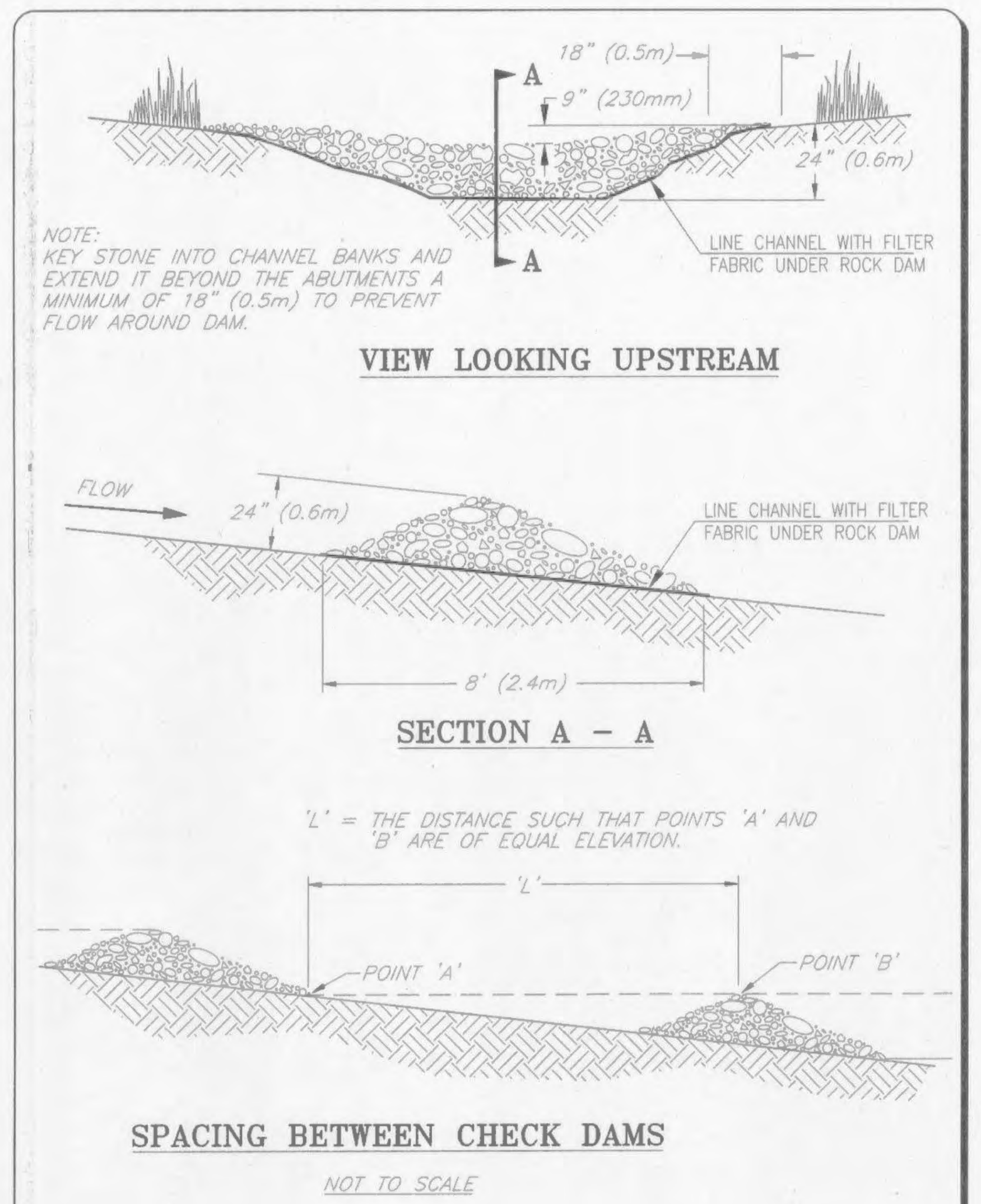
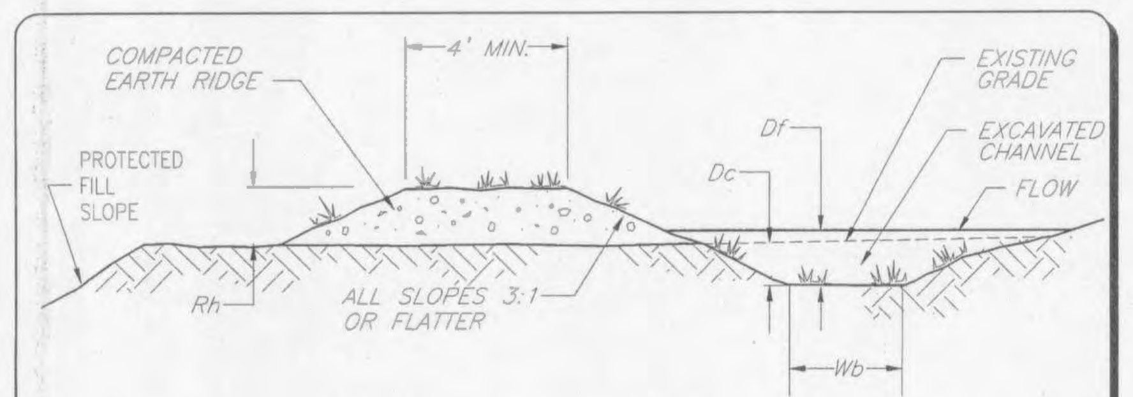


