



July 11, 2024

River Bend Aggregates, LLC  
Attn: Will Glusac  
500 Duke Drive  
Franklin, TN 37067  
wglusac@turnkeyprocessing.com

Re: Approval of Application and Reclamation Plan for a Mine Operating Permit  
Issuance of an Individual Mine Operating Permit  
Mine Permit #I-002410 | River Bend Quarry | Spartanburg County

Dear Mr. Glusac:

The S.C. Department of Environmental Services (SCDES) has approved the application and reclamation plan for the River Bend Quarry as of the date of this letter. SCDES has received the reclamation bond submitted in the amount of \$963,294.00.

With the receipt of the reclamation bond and the approval of the application and reclamation plan, this letter serves as official notification that the Individual Mine Operating Permit for the River Bend Quarry is being issued as of the date of this letter. Enclosed are the permit document, reclamation plan, and mine and reclamation maps.

Should there be any questions or if we may be of further assistance, please do not hesitate to contact the project me at 803-898-7609 or by e-mail at [Jeremy.Eddy@des.sc.gov](mailto:Jeremy.Eddy@des.sc.gov). Kaylin Joye is the regional mine inspector for granite quarries and can be reached at (803) 898-1367 or by e-mail at [Kaylin.Joye@des.sc.gov](mailto:Kaylin.Joye@des.sc.gov).

Respectfully,

A handwritten signature in blue ink that reads "Jeremy E. Eddy".

Jeremy E. Eddy, P.G.  
Manager, Mining & Reclamation Program

Cc: Marty Lindler, Kaylin Joye, Brett Caswell, Cole Alverson (Spartanburg County), Craig Kennedy  
Encl: Permit document, reclamation plan, and maps.



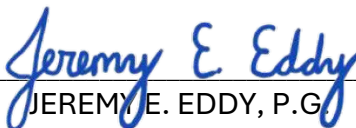


SC DEPARTMENT of  
**ENVIRONMENTAL  
SERVICES**

**INDIVIDUAL MINE  
OPERATING PERMIT**

**River Bend Quarry  
River Bend Aggregates, LLC**

River Bend Aggregates, LLC, a corporation, has been granted a Mine Operating Permit, Mine Permit Number I-002410, to operate the River Bend Quarry in accordance with this Permit, the approved Reclamation Plan, the S.C. Mining Act (S.C. Code Sections 48-20-10 *et seq.*, 1976), and Regulations 89-10 *et seq.* The operator shall conduct this operation as represented in documents submitted to support the issuance of this permit.



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JEREMY E. EDDY, P.G.  
MANAGER - MINING AND RECLAMATION PROGRAM  
DIVISION OF MINING AND SOLID WASTE MANAGEMENT

**PERMIT NUMBER:** I-002410  
**ORIGINALLY ISSUED:** July 11, 2024  
**MODIFIED:** N/A



**Part I: GENERAL INFORMATION**

In accordance with Section 48-20-60 of the South Carolina Mining Act, this Mine Operating Permit will remain valid unless it terminates as set forth in R.89-270 or is revoked in accordance with Section 48-20-160 and R.89-280. The anticipated mining completion date is shown on the *Schedule for Conservation and Reclamation Practices* in the *Reclamation Plan*.

The approved *Permit Application, Reclamation Plan*, and all supplemental information referenced herein, are an integral part of this permit. *Land Entry Agreements and Mine Maps* as identified in Part II and Part IV, respectively, are also a part of this permit.

**CONTACT INFORMATION:**

**Home Office Address:** River Bend Aggregates, LLC  
500 Duke Drive  
Franklin, TN 37067

**Local Office Address:** River Bend Aggregates, LLC  
Attn: Will Glusac  
500 Duke Drive  
Franklin, TN 37067

**Address for Official Mail:** Same as Local Office Address

**Company personnel and title to be the contact for official business and correspondence [South Carolina Department of Environmental Services (SCDES) should be notified in writing immediately of any change in contact, address, telephone or e-mail]:**

Will Glusac  
Vice President

Telephone: (615) 224-8077  
Email: wglusac@turnkeyprocessing.com

**LOCATION:** The mine is located on the Pacolet, SC U.S.G.S. 7.5' Topographic Map. The approximate geographic coordinates for the site are:

Latitude: 34.9365

Longitude: -81.7639

**LOCATION DESCRIPTION:** The operation is located in Spartanburg County, approximately 1.2 mile(s) northwest of Pacolet Mills, S.C. Specifically, the site is located 1.5 miles south of the intersection of Hammett Grove Road and Cowpens Pacolet Road.

**Part II: PERMITTED LAND**

This permit allows River Bend Aggregates, LLC, also referred to as the operator, to conduct mining operations within the permitted land as defined through the *Land Entry Agreement* submitted as part of the application. Permitted land as defined by Section 48-20-40(18) is "the affected land in addition to (a) lands identified for future mining to become affected land; (b) and undisturbed or buffer area that is or may become adjacent to the affected land." Therefore, this permit grants the operator the right to conduct active mining operations within the specified affected land, delineate land for future mine areas as future reserves, and to establish undisturbed buffer zones to mitigate any adverse effects to the surrounding environment.

**AFFECTED LAND:** 240.7 acres of land are to be affected by River Bend Aggregates, LLC under the current mine plan; 147.0 of the affected acres are currently bonded. The affected acres are derived from the operator's response in the *Application for a Mine Operating Permit* and are shown on the approved mine map(s).



**FUTURE RESERVES:** 92.1 acres are identified as future reserves and are specified on the mine site map. Prior to the initiation of activity in future reserves, the operator shall submit detailed mine and reclamation plans to SCDES for approval.

**BUFFER AREAS:** 110.3 acres are identified as buffer area, setbacks, or areas that will not be disturbed beyond the pre-mine natural state. These buffer areas are identified on the mine site map. Acres designated as buffer areas are not bonded under the reclamation bond. Any activity within the buffer areas (e.g. removal of timber) shall require **prior** notification and approval by SCDES.

**TOTAL PERMITTED AREA:** 443.1 acres as submitted on the *Land Entry Agreement(s)*.

**LAND ENTRY AGREEMENTS:** The operator is required to furnish and maintain up-to-date *Land Entry Agreements* on all lands covered under this permit. Any change in ownership on any portion of land covered by this permit, the operator is responsible for furnishing the appropriate and completed *Land Entry Agreements* (Forms MR-600 or MR-700) to SCDES within 30 days of the change of ownership.

Land Owner(s) as Listed on *Land Entry Agreement(s)*:

| <b>TMS #</b>   | <b>Land Owner(s)</b>       |
|--|----------------------------|
| 3-25-00-006.00; 3-25-00-006.06; 3-25-00-007.00;<br>3-25-00-010.00; 3-25-00-013.00; 3-25-00-013.02;<br>3-25-00-014.00; 3-25-00-014.01; 3-25-00-014.02 | River Bend Aggregates, LLC |

Total acres of the contiguous tract(s) of land for which the permit is granted:

OWNED 443.1      LEASED 0.0      TOTAL 443.1

### **Part III: FINANCIAL ASSURANCE FOR RECLAMATION**

The financial assurance for reclamation is based upon the total affected acres. Pursuant to Section 48-20-70 and R.89-200, the financial assurance for this mining permit is set at ~~\$963,294.00~~. The financial assurance shall remain in force and continuous throughout the life of the mining operation and shall only be released, partially or in full, back to the operator after the operator has completed reclamation in accordance with the approved *Reclamation Plan* and the minimum standards in R.89-330.

### **Part IV: MINE OPERATIONS**

River Bend Aggregates, LLC is permitted to mine granite at the River Bend Quarry. The maximum depth to the pit floor shall not exceed +50 feet mean sea level (to an approximate elevation of 500 feet below ground surface as measured from the lowest ground surface elevation). Mining will take place on tracts of land owned by the referenced operator. These tracts of land are identified in the submitted *Land Entry Agreements* (LEAs).

#### **MINE/PIT CHARACTERIZATION:**

The pit will be mined in three phases. The granite will be excavated, processed, and stockpiled on site. Ground clearing will be accomplished by excavators, bull dozers, road scrapers, and pans. Removed overburden will be placed in permanent storage areas at locations designated on the mine map. The exposed granite will be drilled, explosives loaded, and blasted to fragment stone into manageable sizes to facilitate loading in haul trucks and crushing by the primary crusher. Stone passing through the primary crusher will be transported to the processing plant initially by trucks and later by conveyors for further processing.

PROCESSING PLANT LOCATED ON MINE SITE:

The processing plant will consist of primary, secondary, and tertiary crushers, screens, conveyors, and loading and hauling machines located in areas as shown on the mine map. Waste screenings and other fines from crushing, washing, and screening the crushed stone will be stockpiled around the plant site or placed in overburden storage areas.

MINE DEWATERING:

Due to groundwater seepage from natural fractures/joints in the host rock, quarry dewatering will be necessary when the pit floor extends below the water table. Additionally, where feasible, stormwater runoff shall be diverted into the pit, collected into the sump, and discharged in the same manner as groundwater. Any accumulation of groundwater and stormwater shall be pumped into a sediment basin prior to discharge. Water discharged from the mine to a receiving stream must be discharged through an outfall regulated by an NPDES permit.

If an operator receives a complaint concerning adverse impacts to neighboring wells, the operator is to notify SCDES's Manager of the Mining and Reclamation Section, Columbia, SC, within 48 hours. After investigation, if SCDES determines dewatering activities at the mine are affecting a drinking water well or water supply well, the operator shall be responsible for repairing, deepening, or re-drilling such wells. Until that permanent water supply is re-established, the operator shall supply the owner with a temporary water supply (e.g., bottled water for drinking, provisions for laundry).

Active pumping and discharge of water shall cease if the dewatering discharge causes flooding conditions to property downstream of the mine site.

See Part X: *Additional Terms and Conditions* #6.

BLASTING:

Blasting is permitted at this site. Blasting activities shall be conducted in accordance with R.89-150.

Pursuant to R.89-150A., the operator shall conduct a pre-blast survey on inhabited structures within one-half mile of any blasting, prior to the commencement of any blasting activities. The survey shall be completed by a third-party consultant and a copy of the report sent to SCDES, the operator, and the landowner. Upon review and approval, SCDES will then grant permission to begin blasting activities.

Pursuant to R.89-150J., the operator shall report any suspected incident of flyrock outside of the permitted area resulting from blasting operations. Pursuant to R.89-150E., the operator shall report if the peak particle velocity exceeds one (1.0) inch per second at the immediate location of any dwelling not owned by the operator (or where a waiver of damage has been submitted to SCDES). These incidents shall be reported to SCDES within 24 hours of the blast, and a written report shall be submitted to SCDES within five (5) business days.

Pursuant to R.89-150H., the operator shall maintain a minimum distance of 250 feet from contiguous property boundaries when conducting blasting. Additionally, pursuant to R.89-150I., the operator shall maintain a minimum distance as shown on the approved mine map between the nearest point of blasting and any structures not owned by the operator (at the time of the completed application) or where a waiver of damage has been submitted to SCDES.

NOISE MONITORING AND CONTROL:

The operator shall use Best Management Practices (BMPs) to minimize noise from the mine site. These noise BMPs shall include, at a minimum, proper maintenance of mufflers on equipment (trucks, trackhoes, pumps, etc.) and consideration of special buffering measures if planning to operate equipment during nighttime hours.

OTHER STATE OR FEDERAL PERMITS:

The operator must obtain, maintain, and update, as appropriate, all necessary State and Federal permits in order to construct and operate the mine.

## Part V: MAPS

The mine site maps were prepared by S&ME. These maps are further identified with the following SCSCDES map numbers and are part of the operating permit:

|              |                       |                          |
|--------------|-----------------------|--------------------------|
| SM-2410-1V1  | Overall Site Plan     | Dated: February 19, 2024 |
| SM-2410-2V1  | Site Disturbances     | Dated: February 19, 2024 |
| SED-2410-1V1 | Sed & Erosion Details | Dated: October 16, 2023  |
| SED-2410-2V1 | Sed & Erosion Details | Dated: October 16, 2023  |
| SED-2410-3V1 | Sed & Erosion Details | Dated: October 16, 2023  |
| SED-2410-4V1 | Sed & Erosion Details | Dated: October 16, 2023  |
| SED-2410-5V1 | Sed & Erosion Details | Dated: October 16, 2023  |

The reclamation map was prepared by S&ME. This map is further identified with the following SCSCDES map number and is part of the operating permit:

|             |                 |                         |
|-------------|-----------------|-------------------------|
| RM-2410-1V1 | Reclamation Map | Dated: October 16, 2023 |
|-------------|-----------------|-------------------------|

## Part VI: PROTECTION OF NATURAL RESOURCES

### MINE SITE AND SURROUNDING AREA:

Prior to mining activities, this site's land use type was undeveloped; the immediate area around this site is rural. The topography of this area is moderately variable (i.e., several hills and dales), with surface elevation ranging from 550-675ft. MSL. Most adjacent properties are undeveloped, with a few rural residences; another granite quarry lies approximately 0.3mi to the south, and the Pacolet River Heritage Preserve lies directly across the Pacolet River, west/southwest of the site.

### PUBLIC SAFETY:

A gate shall be installed at the entrance to the mine site and kept locked during inactive periods. *Warning* and/or *Danger* signs shall be posted around the perimeter of the property. In the future, if determined to be necessary by SCDES, an appropriate fence shall be installed around the affected area.

Operator shall use BMPs to prevent accumulation of sediment/soil on public roads carried by trucks and other vehicles exiting the mine site; any accumulations shall be removed by the operator on a daily basis or more frequently if needed. To reduce the potential of trackout on public roads, the operator shall construct a paved road that extends the width of the haul road and stretches a minimum of one hundred (100) feet in length.

The operator shall establish a protected area or establish procedures to minimize fuel spillage or incidental spillage of other petroleum products during storage, refueling of equipment or in the performance of routine maintenance on equipment. Contaminated materials resulting from contact with petroleum products shall be removed from the site and disposed of properly to prevent contamination to ground and surface water resources.

To maintain stable mine walls, the unconsolidated saprolite shall be sloped to a stable configuration no steeper than 2H:1V during active mining and 3H:1V for final reclamation. Per the Mine Safety Health Administration (MSHA) requirements, the hard rock pit walls shall be benched to maintain stability and provide safety.

### PUBLICLY-OWNED PARKS, FORESTS, OR RECREATION AREAS:

The Pacolet River flows along the western and southern boundaries of the site, and the Pacolet River Heritage Preserve is located southwest of the site, across the Pacolet River. The operator shall observe a 200ft undisturbed buffer between all mining activities and the Pacolet River, as depicted on the mine map. The operator will comply with NPDES permit requirements and Air Construction and Operating permits to prevent any adverse effects on the Pacolet River and Pacolet River Heritage Preserve.

WETLANDS AND SURFACE WATER AREAS:

There are several unnamed tributaries, associated ephemeral drainages, and wetlands within the site's boundaries. These tributaries flow northeast to southwest through the site to the Pacolet River which borders the western and southern boundaries of the site. See Part X: *Additional Terms and Conditions #2 & #3*.

The operator shall comply with the NPDES General Permit for Non-Metallic Mineral Mining and Stormwater Pollution Prevention Plan developed for the mine.

SIGNIFICANT CULTURAL OR HISTORICAL SITES:

A Cultural Resources Reconnaissance Survey was conducted by a third-party consulting firm on behalf of the operator. The report identified twenty-five archaeological sites within areas planned to be affected by mine development. These sites have been evaluated for eligibility for listing in the National Register of Historic Places (NRHP); three historic resources or structures are eligible for listing or are listed in the NRHP (Sites 38SP0014; 38SP0020; 38SP0052). Lee Cemetery is also located within the site boundaries. The State Historical Preservation Office (SHPO) has reviewed the cultural resources report and concurs with the operator's proposed methods to protect these sites. See Part X: *Additional Terms and Conditions #8*.

If archaeological materials are encountered prior to or during the construction of mine facilities or during mining, the S.C. Department of Archives and History and SCDES should be notified immediately. Archaeological materials consist of any items, fifty years or older, which were made or used by humans. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, oyster shell, worked wood, bone and stone, metal and glass objects, human skeletal remains, and concentrations of charcoal and stones below the ground surface. These materials may be present on the ground surface and/or under the surface of the ground.

WILDLIFE:

Common wildlife typical to this area can be found in and around this site. The tricolored bat, proposed for listing as an endangered species, has a winter hibernaculum just outside the northwest permit boundary. No other threatened or endangered species are believed to inhabit the site. See Part X: *Additional Terms and Conditions #7*.

VISUAL SCREEN:

To appropriately screen the operation from view, the operator shall maintain a minimum 50ft. undisturbed buffer between mining activity and all property lines, as shown on the mine map. A vegetated earthen berm shall be constructed and maintained on portions of the north and east boundaries of the plant and facilities area as shown on the mine map.

ACID WATER GENERATION:

Acid water is not anticipated to be generated from the oxidation of existing minerals currently found on this site.

AIR QUALITY:

The mine operator will use appropriate measures (e.g. water truck, dust suppressants) to control fugitive dust created by moving equipment along haul roads. The operator, where feasible, shall establish vegetation in non-active mine areas barren of vegetation to stabilize the soil and reduce potential for wind erosion and dust emissions.

**Part VII: STANDARD CONDITIONS OF MINE OPERATING PERMIT**

SURVEY MONUMENTS:

In accordance to R.89-130, the operator shall install and maintain the two required permanent survey monuments, or control points, within the permitted area as shown on the mine site map. At the discretion of SCDES, the operator may be required to mark the area to be affected with flagging or other appropriate measures.

**RIGHT OF ENTRY:**

Pursuant to Section 48-20-130 and R.89-240, the operator shall grant SCDES and/or duly appointed representatives access to the permitted area for inspection to determine whether the operator has complied with the reclamation plan, the requirements of this chapter, rules and regulations promulgated hereunder, and any terms and conditions of this permit.

**RECORDS RETENTION:**

All records are to be maintained through additional terms and conditions of this permit or by regulations. Records shall be kept on site or at the office identified for receipt of official mail and open for inspection during normal business hours. The records shall be maintained for a minimum of three (3) years or as specified by SCDES. The operator shall furnish copies of the records upon request to SCDES.

**PERMIT MODIFICATIONS:**

Pursuant to Section 48-20-80, the operator may modify the permit and/or *Reclamation Plan* upon approval by SCDES. Requests for permit and/or *Reclamation Plan* modifications may be made to SCDES on Form MR-1300. The operator shall submit any requested supporting data for consideration during SCDES's evaluation of the modification request. If a modification request is determined to be substantial by SCDES, the modification request will be public noticed pursuant to R.89-100 and a modification fee will be required as specified in R.89-340. If SCDES determines activities proposed under the *Reclamation Plan* and other terms and conditions of the permit are failing to achieve the purpose and requirements of the S.C. Mining Act and Regulations, SCDES shall notify the operator of its intentions to modify the permit and/or *Reclamation Plan* pursuant to Section 48-20-150.

**TRANSFER OF PERMIT:**

Pursuant to Section 48-20-70, this permit may be transferred to another responsible party. The transfer of the permit must be conducted in accordance with R.89-230. The transferor of the permit will remain liable for all reclamation obligations until all required documents, plans, and the replacement reclamation bond have been submitted and approved by SCDES. The transfer will be considered complete when all parties have received notification by certified letters of the approval of the transfer by SCDES.

**DURATION OF MINE OPERATING PERMIT:**

In accordance with Section 48-20-60, this Mine Operating Permit will remain valid unless this permit terminates as set forth in R.89-270 or is revoked in accordance with Section 48-20-160 and R.89-280. The proposed anticipated mining completion date is shown on the *Schedule for Conservation and Reclamation Practices* in the *Reclamation Plan*.

Pursuant to R.89-80(B), the operator shall conduct reclamation simultaneously with mining whenever feasible. Reclamation shall be initiated at the earliest practicable time, but no later than 180 days following termination of mining of any segment of the mine, and shall be completed within two years after completion or termination of mining on any segment of the mine.

**Part VIII: ENFORCEMENT ACTIONS**

Pursuant to Section 48-20-30 of the S.C. Mining Act, "SCDES has ultimate authority, subject to the appeal provisions of this chapter, over all mining, as defined in this chapter, and the provisions of the chapter regulating and controlling such activity." This allows SCDES to assist, cooperate with, or supersede other State agencies in taking enforcement action on violations of the State Regulations or violations of the S.C. Mining Act to ensure the purposes of this Act are enforced.

**COMPLIANCE:** The operator shall comply at all times with all conditions of this mine operating permit. Non-compliance with this mining permit, statute, or regulations could lead to permit revocation and bond forfeiture pursuant to Sections 48-20-160 and 48-20-170 or other enforcement action allowed by law.

Compliance with the Mine Operating Permit requires the operator to conduct the mining operation as described in the approved *Application for a Mine Operating Permit*. Variance from the *Application for a Mine Operating Permit*, this permit, statute or regulation, without first receiving SCDES approval, shall be deemed non-compliance with the permit.

An operator or official representative of the mine operator who willfully violates the provisions of the S.C. Mining Act, rules and regulations, or willfully misrepresents any fact in any action taken pursuant to this chapter or willfully gives false information in any application or report required by this chapter shall be deemed guilty of a misdemeanor and, upon conviction, shall be fined not less than one hundred dollars nor more than one thousand dollars for each offense. Each day of continued violation after written notification shall be considered a separate offense.

The operator is responsible for all mining activity on the permitted mine site.

## **Part IX: REPORTS**

### ANNUAL RECLAMATION REPORTS:

The operator shall comply with Section 48-20-120 and Regulation 89-210 and submit an *Annual Reclamation Report* on Form MR-1100 as supplied by SCDES. The form for the report will be made available to the operator electronically. The operator should receive access to the report form from SCDES by July 1 of each year; however, the operator is ultimately responsible for obtaining the *Annual Reclamation Report* form and is not excused from penalty fees for failure to submit the report on time.

The Annual Operating Fee is a part of the *Annual Reclamation Report*. Failure to submit a complete *Annual Reclamation Report* and fee, in accordance with Section 48-20-120 and R.89-340, will result in a late penalty payment. The *Annual Reclamation Report* and Annual Operating Fee are required if there is any permitted land not fully reclaimed and released by SCDES by June 30 of *each* year.

### SPECIAL REPORTS:

SCDES may at any time request information, data, or explanations from the operator as to conditions relating to the permitted mine site. Such requests from SCDES shall be made in writing to the operator with an appropriate time frame stated for the submittal of the requested information to SCDES. The operator must produce the information requested within the timeframe specified by SCDES.

## **Part X: ADDITIONAL TERMS AND CONDITIONS**

1. Temporary or permanent placement of refuse and debris (e.g., concrete, brick, asphalt) from off-site locations is prohibited without approval by SCDES. Topsoil fill approved by SCDES may be brought in from off-site sources only for the purposes of mine land reclamation.
2. The operator shall maintain a minimum 50ft. undisturbed buffer between all land disturbance activity and any USACE jurisdictional wetlands and/or Waters of the US/State. This buffer shall be permanently flagged prior to the initiation of any mine activity. The flags shall be maintained throughout the active mine operation of the site. The operator is allowed to discharge accumulated stormwater—that meets NPDES permit limits—into wetlands through a regulated NPDES outfall.
3. Impacts to jurisdictional wetlands and/or Waters of the US/State shall be approved by the U.S. Army Corps of Engineers and SCDES. Approval shall be submitted to the Mining and Reclamation Program prior to any disturbance.
4. Prior to expanding mine activity into the Phase 2 or Phase 3 Pit areas, and the East Overburden Storage area, the operator shall submit a detailed sediment and erosion control plan, a revised reclamation cost estimate, and financial assurance to SCDES for approval.

5. A revised mine map, reclamation map, and reclamation schedule shall be submitted and approved by SCDES prior to initiating any mining activity in Future Reserves.

6. Prior to any mining activities, a minimum of four (4) groundwater monitoring wells shall be constructed in the locations delineated in the submitted Groundwater Monitoring Plan (Appendix B). These monitoring wells shall be constructed prior to the initiation of dewatering activities.

No less than one year prior to initiating mining activity in Phase 2, the operator shall construct an additional monitoring well in the Phase 2 area.

The monitoring wells shall be installed by a certified well driller in accordance with R.61-71: *Well Standards and Regulations*. The surveyed elevation of the measuring point, relative to an established benchmark, must be submitted with the driller/geologist's log for each well.

Groundwater monitoring wells shall be measured monthly. Groundwater elevations shall be normalized to mean sea level, and hydrographs plotted for each monitoring well. This data shall be submitted quarterly to the Division of Mining and Solid Waste Management by the 28<sup>th</sup> day of the month following the end of the quarter. The report should include a record of daily precipitation measurements, with monthly rainfall totals graphed to facilitate comparison to well hydrographs.

7. Due to the presence of the tricolored bat, the operator shall maintain a 0.25mi undisturbed buffer from the known hibernaculum located in an abandoned mine outside the northwest boundary of the site. In addition, the operator shall refrain from removing trees during the tricolored bat's pup season (April 15 through July 31). This buffer shall be flagged for the life of the mine.

8. The operator shall observe a 50ft undisturbed buffer and a 50ft protective buffer around each of the three archaeological sites within the permitted boundary, and a 100ft undisturbed buffer around Lee Cemetery, as depicted on the mine map. The protective buffers allow for placement of material but exclude excavation. The buffers shall be flagged for the life of the mine. In addition, the operator shall install a fence around each of the archaeological sites.

# APPENDIX A

## MODIFICATIONS TO MINE PERMIT I-002410

| NUMBER | DATE    | <b>DESCRIPTION OF MODIFICATION</b><br>(PA= Permitted Acreage; AA= Affected, Bonded Acreage; FR= Reserves Acreage, B= Buffer Acreage) |
|--------|---------|--|
| Issued | 7/11/24 | PA = 443.1ac., AA = 240.7ac., FR = 92.1ac., B = 110.3ac.<br>Permit issued.   |
|        |         |  |
|        |         |  |
|        |         |  |
|        |         |  |
|        |         |  |



# **MR-500 Reclamation Plan for an Individual Mine Operating Permit**

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## **Environmental Protection**

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### **Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation.**

The mine permit area is in a rural area with land cover consisting of hardwood and pine forests for managed timber. Within the permitted land, 105.2 acres will be undisturbed buffer to provide additional protections to adjacent properties, creeks and other sensitive areas. The protected species assessment by S&ME did not find endangered species or sensitive habitats on-site.

