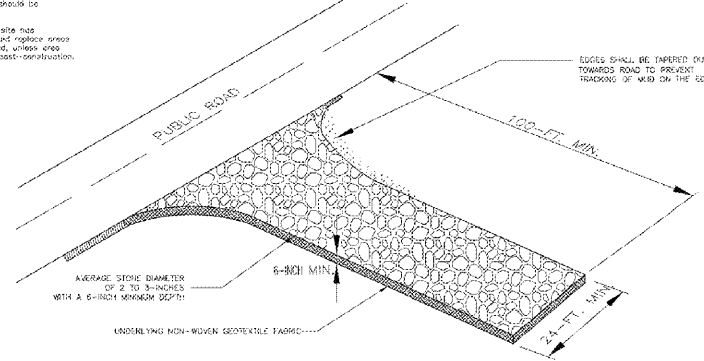


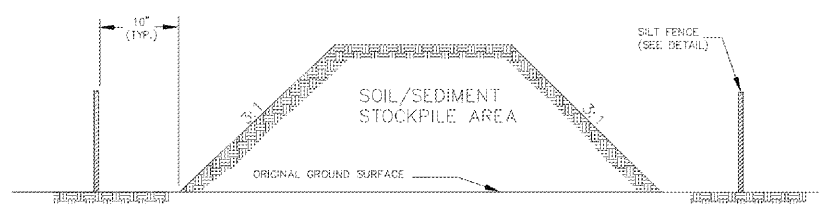
- GENERAL REQUIREMENTS - INSPECTION & MAINTENANCE**
- The key to functional construction entrances is weekly inspections, routine maintenance, and regular removal.
 - Regular inspections of construction entrances shall be conducted once every calendar week and on as-needed basis, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
 - During regular inspections, check for mud and sediment buildup and fast regularly inspection frequencies may need to be more frequent during long periods of wet weather.
 - Reinforce the stone pad as necessary for drainage and runoff control.
 - Wash or replace stones as needed and as directed by site inspector. The stones in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off-site by vehicles. Frequent washing will extend the useful life of stone pad.
 - Irregularly remove mud and sediment trapped or washed onto adjacent pavement surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.
 - During maintenance activities, any broken pavement should be repaired immediately.

- CONSTRUCTION ENTRANCE - GENERAL NOTES**
- Stabilized construction entrances should be used at all points where traffic will access/egress a construction site onto a public road or any impervious surface, such as parking lots.
 - Install a non-woven geotextile fabric prior to placing any stone.
 - Install a silt fence along the entrance where needed to decrease sediment discharge.
 - The entrance shall consist of 2-feet to 3-inch stone placed on a minimum depth of 6-inches.
 - Minimum dimensions of the entrance shall be 24-feet wide by 120-feet long and may be modified as necessary to accommodate site constraints.
 - The edges of the entrance shall be tapered out towards the road to prevent tracking of the edge of the entrance.
 - Shovel all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
 - Urethane may not be used for the stone pad.



SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	120 FEET
ROCK PAD STONE SIZE	2 - 3 INCHES

1 STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



- NOTES:**
- SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE, OR IF STOCKPILE AREA IS LOCATED ON/NEAR A ROAD THE SILT FENCE IS TO EXTEND ALONG CONTOURS OF THE DOWN-GRADE AREA.
 - IF STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED.
 - SILT FENCE SHALL BE MAINTAINED UNTIL STOCKPILE AREA HAS EITHER BEEN REMOVED OR PERMANENTLY STABILIZED.
 - THE KEY TO FUNCTIONAL TEMPORARY STOCKPILE AREAS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

4 TEMPORARY STOCKPILE AREA
N.T.S.

Comprehensive Stormwater Pollution Prevention Plan (C-SWPPP) Statement:

I have prepared this design document submitted depicting that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of Title 45, Chapter 14 of the Code of Laws of SC, 1976 as amended, pursuant to Regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of SC760000.

SC760000 SWPPP NOTES:

