

For Official Use Only:
Attach Construction Site
Storm Water Runoff
Control Applicant
Checklist Here:

Small Construction Site Storm Water Erosion and Sedimentation Control Plan Template

Construction Site Project Name: _____

Physical Site Address: _____

Instructions

To help you develop your construction project Erosion and Sedimentation Control Plan (ESCP), the County of Mendocino has created this ESCP Template. The template is designed to help you develop an ESCP for a construction or grading project that will have less than one-acre of disturbed soil and is not be subject to the State Water Resources Control Board Construction General Permit.

Using the ESCP Template

Each section of the ESCP Template includes "instructions" and space for your project and site information. You should read the instructions for each section before you complete that section.

A. Nature of the Construction Activity

Instructions

Provide a general description of the nature of the construction activities at your project (Example: Construction of 10 x 30 deck; 120 square foot addition to an existing home; new 16 x 24 garage and driveway). This information is addition to the information you provided within your building permit application and in the "Construction Site Storm Water Runoff Control Application Checklist, section III."

1. General Description of Project: _____

2. If your project involves grading, list all applicable permits and attach to this document: _____

3. Site Plan Requirement – Select one of the following:

- A site plan showing BMPs is included with the construction plans and is attached to this document.
- BMPs are shown on the site plan included as Page 4 of this document.

B. Construction Site Best Management Practices

Instructions

Select from the following checklist, the appropriate Best Management Practices (BMPs) for your project. Information about the BMPs can be found on the BMP Fact Sheets that are located at the end of this section as Exhibit A. The BMP Fact Sheets are educational materials containing product information, technical data, and "how-to, do-it-yourself" advice for using BMPs before, during and after construction.

Best Management Practices:
Select all that apply:

1. Scheduling Construction Activity

- Avoid rainy season from October 1 through April 1. Use mulching or hydroseeding to stabilize disturbed soils.
- Plan your construction work to have your BMPs installed before construction. Have all rainy season BMPs installed prior to October 1. Provide enough time before rainfall begins to stabilize the soil with vegetation or physical means or to install sediment trapping devices.

Small Construction Site Storm Water Erosion and Sedimentation Control Plan Template

Best Management Practices, continued from previous page.
Select all that apply:

2. Preservation of Natural Features, vegetation and soil

- Existing vegetation outside the construction area will be preserved on the site and protected.
- Construction activity will avoid activity under the drip line of remaining trees.
- Vegetation to be preserved within the construction area will be protected with temporary fencing.
- Retain protective measures until all construction activity is complete to avoid damage during site cleanup.

3. Drainage swales or lined ditches to control storm water flow

- Earthen dike(s) and drainage swale(s) will be constructed, see BMP EC-9.
- Velocity Dissipation Devices will be installed at the outlets of culverts, conduits or channels to prevent erosion, see BMP EC-10.

4. Mulching or hydroseeding to stabilize disturbed soils

- Mulch, such as wood fiber, will be applied to protect exposed soil from erosion from raindrop impact or wind.
- Seeding will be used with mulching (i.e. straw mulch).

5. Erosion control to protect soils

- Matting of natural materials, geotextiles, or plastic cover, will be used to cover the soil surface to reduce erosion from rainfall impact, see BMP EC-7

6. Protection of storm drain inlets

- Every storm drain inlet receiving sediment-laden runoff will be protected with at least one type of inlet protection, such as a gravel bag barrier, block and gravel filter, excavated drop inlet sediment trap, or filter fabric fence, see BMP SE-10

7. Perimeter sediment control

- Slit fence will be installed on a level contour to trap sediment-laden runoff from disturbed areas to promote sedimentation behind the fence, see BMP SE-1.
- Fiber rolls will be placed along the perimeter of the project to provide for the removal of sediment from runoff, see BMP SE-5.
- A sandbag barrier will be placed on a level contour to intercept sheet flow and pond runoff to allow sediment to settle out, see BMP SE-8.
- Straw bales will be placed end-to-end on a level contour to intercept sheet flow to pond runoff to allow sediment to settle out, see BMP SE-9

8. Sediment trap or sediment basin to retain sediment on site

- A temporary sediment basin will be constructed and maintained until the site is permanently protected against erosion or until a permanent detention basin is constructed, see SE-2.
- A temporary sediment trap will be formed and maintained until the site is permanently protected from erosion by using vegetation and/or structures, see SE-3.
- A temporary check dam of rock, gravel bags, sandbags, fiber rolls, will be placed across a swale or drainage ditch to reduce the velocity of water, to promote sedimentation and for reducing erosion, see SE-4.

9. Stabilized construction exits

- A Stabilized Construction Exit, a driveway aggregate (e.g. gravel) underlain with filter cloth, will be located where traffic will be entering or leaving the construction site to or from a public right of way, street, alley, sidewalk, or parking area, see TC-1.
- Tire washing will be used with a Stabilized Construction Exit, see TC-3

Small Construction Site Storm Water Erosion and Sedimentation Control Plan Template

Best Management Practices, continued from previous page.
Select all that apply:

10. Wind erosion control

- Apply water, dust palliatives, gravel, temporary vegetation, or mulching to prevent or alleviate dust.

11. Other soil loss BMP acceptable to the County

- _____

12. Material handling and waste management

- Applicant will comply with Mendocino County Construction Demolition and Recycling requirements.
 Follow all federal, state, and local regulations that apply to the use, handling, or disposal of hazardous materials, pesticides and herbicides, and fertilizers.
 Store pesticides, herbicides, and fertilizers in a dry covered area, and follow the recommended application rates and methods.
 Designate a waste collection area and use containers with lids so that they can be covered with lids.

13. Building material stockpile management

- Use plastic sheeting or tarps to keep materials (sand, compost, cement, etc) covered during periods of rain.

14. Management of washout areas (concrete, paints, stucco, etc.)

- Designate concrete, paint and stucco washout areas. Collect and retain concrete, paints and stucco washout water or chemicals and solids in leak proof containers so that it does not reach the soil surface and then migrate to surface water or into the ground water.

15. Control of vehicle/equipment fueling to contractor's staging area

- Store and use petroleum products in dry covered areas and perform vehicle fueling in areas having materials and equipment available to contain and clean up any spills that may occur.

16. Vehicle and equipment cleaning performed off-site

- Use detergents only as recommended and limit their use at the construction site. Wash vehicles and equipment where detergent laden wash water will not enter into the storm drain system or will be directed into the sanitary sewer so that it can be treated at the wastewater treatment plant.

17. Spill prevention and control

- Check equipment, hydraulic lines, and containers for leaks and corrosion.
 Maintain a spill-kit with absorbent materials. Clean up spills immediately. For hazardous materials, follow cleanup instructions on the package.

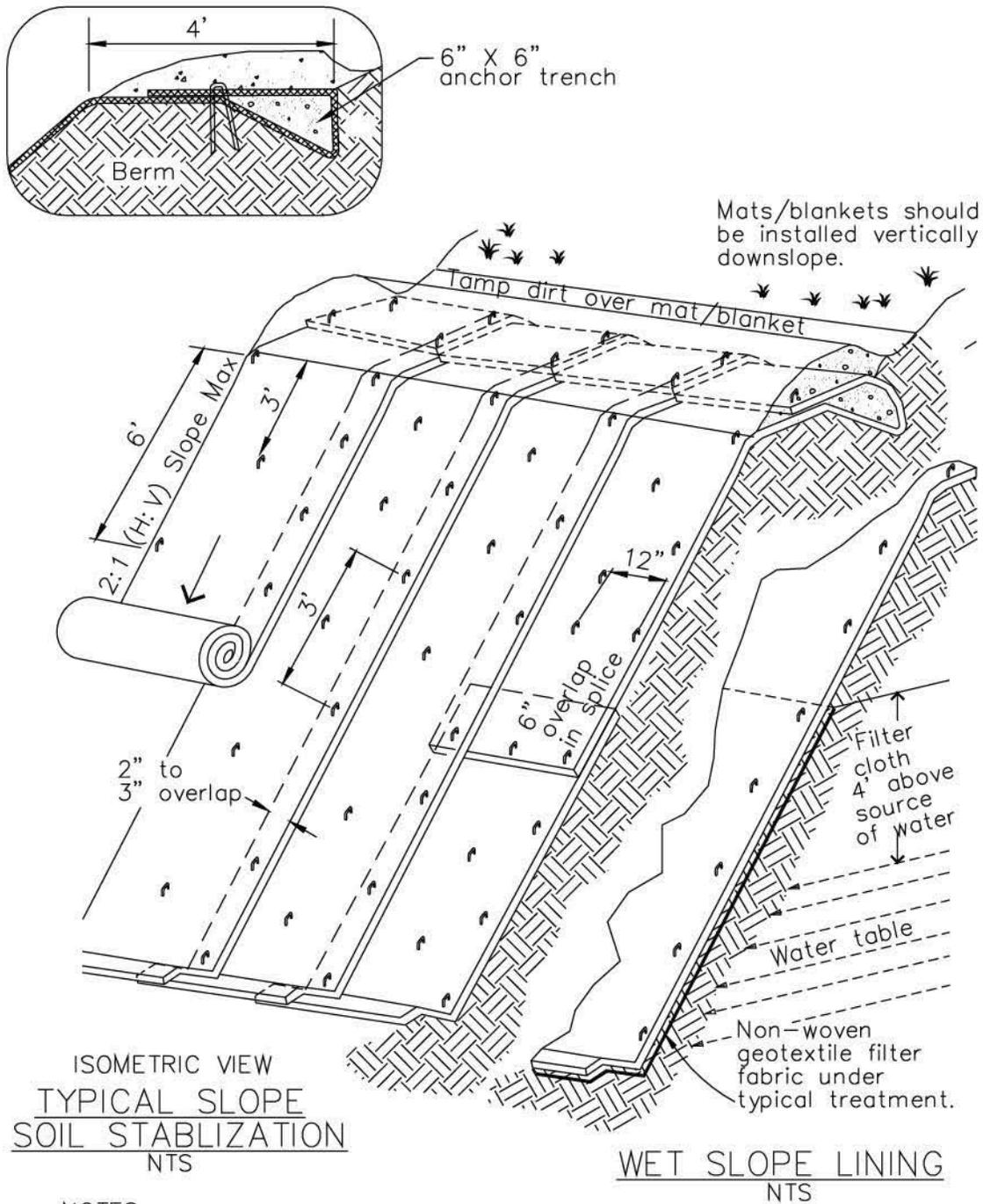
18. Other housekeeping BMP acceptable to the county

- _____

Small Construction Site Storm Water Erosion and Sedimentation Control Plan Template

BMP SITE PLAN

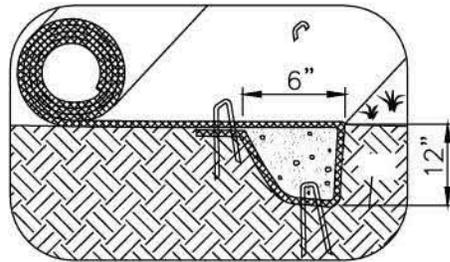
A large grid for drawing a BMP site plan. The grid consists of 20 columns and 20 rows of squares, providing a space for site layout and design.



