Edward F. Poolos
Director

Jeffery W. Kitchens
Deputy Director

Kay Ivey
Governor

Alabama Department of Environmental Management
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1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

April 21, 2026

Mr. Lucian Cayce
Corporate Secretary
Wiser Land Development, LLC.
1431 Kensington Square Court
Murfreesboro, TN 37130

RE: Revised Draft Permit
Eastern Quarry
NPDES Permit Number AL0084529
Shelby County (117)

Dear Mr. Cayce:

Transmitted herein is a revised draft of the above referenced permit. Please review the enclosed draft permit carefully. If previously permitted, the draft may contain additions/revisions to the language in your current permit. Please submit any comments on the draft permit to the Department within 30 days from the date of receipt of this letter.

Since the Department has made a tentative decision to issue the above referenced permit, ADEM Admin. Code r. 335-6-6-.21 requires a public notice of the draft permit followed by a period of at least 30 days for public comment before the permit can be issued. The United States Environmental Protection Agency will also receive the draft permit for review during the 30-day public comment period.

Any mining, processing, construction, land disturbance, or other regulated activity proposed to be authorized by this draft permit is prohibited prior to the effective date of the formal permit. Any mining or processing activity within the drainage basin associated with each permitted outfall which is conducted prior to Departmental receipt of certification from a professional engineer licensed to practice in the State of Alabama, that the Pollution Abatement/Prevention Plan was implemented according to the design plan, or notification from the Alabama Surface Mining Commission that the sediment control structures have been certified, is prohibited.

This permit requires Discharge Monitoring Reports (DMR) to be submitted utilizing the Department's web-based electronic reporting system. Please read Part I.D of the permit carefully and visit https://aepacs.adem.alabama.gov/nviro/ncore/external/home.

Should you have any questions concerning this matter, please contact Ange Boatwright at (334) 274-4208 or maboatwright@adem.alabama.gov.

Sincerely,

William D. McClimans, Chief
Mining and Natural Resource Section
Stormwater Management Branch
Water Division

WDM/mab File: DPER/62741

cc: Ange Boatwright, ADEM
Environmental Protection Agency Region IV
Alabama Department of Conservation and Natural Resources
U.S. Fish and Wildlife Service
Alabama Historical Commission
Advisory Council on Historic Preservation
U.S. Army Corps of Engineers Mobile District

Birmingham Office
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Office
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Coastal Office
1615 South Broad Street
Mobile, AL 36605
(251) 450-3400
(251) 479-2593 (FAX)

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: Wiser Land Development, LLC
1431 Kensington Square Court
Murfreesboro, TN 37130

FACILITY LOCATION: Eastern Quarry
4882 US Highway 231
Vincent, AL 35178
Shelby and St Clair Counties
T18S, R3E, S19
T18S, R2E, S24

PERMIT NUMBER: AL0084529

DSN & RECEIVING STREAM: 001-1 Kelly Creek
002-1 Kelly Creek

*In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1388 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, **Code of Alabama 1975**, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, **Code of Alabama 1975**, §§22-22A-1 to 22-22A-17, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.*

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

DRAFT

Alabama Department of Environmental Management
Water Division Chief

MINING AND NATURAL RESOURCE SECTION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

Construction Sand and Gravel Mine, Wet and Dry Preparation, Transportation and Storage, and Associated Areas

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfalls have been constructed and certified. Discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency[1]
pH 00400	6.0 s.u.	-------	8.5 s.u.	Grab	2/Month
Solids, Total Suspended 00530	-------	25.0 mg/L	45.0 mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant[2] 50050	-------	Report MGD	Report MGD	Instantaneous	2/Month

B. REQUIREMENTS TO ACTIVATE A PROPOSED MINING OUTFALL

1. Discharge from any point source identified on Page 1 of this Permit which is a proposed outfall is not authorized by this Permit until the outfall has been constructed and certification received by the Department from a professional engineer, registered in the State of Alabama, certifying that such facility has been constructed according to good engineering practices and in accordance with the Pollution Abatement and/or Prevention (PAP) Plan.

2. Certification required by Part I.B.1. shall be submitted on a completed ADEM Form 432. The certification shall include the latitude and longitude of the constructed and certified outfall.

3. Discharge monitoring and Discharge Monitoring Report (DMR) reporting requirements described in Part I.C. of this Permit do not apply to point sources that have not been constructed and certified.

4. Upon submittal of the certification required by Part I.B.1. to the Department, all monitoring and DMR submittal requirements shall apply to the constructed and certified outfall.

C. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Sampling Schedule and Frequency

a. The Permittee shall collect at least one grab sample of the discharge to surface waters from each constructed and certified point source identified on Page 1 of this Permit and described more fully in the Permittee's application twice per month at a rate of at least every other week if a discharge occurs at any time during the two week period, but need not collect more than two samples per calendar month. Each sample collected shall be analyzed for each parameter specified in Part I.A. of this Permit

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[1] See Part I.C.2. for further measurement frequency requirements.

[2] Flow must be determined at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.

b. If the final effluent is pumped in order to discharge (e.g. from incised ponds, old highwall cuts, old pit areas or depressions, etc.), the Permittee shall collect at least one grab sample of the discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application each quarterly (three month) monitoring period if a discharge occurs at any time during the quarterly monitoring period which results from direct pumped drainage. Each sample collected shall be analyzed for each parameter specified in Part I.A. of this Permit.

c. The Permittee may increase the frequency of sampling listed in Parts I.C.1.a and I.C.1.b; however, all sampling results must be reported to the Department and included in any calculated results submitted to the Department in accordance with this Permit.

2. Measurement Frequency

Measurement frequency requirements found in Part I.A. shall mean:

a. A measurement frequency of one day per week shall mean sample collection on any day of discharge which occurs every calendar week.

b. A measurement frequency of two days per month shall mean sample collection on any day of discharge which occurs every other week, but need not exceed two sample days per month.

c. A measurement frequency of one day per month shall mean sample collection on any day of discharge which occurs during each calendar month.

d. A measurement frequency of one day per quarter shall mean sample collection on any day of discharge which occurs during each calendar quarter.

e. A measurement frequency of one day per six months shall mean sample collection on any day of discharge which occurs during the period of January through June and during the period of July through December.

f. A measurement frequency of one day per year shall mean sample collection on any day of discharge which occurs during each calendar year.

3. Monitoring Schedule

The Permittee shall conduct the monitoring required by Part I.A. in accordance with the following schedule:

a. MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this Permit and every month thereafter. More frequently than monthly and monthly monitoring may be done anytime during the month, unless restricted elsewhere in this Permit, but the results should be reported on the last Discharge Monitoring Report (DMR) due for the quarter (i.e., with the March, June, September, and December DMRs).

b. QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The Permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this Permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this

Permit, but the results should be reported on the last DMR due for the quarter (i.e., with the March, June, September, and December DMRs).

c. SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The Permittee shall conduct the semiannual monitoring during the first complete semiannual calendar period following the effective date of this Permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this Permit, but it should be reported on the last DMR due for the month of the semiannual period (i.e., with the June and December DMRs).

d. ANNUAL MONITORING shall be conducted at least once during the period of January through December. The Permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this Permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this Permit, but it should be reported on the December DMR.

4. Sampling Location

Unless restricted elsewhere in this Permit, samples collected to comply with the monitoring requirements specified in Part I.A. shall be collected at the nearest accessible location just prior to discharge and after final treatment, or at an alternate location approved in writing by the Department.

5. Representative Sampling

Sample collection and measurement actions taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this Permit.

6. Test Procedures

For the purpose of reporting and compliance, Permittees shall use one of the following procedures:

a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136, guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h), and ADEM Standard Operating Procedures. If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance, however should EPA approve a method with a lower minimum level during the term of this Permit the Permittee shall use the newly approved method.

b. For pollutant parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the

Department, and may be developed by the Permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures identified in Parts I.C.6.a. and b. shall be reported on the Permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

7. Recording of Results

For each measurement or sample taken pursuant to the requirements of this Permit, the Permittee shall record the following information:

a. The facility name and location, point source number, date, time, and exact place of sampling or measurements;

b. The name(s) of person(s) who obtained the samples or measurements;

c. The dates and times the analyses were performed;

d. The name(s) of the person(s) who performed the analyses;

e. The analytical techniques or methods used including source of method and method number; and

f. The results of all required analyses.

8. Routine Inspection by Permittee

a. The Permittee shall inspect all point sources identified on Page 1 of this Permit and described more fully in the Permittee's application and all treatment or control facilities or systems used by the Permittee to achieve compliance with the terms and conditions of this Permit at least as often as the applicable sampling frequency specified in Part I.C.1 of this Permit.

b. The Permittee shall maintain a written log for each point source identified on Page 1 of this Permit and described more fully in the Permittee's application in which the Permittee shall record the following information:

(1) The date and time the point source and any associated treatment or control facilities or systems were inspected by the Permittee;

(2) Whether there was a discharge from the point source at the time of inspection by the Permittee;

(3) Whether a sample of the discharge from the point source was collected at the time of inspection by the Permittee;

(4) Whether all associated treatment or control facilities or systems appeared to be in good working order and operating as efficiently as possible, and if not, a description of the problems or deficiencies; and

(5) The name and signature of the person performing the inspection of the point source and associated treatment or control facilities or systems.

9. Records Retention and Production

a. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the above reports or the application for this Permit, for a period of at least three (3) years from the date of the sample collection, measurement, report, or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA, AEMA, and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director, the Permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records should not be submitted unless requested.

b. All records required to be kept for a period of three (3) years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

10. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this Permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The Permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

D. DISCHARGE REPORTING REQUIREMENTS

1. Requirements for Reporting of Monitoring

a. Monitoring results obtained during the previous three (3) months shall be summarized for each month on a Discharge Monitoring Report (DMR) Form approved by the Department, and submitted to the Department so that it is received by the Director no later than the 28th day of the month following the quarterly reporting period (i.e., on the 28th day of January, April, July, and October of each year).

b. The Department utilizes a web-based electronic reporting system for submittal of DMRs. **Except as allowed by Part I.D.1.c. or d., the Permittee shall submit all DMRs required by Part I.D.1.a. by utilizing the Department's current electronic reporting system.** The Department's current reporting system, Alabama Environmental Permitting and Compliance System (AEPACS), can be found online at https://aepacs.adem.alabama.gov/nviro/ncore/external/home.

c. If the electronic reporting system is down (i.e. electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's system; this could include entry/submittal issues with an entire set of DMRs or individual parameters), permittees are not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the electronic reporting system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the electronic reporting system resuming operation, the Permittee shall enter the data into the reporting system unless an alternate timeframe is approved by the Department. An attachment should be included with the electronic DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date).

d. The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable. Permittees with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The Permittee shall submit the Department-approved DMR forms to the address listed in Part I.D.1.i.

e. If the Permittee, using approved analytical methods as specified in Part I.C.6., monitors any discharge from a point source identified on Page 1 of this Permit and describe more fully in the Permittee's application more frequently than required by this Permit; the results of such monitoring shall be included in the calculation and reporting of values on the DMR Form, and the increased frequency shall be indicated on the DMR Form.

f. In the event no discharge from a point source identified on Page 1 of this Permit and described more fully in the Permittee's application occurs during a monitoring period, the Permittee shall report "No Discharge" for such period on the appropriate DMR Form.

g. Each DMR Form submitted by the Permittee to the Department in accordance with Part I.D.1. must be legible and bear an original signature or electronic signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this Permit.

h. All reports and forms required to be submitted by this Permit, the AWPCA, and the Department's rules and regulations, shall be signed by a "responsible official" of the Permittee as defined in ADEM Admin. Code r. 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Admin. Code r. 335-6-6-.09 and shall bear the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

i. All DMRs, reports, and forms required to be submitted by this Permit, the AWPCA and the Department's rules and regulations, shall be submitted through the Department's electronic reporting system, AEPACS, or, if in hardcopy, shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

j. Unless authorized in writing by the Department, approved reporting forms required by this Permit or the Department are not to be altered, and if copied or reproduced, must be consistent in format and identical in content to the ADEM approved form. Unauthorized alteration, falsification, or use of incorrectly reproduced forms constitutes noncompliance with the requirements of this Permit and may significantly delay processing of any request, result in denial of the request, result in permit termination, revocation, suspension, modification, or denial of a permit renewal application, or result in other enforcement action.

k. If this Permit is a reissuance, then the Permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.D.1.

2. Noncompliance Notification

a. The Permittee must notify the Department if, for any reason, the Permittee's discharge:

(1) Potentially threatens human health or welfare;

(2) Potentially threatens fish or aquatic life;

(3) Causes an in-stream water quality criterion to be exceeded;

(4) Does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. §1317(a);

(5) Contains a quantity of a hazardous substance which has been determined may be harmful to the public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. §1321(b)(4); or

(6) Exceeds any discharge limitation for an effluent parameter as a result of an unanticipated bypass or upset.

The Permittee shall orally or electronically report any of the above occurrences, describing the circumstances and potential effects of such discharge to the Director within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic report, the Permittee shall submit to the Director a written report as

provided in Part I.D.2.c., no later than five (5) days after becoming aware of the occurrence of such discharge.

b. If for any reason, the Permittee's discharge does not comply with any limitation of this Permit, the Permittee shall submit a written report to the Director as provided in Part I.D.2.c. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Part I.D.1. of this Permit after becoming aware of the occurrence of such noncompliance.

c. An electronic Noncompliance Notification Form in a Department-approved format must be submitted to the Director in accordance with Parts I.D.2.a. and b. The completed form must document the following information:

(1) A description of the discharge and cause of noncompliance;

(2) The period of noncompliance, including exact dates and times, or if not corrected, the anticipated time the noncompliance is expected to continue; and

(3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

3. Reduction, Suspension, or Termination of Monitoring and/or Reporting

a. The Director may, with respect to any point source identified on Page 1 of this Permit and described more fully in the Permittee's application, authorize the Permittee to reduce, suspend, or terminate the monitoring and/or reporting required by this Permit upon the submission of a written request for such reduction, suspension, or termination by the Permittee provided:

(1) All mining, processing, or disturbance in the drainage basin(s) associated with the discharge has ceased and site access is adequately restricted or controlled to preclude unpermitted and unauthorized mining, processing, transportation, or associated operations/activity;

(2) Permanent, perennial vegetation has been re-established on all areas mined or disturbed for at least one year since mining has ceased in the drainage basin(s) associated with the surface discharge, or all areas have been permanently graded such that all drainage is directed back into the mined pit to preclude all surface discharges;

(3) Unless waived in writing by the Department, the Permittee has been granted, in writing, a 100% Bond Release, if applicable, by the Alabama Department of Industrial Relations and, if applicable, by the Surface Mining Commission for all areas mined or disturbed in the drainage basin(s) associated with the discharge;

(4) Unless waived in writing by the Department, the Permittee has submitted inspection reports prepared and certified by a Professional Engineer (PE) registered in the State of Alabama or a qualified professional under the PE's direction which certify that the facility has been fully reclaimed or that water quality remediation has been achieved. The first inspection must be conducted approximately one year prior to and the second inspection must be conducted within thirty days of the Permittee's request for termination of monitoring and reporting requirements;

(5) All surface effects of the mining activity such as fuel or chemical tanks, preparation plants or equipment, old tools or equipment, junk or debris, etc., must be removed and disposed of according to applicable state and federal regulations;

(6) The Permittee's request for termination of monitoring and reporting requirements contained in this Permit has been supported by monitoring data covering a period of at least six consecutive months or such longer period as is necessary to assure that the data reflect discharges occurring during varying seasonal climatological conditions;

(7) The Permittee has stated in its request that the samples collected and reported in the monitoring data submitted in support of the Permittee's request for monitoring termination or suspension are representative of the discharge and were collected in accordance with all Permit terms and conditions respecting sampling times (e.g., rainfall events) and methods and were analyzed in accordance with all Permit terms and conditions respecting analytical methods and procedures;

(8) The Permittee has certified that during the entire period covered by the monitoring data submitted, no chemical treatment of the discharge was provided;

(9) The Permittee's request has included the certification required by Part I.D.1.e. of this Permit; and

(10) The Permittee has certified to the Director in writing as part of the request, its compliance with (1) through (9) above.

b. It remains the responsibility of the Permittee to comply with the monitoring and reporting requirements of this Permit until written authorization to reduce, suspend, or terminate such monitoring and/or reporting is received by the Permittee from the Director.

E. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

The Permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The Permittee shall notify the Director, in writing, when all discharges from any point source(s) identified on Page 1 of this Permit and described more fully in the Permittee's application have permanently ceased.

3. Updating Information

a. The Permittee shall inform the Director of any change in the Permittee's mailing address or telephone number or in the Permittee's designation of a facility contact or officer(s) having the authority and responsibility to prevent and abate violations of the AWPCA, the AEMA, the Department's rules and regulations, and the terms and conditions of this Permit, in writing, no later than ten (10) days after such change. Upon request of the Director, the Permittee shall furnish the Director with an update of any information provided in the permit application.

b. If the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

a. The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, suspending, terminating, or revoking and reissuing this Permit, in whole or in part, or to determine compliance with this Permit. The Permittee shall also furnish to the Director upon request, copies of records required to be maintained by this Permit.

b. The Permittee shall furnish to the Director upon request, within a reasonable time, available information (name, phone number, address, and site location) which identifies offsite sources of material or natural resources (mineral, ore, or other material such as iron, coal, coke, dirt, chert, shale, clay, sand, gravel, bauxite, rock, stone, etc.) used in its operation or stored at the facility.

F. SCHEDULE OF COMPLIANCE

The Permittee shall achieve compliance with the discharge limitations specified in Part I.A. of this Permit in accordance with the following schedule:

Compliance must be achieved by the effective date of this Permit.

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Management

The Permittee shall at all times operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of this Permit.

2. Pollution Abatement and/or Prevention Plan

a. The Pollution Abatement and/or Prevention (PAP) Plan shall be prepared and certified by a registered Professional Engineer (PE), licensed to practice in the State of Alabama, and shall include at a minimum:

(1) The information indicated in ADEM Admin Code r. 335-6-9-.03 and ADEM Admin. Code ch. 335-6-9 and its Appendices A and B;

(2) A description of methods which will be implemented to prevent offsite vehicle tracking onto roadways and/or into ditches at the entrances and/or exits of the Permittee's operations;

(3) A description of setbacks from waters of the State in units of linear feet on the horizontal plane; a description of the methods taken to visibly delineate setbacks from waters of the State; and a description of any other actions taken to prevent encroachment upon setbacks;

(4) A description of the methods used to delineate the boundaries of coverage under this Permit such that the boundaries are readily visible during the life of the operation;

(5) A description of any other Best Management Practices (BMPs) which will be implemented to provide control of all nonpoint source pollution that is or may be associated with the Permittee's operations;

b. The PAP Plan shall become a part of this Permit and all requirements of the PAP Plan shall become requirements of this Permit pursuant to ADEM Admin Code r. 335-6-9-.05(2). The PAP Plan shall be amended if the Department determines that the existing sediment control measures, erosion control measures, or other site management practices are ineffective or do not meet the requirements of this Permit.

c. For existing sources, the PAP Plan shall be updated to include all requirements of this section within 180 days of the effective date of this permit. New sources shall submit the PAP plan with the NPDES Individual Permit application prior to coverage under this Permit.

3. Best Management Practices (BMPs)

a. Unless otherwise authorized in writing by the Director, the Permittee shall provide a means of subsurface withdrawal for any discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application. Notwithstanding the above provision, a means of subsurface withdrawal need not be provided for any discharge caused by a 24-hour precipitation event greater than a 10-year, 24-hour precipitation event.

b, Dilution water shall not be added to achieve compliance with discharge limitations except when the Director has granted prior written authorization for dilution to meet water quality requirements.

c. The Permittee shall minimize the contact of water with overburden, including but not limited to stabilizing disturbed areas through grading, diverting runoff, achieving quick growing stands of temporary vegetation, sealing acid-forming and toxic-forming materials, and maximizing placement of waste materials in back-fill areas.

d. The Permittee shall prepare, submit to the Department for approval, and implement a Best Management Practices (BMPs) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a potential for discharge, if so required by the Director. When submitted and approved, the BMP Plan shall become a part of this Permit and all requirements of the BMP Plan shall become requirements of this Permit.

e. Spill Prevention, Control, and Management

The Permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan acceptable to the Department that is prepared and certified by a Professional Engineer (PE), registered in the State of Alabama, for all onsite petroleum product or other pollutant storage tanks or containers as provided by ADEM Admin. Code r. 335-6-6-.08(j)5. The Plan shall describe and the Permittee shall implement appropriate structural and/or non-structural spill prevention, control, and/or management pursuant to ADEM Admin. Code r. 335-6-6-.12 (r) sufficient to prevent any spills of pollutants from entering a ground or surface water of the State or a publicly or privately owned treatment works. The Plan shall include at a minimum, the engineering requirements provided in 40 C.F.R. §§112.1. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. Such containment systems shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided. The Plan shall list any materials which the Permittee may utilize to contain and to absorb fuel and chemical spills and leaks. The Permittee shall maintain sufficient amounts of such materials onsite or have sufficient amounts of such materials readily available to contain and/or absorb fuel and chemical spills and leaks. Soil contaminated by chemical spills, oil spills, etc., must be immediately cleaned up or be removed and disposed of in a manner consistent with all State and federal regulations.

f. All surface drainage and storm water runoff which originate within or enters the Permittee's premises and which contains any pollutants or other wastes shall be discharged, if at all, from a point source identified on Page 1 of this Permit and described more fully in the Permittee's application.

g. The Permittee shall take all reasonable precautions to prevent any surface drainage or storm water runoff which originates outside the Permittee's premises and which contains any pollutants or other wastes from entering the Permittee's premises. At no time shall the Permittee discharge any such surface drainage or storm water runoff which enters the Permittee's premises if, either alone or in combination with the Permittee's effluent, the discharge would exceed any applicable discharge limitation specified in Part I.A. of this Permit.

4. Biocide Additives

a. The Permittee shall notify the Director in writing not later than sixty (60) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in any cooling or boiler system(s) regulated by this Permit. Notification is not required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the Permittee. Such notification shall include:

(a) Name and general composition of biocide or chemical;

(b) 96-hour median tolerance limit data for organisms representative of the biota of the water(s) which the discharge(s) enter(s);

(c) Quantities to be used;

(d) Frequencies of use;

(e) Proposed discharge concentrations; and

(f) EPA registration number, if applicable.

b. The use of any biocide or chemical additive containing tributyl tin, tributyl tin oxide, zinc, chromium, or related compounds in any cooling or boiler system(s) regulated by the Permit is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this Permit or in the application for this Permit or not exempted from notification under this Permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

5. Facility Identification

The Permittee shall clearly display prior to commencement of any regulated activity and until permit coverage is properly terminated, the name of the Permittee, entire NPDES permit number, facility or site name, and other descriptive information deemed appropriate by the Permittee at an easily accessible location(s) to adequately identify the site, unless approved otherwise in writing by the Department. The Permittee shall repair or replace the sign(s) as necessary upon becoming aware that the identification is missing or is unreadable due to age, vandalism, theft, weather, or other reason.

6. Removed Substances

Solids, sludges, filter backwash, or any other pollutants or other wastes removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department rules and regulations.

7. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facility, including but not limited to the loss or failure of the primary source of power of the treatment facility, the Permittee shall, where necessary to maintain compliance with the discharge limitations specified in Part I.A. of this Permit or any other terms or conditions of this Permit, cease, reduce, or otherwise control production and/or discharges until treatment is restored.

8. Duty to Mitigate

The Permittee shall promptly take all reasonable steps to minimize or prevent any violation of this Permit or to mitigate and minimize any adverse impact to waters resulting from noncompliance with any discharge limitation specified in Part I.A. of this Permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as is necessary to determine the nature and impact of the noncomplying discharge.

B. BYPASS AND UPSET

1. Bypass

a. Any bypass is prohibited except as provided in Parts II.B.1.b. and c.

b. A bypass is not prohibited if:

(1) It does not cause any applicable discharge limitation specified in Part I.A. of this Permit to be exceeded;

(2) The discharge resulting from such bypass enters the same receiving water as the discharge from the permitted outfall;

(3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system; and

(4) The Permittee monitors the discharge resulting from such bypass at a frequency, at least daily, sufficient to prove compliance with the discharge limitations specified in Part I.A. of this Permit.

c. A bypass is not prohibited and need not meet the discharge limitations specified in Part I.A. of this Permit if:

(1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the Permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The Permittee submits a written request for authorization to bypass to the Director at least ten (10) days, if possible, prior to the anticipated bypass or within 24 hours of an unanticipated bypass, the Permittee is granted such authorization, and Permittee complies with any conditions imposed by the Director to minimize any adverse impact to waters resulting from the bypass.

d. The Permittee has the burden of establishing that each of the conditions of Parts II.B.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in Part II.B.1.a. and an exemption, where applicable, from the discharge limitations specified in Part I.A. of this Permit.

2. Upset

a. The Permittee may seek to demonstrate that noncompliance with technology-based effluent limits occurred as a result of an upset if the conditions of Part II.B.2.b are met and if the Permittee complies with the conditions provided in Part II.B.2.c.

b. If the Permittee wishes to establish the affirmative defense of an upset for technology-based effluent limit noncompliance, the Permittee must demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the Permittee can identify the specific cause(s) of the upset;

(2) The wastewater treatment facility was at the time being properly operated in accordance with Part II.B.d.

(3) The Permittee submitted notice of the noncompliance during the upset as required by Part II.B.2.c; and

(4) The Permittee complied with any remedial measures required under Part II.A.7. of this Permit.

c. If the Permittee wishes to establish the affirmative defense of an upset for technology-based effluent limit noncompliance, the Permittee shall:

(1) No later than 24-hours after becoming aware of the occurrence of the upset, orally report the occurrence and circumstances of the upset to the Director in accordance with Part I.G.2.; and

(2) No later than five (5) days after becoming aware of the occurrence of the upset, furnish the Director with evidence, including properly signed, contemporaneous operating logs, design drawings, construction certification, maintenance records, weir flow measurements, dated photographs, rain gauge measurements, or other relevant evidence, demonstrating that:

(i) An upset occurred;

(ii) The Permittee can identify the specific cause(s) of the upset;

(iii) The Permittee's treatment facility was being properly operated at the time of the upset; and

(iv) The Permittee promptly took all reasonable steps to minimize any adverse impact to waters resulting from the upset.

d. A discharge which is an overflow from a treatment facility or system, or an excess discharge from a point source associated with a treatment facility or system and which results from a 24-hour precipitation event larger than a 10-year, 24-hour precipitation event is not eligible to be considered as a result of an upset unless:

(1) The treatment facility or system is designed, constructed, and maintained to contain the maximum volume of wastewater which would be generated by the facility during a 24-hour period without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event or to treat the maximum flow associated with these volumes. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event, the volume which would result from all areas contributing runoff to the individual treatment facility must be included (i.e., all runoff that is not diverted from the mining area and runoff which is not diverted from the preparation plant area); and

(2) The Permittee takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow or excess discharge.

e. The Permittee has the burden of proof in defense of any enforcement action as a result of noncompliance of technology-based effluent limits the Permittee proposes to attribute to an upset.

C. PERMIT CONDITIONS AND RESTRICTIONS

1. Prohibition against Discharge from Facilities Not Certified

a. Notwithstanding any other provisions of this Permit, if the permitted facility has not obtained or is not required to obtain a permit from the Alabama Surface Mining Commission, any discharge(s) from any point or nonpoint source(s) from the permitted facility which was not certified to the Department on a form approved by the Department by a professional engineer, registered in the State of Alabama, as being designed, constructed, and in accordance with plans and specifications reviewed by the Department is prohibited; or

b. Notwithstanding any other provisions of this Permit, if the permitted facility has obtained or is required to obtain a permit from the Alabama Surface Mining Commission, any discharge(s) from any point or nonpoint source(s) from the permitted facility which is associated with a treatment facility which was not constructed and certified to the Alabama Surface Mining Commission pursuant to applicable provisions of said Commission's regulations, is prohibited until the Permittee submits to the Alabama Surface Mining Commission, certification by a professional engineer, registered in the State of Alabama, certifying that such facility has been constructed in accordance with plans and specifications approved by the Alabama Surface Mining Commission. This requirement shall not apply to pumped discharges from the underground works of underground coal mines where no surface structure is required by the Alabama Surface Mining Commission, provided the Department is notified in writing of the completion or installation of such facilities, and the pumped discharges will meet permit effluent limits without treatment.

2. Permit Modification, Suspension, Termination, and Revocation

a. This Permit may be modified, suspended, terminated, or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:

(1) The violation of any term or condition of this Permit;

(2) The obtaining of this Permit by misrepresentation or the failure to disclose fully all relevant facts;

(3) The submission of materially false or inaccurate statements or information in the permit application or reports required by the Permit;

(4) The need for a change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

(5) The existence of any typographical or clerical errors or of any errors in the calculation of discharge limitations;

(6) The existence of material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;

(7) The threat of the Permittee's discharge on human health or welfare; or

(8) Any other cause allowed by ADEM Admin. Code ch. 335-6-6.

b. The filing of a request by the Permittee for modification, suspension, termination, or revocation and reissuance of this Permit, in whole or in part, does not stay any Permit term or condition of this Permit.

3. Requirements for Metals, Cyanide, and Phenols Monitoring and Reporting

a. For all outfalls, the Permittee shall collect a sample of the discharge to be analyzed for antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, cyanide, and phenols no later six months following the effective date of the Permit. The analyses shall be submitted on an EPA Form 2C or ADEM From 567 and received by the Department no later than 28 days following six months after the effective date of the Permit.

b. For all outfalls, should a discharge not occur within the first six months following the effective date of this Permit, the Permittee shall collect a sample of the discharge to be analyzed for antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, cyanide, and phenols no later than six months following the date of the first discharge. The analyses shall be submitted on EPA Form 2C or ADEM Form 567 and received by the Department no later than 28 days following six months after the first discharge.

c. Parts II.C.3.a. and b. do not apply for any outfall that is represented by analyses conducted at a substantially similar outfall as indicated on EPA Form 2C or 2D.

d. The Permit shall be reopened, if required, to address any new information resulting from the completion and submittal of the data referenced in Parts II.C.3.a. and b

4. Automatic Expiration of Permits for New or Increased Discharges

a. Except as provided by ADEM Admin. Code r. 335-6-6-.02(h) and 335-6-6-.05, if this Permit was issued for a new discharger or new source, it shall expire eighteen months after the issuance date if construction has not begun during that eighteen month period.

b. Except as provided by ADEM Admin. Code r. 335-6-6-.02(h) and 335-6-6-.05, if any portion of this Permit was issued or modified to authorize the discharge of increased quantities of pollutants to accommodate the modification of an existing facility, that portion of this Permit shall expire eighteen months after this Permit's issuance if construction of the modification has not begun within eighteen month period.

c. Construction has begun when the owner or operator has:

(1) Begun, or caused to begin as part of a continuous on-site construction program:

(i) Any placement, assembly, or installation of facilities or equipment; or

(ii) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

(2) Entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

d. The automatic expiration of this Permit for new or increased discharges if construction has not begun within the eighteen month period after the issuance of this Permit may be tolled by administrative or judicial stay.

5. Transfer of Permit

This Permit may not be transferred or the name of the Permittee changed without notice to the Director and subsequent modification or revocation and reissuance of this Permit to identify the new Permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership, or control of the Permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership, or control of the Permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership, or control, he may decide not to modify the existing Permit and require the submission of a new permit application.

6. Groundwater

Unless authorized on page 1 of this Permit, this Permit does not authorize any discharge to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem, and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

7. Property and Other Rights

This Permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations, nor does it authorize or

approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the State or of the United States.

D. RESPONSIBILITIES

1. Duty to Comply

a. The Permittee must comply with all terms and conditions of this Permit. Any permit noncompliance constitutes a violation of the AWPCA, AEMA, and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification, or denial of a permit renewal application.

b. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the FWPCA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the effluent standard, prohibition or requirement.

c. For any violation(s) of this Permit, the Permittee is subject to a civil penalty as authorized by the AWPCA, the AEMA, the FWPCA, and Code of Alabama 1975, §§22-22A-1 et. seq., as amended, and/or a criminal penalty as authorized by Code of Alabama 1975, §22-22-1 et. seq., as amended.

d. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of this Permit shall not be a defense for a Permittee in an enforcement action.

e. Nothing in this Permit shall be construed to preclude or negate the Permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals.

f. The discharge of a pollutant from a source not specifically identified in the permit application for this Permit and not specifically included in the description of an outfall in this Permit is not authorized and shall constitute noncompliance with this Permit.

g. The Permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this Permit or to minimize or prevent any adverse impact of any permit violation.

2. Change in Discharge

a. The Permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants, increase the quantity of a discharged pollutant, or that could result in an additional discharge point. This requirement also applies to pollutants that are not subject to discharge limitations in this Permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.

b. The Permittee shall notify the Director as soon as it knows or has reason to believe that it has begun or expects to begin to discharge any pollutant listed as a toxic pollutant pursuant to Section 307(a) of the FWPCA, 33 U.S.C. §1317(a), any substance designated as a hazardous substance pursuant to Section 311(b)(2) of the FWPCA, 33 U.S.C. §1321(b)(2), any waste listed as a hazardous waste pursuant to Code of Alabama 1975, §22-30-10, or any other pollutants or other wastes which is not subject to any discharge limitations

specified in Part I.A. of this Permit and was not reported in the Permittee's application, was reported in the Permittee's application in concentrations or mass rates lower than that which the Permittee expects to begin to be discharged, or has reason to believe has begun to be discharged.

3. Compliance with Toxic or Other Pollutant Effluent Standard or Prohibition

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Sections 301(b)(2)(C),(D),(E) and (F) of the FWPCA, 33 U.S.C. §1311(b)(2)(C),(D),(E), and (F); 304(b)(2) of the FWPCA, 33 U.S.C. §1314(b)(2); or 307(a) of the FWPCA, 33 U.S.C. §1317(a), for a toxic or other pollutant discharged by the Permittee, and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Part I.A. of this Permit or controls a pollutant not limited in Part I.A. of this Permit, this Permit shall be modified to conform to the toxic or other pollutant effluent standard or prohibition and the Permittee shall be notified of such modification. If this Permit has not been modified to conform to the toxic or other pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the authorization to discharge in this Permit shall be void to the extent that any discharge limitation on such pollutant in Part I.A. of this Permit exceeds or is inconsistent with the established toxic or other pollutant effluent standard or prohibition.

4. Compliance with Water Quality Standards and Other Provisions

a. On the basis of the Permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this Permit will assure compliance with applicable water quality standards. However, this Permit does not relieve the Permittee from compliance with applicable State water quality standards established in ADEM Admin. Code ch. 335-6-10, and does not preclude the Department from taking action as appropriate to address the potential for contravention of applicable State water quality standards which could result from discharges of pollutants from the permitted facility.

b. Compliance with Permit terms and conditions notwithstanding, if the Permittee's discharge(s) from point source(s) identified on Page 1 of this Permit cause(s) or contribute(s) to a condition in contravention of State water quality standards, the Department may require abatement action to be taken by the Permittee, modify the Permit pursuant to the Department's rules and regulations, or both.

c. If the Department determines, on the basis of a notice provided pursuant to Part II.C.2. of this Permit or any investigation, inspection, or sampling, that a modification of this Permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the noticed act until the Permit has been modified.

5. Compliance with Statutes and Rules

a. This Permit has been issued under ADEM Admin. Code div. 335-6. All provisions of this division, that are applicable to this Permit, are hereby made a part of this Permit. A copy of this division may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36110-2059.

b. This Permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

6. **Right of Entry and Inspection**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the 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; and

d. Sample or monitor at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

7. **Duty to Reapply or Notify of Intent to Cease Discharge**

a. If the Permittee intends to continue to discharge beyond the expiration date of this Permit, the Permittee shall file with the Department a complete permit application for reissuance of this Permit at least 180 days prior to its expiration. **Applications must be submitted electronically via the Department's current electronic permitting system. The Department's current online permitting system, Alabama Environmental Permitting and Compliance System (AEPACS), can be found online at https://aepacs.adem.alabama.gov/nviro/ncore/external/home.**

b. If the Permittee does not desire to continue the discharge(s) allowed by this Permit, the Permittee shall notify the Department at least 180 days prior to expiration of this Permit of the Permittee's intention not to request reissuance of this Permit. This notification must include the information required in Part I.D.4.a. and be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Admin. Code r. 335-6-6-.09.

c. Failure of the Permittee to submit to the Department a complete application for reissuance of this Permit at least 180 days prior to the expiration date of this Permit will void the automatic continuation of this Permit provided by ADEM Admin. Code r. 335-6-6-.06; and should this Permit not be reissued for any reason, any discharge after the expiration of this Permit will be an unpermitted discharge.

PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under this Permit shall, upon conviction, be subject to penalties and/or imprisonment as provided by the AWPCA and/or the AEMA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished as provided by applicable State and Federal law.

3. Permit Enforcement

This NPDES Permit is a Permit for the purpose of the AWPCA, the AEMA, and the FWPCA, and as such all terms, conditions, or limitations of this Permit are enforceable under State and Federal law.

4. Relief From Liability

Except as provided in Part II.B.1. (Bypass) and Part II.B.2. (Upset), nothing in this Permit shall be construed to relieve the Permittee of civil or criminal liability under the AWPCA, AEMA, or FWPCA for noncompliance with any term or condition of this Permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under Section 311 of the FWPCA, 33 U.S.C. §1321.

C. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, §22-22-9(c), all reports prepared in accordance with the terms of this Permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential. Knowingly making any false statement in any such report may result in the imposition of criminal penalties as provided for in Section 309 of the FWPCA, 33 U.S.C. §1319, and Code of Alabama 1975, §22-22-14.

D. DEFINITIONS

1. Alabama Environmental Management Act (AEMA) - means Code of Alabama 1975, §§22-22A-1 et. seq., as amended.

2. Alabama Water Pollution Control Act (AWPCA) - means Code of Alabama 1975, §§22-22-1 et. seq., as amended.

3. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar

month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

4. Arithmetic Mean - means the summation of the individual values of any set of values divided by the number of individual values.

5. BOD - means the five-day measure of the pollutant parameter biochemical oxygen demand

6. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.

7. CBOD - means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.

8. Controlled Surface Mine Drainage – means any surface mine drainage that is pumped or siphoned from the active mining area.

9. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.

10. Daily maximum - means the highest value of any individual sample result obtained during a day.

11. Daily minimum - means the lowest value of any individual sample result obtained during a day.

12. Day - means any consecutive 24-hour period.

13. Department - means the Alabama Department of Environmental Management.

14. Director - means the Director of the Department or his authorized representative or designee.

15. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other waste into waters of the state." Code of Alabama 1975, §22-22-1(b)(8).

16. Discharge monitoring report (DMR) - means the form approved by the Director to accomplish monitoring report requirements of an NPDES Permit.