- If necessary, slopes which exceed eight (8) vertical feet should be stabilized with geotextile or vegetative mats, in addition to hydroseeding. If possible, the contractor shall submit a design for stabilization of slopes. Temporary berms may be needed until the slope is planted to grass.
- Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased. No more than fourteen (14) days after work has ceased, except as stated below:
 - Where stabilization by the 14th day is prohibited by site cover or frozen ground conditions stabilization measures must be initiated on site at that time.
 - Where construction activity on a portion of the site is temporarily ceased, and storm-water discharges will be reduced within 14 days, temporary stabilization measures do not have to be initiated on that portion of the site.
- All sediment and erosion control devices shall be inspected once calendar every week. If periodic inspection or other information indicates that a BMP is not functioning, the contractor must address the necessary requirements of modification required to correct the BMP within 48 hours of notification.
- Practice soil fence and/or other control devices, as may be required, to control soil erosion during utility construction. All control devices shall be checked, cleaned, and supplied with grassing immediately after the utility installation. Fill cover, and temporary seeding at the end of construction areas shall be checked and maintained. See water should be filtered.
- All erosion control devices shall be properly maintained during all phases of construction until the construction site is stabilized and all disturbed areas have been stabilized. Additional control devices may be required during construction in order to control erosion. Temporary control devices shall be removed once construction is complete and the site is stabilized.
- The contractor must take necessary action to minimize the tracking of mud onto public roads. The contractor shall daily remove mud/silt from pavement, as may be required.
- Residential subdivisions require erosion control measures for infrastructure or residential lots. The contractor shall not require individual property owners above these plans during construction or obtain approval of an individual plan. See SC 45-300 and SC 45-301.
- Temporary diversion berms and/or ditches will be provided as needed to prevent runoff from adjacent areas from eroding runoff and/or to direct sediment-laden water to appropriate traps or stable basins.
- All waters of the State (lakes, including wetlands, streams, rivers, and creeks) shall be protected from siltation. A silt fence line to be installed in an area where a 30-foot buffer can't be maintained between the silt fence and the water body. The buffer should be maintained between the last row of silt fence and all water.
- Urban construction debris, oils, fuels, and building materials with high potential for impact (such as stockpiles of heavy building materials) and construction chemicals that could be exposed to storm water must be properly stored, secured, and managed to prevent storm water discharge.
- A copy of the SWPPP, including materials and activities, shall be maintained at the construction site or a nearby location nearby accessible during normal business hours, from the date of commencement of construction activities to the date that stabilization is reached.
- Height stabilization measures on any exposed steep slope (24:1 or greater) where land-disturbing activities have permanently or temporarily ceased, and will not resume for a period of 7 calendar days.
- Minimize soil compaction on areas sensitive to erosion (roads).
- Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment after 24 hours.
- Minimize the discharge of pollutants from dewatering of trenches and excavated areas. These discharges are to be routed through appropriate BMPs (sediment basin, filter bag, etc.).
- The following discharges from sites are prohibited:
 - Wastewater from washout of concrete, washed managed by an appropriate control.
 - Wastewater from washout and cleanup of trucks, pumps, form release oils, curing compounds and other construction materials.
 - Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, and
 - Spills or discharges used in vehicle and equipment washing.
- After construction activities begin, inspections must be conducted at a minimum of at least once every calendar week and must be conducted until final stabilization is reached on all areas of the construction site.
- If existing BMPs need to be modified or if additional BMPs are necessary to comply with the requirements of this permit and/or SC's Water Quality Standards, implementation must be completed before the next storm event whenever practicable. If implementation cannot be completed before the next storm event is anticipated, the situation must be documented in the SWPPP and alternative BMPs must be implemented as soon as reasonably possible.
- A Pre-Construction Conference must be held for each construction site with an approved City SWPPP prior to the implementation of construction activities. For non-linear projects that disturb 10 acres or more this conference must be held on-site unless the Department has approved otherwise.

STORMWATER FACILITY MANAGEMENT PLAN:

THE PROPERTY OWNER SHALL AT ALL TIMES MAINTAIN THE STORMWATER FACILITIES IN GOOD WORKING ORDER, CONDITION, REPAIR, CLEAR OF DEBRIS, AND IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL REGULATIONS.

REQUIRED MAINTENANCE	FREQUENCY
CLEAN AND REMOVE DEBRIS FROM INLET AND OUTLET STRUCTURES	MONTHLY, OR AFTER LARGE STORM EVENTS
MAINTAIN SLOPES	MONTHLY, AS NEEDED
REMOVAL OF INVASIVE VEGETATION	ANNUAL
INSPECT FOR DAMAGE TO CONTROL STRUCTURE AND REPAIR AS NECESSARY	ANNUAL
INSPECT SEDIMENT ACCUMULATION IN THE UNDERGROUND DETENTION FACILITIES	BIENNIAL-ANNUAL OR STEP-BY-STEP UNDERGROUND FACILITY INSPECTION & MAINTENANCE PLAN
REMOVE SEDIMENT FROM UNDERGROUND DETENTION FACILITIES	AFTER 6" OR 15% OF THE TOTAL SYSTEM HEIGHT, SEE CHART & STEP-BY-STEP UNDERGROUND FACILITY INSPECTION & MAINTENANCE PLAN
INSPECT FOR OPERATIONAL INLET AND OUTLET STRUCTURES	ANNUAL
REPAIR EMBANKMENT SLOPES, UNDERCUT OR ERODED AREAS	ANNUAL, OR AS NEEDED
INSPECT AND REMOVE SEDIMENT FROM FOREBAY, ANTILOG DEVICE & FLOW DEVICE SLUMP	MONTHLY, OR AFTER LARGE STORM EVENTS
REMOVE SEDIMENT FROM THE FOREBAY	PER DESIGN CYCLE, AS NEEDED, AFTER 50% OF TOTAL FOREBAY CAPACITY IS FILLED
REMOVE SEDIMENT ACCUMULATIONS IN THE MAIN PERMANENT POOL	5 TO 10 YEAR CYCLE, AFTER 25% OF THE PERMANENT POOL VOLUME IS FILLED
INSPECT OVERFLOW SPILLWAYS FOR DAMAGE AND REPAIR PER MANUFACTURER SPECIFICATIONS	ANNUAL