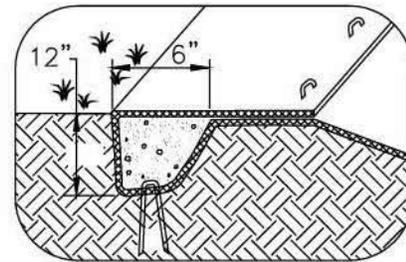
NOTES:

1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
3. Install per manufacturer's recommendations

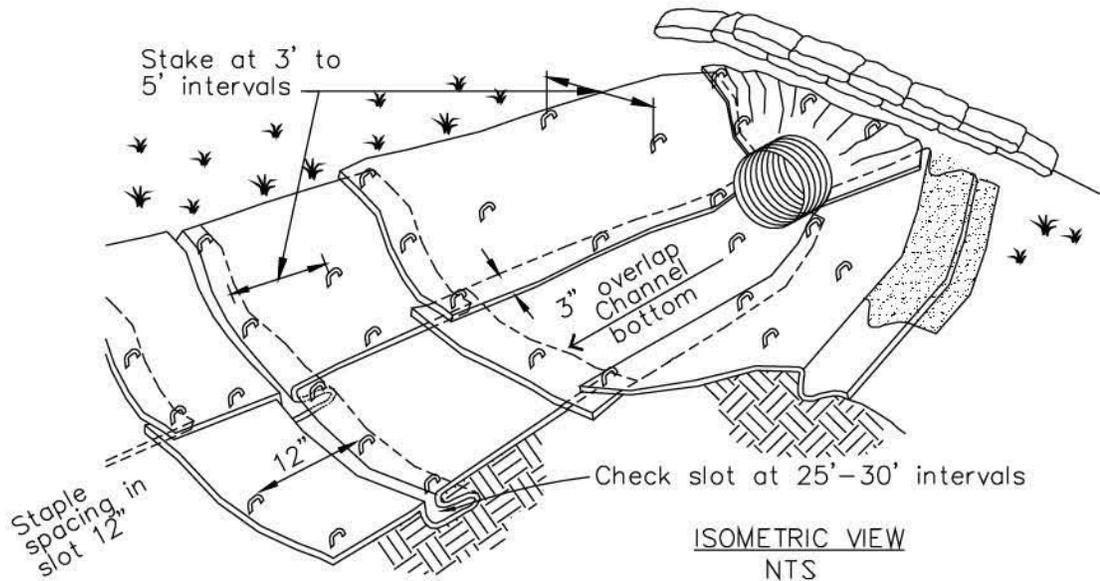
TYPICAL INSTALLATION DETAIL



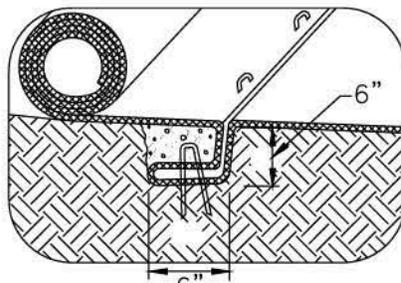
INITIAL CHANNEL ANCHOR TRENCH
NTS



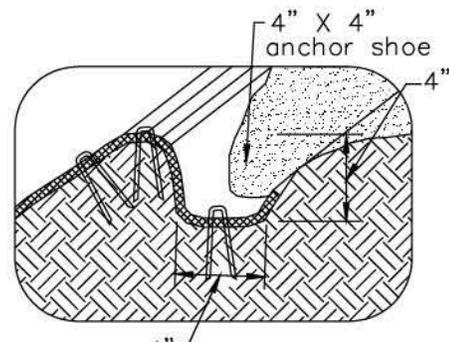
TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH
NTS



ISOMETRIC VIEW
NTS



INTERMITTENT CHECK SLOT
NTS

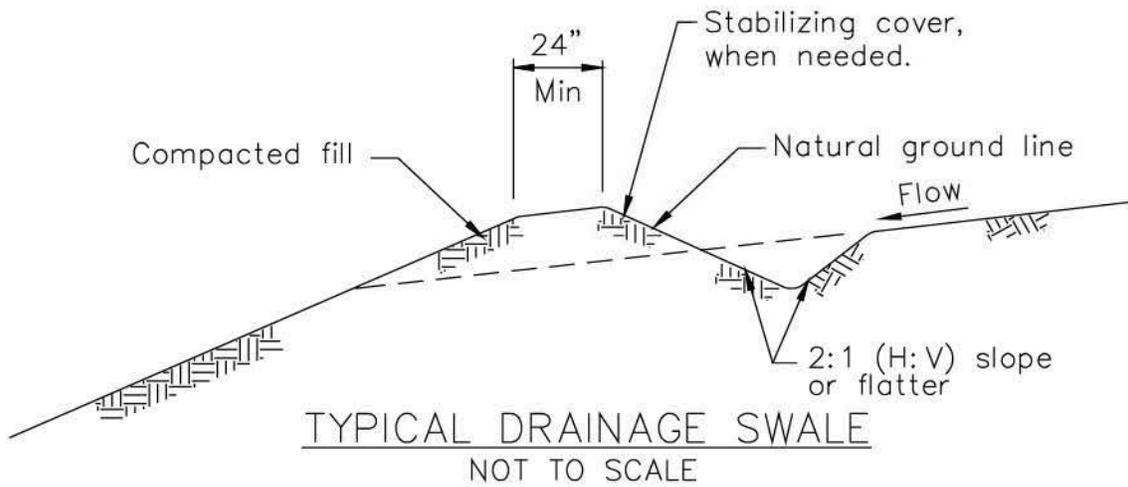


LONGITUDINAL ANCHOR TRENCH
NTS

NOTES:

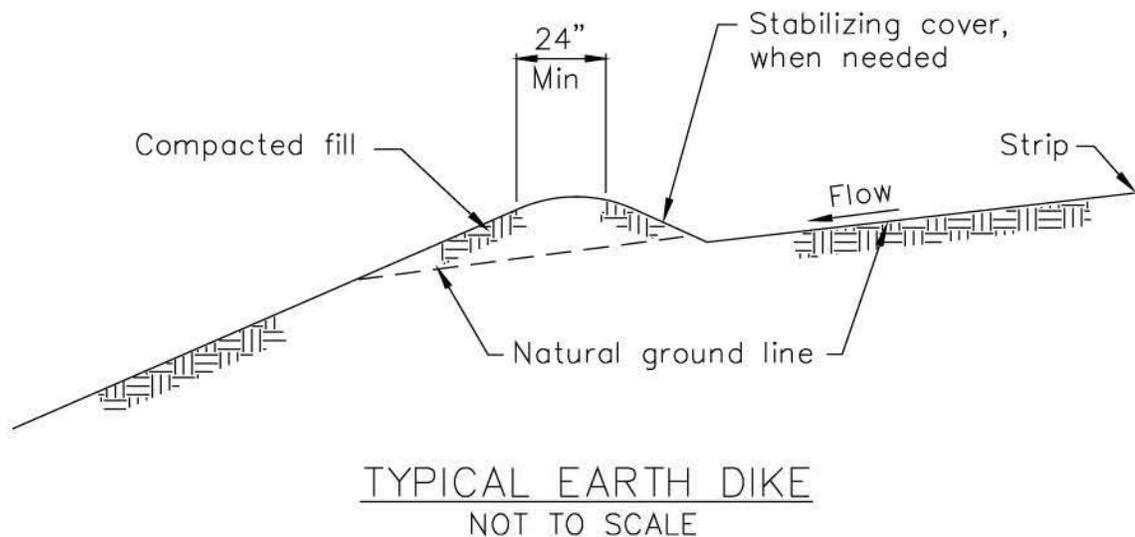
1. Check slots to be constructed per manufacturers specifications.
2. Staking or stapling layout per manufacturers specifications.
3. Install per manufacturer's recommendations

TYPICAL INSTALLATION DETAIL



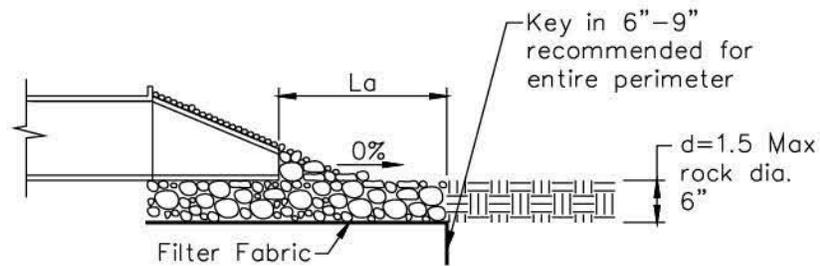
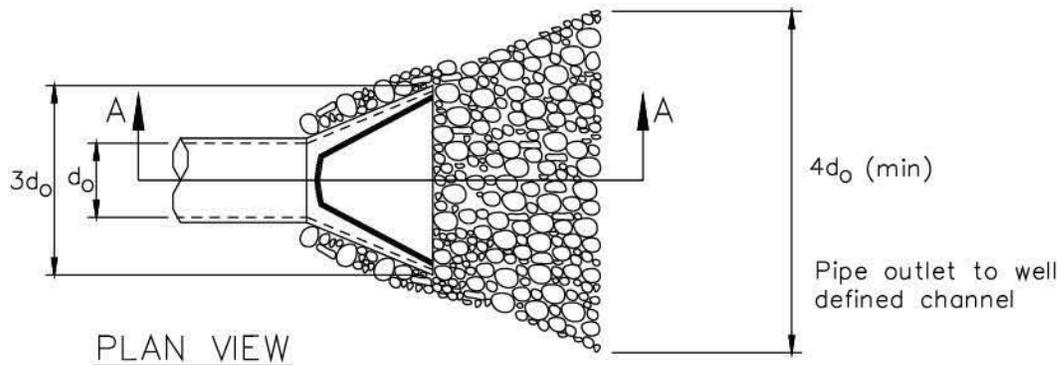
NOTES:

1. Stabilize inlet, outlets and slopes.
2. Properly compact the subgrade.



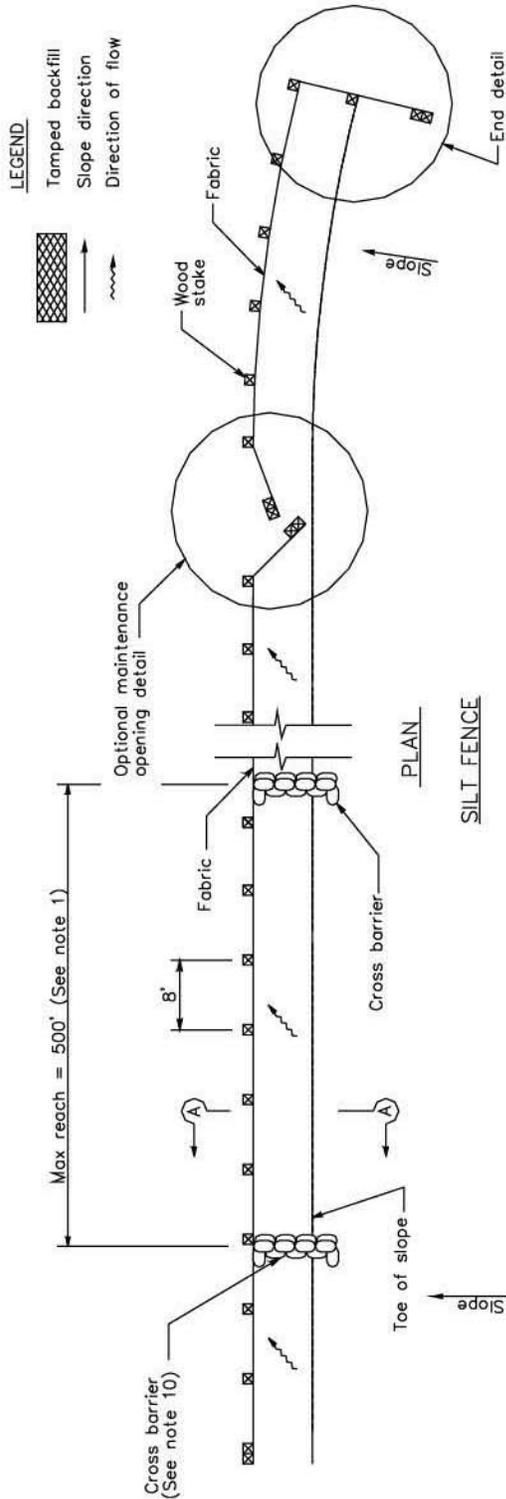
EC-10

Velocity Dissipation Devices



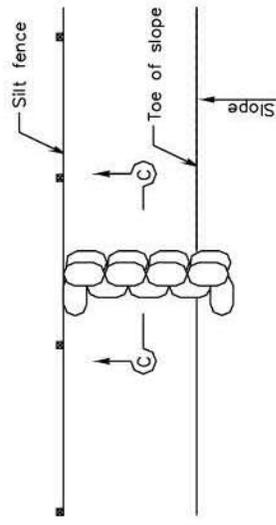
Pipe Diameter inches	Discharge ft ³ /s	Apron Length, L _a ft	Rip Rap D ₅₀ Diameter Min inches
12	5	10	4
	10	13	6
18	10	10	6
	20	16	8
	30	23	12
	40	26	16
24	30	16	8
	40	26	8
	50	26	12
	60	30	16

For larger or higher flows consult a Registered Civil Engineer
Source: USDA - SCS

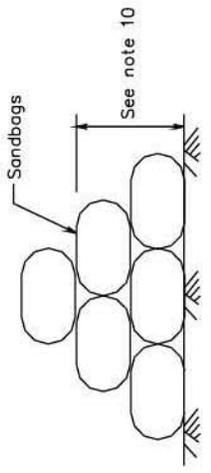


NOTES

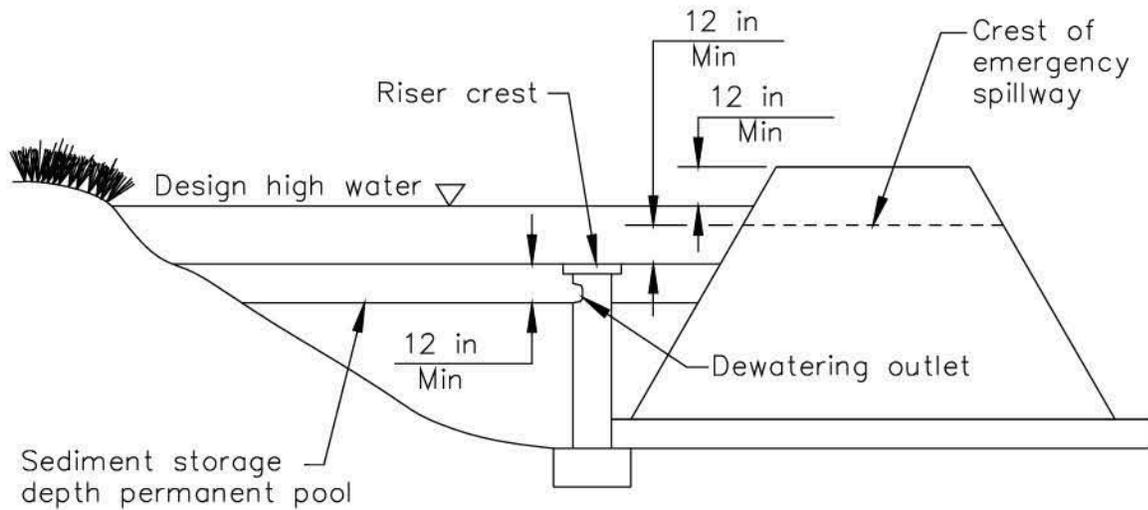
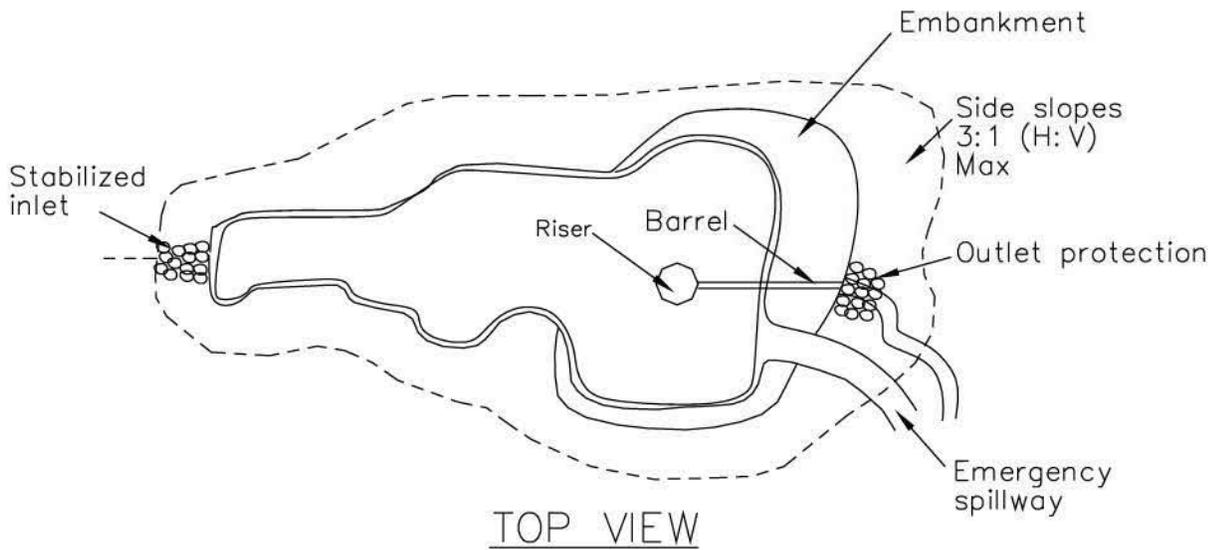
1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the linear barrier, in no case shall the reach length exceed 500'.
2. The last 8'-0" of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 8'-0" maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers shall be offset to eliminate gaps.



CROSS BARRIER DETAIL



SECTION C-C



NOTE:

This outlet provides no drainage for permanent pool.