17. DO - means dissolved oxygen.

18. E. coli – means the pollutant parameter Escherichia coli.

19. 8HC - means 8-hour composite sample, including any of the following:

    a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

    b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

20. EPA - means the United States Environmental Protection Agency.

21. Federal Water Pollution Control Act (FWPCA) - means 33 U.S.C. §§1251 et. seq., as amended.

22. Flow – means the total volume of discharge in a 24-hour period.

23. Geometric Mean - means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

24. Grab Sample - means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.

25. Indirect Discharger - means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.

26. Industrial User - means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category "Division D – Manufacturing" and such other classes of significant waste producers as, by regulation, the Director deems appropriate.

27. mg/L - means milligrams per liter of discharge.

28. MGD - means million gallons per day.

29. Monthly Average - means, other than for E. coli bacteria, the arithmetic mean of all the composite or grab samples taken for the daily discharges collected in one month period. The monthly average for E. coli bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period. (Zero discharges shall not be included in the calculation of monthly averages.)

30. New Discharger - means a person owning or operating any building, structure, facility or installation:

    a. From which there is or may be a discharge of pollutants;

    b. From which the discharge of pollutants did not commence prior to August 13, 1979, and which is not a new source; and

    c. Which has never received a final effective NPDES Permit for dischargers at that site.

31. New Source - means:

    a. A new source as defined for coal mines by 40 CFR Part 434.11 (1994); and

    b. Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

        (1) After promulgation of standards of performance under Section 306 of FWPCA which are applicable to such source; or

        (2) After proposal of standards of performance in accordance with Section 306 of the FWPCA which are applicable to such source, but only if the standards are promulgated in accordance with Section 206 within 120 days of their proposal.

32. NH3-N - means the pollutant parameter ammonia, measured as nitrogen.

33. 1-year, 24-hour precipitation event - means the maximum 24-hour precipitation event with a probable recurrence interval of once in one year as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

34. Permit application - means forms and additional information that are required by ADEM Admin. Code r. 335-6-6-.08 and applicable permit fees.

35. Point Source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. §1362(14).

36. Pollutant - includes for purposes of this Permit, but is not limited to, those pollutants specified in Code of Alabama 1975, §22-22-1(b)(3) and those effluent characteristics, excluding flow, specified in Part I.A. of this Permit.

37. Pollutant of Concern - means those pollutants for which a water body is listed as impaired or which contribute to the listed impairment.

38. Pollution Abatement and/or Prevention Plan (PAP Plan) – mining operations plan developed to minimize impacts on water quality to avoid a contravention of the applicable water quality standards as defined in ADEM Admin. Code r. 335-6-9-.03

39. Preparation, Dry - means a dry preparation facility within which the mineral/material is cleaned, separated, or otherwise processed without use of water or chemical additives before it is shipped to the customer or otherwise utilized. A dry preparation plant includes all ancillary operations and structures necessary to clean, separate, or otherwise process the mineral/material, such as storage areas and loading facilities. Dry preparation also includes minor water spray(s) used solely for dust suppression on equipment and roads to minimize dust emissions.

40. Preparation, Wet - means a wet preparation facility within which the mineral/material is cleaned, separated, or otherwise processed using water or chemical additives before it is shipped to the customer or otherwise utilized. A wet preparation plant includes all ancillary operations and structures necessary to clean, separate, or otherwise process the mineral/material, such as storage areas and loading facilities. Wet preparation also includes mineral extraction/processing by dredging, slurry pumping, etc.

41. Privately Owned Treatment Works - means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".

42. Publicly Owned Treatment Works (POTW) - means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.

43. Receiving Stream - means the "waters" receiving a "discharge" from a "point source".

44. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

45. 10-year, 24-hour precipitation event - means that amount of precipitation which occurs during the maximum 24-hour precipitation event with a probable recurrence interval of once in ten years as

defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

46. TKN - means the pollutant parameter Total Kjeldahl Nitrogen.

47. TON - means the pollutant parameter Total Organic Nitrogen.

48. TRC - means Total Residual Chlorine.

49. TSS – means the pollutant parameter Total Suspended Solids

50. Treatment facility and treatment system - means all structures which contain, convey, and as necessary, chemically or physically treat mine and/or associated preparation plant drainage, which remove pollutants limited by this Permit from such drainage or wastewater. This includes all pipes, channels, ponds, tanks, and all other equipment serving such structures.

51. 24HC - means 24-hour composite sample, including any of the following:

    a. The mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;

    b. A sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or

    c. A sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.

52. 24-hour precipitation event - means that amount of precipitation which occurs within any 24-hour period.

53. 2-year, 24-hour precipitation event - means the maximum 24-hour precipitation event with a probable recurrence interval of once in two years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

54. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate facilities, lack of preventive maintenance, or careless or improper operation.

55. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the State, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, §22-22-1(b)(2). "Waters" include all "navigable waters" as defined in §502(7) of the FWPCA, 33 U.S.C. §1362(7), which are within the State of Alabama.

56. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.

57. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the

Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

E. 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.

F. PROHIBITIONS AND ACTIVIES NOT AUTHORIZED

1. Discharges from disposal or landfill activities as described in ADEM Admin. Code div. 335-13 are not authorized by this Permit unless specifically approved by the Department.

2. Relocation, diversion, or other alteration of a water of the State is not authorized by this Permit unless specifically approved by the Department.

3. Lime or cement manufacturing or production and discharge of process waters from such manufacturing or production is not authorized by this Permit unless specifically approved by the Department.

4. Concrete or asphalt manufacturing or production and discharge of process waters from such manufacturing or production is not authorized by this Permit unless specifically approved by the Department.

5. The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the Permittee or not identified in the application for this Permit or not identified specifically in the description of an outfall in this Permit is not authorized by this Permit.

G. DISCHARGES TO IMPAIRED WATERS

1. This Permit does not authorize new sources or new discharges of pollutants of concern to impaired waters unless consistent with an EPA-approved or EPA-established Total Maximum Daily Load (TMDL) and applicable State law, or unless compliance with the limitations and requirements of the Permit ensure that the discharge will not contribute to further degradation of the receiving stream. Impaired waters are those that do not meet applicable water quality standards and are identified on the State of Alabama's §303(d) list or on an EPA-approved or EPA-established TMDL. Pollutants of concern are those pollutants for which the receiving water is listed as impaired or contribute to the listed impairment.

2. Facilities that discharge into a receiving stream which is listed on the State of Alabama's §303(d) list of impaired waters, and with discharges that contain the pollutant(s) for which the waters are impaired, must within six (6) months of the Final §303(d) list approval, document in its BMP plan how the BMPs will control the discharge of the pollutant(s) of concern, and must ensure that there will be no increase of the pollutants of concern. A monitoring plan to assess the effectiveness of the BMPs in achieving the allocations must also be included in the BMP plan.

3. If the facility discharges to impaired waters as described above, it must determine whether a TMDL has been developed and approved or established by EPA for the listed waters. If a TMDL is approved or established during this Permit cycle by EPA for any waters into which the facility discharges, the facility must review the applicable TMDL to see if it includes requirements for control of any water discharged by the Permittee. Within six (6) months of the date of TMDL approval or establishment, the facility must notify the Department on how it will modify its BMP plan to include best management practices specifically targeted to achieve the allocations prescribed

by the TMDL, if necessary. Any revised BMP plans must be submitted to the Department for review. The facility must include in the BMP plan a monitoring component to assess the effectiveness of the BMPs in achieving the allocations.

NPDES Individual Application - Mining (Form 315)

version 3.4

(Submission #: HQ6-DXG0-Z982Q, version 3)

Details

Submission Alias Vincent Quarry Form 315 Application
Submission ID HQ6-DXG0-Z982Q

Form Input

Processing Information

Is this a coalbed methane operation?
No

Please indicate the purpose of this application:
Initial Permit Application for New Facility

General Instructions

NPDES Individual Permit Application – Mining Operations (Form 315)

This form should be used to submit an application for an NPDES individual permit to authorize discharges from surface & underground mineral, ore, or mineral product mining, quarrying, excavation, borrowing, hydraulic mining, storage, processing, preparation, recovery, handling, loading, storing, or disposing activities, and associated areas including pre-mining site development, construction, excavation, clearing, disturbance, and reclamation.

Incomplete or incorrect answers or missing signatures will delay processing. Attach additional comments or information as needed. Commencement of activities applied for as detailed in this application are not authorized until permit coverage has been issued by the Department.
For assistance, please click here to determine the permit staff responsible for the site or call (334) 394-4372.

Please click here for the Alabama 303(d) list of Impaired Waters

Please click here for Information on Alabama TMDLs

Permittee Information

Permittee

Permittee Name
Wiser Land Development, LLC.

Mailing Address

1431 Kensington Square Court

Murfreesboro, TN 37130

Responsible Official

Prefix
Mr.

First Name	Last Name
Lucian	Cayce

Title
Corporate Secretary

Organization Name
Wiser Land Development, LLC.

Phone Type	Number	Extension
Mobile	6156420851	

Email
LMCayce@wiser.team

Mailing Address

1431 Kensington Square Court

Murfreesboro, TN 37130

Facility/Operations Information

Facility/Operations Name
Eastern Quarry

CORRECTION REQUEST *(APPROVED)*
Facility Name

The facility name needs to be changed to Eastern Quarry
Created on 5/28/2025 11:31 AM by **Ange Boatwright**

Permittee Organization Type
LLC

Parent Corporation and Subsidiary Corporations of Applicant, if any:
NONE PROVIDED

Landowner(s) Name, Address and Phone Number:
Cyrus Wiser, 1711 Waters Edge Court, Murfreesboro TN 37130

Sub-contractor(s)/Operator(s), if known:
NONE PROVIDED

Is the "Company/Permittee" properly registered and in good standing with the Alabama Secretary of State's office?
Yes

Facility/Operations Address or Location Description

4882 US Highway 231

Vincent, AL 35178

CORRECTION REQUEST *(APPROVED)*
Facility Address

Please correct the facility address.
Created on 4/15/2026 9:39 AM by **Ange Boatwright**

1 COMMENT
Jeffrey Havercroft (jeff.havercroft@gmail.com) (4/16/2026 8:03 AM)
Corrected

Facility/Operations County (Front Gate)
Shelby

Do the operations span multiple counties?
Yes

Additional Counties
St Clair

Detailed Directions to the Facility/Operations
Get on I-65 N from AL-152 W/Northern Blvd. Follow I-65 N for 39 miles to AL-145 N in Clanton. Take exit 212 from I-65 N. Follow AL-145 N and AL-25 N for 23 miles to US-231 N in Vincent. Continue onto US-231 N for 5 miles, turn right, 4844 US-231.

Please refer to the link below for Lat/Long map instruction help:
Map Instruction Help

Facility/Operations Front Gate Latitude and Longitude
33.452703234296614,-86.38201753206222

Township(s), Range(s), Section(s) (Note: If you are submitting multiple TRSs, please separate each TRS by a semicolon. Example: T19S,R1E,S15; T20S,R2E,S16)
T18S, R3E, S19, S30; T18S, R2E, S24

SIC Code(s) [Please select your primary SIC code first]:
1422-Crushed and Broken Limestone

NAICS Code(s) [Please select your primary NAICS code first]:
212312-Crushed and Broken Limestone Mining and Quarrying

Facility/Operations Contact

Prefix
Mr.

First Name	Last Name
James	Woodham

Title
PE

Organization Name
Wiser Land Development LLC

Phone Type	Number	Extension
Mobile	2054102283	

Email
jwoodham@mail.com

Member Information

Identify the name, title/position, and unless waived in writing by the Department, the resident address of every officer (a PO Box is not acceptable), general partner, LLP partner, LLC member, investor, director, or person performing a function similar to a director, of the applicant, and each person who is the record or beneficial owner of 10 percent or more of any class of voting stock of the applicant, or any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the facility/operations:

List of Names/Titles/Addresses, as described in the instructions above, will be entered by:
Manually Entering in Table

Name	Title/Position	Physical Address of Residence
Cyrus Wiser	Chief Manager	1171 Waters Edge Court, Murfreesboro, TN 37130
Lucian Cayce	Corporate Secretary	220 Hidden Hollow Lane, Wartrace, TN 37183

Other than the "Company/Permittee", identify the name of each corporation, partnership, association, and single proprietorship for which any individual identified above is or was an officer, general partner, LLP partner, LLC member, investor, director, or individual

performing a function similar to a director, or principal (10% or more) stockholder, that had an Alabama NPDES permit at any time during the five year (60 month) period immediately preceding the date on which this form is signed (if this does not apply, then enter N/A after selecting "Manually Enter in Table"):

List of Corporations/Partnerships/etc, Names and Titles, as described in the instructions above, will be entered by:
Manually Entering in Table

Name of Corporation, Partnership, Association, or Single Proprietorship	Name of Individual	Title/Position in Corporation, Partnership, Association, or Single Proprietorship
Southeastern Land Development, LLC.	Cyrus Wiser	President/CEO

Additional Contacts (1 of 1)

ADDITIONAL CONTACTS:

Contact Type
NONE PROVIDED

Contact

First Name **Last Name**
NONE PROVIDED *NONE PROVIDED*

Title
NONE PROVIDED

Organization Name
NONE PROVIDED

Phone Type **Number** **Extension**
NONE PROVIDED

Email
NONE PROVIDED

Address
[NO STREET ADDRESS SPECIFIED]
[NO CITY SPECIFIED], AL *[NO ZIP CODE SPECIFIED]*

Compliance History

Has the applicant ever had any of the following:

Event	Apply?
An Alabama NPDES, SID, or UIC permit suspended or terminated	No
An Alabama or federal environmental permit suspended/terminated	No
An Alabama State Oil Gas Board permit or other approval suspended or terminated	No
An Alabama or federal performance/environmental bond, or similar security deposited in lieu of a bond, or portion thereof, forfeited	No

Has the applicant, parent corporation, subsidiary, general partner, LLP partner, or LLC Member had any Warning Letters, Notice of Violations (NOVs), Administrative Actions, or litigation filed by ADEM or EPA during the three year (36 month) period preceding the date on which this form is signed?
No

For this facility, list any other NPDES or other environmental permits (including permit numbers), authorizations, or certifications that have been applied for or issued within the State by ADEM, EPA, Alabama Department of Labor (ADOL), US Army Corp of Engineers (USACE), or other agency, to the applicant, parent corporation, subsidiary, or LLC member whether presently effective, expired, suspended, revoked, or terminated:
none

For other facilities, list any other NPDES or other ADEM permits (including permit numbers), authorizations, or certifications that have been applied for or issued within the State by ADEM, EPA, ASMC, ADOL, or USACE, to the applicant, parent corporation, subsidiary, or LLC member whether presently effective, expired, suspended, revoked, or terminated:
Southeastern Quarry ADEM Air Permit413-0127-x001

Southeastern Quarry ADEM NPDES AL0084467

Anti-Degradation Evaluation

Pursuant to ADEM Admin. Code ch. 335-6-10-.12(9), responses to the following questions must be provided by the applicant requesting NPDES permit coverage for new or expanded discharges of pollutant(s) to Tier 2 waters (except discharges eligible for coverage under general permits). As part of the permit application review process, the Department is required to consider, based on the applicant's demonstration, whether the proposed new or increased discharge to Tier 2 waters is necessary for important economic or social development in the area in which the waters are located. Do you have new or increased discharges?
Yes

NOTE

If the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete questions below, ADEM Form 311-Alternatives Analysis, and either ADEM Form 312 or ADEM Form 313- Calculation of Total Annualized Project Costs (Public-Sector or Private-Sector Projects, whichever is applicable). ADEM Form 312 or ADEM Form 313, whichever is applicable, must be provided for each treatment discharge alternative considered technically viable.
ADEM forms can be found on the Department's website here.

What environmental or public health problem will the discharger be correcting?
None.

How much will the discharger be increasing employment (at its existing facility or as the result of locating a new facility)?
Approximately 20 full-time employees will be hired locally.

How much reduction in employment will the discharger be avoiding?
None

How much additional state or local taxes will the discharger be paying?
Eastern Quarry estimates generating additional state and local sales tax of $95,000 annually. Additionally, Vincent Quarry will be paying significant taxes as a result of the purchase of construction materials, equipment, and fuel from local sources.

What public service to the community will the discharger be providing?
Eastern Quarry will be a good neighbor within the community and plans to support and enhance local education including contributing to programs in local schools.

Wiser Land Development will be a dedicated steward of all natural resources found within the facility as well as the surrounding area, and will faithfully protect the land, air, and water from harm.

What economic or social benefit will the discharger be providing to the community?
Providing the construction materials necessary for the continued economic growth of the surrounding region. Eastern Quarry will provide employment for the local community, additional tax revenue to the region, and plans to become an active participant in meeting the needs of the local population.

Attach Form 311 (Alternative Analysis)
Eastern Quarry - Form311 - 2025.09.12.pdf - 09/15/2025 03:09 PM
Comment
NONE PROVIDED

CORRECTION REQUEST *(APPROVED)*
ADEM Form 311

Please attach ADEM Form 311
Created on 5/28/2025 11:35 AM by **Ange Boatwright**

1 COMMENT
Jeffrey Havercroft (jeff.havercroft@gmail.com) (9/15/2025 4:13 PM)
Form 311 is attached

Please attach Form 312 (Public Sector Projects) or Form 313 (Private Sector Projects).

Eastern Quarry - ADEM Form 313.pdf - 09/15/2025 03:15 PM

Comment

NONE PROVIDED

Activity Description & Information

Narrative description of activity(s):

Aggregate Limestone/Dolomite is the raw material that will be excavated at this mine. The aggregate will be processed and stockpiled within the permit area. Quarrying operations will begin along the northwestern quadrant of the Vincent Site (Exhibit A). The initial pit will align in a southwest to northeast direction with advancement to the southeast.
Drilling indicates minimum overburden on site. But any overburden on top of the aggregate will be removed and used in the berms or stored in the spoils area (Exhibit A). The aggregate will be excavated in the pit area by drilling, blasting, and use of heavy equipment. Aggregate will be crushed on site with a portable crusher and washed and screened to variable size crushed stone to be used in the construction industry. The different products will be loaded on trucks and transported to construction industry clients.

Total Facility/Operations Area (acres)

266.00

Total Disturbed Area (acres)

235.00

Anticipated Commencement Date

11/01/2025

Anticipated Completion Date

04/01/2026

Please identify which of the following apply to this operation:

Activity/Condition	Appy?
An existing facility/operation which currently results in discharges to State waters?	No
A proposed facility/operation which will result in a discharge to State waters?	Yes
Be located within any 100-year flood plain?	No
Discharge to Municipal Separate Storm Sewer?	No
Discharge to waters of or be located in the Coastal Zone?	No
Need/have ADEM UIC permit coverage?	No
Be located on Indian/historically significant lands?	No
Need/have ADEM SID permit coverage?	No
Need/have ASMC permit coverage?	No
Need/have State Oil & Gas Board permit coverage?	No
Need/have ADOL permit coverage?	No
Generate, treat, store, or dispose of hazardous or toxic waste?	No
Be located in or discharge to a Public Water Supply (PWS) watershed or be located within mile of any PWS well?	No
Incised pit	Yes

Does your facility/operation use cooling water?

No

Material to be Removed, Processed, or Transloaded

Material To Be Removed, Processed, Or Transloaded (Note: Sum must equal 100.)

Mineral(s)/Mineral product(s)	%
Crushed rock (other)	3
Sand and/or Gravel	5
Limestone, crushed limestone and dolomite	92

Mineral(s)/Mineral product(s)	%
	Sum: 100

Proposed Activity To Be Conducted

Type(s) of activity presently conducted at applicant's existing facility or proposed to be conducted at facility (Select Yes or No)):

Activity	Apply?
Adjacent/associated asphalt/concrete plant(s)	No
Alternative fuels operation	No
Auger mining	No
Cement production	No
Chemical processing or leaching	No
Chemicals used in process or wastewater treatment (coagulant, biocide, etc.)	No
Construction related temporary borrow pits/areas	No
Creek/stream crossings	No
Dredging	No
Excavation	Yes
Grading, clearing, grubbing, etc.	Yes
Hydraulic mining	No
Hydraulic mining, dredging, instream or between stream-bank mining	No
Lime production	No
Low volume sewage treatment package plant	No
Mineral dry processing (crushing & screening)	Yes
Mineral loading	Yes
Mineral storing	Yes
Mineral transportation	Yes
Mineral wet preparation	Yes
Onsite construction debris or equipment storage/disposal	Yes
Onsite mining debris or equipment storage/disposal	Yes
Other beneficiation & manufacturing operations	No
Pre-construction ponded water removal	No
Pre-mining logging or land clearing	Yes
Preparation plant waste recovery	No
Quarrying	Yes
Reclamation of disturbed areas	No
Solution mining	No
Surface mining	No
Synthetic fuel production	No
Underground mining	No
Waterbody relocation or other alteration	No
Within-bank mining	No

CORRECTION REQUEST *(APPROVED)*

Proposed Activity to Be Conducted

The "Lime Plant" activity is marked as "Yes", is this correct? Also, the PAP Plan says there will be a wash plant onsite, is this correct? If so, then "Wet Prep" will need to be marked as "Yes". Please be aware that this will trigger an increase in the permitting fees.
Created on 5/28/2025 2:57 PM by **Ange Boatwright**

1 COMMENT

Jeffrey Havercroft (jeff.havercroft@gmail.com) (9/12/2025 12:35 PM)
Lime Plant has been marked "No" and Wet Prep has been marked "Yes"

If the operation will include activities other than those listed above, please describe them below:
NONE PROVIDED

If the type of activity presently conducted or proposed is Mineral Transportation, please indicate which of the following apply:

Method	Apply?
Barge	No
Rail	No
Truck	Yes

Fuel - Chemical Handling, Storage, & Spill Prevention Control & Countermeasures (SPCC) Plan

Will fuels, chemicals, compounds, or liquid waste be used or stored onsite?
Yes

Please identify the fuel, chemicals, compounds, or liquid waste and indicate the volume of each:

Volume (gallons)	Contents
12.500	Motor oil, diesel fuel, hydraulic oil, transdrive oil
1,000.0	Waste oil

SPCC Plan
Eastern Quarry SPCC - 2025.09.15.pdf - 09/15/2025 03:30 PM
Comment
NONE PROVIDED

CORRECTION REQUEST *(APPROVED)*
SPCC Plan

The amount of fuel stored, site name, and where the plan will be kept do not match the rest of the application. Which is correct? Also. if there is going to be more than 1350 gallons stored onsite, then the SPCC Plan will have to comply with 40 CFR 112.
Created on 5/28/2025 2:29 PM by **Ange Boatwright**

1 COMMENT
Jeffrey Havercroft (jeff.havercroft@gmail.com) (9/15/2025 4:18 PM)
SPCC Plan is attached

ASMC Regulated Entities

Is this a coal mining operation regulated by ASMC?
No

Topographic Map Submittal

Topographic Map

Attach to this application a 7.5 minute series U.S.G.S. topographic map(s) or equivalent map(s) no larger than, or folded to a size of 8.5 by 11 inches (several pages may be necessary), of the area extending to at least one mile beyond property boundaries. The topographic or equivalent map(s) must include a caption indicating the name of the topographic map, name of the applicant, facility name, county, and township, range, & section(s) where the facility are located. Unless approved in advance by the Department, the topographic or equivalent map(s), at a minimum, must show: a) An accurate outline of the area to be covered by the permit (b) An outline of the facility (c) All existing and proposed disturbed areas (d) Location of intake and discharge areas (e) Proposed and existing discharge points (f) Perennial, intermittent, and ephemeral streams (g) Lakes, springs, water wells, wetlands (h) All known

facility dirt/improved access/haul roads (i) All surrounding unimproved/improved roads (j) High-tension power lines and railroad tracks (k) Contour lines, township-range-section lines (l) Drainage patterns, swales, washes (m) All drainage conveyance/treatment structures (ditches, berms, etc.) (n) Any other pertinent or significant feature.

Topographic Map

EXHIBIT A - USGS Exhibit PRINT no image.pdf - 09/15/2025 03:32 PM

Comment

NONE PROVIDED

Detailed Facility Map Submittal

Detailed Facility Map

EASTERN QUARRY PERMIT PLANS - 2025.09.10.pdf - 09/15/2025 03:33 PM

Comment

NONE PROVIDED

Outfalls (1 of 2)

Outfall Identifier: 001

Feature Type
Outfall (External)

Outfall Identifier
001

Outfall Status
Proposed

> Please be aware that you should only mark an outfall status as existing if (1) the Department has been previously notified that it was constructed as proposed or (2) it began discharge prior to this application. A proposed outfall is one that is being newly added to the permit OR one that has never discharged or has never been authorized by the Department to discharge. Should you have any questions about which status to select, please contact the Department's permit engineer for this site.

Receiving Water
Kelly Creek

Check below if the discharge enters the receiving water via an unnamed tributary.

NONE PROVIDED

Location of Outfall
33.447281,-86.377574

CORRECTION REQUEST *(APPROVED)*

Location of Outfall 001

The location of the Outfall needs to be marked at the end of the discharge pipe and not where the discharges would enter the receiving stream.
Created on 5/28/2025 2:37 PM by **Ange Boatwright**

1 COMMENT

Jeffrey Havercroft (jeff.havercroft@gmail.com) (7/10/2025 4:34 PM)
Outfall 001 location adjusted to end of discharge pipe

303(d) Segment?
Yes

CORRECTION REQUEST *(APPROVED)*

303(d) Segment

Kelly Creek is on the current 303(d) list as being impaired for pathogens. Please change this answer to "Yes"
Created on 5/28/2025 2:37 PM by **Ange Boatwright**

1 COMMENT
Jeffrey Havercroft (jeff.havercroft@gmail.com) (9/15/2025 4:22 PM)
303(d) status updated to "Yes"

TMDL Segment?
No

Outfalls (2 of 2)

Outfall Identifier: 002

Feature Type
Outfall (External)

Outfall Identifier
002

Outfall Status
Proposed

> Please be aware that you should only mark an outfall status as existing if (1) the Department has been previously notified that it was constructed as proposed or (2) it began discharge prior to this application. A proposed outfall is one that is being newly added to the permit OR one that has never discharged or has never been authorized by the Department to discharge. Should you have any questions about which status to select, please contact the Department's permit engineer for this site.

Receiving Water
Kelly Creek

Check below if the discharge enters the receiving water via an unnamed tributary.
NONE PROVIDED

Location of Outfall
33.450789,-86.366304

CORRECTION REQUEST *(APPROVED)*
Location of Outfall 002

The location of the Outfall needs to be marked at the end of the discharge pipe and not where the discharges would enter the receiving stream.
Created on 5/28/2025 2:39 PM by **Ange Boatwright**

1 COMMENT
Jeffrey Havercroft (jeff.havercroft@gmail.com) (7/10/2025 4:39 PM)
Outfall 002 location adjusted to end of discharge pipe

303(d) Segment?
Yes

CORRECTION REQUEST *(APPROVED)*
303(d) Segment

Kelly Creek is on the current 303(d) list as being impaired for pathogens. Please change this answer to "Yes"
Created on 5/28/2025 2:40 PM by **Ange Boatwright**

1 COMMENT

Jeffrey Havercroft (jeff.havercroft@gmail.com) (7/10/2025 4:39 PM)
303(d) status for Outfall 002 changed to "Yes"

TMDL Segment?
No

Discharge Characterization

EPA Form 2C, EPA Form 2D, and/or ADEM Form 567 Submittal
Yes, pursuant to 40 CFR 122.21, the applicant requests a waiver for completion of EPA Form 2C, EPA Form 2D, and ADEM Form 567 and certifies that the operating facility will discharge treated stormwater only; that chemical/compound additives are not used (unless waived in writing by the Department on a programmatic, categorical, or individual compound/chemical basis); that there are no process, manufacturing, or other industrial operations or wastewaters, including but not limited to lime or cement production and synfuel operations; and that coal and coal products are not mined nor stored onsite.

CORRECTION REQUEST *(APPROVED)*
EPA Form 2D

The application indicates that there will be a lime plant onsite. If this is correct, then you will not be able to request a waiver for the submittal of EPA Form 2D. If a lime plant is going to be onsite, then you will need to submit EPA Form 2D.
Created on 5/28/2025 2:42 PM by **Ange Boatwright**

1 COMMENT
Jeffrey Havercroft (jeff.havercroft@gmail.com) (9/12/2025 12:41 PM)
Lime Plant has been removed from the application.

Please download the following Excel file to enter your information. Once complete, please attach to the below control.
Download spreadsheet here.

Required attachment:
Eastern Quarry - Form315TableB.xlsx - 09/15/2025 03:40 PM
Comment
NONE PROVIDED

Please download the following Excel file to enter your information. Once complete, please attach to the below control.
Download spreadsheet here.

Required attachment:
Eastern Quarry - Form315TableC.xlsx - 09/15/2025 03:43 PM
Comment
NONE PROVIDED

Discharge Structure Description & Pollutant Source

Please download the following Excel file to enter your information. Once complete, please attach to the below control.
Download spreadsheet here.

Required attachment:
Eastern Quarry - Form315DischargeStructure - 2025.09.12.xlsx - 09/12/2025 02:32 PM
Comment
NONE PROVIDED

CORRECTION REQUEST *(APPROVED)*
Discharge Structure and Pollutant Source

Please mark "No" under "Wet Prep-Other Production Plant", "Yes" under "Pumped or Controlled Discharge", and "Yes" under "Surface Discharge.
Created on 5/28/2025 3:02 PM by **Ange Boatwright**

1 COMMENT
Jeffrey Havercroft (jeff.havercroft@gmail.com) (9/12/2025 2:33 PM)
Wet prep plant is planned for this site, so it was marked "Yes"

Variance Request

Do you intend to request or renew one or more of the CWA technology variances authorized at 40 CFR 122.21(m)?
No

Pollution Abatement & Prevention (PAP) Plan Summary (1 of 1)

Outfall(s):
Kelly Creek

Outfall Questions:	Please select one:
Runoff from all areas of disturbance is controlled	Yes
Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond	Yes
Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage	Yes
Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity	Yes
Trees, boulders, and other obstructions removed from pond during initial construction	Yes
Width of top of dam greater than 12'	Yes
Side slopes of dam no steeper than 3:1	Yes
Cutoff trench at least 8' wide	Yes
Side slopes of cutoff trench no less than 1:1	Yes
Cutoff trench located along the centerline of the dam	Yes
Cutoff trench extends at least 2' into bedrock or impervious soil	Yes
Cutoff trench filled with impervious material	Yes
Embankments and cutoff trench 95% compaction standard proctor ASTM	Yes
Embankment free of roots, tree debris, stones >6" diameter, etc.	Yes
Embankment constructed in lifts no greater than 12"	Yes
Spillpipe sized to carry peak flow from a one year storm event	Yes
Spillpipe will not chemically react with effluent	Yes
Subsurface withdrawal	Yes
Anti-seep collars extend radially at least 2' from each joint in spillpipe	Yes
Splashpad at the end of the spillpipe	Yes
Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream	Yes
Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream	N/A
Emergency overflow at least 20' long	Yes
Side slopes of emergency spillway no steeper than 2:1	Yes
Emergency spillway lined with riprap or concrete	Yes
Minimum of 1.5' of freeboard between normal overflow and emergency overflow	Yes
Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam	Yes
All emergency overflows are sized to handle entire drainage area for ponds in series	N/A
Dam stabilized with permanent vegetation	Yes
Sustained grade of haul road <10%	Yes
Maximum grade of haul road <15% for no more than 300'	Yes
Outer slopes of haul road no steeper than 2:1	Yes

Outfall Questions:	Please select one:
Outer slopes of haul road vegetated or otherwise stabilized	Yes
Detail drawings supplied for all stream crossings	N/A
Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans	Yes
Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans	Yes

Identify and provide detailed explanation for any "N" or "N/A" response(s):
22) Outfall 001P and 002P do not discharge to a PWS classified stream.
28) The site does not have ponds in series.
34) No stream crossings are to be constructed as a part of this plan.

Pollution Abatement & Prevention (PAP) Plan Review Checklist

General Information:	Please select one:
PE Seal with License #	Yes
Name and Address of Operator	Yes
Legal Description of Facility	Yes
Name of Company	Yes
Number of Employees	Yes
Products to be Mined	Yes
Hours of Operation	Yes
Water Supply and Disposition	Yes

Maps:	Please select one:
Topographic Map including Information from Part XIII (a) " (o) of this Application	Yes
1" " 500" or Equivalent Facility Map including Information from Part XIV of this Application	Yes

Detailed Design Diagrams:	Please select one:
Plan Views	Yes
Cross-section Views	Yes
Method of Diverting Runoff to Treatment Basins	Yes
Line Drawing of Water Flow through Facility with Water Balance or Pictorial Description of Water Flow	Yes

Narrative of Operations:	Please select one:
Raw Materials Defined	Yes
Processes Defined	Yes
Products Defined	Yes

Schematic Diagram:	Please select one:
Points of Waste Origin	Yes
Collection System	Yes
Disposal System	Yes

Post Treatment Quantity and Quality of Effluent:	Please select one:
Flow	Yes
Suspended Solids	Yes
Iron Concentration	Yes
pH	Yes

Description of Waste Treatment Facility:	Please select one:
Pre-Treatment Measures	Yes
Recovery System	Yes
Expected Life of Treatment Basin	Yes
Measures for Ensuring Access to All Treatment Structures and Related Appurtenances including Outfall Locations	Yes
Schedule of Cleaning and/or Abandonment	Yes

Other:	Please select one:
Precipitation/Volume Calculations/Diagram Attached	Yes
BMP Plan for Haul Roads	Yes
Measures for Minimizing Impacts to Adjacent Stream (e.g., Buffer Strips, Berms)	Yes
Measures for Ensuring Appropriate Setbacks are Maintained at All Times	Yes
Methods for Minimizing Nonpoint Source Discharges	Yes
If Chemical Treatment Used, Methods for Ensuring Appropriate Dosage	N/A
Facility Closure Plans	Yes
PE Rationale(s) For Alternate Standards, Designs or Plans	N/A

Identify and provide detailed explanation for any "N" or "N/A" response(s):
(Chemical Treatment) -There will no chemical treatment of the effluent.
(Rationale(s)) - There are no requests for any alternative Standards, Designs, or Plans included in the application submission.

Pollution Abatement & Prevention (PAP) Plan

Is this a coal mining operation regulated by ASMC?
No

For non-coal mining facilities, has a PAP Plan in accordance with ADEM Admin. Code r. 335-6-9-.03 been completed?
Yes

PAP Plan (non-coal mining facilities)
EASTERN QUARRY PAP - 2025.09.15.pdf - 09/15/2025 04:42 PM
Comment
NONE PROVIDED

CORRECTION REQUEST *(APPROVED)*
PAP Plan

The PAP Plan states that the mined rock will be washed, is this correct? The buffer area next to Kelly Creek will be required to be visibly marked. How it will be visibly marked needs to be added to the narrative. The design information needs to be added for Outfalls 001 and 002 to show that they comply with 335-6-9 Appendix A. Stating that the pond design is in accordance with the Alabama Handbook is not adequate. According to the Fish and Wildlife National Wetlands Inventory website there are potential jurisdictional wetlands along Kelly Creek on the southern portion of the site. These will need to be included on the detailed facility map and the narrative of the PAP Plan. Please be aware a minimum 50ft buffer is required from all jurisdictional wetlands (unless permitted through USACE) and they have to be visibly marked. The design of the onsite haul road needs to be added as well.
Created on 5/28/2025 3:41 PM by **Ange Boatwright**

1 COMMENT
Jeffrey Havercroft (jeff.havercroft@gmail.com) (9/15/2025 4:30 PM)
A revised PAP Plan is attached. The revised Plan narrative states that the stream / wetland natural buffer areas will be marked with flagging, spray paint, or signage. The proposed ponds have been detailed in accordance with 335-6-9 App A. A haul road design and details are included in the narrative and on the Site Plans.

Professional Engineer (PE)

Registration License Number
32428

Professional Engineer

Prefix
Mr.

First Name	Last Name
Jeffrey	Havercroft

Title
Civil Engineer

Organization Name
Jeffrey Havercroft, PE

Phone Type	Number	Extension
Mobile	2057068170	

Email
jeff.havercroft@gmail.com

Address
2136 16TH AVE S
APT A3
BIRMINGHAM, AL 35205-5010

Information for the Applicant

Please read the following information and acknowledge below:

Contact the Department prior to submittal with any questions or to request acceptable alternate content/format.

Be advised that you are not authorized to commence regulated activity until this application can be processed, publicly noticed, and approval to proceed is received in writing from the Department.

EPA Form(s) 1 and 2F need not be submitted unless specifically required by the Department. EPA Form(s) 2C and/or 2D are required to be submitted unless the
applicant is eligible for a waiver and the Department grants a waiver, or unless the relevant information required by EPA Form(s) 2C and/or 2D are submitted to the Department in an alternative format acceptable to the Department.

Planned/proposed mining sites that are greater than 5 acres, that mine/process coal or metallic mineral/ore, or that have wet or chemical processing, must apply for and obtain coverage under an Individual or General NPDES Permit prior to commencement of any land disturbance. Such Individual NPDES Permit coverage may be requested via this ADEM Form 315.

The applicant is advised to contact:
(1) The Alabama Surface Mining Commission (ASMC) if coal, coal fines, coal refuse, or other coal related materials are mined, transloaded, processed, etc.;
(2) The Alabama Department of Labor (ADOL) if conducting non-coal mining operations;
(3) The Alabama Historical Commission for requirements related to any potential historic or culturally significant sites;
(4) The Alabama Department of Conservation and Natural Resources (ADCNR) for requirements related to potential presence of threatened/endangered species;
(5) The US Army Corps of Engineers, Mobile or Nashville Districts, if this project could cause fill to be placed in federal waters or could interfere with navigation.

The Department must be in receipt of a completed version of this form, including any supporting documentation, and the appropriate processing fee [including Greenfield Fee and Biomonitoring & Toxicity Limits fee(s), if applicable], prior to development of a draft NPDES permit.

Acknowledgement
I acknowledge I have read and understand the information above.

Additional Attachments

Additional Attachments

NONE PROVIDED

Comment

NONE PROVIDED

Application Preparer

Application Preparer

Prefix
NONE PROVIDED

First Name **Last Name**
NONE PROVIDED *NONE PROVIDED*

Title
NONE PROVIDED

Organization Name
NONE PROVIDED

Phone Type **Number** **Extension**
NONE PROVIDED

Email
NONE PROVIDED

Address

[NO STREET ADDRESS SPECIFIED]

[NO CITY SPECIFIED], AL *[NO ZIP CODE SPECIFIED]*

Fees Assessed

The following itemized fees have been assessed in accordance with Fee Schedule D and 335-1-6-.04(a) of ADEM Admin. Code Division 1 regulations based on the information provided in this application.