Cd — CHECK DAM



TYPICAL DIVERSION DITCH

CONTRIBUTING AREA	MAX FLOW	Wb	Df	Rh=Dc
0.1 Ac.	0.5 CFS	2'	0.25'	1'
0.25 Ac.	1.2 CFS	2'	0.3'	1'
0.5 Ac.	2.3 CFS	2'	0.35'	1'
0.75 Ac.	3.5 CFS	2'	0.45'	1'
1.0 Ac.	4.6 CFS	2'	0.55'	1'
1.25 Ac.	5.7 CFS	3'	0.4'	1'
1.5 Ac.	6.9 CFS	3'	0.5'	1'
1.75 Ac.	8.1 CFS	4'	0.5'	1'
2.0 Ac.	9.2 CFS	4'	0.6'	1'

NOTES:
1. THE CHANNEL BEHIND THE DIKE SHALL HAVE POSITIVE GRADE TO A STABILIZED OUTLET. THE DIKE SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
2. THE DIKE SHALL BE STABILIZED WITH TEMPORARY SEEDING.
3. CHANNEL SLOPE (LONGITUDINAL) SHALL BE 2.0% OR FLATTER.
4. ALL SLOPES SHALL BE 3(H):1(V) OR FLATTER.
5.

Di — TEMPORARY DIVERSION DITCH

LAND GRADING FOR MIN. EROSION

Construction Specifications:

Only disturb, clear, or grade areas necessary for construction. Flag or otherwise delineate areas not to be disturbed. Exclude vehicles and construction equipment from these areas to preserve natural vegetation.

All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are permanently stabilized.

All sediment control measures shall be constructed and maintained in accordance with the approved erosion and sediment control plan and according to the standards and specifications for the appropriate erosion control practices.

If topsoil is required for the establishment of vegetation, it shall be stockpiled in the amount necessary to complete finished grading and protected from erosion during the interim.

Areas to be filled shall be cleared, grubbed to remove trees, vegetation, roots and other objectionable material, and stripped of topsoil.

Areas to receive topsoil shall be scarified to a minimum depth of 3 inches (76 mm) prior to placement of topsoil.

All fills shall be compacted as required by building standards to reduce erosion, slippage, settlement, subsidence and other related problems. Fill intended to support buildings, structures, conduits, etc., shall be compacted in accordance with local requirements or codes.