FIGURE 1: TYPICAL TEMPORARY SEDIMENT BASIN
SINGLE ORIFICE DESIGN
 NOT TO SCALE

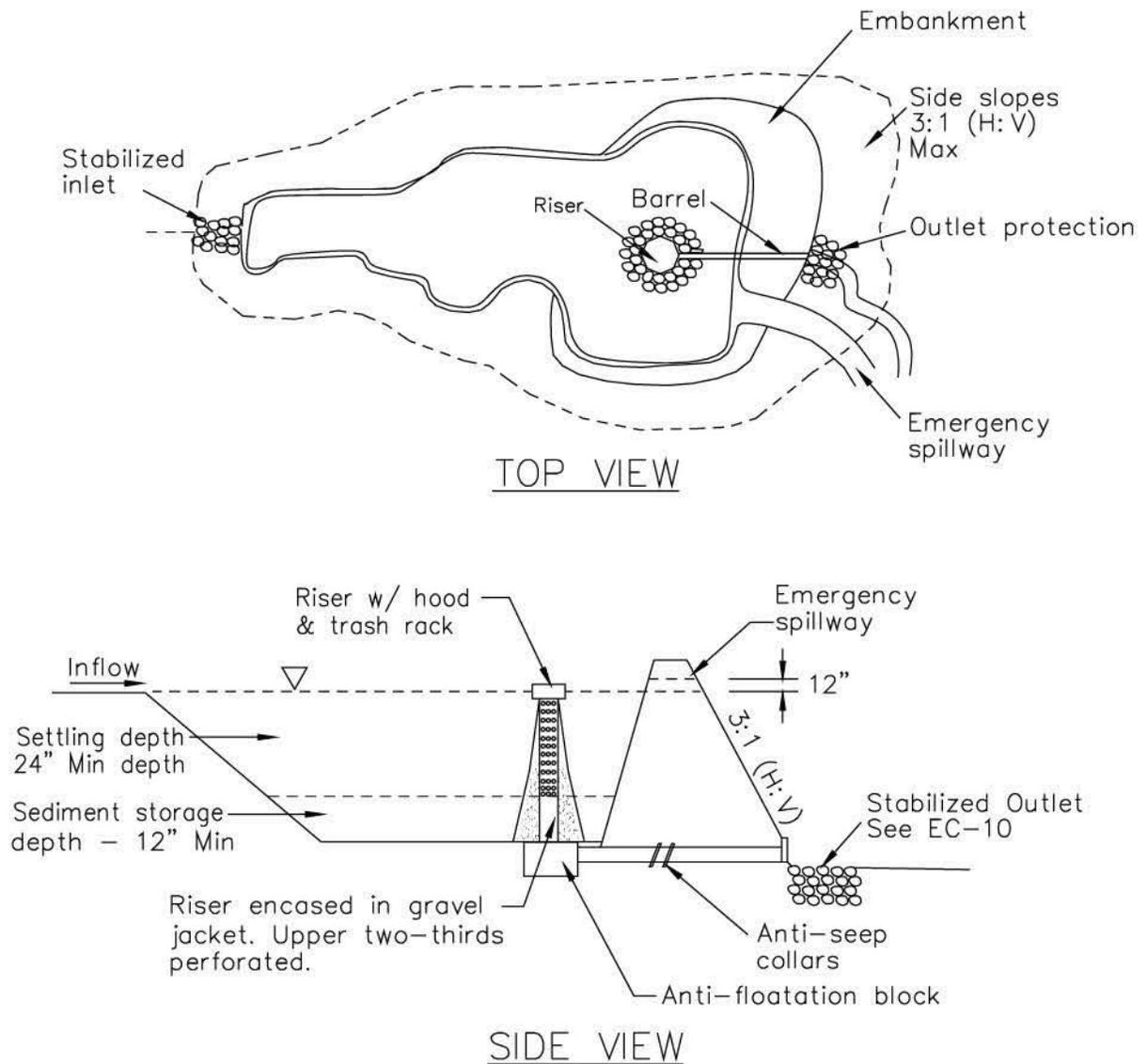


FIGURE 2: TYPICAL TEMPORARY SEDIMENT BASIN
 MULTIPLE ORIFICE DESIGN
 NOT TO SCALE

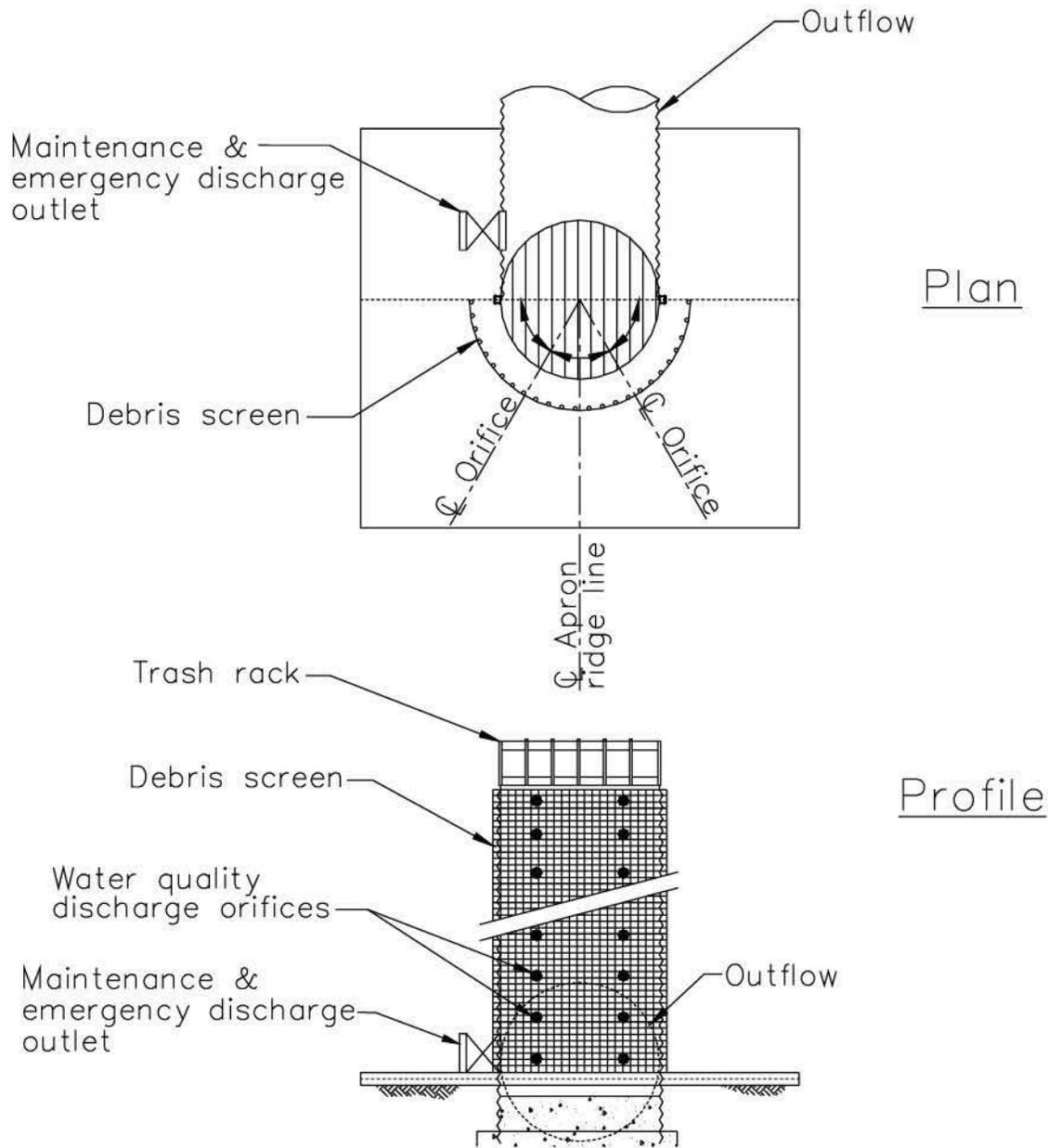
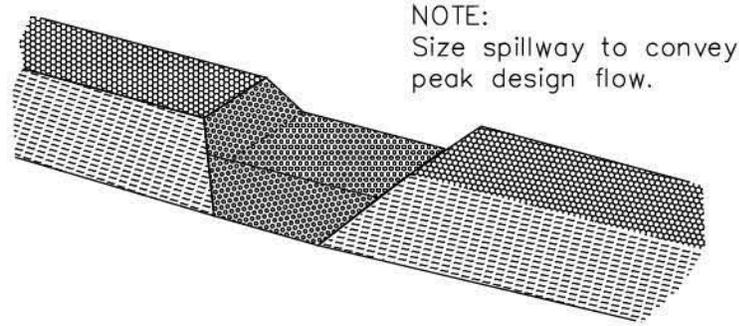
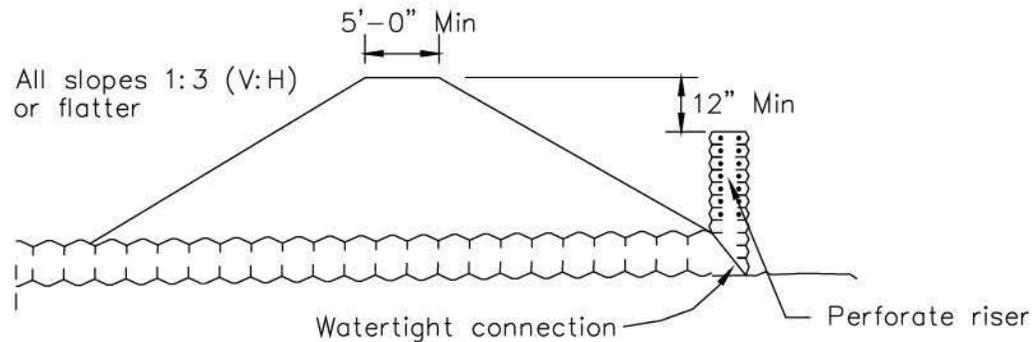
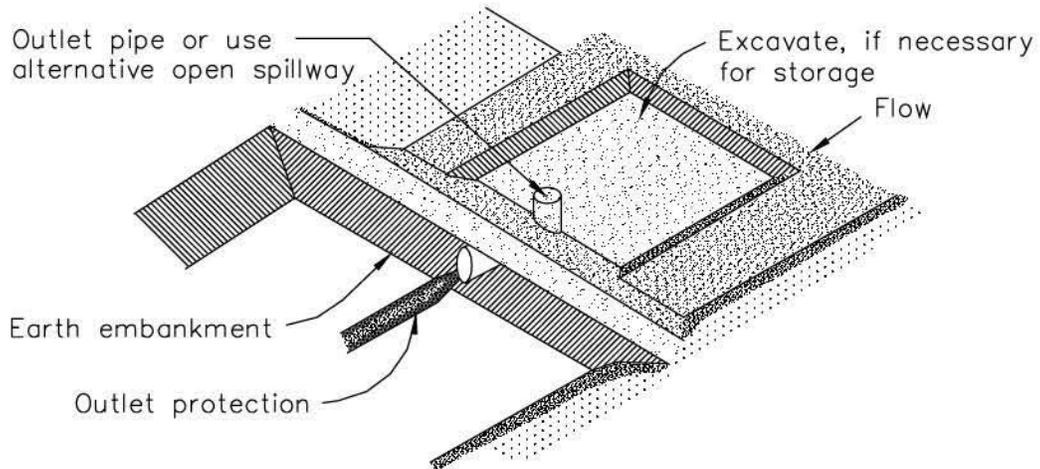


FIGURE 3: MULTIPLE ORIFICE OUTLET RISER
NOT TO SCALE



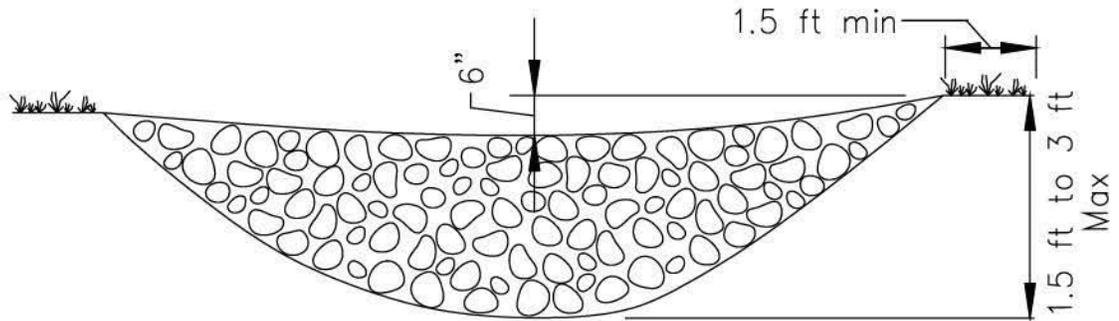
NOTE:
Size spillway to convey
peak design flow.