The River Bend Heritage Preserve is located southwest of the mine permit area on the opposite side of the Pacolet River. The mine permit area has preserved sites of soap stone outcrops mined by pre-historic native Americans. These soapstone sites are listed on the National Registry of Historic Places (NRHP) and will be avoided and protected with 40-foot buffers. Refer to S&ME's Cultural Resources Reconnaissance Survey for the River Bend Quarry site for details.

### **Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources.**

Proper reclamation of the mine site will include stabilizing all overburden storage piles with vegetation, removal of mine equipment both mobile and stationary, clean-up of any spillage of petroleum products, and removal of scrap material. Once mining is terminated, groundwater levels will rebound to approximate original levels. The mining process will not use chemicals in the mining or processing of crushed stone; consequently, there is no potential for chemical contamination to groundwater resources.

### **Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.**

The soapstone quarries mined by native americans will be avoided and protected by 50-foot undisturbed buffer; 50-foot preservation buffer and fence encircling the protected sites with signs designating the areas as a protected resource as approved by State Historic Preservation Office. Additionally, a 100-foot buffer around the Lee Cemetery will be observed to protect any unmarked grave sites.

### **Describe method to prevent or eliminate conditions that could be hazardous to animal or fish life in or adjacent to the permitted area.**

Proper reclamation of the mine site will include stabilizing all overburden storage piles with vegetation, removal of mine equipment both mobile and stationary, cleanup of any spillage of petroleum products, and removal of scrap material. Setbacks, established buffers and soil stabilization along stream banks will provide protection to fisheries in nearby streams. Establishing 3:1 slopes around the pit and overburden storage areas will remove hazardous conditions for the public and indigenous animal populations. On final reclamation, a fence or other suitable and approved barrier around the pit will be constructed. The undisturbed buffer will provide wildlife corridors and natural habitat.

### **Describe how applicant will comply with State air quality and water quality standards as established by the S.C. Department of Health and Environmental Control.**

To operate the mine and processing plant, the mine operator will obtain the Air Quality Construction Permit and the Air Quality Operating Permit. These permits set the quantity of air particulates that can be emitted to be protective of air quality standards.

With the termination of mining all mobile mine equipment and processing plant equipment will be removed from site. Once the process plant equipment is removed from site, the Air Quality Operating Permit can be terminated. Stone stockpiles, fines and barren soils, (potential sources of dust after mining), will be either removed (stone stockpiles) or stabilized with vegetation to eliminate windblown dust.

Discharges from the quarry will qualify for the NPDES General Permit for Discharges Associated with Nonmetal Mineral Mining Facilities. These standards are set to be protective of aquatic life and human health and safety. Prior to discharge into waters of the State, stormwater and groundwater will be treated by appropriated sized and designed sediment basins. Upon final reclamation, vegetation will be established to control erosion and protect water quality.

## **Reclamation of Affected Area**

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### **State useful purpose(s) the affected land is being proposed for reclamation.**

Grassland  
Lake or Pond

## Feasibility Documentation Attachment

NONE PROVIDED

### Comment

Not applicable -- Typical reclamation practices to be used to establish grassland of mined land and to established a pond within the mined quarry. Hydrogeologic studies indicate sufficient groundwater to establish a pond within the quarry.

## Will the final maximum surface gradient (slope) in soil, sand, or other unconsolidated materials be steeper than 3

Horizontal : 1 Vertical (18 degrees or 33 percent)?

No

## How will the final slopes in unconsolidated material be accomplished?

The overburden stripped to expose granite will be placed in overburden storage areas or earthen berms. The final overburden slope around the pit perimeter will be cut slopes at a 3:1 grade for stability and safety. Backfilling is not necessary within the pit to achieve final 3:1 slopes.

If the slope will be by backfilling, demonstrate that

there is adequate material to accomplish the stated final gradient. If gradient is to be achieved by bringing in material from outside the permitted area, state the nature of the material and approximate quantities. If the gradient is to be achieved by grading, show that there is adequate area for grading to achieve gradient (i.e., adequate distance between the property line and edge of highwall).

## Final slopes calculations or other supporting information attachment(s)

NONE PROVIDED

### Comment

To establish final 3:1 slopes in the unconsolidated overburden in the quarry perimeter does not require backfilling. All 3:1 slopes along the quarry perimeter will be cut slopes.

## Describe the plan for revegetation or other surface treatment of affected area(s). The revegetation plan shall include but not be limited to the following: (a) planned soil test; (b) site preparation and fertilization; (c) seed or plant selection; (d) rate of seeding or amount of planting per acre; (e) maintenance.

### (a) Planned Soil Test

Soil analysis will be performed to determine the need for pH adjustment and nutrients. Different soils will be sampled separately. Soil samples will be taken in advance of planting. Soil samples will be submitted to the cooperative NRCS or Clemson extension services or commercial lab for analysis.

### (b) Site Preparation & fertilization

Grading, shaping, and other earth moving will be completed to the extent necessary to permit seeding or planting. Tillage shall be the minimum needed to break compaction; incorporate fertilizers when incorporation of them is required; and provide enough loose soil to cover the seed when seed are to be drilled or covered by harrowing or cultipacking.

Soil amendments will be added as necessary to promote conditions suitable for plant growth (i.e., organic matter). Agricultural limestone will be uniformly spread and incorporated as soon as possible to allow for the pH adjustment. Incorporation also benefits relatively immobile nutrients such as phosphorus when needed. Type and rate of fertilization will be determined based upon soil analysis.

### (c) & (d) Seed or Plant Selection and Seeding Rates

Plants shall be selected based on species characteristics, site and soil conditions, the planned land use and maintenance of the area, the time of year the planting is made, and the needs and desires of the land user. Availability of seed will be one of the criteria for plant selection.

In addition to the below seeding schedule and grass varieties, included are native seed mixes for steep slopes, strip mines and native habitats for strip mines from Ernst Seeds for possible use in reclamation. These seed mixes or similar seed mixes developed by the mine operator will be considered for use based upon locations for planting within the mine, availability and site conditions .

Piedmont

Spring Seeding Mix



Grass or legume Optimum  
Planting Date Seeding Rate  
(# per acre) Comments  
Browntop millet April- August 10 Serve as short term cover  
Bermudagrass (common)  
or  
Coastal Panicgrass March-June

February - June 4

20 broadcast, 12 drilled Hulled (chaff removed)

Pure Live Seed (PLS)  
Annual lespedeza (Kobe) March - July 10 Use scarified seed and inoculate

Piedmont  
Fall Seeding Mix  
Grass or legume Optimum  
Planting Date Seeding Rate  
(# per acre) Comments  
Rye (Abruzzi) or Oats Sept-Dec. 10 Serve as short term cover  
Bermudagrass (common)  
or  
Switchgrass Aug-Nov

Oct-May 8

10 Unhulled (in chaff)  
Crimson clover (optional) Aug - Dec 10 Serve as short term cover, inoculate

(e) Maintenance

The revegetated site will be maintained through periodic inspections to detect areas with significant erosion, seed germination failure or significant plant die off. Additionally, site will be inspected after significant storm events to detect wash outs or gullies in planted areas. Damaged areas will be repaired where necessary by fixing erosion damage and reseeding as necessary.

**Does the possibility exist for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit has discharge limitation parameters other than pH and Total Suspended Solids (TSS); (c) chemically treated tailings or stockpiles (excludes fertilizer or lime for revegetation purposes)?**

No

**Describe the methods to control contaminants and permanently dispose any mine waste. This includes any soil, rock (overburden), mineral, scrap, tailings, fines, slimes, or other material directly connected with the mining, cleaning, and preparation of mineral substances mined. It also includes all waste material deposited on or in the permit area from any source.**

Fines created from processing granite are not "clay slime"; thus, they will not create an unstable sediment mass in settling ponds. These fines will accumulate in the clarification ponds of the wash circuit and periodically removed and either sold as a by-product or placed in overburden storage.

**Describe the method of reclaiming settling and/or sediment ponds.**

Final reclamation of the settling ponds will be determined near the end of mining. Depending on surrounding land uses, settling ponds will either be graded over and revegetated or left as a detention pond to manage stormwater runoff.

**Describe the method of restoring or establishing stream channels, stream banks, and site drainage to a condition to minimize erosion, siltation, and other pollution.**

Impacts to streams will be permitted and mitigate under the Corps of Engineers permit before mining activities disturb the wetlands or wetland buffers. Where a 404 permit is issued to mine through streams, the mined streams channels will not be restored to original grade. The impact to that stream will be mitigated to comply with the Corps' standards.

**What are the maintenance plans to insure that the reclamation practices established on the affected land will not deteriorate before released by the Department?**

Areas that have undergone final reclamation practices will be maintained through periodic inspections and conducting any necessary repairs in a timely manner.

**For final reclamation, submit information about practices to provide for safety to persons and to adjoining property in all excavations. Identify areas of potential danger (vertical walls, unstable slopes, unstable surface on clay slimes, etc.) and provide appropriate safety provisions.**

Prior to commencing final reclamation activities, the operator intends to conduct both market, community, and zoning investigations to determine the best and proper utilization for post mine development. This shall include continued focus to provide safety to persons and adjoining areas. The outer perimeter of the reclaimed pit will be secured by fencing or other approved barrier.

The following mine segments will be reclaimed to provide safety to persons and adjoining areas.

Highwalls -- The overburden will be sloped to a 3:1 gradient around the pit perimeter. Due to the sloped overburden and water filled pit, exposure of rock highwalls will be limited.

Unstable Slopes -- All overburden storage areas will be sloped to 3h:1v gradient and vegetated. Soils placed to a 3:1 gradient are stable and are not prone to landslides.

**What provisions will be taken to prevent noxious, odious, or foul pools of water from collecting and remaining on the mined area? For mines to be reclaimed as lakes or ponds, provide supporting information that a minimum water depth of four (4) feet on at least fifty percent (50%) of the pond surface area can be maintained.**

The final pit will be reclaimed as a lake and will meet the above referenced regulatory requirement for sufficient depth. Areas of the affected land not reclaimed to ponds will be properly graded to prevent unwanted pools of water from collecting and prevent foul water from forming.

**Identify any structures (e.g. buildings, roads) that are proposed to remain as part of final reclamation. Provide justification for leaving any structures.**

The office shop building and other support buildings may be left upon final reclamation for use by future tenants on the property. Also, some of the haul roads may be left to provide access to the property. All areas will be sloped and stabilized to prevent erosion and control sediment.

**Attach a copy of a map of the area (referred to as the RECLAMATION MAP) that shows the reclamation practices and conservation practices to be implemented. The following should be shown (A through P - see below):**

[RIVER BEND QUARRY -Conceptural Reclamation Map 10-16-2023; rev 2-19-24.pdf - 02/19/2024 11:52 AM](#)

[ERNMX-111-MixSheet Native Habitat for Strip Mines Mix.pdf - 03/28/2024 02:15 PM](#)

**Comment**

Included with the revegetation and planning schedule for consideration are native seed mixes for possible use for steep slopes, strip mines and native habitats for strip mines from Ernst Seeds. These seed mixes or similar seed mixes developed by the mine operator will be considered for use based upon locations for planting within the mine, availability and site conditions.

- A. The outline of the proposed final limits of the excavation during the number of years for which the permit is requested.
- B. The approximate final surface gradient(s) and contour(s) of the area to be reclaimed. This would include the sides and bottoms of mines reclaimed ponds and lakes.
- C. The outline of the tailings disposal area.
- D. The outline of disposal areas for spoil and refuse (exclusive of tailings ponds).
- E. The approximate location of the mean shore line of any impoundment or water body and inlet and/or outlet structures which will remain upon final reclamation.
- F. The approximate locations of access roads, haul roads, ramps or buildings which will remain upon final reclamation.
- G. The approximate locations of various vegetative treatments.
- H. The proposed locations of re-established streams, ditches or drainage channels to provide for site drainage.
- I. The proposed locations of diversions, terraces, silt fences, brush barriers or other Best Management Practices to be used for preventing or controlling erosion and off-site siltation.

J. Proposed locations of the measures to provide safety to persons and adjoining property.

K. Segments of the mine that can be mined and reclaimed as an ongoing basis.

L. The boundaries of the permitted area.

M. The boundaries of the affected area for the anticipated life of the mine.

N. The boundaries of the 100-year floodplain, where appropriate.

O. Identify sections of mine where the final surface gradient will be achieved by grading and/or backfilling.

P. A legend showing the name of the applicant, the name of the proposed mine, the north arrow, the county, the scale, the date of preparation and the name and title of the person who prepared the map.

THE REQUIRED RECLAMATION MAP SHALL HAVE A NEAT, LEGIBLE APPEARANCE AND BE OF SUFFICIENT SCALE TO CLEARLY SHOW THE REQUIRED INFORMATION LISTED ABOVE. THE BASE FOR THE MAP SHALL BE EITHER A SPECIALLY PREPARED LINE DRAWING, AERIAL PHOTOGRAPH, ENLARGED USGS TOPOGRAPHIC MAP OR A RECENTLY PREPARED PLAT. RECLAMATION MAP SHOULD BE THE SAME SCALE USED FOR THE SITE MAP.



## Schedule for Implementation of Conservation and Reclamation Practices

As stated in Section 48-20-90 of the S.C. Mining Act, reclamation activities, to the extent feasible, must be conducted simultaneously with mining operations. Identify which areas or segments of the mine are not feasible to reclaim simultaneously with mining. Provide reasons why reclamation can not proceed simultaneously with mining in these areas.

The open pit of the rock quarry operations cannot be mined and reclaimed in segments. Once the pit expands to a terminal wall, the overburden can be sloped and revegetated.

Overburden storage areas will be reclaimed in sections as soon as feasible.

### Schedule for Implementing Conservation and Reclamation Practices

| Conservation & Reclamation Practices                                    | Segment # or Area                      | Planned Amount | Planned Year | *Applied Amount | *Applied Year | Notes         |
|---|--|----------------|--------------|-----------------|---------------|---------------|
| Mark wetland & property line buffers along access road & berms          | PLB-2                                  | 6.0 AC         | 2025         |                 |               | NONE PROVIDED |
| Mark wetland buffers for Pit Phase 1                                    | F, D, E, G, G◆, WC, WD & Pacolet River | 17.5 AC        | 2025         |                 |               | NONE PROVIDED |
| Mark wetland buffer along process plant & Cemetery                      | J, J◆, K, K◆ & C-1                     | 5.3 AC         | 2025         |                 |               | NONE PROVIDED |
| Construct groundwater monitoring wells                                  | MW22-01A, MW22-02, MW-22-03, MW-22-04  | 4 WELLS        | 2023         |                 |               | NONE PROVIDED |
| Construct Sediment Basins and associated diversion channels Pit Phase 1 | P-SB-1 & P-SB-2                        | 2.0 AC         | 2025/26      |                 |               | NONE PROVIDED |

| Conservation & Reclamation Practices  | Segment # or Area                | Planned Amount    | Planned Year  | *Applied Amount | *Applied Year | Notes  |
|---|----------------------------------|-------------------|---------------|-----------------|---------------|--|
| Construct berm, slope and revegetate  | Process Plant & Hammett Grove Rd | 1.3 AC            | 2025/26       |                 |               | NONE PROVIDED  |
| Construct Sediment Basins and associated diversion channels in EOB-2                | E-SB-1 & E-SB-2                  | 1.9 AC            | 2026          |                 |               | NONE PROVIDED  |
| Develop of overburden storage ◆ grading to 3:1 slopes and revegetating              | EOB-2                            | 39.1 AC           | 2026          |                 |               | BEGIN OVERBURDEN STORAGE IN 2026 BUT UNDETERMINED WHEN FINAL RECLAMATION WILL BE COMPLETED |
| Deploy silt fencing and/or other sediment control BMPs                              | WHERE NECESSARY                  | NONE PROVIDED     | NONE PROVIDED |                 |               | WHEN NECESSARY   |
| Slope overburden to 3:1 slope along terminal pit wall and revegetate                | PIT PHASE 1                      | 13.2 AC           | TBD           |                 |               | When and where feasible  |
| Prior to mining, jurisdictional streams will be permitted by the Corps of Engineers | PIT PHASE 2                      | NONE PROVIDED     | AT ALL TIMES  |                 |               | NONE PROVIDED  |
| Route stormwater into pit   | PIT PHASES 1 & 2                 | NONE PROVIDED     | NONE PROVIDED |                 |               | NONE PROVIDED  |
| Slope overburden to 3:1 slope along terminal pit wall and revegetate                | PIT PHASE 2                      | 12.4 AC           | TBD           |                 |               | When and where feasible  |
| Develop of overburden storage ◆ grading to 3:1 slopes and revegetate                | WOB-1                            | 42.6 AC           | TBD           |                 |               | NONE PROVIDED  |
| Modify permit to relocate process plant and develop Phase 3 Pit                     | PIT PHASE 3                      | 43.4 AC           | TBD           |                 |               | NONE PROVIDED  |
| Modify permit to shift future impacts area to affected land                         | FD-1, FD-2, FD-3, FD-4           | 97.4 AC           | TBD           |                 |               | NONE PROVIDED  |
| Install perimeter fence or other suitable barrier around final pit                  | PIT                              | 18,000 LF         | END OF MINING |                 |               | NONE PROVIDED  |
| Remove mine equipment, process plant equipment, and stone stockpiles                | PROCESS PLANT                    | 43.3 AC           | END OF MINING |                 |               | NONE PROVIDED  |
| Monitor reclamation for sustainability  | ALL                              | 2 GROWING SEASONS | NONE PROVIDED |                 |               | Until reclamation is approved and reclamation bond released by DHEC                        |
| Mark 50-foot undisturbed buffers, 50-preservation buffers & fence                   | CHR1, CHR2 & CHR3                | 15.7 AC           | 2025          |                 |               | Includes all cultural & historic resources within permitted area                           |

\*Applied fields to be completed by department





2016 AYRSLEY TOWN BLVD  
SUITE 2-A  
CHARLOTTE, NC 28273  
(704) 523-4726  
ENGINEERING FIRM  
LICENSE NUMBER: E-0176

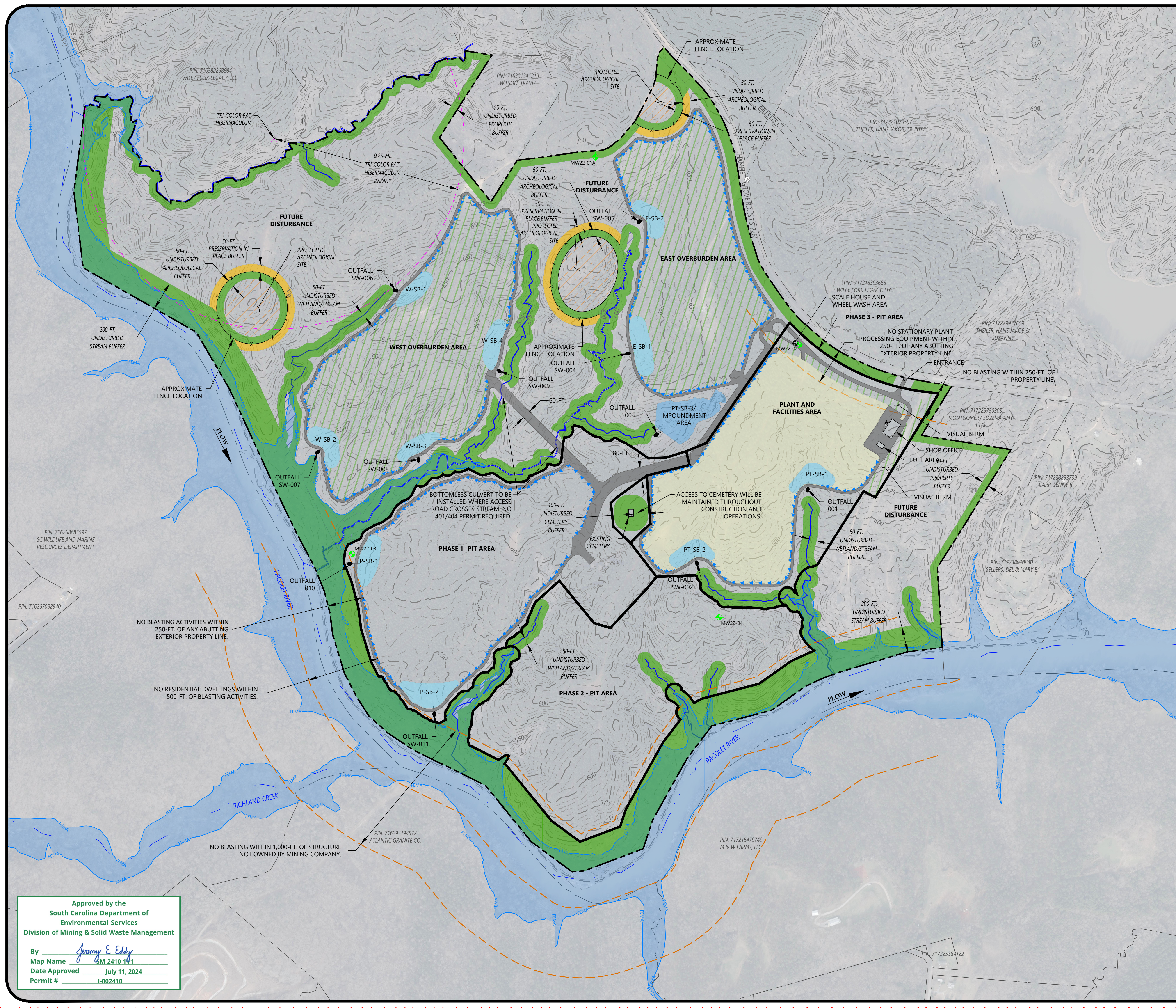
**RIVER  
BEND  
AGGREGATES,  
LLC**



| NO. | DATE       | DESCRIPTION                        | BY | CHK | APP |
|-----|------------|------------------------------------|----|-----|-----|
| 1   | 02/19/2024 | PRESERVATION IN PLACE BUFFER ADDED | AW | CHR | CIS |
| 2   | 10/16/2023 | ISSUED FOR CLIENT REVIEW           | AW | CHR | CIS |

**OVERALL SITE PLAN**  
RIVER BEND QUARRY SITE - CONCEPTUAL PLAN  
RIVER BEND AGGREGATES, LLC  
SPARTANBURG COUNTY, SOUTH CAROLINA

|                |           |
|----------------|-----------|
| PROJECT NUMBER | 22610504B |
| DRAWING NUMBER | 2         |
|                | 9         |



**LEGEND**

**EXISTING FEATURES**

- 420 --- EXISTING GRADE CONTOUR (25 FEET) (REF. 1)
- --- EXISTING GRADE CONTOUR (5 FEET) (REF. 1)
- --- PROPERTY LINE (REF. 2)
- --- PERMIT BOUNDARY
- --- PIT PHASE BOUNDARY
- --- MINING SETBACK (NOTE 1)
- --- STREAMS (NOTE 2)
- --- STREAM CENTERLINES (REF. 3)
- --- WETLANDS (NOTE 2)
- --- BUFFERS (NOTE 3)
- --- PRESERVATION IN PLACE BUFFER (NOTE 4)
- --- VEGETATED BERMS/BUFFER
- --- FEMA 100-YEAR FLOODPLAIN (REF. 4)
- --- PROTECTED ARCHEOLOGICAL SITE
- --- WATER LINE
- ⊙ --- WATER MANHOLE
- --- TRI-COLOR BAT HIBERNACULUM RADIUS (NOTE 6)

**PROPOSED FEATURES**

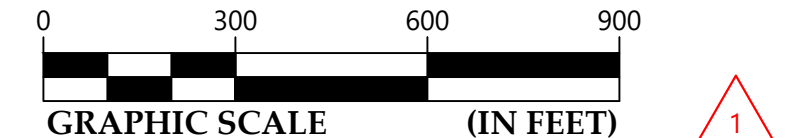
- --- SEDIMENT BASIN
- --- PRELIMINARY LOCATION OF OUTFALL AND PLUNGE POOL
- --- ACCESS/HAUL ROAD
- --- STORMWATER CHANNEL
- --- LONG TERM MONITORING WELL
- --- FENCE

**GENERAL NOTES:**

- PER SECTION 6.X.3 OF THE TOWN OF PACOLET ZONING ORDINANCE, 250-FT. SETBACK REQUIRED FOR ALL STATIONARY PLANT PROCESSING EQUIPMENT FROM ANY ABUTTING EXTERIOR PROPERTY LINE. PER SECTION 6.X.5 OF THE TOWN OF PACOLET ZONING ORDINANCE, 250-FT. SETBACK REQUIRED FOR ALL BLASTING ACTIVITIES FROM ANY ABUTTING EXTERIOR PROPERTY LINE AND 500-FT. SETBACK TO ANY RESIDENTIAL DWELLING.
- S&ME DELINEATED ON-SITE WATER FEATURES IN JANUARY 2023.
- THE PROPERTY BUFFERS ON THE FRONT AND SIDES OF THE PROJECT ARE 50-FT. THE PROPERTY BUFFER ALONG THE REAR OF THE PROJECT IS 200-FT. THE STREAM AND WETLAND BUFFERS ARE 50-FT. THE ARCHEOLOGICAL SITE BUFFERS TOTAL 100-FT., THE FIRST 50-FT. CLOSEST TO THE SITE IS AN UNDISTURBED BUFFER, THE SECOND 50-FT. FURTHEST FROM THE SITE IS A PRESERVATION IN PLACE BUFFER, THE CEMETERY BUFFER IS 100-FT.
- NO EXCAVATION TO OCCUR WITHIN PRESERVATION IN PLACE BUFFER.
- PER REGULATION 89-150H OF THE SOUTH CAROLINA CODE SECTION 48-20-210, NO BLASTING MAY OCCUR WITHIN 250-FT. OF PROPERTY BOUNDARIES.
- PER REGULATION 89-150I OF THE SOUTH CAROLINA CODE SECTION 48-20-210, NO BLASTING MAY OCCUR WITHIN 1,000-FT. OF A STRUCTURE NOT OWNED BY THE MINING COMPANY.
- 0.25-MI. RADIUS FROM TRI-COLOR BAT HIBERNACULUM, FUTURE ACTIVITIES WILL BE PERFORMED PER ESA IN CONSULTATION WITH APPROPRIATE AGENCIES.