The outer face of the fill slope should be allowed to stay loose, not rolled, compacted, or bladed smooth. A bulldozer may run up and down the fill slope so the dozer treads (cleat tracks) create grooves perpendicular to the slope. If the soil is not too moist, excessive compaction will not occur.

All fill shall be placed and compacted in layers not to exceed 8 inches (0.2 m) per lift.

Use slope breaks, such as diversions, benches, or contour furrows as appropriate, to reduce the length of cut-and-fill slopes to limit sheet and rill erosion and prevent gully erosion.

The finished cut-and-fill slopes, which are to be vegetated with grass and legumes, should not be steeper than 2:1.

Slopes to be maintained by tractor or other equipment should not be steeper than 3:1.

Roughen the surface of all slopes during the construction operation to retain water, increase infiltration, and facilitate vegetation establishment.

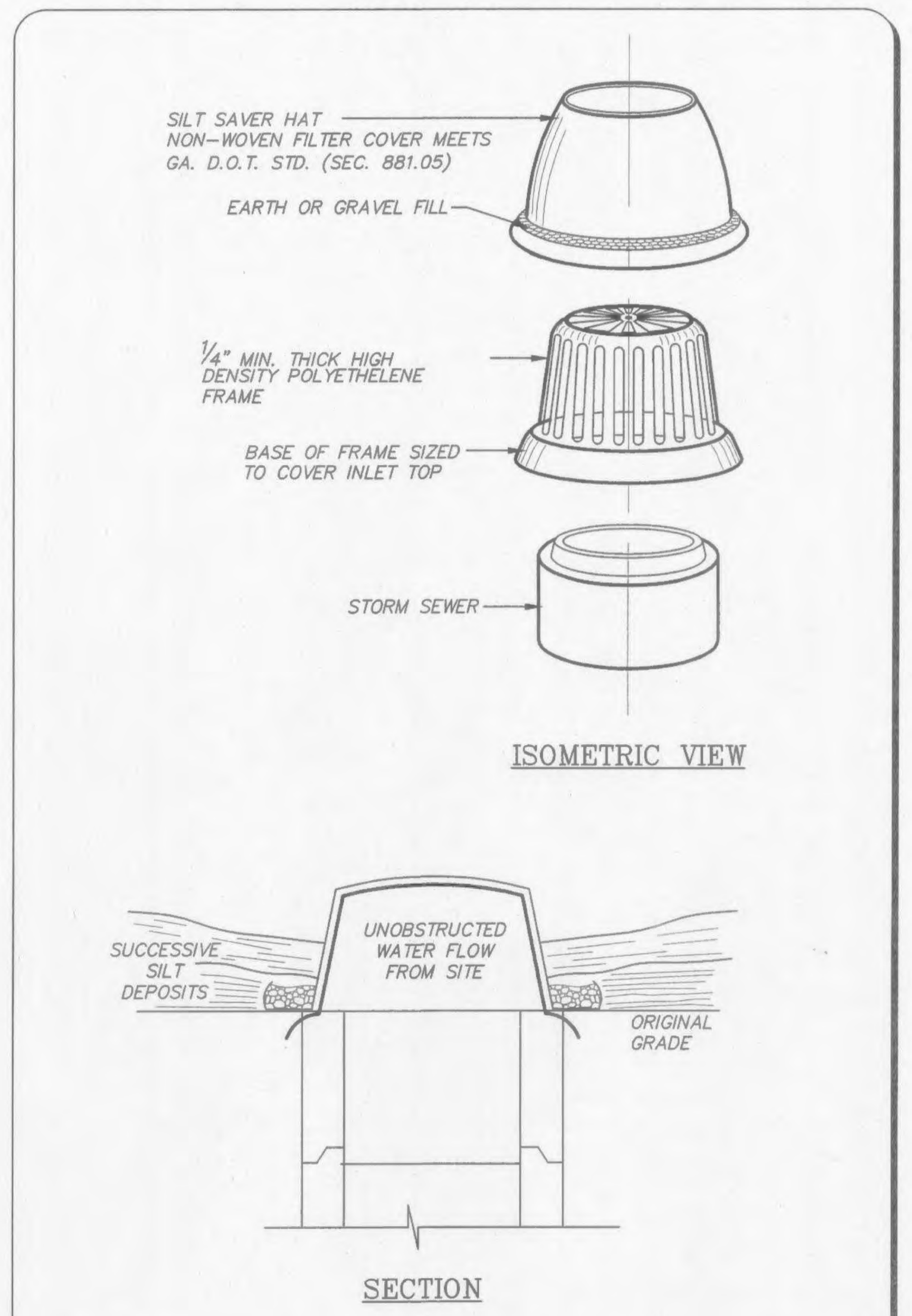
Seeps or springs encountered during construction shall be handled in accordance with approved methods.