TYPICAL OPEN SPILLWAY

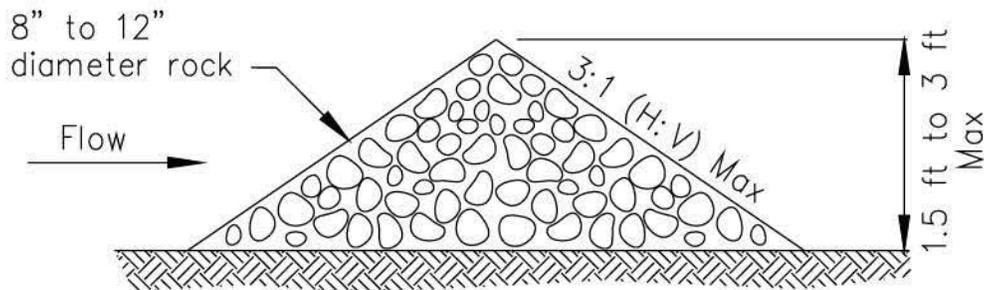


EMBANKMENT SECTION THRU RISER

TYPICAL SEDIMENT TRAP
NOT TO SCALE

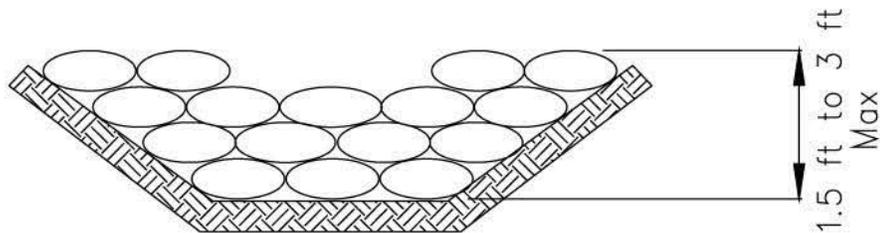


ELEVATION

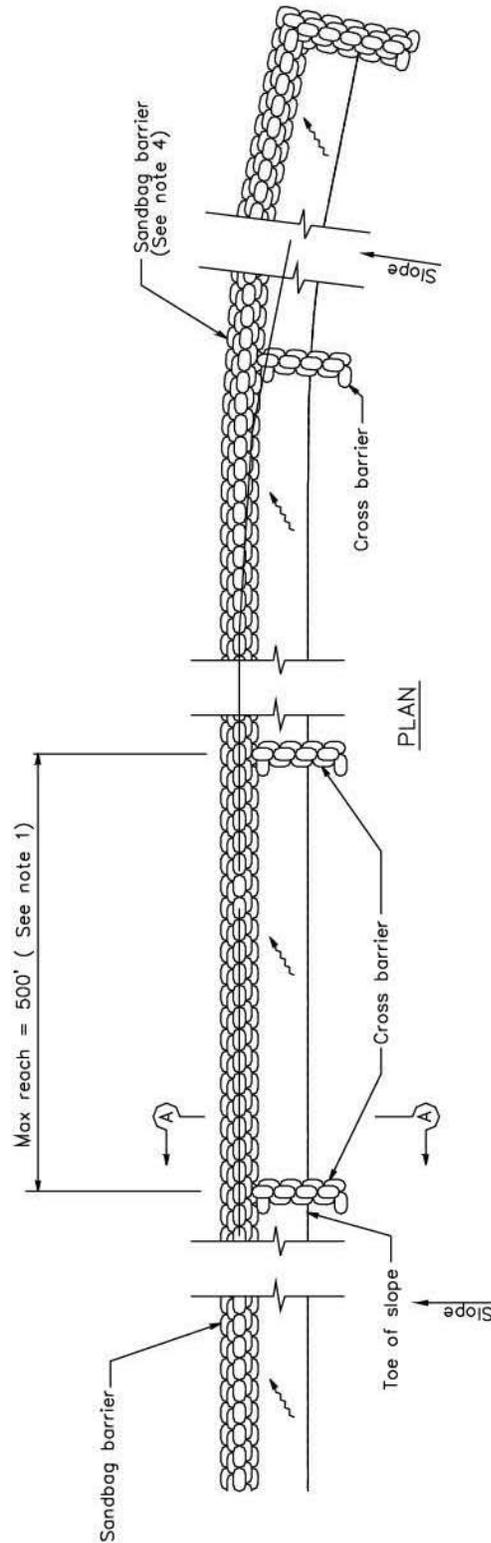


TYPICAL ROCK CHECK DAM SECTION

ROCK CHECK DAM
NOT TO SCALE



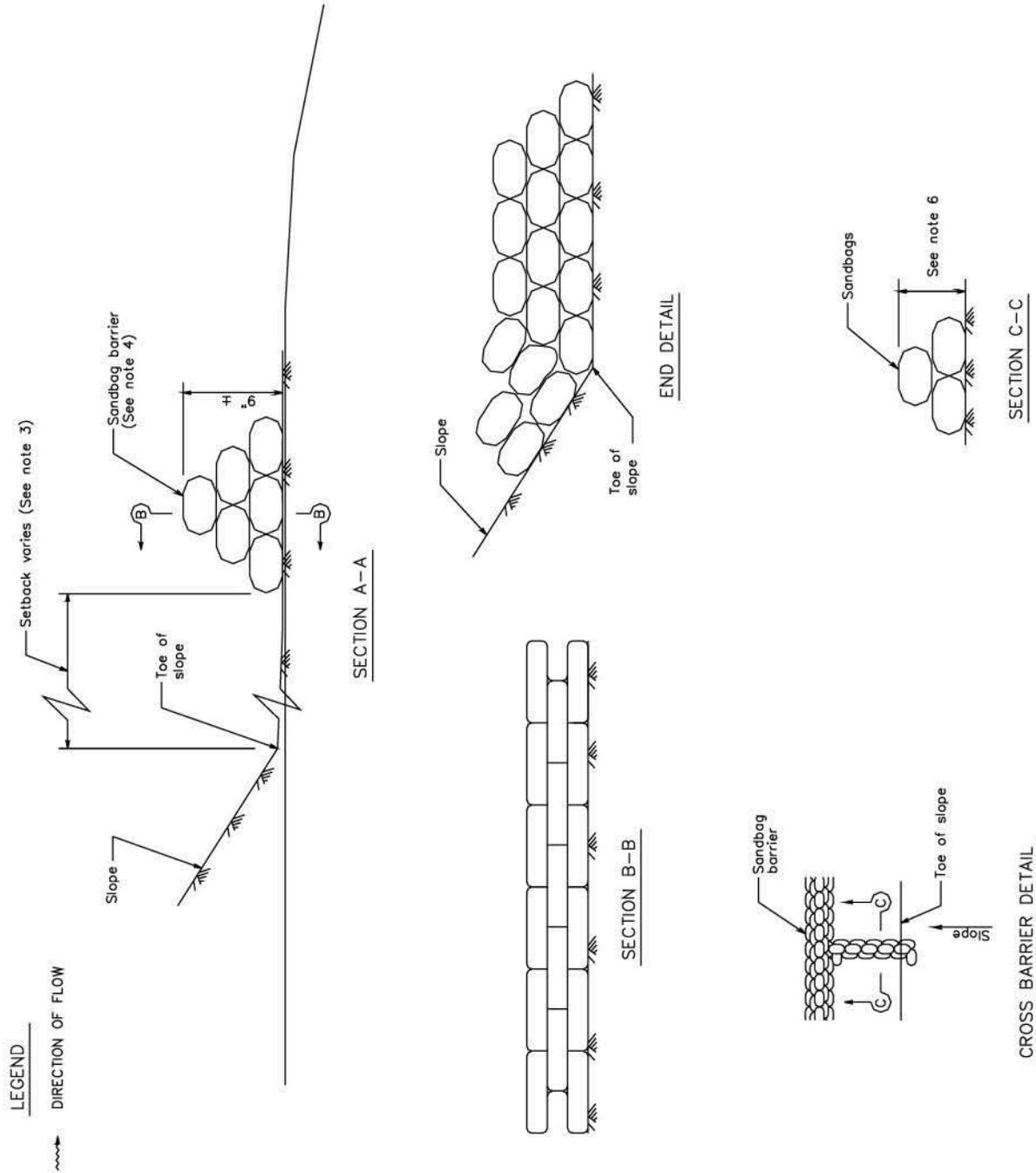
GRAVEL BAG CHECK DAM ELEVATION
NOT TO SCALE

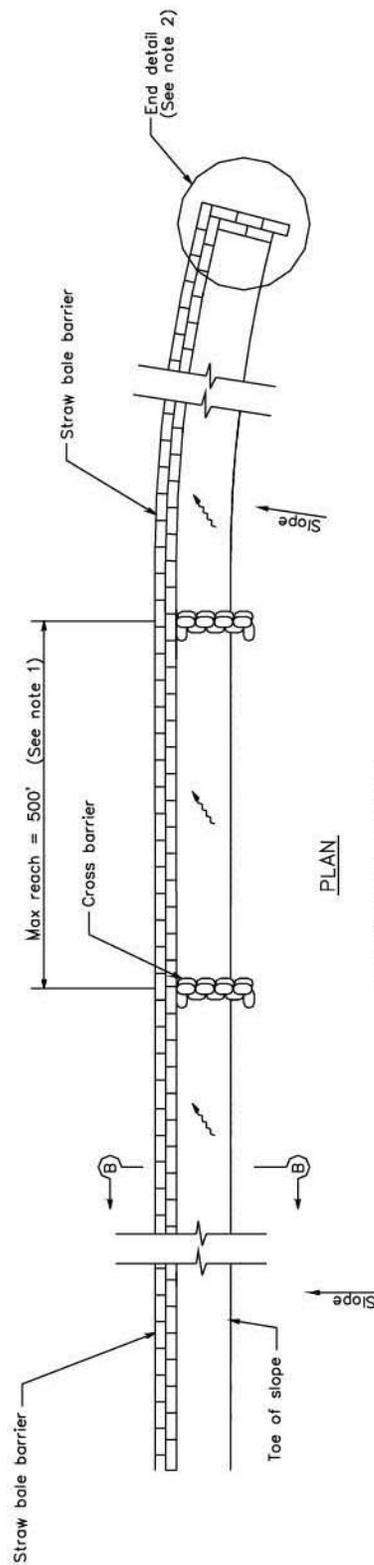


SANDBAG BARRIER

NOTES

1. Construct the length of each reach so that the change in base elevation along the reach does not exceed $1/2$ the height of the linear barrier. In no case shall the reach length exceed 500'.
2. Place sandbags tightly.
3. Dimension may vary to fit field condition.
4. Sandbag barrier shall be a minimum of 3 bags high.
5. The end of the barrier shall be turned up slope.
6. Cross barriers shall be a min of $1/2$ and a max of $2/3$ the height of the linear barrier.
7. Sandbag rows and layers shall be staggered to eliminate gaps.