NOTE:
A COVENANTS FOR PERMANENT MAINTENANCE OF STORMWATER FACILITIES AGREEMENT AND STORMWATER RECORD DRAWINGS FOR THE STORMWATER MANAGEMENT FACILITIES MUST BE COMPLETED IN ACCORDANCE WITH CITY OF CHARLESTON SPECIFICATIONS BEFORE A DEDICATION OF THE PROPOSED PUBLIC RIGHT-OF-WAY WILL BE APPROVED.

UNDERGROUND DETENTION FACILITIES INSPECTION & MAINTENANCE:

THE R-TANK SYSTEM SHOULD BE BACK-FLUSHED ONCE SEDIMENT ACCUMULATION HAS REACHED 6" OR 15% OF THE TOTAL SYSTEM HEIGHT. USE THE CHART BELOW AS A GUIDELINE TO DETERMINE THE POINT AT WHICH MAINTENANCE IS REQUIRED ON YOUR SYSTEM.

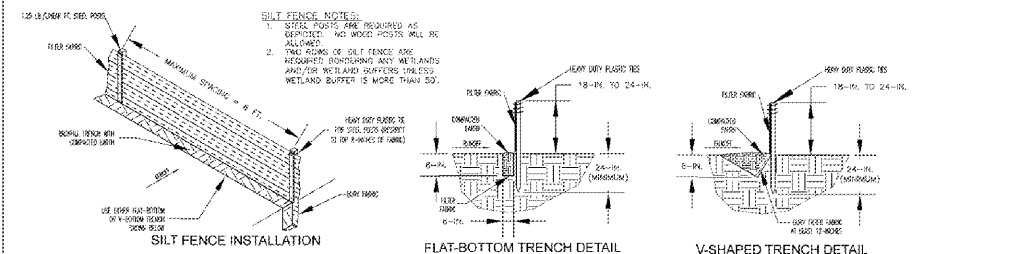
R-TANK UNIT	HEIGHT	MAX SEDIMENT DEPTH
SINGLE	34"	6"
DOUBLE	50"	6"
TRIPLE	67"	6"
FOUR	84"	6"

STEP-BY-STEP INSPECTION & MAINTENANCE ROUTINE:

- INSPECTION**
 - INSPECTION PORT
 - REMOVE CAP
 - USE FLASHLIGHT TO DETECT SEDIMENT DEPOSITS
 - IF PRESENT, MEASURE SEDIMENT DEPTH WITH STADIA ROD
 - RECORD RESULTS ON MAINTENANCE LOG
 - REPLACE CAP
 - MAINTENANCE PORT/S
 - REMOVE CAP
 - USE FLASHLIGHT TO DETECT SEDIMENT DEPOSITS
 - IF PRESENT, MEASURE SEDIMENT DEPTH WITH STADIA ROD
 - RECORD RESULTS ON MAINTENANCE LOG
 - REPEAT FOR ALL MAINTENANCE PORTS
 - ADJACENT MANHOLES
 - REMOVE COVER
 - USE FLASHLIGHT TO DETECT SEDIMENT DEPOSITS
 - IF PRESENT, MEASURE SEDIMENT DEPTH WITH STADIA ROD, ACCOUNTING FOR DEPTH OF SUMP (IF PRESENT)
 - INSPECT PIPES CONNECTING TO R-TANK
 - RECORD RESULTS ON MAINTENANCE LOG
 - REPLACE COVER
 - REPEAT FOR ALL MANHOLES THAT CONNECT TO THE R-TANK
- MAINTENANCE**
 - PLUG SYSTEM OUTLET TO PREVENT DISCHARGE OF BACK-FLUSH WATER
 - DETERMINE BEST LOCATION TO PUMP OUT BACK-FLUSH WATER
 - REMOVE CAP FROM MAINTENANCE PORT
 - PUMP WATER AS RAPIDLY AS POSSIBLE (WITHOUT OVER-TOPPING PORT) INTO SYSTEM UNTIL AT LEAST 1" OF WATER COVERS SYSTEM BOTTOM
 - REPLACE CAP
 - REPEAT AT ALL MAINTENANCE PORTS
 - PUMP OUT BACK-FLUSH WATER TO COMPLETE BACK-FLUSHING
 - VACUUM ALL ADJACENT STRUCTURES AND ANY OTHER STRUCTURES OR STORMWATER PRE-TREATMENT SYSTEMS THAT REQUIRE ATTENTION
 - SEDIMENT-LADEN WATER MAY BE CAPTURED FOR DISPOSAL, OR PUMPED THROUGH A DIRTTRAP
 - REPLACE ANY REMAINING CAPS OR COVERS
 - RECORD THE BACK-FLUSHING EVENT IN YOUR MAINTENANCE LOG WITH ANY RELEVANT SPECIFICS