Stabilize all graded areas with vegetation, crushed stone, riprap, or other ground cover as soon as grading is completed or if work is interrupted for 21 working days or more.

Use mulch to stabilize areas temporarily where final grading must be delayed.

Stockpiles, borrow areas and spoil areas shall be shown on the plans and shall be stabilized to prevent erosion and sedimentation.

Slopes in excess of 2:1 will require hydroseeding or mulching. Tactifying, and/or "punching-in" straw, bioengineering techniques, or retaining walls may also be required on these slopes.



TYPICAL CONSTRUCTION SEQUENCE

1. EXCAVATE APPROXIMATELY 4" TO 6" BELOW THE TOP OF THE INLET STRUCTURE.
2. PLACE THE FRAME ONTO THE INLET STRUCTURE, ENSURE THE FRAME COVERS STRUCTURE COMPLETELY
3. PLACE THE FILTER OVER THE FRAME.
4. FILL THE FILTER POCKETS WITH SOIL, #57 GRAVEL OR EQUIVALENT. THE FILTER POCKETS SHOULD BE COMPLETELY FILLED TO ENSURE A GOOD SEAL BETWEEN THE GROUND AND THE INLET STRUCTURE.
5. BACKFILL AROUND THE FRAME AND FILTER ASSEMBLY IS NOT REQUIRED TO COMPLETE INSTALLATION; HOWEVER BACKFILLING MAY BE NECESSARY TO COMPLETE EXCAVATION REQUIREMENTS FOR THE SITE.

MAINTENANCE REQUIREMENTS

1. MAINTENANCE IS REQUIRED WHEN ERODED SOILS REACH A POINT OF 65% OF THE TOTAL HEIGHT OF THE FRAME OR APPROXIMATELY 7 TO 9 INCHES OF THE GRAY FILTER MATERIAL IS SHOWING.
2. REMOVE THE IMPACTED MATERIAL BY HAND OR MACHINE METHOD, PAYING CLOSE ATTENTION NOT TO DAMAGE THE FRAME OR FILTER.
3. BRUSH, SWEEP OR WASH FILTER AND INSPECT FOR ANY CUTS AND/OR ABRASIONS, REPLACE FILTER AS NECESSARY. INSPECT FRAME FOR ANY STRESS OR DAMAGE, REPLACE AS NECESSARY.
4. REFILL FILTER POCKETS, BACKFILL AS REQUIRED BY JOB SITE CONDITIONS.

Sd2 — SEDIMENT TRAP
SILT SAVER FRAME & FILTER ASSEMBLY

TEMPORARY SEDIMENT BASIN
Construction Specifications:

Construct the basin by excavating or building an embankment before any clearing or grading work begins.

Areas under the embankment and any structural works shall be cleared, grubbed and stripped of any vegetation and rootmat as shown on the erosion and sediment control plan.

In order to facilitate cleanout and restoration, the basin area shall be cleared, grubbed and stripped of any vegetation.