Wet Preparation, Processing, Beneficiation:
6860

Greenfield Site Fee:
1610

Fee

Fee
8470

Revisions

Revision	Revision Date	Revision By
Revision 1	9/5/2024 3:47 PM	James Woodham
Revision 2	5/28/2025 4:01 PM	James Woodham
Revision 3	4/16/2026 8:02 AM	Jeffrey Havercroft

Agreements and Signature(s)

SUBMISSION AGREEMENTS

- ☑ I am the owner of the account used to perform the electronic submission and signature.
- ☑ I have the authority to submit the data on behalf of the facility I am representing.
- ☑ I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- ☑ I have reviewed the electronic form being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

Professional Engineer

A detailed, comprehensive Pollution Abatement & Prevention (PAP) Plan must be prepared, signed, and certified by a professional engineer (PE), registered in the State of Alabama, and the PE must certify as follows: I certify on behalf of the applicant, that I have completed an evaluation of discharge alternatives for any proposed new or increased discharges of pollutant(s) to Tier 2 waters and reached the conclusions indicated. I certify under penalty of law that technical information and data contained in this application, and a comprehensive PAP Plan including any attached SPCC plan, maps, engineering designs, etc. acceptable to ADEM, for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff has been prepared under my supervision for this facility utilizing effective, good engineering and pollution control practices and in accordance with the provisions of ADEM Admin. Code Division 335-6 , including Chapter 335-6-9 and Appendices A & B. If the PAP Plan is properly implemented and maintained by the Permittee, discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other permit requirements. The applicant has been advised that appropriate pollution abatement/prevention facilities and structural & nonstructural management practices or Department approved equivalent management practices as detailed in the PAP Plan must be fully implemented and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices, permit requirements, and other ADEM requirements to ensure protection of groundwater and surface water quality.

Signed By Jeffrey Havercroft on 04/16/2026 at 8:06 AM

Responsible Official

This application must be signed and initialed by a Responsible Official of the applicant pursuant to ADEM Admin. Code Rule 335-6-6-.09 who has overall responsibility for the operation of the facility. I certify under penalty of law that this document, including technical information and data, the PAP Plan, including any SPCC plan, maps, engineering designs, and all other attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the PE and other person or persons under my supervision who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment for knowing violations. A comprehensive PAP Plan to prevent and minimize discharges of pollution to the maximum extent practicable has been prepared at my direction by a PE for this facility utilizing effective, good engineering and pollution control practices and in accordance with the provisions of ADEM Admin. Code Division 335-6, including Chapter 335-6-9 and Appendices A & B, and information contained in this application, including any attachments. I understand that regular inspections must be performed by, or under the direct supervision of, a PE and all appropriate pollution abatement/prevention facilities and structural & nonstructural management practices or Department approved equivalent management practices identified by the PE must be fully implemented prior to and concurrent with commencement of regulated activities and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices and ADEM requirements. I understand that the PAP Plan must be fully implemented and regularly maintained so that discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other requirements to ensure protection of groundwater and surface water quality. I understand that failure to fully implement and regularly maintain required management practices for the protection of groundwater and surface water quality may subject the Permittee to appropriate enforcement action. I certify that this form has not been altered, and if copied or reproduced, is consistent in format and identical in content to the ADEM approved form. I further certify that the discharges described in this application have been tested or evaluated for the presence of non-stormwater discharges and any non-mining associated beneficiation/process pollutants and wastewaters have been fully identified. I acknowledge my understanding that if coal, coal fines, coal refuse, or other coal related materials are mined, transloaded, processed, etc., that I may be required to obtain a permit from the ASMC. I acknowledge my understanding that if non-coal, non-limestone materials are mined, transloaded, processed, etc., that I may be required to obtain a permit from the ADOL. I acknowledge my understanding that if the proposed activities will be conducted in or potentially impact waters of the state or waters of the US (including wetlands), that I may be required to obtain a permit from the USACE.

Signed By Lucian Cayce on 04/16/2026 at 1:52 PM

Calculation of Total Annualized Project Costs for Private-Sector Projects

Capital Costs to be Financed (Supplied by applicant)	$ 144,550 (1)
Interest rate for Financing (Expressed as a decimal)	0.05 (i)
Time Period of Financing (Assume 10 years*)	10 years (n)
Annualization Factor = $\frac{i}{(1+i)^{10} - 1} + i$	0.05 (2)
Annualized Capital Cost [Calculate: (1) x (2)]	$ 7,225 (3)
Annual Cost of Operation and Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement)**	$ 5,500 (4)
Total Annual Cost of Pollution Control Project [(3) + (4)]	$ 12,725 (5)

* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.

** For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

The applicant is required to supply outfall number(s) as it appears on the map(s) required by this application [if this application is for a modification to an existing permit do not change the numbering sequence of the permitted outfalls], describe each, (e.g., pipe, spillway, channel, tunnel, conduit, well, discrete fissure, or container), and identify the origin of pollutants. The response must be precise for each outfall. If the discharge of pollutants from any outfall is the result of commingling of waste streams from different origins, each origin must be completely described.

Description of Origin of Pollutants – typical examples: (1) Discharge of drainage from the underground workings of an underground coal mine, (2) Discharge of drainage from a coal surface mine, (3) Discharge of drainage from a coal preparation plant and associated areas, (4) Discharge of process wastewater from a gravel-washing plant, (5) Discharge of wastewater from an existing source coal preparation plant, (6) Discharge of drainage from a sand and gravel pit, (7) Pumped discharge from a limestone quarry, (8) Controlled surface mine drainage (pumped or siphoned), (9) Discharge of drainage from mine reclamation, (10) Other (please describe):

Outfall	Discharge structure Description	Description of Origin of pollutants	Surface Discharge	Groundwater Discharge	Wet Prep -Other Production Plant	Pumped or Controlled Discharge	Low Volume STP
001	PRINCIPAL SPILLWAY (12" PIPE) AND 35' EMERGENCY SPILLWAY LINED WITH RIPRAP	PUMP DISCHARGE FROM A LIMESTONE QUARRY AND SURFACE DISCHARGE FROM DISTURBED AREA. DISCHARGE OF PROCESS WATER FROM ROCK CRUSHER.	2.4 cfs (12" pipe) 129.1 cfs (spillway / 25yr-24hr storm)	N/A	Process water from wet prep operations will drain to the pit sump to be reused or pre-treated and pumped to Pond 001	Stormwater runoff captured in the pit sump will be pumped to Pond 001 for treatment prior to discharge.	N/A
002	PRINCIPAL SPILLWAY (12" PIPE) AND 35' EMERGENCY SPILLWAY LINED WITH RIPRAP	PUMP DISCHARGE FROM AGGREGATE PIT AND SURFACE DISCHARGE FROM DISTURBED AREA	2.4 cfs (12" pipe) 135.3 cfs (spillway / 25yr-24hr storm)	N/A	N/A	N/A	N/A

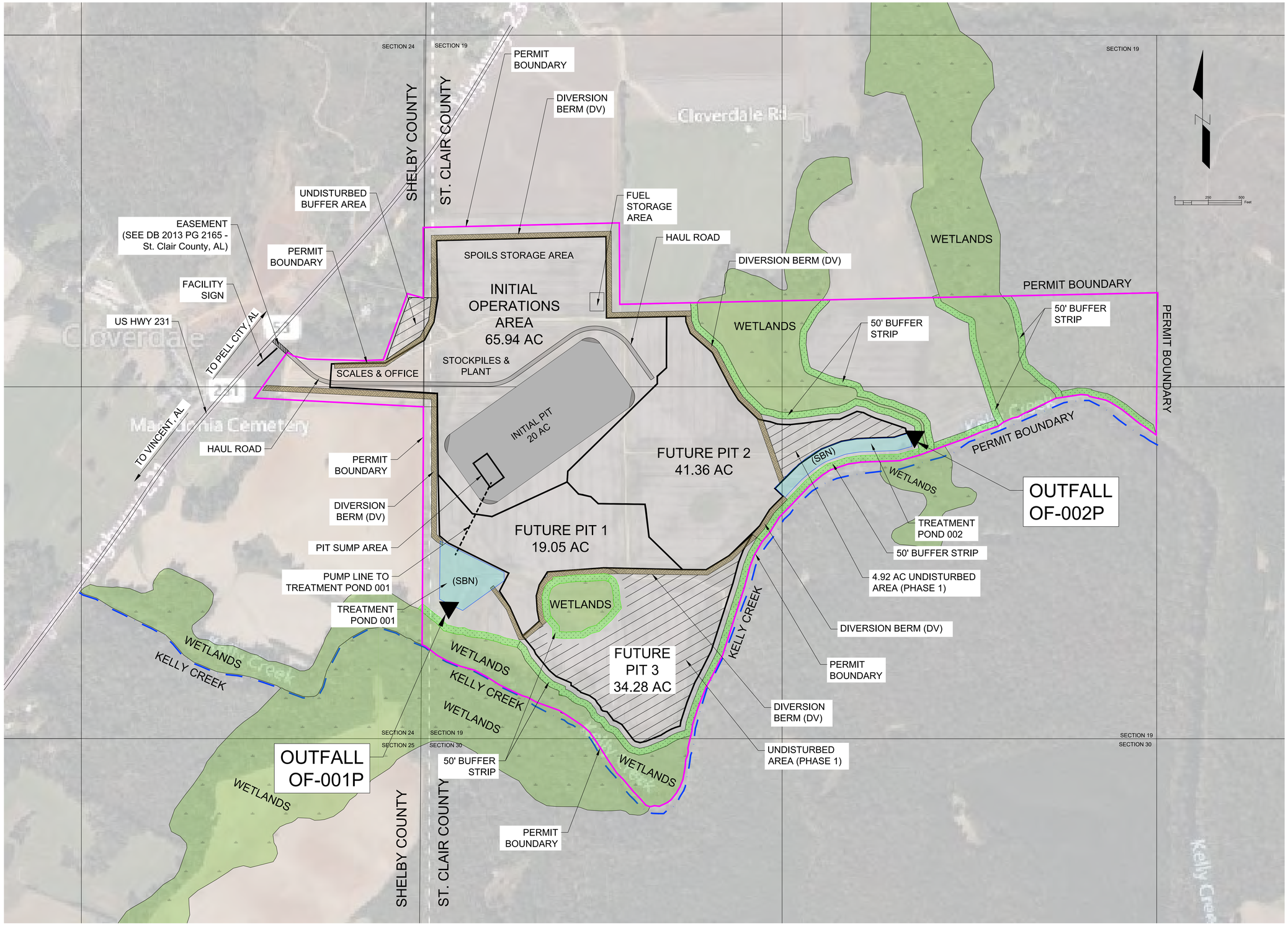
The applicant is required to supply the following information separately for every proposed (P) or existing (E) outfall. List expected average daily discharge flow rate in cfs and gpd; frequency of discharge in hours per day and days per month; average summer and winter temperature of discharge(s) in degrees centigrade; average pH in standard units; and average daily discharges in pounds per day of BOD5, Total Suspended Solids, Total Iron, Total Manganese, and Total Aluminum (if bauxite or bauxitic clay or if otherwise believed present):

Outfall E/P	Information Source - # of Samples	Flow (cfs)	Flow (gpd)	Frequency (hours/day)	Frequency (days/month)	Sum/Win Temp, (°C)	pH (s.u.)	BOD5 (lbs/day)	TSS (lbs/day)	Tot Fe (lbs/day)	Tot Mn (lbs/day)	Tot Al (lbs/day)
001P	ENGINEERING CALCULATIONS	3.2	1 million	12	10	20-22.2	7.5	2.7	9.7	0.27	0.02	N/A
002P	ENGINEERING CALCULATIONS	3.2	1 million	12	10	20-22.2	7.5	2.7	9.7	0.27	0.02	N/A

The applicant is required to supply the following information separately for every proposed or existing outfall. Identify and list expected average daily discharge of any other pollutant(s) listed in EPA Form 2C Tables A, B, C, D, and E that are not referenced in Part XVI.B. or otherwise submitted elsewhere, that you know is present or have reason to believe could be present in the discharge(s) at levels of concern:

Outfall E/P	Reason Believed Present	Information Source - # of Samples								
			lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L
001P	NOT BELIEVED PRESENT	ENGINEERING JUDGMENT	0	0	0	0	0	0	0	0
002P	NOT BELIEVED PRESENT	ENGINEERING JUDGMENT	0	0	0	0	0	0	0	0

SITE LAYOUT PLAN



LEGEND

- WETLANDS
- 50' BUFFER AREA
- DIVERSION DITCH / BERM (DV)
- DRAINAGE FLOW
- SEDIMENT BASIN (SBN) — (SBN)
- OUTFALL POINT (OF)

NOTES:

1. DIVERSION (DV) and SEDIMENT BASIN (SBN) DESIGNED PER "ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS" (THE BLUE BOOK).
2. WETLANDS SHOWN PER NATIONAL WETLANDS INVENTORY GIS MAP.
3. PHASE 1 OF MINING OPERATIONS WILL CONSIST OF THE CONSTRUCTION OF POND 001 AND ESTABLISHING THE INITIAL OPERATIONS AREA AND PIT. PHASE 1 WILL CONTINUE TO FUTURE PIT 1. PHASE 2 WILL CONSIST OF THE CONSTRUCTION OF POND 002 AND EXPANSION OF MINING OPERATIONS INTO FUTURE PIT 2. PHASE 3 WILL CONSIST OF EXPANSION OF MINING OPERATIONS INTO FUTURE PIT 3. FUTURE PIT 3 AND APPROX. 5 ACRES OF FUTURE PIT 2 WILL REMAIN UNDISTURBED UNTIL PHASE 3.

General Notes

EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

WISER LAND DEVELOPMENT LLC

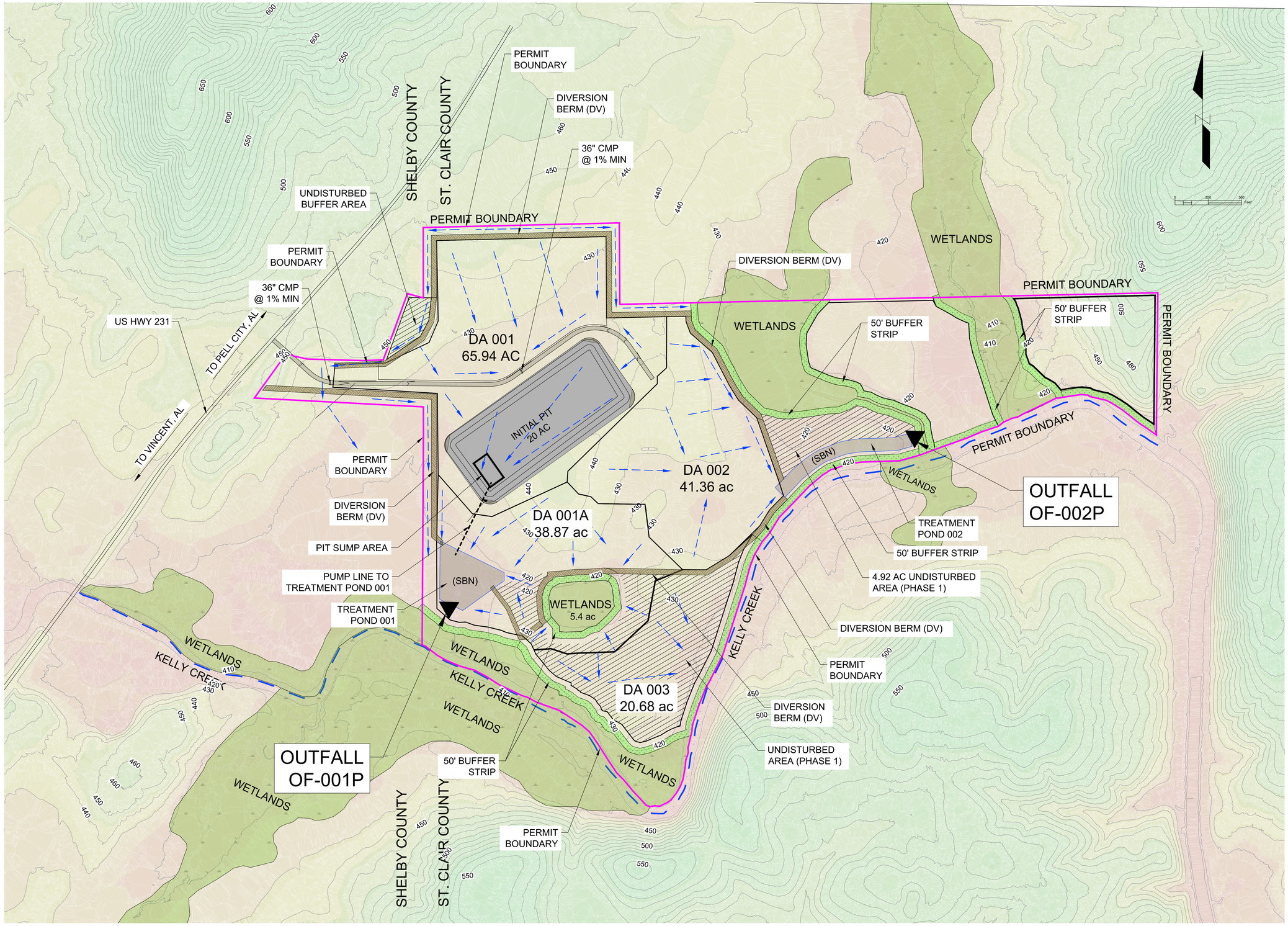
No.	Revision/Issue	Date
	PERMIT REVIEW	9/10/25

Firm Name and Address
JEFFREY V. HAVERCROFT, PE
2136 16TH AVE S
SUITE A3
BIRMINGHAM, AL 35205

Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

Project: EASTERN QUARRY
Date: 9/10/2025
Scale: 1" = 250'
Sheet: 001

DRAINAGE AND EROSION CONTROL PLAN



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	400.00	416.00	
2	416.00	422.00	
3	422.00	430.00	
4	430.00	444.00	
5	444.00	460.00	
6	460.00	490.00	
7	490.00	528.00	
8	528.00	688.00	

LEGEND

- WETLANDS
- 50' BUFFER AREA
- DIVERSION DITCH / BERM (DV)
- DRAINAGE FLOW
- SEDIMENT BASIN (SBN) — (SBN)
- OUTFALL POINT (OF)

NOTES:

1. DIVERSION (DV) and SEDIMENT BASIN (SBN) DESIGNED PER "ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS" (THE BLUE BOOK).
2. WETLANDS SHOWN PER NATIONAL WETLANDS INVENTORY GIS MAP.
3. PHASE 1 OF MINING OPERATIONS WILL CONSIST OF THE CONSTRUCTION OF POND 001 AND ESTABLISHING THE INITIAL OPERATIONS AREA AND PIT. PHASE 1 WILL CONTINUE TO FUTURE PIT 1. PHASE 2 WILL CONSIST OF THE CONSTRUCTION OF POND 002 AND EXPANSION OF MINING OPERATIONS INTO FUTURE PIT 2. PHASE 3 WILL CONSIST OF EXPANSION OF MINING OPERATIONS INTO FUTURE PIT 3. FUTURE PIT 3 AND APPROX. 5 ACRES OF FUTURE PIT 2 WILL REMAIN UNDISTURBED UNTIL PHASE 3.

General Notes

EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

WISER LAND AND DEVELOPMENT LLC

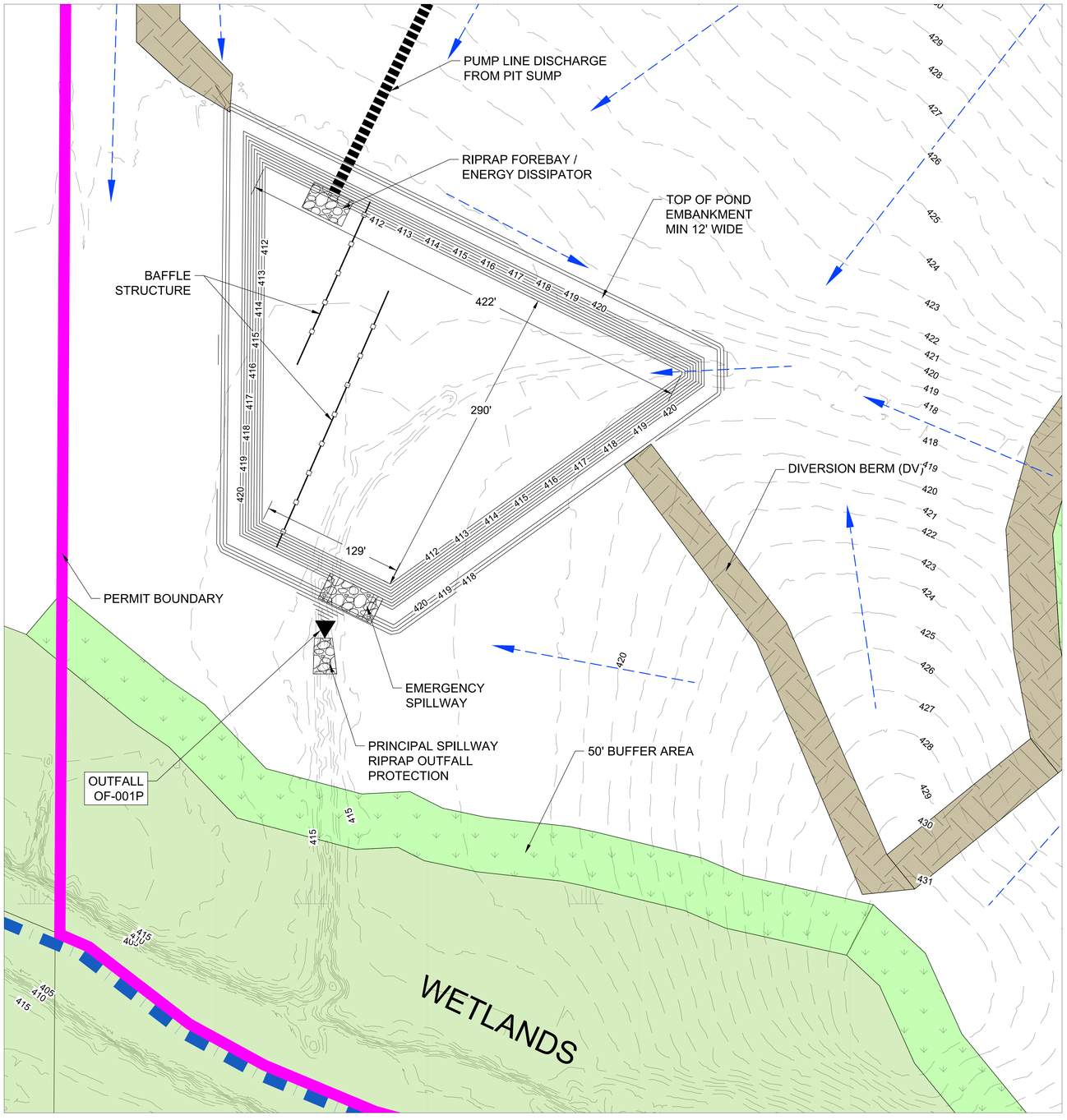
No.	Revision/Issue	Date
	PERMIT REVIEW	9/10/25

Firm Name and Address
JEFFREY V. HAVERCROFT, PE
2136 16TH AVE S
SUITE A3
BIRMINGHAM, AL 35205

Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

Project	Sheet
EASTERN QUARRY	002
Date 8/29/2025	
Scale 1" = 250'	

POND 001 DETAILS



POND 001 (PLAN VIEW)
1" = 40'

LEGEND

- WETLANDS
- 50' BUFFER AREA
- DIVERSION DITCH / BERM (DV)
- DRAINAGE FLOW
- SEDIMENT BASIN (SBN) (SBN)
- OUTFALL POINT (OF)

EMBANKMENT NOTES:

(a) THE TOP OF THE DAM SHOULD BE NO LESS THAN 12 FEET WIDE.

(b) THE SLOPE ON EITHER SIDE OF THE DAM SHOULD BE NO STEEPER THAN 3:1.

(c) THE DAM SHOULD BE CONSTRUCTED WIDE A CUTOFF TRENCH AT LEAST 8 FEET WIDE. THE SIDE SLOPES SHOULD BE NO LESS THAN 1:1. THE CUTOFF TRENCH SHALL BE LOCATED ON THE DAM CENTERLINE AND BE OF SUFFICIENT DEPTH (NOT LESS THAN 2 FEET) TO EXTEND INTO A RELATIVELY IMPERVIOUS LAYER OF SOIL OR TO BEDROCK AND SHALL BE FILLED WITH A RELATIVELY IMPERVIOUS MATERIAL FROM WHICH THE CORE OF THE DAM SHALL BE CONSTRUCTED.

(d) THE ENTIRE EMBANKMENT AND CUTOFF TRENCH SHALL BE COMPACTED TO 95 PERCENT DENSITY, BASED ON STANDARD PROCTOR AS OUTLINED IN ASTM.

(e) THE MATERIAL PLACED IN THE EMBANKMENT SHOULD BE FREE TO SOD, ROOTS, STONES OVER 6 INCHES IN DIAMETER AND OTHER OBJECTIONABLE MATERIALS. THE FILL MATERIAL SHOULD BE PLACED AND SPREAD OVER THE ENTIRE FILL AREA, STARTING AT THE LOWEST POINT OF THE FOUNDATION, IN LAYERS NOT TO EXCEED 12 INCHES IN THICKNESS. CONSTRUCTION OF THE FILL SHOULD BE UNDERTAKEN ONLY AT SUCH TIMES THAT THE MOISTURE CONTENT OF THE FILL MATERIAL WILL PERMIT SATISFACTORY COMPACTION IN ACCORDANCE WITH SUBPARAGRAPH (4)(d) ABOVE.

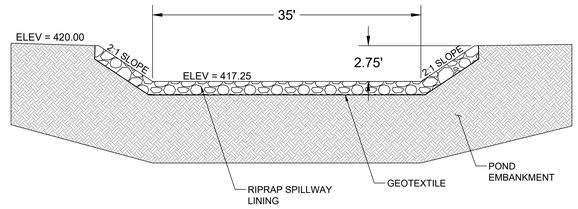
(f) THE SPILLPIPE SHOULD BE SEIZED TO ADEQUATELY CARRY THE EXPECTED PEAK FLOW FROM A ONE-YEAR FREQUENCY STORM.

(g) THE SPILLPIPES SHOULD BE MADE OF A MATERIAL CAPABLE OF WITHSTANDING CHEMICAL REACTIONS CAUSED BY THE QUALITY OF THE WATER BEING DISCHARGED.

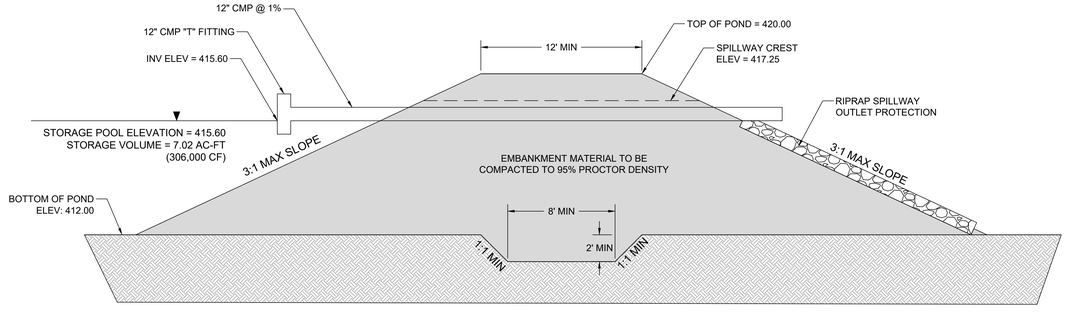
(h) THE SPILLPIPE SHOULD BE EQUIPPED WITH A DEVICE, OR CONSTRUCTED, SUCH TO ENSURE THAT SUBSURFACE WITHDRAWAL IS ACCOMPLISHED IN ORDER TO ENSURE THAT NO FLOATING SOLIDS ARE DISCHARGED.

(i) THE SPILLPIPES SHOULD BE EQUIPPED WITH ANTI-SEEP COLLARS AT EACH JOINT WHICH RADIATE AT LEAST 2 FEET FROM THE PIPE IN ALL DIRECTIONS. THE COLLARS AND THEIR CONNECTIONS TO THE PIPE SHOULD BE WATERTIGHT.

(j) A SPLASH PAD OR RIPRAP SHOULD BE PLACED UNDER THE DISCHARGE OF THE SPILLPIPE, OR THE LOCATION OF THE DISCHARGE SET, SO AS TO ENSURE THAT THE DISCHARGE DOES NOT ERODE THE DAM.



EMERGENCY SPILLWAY
(25-YR / 24-HR)
SECTION VIEW
(N.T.S.)



POND EMBANKMENT
(SECTION VIEW
(N.T.S.)

General Notes

EASTERN QUARRY

4882 HIGHWAY 231
VINCENT, AL 35178

WISER LAND DEVELOPMENT LLC

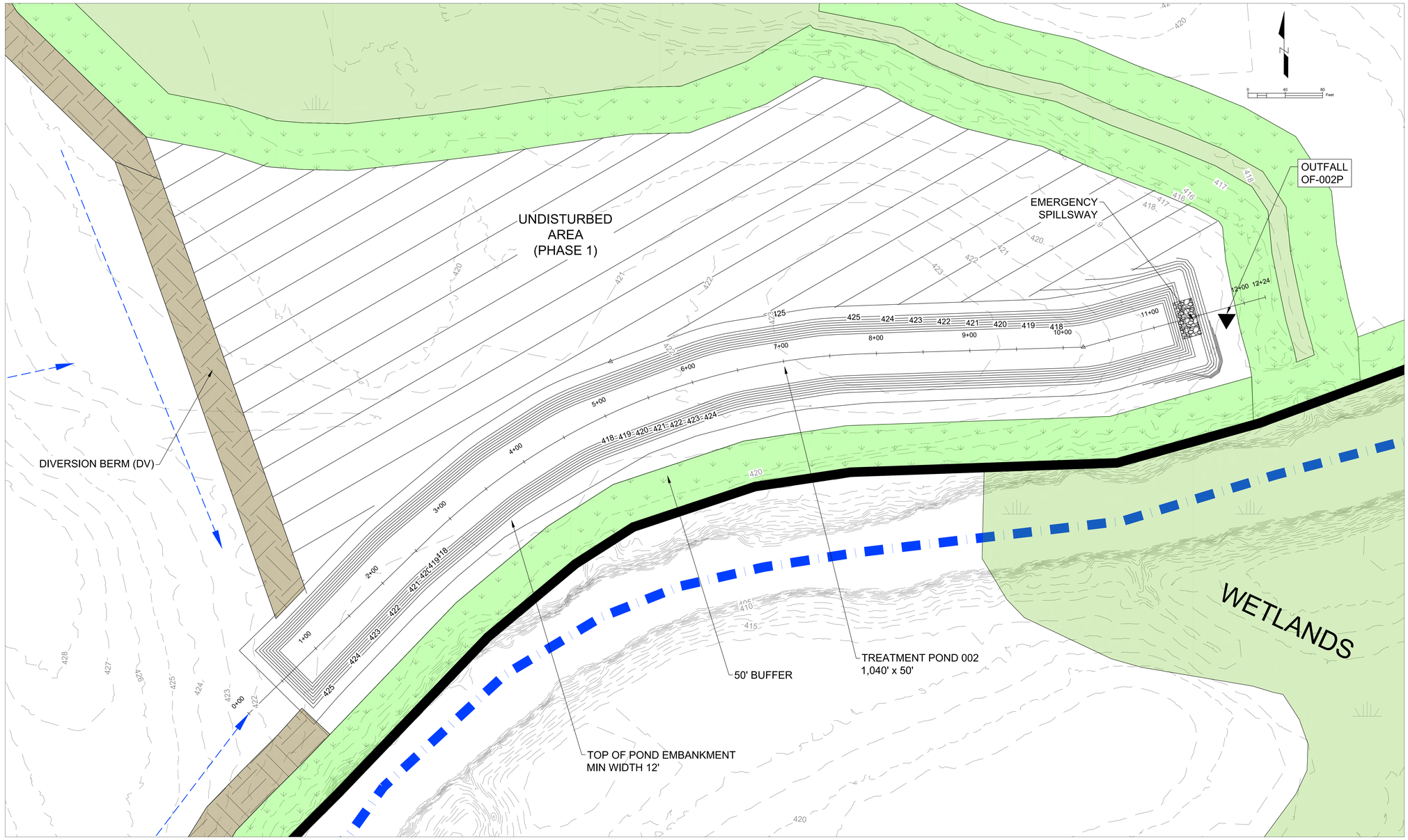
No.	Revision/Issue	Date
	PERMIT REVIEW	9/10/25

Firm Name and Address
JEFFREY V. HAVERCROFT, PE
2136 16TH AVE S
SUITE A3
BIRMINGHAM, AL 35205

Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

Project	Sheet
EASTERN QUARRY	003
Date: 8/29/2025	
Scale: 1" = 40'	

POND 002 DETAILS

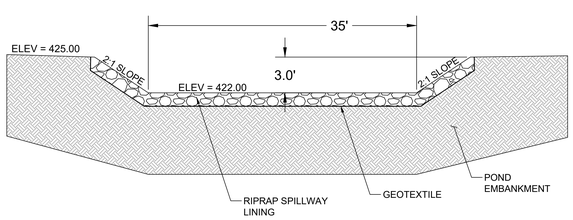


POND 002 (PLAN VIEW)
1" = 40'

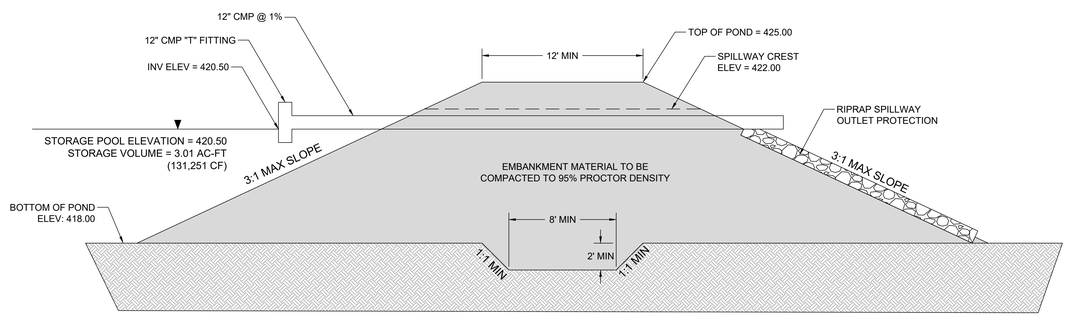
LEGEND

- WETLANDS
- 50' BUFFER AREA
- DIVERSION DITCH / BERM (DV)
- DRAINAGE FLOW
- SEDIMENT BASIN (SBN) — (SBN)
- OUTFALL POINT (OF)

SEE EMBANKMENT NOTES, SHEET 003



EMERGENCY SPILLWAY
(25-YR / 24-HR)
SECTION VIEW
(N.T.S.)



POND EMBANKMENT
(SECTION VIEW
(N.T.S.)