**REFERENCE:**

- 2013 TOPOGRAPHIC CONTOURS DERIVED FROM SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES (SCDNR) SPATIAL DATA DOWNLOAD TOOL. THIS DIGITAL ELEVATION MODEL (DEM) IN SPARTANBURG COUNTY, SOUTH CAROLINA WAS CONVERTED INTO 1-FOOT CONTOURS USING ESRI ARCGIS SPATIAL ANALYST.
- TAX PARCEL DATA OBTAINED FROM THE SPARTANBURG COUNTY, SOUTH CAROLINA GEOGRAPHIC INFORMATION SYSTEMS (GIS) DEPARTMENTS.
- HYDROLOGY DATA OBTAINED FROM THE NATIONAL HYDROGRAPHY DATASET (NHD).
- FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) 100-YEAR FLOODPLAIN, FLOODWAY, AND BASE FLOOD ELEVATION (BFE) DATA OBTAINED FROM THE FEMA NATIONAL FLOOD HAZARD LAYER (NFHL) DATASET.
- AERIAL ORTHOIMAGERY OBTAINED FROM SOUTH CAROLINA REVENUE AND FISCAL AFFAIRS.

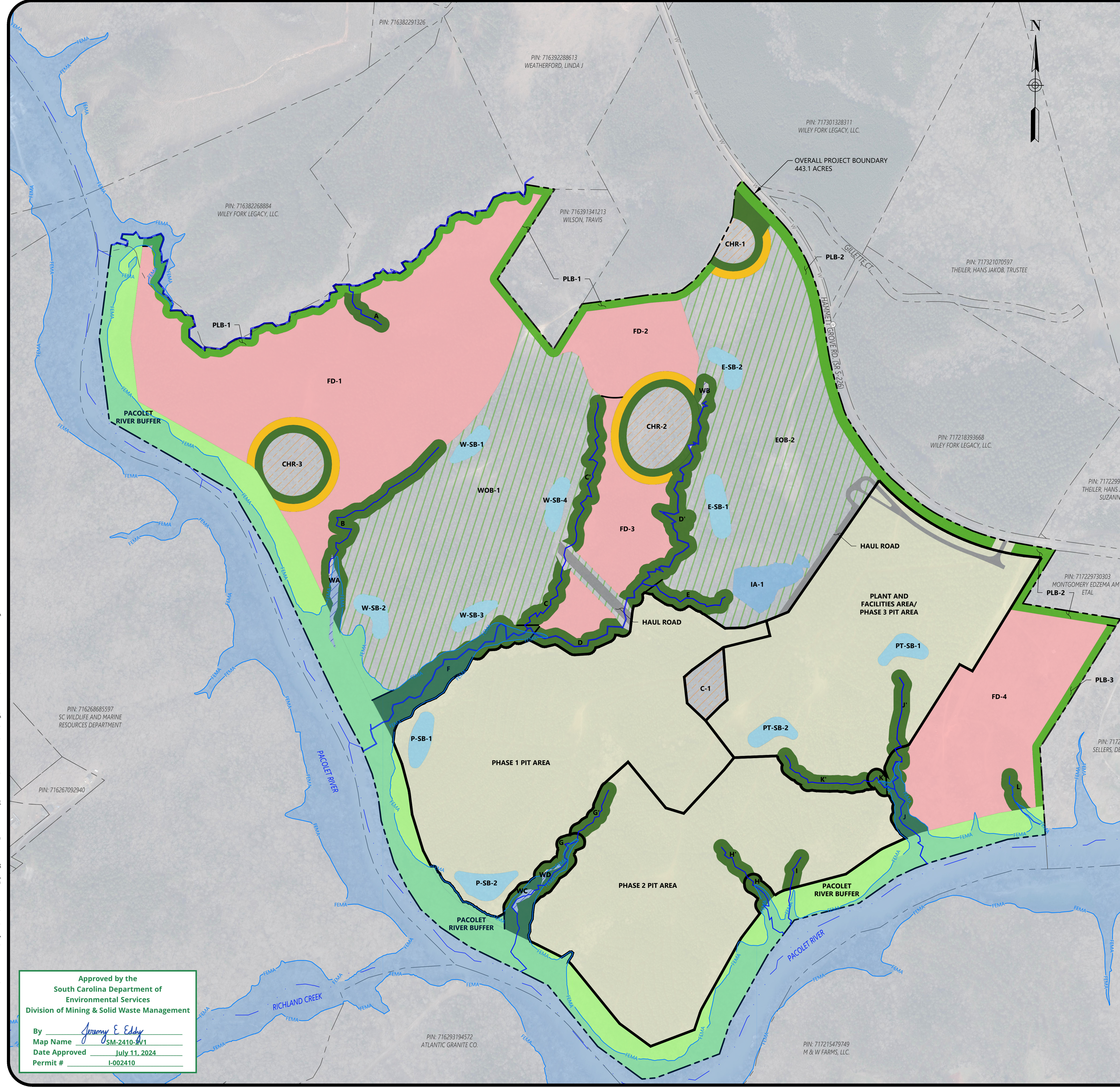


Approved by the  
**South Carolina Department of  
Environmental Services**  
Division of Mining & Solid Waste Management

By Jeremy E. Eddy  
Map Name GM-2410-101  
Date Approved July 11, 2024  
Permit # I-002410

DRAWING PATH: T:\Charlotte-1358\Projects\2024\20240508\_Synergy Materials\Parcel\SC\Env\CAD\Mining SWPPP\Overall\_Site\_Plan.dwg



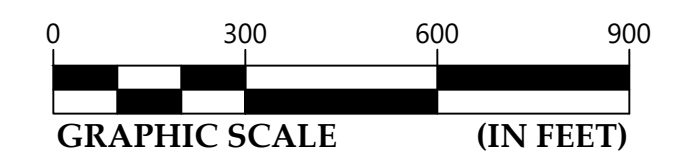



| AFFECTED ACREAGE:                              |          | BUFFER ACREAGE:                              |          |
|--|----------|--|----------|
| <b>PIT AND PLANT AREAS:</b>                    |          |  |          |
| PHASE 1 PIT                                    | 53.5 AC  | PROPERTY LINE BUFFERS:                       |          |
| PHASE 2 PIT                                    | 48.3 AC  | PLB-1  | 7.4 AC   |
| PLANT AND FACILITIES AREA/<br>PHASE 3 PIT AREA | 44.4 AC  | PLB-2  | 5.9 AC   |
|  |          | PLB-3  | 1.5 AC   |
| <b>HAUL ROADS:</b>                             |          |  |          |
| HAUL ROADS (TOTAL)                             | 2.7 AC   | <b>RIVER/STREAM BUFFERS:</b>                 |          |
| <b>OVERBURDEN AREAS:</b>                       |          | PACOLET RIVER BUFFER                         | 46.2 AC  |
| WOB-1  | 42.6 AC  | A  | 0.8 AC   |
| EOB-2  | 38.4 AC  | B  | 3.7 AC   |
|  |          | C  | 1.2 AC   |
|  |          | D  | 2.5 AC   |
|  |          | D'   | 1.6 AC   |
|  |          | D''  | 4.6 AC   |
|  |          | E  | 1.4 AC   |
|  |          | F  | 4.3 AC   |
|  |          | G  | 2.4 AC   |
|  |          | G'   | 1.0 AC   |
|  |          | H  | 0.6 AC   |
|  |          | H'   | 0.8 AC   |
|  |          | I  | 0.6 AC   |
|  |          | J  | 1.7 AC   |
|  |          | J'   | 1.2 AC   |
|  |          | K  | 0.3 AC   |
|  |          | K'   | 1.6 AC   |
|  |          | L  | 0.7 AC   |
| <b>SEDIMENT BASINS:</b>                        |          |  |          |
| PT-SB-1  | 0.8 AC   | <b>WETLANDS:</b>                             |          |
| PT-SB-2  | 0.8 AC   | WA   | 0.5 AC   |
| P-SB-1   | 0.9 AC   | WB   | 0.1 AC   |
| P-SB-2   | 1.1 AC   | WC   | 0.1 AC   |
| W-SB-1   | 0.7 AC   | WD   | 0.1 AC   |
| W-SB-2   | 0.9 AC   |  |          |
| W-SB-3   | 0.7 AC   |  |          |
| W-SB-4   | 0.8 AC   |  |          |
| E-SB-1   | 1.1 AC   |  |          |
| E-SB-2   | 0.8 AC   |  |          |
| <b>IMPOUNDMENT AREA:</b>                       |          |  |          |
| IA-1   | 2.2 AC   | <b>CEMETERY BUFFER:</b>                      |          |
|  |          | C-1  | 1.8 AC   |
| <b>SUBTOTAL</b>                                |          |  |          |
|  | 240.7 AC |  |          |
| <b>FUTURE DISTURBANCE ACREAGE:</b>             |          |  |          |
| <b>FUTURE DISTURBANCE AREAS:</b>               |          |  |          |
| FD-1   | 52.6 AC  | <b>CULTURAL/HISTORICAL RESOURCE BUFFERS:</b> |          |
| FD-2   | 8.3 AC   | CHR-1 (38S90014)                             | 1.1 AC   |
| FD-3   | 9.5 AC   | CHR-1-BUFFER                                 | 1.2 AC   |
| FD-4   | 21.7 AC  | CHR-1 PRESERVATION IN PLACE BUFFER           | 0.6 AC   |
|  |          | CHR-2 (38SP0020)                             | 3.7 AC   |
|  |          | CHR-2-BUFFER                                 | 1.8 AC   |
|  |          | CHR-2 PRESERVATION IN PLACE BUFFER           | 1.5 AC   |
|  |          | CHR-3 (38SP0052)                             | 2.7 AC   |
|  |          | CHR-3-BUFFER                                 | 1.5 AC   |
|  |          | CHR-3 PRESERVATION IN PLACE BUFFER           | 1.6 AC   |
| <b>SUBTOTAL</b>                                |          |  |          |
|  | 92.1 AC  |  | 110.3 AC |
| <b>PARCEL ACREAGE</b>                          |          |  |          |
| <b>INTERNAL PARCELS:</b>                       |          |  |          |
| PIN: 717228279445                              | 13.3 AC  |  |          |
| PIN: 71722900810                               | 0.7 AC   |  |          |
| PIN: 717228004985                              | 5.0 AC   |  |          |
| PIN: 717218902632                              | 8.2 AC   |  |          |
| PIN: 717218517946                              | 2.0 AC   |  |          |
| PIN: 717218393668                              | 48.7 AC  |  |          |
| PIN: 717300506484                              | 1.9 AC   |  |          |
| PIN: 717301328311                              | 361.9 AC |  |          |
| PIN: 716382268884                              | 1.4 AC   |  |          |
| <b>SUBTOTAL</b>                                |          |  |          |
|  | 443.1 AC |  |          |

| EXISTING FEATURES |                                   | PROPOSED FEATURES |                                   |
|-------------------|-----------------------------------|-------------------|-----------------------------------|
| ---               | PROPERTY LINE (REF. 1)            | ---               | AREA BOUNDARY                     |
| ---               | PERMIT BOUNDARY                   | ---               | STREAM/WETLAND BUFFER AREA        |
| ---               | PIT PHASE BOUNDARY                | ---               | PROPERTY BUFFER AREA              |
| ---               | STREAM CENTERLINES (REF. 2)       | ---               | PRESERVATION IN PLACE BUFFER AREA |
| ---               | STREAMS (NOTE 1)                  | ---               | RIVER BUFFER AREA                 |
| ---               | WETLANDS (NOTE 1)                 | ---               | SEDIMENT BASIN                    |
| ---               | FEMA 100-YEAR FLOODPLAIN (REF. 3) | ---               | IMPOUNDMENT AREA                  |
| ---               |                                   | ---               | PLANT/PIT AREA                    |
| ---               |                                   | ---               | HAUL ROAD                         |
| ---               |                                   | ---               | OVERBURDEN AREA                   |
| ---               |                                   | ---               | FUTURE DISTURBANCE AREA           |
| ---               |                                   | ---               | CULTURAL RESOURCES BUFFER AREA    |

**GENERAL NOTES:**  
 1. S&ME DELINEATED ON-SITE WATER FEATURES IN JANUARY 2023.


- REFERENCE:**
- TAX PARCEL DATA OBTAINED FROM THE SPARTANBURG COUNTY, SOUTH CAROLINA GEOGRAPHIC INFORMATION SYSTEMS (GIS) DEPARTMENTS.
  - HYDROLOGY DATA OBTAINED FROM THE NATIONAL HYDROGRAPHY DATASET (NHD).
  - FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) 100-YEAR FLOODPLAIN, FLOODWAY, AND BASE FLOOD ELEVATION (BFE) DATA OBTAINED FROM THE FEMA NATIONAL FLOOD HAZARD LAYER (NFHL) DATASET.
  - AERIAL ORTHOIMAGERY OBTAINED FROM SOUTH CAROLINA REVENUE AND FISCAL AFFAIRS.





2016 AYRSLEY TOWN BLVD  
 SUITE 2-A  
 CHARLOTTE, NC 28273  
 (704) 523-4726  
 ENGINEERING FIRM  
 LICENSE NUMBER: F-0176

**RIVER BEND AGGREGATES, LLC**



S&ME, INC.  
 NO. C00473

| NO. | DATE       | DESCRIPTION                        | BY | CHK | APP |
|-----|------------|------------------------------------|----|-----|-----|
| 1   | 02/19/2024 | PRESERVATION IN PLACE BUFFER ADDED |    |     |     |
| 2   | 10/16/2023 | ISSUED FOR CLIENT REVIEW           |    |     |     |

**SITE DISTURBANCES**

RIVER BEND QUARRY SITE - CONCEPTUAL PLAN  
 RIVER BEND AGGREGATES, LLC  
 SPARTANBURG COUNTY, SOUTH CAROLINA

|                |           |
|----------------|-----------|
| PROJECT NUMBER | 22610504B |
| DRAWING NUMBER | 3         |
|                | 9         |

DRAWING PATH: T:\Charlottesville\13500\Projects\2023\22610504B\_Synergy Materials\_Pacolet Quarry\_S&ME\CAD\Engineering\SWPPPS\SITE DISTURBANCES.dwg

Approved by the  
**South Carolina Department of Environmental Services**  
 Division of Mining & Solid Waste Management

By Jeremy E. Eddy  
 Map Name SM-2410-01  
 Date Approved July 11, 2024  
 Permit # I-002410

PIN: 716293194572  
 ATLANTIC GRANITE CO.

PIN: 717215479749  
 M & W FARMS, LLC.

PIN: 7172380  
 SELLERS, DEL. &

PIN: 717229730303  
 MONTGOMERY EDZEMA AMY ETAL

PIN: 717218393668  
 WILEY FORK LEGACY, LLC.

PIN: 717321070597  
 THEILER, HANS JAKOB, TRUSTEE

PIN: 716391341213  
 WILSON, TRAVIS

PIN: 716382268884  
 WILEY FORK LEGACY, LLC.

PIN: 716382291326

PIN: 716392288613  
 WEATHERFORD, LINDA J

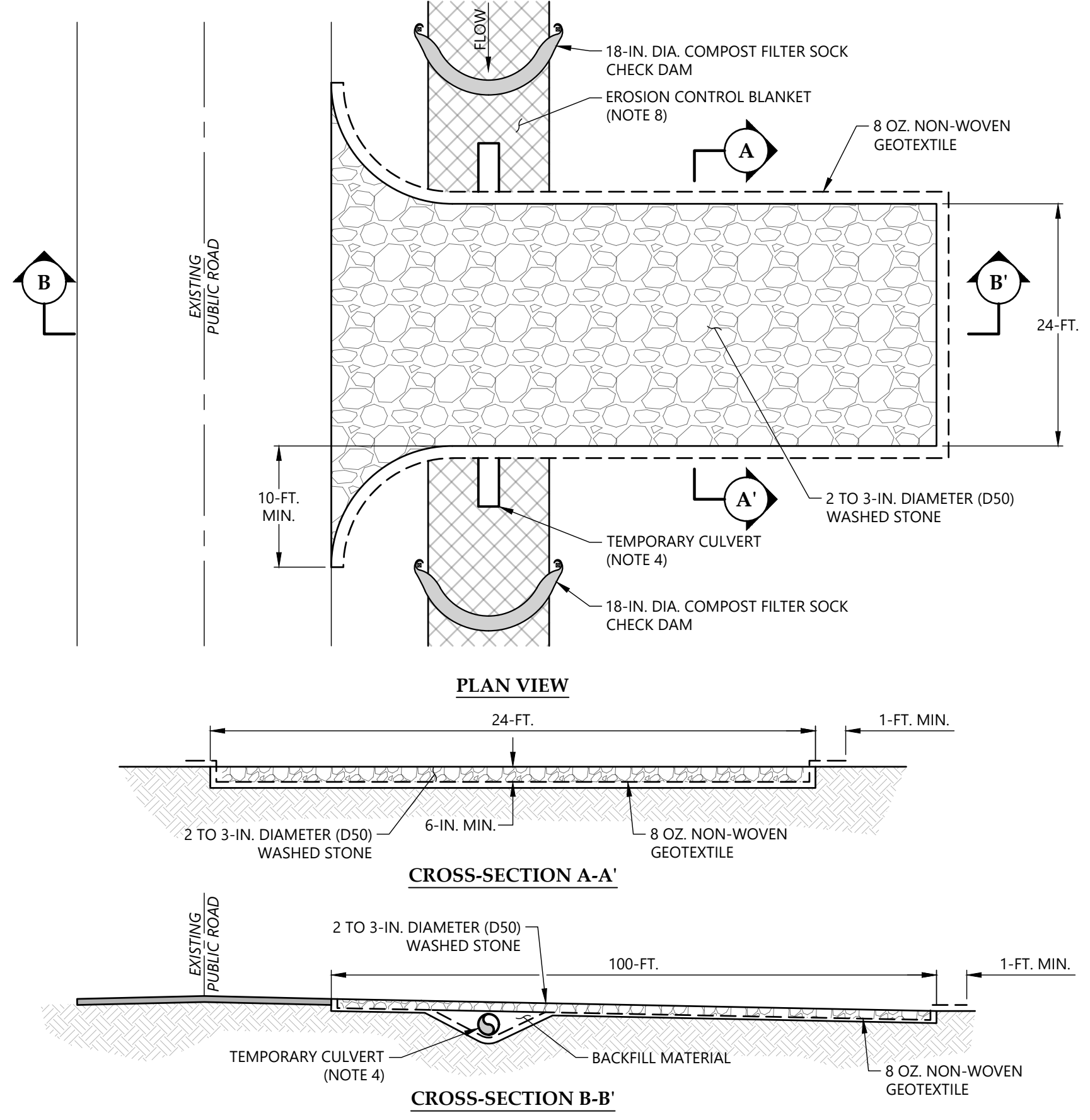
PIN: 717301328311  
 WILEY FORK LEGACY, LLC.

OVERALL PROJECT BOUNDARY  
 443.1 ACRES

PIN: 716268685597  
 SC WILDLIFE AND MARINE RESOURCES DEPARTMENT

PIN: 716267092940





**GENERAL NOTES**

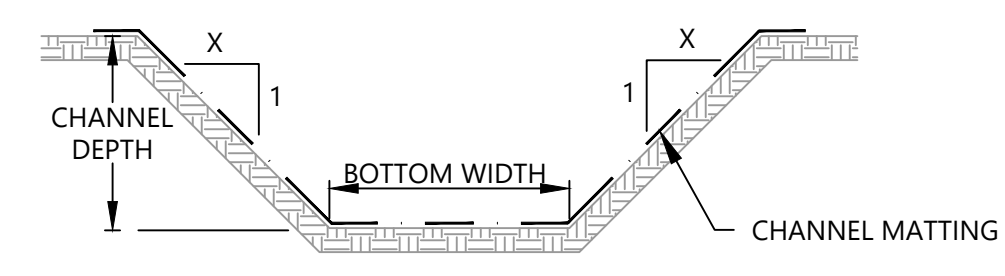
1. DUE TO SITE CONSTRAINTS THE WIDTH AND LENGTH MAY BE ADJUSTED BASED ON CONDITIONS IN THE FIELD.
2. APPROPRIATE SIGNAGE WILL BE POSTED ALONG THE ROAD TO INFORM THE GENERAL PUBLIC OF POTENTIAL CONSTRUCTION TRAFFIC PER REQUIREMENTS.
3. STOCKPILE TOPSOIL FROM CONSTRUCTION ENTRANCE INSTALLATION. USE TOPSOIL FOR BACKFILL AFTER REMOVAL OF CONSTRUCTION ENTRANCE DURING FINAL CLEANUP.
4. THE NEAREST UPSTREAM AND DOWNSTREAM CULVERT DIAMETER(S) WILL BE OBSERVED AT EACH LOCATION A CONSTRUCTION ENTRANCE IS TO BE INSTALLED WITHIN A ROADSIDE SWALE/DITCH. DIAMETER OF TEMPORARY CULVERT SHALL BE THE LARGER OF EITHER THE CULVERT, BUT NO LESS THAN 18-IN. IN DIAMETER. CONTRACTOR SHALL FIELD VERIFY AND DETERMINE APPROPRIATE CULVERT TO BE USED.
5. INSTALL 18-IN. DIA. COMPOST FILTER SOCK CHECK DAMS IN ROADSIDE SWALE/DITCH AT UPSTREAM AND DOWNSTREAM LOCATIONS OF LIMITS OF DISTURBANCE.
6. THE CONSTRUCTION ENTRANCE AND CULVERT (IF PRESENT), WILL BE REMOVED WHEN CONSTRUCTION ACTIVITIES CEASE ON THE PROJECT. THE REMOVED STONE AND SEDIMENT FROM THE ENTRANCE WILL BE HAULLED OFF-SITE AND DISPOSED OF PROPERLY. UPON REMOVAL OF THE CONSTRUCTION ENTRANCE, THE CONTRACTOR SHALL BRING THE AREA TO ORIGINAL GRADE AND STABILIZE IT. IF A TEMPORARY CULVERT WAS UTILIZED IN CONJUNCTION WITH THE CONSTRUCTION ENTRANCE, THE CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKET AND 18-IN. DIA. COMPOST FILTER SOCK CHECK DAMS WITHIN ROADSIDE SWALE/DITCH.
7. EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN BIONET SC150BN OR ENGINEER APPROVED EQUIVALENT.
8. INSTALL THREE 18-IN. DIA. COMPOST FILTER SOCK CHECK DAMS IN EACH IMPACTED SWALE/DITCH; UPSTREAM, DOWNSTREAM, AND MIDDLE OF SWALE/DITCH.

**MAINTENANCE NOTES**

1. ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
2. THE ENTRANCE WILL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO EXISTING ROADWAYS. SEDIMENT TRACKED, SPILLED, DROPPED OR OTHERWISE DEPOSITED ONTO ROADWAYS WILL BE SWEEPED UP AS SOON AS PRACTICAL AND PLACED BACK WITHIN THE APPROVED DISTURBED AREA.
3. IF EXCESS SEDIMENT HAS CLOGGED THE STONE, THE ENTRANCE WILL BE TOPDRESSED WITH NEW STONE AS NEEDED. REPLACEMENT OF THE STONE MAY BECOME NECESSARY WHEN THE STONE BECOMES ENTIRELY FILLED WITH SEDIMENT AND MUD.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005 (PORTIONS REVISED MAY 2014).

**1 CONSTRUCTION ENTRANCE**  
 SCALE: N.T.S.



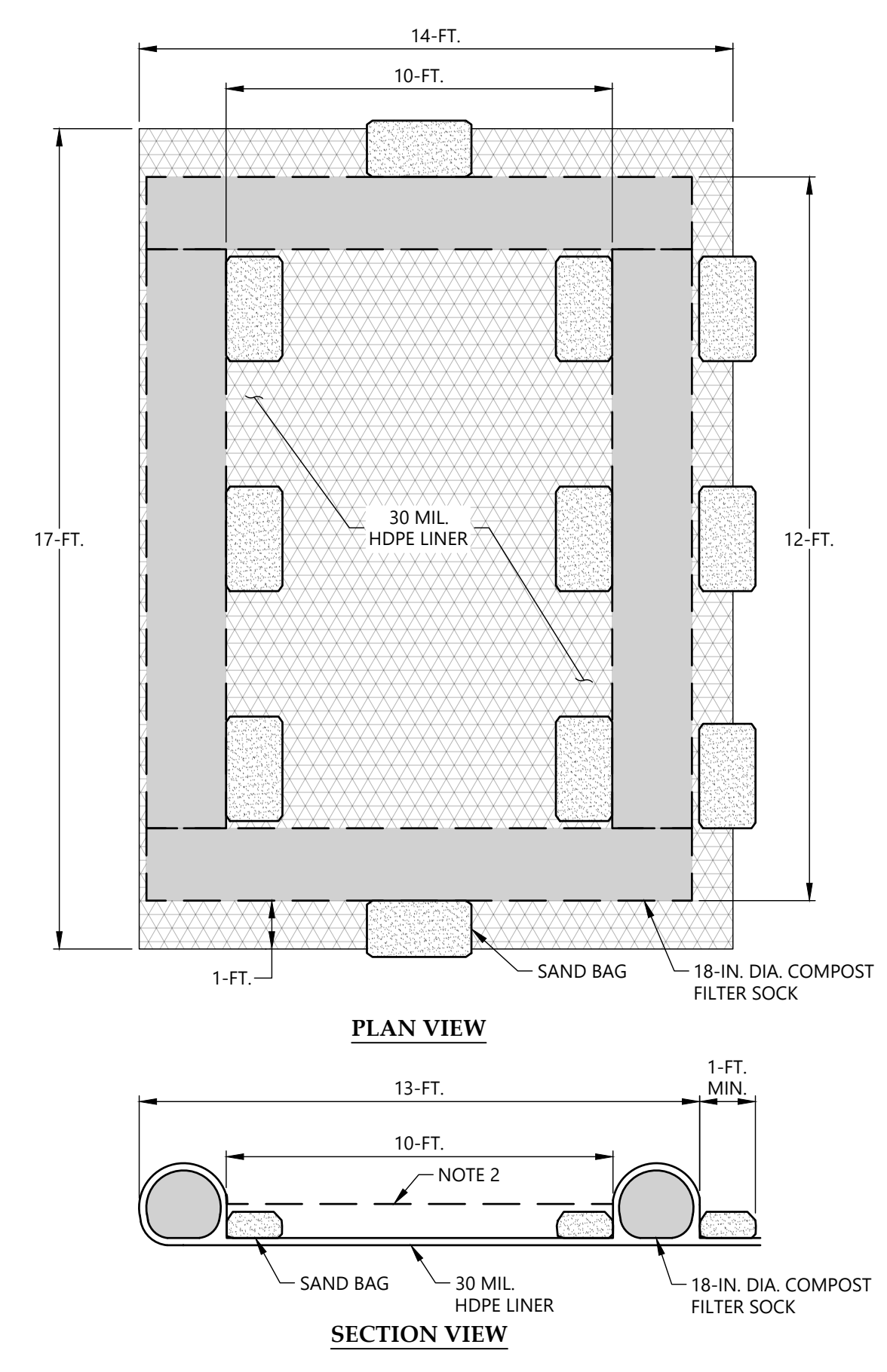
**GENERAL NOTES**

1. SEE PLAN SHEETS FOR CHANNEL LOCATION.
2. DIMENSIONING AND STABILIZATION MATTING (TYPE SPECIFIED IN TABLE OR ENGINEER APPROVED EQUIVALENT)
3. SEE DRAWINGS FOR CHECK DAM/SEDIMENT TUBE LOCATION AND SPACING WITHIN CHANNELS.

| CHANNEL SUMMARY TABLE |                                      |                    |                        |                         |                     |                 |
|-----------------------|--------------------------------------|--------------------|------------------------|-------------------------|---------------------|-----------------|
| CHANNEL ID            | AVERAGE LONGITUDINAL SLOPE (FT./FT.) | BOTTOM WIDTH (FT.) | LEFT SIDE SLOPE (H:1V) | RIGHT SIDE SLOPE (H:1V) | CHANNEL DEPTH (FT.) | CHANNEL MATTING |
|                       |                                      |                    |                        |                         |                     |                 |
|                       |                                      |                    |                        |                         |                     |                 |

THE CHANNEL SUMMARY TABLE WILL BE POPULATED FOLLOWING THE DETAILED DESIGN.