A cut-off trench shall be excavated along the centerline of the earth fill embankments. The minimum depth shall be 2 feet (0.6 m) The cut-off trench shall extend up both abutments to the riser crest elevation.

Fill material for the embankment should be clean mineral soil free of roots, woody vegetation, oversized stones, rocks or other objectionable material.

The fill material shall contain sufficient moisture so that it can be formed by hand into a ball without crumbling.

Fill material shall be placed in 6 inch (0.2 m) lifts, continuous layers over the entire length of the fill. Compacting shall be obtained by routing the hauling equipment over the fill so that the entire surface of each layer of the fill is traversed by at least one wheel or tread track of the equipment, or by the use of a compactor.

The embankment should be constructed to an elevation of 10 percent higher than the design height to allow for settlement if compacting is achieved with hauling equipment. If compactors are used for compacting, the overbuild may be reduced to not less than 5 percent.

The principle spillway riser shall be securely attached to the discharge pipe by welding all around. All connections shall be watertight.

The pipe and riser shall be placed on a firm, smooth soil foundation. The connection between the riser and the riser base shall be watertight. Pervious materials such as sand, gravel or crushed stone shall not be used as backfill around the pipe or anti-seep collars.

The fill material around the pipe spillway shall be placed in 4-inch (101 mm) layers and compacted under the shoulders and around the pipe to at least the same density as the adjacent embankment. A minimum of 2 feet (0.6 m) of compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment.

Steel base plates shall have at least 2 1/2 feet (0.8 m) of compacted earth, stone or gravel over them to prevent flotation.

The emergency spillway shall not be installed in fill. Elevations, design width, and entrance and exit channel slopes are critical to the successful operation of the emergency spillway.

Baffles shall be constructed of 4 inch (101 mm) by 4 inch (101 mm) posts and of 4 foot (1.2 m) by 8 foot (2.4 m) – 1/2inch (12.7 mm) exterior plywood. The posts shall be set at least 3 feet (0.9 m) into the ground, no further apart than 8 feet (2.4 m) center to center, and shall reach a height 6 inches (.2 m) below the riser crest elevation.

The embankment and emergency spillway shall be stabilized with vegetation immediately following construction.

Construction operations shall be carried out in such a manner that erosion and water pollution will be minimized.

Local and state requirements shall be met concerning fencing and signs warning the public of hazards of soft sediment and floodwater.

Inspection and Maintenance:

Inspect weekly and after each rain.

All damages caused by soil erosion or construction equipment shall be repaired before the end of each working day.

Remove sediment when the sediment strorage zone is half full. This sediment shall be placed in such a manner that it will not erode from the site. The sediment shall not be deposited downstream from the embankment or in or adjacent to a stream or floodplain.

When temporary structures have served their intended purpose and the contributing drainage area has been properly stabilized, the embankment and resulting sediment deposit shall be leveled or otherwise disposed of in accordance with the approved erosion and sediment control plan.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

Construction Specifications:

The aggregate size for construction of the pad shall be 2–3 inch (51–76 mm) stone. Place the gravel to the specific grade and dimensions shown on the plans, and smooth it.

The thickness of the pad shall not be less than 6 inches (0.2 m). Use geotextile fabrics, if necessary, to improve stability of the foundation in locations subject to seepage or high water table.

The width of the pad shall not be less than the full width of all points of ingress or egress and in any case shall not be less than 20 feet (3.6 m) wide.

The length of the pad shall be as required, but not less than 50 feet (15.2 m).

Locate construction entrances and exits to limit sediment leaving the site and to provide for maximum utility by all construction vehicles. Avoid entrances which have steep grades and entrances at curves in public roads.

The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand, and repair and/or maintenance of any measures used to trap sediment.

All sediment spilled, dropped, washed or tracked onto public rights-of-way shall be removed immediately.

Provide drainage to carry water to a sediment trap or other suitable outlet.

When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.