PLAN

STRAW BALE BARRIER

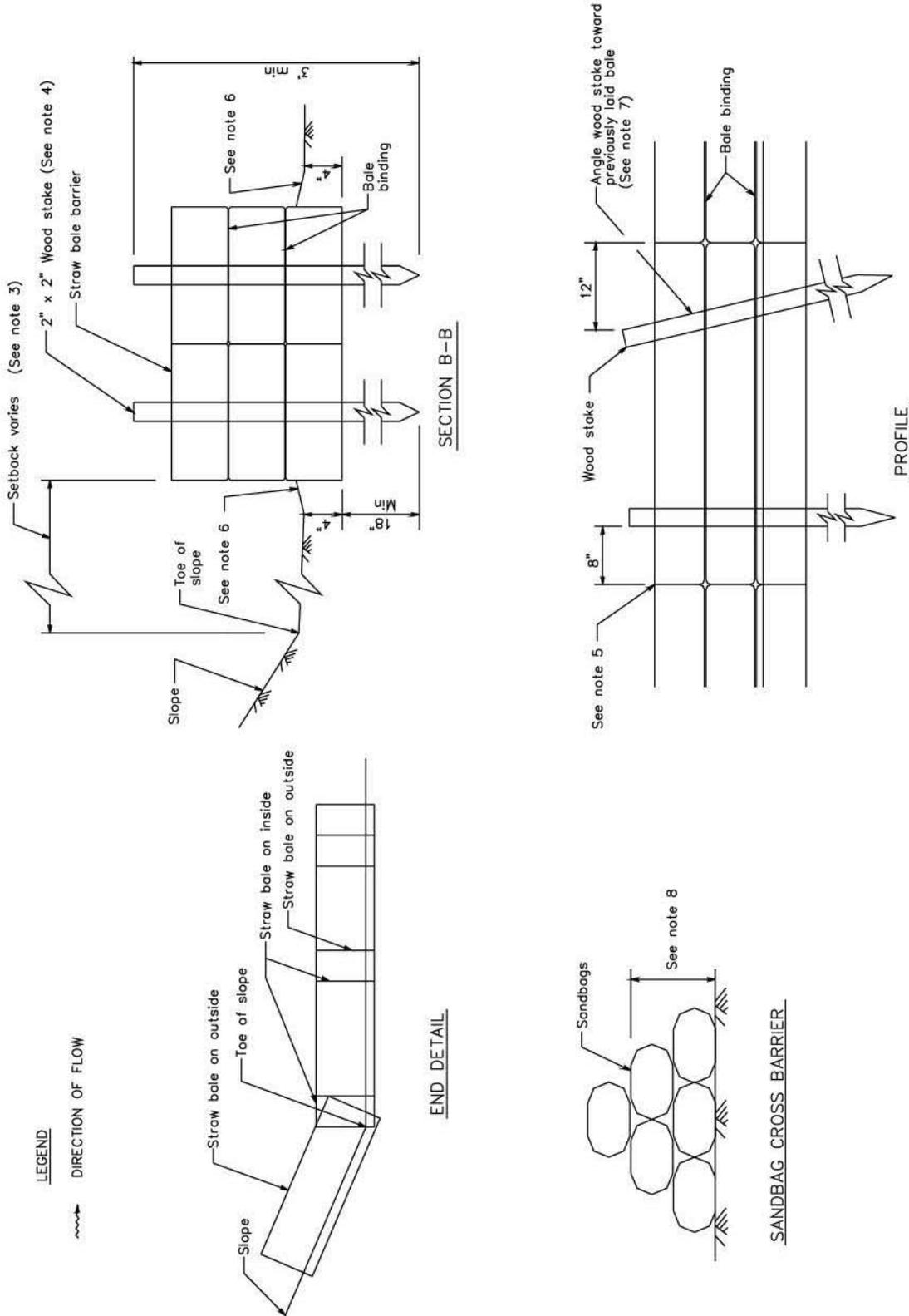
NOTES

1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/2 the height of the linear barrier. In no case shall the reach length exceed 500'.
2. The end of barrier shall be turned up slope.
3. Dimension may vary to fit field condition.
4. Stake dimensions are nominal.
5. Place straw bales tightly together.
6. Tamp embedment spoils against sides of installed bales.
7. Drive angled wood stake before vertical stake to ensure tight abutment to adjacent bale.
8. Sandbag cross barriers should be a min of 1/2 and a max of 2/3 the height of the linear barrier.
9. Sandbag rows and layers should be offset to eliminate gaps.