General Notes

EASTERN QUARRY

WISER LAND DEVELOPMENT LLC

4882 HIGHWAY 231
VINCENT, AL 35178

No.	Revision/Issue	Date
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Firm Name and Address
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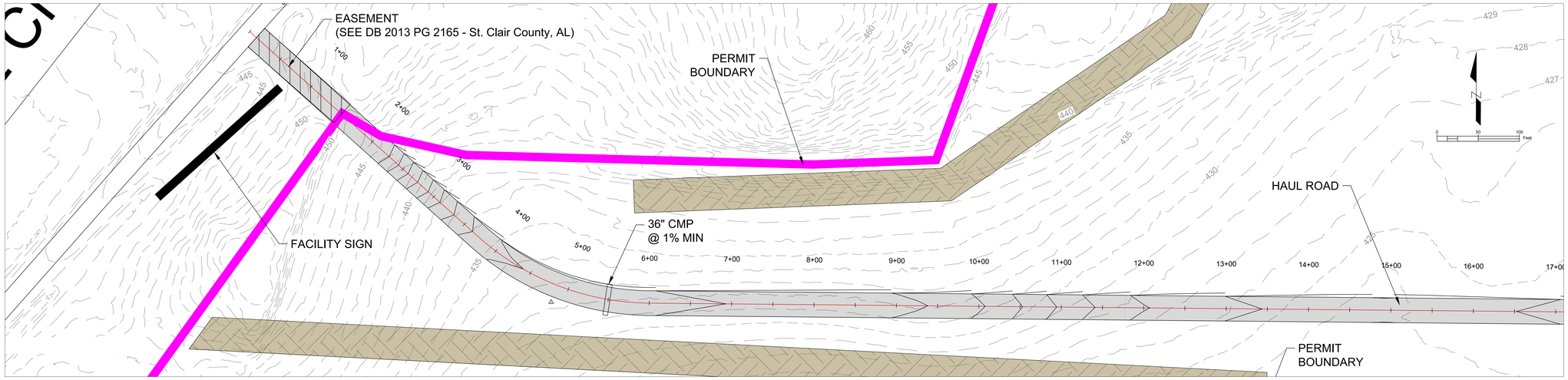
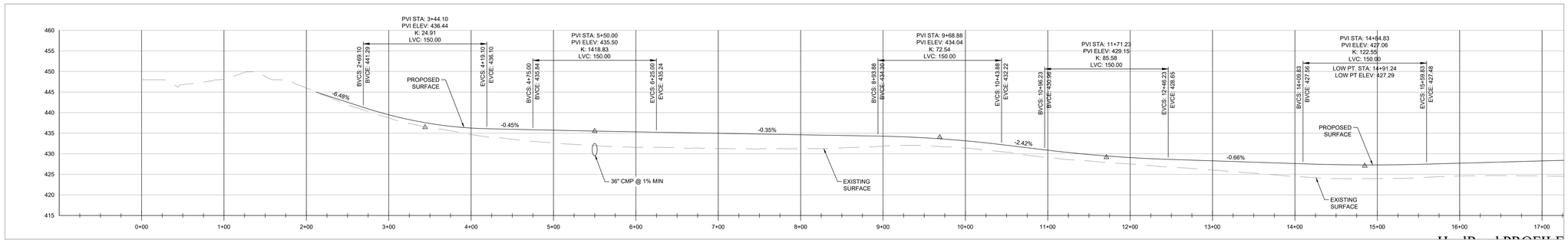
SUITE A3
BIRMINGHAM, AL 35205

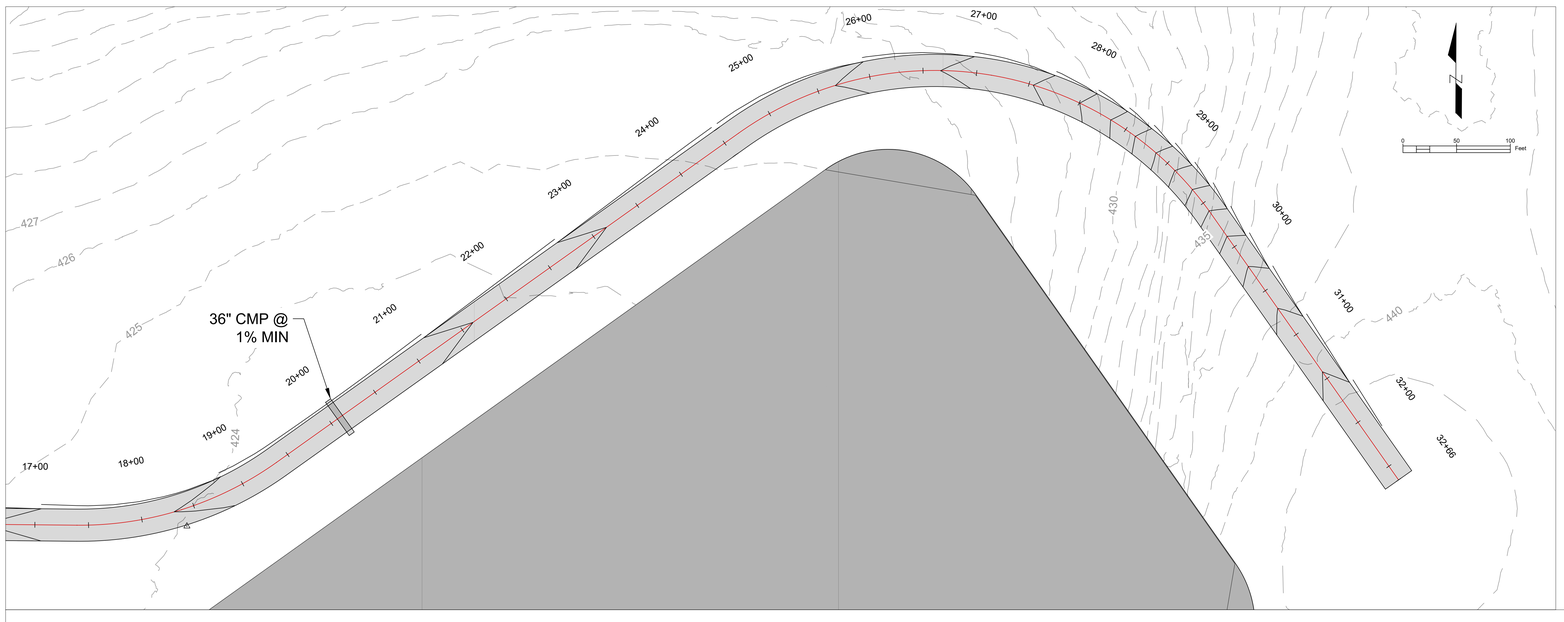
Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

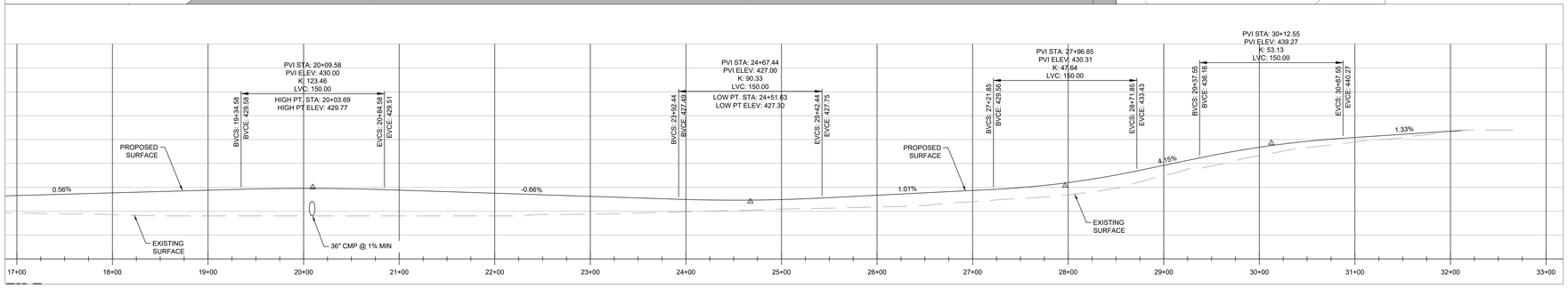
Project	Sheet
EASTERN QUARRY	004
Date: 8/29/2025	
Scale: 1" = 40'	

HAUL ROAD PLAN / PROFILE









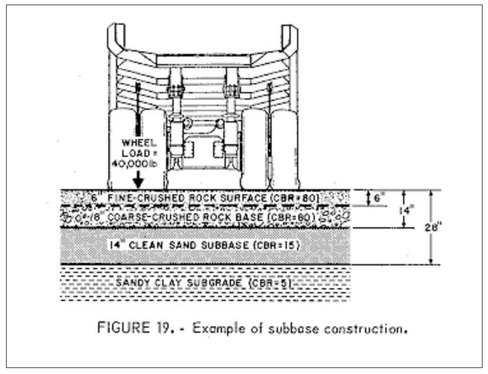


FIGURE 19. - Example of subbase construction.

HAUL ROAD NOTES:

(a) NO SUSTAINED GRADE SHOULD EXCEED 10%.

(b) THE MAXIMUM GRADE SHOULD NOT EXCEED 15 PERCENT FOR 300 FEET.

(c) THERE SHOULD NOT BE MORE THAN 300 FEET OF 15% MAXIMUM GRADE FOR EACH 1,000 FEET OF ROAD CONSTRUCTED.

(d) THE HAUL ROAD, WHENEVER POSSIBLE, SHOULD BE LOCATED SO THAT RUNOFF FROM THE ROAD ENTERS A SEDIMENT BASIN CONSTRUCTED FOR THE MINING OPERATION OR TO PIT DRAINAGE.

(e) OUTER SLOPES FOR HAUL ROADS OUT OF THE PERMITTED AREA SHOULD NOT BE STEEPER THAN 2:1 AND SHOULD BE SEEDED WITH ANNUAL AND PERENNIAL GRASSES WITH AT LEAST 80 PERCENT COVER TO AVOID EROSION. WHERE THIS IS NOT POSSIBLE, BASINS, HAY FILTERS, OR DIVERSION DITCHES SHOULD BE CUT, BUILT, OR PLACED TO INTERCEPT RUNOFF.

General Notes

EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

WISER LAND DEVELOPMENT LLC

No.	Revision/Issue	Date
	PERMIT REVIEW	9/10/25

Firm Name and Address
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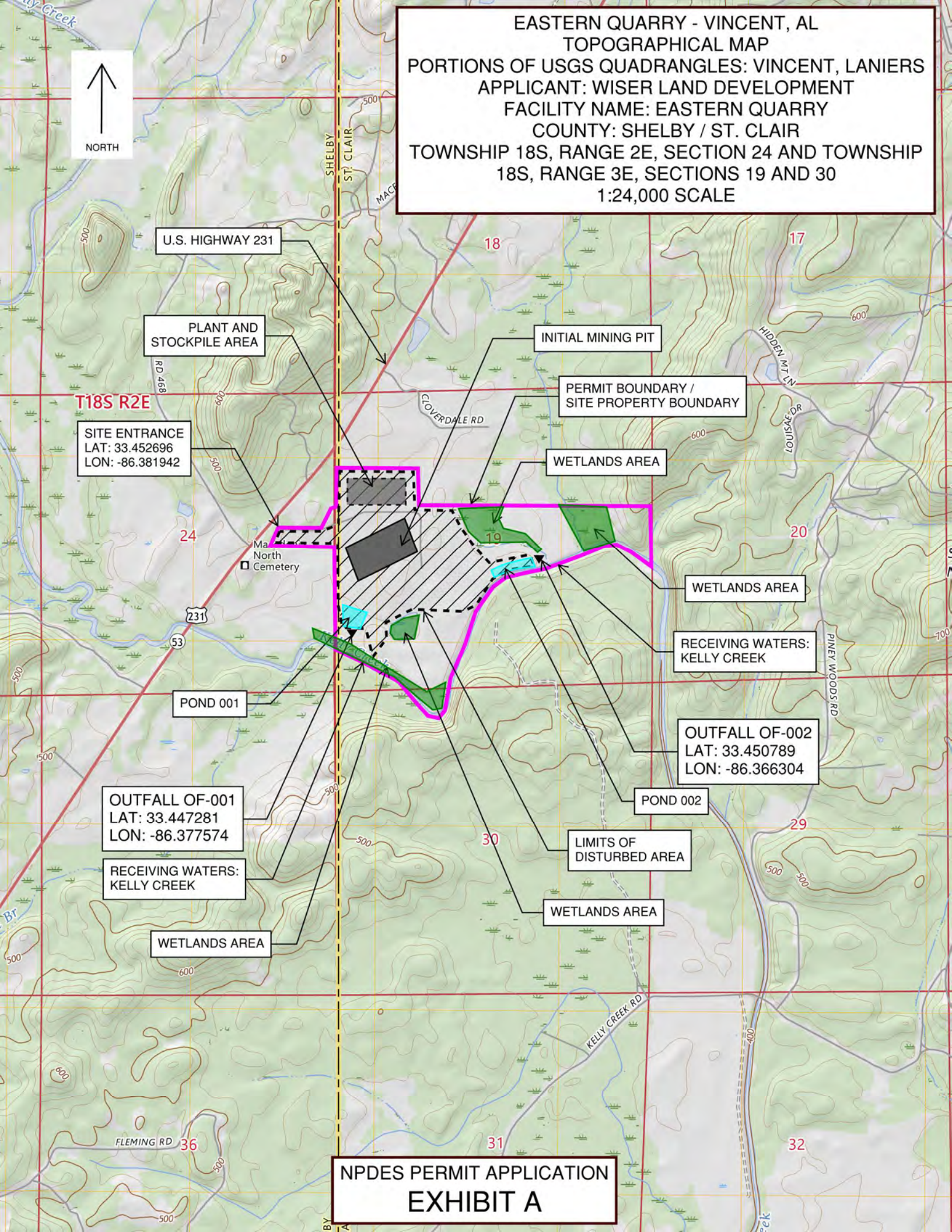
Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

Project	Sheet
EASTERN QUARRY	005
Date 8/29/2025	
Scale 1" = 50'	


EASTERN QUARRY - VINCENT, AL
TOPOGRAPHICAL MAP
PORTIONS OF USGS QUADRANGLES: VINCENT, LANIERS
APPLICANT: WISER LAND DEVELOPMENT
FACILITY NAME: EASTERN QUARRY
COUNTY: SHELBY / ST. CLAIR
TOWNSHIP 18S, RANGE 2E, SECTION 24 AND TOWNSHIP 18S, RANGE 3E, SECTIONS 19 AND 30
1:24,000 SCALE
NORTH
U.S. HIGHWAY 231
PLANT AND STOCKPILE AREA
INITIAL MINING PIT
PERMIT BOUNDARY / SITE PROPERTY BOUNDARY
T18S R2E
SITE ENTRANCE
LAT: 33.452696
LON: -86.381942
WETLANDS AREA
WETLANDS AREA
RECEIVING WATERS: KELLY CREEK
POND 001
OUTFALL OF-002
LAT: 33.450789
LON: -86.366304
POND 002
OUTFALL OF-001
LAT: 33.447281
LON: -86.377574
LIMITS OF DISTURBED AREA
RECEIVING WATERS: KELLY CREEK
WETLANDS AREA
WETLANDS AREA
NPDES PERMIT APPLICATION
EXHIBIT A

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN
EASTERN QUARRY

I. Assessment and Planning

The purpose of this Spill Prevention, Control, and Countermeasures (SPCC) Plan is to describe measures implemented by Wiser Land Development LLC to prevent oil discharges from occurring, and to prepare Wiser Land Development to respond in a safe, effective, and timely manner to mitigate the impacts of a potential discharge from the Eastern Quarry site. This SPCC Plan has been prepared and implemented in accordance with the SPCC requirements contained in 40 CFR part 112.

In addition to fulfilling the requirements of 40 CFR part 112, this SPCC Plan is used as a reference for oil storage information and testing records, as a tool to communicate practices on preventing and responding to discharges with Wiser Land Development's employees and contractors, as a guide to facility inspections, and as a resource during emergency response.

II. Location and Type of Facility

Eastern Quarry is located at Sections 19 & 30, Township 18 South, Range 2 East, and Section 24, Township 18 South, Range 3 East. The Eastern Quarry property is approximately 266 acres. The facility will contain two sediment basins located to the south and east of the proposed active mining areas.

III. Name and Address of Owner / Operator

Cyrus Wiser, President
Wiser Land Development, LLC
1431 Kensington Square Court
Murfreesboro, TN 37130
(615) 642-0851

IV. Designated Emergency Coordinator

Lucian Casey
Wiser Land Development, LLC
1431 Kensington Square Court
Murfreesboro, TN 37130
(615) 278-2480

V. Spill History

This is a new facility and has not experienced a reportable spill from fuel tanks.

VI. Surface Water Features

The existing site drains from north to south, toward Kelly Creek. The site is also adjacent to designated wetland areas. The site will be developed so that drainage from all general operations, ASTs, drums, spoil and stockpile areas, preparation and processing areas, excavation areas, and other areas of land disturbance will be directed away from the wetland areas, and into the incised quarry pit and / or sediment basins before discharging through a permitted outfall.

VII. Discharge Prevention Measures

Petroleum products will be stored and used in the aboveground storage tank area noted on the Site Layout map in the site Pollution Abatement and Prevention (PAP) Plan at Appendix B. The following petroleum products will be used for the proposed facility:

Type of Petroleum	Quantity
Diesel Fuel	(2) 10,000-gallon diesel fuel tank, (1) 1,000 gallon diesel fuel tank
Oil	(1) 1,000-gallon waste oil tank, (1) 500-gallon motor oil tank, (1) 500-gallon hydraulic oil tank, (1) 500-gallon transdrive oil tank

1. AST Secondary Containment

The ASTs will be located in an area not subject to periodic flooding, within earthen berms made of an impervious material of sufficient capacity to contain a spill of 110% of the largest tank size. The containment area will contain a two-inch pipe with a manual gate valve to allow accumulated rainwater to be discharged when necessary. The valve will remain closed at all times and will be locked until the blocked area collects enough rainwater to require draining. After an inspection of the water to determine if any pollutants are present, the valve will be opened to allow the proper drainage and will then be immediately closed again and relocked. If pollutants (oil) are present in the rainwater, the pollutants will be separated from the water prior to draining the water. A valid permit will then be acquired, and the pollutants will be carried to the nearest permitted landfill for disposal.

The site manager or foreman will be present during all dewaterings or drainings of the containment area. If significant amounts of oil products are present (a "sheen" on the water) then the water will be treated with an oil mop, hay or other appropriate oil fuel absorbent material before dewatering occurs and the recovered oil product and recovery materials will be stored in approved containers and transported to a nearby landfill which is rated for the recovered contaminant. If a major spill is encountered, all usable oil fuel will be immediately pumped into mobile fuel tanks for transport to another storage tank equipped with a containment structure.

2. Personnel

All personnel will be trained annually in the operation and maintenance of equipment to prevent

the discharges of oil and fuel. Personnel will also be informed of the applicable pollution control laws, rules and regulations. Periodic briefings will be conducted to highlight and describe known spill events, failures, any malfunctioning components, and recently developed precautionary measures. These briefings will be conducted at a frequency determined by the emergency coordinator to assure adequate understanding of the SPCC Plan for the facility.

3. Security

The entrance to the facility has a gate that is closed and locked after normal business hours. Facility personnel will be present during business hours to control unauthorized personnel. In addition, all outflow hoses, valves, nozzles, and pump starter switches will be secured when not in use.

4. Facility Inspections

Inspections of the facility will be conducted by trained personnel and conducted in accordance with this SPCC Plan. These inspections include at a minimum:

- date of inspection,
- name of inspector,
- storm system location and areas inspected,
- inspection results,
- descriptions of potential sources of storm water contaminants if discovered,
- corrective actions (time initiated and time completed), if any. Additionally, the corrective actions shall include description of the spillage, estimated volume of spill, name of person who observed spill and name of person cleaning up spill.

A written report of each inspection shall be made and signed by the inspector or the appropriate supervisor. Each signed report shall be kept on file with this SPCC Plan. Any deficiencies identified during inspections shall be reported to the Emergency Coordinator.

Dike or containment area drainage shall be monitored and maintained in the form of a log and shall contain the following information, at a minimum:

- Date and time of discharge,
- Estimated volume of discharge.
- Initials of person making visual inspection and authorizing the discharge.

The discharge shall have no sheen, and there shall be no discharge of visible oil, floating solids or visible foam in other than trace amounts. Each signed report shall be kept on file with this SPCC Plan.

VII. Spill Countermeasure Procedures

The objectives of the spill countermeasures are:

- Prevent releases and spills from occurring or reaching waters of the state.

- Mimimize the extent of harm or damage resulting from the spill or release.
- Properly clean up residues or contaminated materials resulting from spill or release.

1. Discovery and Notification

A. Anyone discovering a spill that could reach navigable waters or discovering an imminent or actual emergency situation that could threaten human health or the environment will immediately notify the Emergency Coordinator. The emergency coordinator will be in charge of containment and countermeasures.

B. The emergency coordinator will evaluate the potential release and imminent threat to human health and/or the environment. If required, the emergency coordinator will make the required notifications.

C. Spills of 25 gallons or more should be reported to ADEM and the National Response Center:

Alabama Department of Environmental Management Mining Unit
Field Operations Division 1400 Coliseum Blvd.
Montgomery, AL 36110-2059
Telephone: (334) 271-7700

National Response Center - Telephone: 1-800-424-8802

Notification should include the following information:

1. Name, address, and telephone number of person reporting spill.
2. Name and address of the facility.
3. Date and time of the incident.
4. Location of the incident.
5. Type of material released or spilled
6. Estimated quantity of materials released or spilled
7. Source of spill and cause, if known
8. Nearest down-stream body of water
9. Weather conditions at the incident location
10. NPDES Permit number
11. Any other information that may help emergency personnel respond to the incident
12. Discuss/advise regarding actions taken for containment and clean-up.

2. Containment and Countermeasures

The person who discovers the spill or release should take immediate action that is necessary to control and contain the release. Should a spill escape the secondary containment, emergency action will constitute the application of absorbent material or the erection of suitable earthen dikes

to contain the spill on-site. Any contaminated soil, water, or other material resulting from the incident must be treated, stored, or disposed of properly.

3. Cleanup and Disposal

Clean up of the spill or release should start as soon as possible, after it has been contained and is safe to handle.

a. Large spills should be pumped to tank trucks, tanks, or drums. Clean up of residual product with absorbent material should take place.

b. Product sheen or small product spills that are visible on rainwater in the containment area should be cleaned up using absorbent material or a portable oil skimmer.

c. All absorbed liquids and sorbent materials should be placed in drums, covered, sealed, and appropriately labeled.

d. Licensed waste haulers should be contacted for disposal of liquid and absorbent wastes. Manifest requirements must be met for shipments of spill residues.

e. All equipment, pipes, and storage areas must be checked for proper operation and compliance with environmental and safety regulations prior to resuming normal operation.

IX. Spill Event Reports

Federal regulations require a facility which discharges into navigable waters more than 1,000 gallons of oil in a single event or harmful quantities of oil in two events in a twelve-month period to file a spill event report with the EPA Regional Administrator and the state water pollution control agency within sixty days. The following information is required:

a. Name of facility
b. Name of owner
c. Location of facility
d. Date and year of initial information
e. Maximum storage or handling capacity of the facility and normal daily operation.
f. Description of the facility, including maps, flow diagrams, and topographical maps.
g. A complete copy of the SPCC Plan with any amendments
h. The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred.
i. The corrective action and/or countermeasure taken, including an adequate description of equipment repairs and/or replacement
j. Additional preventive measures taken or contemplated to minimize the possibility of recurrence.

X. Certification of Qualified Credentialed Professional

I certify under penalty of law that this SPCC Plan was prepared in accordance with good engineering practices under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiring of the person or persons who directly gathered the enclosed information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

This document is subject to revision based on feedback from review by federal, state, and local agencies having jurisdiction over site conditions and/or activities conducted on the subject site.

9/15/2025

Jeffrey V. Havercroft, AL P.E. # 32428

POLLUTION ABATEMENT AND PREVENTION PLAN

I. INTRODUCTION:

The Pollution Abatement and Prevention (PAP) Plan is formatted after the outline given in Alabama Department of Environment Management Water Division-Water Quality Program Administrative Code Surface Mining Rules Chapter 335-6-9-.03 (2) (a)-(k).

Drawings presented in the PAP were derived from the rules and regulations of the ADEM Administrative Code R. 335-6-9, Appendix A, Appendix B, and from the Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas Manual Volume 1, 2022 published by the Alabama Soil and Water Conservation Committee, as well as other generally accepted design data sources.

II. PAP CONTENT

a. Name and address of the operator and a legal description of the area to be mined:

Owner/Operator:
Wiser Land Development, LLC
1431 Kensington Square Court
Murfreesboro, TN 37130

The site is in Section 24 in Township 18 South, Range 3 East, and Sections 19 and 30, Township 18 South, Range 3 East, as shown in USGS topographical maps for the Vincent and Laniers quadrangles. The total site property area is +/- 266 acres.

Entrance to the site is located off US Highway 231, approximately 0.72 miles north of the intersection with Kelly Creek Road. Coordinates for the site entrance are 33.452696 N, -86.381942 W.

Legal Description:
<u>Sections 30 and 19, Township 18 South, Range 3 East</u>
The South Half of the South Half of the Northeast Quarter, the South Half of the Southeast Quarter of the Northwest Quarter, the Southwest Quarter of the Northwest Quarter, the Northwest Quarter of the Southwest Quarter, all of the Northeast Quarter of the Southwest Quarter lying North and West of the centerline of Kelly Creek, all of the North Half of the Southeast Quarter lying North of the centerline of Kelly Creek, all of the Southwest Quarter of the Southwest Quarter lying North and East of the centerline of Kelly Creek, all of the Southeast Quarter of the Southwest Quarter lying North and West of the centerline of Kelly Creek containing a total of 254.75 acres.

<u>Section 24, Township 18 South, Range 2 East</u>
From the true NE corner of Section 24, Township 18 South, Range 2 East, run thence South along the accepted East boundary of said Section 24 and the dividing line between Shelby

County and St. Clair County a distance of 1949.66 feet to the point of beginning herein described parcel of land; thence continue along said course a distance of 811.52 feet to a point at an accepted fence corner; thence turn 93 degrees 10 minutes 28 seconds right and run along an accepted fence line a distance of 1,276.29 feet; thence turn 122 degrees 36 minutes 12 seconds right and run 422.67 feet to a point in the center of a 30.0 foot easement for ingress, egress, and utilities; thence turn 81 degrees 30 minutes 58 seconds right and run 79.75 feet along said easement's centerline; thence run 17 degrees 10 minutes 9 seconds left and run 80.82 feet along said easement centerline; thence turn 08 degrees 32 minutes 49 seconds left and run 419.91 feet along said easement centerline; thence turn 03 degrees 38 minutes 23 seconds left and run 533.05 feet; thence turn 90 degrees 00 minutes right and run 129.95 feet to the point of beginning of herein described parcel of land, containing 11.25 acres.

b. General information, including name and affiliation of company, number of employees, product(s) to be mined, hours of operation and water supply and disposition:

Name of Company: Wiser Land Development, LLC

Number of Employees: 20

Products to be mined: Construction Aggregates (Limestone, Dolomite)

Hours of operation: 7:00 AM – 6:00 PM Monday-Saturday

Water Supply and Disposition: Surface drainage will be collected in the pit and used as process water for the facility's wash plant and dust control systems. Any excess water collected will be pre-treated by allowing settlement in the pit sump area, and then pumped to Pond 001 for treatment prior to discharge from the site at Outfall 001. A public water supply will be used on-site when needed.

c. Topographic map showing location of mine, preparation plant, settling basin and all wastewater discharge points:

See Exhibits A (USGS Topographic Map Exhibit) and B (Site Plans)

d. Method and plan for diverting surface water runoff from operational areas and mineral and refuse storage piles:

<u>Initial Phase</u>
The Eastern Quarry Site lies within the Kelly Creek watershed. Surface water in this watershed flows in a southeasterly direction toward Kelly Creek, which also constitutes the

southern property line of the Site. Site development will be phased, starting with the initial operations area, including the initial quarry pit, haul road, and mineral processing / stockpile area.

Diversion berms / ditches will be installed around the initial operations area to divert offsite surface water runoff from entering any disturbed / operational areas. Fifty-foot natural buffer areas will be established outside the diversion structure along wetlands areas and streams. The stockpile / waste areas will be graded to drain into the quarry pit. Pond 001 will be constructed to treat on-site runoff from disturbed areas.

The initial pit of approximately 20 acres will be established, which will collect on-site surface water runoff from operational and material storage piles into a sump. The runoff collected in the sump will then be used as process water. Excess runoff in the sump will be pumped to Pond 001 for further treatment by settling. Any runoff from disturbed areas not draining to the pit will also flow to Pond 001.

For any runoff from minor areas of disturbance that is not directed toward Pond 001 or the active mining pit, BMPs will be installed in accordance with the *Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas Manual Volume 1, 2022*, published by the Alabama Soil and Water Conservation Committee.

Future Phases

Future Pit 1 will be established as mining progresses to the south. Runoff from disturbed areas in Future Pit 1 will also surface drain to Pond 001 until mining has progressed to a point where such runoff can be drained back into the quarry sump for pretreatment and for use as process water.

As mining progresses to Future Pit 2, additional natural buffer areas will be established and diversion berms / ditches will be constructed around the area. Pond 002 will be constructed for treating on-site runoff before discharge at Outfall 002.

Future Pit 3 will be constructed when the pit and sump have been established. Diversion berms / ditches will be established at the area perimeter, and runoff from disturbed areas will be directed to flow into the pit / sump for pretreatment. Excess water will be pumped to Pond 001 for treatment before discharge at Outfall 001.

e. Narrative account of operation(s) explaining and/or defining raw materials, processes and products. Block line or schematic diagrams indicating points of waste origin and its collection and disposal shall be included:

Limestone/Dolomite is the raw material that will be excavated at this mine. The limestone will be processed into sized aggregate and stockpiled within the permit area. Quarrying operations will begin along the northwestern quadrant of the Vincent Site (Exhibit B).

Drilling indicates minimum overburden on site. Any overburden on top of the limestone will be removed and used in the berms or stored in the spoils area. The limestone will be excavated by drilling, blasting, and use of heavy equipment. Aggregate will be crushed on site with a portable crusher and washed and screened to variable size crushed stone to be used in the construction industry. The different products will be loaded on trucks and transported to construction industry clients.

The main waste product will be silt / limestone dust, which will be controlled by spraying (dust control). Stormwater runoff flow from operational areas will be directed into the sump area of the pit. The collected runoff will be reused as process water, and waste material will be allowed to settle. Excess runoff will be pumped to Pond 001 for further treatment before discharge at Outfall 001. Waste material that has accumulated in Pond 001 will be collected and stored in the spoils area. The spoils area will be protected by BMP's, diversion drainage, and berms to ensure the waste material will not reenter either pond on site. A schematic diagram is attached as Exhibit C.

Initial Site Development

The initial pit and operations area is approximately 65.94 acres. Initial development will consist of establishing diversion ditches / berms along the north boundary of the permit area to divert offsite runoff away from any disturbed areas. Haul roads, overburden storage areas, operations and stockpile areas, and the initial quarry pit will be established (approximately 20 acres).

Pond 001 will be constructed to treat runoff from the Initial Site and from Future Pit 1 as that area is developed. Runoff will also be treated in the quarry pit sump area, where it will be retained to be used as process water, or pumped to Pond 001 for further treatment.

Future Pit 1

Future Pit 1 is 19.05 acres south of the Initial Site and is adjacent to 5.46 acres of wetlands. The wetlands will be protected from sedimentation by maintaining a 50' natural buffer around the area and installing diversion berms outside the natural buffer.

Future Pit 2

Future Pit 2 is 41.36 acres to the east of the Initial Site and Future Pit 1. Pond 002 and diversion ditches / berms will be constructed. Future Pit 2 has wetlands to the northeast, which will be protected by maintaining a 50' natural buffer and construction of diversion berms / ditches.

The easternmost 4.92 acres of Future Pit 2 is a low-lying area that does not effectively drain to Pond 002. This area will remain undisturbed until mining operations have developed to the point where it can drain back into the quarry and be treated in the pit sump.

Future Pit 3

Future Pit 3 is 34.28 acres to the south of Future Pit 1 and includes a wetland area that will be protected or mitigated. Future Pit 3 is not part of the initial Mining Plan and will remain undisturbed and protected from on-site runoff by a diversion berm / ditch. Runoff from this part of the property will continue to drain to Kelly Creek.

Future Pit 3 is a low-lying area and does not effectively drain to Pond 001. Future Pit 3 will remain undisturbed until mining operations have developed to the point where runoff can be directed back into the quarry and be treated in the pit sump.

f. Quantity and characteristics of waste after treatment with respect to flow, suspended solids, total iron and pH:

Suspended Solids – Discharge of total suspended solids will be minimized through sedimentation treatment in the quarry pit sump and Ponds 001 and 002. The solids will be primarily silt from construction land disturbance and limestone dust from quarry operations. The TSS and pH of the discharge will comply with the permit limits.

g. Description of waste treatment facilities, pretreatment measures and recovery systems including expected life of sedimentation basins and schedules for cleaning or proper abandonment of such basins. If earthen sedimentation basins are a portion of the treatment scheme, plans for the construction of these facilities should meet minimum construction criteria as found in the Guidelines in Ala. Admin Code section 335-6-9, Appendix A (attached as Exhibit D). Hydrology and pond design calculations are attached as Exhibit E.

Pretreatment / Sump Containment

All surface water runoff from the initial operational area and undisturbed areas within the drainage area 001 will be retained onsite in the pit sump and used as process water. Excess water will be pumped to Pond 001 for treatment before discharge at Outfall 001. At 65.94 acres, the required storage volume for the Initial Operations Area is 16.49 acre-feet. The pit sump will be maintained to contain at least 12.47 acre-feet of volume. Pond 001 is designed to provide the remaining 7.02 acre-feet of required storage.

Pond 001

Pond 001 is on the southern end of the site and is designed to treat excess runoff not used as process water from the Initial Operations Area. Pretreated excess water in the pit sump will be pumped to Pond 001, which will include a riprap lined forebay at the pump line discharge point to dissipate energy before entering the pond. Pond 001 is sized to provide 7.02 acre-feet of storage and will have baffle structures to increase the settling time for the waste material. The treated runoff will discharge from Pond 001 at Outfall 001.

Pond 002

If it is evident that mining will progress eastward into Future Pit 2, then Pond 002 will be constructed prior to mining in this area. Future Pit 2 is approximately 41.36 acres, with a required storage volume of 9.11 acre-feet. Pond 002 will contain 3.01 acre-feet of storage, and the pit sump will contain the remaining 6.10 acre-feet of the required 9.11 acre-feet of storage. In this phase of mining, the pit sump will be maintained to contain at least at least 28.04 acre-feet of runoff (6.10 acre-feet of runoff from Future Pit 2 and 12.47 acre-feet from the Initial Operations Area).

The ponds are expected to last for the life of the mine. The ponds will be cleaned out when the sediment accumulation reaches 60% of the basin volume.

h. A plan to eliminate or minimize sediment and other pollutants from haul roads must be included and should meet minimum design criteria as established by the Guidelines in Ala. Admin Code section 335-6-9, Appendix B (attached as Exhibit D):

All of the planned haul roads will have runoff directed through one of the treatment structures. During construction of the planned haul roads, BMP's will be put in place as needed.

i. location of all streams in or adjacent to the mining area and those measures which will be taken to minimize the impact on water quality when the mining operation is located near such streams. Such measures may include but not be limited to setbacks, buffer strips, or screens:

KELLY CREEK

The main existing water body that is part of and adjacent to this site is Kelly Creek. The centerline of which constitutes the southern boundary line of the site. Wiser Land Development's plan is to maintain a 50-foot buffer around Kelly Creek and wetlands where no disturbance will be permitted. At present, there is natural vegetation inside this 50-foot

buffer area, and the intent is for it to remain untouched. Markers for buffer delineation will include, but not be limited to, flagging, spray paint, silt fence, and signage.

In addition, the main sediment structures (Pond 001 & Pond 002) planned will discharge into Kelly Creek. All drainage from the site (with the exception of undisturbed Drainage Area 003 which naturally drains to Kelly Creek) will pass through one of these Ponds. At this point the water will be treated within the confines of the respective ponds. The discharge points from these ponds will only allow water to pass into Kelly Creek after the treatment process has taken place.

WETLANDS

The site contains four wetlands areas:

1. along the southern property line, adjacent to Kelly Creek
2. within the southern portion of the site
3. northeast of mining area
4. east end of property

Wetlands will be protected from sedimentation by maintaining a 50' undisturbed natural buffer along or around the wetland area, and the installation of diversion berms / ditches to redirect runoff from disturbed areas. Markers for buffer delineation will include, but not be limited to, flagging, spray paint, silt fence, and signage.

Onsite runoff will be captured and treated in the sediment ponds before being discharged on or near wetland areas.

j. Those measures to be employed to minimize the effect of any non- point source pollution which may be generated because of the surface mining operation:

The plan is to construct a series of berms and ditches to direct all the areas within the mining operation through one of the ponds. The natural 50-foot buffer around Kelly Creek and wetland areas will help to minimize not-point source pollution. Markers for buffer delineation will include, but not be limited to, flagging, spray paint, silt fence, and signage.

During the initial phases of development of the mining operations, BMP's for short and long term stabilization and vegetative cover will be implemented. Permanent erosion control shall be implemented when temporarily disturbed areas are no longer needed. BMPs include Temporary and Permanent Seeding (TS and PS), Preservation of Vegetation (PV), Diversion Ditches / Berms (DV), Outlet Protection (OP), and Sediment Barriers (SB). BMP reference information is attached as Exhibit F.

k. All pollution abatement facilities must be certified by the design engineer as being constructed in accordance with the approved plans.

   Onsite structures for pollution mitigation will be inspected by design engineers once constructed.

l. The applicant shall specify if the proposed mining operation is to be constructed in the watershed of an impoundment classified as a public water supply or a direct tributary thereon.

   Not applicable

k. Reclamation

   As mining activities are completed, the area will be top-dressed to eliminate piles of dirt, stone, or low areas. The pit area will be used as a pond/lake for recreational purposes. During reclamation, BMPs will be established to minimize erosion.

I. PE CERTIFICATION

I certify on behalf of the applicant that I have completed an evaluation of discharge alternatives (Item XVIII) for any proposed new or increased discharges of pollutant(s) to Tier 2 waters and reached the conclusions indicated. I certify under penalty of law that technical information and data contained in this application, and a comprehensive PAP Plan including any attached SPCC plan, maps, engineering designs, etc. acceptable to ADEM, for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff has been prepared under my direct supervision for this facility utilizing effective, good engineering and pollution control practices and in accordance with the provisions of ADEM Admin. Code Division 335-6, including Chapter 335-6-9 and Appendices A & B. If the PAP Plan is properly implemented and maintained by the Permittee, discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other permit requirements. The applicant has been advised that appropriate pollution abatement / prevention facilities and structural & nonstructural management practices or Department approved equivalent management practices as detailed in the PAP Plan must be fully implemented and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices, permit requirements, and other ADEM requirements to ensure protection of groundwater and surface water quality.