All sediment shall be prevented from entering any storm drain, ditch or watercourse through use of sand bags, gravel, straw bales, or other approved methods.

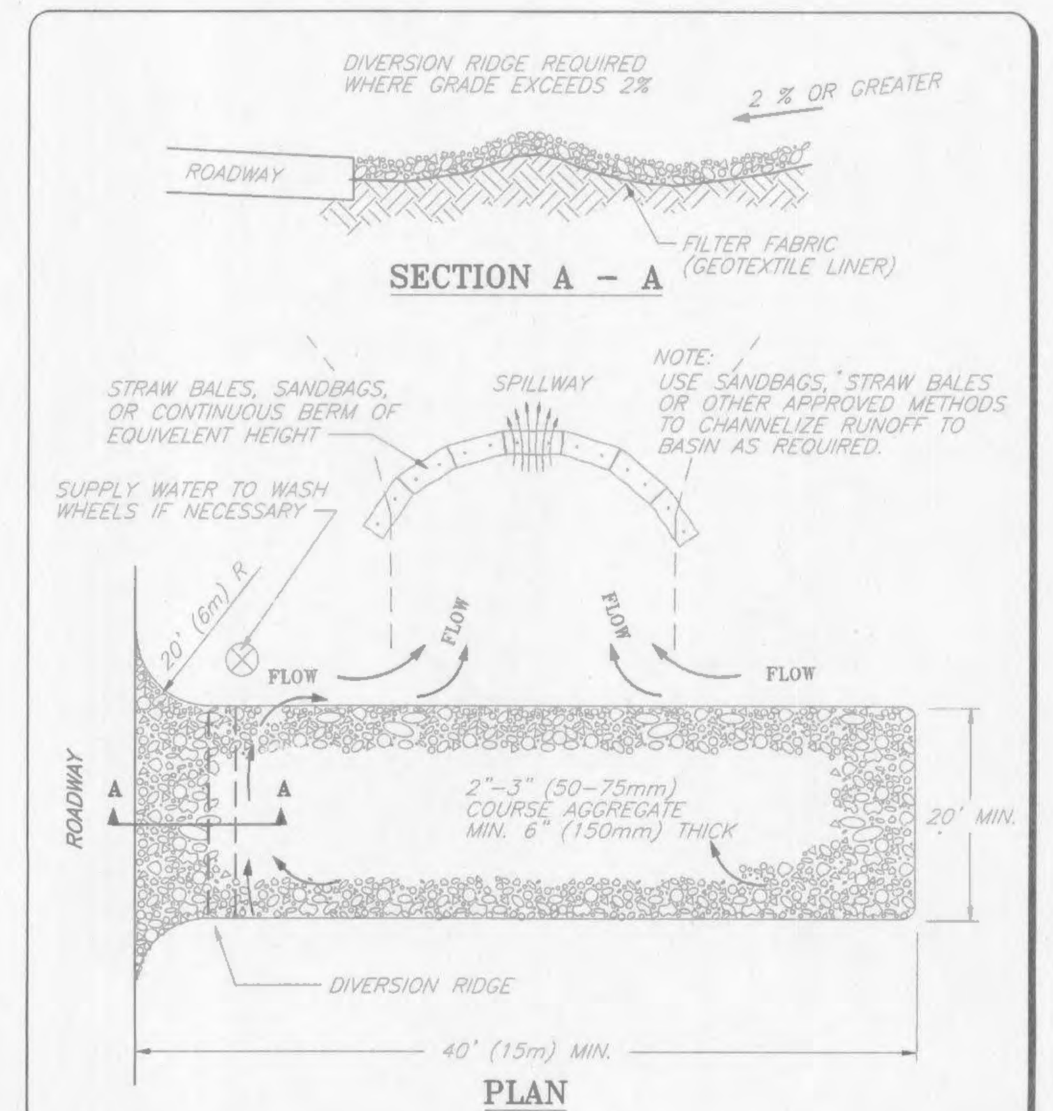
Inspection and Maintenance:

Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site.