**2 CHANNEL MATTING**  
 SCALE: N.T.S.



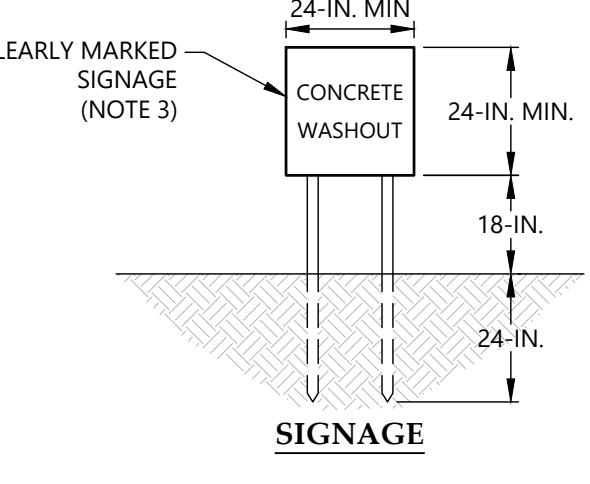
**GENERAL NOTES**

1. ACTUAL LOCATION DETERMINED IN FIELD.
2. CONCRETE WASHOUT STRUCTURES REQUIRING ADDITIONAL CAPACITY SHALL INCLUDE EXCAVATED PIT BENEATH HDPE LINER OF WASHOUT RETENTION AREA. DEPTH OF PIT VARIES DEPENDING ON REQUIRED CAPACITY.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE WITH LETTERS A MINIMUM OF 5-IN. IN HEIGHT AND WITHIN 30-FT. OF STRUCTURE.
4. DO NOT DISCHARGE CONCRETE OR CEMENT SLURRY FROM THE SITE.
5. INSTALL TEMPORARY CONCRETE WASHOUTS PER LOCAL REQUIREMENTS, WHERE APPLICABLE. IF AN ALTERNATE METHOD OR PRODUCT IS TO BE USED, CONTACT YOUR APPROVAL AUTHORITY FOR REVIEW AND APPROVAL. IF LOCAL STANDARD DETAILS ARE NOT AVAILABLE, USE THIS DETAIL. IF THIS DETAIL IS USED, OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE MAY APPROVE ALTERNATIVE MATERIALS PRIOR TO INSTALLATION.
6. DO NOT USE CONCRETE WASHOUTS FOR DEWATERING OR STORING DEFECTIVE CURB OR SIDEWALK SECTIONS. STORMWATER ACCUMULATED WITHIN THE WASHOUT MAY NOT BE PUMPED INTO OR DISCHARGED TO THE STORM DRAIN SYSTEM OR RECEIVING SURFACE WATERS. LIQUID WASTE MUST BE PUMPED OUT AND REMOVED FROM PROJECT.
7. LOCATE WASHOUTS AT LEAST 50-FT. FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE. AT A MINIMUM, INSTALL PROTECTION OF STORM DRAIN INLET(S) CLOSEST TO THE WASHOUT WHICH COULD RECEIVE SPILLS OR OVERFLOW.
8. LOCATE WASHOUTS IN AN EASILY ACCESSIBLE AREA, ON LEVEL GROUND AND INSTALL A STONE ENTRANCE PAD IN FRONT OF THE WASHOUT. ADDITIONAL CONTROLS MAY BE REQUIRED BY THE APPROVING AUTHORITY.
9. INSTALL AT LEAST ONE SIGN DIRECTING CONCRETE TRUCKS TO THE WASHOUT WITHIN THE PROJECT LIMITS. POST SIGNAGE ON THE WASHOUT ITSELF TO IDENTIFY THIS LOCATION.

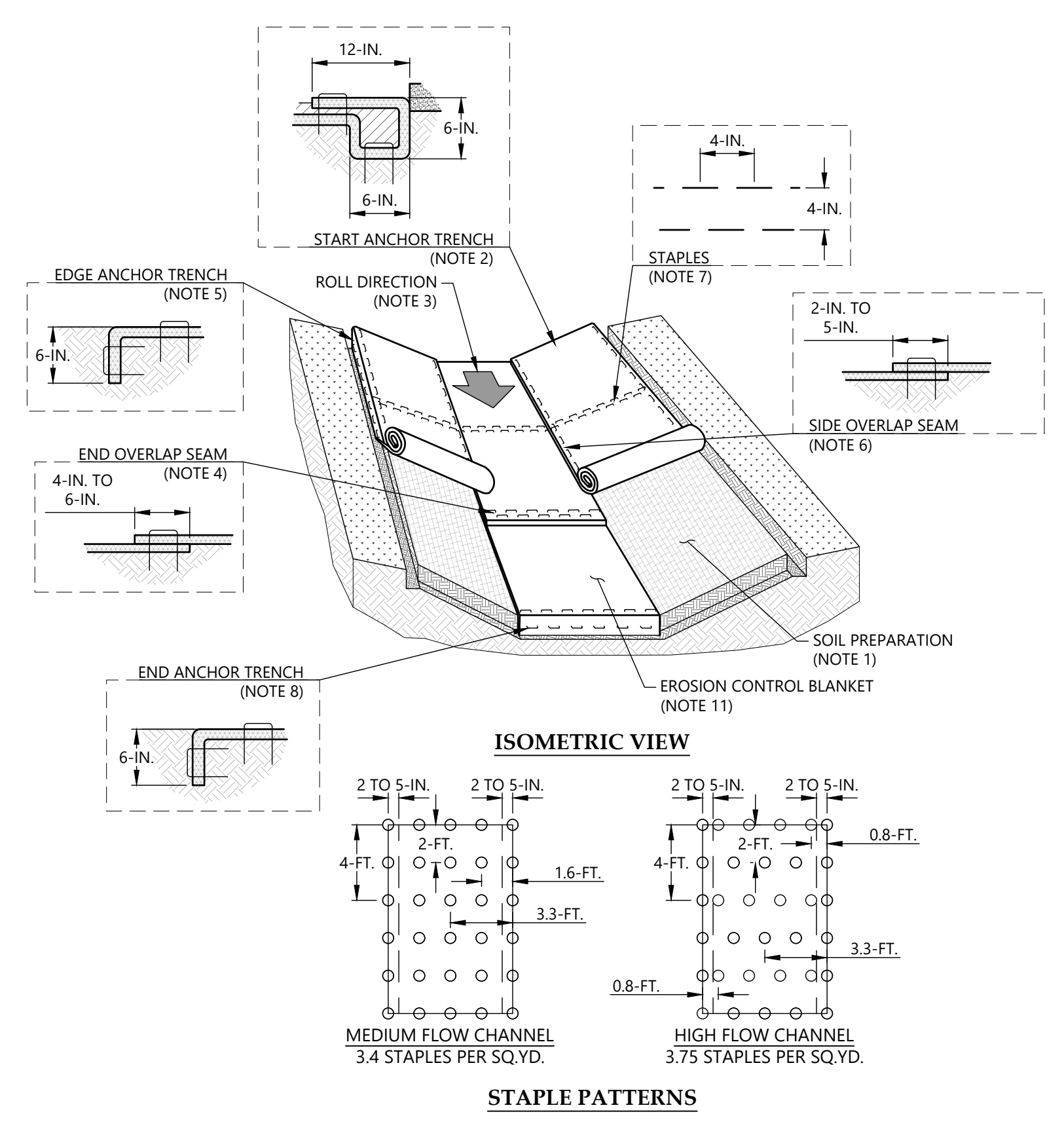
**MAINTENANCE NOTES**

1. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 1/2 OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 6-IN. OF FREEBOARD.
2. DISPOSE OF, OR RECYCLE SETTLED, HARDENED CONCRETE RESIDUE IN ACCORDANCE WITH LOCAL AND STATE SOLID WASTE REGULATIONS AND AT AN APPROVED FACILITY.
3. MANAGE WASHOUT FROM MORTAR MIXERS IN ACCORDANCE WITH THE ABOVE ITEM AND IN ADDITION PLACE THE MIXER AND ASSOCIATED MATERIALS ON IMPERVIOUS BARRIER AND WITHIN LOT PERIMETER SILT FENCE.
4. REMOVE LEAVINGS FROM THE WASHOUT WHEN AT APPROXIMATELY 1/2 CAPACITY TO LIMIT OVERFLOW EVENTS. REPLACE THE HDPE LINER, SAND BAGS OR OTHER TEMPORARY STRUCTURAL COMPONENTS WHEN NO LONGER FUNCTIONAL. WHEN UTILIZING ALTERNATIVE OR PROPRIETARY PRODUCTS, FOLLOW MANUFACTURER'S INSTRUCTIONS.
5. AT THE COMPLETION OF THE CONCRETE WORK, REMOVE REMAINING LEAVINGS AND DISPOSE IN AN APPROVED DISPOSAL FACILITY. STABILIZE ANY DISTURBANCE CAUSED BY REMOVAL OF WASHOUT.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005, REVISED MARCH 2014, AND NCDCEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, CHAPTERS 6 AND 8 REVISED, MAY 2013.



**3 CONCRETE WASHOUT**  
 SCALE: N.T.S.



**GENERAL NOTES**

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPs), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECPs IN A 6-INCH DEEP BY 6-IN. WIDE TRENCH WITH APPROXIMATELY 12-IN. OF RECPs EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPs WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12-IN. PORTION OF RECPs BACK OVER THE SEED AND COMPACTED SOIL. SECURE RECPs OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12-IN. APART ACROSS THE WIDTH OF THE RECPs.
3. ROLL CENTER RECPs IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECPs WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPs MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE RECPs END-OVER-END (SHINGLE STYLE) WITH A 4 TO 6-IN. OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4-IN. APART AND 4-INCH ON CENTER TO SECURE RECPs.
5. FULL LENGTH EDGE OF RECPs AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN A 6-IN. DEEP X 6-IN. WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECPs MUST BE OVERLAPPED APPROXIMATELY 2-IN. TO 5-IN. (DEPENDING ON RECPs TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS A STAPLE CHECK SLOT IS RECOMMENDED AT 30-FT. TO 40-FT. INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4-IN. APART AND 4-IN. ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECPs MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN A 6-IN. DEEP BY 6-IN. WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
9. HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
10. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6-IN. MAY BE NECESSARY TO PROPERLY SECURE THE RECPs.
11. EROSION CONTROL BLANKETS SHALL BE NORTH AMERICAN GREEN OR ENGINEER APPROVED ALTERNATE. REFER TO PLAN VIEW DRAWINGS FOR NORTH AMERICAN GREEN'S PRODUCT NAME FOR SPECIFIC GRADE OF EROSION CONTROL BLANKET FOR EACH ROADSIDE SWALE/DITCH.
12. FOLLOW MANUFACTURERS SPECIFICATIONS IF THERE IS A DISCREPANCY IN NOTES OR IF ENGINEER APPROVED ALTERNATIVE IS USED.

**MAINTENANCE NOTES**

1. ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
2. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECPs.
3. ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
4. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
5. MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2015 (PORTIONS REVISED MAY 2014) AND NORTH AMERICAN GREEN INSTALLATION GUIDE.

**4 CHANNEL MATTING**  
 SCALE: N.T.S.

DRAWING PATH: T:\Chandler\1350\Projects\2023\230504B\_Synergy\_Materials\_Paclet\_SCI\Geo-Env\CAD\Drawings\Mining\_SMP\PP\DETAILS (1 OF 5).dwg

| NO. | DATE | ISSUED FOR CLIENT REVIEW | DESCRIPTION | BY | CHK | C/S | APV |
|-----|------|--------------------------|-------------|----|-----|-----|-----|
|     |      |                          |             |    |     |     |     |
|     |      |                          |             |    |     |     |     |
|     |      |                          |             |    |     |     |     |

|  |           |
|--|-----------|
| <b>DETAILS (1 OF 5)</b>  |           |
| RIVER BEND QUARRY SITE - CONCEPTUAL PLAN<br>RIVER BEND AGGREGATES, LLC<br>SPARTANBURG COUNTY, SOUTH CAROLINA |           |
| PROJECT NUMBER   | 22610504B |
| DRAWING NUMBER   |           |
| <b>5</b>   | <b>9</b>  |

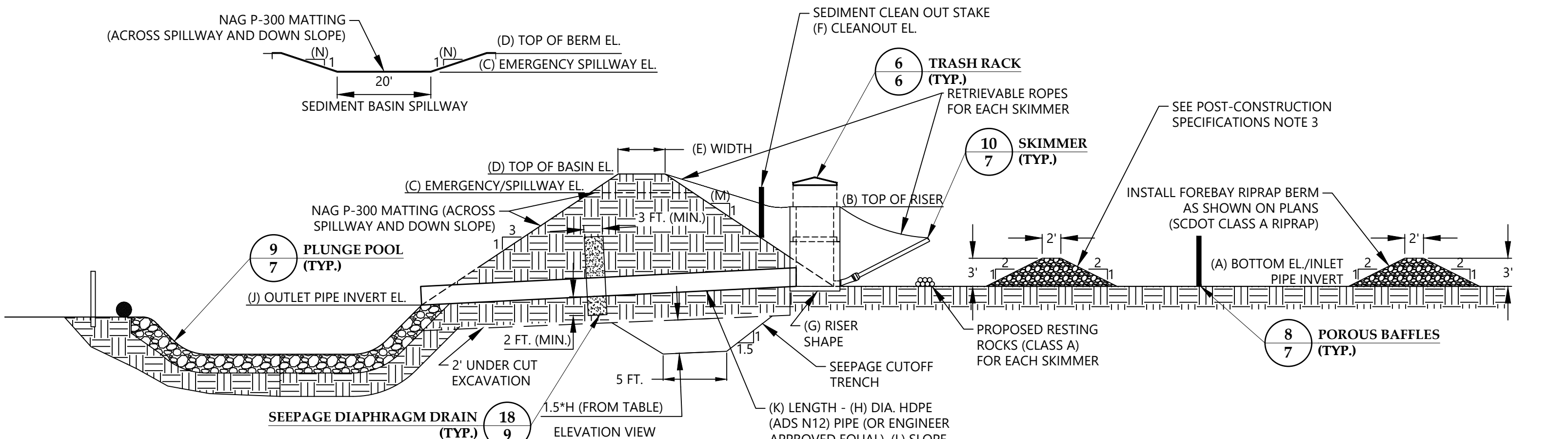


**SEDIMENTATION BASIN CONSTRUCTION SPECIFICATIONS:**

- 1. BASIN PREPARATIONS:** PLACE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES PER THE PLANS. CLEAR, GRUB AND STRIP TOPSOIL FROM THE EMBANKMENT TO REMOVE VEGETATION, STUMPS, ROOTS, ORGANIC MATERIAL, TRASH, ROCK MATERIAL AND OTHER OBJECTIONABLE MATERIAL. REMOVE SEDIMENT, PERVIOUS MATERIAL, ORGANIC MATERIAL TO THE DESIGN ELEVATION AND DIMENSIONS OF THE BASIN. KEEP BASIN DRY DURING CONSTRUCTION ACTIVITIES. THE FLOOR OF THE BASIN SHALL BE GRADED TO THE FINAL ELEVATION SHOWN ON THE DRAWINGS AND THE GRADED BASIN SHALL BE COMPACTED WITH A MINIMUM 10-TON SMOOTH DRUM (NON-VIBRATORY) COMPACTOR AND THEN PROOF-ROLLED. PROOF-ROLL THE ENTIRE SEDIMENTATION BASIN FLOOR. THE PROOF ROLLING SHALL BE OBSERVED AND EVALUATED BY THE ENGINEER OR HIS REPRESENTATIVE.
- 2. PRINCIPAL SPILLWAY, BARREL, AND SKIMMER:** CONSTRUCT THE BARREL ACCORDING TO THE BELOW TEMPORARY SEDIMENT BASIN DETAIL. SECURE ALL CONNECTIONS BETWEEN BARREL AND RISER SECTIONS BY APPROVED WATERTIGHT ASSEMBLIES. ATTACH BASIN SKIMMER TO RISER BY APPROVED WATERTIGHT ASSEMBLIES (SEE SKIMMER DETAIL). DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, SILT, OR CRUSHED STONE AS BACKFILL MATERIAL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-IN. LOOSE LAYERS AND COMPACT IT AROUND THE PIPE TO 95 PERCENT OR GREATER AS THE REST OF THE EMBANKMENT FILL. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF TWO FEET OF HAND COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING THE PIPE WITH COMPACTION EQUIPMENT OR CONSTRUCTION EQUIPMENT.
- 3. EMBANKMENT CONSTRUCTION:** USE CLEAN FILL MATERIAL BROUGHT TO SITE OR EXCAVATED FROM APPROVED AREAS ON SITE. IT SHALL BE CLEAN MINERAL SOIL, FREE OF ROOTS, WOODY VEGETATION, ROCKS AND OTHER OBJECTIONABLE MATERIAL. SCARIFY AREAS AND EACH COMPACTED LIFT ON WHICH FILL IS TO BE PLACED BEFORE PLACING THE FILL. THE FILL OPTIMUM MOISTURE CONTENT SHALL BE MAINTAINED BETWEEN OPTIMUM AND THREE PERCENT ABOVE OPTIMUM. FILL SHALL BE COMPACTED NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD A. THE CONTRACTOR SHALL DEMONSTRATE SOIL DENSITY BY SOIL COMPACTION PER THE PLANS AND SPECIFICATIONS WITH A MINIMUM OF TWO DENSITY TESTS PER LIFT WITH TESTS SPACED EVENLY AND REPRESENTATIVE OF THE EMBANKMENT FILL. ONE FAILED TEST REQUIRES THAT THE LIFT BE RE-COMPACTED AND RE-TESTED AT TWO LOCATIONS UNTIL REQUIRED COMPACTION IS ACHIEVED. NO VEGETATIVE COVER MATERIAL SHALL BE PLACED ON COMPACTED FILL LAYERS BEFORE THE ENGINEER REVIEWS AND APPROVES THE DENSITY DATA FROM THE TESTING PERFORMED. THE ENGINEER MAY EVALUATE COMPACTION AND REPORT THE RESULTS TO THE CONTRACTOR. FAILED SOIL DENSITY TESTS PERFORMED BY THE ENGINEER WILL REQUIRE THAT THE COMPACTED MATERIAL BE REMOVED AND RE-INSTALLED PER THE PLANS AND SPECIFICATIONS.
- 4. OUTLET DISCHARGE:** EFFLUENT FROM THE PRINCIPAL SPILLWAY BARREL FROM THE SEDIMENT BASIN SHALL HAVE AN SEEPAGE DIAPHRAGM DRAIN AND SHALL DISCHARGE TO A PLUNGE POOL (SEE DETAIL).
- 5. EMERGENCY SPILLWAY:** INSTALL THE EMERGENCY SPILLWAY IN THE UNDISTURBED SOIL. TOLERANCE TO DESIGN ELEVATIONS IS +/- 0.2 FEET; TOLERANCE TO DESIGN GRADES IS +/- 1.0 PERCENT; AND TOLERANCE FOR WIDTHS AND LENGTHS IS +/- 1.0-FT. NO DEVIATION FROM THE SPECIFIED TOLERANCES SHALL BE ALLOWED. LINE THE SPILLWAY WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC SHALL HAVE DIMENSIONS LARGE ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES SHALL BE SECURED WITH 8-IN. STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC SHALL BE ONE PIECE, TO PREVENT WATER FROM ACCESS BENEATH THE FABRIC; JOINING OR SPLICING OF SECTIONS ACROSS THE WIDTH SHALL NOT BE ALLOWED. THE LENGTH OF THE FABRIC MAY BE COMPOSED OF SECTIONS SPANNING THE ENTIRE SPILLWAY WIDTH. UPPER SECTIONS SHALL OVERLAP LOWER SECTIONS SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS (ADAPTED FROM "A MANUAL FOR DESIGNING INSTALLING AND MAINTAINING SKIMMER SEDIMENT BASINS" FEBRUARY, 1999 J.W. FAIRCLOTH & SON). A 6-IN. VEGETATIVE COVER SHALL BE PLACED ON TOP OF THE GEOTEXTILE FABRIC. EROSION CONTROL MATTING SHALL BE PLACED ON TOP OF THE VEGETATIVE LAYER.
- 6. INLETS:** INSTALL INLETS TO DISCHARGE WATER INTO THE FOREBAYS IN A MANNER TO PREVENT EROSION.
- 7. EROSION CONTROL:** CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM THE BARE AREAS. COMPLETE THE EMBANKMENT BEFORE ADDITIONAL UPSTREAM AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION (REFERENCES: SURFACE STABILIZATION).

**MAINTENANCE:**

- 1. CHECK SEDIMENT BASIN AFTER PERIODS OF SIGNIFICANT RUNOFF.** REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH AS MARKED BY THE SEDIMENT CLEANOUT STAKE.
- 2. CHECK THE EMBANKMENT, SPILLWAYS AND OUTLET FOR EROSION DAMAGE AND EVALUATE THE EMBANKMENT FOR PIPING AND SETTLEMENT.** MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND DEBRIS FROM THE RISER AND POOL AREA.
- 3. ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD.** INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE BASIN DEPTH. FIRST PULL THE SKIMMER TO ONE SIDE TO ACCESS SEDIMENT BELOW FOR REMOVAL. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT LIMITED TO THE SKIMMER LOCATION OR WITHIN THE FIRST BASIN CELL. CUT OR REMOVE VEGETATION FROM THE BOTTOM OF THE BASIN THAT LIMITS OPERATION OF THE SKIMMER OR RESTRICTS ITS ABILITY TO FLOAT.
- 4. REPAIR DAMAGED BAFFLES.** RE-ANCHOR BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
- 5. REMOVE CLOGS FROM SKIMMER BY JERKING ON THE ROPE TO BOB THE SKIMMER, OR PULL THE SKIMMER TO ONE SIDE OF THE BASIN AND REMOVE THE DEBRIS.** CHECK THE ORIFICE INSIDE THE SKIMMER FOR DEBRIS. IF PRESENT, REMOVE THE DEBRIS. IF THE SKIMMER ARM OR BARREL IS CLOGGED, REMOVE THE ORIFICE AND FLUSH WITH WATER TO RESTORE FLOW, OR USE A PLUMBERS SNAKE TO REMOVE THE CLOG. REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
- 6. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY.** CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER, RISER, AND POOL AREAS.
- 7. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN.** PREVENT ICE FROM CLOGGING THE SKIMMER.