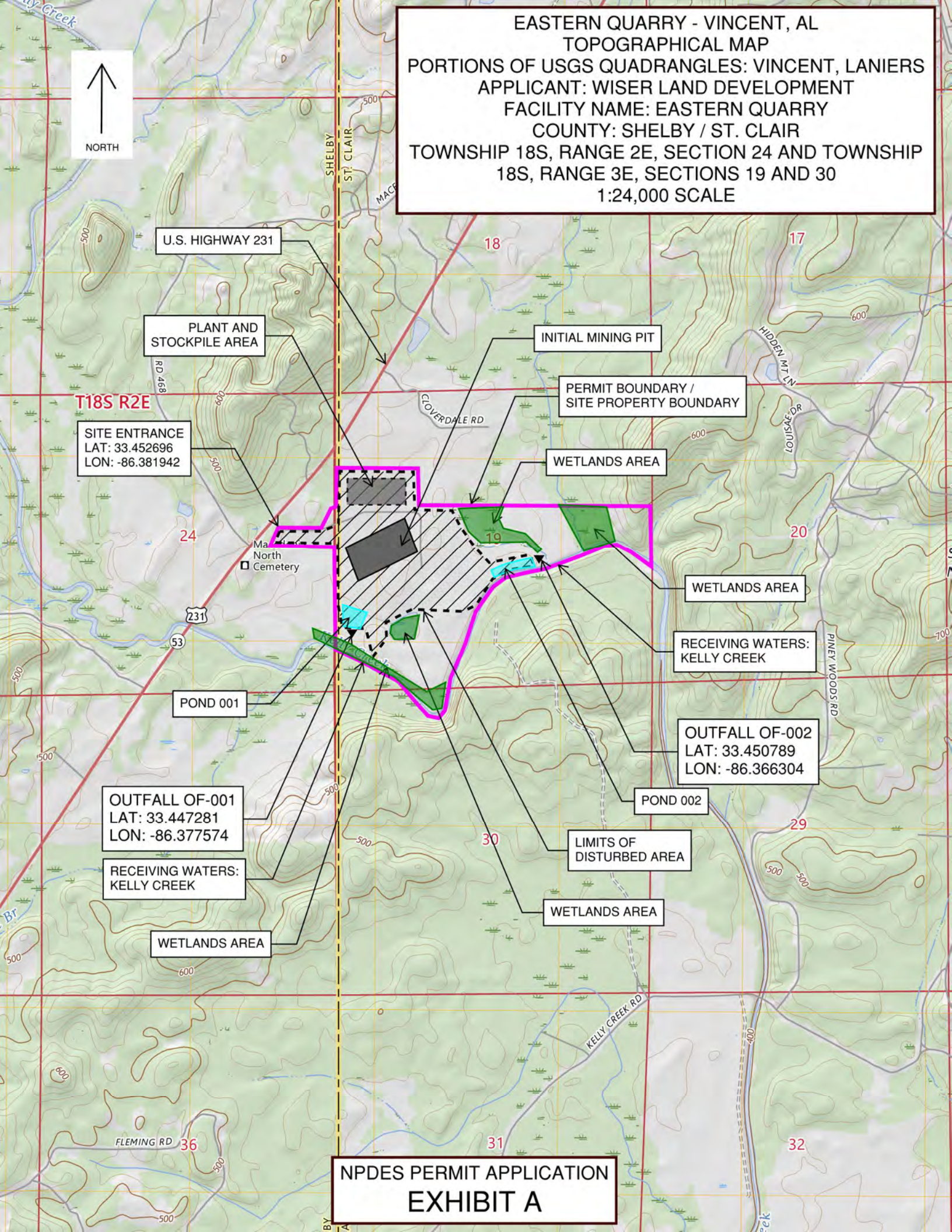
Name:	Jeffrey V. Havercroft, PE	PE Registration #	AL-32428
Title:	Civil Engineer	Phone Number	(205) 706-8170
Address:	2136 16th Ave S, Suite A3, Birmingham, AL 35205		
Signature:		Date Signed	9/12/2025

Listed attachments:

Exhibit A:	USGS Location Map
Exhibit B:	Mining Site Plans
Exhibit C:	Waste Cycle Diagram
Exhibit D:	Ala. Admin Code section 335-6-9, Appendices A and B.
Exhibit E:	Hydrology and Pond Calculations
Exhibit F:	BMP References

Eastern Quarry, Vincent, AL
Wiser Land Development LLC

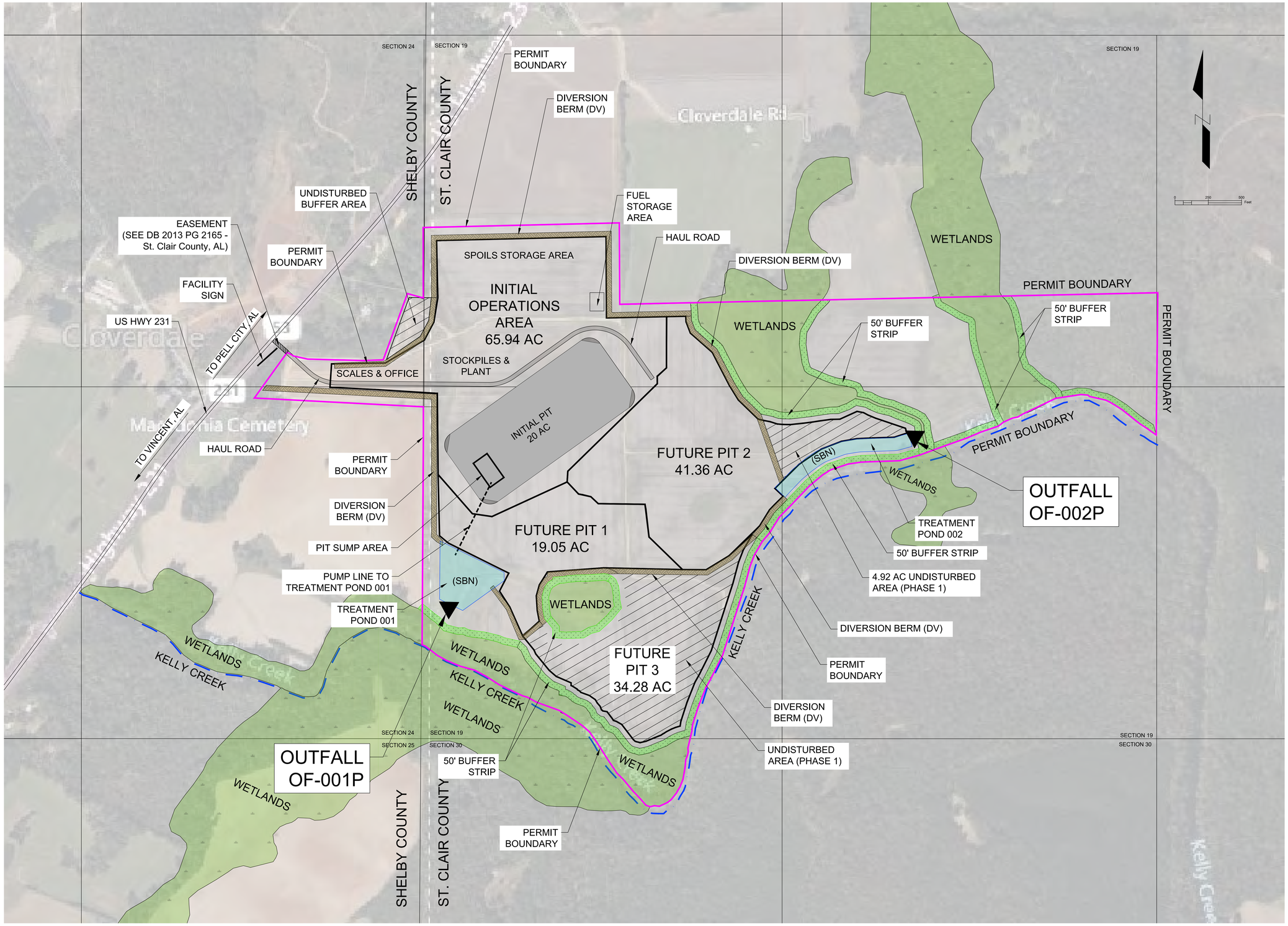
Exhibit A: USGS Location Map


EASTERN QUARRY - VINCENT, AL
TOPOGRAPHICAL MAP
PORTIONS OF USGS QUADRANGLES: VINCENT, LANIERS
APPLICANT: WISER LAND DEVELOPMENT
FACILITY NAME: EASTERN QUARRY
COUNTY: SHELBY / ST. CLAIR
TOWNSHIP 18S, RANGE 2E, SECTION 24 AND TOWNSHIP 18S, RANGE 3E, SECTIONS 19 AND 30
1:24,000 SCALE
NORTH
U.S. HIGHWAY 231
PLANT AND STOCKPILE AREA
INITIAL MINING PIT
PERMIT BOUNDARY / SITE PROPERTY BOUNDARY
T18S R2E
SITE ENTRANCE
LAT: 33.452696
LON: -86.381942
WETLANDS AREA
WETLANDS AREA
RECEIVING WATERS: KELLY CREEK
POND 001
OUTFALL OF-002
LAT: 33.450789
LON: -86.366304
POND 002
OUTFALL OF-001
LAT: 33.447281
LON: -86.377574
LIMITS OF DISTURBED AREA
RECEIVING WATERS: KELLY CREEK
WETLANDS AREA
WETLANDS AREA
NPDES PERMIT APPLICATION
EXHIBIT A

Eastern Quarry, Vincent, AL
Wiser Land Development LLC

Exhibit B: Mining Site Plans

SITE LAYOUT PLAN



LEGEND

- WETLANDS
- 50' BUFFER AREA
- DIVERSION DITCH / BERM (DV)
- DRAINAGE FLOW
- SEDIMENT BASIN (SBN) — (SBN)
- OUTFALL POINT (OF)

NOTES:

1. DIVERSION (DV) and SEDIMENT BASIN (SBN) DESIGNED PER "ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS" (THE BLUE BOOK).
2. WETLANDS SHOWN PER NATIONAL WETLANDS INVENTORY GIS MAP.
3. PHASE 1 OF MINING OPERATIONS WILL CONSIST OF THE CONSTRUCTION OF POND 001 AND ESTABLISHING THE INITIAL OPERATIONS AREA AND PIT. PHASE 1 WILL CONTINUE TO FUTURE PIT 1. PHASE 2 WILL CONSIST OF THE CONSTRUCTION OF POND 002 AND EXPANSION OF MINING OPERATIONS INTO FUTURE PIT 2. PHASE 3 WILL CONSIST OF EXPANSION OF MINING OPERATIONS INTO FUTURE PIT 3. FUTURE PIT 3 AND APPROX. 5 ACRES OF FUTURE PIT 2 WILL REMAIN UNDISTURBED UNTIL PHASE 3.

General Notes

EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

WISER LAND DEVELOPMENT LLC

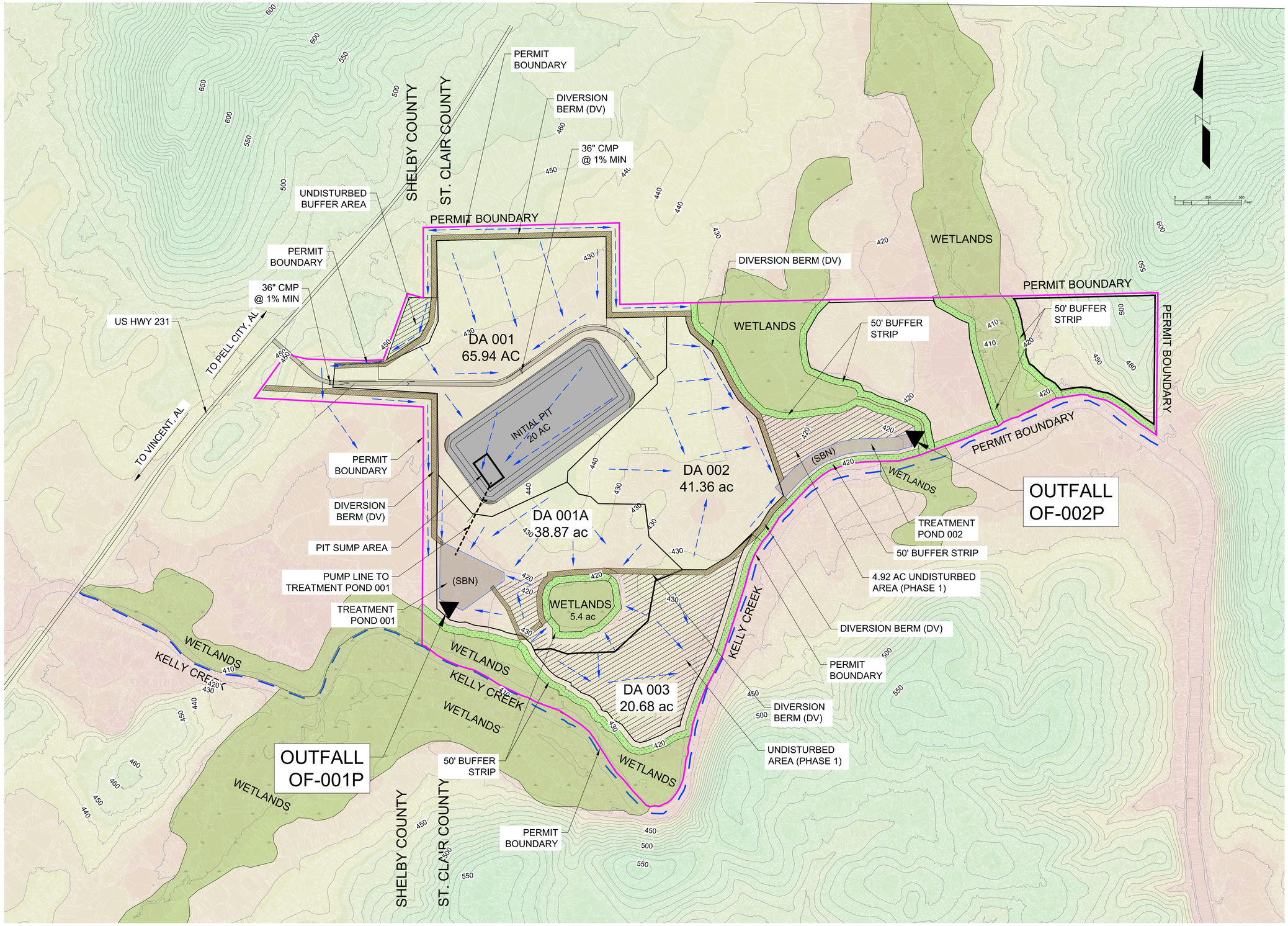
No.	Revision/Issue	Date
	PERMIT REVIEW	9/10/25

Firm Name and Address
JEFFREY V. HAVERCROFT, PE
2136 16TH AVE S
SUITE A3
BIRMINGHAM, AL 35205

Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

Project: EASTERN QUARRY
Date: 9/10/2025
Scale: 1" = 250'
Sheet: 001

DRAINAGE AND EROSION CONTROL PLAN



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	400.00	416.00	
2	416.00	422.00	
3	422.00	430.00	
4	430.00	444.00	
5	444.00	460.00	
6	460.00	490.00	
7	490.00	528.00	
8	528.00	688.00	

LEGEND

- WETLANDS
- 50' BUFFER AREA
- DIVERSION DITCH / BERM (DV)
- DRAINAGE FLOW
- SEDIMENT BASIN (SBN) — (SBN)
- OUTFALL POINT (OF)

NOTES:

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General Notes

EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

WISER LAND AND DEVELOPMENT LLC

No.	Revision/Issue	Date
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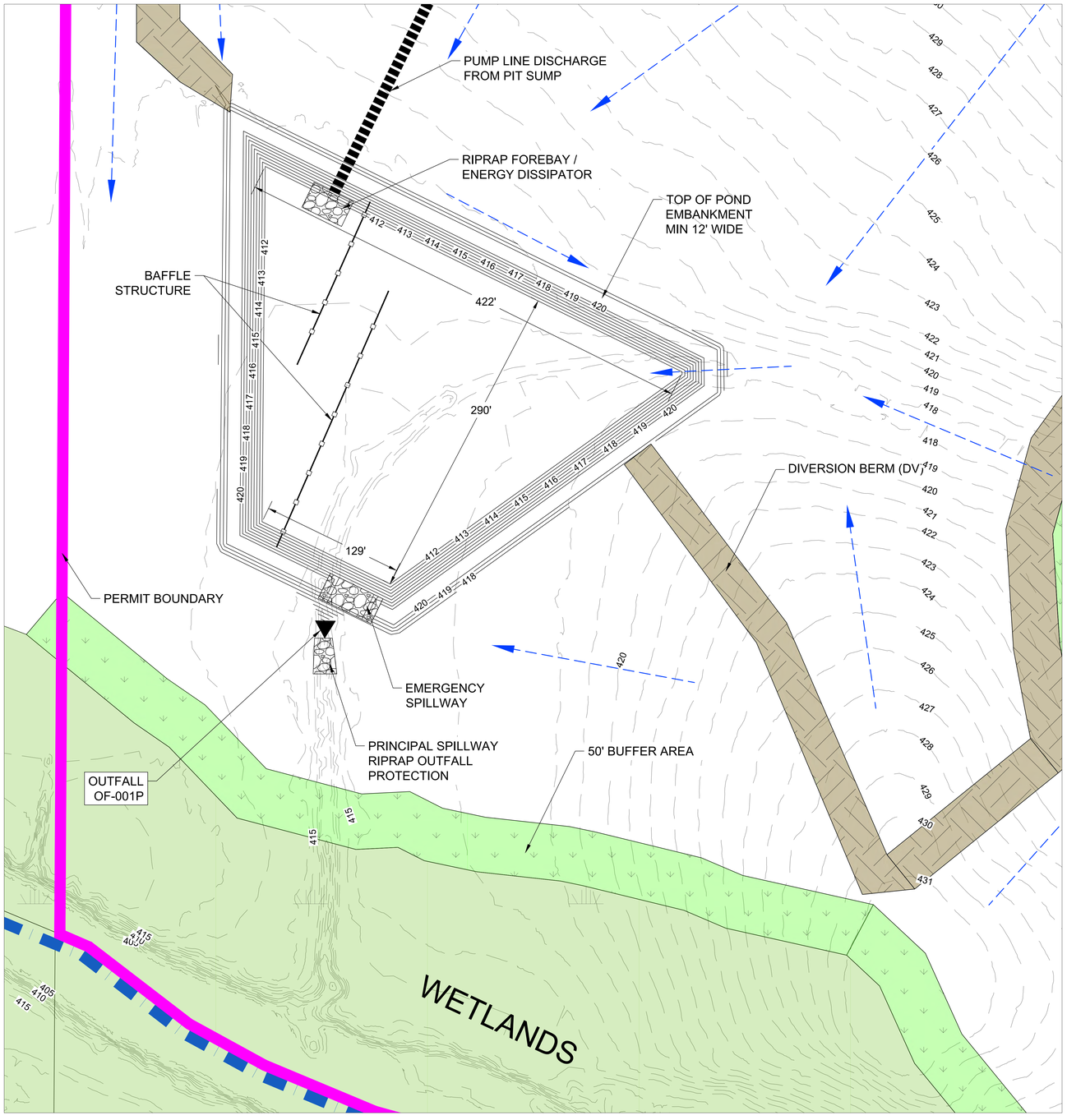
BIRMINGHAM, AL 35205

Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

Project	Sheet
EASTERN QUARRY	002
Date 8/29/2025	
Scale 1" = 250'	

POND 001 DETAILS



POND 001 (PLAN VIEW)
1" = 40'

LEGEND

- WETLANDS
- 50' BUFFER AREA
- DIVERSION DITCH / BERM (DV)
- DRAINAGE FLOW
- SEDIMENT BASIN (SBN) (SBN)
- OUTFALL POINT (OF)

EMBANKMENT NOTES:

(a) THE TOP OF THE DAM SHOULD BE NO LESS THAN 12 FEET WIDE.

(b) THE SLOPE ON EITHER SIDE OF THE DAM SHOULD BE NO STEEPER THAN 3:1.

(c) THE DAM SHOULD BE CONSTRUCTED WIDE A CUTOFF TRENCH AT LEAST 8 FEET WIDE. THE SIDE SLOPES SHOULD BE NO LESS THAN 1:1. THE CUTOFF TRENCH SHALL BE LOCATED ON THE DAM CENTERLINE AND BE OF SUFFICIENT DEPTH (NOT LESS THAN 2 FEET) TO EXTEND INTO A RELATIVELY IMPERVIOUS LAYER OF SOIL OR TO BEDROCK AND SHALL BE FILLED WITH A RELATIVELY IMPERVIOUS MATERIAL FROM WHICH THE CORE OF THE DAM SHALL BE CONSTRUCTED.

(d) THE ENTIRE EMBANKMENT AND CUTOFF TRENCH SHALL BE COMPACTED TO 95 PERCENT DENSITY, BASED ON STANDARD PROCTOR AS OUTLINED IN ASTM.

(e) THE MATERIAL PLACED IN THE EMBANKMENT SHOULD BE FREE TO SOD, ROOTS, STONES OVER 6 INCHES IN DIAMETER AND OTHER OBJECTIONABLE MATERIALS. THE FILL MATERIAL SHOULD BE PLACED AND SPREAD OVER THE ENTIRE FILL AREA, STARTING AT THE LOWEST POINT OF THE FOUNDATION, IN LAYERS NOT TO EXCEED 12 INCHES IN THICKNESS. CONSTRUCTION OF THE FILL SHOULD BE UNDERTAKEN ONLY AT SUCH TIMES THAT THE MOISTURE CONTENT OF THE FILL MATERIAL WILL PERMIT SATISFACTORY COMPACTION IN ACCORDANCE WITH SUBPARAGRAPH (4)(d) ABOVE.

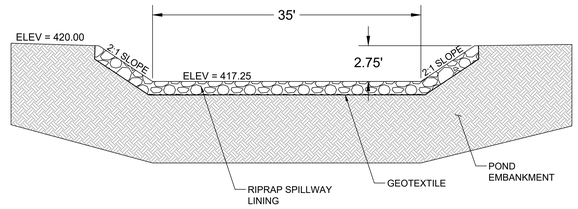
(f) THE SPILLPIPE SHOULD BE SEIZED TO ADEQUATELY CARRY THE EXPECTED PEAK FLOW FROM A ONE-YEAR FREQUENCY STORM.

(g) THE SPILLPIPES SHOULD BE MADE OF A MATERIAL CAPABLE OF WITHSTANDING CHEMICAL REACTIONS CAUSED BY THE QUALITY OF THE WATER BEING DISCHARGED.

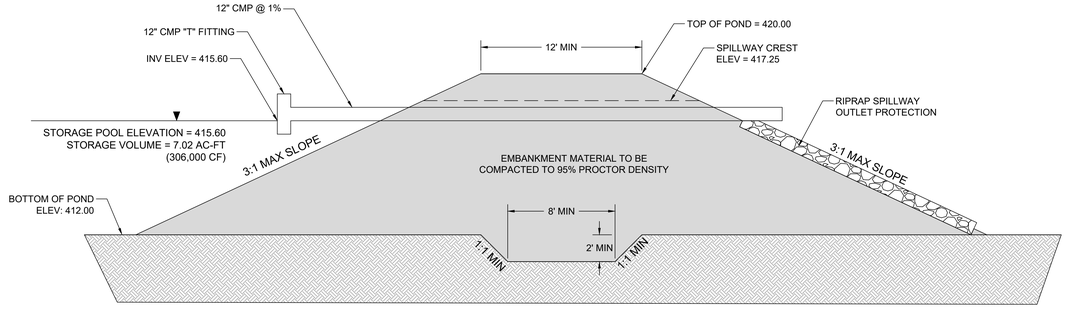
(h) THE SPILLPIPE SHOULD BE EQUIPPED WITH A DEVICE, OR CONSTRUCTED, SUCH TO ENSURE THAT SUBSURFACE WITHDRAWAL IS ACCOMPLISHED IN ORDER TO ENSURE THAT NO FLOATING SOLIDS ARE DISCHARGED.

(i) THE SPILLPIPES SHOULD BE EQUIPPED WITH ANTI-SEEP COLLARS AT EACH JOINT WHICH RADIATE AT LEAST 2 FEET FROM THE PIPE IN ALL DIRECTIONS. THE COLLARS AND THEIR CONNECTIONS TO THE PIPE SHOULD BE WATERTIGHT.

(j) A SPLASH PAD OR RIPRAP SHOULD BE PLACED UNDER THE DISCHARGE OF THE SPILLPIPE, OR THE LOCATION OF THE DISCHARGE SET, SO AS TO ENSURE THAT THE DISCHARGE DOES NOT ERODE THE DAM.



EMERGENCY SPILLWAY
(25-YR / 24-HR)
SECTION VIEW
(N.T.S.)



POND EMBANKMENT
(SECTION VIEW
(N.T.S.)

General Notes

EASTERN QUARRY

4882 HIGHWAY 231
VINCENT, AL 35178

WISER LAND DEVELOPMENT LLC

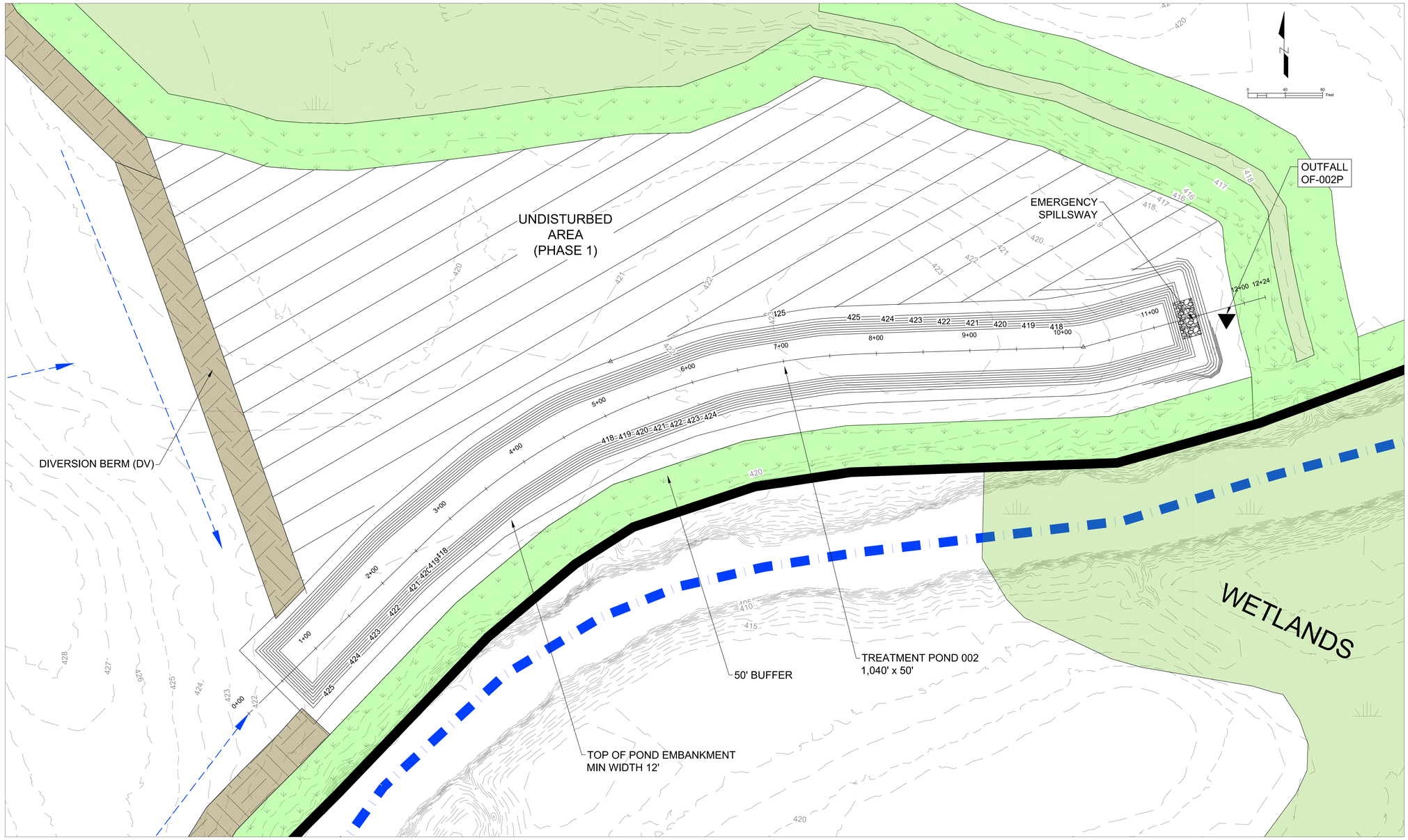
No.	Revision/Issue	Date
	PERMIT REVIEW	9/10/25

Firm Name and Address
JEFFREY V. HAVERCROFT, PE
2136 16TH AVE S
SUITE A3
BIRMINGHAM, AL 35205

Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

Project	Sheet
EASTERN QUARRY	003
Date: 8/29/2025	
Scale: 1" = 40'	

POND 002 DETAILS

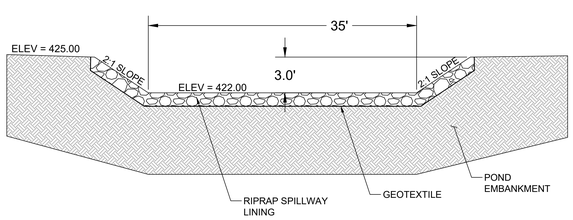


POND 002 (PLAN VIEW)
1" = 40'

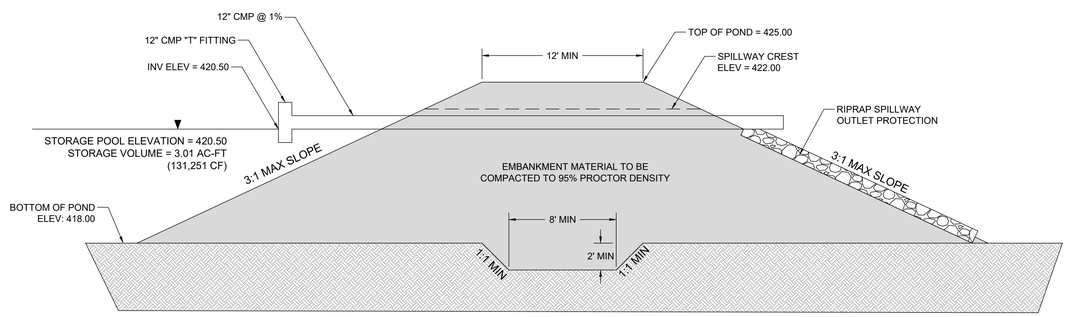
LEGEND

- WETLANDS
- 50' BUFFER AREA
- DIVERSION DITCH / BERM (DV)
- DRAINAGE FLOW
- SEDIMENT BASIN (SBN) — (SBN)
- OUTFALL POINT (OF)

SEE EMBANKMENT NOTES, SHEET 003



EMERGENCY SPILLWAY
(25-YR / 24-HR)
SECTION VIEW
(N.T.S.)



POND EMBANKMENT
(SECTION VIEW
(N.T.S.)

General Notes

EASTERN QUARRY

WISER LAND DEVELOPMENT LLC

4882 HIGHWAY 231
VINCENT, AL 35178

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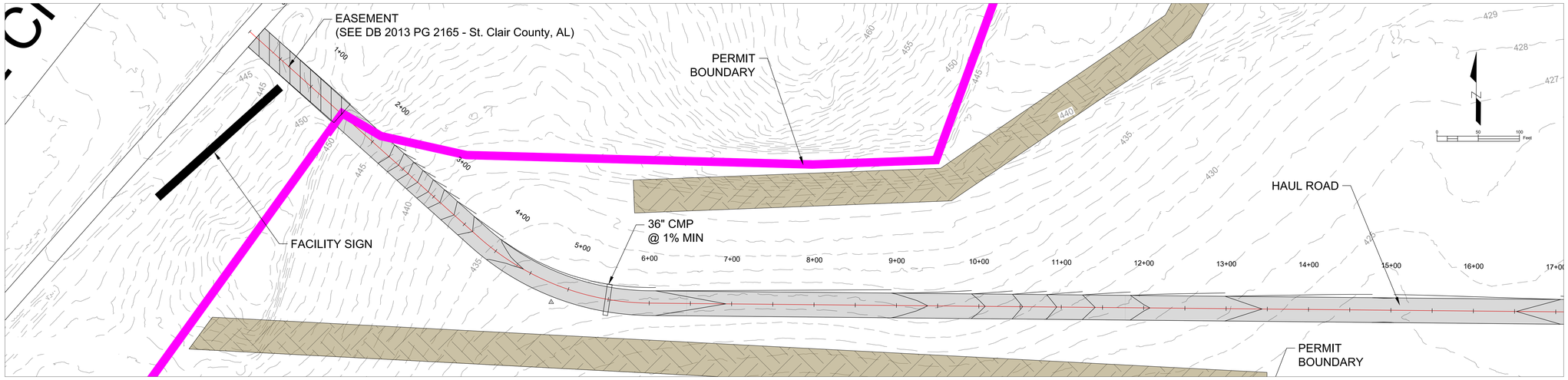
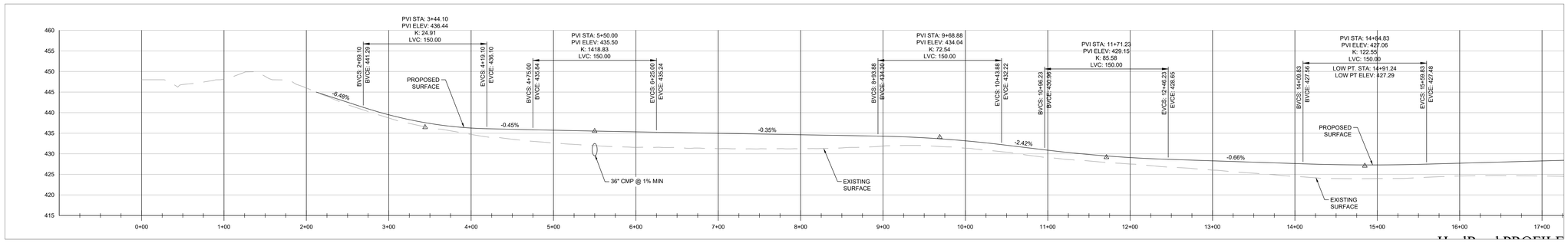
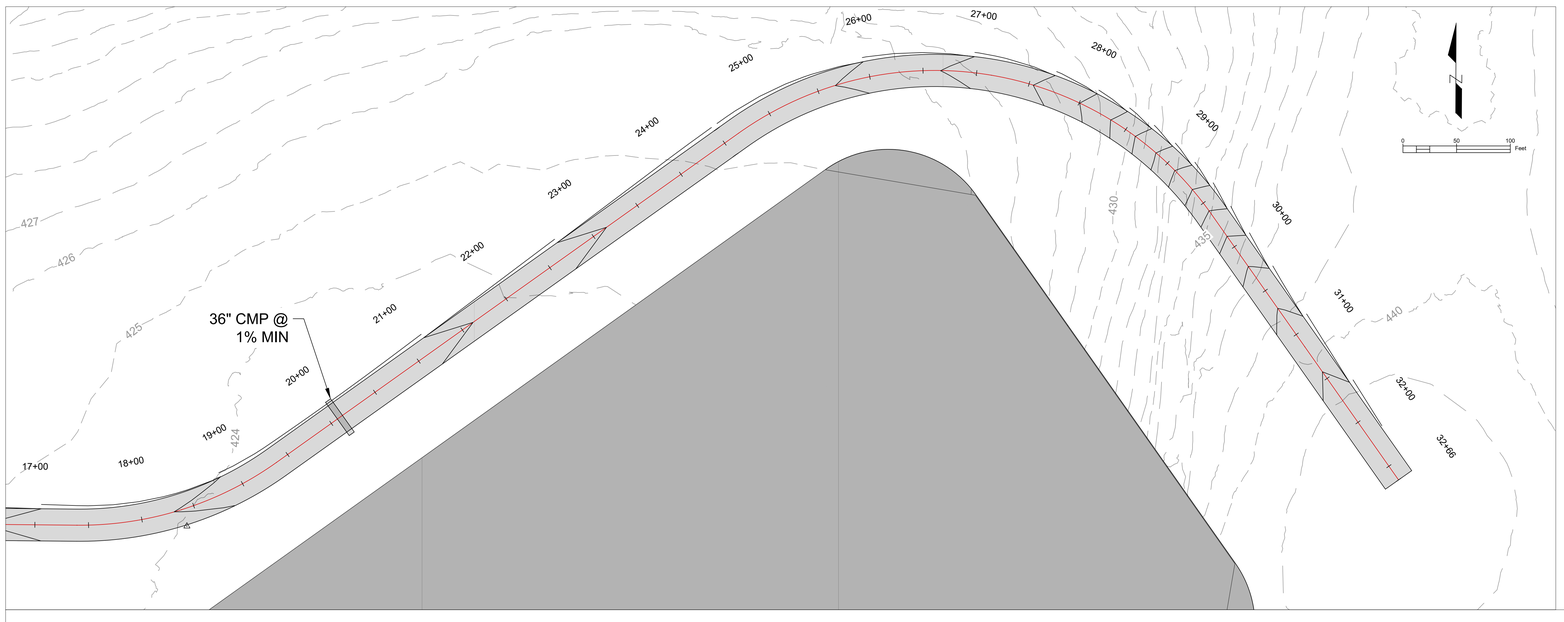
Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

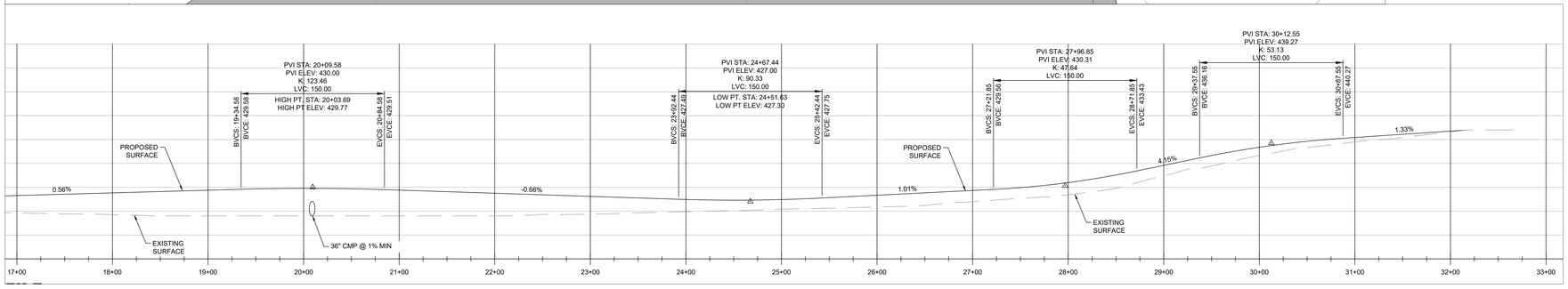
Project	Sheet
EASTERN QUARRY	004
Date: 8/29/2025	
Scale: 1" = 40'	

HAUL ROAD PLAN / PROFILE









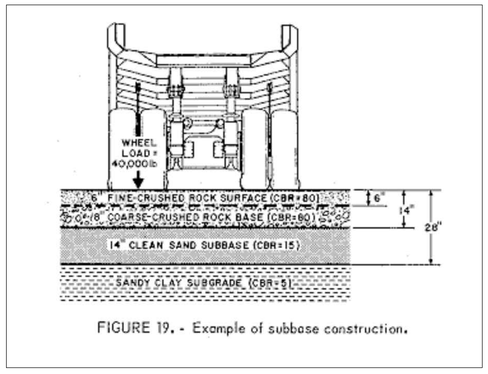


FIGURE 19. - Example of subbase construction.

HAUL ROAD NOTES:

(a) NO SUSTAINED GRADE SHOULD EXCEED 10%.

(b) THE MAXIMUM GRADE SHOULD NOT EXCEED 15 PERCENT FOR 300 FEET.

(c) THERE SHOULD NOT BE MORE THAN 300 FEET OF 15% MAXIMUM GRADE FOR EACH 1,000 FEET OF ROAD CONSTRUCTED.

(d) THE HAUL ROAD, WHENEVER POSSIBLE, SHOULD BE LOCATED SO THAT RUNOFF FROM THE ROAD ENTERS A SEDIMENT BASIN CONSTRUCTED FOR THE MINING OPERATION OR TO PIT DRAINAGE.

(e) OUTER SLOPES FOR HAUL ROADS OUT OF THE PERMITTED AREA SHOULD NOT BE STEEPER THAN 2:1 AND SHOULD BE SEEDED WITH ANNUAL AND PERENNIAL GRASSES WITH AT LEAST 80 PERCENT COVER TO AVOID EROSION. WHERE THIS IS NOT POSSIBLE, BASINS, HAY FILTERS, OR DIVERSION DITCHES SHOULD BE CUT, BUILT, OR PLACED TO INTERCEPT RUNOFF.