Replace gravel material when surface voids are visible.

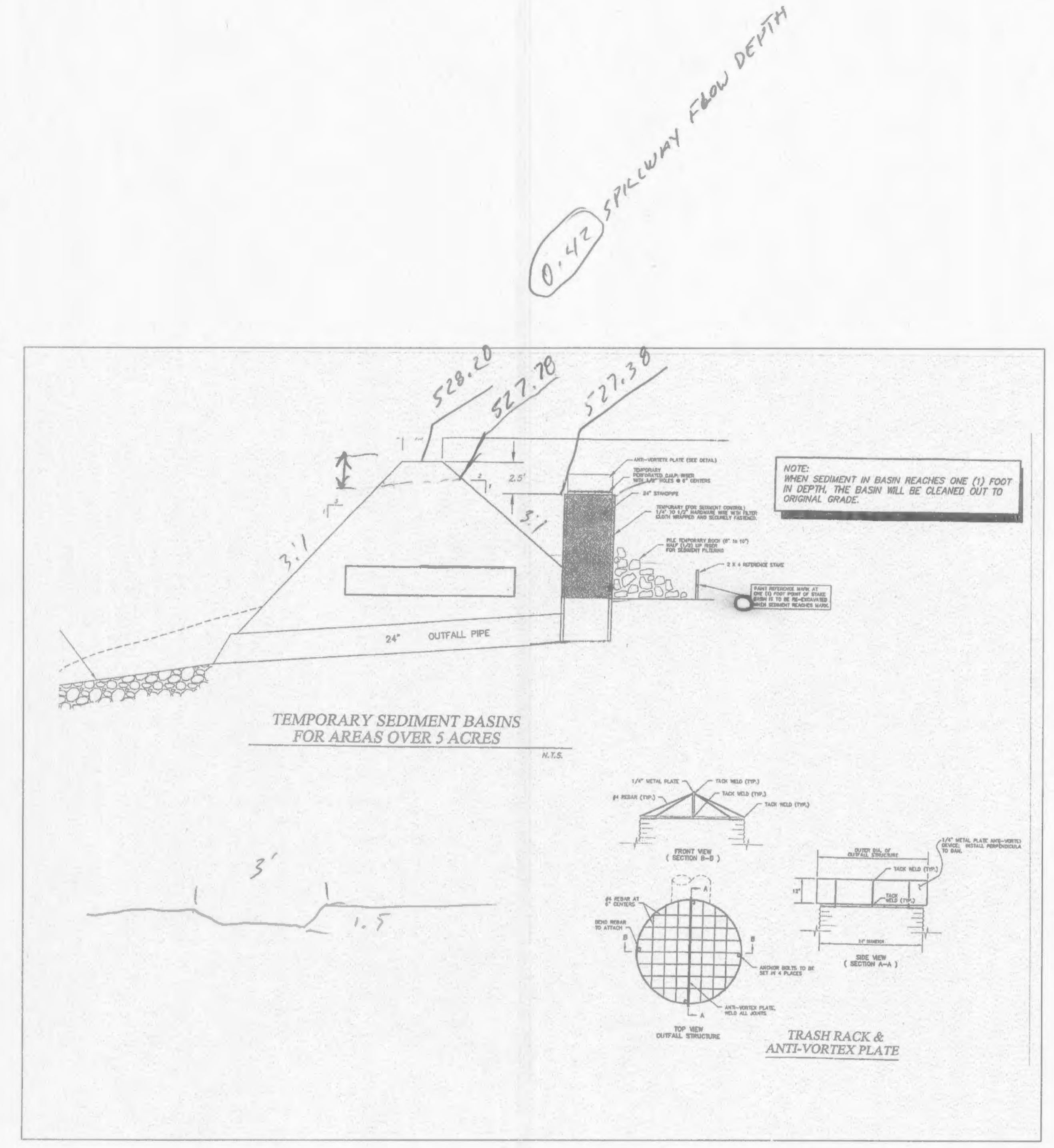
After each rainfall, inspect any structure used to trap sediment and clean it out as necessary.