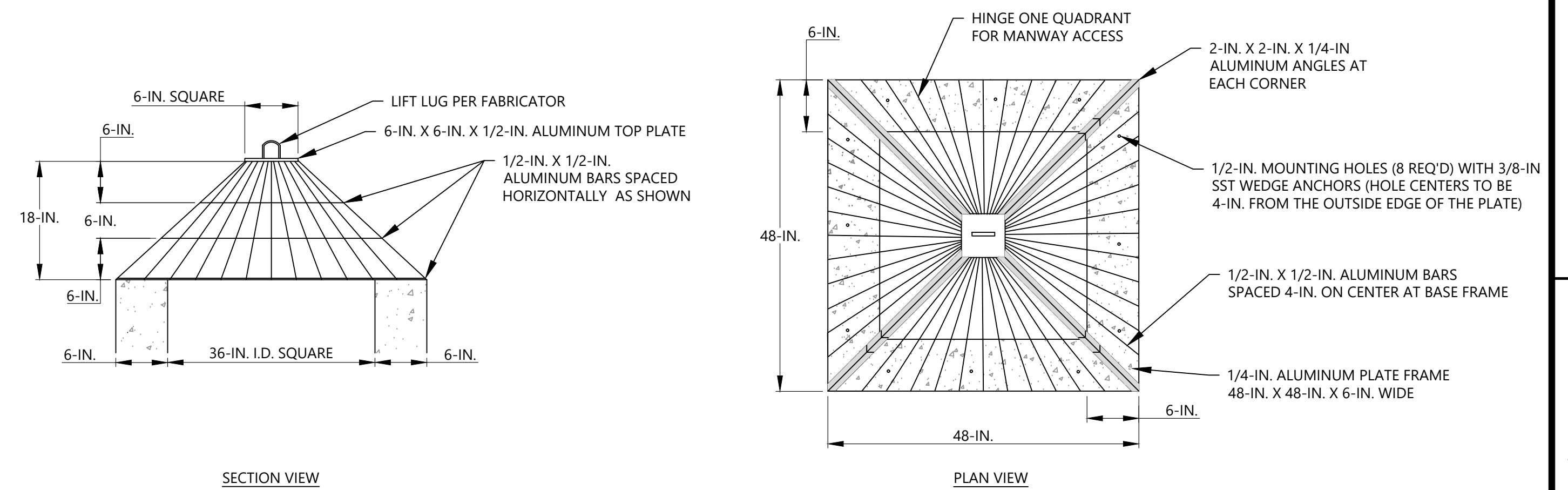
**SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS:**

- 1. ASSEMBLE THE SKIMMER AS DESIGNED (PER THE SKIMMER DETAIL).**
  - 2. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN.** SECURE THE CONNECTIONS BETWEEN THE INLET BASIN SKIMMER FLEXIBLE JOINT TO THE RISER ORIFICE BY APPROVED WATERTIGHT ASSEMBLIES. POSITION THE SKIMMER OVER THE SUPPORT PAD. ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN FOR ACCESS TO THE SKIMMER FOR FUTURE MAINTENANCE.
- POST-CONSTRUCTION SPECIFICATIONS:**  
WHEN THE AREAS CONTRIBUTING SEDIMENT TO THE SYSTEM HAVE BEEN STABILIZED, PROCEDURES CAN BE TAKEN TO RESTORE THE SYSTEM TO ITS PERMANENT USE. THE FOLLOWING REMOVAL AND RESTORATION PROCEDURE IS RECOMMENDED. DURING THIS PROCESS CAREFUL CONSIDERATION SHOULD BE TAKEN TO PROTECT RECEIVING WATERS FROM SEDIMENT POLLUTION AND EROSION DAMAGE.
- 1. REMOVE EROSION AND SEDIMENT CONTROL DEVICES (SKIMMER, BAFFLES, 30 MIL LINER, AND STAINLESS STEEL STRAP).**
  - 2. EXCAVATE THE BASIN TO THE ORIGINAL PROPOSED BOTTOM OF BASIN ELEVATION PER THE PLANS TO REMOVE ANY ACCUMULATED SEDIMENT.** MAINTAIN THE DESIGNED SIDE SLOPES AND APPLY SLOPE MATTING PER THE DETAIL.
  - 3. INSTALL RIPRAP BERM (SCDOT CLASS A RIPRAP), AT MINIMUM 5-FT AWAY FROM RISER.** RIPRAP BERM IS TO BE USED TO HELP PREVENT THE RISER ORIFICE FROM CLOGGING. SEE DETAIL FOR SIZE AND GEOMETRY OF BERM.
  - 4. STABILIZE THE BASIN AND ANY AREAS DISTURBED DURING EROSION AND SEDIMENT CONTROL DEVICE AND SEDIMENT REMOVAL.**

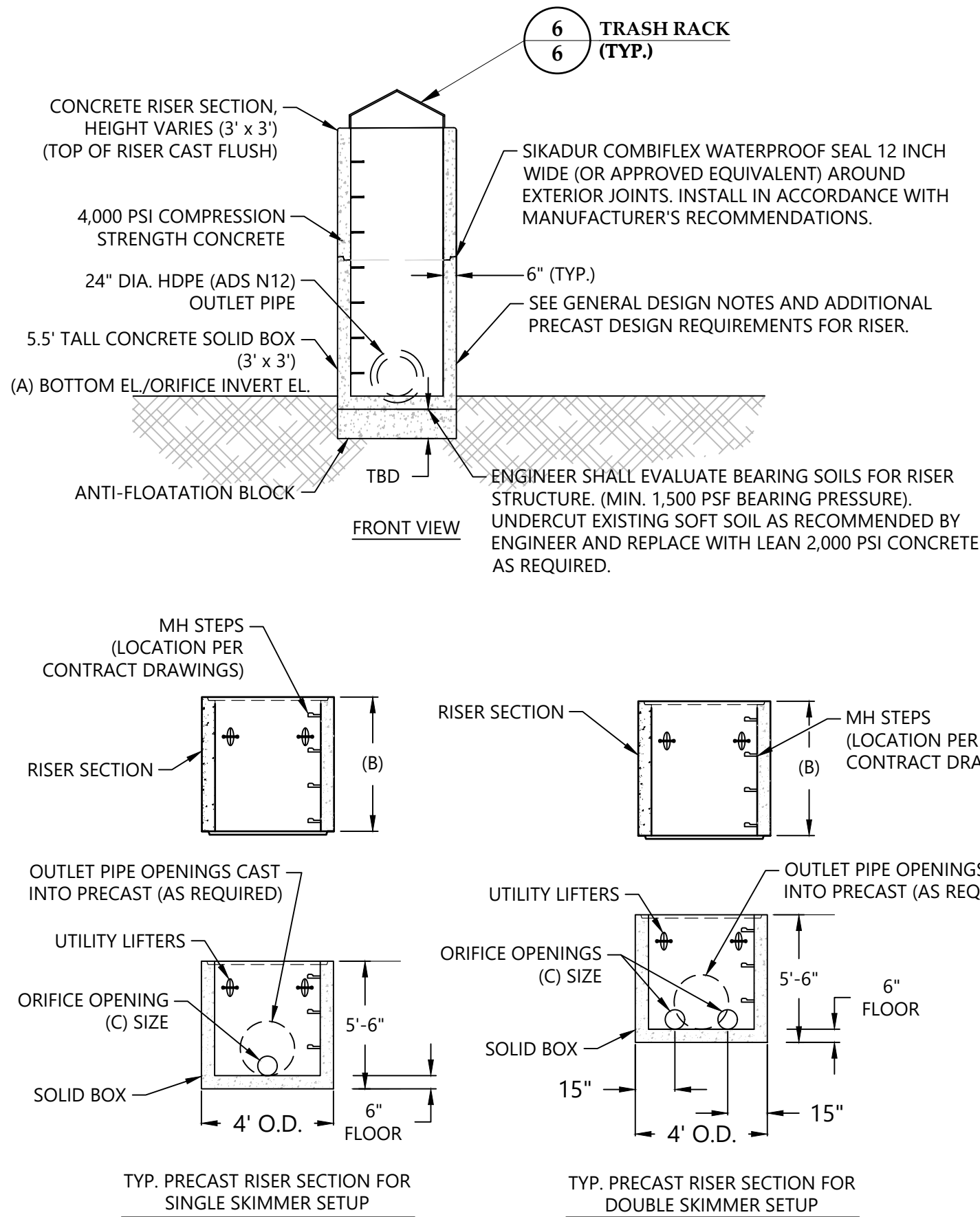
| SEDIMENT BASIN ID | A                               | B                            | C  | D                           | E                       | F                         | G                       | H                               | I   | J   | K                           | L                        | M                                    | N   |
|-------------------|---------------------------------|------------------------------|--|-----------------------------|-------------------------|---------------------------|-------------------------|---------------------------------|---|---|-----------------------------|--------------------------|--------------------------------------|---|
| SEDIMENT BASIN ID | BOTTOM OF BASIN ELEVATION (FT.) | TOP OF RISER ELEVATION (FT.) | EMERGENCY SPILLWAY CREST ELEVATION (FT.) | TOP OF BERM ELEVATION (FT.) | TOP OF BERM WIDTH (FT.) | CLEAN OUT ELEVATION (FT.) | RISER SHAPE (FT. X FT.) | OUTLET PIPE DIAMETER (DO) (FT.) | OUTLET PIPE UPSTREAM INV. ELEVATION (FT.) | OUTLET PIPE DOWNSTREAM INV. ELEVATION (FT.) | LENGTH OF OUTLET PIPE (FT.) | SLOPE OF OUTLET PIPE (%) | INTERIOR SIDE SLOPES (Z FT. X 1 FT.) | EMERGENCY SPILLWAY INTERIOR SIDE SLOPES (Z FT. X 1 FT.) |
|                   |                                 |                              |  |                             |                         |                           |                         |                                 |   |   |                             |                          |                                      |   |

THE SEDIMENT BASIN SUMMARY TABLE WILL BE POPULATED FOLLOWING THE DETAILED DESIGN.

**5** SEDIMENT BASIN  
**6** SCALE: N.T.S.



**6** TRASH RACK  
**6** SCALE: N.T.S.



**ADDITIONAL PRECAST DESIGN REQUIREMENTS:**

- RISER SHALL BE DESIGNED FOR A WATER PRESSURE OF 1,300 PSF AND HORIZONTAL SOIL PRESSURE OF 700 PSF. (TOTAL HORIZONTAL PRESSURE OF 2,000 PSF).
- GENERAL DESIGN NOTES:**
- STRENGTH DESIGN METHOD IN ACCORDANCE WITH (I.A.W.) ACI318.
  - APPLICABLE DESIGN DOCUMENTS (CURRENT EDITIONS):
    - ACI318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (MAIN DESIGN SPECIFICATIONS).
    - ASTM C890 STANDARD PRACTICE FOR MINIMUM STRUCTURAL LOADING FOR MONOLITHIC OR SECTIONAL PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES (LOADING SPECIFICATIONS).
    - ASTM C913 STANDARD SPECIFICATIONS FOR PRECAST CONCRETE AND WATER AND WASTEWATER STRUCTURES.
  - MAX DEPTH TO INVERT OF PRECAST (I.E. FLOOR) = 15' FOR SOLID BASE AND 10 FOR WAFFLE BASE.
  - GROUNDWATER TABLE ASSUMED TO BE BELOW THE INVERT OF THE OUTLET PIPE.
  - LATERAL DESIGN PRESSURES (AS APPLICABLE TO DESIGN):
    - EQUIV DRY SOIL FLUID PRESSURE = 47 PCF.
    - EQUIV SATURATED SOIL FLUID PRESSURE = 85 PCF.
    - LIVE LOAD SURCHARGE = 80 PSF.
  - DESIGN CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS = 4,000 PSI (MIN.) REINFORCEMENT:
    - CARBON-STEEL DEFORMED BARS: ASTM A615, fy = 60 KSI (MIN.)
    - WELDED WIRE REINFORCEMENT (DEFORMED): ASTM 1064 fy = 70 KSI (MIN.)
    - COPOLYMER POLY PROPYLENE STEEL REINFORCED STEPS I.A.W. ASTM C478 SPACED 16" O.C.
  - LIFT LOOPS, PINS OR UTILITY ANCHORS PROVIDED FOR HANDLING. CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING OLD CASTLE PRECAST, INC. LIFTING INSTRUCTIONS AS SHOWN ON BACK OF SHIPPING TICKET.

| SEDIMENT BASIN ID | CONCRETE RISER SUMMARY TABLE        |                            |                    |                        |
|-------------------|-------------------------------------|----------------------------|--------------------|------------------------|
|                   | A                                   | B                          | C                  | D                      |
|                   | BOTTOM EL./ORIFICE INVERT EL. (FT.) | RISER SECTION HEIGHT (FT.) | ORIFICE SIZE (IN.) | RISER BOTTOM EL. (FT.) |
|                   |                                     |                            |                    |                        |

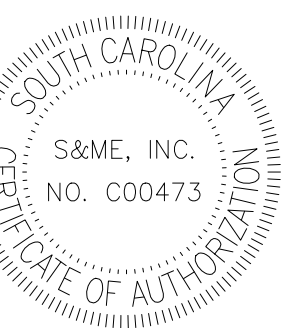
THE CONCRETE RISER SUMMARY TABLE WILL BE POPULATED FOLLOWING THE DETAILED DESIGN.

**7** CONCRETE RISER  
**6** SCALE: N.T.S.



2016 AYRSLEY TOWN BLVD.  
SUITE 2-A  
CHARLOTTE, NC 28273  
(704) 523-4726  
ENGINEERING FIRM  
LICENSE NUMBER: E-0176

**RIVER BEND AGGREGATES, LLC**



| NO. | DATE       | ISSUED FOR CLIENT REVIEW | DESCRIPTION | BY | CHK | C/S | APV |
|-----|------------|--------------------------|-------------|----|-----|-----|-----|
|     | 10/16/2023 |                          |             |    |     |     |     |

DETAILS (2 OF 5)

RIVER BEND QUARRY SITE - CONCEPTUAL PLAN  
RIVER BEND AGGREGATES, LLC  
SPARTANBURG COUNTY, SOUTH CAROLINA

Approved by the  
South Carolina Department of  
Environmental Services  
Division of Mining & Solid Waste Management

By Jeremy E. Eddy  
Map Name SED-2410-011  
Date Approved July 11, 2024  
Permit # I-002410

PROJECT NUMBER  
**22610504B**  
DRAWING NUMBER

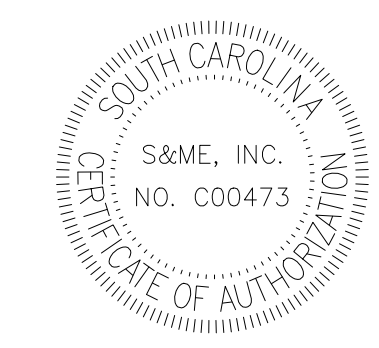
**6** **9**





2016 AYRSLEY TOWN BLVD.  
SUITE 2-A  
CHARLOTTE, NC 28273  
(704) 523-4726  
ENGINEERING FIRM  
LICENSE NUMBER: E-0176

**RIVER BEND AGGREGATES, LLC**

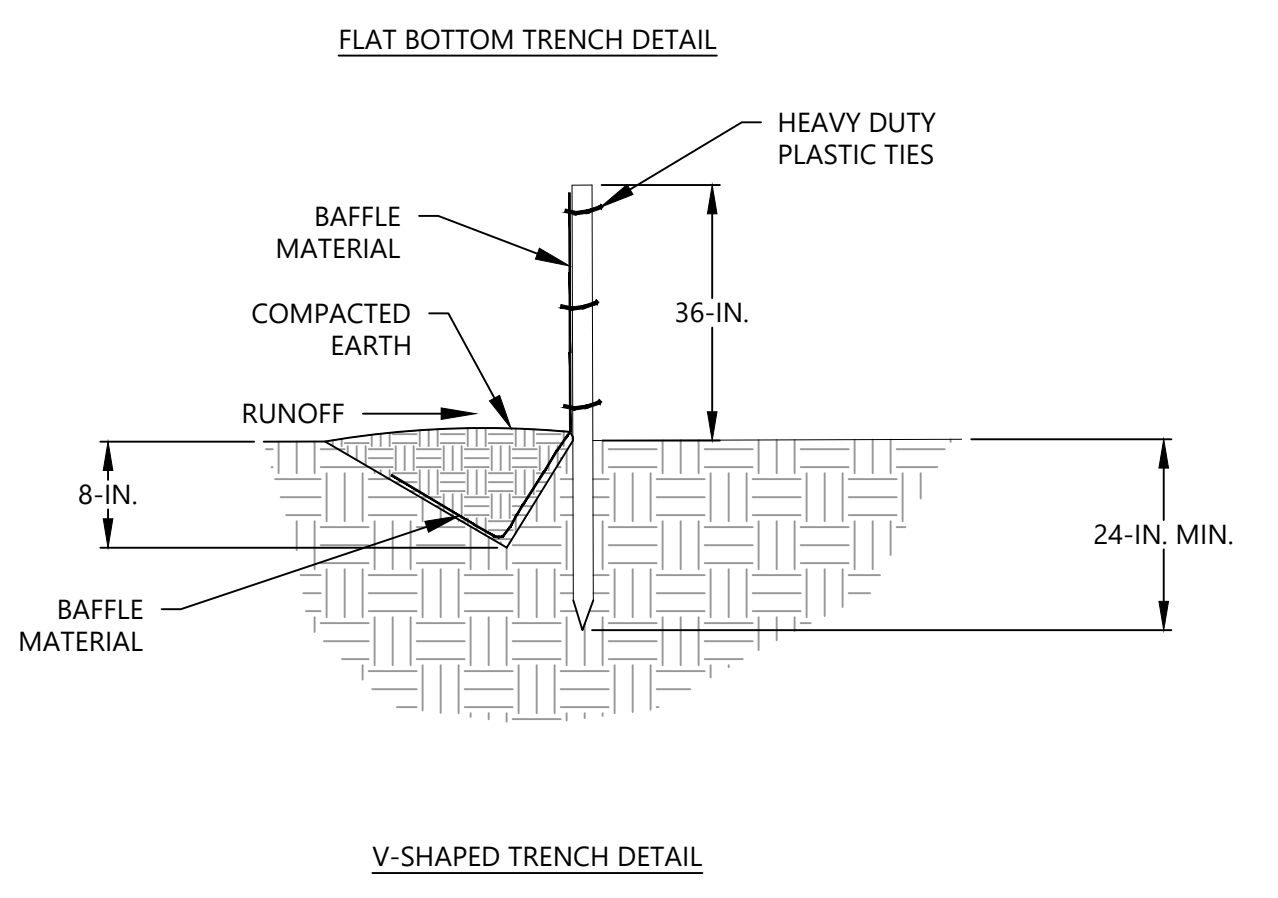
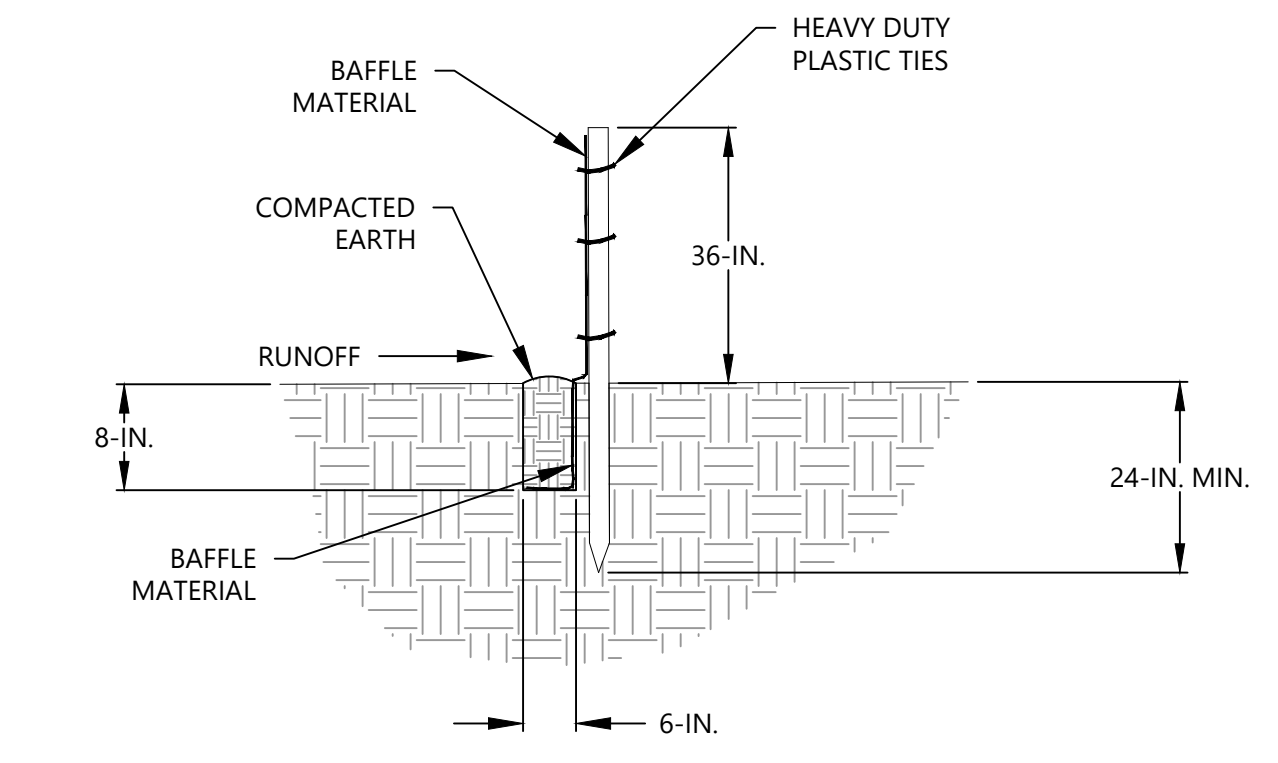
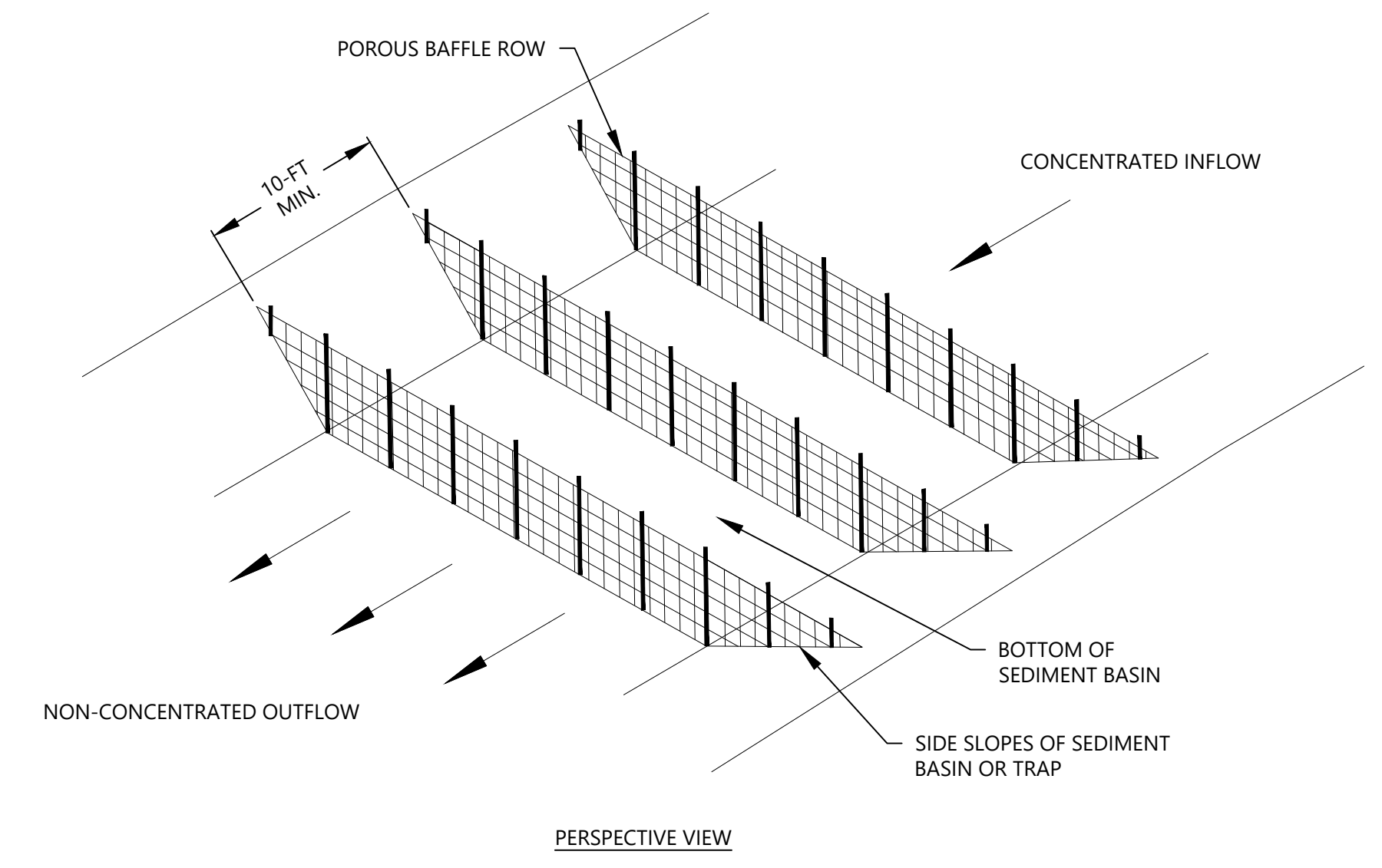
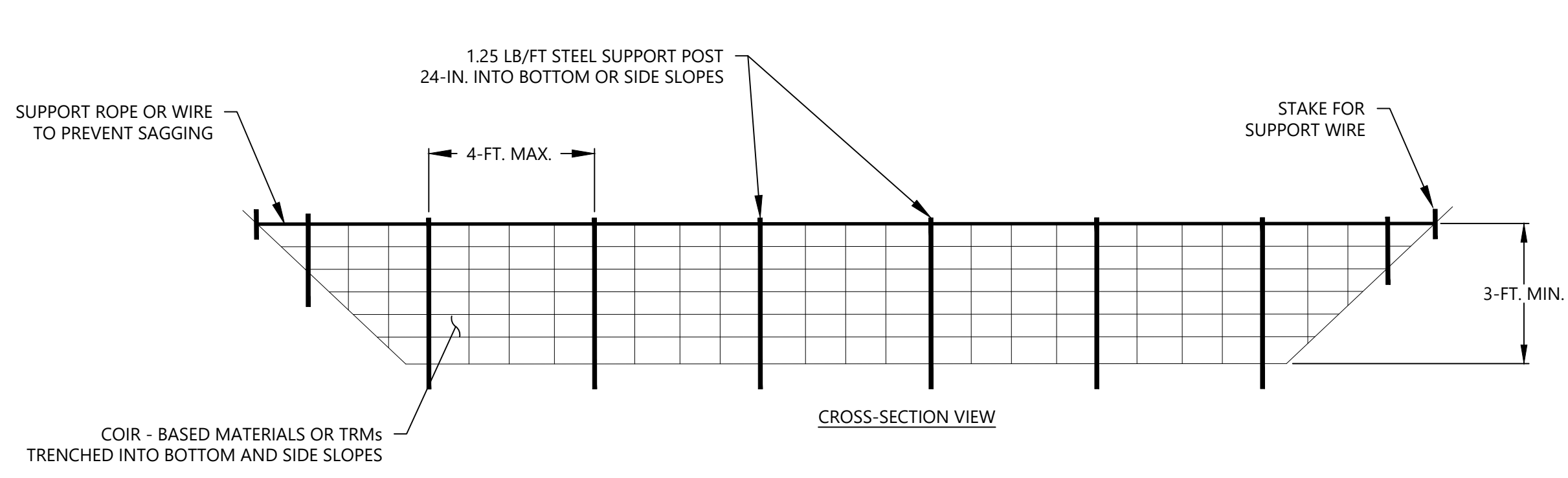


| NO. | DATE | ISSUED FOR CLIENT REVIEW | DESCRIPTION |
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DETAILS (3 OF 5)  
RIVER BEND QUARRY SITE - CONCEPTUAL PLAN  
RIVER BEND AGGREGATES, LLC  
SPARTANBURG COUNTY, SOUTH CAROLINA

