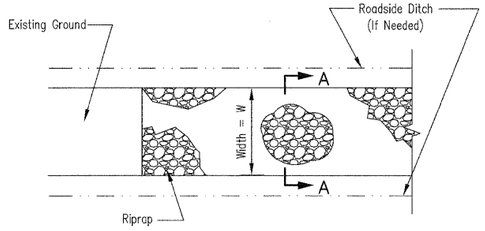
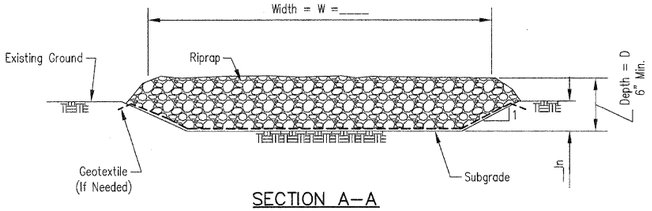


PLAN VIEW



SECTION A–A

NOTES:
1. Rock shall meet one of the following IDOT coarse aggregate gradations, CA–1, CA–2, CA–3 or CA–4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
2. See plans for construction road location, D and W dimensions.
3. Minimum width is 14 feet for one–way traffic and 20 feet for two–way traffic. Two–way traffic widths shall be increased a minimum of 4 feet for trailer traffic. Depending on the type of vehicle or equipment, speed, loads, climatic and other conditions under which vehicles and equipment operate an increase in the minimum widths may be required.
4. Roadway shall follow the contour of the natural terrain to the extent possible.
5. Geotextile (non–woven) minimum criteria:
   - Weight of Geotextile (oz/sq.yd.)_____6
   - Tensile strength (lb) ASTM D 4632_____180
   - Elongation at failure (%) ASTM D 4632_____≥ 50
   - Puncture (lb) ASTM D 4833_____80
   - Ultraviolet light (% residual tensile strength) ASTM D 4355_____min 70
   - Apparent opening size (AOS) ASTM D 4751_____max 40 sieve
   - Permittivity sec^{-1} ASTM D 4491_____min 0.70
6. Any geotextile splices shall overlap a minimum of 18 inches, with upstream or upslope geotextile overlapping the abutting downslope geotextile.

CONSTRUCTION ROAD STABILIZATION

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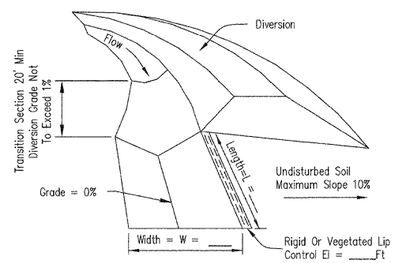
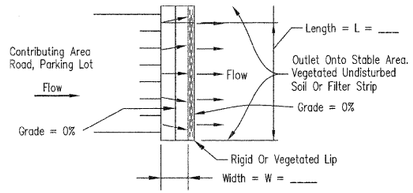
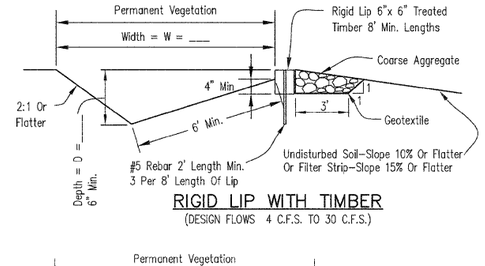


LEVEL SPREADER FOR DIVERSION OUTLET

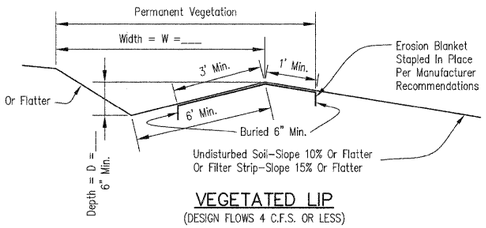


LEVEL SPREADER FOR IMPERVIOUS AREAS

NOTES:
1. Ends of spreader shall be tied into higher ground to prevent flow around level spreader.
2. See plans for L and W dimensions.



RIGID LIP WITH TIMBER
(DESIGN FLOWS 4 C.F.S. TO 30 C.F.S.)



