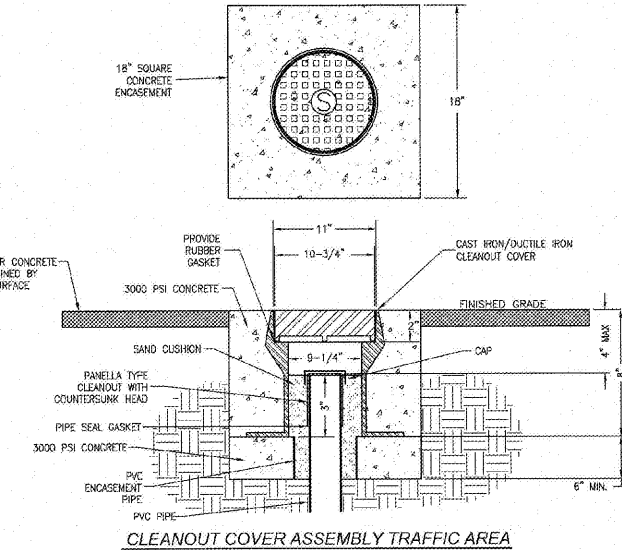
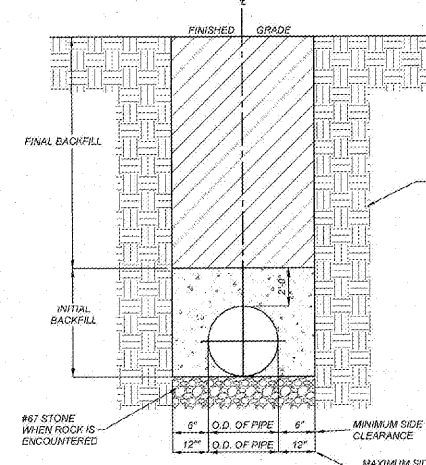


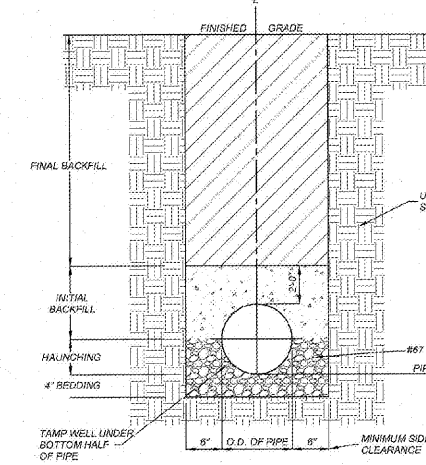
SANITARY SEWER CLEANOUT



CLEANOUT COVER ASSEMBLY TRAFFIC AREA

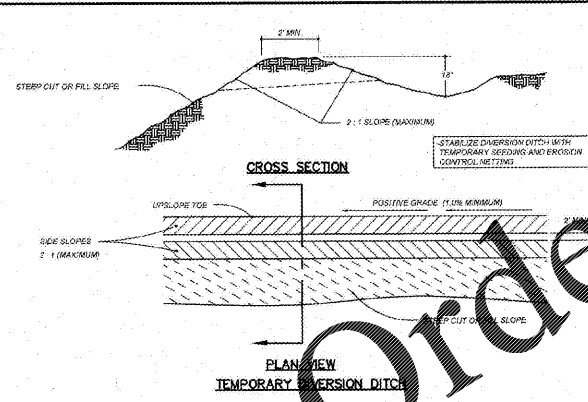


TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE



TYPICAL TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN



TEMPORARY DIVERSION DITCH

PERMANENT SODDING IN NORTH CAROLINA

SPECIES:
HYBRID BERMUDA/DAKOTA

SOIL PREPARATION:
REMOVE AT LEAST 1\"/>

1. PREPARE SODDING SOIL. CLEAR SURFACE OF SOIL OF ALL TRASH AND DEBRIS. FILL ALL LOW SPOTS WITH VOID FILLING MIXTURE.
2. PREPARE INSTALLATION. REMOVE ALL SOIL IN SHADE AND MOISTEN TO MAINTAIN VIABILITY. DELIVER AND INSTALLATION OF SOIL SHOULD TAKE PLACE WITHIN A PERIOD OF 36 HOURS.
3. SODDING. LAY SOIL SLIPMENTS TO SLIGHTLY ABOVE THE SOIL IMMEDIATELY BEFORE LAYING SOIL.
4. LAY FIRST ROW OF SOIL IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND SPACING TIGHTLY AGAINST EACH OTHER. STAGGER STRIPS IN A BRICK-LIKE PATTERN. ENSURE THAT THE SOIL IS NOT STRETCHED OR OVERLAPPED. TRIM AND FIT IRREGULAR AREAS WITH A KNIFE OR SHARP SPADE.
5. INSTALL STRIPS OF SOIL WITH THEIR LONGEST DIMENSION PERPENDICULAR TO THE SLOPE ON SLOPES 2:1 OR GREATER. ON WHEREVER EROSION MAY BE A PROBLEM, SECURE SOIL WITH PINS OR STAPLES.
6. AFTER SODDING OF AREAS IS COMPLETE, ROLL SOIL TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL.
7. IRRIGATE UNTIL THE SOIL IS WET 2 INCHES BELOW THE SOIL. KEEP SODDED AREAS MOIST TO A DEPTH OF 4 INCHES UNTIL GRASS TAKES ROOT.
8. NO MOWING SHOULD OCCUR UNTIL THE SOIL IS FIRM, Y ROOTED, USUALLY 2-3 WEEKS.