LEGEND

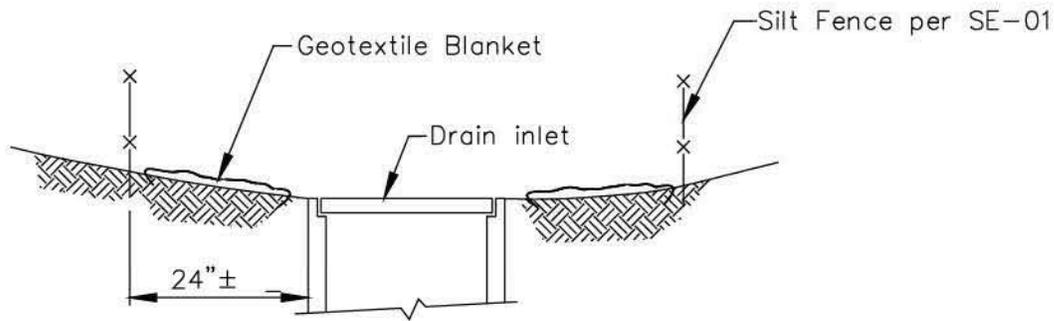
DIRECTION OF FLOW



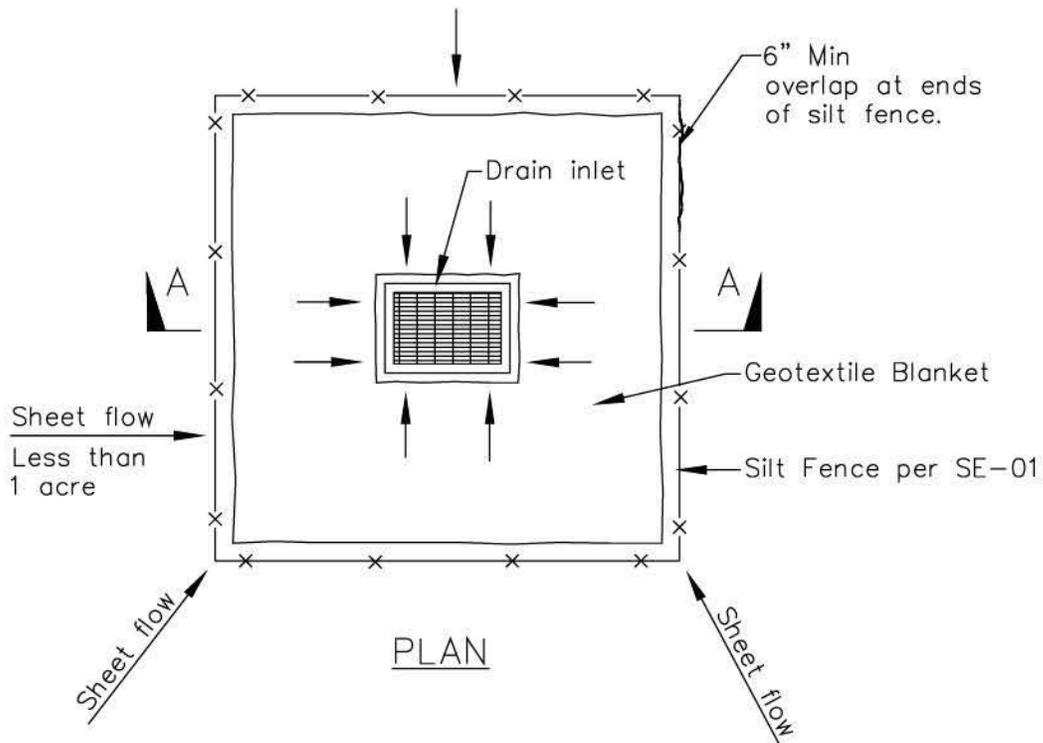


SE-10

Storm Drain Inlet Protection



SECTION A-A

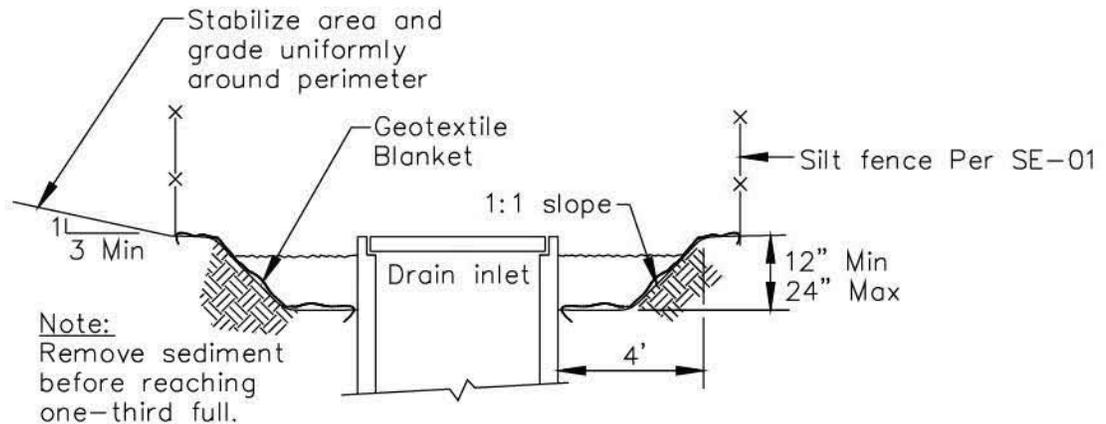


PLAN

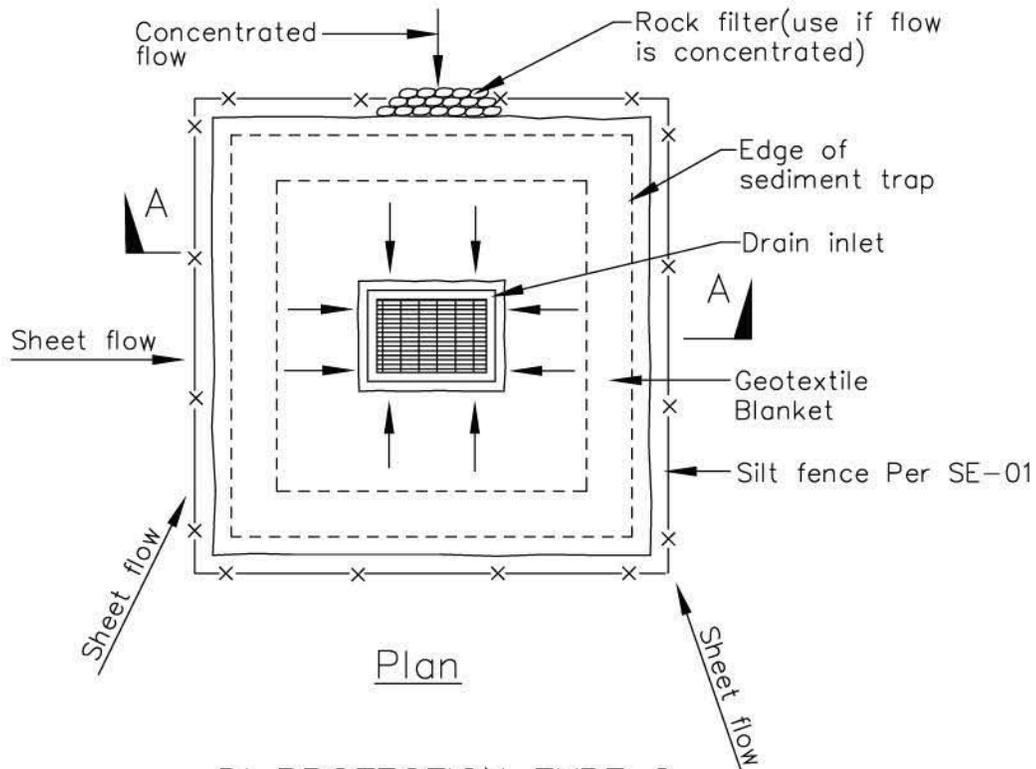
DI PROTECTION TYPE 1
NOT TO SCALE

NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.



Section A-A

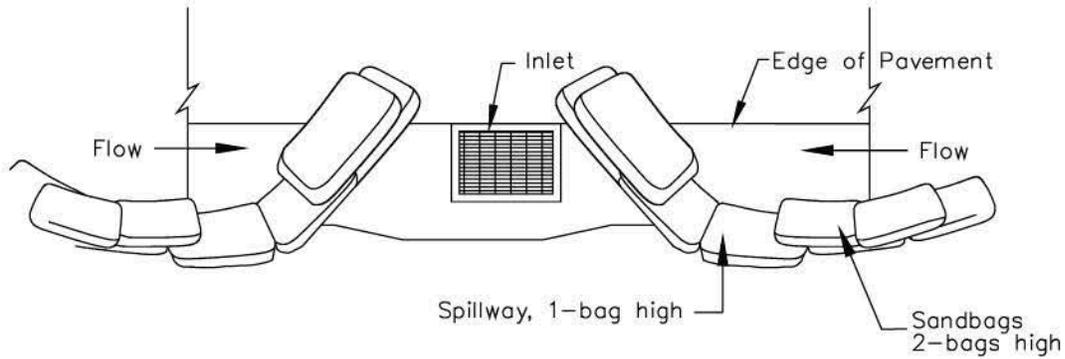


Plan

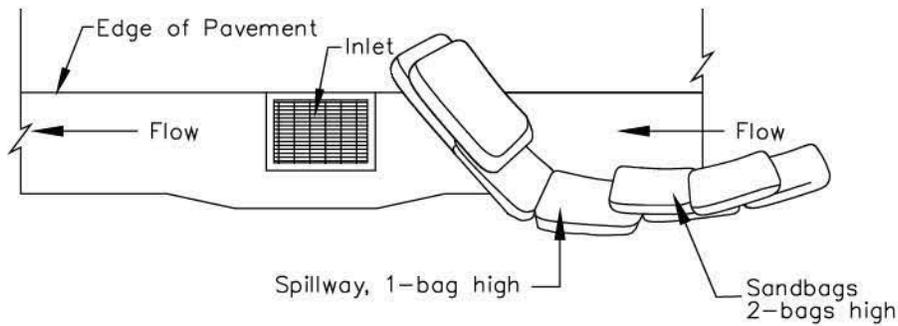
DI PROTECTION TYPE 2
NOT TO SCALE

Notes

1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.



TYPICAL PROTECTION FOR INLET ON SUMP

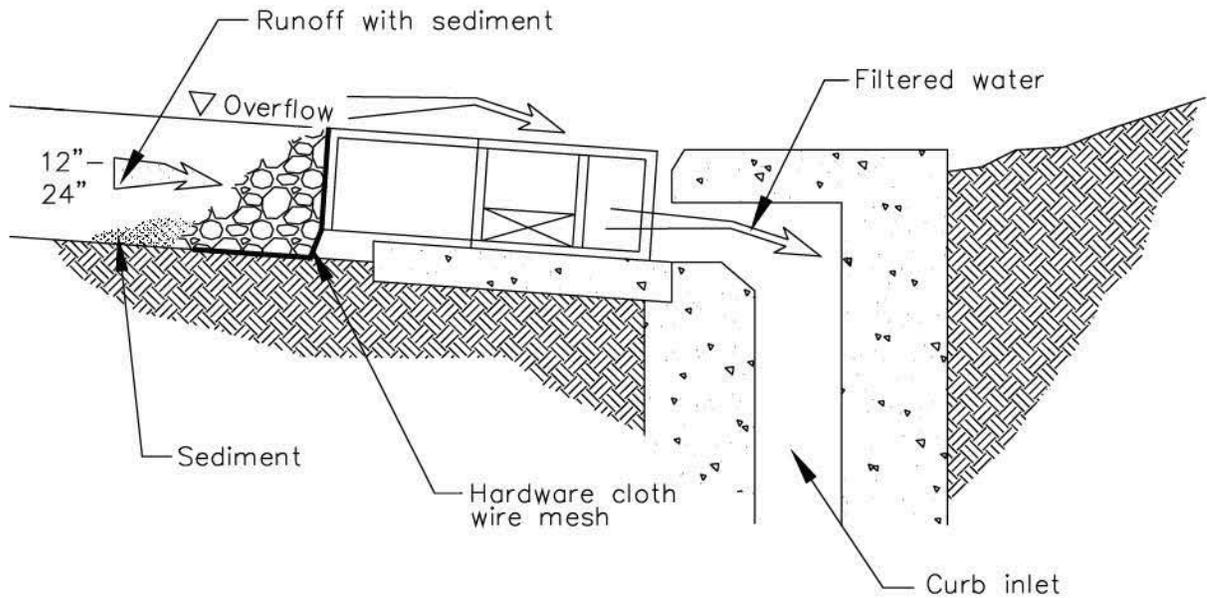
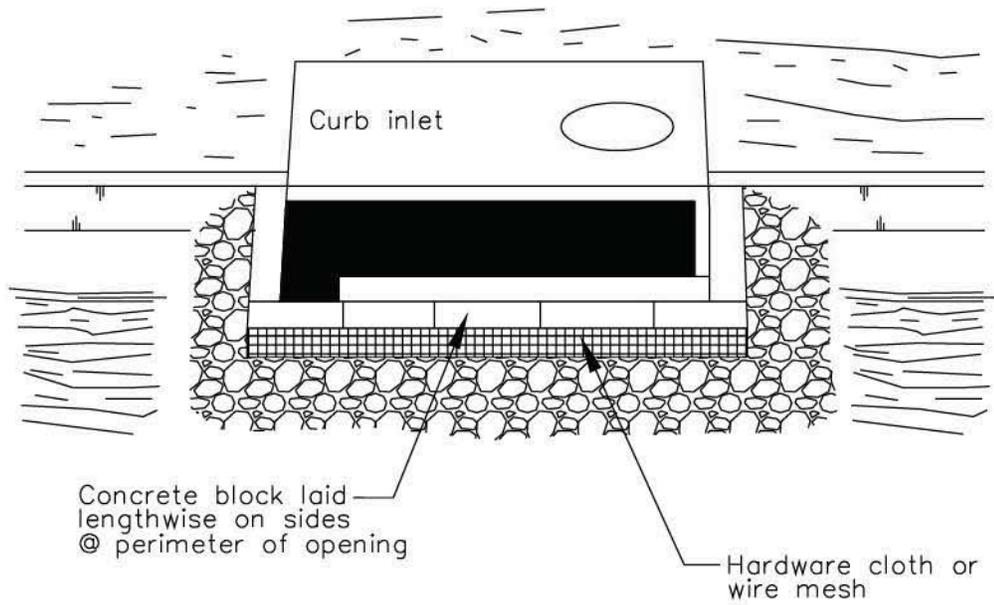


TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:

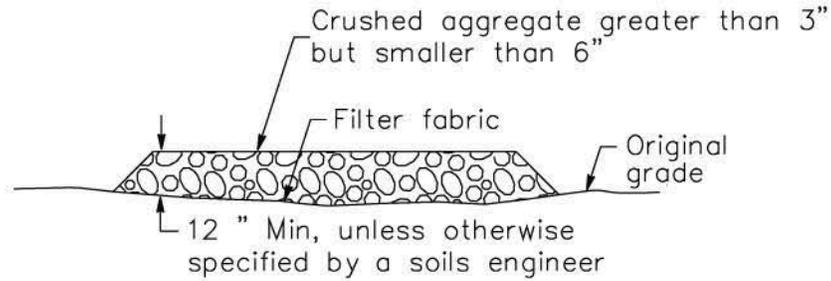
1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

