letter from U.S. Dept. of Interior or Alabama Fish and Wildlife)
- c. Is the proposed landfill located in a zone of active faults, seismic impact zones and unstable areas?
NO: YES:
(If YES then all required seismic studies should be submitted to the Department.)
- d. Is the proposed landfill located in an area that is archaeologically sensitive?
NO: YES: (Attach letter from State Historic Preservation Officer)

Water Quality Standards (Rule 335-13-4-.01(2)):

(ADEM Water Division should be contacted to determine if permit is required)

- a. Will the proposed landfill discharge pollutants to waters of the State in violation of requirements of the National Pollutant Discharge Elimination System (NPDES) Permit?
NO: YES:
- b. Will the proposed landfill violate any requirement of an area wide or Statewide water quality plan that has been approved under the Alabama Water Pollution Control Act?
NO: YES:
- c. Will any part of the landfill, including buffer zone, be located in wetlands, beaches, dunes?
NO: YES:

d. Will solid waste be disposed in any location which will significantly degrade wetlands, beaches, or dunes?
NO: YES:

e. Will the proposed landfill be located outside the boundaries of the coastal area? (If not, then all demonstrations should be submitted to the Department for review.)
NO: YES:

Groundwater Elevations:

Has a minimum five-foot separation between the floor of the disposal cell and the groundwater been established? NO: YES:

SECTION XI:

GENERAL COMMENTS:

All materials listed in Rules 335-13-4-.12 to 335-13-4-.17, Rules 335-13-4-.19 to 335-13-4-.20, and Rule 335-13-4-.23 shall be kept at the landfill office along with a copy of the engineering drawings which must be submitted to the Department for review.

The applicant/permittee is responsible for obtaining a copy of the Division 13 regulations and complying with all Rules related to construction/demolition landfill units.

SECTION XII:

CERTIFICATION OF LOCAL GOVERNMENT APPROVAL:

Upon submittal of this application, we the undersigned certify that local approval has been obtained from Baldwin (city/county). Evidence of this local approval is contained in documents which are on file at the permit applicant's business address.

CERTIFICATION OF COMPLIANCE:

Upon submittal of this application, we the undersigned certify that this document and all attachments submitted are to the best of our knowledge and belief, true, accurate, and complete. We also understand that if any of the material certified to above has not been received, or is not complete or is not accurate, that shall be grounds for the Department to revoke the landfill permit if issued.

SIGNATURE (Responsible official of permit applicant):

Joe Davis III TITLE: Chairman
Joe Davis, III DATE: 12/12/20
(please print or type name)

SIGNATURE (Certifying Engineer):

R. Daniel Wells TITLE: Professional Engineer
R. Daniel Wells DATE: 11/23/20
(please print or type name)

FIRM: CDG Engineers and Associates, Inc. STAMP OR SEAL