General Notes

EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

WISER LAND DEVELOPMENT LLC

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Project Name and Address
EASTERN QUARRY
4882 HIGHWAY 231
VINCENT, AL 35178

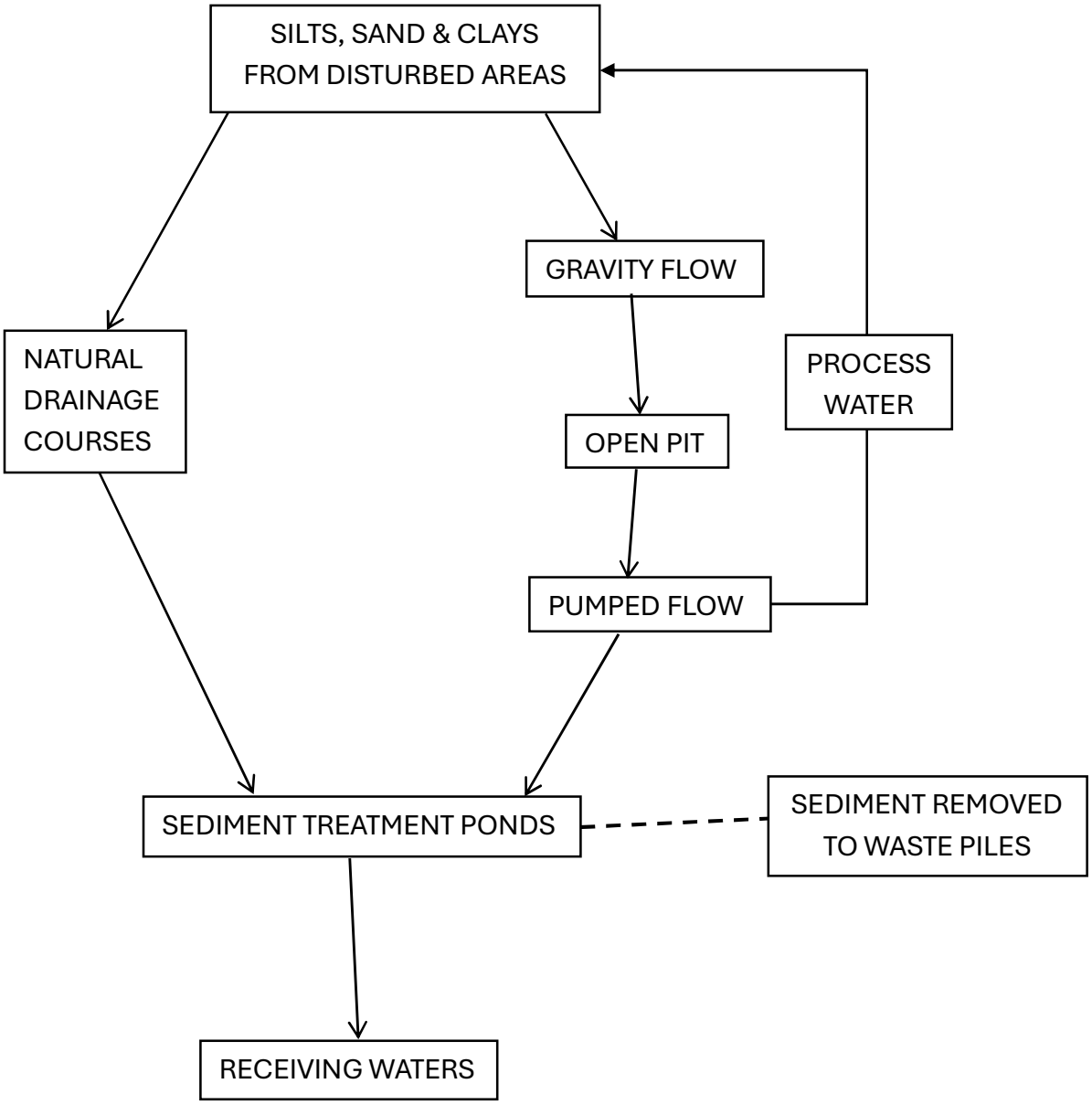
Project	Sheet
EASTERN QUARRY	005
Date 8/29/2025	
Scale 1" = 50'	

Eastern Quarry, Vincent, AL
Wiser Land Development LLC

Exhibit C: Waste Cycle Diagram

EXHIBIT C

SITE SURFACE WATER FLOW / WASTE CYCLE – SCHEMATIC DIAGRAM



Eastern Quarry, Vincent, AL
Wiser Land Development LLC

Exhibit D: Ala. Admin Code section 335-6-9, Appendices A and B.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT WATER DIVISION - WATER QUALITY PROGRAM ADMINISTRATIVE CODE

CHAPTER 335-6-9
SURFACE MINING RULES

335-6-9-A Guidelines For Minimizing The Effects Of Surface Mining.

GUIDELINES FOR MINIMIZING THE EFFECTS OF SURFACE MINING AND SURFACE EFFECTS OF UNDERGROUND MINING ON WATER QUALITY

Recognizing that there are wide variations in the circumstances and conditions surrounding and arising out of the strip mining and underground mining processes, such variables include but not limited to topography, climatic conditions, location of material deposits and soil types, the rules adopted by the Department are of a broad, general nature. They have been designed to provide flexibility to both the Department and the mine operator in preparing a plan of operation with each plan being tailored to a specific set of conditions. The following guidelines should be used as minimum criteria in formulating any pollution abatement and/or prevention plan required by Rule 335-6-9-.03 adopted by the Department and for any plan which the technical staff may require to minimize the surface effects of underground mining on water quality.

APPENDIX A

Sedimentation Controls

(1) Pollution abatement facilities should be designed and constructed so as to control both spoil runoff and pit drainage.

(2) Pit drainage and spoil runoff should be diverted through the sedimentation basin by means of diversion ditches or normal drainage patterns. In cases where it is not practical to use this system, then natural vegetation, vegetative windrows, hay berms, earthen berms or other equally effective systems may be utilized.

(3) The sediment basin should have a minimum capacity to store 0.25 acre feet/acre of disturbed area in the drainage area. The basin shall be cleaned out when the sediment accumulation approaches 60 percent of the design capacity. All trees, boulders and other obstructions must be removed from the basin during the initial construction phase to facilitate clean-out.

(4) The dam for the sediment basin should be designed and built using the following as minimum criteria:

(a) the top of the dam should be no less than 12 feet wide.

(b) the slope on either side of the dam should be no steeper than 3:1.

(c) the dam should be constructed wide a cutoff trench at least 8 feet wide. The side slopes should be no less than 1:1. The cutoff trench shall be located on the dam centerline and be of sufficient depth (not less than 2 feet) to extend into a relatively impervious layer of soil or to bedrock and shall be filled with a relatively impervious material from which the core of the dam shall be constructed.

(d) the entire embankment and cutoff trench shall be compacted to 95 percent density, based on standard proctor as outlined in ASTM.

(e) the material placed in the embankment should be free to sod, roots, stones over 6 inches in diameter and other objectionable materials. The fill material should be placed and spread over the entire fill area, starting at the lowest point of the foundation, in layers not to exceed 12 inches in thickness. Construction of the fill should be undertaken only at such times that the moisture content of the fill material will permit satisfactory compaction in accordance with subparagraph (4)(d) above.

(f) the spillpipe should be seized to adequately carry the expected peak flow from a one-year frequency storm.

(g) the spillpipes should be made of a material capable of withstanding chemical reactions caused by the quality of the water being discharged.

(h) the spillpipe should be equipped with a device, or constructed, such to ensure that subsurface withdrawal is accomplished in order to ensure that no floating solids are discharged.

(i) the spillpipes should be equipped with anti-seep collars at each joint which radiate at least 2 feet from the pipe in all directions. The collars and their connections to the pipe should be watertight.

(j) a splash pad or riprap should be placed under the discharge of the spillpipe, or the location of the discharge set, so as to ensure that the discharge does not erode the dam.

(k) the emergency spillway should be designed to safely carry the expected peak flow from a 25 year, 24 hour storm or shorter duration. When designing spillways that are in the drainage course of a public water supply, then 50 years, 24 hour or shorter duration data should be used. The slope of the entrance and exit to the emergency overflow should not exceed 3 percent. The emergency overflow should be constructed with a control section at least 20 feet long. The side slopes of the emergency overflow should not be steeper than 2:1. The emergency overflow should be riprapped or concreted in order to prevent erosion.

(l) there should be a minimum of 1 1/2 feet of freeboard between the normal overflow and the emergency overflow. There should be at least 1 1/2 feet of freeboard between the maximum design flow elevation in the emergency overflow and the top of the dam.

(m) if basins are built in series, then the emergency overflow for each should be designed to accommodate the entire drainage area.

(n) the dam should be sowed with both perennial and annual grasses in order to ensure erosion is minimized. Hay bails or riprap should be placed at the toe of the dam immediately upon completion of construction.

(5) Areas in which surface mined minerals are stockpiled, and areas in which refuse resulting from any type of mining operation is or has been deposited, should be provided with diversion ditches or other appropriate methods of intercepting surface water in such a way as to minimize the possibility of sediment laden, acidic or toxic waters from such areas, being deposited into a stream.

APPENDIX B

Haul Roads

(1) In order to minimize sediment from haul roads:

(a) no sustained grade should exceed 10 percent;

(b) the maximum grade should not exceed 15 percent for 300 feet;

(c) there should not be more than 300 feet of 15 percent maximum grade for each 1,000 feet of road constructed;

(d) the haul road, wherever possible, should be located so that runoff from the road enters a sediment basin constructed for the mining operation.

(e) outer slopes for haul roads out of the permitted area should not be steeper than 2:1 and should be seeded with annual and perennial grasses with at least 80 percent cover to avoid erosion. Where this is not possible, basins, hay filters or diversion ditches should be cut, built or placed to intercept runoff. Details outlining control measures must be included with the abatement plan.

(2) Stream crossings should be avoided; however, any crossings which are necessary and which meet technical staff approval should be detailed with drawings and any other pertinent data in the pollution abatement plan, using best engineering practices.

Author: ADEM
Statutory Authority: Code of Ala. 1975,
History:

Eastern Quarry, Vincent, AL
Wiser Land Development LLC

Exhibit E: Hydrology and Pond Calculations

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	181.58	2	754	1,312,946	------	------	------	DA 001 PRE
2	SCS Runoff	193.87	2	752	1,357,473	------	------	------	DA 001 POST
3	SCS Runoff	169.17	2	732	767,949	------	------	------	DA 001A PRE
4	SCS Runoff	174.44	2	732	800,197	------	------	------	DA 001A POST
5	Reservoir	129.12	2	744	793,139	4	418.48	585,414	DA 001A ROUTE
7	SCS Runoff	138.04	2	744	808,249	------	------	------	DA 002 PRE
8	SCS Runoff	150.67	2	742	862,517	------	------	------	DA 002 POST
9	Reservoir	135.30	2	750	859,706	8	423.27	335,548	DA 002 ROUTE

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	181.58	2	754	1,312,946	------	------	------	DA 001 PRE
2	SCS Runoff	193.87	2	752	1,357,473	------	------	------	DA 001 POST
3	SCS Runoff	169.17	2	732	767,949	------	------	------	DA 001A PRE
4	SCS Runoff	174.44	2	732	800,197	------	------	------	DA 001A POST
5	Reservoir	129.12	2	744	793,139	4	418.48	585,414	DA 001A ROUTE
7	SCS Runoff	138.04	2	744	808,249	------	------	------	DA 002 PRE
8	SCS Runoff	150.67	2	742	862,517	------	------	------	DA 002 POST
9	Reservoir	135.30	2	750	859,706	8	423.27	335,548	DA 002 ROUTE

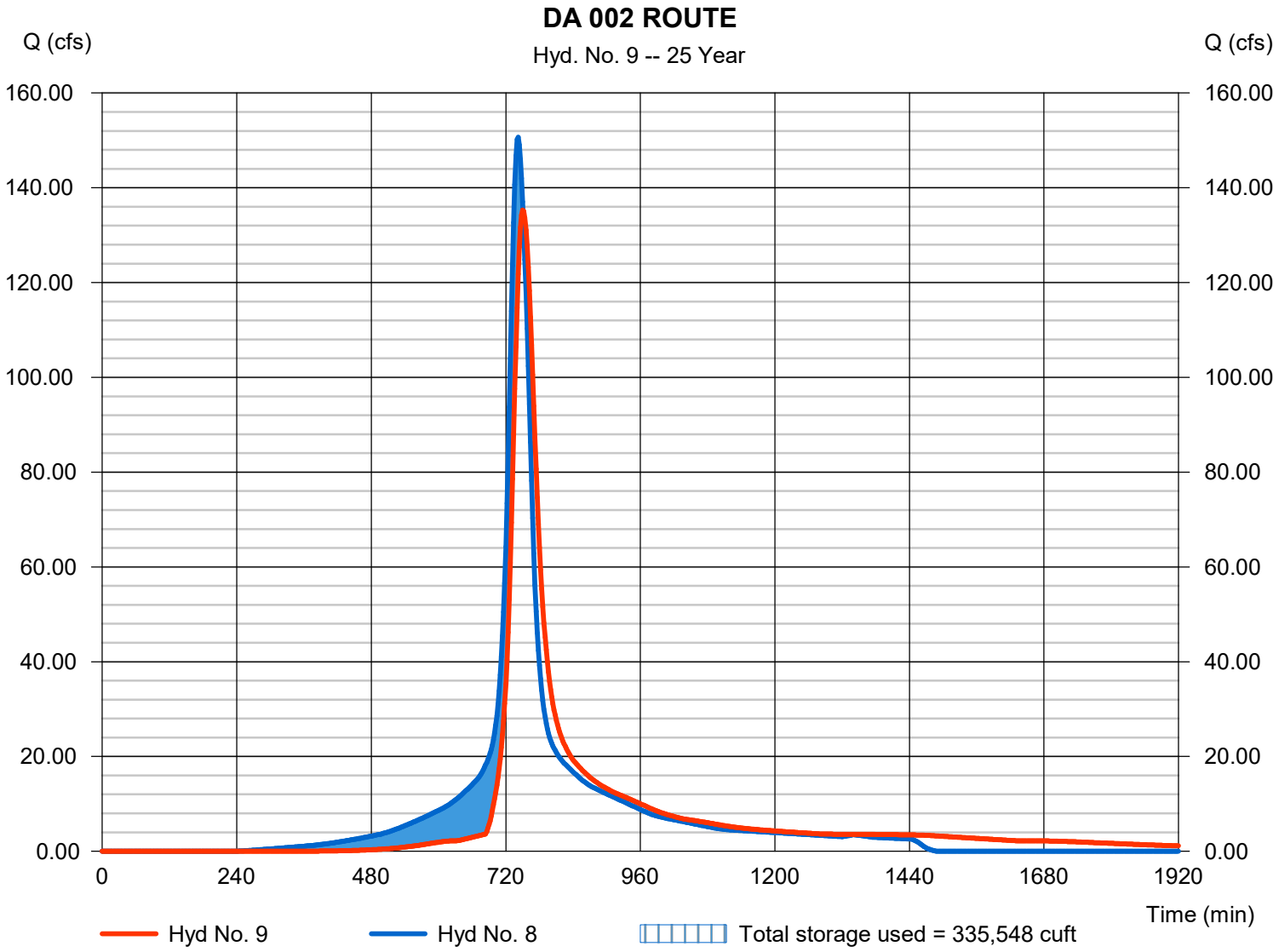
Hydrograph Report

Hyd. No. 9

DA 002 ROUTE

Hydrograph type	=	Reservoir	Peak discharge	=	135.30 cfs
Storm frequency	=	25 yrs	Time to peak	=	750 min
Time interval	=	2 min	Hyd. volume	=	859,706 cuft
Inflow hyd. No.	=	8 - DA 002 POST	Max. Elevation	=	423.27 ft
Reservoir name	=	POND 002	Max. Storage	=	335,548 cuft

Storage Indication method used. Wet pond routing start elevation = 420.50 ft.



Pond Report

Pond No. 2 - POND 002

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 418.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	418.00	49,005	0	0
1.00	419.00	54,502	51,724	51,724
2.00	420.00	60,049	57,247	108,971
3.00	421.00	65,646	62,820	171,792
4.00	422.00	71,294	68,444	240,236
5.00	423.00	76,993	74,118	314,353
6.00	424.00	82,742	79,842	394,196

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	0.00	0.00	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 420.50	0.00	0.00	0.00
Length (ft)	= 30.00	0.00	0.00	0.00
Slope (%)	= 1.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 35.00	0.00	0.00	0.00
Crest El. (ft)	= 422.00	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	418.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
1.00	51,724	419.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
2.00	108,971	420.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
3.00	171,792	421.00	0.95 ic	---	---	---	0.00	---	---	---	---	---	0.947
4.00	240,236	422.00	3.62 oc	---	---	---	0.00	---	---	---	---	---	3.616
5.00	314,353	423.00	5.35 ic	---	---	---	91.00	---	---	---	---	---	96.35
6.00	394,196	424.00	6.55 ic	---	---	---	257.39	---	---	---	---	---	263.94

Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	24.5788	5.4000	0.6754	--------
2	28.0549	5.4000	0.6734	--------
3	0.0000	0.0000	0.0000	--------
5	34.9857	5.6000	0.6793	--------
10	39.2927	5.5000	0.6735	--------
25	42.0368	4.8000	0.6503	--------
50	43.1099	4.2000	0.6286	--------
100	45.0613	3.9000	0.6140	--------

File name: Vincent.ShelbyCo.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	5.05	3.88	3.21	2.77	2.45	2.21	2.02	1.87	1.74	1.63	1.54	1.46
2	5.80	4.45	3.68	3.18	2.81	2.54	2.32	2.15	2.00	1.88	1.77	1.68
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	7.04	5.41	4.48	3.87	3.42	3.09	2.83	2.61	2.43	2.28	2.15	2.04
10	8.06	6.20	5.14	4.44	3.93	3.55	3.25	3.00	2.80	2.63	2.48	2.35
25	9.53	7.29	6.03	5.21	4.62	4.18	3.83	3.55	3.31	3.11	2.94	2.79
50	10.68	8.13	6.73	5.82	5.17	4.68	4.30	3.98	3.72	3.50	3.31	3.15
100	11.77	8.95	7.42	6.42	5.71	5.18	4.76	4.42	4.14	3.90	3.69	3.51

Tc = time in minutes. Values may exceed 60.

Precip. file name: C:\Users\Jeff WORK\Documents\WORK\1. Jobs\2025\Wiser Land Dev\Vincent\Vincent.ShelbyCo.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	3.57	4.08	0.00	5.00	5.82	7.08	0.00	9.25
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Vincent.ShelbyCo.gpw

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024

Friday, 09 / 12 / 2025

25 - Year

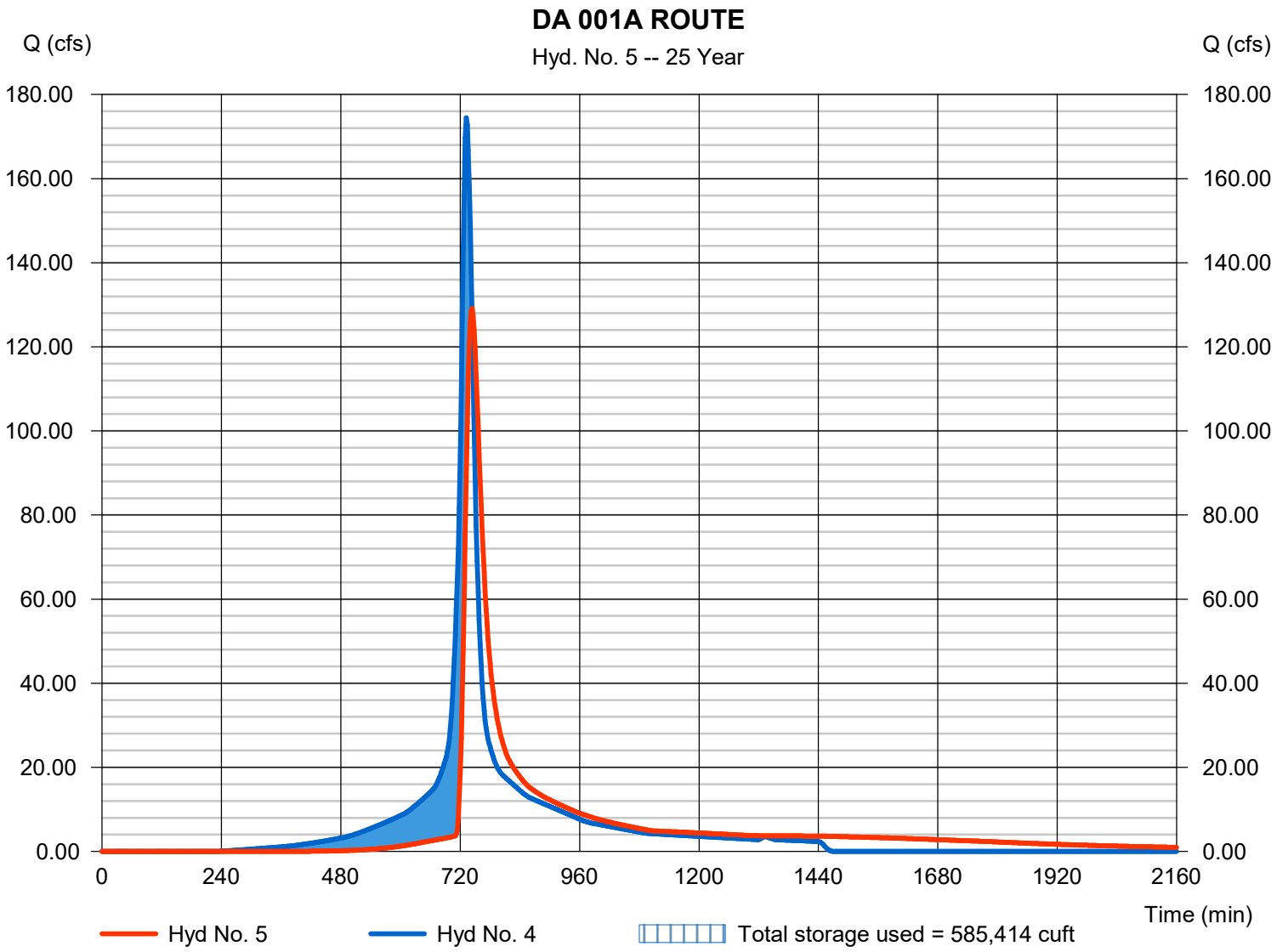
Hydrograph Report

Hyd. No. 5

DA 001A ROUTE

Hydrograph type	= Reservoir	Peak discharge	= 129.12 cfs
Storm frequency	= 25 yrs	Time to peak	= 744 min
Time interval	= 2 min	Hyd. volume	= 793,139 cuft
Inflow hyd. No.	= 4 - DA 001A POST	Max. Elevation	= 418.48 ft
Reservoir name	= POND 001	Max. Storage	= 585,414 cuft

Storage Indication method used. Wet pond routing start elevation = 415.60 ft.



Pond Report

Pond No. 1 - POND 001

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 412.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	412.00	80,138	0	0
1.00	413.00	83,166	81,639	81,639
2.00	414.00	86,242	84,691	166,330
3.00	415.00	89,369	87,792	254,122
4.00	416.00	92,544	90,943	345,065
5.00	417.00	95,769	94,142	439,207
6.00	418.00	99,044	97,392	536,600
8.00	420.00	105,741	204,728	741,328

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	0.00	0.00	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 415.60	0.00	0.00	0.00
Length (ft)	= 80.00	0.00	0.00	0.00
Slope (%)	= 1.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 35.00	0.00	0.00	0.00
Crest El. (ft)	= 417.25	0.00	0.00	0.00
Weir Coeff.	= 2.60	3.33	3.33	3.33
Weir Type	= Broad	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	412.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
1.00	81,639	413.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
2.00	166,330	414.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
3.00	254,122	415.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
4.00	345,065	416.00	0.63 ic	---	---	---	0.00	---	---	---	---	---	0.632
5.00	439,207	417.00	3.46 oc	---	---	---	0.00	---	---	---	---	---	3.461
6.00	536,600	418.00	4.69 oc	---	---	---	59.11	---	---	---	---	---	63.79
8.00	741,328	420.00	6.48 oc	---	---	---	414.99	---	---	---	---	---	421.47

Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	24.5788	5.4000	0.6754	--------
2	28.0549	5.4000	0.6734	--------
3	0.0000	0.0000	0.0000	--------
5	34.9857	5.6000	0.6793	--------
10	39.2927	5.5000	0.6735	--------
25	42.0368	4.8000	0.6503	--------
50	43.1099	4.2000	0.6286	--------
100	45.0613	3.9000	0.6140	--------

File name: Vincent.ShelbyCo.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	5.05	3.88	3.21	2.77	2.45	2.21	2.02	1.87	1.74	1.63	1.54	1.46
2	5.80	4.45	3.68	3.18	2.81	2.54	2.32	2.15	2.00	1.88	1.77	1.68
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	7.04	5.41	4.48	3.87	3.42	3.09	2.83	2.61	2.43	2.28	2.15	2.04
10	8.06	6.20	5.14	4.44	3.93	3.55	3.25	3.00	2.80	2.63	2.48	2.35
25	9.53	7.29	6.03	5.21	4.62	4.18	3.83	3.55	3.31	3.11	2.94	2.79
50	10.68	8.13	6.73	5.82	5.17	4.68	4.30	3.98	3.72	3.50	3.31	3.15
100	11.77	8.95	7.42	6.42	5.71	5.18	4.76	4.42	4.14	3.90	3.69	3.51

Tc = time in minutes. Values may exceed 60.

Precip. file name: C:\Users\Jeff WORK\Documents\WORK\1. Jobs\2025\Wiser Land Dev\Vincent\Vincent.ShelbyCo.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	3.57	4.08	0.00	5.00	5.82	7.08	0.00	9.25
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hydraflow Table of Contents

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Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2024

Friday, 09 / 12 / 2025

25 - Year

Eastern Quarry, Vincent, AL
Wiser Land Development LLC

Exhibit F: BMP References

Permanent Seeding (PS)

Practice Description

Permanent seeding is the establishment of perennial vegetation from seed. This practice is used when vegetation is desired and appropriate to permanently stabilize the soil.

Planning Considerations

The advantages of seeding over other means of establishing plants include the smaller initial cost, lower labor input, and greater flexibility of method.

Disadvantages of seeding include potential for erosion during the establishment stage, seasonal limitations on suitable seeding dates, and weather-related problems such as droughts.

The probability of successful plant establishment can be maximized through good planning. The selection of plants for permanent vegetation should be site specific and based on plant characteristics, wear and mowing tolerance, soil conditions, time of year of planting, method of planting, the intended use, and management requirement of the vegetated area. Climate factors can vary widely in Alabama. Important plant attributes are discussed in Vegetation Establishment for Erosion and Sediment Control in Chapter 2. Other factors that may be important are wear, mowing tolerance, and salt tolerance of vegetation.

Plant selection may include companion plants to provide quick cover on difficult sites, late seedings, or where the desired permanent cover may be slow to

establish. Annuals are usually used for companion plants and should be selected carefully to prevent using a species that provide so much competition that it prevents the establishment of the desired species.

Seeding properly carried out within the optimum planting dates has a higher probability of success. It is also possible to have satisfactory establishment when seeding outside these dates. However, as plantings are deviated from the optimum dates, the probability of failure increases rapidly. Seeding dates should be taken into account in scheduling land-disturbing activities.

Site quality impacts both short-term and long-term plant success. Sites that have compacted soils, soils that are shallow to rock or have textures that are too clayey or too sandy should be modified whenever practical to improve the potential for plant growth and long-term cover success.

The operation of equipment is restricted on slopes steeper than 3:1, severely limiting the quality of the seedbed that can be prepared. Provisions for establishment of vegetation on steep slopes can be made during final grading. In construction of fill slopes, for example, the last 4-6” might not be compacted. A loose, rough seedbed with irregularities that hold seeds and lime and fertilizer is essential for hydroseeding. Cut slopes should be roughened (see Land Grading practice).

Appropriate mulching is critical to protect against erosion on steep slopes. When using straw, anchor with netting or asphalt. On slopes steeper than 3:1, rolled erosion control products or hydraulic erosion control products are usually needed.

The use of irrigation (temporary or permanent) will greatly improve the success of vegetation establishment.

Design Criteria

Plant Selection

Select plants that can be expected to meet planting objectives. To simplify plant selection, use Figure PS-1 Geographical Areas for Species Adaptation and Seeding Dates and Table PS-1, Commonly Used Plants for Permanent Cover. Mixtures commonly specified by the Alabama Department of Transportation are an appropriate alternative for plantings on rights-of-ways. Additional information related to plants commonly used in Alabama is found in Chapter 2 under the section Vegetation for Erosion and Sediment Control.

The plants used for temporary vegetation may be used for companion plants provided the seeding rate of the annual species is reduced by one half. See the Temporary Seeding practice for additional information on establishing temporary vegetation. **Ryegrass or other highly competitive plants should not be used as a companion plant with a permanent seeding**.

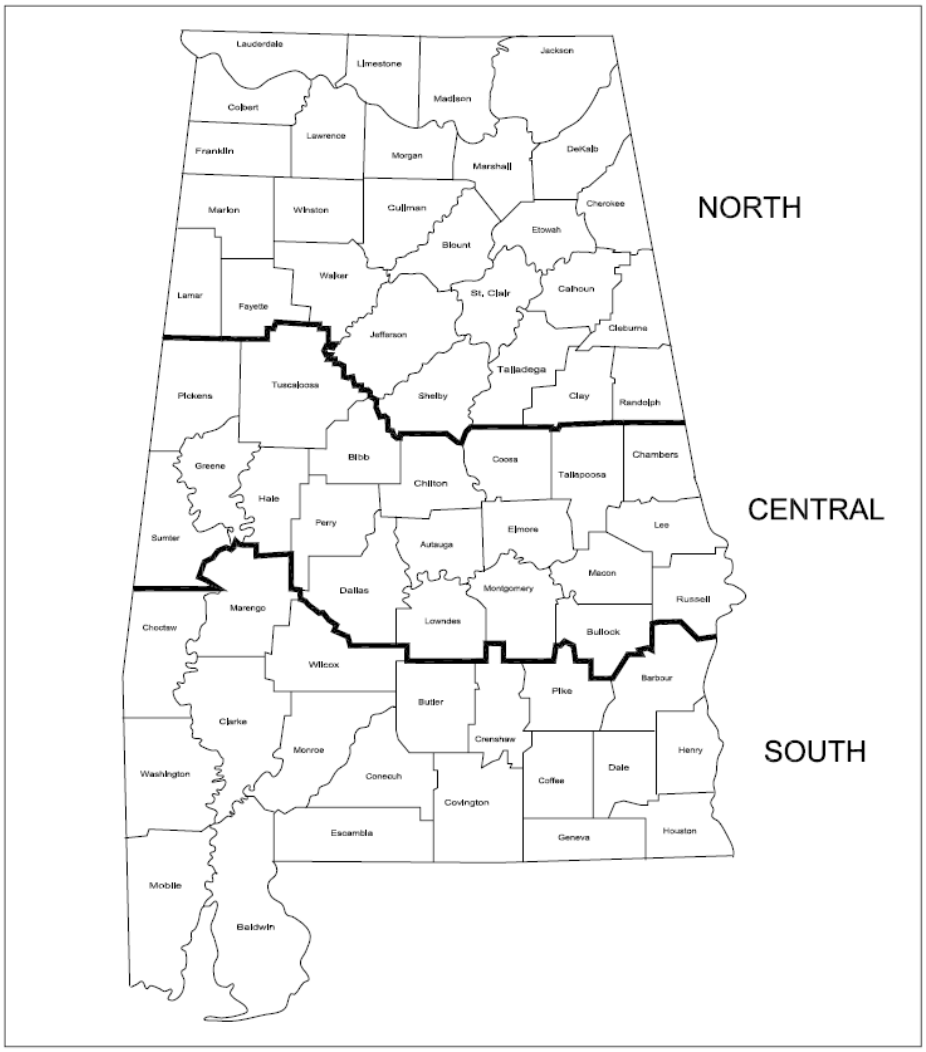

Figure PS-1 Geographical Areas for Species Adaptation and Seeding Dates

Note: Site conditions related to soils and aspect in counties adjacent to or close to county boundaries may justify adjustments in planting dates by qualified design professionals.

Table PS-1 Commonly Used Plants for Permanent Cover with Seeding Rates and Dates[1]

Species	Seeding Rates/Ac PLS[2]	North	Central	South
		Seeding Dates		
Bahiagrass, Pensacola	40 lbs	--	Mar 1-July 1	Feb 1-Nov 1
Bermudagrass, Common	10 lbs	Apr 1-July 1	Mar 15-July 15	Mar 1-July 15
Bahiagrass, Pensacola Bermudagrass, Common	30 lbs 5 lbs	--	Mar 1-July 1	Mar 1-July 15
Bermudagrass, Hybrid (Lawn Types)	Solid Sod	Anytime	Anytime	Anytime
Bermudagrass, Hybrid (Lawn Types)	Sprigs 1/sq ft	Mar 1-Aug 1	Mar 1-Aug 1	Feb 15-Sep 1
Fescue, Tall	40-50 lbs	Sep 1-Nov 1	Sep 1-Nov 1	--
Sericea	40-60 lbs	Mar 15-July 15	Mar 1-July 15	Feb 15-July 15
Sericea & Common Bermudagrass	40lbs 10 lbs	Mar 15-July 15	Mar 1-July 15	Feb 15-July 15
Switchgrass, Alamo	4 lbs	Apr 1-Jun 15	Mar 15-Jun 15	Mar 15-Jun15

1 DO NOT USE Seeding Rates as part of a mixture unless shown as a mixture in this table.
2 PLS means Pure Live Seed and is used to adjust seeding rates. For example, to plant 10 lbs PLS of a species with germination of 80% and purity of 90%, PLS= 0.8 X 0.9 = 72%. 10lbs PLS = 10/0.72 = 13.9 lbs of the species to be planted.

Seedbed Requirements

Establishment of vegetation should not be attempted on sites that are unsuitable due to compaction or inappropriate soil texture, poor drainage, concentrated overland flow, or steepness of slope until measures have been completed to correct these problems. To maintain a good stand of vegetation, the soil must meet certain minimum requirements as a growth medium. A good growth medium should have these attributes:

- Sufficient pore space to permit root penetration.
- Enough fine-grained soil material (silt and clay) to maintain adequate moisture and nutrient supply.
- Sufficient depth of soil to provide an adequate root zone. The depth to rock or impermeable layers such as hardpans should be 12” or more, except on slopes steeper than 2:1 where topsoiling is not feasible.
- A favorable pH range for plant growth, usually 6.0-6.5.

- Sufficient nutrients (nitrogen, phosphorus, and potassium) for initial plant establishment.

- Freedom from large roots, branches, stones, or large clods. Clods and stones may be left on slopes steeper than 3:1 if they are to be hydroseeded.

If any of the above attributes are not met i.e., if the existing soil is too dense, coarse, shallow or acidic to foster vegetation – chiseling, topsoil, or special amendments should be used to improve soil conditions. The soil conditioners described below may be beneficial or topsoil may be applied (for guidance on topsoiling see Topsoiling practice). These amendments should only be necessary where soils have limitations that make them poor for plant growth or for turf establishment.

- Peat-appropriate types are sphagnum moss peat, reed-sedge peat, or peat humus, all from fresh-water sources. Peat should be shredded and conditioned in storage piles for at least 6 months after excavation.

- Sand-should be clean and free of toxic materials.

- Vermiculite-use horticultural grade.

- Rotted manure-use stable or cattle manure not containing undue amounts of straw or other bedding materials.

- Thoroughly rotted sawdust-should be free of stones and debris. Add 6 lbs of nitrogen to each cubic yard.

- Manufactured products that improve stand establishment and performance of the turf.

Soil Amendments

Liming Materials

Lime (Agricultural limestone) should have a neutralizing value of not less than 90 percent calcium carbonate equivalent and 90 percent will pass through a 10-mesh sieve and 50 percent will pass through a 60-mesh sieve.

Selma chalk should have a neutralizing value of not less than 80 percent calcium carbonate equivalent and 90 percent will pass through a 10-mesh sieve.

Other liming materials that may be selected should be provided in amounts that provide equal value to the criteria listed for agricultural lime or be used in combination with agricultural limestone or Selma chalk to provide equivalent values to agricultural limestone.

Plant Nutrients

Commercial grade fertilizers that comply with current Alabama Fertilizer Laws should be used to supply nutrients required to establish vegetation.

Lime and fertilizer needs should be determined by soil tests. Soil testing is performed by the Auburn University Soil Testing Laboratory and provides recommendations based on field tests on Alabama soils. The local county Cooperative Extension Service can provide information on obtaining soil tests. Commercial laboratories that make recommendations based on soil analysis may be used.

When soil tests are not available, use the following rates for application of soil amendments:

Lime Rates
Sandy soils: Use 1 ton/acre (exception on sandy soils – if the cover will be tall fescue and clover) use 2 tons/acre.

Clayey soils: 2 tons/acre.
(Do not apply lime to alkaline soils).

Fertilizer Rates
Grasses alone: Use 400 lbs/acre of 8-24-24 or the equivalent. Apply 30 lbs of additional nitrogen when grass has emerged and begun growth (approximately 0.8lbs/1000 ft^2).

Grass-legume mixtures: Use 800 to 1200 lbs/acre of 5-10-10 or the equivalent.
Legumes Alone: Use 400 to 600 lbs/acre of 0-20-20 or the equivalent.

Note: Fertilizer can be blended to meet exact fertilizer recommendations. Take soil test recommendations to local fertilizer dealer for bulk fertilizer blends. This may be more economical than bagged fertilizer.

Application of Soil Amendments

Apply lime and fertilizer evenly and incorporate into the top 6” of soil by disking, chiseling, or other suitable means during seedbed preparation. Operate machinery on the contour. On sites too steep for seedbed preparation, fertilizer and lime can be applied with a hydroseeder.

Seedbed Preparation

If needed, grade and shape to provide a surface on which equipment can safely and efficiently be used for seedbed preparation and seeding.

Install necessary sediment control practices before seedbed preparation and complete grading according to the approved plan.

Prepare a friable seedbed with tillage to a depth of at least 6". Break up large clods, alleviate compaction, and smooth and firm the soil into a uniform surface. Fill in or level depressions that can collect water.

Planting Methods

Seeding

Use certified seed for permanent seeding whenever possible. Certified seed is inspected by the Alabama Crop Improvement Association to meet high quality standards and will be tagged with a "Certified Seed" tag. (Note: all seed sold in Alabama is required by law to be tagged to identify seed purity, germination, and presence of weed seeds. Seed must meet state standards for content of noxious weeds.)

Seeding dates are determined using Figure PS-1 and Table PS-1.

Inoculate legume seed with the Rhizobium bacteria appropriate to the species of legume if seed are not coated with the appropriate inoculant. Details of legume inoculation are located in Chapter 2 in the part on Vegetation for Erosion and Sediment Control under Inoculation of Legumes.

Plant seed uniformly with a cyclone seeder, a drill seeder, a cultipacker seeder, or by hand on a fresh, firm, friable seedbed. If the seedbed has been sealed by rainfall, it should be disked so the seed will be sown into a freshly prepared seedbed.

When using broadcast-seeding methods, subdivide the area into workable sections and determine the amount of seed needed for each section. Apply one-half the seed while moving back and forth across the area, making a uniform pattern; then apply the second half in the same way, but moving at right angles to the first pass.

Cover broadcast seed by raking or chain dragging; then firm the surface with a roller or cultipacker to provide good seed contact. Small grains should be planted no more than 1" deep and grasses and legume seed no more than ½" deep.

Hydroseeding

Surface roughening is particularly important when hydroseeding, as a roughened slope will provide some natural coverage for lime, fertilizer, and seed. The surface should not be compacted or smooth. Fine seedbed preparation is not necessary for hydroseeding operations; large clods, stones, and irregularities provide cavities in which seeds can lodge.

Mix seed, inoculant if required, and a seed carrier with water and apply as a slurry uniformly over the area to be treated. The seed carrier should be a cellulose fiber, natural wood fiber or other approved fiber mulch material which is dyed an appropriate color to facilitate uniform application of seed. Use the correct legume inoculant at 4 times the recommended rate when adding inoculant to a hydroseeder slurry. The mixture should be applied within one hour after mixing to reduce damage to seed.

Fertilizer should not be mixed with the seed-inoculant mixture because fertilizer salts may damage seed and reduce germination and seedling vigor.

Fertilizer may be applied with a hydroseeder as a separate operation after seedlings are established.