DI PROTECTION TYPE 3
NOT TO SCALE

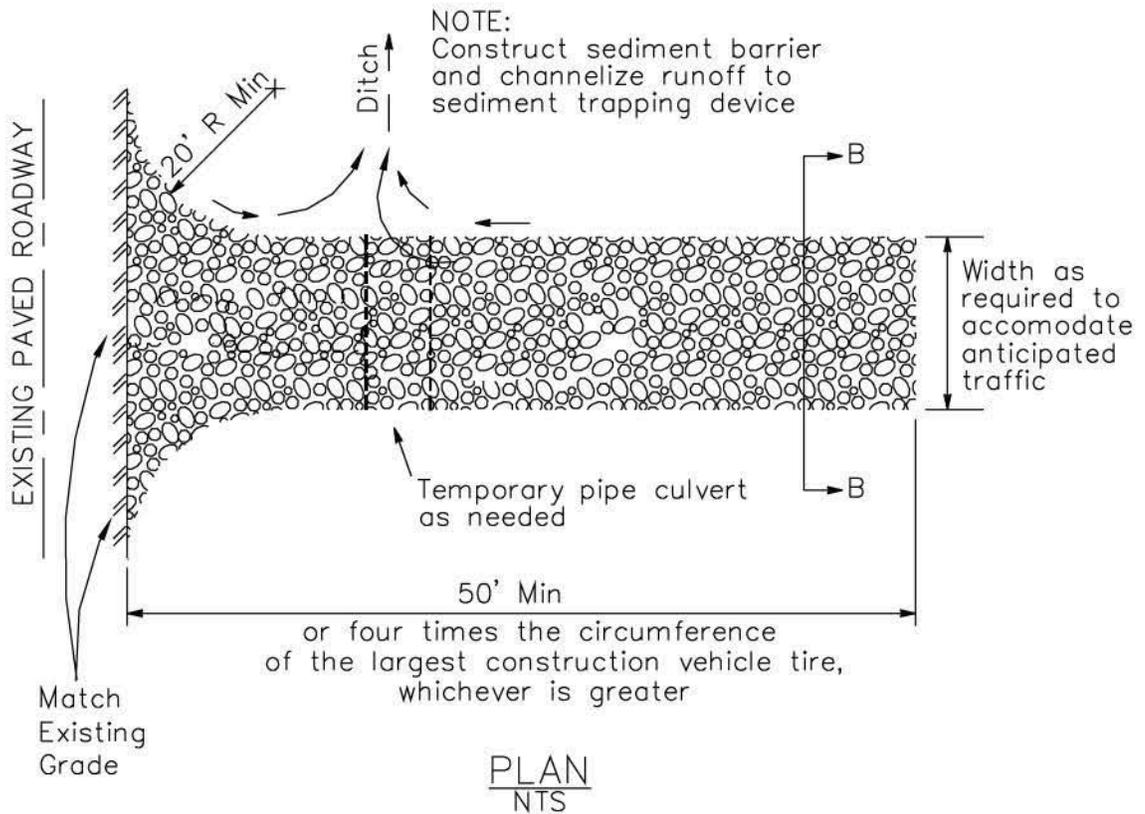


DI PROTECTION – TYPE 4
NOT TO SCALE

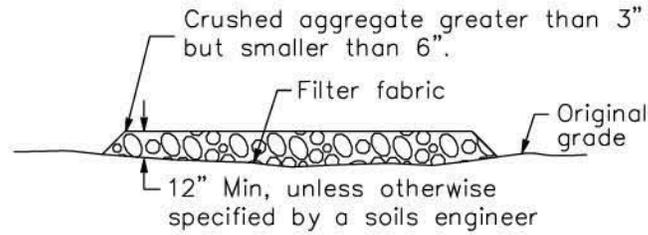
Stabilized Construction Entrance/Exit TC-1



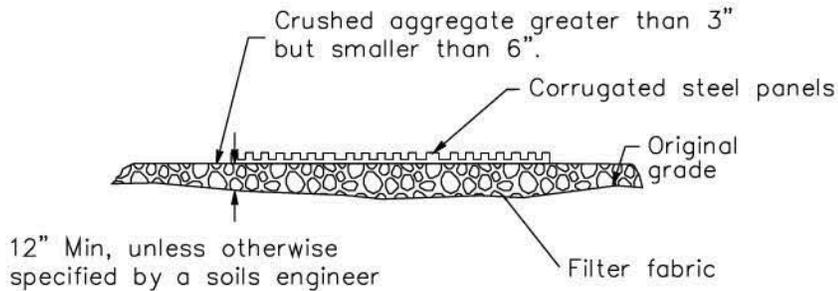
SECTION B-B
NTS



Stabilized Construction Entrance/Exit TC-1



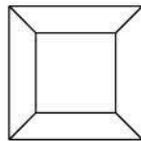
SECTION B-B
NTS



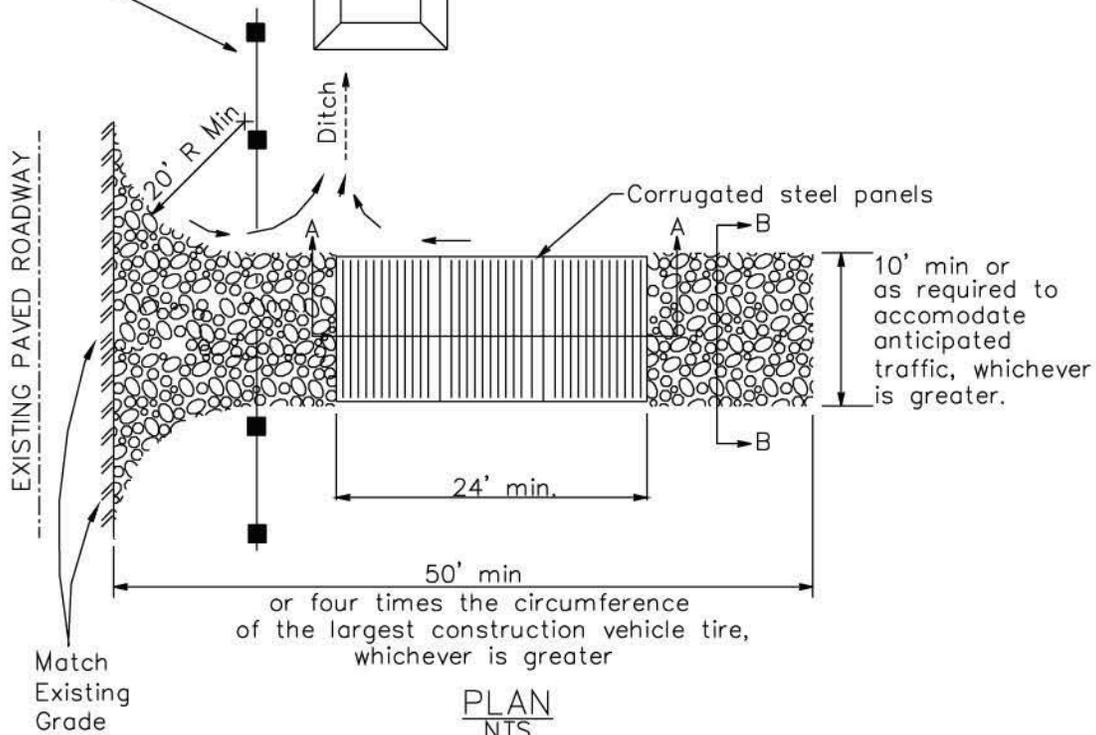
SECTION A-A
NOT TO SCALE

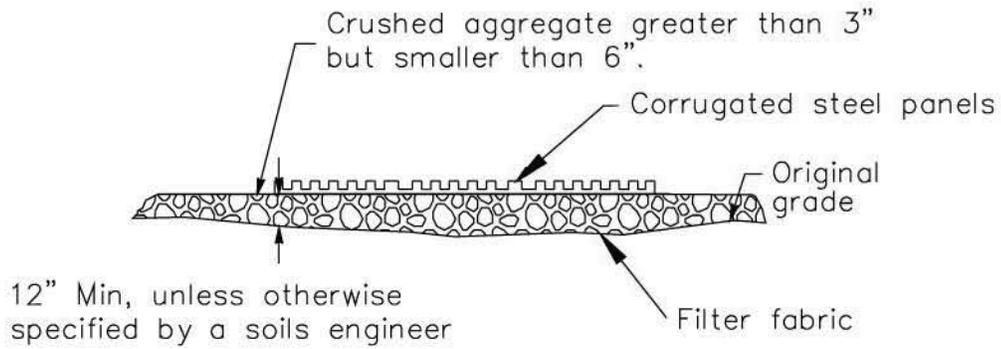
NOTE:

Construct sediment barrier and channelize runoff to sediment trapping device

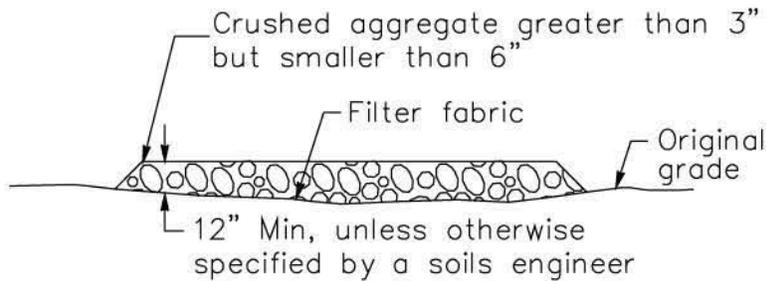


Sediment trapping device

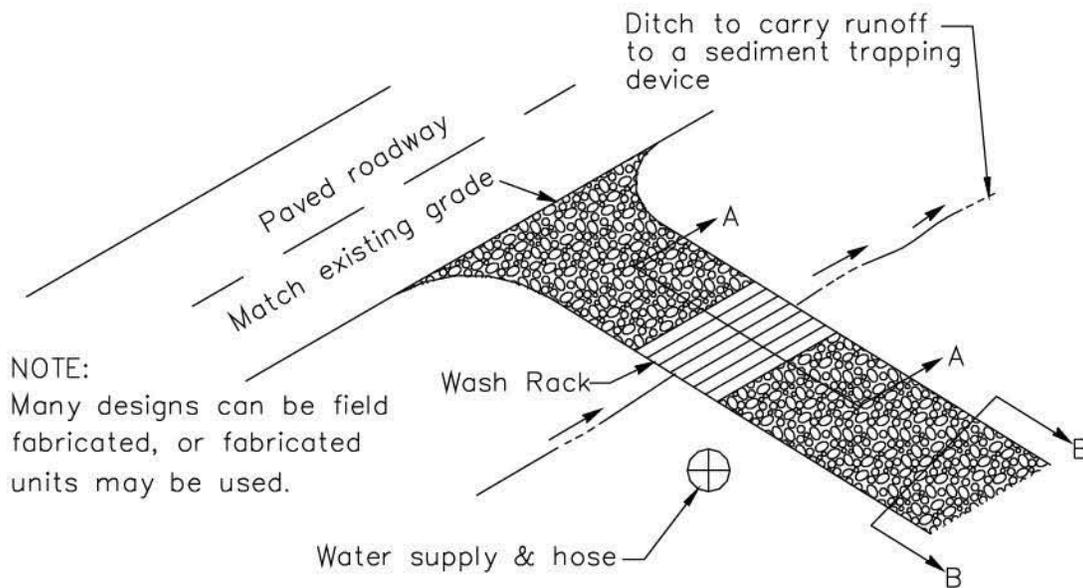




SECTION A-A
NOT TO SCALE



SECTION B-B
NTS



TYPICAL TIRE WASH
NOT TO SCALE