

**TEMPORARY SEDIMENT TRAP**  
COURTESY OF CITY OF KNOXVILLE BMP EROSION AND SEDIMENT

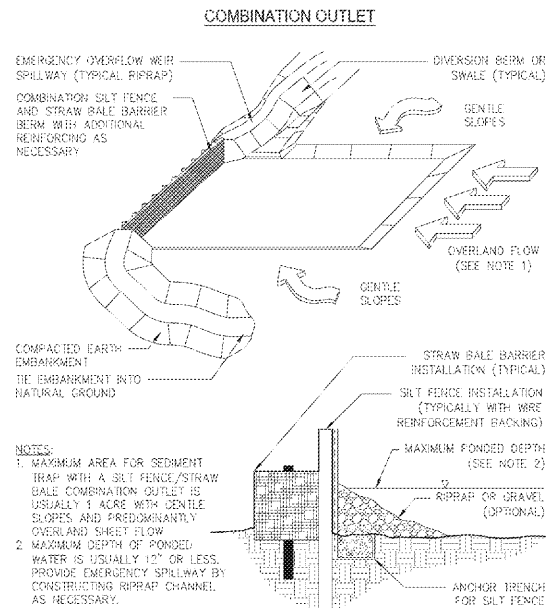
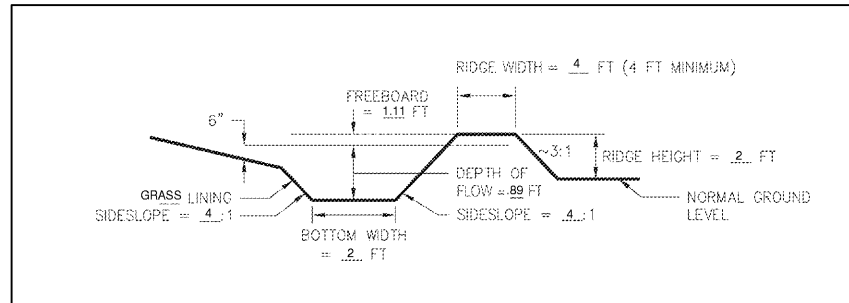


Figure 6-30.2

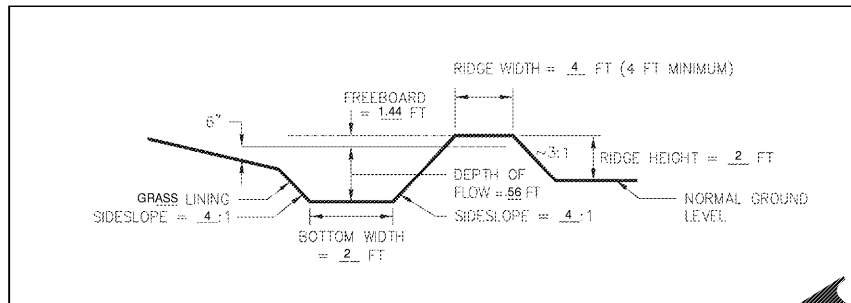
6-188

GSWCC 2019 Edition

**Di #1 - SR 155**



**Di #2 - SR 3**



**DETENTION POND / SKIMMER STAGE-STORAGE CALCULATIONS**

Project Name: RaceTrac Griffin

Stage	Elevation	Area (SF)	Intermodal Storage	Cummulative Storage	Cummulative Storage
0.00 ft	869.00 ft	20.00 sf	0.00 cf	0.00 cf	0.00 cy
1.00 ft	870.00 ft	105.00 sf	62.50 cf	62.50 cf	2.31 cy
2.00 ft	871.00 ft	635.00 sf	370.00 cf	432.50 cf	16.02 cy
3.00 ft	872.00 ft	1615.00 sf	1125.00 cf	1557.50 cf	57.69 cy
4.00 ft	873.00 ft	3190.00 sf	2402.50 cf	3960.00 cf	146.67 cy
5.00 ft	874.00 ft	5295.00 sf	4241.50 cf	8201.50 cf	303.76 cy
6.00 ft	875.00 ft	8210.00 sf	6753.00 cf	14954.50 cf	553.87 cy
7.00 ft	876.00 ft	11250.00 sf	9731.50 cf	24686.00 cf	914.30 cy

**SEDIMENT STORAGE**

4.91 ACRES DRAINED X 67 CU YDS = 329  
SEDIMENT STORAGE REQUIRED  
914.3 CU YDS OF SEDIMENT STORAGE PROVIDED

**Diversion**



**DEFINITION**

A ridge of compacted soil, constructed above, across or below a slope.