MAINTENANCE:
WATER AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE. GRASS HEIGHT SHOULD BE MAINTAINED BETWEEN 1 AND 2 INCHES. APPLY FERTILIZER ANNUALLY AT A RATE OF 5-10 LB

6

Construction Specifications

1. Clear, grub, and strip the area under the embankment of all vegetation and root cut. Remove all surface soil containing large amounts of organic matter and stockpile or dispose of it properly. Haul all objectionable material to the designated disposal area. Place temporary sediment control measures below basin to be used.
2. Ensure that fill material for the embankment is free of roots, woody vegetation, organic matter, and other objectionable material. Place the fill to lift to at least 6 inches, and machine compact it. Overfill the embankment 6 inches to allow for settlement.
3. Shape the basin to the specified dimensions. Prevent the skimming device from settling into the soil by excavating a shallow pit under the skimmer or providing a low support under the skimmer or float.
4. Place the filter (typically 4-inch Schedule 40 PVC pipe) on a firm, smooth foundation of impervious soil. Do not use previous material such as sand, gravel, or crushed stone as backfill around the pipe. Place the fill material around the pipe in 4-inch layers and compact it under and around the pipe to at least the same density as the adjacent embankment. Care must be taken not to raise the pipe from the firm contact with its foundation when compacting under the pipe branches.
5. Assemble the skimmer following the manufacturer's instructions, or as detailed.
6. Lay the reinforced skimmer on the bottom of the basin with the flexible joint at the inlet of the barrel pipe. Attach the flexible joint to the barrel pipe and position the skimmer over the excavated pit or support. Be sure to attach a rope to the skimmer and extend it to the side of the basin. This will be used to pull the skimmer to the side for maintenance.
7. Fasten spillways—Install the spillway in undisturbed soil to the greatest extent possible. The retentions of placed elevations, grade, deep in width, and entrance and exit channel slopes are critical to the successful operation of the spillway. The spillway should be faced with impervious plastic or impermeable geotextile fabric. The fabric must be wide and long enough to cover the bottom and sides and extend into the top of the dam for anchoring in a trench. The edges may be secured with 8-inch staples or pins. The fabric must be long enough to extend down the slope and rest onto stable ground. The width of the fabric must be one piece, not joined or spliced, otherwise water can get under the fabric. If the length of the fabric is insufficient for the entire length of the spillway, multiple sections, spanning the complete width, may be used. The upper sections should overlap the 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.)
8. Inlets—Discharge water into the basin in a manner to prevent erosion. Use temporary slope devices or dividers with outlet protection to divert sediment-laden water in the upper end of the pool area to improve basin trap efficiency. (Reference: *Runoff Control Measures and Outlet Protection*.)

Practice Standards and Specifications

9. Erosion control—Construct the structure so that the disturbed area is rehabilitated. Direct surface water away from basins. Complete the embankment before the area is cleared. Stabilize the emergency spillway embankment and all other disturbed areas above the crest of the principal spillway immediately after construction. (Reference: *Surface Stabilization*.)
 10. Install precast baffles as specified in Practice 6.65, *Precast Baffles*.
 11. After all the sediment-producing areas have been permanently stabilized, remove the structure and all the remaining sediment. Smooth the area to blend with the adjoining areas and stabilize properly. (Reference: *Surface Stabilization*.)
- Maintenance**
- Inspect skimmer substrate basins at least weekly and after each significant (one-half inch or greater) rainfall event and repair immediately. Remove sediment and restore the basin to its original dimensions when sediment accumulation is one-half the height of the first baffle. Pull the skimmer to one side so that the sediment underneath it can be excavated. Excavate the sediment from the entire basin, not just around the skimmer or the first cell. Make sure vegetation growing in the bottom of the basin does not build down the skimmer.
- Repair the baffles if they are damaged. Re-stack the baffles if water is flowing underneath or around them.
- If the skimmer is clogged with trash and there is water in the basin, usually jacking on the rope will make the skimmer bob up and down and discharge the debris and restore flow. If this does not work, pull the skimmer over to the side of the basin and remove the debris. Also check the critical inside the skimmer to see if it is clogged, if so remove the debris.
- If the skimmer arm or barrel pipe is clogged, the outlet can be restored and the obstruction cleaned with a plumber's snake or by flushing with water. The arm and replace the outlet before repositioning the skimmer.
- Check the fabric lined spillway for damage and make any required repairs with fabric that spans the full width of the spillway. Check the embankment, spillways, and outlet for erosion, damage, and impact the embankment for piping and settlement. Make all necessary repairs immediately. Remove all brush and other debris from the skimmer and pool areas.
- Freezing weather can result in ice forming in the basin. Since special precautions should be taken in the winter to prevent the skimmer from plugging with ice.