VEGETATED LIP
(DESIGN FLOWS 4 C.F.S. OR LESS)

NOTES:
1. Coarse aggregate shall meet one of the following IDOT gradations: CA–1 or CA–3.
2. See plans for permanent seeding requirements
3. See plans for D and W dimensions.
4. Geotextile (non–woven) minimum criteria:
   - Weight of Geotextile (oz/sq.yd.)_____6
   - Tensile strength (lb) ASTM D 4632_____180
   - Elongation at failure (%) ASTM D 4632_____≥50
   - Puncture (lb) ASTM D 4833_____80
   - Ultraviolet light ASTM D 4355_____70
   - Apparent opening size (AOS) ASTM D 4751_____max 40 sieve
   - Permittivity sec^{-1} ASTM D 4491_____0.70

LEVEL SPREADER

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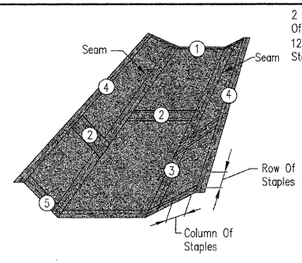
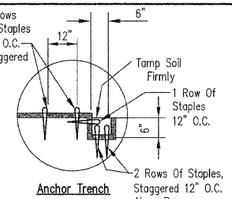
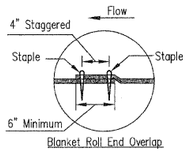


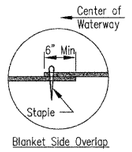


DETAIL 1



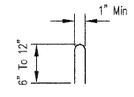
Blanket Roll End Overlap

DETAIL 2



Blanket Side Overlap

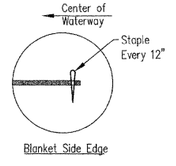
DETAIL 3



STAPLE DETAIL

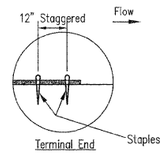
NOTES:
1. Install erosion control blanket (ECB) over waterway: Waterway Width_____ft
   ECB width _____ft
   length _____ft
   Sta. _____ to _____
2. The erosion control blanket shall consist of a machine produced mat of curled wood or coconut fibers, shall have an expected material life of a least 12 months, shall be new and unused, shall be furnished in rolls, and shall meet the minimum requirements stated in Table 1 below.
3. Prepare soil prior to installing erosion control blanket, including seeding, fertilizing, and lime application.
4. The erosion control blanket shall be placed in firm contact with the soil and not be allowed to bridge over surface irregularities. The blanket shall not be stretched.
5. Start laying the blankets by rolling center blanket in the direction of flow, centered on the centerline of waterway. There shall not be an overlap of blankets at the center of the waterway.
6. The erosion control blanket shall be anchored, overlapped, and stapled according to manufacturer's instructions. If no manufacturer's instructions are available, install the blanket as follows:
   a. Staples shall be "U" shaped, 0.12 in diameter wire or greater (#11 gauge). See Staple Detail for dimensions.
   b. Bury upstream end of blanket in a trench 6 inch wide by 6 inch deep and stapled in staggered rows across the width as shown in Detail 1.
   c. For joining ends of rolls, overlap end of upslope blanket a minimum of 6 inches over downslope blanket (shingle style). Use a double row of staggered staples 4 inches apart, as shown in Detail 2.
   d. Blankets on side slopes shall overlap a minimum 6 inches over the blanket below (shingle style). Staple overlap at 12 inch intervals. See Detail 3.
   e. The outer edge along sides of the blanket shall be stapled every 12 inches. See Detail 4.
   f. Staples are to be placed alternately in columns (in the direction of the waterway) 2 feet apart and in rows (across the waterway) 3 feet apart, throughout the area covered by erosion blanket.
   g. Downstream (terminal) end of blanket shall be stapled with a double row of staggered staples 12 inches apart. See Detail 5.