Lime is not normally applied with a hydraulic seeder because it is abrasive but if necessary it can be added to the seed slurry and applied at seeding or it may be applied with the fertilizer mixture. Also, lime can be blown onto steeper slopes in dry form.

Sprigging

Hybrid bermudagrass cannot be grown from seed and must be planted vegetatively. Vegetative methods of establishing common and hybrid bermudagrass, centipede grass and zoysia include sodding, plugging, and sprigging (see Sodding practice).

When sprigs are planted with a sprigging machine, furrows should be 4-6” deep and 2 feet apart. Place sprigs no farther than 2 feet apart in the row and so that at least one rooting node is in the furrow.

When broadcasting is used for sprig planting, broadcast sprigs at the specified rate (Table PS-1). Press into the top ½” to 2” of soil with a cultipacker or with a disk set nearly straight so that the sprigs are not brought back to the surface. A mulch tacking machine may be used to press sprigs into the soil.

Mulching

The use of mulch provides instant cover and helps ensure establishment of vegetation under normal conditions and is essential to seeding success under harsh site conditions (see Mulching practice). Harsh site conditions include: slopes steeper than 3:1 and adverse soils (shallow, rocky, or high in clay or sand). Areas with concentrated flow should be treated differently and require sod, a hydromulch formulated for channels or an appropriate erosion control blanket.

Irrigation

Moisture is essential for seed germination and vegetation establishment. Supplemental irrigation can be very helpful in assuring adequate stands in dry seasons or to speed development of full cover. It is a requirement for establishment of vegetation from sod and sprigs and should be used elsewhere when feasible. However, irrigation is rarely critical for low-maintenance vegetation planted at the appropriate time of the year.

Water application rates must be carefully controlled to prevent runoff. Inadequate or excessive amounts of water can be more harmful than no supplemental water.

Maintenance

Generally, a stand of vegetation cannot be determined to be fully established until soil cover has been maintained for 1 full year from planting. Inspect vegetated areas for failure and make necessary repairs and vegetate as soon as possible.

If a stand has inadequate cover, reevaluate choice of plant materials and quantities of lime and fertilizer. Re-establish the stand after seedbed preparation or over-seed the stand. Consider a temporary seeding if the time of year is not appropriate for establishment of permanent vegetation (see Temporary Seeding practice).

If vegetation fails to grow, a soil test should be made to determine if soil acidity or nutrient imbalance is responsible.

To attain complete establishment, fertilization is usually required in the second growing season. Turf grasses require annual maintenance fertilization. Use soil tests if possible or follow the guidelines given for the specific seeding mixtures.

Protect vegetation during its establishing period from traffic that will be harmful. If appropriate, use either temporary fences or barriers to protect areas that may be damaged by excessive traffic.

Temporary Seeding (TS)

Practice Description

Temporary seeding is the establishment of fast-growing annual vegetation from seed. Temporary vegetation provides economical erosion control for up to a year and reduces the amount of sediment moving off the site.

This practice applies where short-lived vegetation can be established before final grading or in a season not suitable for planting the desired permanent species. It helps prevent costly maintenance operations on other practices such as sediment basins and sediment barriers. In addition, it reduces problems of mud and dust production from bare soil surfaces during construction. Temporary or permanent seeding is necessary to protect earthen structures such as dikes, diversions, grass-lined channels and the banks and dams of sediment basins.

Planning Considerations

Temporary vegetative cover can provide significant short-term erosion and sediment reduction before establishing perennial vegetation.

Temporary vegetation will reduce the amount of maintenance associated with sediment basins.

Temporary vegetation is used to provide cover for no more than 1 year. Permanent vegetation should be established at the proper planting time for permanent vegetative cover.

Certain plants species used for temporary vegetation will produce large quantities of residue which can provide mulch for establishment of the permanent vegetation.

Proper seedbed preparation and selection of appropriate species are important with this practice. Failure to follow establishment guidelines and recommendations carefully may result in an inadequate or short-lived stand of vegetation that will not control erosion.

The selection of plants for temporary vegetation must be site specific. Factors that should be considered are type of soils, climate, establishment rate, and management requirements of the vegetation. Other factors that may be important are wear, mowing tolerance, and salt tolerance of vegetation.

Seeding properly carried out within the optimum dates has a higher probability of success. It is also possible to have satisfactory establishment when seeding outside these dates. However, as plantings are deviated from the optimum dates, the probability of failure increases rapidly. Seeding dates should be taken into account in scheduling land-disturbing activities.

Site quality impacts both short-term and long-term plant success. Sites that have compacted soils should be modified whenever practical to improve the potential for plant growth.

The operation of equipment is restricted on slopes steeper than 3:1, severely limiting the quality of the seedbed that can be prepared. Provisions for establishment of vegetation on steep slopes can be made during final grading. In construction of fill slopes, for example, the last 4-6” might not be compacted. A loose, rough seedbed with irregularities that hold seeds and fertilizer is essential for hydroseeding. Cut slopes should be roughened (see practice Land Grading).

Appropriate mulching practices are critical to protect against erosion on steep slopes. When using straw, anchor with netting or asphalt. On slopes steeper than 2:1, either hydraulic mulch or erosion control blanket is more appropriate than straw to protect the slope.

The use of irrigation (temporary or permanent) will greatly improve the success of vegetation establishment.

Design Criteria

Plant Selection

Select plants that can be expected to meet planting objectives. To simplify plant selection, use Table TS-1, Commonly Used Plants for Temporary Cover and Figure TS-1, Geographical Areas for Species Adaptation and Seeding Dates. Seeding mixtures commonly specified by the Alabama Department of Transportation are an appropriate alternative for plantings on rights-of-ways. Additional information related to plantings in Alabama is found in Chapter 2 in the sections on Non-Woody Vegetation.

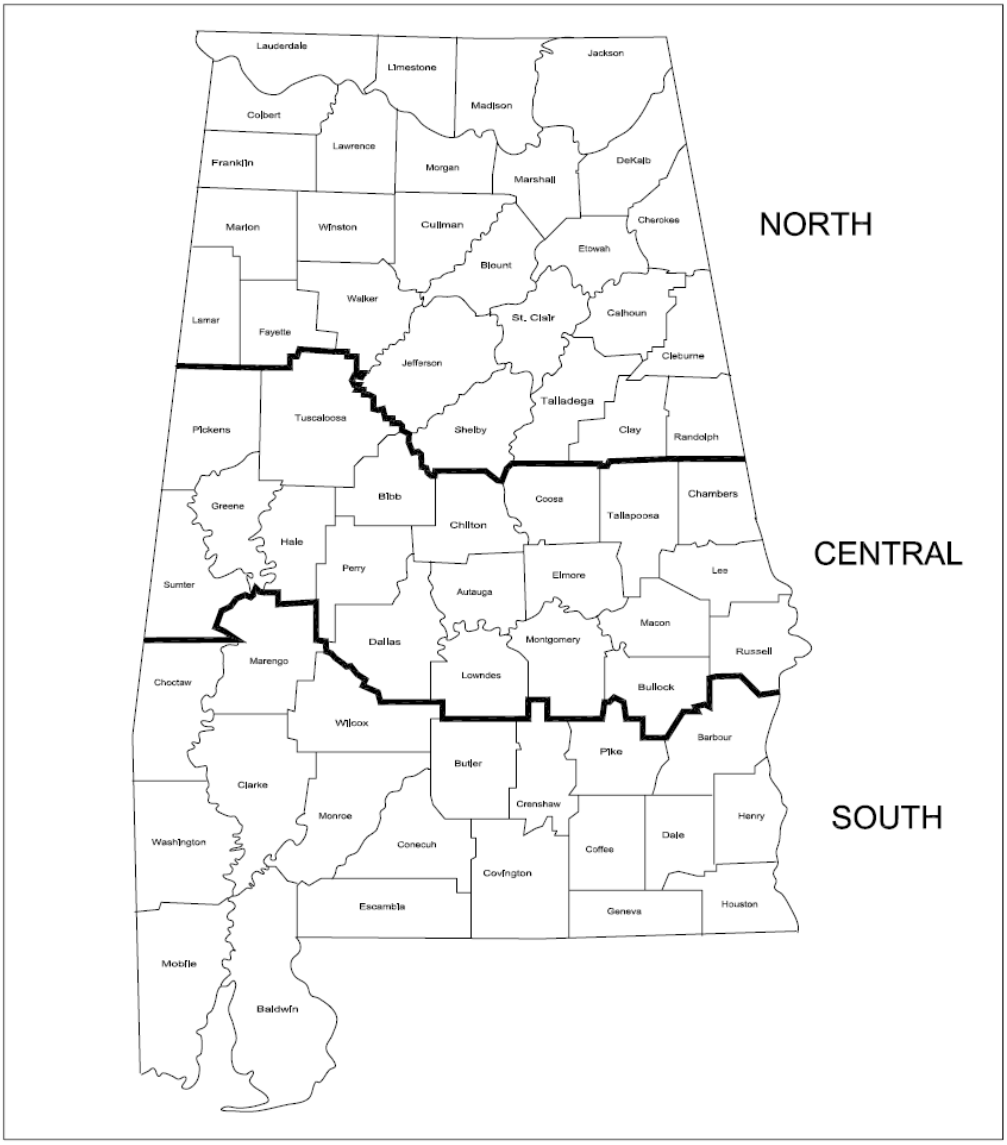

Figure TS-1 Geographical Areas for Species Adaptation and Seeding Dates

Note: Site conditions related to soils and aspect in counties adjacent to or close to county boundaries may justify adjustments in planting dates by qualified design professionals.

Table TS-1 Commonly Used Plants for Temporary Cover[1]

Species	Seeding Rate/AC PLS[2]	North	Central	South
		Seeding Dates		
Millet, Browntop or German	40 lbs	Apr1-Aug 1	Apr1- Aug 15	Apr 1-Aug 15
Rye	3 bu	Sep I-Nov 15	Sep 15-Nov 15	Sep 15-Nov 15
Ryegrass	30 lbs	Aug I-Sep 15	Sep I-Oct 15	Sep 1-Oct 15
Sorghum-Sudan Hybrids	40 lbs	May I-Aug 1	Apr 15-Aug 1	Apr I-Aug 15
Sudangrass	40 lbs	May I-Aug I	Apr 15-Aug	Apr I-Aug 15
Wheat	3 bu	Sep I-Nov 1	Sep 15-Nov 15	Sep 15-Nov 15
Common Bermudagrass	10 lbs	Apr 1-July 1	Mar 15-July 15	Mar 1-July 15
Crimson Clover	10 lbs	Sept 1-Nov 1	Sept 1-Nov 1	Sept 1-Nov 1

1 DO NOT USE Seeding Rates as part of a mixture.
2 PLS means Pure Live Seed and is used to adjust seeding rates. For example, to plant 10 lbs PLS of a species with germination of 80% and purity of 90%, PLS= 0.8 X 0.9 = 72%. 10lbs PLS = 10/0.72 = 13.9 lbs of the species to be planted.

Site Preparation and Soil Amendments

Complete grading and shaping before applying soil amendments if needed to provide a surface on which equipment can safely and efficiently be used to apply soil amendments and accomplish seedbed preparation and seeding.

Lime

Apply lime according to soil test recommendations. If a soil test is not available, use 1 ton of agricultural limestone or equivalent per acre on coarse textured soils and 2 tons per acre on fine textured soils. Do not apply lime to alkaline soils or to areas which have been limed during the preceding 2 years. Other liming materials that may be selected should be provided in amounts that provide equal value to the criteria listed for agricultural lime or be used in combination with agricultural limestone or Selma chalk to provide equivalent values to agricultural limestone.

Fertilizer

Apply fertilizer according to soil test results. If a soil test is not available, apply 8-24-24 fertilizer at a rate of 400 lbs/acre (approximately 9 lbs/1000 ft^2).

When vegetation has emerged to a stand and is growing, 30 to 40 lbs/acre (approximately 0.8 lbs/1000 ft^2) of additional nitrogen fertilizer should be applied.

Note: Fertilizer can be blended to meet exact fertilizer recommendations. Take soil test recommendations to local fertilizer dealer for bulk fertilizer blends. This may be more economical than bagged fertilizer.

Application of Soil Amendments

Incorporate lime and fertilizer into the top 6” of soil during seedbed preparation.

Seedbed Preparation

Good seedbed preparation is essential to successful plant establishment. A good seedbed is well pulverized, loose, and smooth. If soils become compacted during grading, loosen them to a depth of 6” to 8” using a ripper or chisel plow.

If rainfall has caused the surface to become sealed or crusted, loosen it just prior to seeding by disking, raking, harrowing, or other suitable methods. When hydroseeding methods are used, the surface should be left with a more irregular surface of clods.

Planting Methods

Seeding

Evenly apply seed using a cyclone seeder (broadcast), drill seeder, cultipacker seeder, or hydroseeder. Broadcast seeding and hydroseeding are appropriate for steep slopes where equipment cannot operate safely. Small grains should be planted no more than 1” deep, and grasses and legumes no more than ½” deep. Seed that are broadcast must be covered by raking or chain dragging, and then lightly firmed with a roller or cultipacker.

Hydroseeding

Surface roughening is particularly important when hydroseeding, as a roughened slope will provide some natural coverage for lime, fertilizer, and seed. The surface should not be compacted or smooth. Fine seedbed preparation is not necessary for hydroseeding operations; large clods, stones, and irregularities provide cavities in which seeds can lodge.

Mix seed, inoculant if required, and a seed carrier with water and apply as slurry uniformly over the area to be treated. The seed carrier should be a cellulose fiber, natural wood fiber or other approved fiber mulch material which is dyed an appropriate color to facilitate uniform application of seed. Use the correct legume inoculant at 4 times the recommended rate when adding inoculant to hydroseeder slurry. The mixture should be applied within one hour after mixing to reduce damage to seed.

Fertilizer should not be mixed with the seed-inoculant mixture because fertilizer salts may damage seed and reduce germination and seedling vigor. Fertilizer may be applied with a hydroseeder as a separate operation after seedlings are established.

Mulching

The use of appropriate mulch provides instant cover and helps ensure establishment of vegetative cover under normal conditions and is essential to seeding success under harsh site conditions (see the Mulching practice for guidance). Harsh site conditions include the following: slopes steeper than 3:1 and adverse soils (soils that are shallow to rock, rocky, or high in clay or sand). Areas with concentrated flow should be treated differently and require a practice appropriate for channel flow. (Refer to Chapter 5 Runoff Conveyance for guidance).

Diversion (DV)

Practice Description

A diversion is a watercourse constructed on a designed grade, across a slope, and consisting of an excavated channel, a compacted ridge, or a combination of both.

This practice applies to sites where stormwater runoff can be redirected to permanently protect structures or areas downslope from erosion, sediment, and excessive wetness or localized flooding. Diversions may be used to temporarily divert stormwater runoff to protect disturbed areas and slopes or to retain sediment on-site during construction.

Planning Considerations

Diversions are designed to intercept and carry excess water to a stable outlet.

Diversions can be useful tools for managing surface water flows and preventing soil erosion. On moderately sloping areas, they may be placed at intervals to trap and divert sheet flow before it has a chance to concentrate and cause rill and gully erosion.

Most diversions are constructed by excavating a channel and using the excavated material to construct a ridge on the downslope side of the channel. Right-of-way diversions and temporary diversions are sometimes constructed by making a ridge, often called a berm, from fill material.

Perimeter protection is sometimes used to describe both permanent and temporary diversions used at either the upslope or downslope side of a construction area.

Right-of-way diversions, sometimes referred to as water bars, are used to shorten the flow length on a sloping right-of-way and reduce the erosion potential of the stormwater runoff.

Diversions may be placed at the top of cut or fill slopes to keep runoff from upgradient drainage areas off the slope. The following picture illustrates the placement of a diversion near the top of the slope. Diversions are sometimes built at the base of steeper slopes to protect flatter developed areas which cannot withstand runoff water from outside areas. Also, they can be used to protect structures, parking lots, adjacent properties, and other special areas from flooding.

Figure DV-1 Diversion near the top of a slope

Diversions are preferable to other types of man-made stormwater conveyance systems because they more closely simulate natural flow patterns and characteristics. Flow velocities are generally kept to a minimum. When properly coordinated into the landscape design of a site, diversions can he visually pleasing as well as functional.

As with any earthen structure, it is very important to establish adequate vegetation as soon as possible after installation. It is usually important to stabilize the drainage area above the diversion so that sediment will not enter and accumulate in the diversion channel.

Design Criteria

Location

Diversion location should be determined by considering outlet conditions, topography, land use, soil type, length of slope, seepage (where seepage is a problem) and the development layout. Outlets must be stable after the diversion empties stormwater flow into it; therefore, care should be exercised in selecting the location of the diversion and its outlet.

Slope (Grade)

The bed slope of the diversion should be selected to meet velocity, capacity, and lining requirements for the site. Variable grades may be needed to obtain more uniform cross-sections and improve alignment. During the design process, the slope may need to be modified to meet stability and capacity requirements.

Capacity

The diversion channel must have a minimum capacity to carry the runoff expected from a storm frequency meeting the requirements of Table DV-l with a freeboard of at least 0.3 foot (Figure DV-2).

The storm frequency should be used to determine the required channel capacity, Q (peak rate of runoff). The peak rate of runoff should be determined using the Natural Resources Conservation Service runoff curve number (RCN) method or other equivalent methods.

Table DV-1 Design Frequency

Diversion Type	Typical Area of Protection	24-Hour Design Storm Frequency
Temporary	Construction Areas	2-year
	Building Sites	5-year
Permanent	Agricultural Land	10-year
	Mined Reclamation Area	10-year
	Recreation Areas	10-year
	Isolated Buildings	25-year
	Urban areas, Residential, School, Industrial Areas, etc.	50-year

Diversions designed to protect homes, schools, industrial buildings, roads, parking lots, and comparable high-risk areas, and those designed to function in connection with other structures, should have sufficient capacity to carry peak runoff expected from a storm frequency consistent with the hazard involved.

Velocities

Diversions should be planned and designed for the conditions of the construction site. If the diversion is grass or earth-lined, the acceptable velocity to be expected will be determined by the allowable soil effective stress and the properties of the vegetation.

Cross-Section Shape

The land slope where the diversion is to be constructed must be taken into consideration when choosing a channel cross-section. On steeper terrain, narrow and deep channels may be required to reduce earth-moving quantities. However, if the diversion is to be vegetated or unlined, there may be a limit to how steep and deep it can be and still meet allowable effective stress criteria for stability. Broad, shallow channels usually are more applicable on gentler terrain. The diversion channel may be parabolic, trapezoidal, or V-shaped as shown in Figure DV-2.

Ridge Design

The supporting ridge cross section should meet the configuration and requirements of Figure DV-2.

The side slopes should be no steeper than 2:1. Side slopes should be flatter, 5:1 to 10:1, when the diversion is to be permanent with mowing and other maintenance activities performed on or around it.

The width of the ridge at the design water elevation should be a minimum of 4 feet.

The minimum freeboard should be 0.3 foot.

The design should include a 10% settlement factor.

Soils Investigation

The soil textures encountered along the diversion are needed to determine the allowable soil effective stress for stability assessment of bare soil and vegetated channels.

Outlet

Diversions should have adequate outlets which will convey concentrated runoff without erosion. Acceptable outlets include practices such as Grassed Swale, Lined Swale, Drop Structure, Riprap-Lined Swale, Sediment Basin, and Stormwater Detention Basins.

Stabilization

Unless otherwise stabilized, the ridge and channel should be seeded within 13 days of installation in accordance with the applicable seeding practice, Permanent Seeding or Temporary Seeding.

Disturbed areas draining into the diversion should be seeded and mulched prior to or at the time the diversion is constructed in accordance with the Permanent Seeding or Temporary Seeding (whichever is applicable) practices.

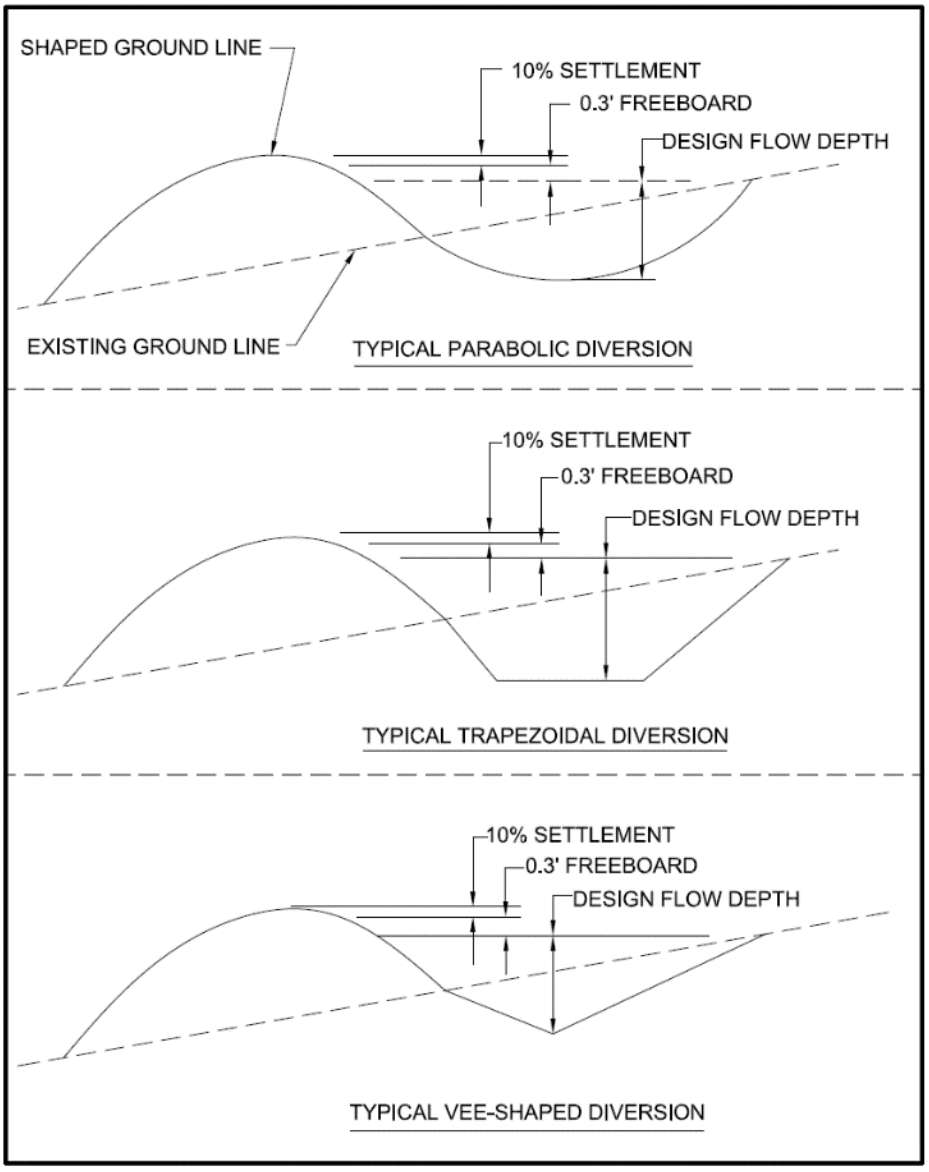

Figure DV-2 Typical Diversions Detail

Diversion Design

Steps in Designing a Diversion

1. Plan the location and type of diversion that minimizes negative impacts.
2. Select design points along the diversion where grades change or drainage areas and type of lining change significantly.
3. Determine the watershed area for the points in step 2 and for the outlet.
4. Find the peak runoff produced by the design storm at each design point identified in step 2.
5. Determine the slope of each reach of the diversion.
6. For the type of diversion to be constructed, select the appropriate channel cross section and the type of channel lining to be used, for example, bare soil, vegetation, rigid lining, or some combination.
7. Design the channel cross section for adequate capacity, typically based on the densest vegetation expected.
8. Check the design for stability by computing effective stress based on the sparsest vegetation expected. Repeating stability design computations may be necessary to complete the design if the stability check shows an inadequate design.
9. Add appurtenant structures, such as reinforced centers, as needed to allow for prolonged flows.

References and Tools for Diversion Design

General design guidance can be found in the USDA-NRCS Part 650, Engineering Field Handbook, Chapter 9, Diversion.

https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=46275.wba

Design tables can be found in the appendix of USDA-NRCS Part 650, Engineering Field Handbook, Chapter 7, Grassed Waterways.

https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=46771.wba

Software for the design of a diversion can be found in the USDA-NRCS Engineering Field Tools (EFT). This can be downloaded at:

https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/ndcsmc/?cid=stelprdb1042198

Outlet Protection (OP)

Practice Description

Outlet Protection is an erosion control practice designed to prevent erosion at the outlet of a channel or conduit by reducing the velocity of flow and dissipating the energy. This practice applies wherever high velocity discharge must be released on erodible material.

Planning Considerations

Outlet protection measures usually consist of a riprap-lined apron, a reinforced concrete flume with concrete baffles, a reinforced concrete box with chambers or baffles and possibly pre-manufactured products.

The outlets of pipes and structurally lined channels are points of critical erosion potential. Stormwater which is transported through man-made conveyance systems at design capacity generally reaches a velocity which exceeds the ability of the receiving channel or area to resist erosion. To prevent scour at stormwater outlets, a flow transition structure is required which will absorb the initial impact of the flow and reduce the flow velocity to a level which will not erode the receiving channel or area of discharge.

The most commonly used structure for outlet protection is an erosion resistant lined apron. These aprons are generally lined with loose rock riprap, grouted riprap, or concrete. They are constructed at zero grade for a distance which is related to the outlet flow rate and the tailwater level. Criteria for designing these structures are contained in this practice. Several outlet conditions are shown in Figure OP-1. Example design problems for outlet protection are found at the end of this practice.

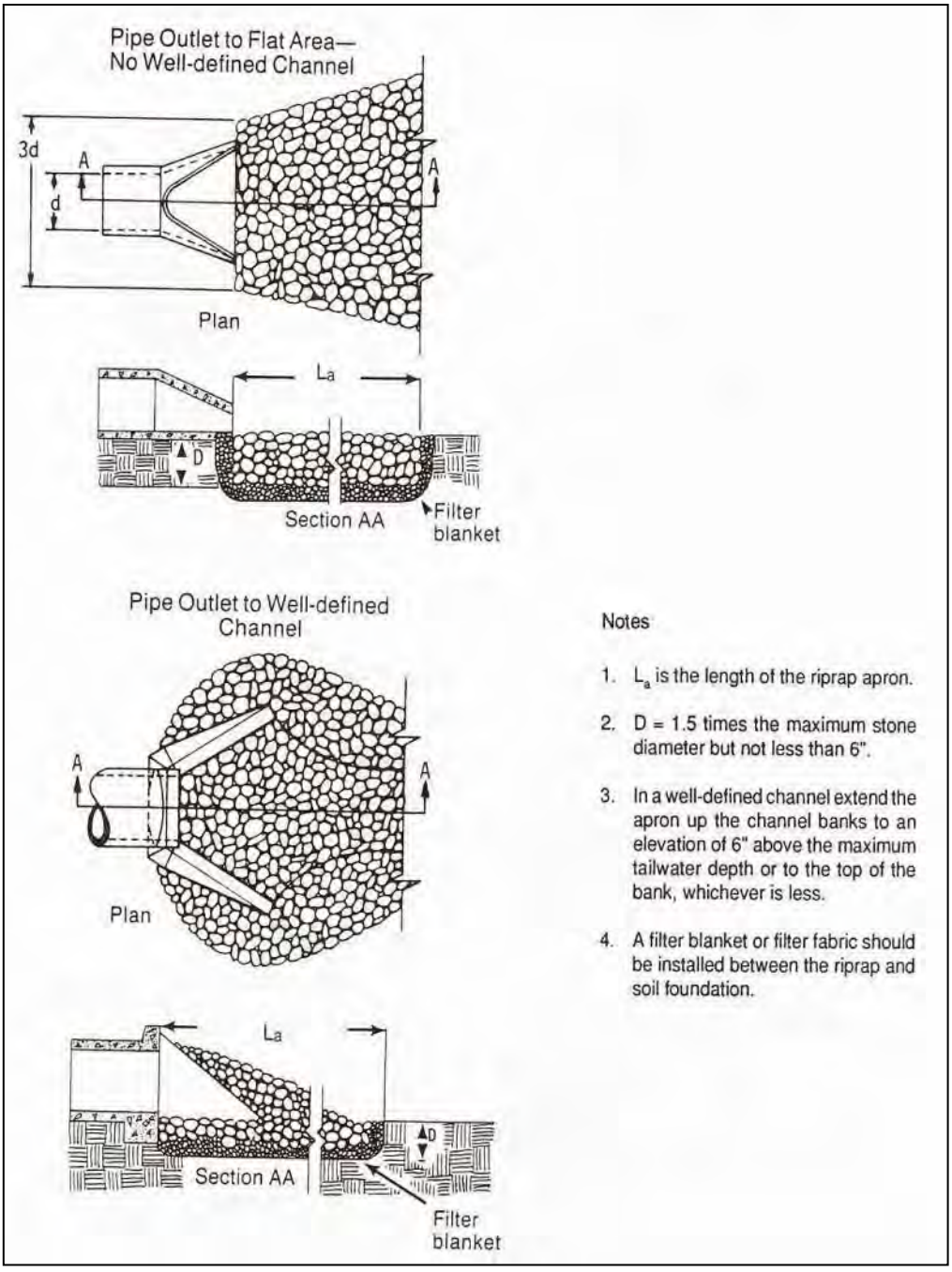

Figure OP-1 Pipe Outlet Conditions

Where the flow is excessive for the economical use of an apron, excavated stilling basins may be used. Acceptable designs for stilling basins may be found in the following documents available from the U. S. Government Printing Office.

1) Hydraulic Design of Energy Dissipaters for Culverts and Channels, Hydraulics Engineering Circular No.14, U. S. Department of Transportation, Federal Highway Administration.

2) Hydraulic Design of Stilling Basins and Energy Dissipaters, Engineering Monograph No.25 U. S. Department of Interior-Bureau of Reclamation.

Design Criteria

Structurally lined aprons at the outlets of pipes and paved channel sections should be designed according to the following criteria:

Pipe Outlets

Capacity

The structurally lined apron should have the capacity to carry the peak stormflow from the 25-year 24-hour frequency storm or the storm specified in state laws or local ordinances or the design discharge of the water conveyance structure, whichever is greatest.

Tailwater

The depth of tailwater immediately below the pipe outlet must be determined for the design capacity of the pipe. Manning's Equation may be used to determine tailwater depth. Manning's Equation may be found in the practice Grass Swales. If the tailwater depth is less than half the diameter of the outlet pipe, it shall be classified as a Minimum Tailwater Condition. If the tailwater depth is greater than half the pipe diameter, it shall be classified as a Maximum Tailwater Condition. Pipes which outlet to flat areas, with no defined channel, may be assumed to have a Minimum Tailwater Condition.

Apron Length

The apron length should be determined from Figure OP-2 or OP-3 according to the tailwater condition.

Apron Thickness

The apron thickness should be determined by the maximum stone size (dmax), when the apron is lined with riprap. The maximum stone size shall be 1.5 x d_{50} (median stone size), as determined from Figure OP-2 or OP-3. The apron thickness shall be 1.5 x dmax.

When the apron is lined with concrete, the minimum thickness of the concrete shall be 4".

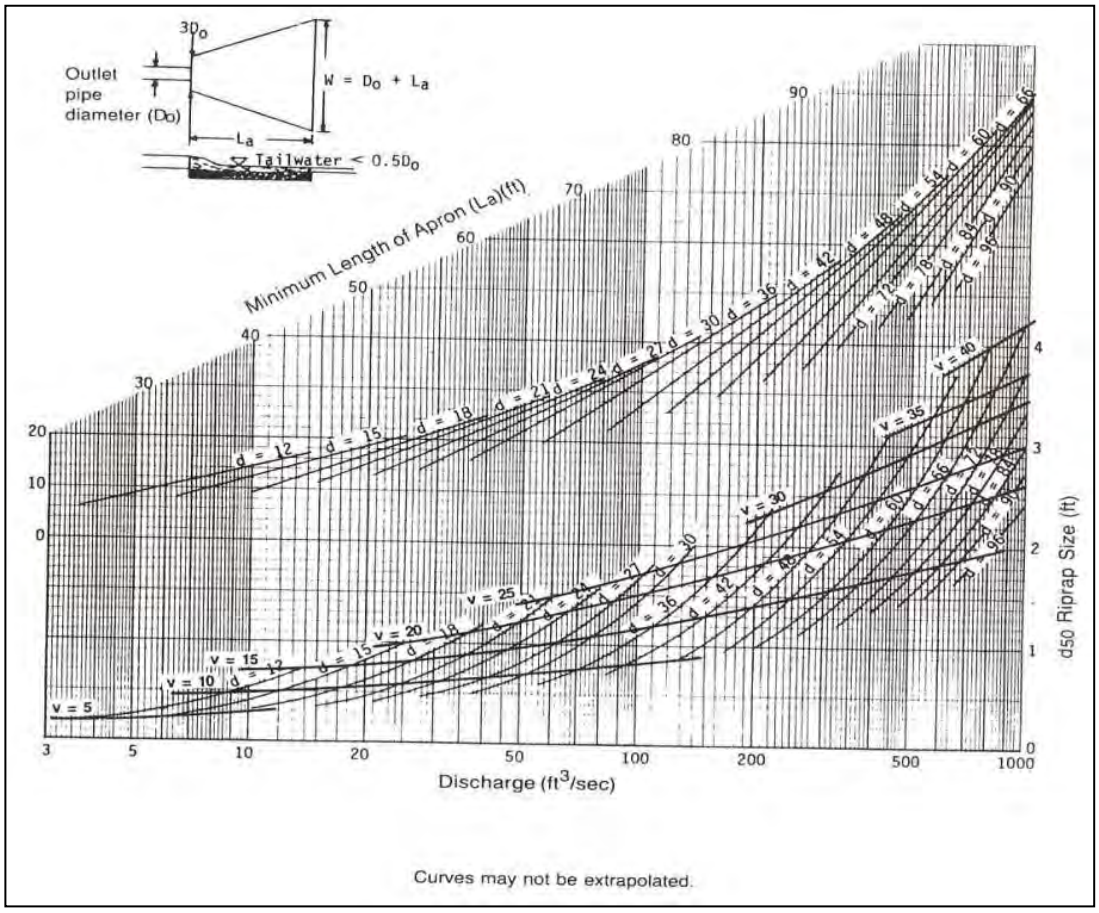

Figure OP-2 Outlet Protection Design for Tailwater < 0.5 Diameter

Apron Width

If the pipe discharges directly into a well-defined channel, the apron should extend across the channel bottom and up the channel banks to an elevation 1foot above the maximum tailwater depth or to the top of the bank, whichever is the least.

If the pipe discharges onto a flat area with no defined channel, the width of the apron should be determined as follows:

- The upstream end of the apron, adjacent to the pipe, should have a width 3 times the diameter of the outlet pipe.
- For a Minimum Tailwater Condition, the downstream end of the apron should have a width equal to the pipe diameter plus the length of the apron obtained from the figures.
- For a Maximum Tailwater Condition, the downstream end shall have a width equal to the pipe diameter plus 0.4 times the length of the apron from Figures OP-2 or OP-3.

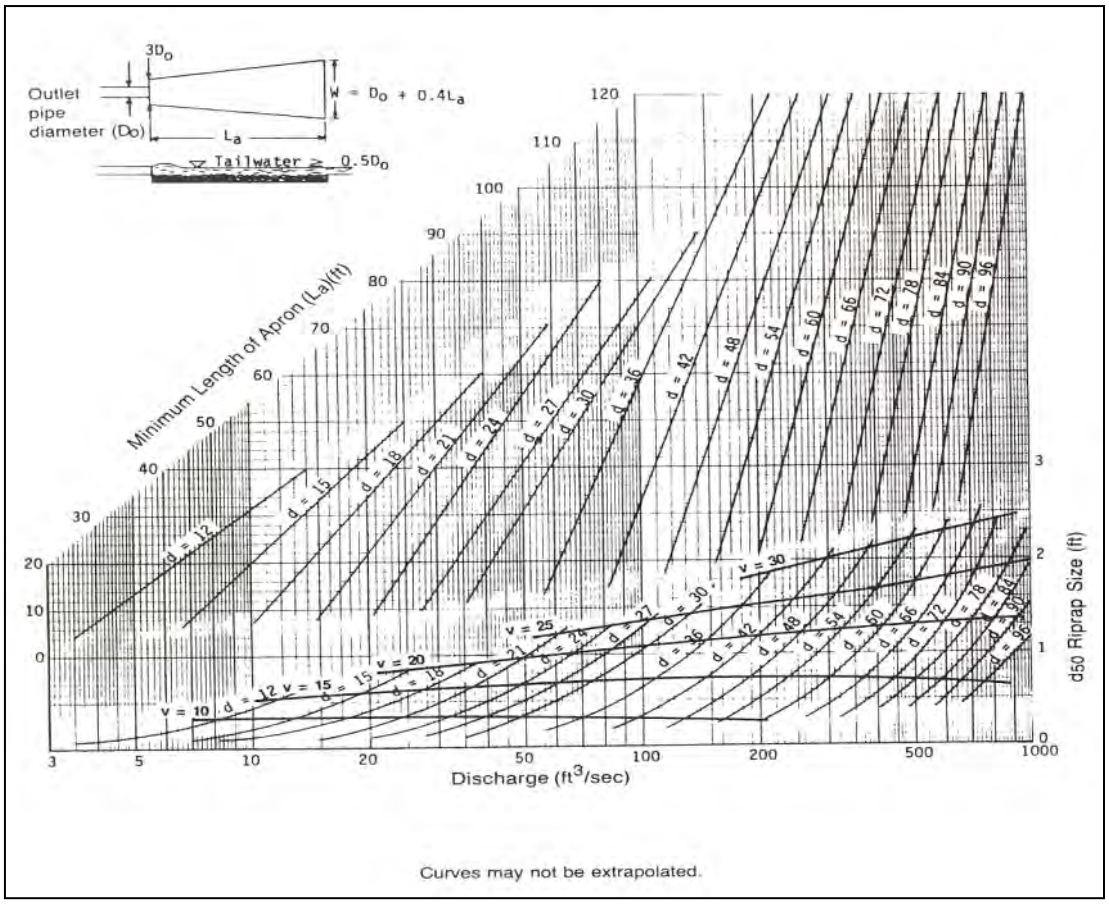

Figure OP-3 Outlet Protection Design for Tailwater ≥ 0.5 Diameter

Bottom Grade

The apron should be constructed with no slope along its length (0.0% grade). The invert elevation of the downstream end of the apron shall be equal to the elevation of the invert of the receiving channel. There shall be no overfall at the end of the apron.

Side Slope

If the pipe discharges into a well-defined channel, the side slopes of the channel should not be steeper than 2:1 (Horizontal:Vertical).

Alignment

The apron should be located so that there are no bends in the horizontal alignment.