Immediately remove all objectionable materials spilled, washed, or tracked onto public roadways. Remove all sediment deposited on paved roadways within 24 hours.



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABLIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

Co — TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT



DATA SUMMARY

Item No.	Description	Units	Pond A
Temporary Sediment Basin Dimensions			
1	Riser Crest Elevation	ft.	527.38
2	Volume of Basin at Riser elevation	cy.	64
3	Cleanout Elevation	ft.	526.45
4	Volume of Basin at Cleanout elevation	cy.	21.12
5	Trash Rack Diameter	in.	18
6	Riser Pipe Diameter	in.	12
7	Principal Spillway Diameter	in.	8
8	Length of Principal Spillway	ft.	10
9	Inflow Invert Principal Spillway	ft.	526.00
10	Outflow Invert Principal Spillway	ft.	525.90
11	Top of Dam Width	ft.	8
12	Antiflotation Block Length	in.	10
13	Antiflotation Block Width	in.	10
14	Antiflotation Block Depth	in.	18
15	Length of Rebar	in.	12
16	Interior Dam Side Slope ___:1		3
17	Exterior Dam Side Slope ___:1		3
18	Emergency Spillway Crest Elevation	ft.	527.78
19	Emergency Spillway Width	ft.	3.00
20	Top of Dam Constructed Elev.	ft.	528.20
21	Top of Dam Settled Elev.	ft.	528.20
22	Spillway Flow Depth	ft.	1.50
23	Antiseep Collar Length	in.	N/A
24	Antiseep Collar Width	in.	N/A
25	Core Trench Depth	ft.	N/A
26	Core Trench Side Slope ___:1		N/A
27	Core Trench Bottom Width	ft.	N/A

LAND LOT 2 - HOME DEPOT OUTPARCEL

FINAL GRADING AND EROSION CONTROL PROJECT
FOR
GENUINE PARTS COMPANY
222 CHASTAIN MEADOWS CT. # 100
KENNESAW, GEORGIA 30144
PHONE: 770-541-4420

CITY OF O'FALLON
ST. CHARLES COUNTY
MISSOURI

LAND LOT 2
FRACTIONAL SECTION 32,
TOWNSHIP 47 NORTH, RANGE 3 EAST

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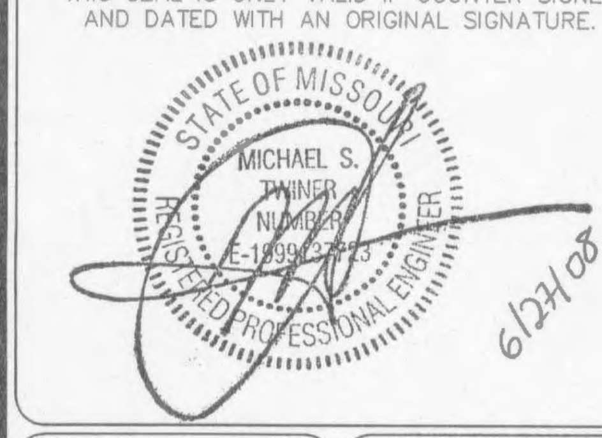
REVISIONS:

NO.	DATE	BY	DESCRIPTION
–1	06/03/08	PEC	GRADING REVISIONS
–2	06/27/08	PEC	CITY COMMENTS

SHEET TITLE
EROSION & SEDIMENT CONTROL DETAILS

SCALE: NTS
DATE: APRIL 3, 2008
PROJECT: 05002.00

THIS SEAL IS ONLY VALID IF COUNTER SIGNED AND DATED WITH AN ORIGINAL SIGNATURE.



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SHEET