**PURPOSE**

To reduce the erosion of steep, or otherwise highly erodible areas by reducing slope lengths, intercepting storm runoff and diverting it to a stable outlet at a non-erosive velocity.

**CONDITIONS**

Diversions are applicable when:

1. Runoff from higher areas is or has potential for damaging property, causing erosion, contributing to pollution, flooding, interfering with or preventing the establishment of vegetation on lower areas.
2. Surface and/or shallow subsurface flow is damaging sloping upland.
3. The length of slope needs to be reduced so that soil loss will be reduced to a minimum.

This standard applies to temporary and permanent diversions in development that involve land disturbing activities.

**DESIGN CRITERIA**

**Location**

Diversion location shall be determined by considering the site conditions, topographic and geologic information, length of slope, and runoff volume. Diversion should be installed to fit the conditions for a particular field and local soil type(s).

A diversion consists of two components that must be designed - the ridge and the channel.

**Ridge Design**

The ridge shall be compacted and designed to have stable side slopes, which shall not be steeper than 2:1. The ridge shall be a minimum width of four feet at the design water elevation after settlement. Its design shall allow ten percent for settlement.

**Channel Design**

Land slope must be taken into consideration when choosing channel dimensions. On the steeper slopes, narrow and deep channels may be required. On the more gentle slopes, broad, shallow channels usually are applicable. The wide, shallow section will be easier to maintain. Since sediment deposition is often a problem in diversions, the designed flow velocity should be kept as high as the channel lining will permit.

Table 6-17.1 indicates the storm frequency required for the design of the diversion. The required storm frequency is based on the purpose of the diversion. The storm frequency is used to determine the required channel capacity (peak rate of runoff).

The channel section of the diversion may have a parabolic or trapezoidal cross-section. Detailed information for the design of these channels is provided in the specification **Wt - Stormwater Conveyance Channel**.

Each diversion must have an adequate outlet. The outlet may be a constructed or natural waterway, a stabilized vegetated area or a stabilized open channel. In all cases, the outlet must be designed in such a manner as to not cause an erosion problem. Protected outlets shall be constructed and stabilized prior to construction of the diversion.

**Stabilization**

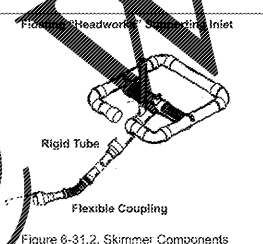
Channels shall be stabilized in accordance with Item 5 of the construction specifications.

**Diversion For Roads and Utility Rights - of Way**

A detailed design is not required for this type of diversion. Diversions installed to divert water

few jerks on the maintenance rope will clear the skimmer of debris and restore flow. If jerking the maintenance rope does not work, pull the skimmer to the embankment with the maintenance rope and manually remove all debris from the trash guard. An internal clog or blockage may require the device to be disassembled and repaired.

Remove sediment deposits from the basin when approximately one-third of the storage volume has been lost to sediment accumulation or when the floating skimmer cannot float low enough above the embankment. Remove debris from the skimmer using the maintenance rope and remove sediment from the skimmer pit.