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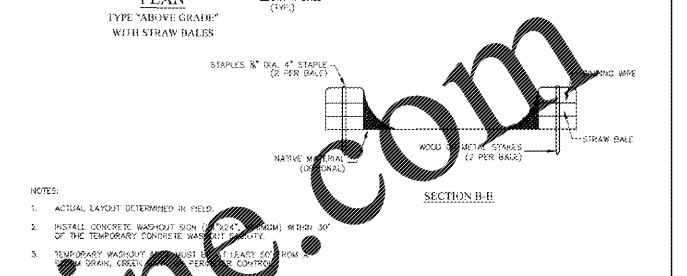
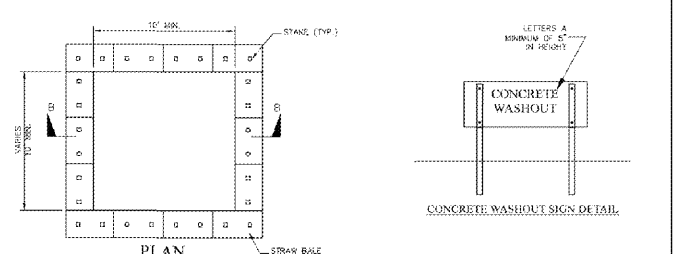
Order Plans @



- SILT FENCE - INSPECTION & MAINTENANCE**
- Be sure to inspect all faces of every silt fence, when conditions and regular maintenance.
 - Repair silt fences if at least 40% of the stones are missing, the fabric is damaged, or the silt fence is not at least 24 inches high.
 - Remove any vegetation growing on the silt fence.
 - Remove silt fences that are damaged or not at least 24 inches high.
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- SILT FENCE - POST REQUIREMENTS**
- Silt fence posts must be 40-lb dry steel rods that meet, at a minimum, the following product requirements:
 - Consist of a 1/2" diameter rod with a minimum yield strength of 33,000 psi.
 - Have a 1/2" diameter rod with a minimum yield strength of 33,000 psi.
 - Have a 1/2" diameter rod with a minimum yield strength of 33,000 psi.
 - Posts must be spaced at 10-foot intervals.
 - Posts must be installed in a trench 12 inches deep.
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2 SILT FENCE
N.T.S.



- NOTES:**
- ACTUAL LAYOUT DETERMINED IN FIELD.
 - INSTALL CONCRETE WASHOUT SIGN (SEE DETAIL) WITHIN 10' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 - TEMPORARY WASHOUT FACILITY MUST BE LEAST 50' FROM ANY ADJACENT ROAD, DRIVE, OR OTHER PUBLIC RIGHT-OF-WAY.
 - CLEAN OUT CONCRETE WASHOUT AREA REGULARLY.
 - THE 48" X 12" CONCRETE WASHOUT IS DESIGNED TO BE USED FOR THE 48" X 12" CONCRETE WASHOUT FACILITY.
 - SILT FENCE SHALL BE MAINTAINED AT ALL TIMES TO PREVENT SEDIMENT FROM ENTERING THE WASHOUT FACILITY.
 - A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG THE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

3 STRAW BALE BARRIER CONCRETE WASHOUT
N.T.S.

Revision	Date	Description

SEALING

NO. 32702

DENNIS CORPORATION

NO. 3103

CERTIFIED

REGISTERED PROFESSIONAL ENGINEER

STATE OF SOUTH CAROLINA

NO. 32702

MATTHEW H. DENNIS

STORMWATER POLLUTION PREVENTION (SWPPP) DETAILS

DENNIS CORPORATION

Improvement Plans for Bees Ferry SLF

September 2019

Charleston County

South Carolina

Scale: 1" = 40'

Sheet C-18



SUBJECT TO REGULATORY AGENCY REVIEW AND APPROVAL