TABLE 1. MINIMUM REQUIREMENTS FOR EROSION CONTROL BLANKET		
	Coconut Blanket	Wood Fiber Blanket
Type of Fiber	100% coconut fibers	100% curled wood fibers
Weight, lbs/sq. yd	0.50	0.63
Fiber Length	N/A	80% of fibers > 6 in.
Fiber Dimensions	N/A	0.021 in. x 0.042 in.
	Optional – Top and bottom of blanket may be covered with a max. 5/8" x 5/8" opening size netting, bound to the mat on max. 1.5" centers.	Optional – Top and bottom of blanket may be covered with a max. 5/8" x 5/8" opening size netting



Blanket Side Edge

DETAIL 4



Terminal End

DETAIL 5

Not To Scale

EROSION BLANKET INSTALLATION DETAILS

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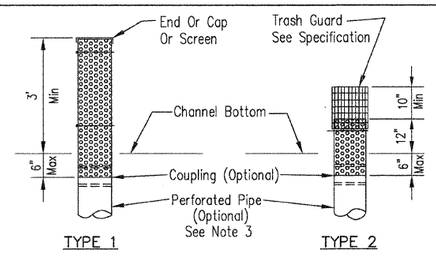
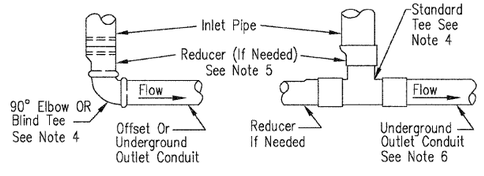


TYPE 1 TYPE 2

INLET ALTERNATIVES



OFFSET CONNECTION
(Or For Upper Inlet On Conduit)

DIRECT CONNECTION

CONNECTION OF INLET CONDUIT

NOTES:
1. Specification for material and fabrication are as shown.
2. The above ground portion of the inlet must have holes evenly spaced around the circumference of the pipe as shown in chart.
3. The below ground portion of the inlet may be perforated with holes 5/16 inch diameter or less to provide drainage around the inlet.
4. The tee or elbow diameter must be equal to or larger than the diameter of the conduit downstream from the inlet.
5. Install a reducer immediately above the tee or elbow if the inlet diameter is not equal to the diameter of the tee or elbow.
6. The underground outlet conduit must be installed deep enough to provide a minimum 24" of cover (after terrace construction) to prevent crushing.

Material Specification

MATERIAL
Inlets may be fabricated from plastic or metal according to the following requirements.
(a) Plastic pipe Polyvinyl Chloride (PVC) or High Density Polyethylene (PE) pipe with SDR equal to 4.3 or less.
(b) Metal pipe: Smooth steel pipe with 3/16" minimum wall thickness or 16 gage corrugated metal pipe (galvanized or aluminum).

FABRICATION:
Inlet holes shall be smooth and burr free. Holes shall not remove more than 50 percent of material in any horizontal or vertical row or vertical row of holes. For inlets fabricated from metal or smooth plastic, 1"x 4" slots may be used in lieu of 1" diameter holes as long as the openings provide an equal cross–sectional area. Holes larger than 5/16" diameter that are more than 6" below the channel bottom shall be covered with plastic, fiberglass, nylon, gravel or other filter material to prevent soil from entering the inlet. Other combinations of the number and size of holes may be acceptable if approved prior to fabrication. Other materials and method of fabrication may be used for the inlet, tee and other appurtenances as long as the functional intent of the inlet is satisfied and it is approved prior to installation

ORIFICES:
Flow may be restricted by use of an orifice plate installed above the tee. It should be firmly supported and able to be removed for maintenance. Orifice plates shall be made from durable plastic or metal. The opening shall be burr free.

TRASH GUARD:
The trash guard for Type II inlets shall be securely fastened to the inlet. Trash guards may be fabricated from metal rods (1/8" diameter or larger) or galvanized welded wire fabric (16 gage or larger). The spacing between vertical members should be 1" if welded wire fabric is used the spacing between the horizontal members should be 2" (1" if orifice plates are used).

Inlet Diameter Inches	Min No Of 1" Dia. Holes Per Ft Of Inlet
5	25
6	30
8	40
10	50
12	60

INLET DETAIL FOR UNDERGROUND OUTLETS

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File No. IL–ENG–118R | Drawing No. | Sheet 1 of 1

AUTOCAD2005

USER NAME = pk	DESIGNED - PK	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
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PLOT SCALE 50.0000 ' / in.	CHECKED - RTM	REVISED -	
PLOT DATE = 12/15/2011	DATE - 12/19/2011	REVISED -	

LANDSCAPING AND EROSION CONTROL
GRAND AVENUE UNDERPASS
SHEET NO. 3 OF 4 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0541	10-F3000-00-BT	LAKE	91	20
		CONTRACT NO. 63665		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
FINAL SURVEY				
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				