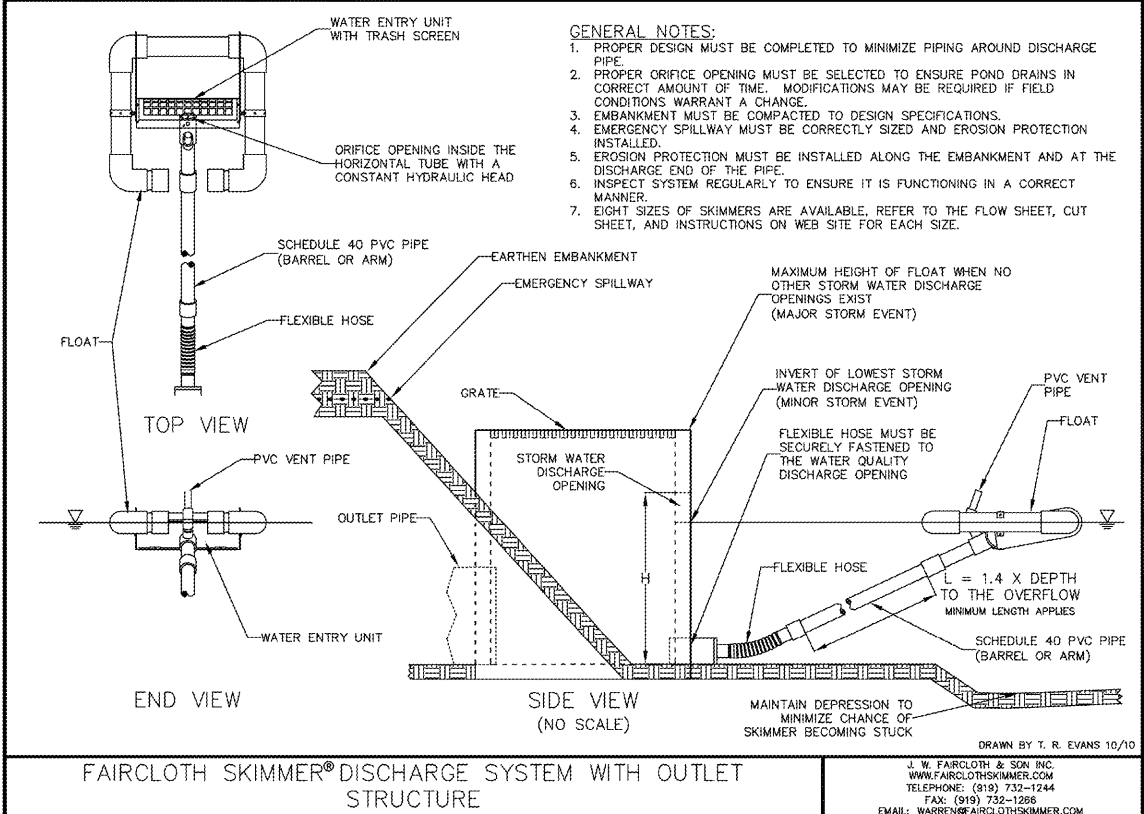
When a FLOATING SURFACE SKIMMER is used, show the following information along with each sediment pond, trap or basin being used on the site:

1. Pond, trap or basin size, length\* (top and bottom) width\* (top and bottom) and depth = BOTTOM: 938 S.F. TOP: 6520 S.F. DEPTH: 4'
  2. Time to Drain (hrs) = 48 HOURS
  3. Skimmer Dimensions (orifice and head size)\*\* ORIFICE DIA.: 2.7" / SKIMMER SIZE: 3.0"
  4. Manufacturer's name = FAIRCLOTH
- \*feet, \*\* inches

**Addendum A: Procedure for Measurement of Floating Pond Skimmer Flow Rate**

This procedure is for evaluating the flow rate of a floating pond skimmer vs. pond depth, including details for setting up a performance test that can be used for design characterization as well as quality assurance to determine product conformance to project specifications.

- Procedure**
- a. Apparatus/Facility
    - i. Testing is performed in a calibrated basin (i.e. it has a known surface area at any known depth.)
    - ii. The basin shall be at least 40-ft long x 6-ft wide x 4-ft deep.
    - iii. The basin shall be outfitted with discharge pipe having a diameter no smaller than that of the pipe joining to the floating skimmer head. The discharge pipe shall have a valve that can be controlled from the outside of the basin to initiate



10/24/2018  
09/16/2018  
07/06/2018  
07/07/2018  
12/12/2017  
12/12/2017  
12/20/2017  
09/15/2017

9. REVISED PER SPALDING CO COMMENTS  
8. REVISED PER SPALDING CO CITY OF GRIFFIN / RT INTER COMMENTS  
7. REVISED PER FEEDBACK OF A  
6. REVISED PER DRAINAGE IN RM PER GOOD COMMENTS  
5. REVISED SET PER SPALDING COUNTY PLAN REVIEW  
4. REVISED SET PER SPALDING COUNTY PLAN REVIEW  
3. REVISED SET PER RT INTERNAL REVIEW / SPALDING COUNTY PLAN REVIEW  
2. REVISED SET PER RT INTERNAL REVIEW / SPALDING COUNTY PLAN REVIEW  
1. REVISED SET PER RT INTERNAL REVIEW / SPALDING COUNTY PLAN REVIEW

NO. REVISIONS DATE

REGISTERED PROFESSIONAL ENGINEER  
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Spalding County

DATE: 7-24-17  
DRAWN BY: JDE  
CHECK-BY: AKA  
DRAWING NAME: 16-136

ES-D3 REV 9  
SHEET NO. REVISION