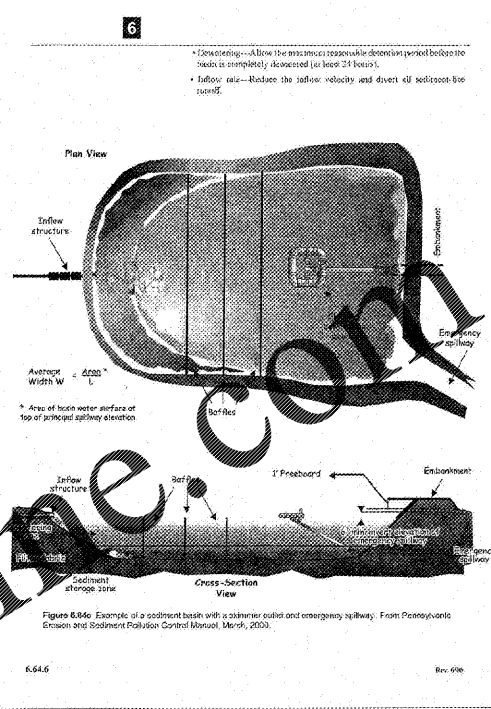


Figure 6.66: Example of a sediment basin with a skimmer outlet and emergency spillway. From Pennsylvania Green and Treatment Pollution Control Manual, March, 2003.

6

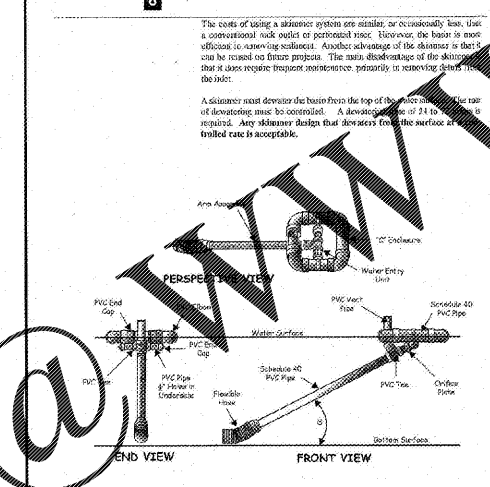


Figure 6.68a: Schematic of a skimmer. From Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2003.

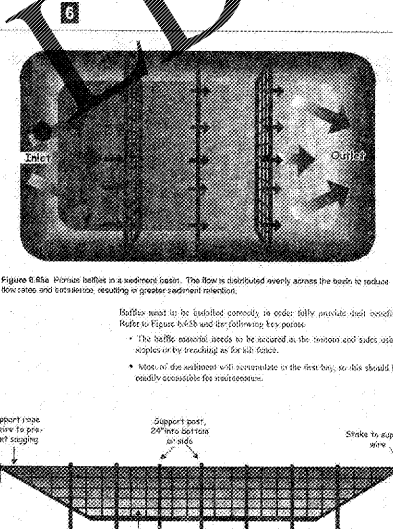


Figure 6.68b: Cross section of a precast baffle in a sediment basin. Note: PVC frame is not used because the water flows through the baffle material.

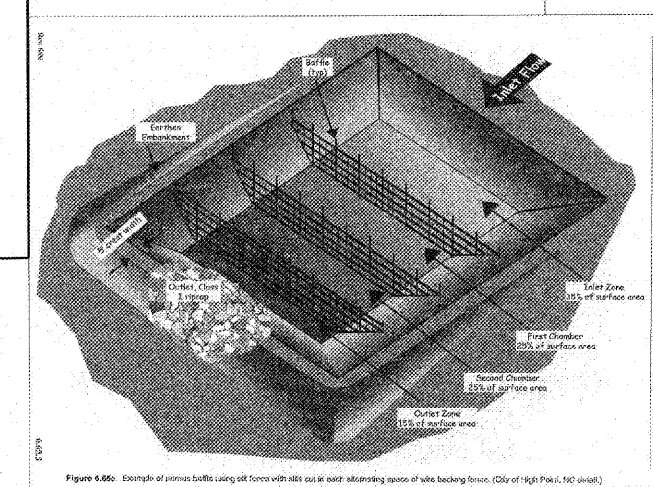


Figure 6.68c: Example of precast baffle using cell forms with side cut-in cells. (City of High Point, NC design)

REVISIONS	CITY COMMENTS	DATE	DESCRIPTION
1	06-14-19		
2	06-20-19		
3	06-26-19		

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DETAILS

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DRAWN BY	RCN
SCALE	N.T.S.
DATE	01-17-19
SHEET NO.	C-7

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