PROJECT NUMBER  
**22610504B**  
DRAWING NUMBER

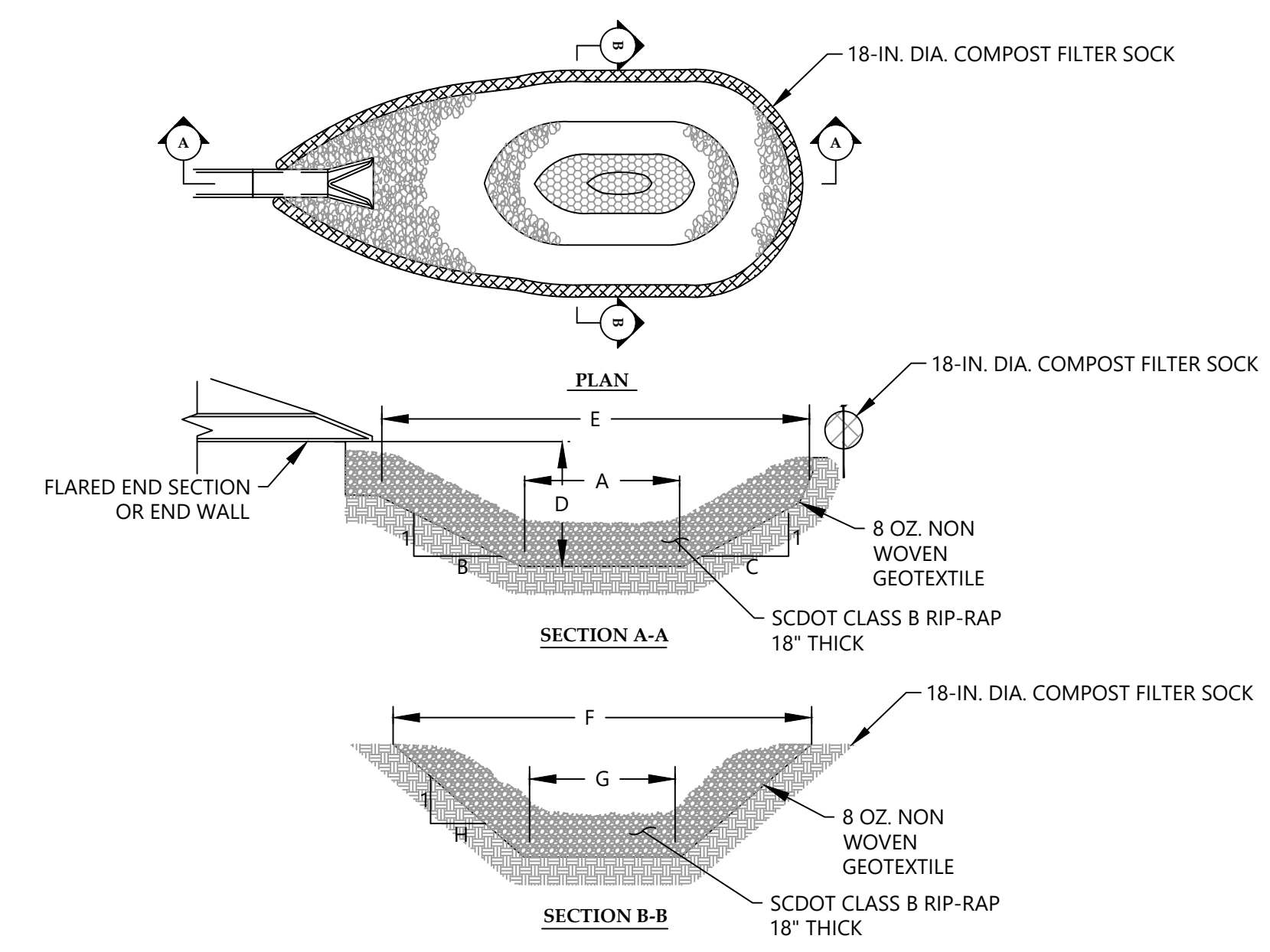
7 9



**8** **POROUS BAFFLES**  
**7** SCALE: N.T.S.

- BAFFLES - POST REQUIREMENTS:**
- POROUS BAFFLE POSTS MUST BE 60-IN. TO 96-IN. LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
    - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
    - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-IN. AND A NOMINAL "T" LENGTH OF 1.48-IN.
    - WEIGH 1.25 POUNDS PER FOOT (± 8%).
  - POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF BAFFLE MATERIAL.
  - INSTALL POSTS TO A MINIMUM OF 24-IN. A MINIMUM HEIGHT OF 1-IN. TO 2-IN. ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3-FT. SHALL BE MAINTAINED ABOVE THE GROUND.
  - POST SPACING SHALL BE AT A MAXIMUM OF 4-FT. ON CENTER.
- BAFFLES - MATERIAL REQUIREMENTS:**
- BAFFLE MATERIAL MUST BE COMPOSED OF COIR-BASED MATERIALS OR TURF REINFORCEMENT MATTING (TRM) THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
    - HAVE A LIGHT PENETRATION (% OPENINGS) BETWEEN 10-35%;
    - FREE OF LOOSE STRAW MATERIAL;
    - HAVE A MINIMUM TENSILE STRENGTH OF 145 LB/FT; AND,
    - HAVE A MINIMUM WIDTH OF 48-IN.
  - 12-IN. OF THE FABRIC SHOULD BE PLACED WITHIN THE EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED OR BAFFLE MATERIAL MAY BE STAPLED INTO GROUND BY USING 12-IN. STAPLES WITH A MAXIMUM SPACING OF 12-IN.
  - BAFFLE MATERIAL SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE WIDTH OF THE SEDIMENT BASIN OR TRAP TO AVOID JOINTS.
- BAFFLES - GENERAL NOTES:**
- ATTACH BAFFLE TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED ALONG THE ABOVE GROUND PORTION OF EACH POST.
  - INSTALL THE BAFFLE ROWS PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE EACH BAFFLE THE PROPER DISTANCE FROM INLET AND OUTLETS TO ALLOW ACCESS FOR MAINTENANCE AND CLEAN-OUT AS PER THE PLANS.
  - EXTEND BAFFLE TO A MINIMUM OF 3 FEET IN HEIGHT.

- BAFFLES - INSPECTION & MAINTENANCE:**
- THE KEY TO FUNCTIONAL POROUS BAFFLES IS WEEKLY INSPECTION, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
  - ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
  - ATTENTION TO SEDIMENT ACCUMULATIONS ALONG EACH ROW OF BAFFLES IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
  - REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE BAFFLE ROW OR WHEN IT REACHES THE CLEAN-OUT HEIGHT OF THE SEDIMENT BASIN OR TRAP, WHICHEVER IS REACHED FIRST.
  - REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
  - CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH EACH ROW OF BAFFLES, OR WHERE THE BAFFLE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE BAFFLE.
  - CHECK FOR TEARS/RIPS WITHIN THE BAFFLES, AREAS WHERE THE BAFFLE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE BAFFLE INEFFECTIVE. REMOVED DAMAGED BAFFLES AND REINSTALL NEW BAFFLES IMMEDIATELY.
  - POROUS BAFFLES SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.
  - REMOVE ANY ACCUMULATED SEDIMENT UPON BAFFLE REMOVAL. DISPOSE OF SEDIMENT OFF-SITE ACCORDING TO STATE AND LOCAL REGULATIONS.



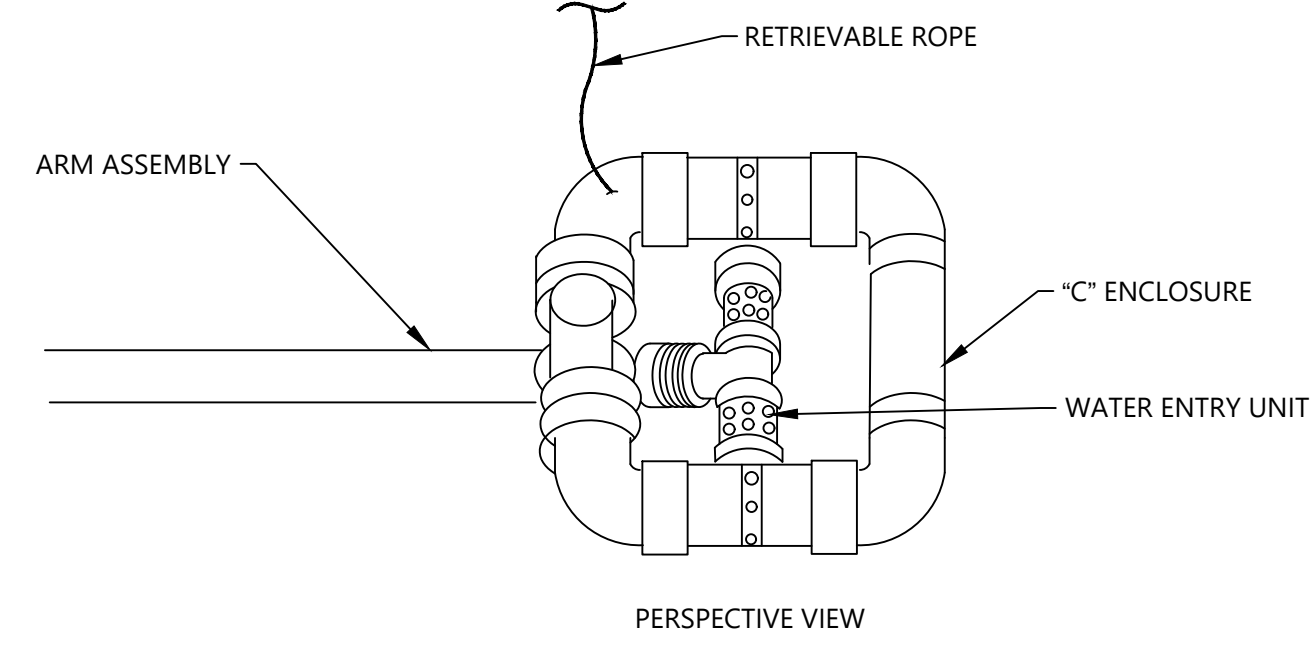
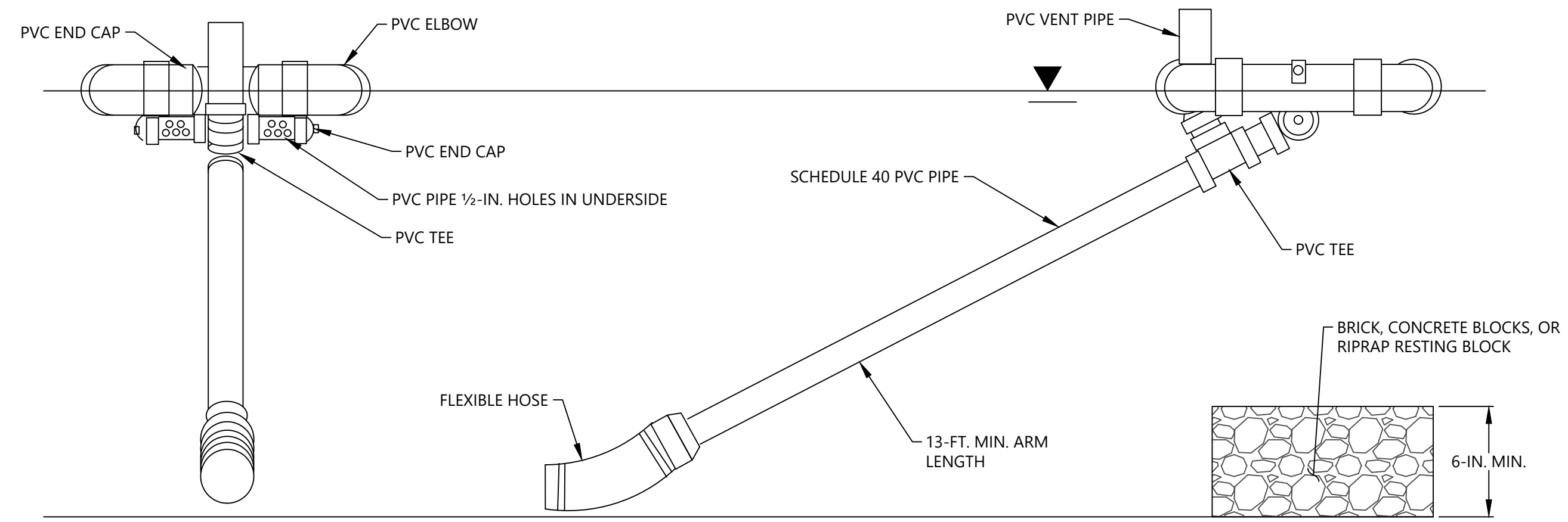
**MAINTENANCE:**  
ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE. REMOVE SEDIMENT AND RESTORE TO ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE POOL. CHECK EMBANKMENT, LINING, AND OUTLET AREA FOR ANY DAMAGE AND REPAIR AS NECESSARY, AS SOON AS PRACTICAL.

**PLUNGE POOL SIZING SUMMARY TABLE**

| ID | A | B | C | D | E | F | G | H |
|----|---|---|---|---|---|---|---|---|
|    |   |   |   |   |   |   |   |   |
|    |   |   |   |   |   |   |   |   |

THE PLUNGE POOL SUMMARY TABLE WILL BE POPULATED FOLLOWING THE DETAILED DESIGN.

**9** **PLUNGE POOL**  
**7** SCALE: N.T.S.



**SKIMMER TABLE**

| SEDIMENT BASIN | PURPOSE | SIZE (IN.) | ORIFICE SIZE (IN.) |
|----------------|---------|------------|--------------------|
|                |         |            |                    |
|                |         |            |                    |

THE SKIMMER SUMMARY TABLE WILL BE POPULATED FOLLOWING THE DETAILED DESIGN.

- MAINTENANCE NOTES:**
- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.

**10** **SKIMMER**  
**7** SCALE: N.T.S.

Approved by the  
**South Carolina Department of Environmental Services**  
Division of Mining & Solid Waste Management  
By Jeremy E. Eddy  
Map Name SED-2410-3V1  
Date Approved July 11, 2024  
Permit # I-002410

DRAWING PATH: T:\Charleston\1320\Projects\2023\22610504B\_Synergy\_Materials\Facet Quarry\_Planet\SC Civil\Geo-Env\CADD\DWG\Mining\_SMP\PP\DETAILS D OF X.dwg





2016 AYRSLEY TOWN BLVD.  
SUITE 2-A  
CHARLOTTE, NC 28273  
(704) 523-4726  
ENGINEERING FIRM  
LICENSE NUMBER: E-0176

**RIVER  
BEND  
AGGREGATES,  
LLC**



| NO. | DATE | ISSUED FOR CLIENT REVIEW | BY | CHK | C/S | APV |
|-----|------|--------------------------|----|-----|-----|-----|
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**DETAILS (4 OF 5)**  
RIVER BEND QUARRY SITE - CONCEPTUAL PLAN  
RIVER BEND AGGREGATES, LLC  
SPARTANBURG COUNTY, SOUTH CAROLINA

PROJECT NUMBER  
**22610504B**  
DRAWING NUMBER

**8** **9**

Approved by the  
South Carolina Department of  
Environmental Services  
Division of Mining & Solid Waste Management

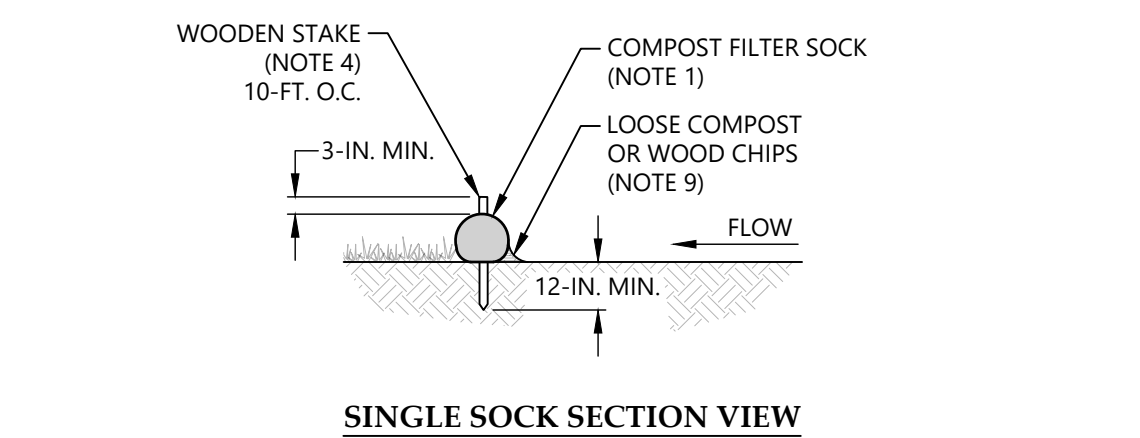
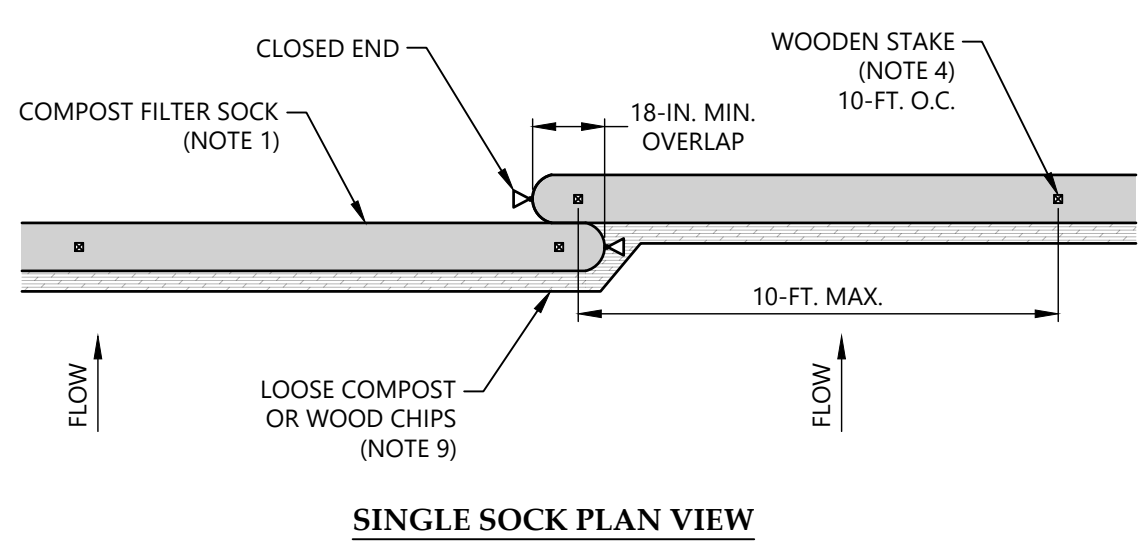
By Jeremy E. Eddy  
Map Name SED-24104V1  
Date Approved July 11, 2024  
Permit # I-002410

**GENERAL NOTES**

- USE FILTREXX® SILTISOXX™ ORIGINAL OR ENGINEER APPROVED ALTERNATIVE. COMPOST FILTER SOCK DIAMETER VARIES. REFER TO PLAN VIEW DRAWINGS FOR DIAMETER.
- COMPOST FILTER SOCKS SHOULD BE LOCATED AS SHOWN ON PLANS AND AS DIRECTED BY THE OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE.
- PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND OTHER DEBRIS GREATER THAN 1-IN. THAT MAY INTERFERE WITH PROPER FUNCTION OF THE COMPOST FILTER SOCK.
- OAK OR OTHER DURABLE HARDWOOD STAKES 2-IN. BY 2-IN. IN CROSS SECTION SHOULD BE DRIVEN VERTICALLY PLUMB, THROUGH THE CENTER OF THE COMPOST FILTER SOCK. STAKES SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 10-FT. O.C. STAKES SHOULD BE DRIVEN TO A MINIMUM DEPTH OF 12-IN. WITH A MINIMUM OF 3-IN. PROTRUDING ABOVE THE COMPOST FILTER SOCK.
- WHERE APPLICABLE PLASTIC OR WIRE TIES SHALL HAVE MINIMUM 50-LB. TENSILE STRENGTH.
- IN THE EVENT STAKING IS NOT POSSIBLE (HIGHLY COMPACTED SOILS OR IMPERVIOUS SURFACES) SAND BAGS OR HEAVY CONCRETE BLOCKS MAY BE USED BEHIND THE SOCK TO HOLD IT IN PLACE DURING RUNOFF EVENTS.
- STRAIGHTEN OR POSITION THE COMPOST FILTER SOCK AS NEEDED ON THE GROUND, ENSURING THERE IS GOOD GROUND CONTACT AND NO VOID SPACES UNDER THE COMPOST FILTER SOCK. DO NOT DRAG COMPOST FILTER SOCK ACROSS ROUGH SURFACES. IF DRAGGING ACROSS A ROUGH SURFACE IS NECESSARY, PLACE A BARRIER SUCH AS PLASTIC OR A TARP UNDER COMPOST FILTER SOCK TO PREVENT TEARING.
- BACKFILL LOOSE COMPOST OR FINE WOOD CHIPS TO 1/2 THE HEIGHT OF THE COMPOST FILTER SOCK ALONG THE UPSLOPE SIDE, FILLING THE SEAM BETWEEN THE SOIL SURFACE AND THE COMPOST FILTER SOCK.
- IF THE COMPOST FILTER SOCK IS TO BE LEFT AS PART OF THE NATURAL LANDSCAPE, IT MAY BE SEED WITH THE PERMANENT SEED MIX AT TIME OF INSTALLATION.
- FOLLOW MANUFACTURER'S SPECIFICATIONS IF THERE IS A DISCREPANCY IN NOTES OR IF ENGINEER APPROVED ALTERNATIVE IS USED.

**MAINTENANCE NOTES**

- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- MAKE ANY NECESSARY REPAIRS IMMEDIATELY.
- THE MAXIMUM ALLOWABLE ACCUMULATED SEDIMENT IS 1/3 THE HEIGHT OF THE COMPOST FILTER SOCK. HOWEVER, ACCUMULATED SEDIMENT SHOULD BE REMOVED MORE FREQUENTLY. ALTERNATIVELY, A NEW COMPOST FILTER SOCK CAN BE PLACED ON TOP OF AND SLIGHTLY BEHIND THE ORIGINAL ONE CREATING MORE SEDIMENT STORAGE CAPACITY WITHOUT SOIL DISTURBANCE.
- REMOVE ACCUMULATED SEDIMENT TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. TAKE CARE TO AVOID UNDERMINING THE COMPOST FILTER SOCK DURING CLEANOUT.
- THE COMPOST SOCK MUST BE REPLACED IF CLOGGED OR TORN.
- IF PONDING BECOMES EXCESSIVE, THE COMPOST FILTER SOCK MAY NEED TO BE REPLACED WITH ONE OF A LARGER DIAMETER OR A DIFFERENT MEASURE.
- THE COMPOST FILTER SOCK NEEDS TO BE REINSTALLED IF UNDERMINED OR DISLODGED.
- THE COMPOST FILTER SOCK SHALL BE MAINTAINED UNTIL DISTURBED AREA ABOVE THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED.

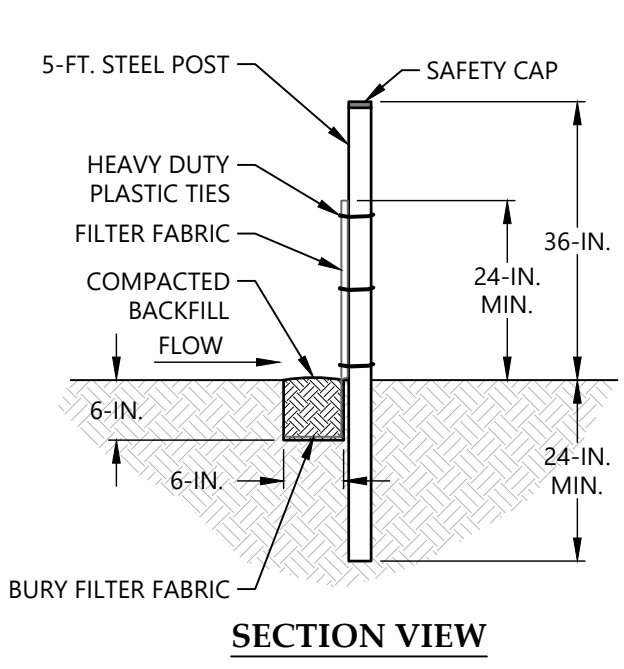
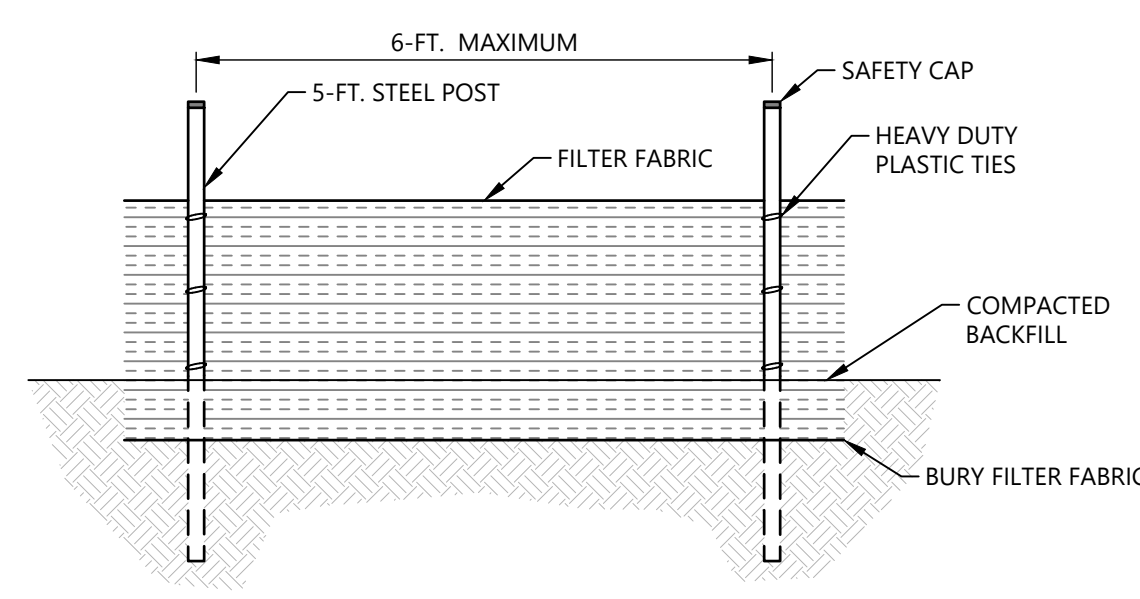


**12**  
**8** **COMPOST FILTER SOCK - SINGLE**  
SCALE: N.T.S.

**INSPECTION & MAINTENANCE**

- THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
  - ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
  - ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
  - REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
  - REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
  - CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH THE SILT FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE SILT FENCE. INSTALL CHECKS/TIE-BACKS AND/OR REINSTALL SILT FENCE, AS NECESSARY.
  - CHECK FOR TEARS WITHIN THE SILT FENCE. AREAS WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INEFFECTIVE, REMOVE DAMAGED SILT FENCE AND REINSTALL NEW SILT FENCE IMMEDIATELY.
  - SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.
- REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005, REVISED MARCH 2014.