Geotextile

When riprap is used to line the apron, non-woven geotextile should be used as a separator between the graded stone, the soil subgrade, and the abutments. Geotextile should be placed immediately adjacent to the subgrade without any voids between the fabric and the subgrade. The geotextile will prevent the migration of soil particles from the subgrade into the graded stone. The geotextile shall be of the strength and durability required for the project to ensure the aggregate and soil base are stable. Generally, the non-woven geotextile should meet the requirements found in AASHTO M288 for a Class 2 separation geotextile.

Materials

The apron may be lined with loose rock riprap, grouted riprap, or concrete. The median sized stone for riprap should be determined from the curves on Figure OP-2 and OP-3 according to the tailwater condition.

After the median stone size is determined, the gradation of rock to be used should be specified using Tables OP-2 and OP-3. Table OP-2 is used to determine the weight of the median stone size (d_{50}). Using this median weight, a gradation can be selected from Table OP-3, which shows the commercially available riprap gradations as classified by the Alabama Department of Transportation.

Stone for riprap should consist of field stone or rough unhewn quarry stone of approximately rectangular shape. The stone should be hard and angular and of such quality that it will not disintegrate on exposure to water or weathering and it shall be suitable in all other respects for the purpose intended. The specific gravity of the individual stones should be at least 2.5.

When the apron is lined with concrete, the concrete should have a minimum compressive strength at 28 days of 3000 pounds per square inch. American Concrete Institute guidelines should be used to design concrete structures and reinforcement. As a minimum, the concrete should be reinforced with steel welded wire fabric.

Table OP-2 Size of Riprap Stones

		Rectangular Shape	
Weight (lbs.)	**Mean Spherical Diameter** (feet)	**Length** (feet)	**Width, Height** (feet)
50	0.8	1.4	0.5
100	1.1	1.75	0.6
150	1.3	2.0	0.67
300	1.6	2.6	0.9
500	1.9	3.0	1.0
1000	2.2	3.7	1.25
1500	2.6	4.7	1.5
2000	2.75	5.4	1.8
4000	3.6	6.0	2.0
6000	4.0	6.9	2.3
8000	4.5	7.6	2.5
20000	6.1	10.0	3.3

Table OP-3 Graded Riprap

Class	**Weight** (lbs.)					
	d_{10}	**d_{15}**	**d_{25}**	**d_{50}**	**d_{75}**	**d_{90}**
1	10	-	-	50	-	100
2	10	-	-	80	-	200
3	-	25	-	200	-	500
4	-	-	50	500	1000	-
5	-	-	200	1000	-	2000

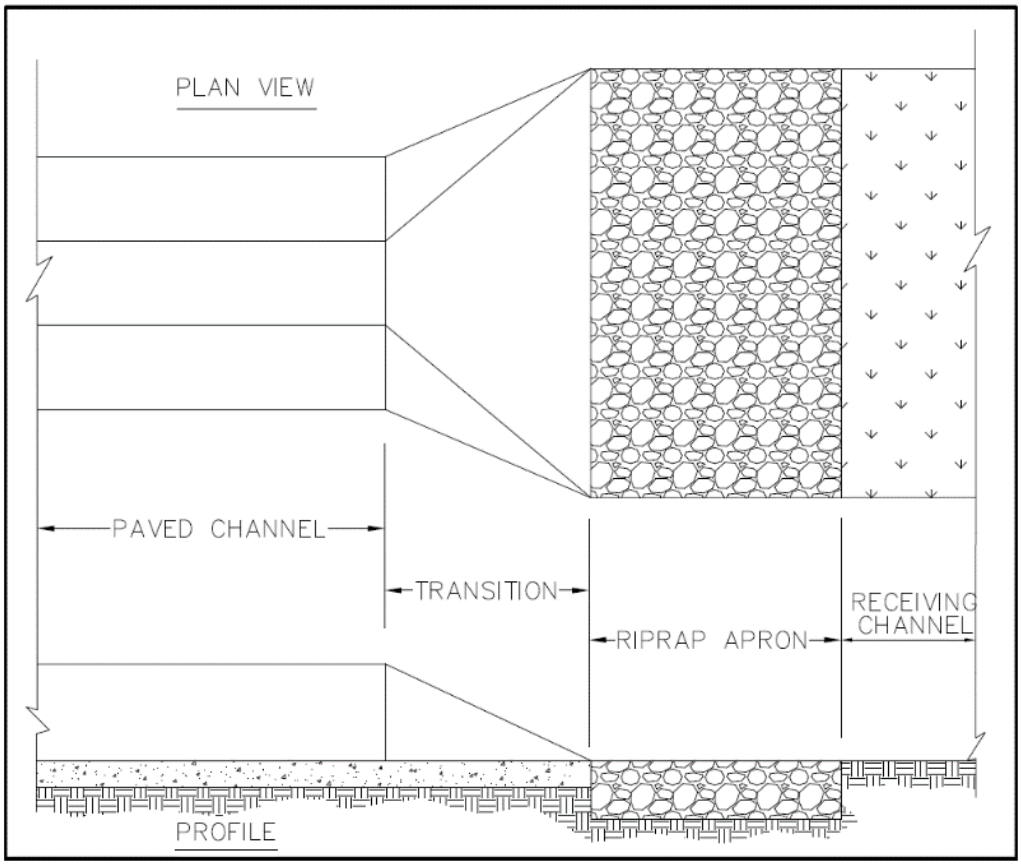

Figure OP-4 Paved Channel Outlet

1) The flow velocity at the outlet of paved channels flowing at design capacity should not exceed the velocity, which will cause erosion and instability in the receiving channel.

2) The end of the paved channel should merge smoothly with the receiving channel section. There should be no overfall at the end of the paved section. Where the bottom width of the paved channel is narrower than the bottom width of the receiving channel, a transition section should be provided. The maximum side divergence of the transition shall be 1 in 3F where

   F = v/gd, and
   F = Froude no.
   V = Velocity at beginning of transition (ft./sec.)
   d = Depth of flow at beginning of transition (feet.)
   g = 32.2 ft./sec.^{2}

3) Bends or curves in the horizontal alignment of the transition are not allowed unless the Froude no. (F) is 0.8 or less, or the section is specifically designed for turbulent flow.

Example Design Problems

Example 1

Given: An 18" pipe discharges 24 cu. ft/sec at design capacity onto a grassy slope (no defined channel).

Find: The required length, width and median stone size (d_{50}) for a riprap-lined apron.

Solution

Since the pipe discharges onto a grassy slope with no defined channel, a Minimum Tailwater Condition may be assumed.

From Figure OP-2, an apron length (La) of 20 feet and a median stone size (d_{50}) of 0.8 feet is determined.

The upstream apron width equals 3 times the pipe diameter: 3 x 1.5 feet = 4.5 feet.

The downstream apron width equals the apron length plus the pipe diameter:
20 feet + 1.5 feet = 21.5 feet.

Example 2

Given: The pipe in example No. 1 discharges into a channel with a triangular cross section, 2 feet deep and 2:1 side slopes. The channel has a 2% slope and an "n" coefficient of 0.045.

Find: The required length, width and the median stone size (d_{50}) for a riprap lining.

Solution

Determine the tailwater depth using Manning's Equation and the Continuity Equation.

$Q = 1.49/n \; R^{2/3} \; S^{1/2} \; A$

$24 = 1.49/n \; [2d/4.47]^{2/3} \; (.02)^{1/2} \; (2d^2)$

where, d = depth of tailwater
d = 1.74 feet. *

*Since d is greater than half the pipe diameter, a Maximum Tailwater Condition exists.

From Figure OP-3, a median stone size (d_{50}) of 0.5 feet. and an apron length (La) of 41 feet. is determined.

The entire channel cross section should be lined since the maximum tailwater depth is within 1-foot of the top of the channel.

Filter Strip (FS)

Practice Description

A filter strip is a wide belt of vegetation designed to provide infiltration, intercept sediment and other pollutants, and reduce stormwater flow and velocity. Filter strips are similar to grassed swales except that they are designed to intercept overland sheet flow (not channel flow). They cannot treat high velocity flows. Surface runoff must be evenly distributed across the filter strip. This practice applies on construction sites and other disturbed areas.

Planning Considerations

Filter strips provide their maximum benefit when established as early as possible after disturbances begin. This concept should receive strong consideration during the scheduling of practices to be installed. In some instances, the existing vegetation may be preserved to serve as a filter strip.

Filter strips should be strategically located on the contour to reduce runoff and increase infiltration. They should be situated downslope from the disturbed site and where runoff water enters environmentally sensitive areas.

Vegetation may consist of existing cover that is preserved and protected or be planted to establish the strip. Once a concentrated flow channel forms in the filter strip, the filter strip is no longer effective.

Overland flow entering filter strips should be primarily sheet flow. All concentrated flow should be dispersed prior to entering the filter strip.

Flow length should be based on slope percent and length, predicted amount and particle size distribution of sediment delivered to the filter strip, density and height of the filter strip vegetation, and runoff volume.

The slope of the drainage area above a filter strip should be greater than 1% but less than 10%. The ratio of the drainage area to the filter strip area should be less than 10:1. The minimum width of an effective filter strip is 15 feet.

Existing vegetation may be used if it meets stand density and height requirements and has uniform flow through the existing vegetation. The existing vegetation strip must be on a contour to be effective.

Site preparation for filter strips requires that the filter strip be placed on the contour. Variation in placement on the contour should not exceed a 0.5% longitudinal (perpendicular to the flow length) gradient.

All soil amendments should be applied according to a soil test recommendation for the planned vegetation.

The vegetation for filter strips must be permanent herbaceous vegetation of a single species or a mixture of grasses or legumes, which have stiff stems and a high stem density near the ground surface. Stem density should be such that the stem spacing does not exceed 1".

Design Criteria

Installation (preservation of existing vegetation)

Designate the areas for preserving vegetation on the design plan map.

Indicate in the plan that the designated areas will be fenced or flagged and will not be disturbed. This includes avoiding surface disturbances that affect sheet flow of stormwater runoff and not storing debris from clearing and grubbing, and other construction waste material in the filter strips during construction.

Installation (planting)

Site Preparation
If the upper edge of the filter strip does not have a level edge, remove any obstructions, and grade the upper edge of the filter strip so that runoff evenly enters the filter strip. Fill and smooth any rills and gullies that exist over the filter strip area to ensure that overland flow will discharge across the filter strip along a smooth surface

Seedbed Preparation
Grade and loosen soil to a smooth firm surface to enhance rooting of seedlings and reduce rill erosion. If existing, break up large clods and loosen compacted, hard or

crusted soil surfaces with a disk, ripper, chisel, harrow or other tillage equipment. Avoid preparing the seedbed under excessively wet conditions.
For broadcast seeding and drilling, tillage should adequately loosen the soil to a depth of at least 6", alleviate compaction, and smooth and firm the soil for the proper placement of seed.

For no-till drilling, the soil surface does not need to be loosened unless the site has surface compaction. If compaction exists, the area should be chiseled across the slope to a depth of at least 6".

Applying Soil Amendments

Liming
Follow soil test recommendation. If a soil test is not available, use 2 tons/acre of ground agricultural lime on clayey soils (approximately 90 lbs/1000 ft^2) and 1 ton/acre on sandy soils (approximately 45 lbs/1000 ft^2). Exception: If the cover is tall fescue, use the 2 tons/acre rate (90 lbs/1000 ft^2) on both clayey and sandy soils.

Spread the specified amount of lime and incorporate into the top 6" of soil after applying fertilizer.

Fertilizing
Apply fertilizer at rates specified in the soil test recommendation. In the absence of soil tests, use the following as a guide:

Grass alone: 8-24-24 or equivalent - 400 lbs/acre (9.2 lbs/1000 ft^2). When vegetation has emerged to a stand and is growing, 30 to 40 lbs/acre (0.8 lb/1000 ft^2) of additional nitrogen fertilizer should be applied.

Grass-Legume Mixture: 8-24-24 or equivalent-400 lbs/acre (9.2 lbs/1000 ft^2). When vegetation has emerged to a stand and is growing, 30 to 40 lbs (0.8 lb/1000 ft^2) of additional nitrogen fertilizer should be applied.

Legume alone: 0-20-20 or equivalent-500 lbs/acre (11.5 lbs/1000 ft^2).

Incorporate lime and fertilizer to a minimum depth of at least 6" or more by disking or chiseling on slopes of up to 3:1.

Planting

Select adapted species from Figure FS-1 and Table FS-1.

Apply seed uniformly using a cyclone seeder, drill seeder, cultipacker seeder or hydroseeder.

When using a drill seeder, plant grasses and legumes ¼" to ½" deep. Calibrate equipment in the field.

When planting by methods other than a drill seeder or hydroseeder, cover seed by raking, or dragging a chain, brush, or mat. Then firm the soil lightly with a roller. Seed can also be covered with hydro-mulched wood fiber and tackifier. Legumes

require inoculation with nitrogen-fixing bacteria to ensure good growth. Purchase inoculum specific for the seed and mix with seed prior to planting.

Table FS-1 Commonly Used Plants for Permanent Cover[1]

Species	Seeding Rates/Ac PLS[2]	North	Central	South
		Seeding Dates		
Bahiagrass, Pensacola	40 lbs	--	Mar 1-July 1	Feb 1-Nov 1[3]
Bermudagrass, Common	10 lbs	Apr 1-July 1	Mar 15-July 15	Mar 1-July 15
Bahiagrass, Pensacola Bermudagrass, Common	30 lbs 5 lbs	--	Mar 1-July 1	Mar 1-July 15
Bermudagrass, Hybrid (Lawn Types)	Solid Sod	Anytime	Anytime	Anytime
Bermudagrass, Hybrid (Lawn Types)	Sprigs 1/sq ft	Mar 1-Aug 1	Mar 1-Aug 1	Feb 15 - Sep 1
Fescue, Tall	40-50 lbs	Sep 1-Nov 1	Sep 1-Nov 1	--
Sericea	40-60 lbs	Mar 15-July 15	Mar 1-July 15	Feb 15 -July 15
Sericea & Common Bermundagrass	40 lbs 10 lbs	Mar 15 -July 15	Mar 1-July 15	Feb 15-July 15
Switchgrass, Alamo	4 lbs	Apr 1-Jun 15	Mar 15-Jun 15	Mar 15-Jun 15

1 DO NOT USE Seeding Rates as part of a mixture unless shown as a mixture in this table.
2 PLS means Pure Live Seed and is used to adjust seeding rates. For example, to plant 10 lbs PLS of a species with germination of 80% and purity of 90%, PLS= 0.8 X 0.9 = 72%. 10lbs PLS = 10/0.72 = 13.9 lbs of the species to be planted.
3 A late fall planting of Bahiagrass should include 45 lbs./ac. of small grain to provide cover during winter months.

Mulching

Cover approximately 75% of the surface with the specified mulch materials. Crimp, tack or tie down straw mulch with netting. Mulching is extremely important for successful seeding (See Mulching practice for more details).

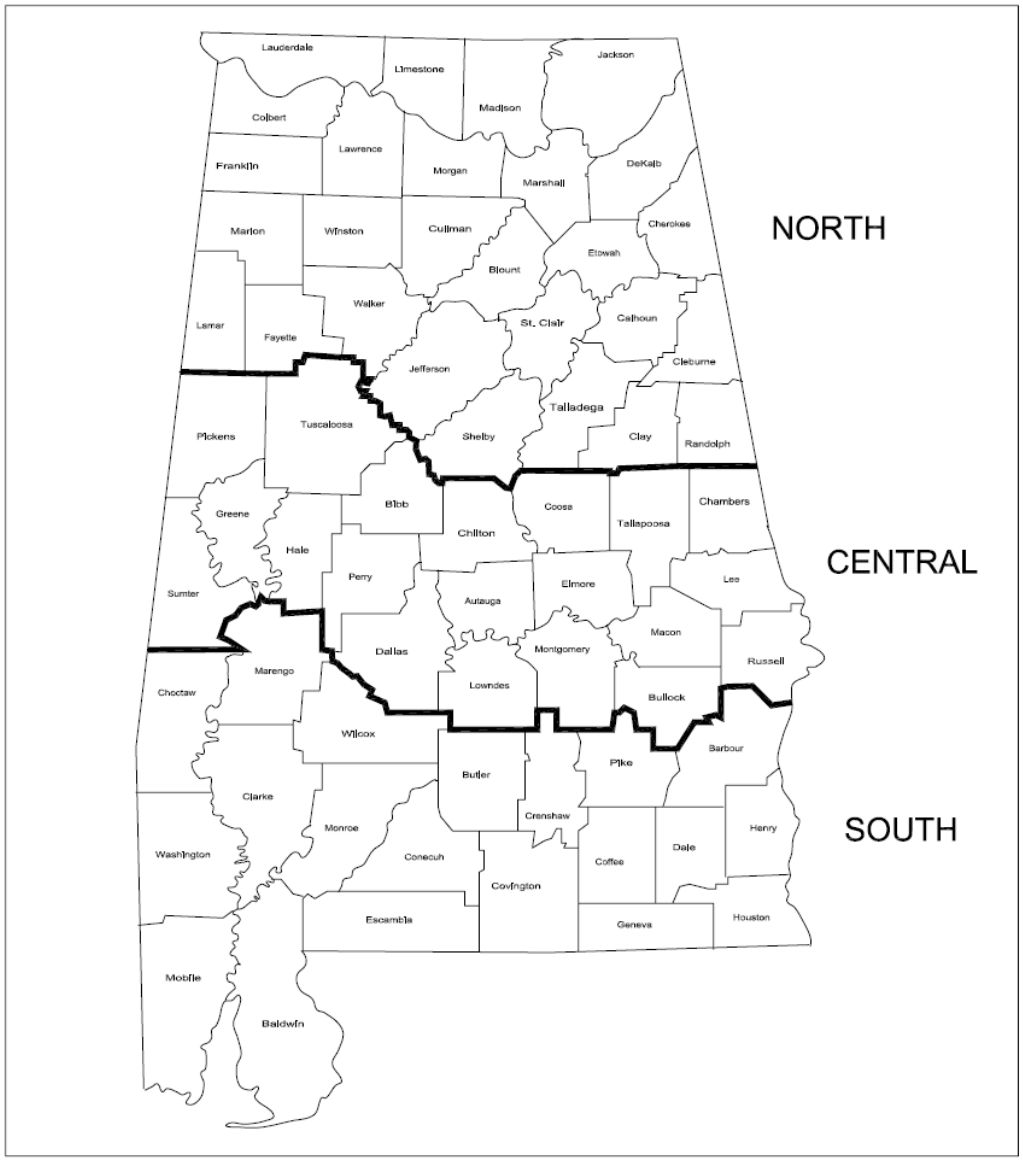

Figure FS-1 Geographical Areas for Species Adaptation and Seeding Dates

Note: Site conditions related to soils and aspect in counties adjacent or close to county boundaries may justify adjustments in planting dates by qualified design professionals.

Sediment Barrier (SB)

Practice Description

A sediment barrier is a temporary sediment control practice installed downstream of a disturbed area intended to remove large-sized suspended sediment from sheet flow runoff by facilitating settling and to a lesser extent filtration. The most commonly used sediment barrier is a silt fence made up of a geotextile fabric that is anchored into the ground and attached to supporting posts and possibly reinforced with a wire fence or polypropylene netting. Other barrier materials could include sand bags, wattles, and various man-made materials and devices that can be used in a similar manner as a silt fence.

This practice applies downstream of small disturbed areas that yield runoff volumes less than the design storage volume. Barriers intercept runoff from upslope to form impoundments that temporarily detain runoff and allow sediment to settle out of the water and remain on the construction site.

Planning Considerations

Sediment barriers are used downslope of a disturbed area to intercept sediment-laden runoff. It is important that they be designed and installed to impound runoff from the design storm event and create favorable conditions for sediment to settle out of suspension. It is also important that the ends of sediment barriers are turned back upslope to prevent runoff from bypass around the ends of the barrier. Sediment barriers should be designed to safely overtop when the design storm is exceeded and provide for controlled dewatering of the detained runoff. Prevention

of scouring, erosion, and undermining at and under sediment barriers is also of upmost importance to ensure maximum impoundment capabilities.

The success of silt fences depends on a proper installation. Ideally, silt fences should be placed on the contour with each end turned up slope. When this installation is not feasible, “C” configurations (smiles), or “J” hooks should be used. Silt fences should be carefully installed to meet the intended purpose of intercepting and impounding sheet flow runoff. When properly installed, silt fences are effective at trapping coarse sediment but do not effectively reduce turbidity.

A silt fence is specifically designed to retain sediment transported by sheet flow from disturbed areas. Water flow through the silt fence often decreases over time as silts and debris “blind” or seal the geotextile fabric. Silt fences should be installed to be stable under the flows expected from the site. Generally, silt fences should not be installed across streams, ditches, waterways, or other concentrated flow areas. When properly designed and installed, silt fences can be used as a Check Dam (See Check Dam).

Silt fences are composed of geotextile (i.e., woven and non-woven) supported between steel or wooden posts. Silt fences are commercially available with geotextile attached to the post and can be rolled out and installed by driving the post into the ground. This type of silt fence is simple to install, but more expensive than some other installations. Silt fences must be trenched in at the bottom to prevent runoff from undermining the fence and developing rills under the fence. Locations with high runoff flows or velocities (steeper slopes and higher Runoff Curve Numbers) should use either a wire or polypropylene net reinforcement. In addition, decreasing the spacing between support posts will improve the structural integrity of the silt fence in these areas.

The “off-set” trench installation method (See Fig. SB-1) is now the preferred method of silt fence installation. This involves a conventional 6 in. x 6 in. trench or 6 in. slice installation to bury the geotextile, with the posts and wire installed 6 in. downslope of the trench or slice. The wire (when used) is on top of the ground surface and not in a trench. This installation has proven to have less potential for undermining than any installation tested at the Auburn University Stormwater Research Facility.

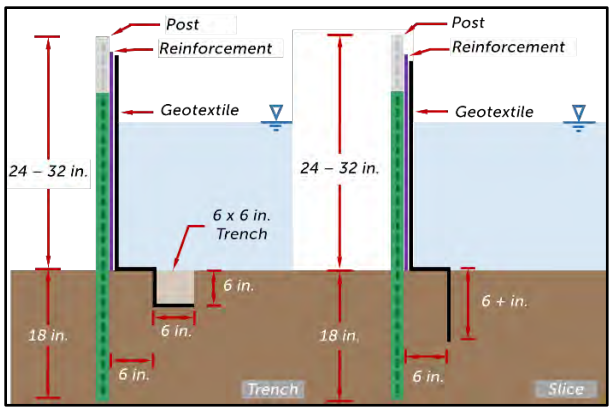

Figure SB-1 Off-Set Installation

Design Criteria (for silt fence)

Silt fence installations are normally limited to situations in which only sheet or overland flow is expected because the practice cannot pass the volumes of water generated by channelized flows. Silt fences are normally constructed of synthetic fabric (geotextile) and the life is expected to be the duration of most construction projects. Silt fence geotextile should conform to the property requirements found in AASHTO M288 shown in Table SB-1 as follows:

Table SB-1 Silt Fence Geotextile Fabric Requirements per AASHTO M288

Requirement	Test Methods	Units	Type A supported fence	Type B unsupported fence
Grab Strength Machine Direction X-Machine Direction	ASTM D4632/D4632M	N	 400 400	 550 450
Permittivity	ASTM D4491	sec^{-1}	0.05	0.05
Apparent Opening Size	ASTM D4751	mm	0.60 max avg roll value	0.60 max avg roll value
Ultraviolet stability (retained strength)	ASTM D4355/4355M	%	70% after 500 h of exposure	70% after 500 h of exposure

Note: ALDOT has an approved products list for geotextile

As a general rule-of-thumb the drainage area behind the silt fence should not exceed ¼ acre per 100 linear feet of silt fence for non-reinforced fence and ½ acre per 100 feet of reinforced silt fence. However, silt fence segments must be designed to impound runoff from the design storm event. Selection of the design storm should be based on site-specific characteristics including project location, duration of disturbance, and acceptable levels of risk to downstream receiving waters. Lacking site-specific guidance, a 2-yr, 24-hr design storm event is recommended.

Overflow Outlet and Dewatering

A silt fence segment must be designed for dewatering and overflow. Since geotextile materials blind or clog over time an effective means for dewatering must be included to prepare the silt fence for subsequent storms and minimize the chance of overtopping or periods of excessive ponding. The silt fence, at full storage capacity, should dewater in 4 to 12 hours. Overflow outlet(s) must be included for runoff that exceeds the design storm event and must convey the peak flow rate for the design storm event. One outlet option which has been well tested is a perforated board with a weir. This is installed in a break along the silt fence, which is sealed to the board. The break should be located at the lowest point of the silt fence segment. The board has several 1 in. diameter orifices, and a v-notch weir at the top, placed 18 in. from the bottom, to maintain volumetric storage (Fig. SB-2).

Figure SB-2 Example dewatering board & overflow weir.

Discharge from silt fence segments should be controlled to be non-erosive. Erosion control or scour protection, such as a geotextile splash apron and/or riprap, must be used immediately downstream of the dewatering and overflow outlet.

Type A Silt Fence

Type A fence shall be a minimum of 24 in. and not more than 32 in. above ground with wire reinforcements and is used on sites needing the highest degree of protection by a silt fence. The wire reinforcement is necessary because this type of silt fence is used for the highest runoff and flow situations. Wire fence should be made of 14-gauge wire with 6 in. x 6 in. openings (Note: ALDOT wire spacing may differ). Equivalent backing or reinforcement is allowed for wire reinforcement if it is sewn in or physically attached to the silt fence fabric. Type A silt fence should be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet. Staked tie backs on each end of a Type A silt fence may be necessary to prevent overturning. Tie backs should also be used at points of possible concentration and overtopping if site conditions do not allow for the silt fence to be installed on the contour.

Provide an overflow outlet with a riprap splash pad with a geotextile underlay or other outlet protection device for any point where flow may overtop the silt fence.

The silt fence should be installed as shown in Figure SB-3. Maximum post spacing is 10 ft. In situations where runoff flows parallel with the silt fence when in perimeter control applications, 10 ft spacing is adequate. J-hooks should also be considered for long parallel flow scenarios to slow flow velocity and create areas of impoundments, thereby reducing scour potential under the silt fence. For the portion of the silt fence that creates the J-hook impoundment area, the maximum post spacing should be reduced to 5 ft. to support the hydrostatic loads. For all installations that intercept flow perpendicularly to the slope causing a concentrated impoundment, the maximum post spacing should be reduced to 5 ft. Materials for posts, post size, and fasteners are shown in Tables SB-2 and SB-3. Do not use "light weight" steel posts commonly found at building supply stores. Details for overlap of Type A silt fence is available from The Alabama Department of Transportation construction drawings and shown in Figure SB-4.

Geotextile silt fence material should be looped over each post and the top of the wire to prevent sagging. A "hog ring" attachment should be made each 1 ft along the top of the wire.

Table SB-2 Post Size for Silt Fence

Silt Fence	Minimum Length	Type of Post	Size of Post
Type A	4 ft	Steel "T" Post	1.25 lb./ft min.
Type B	4 ft	Soft Wood Oak Steel	3 in. diameter or 2X4 1.5 in. X 1.5 in. 1.33 lb./ft min.

Table SB-3 Wood Post Fasteners for Silt Fence

Fastener	Gauge	Crown	Legs	Staples/Post
Wire Staples	17 min.	¾" wide	½" long	5 min.
	Gauge	**Length**	**Button Heads**	**Nail/Post**
Nails	14 min.	1"	¾" long	4 min.

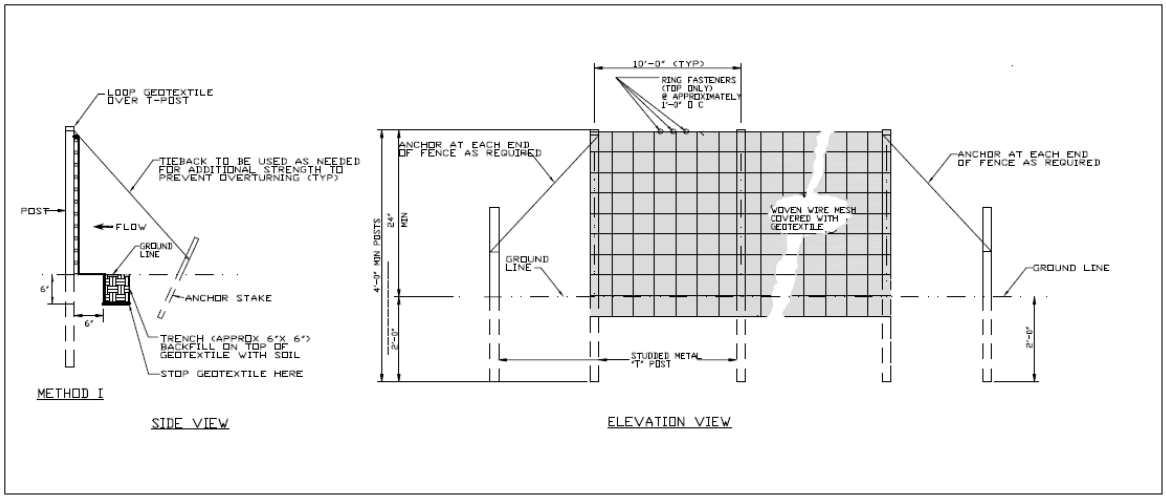

Figure SB-3 Silt Fence-Type A
(For post material requirements see Tables SB-2 and SB-3)

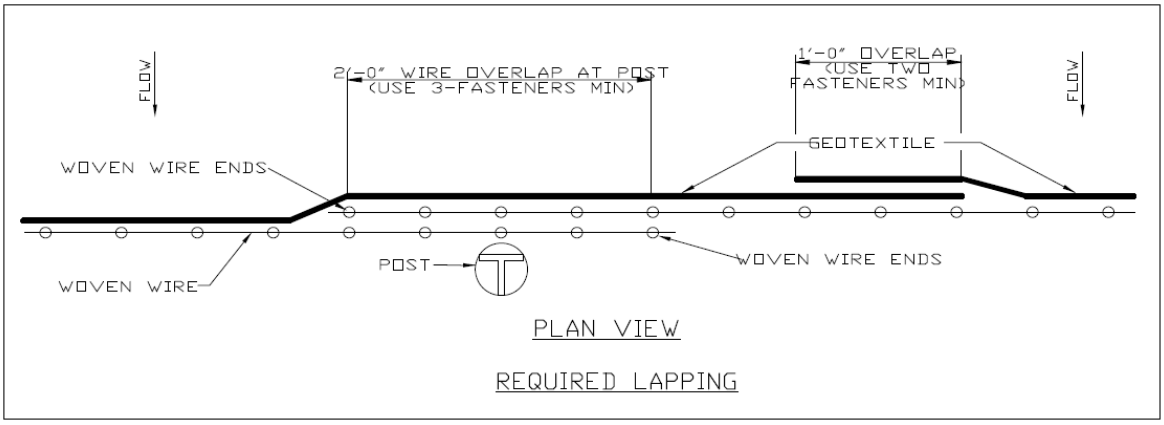

Figure SB-4 Type A Silt Fence Overlap

Type B Silt Fence

This 36 in. wide geotextile fabric should be used on developments where the life of the project is short (6 months or less) and there is less need for protection from a silt fence.

The silt fence should be installed as shown in Figure SB-5. Post spacing is either 4 ft or 6 ft based on geotextile elongation % (see note on Figure SB-5). Materials for posts and fasteners are shown in Tables SB-2 and SB-3. Details for overlap of the silt fence and fastener placement are shown in Figure SB-6. Provide overflow and dewatering devices if needed.

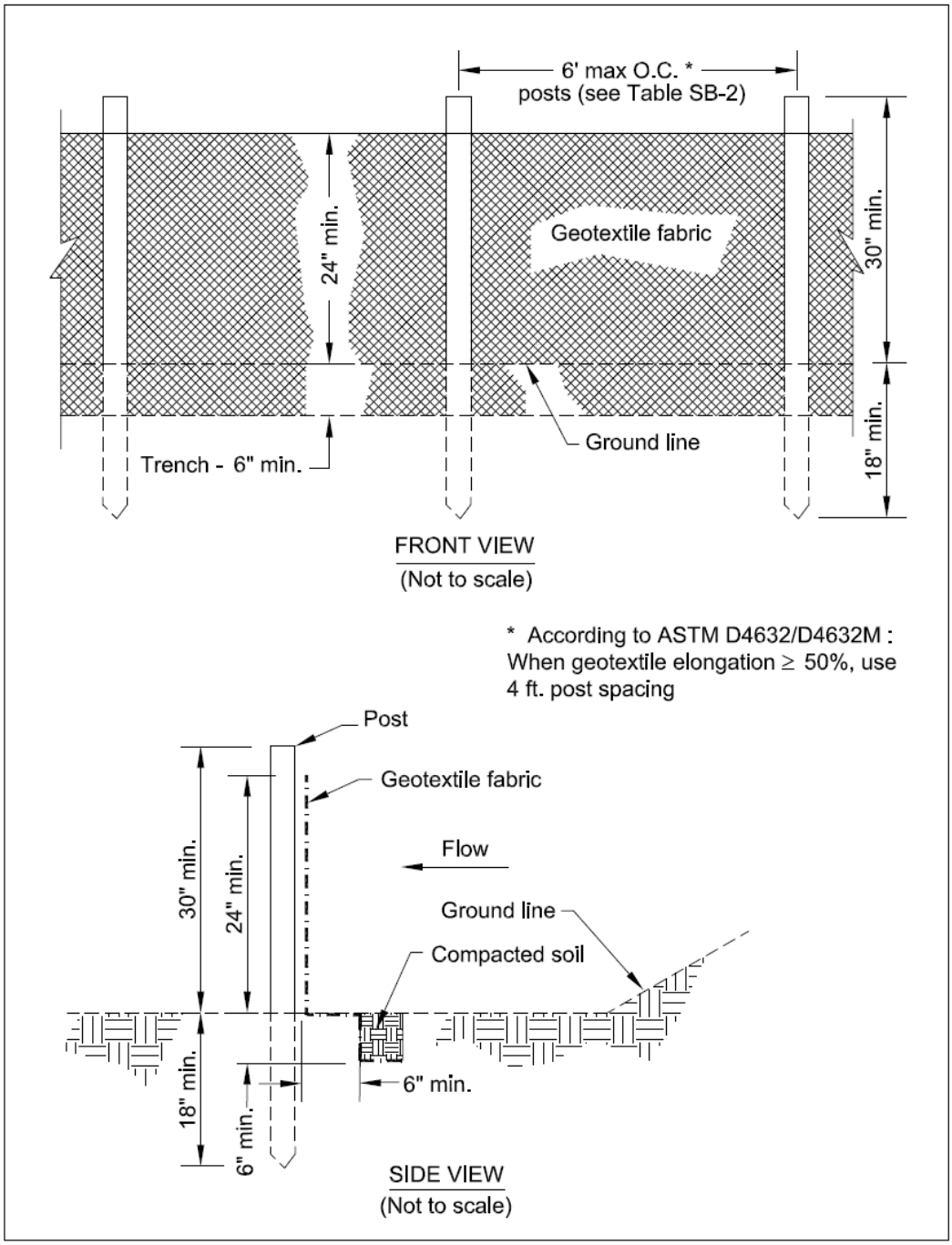

Figure SB-5 Silt Fence - Type B
(For post material requirements see Tables SB-2 and SB-3)

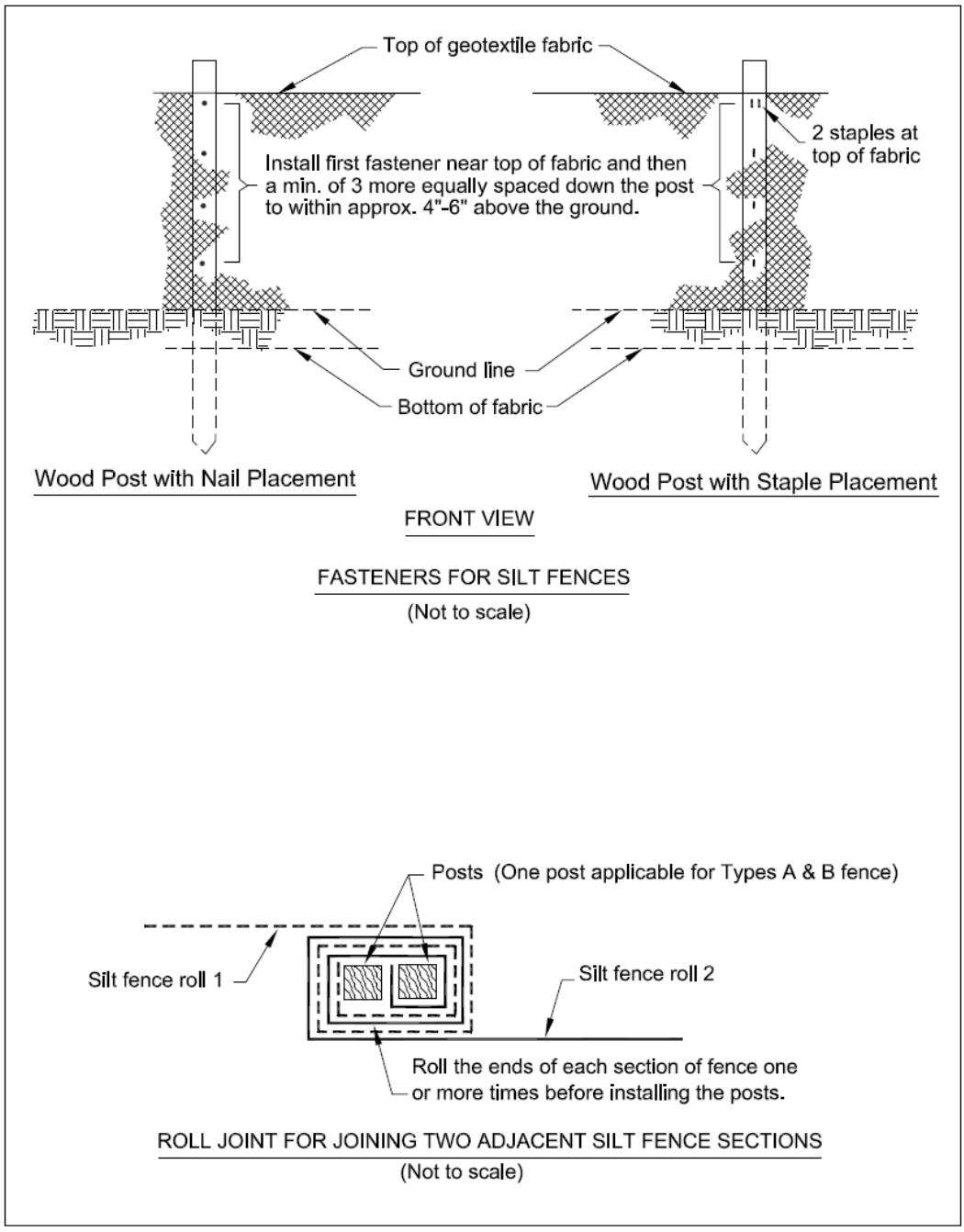

Figure SB-6 Silt Fence Installation Details for Type B