**11**  
**8** **SILT FENCE**  
SCALE: N.T.S.



**POST REQUIREMENTS**

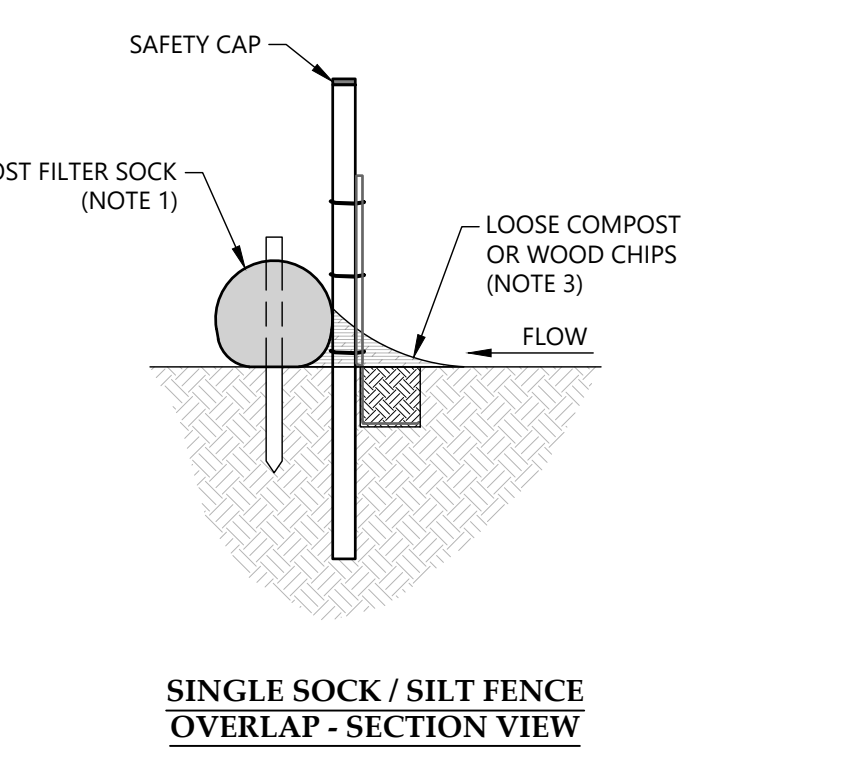
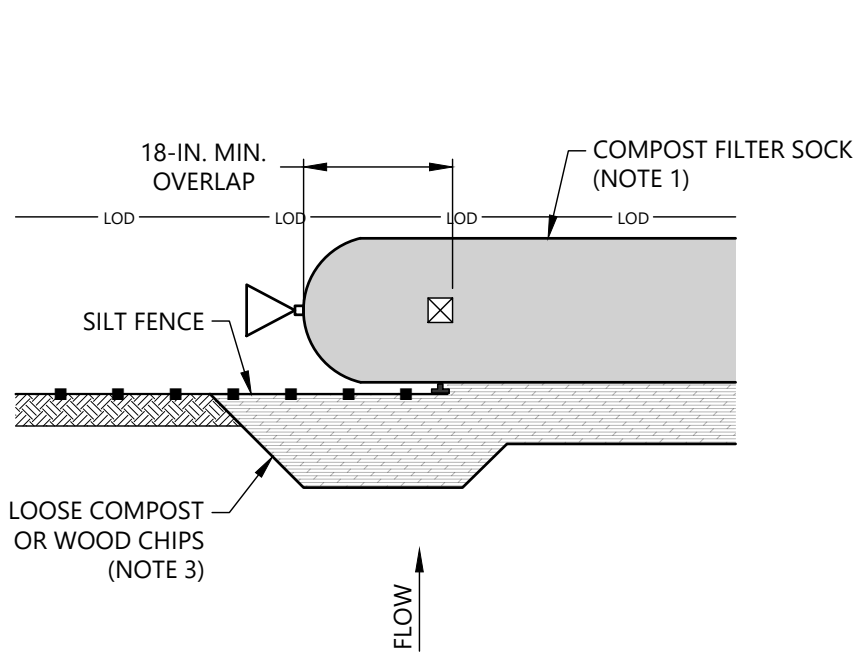
- SILT FENCE POSTS MUST BE 5-FT. LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
  - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
  - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-IN. AND A NOMINAL "I" LENGTH OF 1.48-IN.
  - WEIGH 1.25 POUNDS PER FOOT (± 8%)
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
- EACH POST TO BE EQUIPPED WITH SAFETY CAP.
- STEEL POSTS MAY NEED TO HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONG STEEP SLOPES OR INSTALLED IN LOOSE SOILS. THE PLATE SHOULD HAVE A MINIMUM CROSS SECTION OF 17-SQUARE -IN. AND BE COMPOSED OF 15 GAUGE STEEL, AT A MINIMUM. THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
- INSTALL POSTS TO A MINIMUM DEPTH OF 24-IN. A MINIMUM HEIGHT OF 1-IN. TO 2-IN. ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3-FT. SHALL BE MAINTAINED ABOVE THE GROUND.
- POST SPACING SHALL BE AT A MAXIMUM OF 6-FT. ON CENTER.
- WOODEN POSTS ARE ALLOWED WHEN CROSSING UTILITIES. OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE SHALL APPROVE LOCATIONS WHERE WOODEN POST ARE TO BE USED PRIOR TO INSTALLATION.

**FABRIC REQUIREMENTS**

- SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
  - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER.
  - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION.
  - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND.
  - HAVE A MINIMUM WIDTH OF 36-IN.
  - USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34, MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
  - 12-IN. OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND SECURED WHEN THE TRENCH IS BACKFILLED.
  - FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
  5. FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24-IN. ABOVE THE GROUND.

**GENERAL NOTES**

- DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
- MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100-FT.
- MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
- SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
  - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1-FOOT MINIMUM OVERLAP.
  - OVERLAP SILT FENCE BY INSTALLING 3-FT. PAST THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY-DUTY PLASTIC TIES; OR.
  - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
- ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8-IN. OF THE FABRIC.
- INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
- INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100 -FT., DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED/INSTALLED SILT FENCE.



**14**  
**8** **PERIMETER CONTROL OVERLAP**  
SCALE: N.T.S.

**INSPECTION & MAINTENANCE**

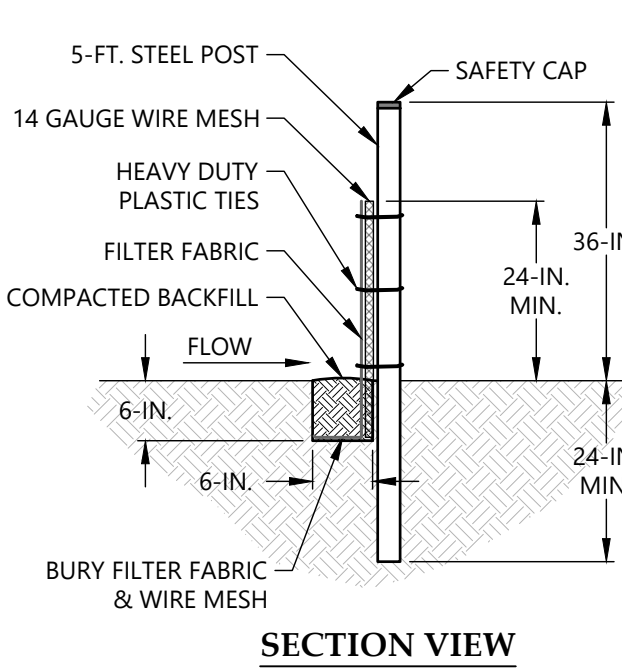
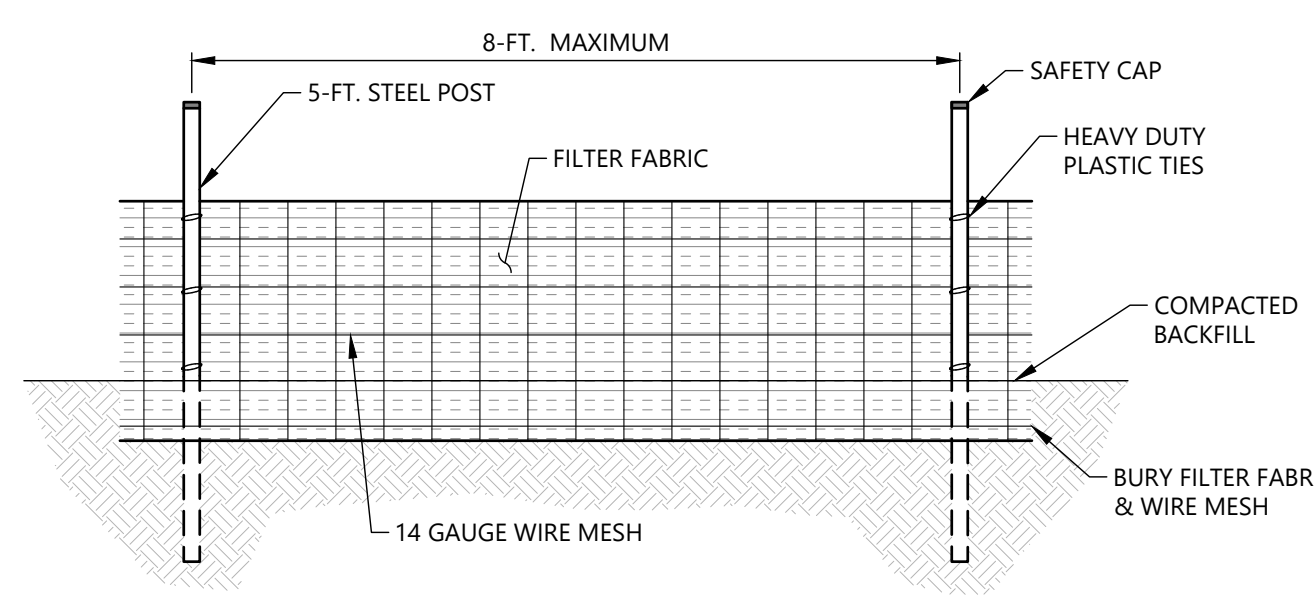
- THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
  - ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
  - ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
  - REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
  - REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
  - CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH THE SILT FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE SILT FENCE. INSTALL CHECKS/TIE-BACKS AND/OR REINSTALL SILT FENCE, AS NECESSARY.
  - CHECK FOR TEARS WITHIN THE SILT FENCE. AREAS WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INEFFECTIVE, REMOVE DAMAGED SILT FENCE AND REINSTALL NEW SILT FENCE IMMEDIATELY.
  - SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.
- REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005, REVISED MARCH 2014 AND NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, CHAPTERS 6 AND 8 REVISED, MAY 2013.

**FABRIC REQUIREMENTS**

- SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
  - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER.
  - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION.
  - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND.
  - HAVE A MINIMUM WIDTH OF 36-IN.
  - USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34, MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
  - 12-IN. OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND SECURED WHEN THE TRENCH IS BACKFILLED.
  - FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
  5. FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24-INCHES ABOVE THE GROUND.
  - USE 14 GAUGE WIRE MESH WITH A MAXIMUM OPENING SPACING OF 6-IN. X 6-IN.

**POST REQUIREMENTS**

- SILT FENCE POSTS MUST BE 5-FT. LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
  - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
  - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-IN. AND A NOMINAL "I" LENGTH OF 1.48-IN.
  - WEIGH 1.25 POUNDS PER FOOT (± 8%)
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
- EACH POST TO BE EQUIPPED WITH SAFETY CAP.
- STEEL POSTS MAY NEED TO HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONG STEEP SLOPES OR INSTALLED IN LOOSE SOILS. THE PLATE SHOULD HAVE A MINIMUM CROSS SECTION OF 17-SQUARE INCHES AND BE COMPOSED OF 15 GAUGE STEEL, AT A MINIMUM. THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
- INSTALL POSTS TO A MINIMUM DEPTH OF 24-IN. A MINIMUM HEIGHT OF 1-IN. TO 2-IN. ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3-FT. SHALL BE MAINTAINED ABOVE THE GROUND.
- POST SPACING SHALL BE AT A MAXIMUM OF 8-FT. ON CENTER.
- WOODEN POSTS ARE ALLOWED WHEN CROSSING UTILITIES. OWNER'S DESIGNATED ENVIRONMENTAL REPRESENTATIVE SHALL APPROVE LOCATIONS WHERE WOODEN POST ARE TO BE USED PRIOR TO INSTALLATION.



**13**  
**8** **REINFORCED SILT FENCE**  
SCALE: N.T.S.

**GENERAL NOTES**

- DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
- MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100-FT.
- MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
- SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
  - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1-FOOT MINIMUM OVERLAP.
  - OVERLAP SILT FENCE BY INSTALLING 3-FT. PAST THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY-DUTY PLASTIC TIES; OR.
  - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
- ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8-INCHES OF THE FABRIC.
- INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
- INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100 -FT., DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED/INSTALLED SILT FENCE.

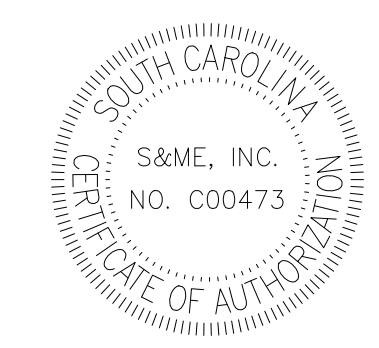
DRAWING PATH: T:\Character-1320\Projects\2023\22610504B\_Synergy\_Materials\_Inc\Site\Geo-Env\CADD\DWG\Mining\_SMPPPP\_Details\_16\_of\_21.dwg





2016 AYRSLEY TOWN BLVD.  
SUITE 2-A  
CHARLOTTE, NC 28273  
(704) 523-4726  
ENGINEERING FIRM  
LICENSE NUMBER: E-0176

**RIVER BEND AGGREGATES, LLC**



| NO. | DATE       | ISSUED FOR CLIENT REVIEW | DESCRIPTION |
|-----|------------|--------------------------|-------------|
|     | 10/16/2023 |                          |             |

**DETAILS (5 OF 5)**  
RIVER BEND QUARRY SITE - CONCEPTUAL PLAN  
RIVER BEND AGGREGATES, LLC  
SPARTANBURG COUNTY, SOUTH CAROLINA

PROJECT NUMBER  
**22610504B**  
DRAWING NUMBER

**9** **9**

**GENERAL NOTES**

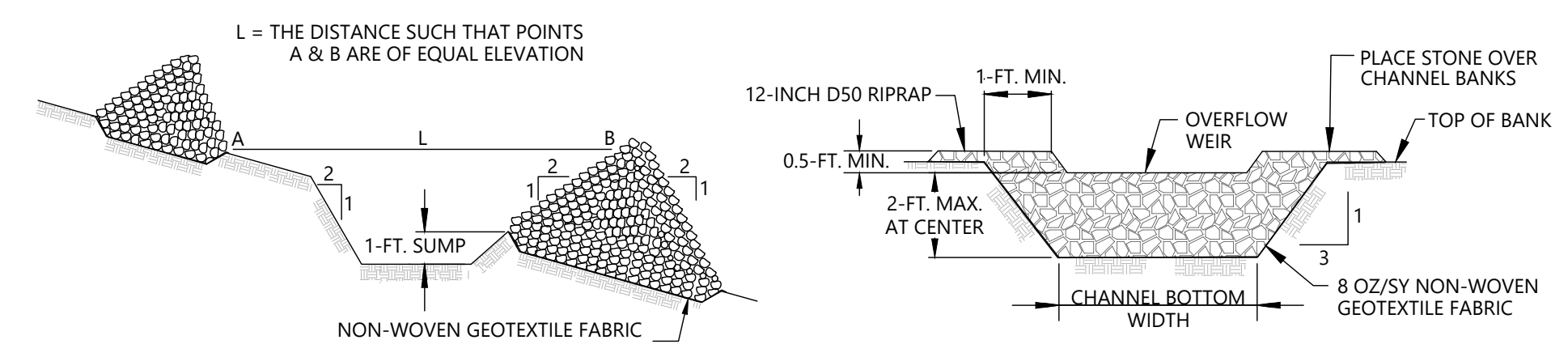
- ROCK CHECK DAMS SHOULD NOT BE PLACED IN WATERS OF THE STATE OR USGS BLUE-LINE STREAMS (UNLESS APPROVED BY FEDERAL AUTHORITIES).
- ROCK CHECK DAMS SHOULD BE INSTALLED IN STEEPLY SLOPED CHANNELS WHERE ADEQUATE VEGETATION CANNOT BE ESTABLISHED. THIS BMP MEASURE SHOULD ONLY BE USED IN SMALL OPEN CHANNELS.
- A 8 OZ/SY NON-WOVEN GEOTEXTILE FABRIC SHALL BE INSTALLED OVER THE SOIL SURFACE WHERE THE ROCK CHECK DAMS IS TO BE PLACED.
- THE BODY OF THE ROCK CHECK DAM SHALL BE COMPOSED OF 12-INCH D50 RIPRAP. THE UPSTREAM FACE MAY BE COMPOSED OF 1-INCH D50 WASHED STONE.
- ROCK CHECK DAMS SHOULD NOT EXCEED A HEIGHT OF 2-FEET AT THE CENTERLINE OF THE CHANNEL.
- ROCK CHECK DAMS SHOULD HAVE A MINIMUM TOP FLOW LENGTH OF 2-FEET.
- RIPRAP SHOULD BE PLACED OVER CHANNEL BANKS TO PREVENT WATER FROM CUTTING AROUND THE ROCK CHECK DAM.
- THE RIPRAP SHOULD BE PLACED BY HAND OR MECHANICAL PLACEMENT (NO DUMPING OF ROCK TO FORM DAM) TO ACHIEVE COMPLETE COVERAGE OF THE CHANNEL. DOING SO WILL ALSO ENSURE THAT THE CENTER OF THE CHECK IS LOWER THAN THE EDGES.
- THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM CHECK IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM CHECK.

**MAINTENANCE NOTES**

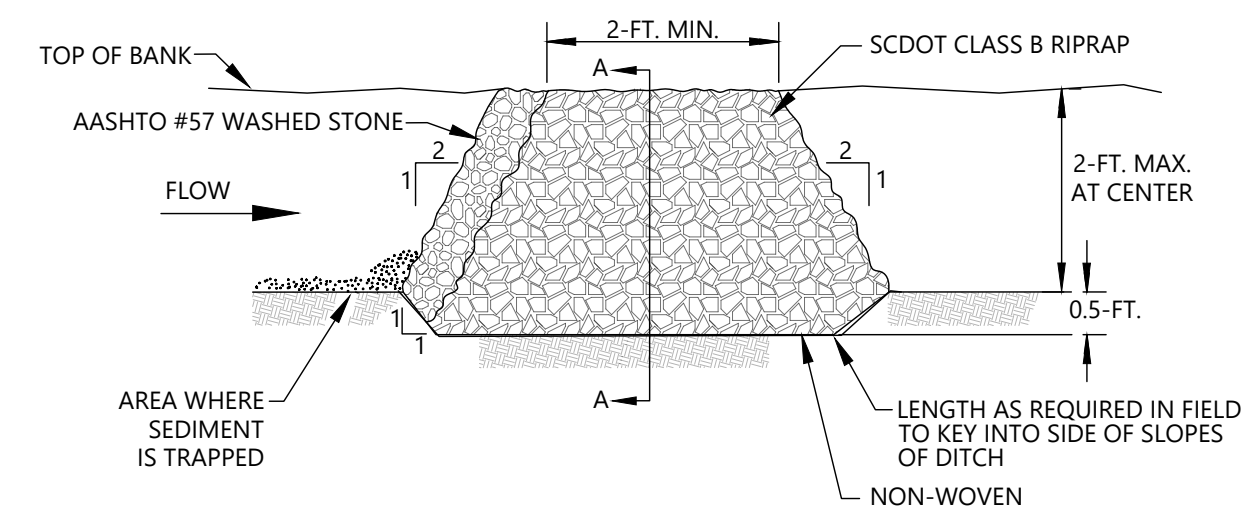
- THE KEY TO FUNCTIONAL ROCK CHECK DAMS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- ATTENTION TO SEDIMENT ACCUMULATIONS IN FRONT OF THE ROCK CHECK DAM IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVED ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE ROCK CHECK DAM.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- INSPECT ROCK CHECK DAMS' EDGES FOR EROSION AND EVIDENCE OF RUNOFF BYPASSING THE INSTALLED CHECK. IF EVIDENT REPAIR PROMPTLY AS NECESSARY TO PREVENT EROSION AND BYPASSING.
- IN THE CASE OF GRASS-LINED DITCHES, CHANNELS, AND SWALES, ROCK CHECK DAMS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE UNLESS THE SLOPE OF THE SWALE IS GREATER THAN 4%.
- AFTER CONSTRUCTION IS COMPLETED AND FINAL STABILIZATION IS REACHED, THE ENTIRETY OF THE ROCK CHECK DAM SHOULD BE REMOVED IF VEGETATION WILL BE USED FOR PERMANENT EROSION CONTROL MEASURES. THE AREA BENEATH THE REMOVED ROCK CHECK DAMS MUST BE ADDRESSED WITH PERMANENT STABILIZATION MEASURES.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2005, REVISED MARCH 2014.

**16 ROCK CHECK DAM**  
SCALE: N.T.S.



**SPACING BETWEEN ROCK CHECK DAMS**



**TYPICAL ROCK CHECK DAM SECTION**

**GENERAL NOTES**

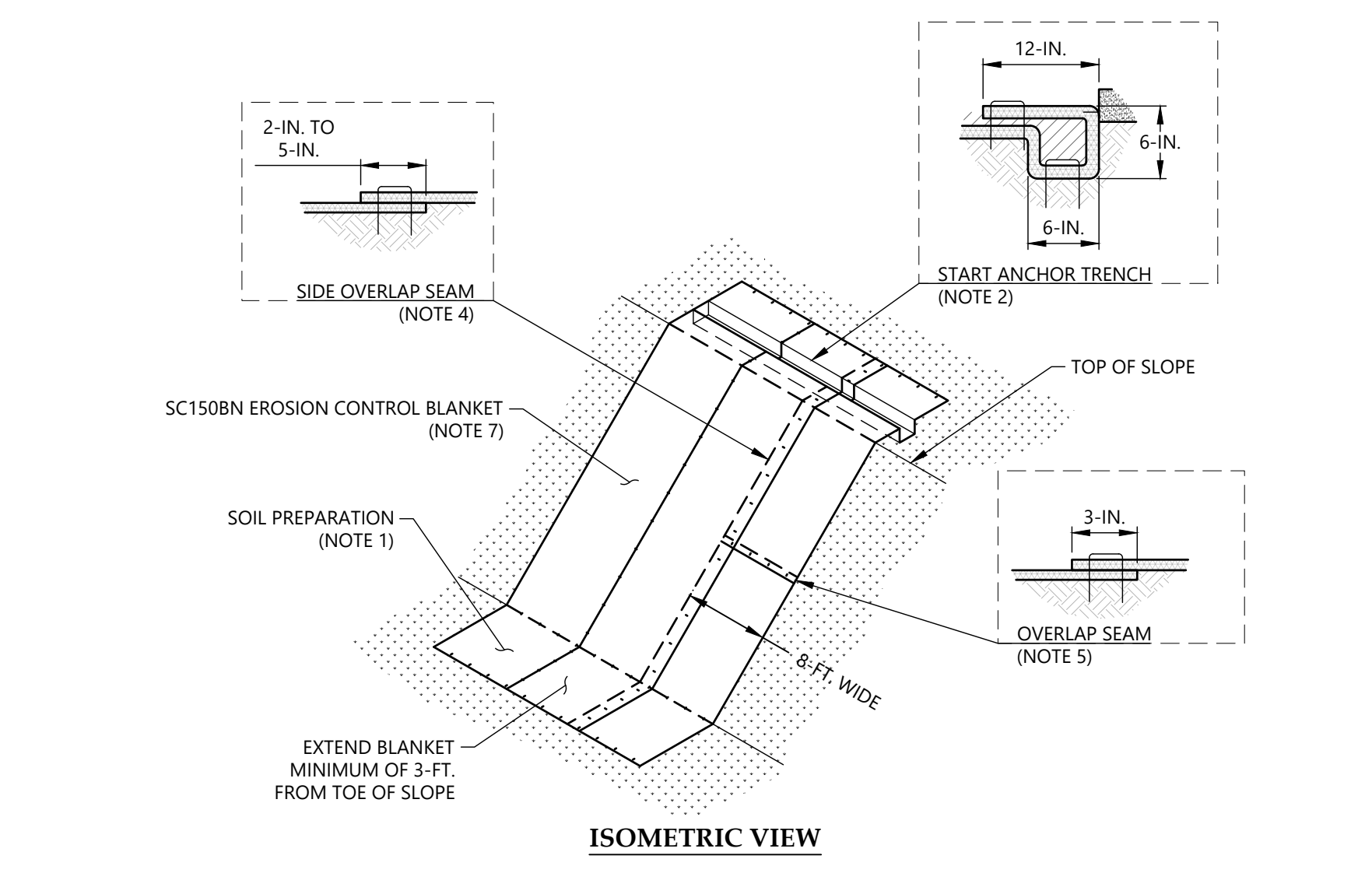
- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPs), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPs IN A 6-IN. DEEP X 6-IN. WIDE TRENCH WITH APPROXIMATELY 12-IN. OF RECPs EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPs WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12-IN. APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12-IN. PORTION OF RECPs BACK OVER THE SEED AND COMPACTED SOIL. SECURE RECPs OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12-IN. APART ACROSS THE WIDTH OF THE RECPs. ROLL THE RECPs DOWN OR HORIZONTALLY ACROSS THE SLOPE BASED ON ENVIRONMENT INSPECTOR. RECPs WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPs MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
- THE EDGES OF PARALLEL RECPs MUST BE STAPLED WITH APPROXIMATELY 2 TO 5-IN. OVERLAP DEPENDING ON THE RECPs TYPE.
- CONSECUTIVE RECPs SPICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3-IN. OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12-IN. APART ACROSS ENTIRE RECPs WIDTH.
- IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6-IN. MAY BE NECESSARY TO PROPERLY SECURE THE RECPs. EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN BIONET SC150BN OR ENGINEER APPROVED EQUIVALENT.
- FOLLOW MANUFACTURERS SPECIFICATIONS IF THERE IS A DISCREPANCY IN NOTES OR IF ENGINEER APPROVED ALTERNATIVE IS USED.

**MAINTENANCE NOTES**

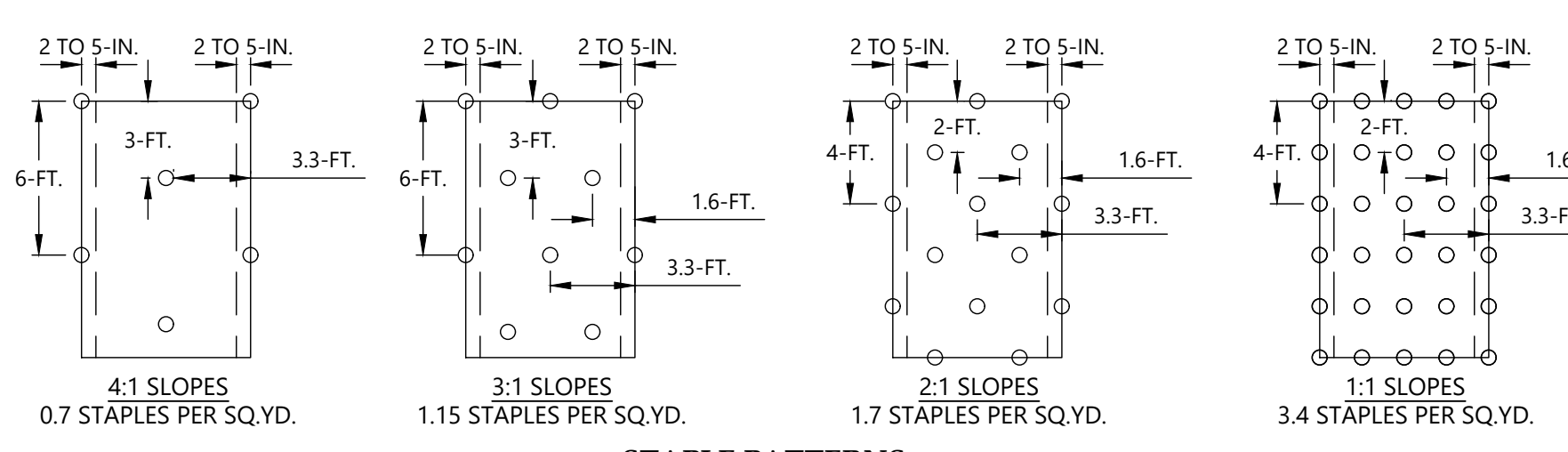
- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- MAKE ANY NECESSARY REPAIRS IMMEDIATELY.
- GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECP.
- ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
- IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
- MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

REFERENCE: DETAIL BASED ON SCDHEC STORM WATER MANAGEMENT BMP HANDBOOK DATED JULY 31, 2015 (PORTIONS REVISED MAY 2014), NORTH AMERICAN GREEN INSTALLATION GUIDE, AND AMERICAN EXCELSIOR CURLEX SLOPE DETAIL ISOMETRIC VIEW.

**15 EROSION CONTROL BLANKET - SLOPE**  
SCALE: N.T.S.

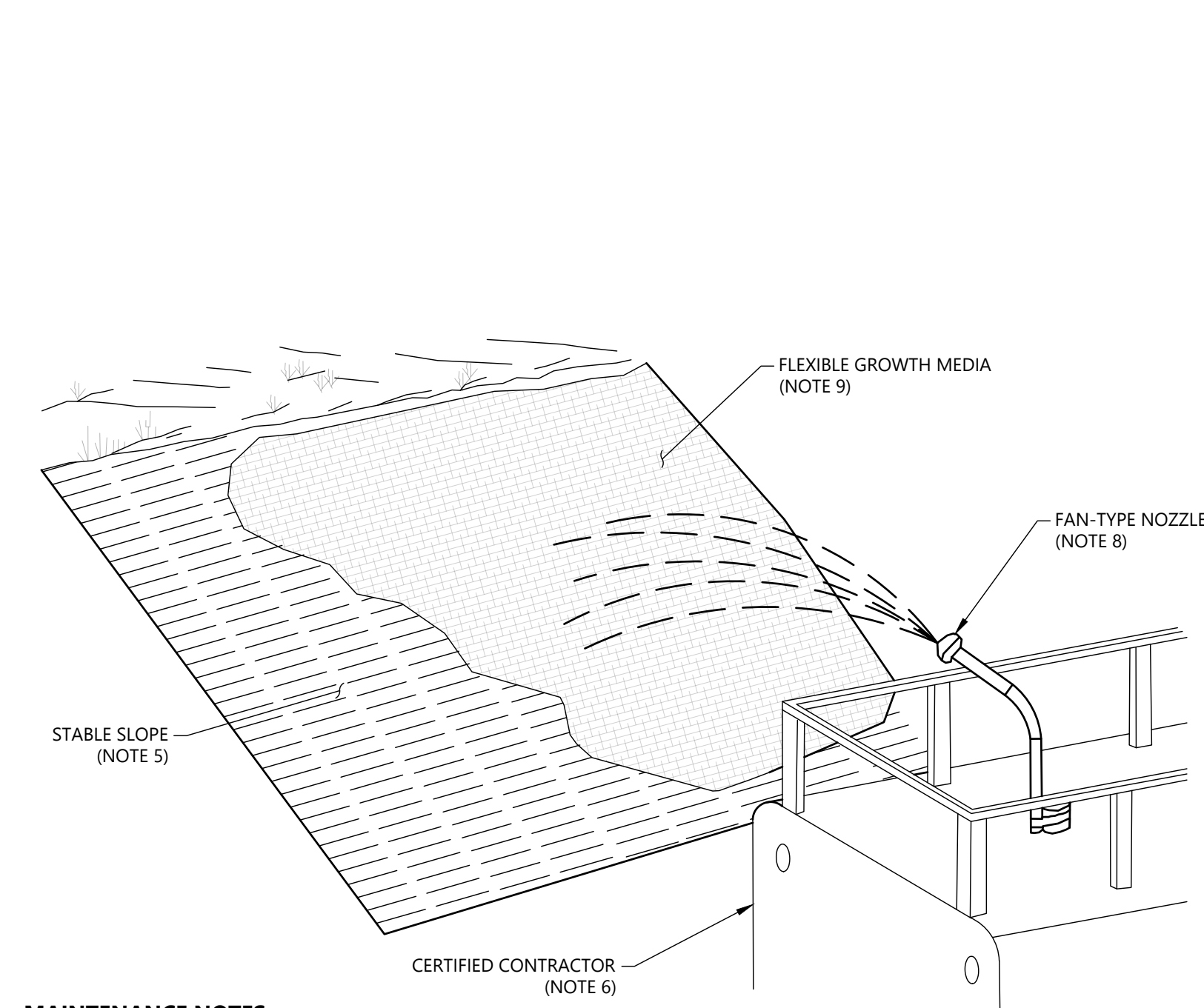


**ISOMETRIC VIEW**



**STAPLE PATTERNS**

**17 FLEXIBLE GROWTH MEDIA**  
SCALE: N.T.S.



**GENERAL NOTES**

- A FLEXIBLE GROWTH MATRIX (FGM) COMBINES BOTH CHEMICAL AND MECHANICAL BONDING TECHNIQUES TO LOCK THE MATRIX IN PLACE. FGM IS COMPOSED OF CRIMPED, MANMADE FIBERS, ORGANIC FIBERS, AND PERFORMANCE ENHANCING ADDITIVES THAT FORM A LOFTY, INTERLOCKING MATRIX. FGM HAS AIR SPACES AND WATER-ABSORBING CAVITIES THAT IMPROVE SEED GERMINATION, REDUCE THE IMPACT OF RAINDROP ENERGY, AND MINIMIZE SOIL LOSS. WATER INSOLUBLE TACKIFIERS AND FLOCCULANTS CHEMICALLY BOND THE MATRIX TO THE SOIL SURFACE.
- FGM IS APPLICABLE FOR THE FOLLOWING SITUATIONS:
  - AS A TYPE A TEMPORARY EROSION CONTROL BLANKET;
  - SLOPES UP TO 2H:1V;
  - AS AN INFILL FOR TURF REINFORCEMENT MATS (TRMS) ON SLOPES GREATER THAN 2H:1V;
  - ENVIRONMENTALLY SENSITIVE AREAS NOT COMPATIBLE FOR NETTING;
  - WHEN THE REQUIRED LONGEVITY OF SOIL PROTECTION IS UP TO 1 YEAR;
  - WHEN THE SITE REQUIRES IMMEDIATE EROSION PROTECTION AND THERE IS A RISK OF IMPENDING WEATHER;
  - WHEN FAST VEGETATION ESTABLISHMENT IS REQUIRED; AND
  - WHEN A HIGH FACTOR OF DESIGN SAFETY IS REQUIRED.
- FGM IS NOT APPLICABLE AS A CHANNEL LINER OR FOR AREAS RECEIVING CONCENTRATED FLOW. APPLICABLE FGM MAY BE SELECTED FROM THE SCDOT APPROVED PRODUCTS LIST.
- FLEXIBLE GROWTH MEDIA (FGM) COMPONENTS ARE PRE-PACKAGED BY THE MANUFACTURER TO ASSURE MATERIAL PERFORMANCE. UNDER NO CIRCUMSTANCES IS FIELD MIXING OF MATERIALS, ADDITIVES OR COMPONENTS ACCEPTED. EXAMINE SUBSTRATES AND CONDITIONS WHERE MATERIALS WILL BE APPLIED.
- APPLY FGM TO GEOTECHNICALLY STABLE SLOPES THAT HAVE BEEN DESIGNED AND CONSTRUCTED TO DIVERT RUNOFF AWAY FROM THE FACE OF THE SLOPE. DO NOT PROCEED WITH INSTALLATION UNTIL SATISFACTORY CONDITIONS ARE ESTABLISHED.
- INSTALL FGM WITH A CONTRACTOR WHO IS CERTIFIED AND TRAINED BY THE MANUFACTURER IN THE PROPER PROCEDURES FOR MIXING AND APPLYING THE FGM.
- STRICTLY COMPLY WITH THE MANUFACTURER'S MIXING RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.
- USE APPROVED HYDRAULIC SEEDING/MULCHING MACHINES WITH FAN-TYPE NOZZLE (50-DEGREE TIP) FOR FGM APPLICATIONS.
- APPLY FGM FROM OPPOSING DIRECTIONS TO THE SOIL SURFACE IN SUCCESSIVE LAYERS, REDUCING THE "SHADOW EFFECT" TO ACHIEVE MAXIMUM COVERAGE OF ALL EXPOSED SOIL.
- FGM DOES NOT REQUIRE A CURE TIME AND IS EFFECTIVE IMMEDIATELY SUCH THAT FGM MAY BE APPLIED IMMEDIATELY BEFORE, DURING OR AFTER A RAINFALL EVENT.
- INSTALL FGM MATERIALS ACCORDING TO THE MANUFACTURER'S APPLICATION RATES.

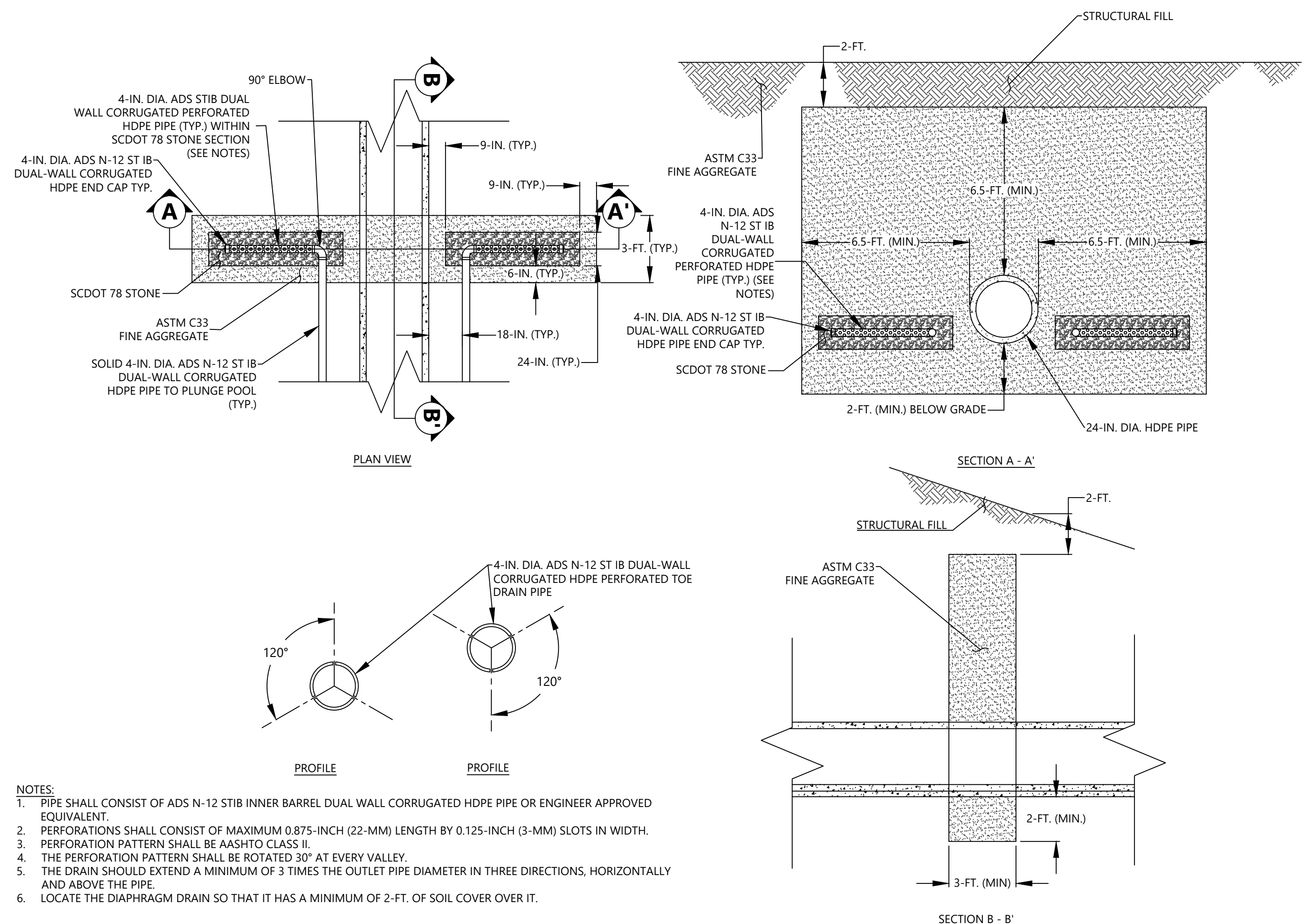
**MAINTENANCE NOTES**

- ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. INSPECTIONS MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- REAPPLY FGM TO DISTURBED AREAS THAT REQUIRE CONTINUED EROSION CONTROL.
- MAINTAIN EQUIPMENT TO PROVIDE UNIFORM APPLICATION RATES. RINSE ALL MIXING AND APPLICATION EQUIPMENT THOROUGHLY WITH WATER TO AVOID FORMATION OF RESIDUES AND DISCHARGE RINSE WATER APPROPRIATELY.
- DEGRADATION OF FGM IS EXPECTED TO OCCUR AS A RESULT OF MECHANICAL DEGRADATION, CHEMICAL AND BIOLOGICAL HYDROLYSIS, SUNLIGHT, SALT AND TEMPERATURE. REAPPLY FGM IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. REAPPLICATION IS NOT REQUIRED UNLESS FGM TREATED SOILS ARE DISTURBED OR TURBIDITY OR WATER QUALITY SHOWS THE NEED FOR AN ADDITIONAL APPLICATION.

Approved by the  
**South Carolina Department of Environmental Services**  
Division of Mining & Solid Waste Management

By Jeremy E. Eddy  
Map Name SED-2416-SV1  
Date Approved July 11, 2024  
Permit # I-002410

**18 SEEPAGE DIAPHRAGM DRAIN**  
SCALE: N.T.S.



**NOTES:**

- PIPE SHALL CONSIST OF ADS N-12 STIB INNER BARREL DUAL WALL CORRUGATED HDPE PIPE OR ENGINEER APPROVED EQUIVALENT.
- PERFORATIONS SHALL CONSIST OF MAXIMUM 0.875-INCH (22-MM) LENGTH BY 0.125-INCH (3-MM) SLOTS IN WIDTH.
- PERFORATION PATTERN SHALL BE AASHTO CLASS II.
- THE PERFORATION PATTERN SHALL BE ROTATED 30° AT EVERY VALLEY.
- THE DRAIN SHOULD EXTEND A MINIMUM OF 3 TIMES THE OUTLET PIPE DIAMETER IN THREE DIRECTIONS, HORIZONTALLY AND ABOVE THE PIPE.
- LOCATE THE DIAPHRAGM DRAIN SO THAT IT HAS A MINIMUM OF 2-FT. OF SOIL COVER OVER IT.

DRAWING PATH: T:\charlotte\1350\Projects\2023\22610504B\_Synergy Materials\Parcel Quarry\_Packet\SC Civil\Geo-Env\CAD\DWG\Mining SWPPP\DETAILS 15 OF 20.dwg



Approved by the  
 South Carolina Department of  
 Environmental Services  
 Division of Mining & Solid Waste Management

By Jeremy E. Eddy  
 Map Name RM-2410-1V1  
 Date Approved July 11, 2024  
 Permit # I-002410



2016 AYRSLEY TOWN BLVD  
 SUITE 2-A  
 CHARLOTTE, NC 28273  
 (704) 523-4726  
 ENGINEERING FIRM  
 LICENSE NUMBER: F-0176

**RIVER  
 BEND  
 AGGREGATES,  
 LLC**



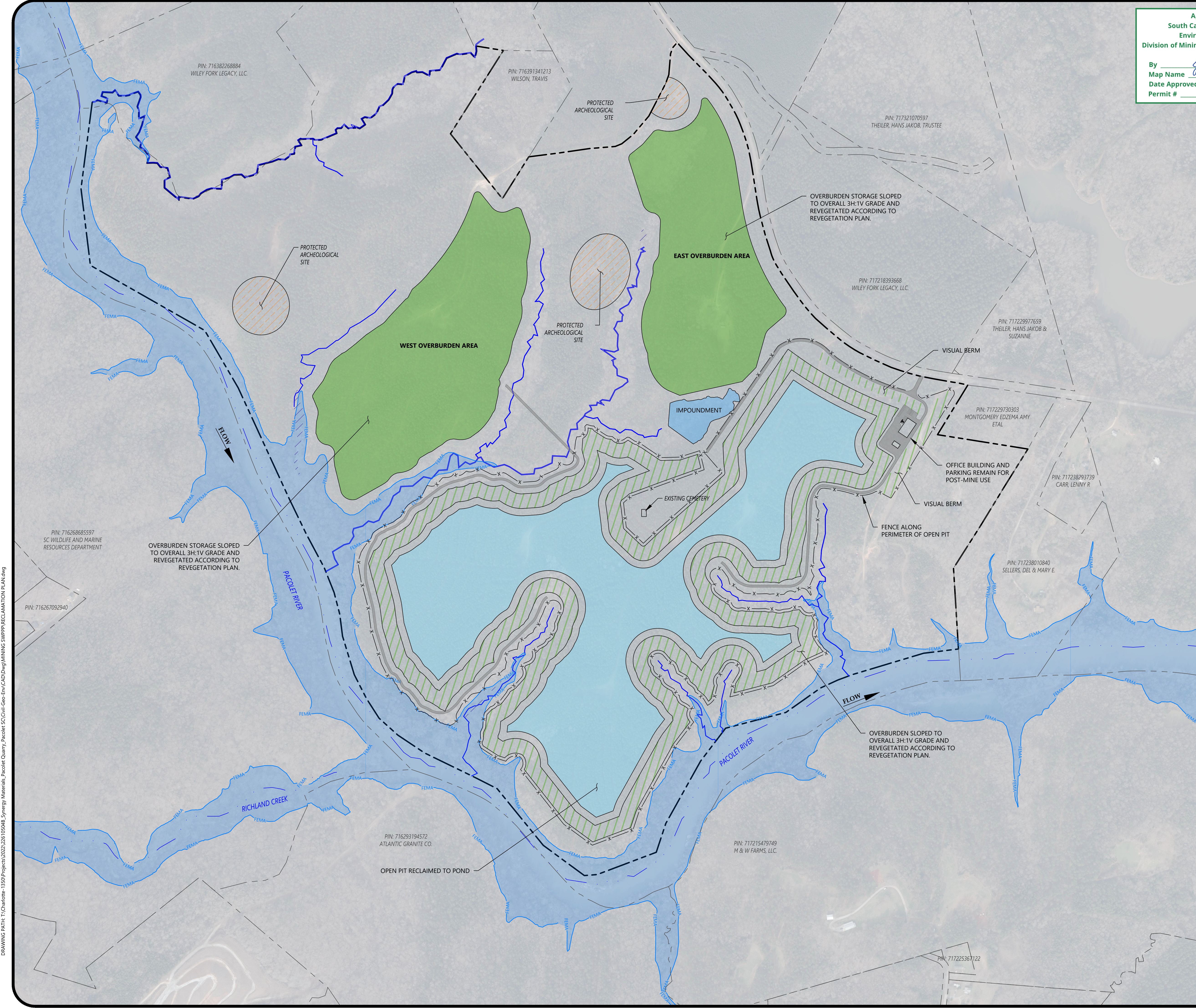
| NO. | DATE | ISSUED FOR CLIENT REVIEW | BY | CHK | CIS | APV |
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**CONCEPTUAL RECLAMATION MAP**

RIVER BEND QUARRY SITE - CONCEPTUAL PLAN  
 RIVER BEND AGGREGATES, LLC  
 SPARTANBURG COUNTY, SOUTH CAROLINA

PROJECT NUMBER  
**22610504B**  
 DRAWING NUMBER

**4**      **9**



**LEGEND**

**EXISTING FEATURES**

- PROPERTY LINE (REF. 1)
- PERMIT BOUNDARY
- STREAMS (NOTE 1)
- STREAM CENTERLINES (REF. 2)
- WETLANDS (NOTE 1)
- FEMA 100-YEAR FLOODPLAIN (REF. 3)
- PROTECTED ARCHEOLOGICAL SITE
- IMPOUNDMENT

**PROPOSED FEATURES**

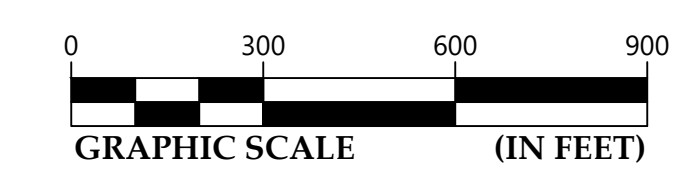
- PIT EDGE RECLAIMED
- OVERBURDEN STORAGE RECLAIMED
- POND
- FENCE
- ROADS

**GENERAL NOTES:**

- S&ME DELINEATED ON-SITE WATER FEATURES IN JANUARY 2023.

**REFERENCE:**

- TAX PARCEL DATA OBTAINED FROM THE SPARTANBURG COUNTY, SOUTH CAROLINA GEOGRAPHIC INFORMATION SYSTEMS (GIS) DEPARTMENTS.
- HYDROLOGY DATA OBTAINED FROM THE NATIONAL HYDROGRAPHY DATASET (NHD).
- FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) 100-YEAR FLOODPLAIN, FLOODWAY, AND BASE FLOOD ELEVATION (BFE) DATA OBTAINED FROM THE FEMA NATIONAL FLOOD HAZARD LAYER (NFHL) DATASET.
- AERIAL ORTHOIMAGERY OBTAINED FROM SOUTH CAROLINA REVENUE AND FISCAL AFFAIRS.



DRAWING PATH: T:\Charleston\1350\Projects\2022\22610504B\_Synergy\_Materials\_Pacolet Quarry\_Pacolet Civil-Geo\_Env\CAD\DWG\Mining\_SWPPP\RECLAMATION\_PLAN.dwg